

## AI-powered Blood Test for Cancer Screening

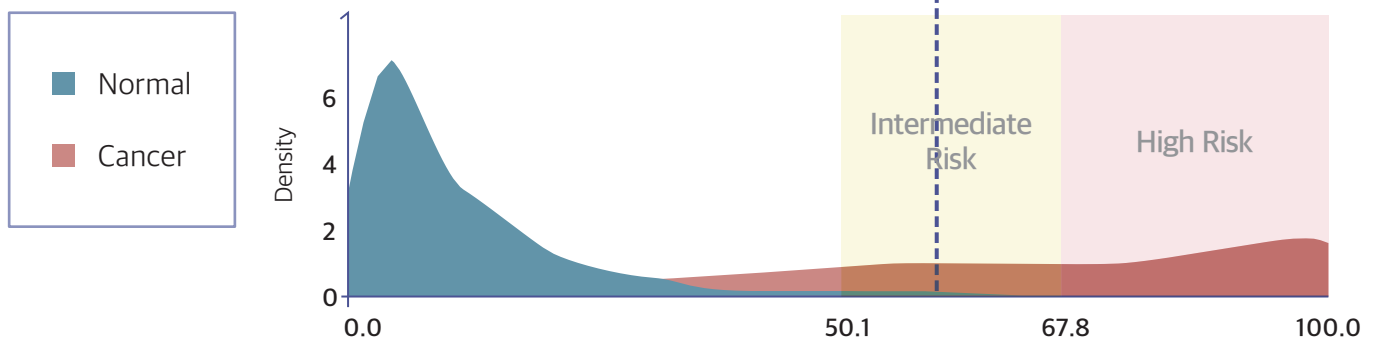
ai-CANCERCH is the multi cancer early detection (MCED) test powered by artificial intelligence (AI) that has trained distinctive DNA patterns from approximately 8,000 cancer patients and healthy individuals. It analyzes DNA patterns to predict the likelihood of the 10 major types of cancers. The test results indicate the potential presence of circulating tumor DNA and require further diagnostic confirmations.

## Test Results

Abnormal Patterns	CANCERCH Score	Suspected Cancer Type
<b>Detected</b>	<b>55.0</b> (Intermediate Risk $\geq 58.1$ )	<b>Not Specified</b>



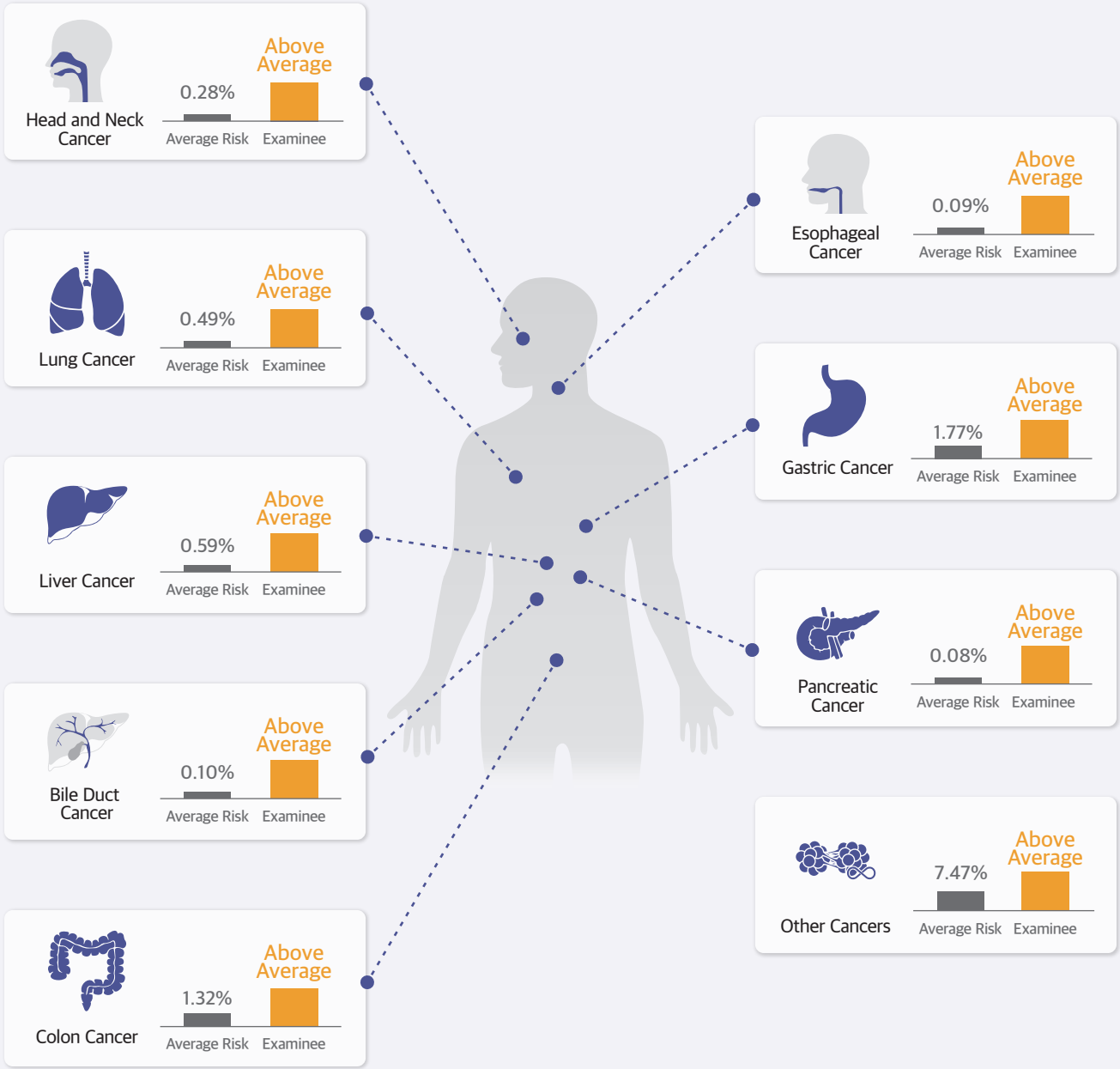
CANCERCH™ Score



The test result of Hong Gildong, **CANCERCH™ Score is 55.0**, and abnormal pattern is detected. This is a strong signal, within the upper 5th percentile compared to healthy individuals. **The possibility of cancer is predicted to be about twice as high.** It is unclear to predict it as a specific cancer; follow-up is recommended.

Cancer Risk

Cancer risk is compared to the risk of similar demographics groups (age and gender)



The average risk for each cancer type corresponds to prevalence among similar age and gender demographics as the examinee. (Annual report of cancer statistics in Korea in 2022))

## Interpretation

As the test result of **Hong Gildong**,  
**cancer-related distinctive pattern is detected.**

**CANCERCH™ Score is 55.0.** The score closer to 100.0 indicates a higher similarity to DNA patterns typically observed in cancer patients.

It is within the **upper 5th percentile** among all test participants. The probability of cancer is predicted to be about **twice as high as** the general prevalence of early 60s female (about 10.46%; 10,460 out of 100,000 individuals).

It is able to take several months to develop cancer even with the Intermediate Risk result. Even normal people may be reported as subjects of Intermediate Risk depending on their health status (benign disease, autoimmune disease, etc.) (about 5%).

Even if cancer is still not confirmed, undergoing regular cancer screening tests like the ai-CANCERCH test to monitor cancer risk can be considered.

This test is a cancer screening test, not a cancer diagnostic test, so physician-driven diagnosis is recommended.

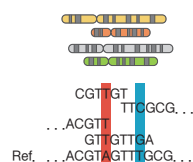
## DNA patterns analyzed by ai-CANCERCH

### Oncogene specific cfDNA fragment end-motif & size pattern information<sup>1)</sup>



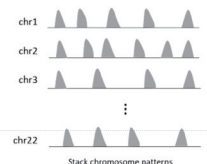
cfDNA size &  
fragment end-motif information

### Oncogene specific mutation density and pattern<sup>2)</sup>



Mutation pattern information


### Oncogene specific copy number variation pattern analyze<sup>3)</sup>



Copy number variation  
pattern quantification

Patent  
1) Method for diagnosing and predicting cancer type using fragment end motif frequency and size of cell-free nucleic acid (10-2021-0068891)  
2) Method for diagnosing and predicting cancer type based on single nucleotide variant in cell-free DNA (10-2022-0072680)  
3) Circulating Tumor DNA Detection Method Using Sample comprising Cell free DNA and Uses thereof (10-2018-0003804)

Personalized Guidelines

 Intermediate Risk	Diagnostic Test	ai-CANCERCH Test
	Consult to a Physician	Retest after 3 months



For the Intermediate Risk result, ai-CANCERCH test after three months for follow ups is recommended. The Intermediate Risk is a case in which abnormal DNA patterns is observed but the possibility of temporal abnormality due to the health status(benign disease, autoimmune disease, etc.) cannot be excluded. Please consider undergoing the ai-CANCERCH to monitor cancer risk every three months. If you have the symptoms for specific cancers, further test through the consultation with the physician is recommended.

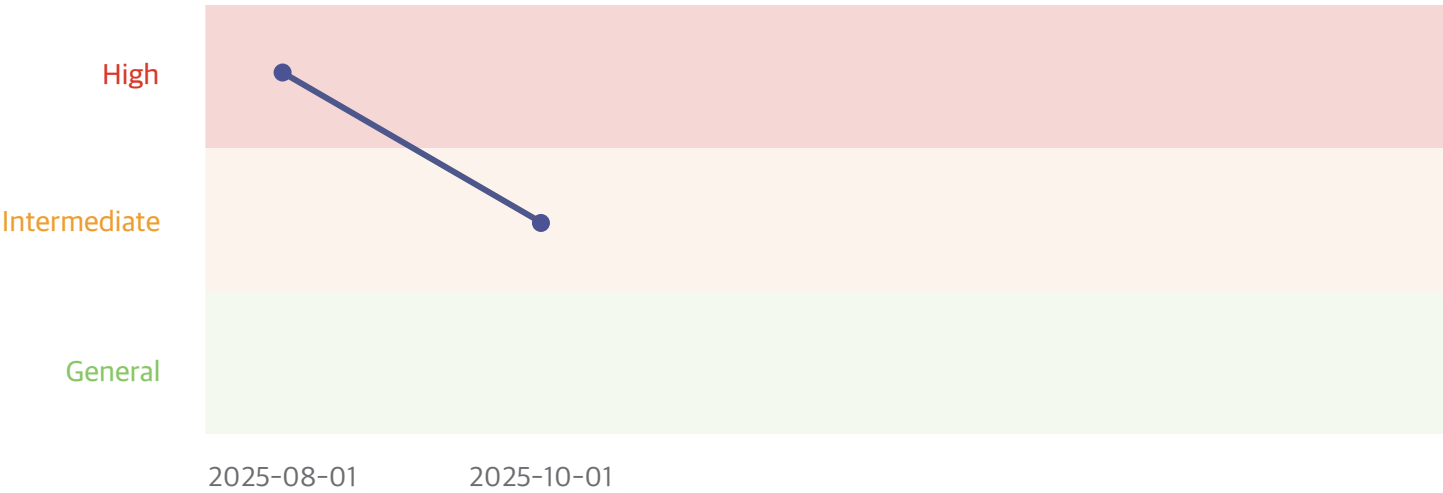
Type	Target	Intervals	Test
Gastric	Individuals aged 40 or older	Every 2 years	Gastroscopy (If gastroscopy is not available, an upper gastrointestinal series may be an option)
Liver	Individuals aged 40 or older and at high risk of liver cancer (Those who have cirrhosis or test positive for the hepatitis B or C virus antibody)	Every 6 months	Liver ultrasound, AFP test
Lung	Individuals aged 54 to 74 with a smoking history of ≥ 30 pack-years*	Every 2 years	Low-dose chest CT
Colon	Individuals aged 50 or older	Every 1 years	If there are any abnormal findings in fecal occult blood test, colonoscopy can be considered (if a colonoscopy is not available, a double contrast barium enema may be an option)
Pancreatic	Individuals aged 50 or older Family history/long-term smoker/Chronic Pancreatitis/Diabetes	Every 1 years	Abdominal ultrasound, CT
Bile Duct	Individuals who have any symptoms or are associated with any risk factor	Regular Check-ups	Blood test, Abdominal ultrasound
Esophageal	Individuals who have any symptoms or are suspected to have esophageal cancer	Regular Check-ups	Esophageal-Gastric endoscopy
Head and Neck	Individuals who have any symptoms or are associated with any risk factor	Regular Check-ups	Regular check-ups(endoscopy or ultrasound) and Consultation with an otolaryngologist in case of suspected symptoms
Breast	Women aged 40 or older	Every 2 years	Mammography
Ovarian	-	-	If there are any abnormal findings in a CA125 test, ultrasound, CT or MRI can be considered

\*Pack-years: Average daily smoking amous (packs)

## Monitoring Graph

### ai-CANCERCH Follow-up Result

f/u No.	Date	Test Results
2nd	2025-10-01	Intermediate Risk
1st	2025-08-01	High Risk



## QC Results

cfDNA Quality <sup>1)</sup>	NGS Data Quality <sup>2)</sup>	QC Quality <sup>3)</sup>
Pass	Pass	Pass

cfDNA Quality: Verifies whether the cfDNA from the examinee is in an appropriate condition and concentration for analysis.  
NGS Data Quality: Confirms whether the data generated through next-generation sequencing are suitable for analyzing DNA patterns.  
QC Quality: Checks whether the test was conducted properly based on the data results of the control material.

## Disclaimers

- This test screens for cancer by analyzing patterns in cfDNA, and a cancer signal does not indicate a diagnosis of cancer.
- This test cannot detect all types of cancer and the test performance may differ depending on the stage or type of cancer.
- This test is developed using major 10 type of cancer sample data. Other cancer types cannot be analyzed accurately.
- The sensitivity may vary depending on the location and genetic characteristics of the cancer.
- Clinical validation for breast cancer was conducted using a Caucasian cohort.
- The test performance and tested cancer type can be modified according to the ML-algorithm improvement
- This test may be reported as false positive in the examinee with benign diseases, autoimmune diseases, etc., and may be reported false negative in case of having chemotherapy, cell therapy, etc.
- This test may show lower specificity in older individuals.

### ai-CANCERCH Performance

AI model version: v.2026

Cancer Type	Specificity <sup>1)</sup>	Sensitivity <sup>2)</sup>	PPV <sup>3)</sup>	NPV <sup>4)</sup>
Overall				>98.0%
Gastric				>98.0%
Liver				>98.0%
Lung				>98.0%
Colon				>98.0%
Pancreatic				>98.0%
Bile duct				>98.0%
Esophageal				>98.0%
Head and Neck				>98.0%
Breast				>98.0%
Ovarian				>98.0%

1) Specificity: Indicates the proportion where the ai-CANCERCH test classifies a healthy individual to the general risk group.

2) Sensitivity: Indicates the proportion where the ai-CANCERCH test classifies a cancer patient to high or intermediate risk group.

3) PPV: Positive Predictive Value. Represents the proportion of subjects identified by the ai-CANCERCH test as part of the high or intermediate risk group who are actual cancer patients.

PPV has been calculated based on the prevalence of the 50s and above Korean.

4) NPV: Negative Predictive Value. Represents the proportion of subjects identified by the ai-CANCERCH test as par of the general risk group who are healthy individuals.

NPV has been calculated based on the prevalence of the 50s and above Korean.

## References

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### ■ Clinical Significance of Genes

This test has no established the clinical significance of its results, and there is still insufficient evidence for the utility if health-related actions based on it.  
- Circulating tumor DNA test for Liver, Lung, Colon, Gstric, Pancreatic, Bile duct, Esophageal, Head and Neck, Ovarian and Breast cancer.

※This test was developed and its performance characteristics determined by GC Genome