ARGO: Accelerating Research in Genomic Oncology

www.icgc-argo.org

We know each cancer is different, yet we treat them the same. Most of the treatments we use don't work, but we don't know ahead of time which will work, and which won't.

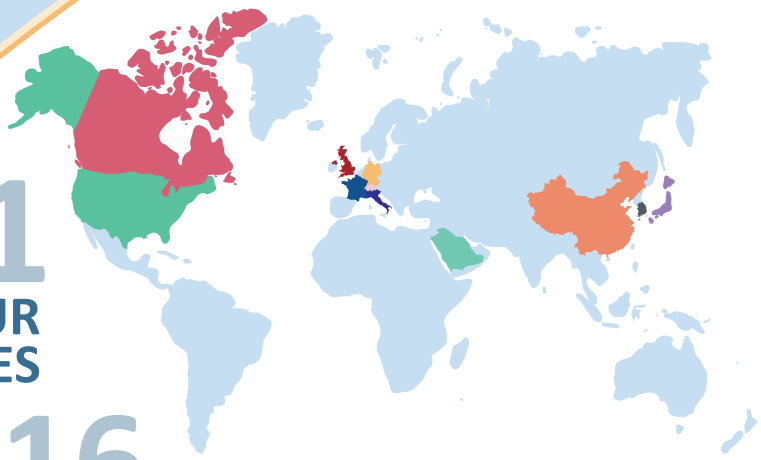
We need to properly address the questions every cancer patient deserves an answer to:

- **What sort of Cancer do I have?**
- **Do I need treatment?**
- **Can I access the treatment?**
- **Which treatment do I choose?**
- **Will the treatment work?**
- **What are the side-effects?**
- **How long have I got?**

Until we have the information, we will never have the knowledge to answer these questions properly and this is why we have ICGC ARGO.

26 PROJECTS

13 COUNTRIES



21 TUMOUR TYPES

63,116 DONORS COMMITTED

(Figures at April 2021)

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. Over the next ten years ICGC ARGO aims to deliver a million patient-years of precision oncology knowledge to the world, by making data available to the entire research community in a rapid and responsible way, to accelerate research into the causes and control of cancer.

ICGC ARGO is an international network of cancer clinicians, researchers and clinical trials groups that aims to deliver a million patient-years of precision oncology knowledge to the world. Over the next decade, ICGC ARGO will build datasets of rich, longitudinal clinical data including treatment and response, coupled with genomic and transcriptomic data, initially from clinical trials and from well-annotated cohorts.

The key questions ICGC ARGO aims to address are:

1. How do we use current treatments better?
2. How does a cancer change with time and how does that impact on the way we treat patients?
3. How do we practically implement these approaches in healthcare?
4. How do we advance early detection and ultimately prevent cancer?

The sources of cohorts of patients that would constitute ICGC ARGO projects may include:

- Biospecimens from participants enrolled in active clinical trials;
- Analyses of banked samples from past clinical trials;
- Analyses of samples from clinically well-annotated cohorts that satisfy ICGC ARGO clinical data requirements;
- Longitudinal cohort studies;
- Autopsy studies with detailed clinical data

Clinical data gathered will include information concerning lifestyle, co-morbidity, diagnostics, toxicity, response to therapy and survival. Using this large-scale integrated data, researchers, scientists, policymakers and clinicians will be able to work with patients, health care providers, industry, and others to advance therapeutic development with interventions based on matching the patient's disease molecular subtype with the most effective treatment; develop preventative strategies; markers for early detection of disease; and more specific criteria and methods for diagnosis and prognostication. This knowledge will translate into new approaches to improve outcomes for people affected by cancer.

"...a million patient-years of precision oncology knowledge"

ICGC ARGO members will submit data to one of a series of ARGO regional data processing centres, where it will be subjected to state-of-the-art QC, alignment, variant calling, annotation and clinical harmonization. The harmonized data will merged into a central compute cloud-accessible database of all ARGO results. Clinical and genomic data generated by ICGC ARGO project members will be exclusively available to its membership for a short period of time before being released to the broader research community.

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International Cancer Genome Consortium