

## WORLD LEADERS IN CANCER AND CHEMOSENSITIVITY TESTS

RGCC Group is a specialist medical genetics company, established in 2004 with headquarters in Switzerland.

We are experts in developing and providing personalised cancer genetics tests for doctors and patients, and testing tumours for sensitivity and resistance to chemotherapy treatment and a range of natural substances.

We are actively involved in pharmaceutical research and development. Our facilities are equipped with the most technologically advanced equipment and specialised software for data analysis.

**Our work can be divided into two main sectors:**

- Our testing services, which detect tumours that are sensitive and resistant to chemotherapy treatment using microarray technology. This uses high throughput screening to provide an automated and fast method to process blood samples and screen different types of libraries, including combinatorial chemistry, genomics, protein and peptide libraries.
- Our analytical services, which includes detecting, immunophenotyping and isolating circulating tumour cells, using flow cytometers.

## GLOBAL PRESENCE



RGCC is a global organisation and we work in collaboration with branch offices and distributors to provide a worldwide service. Our head office is located in Switzerland and we have state-of-the-art laboratory facilities based around the world.

### RGCC HEADQUARTERS

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## DEVELOPING PERSONALISED CANCER TESTS FOR DOCTORS AND PATIENTS



## RESEARCH & DEVELOPMENT

In addition to clinical services, RGCC Group also works in research and development, to identify, produce and test potential drugs. We combine molecular biology and cytogenetic techniques – including microarrays, array comparative genomic hybridisation, ChIP, and fluorescence in situ hybridisation – to identify potential genes and proteins that can be targets for drug treatments.

To find out more about our current research and development, please visit our website.

[rgcc-group.com](http://rgcc-group.com)



  
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## RGCC TESTS

Our range of tests are designed to achieve three aims:

- Potentially detect the early signs of cancer
- Monitor existing cancers
- Produce personalised guidance on which chemotherapy drugs and natural treatments could benefit individual patients

## LIQUID BIOPSY

Our liquid biopsy is a non-invasive blood test that requires no surgical intervention. It can detect circulating tumour cells and circulating free DNA in the blood. This has the potential to identify and diagnose certain forms of cancer, and can also be used to monitor a cancer's progression.

### CIRCULATING TUMOUR CELLS

These tests can detect circulating tumour cells. These are cells that have detached from the original tumour and passed into the blood, the lymph system, or another part of the body, with the potential to create a second tumour.

Researchers have made significant progress in detecting and isolating these cells, but circulating tumour cells tests are not yet 100% accurate.

Studies have found that in people with certain types of cancer - of the breast, prostate, pancreas, colon and skin - our test is 87% sensitive and 83% specific for circulating tumour cells (Papasotiriou I. et al, 2015). This means that our test will correctly return a positive result for 87% of the time, and will correctly return a negative result 83% of the time.

### CIRCULATING FREE DNA

These tests can detect circulating free DNA. These are degraded fragments of DNA which the tumour releases into the bloodstream. Testing for circulating free DNA can reveal more accurate information about a tumour's genetics and characteristics.



## THERAPEUTIC CONCEPT

A tumour consists of several subsets of cells, each with different features. One of these subsets - called cancer stem cell-like cells, or tumour-initiating cells - drives how the disease progresses, whether a tumour is resistant to treatment, and the likelihood of relapse.

The aim of cancer treatment is to destroy cancer cells. When a patient is treated the majority of the cancer cells are destroyed, but some may still remain, in remission.

While a patient is in remission, the remaining cancer stem cells that survive treatment may spread to other parts of the body. So doctors need to detect, discover and explore the features of the remaining cancer stem cells. Our tests are used to detect in which cases the [remaining] cancer cells may respond to treatment. This is to reduce the risk of relapse, and have ways to treat these cancer cells in the future.



## SCIENTIFIC EVIDENCE

Cancer is caused by severely damaged genetic material, which leads to random genetic instability. Each person has a unique genetic fingerprint that is different from others. So each tumour behaves differently in each individual, which is why our highly personalised tests are effective.

One study found that in some groups of people with cancer, the proportion who will respond to chemotherapy treatment varies from five to eight in 100. (Royal North Shore Hospital ClinOncol (R Coll Radiol) 2005 Jun;17(4):294).