Current state in CH-land re *clinical* use of Big Data

- Great cohorts and biobanks:
  - enables CH to participate and even lead some international studies: e.g. HIV, IBD, Sapaldia.
  - Other cohorts are being established
  - Hopefully this will translate into clinical utility as well
- Exist lots of analytic research tools
  - some of which find even their ways into the clinic
  - but I want to focus on those that are essentially translational.
- New clinical tools: Non Invasive Prenatal Tests, Megaclust
- Genetics, Oncology?

- *SwissMedic evaluated: **N**on **I**nvasive **P**renatal **T**est*

  Algorithm developed by Nicolas Guex, Ioannis Xenarios, Christian Iseli

- Megaclust

MegaClust is designed for analysis of flow cytometry datasets containing tens of samples and millions of cells. It results in the exhaustive identification and characterization of cell groups across samples, i.e. cells sharing similar phenotypes. Identification of cell groups is key for downstream analyses (e.g. stratification of individuals).

- *Clinically accredited diagnostic solutions*

  (Sylvain Pradervand, Brian Stevenson et al.)

Current state in CH-land re *clinical* use of Big Data

- Great cohorts and biobanks:
  - enables CH to participate and even lead some international studies: e.g. HIV, IBD, Sapaldia.
  - Other cohorts are being established
  - Hopefully this will translate into clinical utility as well
- Exist lots of analytic research tools
  - some of which find even their ways into the clinic
  - but I want to focus on those that are essentially translational.
- New clinical tools: NIPT, Megaclust
- Genetic diagnosis, Oncology?
- Quid of microbiome, metagenomics …?

Clinical implementations of the microbiome

1. How and when do you see metagenomics entering in the clinic (from research to bedside)?

2. How do you weight the respective contributions into clinical translational implications of human genomics (WGS and WES) vs metagenomics sequencing in a patient's health management?

3. When will metagenomics be reimbursed by insurances and what can we do to accelerate this process?