Genome-based biomarkers leading to validated molecular diagnostic tests for response prediction in breast cancer (RESPONSIFY)

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Research Areas

- Tool Development
- Biomarker Research
  - Diagnostic, Genomic Biomarker
- Basic Research

At a Glance

- Status: Active Consortium
- Year Launched: 2012
- Initiating Organization: European Commission Seventh Framework Programme (FP7)
- Initiator Type: Government
- Location: Europe

Abstract

Individualization of cancer therapy based on standardized biomarker assays is one of the most demanding challenges in cancer medicine. The RESPONSIFY consortium integrates information on response prediction from different breast cancer types and methodologies into biomarker tests for targeted therapies in the clinical routine setting. Those tests will be developed for commercialization using the expertise of the involved small to medium sized enterprises (SMEs) and industrial partners.

Mission

RESPONSIFY will use different genome-based strategies to identify and characterize new biomarkers as well as validate biomarkers from previous projects. Genome-based strategies include new molecular techniques such as genome-wide next generation sequencing, epigenetics, gene and exon expression analysis, as well as kinome arrays, in-situ proteomics, and quantitative polymerase chain reaction (PCR) using formalin-fixed, paraffin-embedded (FFPE) tissue.
A clearly defined marker finding-training-validation-approach will be the backbone of RESPONSIFY to reach a high level of evidence for commercial diagnostic tests. The established therapy stratification criteria will be further validated within clinical trials using the expertise of the clinical study groups.

The clinical study group will develop a web-based data integration and processing system to standardize integration of clinical trial data and biomarker results in one system, which will be further used for clinical biomarker-driven trials.

Health economic characteristics of combined testing and treatment strategies will be determined to inform decision-makers, using state-of-the-art cost-utility analysis. Optimizing the use of current therapy options and avoiding treatments patients will predictably not respond to may improve cost-utility parameters to levels acceptable for most health systems.

For rapid evaluation of response parameters, the major focus will be on neoadjuvant therapy. The RESPONSIFY project will lead to validated tests based on FFPE tissue to predict resistance.

**Consortium History**

Project start: February 2012

**Financing**

RESPONSIFY is funded through the European Union Seventh Framework Programme. The European Union contribution is €6 million.

**Links/Social Media Feed**

Other website  http://cordis.europa.eu/project/rcn/102209_en.html

**Points of Contact**
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