

**"MONSTAR-SCREEN" has joined as an official member program in
the International Cancer Genome Consortium Accelerating
Research in Genomic Oncology (ICGC-ARGO)**

–Accelerating new cancer diagnoses and treatments through broadening
international participation–

May 14, 2021

National Cancer Center Japan

International Cancer Genome Consortium-Accelerating Research in Genomic Oncology

The National Cancer Center (President: Hitoshi Nakagama, Chuo-ku, Tokyo) Hospital East (Director: Atsushi Ohtsu, Kashiwa-shi, Chiba; hereinafter referred to as "NCC Hospital East") and the International Cancer Genome Consortium - Accelerating Research in Genomic Oncology project (ICGC ARGO, Professor Andrew Biankin, Executive Director, International Cancer Genome Consortium) jointly announce that the "MONSTAR-SCREEN" project (study representative: Takayuki Yoshino, Chief - Department of Gastrointestinal Oncology, NCC Hospital East) has joined as an official member program. "MONSTAR-SCREEN" is a nationwide cancer genome screening project registering patients with a wide range of solid tumors. The project started as the third- and fourth-stage program of an industry-academia collaborative cancer genome screening project, SCRUM-Japan,*1 led by the National Cancer Center, Japan.

ICGC-ARGO will uniformly analyze specimens from 100,000 cancer patients with high quality clinical data to address outstanding questions that are vital to our quest to defeat cancer. ICGC-ARGO will make data available to the entire research community in a rapid and responsible way, to accelerate research into the causes and control of cancer. It is expected that the participation of MONSTAR-SCREEN in this project will widely contribute to the construction of a global knowledge base and the development of cancer genomic medicine.

MONSTAR-SCREEN is a prospective observational study for profiling and monitoring cancer-associated genomic alterations and the gut microbiome. The study is carried out by longitudinally analyzing circulating tumor DNA (ctDNA) and feces of patients with a wide range of advanced solid tumors; as of March 2021, approximately 1,600 patients were enrolled in this study. In addition, genomic sequencing data from "MONSTAR-SCREEN-2," the successor project of MONSTAR-SCREEN under the soon starting Stage-4 SCRUM-Japan, is also planned to be provided to ICGC-ARGO. The contribution to the construction of an international database through these projects is expected to lead to a high rating of the quality and quantity of genomic sequencing data from Japan.

In addition, Dr. Yoshino, study representative of MONSTAR-SCREEN, was nominated as the first Japanese member of the Executive Board, which oversees ICGC-ARGO. With full commitment, MONSTAR-SCREEN will cooperate in the construction of a large global database where high-quality clinical information is added to the genome sequencing data. Using the database, MONSTAR-SCREEN will develop new world-class cancer diagnostics and treatment techniques. “Our mission is to bring an engaging smile to patients worldwide,” said the study representative of MONSTAR-SCREEN, Dr. Yoshino. “We believe our participation will contribute to translating multi-omics into clinical utility in patients with solid tumors.”

Professor Andrew Biankin, Regius Professor of Surgery at the University of Glasgow and Executive Director ICGC, said: “ICGC is taking the next step of helping translate scientific discovery into clinical practice and the MONSTAR-SCREEN project is a positive step forward for patients in Japan and across the world. “The inclusion of this project as part of the International Cancer Genome Consortium will widely contribute to the global cancer research and treatment knowledge base.”

【What is ICGC-ARGO?】

The ARGO project is the new phase of the International Cancer Genome Consortium; translating genomic knowledge to improve outcomes for people affected by cancer. Launched in 2019 after 10 successful years of the ICGC mapping genomic alterations that characterise over 50 cancer types. The time has now come to translate this knowledge to improve outcomes for people affected by cancer. It is the third phase of the ICGC following the ICGC 25k*2 and Pan-Cancer Analysis of Whole Genomes (PCAWG) projects. Currently, 13 jurisdictions (Japan, the United States, Canada, England, Scotland (United Kingdom), Germany, France, Italy, Switzerland, South Korea, China, Hong Kong, and Saudi Arabia) have active programs participating in the project across over 20 different cancer types. From Japan, a research group supported by the Japan Agency for Medical Research and Development (AMED) has also participated in ICGC-ARGO, and the registration and sharing of cancer genome information linked to clinical information have already been started.

ICGC-ARGO website (<https://www.icgc-argo.org>)



【Future prospects】

- By playing a central role in the construction of the international whole-genome sequencing database at ICGC-ARGO, whole-genome sequencing research in Japan will be greatly advanced, as the project expands its global profile with the Japanese initiative.
- Discovery of new resistance mechanisms and therapeutic targets as well as the development of cancer diagnosis and treatment techniques will be accelerated, by utilizing the international whole-genome sequencing database with abundant and high quality clinicopathological information.

【Glossary】

*1 SCRUM-Japan (Cancer Genome Screening Project for Individualized Medicine in Japan)

An industry-academia collaborative cancer genome screening project, which integrated the LC-SCRUM-Japan (currently, LC-SCRUM-Asia) for patients with lung cancer started in 2013 and the GI-SCREEN-Japan (currently, MONSTAR-SCREEN) for patients with gastrointestinal cancer started in 2014. In 2018, study subjects were expanded to patients with all solid tumors. Since then, we have analyzed genomic alterations in cancer, and promoted their enrollment in developmental clinical trials for suitable therapeutic agents. Since its establishment in February 2015, more than 20,000 patients with advanced solid tumors have participated in the study. Achievements of this project include 9 new drugs and 9 *in vitro* diagnostics, approved by the regulatory authority and widely available to patients in Japan with coverage from the National Health Insurance scheme. Over 200 medical institutions and 17 pharmaceutical companies/testing laboratories nationwide, industry, academia, and clinical sites work together to develop therapeutic drugs and *in vitro* diagnostics tailored to the genomic alterations in cancer patients in Japan.

- SCRUM-Japan website (<http://www.scrum-japan.ncc.go.jp/>)
- MONSTAR-SCREEN website
(http://www.scrum-japan.ncc.go.jp/monstar_screen/en/index.html)



*2 International Cancer Genome Consortium 25k, Pan-Cancer Analysis of Whole Genomes projects

The International Cancer Genome Consortium (ICGC) has provided over 21,000 comprehensive primary cancer genome data sets to the research community. The Pan-Cancer Analysis of Whole Genomes is an international collaboration from over 700 scientists to identify common mutation patterns across more than 60 cancer types.

(<https://dcc.icgc.org/>)

【Contact information】

National Cancer Center Japan

Office of Public Relations, Strategic Planning Bureau (Kashiwa Campus)

6-5-1 Kashiwanoha, Kashiwa-shi Chiba, 277-8577 Japan

Telephone: +81-4-7133-1111 FAX: +81-4-7130-0195 E-mail: ncc-admin@ncc.go.jp

ICGC ARGO

Secretariat, College of Medical, Veterinary & Life Sciences, Institute of Cancer Sciences,

University of Glasgow, Bearsden G61 1QH Scotland

E-mail: secretariat@icgc-argo.org