Laboratory Guide 2023

THE DOCTORS LABORATORY

Our goal is to provide the highest quality professional practice, led by an experienced team with a deep understanding of diagnostic and clinical medicine. It is through shared objectives and core values, that we aim for our service to doctors and patients to be at the highest possible level.

Contents

The Laboratory Guide Is designed to give you an easy-to-use reference for the most regularly requested services, pathology profiles and tests. If you are not able to find details of the tests and services you need, please contact the laboratory on **020 7307 7373** for advice and information.

For details about all services, please contact the laboratory on **020 7307 7373**, or visit **www.tdlpathology.com**

TDL services include:

- Comprehensive, multidisciplinary pathology services
- Specialist diagnostic analysis for other laboratories
- Pathology partnerships with NHS Trusts
- Support for CRO and pharmaceutical companies

TDL Locations

The Doctors Laboratory
The Halo Building, 1 Mabledon Place
London, WC1H 9AX, UK

Tel: +44 (0)20 7307 7373 – 24 hour Telephone (Main Switchboard/All Services)

Email: tdl@tdlpathology.com

Laboratory times: 24 hours

Out of hours samples can be delivered at any time to this location.

Patients' samples cannot be taken at The Halo Building. This service is undertaken at 76 Wimpole Street, London W1G 9RT

SCAN ME

To download a location map or to get directions visit:

www.tdlpathology.com/about-us/locations/

TDL Manchester
Regents Place, 4 Windsor Street
Salford, M5 4HB, UK

Tel: +44 (0)161 332 7181

Email: tdlmanchester@tdlpathology.com

Laboratory times: 24 hours

Out of hours samples can be delivered at any time to this location.

Patients' samples cannot be taken be taken at TDL Manchester.

TDL Manchester Couriers
Direct Tel: 0161 332 7187
Email: couriersman@tdlpathology.com

TDL Manchester Supplies
Email: supplies@tdlpathology.com

SCAN ME

To download a location map or to get directions visit:

www.tdlpathology.com/about-us/locations/

Patient Reception/ Phlebotomy Services

Patient Reception provides a sample collection service for patients attending at the request of their doctor/clinic.

Patients, of all ages, are welcome to attend Patient Reception, 76 Wimpole Street, London W1G 9RT for their samples to be taken. Patients need to be referred by their clinic or doctor and are required to bring a request form or letter of referral.

Appointments are only necessary if a patient needs specialised investigations or care. Instructions can be telephoned or emailed ahead of the patient's attendance, if this is more convenient.

Sample-taking is undertaken by qualified phlebotomy staff for which a standard sample-taking fee of £50.00 is charged to patients. Doctors and clinics are charged £29.00 for each patient. Sample-taking services for Extended Tests and Drugs of Abuse with Chain of Custody, and semen analysis are routinely available.

Cervical cytology , HVS and cervical swabs are not taken at Patient Reception.

Patient Reception sample-taking services are not available in Manchester.

TDL Patient Reception
76 Wimpole Street, London, W1G 9RT, UK

Tel: +44 (0)20 7307 7383

Email: patientreception@tdlpathology.com

Out of hours samples can be dropped off at this location. **Phlebotomy Services are only available at this location**. Patients' samples cannot be taken at the main laboratory

Opening times

Monday to Friday 7.00am – 7.00pm

Saturday 7.00am – 1.00pm

Closed Sunday and bank holidays.

SCAN ME

To download a location map or to get directions visit:

www.tdlpathology.com/patients/patient-reception/

Helpful information

TDL Collect: specimen collection services by courier

TDL Collect provides a dedicated medical sample collection service (vans by arrangement) on a scheduled or ad hoc basis.

No charge is made for collections from practices within the M25. Courier collections from private addresses are not undertaken.

The courier collection service for Inner London postcodes operates on a 24/7 basis, as shown. Postcodes extending beyond to the M25 operate from 9.00am to 8.00pm. Outside the M25, and throughout the UK, sample collections are by arrangement and may incur courier charges.

TDL Collect Online Courier Booking is a time-saving option for arranging couriers for sample collection: **www.tdlpathology.com/services/tdl-collect/**

Please contact **couriers@tdlpatholgy.com** for your practice's secure login and password.

High-risk samples should be clearly labelled and packed separately from other samples.

TDL's couriers cannot transport samples containing Hazard Group 4 Pathogens such as Ebola Fever or Viral Haemorrhagic Fever.

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Use the TDL Collect Online Courier Booking service to arrange a courier for sample collection:

www.tdlpathology.com/services/tdl-collect/

Semen Analysis

Semen samples need specialist and Immediate handling within the laboratory. For this reason, all requests for Semen Analysis must be made by appointment. Practices or patients can make an online appointment at **www.tdlpathology.com/andrologybooking** or call **020 7025 7940** to make appointments and confirm instructions for sample collection. There is an attendance fee of £50.00.

- Patients must abstain from ejaculation for at least 2 days but not longer than 5 days before the test. Instructions will be given to patients at the time of arranging their appointment.
- Semen samples should be produced at The Doctors Laboratory, 76 Wimpole Street, unless there are exceptional circumstances. If there are exceptional circumstances please contact **TDL Andrology** on **020 7025 7940** for special arrangements and instructions. Refer to Andrology, see page 53.

Semen Analysis services are not provided in Manchester.

SCAN ME

To make an appointment for Semen Analysis online please visit:

www.tdlpathology.com/andrologybooking

Patient request form

To comply with good clinical practice it is important that there is one request form for each patient's request, and specimens and form are correctly matched, fully labelled, and include three unique patient identifiers and other relevant Information.

- First name, Surname, Date of birth, Hospital/Clinic Number, Medical Record Number (MRN) are examples of patient identifiers
- Time and Date of collection of samples
- Type of sample and Anatomical site, where appropriate (e.g. swabs)
- Relevant clinical information
- Relevant details of medication
- High-Risk Samples should be clearly identified on the form and individually packed separately from other samples
- Known cases of Hazard Group 4 pathogens such as Ebola or Viral Haemorrhagic Fever must NOT be sent to the laboratory. If there Is doubt about a patient's symptoms and presentation please contact the Imported Fever Service on 0844 778 8990 for advice before sending samples to TDL or any laboratory.

If additional tests are required for a sample already received please contact the laboratory on 020 7307 7373 with your request for specific further analysis. Samples are stored within timeframes according to their discipline. Laboratory staff will advise on the ability to undertake further testing from samples already received in the laboratory.

SCAN ME

Download TDL Request Forms from:

www.tdlpathology.com/tests/request-forms/

Emailed requests for add ons

The majority of samples received in the laboratory are kept for one week. If sample type and volume allow, further testing can be requested by telephone on **020 7307 7373** or by email to **addons@tdlpathology.com**. Please specify the details of the test(s) details to be added.

If requests for **Add ons** are made by email, the patient's details and **Laboratory Number** need to be referenced.

Home visits

This service is available for patients who, for whatever reason, prefer samples to be taken at home or at locations other than a doctor's practice or TDL's Patient Reception at 76 Wimpole Street, London. This is a service that is used regularly to save time for both doctors and patients and ensures that results can be made available before consultation is undertaken.

There is a visit fee from £120.00 to patients within the M25, and from £160.00 for children when two nurses need to attend. Home visits outside the M25, for weekends, bank holidays and night fees are by special arrangement. To arrange a Home Visit please telephone Patient Reception on **020 7307 7383** or email **homevisits@tdlpathology.com**.

Sample packing

Samples need to be transported for subsequent processing and testing. Transport systems will be various and cover both long or short distances.

Samples need to be collected and packed into appropriate sample containers provided by the laboratory in order to maintain integrity of the sample(s). Attention needs to be given to temperature, special transport containers and time limitations.

Clinics, practices and laboratories who are posting or transporting samples by air, sea, rail and road between local, regional and reference laboratories, or between laboratories in other countries, must adhere to a number of regulations. These regulations are designed to deal with transportation accidents and spills, reduce biohazards and keep samples intact for testing.

Regulations are given by several sources including:

- National transport regulations
- IATA
- Rail and road traffic agencies
- Postal services

Compliance is mandatory in order to reduce risk to couriers, carrier, laboratory staff and passengers.

Sample transport requirements are based on the category of samples being transported. Infectious substances are classified as Category A or Category B.

TDL does not arrange for transport of Category A samples (infectious substances capable of causing permanent disability or life-threatening or fatal disease to humans or animals).

Instruction and packaging for Category B is provided, covering Biological Substances, UN number UN 3373.

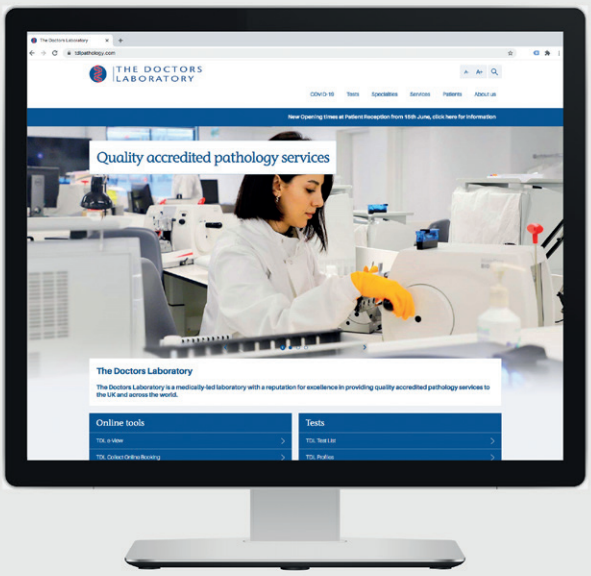
Packaging requirements

There are specific packaging instructions and labelling requirements requiring triple packaging.

- Primary leak-proof container – tube or vial containing the sample must be placed inside a ziplock specimen bag with absorbent material
- Secondary watertight container, with absorbent material, intended to protect the primary container
- Outer container protects the secondary container.

There are specific packaging instructions for frozen samples requiring shipment using BioFreeze bottles, or Dry Ice.

For information please contact the Referrals Dept (**ReferralsOffice@tdlpathology.com**).



TDL website

The TDL website gives updated details of our tests – sample types, turnaround times and special instructions. The Specialities section provides a new way to find tests you need, and a Services section has additional information for TDL Collect, Postal Pathology and TestGuide app. Reference Ranges can be requested by emailing **refranges@tdlpathology.com**. Full details of our tests and profiles are also available in the TDL TestGuide app.

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Find the latest details of tests, sample types, turnaround times, special instructions and request forms on the TDL website at:

www.tdlpathology.com

Postal pathology

Postal pathology services should be considered by all practices in the UK who need a rapid delivery service to the laboratory. Royal Mail require that ALL pathology postal packs are sent using Tracked 24 returns. This provides a particularly suitable method of transport for any healthcare organisation. Royal Mail postal pathology with Tracked 24 returns provides:

- Simple and convenient sample handling throughout the UK for most tests. It is not suitable for samples that need to be received within 24 hours of sample taking (eg coagulation, Quantiferon TBQ)
- Scope for large and small numbers of samples
- Next morning delivery
- Allows patients and practices to track samples through the Royal Mail system
- Samples can be posted from any Royal Mail post box, including COVID-19 antibodies
- There is a charge of £2.86 for each Royal Mail Tracked 24 pack. This charge will be itemised in monthly invoices to the practice or patient, as requested.

DX System

DX is a well known next-day courier of Category B specimens – transporting biological samples in compliance with the industry's highest regulations. DX is compliant to IATA regulations, is audited independently by Dangerous Goods Safety Advisors. They work with a combination of large health organisations and smaller, independent laboratories to ensure the safe delivery of specimens every year.

TDL's DX Address is **DX 340201, St Pancras 90 WC**.

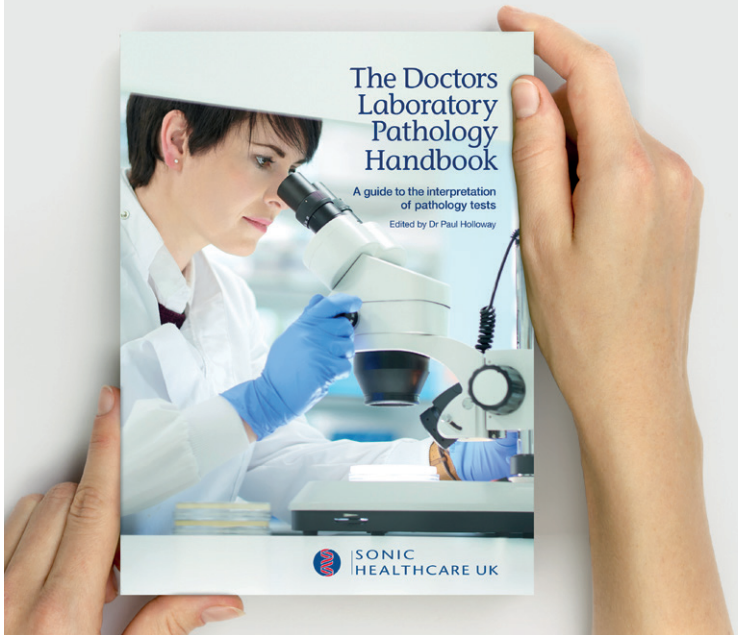
Pathology consumables / Request Forms / Postal packs

TDL Supplies Department provides all appropriate sample collection consumables required for sample collection. Orders will be dispatched on the same or next day and can be made by telephone on **020 7307 7373** or email to **supplies@tdlpathology.com**. A Supplies Order Form is available from the TDL website.

Download TDL Request Forms from:

www.tdlpathology.com/tests/request-forms/

SCAN ME



TDL Pathology Handbook

With more than 1000 entries and 1100 pages covering pathology tests, methods and disease conditions, the Handbook provides comprehensive detail about the range of tests and services offered by the laboratory. Email **handbook@tdlpathology.com** for more information. The Handbook is also available in the TDL TestGuide app.

Feedback for the Pathology Handbook is always welcome; please send suggestions and comments to **tdl@tdlpathology.com**.

Requesting and reporting options

We continually review and update our IT Services for receiving requests and reporting results electronically between practices and the laboratory. A number of innovative report formats are now available.

Encrypted Email

Results will be sent in encrypted format to any number of predetermined email addresses. Copy reports will be emailed automatically to email addresses on the system.

Link to Practice Management System

Bidirectional requests and results can be received and delivered electronically using a number of integrated practice systems. Practice software that accepts data in an HL7 format can be linked to securely receive results from the laboratory.

Security of information in TDL systems and processes is managed by our Information Security Management System, which is certified to the latest International Standard for Information Security ISO/IEC 27001:2013.

TDL eViewPlus

Registered users can view their results online anytime, from anywhere. This is a secure Login/Password protected system, with a cumulative results reporting function.

The same system provides the most accurate requesting option for clinics without a practice management system.

For information about eViewPlus please contact **eviewplus@tdlpathology.com**.

Printed Copy

Printed results will only be sent, as routine, if requested.

Emailed results incorporating your logo

If a practice or company receives results by email, and would like these to be personalised with the practice's logo, please email your company details and logo in GIF format to **logo@tdlpathology.com**.

TDL TestGuide app

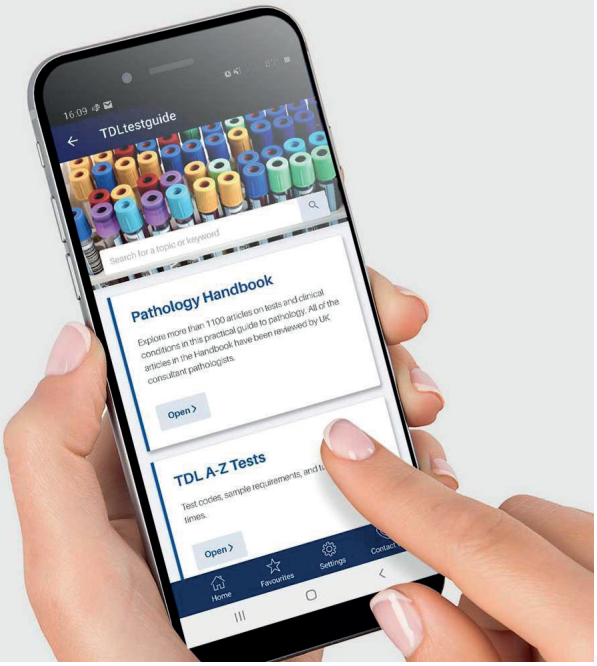
Available for iOS and Android, the TDL TestGuide app offers:

- Full details of TDL's tests and profiles
- The TDL Pathology Handbook, which provides information on more than 1000 pathology topics, reflecting our deep collective knowledge across all areas of pathology

The app can be downloaded from the Apple App Store or Google Play Store. To register for the app, you will just need your TDL Source Code and an email address.

Please contact **testguide@tdlpathology.com** if you need help with finding your Source Code.

Feedback for the TestGuide app is always welcome; please send suggestions and comments to **tdl@tdlpathology.com**.



Fees for pathology

Fees can be paid directly by patients or by the practice, clinic or requesting organisation. A payment instruction clearly identifying to whom invoices need to be sent must be given with each patient's request.

Patients are normally invoiced within 7 days to the address provided by the patient or practice. Their pathology fees include a standard credit/administration charge.

Receipts for insurance purposes are sent, if requested. Patients visiting Wimpole Street for sample-taking have the opportunity to settle their pathology fees at the time of their visit. A credit/administration fee is raised if invoices are sent to patients. All normal credit, debit or charge cards are accepted and payment can be made by following the telephone payment instructions given with each invoice.

The Terms and Conditions of Business appearing on pages 187-193 of this Laboratory Guide shall apply to the services we provide to you, unless otherwise agreed.

Protection of personally identifiable information

The General Data Protection Regulation (GDPR) came in to force in May 2018 and has had a significant impact upon the way that personal data is managed; placing legal requirements upon data processors and controllers to manage that information securely, maintain records of the processing that is carried out, and report when breaches of the regulation do occur. This has impacted the way many businesses operate, and is not restricted to the healthcare sector.

The GDPR requirements have been implemented within the context of a mature ISO 27001 Information Security Management System – the globally accepted standard by which information is secured.

This ensures that senior management have regular visibility of the threats to the confidentiality, availability and integrity of the information that we process, and are able to steer the efforts of their teams to provide an efficient service that places the confidentiality of our customers and their patients at the heart of everything we do.

In order to support our customers compliance with the regulation and as a part of a wider GDPR compliance project TDL has updated its standard terms and conditions to include revised data processing clauses, which are mandatory when providing personal data to another organisation.

TDL eViewPlus

Registered users can view their results online anytime, from anywhere. This is a secure Login/Password protected system, with a cumulative results reporting function.

The same system provides the most accurate requesting option for clinics without a practice management system.

For information about eViewPlus please contact **eviewplus@tdlpathology.com**.

Key contacts

24 HOUR TELEPHONE (MAIN SWITCHBOARD / ALL SERVICES): 020 7307 7373

CEO	**David Byrne**	david.byrne@tdlpathology.com
Group Commercial Director	**Brian Madden**	brian.madden@tdlpathology.com
Group Medical Director	**Dr Rachael Liebmann**	rachael.liebmann@tdlpathology.com
Group Laboratory Director	**Tim Herriman**	tim.herriman@tdlpathology.com
Director of Sales / Service	**Annette Wilkinson**	annette.wilkinson@tdlpathology.com
Director of Genetics & Molecular Pathology	**Dr Lisa Levett**	lisa.levett@tdlpathology.com
Chief Information Officer (IT)	**John Matthews**	john.matthews@tdlpathology.com

Heads of Support Departments

Group Laboratory Operations Manager	**Lisa Manze**	lisa.manze@tdlpathology.com
Director of Laboratory Compliance	**Cyril Taylor**	Cyril.taylor@tdlpathology.com
Director of Governance	**Emer Nestor**	emer.nestor@tdlpathology.com
Credit Control Manager	**William Howard**	william.howard@tdlpathology.com
Logistics / Couriers	**Steve Kettle**	steve.kettle@tdlpathology.com
Patient Reception	**Patient Reception**	patient.reception@tdlpathology.com
Call and Service Centre	**Chris Tanalega**	chris.tanalega@tdlpathology.com
IT Operations / Customer Service	**Rochelle Fakhri**	rochelle.fakhri@tdlpathology.com
Sample Reception	**Chanaide Butler**	chanaide.butler@tdlpathology.com
Referrals Department	**Maulik Trivedi**	maulik.trivedi@tdlpathology.com

Heads of Laboratory Departments (London)

Haem / Bio / Automated Pathology	**Naina Chavda**	naina.chavda@hslpathology.com
Microbiology/Infection Sciences	**Alan Spratt**	alan.spratt@tdlpathology.com
Andrology	**Andrew Dawkins**	andrew.dawkins@tdlpathology.com
Cervical Screening	**Margaret Morgan**	margaret.morgan@tdlpathology.com
Immunology/Virology	**Kushen Ramessur**	kushen.ramessur@tdlpathology.com
Cytogenetics	**Rebecca Watts**	rebecca.watts@hslpathology.com
Molecular Genetics	**Dr Stuart Liddle**	stuart.liddle@tdlpathology.com
TDL Trials	**Abraham Roodt**	abraham.roodt@tdlpathology.com

TDL Manchester

Operational Site Lead	**Diane Benson**	diane.benson@tdlpathology.com
Deputy Site Lead	**Andy Leeson**	andy.leeson@tdlpathology.com
SRA Manager	**Georgina Arnold**	georgina.arnold@tdlpathology.com
Quality Manager	**Carol Tonge**	carol.tonge@tdlpathology.com
Courier Control	**Marc Rennard**	marc.rennard@tdlpathology.com

Quality assurance

The Doctors Laboratory is committed to providing doctors with pathology of the highest quality.

The quality of results is of fundamental importance, and the laboratory operates to stringent technical and administrative standards.

Internal quality assurance is achieved by strict adherence to standard operating procedures for all analytical processes. TDL participates in recognised National External Quality Assessment Schemes; these schemes are subscribed to by NHS and private laboratories. The United Kingdom Accreditation Service (UKAS) provides accreditation to the internationally recognised ISO 15189 Medical Laboratories: Requirements for Quality and Competence standard. Results are subjected to strict internal and external quality control.

Details of the laboratories to whom TDL refers specialist testing are available from TDL Referrals. These laboratories are UKAS accredited or of equal accreditation status.

Quality Assurance is administered by TDL's Quality Management Group (QMG), who also adhere to regulatory and accreditation requirements.

BIOCHEMISTRY

UKNEQAS, WEQAS, RIQAS, BIORAD

ACE
AFP / CEA & HCG
Antibiotics (Gentamicin, Vancomycin and Amikacin)
Anti-Hbs Detection
Ammonia
Autoimmune (RF and TPO)
B2 Microglobulin
Cardiac Markers
Clinical Chemistry
CMV IgG / IgM
CRP & Ultra-Sensitive CRP
CSF
Cyclosporin and Tacrolimus
DEQAS
Diagnostic Serology Exanthem
Diagnostic Serology Hepatitis
Drugs of Abuse
Ethanol
Faecal Markers for Inflammation (Calprotectin)
Free Beta HCG and PAPP-A
GFR
Glucose / Glucometer
Glycated Haemoglobins
Guildford Peptides
Haematinics
Healthcontrol Therapeutic Drugs Screen (TDM)
Hepatitis A (with B and C)
Hepatitis B Serology
Hepatitis C Serology
HIV Serology
Homocysteine
HTLV
IGF-1
Immunity Screen
Lipase
Lipid Investigations
NT-Pro BNP
Paediatric Bilirubins
Parasitology
Peptide Hormones
PSA, Free PSA
PTH, ACTH and hCT
Rubella IgG Serology
Salicylate and Paracetamol
Specific Proteins
Steroid Hormones
Syphilis Serology
Thyroglobulin Surveys
Thyroid Hormones
Total IgE
Toxoplasma IgG / M Serology
Tumour Markers
Toxoplasma IgM Serology
Toxoplasma IgG Serology
Trace Elements
Urine Chemistry
Vitamin D (25 OH)

HAEMATOLOGY

UKNEQAS

Automated Differential Leucocyte Count
Blood Film Morphology
Coagulation (Including PoCT Coagulation)
EBV Mononucleosis
ESR and NRBC (nucleated Rbc)
Flow Cytometry
- Leukaemia immunophenotyping
- Myeloperoxidase
- Iron stain

Full Blood Count
Haematology
Haematology Analysis
Malaria
Parasite Films
Reticulocyte
Sickle Screening
Thrombophilia Screening
Blood Transfusion Laboratory Practice Scheme (BTLP)

Special Coagulation

Von Willebrand (vWD) screen
Anti-Xa assays
Plasma viscosities
ADAMTS-13 activity
ADAMTS-13 antibody
Heparin / Platelet Factor 4 Induced Antibodies

Quality assurance

Platelet function analysis (RCPA)

Lupus anticoagulant:

- Taipan Venom Time
- DRVVT assay

GENETICS AND MOLECULAR VIROLOGY

Molecular genetics

Acquired array (CLL/MDS)

Acute Lymphoblastic Leukaemia (ALL) – G banding and FISH

BCR ABL1 and AML Translocation Identification

BCR ABL1 Kinase Domain Variant

BCR ABL1 Major Quantification

BCR ABL1 Minor Quantification

BoBs Rapid Aneuploidy detection

BRAF p.Val600Glu (V600E) Mutation Status for Hairy Cell Leukaemia

Chlamydia & Gonorrhoea detection by PCR

Chronic Lymphocytic Leukaemia (CLL)

Constitutional Clinical Cytogenetics (Rounds for Amniocentesis, CVS, Solid Tissue, Blood, Array CGH)

Cystic Fibrosis

Duchenne/Becker Muscular Dystrophy

FLT3 Mutation Status

Haematological Technical FISH

Hereditary Haemochromotosis (C282Y+H63D) genotyping + reporting

HLA Class I (HLA-A, HLA-B, HLA-C) Tissue Typing (low resolution)

HLA Class II (HLA-DRB1, HLA-DQB1) Tissue Typing (low resolution)

HLA-B27 Genotyping

HLA-B57*01 Genotyping

HLA+ Disease Typing Cytochrome P450 2C19 genotyping

Human Papillomavirus DNA

IG/TCR Clonality Status

IGHV for CLL

Inborn Errors of Metabolism

JAK2 p.Val617Phe (V617F) Mutation Status

KIT p.Asp816Val (D816V) Mutation Status for Mast Cell Disease

Lymphoid Gene Panels

Lymphoma

Lymphoplasmacytic Lymphoma / Waldenstrom Macroglobulinaemia

Measurable Residual Disease for AML by Molecular Methods

Myeloid (AML/MDS/CML) – G-banding and FISH

Myeloid Gene Panels

Myeloma – sample FISH set up and analysis plus online

Myeloproliferative Neoplasms Diagnostic Testing

NGS AML gene panel

NGS Myeloid Target Panel

NIPT for aneuploidies and sexing

NMP1 Mutation Status

Paediatric Acute Leukaemia Translocations

Paternity Testing

Prader-Willi and Angelman Syndromes

QF-PCR Aneuploidy Detection

Sexually Transmitted Diseases (CT/NG/MGEN/TV/UU/UP)

Spinal Muscular Atrophy

Thrombophilia (Factor II, V, MTHFR)

TP53 for CLL

Y Microdeletion PCR Assay

Molecular virology

Adenovirus DNA Viral load

Bacterial 16S

B19 virus DNA Viral load

BK virus DNA Viral load

CMV DBS (dried blood spots)

CMV DNA Plasma Viral load

CMV DNA Whole Blood Viral load

CMV Resistance

EBV DNA Plasma Viral load

EBV DNA Whole Blood Viral load

Enterovirus RNA

Gastroenteritis Virus Panel

Hepatitis B Genotyping

Hepatitis B Drug Resistance Typing

Hepatitis B Viral Load

Hepatitis C genotyping

Hepatitis C Resistance genome detection (NS5a & b)

Hepatitis C Resistance Typing (NS3 & NS5a)

Hepatitis C Viral Load

Hepatitis D Virus Viral load and Qualitative PCR

Hepatitis E Virus Viral load and Qualitative PCR

HIV-1 Drug Resistance (Pol)

HIV-1 Drug Resistance (Integrase)

HIV-1 RNA Viral load and Qualitative PCR

HIV-1 DNA Genome Detection

HIV-1 Tropism Genome Detection

HSV 1&2 DNA

HSV 1&2 DNA HSV Drug Resistance

Human Herpes virus 6 DNA

Influenza Haemagglutinin typing

JC virus DNA

Measles and Mumps PCR

MERS Coronavirus

Parechovirus RNA

Respiratory panel I

Respiratory panel II

SARS-CoV-2 (COVID-19) PCR/NAAT

SARS-CoV-2 Variants of Concern (VOC) sequencing

Syphilis PCR

Transplantation Virus Panel

VZV DNA

MICROBIOLOGY

Laboratory Quality Scheme

Helicobacter pylori antigen from faeces

Polarising crystal microscopy from synovial fluid

Streptococcus pyogenes (Group A) detection in pharyngeal samples

Surveillance for multi drug resistant bacteria

Blood culture and gram stain

Candida PCR

Mycoplasma PCR

Aspergillus PCR

UKNEQAS

Clostridium difficile detection and toxin testing

Faecal parasites

General bacteriology
Genital pathogens
MRSA screening
Microbial susceptibilities
Mycobacterial microscopy
Mycobacterial culture and molecular detection
Antifungal assays
Antifungal susceptibilities
Cryptococcal antigen
Fungal culture
Fungal biomarkers
Urinary antigen

WEQAS POCT

Urinalysis

QCMD

Dermatophyte PCR
PCP PCR
Atypical pneumoniae PCR

IMMUNOLOGY

UKNEQAS – General Immunology

Allergen Component Testing
Autoimmune Serology ANCA/GBM Antibodies
Bullous Dermatosis Antibodies
Allergen Specific IgE Antibodies
General Autoimmune Serology
Anti-Phospholipid Antibodies (B2GP)
Nuclear and Related Antigens
IGRA (Interferon gamma release assay)
Intrinsic Factor Antibodies
Diabetic Marker (Islet Cell Antibodies)
Myositis Associated Antibodies
Specific Microbial Antibodies
C1 Esterase inhibitor and functional complement
Syphilis (TPPA and RPR)
Lyme (IgG + IgM)
Hepatitis C
Hepatitis E (IgG and IgM)
Coeliac Disease (Endomysium, Tissue transglutaminase)
Triptase

UKNEQAS – Infectious Immunology

HIV Serology / POCT
Immunity Screen – VZV, Parvo Viruse, EBV
Chlamydia Detect
Varicella Zoster (IgG) Serology
Parasite Serology
Chlamydia & Gonorrhoea (NAAT / PCR)
Hepatitis E

RIQAS Scheme

Procalcitonin

RCPAQAP Scheme

Legionella (IgG) Serology
Striated Muscle Antibodies
Chlamydia Serology

INSTAND Scheme

Adrenal Antibodies
Hepatitis E Serology
RNAP Antibodies

CSCQ Scheme

Lyme Borrelia Serology

Laboratory Quality Scheme

Herpes Simplex 1 & 2 Antibodies
Cytomegalovirus Antibodies
Antistreptolysin O Titre
Helicobacter Pylori IgG Antibodies
RNA Polymerase III
Euroimmun ifQ-Lubeck (Liver) Autoimmune Disease Scheme

ENDOCRINOLOGY

UKNEQAS

Steroid Hormones
Peptide Schemes 1 to 4
Thyroid Scheme
Allergens Scheme
SHBG
Prostate Specific Antigen
Tumour Markers
PTH
Specific IgE / Total IgE
AFP / CEA

CERVICAL SCREENING

PHE

Gynaecological Cytopathology EQA Scheme (GEQA)
National EQA Scheme for the Preparation and Staining of Cervical Liquid Based Cytology Samples (TEQA)

HOLOGIC

ThinPrep Stain EQA

UKNEQAS for Microbiology

Molecular Detection of HPV
HIV Serology

DIAGNOSTIC CYTOLOGY

UKNEQAS for CPT

Stained Non-Gynaecological Cytology Module.
All non-gynaecological (diagnostic cytology), including Urine Cytology, are referred to a UKAS accredited laboratory for reporting.

ANDROLOGY

UKNEQAS

Semen Analysis Scheme

INFORMATION SECURITY

Accredited by British Standards Institute ISO/IEC 27001:2013

Links to the UKAS Schedules of Accreditation

HSL Blood Sciences (8169)
https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8169-Medical-Single.pdf

HSL Infection Sciences (8860)
https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8860-Medical-Single.pdf

HSL Molecular Pathology and Genetics (8059)
https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8059-Medical-Single.pdf

TDL Manchester (8812)
https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8812-Medical-Multiple.pdf

TDL Andrology (10199)
https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/10199-Medical-Single.pdf

HSL Cervical Screening (8511)
https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8511-Medical-Single.pdf

Measurement Uncertainty

Medical laboratories are responsible for ensuring that test results are fit for clinical application by defining analytical performance goals and selecting appropriate measurement procedures. All types of measurement have some inaccuracy due to bias and imprecision; therefore measurement results can only be estimates of the values of the quantities being measured. To properly use such results, medical laboratories and their clinical users need some knowledge of the accuracy of such estimates.

The complete result of a measurement is a value, a unit and an estimate of uncertainty. This estimate of uncertainty is conventionally referred to as Measurement Uncertainty (MU) and incorporates the cumulative range of factors involved in the testing procedure itself in addition to consideration of the inter-individual and intra-individual biological variation which will potentially influence the overall test result. Evaluating measurement uncertainty is an ISO 15189:2012 accreditation requirement.

In terms of MU determined by the TDL/HSL group of laboratories, it should be noted all assays are performed in strict accordance with the manufacturers' instructions. MU, which has been estimated for each assay during the verification procedure, is reviewed at regular intervals to ensure that MU values do not exceed the pre-defined maximum allowable uncertainty for each assay.

Overall assay performance is also regularly monitored through internal quality control (IQC) and external quality assessment (EQA) schemes and incorporated in test result interpretation. MU for individual assays is available upon request.

Sample Rejection Criteria

Sometimes tests cannot be performed in the laboratory if samples fall short of the quality, volume or other eligibility criteria. In these cases, the laboratory may need to reject the samples, and not carry out processing. Sometimes the laboratory is able to rectify a situation – and although turnaround times may be affected, it avoids having to arrange for samples to be taken again.

Summary List for Sample Rejection

- Incorrect sample types received:
  - Basic incorrect blood tube/other sample.
  - Samples without the appropriate preservative (e.g. acidified urine samples).
  - Samples that are received ambient, when a frozen sample is required.
  - Samples that are received unprotected from light, when they are required to be covered at the point of venepuncture.
- Samples in incorrect containers (e.g. cervical cytology must be a ThinPrep vial; urine cytology must be in a uricyte container).
- Insufficient sample received.
- No sample received.
- Labelling or form issues (mislabelled/unlabelled/no forms/no clinical information).

- Clotted / haemolysed / lipaemic / icteric samples.
- Sample is broken or has leaked in transit.
- Stability time has been exceeded. Stability time is test dependant, and also refers to tests that can only be carried out on certain days of the week.
- Sample contamination (e.g. being in the same bag as a leaking sample).
- Samples are high risk or infectious.
- Samples that are received in expired tubes.

Department Specific

- Sample Reception will not accept samples packaged with needles of any kind.
- Haematology cannot accept frozen whole blood for testing.
- Coagulation cannot accept over or under filled samples for testing.
- Coagulation cannot accept previously frozen samples that have thawed in transit.
- Biochemistry cannot accept previously frozen samples that have thawed in transit.
- Biochemistry cannot accept samples that display antibody interference.
- Biochemistry cannot accept samples that have had separation delays/un-centrifuged samples that have been stored in the fridge.
- Biochemistry cannot accept paraprotein resulting in viscous samples.
- Biochemistry cannot accept CSF protein that is blood stained.
- Immunology cannot accept TBQ kits that:
  - Do not contain all of the appropriate tubes.
  - Are incubated for more than the specified 16 hours.
  - Have passed the incubation time period.
  - Are over or under filled.
- Microbiology cannot accept samples in non-sterile containers or in formalin.
- Referrals cannot accept samples without three points of identification for DRP testing.
- Referrals cannot accept samples that are not labelled by hand for blood group testing.
- Molecular Pathology cannot accept samples for Haemophilia testing without informed consent.
- Cervical Cytology cannot accept over or under filled samples for testing.
- Cervical Cytology cannot accept samples received within three months of the previous test in order to allow epithelial cells to regenerate.
- Urine cytology cannot accept delayed samples unless they have been refrigerated.

Samples deemed to be PRECIOUS (e.g. CSF, fluid, tissue, bone marrow and paediatric samples) will not be discarded by the laboratory. Results will include a comment relating to the condition of the sample (e.g. sample unlabelled).

Consultant advice and opinion

Each department in the laboratory is consultant led. The TDL Consultants listed below have defined areas of cover and so for doctors wanting clinical advice or professional support, TDL consultants can be contacted via the laboratory.

TDL Lead Consultants

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Special instructions for samples

1 Contact the laboratory for special sample tubes/containers/instructions.

2 Confirmation of not negative drug screens by LCMS/MS may take up to 5 days.

3 Clinical history essential and protect from light.

4 Send to the laboratory without delay.

5 Do not send sample to the laboratory between Friday noon and Monday morning.

6 Contact the Referrals Department before taking and sending sample to the laboratory.

7 Sample should be separated and frozen if sending overnight.

8 DRP Form required. DRP Form can be found at the back of the guide.

9 Clinical history must be provided.

10 Contact the laboratory for special stability tubes for lymphocyte subsets – or take an EDTA sample and ensure same day delivery to the laboratory, Monday to Friday noon (do not send sample between Friday noon and Monday morning).

11 Patient consent required. Consent Form can be found at the back of this guide.

12 Please provide one sample for each person being tested.

13 Protect from light.

14 Provide details of travel history.

15 Ammonia

Sample: EDTA plasma only. Full tubes and tightly stoppered. On ice, centrifuged and analysed 20-30 mins post venepuncture (or plasma can be frozen). If haemolysed gives falsely high results.

Patient: Fasting. Avoid smoking.

16 Lactate

Sample: Fluoride oxalate plasma only. On ice and separate from cells 15-30 mins, analyse promptly. Handle with care as sweat contains large amounts of lactate. No tourniquet.

Patient: Rest 30 mins prior to test.

17 Homocysteine

Should be spun and separated with 1 hour of venepuncture.

18 Citrate Samples

Samples should be double spun and separated and frozen within 4-8 hours of sample taking, if a delay is expected with transportation to the laboratory, samples must be transported as frozen.

19 Must include patient's age, height and weight.

20 Sample types: FCRU or PCR swab or TPV or Semen.

21 Urine cytology container, ideally first catch, mid-morning specimen.

22 Must be fresh.

30 Collect sample at end of exposure.

33 Sample must be labelled by hand with first name, family name, gender and date of birth detailed on sample and form. Do not use labels other than the tube label.

34 Samples must arrive in the laboratory on the same day of sample taking or contact the laboratory.

35 Patient should be fasting and resting for 30 mins before sample taking. Samples need handling urgently.

36 Renin: Sample collected either upright / active or resting /supine (3 hours lying).

37 Provide sample time and date of collection.

38 EDTA sample should not be separated: send whole blood.

39 Urgent samples have a 3 day TAT if genotype is required for prenatal diagnosis or two weeks TAT if urgent for other factors.

40 Informed Consent is required for these tests.

41 Recommendation for patient to attend Patient Reception for sample taking.

42 LGV can be added to a positive chlamydia sample using the same swab if requested within 4 days of receipt of result.

43 Please contact lisa.levett@tdlpathology.com for details for referring samples to the laboratory for sequencing testing.

TDL Screening Profiles DL1-DL12

DL1 Biochemistry Profile

Urea and Electrolytes: Sodium, Potassium, Chloride, Bicarbonate, Urea, Creatinine, eGFR

Liver Function Tests: Bilirubin, Alk Phos, AST, ALT, Gamma GT, Total Protein, Albumin, Globulin

Cardiac/Muscle Enzymes: LDH, CK

Bone Markers: Calcium, Phosphate, Uric Acid

Glucose
Triglycerides
Cholesterol
Iron
Total Iron Binding

TAT: 4 hours

DL1

DL1L
As DL1 plus HDL Cholesterol, LDL Cholesterol, Non-HDL Cholesterol

B G

DL2 Biochemistry (24 Parameters) & Haematology Profile

HAEMATOLOGY
FBC with 5-part Diff, ESR

BIOCHEMISTRY

Urea and Electrolytes: Sodium, Potassium, Chloride, Bicarbonate, Urea, Creatinine, eGFR

Liver Function Tests: Bilirubin, Alk Phos, AST, ALT, Gamma GT, Total Protein, Albumin, Globulin

Cardiac/Muscle Enzymes: LDH, CK

Bone Markers: Calcium, Phosphate, Uric Acid

Glucose
Triglycerides
Cholesterol
Iron
Total Iron Binding

TAT: 4 hours

DL2

DL2L
As DL2 plus HDL Cholesterol, LDL Cholesterol, Non-HDL Cholesterol

A B G

DL3 Haematology Profile

FBC with 5-part Diff
ESR

TAT: 4 hours

DL3

A

DL4 Biochemistry (16 Parameters) & Haematology Profile

HAEMATOLOGY
FBC with 5-part Diff, ESR

BIOCHEMISTRY

Renal Function: Urea, Creatinine, eGFR

Liver Function Tests: Bilirubin, Alk Phos, AST, ALT, Gamma GT, Total Protein, Albumin, Globulin

Bone Markers: Calcium, Phosphate, Uric Acid

Glucose
Triglycerides
Cholesterol

TAT: 4 hours

DL4

DL4L
As DL4 plus HDL Cholesterol, LDL Cholesterol, Non-HDL Cholesterol

A B G

DL5 Biochemistry & Haematology Postal Profile

HAEMATOLOGY
FBC with 5-part Diff

BIOCHEMISTRY

Renal Function: Urea, Creatinine, eGFR

Liver Function Tests: Bilirubin, Alk Phos, AST, ALT, Gamma GT, Total Protein, Albumin, Globulin

Bone Markers: Calcium, Uric Acid

Glucose
Triglycerides
Cholesterol

DL5/DL5L do not include ESR and Phosphate as these results may be more affected by overnight transit times.

TAT: 4 hours

DL5

DL5L
As DL5 plus HDL Cholesterol, LDL Cholesterol, Non-HDL Cholesterol

A B G

DL6 General Well Person Profile

DL2
FT4/TSH
Ferritin

TAT: 4 hours

DL6

DL6L
As DL6 plus HDL Cholesterol, LDL Cholesterol, Non-HDL Cholesterol

A B G

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DL7 Well Man Profile

DL2
FT4/TSH
Ferritin
Prostate Profile

TAT: 4 hours

DL7

DL7L
As DL7 plus HDL Cholesterol,
LDL Cholesterol,
Non-HDL Cholesterol

A B G

DL8 Well Person Profile

DL2
FT4/TSH
Ferritin
Vitamin D

TAT: 4 hours

DL8

DL8L
As DL8 plus HDL Cholesterol,
LDL Cholesterol,
Non-HDL Cholesterol

A B G

DL9F Senior Female Profile 60+

CHANGE
DL2
HDL/LDL Cholesterol
HbA1C
FT4/TSH
CRP
Ferritin
MSU
Vitamin D (25 OH)
HE4
Lp-PLA2 (PLAC) Test

TAT: 2 days

DL9F

A B B G **RU** [4]

DL9M Senior Male Profile 60+

CHANGE
DL2
HDL/LDL Cholesterol
HbA1C
FT4/TSH
Prostate Profile
CRP
Ferritin
MSU
Vitamin D (25 OH)
Lp-PLA2 (PLAC) Test

TAT: 2 days

DL9M

A B B G **RU** [4]

DL10 Cardiovascular Risk Profile 1

Cholesterol
Triglycerides
HDL Cholesterol
LDL Cholesterol
Non-HDL Cholesterol
Apolipoprotein A
Apolipoprotein B
Lipoprotein (a)
hsCRP
Lp-PLA2 (PLAC) Test

TAT: 3 days

DL10

B B

DL11 Cardiovascular Risk Profile 2

Cholesterol
Triglycerides
HDL Cholesterol
LDL Cholesterol
Non-HDL Cholesterol
Apolipoprotein A
Apolipoprotein B
Lipoprotein (a)
Fibrinogen
hsCRP
Lp-PLA2 (PLAC) Test
Homocysteine

TAT: 3 days

DL11

B B B C [34]

DL12 7 STI Profile by PCR (7 PCR Tests from 1 Sample)

Chlamydia trachomatis
Neisseria gonorrhoea
Mycoplasma genitalium
Ureaplasma species
Trichomonas vaginalis
Gardnerella vaginali
Herpes Simplex I/II

All tests can be requested individually

TAT: 2 days

DL12

FCRU / PCR Swab / TPV
or Aptima urine or multisite swab

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
5 HIAA	RU5H	**PU** [1]	5 days
5' Nucleotidase	5NT	B	5 days
6-Thioguanine Nucleotides	TGN	A A	2 weeks
21 Hydroxylase Ab's	21HA	B (Frozen)	10 days
Acetylcholine Receptor Autoantibodies	ACRA	B [4]	5 days
Acid Phosphatase – Total	APT	B	5 days
Adenosine Deaminase	AD	A / B / **Fluid**	3 weeks
Adiponectin	ADIP	B	2 weeks
Albumin	ALB	B	4 hours
Alcohol (Medical) [Do not use alcohol swab prior to sample taking]	ALCO	G [1]	4 hours
Alcohol (Urine)	UALC	**RU**	4 hours
Aldolase	ALDO	B	5 days
Alk Phosphatase Isoenzymes	APIE	B	5 days
Alkaline Phosphatase	ALP	B	4 hours
Alpha Feto Protein (Maternal)	AFPM	B	4 hours
Alpha-1-Antitrypsin (Serum)	A1AT	B	1 day
Alpha-1-Antitrypsin (Stool)	A1AF	**RF**	10 days
Alpha-1-Antitrypsin Genotype – PI*M, PI*S, PI*Z **Requires patient informed consent.**	GENE	A [9]	5 weeks
Alpha-1-Glycoprotein	OROS	B (Frozen)	5 days
Alpha-1-Microglobulin	A1MG	**RU** [1,22]	10 days
Alpha-2-Macroglobulins	A2MG	B	5 days
ALT (Alanine Aminotransferase) (SGPT)	ALT	B	4 hours
Aluminium (Blood)	ALUM	K	7 days
Amino Acid (Serum/Plasma)	AMIN	B	7 days
Amino Acid Quantitative (Urine)	UAAQ	**RU**	7 days
Amino-Laevulinic Acid (Urine)	RUAL	100mls **PU**	5 days
Ammonia	AMMO	A (Frozen) [15]	4 hours
Amylase	AMY	B	4 hours
Amylase (Self-collect) See page 131 for more information	AMY	B (TDL Tiny)	1 day
Amylase (Urine)	UAMY	**CU**	4 hours
Amylase Isoenzymes	AMYI	B	5 days
Amyloidosis (Amyloid A Protein)	SAA	B	5 days
Androstanediolglucoronide	ANDG	B	3 weeks
Angiotensin II	ANG2	A (Frozen)	2 weeks
Angiotensin Converting Enzyme	ACE	B	4 hours
Angiotensin Converting Enzyme – CSF	ACEF	**CSF** (Frozen)	2 weeks
Antimony (Urine)	ANTI	**RU** [30]	10 days

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TEST	CODE	SAMPLE REQS	TAT
Antimullerian Hormone (AMH Plus)	AMH	B	4 hours
Antimullerian Hormone (AMH Plus) (Self-collect) See page 131 for more information	AMH	B (TDL Tiny)	1 day
AP50 Alternative Hemolytic Complement	AP50	B (Frozen)	2 weeks
Apolipoprotein A1	APOA	B	3 days
Apolipoprotein B	APOB	B	3 days
Apolipoprotein C	APOC	B	3 months
Apolipoprotein E (12 hours fasting)	APOE	B (fasting)	5 days
Arsenic (Blood)	ARS	A or H	5 days
Arsenic (Urine)	ARSE	**RU** [30]	5 days
Arylsulphatase A	ARYL	H [5,6]	8 weeks
Aspartate Transaminase (AST) (SGOT)	AST	B	4 hours
Bence-Jones Protein	RBJP	1 x 30mls (**RU**)	5 days
Beta 2 Microglobulin (Serum)	B2MG	B	2 days
Beta 2 Microglobulin (Urine)	UB2M	**RU**	3 days
Beta-Glucuronidase (Sly Disease)	BGLU	H H [9,4]	8 weeks
Bicarbonate	HCO3	B	4 hours
Bile Acids – Serum	BILE	B	4 hours
Bilirubin (Direct/Indirect)	DBIL	B	4 hours
Bilirubin (Total)	BILI	B	4 hours
Bilirubin (Urine)	UBIL	**RU**	1 day
Biotinidase	BIOT	H (Frozen plasma) [4]	3 weeks
Bismuth	BISM	B	5 days
BNP (NT-pro BNP)	BNP	B	4 hours
Bone Alkaline Phosphatase	BALP	B (Frozen)	2 weeks
Bone Screen	BONE	B **CU**	4 hours
Bone Screen (Bloods only)	BON2	B	4 hours
BUN (Blood Urea Nitrogen)	BUN	B	4 hours
C Reactive Protein (Self-collect) See page 131 for more information	CRP	B (TDL Tiny)	1 day
C Reactive Protein	CRP	B	4 hours
C Reactive Protein (High Sensitivity)	HCRP	B	4 hours
C Reactive Protein (High Sensitivity) (Self-collect) See page 131 for more information	HCRP	B (TDL Tiny)	1 day
C1 Esterase: Function & Total	FC1E	C C (Plasma Frozen) [4,18]	10 days
C1q Binding Immune Complex	IMCP	B	5 days
Cadmium (Blood)	CADM	A or H	5 days
Cadmium (Urine)	URCD	**RU** [30]	5 days
Calcium	CA	B	4 hours

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Calcium (24 hour Urine)	UCA	**PU**	4 hours
Calcium (Self-collect) See page 131 for more information	CA	B (TDL Tiny)	1 day
Calcium + Vitamin D (Self-collect) See page 131 for more information	CALD	B (TDL Tiny)	1 day
Calcium + Vitamin D	CALD	B	1 day
Calcium/Creatinine Ratio	CACR	**RU** B	4 hours
Carbohydrate Deficient Glycoprotein	CDG	B	2 weeks
Carbohydrate Deficient Transferrin (CDT)	CDT	B [4]	3 days
Cardiac Enzymes (not chest pain)	CENZ	B	4 hours
Cardiovascular Risk Profile 1	PP10	B B	3 days
Cardiovascular Risk Profile 2	PP11	B B B C [34]	3 days
Ceruloplasmin	CERU	B	1 day
Chest Pain Profile	CPP	B	STAT
Chloride	CL	B	4 hours
Cholesterol	CHO	B	4 hours
Cholesterol (Familial Hypercholesterolaemia) **Requires patient informed consent.**	GENE	A A [9]	7 weeks
Cholinesterase (Serum/Pseudo)	CHPS	B	4 hours
Chromium (Blood)	CHRO	A	5 days
Chromium (Urine)	URCR	**RU** [30]	10 days
Chromogranin A	CGA	B	5 days
Chromogranin A & B	MTAB	**J** [1]	3 weeks
Citrate (Blood)	CITR	B	5 days
Citrate (Urine)	UCIT	**CU** (Frozen)	5 days
CK (MB Fraction)	CKMB	B	4 hours
CK Isoenzymes	CKIE	B	5 days
Cobalt (Blood)	COB	A	5 days
Cobalt (Serum)	COBB	B	5 days
Cobalt (Urine)	COBA	**RU** [30]	5 days
Coenzyme Q10	CQ10	B	2 weeks
Cold Agglutinin	CAGG	**J** [1]	5 days
Collagen (Type I, II, IV) Antibodies	COAB	B	10 days
Collagen Type 1 Cross-Linked N-Telopeptide – NTX	NTX	**2nd EMU**	2 weeks
Complement C1q	C1Q	B	5 days
Complement C2	C2	B	10 days
Complement C5	C5A	B	2 weeks
Complement C6	C6	B (Frozen)*	5 weeks

* Separate and freeze within 2 hours after collection.

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TEST	CODE	SAMPLE REQS	TAT
Complement C7 * Separate and freeze within 2 hours after collection.	C7	B (Frozen)*	5 weeks
Complement C8 * Separate and freeze within 2 hours after collection.	C8	B (Frozen)*	5 weeks
Complement C9 * Separate and freeze within 2 hours after collection.	C9	B (Frozen)*	5 weeks
Complement Factor H	FACH	B	3 weeks
Copper (Serum)	COPP	B	5 days
Copper (Urine)	URCU	**CU**	5 days
Cortisol Binding Globulin	CBG	B (Frozen)	1 month
Cotinine (Urine)	COTT	**RU**	2 days
Creatine Kinase (CK, CPK)	CKNA	B	4 hours
Creatinine	CREA	B	4 hours
Creatinine (Urine)	UCR	**CU**	4 hours
Creatinine Clearance	CRCL	B **CU**	4 hours
Crosslaps (Serum DPD)	SDPD	B (Freeze within 24 hours)	4 days
Cryoglobulins	CRYO	**J** [6]	10 days
Cyclosporin (Monoclonal)	CYCL	A	1 day
Cystatin C	CYCC	B	5 days
Cystine – Quantitative (Beta-CTX)	QCYS	**PU**	5 days
Deoxypyridinoline (DPD) – Serum	SDPD	B (Freeze within 24 hours)	4 days
Deoxypyridinoline (DPD) – Urine	DPD	**EMU**	4 days
Diabetic Profile 1	DIAB	A G	8 hours
Diabetic Profile 2	DIA2	A G **RU**	2 days
Diamine Oxidase Activity	DIAM	B	2 weeks
Elastase (Faecal)	ELAS	**RF**	5 days
Elastase, Faecal (Self-collect) See page 131 for more information	ELAS	Universal faecal container	5 days
Electrolytes	ELEC	B	4 hours
Electrolytes (Urine)	UELE	**CU**	4 hours
ELF/Enhanced Liver Fibrosis	ELF	B	5-7 days
Eosinophil Cationic Protein	ECP	B	7 days
Faecal Elastase	ELAS	**RF**	5 days
Faecal Fat (1 Day Collection)	TFFA	**LF** [6]	5 days
Faecal Fat (3 day)	FFAT	**LF** [6]	5 days
Faecal Lactoferrin	FLAC	**RF**	5 days
Faecal Sugar Chromatography	FCRO	**RF** (Frozen)	3 weeks
Fat Globules in Faeces	FGLO	**RF**	1 week
Ferritin	FERR	B	4 hours

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Ferritin (Self-collect) See page 131 for more information	FERR	B (TDL Tiny)	1 day
Fibrotest (Liver Fibrosis)	FIBT	B	2 weeks
Fluoride (Urine)	UFL	**RU**	5 days
Folate (Red Cell)	RBCF	A	2 days
Folate (Serum)	FOLA	B	1 day
Free Fatty Acids	FFA	B (Frozen) [1]	10 days
Fructosamine	FRUC	B	1 day
Galactose-1-Phosphate Uridyltransferase	GAL1	H [5,6]	2 weeks
Galactosidase – Alpha* *Sample must reach TDL Referrals Dept. urgently, to be tested within 24 hours of collection. **Monday–Thursday only**. Referrals to send Immediately.	GALA	**J***	6 weeks
Gall Stone Analysis	RSTA	**STONE**	10 days
Gamma GT	GGT	B	4 hours
Gastrin	GAST	B (Frozen)	5 days
Globulin	GLOB	B	4 hours
Glucagon	GLUG	**J** [1]	10 days
Glucose	RBG	G	4 hours
Haemochromatosis – HFE common variants C282Y + H63D	HMD	A [9]	3 days
Haemosiderin (Urine)	HSID	**EMU**	2 weeks
Haptoglobin	HAPT	B	5 days
HbA1c	GHB	A	6 hours
HbA1c (Self-collect) See page 131 for more information	GHB	A (TDL Tiny)	1 day
HDL Cholesterol	HDL	B	4 hours
Homocysteine (Quantitative)	HOMO	B [17]	1 day
Homocysteine (Urine)	HCYS	**CU**	2 weeks
Homovanillic Acid (HVA)	HVA	**PU**	5 days
Hyaluronic Acid	AHT	B	1 week
Hydroxybutyrate Dehydrogenase	HBD	B (Frozen)	1 week
Hydroxyprolene	UHYD	**CU**	2 weeks
IgG Subclasses	IGSC	B	4 days
Immunoglobulin A	IGA	B	4 hours
Immunoglobulin D	IGD	B	5 days
Immunoglobulin E – Total	IGE	B	1 day
Immunoglobulin G	IGG	B	4 hours
Immunoglobulin M	IGM	B	4 hours
Immunoglobulins (IgG, IgM, IgA)	IMM	B	4 hours
Insulin-Like Growth Factor 2	IGF2	B [6]	1 month
Iodide – Urine	UIOD	**RU**	1 week

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TEST	CODE	SAMPLE REQS	TAT
Iodine – Serum	IODI	B	1 week
Ionised Calcium	ICPA	B	5 days
Iron (TIBC included)	FE	B	4 hours
Iron (TIBC included) (Self-collect) See page 131 for more information	FE	B (TDL Tiny)	1 day
Iron Overload Profile	IOP	A B [9]	3 days
Iron Status Profile	ISP	B	4 hours
Iron Status Profile (Self-collect) See page 131 for more information	ISP	B (TDL Tiny)	1 day
Lactate (Plasma)	LACT	G [16]	1 day
Lactate Dehydrogenase (LDH)	LDH	B	4 hours
Lactate Pyruvate Ratio	LPR	**J** [1]	4-6 weeks
Lactose Tolerance Test Collection time (minutes post-glucose): Contact 020 7025 7997 (Phlebotomy).	LTT	By appointment only	1 day
LDH Isoenzymes	ISOL	B	5 days
LDL7 Subfractions	LDL7	B	10 days
Lead (Blood)	LEAD	A	5 days
Lead (Urine)	URPB	**RU**	5 days
Leptin	LEPT	B [19]	5 days
Lipase	LIPA	B	4 hours
Lipase (Self-collect) See page 131 for more information	LIPA	B (TDL Tiny)	1 day
Lipid Profile	LIPP	B	4 hours
Lipid Profile (Self-collect) See page 131 for more information	LIPP	B (TDL Tiny)	1 day
Lipoprotein (a)	LPOA	B	4 hours
Lipoprotein (a) (Self-collect) See page 131 for more information	LPOA	B (TDL Tiny)	1 day
Lipoprotein Electrophoresis	LEL	B	5 days
Lithium (take 12 hours after dose)	LITH	B	4 hours
Liver Fibrosis (Enhanced Liver Fibrosis ELF)	ELF	B	5-7 days
Liver Fibrosis Fibrotest	FIBT	B	2 weeks
Liver Function Tests	LFT	B	4 hours
Liver Function Tests (Self-collect) See page 131 for more information	LFT	B (TDL Tiny)	1 day
Lp-PLA2 (PLAC) Test	PLA2	B	2 days
Lysosomal Enzyme Screen	LE	H H [6]	2 months
Lysozyme	LYSO	B	5 days
Magnesium (Serum)	MG	B	4 hours
Magnesium (Urine)	URMG	**PU**	1 day

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Manganese (Serum)	MANG	B	5 days
Mannose Binding Lectin	MBL	B	3 weeks
Mercury (Blood)	MERC	A or H	5 days
Mercury (Urine)	URHG	**RU** [1]	5 days
Methaemoglobin	METH	A	3 days
Methaqualone	METQ	**RU**	5 days
Methylmalonic Acid – Serum	MMAS	B	5 days
Methylmalonic Acid – Urine	MMA	**CU**	2 weeks
Microalbumin (Urine)	UMA	**RU**	4 hours
Mucopolysaccharides	MPS	**RU** (Frozen)	3 weeks
Myeloma Screen	MYEL	A B G **RU**	5 days
Myoglobin (Serum)	SMYO	B	4 hours
Myoglobin (Urine)	UMYO	**RU**	5-10 days
Newborn Screening Panel	GUTH	**J** [1]	2 weeks
Nickel (Serum)	NICK	B	5 days
Nickel (Urine)	NICU	**RU**	10 days
Oligosaccharides	UOLI	**RU**	6 weeks
Orosomucoid (A1AG – Alpha 1 Glycoprotein)	OROS	B (Frozen)	5 days
Osmolality (Serum)	OSMO	B	1 day
Osmolality (Urine)	ROSM	**RU**	1 day
Osteoporosis Screen	OPS	B B	4 days
Oxalate (Plasma)	POXA	A (Frozen)	7 days
Oxalate (Urine)	UOXA	**PU**	5 days
Pancreatic Peptide	PP	**J**	4 weeks
Parathyroid Related Peptide	PTRP	2ml A Plasma frozen (Freeze immediately) [1]	2 weeks
PEth (Phosphatidylethanol)	PETH	A [38]	5-7 days
Phencyclidine (PCP)	DUST	**RU**	5 days
Phosphate	PHOS	B	4 hours
Phosphate (24 hour Urine)	UPH	**PU**	4 hours
PLAC Test (Lp-PLA2)	PLA2	B	2 days
Plasminogen	PLAS	C (Frozen plasma) [4]	5 days
Plasminogen Activator Inhibitor – 1	PAI1	C (Frozen plasma)	2 weeks
Porphyrin (Blood)	PORP	A [3]	15 days
Porphyrin (Stool)	FPOR	**RF** [3]	3 weeks
Porphyrin (Urine)	RPOR	**RU** [3]	3 weeks
Porphyrin Full Screen (Total: Urine, Stool, Blood)	PORS	A **RU**, **RF** [3]	3 weeks
Potassium	K	B	4 hours
Pregnancy (Serum) [Quantitative]	QHCG	B	4 hours

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TEST	CODE	SAMPLE REQS	TAT
Pregnancy Test (Urine)	PREG	**RU**	4 hours
Procalcitonin	PCAL	B (Frozen)[4,7]	1 day
Procollagen 1 Peptide N-Terminal (NTX)	P1NP	B	5 days
Procollagen III Peptide	PRCO	B	5 days
Propoxyphene	DPRO	**RU**	5 days
Prostatic Acid Phosphatase	PACP	B (Frozen)	3 days
Protein (Urine)	UPRT	**CU**	4 hours
Protein 14.3.3 (Creutzfeldt–Jakob Disease)	CJD	**CSF** (Frozen)	5 weeks
Protein Electrophoresis incl. immunoglobin	PRTE	B	2-4 days
Protein Total (Blood)	PROT	B	4 hours
Protein/Creatinine Ratio (Urine)	UCPR	**RU**	4 hours
Renal Calculi Screen (Metabolic)	RSPR	**J** [6]	5 days
Renal Stone Analysis	RSTA	**STONE**	10 days
Retinol Binding Protein	RBP	B	3 days
Salicylates	SALI	B	4 hours
Selenium (Serum)	SELE	B	4 days
Selenium (Whole Blood)	SELR	A or H	4 days
Serum Free Light Chains	SLC	B	1 week
Silver (Blood)	SILV	B	5 days
Silver (Urine)	USIL	**RU**	5 days
Sodium	NA	B	4 hours
Superoxide Dismutase Inhibitor	SODI	A / H	5 days
Thiopurine Methyl Transferase	TPMT	A [5]	5 days
Tissue Polypeptide Antigen	TPA	B	1 week
Total Acid Phosphatase	APT	B	5 days
Total Bile Acid/Bile Salts	BILS	B	1 week
Total IgE	IGE	B	1 day
Transferrin	TRAN	B	1 day
Transferrin Electrophoresis	TREL	B	2 weeks
Triglycerides	TRI	B	4 hours
Trimethylaminuria (Fish Odour Syndrome)	FOS	**PU**	6 weeks
Troponin T (High sensitive)	TROT	B	4 hours
Tryptase	STRY	B	2 days
Tumour Necrosis Factor – Alpha	TNF	B (Frozen) [4]	2 weeks
Urate (Uric acid)	UA	B	4 hours
Urea	UREA	B	4 hours
Urea (Urine)	UURE	**CU**	4 hours
Urea and Electrolytes	U/E	B	4 hours
Urea Electrolytes (Urine)	UELE	**CU**	4 hours

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Biochemistry

TEST	CODE	SAMPLE REQS	TAT
Uric Acid (Serum)	**UA**	B	4 hours
Uric Acid (Serum) (Self-collect) See page 131 for more information	**UA**	B (TDL Tiny)	1 day
Uric Acid (Urine)	**UURI**	**CU**	4 hours
Urinary Bladder Cancer Antigen NEW ** It is recommended to collect mid-stream urine. Do not use first morning urine. Collection of urine specimen before any surgical intervention or treatment or 1–2 weeks after specimen shall not be collected with an instrument e.g. catheter.	**UBC**	**RU** (Freeze within 48 hours)**	5 days
Urine Free Light Chains	**UFLC**	**RU**	1 week
Urine Organic Acids	**UORG**	**RU** (Frozen)	3 weeks
Urine Steroid Screen (Steroid Hormones)	**USTE**	**CU** or **RU** [9]	2 weeks
Urine Sugar Chromatography	**UCRO**	**RU** (Frozen)	3 weeks
Urobilinogen (Urine)	**UURO**	**RU**	1 day
Very Long Chain Fatty Acids	**VLCF**	A or H (Frozen) [9]	4-6 weeks
Vitamin B12 (Active)	**B12**	B	1 day
Vitamin B12 (Active) (Self-collect) See page 131 for more information	**B12**	B (TDL Tiny)	1 day
Vitamin B12 (Active)/Red Cell Folate	**B12F**	A B	2 days
Vitamin B12 (Total)	**TB12**	B	1 day
Vitamin D (25-OH)	**VITD**	B	4 hours
Vitamin D (25-OH) (Self-collect) See page 131 for more information	**VITD**	B (TDL Tiny)	1 day
VLDL Cholesterol	**VLDL**	B [13]	1 week
VMA	**UVMA**	**PU** [1]	5 days

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Antimullerian Hormone (AMH Plus)

AMH age related reference intervals in women

The reference intervals below are derived from a population of apparently healthy women not taking any contraceptive medication. The reference intervals represent the 2.5th – 97.5th percentile values for healthy women in each age bracket.

Age Range	Elecsys AMH (pmol/L)
20 – 24 years	8.7 – 83.6
25 – 29 years	6.4 – 70.3
30 – 34 years	4.1 – 58.0
35 – 39 years	1.1 – 53.5
40 – 44 years	0.2 – 39.1
45 – 50 years	0.1 – 19.3

Samples can be taken at any time during a patient's monthly cycle. Ambient unspun sample stability has been validated for up to 5 days.

TAT: 4 hours

AMH

B

Bone Screen

24 hour Urinary Calcium
24 hour Urinary Phosphate
Urea and Electrolytes
Alkaline Phosphatase
Total Protein
Albumin
Globulin
Calcium

TAT: 4 hours

BONE

B **CU**

Bone Screen (Bloods only)

Urea and Electrolytes
LFT's
Calcium
Phosphate
Vitamin D (25 OH)

TAT: 4 hours

BON2

B

Cardiovascular Risk Profile 1

Cholesterol
Triglycerides
HDL Cholesterol
LDL Cholesterol
Non-HDL Cholesterol
Apolipoprotein A
Apolipoprotein B
Lipoprotein (a)
hsCRP
Lp-PLA2 (PLAC) Test

TAT: 3 days

PP10

B B

Cardiovascular Risk Profile 2

Cholesterol
Triglycerides
HDL Cholesterol
LDL Cholesterol
Non-HDL Cholesterol
Apolipoprotein A
Apolipoprotein B
Lipoprotein (a)
Fibrinogen
hsCRP
Lp-PLA2 (PLAC) Test
Homocysteine

TAT: 3 days

PP11

B B B C [34]

Chest Pain Profile

Myoglobin
CK MB Fraction
Troponin T

TAT: STAT

CPP

B

Diabetic Profile 1

Glucose
HbA1c

TAT: 8 hours

DIAB

A G

Diabetic Profile 2

Glucose
HbA1c
Microalbumin

TAT: 2 days

DIA2

A G **RU**

Iron Overload Profile

Iron
Total Iron Binding Capacity
Ferritin
Transferrin Saturation
Haemochromatosis C282Y, H63D

TAT: 3 days

IOP

A B [9]

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Biochemistry

Iron Status Profile

Iron
Total Iron Binding Capacity
Ferritin
Transferrin Saturation

TAT: 4 hours

ISP

B

Lipid Profile

Triglycerides
Cholesterol
HDL Cholesterol
LDL Cholesterol
Non-HDL Cholesterol

TAT: 4 hours

LIPP

B

Liver Function Tests

Bilirubin
ALT
AST
Total Protein
Alkaline Phos
Albumin
Globulin
Gamma-GT

TAT: 4 hours

LFT

B

Myeloma Screen

FBC and ESR
Biochemistry Profile
Protein Electrophoresis
Immunoglobulins (IgA, IgG, IgM)
Bence-Jones Protein

TAT: 5 days

MYEL

A B G **RU**

Osteoporosis Screen

Alkaline Phosphatase
Calcium
Albumin
Phosphate
Serum Crosslaps (DPD)
Vitamin D (25 OH)

TAT: 4 days

OPS

B B

Porphyrin Full Screen (Total: Blood, Stool, Urine)

Porphyrin Blood
Porphyrin Stool
Porphyrin Urine

TAT: 3 weeks

PORS

A **RU**, **RF** [3]

Urea and Electrolytes

Sodium
Potassium
Chloride
Bicarbonate
Urea
Creatinine

TAT: 4 hours

U/E

B

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Haematology

■ All citrate samples (C) sent by post or with an overnight delay must be double spun and sent frozen.

TEST	CODE	SAMPLE REQS	TAT
Anaemia Profile	ANAE	(A)(A)(B)	2 days
Antenatal Profile	ANTE	(A)(A)[33](B)(B)(B)(G)	3 days
APTT/KCCT	KCCT	(C)[18]	4 hours
Atypical Antibody Screen (handwritten tube label)	AASC	(A)[22,33]	2 days
Blood Film Examination	FILM	(A)	1 day
Blood Group †	ABO	(A)[22,33]	2 days
† The tube's own label must be completed by hand. This must correspond with same name and date of birth details as given on the request form. Do not affix additional computerised or hand written labels.			
Carboxyhaemoglobin	CBHB	(A)	1 week
Coagulation Profile 1	CLPF	(C)[18]	4 hours
Coagulation Profile 2	CLOT	(A)(C)[18]	4 hours
D-Dimers (Fibrinogen Degradation Products)	DDIT	(C)[4]	4 hours
DVT/Pre-travel Screen	DVT1	(A)(A)(B)[9]	5 days
ESR	ESR	(A)	4 hours
Fibrinogen	FIB	(C)[4,18]	4 hours
Full Blood Count	FBC	(A)	4 hours
Haematology Profile	PP3	(A)	4 hours
Haemoglobin	HB	(A)	4 hours
Immune Function Evaluation (Total)	TIE	(A) + (B)[5,10]	7 days
INR	PTIM	(C)[18]	4 hours
Lymphocyte Subsets (CD3/CD4/CD8)	LYSS	(A)[10]	1 day
Malarial Parasites	MALP	(A)[4,9,14]	STAT
Malarial Parasites (visa, non-urgent)	MP48	(A)	2 days
Mean Cell Volume (MCV)	MCV	(A)	4 hours
Microfilaria Blood Film	MICF	(A)	STAT
Natural Killer Profile 2	NKP2	(A)	2 days
PAI1 4G/5G Polymorphism	PAIP	(A)	10 days
Paul Bunnell (Monospot)	PAUL	(A) or (B)	8 hours
Pre-Travel Screen (DVT)	DVT1	(A)(A)(B)[9]	5 days
Prothrombin Time	PTIM	(C)[18]	4 hours
Prothrombin Time + Dose	PT+D	(C)[18]	4 hours
Reticulocyte Count	RETC	(A)	4 hours
Thrombin Time	THRO	(C)[18]	4 hours
Vitamin K (With PIVKA II)	VITK	(B)[13]	10 days

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Special Haemostasis

TEST	CODE	SAMPLE REQS	TAT
Activated Protein C Resistance	APCR	C (Frozen)[4,18]	3 days
ADAMTS-13 Antibody	A13A	C (Frozen)[9,18]	1 month
Anti-Xa Apixaban Monitoring * Please state drug and time of dose on request.	APIX	C (Frozen)*[18]	3 days
Anti-Xa Edoxaban Monitoring * Please state drug and time of dose on request.	EDOX	C (Frozen)*[18]	3 days
Anti-Xa Fondapariux Monitoring * Please state drug and time of dose on request.	FOND	C (Frozen)*[18]	3 days
Anti-Xa LMWH Monitoring * Please state drug and time of dose on request.	LMWX	C (Frozen)*[18]	3 days
Anti-Xa Rivaroxaban Monitoring * Please state drug and time of dose on request.	RIVA	C (Frozen)*[18]	3 days
Antithrombin III	A111	C (Frozen)[4,9,18]	3 days
Factor II Assay	FAC2	C (Frozen)[9,18]	5 days
Factor V Assay	FAC5	C (Frozen)[9,18]	5 days
Factor VII Assay	FAC7	C (Frozen)[9,18]	5 days
Factor VIII Assay	FAC8	C (Frozen)[9,18]	5 days
Factor VIII Inhibiting Antibody	F8IA	C C[18]	2 weeks
Factor IX Assay	F1X	C (Frozen)[9,18]	5 days
Factor IX Inhibiting Antibody	F9IA	C C[18]	2 weeks
Factor X Assay	FX	C (Frozen)[9,18]	5 days
Factor XI Assay	FX1	C (Frozen)[9,18]	5 days
Factor XII Assay	FX11	C (Frozen)[9,18]	5 days
Factor XIII Assay	FA13	C (Frozen)[9,18]	5 days
FXIII A Subunit	F13S	C (Frozen)[9,18]	14 days
Hughes Syndrome	LUPA	B C C[4,18]	2 days
Lupus Anticoagulant and Anticardiolipin Abs	LUPA	B C C[4,9,18]	2 days
Lupus Anticoagulant only	LUPC	C C[9,18]	2 days
Miscarriage/Thrombotic Risk Profile	PROP	A A B C C C[18]	5 days
P2Y12 Receptor Platelet Function Analysis (Clopidogrel Resistance) ** Deliver directly to 60 Whitfield Street, Haemostasis Laboratory before 2pm Monday to Friday and provide details of Drug dose and dose intake time.	P2Y	C (Whole blood)[5,9]**	1 day
Platelet function test Screen- PFA-100/200 ** Deliver directly to 60 Whitfield Street, Haemostasis Laboratory before 2pm.	PFAT	C (Whole blood)[5,9]**	1 day
Platelet Aggregation Studies **Deliver directly to 60 Whitfield Street, Haemostasis Laboratory before 2pm Monday, Wednesday and Friday only. Contact the UCLH Haemostasis Department before taking and sending sample to the laboratory.	PLAG	C C C C C (Whole blood)** J[9]	3 days
Protein C	PRC	C (Frozen)[4,9,18]	3 days
Protein S Activity	PS1	C (Frozen)[4,9,18]	5 days

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TEST	CODE	SAMPLE REQS	TAT
Protein S Free Ag	FPRS	C (Frozen) [4,9,18]	3 days
Taipan Snake Venom Time	TTVT	C C [9,18]	1 week
Thrombotic Risk Profile	PROP	A A B C C C [18]	5 days
Viscosity (Plasma)	VISC	A [4*]	3 days
*EDTA plasma must be separated within 24 hours of collection and sent at room temperature.			
Von Willebrand Profile	FVWF	C C C [4,9,12]	5 days
Von Willebrands Multimers	VWM	C C C [18]	3 months

Special Haematology

TEST	CODE	SAMPLE REQS	TAT
Coombs (Direct Antiglobulin Test)	COOM	A	2 days
Eosin-5 Maleimide Dye binding test for Hereditary spherocytosis (EMA)*	**EMA**	A	2 days
*Sample to be received by laboratory within 24 hours of being taken and the test is done Tuesday to Thursday (test must be performed within 48 hours of sample being taken.			
Erythropoietin	ERY	B	4 days
G6PD	G6PD	A	4 days
Haemoglobin Electrophoresis	HBEL	A	4 days
HFE gene (Haemochromatosis) – common variants C282Y + H63D	HMD	A [9]	3 days
Thalassaemia Screen	HBEL	A	4 days

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Flow Cytometry

TEST	CODE	SAMPLE REQS	TAT
Bone Marrow (Aspirate)	BMAS	**J** [1]	14 days
Bone Marrow (Trephine Biopsy)	BMI	**J** [1]	3 days
CD3/CD4/CD8	LYSS	A [10]	1 day
CD16	CD16	A [4]	1 day
CD19 B Cells	CD19	A [4]	1 day
CD20	CD20	A [10]	2 days
CD25	CD25	A [10]	2 days
CD56	CD56	A [4]	1 day
CD57	CD57	A	1 day
Hams Test for PNH (CD59)	HAMS	**J** [3,4,5]	5 days
Leukaemia Immunophenotyping	LYPT	A [4,5]	5 days

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Anaemia Profile

FBC + 5 part Diff
ESR
Iron
TIBC
Ferritin
B12 (Active)
Folate (RBC)

TAT: 2 days

ANAE

A A B

Antenatal Profile

FBC + 5 part Diff
Blood Group and Rh Type
Atypical Antibody Screen
Haemoglobin electrophoresis
Syphilis IgG/IgM
Glucose
FT4/TSH
Rubella Antibodies (IgG)
Toxoplasma (IgG/IgM)
Hepatitis B sAg
Hep C Abs
Varicella Zoster IgG (Immunity)
HIV 1 & 2 Abs

Please ensure the blood group (EDTA) tube label is handwritten. Do not affix a secondary label.

TAT: 3 days

ANTE

A A [33] B B B G

Coagulation Profile 1

Prothrombin Time
APTT
Fibrinogen

TAT: 4 hours

CLPF

C [18]

Coagulation Profile 2

FBC + 5 part Diff
Prothrombin Time
APTT
Fibrinogen

TAT: 4 hours

CLOT

A C [18]

DVT/Pre-travel Screen

FBC
Factor II Prothrombin Gene
Factor V Leiden
Anticardiolipin Antibodies

TAT: 5 days

DVT1

A A B [9]

Haematology Profile

FBC + 5 part Diff
ESR

TAT: 4 hours

PP3

A

Miscarriage/Thrombotic Risk Profile

FBC
Coagulation Profile
Antithrombin III
Factor V Leiden gene
Factor II Prothrombin gene
MTHFR gene
Lupus Anticoagulant
Protein C
Free Protein S Ag
Anticardiolipin Abs

TAT: 5 days

PROP

A A B C C C [18]

Natural Killer Profile 2

CD3
CD4
CD8
CD16/CD56
CD19

TAT: 2 days

NKP2

A

Pre-Travel Screen (DVT)

FBC
Factor II Prothrombin Gene
Factor V Leiden
Anticardiolipin Antibodies

TAT: 5 days

DVT1

A A B [9]

Thrombotic Risk Profile

FBC
Coagulation Profile
Antithrombin III
Factor V Leiden Common Mutation
Factor II Prothrombin Common Mutation
MTHFR Common Variants
Lupus Anticoagulant
Protein C
Free Protein S Ag
Anticardiolipin Abs

TAT: 5 days

PROP

A A B C C C [18]

Von Willebrand Profile

Von Willebrand Factor
Von Willebrand Activity (Ristocetin Cofactor)
Factor VIII Assay

TAT: 5 days

FVWF

C C C [4,9,12]

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Microbiology

TEST	CODE	SAMPLE REQS	TAT
16S rRNA Bacterial Gene	16S	**J**	1 week
18S rRNA Fungal Gene	18S	**J**	1 week
Aspergillus Precipitins	ASPP	B	5 days
Beta D Glucan	XBDG	B	3 days
Blood Culture#	BCUL	2 x **BC** [4]	6 days +
#Please contact the Phlebotomy at Patient Reception 020 7307 7383 for further details, as needed. Blood cultures must be taken prior to any other blood samples. The aerobic bottle must be collected first, followed by the anaerobic bottle. Each bottle should be filled with 8-10 ml of blood, use the markings on the bottles to achieve this. • Other bloods can be collected but must be collected after the blood cultures. • Bottles must be labelled with the patient's identification details. • Bottles and Request Form need to give the time taken and the body site that the blood was taken from. Ensure that the bottle barcodes are not obscured when adding patient labels. • Send the blood cultures to the laboratory without delay.			
Campylobacter Jejuni Antibodies	CJAB	B	5 days
Candida (Culture)	CANC	**STM / CS**	2-4 days
Candida Antibodies	CANA	B	5 days
Candida Antigen	CCAG	B	5 days
Carbapenemase producing organism screen ‡ Presumptive positive isolates will be sent to the PHE reference laboratory for confirmation.	MDR	**STM** (rectal)	4-5 days ‡
Clostridium Difficile Toxin by PCR * Not performed on formed stool specimens.	CLOS	**RF***	2 days
Cryptococcal Antigen	CRYC	**Serum** or **CSF**	1 day
Cryptosporidium	CRPO	**RF**	2 days
CSF for Microscopy and Culture	CSF	**CSF**	1-3 days
Culture (Any site)	CULT		up to 5 days
Faecal Calprotectin/QFIT Profile (Combined) NEW	QCAL	**QFIT**	5 days
Fluid Culture	FLUD	**SC**	2-7 days
Fluid for Crystals + Culture	FLU2	**SC**	1 day
Fungal ID + Sens	FUID	**Fungal sample** / **STM**	14 days
Fungal investigations (superficial/dermatophyte PCR test)	DERM	Skin, Hair and Nails	3-7 days
Fungal investigations (non-superficial extended culture)	FUN	All specimens other than Skin, Hair and Nails	From 3 days
Galactomanan (Aspergillus Antigen)	SGAL	B	2 weeks
Gonorrhoea – Culture ‡ ‡ ‡ The optimal sample type from the female genital tract is an endocervical swab. Gonorrhoea does not survive well outside the endocervical epithelium; a negative gonorrhoea culture result from a vaginal swab is not reliable for excluding infection.	GONN	**CS** ‡‡‡	2-3 days
Group B Strep	GBSX	2 x **STM**	3-5 days
Group B Strep (Self-collect) – Vaginal and Rectal See page 131 for more information	GBSX	Blue gel Amies swab x2	3-5 days
H. pylori Antigen – Stool	HBAG	**RF**	3 days
H. pylori Antigen – Stool (Self-collect) See page 131 for more information	HBAG	Universal faecal container	3 days
H. pylori Culture	HPCU	**J**	3 weeks

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TEST	CODE	SAMPLE REQS	TAT
HVS ‡ ‡ ‡ ‡ Culture for Mycoplasma, Ureaplasma and Trichomonas vaginalis has been discontinued due to the superiority of molecular methods. If investigations for Mycoplasma genitalium, Ureaplasma or Trichomonas vaginalis are required please request PCR testing (see the Sexual Health section of Lab Guide page 57).	HVS	**STM / CS** ‡‡‡‡	2-4 days
IUCD for Culture	IUCD	Send Device	11-12 days
Legionella Urine Antigen	LEGA	**RU**	1 day
MRSA Culture one swab per site	MRSW	**Blue Micro Swab**	2 days
MRSA Culture (Self-collect) – Nose/Groin See page 131 for more information	MRW2	Purple liquid Amies swab x2	2 days
MRSA Culture (Self-collect) – Nose/Groin/Axilla See page 131 for more information	MRW3	Purple liquid Amies swab x3	2 days
MRSA (Rapid PCR) one swab per site	MRSA	**Blue Micro Swab**	4 hours
MRSA PCR (Self-collect) – Nose/Groin See page 131 for more information	MRS2	Purple liquid Amies swab x2	1 day
MRSA PCR (Self-collect) – Nose/Groin/Axilla See page 131 for more information	MRS3	Purple liquid Amies swab x3	1 day
Mycology/Skin Scrapings by PCR	DERM	Submit Sample	3-7 days
Nail Clippings	DERM	**Nail clippings**	3-7 days
Pleural Fluid for Culture	FLUP	**SC**	7 days
Pneumococcal Antigen	PNAG	**RU**	1 day
Pneumocystis Jiroveci (PCP) Examination ‡ ‡ BAL: Induced sputum or bronchoalveolar larage.	PCYS	**BAL** ‡‡	2-3 days
Quantitative Faecal Immunochemical Test (QFIT)	QFIT	**QFIT**	1 day
Quantitative Faecal Immunochemical Test (QFIT) (Self-collect) See page 131 for more information	QFIT	**QFIT** faecal collection tube	1 day
QFIT/Calprotectin Profile (Combined) NEW	QCAL	**QFIT**	5 days
Rapid Strep (incl. m/c/s) ** Do not use a black swab for RAPS. Use Blue only. Rapid antigen is reported within 4 hours with full culture to follow.	RAPS	**STM****	1-3 days**
Schistosoma (Urine)	USCH	Mid-morning terminal urine following exercise 14	1-2 days
Sellotape Test *** Use clear Sellotape only and attach to slide.	SELL	Send Sample***	1 day
Semen Culture	SPCU	**Semen**	2-4 days
Skin Scrapings/Mycology by PCR	DERM	Send Sample	3-7 days
Specific Gravity (Urine)	USG	**RU**	24 hours
Sputum for Routine Culture	SPU1	**SC**	2-4 days
Sputum for TB Culture (AFB)	SPU2	**SC**	up to 8 weeks
Stool for OCP and Culture †† Please provide relevant travel history. If travel history is not provided, stool will be investigated for endemic pathogens only [Campylobacter, Salmonella, Shigella, Shigatoxin-producing E coli (VTEC), Cryptosporidium and Giardia].	PENT	**RF**	2-3 days
Stool for OVA Cysts & Parasites by PCR	MOCP	**RF**	1 day

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Microbiology

TEST	CODE	SAMPLE REQS	TAT
Stool Reducing Substances	STRS	**RF** [7]	5 days
Swab (Cervical)	CERS	**STM / CS**	2-4 days
Swab (Ear)	EARS	**STM**	2-4 days (Culture) 8-9 days (Fungal) – same swab
Swab (Eye)	EYES	**STM**	2-4 days
Swab (Nasal)	NASS	**STM**	2-4 days
Swab (Oral)	ORSW	**STM / CS**	2-4 days
Swab (Penile)	PENS	**STM / CS**	2-4 days
Swab (Rectal)	RECG	**STM / CS**	2-4 days
Swab (Skin)	SKIS	**STM**	2-4 days
Swab (Throat)	THRS	**STM**	2-4 days
Swab (Urethral)	URES	**STM / CS**	2-4 days
Swab (Vaginal)	VAGS	**STM / CS**	2-4 days
Swab (Vulval)	VULV	**STM / CS**	2-4 days
Swab (Wound)	WOUS	**STM**	2-4 days
Synovial Fluid (for microscopy and culture) † † † If prosthetic joint is present please state in clinical details to ensure that enrichment culture is prolonged for 14 days.	FLU2	**SC** †††	14 days
TB (Pleural Fluid)	TBCU	**SC**	up to 8 weeks
TB Culture	SPU2	**SC**	up to 8 weeks
TB Culture (Urine)	TBUR	3 x **EMU**	up to 8 weeks
TB Slopes – Confirmation and Sensitivity	TBSL	**TB slope** (LJ medium-green) [6]	up to 8 weeks
Tissue for culture	TISS	**Tissue sample**	up to 14 days
Urine (Microscopy Only)	UMIC	**RU**	1 day
Urine Chemistry and Microscopy (Self-collect) See page 131 for more information	UMIC	Urine (Universal). Mid stream	1-2 days
Urine Chemistry, Microscopy and Culture (Self-collect) See page 131 for more information	UCEM	Urine (Universal). Mid stream	1-2 days
Urine for Extended Culture NEW	UCXD	**MSU**	up to 7 days
Urine for Microscopy and Culture	UCEM	**MSU** ††††	1-2 days

Calprotectin/QFIT Profile (Combined)

NEW
Faecal Calprotectin
QFIT

TAT: 5 days

QCAL

QFIT

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Urine culture processing and results

All urine culture testing is performed using manual methods. The culture pathway adheres to national guidance and is a fully UKAS-accredited method.

Manual testing allows a larger amount of urine to be tested than previous automated method, which enables the laboratory to detect lower bacterial counts (as low as 103 cfu/mL) and also facilitates the follow up of significant organisms grown from mixed cultures.

If the culture result is indicative of urinary tract infection, antibiotic susceptibilities will be tested from the culture growth and will be available 24 hours after the culture result. 'Direct sensitivities' are no longer performed. Direct susceptibility testing is not inoculum-controlled, produces inaccurate results and is not UKAS-accredited.

Culture results should be interpreted alongside the microscopy WBC count and clinical signs and symptoms. Significant growth on culture in the absence of pyuria may be suggestive of contamination with regional flora rather than true infection. It should be noted, however, that WBC degrade in urine quite rapidly and delays between sample collection and microscopy may lead to falsely low WBC readings which may account for these findings.

What does the result 'No significant growth' mean?

The amount of growth falls below the threshold for urinary tract infection (< 103 cfu/mL). There is no laboratory evidence of urinary tract infection. Occasionally, this may be seen in very early stages of infection or in a partially treated urinary tract infection. Therefore, please send a repeat specimen if symptoms persist.

What does the result 'mixed growth doubtful significance' mean?

This means that the culture revealed a heavy growth of at least 3 organisms with no predominating organism; this represents contamination of the urine with the patient's flora during collection.

This result does not exclude urinary tract infection but it is not possible to determine the causative organism among the mixture of organisms.

If symptoms persist, please send a repeat urine specimen and ensure that patient understands optimal collection technique.

If you are receiving a lot of 'mixed growth of doubtful significance' results, please consider the following:

- **The instructions that patients are given to collect their urine sample**
  Poor collection technique is the most common reason for a heavily mixed growth in a urine sample. It is almost impossible to collect a urine sample without any contamination from the normal bacterial flora which inhabits the area surrounding the urethral opening, but optimal collection technique will minimise this contamination and allow the true infective cause to stand out and be identified (a patient instruction leaflet is available).
- **Delays between sample collection and laboratory processing**
  The time between sample collection and laboratory processing can allow small amounts of contaminating bacterial flora to multiply up to higher amounts prior to laboratory testing, which can result in heavy mixed growth of bacteria on culture. Using a red topped specimen pot containing boric acid preservative will minimise this.

If, despite these measures, a patient has recurrent mixed growth reports from multiple urines, it may suggest that your patient has abnormal urinary tract architecture, immunosuppression or other non-infective cause that requires different laboratory investigations or referral to a specialist. If further information is required, please telephone the laboratory and ask to discuss the case with one of our consultant Microbiologists.

Red Topped Boric Acid containers

The preservative reduces the overgrowth of organisms and, to a lesser extent, reduces the degradation of white cells during transit leading to a more accurate laboratory result for both microscopy and culture. UKAS recommends the use of boric acid containers for all urine sample for microscopy and culture (Urine M,C&S) to improve the quality of microbiological results.

Red topped boric acid containers are for requests for urine microscopy and culture (MC&S) ONLY. Boric acid container should NOT be used for:

- Other urine microbiology tests (e.g. investigations for Chlamydia, Mycobacterium, Schistosomiasis, urinary antigen testing)
- Urine samples being analysed by PCR methodology
- Urine samples for non-microbiology tests (e.g. biochemistry, virology, pregnancy testing)
- Very small urine volumes (<20ml) e.g. neonates

Use of urinary dipsticks: boric acid may inhibit leukocyte esterase dipstick readings; dipstick testing performed on a sample in a boric acid container should be interpreted with caution.

If additional tests are required in addition to urine microscopy and culture, an additional sample in a white-topped universal container should be sent. In this case, it is advised that the mid-stream clean catch urine is collected in a sterile bowl and then transferred to the necessary specimen containers.

Group B Streptococcus (GBS)

Group B Streptococcus (GBS or group B Strep) is the most common cause of severe infection in newborn babies, and of meningitis in babies under age 3 months. On average in the UK:

- 2 babies a day develop group B Strep infection
- 1 baby a week dies from group B Strep infection
- 1 baby a week survives group B Strep infection with long term disability

Most GBS infection is of early onset, presenting in babies within the first 6 days of life, and usually within the first 12 hours after birth. Between age 7 days and 3 months, these infections are rare, and in babies over 3 months they are very rare indeed.

Most early-onset GBS infections (in babies aged 0-6 days) can be prevented by giving intravenous antibiotics in labour to women whose babies are at raised risk of developing GBS infection. In the UK, women are offered IV antibiotics in labour based on specific risk factors.

GBS is normal flora of the distal GI tract. Up to 30% of women carry it harmlessly in their vaginal tract. Vaginal carriage at the time of vaginal delivery can result in transmission of GBS to baby. Babies are more vulnerable to infection as their immature immune systems cannot fight off the multiplying bacteria. If untreated, GBS can cause serious infections, such as meningitis and septicaemia, which may lead to stillbirths, and newborn and infant deaths. If they survive, babies can develop permanent problems including hearing or vision loss, or cerebral palsy.

Current GBS prevention focuses on giving intravenous antibiotics to women in labour, aiming to reduce disease in infants at delivery. 2 x **Blue culture swabs** (lower vaginal and lower rectal) should ideally be taken from 35 weeks. Swabs will be placed in enrichment culture in the microbiology laboratory to ensure maximal detection.

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Swabs: Types and Codes

Patient Request Forms and **Swabs** should be labelled with the body site from which the sample was taken.
This is important. The swab site determines the appropriate culture media required to target the most likely pathogens.

SITE	CODE	SAMPLE TYPE
Culture Swabs		
Candida only swab	CANC	**Black** or **Blue** Micro Swab
Cervical swab	CERS	**Black** or **Blue** Micro Swab
Ear swab	EARS	**Blue** or **Orange** Micro Swab
Eye swab	EYES	**Blue** or **Orange** Micro Swab
Gonorrhoea	GONN	**Black** Charcoal Swab
High vaginal swab	HVS	**Black** or **Blue** Micro Swab
Nasal swab	NASS	**Blue** or **Orange** Micro Swab
Oral swab	ORSW	**Black** or **Blue** Micro Swab
Penile swab	PENS	**Black** or **Orange** Micro Swab
Rectal swab	RECG	**Black** or **Blue** Micro Swab
Skin swab	SKIS	**Blue** Micro Swab
Throat swab	THRS	**Blue** Micro Swab
Urethral swab	URES	**Black** or **Orange** Micro Swab
Vaginal swab	VAGS	**Black** or **Blue** Micro Swab
Vulval swab	VULV	**Black** or **Blue** Micro Swab
Wound swab	WOUS	**Black** or **Blue** Micro Swab
MRSA by Culture		
	MRSW	**Blue** Micro Swab x 1 – state site
	MRW2	**Blue** Micro Swab x 2 – state sites
	MRW3	**Blue** Micro Swab x 3 – state sites
	MRW4	**Blue** Micro Swab x 4 – state sites
	MRW5	**Blue** Micro Swab x 5 – state sites
Rapid MRSA by PCR		
	MRSA	**Blue** Micro Swab x 1 – state site
	MRS2	**Blue** Micro Swab x 2 – state sites
	MRS3	**Blue** Micro Swab x 3 – state sites
	MRS4	**Blue** Micro Swab x 4 – state sites
	MRS5	**Blue** Micro Swab x 5 – state sites

Blue Micro/Transwab
are multipurpose, culture swabs in transport medium

Orange Micro/Transwab
are small, thin wire culture swabs in transport medium

Black Charcoal Micro/Transwab
Wound, skin and urogenital.

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PCR methods for the detection of Dermatophyte Fungal Cultures

The detection of Dermatophyte fungal cultures uses High Sensitivity PCR testing. This reduces the overall turnaround time by up to three weeks, and increases the detection of fungal infection compared to combined microscopy and culture. Furthermore the specific targeting pathogens associated with superficial fungal infection is increased which assists in preventing the over reporting of insignificant fungi that are contaminants.

Fungal test codes

	Investigation of Superficial Fungal Infection	Investigation of Non-Superficial Fungal Infection
Test code	DERM*	FUN*
Sample type	Skin, Hair and Nail.	All specimens other than Skin, Hair and Nail.
Turnaround time	72 hours for interim PCR report, and 7 days for final culture (unless the fungal culture needs to be extended for significant growth).	7 days (non-sterile e.g. ear swab) and 3 weeks (sterile i.e. CSF).
Notes	• Dermatophyte PCR has replaced microscopy for Skin, Hair and Nail (72 Hour TAT) • Non-dermatophyte culture will take 7 days. • Microscopy is carried out to confirm significance of rare fungi • Pseudomonas investigation in Nail specimens is available on request	• Non-sterile specimen fungal cultures are performed on Sabouraud's agar plates for 7 days with no microscopy. • Sterile specimen fungal cultures have microscopy (Calcafluor) reported on the day of processing and culture on a Sabouraud's agar slope, incubated for 21 days.

Stool test codes

Traditional culture methods have been replaced by Real Time PCR for enteric pathogen testing. The benefits are increased sensitivity and a higher detection rate. Once received and processed in the microbiology lab, negative results will be available within 24 hours. Positive results will be followed up with culture and sensitivities for final reporting.

Stool OCP and Culture

Sample type		Comments
Stool	Please request as **PENT** Serosep EntericBio PCR **Bacteria/Bacterial Toxins** • Salmonella • Campylobacter • Shigella • VTEC **Parasites** • Cryptosporidium • Giardia	All stool samples will be tested for UK Pathogens. Overseas pathogens will only be tested if specifically requested and travel history and clinical details are provided. Samples that are positive for the bacterial pathogens will be cultured to provide sensitivities and, if indicated, for PHE referral. Samples will be kept for 7 days after receipt to allow for additional testing if required.

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Stool for OCP

Sample type		Comments
Stool	Please request as **OCP** Requests for OCP only will include testing for cryptosporidium and giardia by PCR	Overseas pathogens will only be tested if requested and travel history and clinical details are provided.

C. Difficile detection

Sample type		Comments
Stool	Please request as **CLOS** Serosep Enteric Bio PCR Alere Techlab EIA (Toxin)	Two tier PCR and Toxin c.diff screening based on PHE guidance.

Enteric Organism Rapid Detection – see Tropical Immunology page 77

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Endocrinology

TEST	CODE	SAMPLE REQS	TAT
11 Deoxycorticosterone	DEOX	B	10 days
11 Deoxycortisol	11DC	B (Frozen)	10 days
17 Hydroxyprogesterone	17OH	B	5 days
ACTH (Adreno Corticotrophic Hormone)	ACTH	A (Plasma Frozen)[41]	1 day
Aldosterone	ALDN	A or B	5 days
Aldosterone (Urine)	UALD	**PU**	5 days
Alpha Feto Protein	AFP	B	4 hours
Amenorrhoea Profile	AMEN	B	4 hours
Andropause Profile	ANDP	B B	8 hours
Androstenedione	ANDR	B (Frozen)	4 days
Antidiuretic Hormone	ADH	A A (Plasma Frozen)[4]	10 days
Antimullerian Hormone (AMH Plus)	AMH	B	4 hours
Antimullerian Hormone (AMH Plus) (Self-collect) See page 131 for more information. Samples can be taken at any time during a patient's monthly cycle.	AMH	B (TDL Tiny)	1 day
Beta HCG (Quantitative)	QHCG	B	4 hours
BNP (NT-pro BNP)	BNP	B	4 hours
C Peptide	CPEP	B	3 days
Calcitonin	CATO	B (Frozen)[4]	1 day
Catecholamines (Plasma)	CATE	A A (Plasma Frozen)[4]	5 days
Catecholamines (Urine)	UCAT	**PU**[1]	5 days
Cortisol	CORT	B	4 hours
Cortisol (Self-collect) See page 131 for more information	CORT	B (TDL Tiny)	1 day (from time of receipt in the laboratory)
Cortisol (Urine)	UCOR	**CU**	5 days
DHEA	DHEX	B	7-10 days
DHEA – Urine (Dehydroepiandrosterone)	UDHE	**CU**	3 weeks
DHEA Sulphate	DHEA	B	4 hours
DHEA Sulphate (Self-collect) See page 131 for more information	DHEA	B (TDL Tiny)	1 day
Dihydrotestosterone	DHT	B B	7 days
Down Syndrome Risk Bloods only (Risk to be calculated by clinician)	HCGF/ PAPA	B	4 hours
Down Syndrome Risk Profile (2nd trimester) Quad	DRP	B DRP form[7,8]	5 days
Down Syndrome Risk Profile with risk calculation first trimester	DRP	B DRP form + image of scan[7,8]	5 days
Erectile Dysfunction Profile	IMPO	A B B G	3 days
Female Hormone Profile	FIP	B	4 hours

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TEST	CODE	SAMPLE REQS	TAT
Female Hormone Profile (Self-collect) See page 131 for more information Sample integrity may be compromised on received samples older than 48 hours.	FIP	B (TDL Tiny)	1 day
First Trimester Antenatal Screen (Risk to be calculated by requesting clinician)	HCGF/ PAPA	B	4 hours
Free Cortisol (Urine)	UCOR	**CU**	5 days
Free T3	FT3	B	4 hours
Free T3 (Self-collect) See page 131 for more information	FT3	B (TDL Tiny)	1 day
Free T4	FT4	B	4 hours
Free T4 (Self-collect) See page 131 for more information	FT4	B (TDL Tiny)	1 day
FSH (Self-collect) See page 131 for more information	FSH	B (TDL Tiny)	1 day
Growth Hormone (Fasting)	GH	B [7,35]	4 hours
Gut Hormone Profile	GUTP	A A (Frozen within 15 minutes)[41]	3 weeks
Hirsutism Profile	HIRP	B	4 hours
HRT Profile 1	HRT	B	4 hours
HRT Profile 2	HRT2	B G	4 hours
IGF-1 (Somatomedin)	SOMA	B (Frozen)[4]	1 day
IGF-BP3	IGF3	B (Frozen)[4]	5 days
Impotence Profile	IMPO	A B B G	3 days
Inhibin A	INIA	B	1 month
Inhibin B	INIB	B (Day 3 of cycle, frozen)	5 days
Insulin	INSU	B	4 hours
Insulin Resistance, HOMA (Fasting)	FIRI	B G	4 hours
Luteinising Hormone (LH)	LH	B	4 hours
Luteinising Hormone (Self-collect) See page 131 for more information	LH	B (TDL Tiny)	1 day
Macroprolactin	PRLD	B	4 days
Male Hormone Profile	MIPR	B	4 hours
Melatonin (Serum)	MEL	B (Frozen)	5 days
Melatonin (Urine)	UMEL	**CU** [13]	2 weeks
Menopause Profile	MENO	B	4 hours
Metabolic Syndrome Profile	METS	A B B G	9 days
Metanephrines (Plasma)	PMET	A (Frozen plasma)	7 days
Metanephrines (Urine)	UMEX	**PU** [1]	5 days
Oestradiol (E2)	OEST	B	4 hours

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Endocrinology

TEST	CODE	SAMPLE REQS	TAT
Oestradiol (E2) (Self-collect) See page 131 for more information Sample integrity may be compromised on received samples older than 48 hours.	OEST	B (TDL Tiny)	1 day
Oestriol (Estriol)	E3	B B	4 days
Oestrone	E1	B B	4 days
Osteocalcin	OST	B (Frozen)[4]	4 days
Parathyroid Hormone (Whole)	PTHI	B [4]	1 day
Pituitary Function Profile	PITF	B B	1 day
Polycystic Ovary Syndrome Profile	PCOP	A B B B G [7]	5 days
Polycystic Ovary Syndrome SHORT	PCOS	B G	4 hours
Pregnancy (Serum) [Quantitative]	QHCG	B	4 hours
Pregnanetriol (Urine)	UPTR	**CU** (Frozen)	5 days
Pregnenolone	PREN	B	15 days
Progesterone	PROG	B	4 hours
Progesterone (Self-collect) See page 131 for more information	PROG	B (TDL Tiny)	1 day
Proinsulin	PROI	A (Frozen plasma)[4]	5 days
Prolactin	PROL	B	4 hours
Prolactin (Self-collect) See page 131 for more information	PROL	B (TDL Tiny)	1 day
Prolactin (Macro)	PRLD	B	4 days
Renin	RENI	A (Frozen plasma)[36]	5 days
Reverse T3	RT3	B [7,37]	10 days
Serotonin	SERT	H (Frozen whole blood)[1]	10 days
Serotonin (Urine)	USER	**PU** 50mls (Frozen)[1]	5 days
Sex Hormone Binding Globulin	SHBG	B	4 hours
Sex Hormone Binding Globulin (Self-collect) See page 131 for more information	SHBG	B (TDL Tiny)	1 day
Somatomedin (IGF-1)	SOMA	B (Frozen)[4]	1 day
T3	T3	B	4 hours
T3 (Reverse)	RT3	B [7,37]	10 days
Testosterone	TEST	B	4 hours
Testosterone (Free)	FTES	B	3 days
Testosterone (Self-collect) See page 131 for more information	TEST	B (TDL Tiny)	1 day
Thyroglobulin Abs	TGAB	B	1 day
Thyroglobulin Assay	TGA	B	1 day
Thyroid Abs (incl. Thyroglobulin + Thyroid Peroxidase Abs)	THAB	B	1 day
Thyroid Peroxidase Antibodies/Anti TPO	TPEX	B	1 day
Thyroid Profile 1	TF	B	4 hours

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

TEST	CODE	SAMPLE REQS	TAT
Thyroid Profile 1 (Self-collect) See page 131 for more information	TF	B (TDL Tiny)	1 day
Thyroid Profile 2	TF2	B	2 days
Thyroid Profile 3	TF3	B	4 hours
Thyroid Profile 3 (Self-collect) See page 131 for more information	TF3	B (TDL Tiny)	1 day
Thyroxine (T4)	T4	B	4 hours
Thyroxine (T4) (Self-collect) See page 131 for more information	T4	B (TDL Tiny)	1 day
Thyroxine Binding Globulin	TBG	B (Frozen)	10 days
TSH	TSH	B	4 hours
TSH (Self-collect) See page 131 for more information	TSH	B (TDL Tiny)	1 day
TSH-Receptor Antibodies	TSI	B	4 days
Ziwig Endotest® NEW For information about this test and to order kits please contact endotest@tdlpathology.com. The quality of the saliva sample collection is important. Samples should be collected under supervision.	ENDT	Endotest saliva collection kit	25 days

Ziwig Endotest® NEW

This new non-invasive diagnostic test uses Next Generation Sequencing of microRNAs for reliable and rapid diagnosis for all types of endometriosis. Assay performance exceeds conventional diagnostic tests.

About 10% of all women are affected by endometriosis but it generally takes about 7 years to arrive at a diagnosis.

The effects of endometriosis range from asymptomatic, often identified during investigations for infertility, to chronic or progressively severe symptomatic related conditions.

Once diagnosed, optimised clinical management of endometriosis would apply.

Ziwig Endotest® provides a Bioinformatics Approach to microRNA sequencing analysis, from saliva.

- Clear Positive/Negative result
- Definitive diagnosis for all forms of endometriosis
- Non-invasive, saliva sample
- Cost contained single test outcome

For information about this test and to order kits please contact endotest@tdlpathology.com

The quality of the saliva sample collection is important (it is essential that instructions are closely followed). Samples should be collected under supervision.

TEST	CODE	SAMPLE REQS	TAT
Ziwig Endotest® NEW For information about this test and to order kits please contact endotest@tdlpathology.com. The quality of the saliva sample collection is important. Samples should be collected under supervision.	ENDT	Endotest saliva collection kit	25 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Reproductive Immunology at Rosalind Franklin Laboratories, Chicago, USA

TEST	CODE	SAMPLE REQS	TAT
Reproductive Immunophenotype Panel	3RF	H H H	1 week
NK Assay/Cytotoxicity Panel	4RF	H H H	1 week
NK Assay Follow-Up Panel	5RF	H H H	1 week
TH1/TH2 Cytokine Ratio	6RF	H H H [5]	1 week
Leucocyte Antibody Detection Panel MALE	7RF	H H H [3,4,6]	1 week
Leucocyte Antibody Detection Panel FEMALE	8RF	B	1 week
HLA DR Antigens	9RF	A A	2 weeks
HLA DQ Alpha Antigens	10RF	A A	2 weeks
HLA DQ Beta Antigens	11RF	A A	2 weeks
NK Assay Panel + Intralipids	16RF	H H H	1 week
KIR (Killer-like Immunoglobulin-like Receptors) Genotyping	17RF	A A A	2-3 weeks
TH1/TH2 Intracellular Cytokine Ratios with IVIG, Prednisolone	20RF	H H H [5]	1 week
TH1/TH2 Intracellular Cytokine Ratios with IVIG	21RF	H H H [5]	1 week
TH1/TH2 Intracellular Cytokine Ratios with Prednisolone	22RF	H H H [5]	1 week
Endometrial Biopsy Immune Profiling	23RF	**J** (Contact Referrals)	2 weeks
T Regulatory Cells	25RF	H	3 days

Patients who have samples taken at TDL's Patient Reception at 76 Wimpole Street may attend any time during hours of opening on Mondays or Tuesdays, and by NOON on Wednesdays to allow for same day shipping to Chicago by Fed Ex. Samples for Rosalind Franklin are not accepted on Thursdays, Fridays or Saturdays. Fed Ex charges are included in these charges.

Reproductive Immunology at Reproductive Immunology Centre Ltd

TEST	CODE	SAMPLE REQS	TAT
NK (CD69) Cell Assay	CD69	H *	Send Mon-Thurs only
NK (CD69) and NK Cytotoxicity	69C	H H H *	Send Mon-Thurs only
NK Cytotoxicity Assay	HSNK	H H H *	Send Mon-Thurs only
NK Cytotoxicity with suppression with steroid, IVIg and intralipin, and NK (CD69) cell assay	69CI	H H H *	Send Mon-Thurs only
NK Cytotoxicity with suppression, steroid, IVIg & Intralipin	NKCY	H H H *	Send Mon-Thurs only
Suppression with steroid, IVIg and intralipin, NK (CD69) cell assay, TH1/TH2 cytokines	NCIT	H H H *	Send Mon-Thurs only
TH1/TH2 Cytokine Profile	1TH2	H H H *	Send Mon-Thurs only

Patients need to attend Patient Reception at 76 Wimpole Street by 11.00am latest Mondays – Thursdays. Samples cannot be accepted on Fridays, Saturdays or Sundays. Allow 2 days for results.

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Amenorrhoea Profile

LH
FSH
Prolactin
Oestradiol (17-Beta)

TAT: 4 hours

AMEN

B

Andropause Profile

DHEAs
FSH
Testosterone
Free Androgen Index
LH
SHBG

TAT: 8 hours

ANDP

B B

Antimullerian Hormone (AMH Plus)

AMH age related reference intervals in women

The reference intervals below are derived from a population of apparently healthy women not taking any contraceptive medication. The reference intervals represent the 2.5th – 97.5th percentile values for healthy women in each age bracket.

Age Range	Elecsys AMH (pmol/L)
20 – 24 years	8.7 – 83.6
25 – 29 years	6.4 – 70.3
30 – 34 years	4.1 – 58.0
35 – 39 years	1.1 – 53.5
40 – 44 years	0.2 – 39.1
45 – 50 years	0.1 – 19.3

Samples can be taken at any time during a patient's monthly cycle. Ambient unspun sample stability has been validated for up to 5 days.

TAT: 4 hours

AMH

B

Erectile Dysfunction Profile

Lipid Profile
Glucose
HbA1C
FT4/TSH
Prolactin
Total Testosterone
Free Testosterone
PSA
SHBG
Free Androgen Index

TAT: 3 days

IMPO

A B B G

Female Hormone Profile

LH
FSH
Prolactin
Oestradiol (17-Beta)

TAT: 4 hours

FIP

B

First Trimester Antenatal Screen (Risk to be calculated by requesting clinician)

Free β-hCG
PAPP-A

Free β-hCG and PAPP-A in serum and sonographic determination of nuchal translucency (NT) are markers of choice to identify women at increased risk of Down Syndrome during the first trimester (week 11-13) of pregnancy.

TAT: 4 hours

HCGF/PAPA

B

Hirsutism Profile

FSH
LH
Testosterone
DHEAs
SHBG

TAT: 4 hours

HIRP

B

HRT Profile 1

FSH
Oestradiol (17-Beta)
Progesterone

TAT: 4 hours

HRT

B

HRT Profile 2

Lipid Profile
Glucose
FT4
TSH
FSH
OEST

TAT: 4 hours

HRT2

B G

Impotence Profile

Lipid Profile
Glucose
HbA1C
TSH
Prolactin
Total Testosterone
Free Testosterone
PSA
SHBG
Free Androgen Index

TAT: 3 days

IMPO

A B B G

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Endocrinology

Male Hormone Profile

FSH
LH
Testosterone
Free Androgen Index
Prolactin
SHBG

TAT: 4 hours

MIPR

B

Menopause Profile

FSH
LH
Oestradiol (17-Beta)
TSH
FT4

TAT: 4 hours

MENO

B

Metabolic Syndrome Profile

Lipid Profile
Glucose
HbA1C
Insulin
hsCRP
Adiponectin

TAT: 9 days

METS

A B B G

Pituitary Function Profile

TSH
FSH
LH
Prolactin
Growth Hormone
Cortisol

Please provide details of time of day sample is taken. Patient should be resting for 30 mins before sample taking.

TAT: 1 day

PITF

B B

Polycystic Ovary Syndrome SHORT

Testosterone
SHBG
FAI
FSH
LH
Glucose
Insulin
Lipid Profile
FT4/TSH

TAT: 4 hours

PCOS

B G

Polycystic Ovary Syndrome Profile

Testosterone
TSH
Glucose
HbA1C
FSH
DHEAs
Insulin
LH
17 Hydroxyprogesterone
Lipid Profile
Prolactin
Cortisol
Antimullerian Hormone
Androstenedione
SHBG

A fasting 9.00am sample is recommended.

TAT: 5 days

PCOP

A B B B G [7]

Thyroid Profile 1

FT4
TSH

TAT: 4 hours

TF

B

Thyroid Profile 2

T4
TSH
Free T3
Free T4
Thyroglobulin Abs
Thyroid Peroxidase

TAT: 2 days

TF2

B

Thyroid Profile 3

FT3
FT4
TSH

TAT: 4 hours

TF3

B

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TDL Andrology

The single most important factor determining a man's fertility potential is the production of healthy sperm. A semen analysis has classically been used as the marker of this potential, by providing information about the sperm count, motility and morphology. However, there are other parameters given in a semen analysis that are often neglected or overlooked, which may indicate important pathologies – such as infection, prostatic disease, immunological infertility, retrograde ejaculation, malformation or obstruction of the genital tract, tumour, and congenital or endocrine disorders.

Early diagnosis of the male factor is important in order to detect any underlying pathology, determine the extent of infertility and ensure appropriate treatment. It may also avoid unnecessary investigations for the female partner, particularly if her age is a limiting factor.

For men who have had a vasectomy, clearance should only be given when there is no evidence of presence of sperm in two consecutive semen samples. It is therefore vital to ensure that results are reported according to best practice guidelines. Special clearance may be given at the doctor's discretion when there are persistent non-motile sperm present.

Guidelines for Producing Samples

Ideally semen samples should be produced on-site at TDL's Patient Reception at 76 Wimpole Street. Ideally patients must abstain from ejaculation for 2-3 days prior to the test, but no less than 2 days and no longer than 5 days before the test. This requirement is important for semen analyses and post vasectomy analyses to ensure reliability of results. It is possible that samples that do not comply with guidelines for abstinence and collection may not be able to be processed. All semen samples must be produced directly into the sterile containers provided by The Doctors Laboratory.

All containers are weighed and batch tested for sperm cytotoxicity. In exceptional circumstances when semen samples are produced off-site, they can only be accepted by the Andrology Department in sample containers provided by TDL.

WHO 2010 guidelines state that two semen analyses should be performed before any diagnosis is confirmed. This may require requests for two (separate) semen analyses.

Appointments

It is important to make an appointment for all semen samples (on or off site) whether for a comprehensive semen analysis or post vasectomy analysis.
It may be necessary to give patients who attend without an appointment a specific time to re-attend. The first appointments for post vasectomy samples should usually be 12 weeks and 20 ejaculations after surgery.

Appointments can be made by calling 020 7025 7940. There is an attendance fee of £45.00 in addition to pathology charges.

Please complete a Pathology Request Form for your patient. If you would like to request other pathology, you can use the same form or complete a second additional form. Results will usually be reported to you within 48 hours.

If you would like to discuss these tests, or any aspect of this service including clinical interpretation by the consultant please contact TDL Andrology on 020 7025 7940 or email andrology@tdlpathology.com for further information.

SCAN ME

Book an appointment online:

www.tdlpathology.com/andrologybooking

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TDL Andrology

TEST	CODE	SAMPLE REQS	TAT
Individual Semen Parameters* **	SPOD	**Semen** [1]	1 day
*** Semen parameters may be requested individually (e.g. count only, vitality only, motility etc.). Please request as SPOD and indicate on the request form which parameter is required.			
Oxidative Stress in Semen (ROS + MIOXSYS)	SROS	**Semen** [1]	1 day
Retrograde Ejaculation	RTRO	Contact lab	2 days
Semen Analysis, Comprehensive*	SPER	**Semen** [1]	2 days*
* If required, comprehensive semen analysis can be reported within 4 hours, with morphology to follow.			
Semen Analysis, Post-Vasectomy**	PVAS	**Semen** [1]	2 days
** For men who have had a vasectomy, clearance should only be given when there is no evidence of presence of sperm in a single ejaculate when recommendations are met. It is rare that a 'diagnosis' is made without confirmation, therefore patients/clinicians should be able to freely request a second confirmatory sample. Special clearance may be given at the doctor's discretion, when there are <100 000/ml non-motile sperm present after the assessment of two specimens in full accordance with recommendations. Recommendations, as given by the Association of Biomedical Andrologists, the British Andrology Society and the British Association of Urological Surgeons 2016, are as follows: • Analysis of post vasectomy semen samples should not occur until 12 weeks post-surgery and after a minimum of 20 ejaculates • Semen samples must be analysed within 4 hours of production, and in cases where sperm is found a repeat analysis must be performed within 1 hour of production • Semen should be provided in weighed specimen containers provided by TDL Andrology • Sexual abstinence should be between 2 and 7 days.			
Semen Analysis, Vasectomy Reversal*	SPER	**Semen** [1]	2 days*
* If required, comprehensive semen analysis can be reported within 4 hours, with morphology to follow.			
Semen Culture	SPCU	**Semen**	2-4 days
Semen Fructose	SPCF	**Semen**	2 days
Semen Leucocytes	PMNS	**Semen**	2 days
Semen Zinc	SPCZ	**Semen**	up to 10 days
Sperm Aneuploidy	SPPL	**Semen** [1]	4 weeks
Sperm Antibodies (Serum)	ASAB	(B)	5 days
Sperm Antibodies/MAR Test (Semen)†	ASPA	**Semen**	1 day
† Sperm antibodies in semen are measured as part of the routine semen analysis.			
Sperm Comet®	CMET	**Semen**	1-2 weeks
Sperm Count (Post-Vasectomy)	PVAS	**Semen** [1]	2 days
Sperm DNA Fragmentation (SCSA)	SEXT	**Semen** [1]	1-2 weeks
Sperm Morphology (Kruger strict criteria)	MRPH	**Semen** [1]	2 days

By special arrangement

- Sperm swim test
- Sperm preparation for overnight survival
- Sperm motility and vitality testing for epididymal toxicity
- Sperm retrieval procedures (biopsy, PESA, MESA)
- Sperm cryopreservation and storage (undertaken by Andrology Solutions – HFEA licensed)

All men who store sperm must be screened for HIV 1&2, Hepatitis B, Hepatitis C and HTLV. Under HFEA regulations, sperm can be stored for an initial period of 10 years with formal consent. All patients are offered counselling prior to sperm cryopreservation.

These arrangements, and details for other specialist semen tests, are available on request. Please contact TDL Andrology on **020 7025 7940** or email **sheryl.homa@tdlpathology.com** for further information.

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Sperm DNA fragmentation

High sperm DNA fragmentation is associated with reduced natural pregnancy rates and assisted conception pregnancy rates as well as live birth rates. In addition, DNA fragmentation leads to higher miscarriage rates as published in the ESHRE Recurrent Pregnancy Loss 2017 Guideline. High levels of DNA fragmentation may be reduced by considering varicocele repair, treatment of underlying infections or inflammation, changes in lifestyle or with antioxidant supplements.

When requesting Sperm DNA Fragmentation there are two options. Please specify whether the request is for sperm DNA fragmentation by **SCSA** or **COMET**.

Sperm Chromatin Structure Assay (SCSA®) [SEXT]

This test has the ability to measure large numbers of cells (between 5,000 and 10,000 sperm), rapidly in an ejaculate. The SCSA® test monitors the changes in fluorescence of a probe, acridine orange, to detect both single and double DNA strand breaks using flow cytometry. It has been developed using human and animal models over the last 35 years and is one of the most statistically robust tests available for sperm DNA fragmentation. It is a standardised, validated CLIA approved test with high reproducibility and low variability. The test requires a minimum sperm count of approximately 100,000/ml.

Sperm COMET® Assay [CMET]

Exact® tests, powered by SpermComet® technology measure sperm DNA damage. The Exact range of tests are available via healthcare professionals only. Sperm DNA can be damaged when sperm are being made in the testes or as they mature before ejaculation. This damage breaks the DNA into fragments, so sperm DNA tests are also known as sperm DNA fragmentation tests. Men with high levels of sperm DNA damage are less likely to get their partner pregnant and have increased risk of miscarriage. Even if semen analysis results are 'normal', the sperm DNA could be damaged and therefore poor quality. Sperm DNA damage can reduce your chances of having a baby. The Comet® assay can measure both single and double strand breaks. Only a small number of sperm (a minimum of 5,000) sperm are required to perform the assay.

It is a standardized ISO 13485 certified test with high reproducibility and low variability.

It also has the advantage of requiring only 5000 sperm so it can be used for men with low sperm counts and also for surgically retrieved sperm samples.

Sperm Aneuploidy

Chromosomal abnormalities may be somatic cell in origin, in which case they can be detected by a simple blood karyotype analysis. However, most sperm chromosome anomalies arise as a result of errors during meiosis, which cannot be detected by a blood karyotype analysis. These anomalies can only be detected by looking at the sperm chromosomes directly. Studies have shown that sperm with a high rate of aneuploidy have a negative impact on pregnancy rate and are associated with recurrent pregnancy loss.

This test uses fluorescent in situ hybridisation (FISH) to label individual chromosomes with specific probes. Hundreds of sperm are assessed from one ejaculate. There are limitations to the test as only 5 probes are currently used routinely for analysis (three of the 22 autosomes: chromosomes 13, 18 and 21, and the sex chromosomes, X and Y), although others are available upon specific request. The results are reported showing incidence of disomy or nullisomy for each of the autosomes and for both sex chromosomes. A sex chromosome ratio is also reported. It is CE marked.

Instructions for collection of Sperm DNA and Aneuploidy specimens

Sperm DNA Fragmentation or Sperm Aneuploidy testing are not part of the Comprehensive Semen Analysis and need to be requested as a separate test, test code SEXT and SPPL, respectively. Semen samples ideally need to be frozen as soon as possible after liquefaction, but not longer than 60 minutes post ejaculation. Samples must be snap-frozen for Sperm DNA Fragmentation and cryopreserved in TYB for Sperm Aneuploidy. If samples are prepared by another laboratory. Two cryovials containing not less than 0.25 mls of semen is required. Frozen samples can be sent to, or collected by TDL, by arrangement, and must be accompanied with relevant patient details, the sperm count and GDPR consent form. A count of a minimum 0.1 million/ml is required for accurate DNA and aneuploidy reporting.

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Oxidative Stress in Semen (ROS + MIOXSYS) and Male infertility

There is now growing evidence to support a link between oxidative stress and male infertility. It is the underlying cause of sperm DNA damage and impairs semen parameters and fertilisation, adversely affects embryo development and is associated with reduced pregnancy rates. It may also increase the risk of miscarriage. High levels of ROS may be reduced by considering varicocele repair, treatment of underlying infections or inflammation, changes in lifestyle or with antioxidant supplements.

TDL provides a comprehensive assessment of oxidative stress by **combined measurement of Reactive Oxygen Species and Redox Potential**.
Please request as oxidative stress test (code ROS).

The test includes combined testing for:

- **Chemiluminescence Assay for Reactive Oxygen Species**: Reactive Oxidative stress may be measured by a simple chemiluminescence test in semen, which measures the level of reactive oxygen species.
- **MIOXSYS Electrochemical Assay for Redox Potential**: Oxidative stress may be determined by an electrochemical assay which measures the redox potential in semen. This test measures the overall difference between total oxidants and antioxidants in the system.

If you would like to discuss these tests, or any aspect of this service, please contact TDL Andrology on 020 7025 7940 or 020 7307 7373, or email andrology@tdlpathology.com.

References

Vassiliou A, Martin CH, Homa ST, Stone J, Dawkins A, Genkova MN, Skyla Dela Roca H, Parikh S, Patel J, Yap T, Killeen AP. Redox potential in human semen: Validation and qualification of the MiOXsys assay. Andrologia. 2021 Mar;53(2):e13938. doi: 10.1111/and.13938. Epub 2020 Dec 30. PMID: 33377541.

Semen samples need specialist handling – for this reason all requests for semen analyses should be made by appointment. Practices or patients should contact TDL Andrology on 020 7025 7940 to make appointments and to confirm instructions for sample collection.

Effects of ROS-induced Oxidative Stress on Sperm

- Lipid peroxidation which damages the sperm surface causing an abnormal morphology and impaired motility.
- Damage to proteins on cell surface responsible for cell signalling and may affect enzyme function inside the cell.
- Increased semen viscosity.
- Peroxidation of DNA and subsequent unravelling or fragmentation.
- Possible mutagenic effects.
- Damage to seminiferous epithelium, damage to tubules, testicular atrophy, reduced spermatogenesis.
- Decrease in sperm vitality, motility.
- Impaired fertilization by affecting sperm capacitation and the acrosome reaction.

Causes of Elevated ROS Levels

- Genito-urinary tract infection
- Prostatitis
- Vasectomy reversal
- Varicocoele
- Cryptorchidism
- Chronic disease
- Xenobiotics
- Chemical pollutants and occupational hazards
- Heavy metal exposure
- Removal of seminal plasma during sperm preparation for assisted conception
- Drugs – cyclophosphamide, aspirin, paracetamol
- Smoking
- Excessive exercise
- Heat exposure
- Obesity
- Age

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Sexual health

STIs can be caused by virus, fungus, parasite or bacteria. Anyone who is sexually active may be at risk of acquiring an STI. The risk is higher for those with increased numbers of sexual partners, or who have had sex with someone who has/had many partners, or have had unprotected sex.

Chlamydia

Chlamydia is the most common curable STI diagnosed in the UK. Often asymptomatic, anyone who is sexually active is considered to be at increased risk of chlamydia infection. It is the most commonly recognised, screened and treated of all STI's. **Allow 6 weeks before re-testing to avoid picking up the DNA from a previous infection**.

Gonorrhoea

Gonorrhoea is caused by the bacterium Neisseria gonorrhea, which multiplies easily in the mucous membranes of the male and female reproductive tract. It can cause serious and permanent health conditions if not treated. Symptoms of gonorrhoea are usually overt in men with white, yellow, or green discharge from the penis. Gonorrhoea can also infect the throat and rectum – individual PCR swabs from **each site** should be taken to screen for gonorrhoea. Resistance to antibiotics is increasing and treatment is now combined oral and injectable antibiotics. **Partners should be treated at the same time with retesting after two weeks to confirm clearance - test of cure is recommended following treatment for gonococcal infections**.

Mycoplasma Genitalium (M.Gen)

M.gen is an important sexually transmitted pathogen detectable only by NAAT. M.gen lacks a cell wall and has limited treatment options. It spontaneously develops resistance to antimicrobials. BASHH recommends treatment with Resistance Guided Therapy – testing for M.gen with macrolide resistance determination. M.gen cannot be cultured for diagnostic testing. M.gen prevalence is higher than GC, and in some populations can be similar to CT. M.gen risk factors are similar to CT and consider testing M.gen in all males with non-GC urethritis and all individuals with signs or symptoms of PID, cervicitis, endometritis, associated infertility, ano-rectal condition or epididymo-orchitis. Partner testing is advised for current partners only. Rectal infections are common, and appear to be an important reservoir for resistance. BASHH guidance – all patients must return for test of cure at 3-5 weeks.

Macrolide Resistance Testing (M.gen)

Prevalence of M.gen in men and women in the general population is 1-2%. Mycoplasma genitalium has been implicated as a cause of acute and chronic non-chlamydial non-gonococcal urethritis in males and post coital bleeding, cervicitis, endrometritis and pelvic inflammatory disease in females. It is a sexually transmitted, fastidious microorganism that is extremely difficult to culture – with nucleic acid amplification testing (NAAT urine or swab) being the only method available for routine M. genitalium detection. Macrolides are generally considered the first-line treatment for M. genitalium infections. However, **resistance to macrolides** seems to be increasing worldwide typically exceeding > 40% in male patients who are detected positive for M.gen at screening.

M.gen can be requested as a single PCR test or with CT/GC, with or without other testing options. Important updates to the UK BASHH M. genitalium management guidelines are taking the issue of antimicrobial resistance seriously. The draft guidelines have been posted for consultation and include a grade 1B recommendation to test for antimicrobial resistance, stating the importance of knowing the macrolide resistance status to determine whether azithromycin should be prescribed. The guidelines aim to support laboratories in making a case for increased funding to bring in the necessary testing to manage M. genitalium infections and associated antimicrobial resistance.

Ureaplasma

U. Urealyticum and parvum are strains of bacteria that can lead to urinary tract infection and pelvic inflammation. Usually asymptomatic, it is part of the normal genital flora of both men and women. It is found in about 70% of sexually active humans. In males with lower sperm quality, ureaplasma infection could lead to a more pronounced decreased in some seminal parameters and compromise sperm motility.

Trichomoniasis

Trichomoniasis is caused by a tiny parasite called Trichomonas vaginalis – and is one of the most common STI's worldwide. Frequency of coinfection with other STI's is well recognised, and notably, infection increases the risk of HIV transmission in both men and women. It is associated with adverse pregnancy outcomes, infertility, and cervical neoplasia. Some women may mistake this infection for a yeast infection or bacterial vaginosis since the symptoms are similar: frothy discharge, strong vaginal odour, pain on intercourse, irritation and itching. Men can get trichomoniasis too, but they don't tend to have symptoms. It seems to be linked to male factor infertility. Partners (male or female) need to be treated to avoid ongoing re-infection. Infected women who are sexually active have a high rate of reinfection, **thus re-screening at 3 month post treatment could be considered**.

Gardnerella vaginalis

'Gardnerella vaginalis is a bacterium rather than a sexually transmitted infection. It is part of the normal vaginal flora but, when the normal balance of bacteria in the vagina is disrupted, it can flourish and overgrow leading to bacterial vaginosis. Does it matter if it not an STI? Yes, because it can be characterised by a fishy smelling, white vaginal discharge, itching, burning, and irritation, and there are some known pregnancy and pelvic inflammatory conditions associated with Gardnerella as well as a higher risk of getting other STI's.

In a patient with signs and symptoms suggestive of bacterial vaginosis detection of Gardnerella vaginalis provides supportive evidence of bacterial vaginosis. It can, however, be detected in asymptomatic individuals and it can also be absent in patients with bacterial vaginosis which has been caused by overgrowth of other similar organisms such as Mobiluncus and Atopobium species. Results should be interpreted in line with patient's clinical symptoms and microscopy.

Herpes/Herpes Simplex Virus I/II

Genital herpes caused by the herpes simplex virus (HSV). The virus lives in the nerves and when active it travels to the surface of the infected area and makes copies of itself – called shedding, because new virus cells can at this time rub off onto another person. The virus travels back down the nerve to a ganglion usually at the base of the spine where it lies dormant for a while. It causes painful blisters on the genitalia and surrounding areas. It can be passed through intimate sexual contact and for this reason is referred to as an STI. Once infected, it remains a chronic long term condition with the virus remaining with recurrent activity with variable frequency. There are two types of herpes simplex virus: Type I and Type 2. Both are highly contagious and can be passed easily from one person to another. There is no cure for genital herpes, the symptoms can usually be controlled by antiviral medication. Although using a condom can reduce the risk of herpes transmission, condoms are not 100% effective since herpes can be spread from skin-to-skin.

Lymphogranuloma venereum (LGV)

LGV is a type of chlamydia bacteria that attacks the lymph nodes. It is seen predominantly in gay and bisexual men, and very rarely seen in the UK in heterosexual men and women.

Nearly all LGV infections seen in the UK in recent years have been in the rectum. Within a few weeks of becoming infected, most people get painful inflammation in the rectum with bleeding, pus, constipation or ulcers, sometimes with fever, rash and groin, armpit or neck swelling. Left untreated, LGV can cause lasting damage to the rectum that may require surgery. LGV in the penis might cause a discharge and pain when urinating, with swollen glands in the groin. LGV in the mouth or throat is rare but can cause swollen glands in the neck.

Investigation for possible LGV symptoms is by PCR swab taken from the rectum and penis. If LGV infection is suspected in female patients, cervical and vaginal PCR swabs should be taken. Samples are first tested for chlamydia and if chlamydia is detected, if LGV is suspected, swabs can be further tested, if requested, for LGV as an additional tests, using the same swab samples. Sexual contact partners should also be checked.

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STI	INCUBATION PERIOD	SAMPLE SITE	TEST	TEST CODE	SAMPLE TYPE	TAT
Chlamydia CT (Bacterial)	1–3 weeks, up to 6 weeks	Urine	Chlamydia	**CPCR**	First catch Urine	2 days
		Cervix/Vagina	Chlamydia	**SPCR**	PCR Swab	2 days
		Cervix/Vagina	Chlamydia	**TPCR**	Thin Prep Vial	2 days
Gonorrhoea GC (Bacterial)	2–7 days, up to 1 month	Urine	Gonorrhoea by PCR	**CGON**	First Catch Urine	2 days
		Cervix/Vagina	Gonorrhoea by PCR	**SGON**	PCR Swab	2 days
		Cervix/Vagina	Gonorrhoea by PCR	**TGON**	Thin Prep Vial	2 days
		Cervix/Vagina	Gonorrhoea by CULTURE	**GONN**	Black Charcoal swab	2-3 days
CT/GC Combined (Bacterial)	1–3 weeks, up to 6 weeks	Urine	CT/GC	**CCG**	First Catch Urine	2 days
		Cervix/Vagina	CT/GC	**SCG**	PCR Swab	2 days
		Cervix/Vagina	CT/GC	**TCG**	Thin Prep Vial	5 days
		Rectum	CT/GC	**RSCG**	PCR Swab	2 days
		Throat	CT/GC	**TSCG**	PCR Swab	2 days
Mycoplasma genitalium (Bacterial)	Symptoms develop at 1–3 weeks	Urine	Mycoplasma genitalium by PCR	**MGEN**	First Catch Urine	2 days
		GU Site	Mycoplasma genitalium by PCR	**MGEN**	PCR Swab	2 days
		Cervix/Vagina	Mycoplasma genitalium by PCR	**MGEN**	Thin Prep Vial	2 days
Ureaplasma urealyticum (Bacterial)	Symptoms develop at 1–3 weeks	Urine	Ureaplasma by PCR	**UGEN**	First Catch Urine	2 days
		GU Site	Ureaplasma by PCR	**UGEN**	PCR Swab	2 days
		Cervix/Vagina	Ureaplasma by PCR	**UGEN**	Thin Prep Vial	2 days
Trichomonas vaginalis (Parasitic)	4–28 days, many patients are asymptomatic carriers	Urine	Trichomonas vaginalis by PCR	**TVPC**	First Catch Urine	2 days
		GU Site	Trichomonas vaginalis by PCR	**TVPC**	PCR Swab	2 days
		Cervix/Vagina	Trichomonas vaginalis by PCR	**TVPC**	Thin Prep Vial	2 days
Gardnerella vaginalis (Bacterial)	Imbalance of normal flora	Urine	Gardnerella vaginalis by PCR	**GVPC**	First Catch Urine	2 days
		GU Site	Gardnerella vaginalis by PCR	**GVPC**	PCR Swab	2 days
		Cervix/Vagina	Gardnerella vaginalis by PCR	**GVPC**	Thin Prep Vial	2 days
Bacterial Vaginosis (BV) (Bacterial)	Imbalance of normal flora	Cervix/Vagina	Bacterial Vaginosis (BV) Profile by both MICROSCOPY and PCR	**STD8**	Both Microscopy & PCR swab	3 days
Herpes Simplex Viral I/II (Viral)	2–14 days, testing is most appropriate for patients with symptomatic lesion(s)	Herpes lesion	Herpes by PCR	**HERS**	PCR Swab	5 days
			Herpes by PCR	**HERD**	First Catch Urine	5 days
Human Papillomavirus (Viral)	HPV is the most common sexually transmitted infection – usually asymptomatic	Cervical cells	PV (DNA and reflexed mRNA)	**HPVT**	Thin Prep Vial	5 days
		Cells/papilloma from site (throat/penile/anal)	HPV (Individual low & high risk DNA subtypes)	**HP20**	PCR Swab	3 days
			HPV (Individual low & high risk DNA subtypes)	**HP20**	Cells/Papilloma	3 days
Genital warts (Viral)	Weeks/months after exposure	GU Warts	PV (DNA and reflexed mRNA)	**HPVT**	Thin Prep Vial	5 days
			HPV (Individual low & high risk DNA subtypes)	**HP20**	PCR Swab	3 days
			HPV (Individual low & high risk DNA subtypes)	**HP20**	Cells/Papilloma	3 days
Syphilis/Herpes (Bacterial/Viral)	Whenever active lesions are present	Symptomatic lesion	Syphilis/Herpes Lesion Profile	**STD9**	PCR Swab	7 days

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Sexual health

BLOOD	INCUBATION PERIOD	SAMPLE SITE	TEST	TEST CODE	SAMPLE TYPE	TAT
Syphilis (Bacterial)	9–21 days, but up to 90 days	Blood	Syphilis IgG/IgM	SERJ	B	4 hours
Herpes Simplex Virus I/II (Viral)	IgG 4–6 weeks after exposure, IgM 5–35 days after exposure, after which test IgG	Blood	Herpes IgG (past infection Herpes IgM (current/recent)	HERP HERM	B B	2 days 2 days
HIV (Viral)	Usually 10–90 days, but up to 180 days	Blood	HIV I&II/p24 antigen (screening from 45 days post exposure (BHIVA))	HDUO	B	4 hours
Hep B (Viral)	Usually 45–180 days, average of 60–90 days	Blood	Hep B surface antigen	AUAG	B	4 hours
Hep C Ab (Viral)	Usually 9–180 days, average of 45–65 days	Blood	Hep C Antibodies	HEPC	B	4 hours

EARLY DETECTION PROFILES BY PCR	INCUBATION PERIOD	SAMPLE SITE	TEST	TEST CODE	SAMPLE TYPE	TAT
7 STIs by PCR	One sample for 7 STI Tests	Urine Cervix Vagina	Chlamydia Gonorrhoea Mycoplasma genitalium Ureaplasma genitalium Trichomonas vaginalis Gardnerella vaginalis Herpes Simplex I/II	PP12	**Thin Prep Vial** or **First Catch Urine** or **PCR Swab** or **Aptima urine** or **multisite swab**	2 days
HIV/HBV/HCV	Early Detection Screen by PCR Multiplex (HIV from 10 days)	Blood	HIV 1&2 RNA Hepatitis B (HBV DNA) Hepatitis C (HCV RNA)	STDX	A 10mls or 2x4mls (Vacutainer only)	3 days

RAPID Xpert HIV-1

For some patients earlier diagnosis of HIV infection is important. **Xpert HIV-1 Qual** is a qualitative test that provides on-demand molecular testing for early diagnosis (from 10 days).

For patient on treatment for HIV

Xpert HIV-1 Viral Load accommodates on demand testing and measurement of blood plasma HIV-1 RNA concentration (HIV viral load/40 copies/ml) which has been established as the standard of care in assessing HIV-positive patient prognosis and response to antiretroviral therapy. Assessment of viral load levels is a strong predictor of the rate of disease progression and, by itself or in combination with CD4 T-cell counts, has great prognostic value.

- Improve Patient Care: Same day results support better clinical decisions
- Increase Efficiency: Rapid results enable earlier adjustments to appropriate therapy
- Strengthen Communities: Quick decisions can help reduce drug resistance

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TEST	CODE	SAMPLE REQS	TAT
7 STI Profile by PCR (7 tests from 1 Sample)	PP12	**FCRU / PCR / TPV**	2 days
7 STI Profile by PCR (7 tests from 1 Sample) (Self-collect) See page 131 for more information	PP12	Aptima urine or multisite swab	2 days
Chlamydia – Urine	CPCR	**FCRU**	2 days
Chlamydia – PCR swab	SPCR	**PCR**	2 days
Chlamydia – Thin Prep	TPCR	**TPV**	2 days
Chlamydia/Gonorrhoea – Urine	CCG	**FCRU**	2 days
Chlamydia/Gonorrhoea – Urine (Self-collect) See page 131 for more information	CCG	Aptima urine	2 days
Chlamydia/Gonorrhoea – PCR Swab	SCG	**PCR**	2 days
Chlamydia/Gonorrhoea – Thin Prep	TCG	**TPV**	5 days
Chlamydia/Gonorrhoea – Rectal	RSCG	**PCR**	2 days
Chlamydia/Gonorrhoea – Rectal (Self-collect) See page 131 for more information	RSCG	Aptima multisite swab	2 days
Chlamydia/Gonorrhoea – Throat	TSCG	**PCR**	2 days
Chlamydia/Gonorrhoea – Throat (Self-collect) See page 131 for more information	TSCG	Aptima multisite swab	2 days
Chlamydia/Gonorrhoea – Vaginal (Self-collect) See page 131 for more information	SCG	Aptima multisite swab	2 days
Chlamydia/Gonorrhoea/Trichomonas – Urine	CCGT	**FCRU**	2 days
Chlamydia/Gonorrhoea/Trichomonas – PCR Swab	SCGT	**PCR**	2 days
Chlamydia/Gonorrhoea/Trichomonas – Thin Prep	TCGT	**TPV**	2 days
CT/GC/Trichomonas/Mgen – Urine	CGTM	**FCRU**	2 days
CT/GC/Trichomonas/Mgen – PCR Swab	SGTM	**PCR Swab**	2 days
CT/GC/Trichomonas/Mgen – Thin Prep	TGTM	**TPV**	2 days
Gonorrhoea – Culture ‡‡‡ The optimal sample type from the female genital tract is an endocervical swab. Gonorrhoea does not survive well outside the endocervical epithelium; a negative gonorrhoea culture result from a vaginal swab is not reliable for excluding infection.	GONN	**CS**‡‡‡	2-3 days
Gonorrhoea – Urine	CGON	**FCRU**	2 days
Gonorrhoea – PCR swab	SGON	**PCR**	2 days
Gonorrhoea – Thin Prep	TGON	**TPV**	2 days
Early Detection Screen PCR/NAAT	STDX	(A) 10mls or 2 x 4mls (Vacutainer only)	3 days
Early Detection Screen PCR/NAAT with Syphilis	STXX	(B) (A) 10mls or 2 x 4mls	3 days
Gardnerella vaginalis by PCR	GVPC	**FCRU / PCR / TPV**	2 days
Haemophilus ducreyi by PCR	DUCR	**PCR**	7 days
Hepatitis A Profile	HEPA	(B)	4 hours
Hepatitis B Surface Antigen	AUAG	(B)	4 hours
Hepatitis B Surface Antigen (Self-collect) See page 131 for more information	THBA	(B) (TDL Tiny)	1 day

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Sexual health

TEST	CODE	SAMPLE REQS	TAT
Hepatitis C Antibodies	HEPC	B	4 hours
Herpes Simplex (HSV) 1 & 2 – Genital lesion (Self-collect) See page 131 for more information	HERS	Aptima multisite swab	5 days
Herpes Simplex (HSV) 1 & 2 – Oral lesion (Self-collect) See page 131 for more information	HERS	Aptima multisite swab	5 days
Herpes Simplex I/II by PCR (Swab)	HERS	**PCR**	5 days
Herpes Simplex I/II by PCR (Urine)	HERD	**FCRU / PCR / TPV**	5 days
HIV 1 & 2 Abs/p24Ag (Self-collect) See page 131 for more information	THIV	B (TDL Tiny)	1 day
HIV 1 & 2/p24Ag	HDUO	B	4 hours
HIV/HBV/HCV (Early detection by PCR/NAAT) with Syphilis	STXX	B A 10mls or 2 x 4mls	3 days
HIV/HBV/HCV Screen by PCR/NAAT (10 days post exposure)	STDX	A 10mls or 2 x 4mls (Vacutainer only)	3 days
HIV Rapid RNA HIV-1 QUALITATIVE	LHIV	A (Vacutainer only)	4 hours
HIV Rapid RNA HIV-1 QUANTITATIVE	RHIV	A (Vacutainer only)	4 hours
HPV (DNA and reflexed mRNA)	HPVT	**TPV**	5 days
HPV (HR mRNA types 16, 18 + others)	HPVH	**TPV**	3 days
HPV (Individual low & high risk DNA subtypes)	HP20	**TPV / PCR**	3 days
HPV Individually Typed High Risk DNA Subtypes (Self-collect) See page 131 for more information	HPVZ	Qvintip vaginal swab	3 days
HPV mRNA (All High Risk Subtypes) (Self-collect) See page 131 for more information	HPVY	Qvintip vaginal swab	3 days
Lymphogranuloma Venerium (LGV)	LGVP	**PCR*** [42]	1-2 weeks
Lymphogranuloma Venerium (LGV) – Rectal (Self-collect)* See page 131 for more information * This test can be configured to be automatically reflexed as required.	LGVP	Aptima multisite swab	1-2 weeks
Macrolide Resistance Test (Mgen)	MGR	**FCRU / PCR**	1-2 weeks
Monkeypox Virus (Lesion) (Self-collect) See page 131 for more information	MPXV	Aptima multisite swab	2 days
Mycoplasma genitalium by PCR	MGEN	**FCRU / PCR / TPV**	2 days
Mycoplasma genitalium Detection – Urine or Vaginal (Self-collect) See page 131 for more information	MGEN	Aptima urine or multisite swab	2 days
Mycoplasma genitalium Resistance – Urine or Vaginal (Self-collect)* See page 131 for more information * This test can be configured to be automatically reflexed as required.	MGR	Aptima urine or multisite swab	2 days
Mycoplasma genitalium/Ureaplasma by PCR	MUPC	**FCRU / PCR / TPV**	2 days
Rapid Xpert HIV-1 RNA Qualitative – Early Detection from 10 days	LHIV	A (Vacutainer only)	4 hours
Rapid Xpert HIV-1 RNS Viral Load – Rapid Testing for HIV-Positive Patient Prognosis and Response To Antiretroviral Therapy	RHIV	A (Vacutainer only)	4 hours
RPR (Syphilis)	RPR	B	2 days

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TEST	CODE	SAMPLE REQS	TAT
STD1 M/F STD Quad (Urine and Serology)	STD1	B **FCRU**	2 days
STD2 M/F STI Profile Plus (Urine and Serology)	STD2	B **FCRU** (If culture swabs are needed please request separately)	4 days
STD3 Female STD Quad (PCR Swab and Serology)	STD3	B **PCR**	2 days
STD4 Female STI Profile Plus (PCR Swab and Serology)	STD4	B **PCR** (If culture swabs are needed please request separately)	4 days
STD5 Serology only	STD5	B	4 hours
STD6 Serology only without HIV	STD6	B	4 hours
STD8 Vaginitis/BV Profile using Culture & PCR Swab	STD8	**PCR** / **STM**	3 days
STD9 Symptomatic lesion sample using PCR Swab from lesion & PCR Swab	STD9	2 x **PCR Swab**	7 days
STI Profile by PCR (7 tests from 1 Sample) (Self-collect) See page 131 for more information	PP12	Aptima urine or multisite swab	2 days
STI Profile: MSM1	MSM1	B / **FCRU** / **PCR Swab Throat** / **PCR Swab Rectal**	2 days
STI Profile: MSM2	MSM2	B / **FCRU** / **PCR Swab Throat** / **PCR Swab Rectal**	3 days
Syphilis by PCR (chancre)	SYPS	**PCR**	5 days
Syphilis IgG/IgM	SERJ	B	4 hours
Syphilis IgG/IgM (Self-collect) See page 131 for more information	TSYP	B (TDL Tiny)	1 day
TPPA	TPPA	B	2 days
Trichomonas Vaginalis (TV) – Urine or Vaginal (Self-collect) See page 131 for more information	TVPC	Aptima urine or multisite swab	2 days
Trichomonas vaginalis by PCR	TVPC	**FCRU** / **PCR** / **TPV**	2 days
Triple Swab Female Profile NEW	3SWA	**PCR** swab x 3 (label by site)	2 days
Triple Swab Female Profile (Self-collect) NEW See page 131 for more information	3SWA	Aptima multisite swab x 3 (label by site)	2 days
Ureaplasma urealyticum by PCR	UGEN	**FCRU** / **PCR** / **TPV**	2 days
Vaginitis/BV Profile using Culture & PCR Swab	STD8	**PCR** / **STM**	3 days

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Sexual health

STD1 M/F STD Quad (Urine and Serology)

SEROLOGY
HIV 1&2/p24 Antigen
Syphilis IgG/IgM
URINE
Chlamydia
Gonorrhoea

TAT: 2 days

STD1

Ⓑ **FCRU**

STD2 M/F STI Profile Plus (Urine and Serology)

SEROLOGY
HIV 1&2/p24 Antigen
Hep B Surface Antigen
Hep C Abs
Hep C Ag
Syphilis IgG/IgM
URINE
Chlamydia/Gonorrhoea
Mycoplasma genitalium
Ureaplasma
Trichomonas vaginalis
Gardnerella vaginalis
Herpes Simplex I/II

TAT: 4 days

STD2

Ⓑ **FCRU** (If culture swabs are needed please request separately)

STD3 Female STD Quad (PCR Swab and Serology)

SEROLOGY
HIV 1&2/p24 Antigen
Syphilis IgG/IgM
VAGINAL PCR SWAB
Chlamydia
Gonorrhoea

TAT: 2 days

STD3

Ⓑ **PCR**

STD4 Female STI Profile Plus (PCR Swab and Serology)

SEROLOGY
HIV 1&2/p24 Antigen
Hep B Surface Antigen
Hep C Abs
Hep C Ag
Syphilis IgG/IgM
VAGINAL PCR SWAB
Chlamydia/Gonorrhoea
Mycoplasma genitalium
Ureaplasma
Trichomonas vaginalis
Gardnerella vaginalis
Herpes Simplex I/II

TAT: 4 days

STD4

Ⓑ **PCR** (If culture swabs are needed please request separately)

STD5 Serology only

HIV 1&2/p24 Antigen
Hepatitis B Surface Antigen
Hep C Abs
Hep C Ag
Syphilis IgG/IgM

TAT: 4 hours

STD5

Ⓑ

STD6 Serology only without HIV

Hepatitis B Surface Antigen
Hep C Abs
Hep C Ag
Syphilis IgG/IgM

TAT: 4 hours

STD6

Ⓑ

STD8 Vaginitis/BV Profile using Culture & PCR Swab

Candida species
Gardnerella vaginalis by PCR
Trichomonas vaginalis by PCR

TAT: 3 days

STD8

PCR / STM

STD9 Symptomatic lesion sample using PCR Swab from lesion & PCR Swab

Syphilis by PCR
Herpes Simplex I/II by PCR (from single swab)

TAT: 7 days

STD9

2 x **PCR Swab**

7 STI Profile by PCR (7 tests from 1 Sample)

Chlamydia trachomatis
Neisseria gonorrhoea
Mycoplasma genitalium
Ureaplasma species
Trichomonas vaginalis
Gardnerella vaginalis
Herpes Simplex I/II
All tests can be requested individually

TAT: 2 days

PP12

FCRU / PCR / TPV
or Aptima urine or multisite swab

CT/GC/Trichomonas/ Mgen (PCR Swab)

Chlamydia
Gonorrhoea
Trichomonas vaginalis
Mycoplasma genitalium
All tests can be requested individually

TAT: 2 days

SGTM

PCR Swab

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CT/GC/Trichomonas/Mgen (Urine)

Chlamydia
Gonorrhoea
Trichomonas vaginalis
Mycoplasma genitalium

All tests can be requested individually

TAT: 2 days

CGTM

FCRU

HIV/HBV/HCV (Early detection by PCR/NAAT) with Syphilis

HIV1 and HIV2 (RNA)
Hepatitis B Virus (HBV DNA)
Hepatitis C Virus (HCV RNA)
Syphilis IgG/IgM

Samples must be received in the laboratory within 2 days of sample taking

TAT: 3 days

STXX

B A 10mls or 2 x 4mls

HIV/HBV/HCV Screen by PCR/ NAAT (10 days post exposure)

Positive findings will be reflexed for individual qualitative confirmatory testing using the Roche Cobas Ampliscreen

HIV1 and HIV2 (RNA)
Hepatitis B Virus (HBV DNA)
Hepatitis C Virus (HCV RNA)

Samples must be received in the laboratory within 2 days of sample taking

TAT: 3 days

STDX

A 10mls or 2 x 4mls (Vacutainer only)

HIV Rapid RNA HIV-1 QUALITATIVE

Early detection from 10 days

HIV-1 RNA

Sample must be received in the laboratory within 24 hours of sample taking

TAT: 4 hours

LHIV

A (Vacutainer only)

HIV Rapid RNA HIV-1 QUANTITATIVE

Rapid testing for HIV-positive patient prognosis and response to antiretroviral therapy

HIV-1 RNA VIRAL LOAD (40 copies/ml)

Sample must be received in the laboratory within 24 hours of sample taking

TAT: 4 hours

RHIV

A (Vacutainer only)

STI Profile: MSM1

HIV 1&2/p24 Ag
Syphilis IgG/IgM
Urine for CT/GC
Throat Swab CT/GC
Rectal Swab CT/GC

TAT: 2 days

MSM1

B **/ FCRU / PCR Swab Throat / PCR Swab Rectal**

STI Profile: MSM2

HIV 1&2/p24 Ag
Syphilis IgG/IgM
7 STI by PCR Screen
Throat Swab CT/GC
Rectal Swab CT/GC
Macrolide Resistance Test (M.gen)*
Hep B sAg
Hep C Abs

TAT: 3 days

MSM2

B **/ FCRU / PCR Swab Throat / PCR Swab Rectal**

Triple Swab Female Profile

NEW

CT/GC Vaginal
CT/GC Throat
CT/GC Rectal

TAT: 2 days

3SWA

PCR / Aptima multisite swab x 3 (label by site)

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FASTest Test Now: Sexual Health screening ahead of expected time

TEST	CODE	SAMPLE REQS	TAT
FAST Chlamydia – Urine	FCT	**FCRU**	4 hours
FAST Gonorrhoea – Urine	FGN	**FCRU**	4 hours
FAST CT/GC – Urine	FCG	**FCRU**	4 hours
FAST Chlamydia – PCR Swab	FSCT	**PCR Swab**	4 hours
FAST Gonorrhoea – PCR Swab	FSGN	**PCR Swab**	4 hours
FAST CT/GC – PCR Swab	FSCG	**PCR Swab**	4 hours
FAST CT/GC – Throat PCR Swab	FTCG	**PCR Swab**	4 hours
FAST CT/GC – Rectal PCR Swab	FRCG	**PCR Swab**	4 hours
FAST Screen SHORT with Urine	FSSC	Ⓑ **FCRU**	4 hours
FAST Screen SHORT with Swab	FSSS	Ⓑ **PCR Swab**	4 hours
FAST Screen with Urine	FUSC	Ⓑ **FCRU**	4 hours
FAST Screen with Swab	FSWS	Ⓑ **PCR Swab**	4 hours

FAST Screen SHORT with Urine

HIV 1&2/p24 Ag
Syphilis IgM/IgG
FAST Urine CT/GC

TAT: 4 hours

FSSC

Ⓑ **FCRU**

FAST Screen SHORT with Swab

HIV 1&2/p24 Ag
Syphilis IgM/IgG
FAST Swab CT/GC

TAT: 4 hours

FSSS

Ⓑ **PCR Swab**

FAST Screen with Urine

HIV 1&2/p24 Ag
Hep B sAg
Hep C Abs
Syphilis IgG/IgM
FAST Urine CT/GC

TAT: 4 hours

FUSC

Ⓑ **FCRU**

FAST Screen with Swab

HIV 1&2/p24 Ag
Hep B sAg
Hep C Abs
Syphilis IgG/IgM
FAST Swab CT/GC

TAT: 4 hours

FSWS

Ⓑ **PCR Swab**

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Immunology

TEST	CODE	SAMPLE REQS	TAT
Acute Viral Hepatitis Screen	AHSC	B	4 hours
Adrenal Cortex Antibodies	ACTX	B	2 days
ANCA (Anti-Neutrophil Cytoplasmic Abs)	ANCA	B	2 days
Anti-Actin Antibodies	AAA	B	5 days
Anti-Basal Ganglia Antibodies	ABGA	B	3 weeks
Anti-CCP Antibodies (RF)	CCP	B	2 days
Anti-Liver Cytosol Antibodies	ALCA	B	5 days
Anti-MOG [Myelin Oligodendrocyte Glycoprotein] Antibodies	AMOG	B	3 weeks
Anti-MUSK Antibodies	MUSK	B	2 weeks
Anti-Phosphatidylserine Antibodies	PHTS	B	5 days
Anti-Phospholipase A2 Receptor	AA2R	B	3 weeks
Anti-Ri Antibodies	RIAB	B	3 days
Anti-SLA (Soluble Liver Antigen) Abs	LSA	B	10 days
Anti-Nuclear Antibodies (titre & pattern)	ANAB	B	2 days
Anti-Staphylolysin Titre (SGOT)	ASTT	B	3 days
Anti-Streptolysin Titre/ASOT	ASLT	B	2 days
Anti-Sulfatide Antibodies	ASA	B	5 weeks
Aquaporin 4 Antibodies (Neuromyelitis Optica)	AQUA	B	2 weeks
Ascariasis Serology	ASC	B	5 days
Autoantibody Profile I	AUTO	B	2 days
Autoantibody Profile II	ENDO	B	2 days
Avian Precipitins (11 Species)	AVIA	B	5 days
Babesia Antibodies	PCRB	A	7 days
Beta 2 Glycoprotein 1 Abs	B2GP	B	5 days
Borrelia Antibodies (Lyme Disease) IgG, IgM	BORR	B [9,14]	2 days
Borrelia Antibodies (Lyme Disease) IgM	BORM	B	2 days
Borrelia Confirmation (Immunoblot)	BORC	B [9,14]	10 days
Brucella Serology	BRUC	B [9]	2-3 weeks
C1 Esterase Inhibitor	C1EI	B	5 days
C3 Complement	C3	B	4 hours
C3/C4 Complement	COMP	B	4 hours
C4 Complement	C4	B	4 hours
Calprotectin	CALP	**RF**	5 days
Calprotectin, Faecal (Self-collect) See page 131 for more information	CALP	Universal faecal container	5 days
Calprotectin/Elastase Profile	CEP	**RF**	5 days
Calprotectin/QFIT Profile (Combined) NEW	QCAL	QFIT	5 days
Cardiolipin Antibodies (IgG+IgM)	ACAB	B	2 days
Cartilage Antibodies	ACA	B	5 days

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Immunology

TEST	CODE	SAMPLE REQS	TAT
CCP Antibodies (RF)	CCP	B	2 days
Centromere Autoantibodies	CENT	B	2 days
CH50 (Classical pathway)	CH50	B (Frozen) [4]	4 days
Chagas Disease Serology (S.American Trypanosomiasis) T. Cruzi	CHGA	B [9,14]	10 days
Chlamydia Species Specific (MIF) Ab Screen	CHAB	B	2 days
Chronic Fatigue Syndrome Profile	VIP1	A + B [10]	5 days
Coeliac Disease – HLA DQ2/DQ8 Genotype	Q2Q8	A [9]	10 days
Coeliac/Gluten Sensitivity Profile See page 75	GSA	B	2 days
Coeliac/Gluten Profile 2 See page 75	GSA2	A B	10 days
Colloid Antigen-2 Antibodies	CA2A	B	2 weeks
Cotinine (Serum)	COT	B	4 days
COVID-19 (SARS-CoV-2) Abbott IgG Antibody *CE marked IVD capillary kits must be used for self-collection samples and can be ordered through TDL Supplies.	GCOV	**SST / Serum** B * (Venous only)	24 hours
COVID-19 (SARS-CoV-2) Abbott IgM Antibody Contact laboratory	MCOV	**SST / Serum** B * (Venous only)	24 hours
COVID-19 (SARS-CoV-2) Roche Elecsys Anti-SARS-CoV-2 S (SPIKE) *UKCA marked IVD capillary kits must be used for self-collection samples and can be ordered through TDL Supplies.	SCOV	**SST/Serum** B (Venous/ Capillary self-collection*)	24 hours
COVID-19 (SARS-CoV-2) Roche Elecsys Anti-SARS-CoV-2 S (SPIKE) (Self-collect) See page 131 for more information Aid in identifying an immune response to either SPIKE antigen and/or prior infection from SARS-Cov-2.	SCOV	B (TDL Tiny)	24 hours
COVID-19 (SARS-CoV-2) Roche Elecsys Anti-SARS-CoV-2 Total Antibody	TCOV	**SST / Serum** B (Venous only)	24 hours
COVID-19 (SARS-CoV-2) T-SPOT®.COVID *** Do not refrigerate samples at any time. Samples must be received by TDL within 24 hours of taking the sample. Please do not send samples to the laboratory on Saturdays. T-SPOT®. COVID test is CE marked	TCEL	H ***	3 days
Diphtheria Antibodies	DIPH	B	5 days
DNA (Double Stranded) Antibodies IgG	DNAA	B	2 days
DNA (Single Stranded) Antibodies	DNAS	B	5 days
Echinococcus (Hydatid) Antibodies	EFAT	B [9,14]	5 days
Ehrlichiosis Antibodies	EHRL	B [9,14]	10 days
Elastase/Calprotectin Profile	CEP	**RF**	5 days
Endomysial Antibodies (IgA)	AEAB	B	2 days
Endomysial Antibodies (IgA) (Self-collect) See page 131 for more information	AEAB	B (TDL Tiny)	2 days
Extractable Nuclear Antibodies (nRNP, Sm, Ro, La, Jo1, Scl70) CENP-B	ENA	B	2 days
Farmers Lung Precipitins	FARM	B	5 days

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TEST	CODE	SAMPLE REQS	TAT
Fasciola Hepatica Antibodies (Liver Fluke)	FASC	B	2 weeks
Ganglionic Acetylcholine Receptor Antibodies	GACA	B	1 month
Ganglioside GM1, GD1B, GQ1B Abs	GANG	B	5 days
Gastric Parietal Autoantibodies	GASP	B	2 days
Giardia Serology	GIAR	B	5 days
Gliadin Antibodies (IgG) (deamidated)	AGAB	B	2 days
Gliadin Antibodies (IgG) (deamidated) (Self-collect) See page 131 for more information	AGAB	B (TDL Tiny)	2 days
Glomerular Basement Membrane Abs	AGBM	B	2 days
Glutamic Acid Decarboxylase Antibodies (GAD 65)	GAD	B	5 days
Gluten Sensitivity Profile	GLUT	A B B	10 days
Gluten Sensitivity Evaluation	GSA	B	2 days
Gluten/Coeliac Profile 2	GSA2	A B	10 days
Granulocyte Immunology	GRIM	A A (or 10ml) B	2 weeks
H. pylori Antibodies (IgG)	HBPA	B	2 days
H. pylori Antigen – Breath	HBQT	J	5 days
Haemophilus B Influenzae Antibodies	HINF	B	5 days
Histamine (Blood)	HITT	A (Frozen plasma)	5 days
Histamine (Urine)	HITU	RU	5 days
Histamine Releasing Urticaria Test	CURT	B	3 weeks
Histone Antibodies	HISA	B	5 days
Histoplasmosis	HISP	B	10 days
HLA B27	HLAB	A [9]	3 days
Human Anti-Mouse Antibodies	HAMA	B (Frozen)	6 weeks
IgE (Total)	IGE	B	1 day
Immune-Complexes	IMCP	B	5 days
Immunoglobulins (IgG, IgM, IgA)	IMM	B	4 hours
Inner Ear Antigen (Ottoblot)	IEA	B	3 weeks
Insulin Antibodies	INAB	B	5 days
Interleukin 1 Beta	ILB	B (Frozen) [4,7]	1-2 weeks
Interleukin 2	IL2	B (Frozen) [4,7]	1-2 weeks
Interleukin 4	IL4A	B (Frozen) [4,7]	1-2 weeks
Interleukin 6	IL6	B (Frozen) [4,7]	1-2 weeks
Interleukin 8	IL8	B (Frozen) [4,7]	1-2 weeks
Interleukin 10	IL10	B (Frozen) [4,7]	1-2 weeks
Interleukin 28b Genotype	IL28	A	2 weeks
Intrinsic Factor Antibodies	IFAB	B	2 days
Islet Cell Antibodies	ICAB	B	2 days
Legionella Antibodies	LEGO	B	2 days

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Immunology

TEST	CODE	SAMPLE REQS	TAT
Legionella Urine Antigen	LEGA	**RU**	1 day
Leptospirosis (Weil's Disease) Abs (IgM)	LEP	B	5 days
Leukotriene E4	LTE4	**CU** (Frozen)	3 weeks
Listeria IgG/IgM Antibody	LIST	B	1 week
Liver Immunoblot	LIVI	B	3 days
Liver Kidney Microsomal Antibodies	LKM	B	2 days
Lupus Anticoagulant and Anticardiolipin Abs	LUPA	B C [4,18]	2 days
Lyme Disease (Borrelia Abs) IgG, IgM	BORR	B [9,14]	2 days
Lyme Disease (Borrelia Abs) IgM	BORM	B	2 days
Meningococcal Abs	MENI	B	2-4 weeks
Mitochondrial Antibodies	AMIT	B	3 days
Mitochondrial Antibodies M2	MAM2	B	2 days
Myasthenia Gravis Evaluation	MGE	B	5 days
Myelin Associated Glycoprotein Antibodies	MAG	B	5 days
Myelin Basic Protein Antibodies	MBPA	B	2 weeks
Myeloperoxidase Antibodies	MPO	B	2 days
Myocardial Antibodies	MYO	B	1 week
Myositis Panel	MYOS	B	3 days
Neuronal Antibody (Hu, Ri, Yo, Cv2, Ma2)	NEUR	B	10 days
NMDA Receptor Antibodies	NMDA	B	3 weeks
Nucleic Acid Antigen Antibodies	DNA	B	2 days
Oligoclonal Bands	CSFO	**CSF** + B	5 days
Ovarian Autoantibodies	OVAB	B	2 days
Paragomius Serology	PRGM	B	2 weeks
Parathyroid Antibodies	PTHA	B	1 week
Pemphigus/Pemphigoid Autoantibodies	SKAB	B	2 days
Pertussis (Whooping Cough) Antibodies	PERS	B	5 days
Pituitary Antibodies	PITU	B [4]	1 month
Pneumococcal Antibodies – Serotype Specific	PASS	B	5 weeks
Pneumococcal Antibody Screen	PNEU	B	5 days
Proteinase 3 Ab	PR3	B	2 days
Purkinje Cell Antibody (Hu and Yo)	PURK	B	10 days
Q Fever (C Burnetti) Antibodies	QFEV	B [9]	10 days
Rheumatoid Factor (Latex Test)	RF	B	1 day
Rheumatology Profile 1 (Screen)	RH	A B	2 days
Rheumatology Profile 2 (Connective Tissue)	RH2	A A B B	3 days
Rheumatology Profile 3 (Rheumatoid/Basic)	RH3	A B	2 days
Rheumatology Profile 4 (Systemic Lupus)	RH4	A B B	2 days

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TEST	CODE	SAMPLE REQS	TAT
Rheumatology Profile 5 (Mono Arthritis)	RH5	A A B B	3 days
Rheumatology Profile 6 (Rheumatoid Plus)	RH6	B	2 days
Rheumatology Profile 7 (Sjogren's Syndrome)	RH7	B	10 days
Rickettsial Species Antibody Profile	RICK	B	7 days
RNA Polymerase Antibodies	RNAP	B	3 days
RPR (Syphilis)	RPR	B	2 days
Saccharomyces Cerevisiae Antibodies	ASCA	B	2 weeks
Salivary Duct Antibodies	SAB	B	12 days
Scleroderma Immunoblot	SCLI	B	3 days
Sjogren's Syndrome	RH7	B	10 days
Skin (Pemphigus/Pemphigoid) Autoantibodies	SKAB	B	2 days
Skin Antibodies by Immunofluorescence	STSK	B	1 month
Sleeping Sickness Serology (African Trypanosomiasis)	TRYP	B [9]	10 days
Smooth Muscle Antibodies	ASMO	B	2 days
Sperm Antibodies (Serum)	ASAB	B	5 days
Steroid Cell Antibody	SCA	B	2 days
Striated/Skeletal Muscle Antibody	STRA	B	2 days
Strongyloides Antibodies	STGA	B	10 days
Syphilis IgG/IgM	SERJ	B	4 hours
Syphilis IgG/IgM (Self-collect) See page 131 for more information	TSYP	B (TDL Tiny)	1 day
T-SPOT®.COVID *** Do not refrigerate samples at any time. Samples must be received by TDL within 24 hours of taking the sample. Please do not send samples to the laboratory on Saturdays. T-SPOT®. COVID test is CE marked.	TCEL	H ***	3 days
TB Quantiferon®-TB Gold* * Please indicate clearly if samples have/have not been incubated prior to sending to the laboratory. If Lith Hep (green top) tube is used, please request as TBQ4 and ensure sample is received in the laboratory within 16 hours of sample taking.	TBQ4	**Special tubes** or H [1]	3 days
Testicular Autoantibodies	TAB	B	2 days
Tetanus Antibody	TETA	B	5 days
Thyroid Abs (incl. Thyroglobulin + Thyroid Peroxidase Abs)	THAB	B	1 day
Thyroid Peroxidase Antibodies/Anti TPO	TPEX	B	1 day
Tissue Transglutaminase IgA (Coeliac) See page 75	TAA	B	2 days
Tissue Transglutaminase IgA (Coeliac) (Self-collect)** See page 75 **See page 131 for more information	TAA	B (TDL Tiny)	2 days
Tissue Transglutaminase IgG	TAAG	B	5 days
Total Immune Function Evaluation	TIE	A + B [5,10]	7 days
Total Immunoglobulin E	IGE	B	1 day
Toxocara Antibodies (IgG)	TFAT	B [9]	5 days

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Immunology

TEST	CODE	SAMPLE REQS	TAT
Toxoplasma Antibodies (IgG+IgM)	TFAM	B [9]	4 hours
Toxoplasma Antibody Full Evaluation (IgM, Dye Test, IgG Avidity)	TDYE	B [9]	10 days
Toxoplasma by PCR	TXAG	A	5 days
TPPA	TPPA	B	2 days
Trichinella Serology	TRIC	B	5 days
Trypanosome (Chagas) Antibodies	CHGA	B [9,14]	10 days
TSH-Receptor Antibodies	TSI	B	4 days
Tularaemia Antibodies	TULA	B [14]	5 days
Urinary Methyl Histamine	UHIT	**RU** (Frozen)	2 weeks
Urticaria Test (Histamine Releasing)	CURT	B	3 weeks
Vascular Endothelial Growth Factor	VEGF	B	14 days
Voltage Gated Calcium Channel Antibodies	CCAB	B	3 weeks
Voltage Gated Potassium Channel Antibodies	VPCA	B	3 weeks
Whooping Cough (Pertussis) Antibodies	PERS	B	5 days
Whooping Cough (Pertussis) by PCR	PERP	**Prenasal (posterior nasopharynx) swab**	5 days
Yellow Fever Antibodies	YELL	B [9,14]	10 days
Yersinia Antibodies	YERS	B	4 days
Zika Abs IgM and IgG – Antibody detection from 15 days	ZKAB	B	Up to 14 days
Zika RNA by PCR in Semen	ZIKS	**Semen**	Up to 14 days
Zika RT PCR – Window of detection from 1-14 days from onset of symptoms	ZIKU	**RU**	Up to 14 days
Zika RT PCR – Window of detection from 1-7 days from onset of symptoms	ZIKA	B	Up to 14 days

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Acute Viral Hepatitis Screen

Hepatitis A IgM Abs
Hepatitis B Surface Antigen
Hepatitis C Abs

TAT: 4 hours

AHSC

B

Autoantibody Profile I

Thyroid Peroxidase Antibodies
Antinuclear Antibodies
Mitochondrial Antibodies
Smooth Muscle Antibodies
Gastric Parietal Cell Antibodies
LKM

TAT: 2 days

AUTO

B

Autoantibody Profile II

Thyroid Peroxidase Antibodies
Islet Cell Antibodies
Adrenal Antibodies
Gastric Parietal Cell Antibodies
Gonadal (Ovarian/Testicular Abs)

TAT: 2 days

ENDO

B

Calprotectin/QFIT Profile

NEW

Faecal Calprotectin
QFIT

If CALP < 50ug/g then the below comment will be appended:

Calprotectin: < 50 ug/g- Not indicative of GI inflammation. Consider IBS, or quiescent IBD if this is a known patient.

If CALP = 50 ug/g or higher, then the below comment will be appended:

Calprotectin: 50-150 ug/g repeat calprotectin in 2 weeks (Also consider other potential causes (infection, NSAIDS, GI malignancy) depending on the magnitude of the result and clinical context.)

Repeated Calprotectin result: 100–250 ug/g routine referral to gastroenterology.

Calprotectin: >250 ug/g urgent referral to gastroenterology.

TAT: 5 days

QCAL

QFIT

Calprotectin/Elastase Profile

Faecal Calprotectin
Faecal Elastase

TAT: 5 days

CEP

RF

Chlamydia Species Specific (MIF) Ab Screen

Chlamydia trachomatis (serovar A-K & L1-L3)
Chlamydia pneumoniae
Chlamydia psittaci

TAT: 2 days

CHAB

B

Chronic Fatigue Syndrome Profile

Epstein-Barr Virus Antibody Profile
Lymphocyte Subsets (CD4/CD8)*
CRP
Vitamin D (25 OH)

TAT: 5 days

VIP1

A + B [10]

Coeliac/Gluten Sensitivity Profile

Endomysial IgA
Gliadin deamidated IgG
Total IgA*
Tissue Transglutaminase (IgA)

*To reduce the risk of missing IgA deficient patients, a Total IgA will be run for all low Tissue Transglutaminase IgA results.

TAT: 2 days

GSA

B

Coeliac/Gluten Profile 2

Endomysial IgA
Gliadin deamidated IgG
Total IgA*
Tissue Transglutaminase (IgA)

*To reduce the risk of missing IgA deficient patients, a Total IgA will be run for all low Tissue Transglutaminase IgA results.

TAT: 10 days

GSA2

A B

Gluten Sensitivity Profile

Gluten single IgE Allergen
Endomysial Antibodies IgA
Deamidated Gliadin IgG Antibodies
Tissue Transglutaminase IgA
HLA DQ2/DQ8
Total IgA*

*To reduce the risk of missing IgA deficient patients, a Total IgA will be run for all low Tissue Transglutaminase IgA results.

TAT: 10 days

GLUT

A B B

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Immunology

Rheumatology Profile 1 (Screen)

FBC
ESR
Uric Acid
RF Anti CCP Antibodies (RF)
C Reactive Protein

TAT: 2 days

RH

A B

Rheumatology Profile 2 (Connective tissue)

FBC
ESR
Uric Acid
Antinuclear Autoantibodies
Anti-dsDNA IgG
Antibodies to Extractable Nuclear Antigens (ENA):
Anti nRNP
Anti Sm
Anti Ro (SS-A)
Anti La (SS-B)
Anti Jo-1
Anti Scl 70
Anti CENP
RF
Anti CCP Antibodies
HLA B27
C Reactive Protein
CENP-B

TAT: 3 days

RH2

A A B B

Rheumatology Profile 3 (Rheumatoid/Basic)

FBC
ESR
Uric Acid
RF
Anti CCP Antibodies (RF)
Antinuclear Autoantibodies
C Reactive Protein

TAT: 2 days

RH3

A B

Rheumatology Profile 4 (Systemic Lupus)

FBC
ESR
Antinuclear Autoantibodies
Anti-dsDNA IgG
Antibodies to Extractable Nuclear Antigens (ENA)
Anti nRNP
Anti Sm
Anti Ro (SS-A)
Anti La (SS-B)
Anti Jo-1
Anti Scl 70
Anti CENP
RF
Anti CCP Antibodies
Anti Cardiolipin Autoantibodies
Complement 3/4
C Reactive Protein

TAT: 2 days

RH4

A B B

Rheumatology Profile 5 (Mono Arthritis)

FBC
ESR
Uric Acid
RF
Anti CCP Antibodies (RF)
Antinuclear Autoantibodies
C Reactive Protein
HLA B27

TAT: 3 days

RH5

A A B B

Rheumatology Profile 6 (Rheumatoid Plus)

RF
Anti CCP Antibodies (RF)
C Reactive Protein

TAT: 2 days

RH6

B

Rheumatology Profile 7 (Sjogren's Syndrome)

Anti RO (SS-A)
Anti La (SS-B)
Salivary Antibodies (SAB)
C Reactive Protein

TAT: 10 days

RH7

B

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Coeliac Disease (CD)

Coeliac Disease (CD) is an immune-mediated disease of the intestines that is triggered by the ingestion of gluten in genetically susceptible individuals. Gluten is the major protein component of wheat, rye, and barley. Genetic predisposition does play a key role in CD, and it is well known that CD is strongly associated with specific HLA class II genes known as HLA-DQ2 and HLA-DQ8. Approximately 95% of CD patients express HLA-DQ2, and the remaining patients are usually HLA-DQ8 positive. The negative predictive value for both tests is higher than 99%. However, the HLA-DQ2 allele is common and is carried by approximately 30% of Caucasian individuals. Thus, HLA-DQ2 or HLA-DQ8 is necessary for disease development but is not sufficient for disease development; its estimated risk effect is only 36-53%.

Note: History taking is important if a patient has been on a gluten-free diet for 6-12 months, approximately 80% will lose their antibody response. After 5 years this increases to >90%.

New pathway

To determine the new Coeliac Pathway, a TDL audit of more than 12,000 requests for coeliac testing was carried out and results assessed within UKAS current guidelines. The purpose of these new guidelines is to reduce the risk of missing IgA deficient patients.

The new pathway covers this by adding a total IgA to all low Tissue Transglutaminase (TGG) IgA results to check for an IgA deficiency. If an IgA deficiency is identified, a reflex deamidated gliadin IgG will be carried out to determine whether the patient is likely to have coeliac disease with an IgG antibody.

The changes are as follows:

- Initial TTG IgA samples are received and tested
- If TTG IgA is LOW <0.2 U/ml reflex testing for Total IgA will be undertaken
- If Total IgA is LOW <0.1 g/L then reflex testing for Gliadin IgG test will be undertaken
- If TTG IgA is HIGH (>/= 10 U/ml then reflex testing for Endomysial IgA will be undertaken as a confirmatory test.

Endomysial IgA

- This is no longer available as a stand-alone test. If requested the request will default to TTG IgA.
- However if TTG IgA is positive endomysial IgA will be carried out as a confirmatory test. This only needs to be done once in the patients history.

Endomysial IgG requests

- No longer available as a single test request.

Deamidated gliadin IgA requests

- This is no longer available. If requested the request will default to TTG IgA.

Deamidated gliadin IgG requests

- This can be requested as an individual standalone test as well as being incorporated into the coeliac pathway. This may be useful when testing children's samples.

Appropriate clinical comments will be added to results automatically – see table.

Deamidated gliadin IgG requests

TTG IgA result U/ml	Total IgA result for new assay g/L	Deamidated gliadin IgG result U/ml	Comment
0.2 to 10	N/A	N/A	Coeliac disease unlikely (please note that if the patient has no dietary gluten results may appear false negative)
>/= 10	N/A	N/A	Suggestive of coeliac disease
<0.2	>/= 0.1	N/A	Coeliac disease unlikely (please note that if the patient has no dietary gluten, results may appear false negative)
<0.2	<0.1	>/=10	Consistent with coeliac disease in a patient with selective IgA deficiency
<0.2	<0.1	<7	Coeliac disease unlikely (please note that if the patient has no dietary gluten, results may appear false negative)
<0.2	<0.1	7-10	Result equivocal suggest referral to a gastroenterologist for consideration of duodenal biopsy

Tropical and travel-related immunology

TEST	CODE	SAMPLE REQS	TAT
Amoebic (E. histolytica) Antibodies	AFAT	B	2 days
Amoebic (E. histolytica) PCR	AMAG	**RF**	2 days
Bancroftia/Oncerciasis/Filarial Antibodies	TFIF	B [14]	2 weeks
Bilharzia (Schistosome) Antibody Screen	BILH	B [14]	10 days
Bilharzia (Urine)	USCH	Mid-morning terminal urine following exercise [14]	1-2 days
Borrelia Antibodies (Lyme Disease) IgG, IgM	BORR	B [9,14]	2 days
Borrelia Antibodies (Lyme Disease) IgM	BORM	B	2 days
Borrelia Confirmation (Immunoblot)	BORC	B [9,14]	10 days
Cryptosporidium Detection by PCR	CRPA	**RF**	2 days
Dengue Virus Serology	DENG	B [9,14]	5 days
DVT/Pre-travel Screen	DVT1	A A B [9]	5 days
Echinococcus (Hydatid) Antibodies	EFAT	B [9,14]	5 days
Enteric Organism Rapid Detection	EORD	**RF**	2 days
Filaria (Lymphatic and Non-Lymphatic) Antibodies	FIFA	B [9,14]	10 days
Gastrointestinal Pathogen PCR (Self-collect) See page 131 for more information	EORD	Universal faecal container	2 days
Insect/Worm/Ova/Cysts	FLEA	Send Specimen [9,14]	5 days
Leishmania Antibodies	LEIS	B	5 days
Malarial Antibodies (Pl. falciparum)	MALA	B [9,14]	5 days
Malarial Antibodies (species specific)	MALS	B [9,14]	10 days
Post-Travel Screen 1 (Prior to 6 weeks)	PTS	A A B G [14]	10 days
Post-Travel Screen 2 (Prior to 6 weeks)	PTS2	A A B B B G [14]	10 days
Pre-Travel Screen (DVT)	DVT1	A A B [9]	5 days
Rickettsial Species Antibody Profile	RICK	B	7 days
Schistosome (Bilharzia) Antibodies	BILH	B [14]	10 days
Toxoplasma Antibodies (IgG+IgM)	TFAM	B [9]	4 hours
Tropical Screen (from 6 weeks post-travel)	TROP	B B [9,14]	10 days
Zika Abs IgM and IgG – Antibody detection from 15 days	ZKAB	B	Up to 14 days
Zika RNA by PCR in Semen	ZIKS	**Semen**	Up to 14 days
Zika RT PCR – Window of detection from 1-14 days from onset of symptoms	ZIKU	**RU**	Up to 14 days
Zika RT PCR – Window of detection from 1-7 days from onset of symptoms	ZIKA	B	Up to 14 days

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Post-Travel Screen 1 (Prior to 6 weeks)

Haematology Profile
Biochemistry Profile
Schistosome Abs
Malarial Abs

TAT: 10 days

PTS

A A B G [14]

Post-Travel Screen 2 (Prior to 6 weeks)

Haematology Profile
Biochemistry Profile
Schistosome Abs
Malarial Abs
Hep A IgM Abs
Hep B sAg
Hep C Abs
HIV Duo

TAT: 10 days

PTS2

A A B B B G [14]

DVT/Pre-travel Screen

FBC
Factor II Prothrombin Gene
Factor V Leiden
Anticardiolipin Antibodies

TAT: 5 days

DVT1

A A B [9]

Tropical Screen (from 6 weeks post-travel)

Amoebic Antibodies
Schistosomal Antibodies (Bilharzia)
Echinococcus Antibodies (Hydatid)
Leishmania Antibodies
Malarial Antibodies (IFA)
Toxoplasma Antibodies IgG
Toxoplasma Antibodies IgM

TAT: 10 days

TROP

B B [9,14]

Enteric Organism Rapid Detection

Detection of Bacterial, Viral and Parasitic Infection by Multiplex Real-Time PCR

Bacteria and Bacterial Toxins

C. difficile Toxin A/B gene, Campylobacter spp., Enteroaggregative E.coli (EAEC), Enteroinvasive E.coli (EIEC)/Shigella, Enterotoxigenic E.coli (ETEC), Enteropathogenic E.coli (EPEC), Plesiomonas shigelloides, Salmonella, Shiga-toxin producing E.coli (STEC) stx1/stx2, Shiga-toxin producing E.coli (STEC) O157:H7, Vibrio cholerae, Vibrio parahaemolyticus, Vibrio vulnificus, Yersinia enterocolitica

Viruses

Adenovirus 40/41, Astrovirus, Norovirus GI, Norovirus GII, Rotavirus A, Sapovirus (I, II, IV, V)

Parasites

Cyclospora cayetanensis, Cryptosporidium spp., Entamoeba histolytica, Gardia lamblia

This does NOT include stool for m/c/s – this needs to be requested as a separate test. Please provide two samples if this is required.

TAT: 2 days

EORD

RF

Borrelia Antibodies (Lyme Disease) *Borrelia burgdorferi*

Presence of antibodies confirms infection with the Lyme Disease spiral bacterium (spirochaete) known as Borrelia burgdorferi by a bite from an infected tick. Patients bitten by an infected tick which is not removed within a day or so may develop Lyme disease. An expanding rash would usually appear at the site of the bite within 3 to 30 days in a large proportion of those infected. The rash spreads and often develops a 'bulls-eye' appearance. Many also develop flu-like symptoms with aching joints and muscles. The disease can later affect the nervous system, joints and other body systems.

Borrelia Antibodies IgM (BORM)

Detectable after 2-3 weeks increasing up to 6 weeks.

Borrelia Antibodies IgG/IgM (BORR)

Detectable after several weeks increasing to maximum at 4-6 months and may remain at high levels for many years.

Borrelia Confirmation (Immunoblot) (BORC)

The ELISA test is sensitive but has a well-documented high false positive rate giving positive results in cases of glandular fever, rheumatoid arthritis and other autoimmune conditions. If the ELISA is positive testing by Immunoblot confirms a diagnosis by Lyme disease. IgM and IgG antibodies are tested separately. It is essential that details of the IgG +IgM Elisa are provided for this test.

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Virology

Immune status

TEST	CODE	SAMPLE REQS	TAT
Hepatitis A Immunity (IgG/IgM)	HAIM	B	4 hours
Hepatitis B Immunity	HBIM	B	4 hours
Hepatitis B Immunity (IgG) (Self-collect) See page 131 for more information	THBI	B (TDL Tiny)	1 Day
Measles Antibodies (IgG) Immunity	MEAS	B	1 day
Measles Antibodies (IgM)	MEAM	B [9]	2 days
Measles, Mumps, Rubella (MMR)	MMR	B	1 day
Mumps Antibodies (IgG)	MUMP	B	1 day
Mumps Antibodies (IgM)	MUMM	B	1 day
Pertussis (Whooping Cough) Antibodies	PERS	B	5 days
Pneumococcal Antibody Screen	PNEU	B	5 days
Polio Virus 1, 2, 3 Antibodies	POLO	B [9]	15 days
Rabies Antibody	RABI	B	10 days
Rubella Antibody (IgG)	RUBE	B	4 hours
Rubella Antibody (IgM)	RUBM	B	4 hours
Rubella PCR	RUBP	A / **Amniotic Fluid**	5 days
Tetanus Antibody	TETA	B	5 days
Varicella Zoster Antibodies (IgG)	VZOS	B	1 day
Varicella Zoster Antibodies (IgM)	VZOM	B	1 day

Hepatitis viral load sample instructions

Whole blood can be stored at 2°C to 30°C and must be centrifuged within 24 hours of specimen collection. Separate the plasma or serum from the pelleted red blood cells following the manufacturer's instructions for the tube used. Plasma or serum can be tested on the Panther system in the primary tube or transferred to a secondary Aptima Specimen Aliquot Tube (SAT) for testing on the Panther system. If not tested immediately, plasma and serum can be stored in accordance with the specifications below. If transferred to the SAT, plasma may be frozen at -20°C or -70°C, and serum may be frozen at -20°C. Do not freeze specimens in EDTA, ACD, or serum primary collection tubes.

After centrifugation: In the primary collection tube at 2°C to 8°C for up to 3 days

In the Aliquoted Tubes: at 2°C to 8°C for up to 5 days

In the Aliquoted Tubes: at -20°C or -70°C for up to 90 days

Hepatitis B Immunity/Vaccination Anti-HBs

less than 10 mIU/ml	Non-immune to Hepatitis B
10 – 50 mIU/ml	Borderline – booster indicated
50 – 100 mIU/ml	Low level immunity – booster suggested
100 and over	Immune to Hepatitis B

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Hepatitis testing

TEST	CODE	SAMPLE REQS	TAT
Hepatitis (Acute) Screen	AHSC	B	4 hours
Hepatitis A (IgM)	HAVM	B	4 hours
Hepatitis A Immunity (IgG/IgM)	HAIM	B	4 hours
Hepatitis A Profile	HEPA	B	4 hours
Hepatitis A RNA by PCR	HAVR	A or B	3 weeks
Hepatitis A, B & C Profile	ABC	B	4 hours
Hepatitis B (PCR) Genotype	BGEN	A	7 days
Hepatitis B 'e' Antigen and Antibody	HEPE	B	4 hours
Hepatitis B Core Antibody – IgM	HBCM	B	4 hours
Hepatitis B Core Antibody – Total	HBC	B	4 hours
Hepatitis B DNA (Viral load)	DNAB	A	5 days
Hepatitis B Immunity	HBIM	B	4 hours
Hepatitis B Immunity (IgG)	THBI	B	1 day
Hepatitis B Immunity (IgG) (Self-collect) See page 131 for more information	THBI	B (TDL Tiny)	1 Day
Hepatitis B Profile	HEPB	B	4 hours
Hepatitis B Resistant Mutation	HBRM	A or B	7 days
Hepatitis B Surface Antigen	AUAG	B	4 hours
Hepatitis B Surface Antigen (Self-collect) See page 131 for more information	THBA	B (TDL Tiny)	1 day
Hepatitis C Abs Confirmation (RIBA)	RIBA	B	5 days
Hepatitis C Antibodies	HEPC	B	4 hours
Hepatitis C Antibodies (Self-collect) See page 131 for more information	THCV	B (TDL Tiny)	1 Day
Hepatitis C Antigen (Early detection)	HCAG	B	4 hours
Hepatitis C Genotype	CGEN	A	5 days
Hepatitis C Quantification (Viral Load)	QPCR	A or B	5 days
Hepatitis Delta Antibody	HEPD	B	5 days
Hepatitis Delta Antigen	HDAG	B	5 days
Hepatitis Delta RNA	DRNA	A (Frozen plasma)	5 days
Hepatitis E (PCR)	EHEP	A	2 weeks
Hepatitis E IgG/IgM	HBE	B	5 days
Hepatitis G (PCR)	HEPG	A (Frozen plasma)	2 weeks

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HAV, HBV and HCV assays

All virology samples are processed as per manufacturers sample requirements and guidelines.

Hepatitis virus is named in order of their discovery A, B, C, D, E and G.

Hepatitis A

Hepatitis A is spread through food and water that have been contaminated with the virus derived from human faeces and urine. Hepatitis A is an acute infection, not a chronic form of the disease.

HBV Assays

Hepatitis B surface antigen (HBsAg) (AUAG)

A protein on the surface of HBV; it can be detected in high levels in serum during acute or chronic HBV infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make Hepatitis B vaccine.

Hepatitis B surface antibody (anti-HBs) (HBIM)

The presence of anti-HBs is generally interpreted as indicating recovery and immunity from HBV infection. Anti-HBs also develops in a person who has been successfully vaccinated against Hepatitis B.

Total Hepatitis B core antibody (anti-HBc) (HBC)

Appears at the onset of symptoms in acute Hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with HBV in an undefined time frame.

IgM antibody to Hepatitis B core antigen (IgM anti-HBc) (HBCM)

Positivity indicates recent infection with HBV (≤6 months). Its presence indicates acute infection.

Hepatitis B e antigen and antibody (HEPE)

Hepatitis B e antigen (HbeAg): A secreted product of the nucleocapsid gene of HBV that is found in serum during acute and chronic Hepatitis B. Its presence indicates that the virus is replicating and the infected person has high levels of HBV.

Hepatitis B e antibody (HBeAb or anti-HBe): Produced by the immune system temporarily during acute HBV infection or consistently during or after a burst in viral replication. Spontaneous conversion from e antigen to e antibody (a change known as seroconversion) is a predictor of long-term clearance of HBV in patients undergoing antiviral therapy and indicates lower levels of HBV.

HBV Viral Load (DNAB)

This assay measures the concentration of Hepatitis B viral DNA in patient serum. The test enables the viral load at the beginning of treatment to be established and, thereafter, monitored to indicate treatment success.

HBV Genotyping (BGEN)

Identifies the hepatitis B genotype (A to H) in a patient's serum/plasma. This is critical for determining treatmentand monitoring response.

HBV Drug Resistance Detection (HBRM)

Detects hepatitis B virus wild-type and drug-induced mutations, associated with lamivudine, entecavir and tenofovir.

HCV Assays

HCV Antibody (HEPC)

The test indicates exposure to virus but does not necessarily signify current infection. The HCV antibody test may therefore be used to screen patients for possible HCV infection to detect the presence of antibodies to the virus, indicating exposure to HCV. This test cannot tell if the viral infection is active, only that you were exposed to the virus in the past.

HCV Antigen (HCAG)

HVC Antigen is detectable well before the occurrence of antibodies against HCV. When virus is present, but antibodies are not detectable, a negative antibody test does not rule out HCV infection. Active HCV infection, either acute or chronic is characterised by the presence of HCV Antigen. This is analogous to HepB sAg (AUAG) in active HBV Infection.

HCV Viral Load (QPCR)

Measures the concentration of hepatitis C viral RNA in patient serum. This state-of-the-art assay enables the viral load at the beginning of treatment to be established and, thereafter, monitored to indicate treatment success.

HCV Genotype for Treatment (CGEN)

Determines the HCV genotype in a patient's serum. The result is presented as being of either Genotype [1, 5, 6], [4] or [2, 3]. This grouping reflects required treatment duration of the different genotypes.

HCV Drug Resistance

Detects hepatitis C wild-type or drug-induced mutations associated with resistance to HCV drugs including NS5A inhibitors, NS5B inhibitors or NS3 inhibitors.

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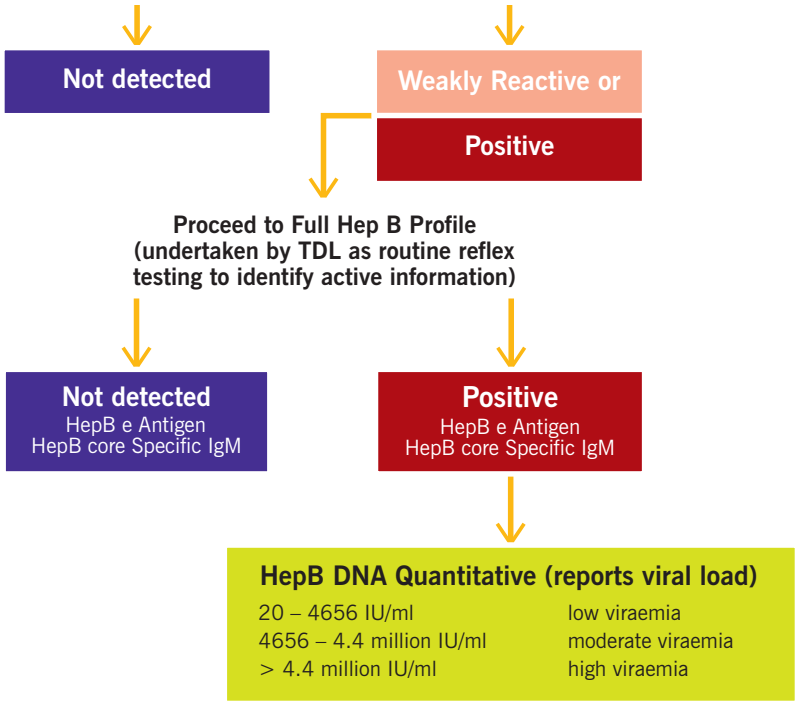
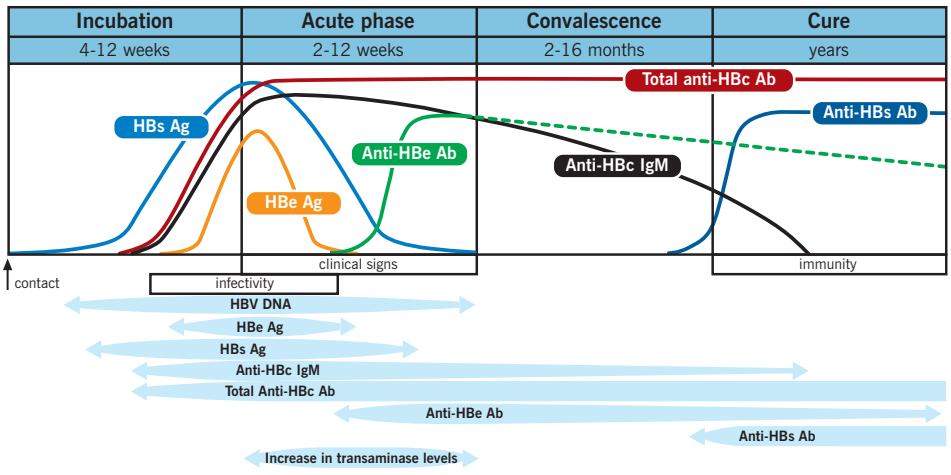
Hepatitis B Surface Antigen

Hepatitis B

- **Transmission**: Sexual, parenteral, perinatal, direct contact between individuals.
- **Clinical Signs**: Asymptomatic in 90% of cases.
- **Cure**: 95% of cases (adults).
- **Complications**: Cirrhosis and hepatocellular carcinoma.
- **Development of chronic form**: Yes (5% of adult cases).
- **Prevention**: Vaccination ++++; specific IgG.
- **Main Marker**: HBS Ag, anti HBc IgM, total anti HBc Ab, Anti-HBs Ab, HBe Ag, Anti-HBe Ab, HBV DNA.





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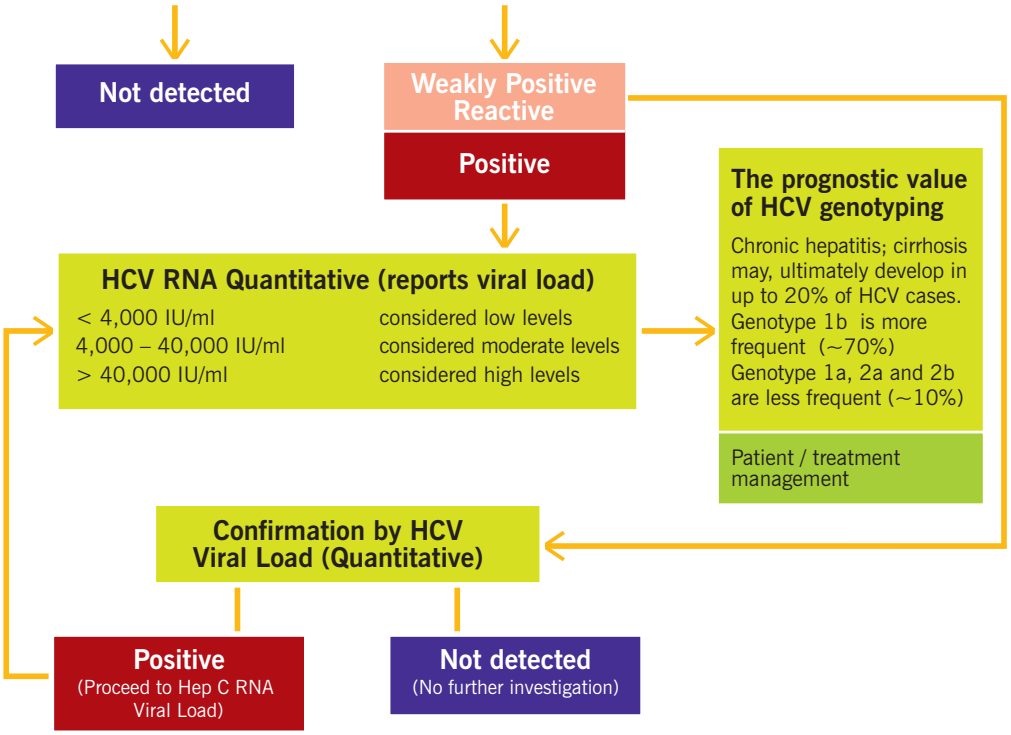
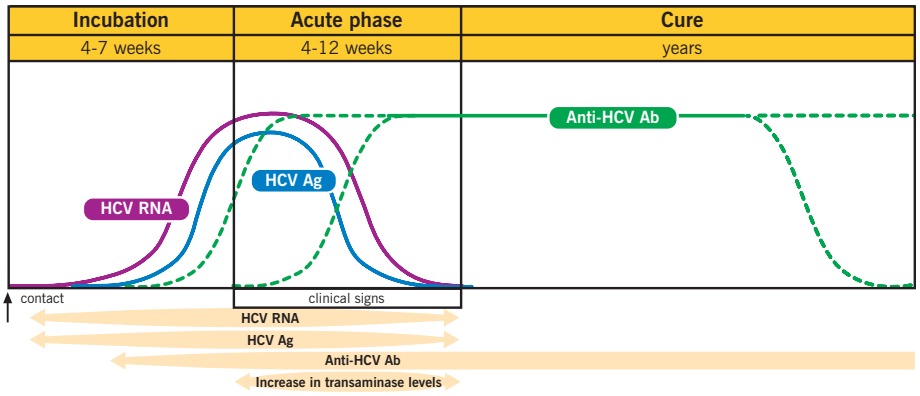
Hepatitis C Antibodies

Hepatitis C

- **Transmission**: Parenteral, nosocomial, sexual.
- **Clinical Signs**: Asymptomatic in 90% of cases.
- **Cure**: 95% of cases (adults).
- **Complications**: Cirrhosis and hepatocellular carcinoma.
- **Development of chronic form**: Yes (80% of adult cases).
- **Prevention**: Hygiene, no vaccination.
- **Main Marker**: Anti HCV Ab, HCV RNA





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HIV testing

TEST	CODE	SAMPLE REQS	TAT
HIV-1 Proviral DNA	HIVP	A Whole blood	7 days
HIV Confirmation of Positive Screens (Using 3 methodologies)	HIVC	B	1 day
HIV/HBV/HCV Screen by PCR/NAAT (10 days post exposure)	STDX	A 10mls or 2 x 4mls (Vacutainer only)	3 days
HIV Rapid RNA HIV-1 QUALITATIVE	LHIV	A (Vacutainer only)	4 hours
HIV Rapid RNA HIV-1 QUANTITATIVE	RHIV	A (Vacutainer only)	4 hours
HIV Screening: HIV1 & 2 Abs/p24 Ag (4th Gen)	HDUO	B	4 hours
HTLV 1 & 2 Abs. (Human T Lymphotropic Virus Type I-II)	HTLV	B	8 hours
HTLV by PCR	HTLP	A Whole blood	21 days

HIV positive patient monitoring

TEST	CODE	SAMPLE REQS	TAT
CD3/CD4/CD8	LYSS	A [10]	1 day
HIV-1 RNA Viral Load by PCR	HIV1	A A (2 x 6ml whole blood)	3 days
HIV-2 RNA by PCR	HIV2	A	21 days
HIV Rapid RNA HIV-1 QUANTITATIVE	RHIV	A (Vacutainer only)	4 hours
HIV Therapeutic Drug Monitoring	TDM	J	21 days

HIV-1 genotypic resistance testing

TEST	CODE	SAMPLE REQS	TAT
HIV-1 Genotypic Resistance (Integrase)	INTE	A A (2 x 6ml whole blood)	21 days
HIV-1 Genotypic Resistance (RT & Protease)	HIVD	A A (2 x 6ml whole blood)	21 days
HIV-1 Tropism	TRPM	A A (2 x 6ml whole blood)	28 days
HLA B*57:01	HL57	A [9]	10 days

HLA-B*57:01 should be tested before starting patients on an Abacavir (ABC) containing regimen to reduce the risk of hypersensitivity reaction. HLA-B*57:01-positive patients should not be prescribed ABC and a positive status should be recorded as an ABC allergy in the patient's medical record.

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Virology

TEST	CODE	SAMPLE REQS	TAT
Adenovirus by PCR	ADV	A / **PCR** / **VS** / **SC**	7 days
Arbovirus Antibodies/Abs	ARBO	B [9,14]	3 weeks
Atypical Pneumonia Screen	APS	B	2 days
BK Polyoma Virus by PCR	BKPV	A /**RU**	5 days
Cat Scratch Fever (Bartonella IgG+IgM)	CAT	B	5 days
Chikungunya Virus Abs	CHIK	B [9,14]	10 days
COVID-19 (SARS-CoV-2) Rapid RNA Sequencing Please contact lisa.levett@tdlpathology.com for details for referring samples to the laboratory for sequencing testing.	COSQ	**RNA** or **PCR swab** [43]	48-72 hours
COVID-19 (SARS-CoV-2) RNA by PCR Contact Laboratory	NCOV	**PCR Swab** (nasal/pharyngeal)	24 hours
COVID-19 (SARS-CoV-2) RNA by PCR (Self-collect) See page 131 for more information	NCOV	Throat and nose swab	48 hours
Coxsackie Antibodies (IgM)	COXM	B	10 days
CSF Screen by PCR	VPCR	**CSF**	2 days
Cytomegalovirus (CMV-DNA) Amnio	CMVD	**AF**	5 days
Cytomegalovirus (IgG/IgM) Antibodies	CMV	B	4 hours
Cytomegalovirus (PCR) Semen	SCVM	**Semen**	7 days
Cytomegalovirus (PCR) Urine	CMVU	**RU**	5 days
Cytomegalovirus Avidity	CMAV	B	10 days
Cytomegalovirus DNA (PCR)	CMVP	A	5 days
Cytomegalovirus Resistance	CMVR	A A (2 x 6mls)	21 days
Dengue Fever PCR	DPCR	A or B [9,14]	2 weeks
Epstein-Barr Virus Antibodies IgG/IgM	EBVA	A or B	2 days
Epstein-Barr Virus PCR	EBVQ	A	5 days
Hantavirus Serology	HANV	B [9]	10 days
Herpes Simplex (HSV) 1 & 2 – Genital lesion (Self-collect) See page 131 for more information	HERS	Aptima multisite swab	5 days
Herpes Simplex (HSV) 1 & 2 – Oral lesion (Self-collect) See page 131 for more information	HERS	Aptima multisite swab	5 days
Herpes Simplex I/II Antibody Profile (IgG)	HERP	B	2 days
Herpes Simplex I/II by PCR (Swab)	HERS	**PCR**	5 days
Herpes Simplex I/II by PCR (Urine)	HERD	**FCRU** / **PCR** / **TPV**	5 days
Herpes Simplex I/II IgM	HERM	B	2 days
HIV/HBV/HCV Screen by PCR/NAAT (10 days post exposure)	STDX	A 10mls or 2 x 4mls (Vacutainer only)	3 days
Human Herpes Virus – 6 by PCR	HHV6	A	5 days
Human Herpes Virus – 8 (IgG)	HHV8	B	10 days
Human Herpes Virus – 8 by PCR	HV8D	A	5 days
Human Parvovirus B19 – DNA	PCRP	A	2 weeks

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TEST	CODE	SAMPLE REQS	TAT
JC Polyoma Virus by PCR	JCPV	A/B/**CSF**	5 days
Measles Antibodies (IgG) Immunity	MEAS	B	1 day
Measles Antibodies (IgM)	MEAM	B[9]	2 days
Measles PCR	MEAP	**Buccal swab**	48 hours
MERS Coronavirus Test	MERS	**J**	1 day
Mumps Antibodies (IgM)	MUMM	B	1 day
Mycoplasma species – DNA	MPCR	A	5 days
Needle Stick Injury Profile	NSI	B B	4 hours
Neurological Viral Screen	NVIR	B B	2 days
Parvovirus Antibodies (IgM)	PARV	B	2 days
Parvovirus IgG Antibodies	PARG	B	2 days
Parvovirus IgG/IgM Abs	PARP	B	2 days
Pneumonia (Atypical) Screen	APS	B	2 days
Respiratory PCR Panel (COVID-19, Flu A/B and RSV)	FLU4	**PCR** nasopharyngeal	2 days
Respiratory PCR Panel (COVID-19, Flu A/B and RSV) (Self-collect) See page 131 for more information	FLU4	Throat and nose swab	2 days
Rotavirus in Stool by PCR	ROTA	**RF**	1 day
Rubella Antibody (IgG)	RUBE	B	4 hours
Rubella Antibody (IgM)	RUBM	B	4 hours
Rubella Avidity	RUAV	B	1 week
Torch Screen	TORC	B	2 days
Varicella Zoster – DNA	VZPC	A	5 days
Varicella Zoster Antibodies (IgG)	VZOS	B	1 day
Varicella Zoster Antibodies (IgM)	VZOM	B	1 day
Viral Antibody Screen	VIRA	B B	2 days
Viral Eye by PCR	VPE	**PCR**	3 days
Viral Respiratory RNA Screen by PCR	VPR	**PCR** or as specified on the form	2 days
Viral Skin/Mucosa by PCR	VPSK	**PCR**	2 days
West Nile Virus Abs	WNV	B	2 weeks
Zika Abs IgM and IgG – Antibody detection from 15 days	ZKAB	B	Up to 14 days
Zika RNA by PCR in Semen	ZIKS	**Semen**	Up to 14 days

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Virology

Atypical Pneumonia Screen

Mycoplasma pneumonia Abs
Chlamydia pneumoniae (MIF)
Legionella pneumophila (IF)

TAT: 2 days

APS

B

Respiratory PCR Panel (COVID-19, Flu A/B and RSV)

Flu A
Flu B
Respiratory Syncytal Virus (RSV)
COVID-19

TAT: 2 days

FLU4

PCR nasopharyngeal

CSF Screen by PCR

Herpes Simplex virus
Varicella Zoster virus
Enterovirus

TAT: 2 days

VPCR

CSF

Hepatitis (Acute) Screen

Hepatitis A IgM Abs
Hepatitis B Surface Antigen
Hepatitis C Abs

TAT: 4 hours

AHSC

B

Hepatitis A, B & C Profile

Hepatitis A Profile
Hepatitis B Profile
Hepatitis C Abs
LFT's

TAT: 4 hours

ABC

B

Hepatitis B Profile

Hep B Surface Antigen
Hep B Surface Antibodies
Hep B Core IgG/IgM

TAT: 4 hours

HEPB

B

HIV/HBV/HCV Screen by PCR/ NAAT (10 days post exposure)

Positive findings will be reflexed for individual qualitative confirmatory testing using the Roche Cobas Ampliscreen

HIV1 and HIV2 (RNA), Hepatitis B Virus (HBV DNA), Hepatitis C Virus (HCV RNA).

Samples must be received in the laboratory within 2 days of sample taking

TAT: 3 days

STDX

A 10mls or 2 x 4mls (Vacutainer only)

HIV Rapid RNA HIV-1 QUALITATIVE

HIV-1 RNA

Sample must be received in the laboratory within 24 hours of sample taking

TAT: 4 hours

LHIV

A (Vacutainer only)

HIV Rapid RNA HIV-1 QUANTITATIVE

HIV-1 RNA VIRAL LOAD (40 copies/ml)

Sample must be received in the laboratory within 24 hours of sample taking

TAT: 4 hours

RHIV

A (Vacutainer only)

Needle Stick Injury Profile

(Donor – Not recipient)

Hep B sAg
Hep C Abs
HIV 1+2 Abs/p24 Antigen

Serum saved for 2 years

TAT: 4 hours

NSI

B B

Neurological Viral Screen

Measles IgG
Measles IgM
Mumps IgG
Mumps IgM
CMV IgG
HSV 1+2 IgG
HSV 1+2 IgM
VZV IgG

TAT: 2 days

NVIR

B B

Torch Screen

Toxoplasma Antibodies (IgG, IgM)
Rubella Antibody (IgG, IgM)
CMV Antibody (IgG, IgM)
Herpes Antibody (HSV1/HSV2 IgG)

TAT: 2 days

TORC

B

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Viral Antibody Screen

Measles IgG
Measles IgM
Mumps IgG
Mumps IgM
Mycoplasma pneumonia
CMV
HSV 1
HSV 2

TAT: 2 days

VIRA

Viral Eye by PCR

Herpes Simplex virus
Varicella Zoster virus
Adenovirus

TAT: 3 days

VPE

PCR

Viral Respiratory RNA Screen by PCR

Throat swabs, nasopharyngeal aspirates

Adenovirus, Parainfluenza [1,2,3,4], Influenza A and B, Seasonal Coronavirus (COVID-19), Parechovirus, Rhinovirus, Enterovirus, Respiratory Syncytial virus A and B, Human metapneumovirus

TAT: 2 days

VPR

PCR or as specified on the form

Viral Skin/Mucosa by PCR

If chicken pox or shingles suspected, please indicate clearly on request form

Herpes Simplex virus, Varicella Zoster virus

TAT: 2 days

VPSK

PCR

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Tumour markers/sites

TEST	CODE	SAMPLE REQS	TAT
Alpha Feto Protein	AFP	B	4 hours
Beta HCG (Oncology)	HCGQ	B	4 hours
Breast Cancer NGS Panel – full gene sequencing **Requires patient informed consent.**	GENE	A A [9,11]	4 weeks
CA 15-3	C153	B	4 hours
CA 19-9	C199	B	4 hours
CA 50	CA50	B	5 days
CA 72-4	C724	B	5 days
CA 125	C125	B	4 hours
CA 125 (Self-collect) See page 131 for more information	C125	B (TDL Tiny)	1 day
Carcino Embryonic Antigen	CEA	B	4 hours
Complex PSA (Prostate Specific Ag)	CPSA	B	3 days
Cyfra 21-1	CY21	B	4 days
Early CDT-Lung	CDTL	B	10 days
HE4 + ROMA (Earlier Detection of Ovarian Tumour)	HE4	B	1 day
Neurone Specific Enolase	NSE	B	5 days
Osteocalcin	OST	B (Frozen)[4]	4 days
Prostate Profile (Total & Free PSA)	PR2	B	4 hours
Prostate Specific Antigen (Total)* *Results that fall between 4.00 ug/L and 10.00 ug/L will automatically reflex to a Free PSA with a calculated ratio.	PSPA	B	4 hours
Prostate Specific Antigen (Total) (Self-collect) See page 131 for more information	PSPA	B (TDL Tiny)	1 day
Pyruvate Kinase (M2-PK)	M2ST	**RF** [4]	5 days
Pyruvate Kinase (M2-PK)	M2PK	A (Frozen plasma)[7]	5 days
S100 Malignant Melanoma	S100	B	4 days
Squamous Cell Carcinoma	SCC	B	4 days
Testicular Tumour Profile	TTP	B	4 hours
Urinary Bladder Cancer Antigen NEW	UBC	**RU** (Freeze within 48 hours)**	5 days

** It is recommended to collect mid-stream urine. Do not use first morning urine. Collection of urine specimen before any surgical intervention or treatment or 1–2 weeks after specimen shall not be collected with an instrument e.g. catheter.

HE4 + ROMA (Earlier Detection of Ovarian Tumour)

HE4 / CA 125 / ROMA

Calculated Algorithm for pre and post menopausal risk of malignant disease.

TAT: 1 day

HE4

B

Prostate Profile (Total & Free PSA)

Total PSA
Free PSA
Calculated Ratio

The ratio of Free to Total PSA may help discriminate between prostate cancer and benign prostatic hyperplasia.

TAT: 4 hours

PR2

B

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Tumour markers/sites

Site	Tumour marker	Sample type	Turnaround time
Oesophagus	CA 19-9	serum	4 hours
	CEA	serum	4 hours
	SCC	serum	4 days

Site	Tumour marker	Sample type	Turnaround time
Bronchial/ Lung	NSE*	serum	5 days
	SCC*	serum	4 days
	CDTL	serum	10 days
	CEA	serum	4 hours
	Cyfra 21-1	serum	4 days

Site	Tumour marker	Sample type	Turnaround time
Bile duct	CA 19-9	serum	4 hours
	CEA	serum	4 hours

Site	Tumour marker	Sample type	Turnaround time
Pancreas	CA 19-9	serum	4 hours
	CEA	serum	4 hours

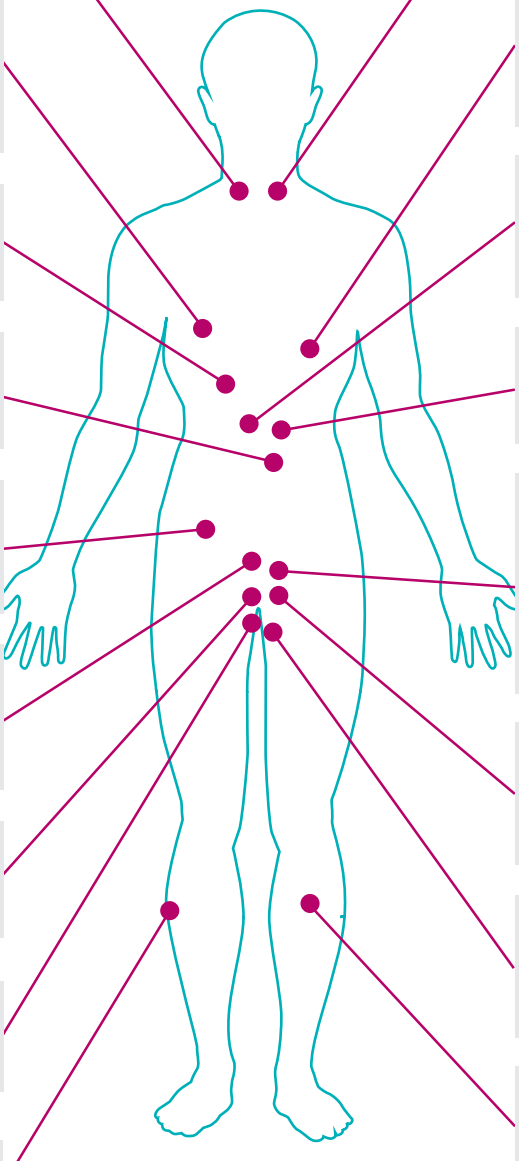
Site	Tumour marker	Sample type	Turnaround time
Carcinoid	5-HIAA	24 hour urine/ acidified	5 days

Site	Tumour marker	Sample type	Turnaround time
Bladder/ Chorion	CEA	serum	4 hours
	CA 50	serum	5 days
	UBC **NEW**	urine	5 days

Site	Tumour marker	Sample type	Turnaround time
Cervix/ Uterus	SCC	serum	4 days
	CEA	serum	4 hours

Site	Tumour marker	Sample type	Turnaround time
Prostate	Prostate Profile (Total + Free PSA)	serum	4 hours

Site	Tumour marker	Sample type	Turnaround time
Melanoma	S-100	serum	4 days



Site	Tumour marker	Sample type	Turnaround time
Thyroid	CEA	serum	4 hours
	Thyroglobulin	serum	1 day
	Calcitonin	1ml Frozen serum	1 day

Site	Tumour marker	Sample type	Turnaround time
Breast	Breast Cancer NGS Panel	EDTA	4 weeks
	CA 15-3	serum	4 hours
	CEA	serum	4 hours

Site	Tumour marker	Sample type	Turnaround time
Liver	AFP	serum	4 hours
	CEA	serum	4 hours
	Ferritin	serum	4 hours

Site	Tumour marker	Sample type	Turnaround time
Gastro-intestine	CEA	serum	4 hours
	CA 19-9	serum	4 hours

Site	Tumour marker	Sample type	Turnaround time
Ovary	Ovarian Cancer NGS Panel	EDTA	4 weeks
	CA 125	serum	4 hours
	CA 15-3	serum	4 hours
	HE4	serum	1 day
	AFP	serum	4 hours

Site	Tumour marker	Sample type	Turnaround time
Colon	CEA	serum	4 hours
	CA 19-9	serum	4 hours
	CA 50	serum	5 days

Site	Tumour marker	Sample type	Turnaround time
Testes	AFP	serum	4 hours
	Beta HCG (quantitative)	serum	4 hours

Site	Tumour marker	Sample type	Turnaround time
	Osteocalcin	serum (frozen)	4 days

* NSE: Neurone Specific Enolase
SCC: Squamous Cell Carcinoma

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

TDL Genetics

TDL Genetics is a consultant-led service which is able to provide extensive expertise in the testing, diagnosis and genetic counselling of inherited disorders. Genetic tests are performed on DNA for molecular genetic analysis and on whole chromosomes for cytogenetic analysis. Some tests are part of profiles that can be linked with assays from other TDL disciplines, such as biochemistry and haematology, to give more comprehensive results for the patient.

Genetic tests are available for:

- Prenatal diagnosis and rapid trisomy screening by Amnio-PCR
- Carrier screening
- Newborn chromosome analysis
- Confirmation of symptomatic individuals and pre-symptomatic testing
- Genetic variation that influences risk of disease
- Identity studies (paternity, zygosity, tissue typing)
- Fertility studies
- Products of conception
- Cancer

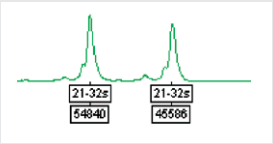
Genetic testing is sometimes complex and tests will vary in their ability to detect mutations or to detect all patients who have, or will develop, the disease. Some tests are diagnostic for a condition, others are indicative or are associated with an altered risk for a condition. Results can affect the lives of individuals and have implications for their family, for insurance and employment. Where testing will predict the inheritance of a disease in a healthy person, counselling and consent are mandatory. For these tests, please complete the Genetic Request form at the back of the guide (including informed consent). Our service provides result interpretation and risk assessment to patients and their family members. Genetic counselling can be arranged by TDL's Consultant Clinical Geneticist.

SCAN ME

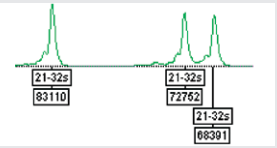
Download TDL Request Forms from:

www.tdlpathology.com/tests/request-forms/

DNA peaks from normal fetus



DNA peaks from Down Syndrome fetus



To meet the increasing range and complexity of genetic testing we have developed an excellent collaboration with other specialist laboratories.

Tests marked GENE are sent to these laboratories within our network and have a fixed price.

GENE panel composition may change throughout the year to reflect new and improved developments. Turnaround times may be longer if follow-up studies are required.

Specimen Receipt at The Doctors Laboratory is 24 hours a day. Specifically, TDL Genetics results service is available Monday to Friday 8.30am – 5.30pm with the laboratory also open for processing of samples on Saturdays from 9.00am – 1.00pm.

Test codes, sample requirement codes and turnaround times may be found on the following pages.

All samples must be collected in the specified containers, as shown in the key at the back of this guide. Samples should be fresh and in good condition (e.g. not clotted if EDTA or heparinised whole blood is required) otherwise testing may be adversely affected and another sample may be required. Small DNA samples are stored routinely for one year, larger DNA samples can be stored by special arrangement.

Instructions for transportation, sample labelling, and the completion of request forms can be found on the reverse of the TDL Genetics Request Form.

The locations of the Laboratory and Patient Reception are indicated on the map on the reverse of each request form. If you do not find the test you require in this directory or need more information and advice please telephone the laboratory on **020 7307 7409**.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Sending samples to the laboratory

Transport arrangements

All specimens should be kept at room temperature and despatched to the laboratory as soon as possible, by TDL/ international courier, first class post, guaranteed next day delivery or a reliable alternative.

If a delay in sending the sample is unavoidable, please refrigerate overnight – DO NOT FREEZE. For NIPT sample stability see page 116, do not refrigerate or freeze NIPT bloods.

Specimens must not be allowed to come in contact with request forms, but should be kept separate by using dual – pocketed plastic bags. Specimens for inland postage must be packed in a rigid crush-proof container according to current Post Office guidelines. IATA guidelines should be followed for international transport (Advice is available from the laboratory).

Labelling of high risk samples

Please note that it is the responsibility of the referring clinician to ensure that high-risk samples are clearly identified to reduce the risk of infection to staff and others.

Patient details on request forms and samples

Request and consent forms are available directly from TDL Genetics. In order to avoid unnecessary time spent in obtaining details please provide the following information:

Information for request forms

- Surname, forename (not initials), date of birth and biological sex of patient for postnatal referrals
- Full name (not initials) and location of referring clinician
- Full address of clinician to whom the result should be sent
- Legible clinical summary, including details of any relevant family history
- Address for billing – Doctor, patient or other
- Gestation on prenatal samples
- Hospital or reference number
- Test required

Essential information on sample container label

- Patients surname and forename (not initials)
- Date of birth
- Hospital number or reference number

Consent forms

Consent forms (at the back of this guide) are available for genetic testing. As genetic testing may have implications for other family members and is regarded as personal data, it is recommended that written consent is obtained wherever possible. In cases with predictive testing for severe disorders, as indicated in the laboratory guide, it is essential that patients should also be offered formal genetic counselling. It is the responsibility of the referring clinician to obtain appropriate consent from the patient.

Unlabelled samples

Unlabelled samples will ONLY be processed if the individual who took the sample can confirm the sample is from the patient in question. In the absence of this assurance, the sample will be discarded and a repeat required.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Genetic testing

The importance of clinical details

Clinical details are very important when providing genetic analysis. The more clinical information that is available (e.g. details of ultrasound information, phenotypic features or family history) the better the service we can provide. Failure to provide this information for cytogenetic studies may result in an inaccurate analysis.

Molecular genetics

Clinical details can be extremely important for clinical interpretation of a molecular genetic test.

For example, the clinical comments accompanying a cystic fibrosis screening report will vary depending on whether the patient is a potential gamete donor or a person exhibiting a cystic fibrosis phenotype.

It may also be crucial, where a mutation has already been shown to be segregating in a family, to be provided with information concerning the mutation and a family pedigree to ensure the correct analysis is performed and reliable risk figures calculated.

Cytogenetics

Cytogenetic analysis is performed according to the Professional Guidelines for the Association of Clinical Genetic Science and the recommendations provided are dependent on the clinical indications given for each case.

Clinical details inform the investigation at all stages:

- Prior to analysis, clinical details may indicate, for example, that procedures such as chromosome breakage or leukaemic studies are required, which must be referred to the oncogenomic department or specialist centre.
- During analysis they may indicate that extra cells should be screened to investigate the possibility of mosaicism, for example in a diagnosis of suspected Turner syndrome, or that particular chromosomes must be targeted for high-resolution study, for example chromosome 4 in suspected Wolf-Hirschhorn syndrome.
- When the analysis has been completed they may help to provide an accurate interpretation of the findings and in some instances prompt further investigations, for example FISH or molecular genetic studies.

When clinical details are not available a routine analysis will be performed and a conditional report issued.

Sample Stability

Molecular Genetic Samples

Whole blood collected in EDTA should be sent to the laboratory between 4˚C-28˚C within 48 hours.

Long term storage should be at 2-8°C.

Extracted DNA samples should be sent to the laboratory between 4˚C-28˚C.

Cytogenetic Samples

Cytogenetic studies require living cells, please ensure that samples reach the laboratory as soon as possible. If a delay before dispatch is unavoidable, samples may be stored in a refrigerator (4°C) but they must not be frozen.

Samples sent more than 48 hours after sampling, or kept at temperatures below 4˚C and greater than 38˚C may have inhibited growth.

Information concerning packaging, transportation, and labelling of samples is provided on the reverse of our TDL Genetics Request Form.

Requesting additional tests

Any further tests not requested at the time of sample receipt must be requested within:

- 1 week for tests requiring prenatal culture or cultured cells
- 2 weeks for DNA testing
- 2 weeks for cell culture testing
- 3 months for FISH testing

Samples can be stored for longer periods if specifically requested at the time of sample receipt.

Postnatal Diagnosis (Blood Culture)

Reasons for analysis: Chromosome studies are requested where problems that may have a cytogenetic basis are suspected, e.g. babies with birth defects; children with developmental delay and physical handicaps, or adults with fertility problems. Additionally, prospective gamete donors are screened to detect carriers of balanced chromosome rearrangements.

Sample requirements: Lithium heparin whole blood specimens are required – gently mixed to prevent clotting and must not be frozen, See sample stability section for cytogenetic samples. Sample volumes may be reduced for children (2-4ml) and neonates (1-2ml).

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Turnaround time: The usual turnaround time is 2-3 weeks however the laboratory will endeavour to respond to urgent requests. Where a major trisomy is suspected, a rapid PCR screen may be performed to provide an urgent provisional result.

Notes

- Rarely, blood samples fail to culture (<1%);
- The culture may yield chromosomes of insufficient quality. This will be indicated on the report and a repeat study suggested;
- The laboratory should be informed if the patient has recently received a blood transfusion.
- The laboratory should be informed if the patient has EVER had a bone marrow transplant.
- The patient's biological sex should be included on the request form.

Prenatal diagnosis

Reasons for analysis: Chromosome studies are requested where pregnancies are identified as being at risk of a cytogenetic abnormality e.g. positive maternal serum screening combined NT test; fetal abnormalities found on ultrasound; or where a parent is a known carrier of a chromosome anomaly, or where a high risk trisomy has been found by NIPT.

Sample requirements:

- Amniotic fluid – 10ml+ in a plain sterile, leak-proof container. Suitable containers can be provided by the laboratory. The specimen must not be frozen. See sample stability section for cytogenetic samples.
- Chorionic villus – 5mg+ in sterile transport medium. Suitable containers containing medium can be provided by the laboratory. The specimen must not be frozen. See sample stability section for cytogenetic samples.
- Fetal blood – 1-2ml LITHIUM HEPARIN whole blood, gently mixed to prevent clotting. The specimen must not be frozen. See sample stability section for cytogenetic samples.

Turnaround time: This is dependent on the rate of cell growth, however, the usual turnaround time is approximately 2 weeks. A number of circumstances now occur more frequently, as invasive prenatal diagnosis becomes less common, that may result in delayed reporting time. These include:

- A delay in transportation in order to collect a batch of samples to reduce courier costs. Even when couriered promptly, sample growth may be slower than that seen in samples sent immediately.
- Sampling at early or late gestations, for example to confirm non-invasive tests or follow up anomaly scans.
- A tendency to take smaller quantities of sample or to take insufficient sample for multiple techniques.
- The request for karyotyping as an add-on after an initial PCR test.

Fetal blood results will usually be reported by 10 calendar days. For all other prenatal tests, please contact the laboratory prior to taking samples.

Notes

- Maternal contamination, and mosaicism may complicate the analysis and may lead to the suggestion that a second invasive test is performed.
- Rarely, cultures fail to grow (overall <1%)
- Very small chromosome abnormalities may not be detected (this is why the phrase 'No trisomies or major chromosome abnormalities detected…' is used in our reports).
- for TTTs or heavily blood stained amniocentesis samples, please provide a maternal EDTA blood sample for comparison studies.

Solid tissue

Reasons for analysis: Fibroblast cultures may be used in addition to blood cultures, for example where tissue specific mosaicism is suspected, or where blood samples cannot be obtained. POC samples may be requested for early spontaneous miscarriages, stillbirths, or to confirm a prenatal diagnosis.

Sample requirements: All specimens should be placed in a sterile container, preferably containing transport medium. This can be supplied by the laboratory. Sterile normal saline can be used if transport medium is not available. Samples must not be placed in formaldehyde or other preservative and must not be frozen. See sample stability section for cytogenetic samples.

Turnaround time: This is dependent on the rate of cell growth, however, the usual turnaround time is approximately 4 weeks.

Notes

- Material from miscarriages has a relatively high culture failure rate (around 20%). Where failure occurs, alternative molecular methods may be attempted, usually a KaryoLite Bacs-on-Beads assay that can detect whole monosomy or trisomy of any chromosome, if possible.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

- If no villus or fetal parts are identified in supposedly POC material and a normal female chromosome result is found, this may indicate that maternal tissue has been cultured (this will be noted on our report).
- If a request is made for remaining pregnancy loss tissue to be returned to the patient or hospital for burial or cremation, we will return the sample as soon as possible once adequate tissues have been used for testing. Please ensure that this is communicated to the lab using a hospital consent form, noted on the referral form or by email. Patients can arrange to collect remaining tissues from TDL Patient Reception.
- The lab will send all remaining tissue for samples without specific consent, for sensitive incineration. Please note that there is no distinction made between fetal and other pregnancy tissues for this process and there will be no ashes afterwards. The lab keeps detailed records of all pregnancy tissue sent for incineration and a Certificate of Destruction is available if required.

Fluorescence in situ hybridisation (FISH)

Where FISH studies for specific microdeletion syndromes are required this must be indicated on the request form.

Note: FISH studies for a rapid pre or postnatal aneuploidy screen have now been superseded in our laboratory by multiplex-PCR technology. Subtelomeric screens are now performed by Array CGH as part of developmental delay investigations. Common microdeletion syndrome testing is now performed by BOBs analysis.

Cell line karyology

The cytogenetics laboratory can perform cell line karyology on live cultures or fixed cells suspensions (recommended) on a research basis. Please note: a laboratory processing charge of £100+VAT is applicable to those cases wherein a successful analysis cannot be obtained. Please contact the laboratory for further details.

Statement regarding Measurement Uncertainty (MU)

Measurement Uncertainty is determined for each measurement procedure in the examination phase used to report measured quantity values on patients' samples. This is determined during verification of this assay for service introduction; creation of laboratory standard operating procedures (SOP) and interpretation of the results.

Where examinations include a measurement step but do not report a measured quantity value, the laboratory calculates the uncertainty of the measurement step where it has utility in assessing the reliability of the examination procedure or has influence on the reported result.

Estimates of measurement uncertainty are regularly reviewed and are available upon request to laboratory users.

Key Personnel

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Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

TEST	CODE	SAMPLE REQS	TAT
1p36 Deletion Syndrome – karyotype + FISH	KARY, FISH	**CVS** / **AF** / H [9]	12-17 days
21-Hydroxylase Deficiency (Congenital Adrenal Hyperplasia) Requires patient informed consent.	GENE	A [9,11]	5 weeks
22q11 & 10p14 deletion (Di George Syndrome) – BOBs only	DGB	**CVS** / **AF** / A [9]	5 days
22q11 & 10p14 deletion (Di George Syndrome) – BOBs (5 days) + karyotype (15 days)	DGB, KARY	**CVS** / **AF** / A H [9]	5-15 days
Achromatopsia NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	5 weeks
Aicardi-Goutières Syndrome NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	5 weeks
Alagille Syndrome NGS Panel – full sequencing JAG1 + NOTCH2 genes Requires patient informed consent.	GENE	A A [9]	8 weeks
Alpha Fetoprotein on Amniotic fluid	AFPA	**AF** [9]	5-10 days
Alpha Thalassaemia – multiplex PCR for common large deletions Requires patient informed consent.	GENE	A [9]	4 weeks
Alpha-1-Antitrypsin Genotype – PI*M, PI*S, PI*Z Requires patient informed consent.	GENE	A [9]	5 weeks
Alport Syndrome NGS Panel – full sequencing with deletions and duplications Requires patient informed consent.	GENE	A A [9]	5 weeks
AML/ALL Molecular MRD – NPM1, PML-RARA, CBFB-MYH11, RUNX1-RUNX1T1, ETV6-RUNX1 Contact lab for further information. Requires patient informed consent.	GENE	**Bone Marrow** / A	5 days
AmnioBOBs only – rapid aneuploidy diagnosis for all chromosomes + common microdeletion syndromes	ABOB	**AF** [9]	5 days
Amniocentesis – rapid BOBs aneuploidy diagnosis for all chromosomes (5 days) + culture (10-15 days)	ABK	**AF** [9]	5-15 days
Amniocentesis – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	APCC	**AF** [9]	2-15 days
Amniocentesis culture (karyotype) only	ACUL	**AF** [9]	10-15 days
AmnioPCR only – rapid common aneuploidy diagnosis by QF-PCR	APC	**AF** [9]	2 days
Amylotrophic Lateral Sclerosis (Motor Neurone Disease) NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	5 weeks
Androgen Insensitivity – AR gene sequencing Requires patient informed consent.	GENE	A [9]	4 weeks
Aneurysm/Connective Tissue Disorders/Ehlers-Danlos Syndrome NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	6 weeks
Aortopathy/Marfan Syndrome and Thoracic Aortic and Dissection NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Angelman Syndrome (Primary Screen) – methylation PCR	PWAM	A [9]	10 days

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Angelman/Rett Syndromes NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	5 weeks
Aniridia, Isolated – PAX6 gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	5 weeks
Anophthalmia/Microphthalmia/Coloboma NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Antithrombin Deficiency – SERPINC1 Gene Variant Analysis (Known Genotype)	ATMA	A A (Whole Blood 10ml) [40]	6 weeks
Antithrombin Deficiency – SERPINC1 Gene Variant Analysis (Unknown Genotype)	ATMA	A A (Whole Blood 10ml) [40]	12 weeks
Apert Syndrome – common FGFR2 variants Requires patient informed consent.	GENE	A [9]	9 weeks
Apolipoprotein E genotype – E2, E3, E4	GENE	A [9]	14 days
Array CGH (Comparative Genomic Hybridisation)	CGH	**CVS** / **AF** / A H [9]	10 days
Ashkenazi Breast Cancer Screen – common variants Requires patient informed consent.	GENE	A [9,11]	4 weeks
Ashkenazi Jewish Carrier Screen Requires patient informed consent.	GENE	A [9]	4 weeks
Ataxia NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Autoinflammation/Periodic Fever NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Azoospermia – karyotype + cystic fibrosis screen + polyT(5T) + Y deletions	GRP	A H [9]	10-15 days
B cell clonality assay (IgH and IgK)	IGHA	A or **FFPE**	2 weeks
Bardet-Biedl Syndrome NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Batten Disease (Neuronal Ceroid Lipofuscinosis) NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
BCR-ABL Diagnostic Assay	BCRD	A	2 weeks
BCR/ABL Quantitative – fusion gene sizes p190 + p210 MUST arrive in the laboratory within 48 hours, before 12pm on Fridays	BCRQ	A A [9]	10 days
Becker/Duchenne Muscular Dystrophy – deletions/duplications	DMD1	A [9]	10 days
Beckwith-Wiedemann Syndrome – methylation studies on 11p15 imprinting domains KvDMR + H19 Requires patient informed consent.	GENE	A [9]	6 weeks
Behcet's Disease – HLA Tissue Typing B*51	B51	A [9]	10 days
Beta Thalassaemia – beta-globin gene sequencing Requires patient informed consent.	GENE	A [9]	5 weeks

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TEST	CODE	SAMPLE REQS	TAT
Bleeding and Platelet Gene Panel (known familial variants) Contact lab. Requires patient informed consent.	R90K	(A)(A)	6 weeks
Bleeding and Platelet Gene Panel (unknown familial variants) Contact lab. Requires patient informed consent.	R90U	(A)(A)	12 weeks
Blood PCR for Chromosome 13, 18, 21 and sex chromosomes	BPCR	(A)	5 days
Breast Cancer Ashkenazi Screen – common variants Requires patient informed consent.	GENE	(A) 9,11	4 weeks
Breast Cancer – BRCA1 + BRCA2 only gene sequencing + deletions/duplications Requires patient informed consent.	GENE	(A)	4 weeks
Breast Cancer NGS Panel – full gene sequencing Requires patient informed consent.	GENE	(A)(A) 9,11	4 weeks
Brugada Syndrome/Long-QT NGS Panel – full gene sequencing Requires patient informed consent.	GENE	(A)(A) 9	4 weeks
C-KIT D816V variant by PCR for Mastocytosis Requires patient informed consent.	GENE	**Bone Marrow** / (A)	14 days
CADASIL – NOTCH3 gene sequencing Requires patient informed consent.	GENE	(A) 9	6 weeks
CAKUT (Congenital Anomalies of Kidney & Urinary Tract) NGS Panel – full gene sequencing Requires patient informed consent.	GENE	(A)(A) 9	6 weeks
Calreticulin – CALR exon 9 variant screen	CALR	(A) 9	2 weeks
Cancer, Comprehensive NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	(A)(A) 9,11	5 weeks
Cardio-Facio-Cutaneous/Noonan/LEOPARD/Costello Syndromes NGS Panel – full gene sequencing Requires patient informed consent.	GENE	(A)(A) 9	6 weeks
Cardiovascular, Comprehensive NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	(A)(A) 9	6 weeks
Cardiomyopathy, Dilated NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	(A)(A) 9	6 weeks
Cardiomyopathy, Hypertrophic NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	(A)(A) 9	6 weeks
Carrier Screen (Ashkenazi Jewish) Requires patient informed consent.	GENE	(A) 9	4 weeks
Carrier Screen (Ashkenazi Jewish) – Partnered Report Please contact the lab for special requirements before sending. Requires patient informed consent.	GENE	(A) 9	4 weeks
Carrier Screen (Pan-Ethnic) Requires patient informed consent.	GENE	(A) 9	4 weeks

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Carrier Screen (Pan-Ethnic) – Partnered Report Please contact the lab for special requirements before sending. Requires patient informed consent.	GENE	A [9]	4 weeks
Charcot-Marie-Tooth Syndrome NGS Panel – full gene sequencing Contact lab prior to sending. Referral from clinical neurologist or clinical geneticist required with genetic consent form. Requires patient informed consent.	GENE	A A [9]	6 weeks
Charcot-Marie-Tooth Type 1A – PMP22 duplications Contact lab prior to sending. Referral from clinical neurologist or clinical geneticist required with genetic consent form. Requires patient informed consent.	GENE	A [9]	7 weeks
CHARGE Syndrome – CHD7 gene sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Chediak-Higashi Syndrome – LYST gene sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Cholestasis, Intrahepatic NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Cholestasis NGS Panel – full sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Chromosome Analysis (Amniocentesis) – culture only	ACUL	**AF** [9]	10-15 days
Chromosome Analysis (Amniocentesis) – rapid BOBs aneuploidy diagnosis for all chromosomes (5 days) + culture (10-15 days)	ABK	**AF** [9]	5-15 days
Chromosome Analysis (Amniocentesis) – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	APCC	**AF** [9]	2-15 days
Chromosome Analysis (Blood)	KARY	H [9]	2-3 weeks
Chromosome Analysis (Chorionic Villus) – rapid BOBs aneuploidy diagnosis for all chromosomes (5 days) + culture (10-15 days)	CBK	**CVS** [9]	5-15 days
Chromosome Analysis (Chorionic Villus) – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	CVPC	**CVS** [1,9]	2-15 days
Chromosome Analysis (Chorionic Villus) – culture only	CVSC	**CVS** [1,9]	10-15 days
Chromosome Analysis (Products of Conception)	PROC	**Placental Sample** [1,9]	20-25 days
Chromosome Analysis (Products of Conception) – BOBs rapid aneuploidy diagnosis for all chromosomes (10 days) + culture (25 days)	PBK	**Placental Sample** [1,9]	10-25 days
Chromosome Analysis (Solid Tissue)	PROC	**Fetal tissue** [1,9]	4-5 weeks
Chromosome Analysis (Stem Cells)	STEM/ SUSP	**Culture/Fixed cells**	Contact lab
Chromosome Y Deletion – AZFa, AZFb, AZFc + SRY	YDEL	A [9]	5 days
Coeliac Disease – HLA DQ2/DQ8 Genotype	Q2Q8	A [9]	10 days
Colorectal Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Comparative Genomic Hybridisation (Array CGH)	CGH	**CVS / AF /** A H [9]	10 days

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TEST	CODE	SAMPLE REQS	TAT
Comprehensive Neuropathy NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Congenital Absence of Vas Deferens – karyotype + cystic fibrosis screen + polyT(5T) + Y deletions	GRP	A H [9]	10-15 days
Congenital Myopathy NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Connective Tissue Disorders/Ehlers-Danlos Syndrome/Aneurysm NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	6 weeks
Cornelia de Lange Syndrome NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	5 weeks
Costello/Noonan/LEOPARD/Cardio-Facio-Cutaneous Syndromes NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Craniosynostosis NGS Panel Requires patient informed consent.	GENE	A A	6 weeks
Cri du Chat Syndrome – BOBs (5 days) + karyotype (15 days)	PBOB, KARY	**CVS / AF /** A H [9]	5-15 days
Cri du Chat Syndrome – BOBs only	PBOB	**CVS / AF /** A [9]	5 days
CVS PCR for common aneuploidies (2 days) + culture (10-15 days)	CVPC	**CVS** [1,9]	2-15 days
CVSBOBs – rapid BOBs aneuploidy diagnosis for all chromosomes (5 days) + culture (10-15 days)	CBK	**CVS** [9]	5-15 days
CVSBOBs only – rapid aneuploidy diagnosis for all chromosomes + common microdeletion syndromes	CBOB	**CVS** [9]	5 days
Cystic Fibrosis (139 common variants) – reflex to Poly T when required	CFS	A [9]	5-7 days
Deafness NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Diabetes – Obesity NGS Panel Requires patient informed consent.	GENE	A	6 weeks
DiGeorge Syndrome (22q11 & 10p14 deletion) – BOBs (5 days) + karyotype (15 days)	DGB, KARY	**CVS / AF /** A H [9]	5-15 days
DiGeorge Syndrome (22q11 & 10p14) – BOBs only	DGB	**CVS / AF /** A [9]	5 days
Dihydropyrimidine Dehydrogenase deficiency screening (Fluoropyrimidine Toxicity)	5FU	A [9]	1-2 weeks
Dilated Cardiomyopathy NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	6 weeks
DNA Extraction & Storage – 3 years (longer upon request)	XDNA	A [9]	20 days
DNA Identity Profile – 15 STR markers	DNAF	A [9,11]	10 days
Duchenne Muscular Dystrophy – deletions/duplications only	DMD1	A [9]	10 days
Duchenne Muscular Dystrophy – full sequencing DMD1 gene Requires patient informed consent.	GENE	A [9]	5 weeks

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
DVT/Pre-travel Screen	DVT1	A A B [9]	5 days
Ehlers-Danlos Syndrome/Aneurysm/Connective Tissue Disorders NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	6 weeks
Endometrial Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	6 weeks
Epidermolysis Bullosa NGS Panel – full sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Epilepsy, Adolescent/Adult Onset Panel – sequencing + deletions/duplications Requires patient informed consent.	GENE	A	6 weeks
Epilepsy, Comprehensive NGS Panel – full sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	6 weeks
Fabry Disease, X-linked – GLA gene sequencing	GENE	A [9]	4 weeks
Facioscapulohumeral Muscular Dystropy (FSHD) – D4Z4 repeat deletion Contact lab prior to sending. Referrals only from consultant neurologist or clinical geneticist. Genetic consent form required. Requires patient informed consent.	GENE	A A A [9]	9 weeks
Factor II Prothrombin – G20210A Variant	FX2	A [9]	5 days
Factor V Leiden – G1691A Variant	FX5	A [9]	5 days
Factor VII Deficiency – F7 Gene Variant Analysis (Known Genotype)	7MA	A A (Whole blood 10ml) [40]	6 weeks
Factor VII Deficiency – F7 Gene Variant Analysis (Unknown Genotype)	7MA	A A (Whole blood 10ml) [40]	12 weeks
Factor X Deficiency – F10 Gene Variant Analysis (Known Genotype)	10MA	A A (Whole blood 10ml) [40]	6 weeks
Factor X Deficiency – F10 Gene Variant Analysis (Unknown Genotype)	10MA	A A (Whole blood 10ml) [40]	12 weeks
Factor XI Deficiency – F11 Gene Variant Analysis (Known Genotype)	11MA	A A (Whole blood 10ml) [40]	6 weeks
Factor XI Deficiency – F11 Gene Variant Analysis (Unknown Genotype)	11MA	A A (Whole blood 10ml) [40]	12 weeks
Familial Adenomatous Polyposis (FAP) – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	5 weeks
Familial Exudative Vitreoretinopathy (FEVR) NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	8 weeks
Familial Hypercholesterolaemia NGS panel Requires patient informed consent.	GENE	A A [9]	6 weeks

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Familial Hypocalciuric Hypercalcaemia (FHH) Panel – full sequencing CASR + AP2S1 + GNA11 genes Requires patient informed consent.	GENE	A A [9]	9 weeks
Familial Medullary Thyroid Carcinoma – hotspot sequencing RET gene Requires patient informed consent.	GENE	A [9,11]	8 weeks
Fatty Acid Oxidation Deficiency NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
FLT3-ITD and FLT3-TKD screening assay	FLT3	A	24 hours
Fragile X Syndrome screen – FMR1 repeat analysis PCR Requires patient informed consent.	GENE	A A A [9]	3-8 weeks
Friedreich Ataxia – frataxin gene repeat analysis Requires patient informed consent.	GENE	A [9]	6 weeks
Gaucher Disease full gene sequencing	GDMA	A [40]	4 weeks
Genetic Reproductive Profile (Male)	GRP	A H [9]	10-15 days
Gilbert Syndrome – common UGT1A1 repeat variation Requires patient informed consent.	GENE	A [9]	4 weeks
Glucose-6-Phosphate Dehydrogenase (G6PD) Deficiency – full G6PD gene sequencing Requires patient informed consent.	GENE	A [9]	4 weeks
Glycogen storage disease type 2 (Pompe) variant analysis	POMP	A	4 weeks
Haemochromatosis – HFE common variants C282Y + H63D	HMD	A [9]	3 days
Haemophilia A CVS Variant Analysis (Known Genotype) – F8 Intron 22 Inversion, F8 Intron 1 Inversion, Sequence analysis of known variants for F8 gene	8CVS	**CVS** [40]	3 days
Haemophilia A Variant Analysis (Known Genotype) – F8 Intron 22 Inversion, F8 Intron 1 Inversion, Sequence analysis of known variants for F8 gene	HACD	A A (Whole blood 10ml) [40]	6 weeks
Haemophilia A Variant Analysis (Unknown Genotype) – F8 Intron 22 Inversion, F8 Intron 1 Inversion, Sequence analysis of unknown variants for F8 gene Requires patient informed consent.	HAMA	A A (Whole blood 10ml) [40]	12 weeks
Haemophilia B CVS Variant Analysis (Known Genotype) – Sequence analysis of known variants for F9	9CVS	**CVS** [40]	3 days
Haemophilia B Variant Analysis (Known Genotype) – Sequence analysis of known variants for F9	HBCD	A A (Whole blood 10ml) [40]	6 weeks
Haemophilia B Variant Analysis (Unknown Genotype) – Sequence analysis of unknown variants for F9	HBMA	A A (Whole blood 10ml) [40]	12 weeks
Harmony® Prenatal Test (Non-Invasive Prenatal Testing) – common aneuploidy screening from maternal blood	NIPT	**J/Special tubes** [1]	3-5 days
Hearing Loss NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	5 weeks
Hereditary Cancer NGS Panel, Comprehensive – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	5 weeks

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TDL Genetics

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Hereditary Neuropathy with Liability to Pressure Palsy – PMP22 deletion analysis Contact lab prior to sending. Referrals only from consultant neurologist or clinical geneticist. Genetic consent form required. Requires patient informed consent.	GENE	A [9]	7 weeks
Hereditary Colon Cancer (Lynch Syndrome) NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Hereditary Spastic Paraplegia NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	5 weeks
HFE gene (Haemochromatosis) – common variants C282Y + H63D	HMD	A [9]	3 days
Hirschprung Disease NGS Panel – full sequencing with deletions and duplications Requires patient informed consent.	GENE	A A [9]	6 weeks
HLA Tissue Typing A	HLA	A [9]	10 days
HLA Tissue Typing A+B	HLBA	A [9]	10 days
HLA Tissue Typing A+B+C (Class I)	HABC	A [9]	10 days
HLA Tissue Typing A/B/DRB1/3/4/5	HLAF	A [9]	10 days
HLA Tissue Typing A/B/DRB1/3/4/5/DQB1	HLF	A [9]	10 days
HLA Tissue Typing A/B/C/DRB1/3/4/5/DQB1 (Class I & II)	HLFC	A [9]	10 days
HLA Tissue Typing B	HLB	A [9]	10 days
HLA Tissue Typing B*27 only	HLAB	A [9]	3 days
HLA Tissue Typing B*51 (Behcet's Disease)	B51	A [9]	10 days
HLA Tissue Typing B*57:01 high resolution	HL57	A [9]	10 days
HLA Tissue Typing C	HLC	A [9]	10 days
HLA Tissue Typing Coeliac Disease – DQ2/DQ8	Q2Q8	A [9]	10 days
HLA Tissue Typing DRB1/3/4/5	DRB1	A [9]	10 days
HLA Tissue Typing DRB1/3/4/5/DQB1 (Class II)	HLDQ	A [9]	10 days
HLA Tissue Typing Narcolepsy – DQB1*06:02 Requires patient informed consent.	GENE	A [9]	4 weeks
Huntington Disease – HD gene repeat analysis PCR Contact lab prior to sending. Referrals only from consultant neurologist or clinical geneticist. Genetic consent form required. Requires patient informed consent.	GENE	A A [9,11]	6 weeks
Hyperinsulinism NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Hyperparathyroidism – CASR sequencing Requires patient informed consent.	GENE	A [9]	8 weeks
Identity Profile (DNA) – 15 STR markers	DNAF	A [9,11]	10 days
IDH1/2 screening assay Requires patient informed consent.	GENE	A	48 hours

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TEST	CODE	SAMPLE REQS	TAT
IgVH variant analysis for CLL	IGMU	A	4 weeks
Intellectual Disability NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	6 weeks
Iron Overload Profile	IOP	A B [9]	3 days
JAK2 – exon 12 sequencing (rare variants) MUST arrive in the laboratory within 48 hours, before 12pm on Fridays. Requires patient informed consent.	JE12	A [9]	4 weeks
JAK2 V617F genotyping assay	JAK2	A	2 weeks
Joubert/Meckel-Gruber Syndrome NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A	6 weeks
Kallmann Syndrome NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Kennedy Disease (Spinal Bulbar Muscular Atrophy) – AR repeat expansion Requires patient informed consent.	GENE	A [9]	9 weeks
Kidney/Urinary Tract Comprehensive Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	6 weeks
Krabbe Disease – GALC sequencing + 502T/del common deletion Requires patient informed consent.	GENE	A [9]	5 weeks
KRAS/NRAS screening assay Requires patient informed consent.	MGP	A	48 hours
Lactose Intolerance Gene	LACG	A	2 weeks
Langer-Giedion Syndrome – BOBs (5 days) + karyotype (15 days)	PBOB, KARY	**CVS** / **AF** / A H [9]	5-15 days
Langer-Giedion Syndrome – BOBs only	PBOB	**CVS** / **AF** / A [9]	5 days
Leber's Congenital Amaurosis NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Leber's Hereditary Optic Neuropathy – m.3460G>A + m.11778G>A + m.14484T>C common variants Requires patient informed consent.	GENE	A [9]	8 weeks
Leigh and Leigh Like Syndrome NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	5 weeks
LEOPARD/Noonan/Cardio-Facio-Cutaneous/Costello Syndromes NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Leukaemia (Rapid Acute) DNA and RNA NGS Panel NEW	ALRP	A	3 days
Leukaemia Fusion Gene Screening Assay (Q30)	LMPX	A	24 hours
Leukaemia/Lymphoma RNA Sequencing (Fusion Gene and SNV/Indel) Panel NEW	PHFP	A	2 weeks

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TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Li-Fraumeni Syndrome (p53-related cancer predisposition) – TP53 sequencing + MLPA Requires patient informed consent.	GENE	A [9,11]	6 weeks
Limb-Girdle Muscular Dystrophy (LGMD) NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Lissencephaly NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Loeys-Dietz Syndrome/Marfan Syndrome/Aortic Aneurysm and Dissection NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Long-QT Syndrome/Brugada Syndrome – full gene sequencing Requires patient informed consent.	GENE	A A [9]	4 weeks
Lowe (Oculocerebrorenal) Syndrome – OCRL sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Lung Disorders NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Lynch Syndrome (HNPCC) NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9]	4 weeks
Lysosomal Storage Disorders NGS Panel – full gene sequencing NEW Requires patient informed consent.	LSDS	A A [9]	4-6 weeks
Male Genetic Reproductive Profile	GRP	A H [9]	10-15 days
Marfan Syndrome – FBN1 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	5 weeks
Marfan Syndrome and Thoracic Aortic Aneurysm and Dissection NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Maturity-Onset Diabetes of the Young (MODY) Diabetes Requires patient informed consent.	GENE	A	6 weeks
Meckel-Gruber/Joubert Syndrome NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A	6 weeks
Medium-Chain Acyl-CoA Dehydrogenase Deficiency – ACADM sequencing	GENE	A [9]	5 weeks
Melanoma Comprehensive Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Microdeletion (common) Syndromes – BOBs only	PBOB	**CVS / AF /** A [9]	5 days
Microphthalmia/Anophthalmia/Coloboma NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks

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Miller-Dieker Syndrome – BOBs (5 days) + karyotype (15 days)	PBOB, KARY	**CVS / AF /** A H [9]	5-15 days
Miller-Dieker Syndrome – BOBs only	PBOB	**CVS / AF /** A [9]	5 days
Mitochondrial genome – full mitochondrial DNA sequencing + deletions Requires patient informed consent.	GENE	A [9]	6 weeks
Mitochondrial genome sequencing Requires patient informed consent.	GENE	A [9]	6 weeks
Motor Neurone Disease (Amylotrophic Lateral Sclerosis) NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	5 weeks
MPL exon 10 analysis	MPL	A	2 weeks
MTHFR – common C677T + A1298C variants	MTHF	A [9]	5 days
Mucopolysaccharidosis NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Multiple Endocrine Neoplasia Type 1 – full MEN1 sequencing Requires patient informed consent.	GENE	A [9,11]	9 weeks
Multiple Endocrine Neoplasia Type 2 – RET gene hotspot sequencing Requires patient informed consent.	GENE	A [9,11]	8 weeks
Myeloid Gene Panel NEW Requires patient informed consent.	MVPS	A	2 weeks
Myeloproliferative Neoplasm NGS Screening Panel NEW Requires patient informed consent.	MPNS	A	1 week
Myotonic Dystrophy Type 1 – DMPK repeat PCR Requires patient informed consent.	GENE	A [9]	6 weeks
Myotonic Dystrophy Type 2 (PROMM) – ZNF9 repeat PCR Requires patient informed consent.	GENE	A [9]	6 weeks
Narcolepsy (HLA DQB1*06:02) Requires patient informed consent.	GENE	A [9]	4 weeks
Nephrotic Syndrome, Steroid-Resistant NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Nervous System/Brain Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	6 weeks
Neurofibromatosis Type 1 – NF1 + SPRED1 sequencing + deletions/duplications Contact lab prior to sending. Requires patient informed consent.	GENE	A A [9,11]	8 weeks
Neurofibromatosis Type 2 (Bilateral Acoustic) – NF2 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	8 weeks

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TDL Genetics

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Neuronal Ceroid Lipofuscinosis (Batten Disease) NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Non-Invasive Prenatal Testing – common aneuploidy screening from maternal blood	NIPT	**J / Special tubes** [1]	3-5 days
Noonan Syndrome Prenatal Screening – PTPN11 exons 3 & 8 only Requires patient informed consent.	GENE	**CVS / AF**	2 weeks
Noonan/LEOPARD/Cardio-Facio-Cutaneous/Costello Syndromes NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
NPM1 mutascreen assay	NPM1	A	24 hours
Nystagmus, X-linked Infantile – FRMD7 gene sequencing Requires patient informed consent.	GENE	A [9]	7 weeks
Oculopharyngeal Muscular Dystrophy – PABPN1 repeat analysis Requires patient informed consent.	GENE	A [9]	5 weeks
Optic Atrophy NGS Panel – full sequencing OPA1 + OPA3 genes Requires patient informed consent.	GENE	A A [9]	6 weeks
Osteogenesis Imperfecta NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Ovarian Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	4 weeks
p53-related cancer predisposition (Li-Fraumeni Syndrome) – TP53 sequencing + MLPA Requires patient informed consent.	GENE	A [9,11]	5 weeks
Pancreatic Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	5 weeks
Paraganglioma/Pheochromocytoma NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	5 weeks
Paternity Testing (postnatal and prenatal) Sample required from each person being tested (3 people). Contact the genetics lab before sending the sample.	PATT	A **/ AF / CVS** [1,12] **Contact Genetics lab**	5 days
Pelizaeus-Merzbacher Disease – PLP1 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	5 weeks
Pendred Syndrome – SLC26A4 gene sequencing Requires patient informed consent.	GENE	A [9]	5 weeks
Periodic Fever/Autoinflammation NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks

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TEST	CODE	SAMPLE REQS	TAT
Peutz-Jegher Syndrome – STK11 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	5 weeks
Phelan-McDermid Syndrome – karyotype + FISH	KARY, FISH	**CVS** / **AF** / H [9]	12-17 days
Pheochromocytoma/Paraganglioma NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	5 weeks
POLG-Related Disorders – full POLG sequencing + deletions and duplications Requires patient informed consent.	GENE	A [9]	5 weeks
Polycystic Kidney/NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Pontocerebellar Hypoplasia NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Postnatal array CGH	CGH	A H [9]	10 days
Prader-Willi Syndrome (Primary Screen) – methylation PCR	PWAM	A [9]	10 days
Prenatal array CGH	CGH	**Amniotic fluid** or **CVS** [9]	10 days
Prenatal Diagnosis (BOBs + Culture)	ABK or CBK	**AF** / **CVS** [9]	3-5 days, 15 days
Pre-Travel Screen (DVT)	DVT1	A A B [9]	5 days
Primary Ciliary Dyskinesia (PCD) NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Primary Hyperoxaluria Panel – full gene sequencing + CNV Requires patient informed consent.	GENE	A	6 weeks
Products of Conception – rapid BOBs aneuploidy diagnosis for all chromosomes (10 days) + culture (25 days)	PBK	**Placental Sample** [1,9]	10-25 days
Products of Conception (BOBs + Culture)	PBK	**Placental Sample** [1,9]	10-25 days
Products of Conception BOBs only – rapid aneuploidy diagnosis for all chromosomes	KBOB	**Placental Sample** or **Solid Tissue** [1,9]	10 days
Prostate Cancer NGS Panel – full sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Protein C Deficiency – PROC Gene Variant Analysis (Known Genotype)	PCMA	A A (Whole blood 10ml) [40]	6 weeks
Protein C Deficiency – PROC Gene Variant Analysis (Unknown Genotype)	PCMA	A A (Whole blood 10ml) [40]	12 weeks
PTEN-related disorders (including Bannayan-Riley-Ruvalcaba, Cowden & Proteus Syndromes) – sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	6 weeks
QF-PCR rapid common aneuploidy screen	APC	**AF** / A [9]	2 days
Recurrent Miscarriage Profile (female)	RMP	A A B C C C H [9,18]	10-15 days

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TEST	CODE	SAMPLE REQS	TAT
Renal Cysts and Diabetes (RCAD) – HNF-1β sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	6 weeks
Renal/Urinary Tract Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	5 weeks
Retinal Disorders NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Retinoblastoma – RB1 sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	6 weeks
Rett Syndrome (MECP2 gene only) – full sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9,11]	5 weeks
Rett/Angelman Syndromes NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Short-Chain Acyl-CoA Dehydrogenase Deficiency – ACADS sequencing Requires patient informed consent.	GENE	A [9]	5 weeks
Short Stature – SHOX variant screening + deletions/duplications Requires patient informed consent.	GENE	A [9]	9 weeks
Silver-Russell Syndrome – methylation studies on 11p15 imprinting domains KvDMR + H19 Requires patient informed consent.	GENE	A [9]	7 weeks
Skeletal Dysplasia NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
Smith-Lemli-Opitz Syndrome – DHCR7 sequencing Requires patient informed consent.	GENE	A [9]	5 weeks
Smith-Magenis Syndrome – BOBs (5 days) + karyotype (15 days)	PBOB, KARY	**CVS / AF /** A H [9]	5-15 days
Smith-Magenis Syndrome – BoBs only	PBOB	**CVS / AF /** A [9]	5 days
Sotos Syndrome (Cerebral Gigantism) – NSD1 sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	5 weeks
Spastic Paraplegia NGS Panel – full gene sequencing + deletions/duplications + mitochondrial DNA Requires patient informed consent.	GENE	A A [9]	6 weeks
Spinal Bulbar Muscular Atrophy (Kennedy Disease) – AR repeat analysis Requires patient informed consent.	GENE	A [9]	9 weeks
Spinal Muscular Atrophy – SMN1 deletions/duplications	SMA	A [9]	10 days
Spinocerebellar Ataxia – multiplex SCA1+2+3+6+7+17 common repeat expansions Requires patient informed consent.	GENE	A [9]	9 weeks

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TEST	CODE	SAMPLE REQS	TAT
Spinocerebellar Ataxia NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	6 weeks
SRY (Sex-determining Region Y)	SRY	A [9]	2 days
Systemic mastocystosis – C-Kit common variants (KIT D816V) Requires patient informed consent.	GENE	A [9]	14 days
T cell clonality assay (TCR beta and TCR gamma)	TCRA	A or **FFPE**	2 weeks
Tay Sachs Screen – common variants See also Carrier Screen (Ashkenazi Jewish/Pan-Ethnic). Requires patient informed consent.	GENE	A [9]	5 weeks
Thrombosis Gene Panel (known familial variants) Requires patient informed consent.	R97K	A A	12 weeks
Thrombosis Gene Panel (unknown familial variants) Requires patient informed consent.	R97U	A A	12 weeks
Thrombotic Risk Profile	PROP	A A B C C C [18]	5 days
Thyroid Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	4 weeks
Torsion Dystonia (DYT1) – TOR1A common variant c.904-906delGAG Requires patient informed consent.	GENE	A [9]	7 weeks
Treacher-Collins Syndrome NGS Panel – full sequencing POLR1C + POLR1D + TCOF1 Requires patient informed consent.	GENE	A A [9]	8 weeks
Tuberous Sclerosis – full TSC1 + TSC2 gene sequencing Requires patient informed consent.	GENE	A A [9]	5 weeks
Urinary Tract/Renal Cancer NGS Panel – full gene sequencing + deletions/duplications Requires patient informed consent.	GENE	A A [9,11]	5 weeks
Usher Syndrome NGS Panel – full gene sequencing Requires patient informed consent.	GENE	A A [9]	7 weeks
Very Long-Chain Acyl-CoA Dehydrogenase Deficiency – ACADVL sequencing Requires patient informed consent.	GENE	A [9]	5 weeks
Von Hippel-Lindau Syndrome – VHL sequencing + deletions/duplications Requires patient informed consent.	GENE	A [9]	9 weeks
Von Willebrands Disease – Type 2 (Ex28) Variant Analysis (VWF) (Known Genotype)	VW2A	A A (Whole blood 10ml) [40]	6 weeks
Von Willebrands Disease – Type 2 (Ex28) Variant Analysis (VWF) (Unknown Genotype)	VW2A	A A (Whole blood 10ml) [40]	12 weeks
Von Willebrands Disease – Type 2 VWD Variant Analysis (VWF) (Known Genotype)	2AVW	A A (Whole blood 10ml) [40]	6 weeks
Von Willebrands Disease – Type 2 VWD Variant Analysis (VWF) (Unknown Genotype)	2AVW	A A (Whole blood 10ml) [40]	12 weeks

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

TDL Genetics

TEST	CODE	SAMPLE REQS	TAT
Von Willebrands Disease – Type 2N Variant Analysis (VWF) (Known Genotype)	VW2N	AA (Whole blood 10ml)[40]	6 weeks
Von Willebrands Disease – Type 2N Variant Analysis (VWF) (Unknown Genotype)	VW2N	AA (Whole blood 10ml)[40]	12 weeks
Wolf-Hirschhorn Syndrome – BOBs (5 days) + karyotype (15 days)	PBOB, KARY	**CVS / AF /** AH[9]	5-15 days
Wolf-Hirschhorn Syndrome – BOBs only	PBOB	**CVS / AF /** A[9]	5 days
Y chromosome microdeletions – AZFa + AZFb + AZFc + SRY	YDEL	A[9]	5 days
Zellweger Syndrome/Peroxisomal Disorders NGS Panel – full gene sequencing Requires patient informed consent.	GENE	AA[9]	6 weeks
Ziwig Endotest® NEW For information about this test and to order kits please contact endotest@tdlpathology.com. The quality of the saliva sample collection is important. Samples should be collected under supervision.	ENDT	Endotest saliva collection kit	25 days
Zygosity testing – comparative DNA profile	DNAC	A (From each twin and both parents)[9]	5 days

Carrier Screen (Ashkenazi Jewish)

This test is optimised for individuals and couples of Ashkenazi Jewish ancestry.**

Uses the same technology as the Pan-Ethnic Carrier Screen.

**Male patients will not be screened for X-linked conditions (e.g., FMR1, etc.).

Requires patient informed consent.

TAT: 4 weeks

GENE

A[9]

Carrier Screen (Pan-Ethnic)

Targets 400+ Autosomal Recessive and X-linked Inherited Disorders**

** Male patients will not be screened for X-linked conditions (e.g., FMR1, etc.).

Requires patient informed consent.

TAT: 4 weeks

GENE

A[9]

DVT/Pre-travel Screen

FBC
Factor II Prothrombin Gene
Factor V Leiden
Anticardiolipin Antibodies

TAT: 5 days

DVT1

AAB[9]

Carrier Screen (Ashkenazi Jewish) – Partnered Report

Please contact the lab for special requirements before sending. Requires patient informed consent

TAT: 4 weeks

GENE

A[9]

Carrier Screen (Pan-Ethnic) – Partnered Report

Please contact the lab for special requirements before sending. Requires patient informed consent

TAT: 4 weeks

GENE

A[9]

Iron Overload Profile

Iron
Total Iron Binding Capacity
Ferritin
Transferrin Saturation
Haemochromatosis C282Y, H63D

TAT: 3 days

IOP

AB[9]

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Leukaemia (Rapid Acute) DNA and RNA NGS Panel / Myeloproliferative Neoplasm NGS Screening Panel

NEW

This NGS assay allows for rapid generation of comprehensive profile of variants (both DNA and RNA) from a single NGS run. This assay can profile both DNA and RNA targets including DNA mutations and translocations detected from RNA targets and allows for simultaneous interrogation of 45 DNA target genes and 30 RNA fusion driver genes. The broad fusion panel enables sequencing of over 700 unique fusion transcripts. The panel covers relevant targets for acute myeloid leukaemia, myelodyplastic syndromes and myeoproliferative neoplasms, including CML, CMML and JMML.

Requires patient informed consent.

TAT: 3 days / 1 week

ALRP (DNA & RNA)

MPNS (DNA)

A

Lysosomal Storage Disorders NGS Panel – full gene sequencing

NEW

This is a 55 gene custom NGS panel which can be used to detect both pathogenic SNP/Indels and copy number variants (including whole exon insertions/deletions) which cause the various Lysosomal storage disorders.

All known lysosomal storage diseases are covered on this panel including:

Fabry disease, Gaucher disease, Pompe disease, metachromatic leukodystrophy, all the different mucopolysaccharidoses, fucosidosis, Krabbe disease, Tay-Sachs disease, Sandhoff disease, Danon disease, lysosomal acid lipase deficiency, Niemann-Pick disease types A, B and C, lipfuscinoses, prosaposin deficiency and Salla disease.

Requires patient informed consent.

TAT: 4-6 weeks

LSDS

A A [9]

Leukaemia / Lymphoma RNA Sequencing (Fusion Gene and SNV/Indel) Panel

NEW

The Leukaemia/Lymphoma RNA Sequencing panel is an Anchored Multiplex PCR (AMP™)-based next-generation sequencing (NGS) panel to detect and identify fusions, point mutations and expression levels from ribonucleic acid (RNA) input. The panel encompasses targets in over 199 genes relating to lymphoid and myeloid malignancies. By using gene-specific primers to amplify into molecular barcodes ligated onto the cDNA fragment ends, both known and novel fusions can be identified.

TAT: 2 weeks

PHFP

A

Male Genetic Reproductive Profile

Chromosome Analysis
Y-Chromosome Microdeletions
Cystic Fibrosis Carrier Screen
(139 common variants)
PolyT (5T,7T,9T) if clinically indicated

TAT: 10-15 days

GRP

A H [9]

Myeloid Gene Panel

NEW

This is a 75 gene targeted NGS panel for acute myeloid leukaemia, myeloproliferative neoplasms, myelodysplastic syndromes, and also contains a number of targets which are useful for lymphoid malignancies (ALL and lymphoma). It uses Anchored Multiplex PCR (AMPTM) chemistry which enables deep strand-specific amplification of molecular barcoded DNA fragments for sequencing.

Requires patient informed consent.

TAT: 2 weeks

MVPS

A

Prenatal Diagnosis (BOBs + Culture)

Rapid Aneuploidy Diagnosis for All Chromosomes + Common Microdeletion Syndromes by BOBs Analysis (3-5 days), Chromosome Analysis (Karyotype) (15 days)

Requires patient informed consent.

TAT: 3-5 days, 15 days

ABK or CBK

AF / CVS [9]

Pre-Travel Screen (DVT)

FBC
Factor II Prothrombin Gene
Factor V Leiden
Anticardiolipin Antibodies

TAT: 5 days

DVT1

A A B [9]

Products of Conception (BOBs + Culture)

Rapid Aneuploidy Diagnosis for all Chromosomes by BOBs Analysis (10 days), Chromosome Analysis (Karyotype) (25 days)

TAT: 10-25 days

PBK

Placental Sample [1,9]

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Recurrent Miscarriage Profile (female)

FBC
Coagulation Profile
Antithrombin III
Factor V Leiden Common Variant
Factor II Prothrombin Common Variant
MTHFR Common Variants
Fibrinogen
Lupus Anticoagulant
Protein C
Free Protein S Ag
Anticardiolipin Abs
Chromosome Analysis

Please request Partner's Chromosome Analysis using a separate request form.

TAT: 10-15 days

RMP

AABCCCH 9,18

Thrombotic Risk Profile

FBC
Coagulation Profile
Antithrombin III
Factor V Leiden Common Variant
Factor II Prothrombin Common Variant
MTHFR Common Variants
Lupus Anticoagulant
Protein C
Free Protein S Ag
Anticardiolipin Abs

TAT: 5 days

PROP

AABCCC 18

Ziwig Endotest® NEW

This new non-invasive diagnostic test uses Next Generation Sequencing of microRNAs for reliable and rapid diagnosis for all types of endometriosis. Assay performance exceeds conventional diagnostic tests.

About 10% of all women are affected by endometriosis but it generally takes about 7 years to arrive at a diagnosis.

The effects of endometriosis range from asymptomatic, often identified during investigations for infertility, to chronic or progressively severe symptomatic related conditions.

Once diagnosed, optimised clinical management of endometriosis would apply.

Ziwig Endotest® provides a Bioinformatics Approach to microRNA sequencing analysis, from saliva.

- Clear Positive/Negative result
- Definitive diagnosis for all forms of endometriosis
- Non-invasive, saliva sample
- Cost contained single test outcome

For information about this test and to order kits please contact endotest@tdlpathology.com

The quality of the saliva sample collection is important (it is essential that instructions are closely followed). Samples should be collected under supervision.

TEST	CODE	SAMPLE REQS	TAT
Ziwig Endotest® NEW For information about this test and to order kits please contact endotest@tdlpathology.com. The quality of the saliva sample collection is important. Samples should be collected under supervision.	ENDT	Endotest saliva collection kit	25 days

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Array CGH testing

Chromosome abnormalities can be associated with developmental delay, autism spectrum disorder, learning difficulties, dysmorphic features and other congenital abnormalities.

Array CGH can detect smaller genetic changes than is possible by conventional karyotyping, and can provide accurate information on the size and possible consequences of the gains (duplications) or losses (deletions) identified. Multiple studies have shown that Array CGH, when applied to appropriate patients, will detect up to three times more pathogenic chromosome imbalances than karyotyping due to its greater precision and sensitivity.

Array CGH testing is now considered to be the front line test for patients presenting with developmental delay (motor or growth), autism spectrum disorder, moderate to severe learning difficulties, dysmorphic features, with or without congenital abnormalities. Consortiums in the USA and many EU countries have adopted Array CGH as the front line test in this patient cohort.

Array CGH is now more frequently used for prenatal studies as an adjunct or replacement for conventional cytogenetic studies, particularly where structural fetal abnormalities are seen at ultrasound scan but also at a patient's or doctor's request. The technique may also be utilised as a follow up test to characterise anomalies detected by a previous study (e.g. an apparently balanced de novo rearrangement or marker chromosome).

When to use Array CGH

In postnatal cases, patients should present with one or more of the following:

- Mental retardation
- Developmental delay
- Autism/autism spectrum disorder
- Dysmorphic features
- Congenital malformations

In prenatal cases, patients may present with:

- Abnormalities or increased nuchal translucency on ultrasound scan which may be associated with a chromosome imbalance.

Approximately 10-20% of results identify extra or missing DNA which may or may not be relevant to the clinical phenotype, and will require further family studies to assist with interpretation.

What can Array CGH detect?

Deletions and duplications with greater sensitivity than conventional karyotyping.

What does Array CGH not detect?

- Balanced chromosome rearrangements such as translocations or inversions. The chromosome location of duplications (this would require additional FISH testing).
- Low frequency mosaicism (<30% abnormal cells), some types of polyploidy like triploidy, Uniparental disomy (UPD) and Fragile X syndrome, imprinting defects, genetic diseases caused by point mutations or multifactorial inheritance.

Further information is provided by the UNIQUE website at www.rarechromo.org

TEST	CODE	SAMPLE REQS	TAT
Postnatal array CGH	**CGH**	A H [9]	10 days

Blood from both parents may also be provided in case of follow up studies at no extra charge.

TEST	CODE	SAMPLE REQS	TAT
Prenatal array CGH	**CGH**	**Amniotic fluid** or **CVS** [9]	10 days

EDTA and heparin blood from both parents should be provided at the time of prenatal sampling, if possible, in case of follow up studies at no extra charge.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Pan-ethnic carrier screening

The Fulgent Beacon carrier panel is a comprehensive genetic screen for people of all ethnic backgrounds. The panel analyses more than 400 genes, in which mutations may cause over 440 different recessive disorders. Testing includes Cystic Fibrosis, Sickle Cell Disease, Thalassemia and Spinal Muscular Atrophy. These conditions vary in morbidity, mortality and treatment.

The Beacon carrier screen can also be filtered to report only on diseases common to the Jewish population – such as Bloom Syndrome, Canavan Disease, Gaucher Syndrome and Tay-Sachs Disease.

Indications for use

- Pre-pregnancy screening for couples that wish to check if they are silent carriers for a disease that would have serious implications for the future health of any children.
- For patients who are concerned about a family history of a particular disease, where common mutation detections are very high – such as Tay-Sachs Disease.

The report comes with a synopsis of any diseases for which a mutation was found, including prognosis, treatment and mode of inheritance. It includes a risk assessment and recommendations for further testing.

A full list of diseases covered by this test is available from the laboratory.

Male patients will not be screened for X-linked conditions. If an X-linked condition is suspected in a male patient please contact the laboratory or a genetics specialist about diagnostic testing for that particular condition.

Limitations

A normal result does not rule out the possibility that the patient carries a rare mutation not detectible by this particular assay. For this reason, this test is also not appropriate to use as a direct prenatal screen (both parents must be confirmed carriers for a particular disease before we can offer prenatal diagnosis). Screening is not designed to detect somatic mutations.

TEST	CODE	SAMPLE REQS	TAT
Carrier Screen (Ashkenazi Jewish) Requires patient informed consent.	GENE	A 9	4 weeks
Carrier Screen (Ashkenazi Jewish) – Partnered Report Please contact the lab for special requirements before sending. Requires patient informed consent.	GENE	A 9	4 weeks
Carrier Screen (Pan-Ethnic) Requires patient informed consent.	GENE	A 9	4 weeks
Carrier Screen (Pan-Ethnic) – Partnered Report Please contact the lab for special requirements before sending. Requires patient informed consent.	GENE	A 9	4 weeks

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Non-Invasive Prenatal Testing (NIPT)

The Harmony test is a cell-free DNA-based prenatal blood screen. It is being used in more than 100 countries around the world, and has been used to guide clinical care in over 1.4 million pregnancies. The test can be used in singleton, twin, and egg-donor pregnancies and has been validated for use in pregnant women aged 16 to 48. It can be administered as early as 10 weeks gestation.

The test can screen for:

- Trisomies 21, 18, and 13
- Sex chromosome aneuploidy
- Monosomy X
- Fetal sex

Patient information

Non-invasive prenatal testing (NIPT) analyses cell-free DNA circulating in a pregnant mother's blood. It is used screen for Down syndrome (trisomy 21) and other common chromosomal conditions (trisomies 18 and 13). Options are also available to screen for X and Y chromosome conditions.

About the test

DNA from the fetus circulates in the mother's blood. Cell-free DNA (cfDNA) results from the natural breakdown of fetal cells (presumed to be mostly placental) and clears from the maternal system within hours of giving birth.

During a pregnancy, cfDNA can be tested to give the most accurate screening approach in estimating the risk of a fetus having a common chromosome condition sometimes called a trisomy. This occurs when there are three copies of a particular chromosome instead of the expected two. The test looks to detect the following conditions:

- **Trisomy 21** is the most common trisomy at the time of birth. Also called Down syndrome, it is associated with moderate to severe intellectual disabilities and may also lead to digestive disease, congenital heart defects and other malformations.
- **Trisomy 18** (Edwards syndrome) and **Trisomy 13** (Patau syndrome) are associated with a high rate of miscarriage. These babies are born with severe brain abnormalities and often have congenital heart defects as well as other birth defects. Most affected individuals die before or soon after birth, and very few survive beyond the first year of life.
- **Sex chromosome conditions** occur when there is a missing, extra, or incomplete copy of the X or Y chromosomes. The Harmony test with sex chromosome aneuploidy panel option can assess risk for XXX, XYY, XXYY, XXY (Klinefelter syndrome), and a missing X chromosome in a girl (Turner syndrome).

An option is also available to look for Turner syndrome only (and not the other sex chromosome conditions). If the mother is interested in having this optional testing, she should talk with her healthcare provider to determine if it is right for her. This option is not available for twin pregnancies.

Risk

The testing is non-invasive: it involves taking a blood sample from the mother. The pregnancy is not put at risk of miscarriage, or from other adverse outcomes that are associated with invasive testing procedures such as amniocentesis.

Accuracy

A 'high probability' result is indicative of a high probability for a trisomy. In singleton pregnancies, the test identifies more than 99% of fetuses with trisomy 21, 97% of fetuses with trisomy 18, 94% of fetuses with trisomy 13, and 96% of fetuses with Turner syndrome. X and Y analysis provides >99% accuracy for fetal sex. Accuracy for detecting other sex chromosome anomalies varies by condition.

After the test, less than 1% of women need to have a CVS or an amniocentesis procedure.

The Harmony test is considered a prenatal screening test, not a diagnostic test. So if the test results show there is a high risk of the fetus having trisomy 21, 18, 13 or a sex chromosome condition, it does not mean that the fetus definitely has one of these conditions – although it is highly likely. For this reason, in the event of a 'high risk' (or positive) result, follow-up testing by an invasive procedure is recommended.

TEST	CODE	SAMPLE REQS	TAT
Non-Invasive Prenatal Testing – common aneuploidy screening from maternal blood	**NIPT**	**J / Special tubes** [1]	3-5 days

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

In the same way, if the test results show a 'low probability' of the fetus having trisomy 21, 18, 13 or a sex chromosome condition, it is unlikely that the fetus has one of these conditions. However, there is a very small risk that not all trisomic fetuses will be detected.

Who can have this test?

The Harmony test can be ordered by healthcare professionals for women with pregnancies of at least 10 weeks' gestational age. This test can be requested for any singleton or twin pregnancy, including those conceived naturally or by IVF using the patient's own egg or a donor egg. Note that, in twin pregnancies, sex chromosome (X and Y) analysis can determine fetal sex but not sex chromosome conditions. The Harmony test also does not assess risk for mosaicism, partial trisomies or translocations.

Results will be ready in approximately 3-5 days. Women still can have their 12-week scan for a detailed examination of the fetal anatomy, including measurement of nuchal translucency, nasal bone and other important factors. In this visit, patients can discuss the DNA and ultrasound results with their obstetricians.

On the basis of the NIPT result and the ultrasound findings, a patient can decide whether or not she wants to have an invasive procedure (for example, CVS or amniocentesis).

Repeat samples

There needs to be enough fetal DNA in the maternal blood to be able to provide a result. If there is insufficient fetal DNA in the sample (which occurs in 3% of cases), another blood sample from the mother may be required. This will be processed in the laboratory at no extra charge.

What is the process?

Once the mother has taken an independent personal decision that she wants to have the NIPT performed, she will be asked to sign a consent form and her blood sample can be taken from a vein in her arm.

Who carries out the analysis of the test?

Her sample and completed request form need to be sent to TDL Genetics, where the Harmony test is performed on the DNA extracted from her blood sample.

Will the mother need to have any other tests?

The Harmony test does not provide information on mosaicism, partial trisomies or translocations, or other rare chromosomal abnormalities. If the ultrasound scan shows a high nuchal translucency or other major physical defects such as brain abnormalities, heart abnormalities, the risk for some rare chromosomal defects may be high. In such cases, the mother may choose to have a CVS or an amniocentesis.

The non-invasive prenatal test does not provide information on other physical defects such as spina bifida, or information on fetal growth. It is therefore advisable that the mother has all the usual ultrasound scans during her pregnancy.

Sample stability

Samples must be taken in special tubes provided by the laboratory. These samples must not be refrigerated, but stored at ambient temperature protected by the gel packs provided. The lab must receive the samples within 7 days to allow testing to proceed.

Always provide clinical details and family history for genetic tests. Practice discounts do not apply to tests with the GENE code. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

In-vivo tests

These tests, ideally, must be carried out by appointment. Please telephone 020 7307 7383 for details, information for patient preparation, and appointment times. Sample taking fees for Extended tests are charged at £101.00 per visit.

Extended Testing

- 50g liquid glucose is consumed for the glucose challenge test/Mini-GTT.
- 75g liquid glucose is consumed for all other glucose tests.
- Each sample tube must be labelled with time of collection.

Glucose tolerance tests

TEST	CODE	SAMPLE REQS	TAT	COLLECTION TIME (MINUTES POST-GLUCOSE)
Glucose Challenge Test/Mini-GTT	RBGM	G	1 day	Collection time (minutes post-glucose): 1 at 60 mins (50gm glucose)
Glucose Tolerance Test (Extended Plus)	GTTX	7 x G, 7 x **RU**	1 day	Collection time (minutes post-glucose): 1 each at 0, 30, 60, 90, 120, 150 and 180 mins.
Glucose Tolerance Test (Extended)	GTTE	5 x G, 5 x **RU**	1 day	Collection time (minutes post-glucose): 1 each at 0, 30, 60, 90 and 120 mins.
Glucose Tolerance Test (Short)	GTTS	2 x G, 2 x **RU**	1 day	Collection time (minutes post-glucose): 1 each at 0 and 120 mins.
Glucose Tolerance Test/OGTT	GTT	3 x G, 3 x **RU**	1 day	Collection time (minutes post-glucose): 1 each at 0, 60 and 120 mins (75gm glucose load)
Glucose Tolerance with Growth Hormone	GTT + GHDF	3 x B[35], 3 x G, 3 x **RU**	1 day	Collection time (minutes post-glucose): 1 each at 0, 60 and 120 mins.
Glucose Tolerance with Insulin	GTTI	3 x B, 3 x G, 3 x **RU**	1 day	Collection time (minutes post-glucose): 1 each at 0, 60 and 120 mins

Extended tests

TEST	CODE	SAMPLE REQS	TAT	COLLECTION TIME (MINUTES POST-GLUCOSE)
Lactose Tolerance Test	LTT	By appointment only	1 day	Collection time (minutes post-glucose): Contact 020 7025 7997 (Phlebotomy).
Synacthen Stimulation Test	SYNA	By appointment only	1 day	Collection time (minutes post-glucose): Contact 020 7025 7997 (Phlebotomy).

Antibiotic assays

TEST	CODE	SAMPLE REQS	TAT
Amikacin Level (State dose)	AMIK	B[4]	4 hours
Gentamicin Assay	GENT	B[4]	4 hours
Metronidazole Level	METR	B[4]	7 days
Teicoplanin Assay	TEIC	B	5 days
Tobramycin Assay (Provide Clinical Details)	TOBR	B	3 days
Vancomycin Hydrochloride	VANC	B	4 hours

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Therapeutic drug assays

There are three different collection times for Therapeutic Drug Monitoring:

- **Trough Level**: Blood should be collected just before the next dose. Trough Levels check that the appropriate drug concentration is being maintained.
- **Peak Levels**: Sample collection time is dependent on specific drug type and method of administration. Peak levels check that the drug level is not in the toxic range.
- **Suspected Toxicity**: Blood can be collected any time.

All collections should have the following noted on the request form:

- Dosage schedule including the amount and frequency and time of the last dose
- Time of specimen collection
- Clinical status of patient (e.g. routine, suspected toxicity)
- Name(s) of other drugs being taken by the patient

TEST	CODE	SAMPLE REQS	TAT
Amitriptyline	AMTR	A [4]	5 days
Anafranil (Clomipramine)	CHLO	A	7 days
Carbamazepine (Tegretol)	CARB	B	4 hours
Clobazam	CLOB	A	5 days
Clomipramine (Anafranil)	CHLO	A	7 days
Clonazepam	CLON	A	7 days
Diazepam (Valium)	DIAZ	A	7 days
Digoxin	DIGO	B	4 hours
Epanutin (Phenytoin)	PHEN	B	4 hours
Erythropoietin	ERY	B	4 days
Ethosuximide	ETHO	A	7 days
FK506 (Tacrolimus/Prograf)	FK5	A [4]	1-2 days
Flecainide (Tambocor)	FLEC	A	5 days
Fluoxetine (Prozac)	PROZ	A [4]	5 days
Gabapentin	GABA	B [4]	5 days
Imipramine	IMIP	A [4]	4 days
Lamotrigine	LAMO	B [4]	5 days
Levetiracetam (Keppra)	LEVE	B [4]	3 days
Lithium (take 12 hours after dose)	LITH	B	4 hours
Lorazepam	LORA	A [4]	10 days
Methotrexate	METX	B	2 days
Mycophenolic Acid (Cellcept)	MYCP	A	5 days
Mysoline (Primidone)	PRIM	B [4]	3 days
Olanzapine	OLAN	A [4]	5 days
Paracetamol	PARA	B	4 hours
Phenobarbitone	PHB	B	4 hours
Phenytoin (Epanutin)	PHEN	B	4 hours
Primidone (Mysoline)	PRIM	B [4]	3 days
Propanalol	PRO	B [4]	7 days

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TEST	CODE	SAMPLE REQS	TAT
Risperidone	RISP	A [4]	7 days
Sinequan (Doxepin)	DOXE	A	10 days
Sirolimus	SIRO	A	3 days
Streptomycin Levels	STRM	F	5 days
Sulpiride	SULP	B [4]	4 days
Tacrolimus/Prograf (FK506)	FK5	A [4]	1-2 days
Tegretol (Carbamazepine)	CARB	B	4 hours
Temazepam	TEMA	B [4]	4 days
Theophylline	THEO	B	4 hours
Topiramate (Topamax)	TOPI	B [4]	4 days
Trimipramine	TRIM	A	5 days
Valium (Diazepam)	DIAZ	A	7 days
Valproic Acid (Epilim)	VALP	B	4 hours
Vigabatrin (Sabril)	VIGA	A	10 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Allergy

Allergy, Asthma and Autoimmune diseases are increasing around the world, especially in industrialised countries and affect all ages. Since every country has their own dietary habits there are noteworthy differences in the allergens causing food allergy.

For Component Testing see page 123. A list of individual allergens is available on page 125.

TEST	CODE	SAMPLE REQS	TAT
Allergy – Individual Allergens	ALLE	B	2 days
Allergy – Individual Allergens (Self-collect) See page 131 for more information	ALLE	B (TDL Tiny)	2 days
Allergy – 5 x Single Individual Allergens NEW	5AL	B	2 days
Allergy – 10 x Single Individual Allergens NEW	10AL	B	2 days
Allergy Profile 1 (Food & Inhalants)	1A	B B	2 days
Allergy Profile 2 (UK Aero Allergen)	2A	B	2 days
Allergy Profile 3 (Food)	3A	B	2 days
Allergy Profile 4 (Nuts & Seeds)	4A	B	2 days
Allergy Profile 5 (Children's Panel) CHANGE	5A	B	2 days
Allergy Profile 6 (Shellfish)	6A	B	2 days
Allergy Profile 7 (Finfish)	7A	B	2 days
Allergy Profile 8 (Cereal – singles)	8A	B	2 days
Allergy Profile 9 (Antibiotics)	9A	B	2 days
Allergy Profile 10 (Insects)	10A	B	2 days
Allergy Profile 11 (Combined Shellfish/Finfish)	11A	B	2 days
Allergy Profile 12 (Milk & Milk Proteins)	12A	B	2 days
Allergy Profile 13 (Stone fruit/Rosaceae family)	13A	B	2 days
ALEX² Allergy Test NEW	ALEX	B (Serum)	3-4 days
ALEX² Allergy Test (Self-collect) NEW See page 131 for more information	ALEX	B (TDL Tiny)	3-4 days
ISAC Panel	ISAC	B	3 days
ISAC Panel (Self-collect) See page 131 for more information	ISAC	B (TDL Tiny)	3 days
Atopic Dermatitis/Eczema Profile (14 allergens) CHANGE	ALEC	B	2 days
Gluten Sensitivity Profile	GLUT	A B B	10 days
Allergic Rhinitis/Asthma Profile CHANGE	ALRN	B	2 days
Histamine Releasing Urticaria Test	CURT	B	3 weeks
Prealbumin	PALB	B	3 days
Total IgE	IGE	B	1 day
Tryptase	STRY	B	2 days

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Allergy Profile 1 (Food & Inhalants)

Total IgE with individual IgE allergens for:

Grass Mix, inc.: Cocksfoot, Meadow Fescue, Meadow, Rye, Timothy

Weed Mix, inc.: Common Ragweed, Giant Ragweed, Western Ragweed

Dust Mix, inc.: Blatella germanica, Dermatophagoides pteronyssinus, Dermatophagoides farinae, Hollister-Stier Labs

Mould Mix, inc.: A. alternata, Aspergillus fumigatus, Candida albicans, Cladosporium herbarum, Helminthosporium halodes, Penicillium notatum

Tree Mix, inc.: Box Elder, Common Silverbirch, Hazel, Oak, London Plane, Maple, Sycamore

Single Allergens (19): Beef, Bermuda Grass, Cat Dander, Clam, Common Silver Birch, Cow's Milk, Crab, Dog Dander, Egg White, Egg Yolk, Fish (Cod), Hazel Nut, Horse Dander, Latex, Nettle, Peanut, Shrimp/Prawn, Soya Bean, Wheat

TAT: 2 days

1A

B B

Allergy Profile 2 (UK Aero Allergen)

Total IgE with individual IgE allergens for:

Alternaria
Aspergillus
Birch Pollen
Cat Dander
Cladosporium
Common Ragweed
Derma farinae
Dog Dander
House Dust Mite
Horse Dander
Timothy Grass

TAT: 2 days

2A

B

Allergy Profile 3 (Food)

Total IgE with individual IgE allergens for:

Codfish
Cow's Milk
Egg White
Egg Yolk
Kiwi
Peanut
Sesame
Soya
Wheat

TAT: 2 days

3A

B

Allergy Profile 4 (Nuts & Seeds)

Total IgE with individual IgE allergens for:

Almond
Brazil Nut
Cashew
Hazel Nut
Macadamia Nut
Peanut
Pecan
Pine Nut
Pistachio
Poppy Seed
Pumpkin Seed
Sesame Seed
Sunflower Seed
Walnut

TAT: 2 days

4A

B

Allergy Profile 5 (Children's Panel)

CHANGE

Total IgE with individual IgE allergens for:

Cat Dander
Cod
Cow's Milk
Dog Dander
Dust Mite
Egg White
Egg Yolk
Hazelnut
Peanut
Silver Birch
Soya Bean
Timothy Grass
Wheat Flour

TAT: 2 days

5A

B

Allergy Profile 6 (Shellfish)

Total IgE with individual IgE allergens for:

Clam
Crab
Crawfish/Crayfish
Lobster
Octopus
Prawns/Shrimp
Scallop
Squid

TAT: 2 days

6A

B

Allergy Profile 7 (Finfish)

Total IgE with individual IgE allergens for:

Codfish
Mackerel
Plaice
Sardine/Pilchard
Salmon
Sole
Swordfish
Tuna

TAT: 2 days

7A

B

Allergy Profile 8 (Cereal – singles)

Total IgE with individual IgE allergens for:

Barley
Oat
Rye
Wheat

TAT: 2 days

8A

B

Allergy Profile 9 (Antibiotics)

Total IgE with individual IgE allergens for:

Amoxicilloyl
Ampicilloyl
Cefaclor
Pen G
Pen V

TAT: 2 days

9A

B

Allergy Profile 10 (Insects)

Total IgE with individual IgE allergens for:

Common Wasp – Yellow Jacket
Bee
Paper Wasp
Yellow Hornet
White Faced Hornet

TAT: 2 days

10A

B

Allergy Profile 11 (Combined Shellfish/Finfish)

Total IgE with individual IgE allergens for:

Cod
Prawn/Shrimp
Salmon
Scallop
Squid
Tuna

TAT: 2 days

11A

B

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Allergy

Allergy Profile 12 (Milk & Milk Proteins)

Total IgE with individual IgE allergens for:

Alpha-lactalbumin – milk proteins
Beta-lactoglobulin – milk proteins
Casein – milk proteins
Cow's Milk
Goat's Milk
Mare's Milk
Sheep's Milk
Whey (cow and ewe)

TAT: 2 days

12A

B

Allergy Profile 13 (Stone fruit/Rosaceae family)

Total IgE with individual IgE allergens for:

Almond
Apple
Apricot
Cherry
Peach
Pear
Plum
Raspberry
Strawberry

TAT: 2 days

13A

B

ALEX² Allergy Test

NEW

ALEX® Allergy Explorer rapidly tests for up to 300 allergens simultaneously and providing a comprehensive analysis, from a very small sample volume. The panel of allergens includes pollen, mites, cat and dog fur, insect venoms, moulds and yeasts, food and latex, supplemented with total IgE.

TAT: 3-4 days

ALEX

B (Serum)

ISAC Panel

Simultaneous measurement in a single test of specific antibodies to more than one hundred allergen components from more than 48 preselected allergen sources.

TAT: 3 days

ISAC

B

Atopic Dermatitis/Eczema Profile (14 allergens)

CHANGE

TOTAL IGE with individual IgE allergens for:

Cod fish
Cows Milk
Egg White
Soyabean
Peanut
Hazelnut
Shrimp
Wheat
Apple
Dust mite - dermatophagoides pteronyssinus
Cat Dander
Dog Dander
Timothy Grass
Common Silver Birch

TAT: 2 days

ALEC

B

Gluten Sensitivity Profile

Gluten single IgE Allergen
Gliadin
Wheat
Tissue transglutaminase
Total IgA
HLA DQ2/DQ8

TAT: 10 days

GLUT

A B B

Allergic Rhinitis/Asthma Profile

CHANGE

Total IgE with individual IgE allergens for:

Cat dander
Dog dander
Common Silver Birch
Timothy Grass
Dust Mite - Dermatophagoides pteronyssinus
Alternaria alternata
Aspergillius fumigatus
Caldosporium herbarum
Mugwort
London Plane
Peanut
Egg White
Cows Milk

TAT: 2 days

ALRN

B

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Component testing

Using ImmunoCAP Allergen Components can help refine the understanding of sensitisation, by assessing a person's sensitisation pattern at the molecular level. When used in conjunction with traditional extract-based IgE testing, these provide information at the individual component level.

For more information, please contact the Immunology Department on 020 7025 7917.

TEST	CODE	SAMPLE REQS	TAT
Alpha Gal Components (related to red meat)	ZZ37	B	2 days
Alternaria Components	ZZ1	B	2 days
Apple Components	ZZ36	B	2 days
Aspergillus Components	ZZ2	B	2 days
Birch Components	ZZ3	B	2 days
Brazil Components	ZZ4	B	2 days
Cashew Components	ZZ35	B	2 days
Cat Components	ZZ5	B	2 days
Celery Components	ZZ6	B	2 days
Cow's Milk Components	ZZ7	B	2 days
Dog Components	ZZ8	B	2 days
Egg Components	ZZ9	B	2 days
Fish Components	ZZ10	B	2 days
Glycan Determinants	ZZ27	B	2 days
Hazelnut Components	ZZ11	B	2 days
Horse Components	ZZ38	B	2 days
House Dust Mite Components	ZZ12	B	2 days
Kiwi Components	ZZ32	B	2 days
Latex Components	ZZ13	B	2 days
Lipid Transfer Proteins	ZZ23	B	2 days
Lipocalins	ZZ28	B	2 days
Olive Components	ZZ14	B	2 days
Parvalbumins	ZZ29	B	2 days
Peach Components	ZZ15	B	2 days
Peanut Components	ZZ16	B	2 days
Polcalcins	ZZ25	B	2 days
PR-10 Proteins	ZZ22	B	2 days
Profilins	ZZ24	B	2 days
Seed Storage Proteins	ZZ26	B	2 days
Serum Albumins	ZZ30	B	2 days
Sesame Components	ZZ39	B	2 days
Shrimp Components	ZZ17	B	2 days
Soybean Components	ZZ18	B	2 days

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Allergy

TEST	CODE	SAMPLE REQS	TAT
Timothy Grass Components	ZZ19	B	2 days
Tropomyosins	ZZ31	B	2 days
Venom Components	ZZ33	B	2 days
Wall Pellitory Components	ZZ20	B	2 days
Walnut Components	ZZ34	B	2 days
Wheat Components	ZZ21	B	2 days

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Individual allergens

Allergens, when requested individually are priced as single tests, sample 1 x B (up to 5 allergens).

Protein allergens are manufactured by Thermofisher (Phadia) and are IgE specific.

GRASS POLLENS
Bahia grass g17
Barley g201
Bermuda grass g2
Brome grass g11
Canary grass g71
Cocksfoot g3
Common reed g7
Cultivated oat g14
Cultivated rye g12
Cultivated wheat g15
Johnson grass g10
Maize, Corn g202
Meadow fescue g4
Meadow foxtail g16
Meadow grass, Kentucky blue g8
Redtop, Bentgrass g9
Rye-grass g5
Sweet vernal grass g1
Timothy grass g6
Velvet grass g13
Wild rye grass g70

WEED POLLENS
Alfalfa w45
Camomile w206
Careless weed w82
Cocklebur w13
Common pigweed w14
Common ragweed w1
Dandelion w8
Dog fennel w46
False ragweed w4
Firebush (Kochia) w17
Giant ragweed w3
Goldenrod w12
Goosefoot, Lamb's quarters w10
Japanese Hop w22
Lupin w207
Marguerite, Ox-eye daisy w7
Mugwort w6
Nettle w20
Parietaria officinalis w19
Parietaria judaica w21
Plantain (English), Ribwort w9
Rape w203
Rough marshelder w16
Saltwort (prickly), Russian thistle w11
Scale, Lenscale w15
Sheep sorrel w18
Sunflower w204
Wall pellitory w19
Wall pellitory w21
Western ragweed w2
Wormwood w5
Yellow dock w23

TREE POLLENS
Acacia t19
American beech t5
Australian pine t73
Bald cypress t37
Bayberry t56
Box-elder t1
Cedar t212
Cedar elm t45
Chestnut t206
Common silver birch t3
Cottonwood t14
Cypress t222
Date t214
Elder t205
Elm t8
Eucalyptus, Gum-tree t18
European ash t25
Grey alder t2
Hackberry t44
Hazel t4
Horn beam t209
Horse chestnut t203
Italian/Mediterranean/Funeral cypress t23
Japanese cedar t17
Linden t208
Maple leaf sycamore, London plane t11
Melaleuca, Cajeput-tree t21
Mesquite t20
Mountain juniper t6
Mulberry t70
Oak t7
Oil Palm t223
Olive t9
Pecan, Hickory t22
Peppertree t217
Pine t213
Privet t210
Queen palm t72
Red cedar t57
Red mulberry t71
Scotch broom t55
Spruce t201
Sweet gum t211
Walnut t10
White ash t15
White hickory t41
White pine t16
Willow t12
Virginia live oak t218

MICROORGANISMS
Acremonium kiliense m202
Alternaria alternata m6
Aspergillus flavus m228
Aspergillus fumigatus m3
Aspergillus niger m207
Aspergillus terreus m36
Aureobasidium pullulans m12
Botrytis cinerea m7
Candida albicans m5
Chaetomium globosum m208
Cladosporium herbarum m2
Curvularia lunata m16
Epicoccum purpurascens m14
Fusarium proliferatum (F. moniliforme) m9
Setomelanomma rostrata (Helminthosporium halodes) m8
Malassezia spp. m227
Mucor racemosus m4
Penicillium chrysogenum (P. notatum) m1
Penicillium glabrum m209
Phoma betae m13
Rhizopus nigricans m11
Staphylococcal enterotoxin A m80
Staphylococcal enterotoxin B m81
Staphylococcal enterotoxin C m223
Staphylococcal enterotoxin TSST m226
Stemphylium herbarum (S. botryosum) m10
Tilletia tritici m201
Trichoderma viride m15
Trichophyton mentagrophytes var. interdigitale m211
Trichophyton rubrum m205
Ulocladium chartarum m204

EPIDERMALS AND ANIMAL PROTEINS
Budgerigar droppings e77
Budgerigar feathers e78
Camel dander u328
Canary bird droppings e200
Canary bird feathers e201
Cat dander e1
Chicken droppings e218
Chicken feathers e85
Chicken, serum proteins e219
Chinchilla epithelium e208
Cow dander e4
Dog dander e5
Duck feathers e86
Ferret epithelium e217
Finch feathers e214
Gerbil epithelium e209
Goat epithelium e80
Goose feathers e70
Guinea pig epithelium e6

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Allergy

Hamster epithelium e84
Horse dander e3
Mink epithelium e203
Mouse epithelium e71
Mouse epithelium, serum proteins and urine proteins e88
Mouse serum proteins e76
Mouse urine proteins e72
Parrot feathers e213
Pigeon feathers e215
Rabbit epithelium e82
Rabbit, serum proteins e206
Rabbit, urine proteins e211
Rat epithelium e73
Rat epithelium, serum proteins and urine proteins e87
Rat serum proteins e75
Rat urine proteins e74
Sheep epithelium e81
Swine epithelium e83
Turkey feathers e89

MITES
Acarus siro (Storage mite) d70
Blomia tropicalis (House dust mite) d201
Dermatophagoides farinae (House dust mite) d2
Dermatophagoides microceras (House dust mite) d3
Dermatophagoides pteronyssinus (House dust mite) d1
Euroglyphus maynei (House dust mite) d74
Glycyphagus domesticus (Storage mite) d73
Lepidoglyphus destructor (Storage mite) d71
Tyrophagus putrescentiae (Storage mite) d72

ALLERGEN COMPONENTS
See page 123 for Component Testing and Component Allergen Profiles

HOUSE DUST
Greer Labs., Inc. h1
Hollister-Stier Labs. h2

INSECTS
Berlin beetle i76
Blood worm i73
Cockroach, American i206
Cockroach, German i6
Fire ant i70
Grain weevil i202
Green nimitti i72
Horse fly i204
Mediterranean flour moth i203
Mosquito i71
Moth i8

VENOMS
Bumblebee i205
Common wasp (Yellow jacket i3
European Paper Wasp i77
European hornet i75
Honey bee i1
Paper wasp i4
White-faced hornet i2
Yellow hornet i5

DRUGS
Amoxicilloyl c6
Ampicilloyl c5
Cefaclor c7
Chlorhexidine c8
Gelatin bovine c74
Insulin human c73
Penicilloyl G c1
Penicilloyl V c2
Pholcodine c261
Morphine c260
Suxamethonium (succinylcholine) c202

OCCUPATIONAL
Bougainvillea k214
Cotton seed k83
Ethylene oxide k78
Ficus k81
Formaldehyde/Formalin k80
Hexahydrophtalic anhydrid k209
Isocyanate HDI (Hexamethylene diisocyanate) k77
Isocyanate MDI (Diphenylmethane diisocyanate) k76
Isocyanate TDI (Toluene diisocyanate) k75
Ispaghula k72
Latex k82
Methyltetrahydrophtalic anhydrid k211
Phthalic anhydride k79
Sunflower seed k84
Trimellitic anhydride, TMA k86

PARASITES
Anisakis p4
Ascaris p1
Echinococcus p2

MISCELLANEOUS
Cotton, crude fibers o1
Mealworm o211
MUXF3 CCD, Bromelain o214
Seminal fluid o70
Streptavidin o212

FOODS – FRUITS & VEGETABLES
Apple f49
Apricot f237
Asparagus f261
Aubergine, eggplant f262
Avocado f96
Bamboo shoot f51
Banana f92
Beetroot f319
Blackberry f211
Blueberry f288
Broccoli f260
Brussel sprouts f217
Cabbage f216
Carrot f31
Cauliflower f291
Celery f85
Cherry f242
Cucumber f244
Date f289
Fennel, fresh f276
Fig f328
Garlic f47
Grape f259
Grapefruit f209
Kiwi f84
Lemon f208
Lettuce f215
Lime f306
Mandarin (tangerine, clementine, satsumas) f302
Mango f91
Melon f87
Olive (black, fresh) f342
Onion f48
Orange f33
Papaya f293
Passion fruit f294
Peach f95
Pear f94
Persimon (kaki fruit, sharon) f301
Pineapple f210
Plum f255
Potato f35
Pumpkin f225
Raspberry f343
Spinach f214
Strawberry f44
Sweet potato f54
Tomato f25
Watermelon f329

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FOODS - SEED, LEGUMES & NUTS
Almond f20
Barley f6
Brazil nut f18
Buckwheat f11
Cashew nut f202
Chick pea f309
Coconut f36
Common millet f55
Fenugreek f305
Foxtail millet f56
Gluten f79
Green bean f315
Hazel nut f17
Lentil f235
Lima bean f182
Linseed f333
Lupin seed f335
Macadamia nut f345
Maize, Corn f8
Oat f7
Pea f12
Peanut f13
Pecan nut f201
Pine nut, pignoles f253
Pistachio f203
Poppy seed f224
Pumpkin seed f226
Quinoa f347
Rape seed f316
Red kidney bean f287
Rice f9
Rye f5
Sesame seed f10
Soybean f14
Spelt wheat f124
Sugar-beet seed f227
Sweet chestnut f299
Walnut f256
Wheat f4
White bean f15

FOODS - SPICES
Anise f271
Basil f269
Bay leaf f278
Black pepper f280
Caraway f265
Chilipepper f279
Clove f268
Coriander f317
Dill f277
Ginger f270
Green pepper (unripe seed) f263
Lovage f275
Mace f266
Marjoram f274
Mint f332
Mustard f89
Oregano f283
Paprika, Sweet pepper f218
Parsley f86
Tarragon f272
Thyme f273
Vanilla f234

FOODS - FISH, SHELLFISH & MOLLUSCS
Abalone f346
Anchovy f313
Blue mussel f37
Cat fish f369
Chub mackerel f50
Clam f207
Crab f23
Crayfish f320
Fish (cod) f3
Gulf flounder f147
Haddock f42
Hake f307
Halibut f303
Herring f205
Jack mackerel, Scad f60
Langust (spiny lobster) f304
Lobster f80
Mackerel f206
Megrim f311
Octopus f59
Oyster f290
Pacific squid f58
Plaice f254
Pollock f413
Red snapper f381
Salmon f41
Sardine (Pilchard) f308
Sardine, Japanese Pilchard f61
Scallop f338
Shrimp f24
Snail f314
Sole f337
Squid f258
Swordfish f312
Tilapia f414
Trout f204
Tuna f40
Walleye pike f415
Whitefish (Inconnu) f384

FOODS - EGG & FOWL
Chicken f83
Egg f245
Egg white f1
Egg yolk f75
Turkey meat f284

FOODS - MEAT
Beef f27
Mutton f88
Pork f26
Rabbit f213

FOODS - MILK
Cheese, cheddar type f81
Cheese, mold type f82
Cow's whey f236
Goat milk f300
Mare's milk f286
Milk f2
Milk, boiled f231
Sheep milk f325
Sheep whey f326

FOODS - ADDITIVES
Carob (E410) f296
Guar, guar gum (E412) f246
Gum arabic (E414) f297
Cochineal extract (Carmine red) (E120) f340

FOODS - MISCELLANEOUS
Cacao f93
Coffee f221
Malt f90
Mushroom (champignon) f212
Tea f222
Yeast f45

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Vitamins, Nutrition and Lifestyle

TEST	CODE	SAMPLE REQS	TAT
1,25 Vitamin D	D3	B	5-8 days
Beta Carotene	CARO	B	5 days
Biotin	BIOS	B	5 days
Carotenes	CARO	B [13]	5 days
Vitamin A (Retinol)	VITA	B	5 days
Vitamin B (Functional)	FUNC	A A or H [13]	5 days
Vitamin B Profile	VBP	A A B	5 days
Vitamin B1 (Thiamine)	VIT1	A	5 days
Vitamin B2 (Riboflavin)	VIB2	A	5 days
Vitamin B3 (Nicotinamide)	VIB3	B	5 days
Vitamin B5 (Pantothenic Acid)	VB5S	B	5 days
Vitamin B6 (Pyridoxine)	VITB	A	5 days
Vitamin B8 (Biotin)	BIOS	B	5 days
Vitamin B9 (Folic acid) – Red cell	RBCF	A	2 days
Vitamin B9 (Folic acid) – Serum	FOLA	B	1 day
Vitamin B9 (Folic acid) – Serum (Self-collect) See page 131 for more information Sample integrity may be compromised on received samples older than 48 hours.	FOLA	B (TDL Tiny)	1 day
Vitamin B12 (Active)	B12	B	1 day
Vitamin B12 (Active) (Self-collect) See page 131 for more information	B12	B (TDL Tiny)	1 day
Vitamin B12 (Active)/Red Cell Folate	B12F	A B	2 days
Vitamin C (Active) *Serum should be separated and frozen within 3 hours of venepuncture.	VITC	B (Frozen)*	5 days
Vitamin D (1, 25 Dihydroxy)	D3	B	5-8 days
Vitamin D (25-OH)	VITD	B	4 hours
Vitamin D (25-OH) (Self-collect) See page 131 for more information	VITD	B (TDL Tiny)	1 day
Vitamin E (Alpha Tocopherol)	VITE	B	5 days
Vitamin K (Nutritional) * Sample should be light protected after collection, spun/separated and frozen within 24 hours of collection.	VKN	Serum (SST or B)*	5 days
Vitamin Profile 1 CHANGE	VITS	A B B [7]	5 days
Vitamin Profile 2 CHANGE	VIT2	A A A B B [7,13]	5 days

Patients taking supplements may be advised to stop medication prior to testing.

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Vitamin B Profile

Vitamin B1
Vitamin B2
Vitamin B3
Vitamin B6
Vitamin B9 (Red cell)
Vitamin B12 (Active)

TAT: 5 days

VBP

A A B

Vitamin Profile 1

CHANGE
Vitamin A
Beta Carotene
Vitamin B1
Vitamin B2
Vitamin B6
Vitamin D (25-OH)
Vitamin E

TAT: 5 days

VITS

A B B [7]

Vitamin Profile 2

CHANGE
Vitamin A
Beta Carotene
Vitamin B1
Vitamin B2
Vitamin B3
Vitamin B6
Vitamin B9
(Red Cell Folate)
Vitamin B12 (Active)
Vitamin D (25-OH)
Vitamin E

TAT: 5 days

VIT2

A A A B B [7,13]

This provides valuable diagnostic information, which can be assimilated with other diagnostic markers in the assessment of nutritional status, and compares favourably to semi-quantitative functional assays.

TEST	CODE	SAMPLE REQS	TAT
Ceruloplasmin	CERU	B	1 day
Copper (Serum)	COPP	B	5 days
Essential Fatty Acid Profile (Red Cell)	EFAR	A [4]	10 days
Folate (Red Cell)	RBCF	A	2 days
Glutathione (Red Cell)	GLUR	H [5]	5 days
Glutathione Peroxidase	GLPX	H	5 days
Lutein	LUTE	B [13]	2 weeks
Lycopene	LYCO	B	2 weeks
Magnesium (Whole blood)	RCMG	A or H	4 days
Mineral Screen	MINE	B K	5 days
Mineral Screen (Whole blood)	RMIN	H H	5 days
Mineral Screen and Industrial Heavy Metal Screen (Trace Metals)	TRAC	A B H K	7-10 days
Omega 3/Omega 6	OMG3	A [4]	4 days
Omega 3/Omega 6 (Self-collect) See page 131 for more information	OMG3	A (TDL Tiny)	4 days
Selenium (Serum)	SELE	B	4 days
Selenium (Whole Blood)	SELR	A or H	4 days
Sports/Performance Profile	SPOR	A A A B B B B G K [4]	5 days
Xylose Tolerance Test	XTT	J [1]	7 days
Zinc (Serum/Plasma)	ZINC	K	1 day
Zinc (Urine)	URZN	CU	5 days
Zinc (Whole Blood)	RBCZ	A or H	5 days

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Mineral Screen

Calcium
Magnesium
Zinc
Iron
Copper
Chromium
Manganese

TAT: 5 days

MINE

B K

Mineral Screen (Whole blood)

Whole Blood Potassium
Whole Blood Magnesium
Whole Blood Calcium
Whole Blood Manganese
Whole Blood Zinc
Whole Blood Copper
Whole Blood Selenium
Whole Blood Chromium

TAT: 5 days

RMIN

H H

Mineral Screen and Industrial Heavy Metal Screen (Trace Metals)

Aluminium
Manganese
Iron
Calcium
Zinc
Magnesium
Copper
Cadmium
Mercury
Lead
Chromium

TAT: 7-10 days

TRAC

A B H K

Sports/Performance Profile

FBC/ESR
Biochemistry Profile
HDL/LDL
Ferritin
C-Reactive Protein
Omega 3/Omega 6
Mineral Screen
Vitamin B9 (Red Cell Folate)
Vitamin B12 (Active)

TAT: 5 days

SPOR

A A A B B B B G K [4]

Essential Red Cell Fatty Acids Omega-3/Omega-6

Omega-3 is the name given to a family of polyunsaturated fatty acids, which the body needs but cannot manufacture itself. Omega-3 fats are used as the building blocks for fat derived hormones such as prostaglandins and leukotrienes. The hormones with an Omega-3 base tend to reduce inflammation, while those that have an Omega-6 base increase inflammation. In the cell membrane the competition between these two essential fats has a direct bearing on the type of local hormone produced and the level of inflammation in the cell.

The Omega-6 to Omega-3 ratio in the cell membranes is key to the development of inflammatory disorders such as rheumatoid arthritis and heart disease. Diets low in oily fish and high in grains will promote inflammation and affect good health. The ratio of Omega-6 to Omega-3 in the West is around 15 to 1, fifteen times more Omega-6 on the cell membrane promoting inflammation. Having twice as much Omega-6 is considered by most experts to be the optimal amount but a ratio of 2:1 is not easy to produce by diet alone. Many people are aware of the health benefits of Omega-3 but the supplementation to achieve optimal health is erratic. Being able to test for Essential Red Cell Fatty Acids (Omega-6/Omega-3 ratio) identifies a person's current status and is sufficiently specific to allow an accurate supplementation recommendation to be made.

Results show the Omega Ratio with a clear recommendation for the required level of Omega Supplementation (if any) to achieve optimal levels.

TEST	CODE	SAMPLE REQS	TAT
Omega 3/Omega 6	OMG3	A [4]	4 days
Omega 3/Omega 6 (Self-collect) See page 131 for more information	OMG3	A (TDL Tiny)	4 days

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Self-collection samples

The self-collection of pathology samples is growing to become an important part of our diagnostic services. Self-collection is utilised extensively across areas such as sexual health screening, wellness services, hospital pre-operative screening, and we have seen the extensive use of self-collection of respiratory sampling for the COVID-19 pandemic.

In each scenario, sample self-collection has enabled patients to collect samples at home, at a convenient time. The Royal Mail Tracked postal return systems across the UK have developed to facilitate fast and effective delivery of samples to the laboratory.

As part of the ongoing development of the TDL self-collection service the kit manufacture of the TDL Tiny™ and TDL Self-Collect range ensure that TDL is aligned to the developing regulatory requirements around ISO:13485 kit manufacture and UKCA and CE marking across the UK and EU.

This process has given TDL the opportunity to refine and improve the TDL self-collection kit range and we are pleased to provide details of the kits which are now available and pathology services they support.

All TDL Self-Collect samples are returned to accredited TDL laboratories who undertake the required testing.

TDL kits are manufactured using high quality components and assembled within the UK, specifically using a quality system for medical device manufacture (ISO13485:2016).

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Self-collection samples

The TDL Tiny™ capillary blood and TDL Self-Collect sample kits cover a wide range of diagnostic and screening tests. These sample collection kits are not at-home test kits. TDL kits facilitate samples to be collected at home and returned to the laboratory for testing using Royal Mail Tracked 24 postal service. Results are returned directly to the healthcare organisation, doctor or managing healthcare professional, not to the patient.

TDL Tiny™ blood samples can be combined with other TDL Self-Collect sample types (urine, stool and swabs). Tests with available UKCA marked kits are listed on pages 134-137 and this range will be updated on a regular basis.

Different tests require varying amounts of sample volume, or special handling, which means that although certain tests can be carried out from capillary tubes, many tests simply cannot be achieved from these smaller sample volumes. Additionally, out of range, abnormal or positive test results should be confirmed with a confirmatory venous sample.

The TDL Tiny™ capillary blood collection kits are designed to collect samples from skin puncture using lancets. Sample type colour coded microtainers show the 600 microlitres upper fill line. Upon receipt in the laboratory these samples are centrifuged and provide a volume of c.250 – 300 microlitres of serum/plasma (depending on the tube type used).

Instructions for sample collection are enclosed in each collection kit. The most successful outcomes are collected by patients who give best attention to the instructions provided, and who collect blood drops sufficient to fill the microtainer tube(s) in their kit.

A completed request form, or specially provided tube labels must be returned with the collected sample. Results will always be sent to the requesting healthcare organisation, doctor or managing healthcare professional.

If you are new to this service, please email **UKCAkits@tdlpathology.com**

Your TDL account manager will discuss the service with you, and provide you with an order form that incudes your Source Code.

For repeat bulk orders, please email a completed order form (ensuring that the form includes your Source Code) to **supplies@tdlpathology.com**.

Quality is key

- **Components**: verified for the specific intended use of the kit and linked to the accredited tests performed in the laboratory.
- **Instructions**: monitored for ease of use, version controlled, with regular feedback for ongoing improvement.
- **Quality**: Management of technical files, regulatory submissions and manufactured to the required ISO:13485 medical device manufacturing standards.
- **Supply**: Assembled within the UK. Both individual kit fulfilment services and larger size kit orders are available.
- **Security**: Test kits are security sealed.
- **Accompanying information**: Request forms cannot be inserted into the sealed kits. An accompanying envelope (TDL will provide) or other clearly visible method must be sent with each kit to clearly display the request form.
- **Laboratory testing**: Verified diagnostic tests performed in an ISO:15189 accredited clinical laboratory

We recommend that all healthcare organisations and healthcare professionals using our TDL Tiny™ and TDL Self-Collect kits are up to date with latest diagnostic testing guidelines and relevant updates, including but not limited to those published by:

- UKHSA Standards for Microbiology Investigations (SMI)
- British Association of Sexual Health and HIV Guidelines (BASHH)
- Royal College of Obstetrics and Gynaecology Guidelines (RCOG)
- NICE Evidence-based recommendations on faecal immunochemical tests (DG30)
- British Society of Haematology Evidence Based Guidance (BSH)
- Association of Clinical Biochemistry (ACB)

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TDL's range of kits

Respiratory virus PCR

KIT CODE	KIT TYPE	SAMPLE TYPE
KT293	Respiratory Virus Swab Collection Kit (2mL)	Oropharyngeal and Nasal swab

Capillary blood

KIT CODE	KIT TYPE	SAMPLE TYPE
KT353	Capillary Blood Collection Kit (SST)	Capillary Blood (SST)
KT384	Capillary Blood Collection Kit (SST x2)	Capillary Blood (SST x2)
KT354	Capillary Blood Collection Kit (EDTA)	Capillary Blood (EDTA)
KT355	Capillary Blood Collection Kit (SST and EDTA)	Capillary Blood (SST and EDTA)
KT423	Capillary Blood Collection Kit (SST x2 and EDTA)	Capillary Blood (SST x2 and EDTA)

Sexual health

KIT CODE	KIT TYPE	SAMPLE TYPE
KT356	Sexual Health Collection Kit (Urine)	Aptima Urine
KT357	Sexual Health Collection Kit (Vaginal)	Aptima multisite swab
KT358	Sexual Health Collection Kit (Blood and Vaginal)	Capillary Blood and Aptima multisite swab
KT359	Sexual Health Collection Kit (Throat and Rectal)	Aptima multisite swab x2
KT360	Sexual Health Collection Kit (Blood and Urine)	Capillary Blood and Aptima Urine
KT361	Sexual Health Collection Kit (Blood, Urine, Throat and Rectal – MSM)	Capillary Blood, Aptima Urine and Aptima multisite swab x2
KT424	Sexual Health Collection Kit (Blood, Vaginal, Throat and Rectal)	Capillary Blood and Aptima multisite swab x3
KT404	Sexual Health Collection Kit (Oral lesion)	Oral swab
KT405	Sexual Health Collection Kit (Genital lesion)	Genital swab
KT421	Sexual Health Collection Kit (Urine, Throat and Rectal – MSM)	Aptima Urine and multisite swab x2
KT425	Sexual Health Collection Kit (Throat)	Aptima multisite swab
KT426	Sexual Health Collection Kit (Rectal)	Aptima multisite swab
KT428	Sexual Health Collection Kit (Vaginal, Throat and Rectal)	Aptima multisite swab x3
KT429	Sexual Health Collection Kit (Blood, Urine, Vaginal, Throat and Rectal)	Capillary Blood, Aptima Urine and Aptima multisite swab x3

Microbial/Viral screening

KIT CODE	KIT TYPE	SAMPLE TYPE
KT364	HPV Swab Collection Kit	Qvintip swab
KT365	MRSA Collection Kit (Nose and Groin)	Purple liquid Amies swab x2
KT422	MRSA Collection Kit (Nose, Groin and Axilla)	Purple liquid Amies swab x3
KT366	GBS Collection Kit (Vaginal and Rectal)	Blue gel Amies swab x2
KT385	Urinalysis Collection Kit (Chemistry and microscopy)	Urine (Universal)

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Self-collection samples

Gastrointestinal

KIT CODE	KIT TYPE	SAMPLE TYPE
KT362	**QFIT Collection Kit**	QFIT faecal collection tube
KT363	**Faecal Collection Kit (Universal)**	Universal faecal container
KT430	**Faecal Collection Kit (QFIT and Universal x2)**	QFIT faecal collection tube and universal faecal container x2

TDL test repertoire by specialty

Please post self-collected samples on the same day they are taken, avoid posting over weekends and bank holidays.

Allergy

TEST	CODE	SAMPLE TYPE	TAT
ALEX² Allergy Test (Self-collect) NEW	ALEX	B (TDL Tiny)	3-4 days
Allergy – Individual Allergens (Self-collect)	ALLE	B (TDL Tiny)	2 days
ISAC Panel (Self-collect) Simultaneous measurement in a single test of specific antibodies to more than one hundred allergen components from more than 48 preselected allergen sources.	ISAC	B (TDL Tiny)	3 days

Biochemistry

TEST	CODE	SAMPLE TYPE	TAT
Amylase (Self-collect)	AMY	B (TDL Tiny)	1 day
Antimullerian Hormone (AMH Plus) (Self-collect) Samples can be taken, at any time during a patient's monthly cycle. Ambient, unspun sample stability has been validated for up to 5 days.	AMH	B (TDL Tiny)	1 day
C Reactive Protein (Self-collect)	CRP	B (TDL Tiny)	1 day
C Reactive Protein (High Sensitivity) (Self-collect)	HCRP	B (TDL Tiny)	1 day
Calcium (Self-collect) Sample integrity may be compromised on received samples older than 48 hours.	CA	B (TDL Tiny)	1 day
Calcium + Vitamin D (Self-collect) Sample integrity may be compromised on received samples older than 48 hours.	CALD	B (TDL Tiny)	1 day
Elastase, Faecal (Self-collect)	ELAS	Universal faecal container	5 days
Ferritin (Self-collect) Sample integrity may be compromised on received samples older than 48 hours.	FERR	B (TDL Tiny)	1 day
HbA1c (Self-collect)	GHB	A (TDL Tiny)	1 day
Iron (TIBC included) (Self-collect)	FE	B (TDL Tiny)	1 day
Iron Status Profile (Self-collect) Sample integrity may be compromised on received samples older than 48 hours.	ISP	B (TDL Tiny)	1 day
Lipase (Self-collect)	LIPA	B (TDL Tiny)	1 day
Lipid Profile (Self-collect)	LIPP	B (TDL Tiny)	1 day
Lipoprotein (a) (Self-collect)	LPOA	B (TDL Tiny)	1 day

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TEST	CODE	SAMPLE TYPE	TAT
Liver Function Tests (Self-collect) Sample integrity may be compromised on received samples older than 48 hours.	LFT	B (TDL Tiny)	1 day
Uric Acid (Serum) (Self-collect)	UA	B (TDL Tiny)	1 day
Vitamin B12 (Active) (Self-collect)	B12	B (TDL Tiny)	1 day
Vitamin D (25-OH) (Self-collect)	VITD	B (TDL Tiny)	1 day

Endocrinology

TEST	CODE	SAMPLE TYPE	TAT
Antimullerian Hormone (AMH Plus) (Self-collect) Samples can be taken, at any time during a patient's monthly cycle. Ambient, unspun sample stability has been validated for up to 5 days.	AMH	B (TDL Tiny)	1 day
Cortisol (Self-collect)	CORT	B (TDL Tiny)	1 day (from time of receipt in the laboratory)
DHEA Sulphate (Self-collect)	DHEA	B (TDL Tiny)	1 day
Female Hormone Profile (Self-collect)	FIP	B (TDL Tiny)	1 day
Free T3 (Self-collect)	FT3	B (TDL Tiny)	1 day
Free T4 (Self-collect)	FT4	B (TDL Tiny)	1 day
FSH (Self-collect)	FSH	B (TDL Tiny)	1 day
Luteinising Hormone (Self-collect)	LH	B (TDL Tiny)	1 day
Oestradiol (E2) (Self-collect) Sample integrity may be compromised on received samples older than 48 hours.	OEST	B (TDL Tiny)	1 day
Progesterone (Self-collect)	PROG	B (TDL Tiny)	1 day
Prolactin (Self-collect)	PROL	B (TDL Tiny)	1 day
Sex Hormone Binding Globulin (Self-collect)	SHBG	B (TDL Tiny)	1 day
Testosterone (Self-collect)	TEST	B (TDL Tiny)	1 day
Thyroid Profile 1 (Self-collect)	TF	B (TDL Tiny)	1 day
Thyroid Profile 3 (Self-collect)	TF3	B (TDL Tiny)	1 day
Thyroxine (T4) (Self-collect)	T4	B (TDL Tiny)	1 day
TSH (Self-collect)	TSH	B (TDL Tiny)	1 day

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Self-collection samples

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Immunology

TEST	CODE	SAMPLE TYPE	TAT
Calprotectin, Faecal (Self-collect)	CALP	Universal faecal container	5 days
COVID-19 (SARS-CoV-2) Roche Elecsys Anti-SARS-CoV-2 S (SPIKE) (Self-collect) Aid in identifying an immune response to either SPIKE antigen and/or prior infection from SARS-Cov-2.	SCOV	B (TDL Tiny)	24 hours
Endomysial Antibodies (IgA) (Self-collect)	AEAB	B (TDL Tiny)	2 days
Gastrointestinal Pathogen PCR (Self-collect)	EORD	Universal faecal container	2 days
Gliadin Antibodies (IgG) (deamidated) (Self-collect)	AGAB	B (TDL Tiny)	2 days
Syphilis IgG/IgM (Self-collect)	TSYP	B (TDL Tiny)	1 day
Tissue Transglutaminase IgA (Coeliac) (Self-collect) See page 75	TAA	B (TDL Tiny)	2 days

Microbiology

TEST	CODE	SAMPLE TYPE	TAT
Group B Strep (Self-collect) – Vaginal and Rectal	GBSX	Blue gel Amies swab x2	3-5 days
H. pylori Antigen – Stool (Self-collect)	HBAG	Universal faecal container	3 days
MRSA Culture (Self-collect) – Nose/Groin	MRW2	Purple liquid Amies swab x2	2 days
MRSA Culture (Self-collect) – Nose/Groin/Axilla	MRW3	Purple liquid Amies swab x3	2 days
MRSA PCR (Self-collect) – Nose/Groin	MRS2	Purple liquid Amies swab x2	1 day
MRSA PCR (Self-collect) – Nose/Groin/Axilla	MRS3	Purple liquid Amies swab x3	1 day
Quantitative Faecal Immunochemical Test (QFIT) (Self-collect)	QFIT	**QFIT** faecal collection tube	1 day
Urine Chemistry and Microscopy (Self-collect)	UMIC	Urine (Universal). Mid stream	1-2 days
Urine Chemistry, Microscopy and Culture (Self-collect)	UCEM	Urine (Universal). Mid stream	1-2 days

Sexual Health

TEST	CODE	SAMPLE TYPE	TAT
7 STI Profile by PCR (7 tests from 1 Sample) (Self-collect)	PP12	Aptima urine or multisite swab	2 days
Chlamydia/Gonorrhoea – Urine (Self-collect)	CCG	Aptima urine	2 days
Chlamydia/Gonorrhoea – Rectal (Self-collect)	RSCG	Aptima multisite swab	2 days
Chlamydia/Gonorrhoea – Throat (Self-collect)	TSCG	Aptima multisite swab	2 days
Chlamydia/Gonorrhoea – Vaginal (Self-collect)	SCG	Aptima multisite swab	2 days
Hepatitis B Surface Antigen (Self-collect)	THBA	B (TDL Tiny)	1 day
Herpes Simplex (HSV) 1 & 2 – Genital lesion (Self-collect)	HERS	Aptima multisite swab	5 days
Herpes Simplex (HSV) 1 & 2 – Oral lesion (Self-collect)	HERS	Aptima multisite swab	5 days
HPV Individually Typed High Risk DNA Subtypes (Self-collect)	HPVZ	Qvintip vaginal swab	3 days
HPV mRNA (All High Risk Subtypes) (Self-collect)	HPVY	Qvintip vaginal swab	3 days

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Please post self-collected samples on the same day they are taken, avoid posting over weekends and bank holidays.

TEST	CODE	SAMPLE TYPE	TAT
HIV 1 & 2 Abs/p24Ag (Self-collect)	THIV	B (TDL Tiny)	1 day
Lymphogranuloma Venerium (LGV) – Rectal (Self-collect)* * This test can be configured to be automatically reflexed as required.	LGVP	Aptima multisite swab	1-2 weeks
Monkeypox Virus (Lesion) (Self-collect)	MPXV	Aptima multisite swab	2 days
Mycoplasma genitalium Detection – Urine or Vaginal (Self-collect)	MGEN	Aptima urine or multisite swab	2 days
Mycoplasma genitalium Resistance – Urine or Vaginal (Self-collect)* * This test can be configured to be automatically reflexed as required.	MGR	Aptima urine or multisite swab	2 days
STI Profile by PCR (7 tests from 1 Sample) (Self-collect)	PP12	Aptima urine or multisite swab	2 days
Syphilis IgG/IgM (Self-collect)	TSYP	B (TDL Tiny)	1 day
Trichomonas Vaginalis (TV) – Urine or Vaginal (Self-collect)	TVPC	Aptima urine or multisite swab	2 days
Triple Swab Female Profile NEW	3SWA	Aptima multisite swab x 3	2 days

Tumour Markers/Sites

TEST	CODE	SAMPLE TYPE	TAT
CA 125 (Self-collect)	C125	B (TDL Tiny)	1 day
Prostate Specific Antigen (Total) (Self-collect)	PSPA	B (TDL Tiny)	1 day

Virology

TEST	CODE	SAMPLE TYPE	TAT
COVID-19 (SARS-CoV-2) RNA by PCR (Self-collect)	NCOV	Throat and nose swab	48 hours
Hepatitis B Immunity (IgG) (Self-collect)	THBI	B (TDL Tiny)	1 Day
Hepatitis B Surface Antigen (Self-collect)	THBA	B (TDL Tiny)	1 day
Hepatitis C Antibodies (Self-collect)	THCV	B (TDL Tiny)	1 Day
Herpes Simplex (HSV) 1 & 2 – Genital lesion (Self-collect)	HERS	Aptima multisite swab	5 days
Herpes Simplex (HSV) 1 & 2 – Oral lesion (Self-collect)	HERS	Aptima multisite swab	5 days
Respiratory PCR Panel (COVID-19, Flu A/B and RSV) (Self-collect)	FLU4	Throat and nose swab	2 days

Vitamins, Nutrition and Lifestyle

TEST	CODE	SAMPLE TYPE	TAT
Omega 3/Omega 6 (Self-collect)	OMG3	A (TDL Tiny)	4 days
Vitamin B9 (Folic acid) – Serum (Self-collect) Sample integrity may be compromised on received samples older than 48 hours.	FOLA	B (TDL Tiny)	1 day
Vitamin B12 (Active) (Self-collect)	B12	B (TDL Tiny)	1 day
Vitamin D (25-OH) (Self-collect)	VITD	B (TDL Tiny)	1 day

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Screening for Drugs of Abuse/Alcohol

TEST	CODE	SAMPLE REQS	TAT
Alcohol Profile	AP	A B B G	5-7 days
Alcohol Profile 2	ALCP	A A B B G **RU**	5-7 days
Amphetamines – Blood	AMPB	B B	5 days
Cannabinoids (Urine) Screen	CANN	**RU**	1 day
Cocaine (Urine) Screen	UCOC	**RU**	1 day
Drugs of Abuse from Blood without Chain of Custody	DOAP	B	5 days
Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody	DOA	**RU**	2 days (5 days with LC-MS/MS confirmation)
Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody Plus Alcohol	DOA3	**RU**	2 days (5 days with LC-MS/MS confirmation)
Drugs of Abuse Profile – With Chain of Custody*	DOAL	**RU/CoC Collection Containers** [1,2]	2 days (5 days with LC-MS/MS confirmation)
Drugs of Abuse Profile – Without Chain of Custody	DOAN	**RU** [2]	2 days (5 days with LC-MS/MS confirmation)
Ketamine Screen	KETA	**RU**	7-10 days
LSD	LSD	**RU**	5 days
Opiate Screen (Urine)	UOPI	**RU**	2 days
PEth (Phosphatidylethanol)	PETH	A [38]	5-7 days
Urine EtG (Ethyl glucuronide)	ETG	**RU**	1 week

Chain of custody

Chain of custody refers to the system of controls governing the entire urine collection, processing and storage of sample to ensure that a particular urine specimen originated from a particular individual and that the reported results relate, beyond doubt, to that specimen. Chain of custody requires attention to detail so that it is possible to prove that there has been no opportunity for the sample to be accidentally or maliciously adulterated. Sample collection should be undertaken by collectors who are well versed in the protocols of chain of custody.

Samples submitted for analysis will undergo initial screening. Urinary creatinine is routinely measured during testing to verify the validity of the sample submitted. Creatinine levels below normal occur when the urine has been diluted, either directly or by drinking large amounts of water before providing the urine sample. Chain of custody containers, forms, seals and barcodes are provided by TDL on request. All Chain of Custody, and non-chain, samples with positive findings will proceed to identification/confirmation by Gas Chromotography/Mass Spectrometry.

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Alcohol Profile

LFT
Alcohol Level
PEth
CDT
MCV

TAT: 5-7 days

AP

A B B G

Alcohol Profile 2

LFT
Alcohol Level
PEth
CDT
MCV
Urine Ethyl Gluconaride (EtG)

TAT: 5-7 days

ALCP

A A B B G **RU**

Drugs of Abuse from Blood without Chain of Custody

Amphetamines
Barbiturates
Tricyclic Antidepressants
Benzodiazepine
Cannabinoids
Opiates
Cocaine

TAT: 5 days

DOAP

B

Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody

Amphetamines
Barbiturates
Benzodiazepine
Cannabinoids
Cocaine
Codeine – opiate
Dihydrocodeine – opiate
MDMA
Methadone
Morphine – opiate

TAT: 2 days
(5 days with LC-MS/MS confirmation)

DOA

RU

Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody Plus Alcohol

Alcohol
Amphetamines
Barbiturates
Benzodiazepine
Cannabinoids
Cocaine
Codeine – opiate
Dihydrocodeine – opiate
MDMA
Methadone
Morphine – opiate

TAT: 2 days
(5 days with LC-MS/MS confirmation)

DOA3

RU

Drugs of Abuse Profile – With Chain of Custody*

Alcohol
Amphetamines
Barbiturates
Benzodiazepine
Cannabinoids
Cocaine
Codeine – opiate
Dihydrocodeine – opiate
Ketamine
LSD
MDMA
Methadone
Methaqualone
Morphine – opiate
Phencyclidine
Propoxyphene

*Appointment required at Patient Reception and Photo ID to be shown

TAT: 2 days
(5 days with LC-MS/MS confirmation)

DOAL

RU/CoC Collection Containers [1,2]

Drugs of Abuse Profile – Without Chain of Custody

Alcohol
Amphetamines
Barbiturates
Benzodiazepine
Cannabinoids
Cocaine
Codeine – opiate
Dihydrocodeine – opiate
Ketamine
LSD
MDMA
Methadone
Methaqualone
Morphine – opiate
Phencyclidine
Propoxyphene

TAT: 2 days
(5 days with LC-MS/MS confirmation)

DOAN

RU [2]

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Occupational health

Trace metals in blood

TEST	CODE	SAMPLE REQS	TAT
Aluminium (Blood)	ALUM	K	7 days
Arsenic (Blood)	ARS	A or H	5 days
Cadmium (Blood)	CADM	A or H	5 days
Chromium (Blood)	CHRO	A	5 days
Cobalt (Serum)	COBB	B	5 days
Copper (Serum)	COPP	B	5 days
Lead (Blood)	LEAD	A	5 days
Lead Profile (Hb, ZPP, Lead)	LEAZ	A [13]	3-5 days
Magnesium (Serum)	MG	B	4 hours
Manganese (Serum)	MANG	B	5 days
Mercury (Blood)	MERC	A or H	5 days
Nickel (Serum)	NICK	B	5 days
Silver (Blood)	SILV	B	5 days
Trace Metal (Blood) Profile	TRAC	A B H K	7-10 days
Zinc (Serum/Plasma)	ZINC	K	1 day

Trace metals in urine

TEST	CODE	SAMPLE REQS	TAT
Aluminium (Urine)	ALUU	**RU**	1-2 weeks
Arsenic (Urine)	ARSE	**RU** [30]	5 days
Cadmium (Urine)	URCD	**RU** [30]	5 days
Chromium (Urine)	URCR	**RU** [30]	10 days
Cobalt (Urine)	COBA	**RU** [30]	5 days
Copper (Urine)	URCU	**CU**	5 days
Lead (Urine)	URPB	**RU**	5 days
Magnesium (Urine)	URMG	**PU**	1 day
Mercury (Urine)	URHG	**RU** [1]	5 days
Nickel (Urine)	NICU	**RU**	10 days
Silver (Urine)	USIL	**RU**	5 days
Zinc (Urine)	URZN	**CU**	5 days

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Tests for specific exposure

TEST	CODE	SAMPLE REQS	TAT
2-Butanone GC	BUTA	RU	7 days
2-Furoic Acid	2FA	RU	10 days
Acetone – Blood	ACTB	A or H	2 weeks
Acetone – Urine	ACTU	RU	5 days
Alcohol Profile	AP	A B B G	5-7 days
Alcohol Profile 2	ALCP	A A B B G RU	5-7 days
Benzene	BENZ	J [1,6]	3 days
Beta 2 Microglobulin (Serum)	B2MG	B	2 days
Beta 2 Microglobulin (Urine)	UB2M	RU	3 days
Bromide	BROM	B	3 days
Cholinesterase (Serum/Pseudo)	CHPS	B	4 hours
Doxepin Level (Sinequan)	DOXE	A	10 days
MBOCA in Urine	MBOC	RU	10 days
Molybdenum (Serum)	MOLY	B	5 days
Pethidine – Urine	UPET	RU	4 weeks
Thallium (Blood)	THAL	A / H	1 week
Thallium (Urine)	URTH	RU	1 week
Toluene (Blood)	TOL	J	10 days
Toluene (Urine)	UTOL	RU	10 days
Trichloracetic Acid (Urine)	UTCA	RU	5 days
Xanthine – Blood	XANB	A	2 weeks
Xylene – Urine	UXYL	RU [30]	2 weeks
Zinc Protoporphyrin	ZNPR	A [13]	5 days

Alcohol Profile

LFT
Alcohol Level
PEth
CDT
MCV

TAT: 5-7 days

AP

A B B G

Alcohol Profile 2

LFT
Alcohol Level
PEth
CDT
MCV
Urine Ethyl Gluconaride (EtG)

TAT: 5-7 days

ALCP

A A B B G RU

Trace Metal (Blood) Profile

Aluminium, Manganese, Iron, Calcium, Zinc, Magnesium, Copper, Cadmium, Mercury, Lead, Chromium

TAT: 7-10 days

TRAC

A B H K

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Cervical screening

The Cervical Cytology laboratory provides a rapid service for liquid based cervical samples. Urine cytology is performed in house while other non-gynaecological cytology samples are referred to a UKAS accredited laboratory for reporting.

Human papilloma virus (HPV), Chlamydia and Gonorrhoea testing is carried out routinely from ThinPrep vials and can be requested at the time the cervical sample is taken.

Laboratory hours

The laboratory department is open 9.00am to 6.00pm. Out-of-hours results are available on 020 7307 7373.

Urgent samples

It is helpful if requests for urgent samples can be discussed with the Senior Management Team. Please telephone 020 7307 7323 ext 4761.

Use of service/Information required

Request forms must include 3 identifiers (this can be patient's full name = 1, date of birth, hospital number or reference number). Samples will not be processed without a request form. TDL Request Forms do not include the information required for NHS requests for cervical cytology and should not be used for NHS requests.

Appropriate clinical information providing previous treatment/histological diagnosis is essential to ensure correct management recommendations can be given in the patient report. Tick boxes are provided to assist you.

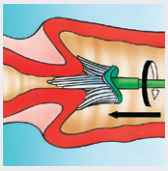
The specimen container must be clearly labelled with patient details. Forms and samples which are mismatched will result in the sample being returned to the sender for correction and will delay the report turn around time.

Clinical advice

The Consultant Cytopathologists and the Advanced Practitioner work together to provide clinical and technical advice, including recommendations for follow-up, HPV testing and management of complex cases. TDL will provide recommendation for patient management, but not undertake to provide a direct referral. No result will be entered onto the NHS CSP database and will therefore not be part of an individual's NHS screening record. Failsafe and management of the patient and their follow up, including referral for colposcopy where indicated, would need to be arranged by their referring clinician. To contact the department directly, please 020 7307 7323.

RECORD...

...the patient's 3 identifiers to include date of birth on the vial, and the patient information and medical history on the cytology requisition form. TDL Request Forms do not include the information required for NHS requests and should not be used for NHS requests.



OBTAIN...

...an adequate sample from the cervix using a Cervex Brush (broom-like device). Insert the central bristles of the brush into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the brush in a clockwise direction five times.

RINSE...

...the Cervex Brush immediately into the PreservCyt Solution vial by pushing it into the bottom of the vial 10 times, forcing the bristles apart. As a final step, swirl the brush vigorously to further release material. Visually inspect the Cervex Brush to ensure that no material remains attached. Discard the brush.

Do not leave the head of the Cervex Brush in the vial. Check the vial is in date before use.

TIGHTEN...

...the cap so that the black torque line on the cap passes the black torque line on the vial. Do not over-tighten.

PLACE...

...the vial and request form in a specimen bag for transportation to TDL.

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

ThinPrep® PAP Test Cervex Brush Protocol

Prepare all equipment before starting the procedure

- Note expiry date on sample collection vial. Do not use expired vials.
- Ensure the entire plastic seal is removed from the lid of the vial and discarded.
- Complete patient details on both the request form and the vial. Specimens may be returned or discarded if details are missing from the vial.
- Remove the lid from the vial before taking the sample.
- Use of lubricant is not recommended.

DO

- If excessive mucus is present, this should be gently removed before sampling.
- Use either the Cervex Brush (broom-like device) on its own or a Plastic spatula and endocervical brush combination.
- The Cervex Brush should be rotated 5 times in a clockwise direction. The Plastic spatula should be rotated through 360 degrees and the endocervical brush rotated through one quarter to one half turn.
- Immediately rinse the collected material into the vial.
- Replace the lid and tighten so that the black torque line on the cap passes the black torque line on the vial to avoid leakage.
- Keep the unlabelled portion of the sample vial free of labels so that the contents can be seen.
- If barcoded labels are used these must be applied horizontally around the vial.
- Samples should be sent to the laboratory without delay.

DON'T

- DO NOT leave the head of the Cervex Brush in the vial.
- DO NOT routinely clean the cervix or take a cervical swab before taking a cervical sample.
- An endocervical brush should never be used in isolation.
- DO NOT under any circumstances use a wooden spatula.
- DO NOT leave the collection device sitting in the vial whilst dealing with the patient.
- DO NOT over-tighten the lid on the vial.
- DO NOT place multiple labels on the outside of the vial.
- DO NOT apply barcoded labels vertically on the vial.
- DO NOT use expired vials.
- DO NOT delay the sending of vials to the laboratory. The sample needs to be processed within 3 weeks of collection.
- DO NOT use excessive lubricant – please avoid if possible.

Gynaecological Samples

The Cytology department processes cervical samples directly referred from all sectors of practice – Health Screening, Occupational Health, GP's, Consultants, Colposcopy Units, Clinics, Hospitals and other Laboratories.

Liquid Based Cytology (LBC) is processed using the Hologic ThinPrep system. The Doctors Laboratory uses the Hologic Imaging system as an enhanced Quality Control.

Information for Sample Takers is available by contacting the department. Important: the head of the cervical broom must NOT be left in the vial. The use of lubricant interferes with LBC sampling and may result in an inadequate sample. Use of lubricant is NOT recommended as it can affect the processing quality of the sample. Supplies of Thin prep vials are available from TDL.

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STI Screening from Hologic Thin Prep Vial

Tests are priced individually. Please request tests individually. Thin Prep Vials are kept for 21 days after receipt of sample. Requests for additional tests from the vial already received in the laboratory can be made by contacting the Cytology Department.

Infection by PCR (single tests)

TEST	CODE	SAMPLE REQS	TAT
Chlamydia	TPCR	**TPV**	2 days
Chlamydia/Gonorrhoea	TCG	**TPV**	5 days
Chlamydia/Gonorrhoea/Trichomonas	TCGT	**TPV**	2 days
Gardnerella vaginalis	GVPC	**TPV**	2 days
Gonorrhoea	TGON	**TPV**	2 days
Herpes Simplex I/II	HERD	**TPV**	5 days
Mycoplasma genitalium	MGEN	**TPV**	2 days
Mycoplasma genitalium/Ureaplasma	MUPC	**TPV**	2 days
Trichomonas vaginalis	TVPC	**TPV**	2 days
Ureaplasma urealyticum	UGEN	**TPV**	2 days

Multiple tests from a single sample

TEST	CODE	SAMPLE REQS	TAT
7 STI Profile by PCR (7 tests from 1 Sample) Chlamydia trachomatis, Neisseria gonorrhoea, Mycoplasma genitalium, Ureaplasma species, Trichomonas vaginalis, Gardnerella vaginalis, Herpes Simplex I/II	PP12	**TPV**	2 days

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

Human papillomavirus (HPV)

Human papillomavirus (HPV) is a common virus transmitted through sexual contact. High Risk sub-types of HPV (HR-HPV) are linked to the development of abnormal cells and can cause cervical cancer. HPV is a necessary cause of invasive cervical cancer. Evidence shows HPV testing is a more effective way to identify women at risk of cervical cancer than by screening microscopically for abnormal cells from a PAP test.

HR-HPV testing has been used in the UK since 2011 to identify women with low grade cytology abnormalities and as a follow up test of cure in women who have received treatment. In 2017 the UK NHSCSP recommended that **testing for HPV should replace cytology as the first (primary test) in cervical screening**. Primary HR-HPV testing has higher sensitivity for high grade CIN than primary cytology. HR-HPV testing also has a lower false negative rate than cytology. Primary HR-HPV testing was fully implemented in the UK during 2020. Sample-taking remains unchanged: HR-HPV testing is carried out from Thin Prep samples. Cytology will be undertaken as a triage if HPV is DETECTED.

What does this change mean?

It means that HPV testing is the **FIRST LINE TEST**. It will be carried out as a single test, with a single result reported as Detected/Not Detected.

- If HR-HPV is NEGATIVE (Not Detected) – this means no further testing is needed for your patient: she returns to Routine Recall
- If HR-HPV is POSITIVE (Detected) – this means that **CYTOLOGY** will be processed from the same Thin Prep Vial. **A further specimen is not required**.
- **If the result from the sample is HR-HPV NOT DETECTED** – the patient Recall will be determined by the screening history and will either be a repeat HR-HPV test in 12 months' time or, if HR-HPV remains persistent, a referral to colposcopy will be recommended.
- **If the CYTOLOGY result from the sample is ABNORMAL** the recommendation is to refer this patient for COLPOSCOPY.

https://www.gov.uk/government/publications/cervical-screening-primary-hpv-screening-implementation/cervical-screening-implementation-guide-for-primary-hpv-screening

All TDL requests for HPV have been processed as follows:

- If HPV is requested as a single test and the result is Negative/Not Detected, cervical cytology (PAPT) would only be processed if specifically requested. Should HPV and PAPT be undertaken, there would be a charge for both the HPV and the PAPT.
- If the HPV result is HR-HPV Detected, cervical cytology (PAPT) will be processed, even if the PAPT has not been requested. The PAPT will not be charged.

Understanding the significance of HPV testing

The benefit of a negative HPV result is its negative predictive value – meaning that a negative HPV result indicates that a patient is at very low risk of developing cervical disease. However, neither HPV testing nor negative cervical cytology are able to reduce the risk to zero. The negative predictive value of both DNA and mRNA testing is the same. DNA tests detect presence of virus only. A mRNA test detects the presence of viral oncogenic expression.

Turnaround times are from receipt of sample in the Cervical Cytology laboratory.

Cervical screening

Requests for Cervical Cytology (PAPT) only will no longer be processed without HPV. HPV testing will be charged.

Requests for PAPT

TEST	CODE	SAMPLE REQS	TAT
Cervical Cytology	PAPT will include HPVH	**TPV**	6 days (combined report)

If PAPT is requested as a single test, HR-HPV will be undertaken additionally, and a combined report will be issued. PAPT and HPVH will be charged.

Requests for PAPT with selected HPV (HPVH or HP20 or HPVT)

TEST	CODE	SAMPLE REQS	TAT
PAPT and HPVH	PAPT + HPVH	**TPV**	6 days (combined report)

If PAPT and HPVH are requested together, results will be given as a combined report, **PAPT and selected HPVH test will be charged**.

Requests for HPV as the PRIMARY TEST will reflex to PAPT if HR-HPV is Detected/Positive. PAPT will NOT be charged.

TEST	CODE	SAMPLE REQS	TAT
HPV mRNA (All High Risk Subtypes)	HPVH	**TPV**	3 days

If HR-HPV is DETECTED/POSITIVE, cervical cytology (PAPT) will be processed without charge. The PAPT will be processed from the same vial.

Requests for HP20 as a single test

TEST	CODE	SAMPLE REQS	TAT
HPV (Individual low & high risk DNA subtypes)	HP20	**TPV/PCR Swab**	3 days

HPV low and high risk DNA subtypes will be reported individually (9 low and 19 high risk). If High Risk DNA subtypes are positive then cervical cytology (PAPT) using the same vial will be processed **without charge**.

Requests for HPVT as a single test

TEST	CODE	SAMPLE REQS	TAT
HPV (DNA and reflexed mRNA)	HPVT	**TPV**	5 days

If one or more of DNA types 16, 18, 31, 33, 45 are DETECTED/POSITIVE, reflex testing for expression of E6/E7 oncoproteins will be undertaken and cervical cytology (PAPT) will be processed **without charge**. The PAPT will be processed from the same vial.

HPV/PAPT Combined Report

Where HPV result is reported with Cervical Cytology, a recommendation for patient management will be given, based on the combined findings.

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Self-collection HPV samples

TDL Self-Collection HPV Test

Human Papillomavirus (HPV) is the primary cause of nearly all cervical cancer. In most cases, the HPV virus is harmless and causes no symptoms. Most women who acquire HPV are able to clear the infection through their own immune systems. Persistent presence of high-risk types of HPV can cause cervical lesions which over time may develop into cancer if untreated. Testing for HPV determines the presence, or absence, of HPV and will determine whether the HPV type present is high risk for CIN and cervical cancer.

The Self-Collection HPV Test provides women with the option to self-collect a vaginal specimen that is then sent to the laboratory for testing. There is well documented high level of concordance between the HPV DNA results from self-collected and clinician-collected specimens.

The Self-Collection HPV Test is validated, using a CE marked sample collection device for vaginal cell collection. This sample is then sent to the laboratory for processing for 19 high risk HPV DNA subtypes. A negative result means that these high-risk subtypes HPV were not detected and the patient is at extremely low risk of developing high-grade cervical disease/CIN2+ before their next routine visit.

A positive HPV result might indicate an increased risk of developing CIN/cervical cancer, and the report from the laboratory will provide a clear recommendation for follow-up/colposcopy.

The value of HPV DNA testing in cervical cancer screening and disease detection has been proven over and over again. Self-collection of specimens for HPV testing is not intended to replace existing patient management pathways but allows for:

- Those who wish to test following a change of sexual partner
- Option for identifying individual high risk DNA subtypes
- Personal preference to self-collect vaginal samples
- An acceptable option for women who avoid having regular cervical smears
- Self-collection for HPV increases acceptability and coverage rate of cervical cancer prevention

Results will always be sent to the requesting clinician, clinic or healthcare organisation.

HPVY

Self-Collected HPV DNA incorporating a collective of high risk subtypes.

HPVZ

Self-Collected HPV DNA with **individual** reporting of all High Risk subtypes (16, 18, 31, 33, 45, 35, 39, 51, 52, 56, 58, 59, 66, 68, 26, 53, 69, 73, 82).

For more information, or to order Self-Collection HPV Test Packs, please contact Annette Wilkinson on 020 7307 7373 or annette.wilkinson@tdlpathology.com

TEST	CODE	SAMPLE REQS	TAT
HPV Individually Typed High Risk DNA Subtypes (Self-collect) See page 131 for more information	HPVZ	Qvintip vaginal swab	3 days
HPV mRNA (All High Risk Subtypes) (Self-collect) See page 131 for more information	HPVY	Qvintip vaginal swab	3 days

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Non-Gynae Cytology

Non-Gynaecological Cytology

Urines

To prevent cell degeneration it is advisable to collect urine samples in a sample pot containing preservative (available from TDL Supplies). Use of preservative will ensure the cellular material is preserved up to 48 hours.

Ideally 10 mls (excluding preservative) from a freshly fully voided urine (when the bladder is emptied) mid-morning sample should be submitted for cytological assessment. If microbiology or chemistry investigations are also required, **please submit separate urine samples** and mark the vials accordingly. A mid-stream urine sample is NOT recommended for cytological assessment is it could lead to a low cellular yield. If a delay of greater than 24 hours in reaching the laboratory is anticipated samples should be refrigerated at 4°C.

Sputum

Sputum should be collected on at least three occasions if underlying lung carcinoma is suspected. A single sputum is sufficient for microbiological assessment. Sputum should be sent to the laboratory immediately following production, or stored in a universal container containing cytolyt cell fixative if there is a likely delay. Please note that this is only acceptable if sputum is only for Cytology. Microbiology cannot be performed on fixed material. Early morning sputum is ideal, but contamination with food, toothpaste and tobacco should be avoided.

Fluids

All available material should be submitted in a sterile container without fixative as quickly as possible. If any delay is anticipated, the material should be submitted in cytolyt fixative.

Cerebrospinal fluid (CSF)

Ideally CSF should be submitted fresh or as an air dried cytospin slide, unstained and in a plastic transport slide box. A minimum of 3mls should be submitted either in fresh form or spun on multiple slides for cytopathologists' review and opinion. Please contact TDL Cytology for advice if required on 020 7307 7323 / 7373.

Tests for Urine/Sputum/Fluid

TEST	CODE	SAMPLE REQS	TAT
Fluid Cytology	CATF	**Fluid** [4]	3 days
Urine Cytology (Urine cytology containers available from TDL Supplies)	URCY	**Urine** (30mls) [21]	2 days

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Histopathology

TDL's Histopathology service supports a full range of pathology sub-specialities.

To prevent tissue degeneration, it is advisable to collect histopathology samples in sample pot(s) containing preservative, usually formalin, to at least ten times the volume of the tissue sample (available from TDL Supplies). Use of preservative will ensure that the tissue architecture and microscopic appearances of specimens are preserved. Patient demographics, together with clinical and sample details need to be provided with the specimens. Testicular investigations for reproductive investigations are best submitted fixed in Bouins solution. Requests for products of conception require the patient's signed consent/instruction regarding sensitive disposal when the histopathology is complete. Please contact 020 7307 7380 or 020 7307 7373 for information or any query relating to histopathology.

CATEGORY	CODE	TISSUE SAMPLE
Breast	**HIS1**	Breast Capsule
Breast	**HIS4**	Breast Reduction (Bilateral)
Breast	**HIS3**	Breast Reduction (Unilateral)
Breast	**HIS2**	Breast Tissue
Breast	**HIS2**	Cavity Shavings
Breast	**HIS1**	Core Biopsy (1 Specimen)
Breast	**HIS2**	Core Biopsy (2 Specimens)
Breast	**HIS3**	Core Biopsy (3 Specimens)
Breast	**HIS4**	Core Biopsy (4 Specimens)
Breast	**HIS3**	Lumpectomy
Breast	**HIS5**	Mastecomy (simple)/Wide Local Excision (WLE)
Breast	**HIS5+HIS4**	Mastectomy + Axillary Clearance
Breast	**HIS4**	Microdochectomy
Breast	**HIS2**	Nipple
Breast	**HIS5**	Sentinal Nodes
Cardiac	**HIS3**	Aorta
Cardiac	**HIS2**	Cardiac Biopsy
Cardiac	**HIS3**	Cardiac Tumour Excision
Cardiac	**HIS2**	Heart Valves
Cardiac	**HIS2**	Mediastinal Tissue
Cardiac	**HIS2**	Pericardium
Cardiac	**HIS2**	Temporal Artery Biopsy
Endocrine	**HIS5**	Adrenal
Endocrine	**HIS4**	Parathyroid
Endocrine	**HIS4**	Thyroid (Lobe)
Endocrine	**HIS5**	Thyroid (Total)
ENT – Biopsy	**HIS2**	Bronchial Biopsy
ENT – Biopsy	**HIS1**	Cholesteatoma
ENT – Biopsy	**HIS1**	Dental Cyst
ENT – Biopsy	**HIS1**	Ear Canal Biopsy
ENT – Biopsy	**HIS1**	Ear Polyp

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Histopathology

CATEGORY	CODE	TISSUE SAMPLE
ENT – Biopsy	**HIS1**	Epiglottis
ENT – Biopsy	**HIS1**	Gingivial Tissue
ENT – Biopsy	**HIS1**	Laryngeal Biopsy
ENT – Biopsy	**HIS2**	Laryngeal Nodule (Bilateral)
ENT – Biopsy	**HIS1**	Laryngeal Nodule (Unilateral)
ENT – Biopsy	**HIS2**	Mandible Biopsy
ENT – Biopsy	**HIS2**	Maxillary Mucosa
ENT – Biopsy	**HIS2**	Mucocele
ENT – Biopsy	**HIS1**	Nasal Biopsy
ENT – Biopsy	**HIS1**	Nasal Polyps
ENT – Biopsy	**HIS1**	Oral Biopsy
ENT – Biopsy	**HIS1**	Palatal Biopsy
ENT – Biopsy	**HIS1**	Pharyngeal Biopsy
ENT – Biopsy	**HIS2**	Pleural Biopsy
ENT – Biopsy	**HIS1**	Thyroid Biopsy
ENT – Biopsy	**HIS1**	Tongue Biopsy
ENT – Biopsy	**HIS1**	Tonsil (1 Specimen)
ENT – Biopsy	**HIS2**	Tonsil Biopsy
ENT – Biopsy	**HIS2**	Tonsils (2 Specimens)
ENT – Biopsy	**HIS2**	Uvelectomy
ENT – Biopsy	**HIS1**	Vocal Chords
ENT – Resections	**HIS5+HIS2**	Glossectomy
ENT – Resections	**HIS5**	Laryngectomy
ENT – Resections	**HIS5+HIS2**	Maxillectomy
ENT – Resections	**HIS5+HIS2**	Neck Dissection
ENT – Resections	**HIS5+HIS5**	Neck Dissection (Bilateral)
ENT – Resections	**HIS4**	Parotidectomy
ENT – Resections	**HIS4**	Partial Thyroidectomy
ENT – Resections	**HIS5+HIS5**	Pharyngectomy
ENT – Resections	**HIS5+HIS2**	Rhinectomy
ENT – Resections	**HIS3**	Submandibular Gland – Excision
ENT – Resections	**HIS2**	Thyroglossal Cyst
GI Endoscopic – Biopsy	**HIS1**	Bile Duct Biopsy
GI Endoscopic – Biopsy	**HIS1**	Colonic Polyp
GI Endoscopic – Biopsy	**HIS1**	Endoscopic Biopsy (1 specimen)
GI Endoscopic – Biopsy	**2H1**	Endoscopic Biopsy (2 specimens)
GI Endoscopic – Biopsy	**3H1**	Endoscopic Biopsy (3 specimens)
GI Endoscopic – Biopsy	**4H1**	Endoscopic Biopsy (4 specimens)
GI Endoscopic – Biopsy	**5H1**	Endoscopic Biopsy (5 specimens)

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CATEGORY	CODE	TISSUE SAMPLE
GI Endoscopic – Biopsy	**6H1**	Endoscopic Biopsy (6 specimens)
GI Endoscopic – Biopsy	**7H1**	Endoscopic Biopsy (7 specimens)
GI Endoscopic – Biopsy	**8H1**	Endoscopic Biopsy (8 specimens)
GI Endoscopic – Biopsy	**9H1**	Endoscopic Biopsy (9 specimens)
GI Endoscopic – Biopsy	**10H1**	Endoscopic Biopsy (10-15 specimens)
GI Endoscopic – Biopsy	**HIS5**	Liver Biopsy – Medical
GI Endoscopic – Biopsy	**HIS3**	Liver Biopsy – Tumour
GI Endoscopic – Biopsy	**HIS3**	Omental Biopsy
GI Endoscopic – Biopsy	**HIS1**	Pancreatic Biopsy
GI Endoscopic – Biopsy	**HIS1**	Perianal Biopsy
GI-Resection – Small	**HIS215**	Anal Fistula
GI-Resection – Small	**HIS2**	Appendix
GI-Resection – Small	**HIS3**	Endo Mucosal Resection (EMR/ESD)
GI-Resection – Small	**HIS2**	Gallbladder
GI-Resection – Small	**HIS2**	Haemorrhoidectomy
GI-Resection – Small	**HIS2**	Hernia Sac
GI-Resection – Small	**HIS3**	Meckel's Diverticulum
GI-Resection – Small	**HIS2**	Mesentery
GI-Resection – Small	**HIS2**	Perianal Biopsy/Warts
GI-Resection – Small	**HIS2**	Pilonidal Sinus
GI-Resection – Small	**HIS2**	Polypectomy
GI-Resection – Small	**HIS2**	Umbilical Lesion
GI Resection – Large	**HIS5**	Biliary Resection
GI Resection – Large	**HIS5+HIS2**	Colon
GI Resection – Large	**HIS5**	Distal Pancreatectomy
GI Resection – Large	**HIS5+HIS2**	Gastrectomy
GI Resection – Large	**HIS5**	Gastric Wedge Resection
GI Resection – Large	**HIS5**	Ileoanal Pouch Resection
GI Resection – Large	**HIS4**	Ileostomy
GI Resection – Large	**HIS3**	Ileum
GI Resection – Large	**HIS5+HIS2**	Large Bowel Resection – Benign/Malignant
GI Resection – Large	**HIS4**	Liver Wedge Resection
GI Resection – Large	**HIS5+HIS2**	Oesophagectomy
GI Resection – Large	**HIS5**	Partial Hepatectomy
GI Resection – Large	**HIS5**	Small Bowel Resection – Benign/Malignant
GI Resection – Large	**HIS5+HIS5**	Whipple's Procedure/Pancreatectoduodenectomy
Gynaecology	**HIS2**	Cervical Biopsy
Gynaecology	**HIS1**	Cervical Polyp
Gynaecology	**HIS4**	Cervix

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Histopathology

CATEGORY	CODE	TISSUE SAMPLE
Gynaecology	**HIS1**	Curettings – Endocervical
Gynaecology	**HIS1**	Curettings – Endometial
Gynaecology	**HIS2**	Endometrial Biopsy
Gynaecology	**HIS1**	Endometrial Pipelle
Gynaecology	**HIS1**	Endometrial Polyp
Gynaecology	**HIS2**	Fallopian Tube
Gynaecology	**HIS3**	Fibroids
Gynaecology	**HIS2**	Fimbrial Cyst
Gynaecology	**HIS4**	LLETZ and/or Cone Biopsy
Gynaecology	**HIS2**	Mastoid
Gynaecology	**HIS2**	Ovarian Biopsy
Gynaecology	**HIS2**	Ovarian Cyst
Gynaecology	**HIS1**	Ovarian Pipelle
Gynaecology	**HIS5**	Ovaries (Bilateral)
Gynaecology	**HIS3**	Ovary (Unilateral)
Gynaecology	**HIS4**	Ovary and Tube (Unilateral)
Gynaecology	**HIS5**	Ovary and Tube (Bilateral)
Gynaecology	**HIS2**	Pelvic Mass
Gynaecology	**HIS1**	Peritoneal Biopsy
Gynaecology	**HIS5**	Placenta
Gynaecology	**HIS2**	Pouch of Douglas
Gynaecology	**HIS1**	Products of Conception
Gynaecology	**HIS2**	Uterine Polyp
Gynaecology	**HIS4**	Uterus
Gynaecology	**HIS5**	Uterus and Cervix
Gynaecology	**HIS5**	Uterus, Tubes and Ovaries
Gynaecology	**HIS1**	Vulval Biopsy
Haemato-Oncology	**HIS5**	Bone Marrow
Haemato-Oncology	**HIS2**	Lymph Node
Haemato-Oncology	**HIS3**	Lymph Node (Lymphoma)
Haemato-Oncology	**HIS3**	Lymph Node (Metastatic Disease)
Haemato-Oncology	**HIS5**	Spleen
Haemato-Oncology	**HIS5**	Thymus
Lung – Biopsy	**HIS3**	Lung Biopsy
Lung – Resections	**HIS3**	Lung Lesion Small Wedge Resection
Lung – Resections	**HIS5+HIS5**	Lung Resection
Lung – Resections	**HIS5**	Lung Tumour Resection +/- Nodes
Neurosurgery	**HIS3**	Brain Biopsy
Neurosurgery	**HIS3**	Brain Resection

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CATEGORY	CODE	TISSUE SAMPLE
Neurosurgery	**HIS5+HIS5**	Muscle Biopsy
Neurosurgery	**HIS3**	Pituitary Gland – Resection
Neurosurgery	**HIS3**	Spinal Tumour Biopsy
Neurosurgery	**HIS3**	Spinal Tumour Resection
Neurosurgery	**HIS4**	Vertebrea
Opthalmic	**HIS1**	Conjunctival Biopsy
Opthalmic	**HIS1**	Cornea
Opthalmic	**HIS4**	Globe / Removal of Eye
Opthalmic	**HIS2**	Lacrimal Gland Biopsy / Excision
Opthalmic	**HIS1**	Orbit Contents of Eye
Orthopaedic	**HIS1**	Bone Biopsy
Orthopaedic	**HIS2**	Bone Currettings
Orthopaedic	**HIS2**	Bursa
Orthopaedic	**HIS2**	Duputrenes Contracture
Orthopaedic	**HIS3**	Femoral Head Resection
Orthopaedic	**HIS1**	Ganglion Cyst
Orthopaedic	**HIS3**	Joint Resurfacing / Redo Prosthesis Capsule
Orthopaedic	**HIS1**	Neuroma
Orthopaedic	**HIS2**	Synovial Biopsy
Orthopaedic	**HIS3**	Tendon
Skin and Soft Tissue	**HIS2**	Abscess
Skin and Soft Tissue	**HIS3**	Alopecia Biopsies
Skin and Soft Tissue	**HIS1**	Cyst Excision
Skin and Soft Tissue	**HIS1**	Fossa
Skin and Soft Tissue	**HIS1**	Granuloma
Skin and Soft Tissue	**HIS3**	Lipoma
Skin and Soft Tissue	**HIS2**	Skin Excision BCC / SCC
Skin and Soft Tissue	**HIS1**	Nail
Skin and Soft Tissue	**HIS1**	Pilonidal Sinus
Skin and Soft Tissue	**HIS5**	Sentinel Nodes in Skin Cancer (Melanoma)
Skin and Soft Tissue	**1SK**	Skin Biopsy (1 specimen)
Skin and Soft Tissue	**2SK**	Skin Biopsy (2 specimens)
Skin and Soft Tissue	**3SK**	Skin Biopsy (3 specimens)
Skin and Soft Tissue	**4SK**	Skin Biopsy (4 specimens)
Skin and Soft Tissue	**5SK**	Skin Biopsy (5 specimens)
Skin and Soft Tissue	**6SK**	Skin Biopsy (6 specimens)
Skin and Soft Tissue	**7SK**	Skin Biopsy (7 specimens)
Skin and Soft Tissue	**8SK**	Skin Biopsy (8 specimens)
Skin and Soft Tissue	**9SK**	Skin Biopsy (9 specimens)

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Histopathology

CATEGORY	CODE	TISSUE SAMPLE
Skin and Soft Tissue	**10SK**	Skin Biopsy (10 specimens)
Skin and Soft Tissue	**11SK**	Skin Biopsy (11-15 specimens)
Skin and Soft Tissue	**HIS3**	Soft Tissue Tumour Biopsy
Skin and Soft Tissue	**HIS3**	Soft Tissue Tumour Resection
Urology – Biopsy	**HIS1**	Bladder Biopsy
Urology – Biopsy	**HIS1**	Core Biopsy (Urology)
Urology – Biopsy	**HIS2**	Hydrocele
Urology – Biopsy	**HIS2**	Penile Biopsy
Urology – Biopsy	**HIS1**	Prostate Biopsy
Urology – Biopsy	**2H1**	Prostate Biopsies x 2
Urology – Biopsy	**3H1**	Prostate Biopsies x 3
Urology – Biopsy	**4H1**	Prostate Biopsies x 4
Urology – Biopsy	**5H1**	Prostate Biopsies x 5
Urology – Biopsy	**6H1**	Prostate Biopsies x 6
Urology – Biopsy	**7H1**	Prostate Biopsies x 7
Urology – Biopsy	**8H1**	Prostate Biopsies x 8
Urology – Biopsy	**9H1**	Prostate Biopsies x 9
Urology – Biopsy	**10H1**	Prostate Biopsies x 10-12
Urology – Biopsy	**HIS5**	Testicular Biopsy (Bilateral)
Urology – Biopsy	**HIS4**	Testicular Biopsy (Unilateral)
Urology – Biopsy	**HIS1**	Urethral Biopsy
Urology – Biopsy	**HIS2**	Vasectomy
Urology – Resection	**HIS5+HIS5**	Cystoprostatectomy
Urology – Resection	**HIS3**	Epididymis
Urology – Resection	**HIS1**	Foreskin / Circumcision
Urology – Resection	**HIS5**	Nephrectomy / Kidney
Urology – Resection	**HIS5+HIS5**	Prostatectomy
Urology – Resection	**HIS5+HIS5**	Radical Cystectomy
Urology – Resection	**HIS3**	Testis
Urology – Resection	**HIS3 – HIS5+**	TURBT (dependent on number of blocks)
Urology – Resection	**HIS3 – HIS5**	TURP (dependent on number of blocks)

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
1,25 Vitamin D	D3	B	5-8 days	128
2-Butanone GC	BUTA	**RU**	7 days	141
2-Furoic Acid	2FA	**RU**	10 days	141
5 HIAA	RU5H	**PU** [1]	5 days	22
5' Nucleotidase	5NT	B	5 days	22
6-Thioguanine Nucleotides	TGN	A A	2 weeks	22
7 STI Profile by PCR (7 tests from 1 Sample)	PP12	**FCRU / PCR / TPV**	2 days	61, 64, 144
7 STI Profile by PCR (7 tests from 1 Sample) (Self-collect)	PP12	Aptima urine or multisite swab	2 days	61, 136
11 Deoxycorticosterone	DEOX	B	10 days	46
11 Deoxycortisol	11DC	B (Frozen)	10 days	46
16S rRNA Bacterial Gene	16S	**J**	1 week	38
17 Hydroxyprogesterone	17OH	B	5 days	46
18S rRNA Fungal Gene	18S	**J**	1 week	38
21 Hydroxylase Ab's	21HA	B (Frozen)	10 days	22
Acetone – Blood	ACTB	A or H	2 weeks	141
Acetone – Urine	ACTU	**RU**	5 days	141
Acetylcholine Receptor Autoantibodies	ACRA	B [4]	5 days	22
Acid Phosphatase – Total	APT	B	5 days	22
ACTH (Adreno Corticotrophic Hormone)	ACTH	A (Plasma Frozen) [41]	1 day	46
Activated Protein C Resistance	APCR	C (Frozen) [4,18]	3 days	34
Acute Viral Hepatitis Screen	AHSC	B	4 hours	67, 73
ADAMTS-13 Antibody	A13A	C (Frozen) [9,18]	1 month	34
Adenosine Deaminase	AD	A / B / **Fluid**	3 weeks	22
Adenovirus by PCR	ADV	A / **PCR / VS / SC**	7 days	84
Adiponectin	ADIP	B	2 weeks	22
Adrenal Cortex Antibodies	ACTX	B	2 days	67
Albumin	ALB	B	4 hours	22
Alcohol (Medical) [Do not use alcohol swab prior to sample taking]	ALCO	G [1]	4 hours	22
Alcohol (Urine)	UALC	**RU**	4 hours	22
Alcohol Profile	AP	A B B G	5-7 days	138-139, 141
Alcohol Profile 2	ALCP	A A B B G **RU**	5-7 days	138-139, 141
Aldolase	ALDO	B	5 days	22
Aldosterone	ALDN	A or B	5 days	46
Aldosterone (Urine)	UALD	**PU**	5 days	46
ALEX² Allergy Test NEW	ALEX	B (Serum)	3-4 days	120, 122
ALEX² Allergy Test (Self-collect) NEW	ALEX	B (TDL Tiny)	3-4 days	120, 134
Alk Phosphatase Isoenzymes	APIE	B	5 days	22
Alkaline Phosphatase	ALP	B	4 hours	22
Allergic Rhinitis/Asthma Profile CHANGE	ALRN	B	2 days	120, 122
Allergy – Individual Allergens	ALLE	B	2 days	120
Allergy – Individual Allergens (Self-collect)	ALLE	B (TDL Tiny)	2 days	120, 134
Allergy – 5 x Single Individual Allergens NEW	5AL	B	2 days	120
Allergy – 10 x Single Individual Allergens NEW	10AL	B	2 days	120
Allergy Profile 1 (Food & Inhalants)	1A	B B	2 days	120-121
Allergy Profile 2 (UK Aero Allergen)	2A	B	2 days	120-121
Allergy Profile 3 (Food)	3A	B	2 days	120-121
Allergy Profile 4 (Nuts & Seeds)	4A	B	2 days	120-121
Allergy Profile 5 (Children's Panel) CHANGE	5A	B	2 days	120-121
Allergy Profile 6 (Shellfish)	6A	B	2 days	120-121

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Allergy Profile 7 (Finfish)	7A	B	2 days	120-121
Allergy Profile 8 (Cereal – singles)	8A	B	2 days	120-121
Allergy Profile 9 (Antibiotics)	9A	B	2 days	120-121
Allergy Profile 10 (Insects)	10A	B	2 days	120-121
Allergy Profile 11 (Combined Shellfish/Finfish)	11A	B	2 days	120-121
Allergy Profile 12 (Milk & Milk Proteins)	12A	B	2 days	120, 122
Allergy Profile 13 (Stone fruit/Rosaceae family)	13A	B	2 days	120, 122
Alpha Feto Protein	AFP	B	4 hours	46, 88
Alpha Feto Protein (Maternal)	AFPM	B	4 hours	22
Alpha Gal Components (related to red meat)	ZZ37	B	2 days	123
Alpha-1-Antitrypsin (Serum)	A1AT	B	1 day	22
Alpha-1-Antitrypsin (Stool)	A1AF	**RF**	10 days	22
Alpha-1-Antitrypsin Genotype – PI*M, PI*S, PI*Z	GENE	A [9]	5 weeks	22
Alpha-1-Glycoprotein	OROS	B (Frozen)	5 days	22
Alpha-1-Microglobulin	A1MG	**RU** [1,22]	10 days	22
Alpha-2-Macroglobulins	A2MG	B	5 days	22
ALT (Alanine Aminotransferase) (SGPT)	ALT	B	4 hours	22
Alternaria Components	ZZ1	B	2 days	123
Aluminium (Blood)	ALUM	K	7 days	22, 140
Aluminium (Urine)	ALUU	**RU**	1-2 weeks	140
Amenorrhoea Profile	AMEN	B	4 hours	46, 51
Amikacin Level (State dose)	AMIK	B [4]	4 hours	117
Amino Acid (Serum/Plasma)	AMIN	B	7 days	22
Amino Acid Quantitative (Urine)	UAAQ	**RU**	7 days	22
Amino-Laevulinic Acid (Urine)	RUAL	100mls **PU**	5 days	22
Amitriptyline	AMTR	A [4]	5 days	118
Ammonia	AMMO	A (Frozen) [15]	4 hours	22
Amoebic (E. histolytica) Antibodies	AFAT	B	2 days	76
Amoebic (E. histolytica) PCR	AMAG	**RF**	2 days	76
Amphetamines – Blood	AMPB	B B	5 days	138
AML/ALL Molecular MRD – NPM1, PML-RARA, CBFB-MYH11, RUNX1-RUNX1T1, ETV6-RUNX1	GENE	**Bone Marrow** / A	5 days	95
Amniocentesis – rapid BOBs aneuploidy diagnosis for all chromosomes (5 days) + culture (10-15 days)	ABK	**AF** [9]	5-15 days	95
Amniocentesis – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	APCC	**AF** [9]	2-15 days	95
Amylase	AMY	B	4 hours	22
Amylase (Self-collect)	AMY	B (TDL Tiny)	1 day	22, 134
Amylase (Urine)	UAMY	**CU**	4 hours	22
Amylase Isoenzymes	AMYI	B	5 days	22
Amyloidosis (Amyloid A Protein)	SAA	B	5 days	22
Anaemia Profile	ANAE	A A B	2 days	33, 37
Anafranil (Clomipramine)	CHLO	A	7 days	118
ANCA (Anti-Neutrophil Cytoplasmic Abs)	ANCA	B	2 days	67
Andropause Profile	ANDP	B B	8 hours	46, 51
Androstanediolglucoronide	ANDG	B	3 weeks	22
Androstenedione	ANDR	B (Frozen)	4 days	46
Angiotensin Converting Enzyme	ACE	B	4 hours	22
Angiotensin Converting Enzyme – CSF	ACEF	**CSF** (Frozen)	2 weeks	22
Angiotensin II	ANG2	A (Frozen)	2 weeks	22
Antenatal Profile	ANTE	A A [33] B B B G	3 days	33, 37

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Anti-Actin Antibodies	AAA	B	5 days	67
Anti-Basal Ganglia Antibodies	ABGA	B	3 weeks	67
Anti-CCP Antibodies (RF)	CCP	B	2 days	67
Anti-Liver Cytosol Antibodies	ALCA	B	5 days	67
Anti-MOG [Myelin Oligodendrocyte Glycoprotein] Antibodies	AMOG	B	3 weeks	67
Anti-MUSK Antibodies	MUSK	B	2 weeks	67
Anti-Nuclear Antibodies (titre & pattern)	ANAB	B	2 days	67
Anti-Phosphatidylserine Antibodies	PHTS	B	5 days	67
Anti-Phospholipase A2 Receptor	AA2R	B	3 weeks	67
Anti-Ri Antibodies	RIAB	B	3 days	67
Anti-SLA (Soluble Liver Antigen) Abs	LSA	B	10 days	67
Anti-Staphylolysin Titre (SGOT)	ASTT	B	3 days	67
Anti-Streptolysin Titre/ASOT	ASLT	B	2 days	67
Anti-Sulfatide Antibodies	ASA	B	5 weeks	67
Anti-Xa Apixaban Monitoring	APIX	C (Frozen)*[18]	3 days	34
Anti-Xa Edoxaban Monitoring	EDOX	C (Frozen)*[18]	3 days	34
Anti-Xa Fondapariux Monitoring	FOND	C (Frozen)*[18]	3 days	34
Anti-Xa LMWH Monitoring	LMWX	C (Frozen)*[18]	3 days	34
Anti-Xa Rivaroxaban Monitoring	RIVA	C (Frozen)*[18]	3 days	34
Antidiuretic Hormone	ADH	A A (Plasma Frozen)[4]	10 days	46
Antimony (Urine)	ANTI	**RU**[30]	10 days	22
Antimullerian Hormone (AMH Plus)	AMH	B	4 hours	23, 31, 46, 51
Antimullerian Hormone (AMH Plus) (Self-collect)	AMH	B (TDL Tiny)	1 day	23, 46, 134-135
Antithrombin III	A111	C (Frozen)[4,9,18]	3 days	34
AP50 Alternative Hemolytic Complement	AP50	B (Frozen)	2 weeks	23
Apolipoprotein A1	APOA	B	3 days	23
Apolipoprotein B	APOB	B	3 days	23
Apolipoprotein C	APOC	B	3 months	23
Apolipoprotein E (12 hours fasting)	APOE	B (fasting)	5 days	23
Apolipoprotein E genotype – E2, E3, E4	GENE	A[9]	14 days	96
Apple Components	ZZ36	B	2 days	123
APTT/KCCT	KCCT	C[18]	4 hours	33
Aquaporin 4 Antibodies (Neuromyelitis Optica)	AQUA	B	2 weeks	67
Arbovirus Antibodies/Abs	ARBO	B[9,14]	3 weeks	84
Array CGH (Comparative Genomic Hybridisation)	CGH	**CVS / AF /** A H[9]	10 days	96
Arsenic (Blood)	ARS	A or H	5 days	23, 140
Arsenic (Urine)	ARSE	**RU**[30]	5 days	23, 140
Arylsulphatase A	ARYL	H[5,6]	8 weeks	23
Ascariasis Serology	ASC	B	5 days	67
Ashkenazi Jewish Carrier Screen	GENE	A[9]	4 weeks	96
Aspartate Transaminase (AST) (SGOT)	AST	B	4 hours	23
Aspergillus Components	ZZ2	B	2 days	123
Aspergillus Precipitins	ASPP	B	5 days	38
Atopic Dermatitis/Eczema Profile (14 allergens) CHANGE	ALEC	B	2 days	120, 122
Atypical Antibody Screen (handwritten tube label)	AASC	A[22,33]	2 days	33
Atypical Pneumonia Screen	APS	B	2 days	84, 86
Autoantibody Profile I	AUTO	B	2 days	67, 73
Autoantibody Profile II	ENDO	B	2 days	67, 73

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Avian Precipitins (11 Species)	AVIA	B	5 days	67
Azoospermia – karyotype + cystic fibrosis screen + polyT(5T) + Y deletions	GRP	A H [9]	10-15 days	96
Babesia Antibodies	PCRB	A	7 days	67
Bancroftia/Oncerciasis/Filarial Antibodies	TFIF	B [14]	2 weeks	76
BCR/ABL Quantitative – fusion gene sizes p190 + p210	BCRQ	A A [9]	10 days	96
Becker/Duchenne Muscular Dystrophy – deletions/duplications	DMD1	A [9]	10 days	96
Behcet's Disease – HLA Tissue Typing B*51	B51	A [9]	10 days	96
Bence-Jones Protein	RBJP	1 x 30mls (**RU**)	5 days	23
Benzene	BENZ	**J** [1,6]	3 days	141
Beta 2 Glycoprotein 1 Abs	B2GP	B	5 days	67
Beta 2 Microglobulin (Serum)	B2MG	B	2 days	23, 141
Beta 2 Microglobulin (Urine)	UB2M	**RU**	3 days	23, 141
Beta Carotene	CARO	B	5 days	128
Beta D Glucan	XBDG	B	3 days	38
Beta HCG (Oncology)	HCGQ	B	4 hours	88
Beta HCG (Quantitative)	QHCG	B	4 hours	46
Beta-Glucuronidase (Sly Disease)	BGLU	H H [9,4]	8 weeks	23
Bicarbonate	HCO3	B	4 hours	23
Bile Acids – Serum	BILE	B	4 hours	23
Bilharzia (Schistosome) Antibody Screen	BILH	B [14]	10 days	76
Bilharzia (Urine)	USCH	Mid-morning terminal urine following exercise [14]	1-2 days	76
Bilirubin (Direct/Indirect)	DBIL	B	4 hours	23
Bilirubin (Total)	BILI	B	4 hours	23
Bilirubin (Urine)	UBIL	**RU**	1 day	23
Biotin	BIOS	B	5 days	128
Biotinidase	BIOT	H (Frozen plasma) [4]	3 weeks	23
Birch Components	ZZ3	B	2 days	123
Bismuth	BISM	B	5 days	23
BK Polyoma Virus by PCR	BKPV	A /**RU**	5 days	84
Bleeding and Platelet Gene Panel (known familial variants)	R90K	A A	6 weeks	97
Bleeding and Platelet Gene Panel (unknown familial variants)	R90U	A A	12 weeks	97
Blood Culture#	BCUL	2 x **BC** [4]	6 days +	38
Blood Film Examination	FILM	A	1 day	33
Blood Group †	ABO	A [22,33]	2 days	33
BNP (NT-pro BNP)	BNP	B	4 hours	23, 46
Bone Alkaline Phosphatase	BALP	B (Frozen)	2 weeks	23
Bone Marrow (Aspirate)	BMAS	**J** [1]	14 days	36
Bone Marrow (Trephine Biopsy)	BMI	**J** [1]	3 days	36
Bone Screen	BONE	B **CU**	4 hours	23, 31
Bone Screen (Bloods only)	BON2	B	4 hours	23, 31
Borrelia Antibodies (Lyme Disease) IgG, IgM	BORR	B [9,14]	2 days	67, 76
Borrelia Antibodies (Lyme Disease) IgM	BORM	B	2 days	67, 76
Borrelia Confirmation (Immunoblot)	BORC	B [9,14]	10 days	67, 76
Brazil Components	ZZ4	B	2 days	123
Breast Cancer – BRCA1 + BRCA2 only gene sequencing + deletions/duplications	GENE	A	4 weeks	97

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Breast Cancer NGS Panel – full gene sequencing	GENE	A A [9,11]	4 weeks	88, 97
Bromide	BROM	B	3 days	141
Brucella Serology	BRUC	B [9]	2-3 weeks	67
BUN (Blood Urea Nitrogen)	BUN	B	4 hours	23
C-KIT D816V variant by PCR for Mastocytosis	GENE	**Bone Marrow** / A	14 days	97
C Peptide	CPEP	B	3 days	46
C Reactive Protein	CRP	B	4 hours	23
C Reactive Protein (Self-collect)	CRP	B (TDL Tiny)	1 day	23, 134
C Reactive Protein (High Sensitivity)	HCRP	B	4 hours	23
C Reactive Protein (High Sensitivity) (Self-collect)	HCRP	B (TDL Tiny)	1 day	23, 134
C1 Esterase Inhibitor	C1EI	B	5 days	67
C1 Esterase: Function & Total	FC1E	C C (Plasma Frozen) [4,18]	10 days	23
C1q Binding Immune Complex	IMCP	B	5 days	23
C3 Complement	C3	B	4 hours	67
C3/C4 Complement	COMP	B	4 hours	67
C4 Complement	C4	B	4 hours	67
CA 15-3	C153	B	4 hours	88
CA 19-9	C199	B	4 hours	88
CA 50	CA50	B	5 days	88
CA 72-4	C724	B	5 days	88
CA 125	C125	B	4 hours	88
CA 125 (Self-collect)	C125	B (TDL Tiny)	1 day	88, 137
Cadmium (Blood)	CADM	A or H	5 days	23, 140
Cadmium (Urine)	URCD	**RU** [30]	5 days	23, 140
Calcitonin	CATO	B (Frozen) [4]	1 day	46
Calcium	CA	B	4 hours	23
Calcium (Self-collect)	CA	B (TDL Tiny)	1 day	24, 134
Calcium (24 hour Urine)	UCA	**PU**	4 hours	24
Calcium + Vitamin D	CALD	B	1 day	24
Calcium + Vitamin D (Self-collect)	CALD	B (TDL Tiny)	1 day	24, 134
Calcium/Creatinine Ratio	CACR	**RU** B	4 hours	24
Calprotectin	CALP	**RF**	5 days	67
Calprotectin, Faecal (Self-collect)	CALP	Universal faecal container	5 days	67, 136
Calprotectin/Elastase Profile	CEP	**RF**	5 days	67, 73
Calprotectin/QFIT Profile (Combined) NEW	QCAL	QFIT	5 days	67, 73
Campylobacter Jejuni Antibodies	CJAB	B	5 days	38
Candida (Culture)	CANC	**STM/CS**	2-4 days	38
Candida Antibodies	CANA	B	5 days	38
Candida Antigen	CCAG	B	5 days	38
Cannabinoids (Urine) Screen	CANN	**RU**	1 day	138
Carbamazepine (Tegretol)	CARB	B	4 hours	118
Carbapenemase producing organism screen	MDR	**STM** (rectal)	4-5 days ‡	38
Carbohydrate Deficient Glycoprotein	CDG	B	2 weeks	24
Carbohydrate Deficient Transferrin (CDT)	CDT	B [4]	3 days	24
Carboxyhaemoglobin	CBHB	A	1 week	33
Carcino Embryonic Antigen	CEA	B	4 hours	88
Cardiac Enzymes (not chest pain)	CENZ	B	4 hours	24
Cardiolipin Antibodies (IgG+IgM)	ACAB	B	2 days	67
Cardiovascular Risk Profile 1	PP10	B B	3 days	24, 31
Cardiovascular Risk Profile 2	PP11	B B B C [34]	3 days	24, 31

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Carotenes	CARO	B [13]	5 days	128
Carrier Screen (Ashkenazi Jewish)	GENE	A [9]	4 weeks	97, 110, 114
Carrier Screen (Ashkenazi Jewish) – Partnered Report	GENE	A [9]	4 weeks	97, 110, 114
Carrier Screen (Pan-Ethnic)	GENE	A [9]	4 weeks	97, 110, 114
Carrier Screen (Pan-Ethnic) – Partnered Report	GENE	A [9]	4 weeks	98, 110, 114
Cartilage Antibodies	ACA	B	5 days	67
Cashew Components	ZZ35	B	2 days	123
Cat Components	ZZ5	B	2 days	123
Cat Scratch Fever (Bartonella IgG+IgM)	CAT	B	5 days	84
Catecholamines (Plasma)	CATE	A A (Plasma Frozen) [4]	5 days	46
Catecholamines (Urine)	UCAT	**PU** [1]	5 days	46
CCP Antibodies (RF)	CCP	B	2 days	68
CD3/CD4/CD8	LYSS	A [10]	1 day	36, 83
CD16	CD16	A [4]	1 day	36
CD19 B Cells	CD19	A [4]	1 day	36
CD20	CD20	A [10]	2 days	36
CD25	CD25	A [10]	2 days	36
CD56	CD56	A [4]	1 day	36
CD57	CD57	A	1 day	36
Celery Components	ZZ6	B	2 days	123
Centromere Autoantibodies	CENT	B	2 days	68
Ceruloplasmin	CERU	B	1 day	24, 129
Cervical Cytology	PAPT will include HPVH	**TPV**	6 days (combined report)	146
CH50 (Classical pathway)	CH50	B (Frozen) [4]	4 days	68
Chagas Disease Serology (S.American Trypanosomiasis) T. Cruzi	CHGA	B [9,14]	10 days	68
Chest Pain Profile	CPP	B	STAT	24, 31
Chikungunya Virus Abs	CHIK	B [9,14]	10 days	84
Chlamydia – PCR swab	SPCR	**PCR**	2 days	61
Chlamydia – Thin Prep	TPCR	**TPV**	2 days	61, 144
Chlamydia – Urine	CPCR	**FCRU**	2 days	61
Chlamydia Species Specific (MIF) Ab Screen	CHAB	B	2 days	68, 73
Chlamydia/Gonorrhoea – PCR Swab	SCG	**PCR**	2 days	61
Chlamydia/Gonorrhoea – Rectal	RSCG	**PCR**	2 days	61
Chlamydia/Gonorrhoea – Rectal (Self-collect)	RSCG	Aptima multisite swab	2 days	61, 136
Chlamydia/Gonorrhoea – Thin Prep	TCG	**TPV**	5 days	61, 144
Chlamydia/Gonorrhoea – Throat	TSCG	**PCR**	2 days	61
Chlamydia/Gonorrhoea – Throat (Self-collect)	TSCG	Aptima multisite swab	2 days	61, 136
Chlamydia/Gonorrhoea – Urine	CCG	**FCRU**	2 days	61
Chlamydia/Gonorrhoea – Urine (Self-collect)	CCG	Aptima urine	2 days	61, 136
Chlamydia/Gonorrhoea – Vaginal (Self-collect)	SCG	Aptima multisite swab	2 days	61, 136
Chlamydia/Gonorrhoea/Trichomonas – PCR Swab	SCGT	**PCR**	2 days	61
Chlamydia/Gonorrhoea/Trichomonas – Thin Prep	TCGT	**TPV**	2 days	61, 144
Chlamydia/Gonorrhoea/Trichomonas – Urine	CCGT	**FCRU**	2 days	61
Chloride	CL	B	4 hours	24
Cholesterol	CHO	B	4 hours	24
Cholesterol (Familial Hypercholesterolaemia)	GENE	A A [9]	7 weeks	24
Cholinesterase (Serum/Pseudo)	CHPS	B	4 hours	24, 141
Chromium (Blood)	CHRO	A	5 days	24, 140

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Chromium (Urine)	URCR	**RU** [30]	10 days	24, 140
Chromogranin A	CGA	B	5 days	24
Chromogranin A & B	MTAB	**J** [1]	3 weeks	24
Chromosome Analysis (Amniocentesis) – culture only	ACUL	**AF** [9]	10-15 days	98
Chromosome Analysis (Amniocentesis) – rapid BOBs aneuploidy diagnosis for all chromosomes (5 days) + culture (10-15 days)	ABK	**AF** [9]	5-15 days	98
Chromosome Analysis (Amniocentesis) – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	APCC	**AF** [9]	2-15 days	98
Chromosome Analysis (Blood)	KARY	H [9]	2-3 weeks	98
Chromosome Analysis (Chorionic Villus) – rapid BOBs aneuploidy diagnosis for all chromosomes (5 days) + culture (10-15 days)	CBK	**CVS** [9]	5-15 days	98
Chromosome Analysis (Chorionic Villus) – rapid PCR diagnosis for common aneuploidies (2 days) + culture (10-15 days)	CVPC	**CVS** [1,9]	2-15 days	98
Chromosome Analysis (Chorionic Villus) – culture only	CVSC	**CVS** [1,9]	10-15 days	98
Chromosome Analysis (Products of Conception)	PROC	**Placental Sample** [1,9]	20-25 days	98
Chromosome Analysis (Products of Conception) – BOBs rapid aneuploidy diagnosis for all chromosomes (10 days) + culture (25 days)	PBK	**Placental Sample** [1,9]	10-25 days	98
Chromosome Analysis (Solid Tissue)	PROC	**Fetal tissue** [1,9]	4-5 weeks	98
Chromosome Analysis (Stem Cells)	STEM/ SUSP	**Culture/Fixed cells**	Contact lab	98
Chronic Fatigue Syndrome Profile	VIP1	A + B [10]	5 days	68, 73
Citrate (Blood)	CITR	B	5 days	24
Citrate (Urine)	UCIT	**CU** (Frozen)	5 days	24
CK (MB Fraction)	CKMB	B	4 hours	24
CK Isoenzymes	CKIE	B	5 days	24
Clobazam	CLOB	A	5 days	118
Clomipramine (Anafranil)	CHLO	A	7 days	118
Clonazepam	CLON	A	7 days	118
Clostridium Difficile Toxin by PCR	CLOS	**RF***	2 days	38
Coagulation Profile 1	CLPF	C [18]	4 hours	33, 37
Coagulation Profile 2	CLOT	A C [18]	4 hours	33, 37
Cobalt (Blood)	COB	A	5 days	24
Cobalt (Serum)	COBB	B	5 days	24, 140
Cobalt (Urine)	COBA	**RU** [30]	5 days	24, 140
Cocaine (Urine) Screen	UCOC	**RU**	1 day	138
Coeliac Disease – HLA DQ2/DQ8 Genotype	Q2Q8	A [9]	10 days	68
Coeliac/Gluten Profile 2	GSA2	A B	10 days	68, 73
Coeliac/Gluten Sensitivity Profile	GSA	B	2 days	68, 73
Coenzyme Q10	CQ10	B	2 weeks	24
Cold Agglutinin	CAGG	**J** [1]	5 days	24
Collagen (Type I, II, IV) Antibodies	COAB	B	10 days	24
Collagen Type 1 Cross-Linked N-Telopeptide – NTX	NTX	**2nd EMU**	2 weeks	24
Colloid Antigen-2 Antibodies	CA2A	B	2 weeks	68
Colorectal Cancer NGS Panel – full gene sequencing + deletions/duplications	GENE	A A [9,11]	4 weeks	98
Comparative Genomic Hybridisation (Array CGH)	CGH	**CVS** / **AF** / A H [9]	10 days	98
Complement C1q	C1Q	B	5 days	24

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Alphabetical test index

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CT/GC/Trichomonas/Mgen – Thin Prep	TGTM	**TPV**	2 days	61
CT/GC/Trichomonas/Mgen – Urine	CGTM	**FCRU**	2 days	61, 65
Culture (Any site)	CULT		up to 5 days	38
CVS PCR for common aneuploidies (2 days) + culture (10-15 days)	CVPC	**CVS** [1,9]	2-15 days	99
CVSBOBs – rapid BOBs aneuploidy diagnosis for all chromosomes (5 days) + culture (10-15 days)	CBK	**CVS** [9]	5-15 days	99
CVSBOBs only – rapid aneuploidy diagnosis for all chromosomes + common microdeletion syndromes	CBOB	**CVS** [9]	5 days	99
Cyclosporin (Monoclonal)	CYCL	A	1 day	25
Cyfra 21-1	CY21	B	4 days	88
Cystatin C	CYCC	B	5 days	25
Cystic Fibrosis (139 common variants) – reflex to Poly T when required	CFS	A [9]	5-7 days	99
Cystine – Quantitative (Beta-CTX)	QCYS	**PU**	5 days	25
Cytomegalovirus (CMV-DNA) Amnio	CMVD	**AF**	5 days	84
Cytomegalovirus (IgG/IgM) Antibodies	CMV	B	4 hours	84
Cytomegalovirus (PCR) Semen	SCVM	**Semen**	7 days	84
Cytomegalovirus (PCR) Urine	CMVU	**RU**	5 days	84
Cytomegalovirus Avidity	CMAV	B	10 days	84
Cytomegalovirus DNA (PCR)	CMVP	A	5 days	84
Cytomegalovirus Resistance	CMVR	A A (2 x 6mls)	21 days	84
D-Dimers (Fibrinogen Degradation Products)	DDIT	C [4]	4 hours	33
Dengue Fever PCR	DPCR	A or B [9,14]	2 weeks	84
Dengue Virus Serology	DENG	B [9,14]	5 days	76
Deoxypyridinoline (DPD) – Serum	SDPD	B (Freeze within 24 hours)	4 days	25
Deoxypyridinoline (DPD) – Urine	DPD	**EMU**	4 days	25
DHEA	DHEX	B	7-10 days	46
DHEA – Urine (Dehydroepiandrosterone)	UDHE	**CU**	3 weeks	46
DHEA Sulphate	DHEA	B	4 hours	46
DHEA Sulphate (Self-collect)	DHEA	B (TDL Tiny)	1 day	46, 135
Diabetes – Obesity NGS Panel	GENE	A	6 weeks	99
Diabetic Profile 1	DIAB	A G	8 hours	25, 31
Diabetic Profile 2	DIA2	A G **RU**	2 days	25, 31
Diamine Oxidase Activity	DIAM	B	2 weeks	25
Diazepam (Valium)	DIAZ	A	7 days	118
DiGeorge Syndrome (22q11 & 10p14 deletion) – BOBs (5 days) + karyotype (15 days)	DGB, KARY	**CVS** / **AF** / A H [9]	5-15 days	99
DiGeorge Syndrome (22q11 & 10p14) – BOBs only	DGB	**CVS** / **AF** / A [9]	5 days	99
Digoxin	DIGO	B	4 hours	118
Dihydrotestosterone	DHT	B B	7 days	46
Diphtheria Antibodies	DIPH	B	5 days	68
DL1-DL12 Screening Profiles				20-21
DNA (Double Stranded) Antibodies IgG	DNAA	B	2 days	68
DNA (Single Stranded) Antibodies	DNAS	B	5 days	68
DNA Extraction & Storage – 3 years (longer upon request)	XDNA	A [9]	20 days	99
DNA Identity Profile – 15 STR markers	DNAF	A [9,11]	10 days	99
Dog Components	ZZ8	B	2 days	123
Down Syndrome Risk Bloods only (Risk to be calculated by clinician)	HCGF/ PAPA	B	4 hours	46

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Down Syndrome Risk Profile (2nd trimester) Quad	DRP	B DRP form[7,8]	5 days	46
Down Syndrome Risk Profile with risk calculation first trimester	DRP	B DRP form + image of scan[7,8]	5 days	46
Doxepin Level (Sinequan)	DOXE	A	10 days	141
Drugs of Abuse from Blood without Chain of Custody	DOAP	B	5 days	138-139
Drugs of Abuse Profile – Random Urine Sample/No Chain of Custody	DOA	**RU**	2 days (5 days with LC-MS/MS confirmation)	138-139
Drugs of Abuse Profile – Random Urine Sample/ No Chain of Custody Plus Alcohol	DOA3	**RU**	2 days (5 days with LC-MS/MS confirmation)	138-139
Drugs of Abuse Profile – With Chain of Custody*	DOAL	**RU/CoC Collection Containers** [1,2]	2 days (5 days with LC-MS/MS confirmation)	138-139
Drugs of Abuse Profile – Without Chain of Custody	DOAN	**RU** [2]	2 days (5 days with LC-MS/MS confirmation)	138-139
Duchenne Muscular Dystrophy – deletions/duplications only	DMD1	A [9]	10 days	99
DVT/Pre-travel Screen	DVT1	A A B [9]	5 days	33, 37, 76-77, 100, 110
Early CDT-Lung	CDTL	B	10 days	88
Early Detection Screen PCR/NAAT	STDX	A 10mls or 2 x 4mls (Vacutainer only)	3 days	61
Early Detection Screen PCR/NAAT with Syphilis	STXX	B A 10mls or 2 x 4mls	3 days	61
Echinococcus (Hydatid) Antibodies	EFAT	B [9,14]	5 days	68, 76
Egg Components	ZZ9	B	2 days	123
Ehlers-Danlos Syndrome/Aneurysm/Connective Tissue Disorders NGS Panel – full gene sequencing + deletions/duplications	GENE	A A [9]	6 weeks	100
Ehrlichiosis Antibodies	EHRL	B [9,14]	10 days	68
Elastase (Faecal)	ELAS	**RF**	5 days	25
Elastase, Faecal (Self-collect)	ELAS	Universal faecal container	5 days	25, 134
Elastase/Calprotectin Profile	CEP	**RF**	5 days	68
Electrolytes	ELEC	B	4 hours	25
Electrolytes (Urine)	UELE	**CU**	4 hours	25
ELF/Enhanced Liver Fibrosis	ELF	B	5-7 days	25
Endometrial Biopsy Immune Profiling	23RF	**J** (Contact Referrals)	2 weeks	50
Endomysial Antibodies (IgA)	AEAB	B	2 days	68
Endomysial Antibodies (IgA) (Self-collect)	AEAB	B (TDL Tiny)	2 days	68, 136
Enteric Organism Rapid Detection	EORD	**RF**	2 days	76-77
Eosin-5 Maleimide Dye binding test for Hereditary spherocytosis (EMA)*	EMA	A	2 days	35
Eosinophil Cationic Protein	ECP	B	7 days	25
Epanutin (Phenytoin)	PHEN	B	4 hours	118
Epstein-Barr Virus Antibodies IgG/IgM	EBVA	A or B	2 days	84
Epstein-Barr Virus PCR	EBVQ	A	5 days	84
Erectile Dysfunction Profile	IMPO	A B B G	3 days	47, 51
Erythropoietin	ERY	B	4 days	35, 118
ESR	ESR	A	4 hours	33
Essential Fatty Acid Profile (Red Cell)	EFAR	A [4]	10 days	129
Ethosuximide	ETHO	A	7 days	118

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Extractable Nuclear Antibodies (nRNP, Sm, Ro, La, Jo1, Scl70) CENP-B	ENA	B	2 days	68
Factor II Assay	FAC2	C (Frozen)[9,18]	5 days	34
Factor II Prothrombin – G20210A Variant	FX2	A[9]	5 days	100
Factor V Assay	FAC5	C (Frozen)[9,18]	5 days	34
Factor V Leiden – G1691A Variant	FX5	A[9]	5 days	100
Factor VII Assay	FAC7	C (Frozen)[9,18]	5 days	34
Factor VIII Assay	FAC8	C (Frozen)[9,18]	5 days	34
Factor VIII Inhibiting Antibody	F8IA	C C[18]	2 weeks	34
Factor IX Assay	F1X	C (Frozen)[9,18]	5 days	34
Factor IX Inhibiting Antibody	F9IA	C C[18]	2 weeks	34
Factor X Assay	FX	C (Frozen)[9,18]	5 days	34
Factor XI Assay	FX1	C (Frozen)[9,18]	5 days	34
Factor XII Assay	FX11	C (Frozen)[9,18]	5 days	38, 41
Factor XIII Assay	FA13	C (Frozen)[9,18]	5 days	25
Faecal Fat (1 Day Collection)	TFFA	**LF**[6]	5 days	25
Faecal Fat (3 day)	FFAT	**LF**[6]	5 days	25
Faecal Lactoferrin	FLAC	**RF**	5 days	25
Faecal Sugar Chromatography	FCRO	**RF** (Frozen)	3 weeks	25
Familial Hypercholesterolaemia NGS panel	GENE	A A[9]	6 weeks	100
Farmers Lung Precipitins	FARM	B	5 days	68
Fasciola Hepatica Antibodies (Liver Fluke)	FASC	B	2 weeks	69
FAST Chlamydia – PCR Swab	FSCT	**PCR Swab**	4 hours	66
FAST Chlamydia – Urine	FCT	**FCRU**	4 hours	66
FAST CT/GC – PCR Swab	FSCG	**PCR Swab**	4 hours	66
FAST CT/GC – Rectal PCR Swab	FRCG	**PCR Swab**	4 hours	66
FAST CT/GC – Throat PCR Swab	FTCG	**PCR Swab**	4 hours	66
FAST CT/GC – Urine	FCG	**FCRU**	4 hours	66
FAST Gonorrhoea – PCR Swab	FSGN	**PCR Swab**	4 hours	66
FAST Gonorrhoea – Urine	FGN	**FCRU**	4 hours	66
FAST Screen SHORT with Swab	FSSS	B **PCR Swab**	4 hours	66
FAST Screen SHORT with Urine	FSSC	B **FCRU**	4 hours	66
FAST Screen with Swab	FSWS	B **PCR Swab**	4 hours	66
FAST Screen with Urine	FUSC	B **FCRU**	4 hours	66
Fat Globules in Faeces	FGLO	**RF**	1 week	25
Female Hormone Profile	FIP	B	4 hours	47, 51
Female Hormone Profile (Self-collect)	FIP	B (TDL Tiny)	1 day	47, 135
Ferritin	FERR	B	4 hours	25
Ferritin (Self-collect)	FERR	B (TDL Tiny)	1 day	26, 134
Fibrinogen	FIB	C[4,18]	4 hours	33
Fibrotest (Liver Fibrosis)	FIBT	B	2 weeks	26
Filaria (Lymphatic and Non-Lymphatic) Antibodies	FIFA	B[9,14]	10 days	76
First Trimester Antenatal Screen (Risk to be calculated by requesting clinician)	HCGF/ PAPA	B	4 hours	47, 51
Fish Components	ZZ10	B	2 days	123
FK506 (Tacrolimus/Prograf)	FK5	A[4]	1-2 days	118
Flecainide (Tambocor)	FLEC	A	5 days	118
Fluid Culture	FLUD	**SC**	2-7 days	38
Fluid Cytology	CATF	**Fluid**[4]	3 days	148
Fluid for Crystals + Culture	FLU2	**SC**	1 day	38

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Fluoride (Urine)	UFL	**RU**	5 days	26
Fluoxetine (Prozac)	PROZ	A [4]	5 days	118
Folate (Red Cell)	RBCF	A	2 days	26, 129
Folate (Serum)	FOLA	B	1 day	26
Fragile X Syndrome screen – FMR1 repeat analysis PCR	GENE	A A A [9]	3-8 weeks	101
Free Cortisol (Urine)	UCOR	**CU**	5 days	47
Free Fatty Acids	FFA	B (Frozen) [1]	10 days	26
Free T3	FT3	B	4 hours	47
Free T3 (Self-collect)	FT3	B (TDL Tiny)	1 day	47, 135
Free T4	FT4	B	4 hours	47
Free T4 (Self-collect)	FT4	B (TDL Tiny)	1 day	47, 135
Fructosamine	FRUC	B	1 day	26
FSH (Self-collect)	FSH	B (TDL Tiny)	1 day	47, 135
Full Blood Count	FBC	A	4 hours	33
Fungal ID + Sens	FUID	**Fungal sample / STM**	14 days	38
Fungal investigations (non-superficial extended culture)	FUN	All specimens other than Skin, Hair and Nails	From 3 days	38
Fungal investigations (superficial/dermatophyte PCR test)	DERM	Skin, Hair and Nails	3-7 days	38
FXIII A Subunit	F13S	C (Frozen) [9,18]	14 days	34
G6PD	G6PD	A	4 days	35
Gabapentin	GABA	B [4]	5 days	118
Galactomanan (Aspergillus Antigen)	SGAL	B	2 weeks	38
Galactose-1-Phosphate Uridyltransferase	GAL1	H [5,6]	2 weeks	26
Galactosidase – Alpha*	GALA	**J***	6 weeks	26
Gall Stone Analysis	RSTA	**STONE**	10 days	26
Gamma GT	GGT	B	4 hours	26
Ganglionic Acetylcholine Receptor Antibodies	GACA	B	1 month	69
Ganglioside GM1, GD1B, GQ1B Abs	GANG	B	5 days	69
Gardnerella vaginalis by PCR	GVPC	**FCRU / PCR / TPV**	2 days	61, 144
Gastric Parietal Autoantibodies	GASP	B	2 days	69
Gastrin	GAST	B (Frozen)	5 days	26
Gastrointestinal Pathogen PCR (Self-collect)	EORD	Universal faecal container	2 days	76, 136
Genetic Reproductive Profile (Male)	GRP	A H [9]	10-15 days	101
Genetics: TDL Genetics				90
Gentamicin Assay	GENT	B [4]	4 hours	117
Giardia Serology	GIAR	B	5 days	69
Gliadin Antibodies (IgG) (deamidated)	AGAB	B	2 days	69
Gliadin Antibodies (IgG) (deamidated) (Self-collect)	AGAB	B (TDL Tiny)	2 days	69, 136
Globulin	GLOB	B	4 hours	26
Glomerular Basement Membrane Abs	AGBM	B	2 days	69
Glucagon	GLUG	**J** [1]	10 days	26
Glucose	RBG	G	4 hours	26
Glucose Challenge Test/Mini-GTT	RBGM	G	1 day	117
Glucose Tolerance Test (Extended Plus)	GTTX	7 x G, 7 x **RU**	1 day	117
Glucose Tolerance Test (Extended)	GTTE	5 x G, 5 x **RU**	1 day	117
Glucose Tolerance Test (Short)	GTTS	2 x G, 2 x **RU**	1 day	117
Glucose Tolerance Test/OGTT	GTT	3 x G, 3 x **RU**	1 day	117
Glucose Tolerance with Growth Hormone	GTT + GHDF	3 x B [35], 3 x G, 3 x **RU**	1 day	117
Glucose Tolerance with Insulin	GTTI	3 x B, 3 x G, 3 x **RU**	1 day	117

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Glutamic Acid Decarboxylase Antibodies (GAD 65)	GAD	B	5 days	69
Glutathione (Red Cell)	GLUR	H [5]	5 days	129
Glutathione Peroxidase	GLPX	H	5 days	129
Gluten Sensitivity Evaluation	GSA	B	2 days	69
Gluten Sensitivity Profile	GLUT	A B B	10 days	69, 73, 120, 122
Gluten/Coeliac Profile 2	GSA2	A B	10 days	69
Glycan Determinants	ZZ27	B	2 days	123
Gonorrhoea – Culture	GONN	**CS** ‡‡‡	2-3 days	38, 61
Gonorrhoea – PCR swab	SGON	**PCR**	2 days	61
Gonorrhoea – Thin Prep	TGON	**TPV**	2 days	61, 144
Gonorrhoea – Urine	CGON	**FCRU**	2 days	61
Granulocyte Immunology	GRIM	A A (or 10ml) B	2 weeks	69
Group B Strep	GBSX	2 x **STM**	3-5 days	38
Group B Strep (Self-collect) – Vaginal and Rectal	GBSX	Blue gel Amies swab x2	3-5 days	38, 136
Growth Hormone (Fasting)	GH	B [7,35]	4 hours	47
Gut Hormone Profile	GUTP	A A (Frozen within 15 minutes) [41]	3 weeks	47
H. pylori Antibodies (IgG)	HBPA	B	2 days	69
H. pylori Antigen – Breath	HBQT	**J**	5 days	69
H. pylori Antigen – Stool	HBAG	**RF**	3 days	38
H. pylori Antigen – Stool (Self-collect)	HBAG	Universal faecal container	3 days	38, 136
H. pylori Culture	HPCU	**J**	3 weeks	38
Haematology Profile	PP3	A	4 hours	33, 37
Haemochromatosis – HFE common variants C282Y + H63D	HMD	A [9]	3 days	26
Haemoglobin	HB	A	4 hours	33
Haemoglobin Electrophoresis	HBEL	A	4 days	35
Haemophilus B Influenzae Antibodies	HINF	B	5 days	69
Haemophilus ducreyi by PCR	DUCR	**PCR**	7 days	61
Haemosiderin (Urine)	HSID	**EMU**	2 weeks	26
Hams Test for PNH (CD59)	HAMS	**J** [34,5]	5 days	36
Hantavirus Serology	HANV	B [9]	10 days	84
Haptoglobin	HAPT	B	5 days	26
Harmony® Prenatal Test (Non-Invasive Prenatal Testing) – common aneuploidy screening from maternal blood	NIPT	**J/Special tubes** [1]	3-5 days	101
Hazelnut Components	ZZ11	B	2 days	123
HbA1c	GHB	A	6 hours	26
HbA1c (Self-collect)	GHB	A (TDL Tiny)	1 day	26, 134
HDL Cholesterol	HDL	B	4 hours	26
HE4 + ROMA (Earlier Detection of Ovarian Tumour)	HE4	B	1 day	88
Hepatitis (Acute) Screen	AHSC	B	4 hours	79, 86
Hepatitis A (IgM)	HAVM	B	4 hours	79
Hepatitis A Immunity (IgG/IgM)	HAIM	B	4 hours	78-79
Hepatitis A Profile	HEPA	B	4 hours	61, 79
Hepatitis A RNA by PCR	HAVR	A or B	3 weeks	79
Hepatitis A, B & C Profile	ABC	B	4 hours	79, 86
Hepatitis B 'e' Antigen and Antibody	HEPE	B	4 hours	79
Hepatitis B (PCR) Genotype	BGEN	A	7 days	79
Hepatitis B Core Antibody – IgM	HBCM	B	4 hours	79
Hepatitis B Core Antibody – Total	HBC	B	4 hours	79

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Hepatitis B DNA (Viral load)	DNAB	A	5 days	79
Hepatitis B Immunity	HBIM	B	4 hours	78-79
Hepatitis B Immunity (IgG)	THBI	B	1 day	79
Hepatitis B Immunity (IgG) (Self-collect)	THBI	B (TDL Tiny)	1 Day	78-79, 137
Hepatitis B Profile	HEPB	B	4 hours	79, 86
Hepatitis B Resistant Mutation	HBRM	A or B	7 days	79
Hepatitis B Surface Antigen	AUAG	B	4 hours	61, 79
Hepatitis B Surface Antigen (Self-collect)	THBA	B (TDL Tiny)	1 day	61, 79, 136-137
Hepatitis C Abs Confirmation (RIBA)	RIBA	B	5 days	79
Hepatitis C Antibodies	HEPC	B	4 hours	62, 79
Hepatitis C Antibodies (Self-collect)	THCV	B (TDL Tiny)	1 Day	79, 137
Hepatitis C Antigen (Early detection)	HCAG	B	4 hours	79
Hepatitis C Genotype	CGEN	A	5 days	79
Hepatitis C Quantification (Viral Load)	QPCR	A or B	5 days	79
Hepatitis Delta Antibody	HEPD	B	5 days	79
Hepatitis Delta Antigen	HDAG	B	5 days	79
Hepatitis Delta RNA	DRNA	A (Frozen plasma)	5 days	79
Hepatitis E (PCR)	EHEP	A	2 weeks	79
Hepatitis E IgG/IgM	HBE	B	5 days	79
Hepatitis G (PCR)	HEPG	A (Frozen plasma)	2 weeks	79
Herpes Simplex (HSV) 1 & 2 – Genital lesion (Self-collect)	HERS	Aptima multisite swab	5 days	62, 84, 136-137
Herpes Simplex (HSV) 1 & 2 – Oral lesion (Self-collect)	HERS	Aptima multisite swab	5 days	62, 84, 136-137
Herpes Simplex I/II Antibody Profile (IgG)	HERP	B	2 days	84
Herpes Simplex I/II by PCR (Swab)	HERS	**PCR**	5 days	62, 84
Herpes Simplex I/II by PCR (Urine)	HERD	**FCRU / PCR / TPV**	5 days	62, 84, 144
Herpes Simplex I/II IgM	HERM	B	2 days	84
HFE gene (Haemochromatosis) – common variants C282Y + H63D	HMD	A [9]	3 days	35
Hirsutism Profile	HIRP	B	4 hours	47, 51
Histamine (Blood)	HITT	A (Frozen plasma)	5 days	69
Histamine (Urine)	HITU	**RU**	5 days	69
Histamine Releasing Urticaria Test	CURT	B	3 weeks	69, 120
Histone Antibodies	HISA	B	5 days	69
Histopathology				149
Histoplasmosis	HISP	B	10 days	69
HIV 1 & 2 Abs/p24Ag (Self-collect)	THIV	B (TDL Tiny)	1 day	62, 137
HIV 1 & 2/p24Ag	HDUO	B	4 hours	62
HIV Confirmation of Positive Screens (Using 3 methodologies)	HIVC	B	1 day	83
HIV Rapid RNA HIV-1 QUALITATIVE	LHIV	A (Vacutainer only)	4 hours	62, 65, 83, 86
HIV Rapid RNA HIV-1 QUANTITATIVE	RHIV	A (Vacutainer only)	4 hours	62, 65, 83, 86
HIV Screening: HIV1 & 2 Abs/p24 Ag (4th Gen)	HDUO	B	4 hours	83
HIV Therapeutic Drug Monitoring	TDM	**J**	21 days	83
HIV-1 Genotypic Resistance (Integrase)	INTE	A A (2 x 6ml whole blood)	21 days	83
HIV-1 Genotypic Resistance (RT & Protease)	HIVD	A A (2 x 6ml whole blood)	21 days	83
HIV-1 Proviral DNA	HIVP	A Whole blood	7 days	83

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TEST	CODE	SAMPLE REQS	TAT	PAGE
HIV-1 RNA Viral Load by PCR	HIV1	A A (2 x 6ml whole blood)	3 days	83
HIV-1 Tropism	TRPM	A A (2 x 6ml whole blood)	28 days	83
HIV-2 RNA by PCR	HIV2	A	21 days	83
HIV/HBV/HCV (Early detection by PCR/NAAT) with Syphilis	STXX	B A 10mls or 2 x 4mls	3 days	62, 65
HIV/HBV/HCV Screen by PCR/NAAT (10 days post exposure)	STDX	A 10mls or 2 x 4mls (Vacutainer only)	3 days	62, 65, 83-84, 86
HLA B*57:01	HL57	A [9]	10 days	83
HLA B27	HLAB	A [9]	3 days	69
HLA DQ Alpha Antigens	10RF	A A	2 weeks	50
HLA DQ Beta Antigens	11RF	A A	2 weeks	50
HLA DR Antigens	9RF	A A	2 weeks	50
HLA Tissue Typing A	HLA	A [9]	10 days	102
HLA Tissue Typing A+B	HLBA	A [9]	10 days	102
HLA Tissue Typing A+B+C (Class I)	HABC	A [9]	10 days	102
HLA Tissue Typing A/B/DRB1/3/4/5	HLAF	A [9]	10 days	102
HLA Tissue Typing A/B/DRB1/3/4/5/DQB1	HLF	A [9]	10 days	102
HLA Tissue Typing A/B/C/DRB1/3/4/5/DQB1 (Class I & II)	HLFC	A [9]	10 days	102
HLA Tissue Typing B	HLB	A [9]	10 days	102
HLA Tissue Typing B*27 only	HLAB	A [9]	3 days	102
HLA Tissue Typing B*51 (Behcet's Disease)	B51	A [9]	10 days	102
HLA Tissue Typing B*57:01 high resolution	HL57	A [9]	10 days	102
HLA Tissue Typing C	HLC	A [9]	10 days	102
HLA Tissue Typing Coeliac Disease – DQ2/DQ8	Q2Q8	A [9]	10 days	102
HLA Tissue Typing DRB1/3/4/5	DRB1	A [9]	10 days	102
HLA Tissue Typing DRB1/3/4/5/DQB1 (Class II)	HLDQ	A [9]	10 days	102
HLA Tissue Typing Narcolepsy – DQB1*06:02	GENE	A [9]	4 weeks	102
Homocysteine (Quantitative)	HOMO	B [17]	1 day	26
Homocysteine (Urine)	HCYS	**CU**	2 weeks	26
Homovanillic Acid (HVA)	HVA	**PU**	5 days	26
Horse Components	ZZ38	B	2 days	123
House Dust Mite Components	ZZ12	B	2 days	123
HPV (DNA and reflexed mRNA)	HPVT	**TPV**	5 days	62, 146
HPV (HR mRNA types 16, 18 + others)	HPVH	**TPV**	3 days	62
HPV (Individual low & high risk DNA subtypes)	HP20	**TPV/PCR Swab**	3 days	62, 146
HPV mRNA (All High Risk Subtypes)	HPVH	**TPV**	3 days	146
HPV Individually Typed High Risk DNA Subtypes (Self-collect)	HPVZ	Qvintip vaginal swab	3 days	62, 136
HPV mRNA (All High Risk Subtypes) (Self-collect)	HPVY	Qvintip vaginal swab	3 days	62, 136
HRT Profile 1	HRT	B	4 hours	47, 51
HRT Profile 2	HRT2	B G	4 hours	47, 51
HTLV 1 & 2 Abs. (Human T Lymphotropic Virus Type I-II)	HTLV	B	8 hours	83
HTLV by PCR	HTLP	A Whole blood	21 days	83
Hughes Syndrome	LUPA	B C C [4,18]	2 days	34
Human Anti-Mouse Antibodies	HAMA	B (Frozen)	6 weeks	69
Human Herpes Virus – 6 by PCR	HHV6	A	5 days	84
Human Herpes Virus – 8 (IgG)	HHV8	B	10 days	84
Human Herpes Virus – 8 by PCR	HV8D	A	5 days	84
Human Parvovirus B19 – DNA	PCRP	A	2 weeks	84
HVS	HVS	**STM/CS** ‡‡‡‡	2-4 days	39
Hyaluronic Acid	AHT	B	1 week	26

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Hydroxybutyrate Dehydrogenase	HBD	B (Frozen)	1 week	26
Hydroxyprolene	UHYD	**CU**	2 weeks	26
Identity Profile (DNA) – 15 STR markers	DNAF	A [9,11]	10 days	102
IgE (Total)	IGE	B	1 day	69
IGF-1 (Somatomedin)	SOMA	B (Frozen) [4]	1 day	47
IGF-BP3	IGF3	B (Frozen) [4]	5 days	47
IgG Subclasses	IGSC	B	4 days	26
Imipramine	IMIP	A [4]	4 days	118
Immune Function Evaluation (Total)	TIE	A + B [5,10]	7 days	33
Immune-Complexes	IMCP	B	5 days	69
Immunoglobulin A	IGA	B	4 hours	26
Immunoglobulin D	IGD	B	5 days	26
Immunoglobulin E – Total	IGE	B	1 day	26
Immunoglobulin G	IGG	B	4 hours	26
Immunoglobulin M	IGM	B	4 hours	26
Immunoglobulins (IgG, IgM, IgA)	IMM	B	4 hours	26, 69
Impotence Profile	IMPO	A B B G	3 days	47, 51
Individual Semen Parameters* **	SPOD	**Semen** [1]	1 day	54
Inhibin A	INIA	B	1 month	47
Inhibin B	INIB	B (Day 3 of cycle, frozen)	5 days	47
Inner Ear Antigen (Ottoblot)	IEA	B	3 weeks	69
INR	PTIM	C [18]	4 hours	33
Insect/Worm/Ova/Cysts	FLEA	Send Specimen [9,14]	5 days	76
Insulin	INSU	B	4 hours	47
Insulin Antibodies	INAB	B	5 days	69
Insulin Resistance, HOMA (Fasting)	FIRI	B G	4 hours	47
Insulin-Like Growth Factor 2	IGF2	B [6]	1 month	26
Interleukin 1 Beta	ILB	B (Frozen) [4,7]	1-2 weeks	69
Interleukin 2	IL2	B (Frozen) [4,7]	1-2 weeks	69
Interleukin 4	IL4A	B (Frozen) [4,7]	1-2 weeks	69
Interleukin 6	IL6	B (Frozen) [4,7]	1-2 weeks	69
Interleukin 8	IL8	B (Frozen) [4,7]	1-2 weeks	69
Interleukin 10	IL10	B (Frozen) [4,7]	1-2 weeks	70
Interleukin 28b Genotype	IL28	A	2 weeks	70
Intrinsic Factor Antibodies	IFAB	B	2 days	70
Iodide – Urine	UIOD	**RU**	1 week	26
Iodine – Serum	IODI	B	1 week	27
Ionised Calcium	ICPA	B	5 days	27
Iron (TIBC included)	FE	B	4 hours	27
Iron (TIBC included) (Self-collect)	FE	B (TDL Tiny)	1 day	27, 134
Iron Overload Profile	IOP	A B [9]	3 days	27, 31, 103, 110
Iron Status Profile	ISP	B	4 hours	27, 31
Iron Status Profile (Self-collect)	ISP	B (TDL Tiny)	1 day	27, 134
ISAC Panel	ISAC	B	3 days	120, 122
ISAC Panel (Self-collect)	ISAC	B (TDL Tiny)	3 days	120, 134
Islet Cell Antibodies	ICAB	B	2 days	70
IUCD for Culture	IUCD	Send Device	11-12 days	39
JC Polyoma Virus by PCR	JCPV	A/B/**CSF**	5 days	85
Ketamine Screen	KETA	**RU**	7-10 days	138

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TEST	CODE	SAMPLE REQS	TAT	PAGE
KIR (Killer-like Immunoglobulin-like Receptors) Genotyping	17RF	A A A	2-3 weeks	50
Kiwi Components	ZZ32	B	2 days	123
Lactate (Plasma)	LACT	G [16]	1 day	27
Lactate Dehydrogenase (LDH)	LDH	B	4 hours	27
Lactate Pyruvate Ratio	LPR	**J** [1]	4-6 weeks	27
Lactose Intolerance Gene	LACG	A	2 weeks	103
Lactose Tolerance Test	LTT	By appointment only	1 day	27, 117
Lamotrigine	LAMO	B [4]	5 days	118
Langer-Giedion Syndrome – BOBs (5 days) + karyotype (15 days)	PBOB, KARY	**CVS** / **AF** / A H [9]	5-15 days	103
Langer-Giedion Syndrome – BOBs only	PBOB	**CVS** / **AF** / A [9]	5 days	103
Latex Components	ZZ13	B	2 days	123
LDH Isoenzymes	ISOL	B	5 days	27
LDL7 Subfractions	LDL7	B	10 days	27
Lead (Blood)	LEAD	A	5 days	27, 140
Lead (Urine)	URPB	**RU**	5 days	27, 140
Lead Profile (Hb, ZPP, Lead)	LEAZ	A [13]	3-5 days	140
Legionella Antibodies	LEGO	B	2 days	69
Legionella Urine Antigen	LEGA	**RU**	1 day	39, 70
Leishmania Antibodies	LEIS	B	5 days	76
Leptin	LEPT	B [19]	5 days	27
Leptospirosis (Weil's Disease) Abs (IgM)	LEP	B	5 days	70
Leucocyte Antibody Detection Panel FEMALE	8RF	B	1 week	50
Leucocyte Antibody Detection Panel MALE	7RF	H H H [3,4,6]	1 week	50
Leukaemia Immunophenotyping	LYPT	A [4,5]	5 days	36
Leukotriene E4	LTE4	**CU** (Frozen)	3 weeks	70
Levetiracetam (Keppra)	LEVE	B [4]	3 days	118
Lipase	LIPA	B	4 hours	27
Lipase (Self-collect)	LIPA	B (TDL Tiny)	1 day	27, 134
Lipid Profile	LIPP	B	4 hours	27, 32
Lipid Profile (Self-collect)	LIPP	B (TDL Tiny)	1 day	27, 134
Lipid Transfer Proteins	ZZ23	B	2 days	123
Lipocalins	ZZ28	B	2 days	123
Lipoprotein (a)	LPOA	B	4 hours	27
Lipoprotein (a) (Self-collect)	LPOA	B (TDL Tiny)	1 day	27, 134
Lipoprotein Electrophoresis	LEL	B	5 days	27
Listeria IgG/IgM Antibody	LIST	B	1 week	70
Lithium (take 12 hours after dose)	LITH	B	4 hours	27, 118
Liver Fibrosis (Enhanced Liver Fibrosis ELF)	ELF	B	5-7 days	27
Liver Fibrosis Fibrotest	FIBT	B	2 weeks	27
Liver Function Tests	LFT	B	4 hours	27, 32
Liver Function Tests (Self-collect)	LFT	B (TDL Tiny)	1 day	27, 135
Liver Immunoblot	LIVI	B	3 days	70
Liver Kidney Microsomal Antibodies	LKM	B	2 days	70
Lorazepam	LORA	A [4]	10 days	118
Lp-PLA2 (PLAC) Test	PLA2	B	2 days	27
LSD	LSD	**RU**	5 days	138
Lupus Anticoagulant and Anticardiolipin Abs	LUPA	B C C [4,9,18]	2 days	34, 70
Lupus Anticoagulant only	LUPC	C C [9,18]	2 days	34

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Lutein	LUTE	B [13]	2 weeks	129
Luteinising Hormone (LH)	LH	B	4 hours	47
Luteinising Hormone (Self-collect)	LH	B (TDL Tiny)	1 day	47, 135
Lycopene	LYCO	B	2 weeks	129
Lyme Disease (Borrelia Abs) IgG, IgM	BORR	B [9,14]	2 days	70
Lyme Disease (Borrelia Abs) IgM	BORM	B	2 days	70
Lymphocyte Subsets (CD3/CD4/CD8)	LYSS	A [10]	1 day	33
Lymphogranuloma Venerium (LGV)	LGVP	**PCR*** [42]	1-2 weeks	62
Lymphogranuloma Venerium (LGV) – Rectal (Self-collect)*	LGVP	Aptima multisite swab	1-2 weeks	62, 137
Lysosomal Enzyme Screen	LE	H H [6]	2 months	27
Lysozyme	LYSO	B	5 days	27
Macrolide Resistance Test (Mgen)	MGR	**FCRU / PCR**	1-2 weeks	62
Macroprolactin	PRLD	B	4 days	47
Magnesium (Serum)	MG	B	4 hours	27, 140
Magnesium (Urine)	URMG	**PU**	1 day	27, 140
Magnesium (Whole blood)	RCMG	A or H	4 days	129
Malarial Antibodies (Pl. falciparum)	MALA	B [9,14]	5 days	76
Malarial Antibodies (species specific)	MALS	B [9,14]	10 days	76
Malarial Parasites	MALP	A [4,9,14]	STAT	33
Malarial Parasites (visa, non-urgent)	MP48	A	2 days	33
Male Genetic Reproductive Profile	GRP	A H [9]	10-15 days	104, 111
Male Hormone Profile	MIPR	B	4 hours	47, 52
Manganese (Serum)	MANG	B	5 days	28, 140
Mannose Binding Lectin	MBL	B	3 weeks	28
MBOCA in Urine	MBOC	**RU**	10 days	141
Mean Cell Volume (MCV)	MCV	A	4 hours	33
Measles Antibodies (IgG) Immunity	MEAS	B	1 day	78, 85
Measles Antibodies (IgM)	MEAM	B [9]	2 days	78, 85
Measles PCR	MEAP	**Buccal swab**	48 hours	85
Measles, Mumps, Rubella (MMR)	MMR	B	1 day	78
Melatonin (Serum)	MEL	B (Frozen)	5 days	47
Melatonin (Urine)	UMEL	**CU** [13]	2 weeks	47
Meningococcal Abs	MENI	B	2-4 weeks	70
Menopause Profile	MENO	B	4 hours	47, 52
Mercury (Blood)	MERC	A or H	5 days	28, 140
Mercury (Urine)	URHG	**RU** [1]	5 days	28, 140
MERS Coronavirus Test	MERS	**J**	1 day	85
Metabolic Syndrome Profile	METS	A B B G	9 days	47, 52
Metanephrines (Plasma)	PMET	A (Frozen plasma)	7 days	47
Metanephrines (Urine)	UMEX	**PU** [1]	5 days	47
Methaemoglobin	METH	A	3 days	28
Methaqualone	METQ	**RU**	5 days	28
Methotrexate	METX	B	2 days	118
Methylmalonic Acid – Serum	MMAS	B	5 days	28
Methylmalonic Acid – Urine	MMA	**CU**	2 weeks	28
Metronidazole Level	METR	B [4]	7 days	117
Microalbumin (Urine)	UMA	**RU**	4 hours	28
Microdeletion (common) Syndromes – BOBs only	PBOB	**CVS / AF /** A [9]	5 days	104
Microfilaria Blood Film	MICF	A	STAT	33

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Miller-Dieker Syndrome – BOBs (5 days) + karyotype (15 days)	PBOB, KARY	**CVS / AF /** A H [9]	5-15 days	105
Miller-Dieker Syndrome – BOBs only	PBOB	**CVS / AF /** A [9]	5 days	105
Mineral Screen	MINE	B K	5 days	129-130
Mineral Screen (Whole blood)	RMIN	H H	5 days	129-130
Mineral Screen and Industrial Heavy Metal Screen (Trace Metals)	TRAC	A B H K	7-10 days	129-130
Miscarriage/Thrombotic Risk Profile	PROP	A A B C C C [18]	5 days	34,37
Mitochondrial Antibodies	AMIT	B	3 days	70
Mitochondrial Antibodies M2	MAM2	B	2 days	70
Molybdenum (Serum)	MOLY	B	5 days	141
Monkeypox Virus (Lesion) (Self-collect)	MPXV	Aptima multisite swab	2 days	62, 137
MRSA Culture one swab per site	MRSW	**Blue Micro Swab**	2 days	39
MRSA Culture (Self-collect) – Nose/Groin	MRW2	Purple liquid Amies swab x2	2 days	39, 136
MRSA Culture (Self-collect) – Nose/Groin/Axilla	MRW3	Purple liquid Amies swab x3	2 days	39, 136
MRSA (Rapid PCR) one swab per site	MRSA	**Blue Micro Swab**	4 hours	39
MRSA PCR (Self-collect) – Nose/Groin	MRS2	Purple liquid Amies swab x2	1 day	39, 136
MRSA PCR (Self-collect) – Nose/Groin/Axilla	MRS3	Purple liquid Amies swab x3	1 day	39, 136
Mucopolysaccharides	MPS	**RU** (Frozen)	3 weeks	28
Mumps Antibodies (IgG)	MUMP	B	1 day	78
Mumps Antibodies (IgM)	MUMM	B	1 day	78, 85
Myasthenia Gravis Evaluation	MGE	B	5 days	70
Mycology/Skin Scrapings by PCR	DERM	Submit Sample	3-7 days	39
Mycophenolic Acid (Cellcept)	MYCP	A	5 days	118
Mycoplasma genitalium by PCR	MGEN	**FCRU / PCR / TPV**	2 days	62, 144
Mycoplasma genitalium Detection – Urine or Vaginal (Self-collect)	MGEN	Aptima urine or multisite swab	2 days	62, 137
Mycoplasma genitalium Resistance – Urine or Vaginal (Self-collect)*	MGR	Aptima urine or multisite swab	2 days	62, 137
Mycoplasma genitalium/Ureaplasma by PCR	MUPC	**FCRU / PCR / TPV**	2 days	62, 144
Mycoplasma species – DNA	MPCR	A	5 days	85
Myelin Associated Glycoprotein Antibodies	MAG	B	5 days	70
Myelin Basic Protein Antibodies	MBPA	B	2 weeks	70
Myeloma Screen	MYEL	A B G **RU**	5 days	28, 32
Myeloperoxidase Antibodies	MPO	B	2 days	70
Myocardial Antibodies	MYO	B	1 week	70
Myoglobin (Serum)	SMYO	B	4 hours	28
Myoglobin (Urine)	UMYO	**RU**	5-10 days	28
Myositis Panel	MYOS	B	3 days	70
Mysoline (Primidone)	PRIM	B [4]	3 days	118
Nail Clippings	DERM	**Nail clippings**	3-7 days	39
Natural Killer Profile 2	NKP2	A	2 days	33, 37
Needle Stick Injury Profile	NSI	B B	4 hours	85-86
Neurological Viral Screen	NVIR	B B	2 days	85-86
Neuronal Antibody (Hu, Ri, Yo, Cv2, Ma2)	NEUR	B	10 days	70
Neurone Specific Enolase	NSE	B	5 days	88
Newborn Screening Panel	GUTH	**J** [1]	2 weeks	28
Nickel (Serum)	NICK	B	5 days	28, 140
Nickel (Urine)	NICU	**RU**	10 days	28, 140
NK (CD69) and NK Cytotoxicity	69C	H H H*	Send Mon-Thurs only	50

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
NK (CD69) Cell Assay	CD69	H*	Send Mon-Thurs only	50
NK Assay Follow-Up Panel	5RF	HHH	1 week	50
NK Assay Panel + Intralipids	16RF	HHH	1 week	50
NK Assay/Cytotoxicity Panel	4RF	HHH	1 week	50
NK Cytotoxicity Assay	HSNK	HHH*	Send Mon-Thurs only	50
NK Cytotoxicity with suppression with steroid, IVIg and intralipin, and NK (CD69) cell assay	69CI	HHH*	Send Mon-Thurs only	50
NK Cytotoxicity with suppression, steroid, IVIg & Intralipin	NKCY	HHH*	Send Mon-Thurs only	50
NMDA Receptor Antibodies	NMDA	B	3 weeks	70
Non-Invasive Prenatal Testing – common aneuploidy screening from maternal blood	NIPT	**J / Special tubes** [1]	3-5 days	106, 115-116
Nucleic Acid Antigen Antibodies	DNA	B	2 days	70
Oestradiol (E2)	OEST	B	4 hours	47
Oestradiol (E2) (Self-collect)	OEST	B (TDL Tiny)	1 day	48, 135
Oestriol (Estriol)	E3	BB	4 days	48
Oestrone	E1	BB	4 days	48
Olanzapine	OLAN	A [4]	5 days	118
Oligoclonal Bands	CSFO	**CSF** + B	5 days	70
Oligosaccharides	UOLI	**RU**	6 weeks	28
Olive Components	ZZ14	B	2 days	123
Omega 3/Omega 6	OMG3	A [4]	4 days	129-130
Omega 3/Omega 6 (Self-collect)	OMG3	A (TDL Tiny)	4 days	129-130, 137
Opiate Screen (Urine)	UOPI	**RU**	2 days	138
Orosomucoid (A1AG – Alpha 1 Glycoprotein)	OROS	B (Frozen)	5 days	28
Osmolality (Serum)	OSMO	B	1 day	28
Osmolality (Urine)	ROSM	**RU**	1 day	28
Osteocalcin	OST	B (Frozen) [4]	4 days	48, 88
Osteoporosis Screen	OPS	BB	4 days	28, 32
Ovarian Autoantibodies	OVAB	B	2 days	70
Oxalate (Plasma)	POXA	A (Frozen)	7 days	28
Oxalate (Urine)	UOXA	**PU**	5 days	28
Oxidative Stress in Semen (ROS + MIOXSYS)	SROS	**Semen** [1]	1 day	54
P2Y12 Receptor Platelet Function Analysis (Clopidogrel Resistance)	P2Y	C (Whole blood) [5,9] **	1 day	34
PAI1 4G/5G Polymorphism	PAIP	A	10 days	33
Pancreatic Peptide	PP	**J**	4 weeks	28
PAPT and HPVH	PAPT + HPVH	**TPV**	6 days (combined report)	146
Paracetamol	PARA	B	4 hours	118
Paragomius Serology	PRGM	B	2 weeks	70
Parathyroid Antibodies	PTHA	B	1 week	70
Parathyroid Hormone (Whole)	PTHI	B [4]	1 day	48
Parathyroid Related Peptide	PTRP	2ml A Plasma frozen (Freeze immediately) [1]	2 weeks	28
Parvalbumins	ZZ29	B	2 days	123
Parvovirus Antibodies (IgM)	PARV	B	2 days	85
Parvovirus IgG Antibodies	PARG	B	2 days	85
Parvovirus IgG/IgM Abs	PARP	B	2 days	85

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Paternity Testing (postnatal and prenatal) Sample required from each person being tested (3 people)	PATT	A / **AF** / **CVS** [1,12] **Contact Genetics lab**	5 days	106
Paul Bunnell (Monospot)	PAUL	A or B	8 hours	33
Peach Components	ZZ15	B	2 days	123
Peanut Components	ZZ16	B	2 days	123
Pemphigus/Pemphigoid Autoantibodies	SKAB	B	2 days	70
Pertussis (Whooping Cough) Antibodies	PERS	B	5 days	70, 78
PEth (Phosphatidylethanol)	PETH	A [38]	5-7 days	28, 138
Pethidine – Urine	UPET	**RU**	4 weeks	141
Phelan-McDermid Syndrome – karyotype + FISH	KARY, FISH	**CVS** / **AF** / H [9]	12-17 days	107
Phencyclidine (PCP)	DUST	**RU**	5 days	28
Phenobarbitone	PHB	B	4 hours	118
Phenytoin (Epanutin)	PHEN	B	4 hours	118
Phosphate	PHOS	B	4 hours	28
Phosphate (24 hour Urine)	UPH	**PU**	4 hours	28
Pituitary Antibodies	PITU	B [4]	1 month	70
Pituitary Function Profile	PITF	B B	1 day	48, 52
PLAC Test (Lp-PLA2)	PLA2	B	2 days	28
Plasminogen	PLAS	C (Frozen plasma) [4]	5 days	28
Plasminogen Activator Inhibitor – 1	PAI1	C (Frozen plasma)	2 weeks	28
Platelet function test Screen- PFA-100/200	PFAT	C (Whole blood) [5,9] **	1 day	34
Platelet Aggregation Studies	PLAG	C C C C C (Whole blood)** **J** [9]	3 days	34
Pleural Fluid for Culture	FLUP	**SC**	7 days	39
Pneumococcal Antibodies – Serotype Specific	PASS	B	5 weeks	70
Pneumococcal Antibody Screen	PNEU	B	5 days	70, 78
Pneumococcal Antigen	PNAG	**RU**	1 day	39
Pneumocystis Jiroveci (PCP) Examination	PCYS	**BAL** ‡‡	2-3 days	39
Pneumonia (Atypical) Screen	APS	B	2 days	85
Polcalcins	ZZ25	B	2 days	123
Polio Virus 1, 2, 3 Antibodies	POLO	B [9]	15 days	78
Polycystic Ovary Syndrome Profile	PCOP	A B B B G [7]	5 days	48, 52
Polycystic Ovary Syndrome SHORT	PCOS	B G	4 hours	48, 52
Porphyrin (Blood)	PORP	A [3]	15 days	28
Porphyrin (Stool)	FPOR	**RF** [3]	3 weeks	28
Porphyrin (Urine)	RPOR	**RU** [3]	3 weeks	28
Porphyrin Full Screen (Total: Urine, Stool, Blood)	PORS	A **RU**, **RF** [3]	3 weeks	28, 32
Post-Travel Screen 1 (Prior to 6 weeks)	PTS	A A B G [14]	10 days	76-77
Post-Travel Screen 2 (Prior to 6 weeks)	PTS2	A A B B B G [14]	10 days	76-77
Postnatal array CGH	CGH	A H [9]	10 days	107
Potassium	K	B	4 hours	28
PR-10 Proteins	ZZ22	B	2 days	123
Prader-Willi Syndrome (Primary Screen) – methylation PCR	PWAM	A [9]	10 days	107
Pre-Travel Screen (DVT)	DVT1	A A B [9]	5 days	33, 37, 76
Prenatal array CGH	CGH	**Amniotic fluid** or **CVS** [9]	10 days	107
Prealbumin	PALB	B	3 days	120
Pregnancy (Serum) [Quantitative]	QHCG	B	4 hours	28, 48
Pregnancy Test (Urine)	PREG	**RU**	4 hours	29

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Pregnanetriol (Urine)	UPTR	**CU** (Frozen)	5 days	48
Pregnenolone	PREN	B	15 days	48
Pre-Travel Screen (DVT)	DVT1	A A B [9]	5 days	107, 111
Primidone (Mysoline)	PRIM	B [4]	3 days	118
Procalcitonin	PCAL	B (Frozen) [4,7]	1 day	29
Procollagen 1 Peptide N-Terminal (NTX)	P1NP	B	5 days	29
Procollagen III Peptide	PRCO	B	5 days	29
Products of Conception – rapid BOBs aneuploidy diagnosis for all chromosomes (10 days) + culture (25 days)	PBK	**Placental Sample** [1,9]	10-25 days	107
Products of Conception (BOBs + Culture)	PBK	**Placental Sample** [1,9]	10-25 days	107, 111
Products of Conception BOBs only – rapid aneuploidy diagnosis for all chromosomes	KBOB	**Placental Sample** or **Solid Tissue** [1,9]	10 days	107
Profilins	ZZ24	B	2 days	123
Progesterone	PROG	B	4 hours	48
Progesterone (Self-collect)	PROG	B (TDL Tiny)	1 day	48, 135
Proinsulin	PROI	A (Frozen plasma) [4]	5 days	48
Prolactin	PROL	B	4 hours	48
Prolactin (Self-collect)	PROL	B (TDL Tiny)	1 day	48, 135
Prolactin (Macro)	PRLD	B	4 days	48
Propanalol	PRO	B [4]	7 days	118
Propoxyphene	DPRO	**RU**	5 days	29
Prostate Profile (Total & Free PSA)	PR2	B	4 hours	88
Prostate Specific Antigen (Total)*	PSPA	B	4 hours	88
Prostate Specific Antigen (Total) (Self-collect)	PSPA	B (TDL Tiny)	1 day	88, 137
Prostatic Acid Phosphatase	PACP	B (Frozen)	3 days	29
Protein (Urine)	UPRT	**CU**	4 hours	29
Protein 14.3.3 (Creutzfeldt–Jakob Disease)	CJD	**CSF** (Frozen)	5 weeks	29
Protein C	PRC	C (Frozen) [4,9,18]	3 days	34
Protein S Activity	PS1	C (Frozen) [4,9,18]	5 days	34
Protein Electrophoresis incl. immunoglobin	PRTE	B	2-4 days	29
Protein Total (Blood)	PROT	B	4 hours	29
Protein/Creatinine Ratio (Urine)	UCPR	**RU**	4 hours	29
Proteinase 3 Ab	PR3	B	2 days	70
Prothrombin Time	PTIM	C [18]	4 hours	33
Prothrombin Time + Dose	PT+D	C [18]	4 hours	33
Purkinje Cell Antibody (Hu and Yo)	PURK	B	10 days	70
Pyruvate Kinase (M2-PK)	M2ST	**RF** [4]	5 days	88
Pyruvate Kinase (M2-PK)	M2PK	A (Frozen plasma) [7]	5 days	88
Q Fever (C Burnetti) Antibodies	QFEV	B [9]	10 days	70
QF-PCR rapid common aneuploidy screen	APC	**AF** / A [9]	2 days	107
QFIT/Calprotectin Profile (Combined) NEW	QCAL	**QFIT**	5 days	39, 40
Quantitative Faecal Immunochemical Test (QFIT)	QFIT	**QFIT**	1 day	39
Quantitative Faecal Immunochemical Test (QFIT) (Self-collect)	QFIT	**QFIT** faecal collection tube	1 day	39, 136
Rabies Antibody	RABI	B	10 days	78
Rapid Strep (incl. m/c/s)	RAPS	**STM****	1-3 days**	39
Rapid Xpert HIV-1 RNA Qualitative – Early Detection from 10 days	LHIV	A (Vacutainer only)	4 hours	62

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Rapid Xpert HIV-1 RNS Viral Load – Rapid Testing for HIV-Positive Patient Prognosis and Response To Antiretroviral Therapy	RHIV	A (Vacutainer only)	4 hours	63
Recurrent Miscarriage Profile (female)	RMP	A A B C C C H [9,18]	10-15 days	107, 112
Renal Calculi Screen (Metabolic)	RSPR	**J** [6]	5 days	29
Renal Stone Analysis	RSTA	**STONE**	10 days	29
Renin	RENI	A (Frozen plasma)[36]	5 days	48
Reproductive Immunophenotype Panel	3RF	H H H	1 week	50
Respiratory PCR Panel (COVID-19, Flu A/B and RSV)	FLU4	**PCR** nasopharyngeal	2 days	85-86
Respiratory PCR Panel (COVID-19, Flu A/B and RSV) (Self-collect)	FLU4	Throat and nose swab	2 days	85, 137
Reticulocyte Count	RETC	A	4 hours	33
Retinol Binding Protein	RBP	B	3 days	29
Retrograde Ejaculation	RTRO	Contact lab	2 days	54
Reverse T3	RT3	B [7,37]	10 days	48
Rheumatoid Factor (Latex Test)	RF	B	1 day	70
Rheumatology Profile 1 (Screen)	RH	A B	2 days	70, 74
Rheumatology Profile 2 (Connective Tissue)	RH2	A A B B	3 days	70, 74
Rheumatology Profile 3 (Rheumatoid/Basic)	RH3	A B	2 days	70, 74
Rheumatology Profile 4 (Systemic Lupus)	RH4	A B B	2 days	70, 74
Rheumatology Profile 5 (Mono Arthritis)	RH5	A A B B	3 days	71, 74
Rheumatology Profile 6 (Rheumatoid Plus)	RH6	B	2 days	71, 74
Rheumatology Profile 7 (Sjogren's Syndrome)	RH7	B	10 days	71, 74
Rickettsial Species Antibody Profile	RICK	B	7 days	71
Rickettsial Species Antibody Profile	RICK	B	7 days	76
Risperidone	RISP	A [4]	7 days	119
RNA Polymerase Antibodies	RNAP	B	3 days	71
Rotavirus in Stool by PCR	ROTA	**RF**	1 day	85
RPR (Syphilis)	RPR	B	2 days	62, 71
Rubella Antibody (IgG)	RUBE	B	4 hours	78, 85
Rubella Antibody (IgM)	RUBM	B	4 hours	78, 85
Rubella Avidity	RUAV	B	1 week	85
Rubella PCR	RUBP	A / **Amniotic Fluid**	5 days	78
S100 Malignant Melanoma	S100	B	4 days	88
Saccharomyces Cerevisiae Antibodies	ASCA	B	2 weeks	71
Salicylates	SALI	B	4 hours	29
Salivary Duct Antibodies	SAB	B	12 days	71
Schistosoma (Urine)	USCH	Mid-morning terminal urine following exercise [14]	1-2 days	39
Schistosome (Bilharzia) Antibodies	BILH	B [14]	10 days	76
Scleroderma Immunoblot	SCLI	B	3 days	71
Screening Profile 1 – Biochemistry	PP1	B G	4 hours	20
Screening Profile 2 – Haematology/Biochemistry	PP2	A B G	4 hours	20
Screening Profile 3 – Haematology	PP3	A	4 hours	20
Screening Profile 4 – Haematology/Biochemistry (Short)	PP4	A B G	4 hours	20
Screening Profile 5 – Haematology/Biochemistry (Postal)	PP5	A B G	4 hours	20
Screening Profile 6 – Well Person	PP6	A B G	4 hours	20
Screening Profile 7 – Well Man	PP7	A B G	4 hours	21
Screening Profile 8 – Well Person	PP8	A B G	4 hours	21
Screening Profile 9F – Senior Female CHANGE	PP9F	A B B G **RU** [4]	2 days	21
Screening Profile 9M – Senior Male CHANGE	PP9M	A B B G **RU** [4]	2 days	21

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Alphabetical test index

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Sputum for TB Culture (AFB)	SPU2	**SC**	up to 8 weeks	39
Squamous Cell Carcinoma	SCC	B	4 days	88
STD1 M/F STD Quad (Urine and Serology)	STD1	B **FCRU**	2 days	62, 64
STD2 M/F STI Profile Plus (Urine and Serology)	STD2	B **FCRU** (If culture swabs are needed please request separately)	4 days	62, 64
STD3 Female STD Quad (PCR Swab and Serology)	STD3	B **PCR**	2 days	63-64
STD4 Female STI Profile Plus (PCR Swab and Serology)	STD4	B **PCR** (If culture swabs are needed please request separately)	4 days	63-64
STD5 Serology only	STD5	B	4 hours	63-64
STD6 Serology only without HIV	STD6	B	4 hours	63-64
STD8 Vaginitis/BV Profile using Culture & PCR Swab	STD8	**PCR / STM**	3 days	63-64
STD9 Symptomatic lesion sample using PCR Swab from lesion & PCR Swab	STD9	2 x **PCR Swab**	7 days	63-64
Steroid Cell Antibody	SCA	B	2 days	71
STI Profile by PCR (7 tests from 1 Sample) (Self-collect)	PP12	Aptima urine or multisite swab	2 days	63, 137
STI Profile: MSM1	MSM1	B / **FCRU / PCR Swab Throat / PCR Swab Rectal**	2 days	63, 65
STI Profile: MSM2	MSM2	B / **FCRU / PCR Swab Throat / PCR Swab Rectal**	3 days	63, 65
Stool for OCP and Culture	PENT	**RF**	2-3 days	40
Stool for OVA Cysts & Parasites by PCR	MOCP	**RF**	1 day	40
Stool Reducing Substances	STRS	**RF**[7]	5 days	40
Streptomycin Levels	STRM	F	5 days	119
Striated/Skeletal Muscle Antibody	STRA	B	2 days	71
Strongyloides Antibodies	STGA	B	10 days	71
Sulpiride	SULP	B[4]	4 days	119
Superoxide Dismutase Inhibitor	SODI	A / H	5 days	29
Suppression with steroid, IVIg and intralipin, NK (CD69) cell assay, TH1/TH2 cytokines	NCIT	H H H*	Send Mon-Thurs only	50
Swab (Cervical)	CERS	**STM / CS**	2-4 days	40
Swab (Ear)	EARS	**STM**	2-4 days (Culture) 8-9 days (Fungal) – same swab	40
Swab (Eye)	EYES	**STM**	2-4 days	40
Swab (Nasal)	NASS	**STM**	2-4 days	40
Swab (Oral)	ORSW	**STM / CS**	2-4 days	40
Swab (Penile)	PENS	**STM / CS**	2-4 days	40
Swab (Rectal)	RECG	**STM / CS**	2-4 days	40
Swab (Skin)	SKIS	**STM**	2-4 days	40
Swab (Throat)	THRS	**STM**	2-4 days	40
Swab (Urethral)	URES	**STM / CS**	2-4 days	40
Swab (Vaginal)	VAGS	**STM / CS**	2-4 days	40
Swab (Vulval)	VULV	**STM / CS**	2-4 days	40
Swab (Wound)	WOUS	**STM**	2-4 days	40
Synacthen Stimulation Test	SYNA	By appointment only	1 day	117
Synovial Fluid (for microscopy and culture)	FLU2	**SC**†††	14 days	40
Syphilis by PCR (chancre)	SYPS	**PCR**	5 days	63
Syphilis IgG/IgM	SERJ	B	4 hours	63, 71

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Syphilis IgG/IgM (Self-collect)	TSYP	B (TDL Tiny)	1 day	63, 71, 136-137
T Regulatory Cells	25RF	H	3 days	50
T-SPOT®.COVID	TCEL	H***	3 days	71
T3	T3	B	4 hours	48
T3 (Reverse)	RT3	B [7,37]	10 days	48
Tacrolimus/Prograf (FK506)	FK5	A [4]	1-2 days	119
Taipan Snake Venom Time	TTVT	C C [9,18]	1 week	35
TB (Pleural Fluid)	TBCU	**SC**	up to 8 weeks	40
TB Culture	SPU2	**SC**	up to 8 weeks	40
TB Culture (Urine)	TBUR	3 x **EMU**	up to 8 weeks	40
TB Quantiferon®-TB Gold*	TBQ4	**Special tubes** or H [1]	3 days	71
TB Slopes – Confirmation and Sensitivity	TBSL	**TB slope** (LJ medium-green) [6]	up to 8 weeks	40
Tegretol (Carbamazepine)	CARB	B	4 hours	119
Teicoplanin Assay	TEIC	B	5 days	117
Temazepam	TEMA	B [4]	4 days	119
Testicular Autoantibodies	TAB	B	2 days	71
Testicular Tumour Profile	TTP	B	4 hours	88
Testosterone	TEST	B	4 hours	48
Testosterone (Self-collect)	TEST	B (TDL Tiny)	1 day	48, 135
Testosterone (Free)	FTES	B	3 days	48
Tetanus Antibody	TETA	B	5 days	71, 78
TH1/TH2 Cytokine Profile	1TH2	H H H*	Send Mon-Thurs only	50
TH1/TH2 Cytokine Ratio	6RF	H H H [5]	1 week	50
TH1/TH2 Intracellular Cytokine Ratios with IVIG	21RF	H H H [5]	1 week	50
TH1/TH2 Intracellular Cytokine Ratios with IVIG, Prednisolone	20RF	H H H [5]	1 week	50
TH1/TH2 Intracellular Cytokine Ratios with Prednisolone	22RF	H H H [5]	1 week	50
Thalassaemia Screen	HBEL	A	4 days	35
Thallium (Blood)	THAL	A / H	1 week	141
Thallium (Urine)	URTH	**RU**	1 week	141
Theophylline	THEO	B	4 hours	119
Thiopurine Methyl Transferase	TPMT	A [5]	5 days	29
Thrombin Time	THRO	C [18]	4 hours	33
Thrombotic Risk Profile	PROP	A A B C C C [18]	5 days	35, 37, 109, 112
Thyroglobulin Abs	TGAB	B	1 day	48
Thyroglobulin Assay	TGA	B	1 day	48
Thyroid Abs (incl. Thyroglobulin + Thyroid Peroxidase Abs)	THAB	B	1 day	48, 71
Thyroid Peroxidase Antibodies/Anti TPO	TPEX	B	1 day	48, 71
Thyroid Profile 1	TF	B	4 hours	48, 52
Thyroid Profile 1 (Self-collect)	TF	B (TDL Tiny)	1 day	49, 135
Thyroid Profile 2	TF2	B	2 days	49, 52
Thyroid Profile 3	TF3	B	4 hours	49, 52
Thyroid Profile 3 (Self-collect)	TF3	B (TDL Tiny)	1 day	49, 135
Thyroxine (T4)	T4	B	4 hours	49
Thyroxine (T4) (Self-collect)	T4	B (TDL Tiny)	1 day	49, 135
Thyroxine Binding Globulin	TBG	B (Frozen)	10 days	49
Timothy Grass Components	ZZ19	B	2 days	124

Please ensure all specimens and forms are labelled with given Forename, Surname, DOB, Date and Time of sample collection. Turnaround times are measured from the point at which samples are entered into TDL's laboratory system and provide a guide for the issue of results. Please note that times quoted in days refer to working days (Monday to Friday).

TEST	CODE	SAMPLE REQS	TAT	PAGE
Tissue for culture	TISS	**Tissue sample**	up to 14 days	40
Tissue Polypeptide Antigen	TPA	B	1 week	29
Tissue Transglutaminase IgA (Coeliac)	TAA	B	2 days	71, 74
Tissue Transglutaminase IgA (Coeliac) (Self-collect)**	TAA	B (TDL Tiny)	2 days	72, 136
Tissue Transglutaminase IgG	TAAG	B	5 days	72
Tobramycin Assay (Provide Clinical Details)	TOBR	B	3 days	117
Toluene (Blood)	TOL	**J**	10 days	141
Toluene (Urine)	UTOL	**RU**	10 days	141
Topiramate (Topamax)	TOPI	B [4]	4 days	119
Torch Screen	TORC	B	2 days	85-86
Total Acid Phosphatase	APT	B	5 days	29
Total Bile Acid/Bile Salts	BILS	B	1 week	29
Total IgE	IGE	B	1 day	29, 120
Total Immune Function Evaluation	TIE	A + B [5,10]	7 days	72
Total Immunoglobulin E	IGE	B	1 day	72
Toxocara Antibodies (IgG)	TFAT	B [9]	5 days	72
Toxoplasma Antibodies (IgG+IgM)	TFAM	B [9]	4 hours	72, 76
Toxoplasma Antibody Full Evaluation (IgM, Dye Test, IgG Avidity)	TDYE	B [9]	10 days	72
Toxoplasma by PCR	TXAG	A	5 days	72
TPPA	TPPA	B	2 days	63, 72
Trace Metal (Blood) Profile	TRAC	A B H K	7-10 days	140-141
Transferrin	TRAN	B	1 day	29
Transferrin Electrophoresis	TREL	B	2 weeks	29
Trichinella Serology	TRIC	B	5 days	72
Trichloracetic Acid (Urine)	UTCA	**RU**	5 days	141
Trichomonas Vaginalis (TV) – Urine or Vaginal (Self-collect)	TVPC	Aptima urine or multisite swab	2 days	63, 137
Trichomonas vaginalis by PCR	TVPC	**FCRU / PCR / TPV**	2 days	63, 144
Triglycerides	TRI	B	4 hours	29
Trimethylaminuria (Fish Odour Syndrome)	FOS	**PU**	6 weeks	29
Trimipramine	TRIM	A	5 days	119
Triple Swab Female Profile NEW	3SWA	**PCR** / Aptima multisite swab x 3 (label by site)	2 days	63, 65, 137
Tropical Screen (from 6 weeks post-travel)	TROP	B B [9,14]	10 days	76-77
Tropomyosins	ZZ31	B	2 days	124
Troponin T (High sensitive)	TROT	B	4 hours	29
Trypanosome (Chagas) Antibodies	CHGA	B [9,14]	10 days	72
Tryptase	STRY	B	2 days	29, 120
TSH	TSH	B	4 hours	49
TSH (Self-collect)	TSH	B (TDL Tiny)	1 day	49, 135
TSH-Receptor Antibodies	TSI	B	4 days	49, 72
Tularaemia Antibodies	TULA	B [14]	5 days	72
Tumour Necrosis Factor – Alpha	TNF	B (Frozen) [4]	2 weeks	29
Urate (Uric acid)	UA	B	4 hours	29
Urea	UREA	B	4 hours	29
Urea (Urine)	UURE	**CU**	4 hours	30
Urea and Electrolytes	U/E	B	4 hours	29, 32
Urea Electrolytes (Urine)	UELE	**CU**	4 hours	29
Ureaplasma urealyticum by PCR	UGEN	**FCRU / PCR / TPV**	2 days	63, 144
Uric Acid (Serum)	UA	B	4 hours	30

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Alphabetical test index

TEST	CODE	SAMPLE REQS	TAT	PAGE
Uric Acid (Serum) (Self-collect)	UA	B (TDL Tiny)	1 day	30, 135
Uric Acid (Urine)	UURI	**CU**	4 hours	30
Urinary Bladder Cancer Antigen NEW	UBC	**RU** (Freeze within 48 hours)**	5 days	30, 88
Urinary Methyl Histamine	UHIT	**RU** (Frozen)	2 weeks	72
Urine (Microscopy Only)	UMIC	**RU**	1 day	40
Urine Chemistry and Microscopy (Self-collect)	UMIC	Urine (Universal). Mid stream	1-2 days	40, 136
Urine Chemistry, Microscopy and Culture (Self-collect)	UCEM	Urine (Universal). Mid stream	1-2 days	40, 136
Urine Cytology (Urine cytology containers available from TDL Supplies)	URCY	**Urine** (30mls) [21]	2 days	148
Urine EtG (Ethyl glucuronide)	ETG	**RU**	1 week	138
Urine for Extended Culture NEW	UCXD	**MSU**	up to 7 days	40
Urine for Microscopy and Culture	UCEM	**MSU** ††††	1-2 days	40
Urine Free Light Chains	UFLC	**RU**	1 week	30
Urine Organic Acids	UORG	**RU** (Frozen)	3 weeks	30
Urine Steroid Screen (Steroid Hormones)	USTE	**CU** or **RU** [9]	2 weeks	30
Urine Sugar Chromatography	UCRO	**RU** (Frozen)	3 weeks	30
Urobilinogen (Urine)	UURO	**RU**	1 day	30
Urticaria Test (Histamine Releasing)	CURT	B	3 weeks	72
Vaginitis/BV Profile using Culture & PCR Swab	STD8	**PCR / STM**	3 days	63
Valium (Diazepam)	DIAZ	A	7 days	119
Valproic Acid (Epilim)	VALP	B	4 hours	119
Vancomycin Hydrochloride	VANC	B	4 hours	117
Varicella Zoster – DNA	VZPC	A	5 days	85
Varicella Zoster Antibodies (IgG)	VZOS	B	1 day	78, 85
Varicella Zoster Antibodies (IgM)	VZOM	B	1 day	78, 85
Vascular Endothelial Growth Factor	VEGF	B	14 days	72
Venom Components	ZZ33	B	2 days	124
Very Long Chain Fatty Acids	VLCF	A or H (Frozen) [9]	4-6 weeks	30
Vigabatrin (Sabril)	VIGA	A	10 days	119
Viral Antibody Screen	VIRA	B B	2 days	85-86
Viral Eye by PCR	VPE	**PCR**	3 days	85, 87
Viral Respiratory RNA Screen by PCR	VPR	**PCR** or as specified on the form	2 days	85, 87
Viral Skin/Mucosa by PCR	VPSK	**PCR**	2 days	85, 87
Viscosity (Plasma)	VISC	A [4*]	3 days	35
Vitamin A (Retinol)	VITA	B	5 days	128
Vitamin B (Functional)	FUNC	A A or H [13]	5 days	128
Vitamin B Profile	VBP	A A B	5 days	128-129
Vitamin B1 (Thiamine)	VIT1	A	5 days	128
Vitamin B2 (Riboflavin)	VIB2	A	5 days	128
Vitamin B3 (Nicotinamide)	VIB3	B	5 days	128
Vitamin B5 (Pantothenic Acid)	VB5S	B	5 days	128
Vitamin B6 (Pyridoxine)	VITB	A	5 days	128
Vitamin B8 (Biotin)	BIOS	B	5 days	128
Vitamin B9 (Folic acid) – Red cell	RBCF	A	2 days	128
Vitamin B9 (Folic acid) – Serum	FOLA	B	1 day	128
Vitamin B9 (Folic acid) – Serum (Self-collect)	FOLA	B (TDL Tiny)	1 day	128, 137
Vitamin B12 (Active)	B12	B	1 day	30, 128
Vitamin B12 (Active) (Self-collect)	B12	B (TDL Tiny)	1 day	30, 128, 135, 137
Vitamin B12 (Active)/Red Cell Folate	B12F	A B	2 days	30, 128

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TEST	CODE	SAMPLE REQS	TAT	PAGE
Vitamin B12 (Total)	TB12	B	1 day	30
Vitamin C (Active)	VITC	B (Frozen)*	5 days	128
Vitamin D (1, 25 Dihydroxy)	D3	B	5-8 days	128
Vitamin D (25-OH)	VITD	B	4 hours	30, 128
Vitamin D (25-OH) (Self-collect)	VITD	B (TDL Tiny)	1 day	30, 128, 135, 137
Vitamin E (Alpha Tocopherol)	VITE	B	5 days	128
Vitamin K (Nutritional)	VKN	Serum (SST or B)*	5 days	128
Vitamin K (With PIVKA II)	VITK	B [13]	10 days	33
Vitamin Profile 1 CHANGE	VITS	A B B [7]	5 days	128-129
Vitamin Profile 2 CHANGE	VIT2	A A A B B [7,13]	5 days	128-129
VLDL Cholesterol	VLDL	B [13]	1 week	30
VMA	UVMA	**PU** [1]	5 days	30
Voltage Gated Calcium Channel Antibodies	CCAB	B	3 weeks	72
Voltage Gated Potassium Channel Antibodies	VPCA	B	3 weeks	72
Von Willebrand Profile	FVWF	C C C [4,9,12]	5 days	35, 37
Von Willebrands Multimers	VWM	C C C [18]	3 months	35
Wall Pellitory Components	ZZ20	B	2 days	124
Walnut Components	ZZ34	B	2 days	124
West Nile Virus Abs	WNV	B	2 weeks	85
Wheat Components	ZZ21	B	2 days	124
Whooping Cough (Pertussis) Antibodies	PERS	B	5 days	72
Whooping Cough (Pertussis) by PCR	PERP	**Prenasal (posterior nasopharynx) swab**	5 days	72
Wolf-Hirschhorn Syndrome – BOBs (5 days) + karyotype (15 days)	PBOB, KARY	**CVS / AF /** A H [9]	5-15 days	110
Wolf-Hirschhorn Syndrome – BOBs only	PBOB	**CVS / AF /** A [9]	5 days	110
Xanthine – Blood	XANB	A	2 weeks	141
Xylene – Urine	UXYL	**RU** [30]	2 weeks	141
Xylose Tolerance Test	XTT	**J** [1]	7 days	129
Y chromosome microdeletions – AZFa + AZFb + AZFc + SRY	YDEL	A [9]	5 days	110
Yellow Fever Antibodies	YELL	B [9,14]	10 days	72
Yersinia Antibodies	YERS	B	4 days	72
Ziwig Endotest® NEW	ENDT	Endotest saliva collection kit	25 days	49, 100, 112
Zika Abs IgM and IgG – Antibody detection from 15 days	ZKAB	B	Up to 14 days	72, 76, 85
Zika RNA by PCR in Semen	ZIKS	**Semen**	Up to 14 days	72, 76, 85
Zika RT PCR – Window of detection from 1-14 days from onset of symptoms	ZIKU	**RU**	Up to 14 days	72, 76
Zika RT PCR – Window of detection from 1-7 days from onset of symptoms	ZIKA	B	Up to 14 days	72, 76
Zinc (Serum/Plasma)	ZINC	K	1 day	129, 140
Zinc (Urine)	URZN	**CU**	5 days	129, 140
Zinc (Whole Blood)	RBCZ	A or H	5 days	129
Zinc Protoporphyrin	ZNPR	A [13]	5 days	141
Zygosity testing – comparative DNA profile	DNAC	A (From each twin and both parents) [9]	5 days	110

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Referral laboratories

For certain specialist tests TDL has developed a selected network of TDL Group and Reference Laboratories. These Group or specialist laboratories can be identified by a code assigned to reports. The quality of these laboratories is recognised by UKAS, or similar accrediting bodies for the laboratories outside the UK.

TDL Referral laboratories

Addenbrooke's Hospital – BGU and Immunology [899]

Affinity Biomarker Labs [870]

Alder Hey Children's NHS Foundation Trust – Biochemistry Department [880]

Analytical Services International Ltd, St George's University of London – Forensic Toxicology Service [994]

Animal and Plant Health Agency – Veterinary labs [911]

Bio-Diagnostics Ltd [Original report]

Bio Predictive [Original report]

Bioscientia (Germany) [868]

Birmingham Children's Hospital NHS Foundation Trust – Clinical Chemistry [970]

Brucella Reference Unit – Liverpool Clinical Laboratories, Royal Liverpool and Broadgreen Hospital [947]

Cambridge Clinical Laboratory [867]

Cambridge Life Sciences [997]

Cambridge Nutritional Science Ltd [Original report]

Cardiff and Vale University Health Board – The Analytical Toxicology Department [998]

Douglass Hanly Moir Pathology (Australia) [Original report]

Epsom and St Helier University Hospital NHS Trust – Biochemistry Department [968]

Epsom and St Helier University Hospital NHS Trust – Immunology Department [968]

Epsom and St Helier University Hospital NHS Trust – Microbiology Department [951]

Eurofins – Biomnis (France) [950]

Great Ormond Street Hospital – Department of Chemical Pathology [964]

Great Ormond Street Hospital – Enzyme Unit, Chemical Pathology [964]

Great Ormond Street Hospital – Immunology Department [924]

Great Ormond Street Hospital – Neurometabolic Unit [964]

Guildford RSCH Trace Element Laboratory, SAS Trace Element Centre [955]

HCA Healthcare UK – HCA Laboratories [982]

HFL Sport Science (LGC Group) [861]

Igenomix UK [Original Report]

Imperial College Healthcare NHS Trust – Charing Cross Hospital, Chemical Pathology Department [912]

Imperial College Healthcare NHS Trust – Charing Cross Hospital, Infection and Immunity Department [962]

Imperial College Healthcare NHS Trust – Charing Cross Hospital, Medical Oncology [912]

Imperial College Healthcare NHS Trust – Hammersmith Hospital, Molecular Endocrinology [931]

Imperial College Healthcare NHS Trust, St Mary's Hospital – Virology Department [912]

Institute of Aquaculture – University of Stirling [1000]

Institute of Neurology – Neurogenetics Unit [975]

King's College Hospital – HMDC Laboratory for Molecular Haemato-Oncology [943]

Labor Augsburg MVZ GmbH (Germany) [900]

Latis Scientific [927]

London School of Hygiene & Tropical Medicine – Diagnostic Parasitology Lab [933]

Matrix Diagnostics [896]

Mayo Clinic Laboratories (Netherlands [894]

Meningococcal reference unit (Men RU) Manchester – Manchester Royal Infirmary [949]

Micropathology Ltd [920]

National Blood Service – Colindale, Red Cell Immuno Haematology Department [910]

NHS Blood and Transplant – Birmingham [856]

NHS Blood and Transplant – H & I Laboratory [855]

NHS Blood and Transplant – Tooting [854]

Norfolk and Norwich University Hospital NHS Foundation Trust – SAS Metabolic Bone Laboratory [993]

Oxford Immunotec [841]

Oxford University Hospital NHS Foundation Trust – Churchill Hospital [983]

Pathcare [978]

UKHSA – Bacteriology Reference Department (BRD), Colindale [910]

UKHSA – Virus Reference Department (VRD) – Colindale [910]

UKHSA Mycology Reference Laboratory – UKHSA South West Laboratory, Southmead Hospital, Bristol [903]

UKHSA National Mycobacterium Reference Service National Infection Service, Colindale [974]

UKHSA Rare and imported pathogens laboratory – Porton Down [981]

Queens University Hospital, Belfast – Institute of Clinical Science [853]

Radboud University Nijmegen Medical Center (Netherlands) [852]

Randox Health – London [851]

Reflab (Denmark) [988]

Reproductive Immunology Centre [839]

Rosalind Franklin University (USA) - [Original report]

Royal Berkshire Hospital NHS Foundation Trust – Clinical Biochemistry [847]

Royal Devon and Exeter NHS Foundation Trust [838]

Royal Surrey County Hospital – SAS Peptide Hormone Section [959]

Sandwell and West Birmingham NHS Trust – City Hospital Birmingham, Clinical Biochemistry Department [970]

SCSA Diagnostics (USA) [Original report]

Sheffield Children's NHS Trust – Clinical Chemistry [847]

Sheffield Teaching Hospital NSH Foundation Trust – Protein Reference Laboratory Unit and Immunology Department [966]

Southmead Hospital – Antimicrobial Reference Laboratory, Bristol [915]

St George's University Hospital NHS Foundation Trust – Cell Marker Department [846]

SYNLAB Budapest Diagnostic Center, Genoid Molecular Diagnostic Laboratory [934]

SYNLAB Laboratory Service – Abergavenny [941]

The Epilepsy Society (Chalfont Centre) [837]

The Leeds Teaching Hospital NHS Trust – Endocrinology Laboratory (including SAS Steroid Centre), Department of Specialist Laboratory Medicine, St James University Hospital) [992]

The Leeds Teaching Hospitals NHS Trust – Mycology Reference Centre [973]

The Newcastle upon Tyne Hospitals – Royal Victoria Infirmary [878]

The Royal Marsden Hospital – Department of Haematology / Oncology [989]

The Royal Marsden Hospital – Department of Pathology [990]

Toxoplasma Reference Unit, Public Health Wales Microbiology ABM, Singleton Hospital – Swansea [969]

Trace Laboratories Ltd [955]

UCL Great Ormond Street Institute of Child Health [935]

UCL Queen Square Institute of Neurology – Department of Neuroimmunology [975]

University Hospital Birmingham NHS Foundation Trust – Heartlands Hospital [843]

University Hospital of Wales – Cardiff Medical Immunology Department [842]

Synnovis – Guy's Hospital, Biochemistry Genetics Laboratory [930]

Synnovis – King's College Hospital, Clinical Biochemistry [914]

Synnovis – St Thomas' Hospital Haemophilia Centre [956]

Synnovis – St Thomas' Hospital Immunohistology [961]

Synnovis – St Thomas' Hospital Purine Research Laboratory [925]

GROUP LABORATORIES

Royal Free London NHS Foundation Trust – Haemostasis [984]

University College London Hospitals NHS Foundation Trust (UCLH) – Cytology [Original report]

University College London Hospitals NHS Foundation Trust (UCLH) – Hospital for Tropical disease [933]

University College London Hospitals NHS Foundation Trust (UCLH) – Molecular Virology [999]

University College London Hospitals NHS Foundation Trust (UCLH) – Special Chemistry [953]

TDL Genetics Referral laboratories

All Wales Medical Genetics Service

Anthony Nolan, Histocompatability and Immunogenetics

Asper Biotech

Bioscientia GmBH

Bristol Genetics Laboratory (North Bristol NHS Trust)

CentoGene

DiaGenom GmbH

Douglass Hanly Moir Pathology

East Scotland Regional Genetics Service (NHS Tayside)

Exeter Clinical Laboratory – Department of Molecular Genetics

Fulgent Diagnostics

Institute of Neurology, Queen's Square

International Blood Group Reference Laboratory

London South East Genetics Service

Medical Genetics Laboratory – Central Manchester University Hospitals NHS Foundation Trust

Medical Neurogenetics Laboratory LLC

Micropathology Ltd

Molecular Genetics Laboratory –Liverpool's Women NHS Foundation Trust

Molecular Vision Laboratory

Newcastle Mitochondrial NGC Diagnostic Service

North East Thames Regional Genetic Service

North West London Pathology

North West Thames Regional Genetic Service

Northern Genetics Service

Oxford Genetics Laboratory – Oxford University Hospitals

Prevention Genetics

Progenika Biopharma Grifols

Protein Reference Unit & Immunology Department – Sheffield Protein Unit

Purine Research Laboratory – St Thomas' Hospital

Royal Marsden – Haemato-Oncology Unit

Sheffield Diagnostic Genetics Service

SIHMDS – Cytogenetics Laboratory, Great Ormond Street Hospital

South East Scotland Genetics Service (NHS Lothian)

South West Thames Regional Genetics Service

SYNLAB Budapest Diag Center

The Leeds Genetics Laboratory Viapath Analytics LLP

Wessex Region Genetics Service

West Midlands Regional Genetics Laboratory

West of Scotland Genetic Service (NHS Greater Glasgow and Clyde)

Terms and conditions of business from 1st Jan 2023

The definitions which apply to these Terms and Conditions are set out in clause 19.

1 THE SERVICES

1.1 These Terms and Conditions will apply to any services or consumables that The Doctors Laboratory Limited or TDL Genetics Limited provides to the Client, unless those services are the subject of a separate written agreement signed by TDL and the Client. These Terms and Conditions apply to the exclusion of any other terms presented by the Client or implied by custom or course of dealing.

1.2 By submitting a Pathology Request, a request for any other services described in the Laboratory Guide or in any other proposal provided by TDL, or an order for any Consumables described in the Laboratory Guide (in each case an '**Order**'), the Client offers to purchase those Tests, other services or Consumables on these Terms and Conditions from TDL. TDL may accept or reject any Order.

1.3 A contract between TDL and the Client for the provision of Services and / or Consumables, incorporating these Terms and Conditions and the Order (an '**Agreement**') takes effect when TDL confirms acceptance of the Client's Order in writing, logs the relevant Pathology Request in its laboratory information management system, or begins performing the Services (whichever occurs first). Any request for add-on Tests (as described in the Laboratory Guide) constitutes a request for further Services under that Agreement, which TDL may accept or decline. In the event of a conflict between the Order and these Terms and Conditions, the Terms and Conditions will take priority.

1.4 TDL will provide the Services under the Agreement:

1.4.1 in accordance with Good Industry Practice;

1.4.2 in accordance with the UKAS medical laboratory accreditation standard (ISO 15189); and

1.4.3 using suitably skilled and experienced staff.

1.5 TDL will use reasonable efforts to achieve the Test turnaround times quoted in the Laboratory Guide, but does not warrant that it will achieve those times in the case of any particular Sample.

1.6 The Laboratory Guide sets out Sample rejection criteria. If the Sample meets those criteria, or if TDL considers that the Sample is otherwise unsuitable for Testing or TDL is unable to conduct the Testing then TDL may decline to carry out the Testing under the Agreement and will be entitled to dispose of the Sample.

1.7 As part of its Services TDL will, on request, arrange for collection of Samples from locations within the M25 motorway. Such collection service is included within the price of the Test unless otherwise specified by TDL. Collection of Samples from locations outside the M25 is by special arrangement, and may incur an additional charge. Where collection by TDL has not been requested and agreed, the Client will be responsible, at its own cost, for the transport of Samples to TDL. Where TDL arranges collection of Samples it will use reasonable efforts to achieve the timescales it quotes for collection, but does not warrant that it will achieve those timescales in the case of any particular collection.

1.8 TDL may destroy or dispose of a Sample after completing the Testing or on termination of the Agreement, unless otherwise agreed in writing with the Client.

1.9 In providing the Services, TDL shall comply with all Applicable Law relating to anti-bribery and anti-corruption, including the Bribery Act 2010. TDL shall not, and shall ensure that its staff do not, engage in any activity which would constitute an offence under the Bribery Act 2010.

1.10 TDL is committed to trading ethically, with zero tolerance for modern slavery (including forced labour or human trafficking of any kind), human rights violations, and child labour. In performing its obligations under this Agreement, TDL will comply with all Applicable Law and applicable internal policies relating to anti-slavery and human trafficking.

1.11 TDL's laboratories are operated by members of the TDL Group. TDL uses those laboratories to undertake the Tests, except where TDL refers the Tests to suitably accredited laboratories operated outside the TDL Group. The UKAS accreditation numbers for the TDL Group laboratories in the UK are as follows: 8059 (HSL Analytics LLP) Genetics and Molecular Sciences, 8169 (HSL Analytics LLP) Blood Sciences, 8860 (HSL Analytics LLP) Infection Sciences, 8812 (The Doctors Laboratory Limited) Haematology, Blood Transfusion, Biochemistry, Microbiology, Molecular Biology, 10199 (The Doctors Laboratory Limited) Andrology, 8511 (HSL Analytics LLP) Cytology, 9706 (The Doctors Laboratory Limited) Urine Cytology.

2 SUPPLY OF CONSUMABLES

2.1 TDL shall supply Consumables to the Client in accordance with the terms of this Agreement.

2.2 The Consumables shall: (i) be of satisfactory quality (within the meaning of the Sale of Goods Act 1979) and fit for any purpose held out by TDL; and (ii) comply with all Applicable Law.

2.3 TDL shall not be liable for Consumables' failure to comply with clause 2.2 if: (i) the Client makes any further use of those Consumables after notifying TDL of such failure; (ii) the defect arises because the Client failed to follow TDL's instructions for the storage, use or maintenance of the Consumables or (if there are none) good practice regarding the same; (iii) the Client alters or repairs those Consumables without TDL's prior written consent; (iv) the defect arises as a result of fair wear and tear, deliberate damage, negligence, or abnormal storage or working conditions; or (v) the Consumables differ from their description as a result of changes made to ensure they comply with Applicable Law.

2.4 In the event the Consumables do not comply with clause 2.2, TDL shall provide replacement Consumables without undue delay. This shall be the Client's only remedy for such non-compliance. The terms of this clause 2 shall apply to any such replacement Consumables provided by TDL.

2.5 TDL shall ensure that the Consumables are properly packed and secured in a manner to enable them to reach their destination in good condition, and in a manner which complies with Applicable Law.

2.6 If the Client or the Client's carrier will collect the Consumables from TDL's premises, delivery shall be completed when TDL places the Consumables at the Client's disposal at TDL's premises. In all other cases, delivery shall be completed on the loading of the Consumables at the premises where they are loaded onto transport for carriage.

2.7 TDL may deliver Consumables by instalments, which may be invoiced and paid for separately. Time for delivery of Consumables is not of the essence of this Agreement and delays in the delivery of Consumables shall not entitle the Client to refuse to take delivery. TDL shall have no liability for any failure or delay in delivering Consumables to the extent that any failure or delay is caused by the Client's failure to comply with its obligations under this Agreement.

2.8 Title and risk in the Consumables shall pass to the Client on delivery, except that any biofreeze bottles provided by TDL shall remain the property of TDL at all times, regardless of any use by the Client of the biofreeze bottles.

2.9 The Client must not resell the Consumables or provide them to any third party without TDL's prior written consent.

2.10 The Client shall ensure that: (i) any Consumables provided by TDL are only used by healthcare professionals who are appropriately qualified and trained in the proper use of such Consumables; and (ii) the healthcare professionals use the Consumables in accordance with any instructions relating to the use of the Consumables provided by TDL and in any event with the degree of skill and care reasonably to be expected of a healthcare professional experienced in the use of such Consumables.

3 PRICE AND PAYMENT TERMS

3.1 The price payable by the Client for the Services and / or the Consumables will be the most recent price confirmed by TDL to the Client in writing or by telephone prior to the Client submitting its Order. If TDL has not confirmed the price for the Services and / or Consumables, the price will be that indicated in the Laboratory Guide.

3.2 As at the date of these Terms and Conditions many of TDL's services are VAT exempt. All of TDL's prices are stated exclusive of VAT and where VAT is chargeable on the Services and/or Consumables the Client will pay it at the applicable rate.

3.3 Invoices are normally issued on a monthly basis, but TDL reserves the right to issue them more frequently. The client will pay TDL's invoices under the Agreement within 30 days of the date of the invoice, without any deduction or set off. At TDL's option, interest may be charged on late payment at the statutory rate prescribed from time to time by regulations under the Late Payments of Commercial Debts (Interest) Act 1998. Invoices paid from outside the UK must be paid by either direct bank transfer or by cheque drawn on a UK branch. All payments will be made in pounds sterling.

3.4 Without affecting any of its other rights, TDL may suspend or cease provision of the Services and / or Consumables if the Client fails to pay an invoice due to TDL, or if the total of the sums payable by the Client to TDL under any agreements between the Client and TDL meets or exceeds any credit limit that TDL communicates to the Client from time to time.

4 CONFIDENTIALITY

4.1 TDL agrees that it will hold and maintain the confidence of:

4.1.1 all information of a confidential nature which is received by TDL from the Client or its patients in connection with the Services; and

4.1.2 all Test results, invoices and other information of a confidential nature issued by TDL to the Client or its patients in connection with the Services, and, save with the Client's consent or as otherwise permitted under this Agreement, will not disclose such information other than to its professional staff, independent consultants and/ or persons to whom it has delegated the performance of the Services and who require the information for such purpose. Where TDL has been provided with the details of a patient's private medical insurance in connection with the Services, TDL will be entitled to assume (and the Client so warrants) that both the Client and the patient consent to the disclosure of information relating to that patient to the insurer concerned.

4.2 The restrictions in clause 4.1 will not apply to information which: (i) was in TDL's possession prior to disclosure by the Client; or (ii) is now or hereafter comes into the public domain other than by default of TDL; or (iii) was lawfully received by TDL from a third party acting in good faith having a right of further disclosure; or (iv) is required by law to be disclosed by TDL; or (v) which is required by a regulatory or accreditation body to be disclosed to it for the purpose of regulating or accrediting the TDL Group.

5 CLIENT RESPONSIBILITIES

5.1 Except where TDL obtains the Sample directly from the patient during a home visit or at TDL's patient reception facility, the Client will ensure that the Sample is obtained from the patient, packaged, and labelled in accordance with Applicable Law and good clinical practice.

5.2 Except where TDL agrees to arrange transport of the Sample to TDL's laboratory, the Client will ensure that the Sample is transported to TDL's laboratory in accordance with Applicable Law and good clinical practice. Where TDL agrees to arrange transport of the Sample the Client will ensure that the Samples are ready for collection by TDL or its carrier at the agreed times.

5.3 The Client will ensure that all necessary consents and permissions are obtained and all necessary information provided to the patient, which is required under Applicable Law or good clinical practice in order to permit the performance of the Testing, and any

other Services, and the use of the Protected Data as contemplated in the Agreement.

5.4 The Client will provide TDL with any information reasonably necessary for performing the Services and / or supplying Consumables, including by ensuring that the Pathology Request contains sufficient information regarding the Sample, the relevant patient, and the persons to whom the Test results are to be reported, and will ensure that any information the Client provides to TDL in connection with the Services and / or Consumables is accurate and complete.

6 LIABILITY

6.1 Nothing in the Agreement will limit or exclude liability for death or personal injury caused by negligence or any other liability that cannot be limited or excluded under Applicable Law.

6.2 In these Terms and Conditions 'liability' means any liability whether in contract, tort (including negligence), misrepresentation, breach of statutory duty or otherwise, which arises in connection with the Services, the Consumables or under or in connection with any Agreement.

6.3 The liability of TDL and the Client will each be limited to £2,000,000 in total. This limit applies per Agreement and in aggregate for all Agreements made in a calendar year.

6.4 Neither TDL nor the Client will have any liability for:

6.4.1 loss of profit or revenue;

6.4.2 loss of anticipated savings;

6.4.3 loss of reputation or goodwill; or

6.4.4 indirect, special or consequential loss.

6.5 TDL will have no liability for any delay or failure in performance of the Services or provision of the Consumables arising from the Client's delay or failure in performing its obligations under clause 5 (Client Responsibilities).

6.6 All of the warranties which TDL gives in relation to the Services and / or the Consumables are expressly set out in these Terms and Conditions. All other warranties, whether implied or express, are excluded from the Agreement where it is lawful to exclude them.

6.7 In this clause 6, references to TDL include the members of TDL's Group, and for the purpose of the limit in clause 6.3 the liabilities of TDL and the TDL Group Members will be counted in aggregate. The members of TDL's Group may enforce this clause 6.

7 FORCE MAJEURE

If the performance of any obligation under the Agreement (except for an obligation to pay) is prevented, restricted or interfered with by reason of circumstances beyond the reasonable control of that party obliged to perform it (a '**Force Majeure Event**'), the party so affected will be excused from any resulting failure or delay in performance, and the time for performance will be extended by an amount of time equal to the duration of the Force Majeure Event. The party so affected will use reasonable endeavours to mitigate the effect of the Force Majeure Event on its performance of its obligations. If the Force Majeure Event delays or prevents performance of a party's obligations for more than three months, either party may terminate the Agreement on written notice to the other.

8 DATA PROCESSOR AND DATA CONTROLLER

8.1 When TDL processes Protected Data on behalf of the Client in providing the Services the parties agree that the Client will be the controller and TDL will be the processor. The Annex to these Terms and Conditions sets out when TDL processes Protected Data on behalf of the Client. Clause 17 describes the circumstances where TDL will use Protected Data on its own behalf as controller.

8.2 When TDL processes Protected Data as processor, clauses 9 to 16 will apply in relation to the Protected Data. Where TDL processes Protected Data as controller, clause 17 will apply instead.

8.3 The Client will comply with the Data Protection Laws in relation to the Protected Data, and ensure that all instructions given by it to TDL in respect of Protected Data will at all times be in accordance with Data Protection Laws.

9 DATA PROCESSING INSTRUCTIONS

9.1 When TDL processes Protected Data as processor, TDL will comply with the obligations of processors under the Data Protection Laws.

9.2 Unless required to do otherwise by Applicable Law, TDL will (and will take steps to ensure each person acting under its authority will) process the Protected Data only in accordance with the Client's documented instructions as set out in the Order, pursuant to these Terms and Conditions, and in the Annex (the '**Processing Instructions**').

9.3 If Applicable Law requires TDL to process Protected Data other than in accordance with the Processing Instructions, TDL will notify the Client of any such requirement before processing the Protected Data (unless Applicable Law prohibits TDL from doing so).

9.4 TDL will promptly inform the Client if TDL becomes aware of a Processing Instruction that, in TDL's opinion, infringes Data Protection Laws. TDL will have no liability for any processing in accordance with those Processing Instructions after giving the notice. TDL's obligations under this clause 9.4 do not limit the Client's obligations under clause 8.3.

10 DATA SECURITY MEASURES

In relation to the processing of the Protected Data, TDL will implement and maintain, at its cost and expense, appropriate technical and organisational measures to ensure for the Protected Data a level of security appropriate to the risks presented by the processing, taking into account the state of the art, the cost of implementation and the nature, scope, context and purpose of the processing of the Protected Data, as well as the risk of varying likelihood and severity of the rights and freedoms of natural persons.

11 USING STAFF AND OTHER PROCESSORS

11.1 TDL will not engage any processor to process the Protected Data on the Client's behalf (a '**Sub-Processor**') without the Client's authorisation of that specific Sub-Processor. The Client will not unreasonably withhold, condition or delay such consent. By accepting these Terms and Conditions the Client authorises the appointment of the Authorised Sub-Processors.

11.2 TDL will ensure that each Sub-Processor is appointed under a written contract containing materially the same obligations as clauses 9 to 16 (inclusive).

11.3 TDL will ensure that all persons authorised to process Protected Data are subject to a binding obligation to keep the Protected Data confidential (except where disclosure is required in accordance with Applicable Law, in which case TDL will, where practicable and not prohibited by Applicable Law, notify the Client of any such requirement before such disclosure).

12 ASSISTANCE WITH THE CLIENT'S COMPLIANCE AND DATA SUBJECT RIGHTS

12.1 Taking into account the nature of the processing, TDL will implement and maintain reasonable measures to assist the Client to respond to the Data Subject Requests relating to the Protected Data that TDL processes on the Client's behalf. TDL will refer such Data Subject Requests it receives to the Client promptly, and in any event within five Business Days of receipt of the request.

12.2 TDL will provide such assistance as the Client reasonably requires (taking into account the nature of processing and the information available to TDL) to the Client in ensuring compliance with the Client's obligations under Data Protection Laws with respect to: (i) security of processing, (ii) data protection impact assessments, (iii) prior consultation with the relevant regulator regarding high risk processing, and (iv) notifications to the regulator and/or communications to data subjects by the Client in response to any Personal Data Breach. The Client will pay TDL's charges for providing the assistance in this clause 12, such charges to be calculated on a time and materials basis at TDL's applicable daily or hourly rates in force from time to time.

13 INTERNATIONAL DATA TRANSFERS

13.1 The Client agrees that TDL may transfer Protected Data to countries outside the United Kingdom for the purpose of providing the Services, provided all transfers by TDL of Protected Data to such recipients are in accordance with such safeguards or other mechanism(s) for transfers of personal data as may be permitted under the Data Protection Laws from time to time. The Client agrees that TDL may implement such safeguards by entering into standard data protection clauses authorised under the Data Protection Laws, subject to clause 13.2

13.2 Where the Client requires TDL to transfer Protected Data for the purpose of providing the Services to a country outside the United Kingdom which is not subject to an adequacy regulation under the Data Protection Laws (a **Third Country**) then:

13.2.1 the Client will enter into (or where relevant use reasonable endeavours to procure that the applicable third party recipient of the Protected Data enters into) standard data protection clauses with TDL authorised under the Data Protection Laws for the international transfer of personal data that provide sufficient safeguards for the relevant transfer, on terms acceptable to TDL (acting reasonably); and

13.2.2 where the data protection clauses referred to in clause 13.2.1 are not entered into, the Client will procure that prior to the transfer the relevant data subjects provide valid consent to the transfer for the purposes of the Data Protection Laws, and the Client will provide evidence of such consents to TDL on request.

14 RECORDS, INFORMATION AND AUDIT

14.1 TDL will maintain, in accordance with the Data Protection Laws binding on TDL, written records of all categories of processing activities carried out on behalf of the Client.

14.2 TDL will, in accordance with the Data Protection Laws, make available to the Client such information as is reasonably necessary to demonstrate TDL's compliance with its obligations as a processor under these Terms and Conditions and the Data Protection Laws, and allow for and contribute to audits, including inspections, by the Client (or another auditor mandated by the Client) for this purpose, subject to the Client:

14.2.1 giving TDL reasonable prior notice of such information request, audit and/or inspection required by the Client;

14.2.2 ensuring that all information obtained or generated by the Client or its auditor(s) in connection with such information requests, inspections and audits is kept strictly confidential (save for disclosure to the relevant regulator or as otherwise required by Applicable Law); and

14.2.3 ensuring that such audit or inspection is undertaken during normal business hours, with minimal disruption to TDL's business, any Sub-Processor's business and the business of other customers of TDL.

15 BREACH NOTIFICATION

TDL will, without undue delay, notify the Client of a personal data breach involving the Protected Data, and provide the Client with details of the personal data breach.

16 DELETION OR RETURN OF PROTECTED DATA AND COPIES

TDL will, at the Client's written request, either delete or return all of the Protected Data to the Client in such form as the Client reasonably requests within a reasonable time after the end of the provision of the relevant Services related to processing, and delete existing copies (unless storage of any data is required by Applicable Law, in which case TDL will inform the Client of any such requirement). Where TDL will process that Protected Data as controller under clause 17, TDL may retain the Protected Data.

17 PROTECTED DATA THAT TDL PROCESSES AS A CONTROLLER

17.1 TDL may process Protected Data as controller in the circumstances and for the purposes set out in TDL's Privacy Notice. In particular TDL may:

17.1.1 retain and submit the Protected Data to a Health Authority in the United Kingdom for the purposes of a Public Health Programme operated by that Health Authority, or to regulator for the purpose of complying with regulatory obligations; and

17.1.2 retain and process Protected Data in its laboratory records in order to meet the requirements of the UKAS medical laboratory accreditation standard (ISO 15189) and implement the guidelines of the Royal College of Pathologists for the retention and storage of pathological records and specimens.

17.3 When TDL processes Protected Data to provide Harmony® Non-Invasive Prenatal Tests, TDL does so as a controller.

17.4 When TDL processes personal data on its own behalf as controller, it will do so in accordance with the obligations of data controllers under the Data Protection Laws and with the applicable terms of the Agreement.

18 GENERAL

18.1 Dispute resolution

18.1.1 If any dispute arises relating to this Agreement or any breach or alleged breach of this Agreement, the parties will make a good faith effort to resolve such dispute without recourse to legal proceedings. If, notwithstanding such good faith efforts, the dispute is not resolved either party may submit the dispute to the jurisdiction of the English Courts.

18.1.2 Except to the extent clearly prevented by the area of dispute, the parties will continue to perform their respective obligations under this Agreement while such dispute is being resolved.

18.2 Variation

18.2.1 TDL may amend these Terms and Conditions by updating the Laboratory Guide and providing the Client with a copy of the update or publishing it on TDL's website. Such amendments will only apply to an Order submitted after the date of the update, and the Client will be deemed to accept those amendments by submitting an Order after that date.

18.2.2 Except as set out in clause 18.2.1, any amendments to this Agreement will not be effective unless in writing and signed by an authorised signatory on behalf of each of the parties. The terms of this Agreement may be varied by agreement of the parties but without the consent of any third party whether or not the rights of such third party are affected by such variation. The Client will not unreasonably withhold, delay or condition its agreement to any variation to this Agreement requested by TDL in order to ensure the Services and TDL (and each Sub-Processor) can comply with any change in Applicable Laws.

18.3 Rights and waiver

All rights granted to either of the parties will be cumulative and not exhaustive of any rights and remedies provided by law. The failure of either party to enforce (or delay in enforcing) at any time for any period any one or more of the terms of this Agreement will not be a waiver of such term or of the right of such party at any time subsequently to enforce all the terms of this Agreement.

18.4 Severability

If any provision of this Agreement is or becomes invalid, illegal or unenforceable in any respect under any law, the validity, legality and enforceability of the remaining provisions will not be in any way affected.

18.5 Sub-contracting and Assignment

TDL may assign or sub-contract the performance of this Agreement (in whole or in part) or any one or more of the Tests to be performed hereunder to any member of the TDL Group or any suitably accredited laboratories including those listed in the Laboratory Guide. The Client may not assign this Agreement or any of its rights or obligations hereunder without the prior approval of TDL.

18.6 Relationship of the parties

It is acknowledged and agreed that TDL and the Client are independent contractors and nothing in this Agreement will create or be construed as creating a partnership or a relationship of agent and principal between the parties. The Client acknowledges and agrees that, in requesting Services from TDL, it is not acting as agent for any patient or patients to which the Services relate.

18.7 Notices

All notices given under this Agreement will be in writing and will be delivered by hand or sent by prepaid first class post or by prepaid first class recorded delivery or by email transmission. All notices will be delivered at or sent, in the case of TDL, to: post The Halo Building, 1 Mabledon Place, London WC1H 9AX, email notices@tdlpathology.com and, in the case of the Client to the address and/or email address set out in the Order (or such other address as that party will notify in writing to the other for this purpose). A notice sent by post will be deemed to be served at 9.00 am on the second Business Day following the date of posting; a notice sent by email transmission will (provided the sender receives no error message indicating that delivery has been unsuccessful) be deemed to have been served at the time it is transmitted, if transmitted within business hours (9.00 am to 6.00 pm on a Business Day) or, if transmitted outside business hours, as soon thereafter as such business hours commence.

18.8 Entire agreement

The Agreement is the entire agreement between the Client and TDL and supersedes and extinguishes all prior and contemporaneous agreements, promises, assurances, discussions, representations and understandings between them, whether written or oral, relating to its subject matter. Each party acknowledges

that it has not entered into the Agreement in reliance on, and will have no remedies in respect of, any statement, representation, assurance or warranty (whether made innocently or negligently) that is not expressly set out in the Agreement except in the case of fraudulent misrepresentation.

18.9 Third parties

The Agreement is not intended to create any rights for, nor be enforceable by, any third party except as set out in clause 6, and where the Client and The Doctors Laboratory Limited agree that these Terms and Conditions will apply to any Orders, that agreement is also for the benefit of and enforceable by TDL Genetics Limited.

18.10 Governing law

The Agreement and any dispute arising out of or in connection with it (including non-contractual disputes and claims) or its subject matter or formation will be governed by and construed in accordance with English law and each of the parties submits to the exclusive jurisdiction of the English Courts.

19 INTERPRETATION

19.1 In these Terms and Conditions and the Annex:

'Agreement' has the meaning given in clause 1.3;

'Annex' means the annex to the Terms and Conditions;

'Applicable Law' means the laws, regulations and judgments binding on the relevant party, as amended from time to time;

'Authorised Sub-Processors' means:

a) Health Service Laboratories LLP and any other member of the TDL Group which provides the applicable Test or Service;

b) accredited specialist centres for onward referral of esoteric assays as identified in the TDL Laboratory Guide;

c) persons who provide information technology services that TDL uses in the course of providing the Services; and

d) any Sub-Processor referred to in the Annex;

'Business Day' means a day other than a Saturday, Sunday, or public holiday in England;

'Client' means the person or organisation requesting Services and / or Consumables from TDL and for whom TDL has agreed to provide the Services and / or Consumables;

'controller', 'data subject', 'data protection impact assessment', 'personal data', 'personal data breach', 'process' and 'processor' have the meanings given to those terms in the Data Protection Laws;

'Consumables' means any goods to be provided by TDL in order for the Client to benefit from the Services;

'Data Protection Laws' means the UK GDPR, the Data Protection Act 2018, and any other Applicable Law having effect in the United Kingdom concerning privacy or the use of personal data;

'Data Subject Request' means a request made by a data subject to exercise any rights of data subjects under Data Protection Laws;

'Good Industry Practice' means the standard of skill and care reasonably to be expected from a professional provider of the Services;

'Group' in respect of any undertaking, means such undertaking and its group undertakings ('undertaking' and 'group undertaking' having the meanings given in the Companies Act 2006);

'Health Authority' means (i) a department of the UK government or of a devolved administration, (ii) an executive agency of such department, or (iii) a body exercising statutory functions in relation to public health in the UK or any part of the UK;

'Laboratory Guide' means TDL's Laboratory Guide current at the time the Client submits the Order, as supplied to the Client or, if not so supplied, available on request from TDL, including any updates or supplements issued by TDL;

'Order' has the meaning given in clause 1.2;

'Pathology Request' means a request for Testing submitted by the Client in a format TDL accepts from time to time and by any of the methods TDL accepts from time to time, whether in hard copy or via one of TDL's electronic portals;

'Privacy Notice' means TDL's detailed Privacy Notice available at tdlpathology.com;

'Processing Instructions' has the meaning given to that term in paragraph 8.2;

'Protected Data' means personal data provided to TDL by the Client or a third party on the instructions of the Client, or collected or generated by TDL in the course of providing the Services or Consumables;

'Public Health Programme' means a programme administered by a Health Authority to monitor or analyse health data for the purpose of public health or for statistical, scientific or research purposes in the public interest;

'Sample' means a pathology sample provided by the Client to TDL for Testing;

'Services' means the services to be provided under the Agreement;

'Sub-Processor' has the meaning given in clause 11.1;

'TDL' means (i) The Doctors Laboratory Limited or, (ii) TDL Genetics Limited in the case of services offered under the TDL Genetics name;

'TDL Group' means TDL Genetics Limited and The Doctors Laboratory Limited and its Group and Health Service Laboratories LLP and its Group;

'Test' means a laboratory test to be carried out by TDL on a Sample, and 'Testing' means the process of conducting that Test and reporting the results;

'UKAS' means the United Kingdom Accreditation Service, or any successor to it;

'UK GDPR' has the same meaning as it does in section 3(10) of the Data Protection Act 2018, read with section 205(4) of that Act.

19.2 References to the singular include the plural and vice versa.

19.3 Clause headings and paragraph headings are for ease of reference only and are not part of these Terms and Conditions for the purpose of construction.

19.4 References to paragraphs are to paragraphs of the Annex.

19.5 Words following the terms 'including', 'include', 'in particular', 'for example' or any similar expression shall be construed as illustrative and shall not limit the sense of the words, preceding those terms.

19.6 The Annex is incorporated into these Terms and Conditions.

ANNEX

1 Subject matter and nature of processing

1.1 TDL processes Protected Data as processor on behalf of the Client:

1.1.1 in the case of Testing, when TDL receives a Pathology Request and Sample and processes the corresponding Protected Data to carry out the Test and report the Test results in accordance with the Processing Instructions;

1.1.2 when TDL carries out the Client's 'fee to patient' instructions, as described below; and

1.1.3 in the case of any other Services or the provision of Consumables, when TDL is required to process Protected Data on the Client's behalf to fulfil the Client's instructions.

1.2 The subject matter and nature of TDL's processing of the Protected Data are:

1.1.1 Samples and Test results for the purpose of providing clinical pathology Services;

1.1.2 information about clinicians who order Tests, for the purposes of reporting the Test results to the Client;

1.1.3 information about a patient's health insurance for the purposes of administering payment for the Services; and

1.1.4 billing information for a patient where the Client has asked TDL to direct TDL's invoice to the patient.

2 Duration of processing

The duration of the processing is the time necessary to carry out the Services or provide the Consumables.

3 Types of personal data

3.1 The Protected Data may comprise the following types of personal data:

3.1.1 name

3.1.2 gender

3.1.3 date of birth

3.1.4 address

3.1.5 identity numbers assigned by TDL or the Client

3.1.6 types of Tests conducted

3.1.7 results of Tests

3.1.8 health insurance policy details

3.1.9 billing information

3.1.10 the types of data referred to in the TDL Laboratory Guide

4 Categories of data subjects

The Protected Data concerns patients in respect of whom TDL conducts Tests, and clinicians who request Tests.

5 Reporting Test results

5.1 TDL will report Test results using the method selected by the Client from the range of options offered by TDL or, if no method is selected by the Client, using a method selected by TDL from that range of options.

5.2 TDL will report the Test results using the contact details supplied to TDL in the relevant section of the Pathology Request. The Client will be responsible for ensuring that those contact details are correct.

5.3 Where TDL supplies Test results electronically it will ensure that the results are supplied in the format selected by the Client (from the range of options offered by TDL) and are supplied to the address indicated when the Client selects electronic results reporting. The Client will be responsible for ensuring that the selected format is compatible with the Client's information systems and for making the results available to the users of those systems.

6 Fee to patient

Where the Client selects the 'fee to patient' option in a Pathology Request form, the Client instructs TDL to seek payment from the patient of the fees owed by the Client in respect of that test. The Client confirms that the patient has agreed with the Client to pay those fees to TDL for the Client. The Client instructs TDL to recover the fees by invoicing the patient using the personal data provided by the Client. The Client instructs TDL on the Client's behalf to appoint debt collectors to recover the fees from the patient if the patient does not pay the invoice by the date payment falls due. The Client authorises TDL to appoint those debt collectors as Sub-Processors in accordance with clauses 9 to 16.

Request Forms

- Maternal Screening Request Form:
  For Down, Edwards and Patau Syndromes screening
- Leukaemic Studies Request Form
  (Cytogenetics/Molecular genetics)
- Genetic Request Form
- TDL Supplies Re-order Form
- TDL Request Form

SCAN ME

Download TDL Request Forms from:

www.tdlpathology.com/tests/request-forms/

THE DOCTORS LABORATORY

Maternal screening request form (Down's, Edwards' and Patau's)

TAP5094/22-09-22/V6

SECTION 1

Surname	First name	Date of birth:
TDL no.:	NHS no.:	Hospital no.:
Home address: Postcode:	Hospital/Consultant:	

SCREENING CHOICE

☐ **1st Trimester 11+2 – 14+1 weeks** (Down's syndrome, Edwards' syndrome and Patau's syndrome unless otherwise stated)

☐ **2nd Trimester 14+2 weeks** (Down's syndrome and open neural tube defects)

Ethnicity (tick as required, see page 2)

☐ White
☐ South Asian
☐ South East Asian
☐ African or African Caribbean (Black)
☐ Other

Smoker (NOT including nicotine replacement)

☐ No
☐ Yes

Weight

_____ Kg

Any previous pregnancy affected by:

☐ Down's syndrome
☐ Edwards' syndrome
☐ Patau's syndrome
☐ None of the the above or N/A

Diabetes:

☐ No diabetes
☐ Diabetes – not on insulin
☐ **Insulin** dependent diabetes

PREGNANCY

☐ Not IVF pregnancy

☐ IVF pregnancy

☐ Own egg Egg harvest date: _____ Egg transfer date: _____

☐ Donor egg Age of donor at harvest: _____ Egg transfer date: _____

Additional comments:

Please complete all of the above details accurately. This information is used to calculate and report your screening result.

SECTION 2 To be completed by sonographer

Date of ultrasound

Gestation

|

Fetus(es)	Nuchal translucency (NT)	Crown rump length (CRL)	Head circumference (HC)	Biparietal diameter (BPD)
1				
2				

COMBINED TEST (1st trimester screening)

CRL between 45 mm and 84 mm for combination with the nuchal translucency. Note: the nuchal translucency must be measured at the same time as the CRL is measured.

Not acceptable: CRL <45 mm

If the CRL is <45 mm patient needs to be recalled for a further scan to measure the CRL and NT (see below details of the rate of growth of CRL).

QUAD TEST (2nd trimester screening)

If the CRL is >84 mm the gestational age should be calculated using the Head circumference (HC) although a BPD is acceptable.

Acceptable: HC 85–172 mm / BPD 15–65 mm

Not acceptable: HC >172 mm

Note: If a patient has been scanned in early pregnancy but a nuchal measurement has not been possible, the patient should be recalled for a quad test when the gestational age is at least 15 weeks based on the early dating scan.

TWIN PREGNANCIES (Select Chorionicity)

☐ Monochorionic ☐ Dichorionic **We cannot calculate risks for triplet pregnancies**

Combined test Dichorionic twins: A risk will be reported for each fetus. Monochorionic twins: A single risk will be reported because the fetuses are identical.

Quad test A single pregnancy risk will be reported irrespective of the chorionicity.

SECTION 3 To be completed by phlebotomy

Sample taken by:

Date of sample

Signature _____ Print name _____

REPORTING

High risk screening result/Screen positive result
Risk of trisomy is greater than or equal to 1 in 150. That is the risk is any value from 1 in 2 to 1 in 150.

Low risk result/Screen negative result
Risk of trisomy is less than 1 in 150. That is any value from 1 in 151 to less than 1 in 10,000.

Ethnicity Categories

White to include:

- United Kingdom White
- Northern European White
- Southern European White
- Any other European White family origin: e.g. Australia, North America, South Africa

South Asian: e.g. India or African-Indian, Pakistan, Bangladesh, Sri Lanka

South East Asian: e.g. China, Hong Kong, Taiwan, Singapore, Japan, Thailand, Indonesia, Malaysia, Vietnam, Philippines, Cambodia, Laos, Myanmar

African or African Caribbean (Black): e.g. Caribbean Islands, Africa (excluding North Africa)

Other to include:

- North Africa, South America, Middle East (Saudi Arabia, Iran etc.)
- Mixed ethnic group – applies if you can tick more than one of the categories in bold.

	FIRST TRIMESTER SCREENING	SECOND TRIMESTER SCREENING
Screening test information	**Combined test**: NT + PAPPA + Free Beta hCG 11+2 – 14 +1 weeks of pregnancy (CRL 45–84mm) NT to be measured at the same time as the CRL is measured.	**Quadruple test**: AFP + hCG + uE3 + InhA 14 +2 – 20+0 weeks of pregnancy (HC ≥ 101mm and < 172 mm) The test is best at detecting open neural tube defects between 15 and 16 weeks.
Sample stability and sample required	4.5–5.0 mLs clotted venous blood sample taken in a Serum-Gel tube is preferred. A plain tube is also acceptable. Tubes containing EDTA/other additives are unacceptable. Please label all samples with the following information: Surname, Forename, Date of birth, Date and Time of collection, TDL number. **1st trimester** samples MUST BE SPUN, those in a Serum-Gel tube will not require further separation after spinning. Samples in a Plain tube should be spun and separated, sending the serum aliquot. Samples should arrive at the laboratory within 48hrs of collection, this is particularly important in warm weather due to instability of free Beta hCG. **2nd trimester** samples should ideally be spun and separated as above, however whole blood will still be accepted and samples should arrive at the laboratory within 6 days of collection. The stability of samples is improved by refrigeration at 4°C. Whole blood samples should not be frozen or placed on dry ice. For all international clients a frozen serum sample is required.	

Leukaemic studies request
(Cytogenetics/Molecular Genetics)

THE DOCTORS LABORATORY

Lab No: _____ Priority Code: _____

Surname: _____ First Name: _____

Hospital No.: _____ Date of Birth: D D M M Y Y Y Y

Consultant: _____ Gender: ☐ Male ☐ Female

Sample Type: _____ Sample WBC (x10^9/l): _____

Sample Date: _____ Sample Vol. (ml): _____

Date Received: D D M M Y Y Y Y Time Received: _____

Sample Comments: _____ Amount Sample/Culture: _____ Check: _____

Referral centre/hospital: _____

Full postal address: _____

_____

Tel: _____ Email: _____

Referral reason/Clinical details: _____

_____

_____

Disease stage: _____ Treatment stage: _____

Karyotype analysis required? ☐ Yes ☐ No

FISH required? ☐ Yes ☐ No Probes: _____

RT-PCR Required? ☐ Yes ☐ No Gene Fusion: _____

SAMPLE REQUIREMENTS

In preservative-free heparin and RPMI medium

Preferred volume	**Peripheral Blood**	Adult: 10mls	Child: 2-5mls
	Bone Marrow	Adult: 5-10ml	Child: 2-5mls
Optimal time in transit	**Peripheral Blood:** 48hrs		**Bone Marrow:** 24hrs

☐ Fee to be paid by Patient/Other. **PLEASE PROVIDE ADDRESS DETAILS**

☐ Fee to be paid by Doctor/Clinic as above

Insurance Co. _____ Membership No. _____

Patient address _____

_____

_____ Postcode _____ Contact telephone number _____

Genetic Request

THE DOCTORS LABORATORY

In order to provide an efficient service for Genetic Requests, please complete the following:

PATIENT DETAILS

Surname: _____

First Name: _____

Date of Birth: _____ Gender: ☐ M ☐ F

Patient Number: _____

Ethnic Origin: _____

Gestation (if applicable): _____ weeks

REFERRING DOCTOR

Name: _____

Address: _____

_____

_____

Tel: _____

Email: _____

TEST REQUEST

Disease Name: _____

Gene(s) to be Analysed: _____

Test for: ☐ Diagnosis ☐ Carrier Screening ☐ Known Family Mutation

Clinical Symptoms: _____

Family History: _____

Please state any Family Gene Mutation(s) if known: _____

Please also provide copies of any relevant genetic or pathology (ie. haematology) reports.

INFORMED CONSENT

PATIENT OR GUARDIAN

Please cross-out where applicable:

I consent / do not consent to be tested for the genetic test(s), which have been explained to me

I consent / do not consent for the results of this test to be available to assist in testing other family members

I consent / do not consent for DNA from this sample to be stored

I consent / do not consent for DNA to be used anonymously for relevant research

Signed: _____ Date: ___/___/___

DOCTOR/GENETIC COUNSELLOR

I have explained the purpose of obtaining a blood or tissue sample for genetic testing.

Signed: _____ Date: ___/___/___

This consent form is for use with diagnostic testing. It is important to think through the implications of genetic testing for other family members. We strongly recommend genetic counselling for predictive testing in disorders such as Huntington's Disease or inherited cancers. Please contact our Consultant if you have queries about consent or counselling issues.

☐ Fee to be paid by Patient/Other. **PLEASE PROVIDE ADDRESS DETAILS**

Insurance Co. _____ Membership No. _____

Patient address _____

_____

_____ Postcode _____ Contact telephone number _____

☐ Fee to be paid by Doctor/Clinic as above

TAP4157C/16-11-21/V3

Supplies re-order form

Tel: 020 7307 7373
Email: supplies@tdlpathology.com

THE DOCTORS LABORATORY

Doctor/Practice:

Delivery address:

Billing address:

Requested by:

Source code:

Contact number:

Date of order:

If urgent by:

VACUTAINER TUBES	No. Required
☐ EDTA 4ml Lavender [Each] (Ref. 368860)	[ ]
☐ SST/Serum 5ml Gold [Each] (Ref. 367954)	[ ]
☐ Citrate/Clotting 2.7ml Light Blue [Each] (Ref. 363095)	[ ]
☐ Fluoride Ox./Glucose 4ml Grey [Each] (Ref. 368521)	[ ]
☐ Serology 6ml Red [Each] (Ref. 367837)	[ ]
☐ Lithium Heparin 6ml Green [Each] (Ref. 367885)	[ ]
☐ Sodium Heparin 6ml Dark Blue [Each] (Ref. 368380)	[ ]
☐ Cross-Match 6ml Pink [Each] (Ref. 367941)	[ ]
☐ EDTA 10ml Lavender [Each] (Ref. 367525)	[ ]
☐ Aprotinin 5ml Pink [Each] (Ref. 361017)	[ ]

VACUTAINER NEEDLES & HOLDERS	No. Required
☐ 21g Butterfly - Green [Each] (Ref. 367282)	[ ]
☐ 23g Butterfly - Blue [Each] (Ref. 367284)	[ ]
☐ 21g Eclipse - Green [Each] (Ref. 368609)	[ ]
☐ 22g Eclipse - Black [Each] (Ref. 368610)	[ ]
☐ Vacutainer Holders [Each] - Transparent (Ref. 364815)	[ ]

SAMPLE BAGS	No. Required
☐ Medium - Clear [Pack of 100] (Ref. MEDSB003A)	[ ]
☐ Large - Clear [Pack of 100] (Ref. MEDSB004A)	[ ]
☐ Red - Urgent [Pack of 100] (Ref. MEDSB003A/R)	[ ]
☐ Blue [Pack of 100] (Ref. MEDSB003A/B)	[ ]
☐ Large transport/Courier bags [Each] (TAP2549)	[ ]

URINE/STOOL & UNIVERSAL CONTAINERS	No. Required
☐ Universal Container Pots 30ml [Each] (Ref. 128B)	[ ]
☐ Universal Container Pots 60ml [Each] (Ref. 125BM)	[ ]
☐ Stool Pots - Blue Top [Each] (Ref. 128SB)	[ ]
☐ 24 Hour Urine Container - Non-acid [Each] (Ref. UR2406)	[ ]
☐ 24 Hour Urine Container - 20ml HCL 25% Acid [Each] (Ref. UR2453)	[ ]

GYNAE & CYTOLOGY ONLY	No. Required
☐ Speculum - Small [Box of 25] (Ref. 400105)	[ ]
☐ Speculum - Medium [Box of 25] (Ref. 400106)	[ ]
☐ Speculum - Medium Long [Box of 25] (Ref. 400107)	[ ]
☐ Thin Prep Vial [Tray of 25] (Ref. 70098-002)	[ ]
☐ Thin Prep Brush [Bag of 25] (Ref. 70671-001)	[ ]

SWABS & OTHER	No. Required
☐ Dark Blue Swab (Culture) [Each] (Ref. MW170)	[ ]
☐ Orange Swab (Culture) [Each] (Ref. MW172P)	[ ]
☐ Black Charcoal Swab (Culture) [Each] (Ref. MW171)	[ ]
☐ Virocult Viral Swab [Each] (Ref. MW951S)	[ ]
☐ Purple Dry PCR Swab [Each] (Ref. 441122)	[ ]
☐ MRSA Swab [Each] (Ref. MW176S)	[ ]
☐ Orange Thin Wire Swab [Each] (Ref. MW142)	[ ]
☐ Quantiferon TB Gold - TBQ [Each] (Ref. 622222)	[ ]
☐ Purple Top Blood Culture Bottle [Each] (Ref. 442021)	[ ]
☐ Silver Top Blood Culture Bottle [Each] (Ref. 442023)	[ ]

OTHER/KITS - PLEASE SPECIFY

If you require any request forms, please email forms@tdlpathology.com

TAP5152/10-11-22/V4

PATIENT RECEPTION AT:
THE DOCTORS LABORATORY
76 Wimpole Street, London W1G 9RT
Monday to Friday 7.00am–7.00pm
Saturday 7.00am–1.00pm
Main Tel: 020 7307 7373
Out of hours samples may be dropped at 76 Wimpole St

CLINICIAN

SOURCE

Doctor

Address

Tel

Email

Additional copy of results to:

SURNAME		DOB	/ /
FORENAME	TITLE	M/F	

When completing this form please provide at least three unique identifiers for your patient.

	Please Tick	
(Biochemistry)	DL1	☐
(Biochemistry/HDL)	DL1L	☐
(Haem/Bio)	DL2	☐
(Haem/Bio/HDL)	DL2L	☐
(Haematology)	DL3	☐
(Haem/Bio (short))	DL4	☐
(Haem/Bio/HDL)	DL4L	☐
(Postal Haem/Bio)	DL5	☐
(Postal Haem/Bio/HDL)	DL5L	☐
Well Person Screen (DL2/T4/TSH/Ferritin)	DL6	☐
Well Person Screen (DL2L/T4/TSH/Ferritin)	DL6L	☐
Well Man Screen (DL6/PSA/Ferritin)	DL7	☐
Well Man Screen (DL6L/PSA/Ferritin)	DL7L	☐
Well Person Screen (DL6/VITD/Ferritin)	DL8	☐
Well Person Screen (DL6/HDL/VITD/Ferritin)	DL8L	☐
Senior Male Profile 60+	DL9M	☐
Senior Female Profile 60+	DL9F	☐
Cardiovascular Risk Evaluation Profile	DL10	☐
Cardiovascular Risk Plus Profile	DL11	☐
Sexual Health 7 STI screen by PCR	DL12	☐

Home Visit ☐

PATIENT DETAILS

LMP: / /

Last smear: /
MONTH YEAR

Routine screen ☐

Colposcopy ☐

Previous HPV -ve ☐ +ve ☐

Previous abnormal history (please specify):

TESTS (PLEASE SPECIFY)

☐ **PAPT**
A HR-HPV test will always be carried out if PAPT is requested as a single test. HPV will be charged.

☐ **HPV HR-HPV mRNA**
If HPV is requested as a single test and is Positive/Detected, cervical cytology (PAPT) will be carried out from the same vial without charge.

☐ **HP20 28 LR+HR HPV DNA subtypes**
If HP20 is requested as a single test and is Positive/Detected for HR subtypes, PAPT will be carried out without charge.

☐ **HPVT HP20 plus mRNA E6/E7 oncoproteins**
If HPVT is requested as a single test and is Positive/Detected, PAPT will be carried out without charge.

☐ **TPCR** Thin Prep Chlamydia ☐ **TGON** Thin Prep Gonorrhoea

☐ **TCG** Thin Prep CT/GC

☐ **CCGT** CT/GC/Trichomonas ☐ **CGTM** CT/GC/Trichomonas/Mgen

☐ **7 STI (DL12)**

Patient Ref/ID No.

PROFILES AND TESTS
Please specify

TAP3643D/14-11-21/V9

Clinical Details

☐ Fasting (tick if yes)

☐ Ethnic Origin (details, if relevant) _____

☐ Drug Therapy (Please specify) _____

☐ Fee to be paid by Patient/Other. **PLEASE PROVIDE ADDRESS DETAILS**

Insurance Co. _____ Membership No. _____

Patient address _____

_____ Postcode _____ Contact telephone number _____

☐ Fee to be paid by Doctor/Clinic as above

Signature _____

Date sample taken _____

Time sample taken _____

For Practice Use Only:						For Laboratory Use Only:						For Patient Service's Use Only:			
EDTA	SST	GREY	MSU	OTHERS	INITIALS	EDTA	SST	GREY	MSU	OTHERS	INITIALS	TIME IN R	TIME IN Ph	TIME OUT Ph	TAKEN BY INITIALS

THE DOCTORS LABORATORY

Sample requirements

Vacutainer

Sample type	Vacutainer	Anticoagulant	Capacity
A	Lavender	EDTA	4ml/10ml*
B	Gold	SST/Gel	5ml
C	Light Blue	Citrate	4.5ml
F	Red	None	6ml
G	Grey	Fluoride oxalate	2ml, 4ml
H	Green	Lithium heparin	6ml
K	Dark blue	Sodium heparin	7ml

* 10ml EDTA tubes are used for specific PCR assays

Other sample types

Sample type	Description
BC	Blood culture bottle: contact laboratory
J	Contact laboratory for advice on sample taking
X	Test by appointment
RF	Random Faeces
LF	Faecal Collection
RU	Random Urine
FCRU	First Catch Random Urine (for DL12/Chlamydia, etc.)
CU	30ml aliquot from a 24 hour urine collection – state total volume
PU	30ml aliquot from a 24 hour urine collection with 10ml of 0.1N Hydrochloric Acid added – state total volume
EMU	Early Morning Urine (1st sample of the day)
SC	60ml container
TPV	Cytyc Thin Prep Vial
STM	Orange/Blue swab for culture – swab in transport medium
CS	Black Charcoal swab
VS	Green Viral swab
PCR	PCR swab for Chlamydia/PCR Infection Screening
MW	Tap/bottled water mouth wash – 20mls
AF	Amniotic fluid (5mls PCR – 10mls Karyotype)
CVS	Chorionic Villus (medium provided by laboratory)
UCYT	Urine cytology container

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TAP5184/11-01-23/V3C