



Accelerating Research in Genomic Oncology
The International Cancer Genome Consortium
2019-2030

Background and Evolution



- ICGC ARGO is the new phase of the International Cancer Genome Consortium project, which comprehensively mapped the structural aberrations of cancer genomes and advanced our understanding of the molecular basis of cancer
 - ICGC 25k project (www.icgc.org) ~ 21,000 cancer genomes of primary cancers
 - ICGC Pan-Cancer Analysis of Whole Genomes- ~2,600 whole cancer genomes (<https://www.nature.com/collections/afdejafadb/>)
- Hundreds of seminal works arising from ICGC data, and landmark articles appearing in the world's elite scientific journals. No therapeutic is developed today without, in some way, applying the knowledge that ICGC has provided the world.
- In response to the realization of the potential of genomics in healthcare, in 2016 released a position "white paper" on the evolution of ICGC moving directly to impacting on human health

Vision: The ARGO project is the new phase of the ICGC; translating genomic knowledge to improve outcomes for people affected by cancer.

Mission: ICGC ARGO will analyse specimens from 100,000 cancer patients with high quality clinical data to **address outstanding questions** that are vital to our quest to defeat cancer. This data will be made available to the research community in a rapid and responsible way.

ICGC ARGO Data Features:

- Comprehensive longitudinal annotation; clinical data describing lifestyle, comorbidity, diagnostics, response to therapy and survival
- High quality; using common quality standards for pathology and technology
- Harmonised; using central analysis and pipelines through regional data processing centres.

Key questions addressed by ARGO are:

- 1. How do we use current treatments better?*
- 2. How does a cancer change with time and treatment?*
- 3. How do we translate this knowledge into improved health outcomes and more effective drug development?*
- 4. How do we advance early detection and ultimately prevent cancer?*



Hong Kong Brain Metastasis
 Study, Colorectal and Lung
 Cancers (Chinese University of HK)



OLIGO Clinical Trial, (multiple cancers)
 University College London (UK)

Member programs as of December 2020.
 More details on member programs:
<https://www.icgc-argo.org/page/89/project-list>