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Kyoto University Hospital and Xcoo are jointly researching a system to support the operation of expert panels for cancer genomic medicine

Staring in April 2025, Kyoto University Hospital and Xcoo Inc. have rolled out the RAD (Rule based Annotation Descriptor) system to support the on-site operation of expert panels. This system, in development since November 2022, applies Xcoo's "Software to Support Cancer Genomic Medicine" based on the "Kyoto University Rulebook," a guideline for interpreting expert panels that was being developed by Professor Manabu Muto of the Department of Medical Oncology, Graduate School of Medicine, Kyoto University.

Background and Content

There is a recent global trend in adopting "Cancer genomic medicine," which analyzes the characteristics of cancer at the genome level and provides individualized diagnosis and treatment. In Japan, "cancer genome profiling tests" have been covered by public health insurance since June 2019, and as of July 2025, more than 100,000 individuals have undergone the test. During a "cancer genome profiling tests," an "expert panel (molecular tumor board)" is introduced, where multiple specialists gather to discuss the clinical significance and treatment protocol for the detected gene variants. However, as pointed out by the Cancer Genomic Medicine Core Hospital Liaison Conference (https://www.ncc.go.jp/jp/c_cat/jitsumushya/090/index.html), some reports greatly strains the expert panel, as specialized knowledge and judgment are required to interpret gene variants, search for drugs, and consider clinical trials.

Kyoto University Hospital has developed the "Kyoto University Rulebook," a policy for interpreting gene variants, which has assisted in the interpretation by systematizing the process. The joint research project developed a system that automatically references the "Kyoto University Rulebook" (Figure 1) which further simplified the process. The system has been in stable operation for over three months, resulting in improved clinical practice.

Professor Manabu Muto of Kyoto University Hospital commented, "This system will help cancer genomic medicine affiliated hospitals interpret gene variants in their own facilities. As the number of facilities capable of expert panels increases, we can expect cancer genomic medicine to spread nationwide."

We will continue to update the latest information and system on gene variant interpretation, with the intention of enhancing the experience for medical professionals and patients.

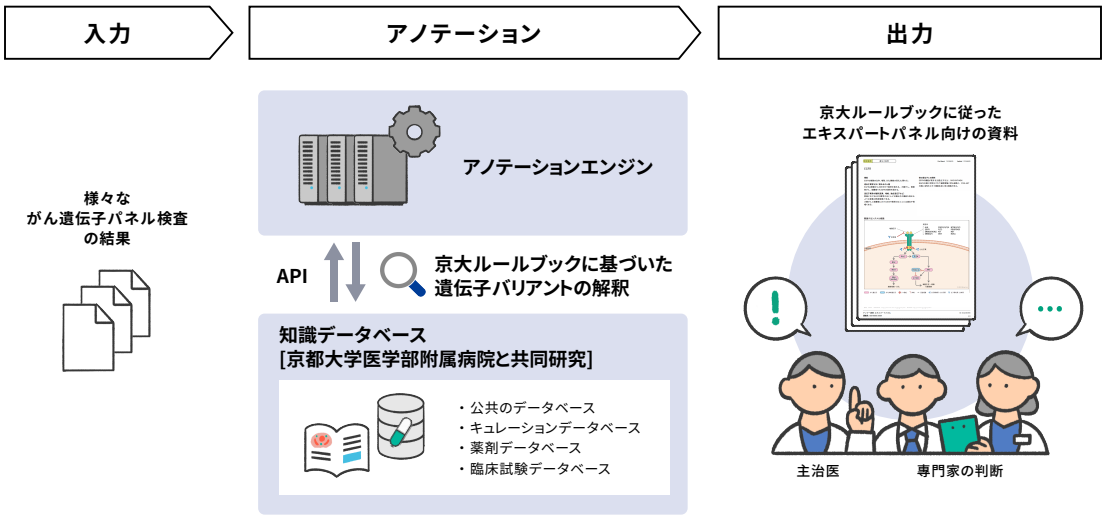

Figure 1. A system to support the operation of an expert panel on cancer genomic medicine conducted jointly by Kyoto University Hospital and Xcoo

About Xcoo

A start-up company originating from the University of Tokyo, specialized in genome analysis and bioinformatics. Xcoo has been developing and operating Chrovis, a total solution software for genomic and bioinformatics analyses. The company has received numerous startup-related awards, including the MEXT Minister's Award at Adcademic Startups 2019. Chrovis Clinical Annotation Cancer Genome Reporting (tentative name) has been designated for priority review by the Ministry of Health, Labor and Welfare concerning Software as a Medical Device (SaMD).

Headquarters：	Headquarters : 2-40-8, Hongo, Bunkyo-ku, Tokyo 113-0033 JAPAN
CEO：	Kunihiro Nishimura, Ph.D.
Established：	April, 2011
Web site：	https://xcoo.co.jp/
Xcoo's Business：	・Development and operation of Chrovis, a total solution for genome and bioinformatics analysis ・Development of systems for high-speed data processing by parallel and distributed computing ・Development of systems for data analysis/visualization based on state-of-the-art algorithms

Contact us

Kyoto University Hospital General Affairs Division Planning and Public Relations： hisyokoh@kuhp.kyoto-u.ac.jp
Xcoo, Inc. Public Relations： pr@xcoo.jp