Stratified Medicine Programme

Research Areas

- Tool Development
- Data-Sharing Enabler
- Product Development

At a Glance

- Status: Completed Consortium
- Year Launched: 2012
- Initiating Organization: Cancer Research UK
- Initiator Type: Government
- Location: Europe

Abstract

Cancer Research UK’s Stratified Medicine Programme is a vital step toward making personalized treatments a reality in the U.K. Together with AstraZeneca, Pfizer, and the U.K. government’s Technology Strategy Board, the program is building the model for a national service that will routinely test tumors for certain genetic changes. As new targeted treatments become available, this system will give doctors access to tests that will help them decide which treatments are best for each patient. At the same time, information about patients’ test results and their treatments will help researchers investigate how certain genetic changes can affect the outcome of particular treatments — information that will help to save more lives in the future.

Financing

The entire program is funded at £5.5 million by Cancer Research UK, AstraZeneca, Pfizer, and the U.K. Technology Strategy Board.
The program focuses on breast, bowel, lung, prostate, and ovarian cancers and melanoma. These cancers have been chosen because they are common in the U.K. and because targeted drugs are available (or are likely to soon be available) to treat them.

In Phase One (between October 2011 and July 2013), certain patients being treated for these cancers will be invited to take part in the program by donating blood and tumor samples. Researchers will collect samples from 9,000 patients being treated at Experimental Cancer Medicine Centres (from a referral network of 20 hospitals).

The samples will be sent to one of three centralized, quality-assured laboratories, where the deoxyribonucleic acid (DNA) will be tested for specific genetic changes known to be important in these particular types of cancer. The testing hubs are at the Institute of Cancer Research in Sutton, the Cardiff All Wales Regional Genetic Laboratory, and the West Midlands Regional Genetic Laboratory.

The tests results will be returned to the doctors looking after the patients, but will not be used directly in determining their treatment at this stage. However, new drugs targeting some of the genetic changes being tested in this study are already in clinical trials. The tests results could show whether some patients are suitable to take part in a particular trial, but this is likely to apply only to a small number of patients.

Phase One will demonstrate on a small scale how routine testing of patients’ tumors could be scaled up to provide a national service across the National Health Service (NHS), while also gathering data on patients’ genetic test results and their treatments to boost research into personalized medicine.

In the long-term, the Stratified Medicine Programme will put in place a system to help doctors identify the best treatment for individual patients. This approach may also reduce the number of treatments each patient receives, which could reduce the need to treat the side effects of treatments that prove to be unhelpful for certain patients. In the future, the information collected by the program will also be used for research into new treatment approaches.

Data Sharing

The data will be stored at the Eastern Cancer Registry and Information Centre. Cancer registries have
been granted authority to store this type of data by law. The information is kept strictly confidential and is only accessible to authorized people. The partners will have access to some sample material for ethically approved research (e.g., testing for newly discovered genetic faults).

Cancer Research UK wants the best use to be made of the samples that have been given for research, so the charity is setting up an access committee for researchers who want to use the data.

**Impact/Accomplishment**

In the two years up to July 2013, more than 9,000 people with melanoma, breast, bowel, lung, prostate, and ovarian cancer had their tumors tested.

More than 8,000 patient records are now securely stored in a research database, with access for researchers planned for 2014.

The program has switched from individual gene tests to Next Generation Sequencing, which tests multiple genes at the same time, saving time and money.

Importantly, it now has a dedicated, nationwide network of hospitals and individuals experienced in providing genetic testing and has laid the foundations from SMP2.

**Links/Social Media Feed**

Homepage  
http://www.cancerresearchuk.org/funding-for-researchers/how-we-deliver-research/our-research-partnerships/stratified-medicine-programme

**Points of Contact**

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Sponsors & Partners

AstraZeneca
Bristol-Myers Squibb
Cancer Research UK
Oracle
Pfizer
Public Health England
Roche
The Catalyst Club
University of Oxford

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