

Anpac Bio-Medical Science Company Ltd. Abstract:

# Investigations on Non-Small Cell Lung Cancer Screening

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Abstract:

**Background:** Non-small cell lung cancer (NSCLC) is one of the most common cancers in the world. The high mortality rate of lung cancer is partly due to that current image-based technologies are not sensitive enough to screen early lung cancer incidences. A new cancer diagnostics method, named Cancer Differentiation Analysis Technology (CDA hereafter), was developed for diagnosis of lung cancer. In CDA technology, multi-level and multi-parameter data information including protein fragments and cellular information are collected while most existing technologies are single parameter technology, e.g. bio-marker and gene test. **Methods:** Three groups of samples were investigated, NSCLC group (383 samples), non-cancerous lung disease group (103 samples) and control group (149 samples). Samples used in this investigation were whole blood collected via syringe containing EDTA anticoagulant. CDA data were then collected and the differences in CDA data distribution among NSCLC group, non-cancerous lung disease group and control group were investigated. **Results:** Test results are shown in Table 1, which exhibited significant statistical difference with P value < 0.05 between any 2 groups in T test. Based on initial data, the sensitivity and specificity of CDA technology for lung cancer test appears to be higher than that of existing technologies, reaching 87.7% and 79.9% respectively.

**Conclusions:** CDA technology is a promising technology for lung cancer diagnostics. It is able to distinguish control group, non-cancerous disease group and NSCLC group, with sensitivity and specificity higher than existing technologies.

## CDA Test Results of Three Groups of Samples

<u>Sample Group</u>	<u>Sample Size</u>	<u>CDA Mean(Rel. Units)</u>	<u>CDA Stdev</u>
<b>Control Group</b>	149	34.09	5.23
<b>Non-Cancerous Disease</b>	103	44.77	9.44
<b>NSCLC Group</b>	383	48.93	7.41