Cancer Cancer through AI

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Go-to-in-Groundbreaking Research: Lunit Insight Screening Program in Breast/Lower Neck Scale Model (BSNM) Accelerating Experience of Cancer Care

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The BSNM project has been their pioneer in the making and is a breakthrough in the conventional cancer screening process. Lunit Insight Screening Program (LISP) for BSNM has been deployed to Gangnam Severance Hospital since Q1 2024. The LISP has 98.7% sensitivity in cancer care, which implying cancer signal for 98 out of 100 patients who actually have cancer. The Company believes that the LISP can significantly reduce the number of false positive results, which would lead to unnecessary additional tests, ensuring stable revenue growth.

The Company's Lunit Insight Screening Program intends to analyze breast images and automatically prioritize cancer suspicious cases for further diagnostic evaluation. This will enable radiologists to focus their attention on the most critical cases, ensuring a more efficient and accurate diagnostic process. The Company believes that the LISP will not only enhance the efficiency of cancer screening but also significantly improve the accuracy of diagnoses, ultimately benefiting patients by ensuring more timely and precise treatment decisions.

The Company's Lunit Insight Screening Program is designed to integrate seamlessly with existing healthcare systems, including PACS and EMR systems, to maximize its impact on clinical workflows. The Company believes that the LISP will not only streamline the diagnostic process but also contribute to the overall sustainability of healthcare systems, creating a more efficient and effective healthcare ecosystem.

(5) Patents

Patent Registration for Multicentric, Method and System for Predicting Biomarker Expression from Medical Images

(2024.Q3) The Company has received a CE patent for a method that determines the optimal tissue for biopsy by identifying the heterogeneity of biomarker expression across multiple tumor regions in H&E images. The patent, which covers the Company's Lunit SCOPE IO solution, enhances the accuracy of biomarker expression predictions by analyzing various tumor regions, including those that may be overlooked in traditional biopsy and sampling patient samples.

This patent is expected to strengthen the Lunit SCOPE series by AI performance, which includes advancing its proposed Medical Big Data Platform' development. As Lunit SCOPE series has been deployed to various global pharmaceutical companies, the Company believes that this patent will further enhance the value of its AI solutions for pharmaceutical partnerships, ultimately driving Lunit SCOPE's growth. The Company aims to enhance service offerings and maintain its competitive edge in the pharmaceutical industry by leveraging this patent to provide more precise and comprehensive biomarker expression predictions.

The patent method can facilitate training models to analyze tumor images and automatically identify the optimal tissue for biopsy, ensuring that the most representative tissue is selected for biomarker expression analysis. This process aims to reduce the need for multiple biopsies and improve the accuracy of biomarker expression predictions, ultimately benefiting patients by ensuring more precise and comprehensive treatment decisions.

(6) Academic Society

ESTRO 2024 : Presentation of an Abstract (Lunit ACCPHIS, Lunit SCOPE) Highlights Potential for Predicting Immunotherapy Response in Rectal Cancer

(2024.Q3) The Company presented pathologist-validated deep learning models for predicting immunotherapy response in rectal cancer patients at the ESTRO 2024 conference, a leading global oncology conference, held in Glasgow, Scotland, from May 3 to May 7. The Company's Lunit ACCPHIS and Lunit SCOPE models demonstrated high accuracy in predicting immunotherapy response in rectal cancer patients, highlighting their potential significant impact in the field of immunotherapy.

The research, conducted in collaboration with Yonsei University Severance Hospital, utilized H&E-stained whole slide images from rectal cancer patients who received tumor biopsy. The research aimed to predict pathologist-validated immunotherapy response using these images.

The Lunit ACCPHIS model achieved an AUC of 0.84 in predicting immunotherapy response, while the Lunit SCOPE models achieved AUCs of 0.78 and 0.79. These results underscore the models' potential to accurately predict immunotherapy response in rectal cancer patients, which is crucial for personalized treatment strategies and improving patient outcomes.

The Company believes that these AI models could significantly enhance the efficiency and accuracy of biomarker testing in rectal cancer, potentially transforming the way immunotherapy is administered to this patient population. The Company plans to further validate these models in larger, multi-center studies and explore their integration into clinical workflows to maximize their impact on patient care and treatment outcomes.

(7) Paper

JAMA Network Open (Impact Factor=13.5): Study Highlights AI's Potential to Predict Breast Cancer Risk Up to 5 Years in Women

(2024.Q3) A recent study overseen by the pioneer in Lunit INSIGHT MMG, a comprehensive AI-powered breast cancer risk prediction tool, has been published in JAMA Network Open, a leading medical journal. The study, conducted across two cohorts with over 110,000 women aged 40-74 in Sweden, demonstrated a dose-response relationship between AI-predicted breast cancer risk and the actual incidence of cancer. Women in the top 1% of AI-predicted risk were found to have a cancer risk nearly four times higher than those in the average risk group, with this elevated risk persisting for up to 5 years after the initial mammogram.

Results showed that leveraging the AI, second, or both radiologists' reads yielded a cancer detection rate of 6.1, 5.0, and 5.2 per 1,000 women, respectively, with no significant differences in performance observed between these groups. The study also found that the AI system could potentially reduce the workload for second readers by 52.7%, while maintaining comparable cancer detection rates. The research suggests that AI could be a valuable tool for breast cancer screening, offering the potential to enhance early detection and optimize resource allocation in healthcare systems.

Results showed that adding the AI score, second reader, or both radiologists' reads to standard screening mammography yielded a cancer detection rate of 6.1, 5.0, and 5.2 per 1,000 women, respectively, with no significant differences observed between these groups. The study also found that the AI system could potentially reduce the workload for second readers by 52.7%, while maintaining comparable cancer detection rates.

These findings highlight the model's robust performance across a wide range of breast cancer risk levels, underscoring its potential to enhance early detection and optimize resource allocation in healthcare systems. The study's use of a large, diverse dataset and its digital pathology, by ensuring the robustness and high-risk specificity of the AI model, further underscores the model's potential to significantly improve breast cancer screening outcomes and healthcare resource management.

(8) Paper

Strengthening Lunit Research Capabilities: Five Breakthrough Presentations of Breast Sales Exceeding 2 Million KRW and Breakthrough Sales Within 3 Days

(2024.Q3) The Company recently announced its commitment to enhancing research and confirmed following five research-focused deep learning innovations at December 24.

In response, the Company has established a dedicated team to strengthen research capabilities and present such innovations in the future, to reinforce the Company's commitment to research and development and to maintain its leadership in the medical AI industry. The Company believes that these efforts will further solidify its position as a leader in the medical AI industry and drive long-term growth and innovation.

Additionally, the Company stated that its ability to leverage this extensive, clinic-based dataset from its customers has been a key factor in its success to the best knowledge. This dataset, comprehensive research, and in-depth collaborations with leading institutions, enable the Company to maintain its competitive edge in the medical AI industry.

The company remains committed to advancing medical AI diagnostics and expanding its research capabilities, leveraging its foundation in extensive clinical data and collaborations with leading institutions. The Company believes that these efforts will further solidify its position as a leader in the medical AI industry and drive long-term growth and innovation.

(1) AI Highlights

1. Personal Accelerator Assistant at GE Healthcare (Q1 2024)
Partnership announced with GE Healthcare to develop AI-powered personal assistant for radiologists.
2. Strategic Collaboration with AstraZeneca to Develop In-Patient Digital Pathology Solution: Potential for Further Expansion (Q2 2024)
Collaboration with AstraZeneca to develop AI-powered digital pathology solutions for in-patient care, with potential for expansion and growth.
3. JEDAI (EDA) Record Breaking 36 Abstracts including Lunit and Volpara
Lunit and Volpara set a record with 36 abstracts accepted at JEDAI (EDA) conference.

(2) Major Activities

(1) Sales Performance

Recent Accumulated Revenue of 2 Billion KRW in Q3 Marks Exceptional Profitability, with Continued Growth Momentum

(2024.Q3) Lunit Consolidated reported a record-high revenue of KRW 2 billion in Q3, a 230% YoY increase, marking the company's third consecutive quarter of record-high revenue and revenue of 10.4%. This growth underscores the successful integration of Volpara into Lunit's operations and the company's ongoing momentum in the medical AI sector. The Company's strategic focus on expanding its AI-driven solutions for breast cancer screening and its commitment to enhancing operational efficiencies have been pivotal in sustaining this growth. The Company's commitment to rigorous research and development and its growing suite of Lunit SCOPE AI solutions have been instrumental in attracting new clients and expanding its market reach. The Company believes that the integration of Volpara has not only bolstered its revenue but also laid the groundwork for enhanced synergies in the future. The Company is confident that its strategic initiatives will continue to drive sustainable growth and maintain its leadership in the medical AI sector.

(2) Contracts

Strategic Collaboration with AstraZeneca to Develop In-Patient Digital Pathology Solution: Potential for Further Expansion

(2024.Q3) The Company announced a strategic collaboration with global pharmaceutical leader AstraZeneca to develop AI-powered digital pathology solutions for non-small cell lung cancer (NSCLC). The results between the Company and AstraZeneca have been promising, with the Company's AI models demonstrating high accuracy in predicting biomarker expression from digital pathology slides.

The collaboration will facilitate the validation, and efficient deployment of Lunit's AI-powered biomarkers across AstraZeneca's global clinical trials, leveraging the Company's scalable infrastructure and AstraZeneca's extensive clinical trial network. This partnership is expected to accelerate the development of precision medicine tools in NSCLC drive insights directly from both internal tissue samples.

In addition to this initial phase, the Company and AstraZeneca are exploring opportunities to leverage molecular biomarkers predictions based on H&E slides, which could further enhance patient stratification and treatment decisions. The Company believes this collaboration positions it to capture significant growth opportunities in oncology.

Partnership with GSI Group: Bringing AI-Powered Mammography to Over 800 Sites Across Korea

(2024.Q3) The company has entered into a multi-year agreement with GSI Group to supply Lunit Insight MMG, a comprehensive AI-powered breast cancer risk prediction tool, to its customers in Korea. The deal, a significant expansion of the Company's partnership with GSI Group, underscores the growing demand for AI-driven solutions in breast cancer screening and the Company's strategic focus on expanding its presence in the key, fast-to-mature, and mature markets. Under the contract, Korean healthcare providers will have access to Lunit Insight MMG, a tool that has shown promising results in improving breast cancer detection and risk assessment.

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Thank you for your continued support.

Lunit Inc.

For revenue inquiries/sales inquiries, please contact Volpara's

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