



# LUNG CANCER EARLY DETECTION TEST REPORT



Spot early signs of lung cancer, by analyzing DNA shed by cancer cells (ctDNA).



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#### ctDNA ANALYSIS RESULT SPOT-MAS LUNG:

EARLY DETECTION OF CANCER IN THE LUNG

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	DATIENT	INFORMATION
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PERSONAL INFORMATION		SAMPLE INFORMATION		TEST INFORMATION	
Full Name:	Sample Patient	Sample Type:	Blood	Ordering Physician:	DR. GS
NRIC/Passport/ID:	XXXXXX	Date Collected:	01/01/2025	MCR/MMC no.:	XXXXXX
Gender:	Female	Date Received by Lab:	02/01/2025	Sample Collection Place:	Sample Hospital
Date of Birth:	19/01/1987			Date Reported:	20/01/2025

#### CLINICAL INFORMATION

Remark:

An in-depth analysis and commentary on a clinical topic, supported by the latest evidence and insights. Clinical comments can also include personal experiences.

#### RESULT

LABCODE ID: SAAAAAR29 | ECD ID: ECDXXXX01 | PERFORMED TEST: SPOT-MAS LUNG

#### RISK ASSESSMENT



#### INOTE:

- A positive result (ctDNA signal detected) does NOT COMPLETELY affirm that a test participant has cancer because some special pathological conditions may lead to a "pseudo" ctDNA signal.
- The specificity of the test is 92.0%<sup>(1)</sup>, which means that for every 100 lung cancer-free cases there will be about 8 cases with positive ctDNA signal.
- The distinct features identifying the tumor origin of ctDNA from the lungs may overlap, leading to the possibility of detecting lesions outside the lung in positive results.
- (1) Gene Solutions internal validation data on lung cancer





Laboratory Director

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## YOUR RESULT

#### EARLY CANCER SCREENING BASED ON DNA RELEASED FROM TUMOR (ctDNA)

- This analysis helps detect Lung cancer based on the ctDNA released from the tumor (ctDNA). These DNA fragments can be released early, when the tumor is small, has not metastasized and has not caused the typical clinical manifestations of cancer. The content of ctDNA is directly proportional to tumor size and metastasis, while ctDNA release capacity depends on cancer type and tumor locations, which will affect the ability to detect ctDNA in blood.
- This ctDNA analysis result shows that ctDNA SIGNAL (DNA from tumor) originating from the lung was DETECTED in your blood sample.

#### Note:

- This result shows that after analyzing your blood sample, signals suggestive of Lung cancer was DETECTED.
- Therefore, you are recommended to consult with your doctor and perform additional imaging tests to diagnose cancer.
  Regarding ctDNA related to Lung cancer, a chest CT scan with contrast is recommended to definitively confirm your condition.
- If the chest CT scan with contrast results DETECT a tumor, your condition will be consulted by the hospital's specialists and recommended to perform a PET CT or biopsy-histopathology test, determine whether the tumor is benign or not. Based on the results of the PET-CT or histopathology, the doctor will continue to advise on appropriate monitoring diagnosis and treatment to improve your health.
- If the chest CT scan with contrast results DO NOT DETECT a tumor, this may be due to the overlap of distinct features identifying the tumor origin of ctDNA from lungs, leading the possibility of detecting lesions outside the lung in positive results. You need to perform a whole-body CT scan to assess lesions outside the lung, in order to have accurate diagnosis and appropriate treatment.

If you have any questions or need more consultation about the results, please contact Gene Solutions customer service through your physician.





### ctDNA SCREENING METHOD

### How SPOT-MAS<sup>™</sup> test works



Apply next-generation sequencing to analyze multiple features of ctDNA

Use Al-guided model to predict the tissue of origin of the detected ctDNA.





# **TECHNICAL SPECIFICATION**

#### **SPOT-MAS TECHNOLOGY**

Cell-free DNA is extracted from the blood sample and processed using a proprietary next-generation sequencing (NGS) workflow, which includes both whole genome sequencing and amplicon-based sequencing. Sequencing is performed using DNA nanoball technology on the DNBSEQ-G400 system (MGI Tech Co.). The resulting data are then analyzed using AI-guided machine learning models to detect the presence of ctDNA in the blood and identify the tumor origin, based on a multi-omic database that incorporates genetic, epigenetic, and fragmentomic features of cfDNA.

#### LABORATORY INFORMATION

- This screening test was developed by, and its performance characteristics determined by Gene Solutions Genomics Pte Ltd, a company registered in Singapore.
- Gene Solutions Genomics is licensed by the Ministry of Health (Singapore) as a Clinical Laboratory (License no. L/24I1577/ CLB/001/242) under the Healthcare Services Act 2020.

#### **PUBLICATIONS**

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