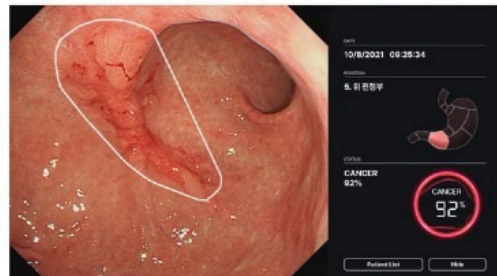
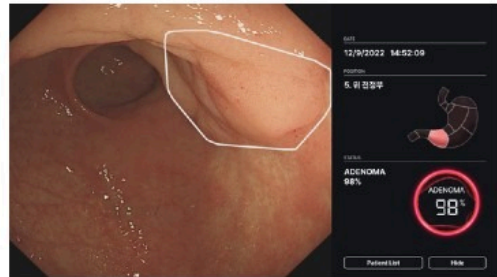


**TECH OFFER**

**AI Diagnosis-Based Gastric Cancer Prevention Management & Care Software**



**KEY INFORMATION**

TECHNOLOGY CATEGORY:  
Healthcare - Diagnostics

TECHNOLOGY READINESS LEVEL (TRL): **TRL8**  
COUNTRY: **SOUTH KOREA**  
ID NUMBER: **TO175143**

**OVERVIEW**

The AI-based software for gastric cancer prevention and management is a pioneering medical device that leverages real-time AI diagnostics to improve patient outcomes. This innovative solution aims to enhance the survival rates and quality of life for high-risk gastric cancer patients, reduce healthcare costs by preventing the disease from progressing to more severe stages, and is currently undergoing clinical trials in major hospitals in Korea with related patents secured.

Among the world's seven major cancers, the one with the lowest 5-year relative survival rate of 20-30% demonstrates that regular surveillance diagnostics of the high risk patients is the most well-proven preventive measure.

The core technology integrates comprehensive AI diagnostics from pre-cancerous stages to cancer and a multi-modal AI personalized surveillance system for optimal preventive management and patient care. Developed in Korea, where millions of endoscopic examinations are conducted annually, this software is designed to maximize the diagnostic and consultative capabilities of physicians and enhance the preventive management functions for patients. The user interface is tailored to meet

the needs of doctors, high-risk patients, and their caregivers, with AI algorithms and interfaces continuously improving.

## TECHNOLOGY FEATURES & SPECIFICATIONS

Key functional Features:

- High-performance AI algorithms and unique interface: Patented AI/interface and over 1 million data points diagnose comprehensive pre-cancerous conditions, including gastric cancer, adenoma, and chronic gastritis (intestinal metaplasia).
- Diagnostic accuracy: Simultaneously diagnoses multiple diseases in real-time, achieving performance equal to or superior to that of skilled physicians.
- User-friendly display: Intuitive UI resolves information asymmetry between skilled and unskilled doctors, as well as between doctors and patients.
- Multimodal AI software: Integrates various data sources such as imaging, medical, and language to support multimodal consultations and provide personalized management and care plans.
- Versatility: Supports both on-premises and cloud environments, making it compatible with various endoscopic devices and platforms.
- Efficiency and environmental protection: Features like auto-capture and best shot selection enhance pathology confirmation efficiency, reducing medical time and costs and contributing to environmental protection.

Development process: Organically structured in stages of UI design tailored to doctor and patient needs together, AI algorithm development and integration, final product quality verification, and continuous enhancement.

## POTENTIAL APPLICATIONS

- As a digital healthcare solution:
  - Real-time diagnostic market and new medical device market based on AI software solutions
  - Health management services using AI-based personalized preventive care solutions
  - Insurance and consumer (patient)-targeted health management platform linkage market
  - Future markets that can be linked and expanded with the medical ecosystem related to medical big data, telemedicine, and patient monitoring systems
- As a software developer and business operator:
  - New business approaches through collaboration with various hardware and platform operators

## MARKET TRENDS & OPPORTUNITIES

The global market for AI-assisted upper endoscopy diagnostics exceeds \$6 billion, while the patient-driven gastric cancer prevention and care market surpasses \$60 billion. A particular company demonstrates significant market competitiveness through its innovative technologies:

1. Endoscopic Pre-cancer Diagnosis for Gastric Cancer Prevention:
  - The first technology in Korea and globally that allows personalized diagnostic results to be managed over time.
  - A technology with approximately 90% diagnostic accuracy for major pre-cancerous conditions like intestinal metaplasia, achieved through comprehensive analysis of multiple landmarks in videos, potentially replacing

numerous random biopsies.

2. Early Partnerships: Pursuing early partnerships with multi-national hardware and platform providers based on software flexibility.
3. International Academic Activities:
  - Presentation at the European Union Digestive Disease Week in October 2023 (superiority in diagnosing intestinal metaplasia compared to experienced physicians).
  - Abstract presentation at the Spring 2024 SIDDs conference (efficiency of landmark classification and engine compared to experienced physicians, and improvement in photo documentation quality).
  - Several research publications are currently in the process of being published.

## UNIQUE VALUE PROPOSITION

### Current Advanced Technology Improvements

1. Comprehensive Real-Time Diagnosis: Unlike existing solutions that focus on a single and non-real-time disease detection, this product simultaneously diagnoses various conditions from pre-cancerous stages to cancer in real-time.
2. High Diagnostic Accuracy: Trained on over a million data points, the AI algorithm provides diagnostic accuracy equal to and/or significantly better than skilled physicians' visual detection.
3. Multi-type User-Friendly Interface: An intuitive 'medical device UI' addresses information asymmetry not only between skilled and unskilled physicians, but also between doctors and patients.
4. Multimodal AI Software Medical Device: Integrates imaging, medical records, and language data to support personalized consultations and preventive care plans.
5. Support for Various Environments and Efficiency: Supports both on-premises and cloud environments, and features automatic shooting and optimal shot selection to reduce medical costs and contribute to environmental protection.

### Unique Value Proposition (UVP) Compared to Current Advanced Technology

1. World's First AI-Based Preventive Care: The first AI software medical device to implement real-time AI diagnosis for gastric cancer preventive care.
2. Comprehensive Solution for Gastric Cancer Prevention Management: Provides an integrated solution that simultaneously addresses the major obstacles in gastric cancer prevention management, such as diagnostic errors and appropriate surveillance management errors.
3. Verified Patent Technology: Undergoing clinical trials in major hospitals in Korea, with related patents obtained and filed to ensure the reliability and effectiveness of the technology including surface/diffuse type of lesion detection not limiting to traditional contour-based lesion detection.
4. International-Level Research: Maintains cutting-edge technology through continuous international-level research.