GASTROCLEar

- Blood-based biomarker test for early detection of gastric cancer in conjunction with gastroscopy.
- ✓ Validated to detect 87.5% of stage 1 gastric cancers and 89.5% of stage 2 gastric cancers¹.
- Jointly developed in Singapore by Agency for Science, Technology, and Research (A*STAR), National University Hospital, Tan Tock Seng Hospital, and Mirxes.

Why is gastric cancer early detection important?



 In Singapore²:
Gastric cancer is one of the highest incidence cancers (8th in males, 10th in females).

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- It is also one of the leading causes of cancer mortality (6th in males, 7th in females).
- 60% **3. About 60% of gastric cancers** are diagnosed late (in stages **3 & 4)**.

Who is the GASTROClear[™] test intended for?

Adults of either sex, aged 40 years or older, at average risk of having gastric cancer with one of the following risk factors:

- Medical history:
 - Family history of gastric cancer.
 - History of Helicobacter pylori (H. pylori) infection.
 - Previous history of stomach lymphoma and stomach polyps.
 - Long-term stomach inflammation (chronic gastritis).

Lifestyle habits:

- Diets containing large amounts of fried food, smoked foods, salted fish, processed meat, and pickled foods.
- Diet low in fruits and vegetables.
- Smoking

How does the GASTROClear[™] test help medical professionals detect patients with gastric cancer earlier?

- 1 Intended to be used as an adjunctive test to identify high-risk patients who should undergo gastroscopy for more detailed examination to detect gastric cancer.
- 2 An option for high-risk patients who are not keen on first-line gastroscopic screening as the test can differentiate between patients with gastric cancer and those with gastric conditions like gastritis and intestinal metaplasia¹.
- 3 The test detects all stages of gastric cancer with up to 86% sensitivity and up to 89% specificity¹.

GASTROClear[™] test results and interpretation

The test report gives a quantitative risk score calculated based on the expression levels of 12 selected microRNA biomarkers.

Risk Score	Risk Category	Interpretation
0 to 39.9	Low Risk	Likelihood of gastric cancer is not elevated.
40.0 to 50.0	Intermediate Risk	Likelihood of gastric cancer is slightly elevated. Further medical evaluation and/or repeat testing may be appropriate.
50.1 to 100	High Risk	Likelihood of gastric cancer is elevated. Specialist medical consultation is advised for further evaluation.

For medical professionals only.



GASTROClear™ validation

Clinical validation of GASTROClear was performed with a total of 4,566 subjects from a prospective study which enrolled 5,282 symptomatic high-risk patients referred to gastroscopy at two Singapore hospitals¹. There were 115 gastric cancer subjects confirmed with biopsy and 10 subjects with high-grade dysplasia.

Clinical performance of GASTROClear was evaluated against the clinical gold standard of gastroscopy and pathohistological examination. Performance was also compared against conventional blood-based biomarkers CEA, CA19-9, pepsinogen (PG) 1/2 ratio, PG index, H. pylori serology, and the "ABC" method that combines H. pylori serology and PG 1/2 ratio.

The assay, which measures 12 miRNA biomarkers, detected gastric cancer with >80% sensitivity regardless of cancer stage, gender, ethnicity, age and had minimal cross-reactivity with other common cancers including those of the gastrointestinal tract.



population)

GASTROClear™ Test Specifications

Intended Use	GASTROClear is a lab developed test (LDT) which utilizes a proprietary RT-qPCR technology to evaluate the expression of multiple circulating human microRNAs associated with gastric cancer. The test measures multiple cancer-associated microRNA biomarkers and detects signatures that are often present in the blood of persons with gastric cancer. These are combined to create a risk score to reflect the likelihood of gastric cancer being present at the time of testing, based on scores from a cohort of patients with and without gastric cancer.
Sample Requirement	5 mL blood sample in SST or red top blood tube. No fasting required prior to blood collection.
Lab Procedure	Uses RT-qPCR to detect multiple microRNA biomarkers associated with gastric cancer.

This test is not intended to provide a definitive diagnosis of gastric cancer and is not a substitute for gastroscopy. The test result is intended solely for use by a medical professional and does not constitute medical advice by Mirxes and related parties.

References:

- So JBY et al. Development and validation of a serum microRNA biomarker panel for detecting gastric cancer in a high-risk population. Gut 2020; doi: 10.1136/gutjnl-2020-322065
- 2 Singapore Cancer Registry Annual Report 2021.





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About the Company

Our mission is to save and improve lives through early, actionable, and personalized diagnoses across the care continuum.

Mirxes At A Glance

- 1. Global leader in microRNA focused molecular diagnostics.
- 2. Focused in the delivery of early and actionable cancer diagnoses using proprietary RNA-powered blood tests.
- 3. Strong pipeline in Oncology, Infectious and Cardiovascular Diseases.
- 4. End-to-end Capabilities in R&D, Manufacturing & Clinical Diagnostic Services.

Visit our website for more information.



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