EarlyCDT®-Lung: A blood test for earlier detection of lung cancer

42,000 people are diagnosed with lung cancer in the UK every year, with about 35,000 deaths from the disease. Rates of lung cancer in Scotland are amongst the highest in the world. Tobacco smoking is estimated to cause around 90% of all cases in men and 80% in women, with nearly all other lung cancers caused by environmental exposure.

The latency period for lung cancers attributable to smoking is at least 20 years, which accounts for why 85% of cancers are found symptomatically in people aged 60 and over. These cancers are often detected by a chest X-ray when they are usually advanced and the chances of long term survival are low. Early detection is key for improved survival by identification of patients with lung cancer in earlier, more curable stages.

How many people survive lung cancer?

- The earlier diagnosed the better – the five-year survival rate for early stage is 43-73%, while for later stage disease it is 2-13%
- The five-year survival rates for men and women diagnosed with lung cancer are 7.3% and 8.7% respectively

EarlyCDT-Lung is a blood test developed to measure a panel of 7 autoantibodies, associated specifically with lung cancer. In the early stages of solid tumour cancer, autoantibodies are produced in response to tumour antigens. Autoantibodies are present, and remain measurable, in all stages.

The EarlyCDT-Lung test can also be used in conjunction with diagnostic imaging such as X-Ray or CT scan, to further assess the risk of lung cancer being present where indeterminate lung nodules have been detected, but which may or may not be a sign of cancer.

This is not a genetic test for predisposition – a positive test may indicate the presence of the disease and an increased risk of malignancy.

Does smoking cessation affect risk?

As the graph illustrates, smoking cessation reduces the risk of lung cancer but early cessation is key, since the effects of smoking accrue over time.

Test information

<table>
<thead>
<tr>
<th>Test</th>
<th>Code</th>
<th>Sample type</th>
<th>Turnaround Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>EarlyCDT-Lung</td>
<td>CDTL</td>
<td>1 x Gold /SST</td>
<td>7-9 days*</td>
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</tbody>
</table>

High or Moderate Level results indicate that the patient’s risk of having lung cancer is greater than that predicted by gender, age, smoking and other risk factors and a recommendation for additional testing, which may include CT imaging.

*this test is referred to Oncimmune (USA) LLC (www.oncimmune.com)

For further information, please contact:
Annette Wilkinson, The Doctors Laboratory, 60 Whitfield Street, London W1T 4EU
Tel: +44 (0)20 7307 7343/73 E-mail: annette.wilkinson@tdlpathology.com Website: www.tdlpathology.com

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