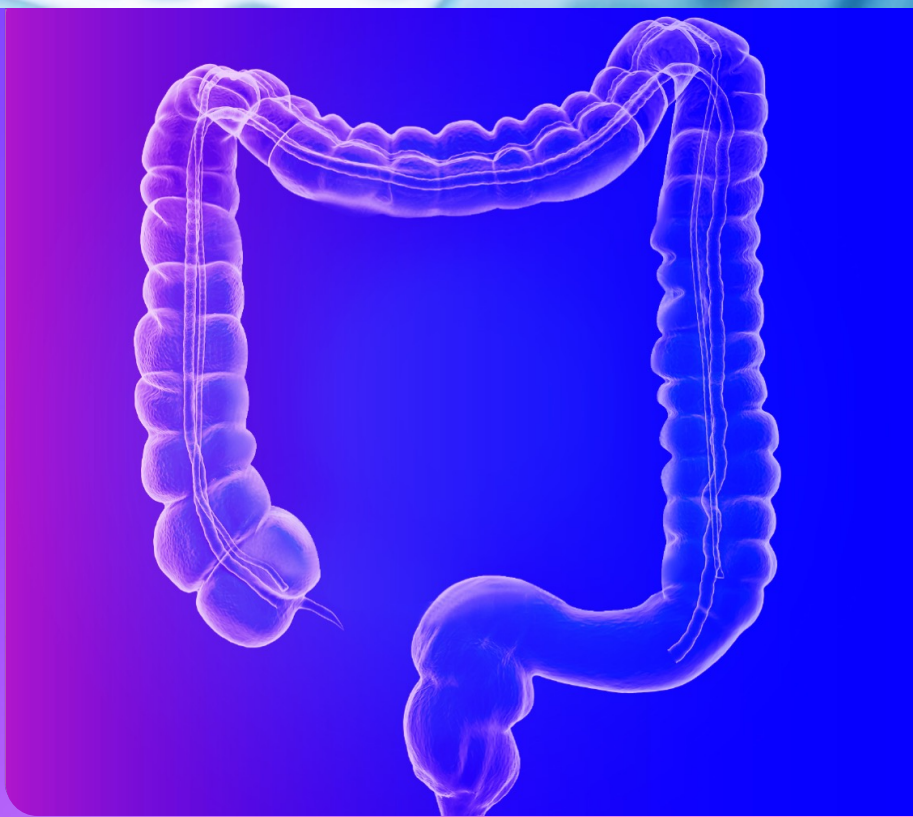
GENE SOLUTIONS

SPOT-MAS

# COLORECTAL CANCER EARLY DETECTION TEST REPORT

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



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# ctDNA ANALYSIS RESULT

## SPOT-MAS CRC:
## EARLY DETECTION OF CANCER IN THE COLORECTUM

## PATIENT INFORMATION

| 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 CRC

### RISK ASSESSMENT


Scope of Investigation: **ctDNA Z-Score**

Risk Value: **4.00**

Result: **Abnormalities Detected**

- Negative Score: ≤3
- Positive Score: >3

**ctDNA (circulating tumor DNA)** is DNA released from cancerous cells and tumors, circulating freely in the bloodstream.

**What Your Result Means:**

**A detected ctDNA signal indicates that you may have colorectal cancer.**
This test is a screening tool, not a diagnostics test. Your doctor will advise you on the next steps and recommend further diagnostic tests to evaluate your condition.

*This result is only valid on the received sample*

## NOTE:

- 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%(1), which means that for **every 100 colorectal cancer-free cases there will be about 8 cases with positive ctDNA signal**.
- The distinct features identifying the tumor origin of ctDNA from the colorectum may overlap, leading to the **possibility of detecting lesions outside the colorectum in positive results.**

*(1) Gene Solutions internal validation data on colorectal cancer*




This report is electronically signed by

| Laboratory Director | Gene Solutions Singapore |
|---|---|
| Christopher Wong, PhD | 5 Tai Seng Avenue #02-54, Singapore 536671<br>**MOH license:** L/24I1577/CLB/001/242 |

CAP ACCREDITED

# YOUR RESULT

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

- This analysis helps detect Colorectal 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 colorectum was DETECTED** in your blood sample.

**Note:**

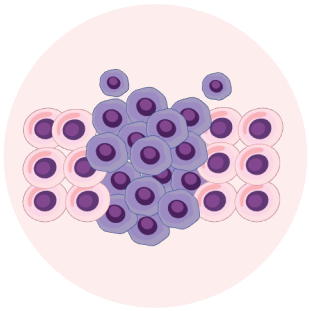
- This result shows that after analyzing your blood sample, **signals suggestive of Colorectal cancer was DETECTED.**
- Therefore, you are recommended to consult with your doctor and perform additional imaging tests to diagnose cancer. **Regarding ctDNA related to Colorectal cancer, a colonoscopy is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

1



Cancer cells grow and form a tumor

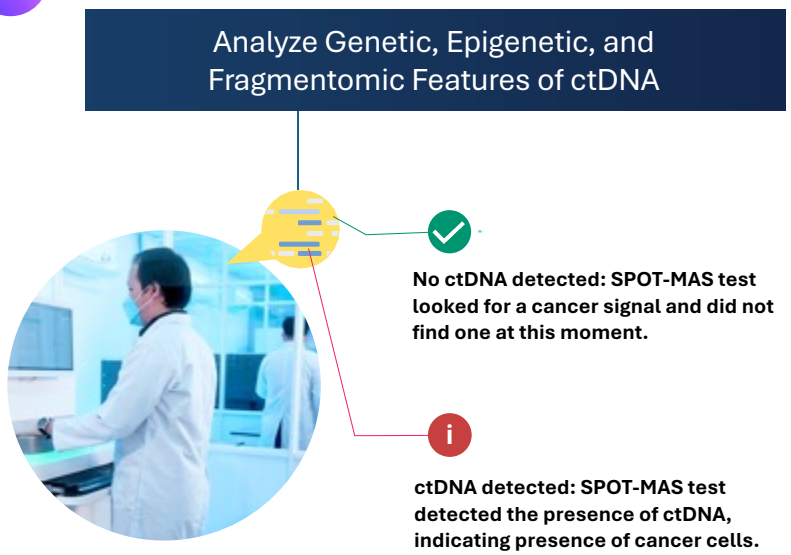
2


Tumor cells release DNA fragments into the bloodstream, known as circulating tumor DNA (ctDNA)

3

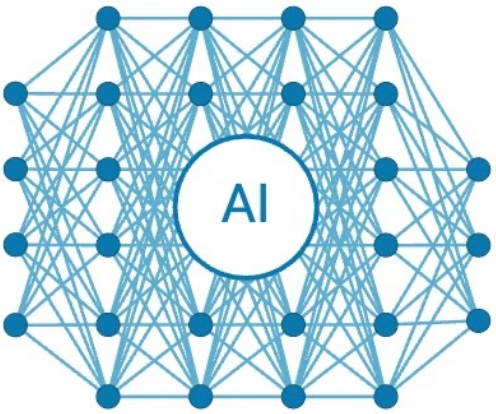
Obtain 01 tube of whole blood (10ml). Extract cell-free DNA from Plasma.

4




Apply next-generation sequencing to analyze multiple features of ctDNA

5




Use AI-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.

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# Share the awareness of early cancer detection today. Early detection is the key to save lives.


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