Query, view and analysis of studies in tranSMART DeCoDe studies, on to FAIR data

Today: hands-on training session!

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Agenda

• Short introduction
  – TraIT initiative
  – tranSMART: data integration tool

• Hands-on training session
  – Search & Browse
  – Analyze
  – View
Translational research

Participant/patient enters

Clinical/Biobank Procedures

- Questionnaire EHR
  - Phenotypic database
  - External data

- Imaging
  - Image database & analysis
  - Biobank catalogue
  - Experimental data

- Samples
  - Experiments

- Data Integration

  - Downstream analysis
    - Scientific Output
    - Intellectual Property
    - Improved Healthcare
    - Participant Interaction

A similar, common design
Different workpackages involved with establishing a long-lasting infrastructure in NL for storing biomedical information, including:

- clinical (WP1)
- biomedical imaging/digital pathology (WP2/7)
- biobanking (WP3)
- (molecular) experimental data (WP4)
- data-integration platform (WP5)
- deployment (WP6)
Translational research

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Downstream analysis

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A similar, common design
Study: DeCoDe_WP5

Patients with metastatic colorectal cancer
- partaking in phase III clinical trials: CAIRO and CAIRO2

CAIRO: Sequential versus combination chemotherapy in advanced colorectal carcinoma


CAIRO2: cetuximab, capecitabine, oxaliplatin and bevacizumab in advanced colorectal cancer


- Genomic landscape investigated of a subset of 349 patients

Years of research: large amounts of data have been obtained

→ Retrospectively, imported data to OpenClinica & Catalogue
→ Processed data import(ed) to tranSMART
Overview - Data types

- Clinical / NHTMP
  - numerical and categorical

- Gene expression microarray

- Copy number alteration microarray
Genomic landscape of metastatic colorectal cancer

Josien C. Haan¹, Mariette Labots², Christian Rausch¹, Miriam Koopman³, Jolien Tol⁴, Leonie J.M. Mekenkamp⁵, Mark A. van de Wiel⁶, Danielle Israel³, Hendrik F. van Essen¹, Nicole C.T. van Grieken¹, Quirinus J.M. Voorham¹, Linda J.W. Bosch¹, Xueping Qu⁷, Omar Kabbarah⁷, Henk M.W. Verheul², Iris D. Nagtegaal⁵, Cornelis J.A. Punt⁸, Bauke Ylstra¹* & Gerrit A. Meijer¹*
With tranSMART you can explore your available data
Hands-on training session

Short live part:

- Search & Browse
- Analyze
- View

Please follow the documentation and try and reproduce the results.

If you need aid – we’re here to help!