

RAIDs (*Rational Assessment and Innovative Drug Selection*) is a EU funded project proposing a rational approach towards building intelligent new treatment designs based on the understanding of specific wiring errors in tumor cell signaling (<http://www.raids-fp7.eu/>). It is meant to set the stage for future precision medicine and vaccine development through a comprehensive analysis of the tumor and its interactions with the tumor micro environment.

At the core of the RAIDs project is BioRAID, a clinical trial including a substantial biobanking effort for molecular profiling with high standards of quality control of biological and clinical data. To our knowledge, BioRAIDs is one of the first prospective trials of this type aiming to identify predictive biomarkers for treatment response in cervical cancer patients. *RAIDs results will be priceless to identify a set of stratification criteria that will help in the near future to better orient patient to a more personalized treatment.* Main clinical trial support structures are based at the promoter site at Institut Curie with sponsorship delegations to Hannover (HCTC), ECRIN and NKI, Amsterdam. Genetic mutations (SeqOmics, Hungary), proteomic alteration (Translational platform Institut Curie (IC)) and their influence on the tumor microenvironment (NKI) of cervical cancers from 7 EU countries are being analyzed. Lacking harmonization in regulatory requirements across Europe and variable levels of experience with biobanking and clinical trial conduct had been a major challenge to the implementation of BioRAIDs study, which is actively including patients today. RAIDs project include a first-in- man DNA Vaccine trial, currently ongoing at NKI Amsterdam and accruing well.

The European collaboration between the different members (SMEs and academia) of the RAIDs consortium will ensure the exploitation of clinical and molecular results:

- SeqOmics (Hungary) plans to develop a molecular profiling platform for patient tumors in the neighboring countries.
- Drug sensitivity screenings currently ongoing shows highly interesting findings that may suggest new alleys for treatment proposals (INSERM/France) as a function of specific molecular alterations. In addition, a RUSH assay-based (Boncompain et al, 2012) screening tool (IC, CNRS UMR144) for molecules that will inhibit chemokine secretion by tumor cells which misrepresent the microenvironment is being deployed. Knowledge will be helpful for complex precision medicine strategies or vaccines and molecules may be able to improve personalized treatments.
- Sophisticated animal modeling already demonstrated a synergy between a vaccine with radiotherapy (collaboration with Gustave Roussy), leading to future vaccine trial developments
- Monitoring genetic changes throughout the treatment process using targeted sequencing in so called Liquid Biopsies (plasma or sera)
- SMEs and large pharma have already shown interest for participation in the exploitation of results.

Continuous patient information will be ensured via a dropbox integrated into the RAIDs website to allow communication between patients and experienced physicians from many countries.