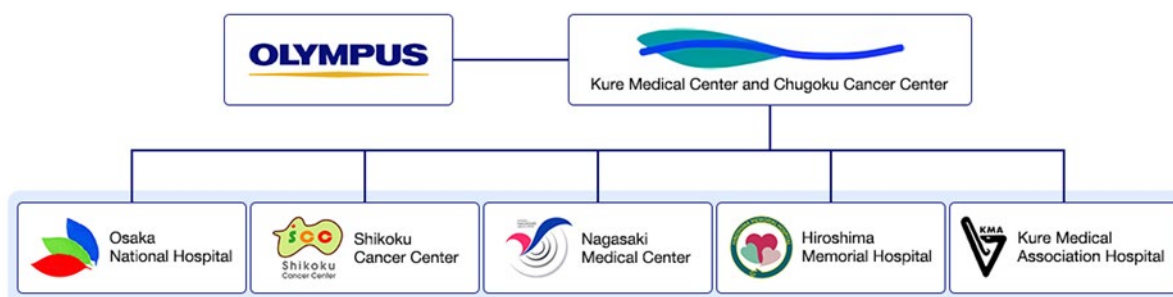


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**Olympus Deep Learning AI-Based Pathology Diagnostic Tool Advances to the Multicenter Testing Phase****Jointly developed computer-assisted diagnostic tool will be refined and tested using data from multiple hospitals in Japan**

Beginning in 2017, Olympus' proprietary deep-learning technology has been used in a joint research program to create an AI-based pathology diagnostic tool with the potential to streamline pathologists' workloads. The program has two phases; phase 1 testing demonstrated the tool's effectiveness at identifying adenocarcinoma (ADC) tissue in images. Phase 2 testing at six hospitals in Japan\*<sup>1</sup> is now beginning with the aim of further refining the tool in preparation for commercialization. This AI testing phase is expected to last for three years.

**▪ Demand for Diagnostic Tools**

There is increasing demand for diagnostic tools that can help reduce the workload of pathologists. To help meet this need, Olympus, through its Office of Innovation\*<sup>2</sup>, began a collaboration with the Kure Medical Center and Chugoku Cancer Center in Japan in 2017 to develop an AI-based pathology diagnostic tool. In the initial testing phase, the AI was trained using 368 pathology slide images collected from ADC specimens. Once the AI was trained, it was able to successfully identify ADC tissue from slide images.

**▪ Phase 2 Testing**

In phase 2, the diagnostic tool will be expanded to six hospitals in Japan, including the Kure Medical Center and Chugoku Cancer Center. This is crucial as the quality of samples—such as thickness, color and condition—can vary. By testing the AI tool at multiple hospitals, the AI can demonstrate that it can obtain accurate results no matter the sample's quality. During this phase, testing will be expanded to include stomach cancer samples as well as adenocarcinoma. The AI will undergo training to identify stomach cancer samples at the Kure Medical Center and Chugoku Cancer Center prior to testing.

The goal of this program is to deliver AI pathology diagnosis software that can reduce the burden on pathologists by 2023.

▪ **About the National Hospital Organization Kure Medical Center and Chugoku Cancer Center**

The Kure Medical Center and Chugoku Cancer Center is one of the core hospitals in western Japan. The pathology department performs a large number of pathological diagnoses on a daily basis, and also conducts pathological diagnosis of community medicine in cooperation with Hiroshima University and the Kure Medical Association Hospital. In addition, as a tumor pathology laboratory, they are conducting cutting-edge academic research, including the field of digital pathology. And as a member of the National Hospital Organization Pathology Council, they are also actively conducting clinical pathology research.

\*1

- National Hospital Organization Kure Medical Center and Chugoku Cancer Center
- National Hospital Organization Osaka National Hospital
- National Hospital Organization Shikoku Cancer Center
- National Hospital Organization Nagasaki Medical Center
- Hiroshima Memorial Hospital
- Kure Medical Association Hospital

\*2 Collaboration with companies and academic organizations with advanced technologies under our X (cross) INNOVATION program.

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