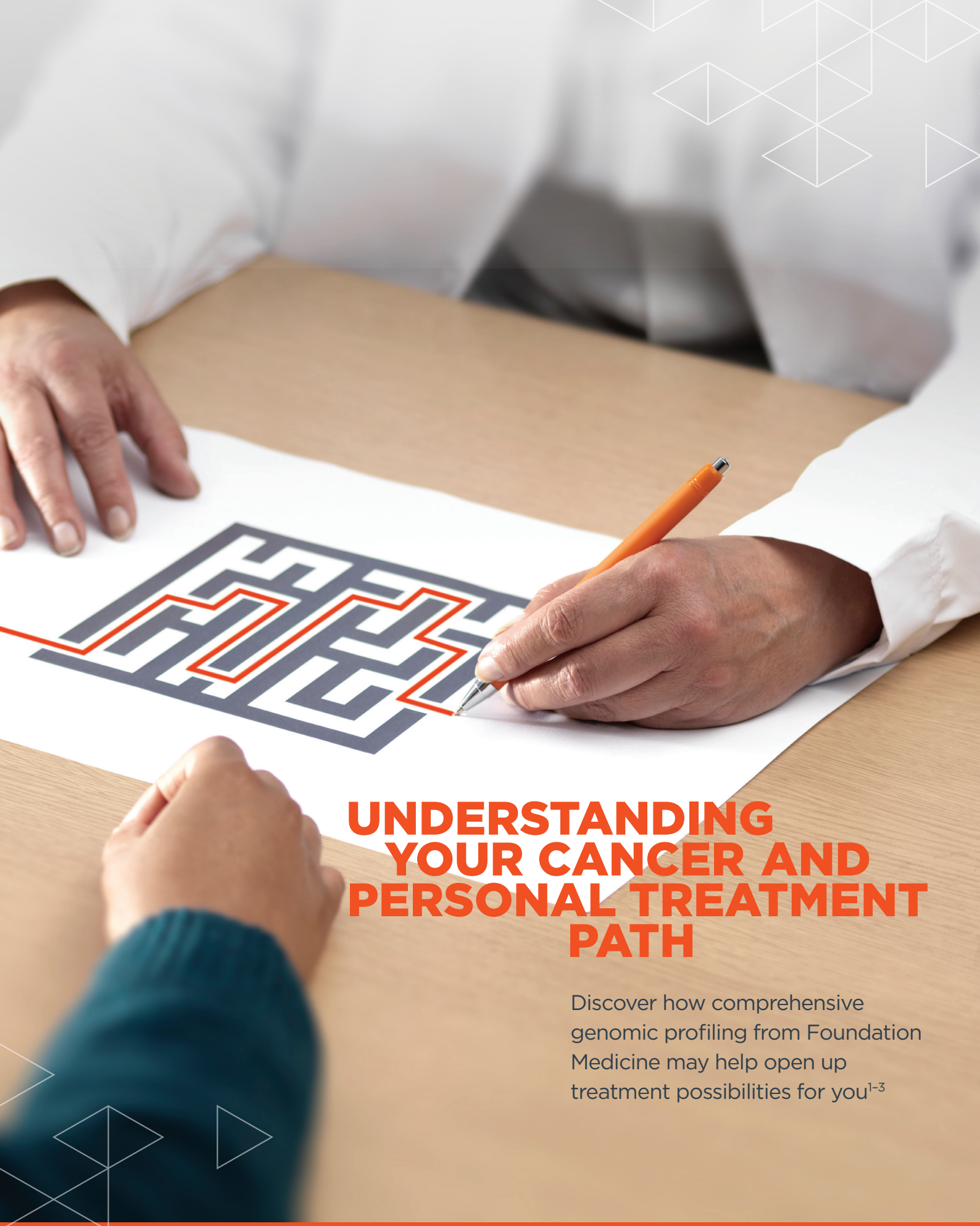


UNDERSTANDING YOUR CANCER AND PERSONAL TREATMENT PATH

Discover how comprehensive genomic profiling from Foundation Medicine may help open up treatment possibilities for you[1-3]

See more, do more

FOUNDATION MEDICINE®

Roche

Cancer occurs due to changes in DNA called mutations that affect the way your cells work and grow[4,5]

What causes cancer?

HEALTHY CELL

NORMAL DNA

DNA makes up the genes within your cells and contains the information needed for your body to work correctly[6,7]

CHANGED DNA

Sometimes an error can occur when the DNA is copied. These errors are called mutations[5,7,8]

CANCER CELLS

UNCONTROLLED CELL GROWTH

MALIGNANT TUMOUR

Mutations may affect the way your cells work and grow. These cells become cancer cells, which divide and grow uncontrolled and ultimately form a malignant tumour (a mass of cancer cells that may invade nearby tissues)[7]

CANCER CELLS ENTER BLOOD VESSELS OR LYMPHATIC SYSTEM

METASTASIS: CANCER CELLS FORM SECONDARY TUMOURS IN OTHER ORGANS

If cancer cells enter the blood vessels or the lymphatic system, they spread within the body[9,10]

Are all cancers caused by the same mutations?

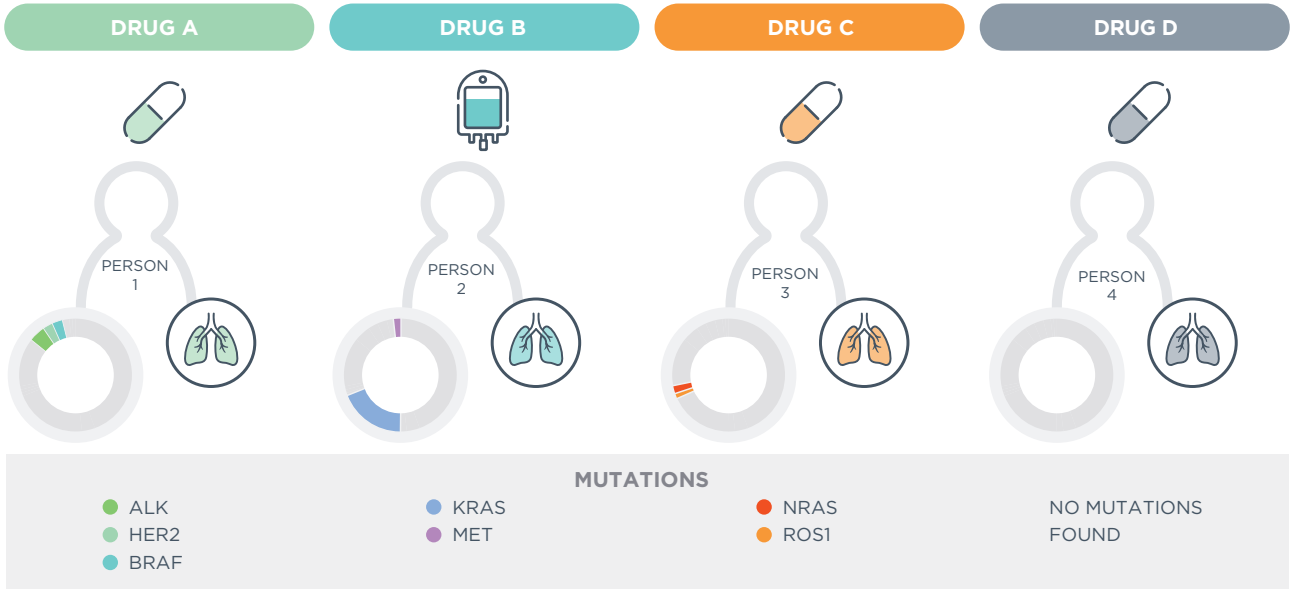
Due to advances in scientific and medical research, we now understand more about the DNA mutations causing cancer. It is now known that even if you have the same type of cancer as someone else (e.g. breast cancer), your DNA mutations may differ, and you may need different treatment. On the contrary, even if your primary tumour is in a different organ, the DNA mutations can be the same. You may then benefit from a similar treatment.[11]

Each person's cancer is unique because DNA mutations between cancers differ in type and number[12,13]

Knowing the mutations in your cancer can help you and your doctor understand your treatment options, thereby personalising your treatment[12–16]

How can knowing your cancer's mutations help your treatment plan?

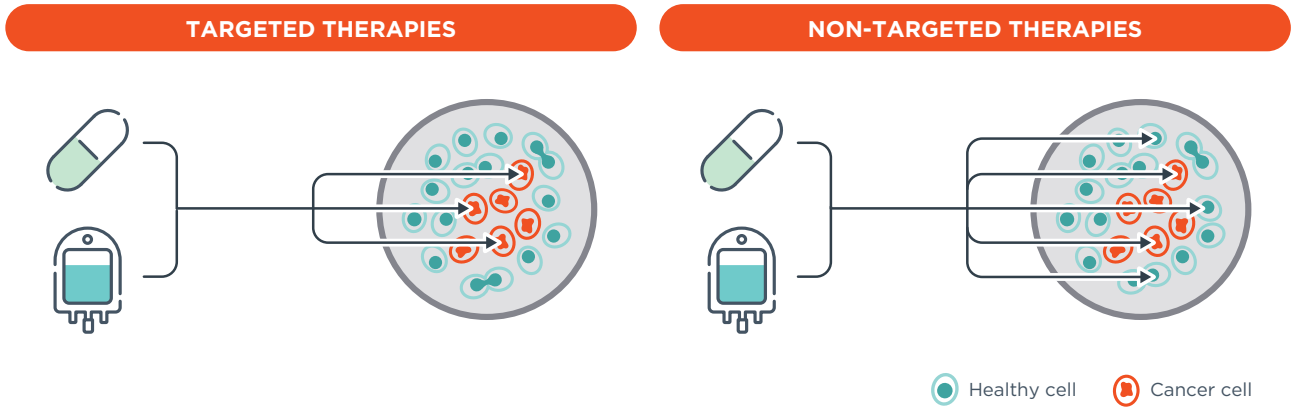
If certain mutations are found in your cancer cells' DNA, your doctor may be able to give you a more precise treatment based on this finding. There might be cases where no relevant mutations are found. This is also valuable information, supporting further treatment planning.[12–16]



What are the different types of cancer treatment?

There are several different treatment options, including surgery, radiotherapy, chemotherapy, targeted therapy and immunotherapy.[17]

Targeted therapies have been developed that are able to target cancer cells with specific DNA mutations. These are different from non-targeted therapies, such as chemotherapies, which do not specifically target cancer cells and may also kill fast-growing healthy cells.[18,19] If a tumour has a specific biomarker, targeted therapies may be used against this biomarker. By testing your tumour sample, your doctor can consider this information for identifiying the most appropriate treatment approach for your cancer.



Targeted therapies target cancer cells with specific DNA mutations.[18,19]

Non targeted therapies do not specifically target cancer cells and therefore may also kill fast-growing healthy cells.[18,19]

There are several cancer testing methods available which search for mutations in your cancer cell's DNA

Comprehensive genomic profiling uses a single test to search for mutations driving your cancer[1–3]

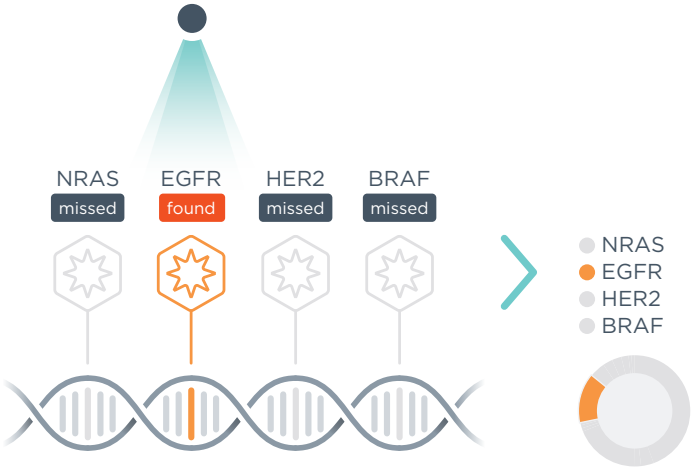
What makes comprehensive genomic profiling different?

There are several different types of genomic testing, which include single biomarker testing, hotspot testing and comprehensive genomic profiling. They all test your cancer sample for DNA mutations, but work in different ways:

For example, this cancer cell DNA has 4 mutations

Single biomarker testing or hotspot testing

Single biomarker testing and hotspot testing only look for predefined individual mutations within limited regions on your cancer cells' DNA. These mutations are always chosen before testing starts. So, if you do not choose to look for a mutation you will not find it.[20,21]

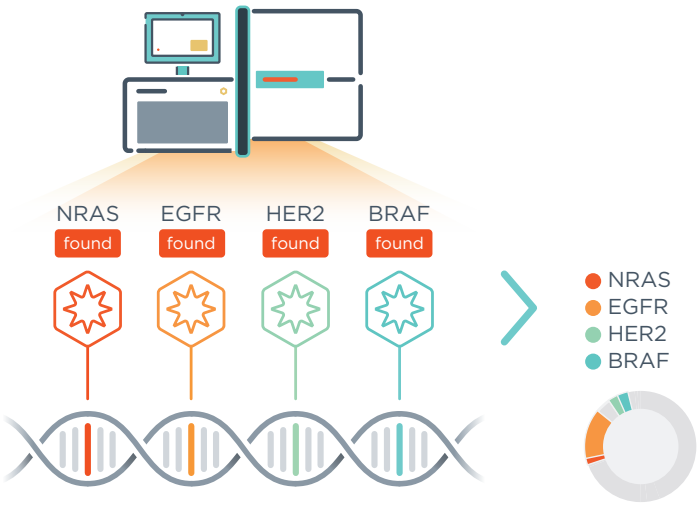


What comprehensive genomic profiling finds. How is it different?

Comprehensive genomic profiling provides a more complete picture of your cancer by searching for multiple mutations across a broad region of your cancer cells' DNA.

Comprehensive genomic profiling looks at all potential mutations that may drive your cancer, even if these are very rare, in a single test.

This increases your chances of finding important mutations right away. This may also increase the chance of finding a more precise treatment for you.[1–3]



Foundation Medicine's services use comprehensive genomic profiling[21,22]

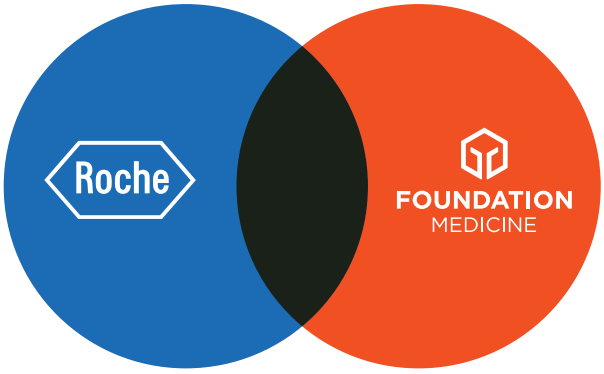
Foundation Medicine offers a high-quality portfolio of comprehensive genomic profiling services[1, 22–24]

About Roche and Foundation Medicine

Roche and Foundation Medicine are collaborating to bring Foundation Medicine comprehensive genomic profiling services to cancer patients around the world.

Foundation Medicine is a world-leading molecular insights company and innovator in the field of comprehensive genomic profiling.

As part of a long-standing commitment to pioneering progress in precision medicine Foundation Medicine has joined the Roche Group, a global healthcare company leading in cancer treatments and personalised healthcare.[25]



Which Foundation Medicine service may be suitable for you?

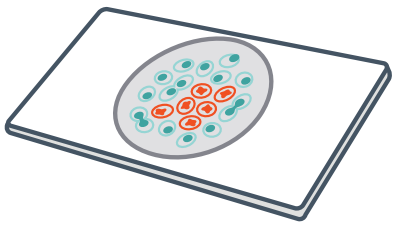
Foundation Medicine offers comprehensive genomic profiling services that can help you and your doctor better understand your treatment options. There are different tests available for patients with different types of cancer. FoundationOne CDx and FoundationOne Liquid are for patients with all types of solid tumours, e.g. lung or breast cancer.[22,23]

Discuss with your doctor whether a tissue-based test or blood-based test is recommended for your cancer

FOUNDATIONONE® CDx

Uses a tissue sample (tissue biopsy)

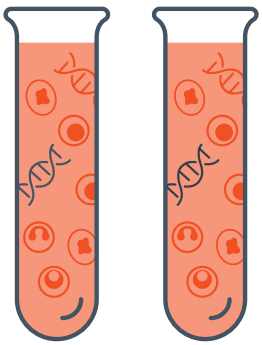
Tests over 300 genes



FOUNDATIONONE® LIQUID

Uses a blood sample (liquid biopsy)

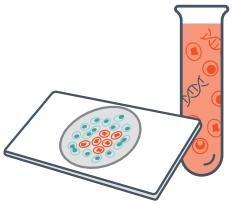
Tests 70 genes



Your care team will send your tissue or blood sample to Foundation Medicine where it undergoes thorough analysis

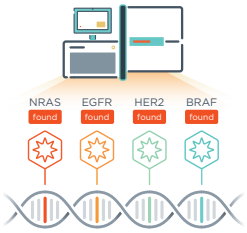
A team of experts analyse your sample and create a comprehensive report based on your cancer's mutations

TUMOR / BLOOD SAMPLE



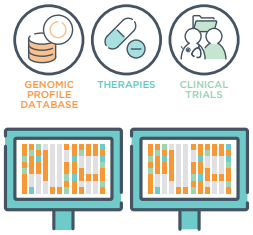
A sample is taken from your tumour or blood and sent to a Foundation Medicine laboratory.

COMPREHENSIVE GENOMIC PROFILING



Your DNA is extracted from your sample. The DNA is searched for mutations possibly responsible for your cancer.[1]

DATA ANALYSIS



Mutations found are evaluated by a team of experts to identify associated treatment options, such as targeted therapies or immunotherapies, or relevant clinical trials, using a large cancer information database.[26,27]

The Foundation Medicine information database is continuously updated based on new research, clinical trials and increasing amount of patient genomic profiles from clinical routine, ensuring the Foundation Medicine Report is based on the latest scientific data.[26]

FOUNDATION MEDICINE REPORT

Your care team will receive a comprehensive report including the details on your tumour profile as well as therapies and clinical trials for you to discuss together.[27]

It takes around 14 days from receipt of your sample at the Foundation Medicine laboratory to your doctor receiving the report.

Discuss the findings of the report with your doctor

The Foundation Medicine report may help guide your treatment plan[27]

Page 1 of an example FoundationOne CDx report[27]

Page 1 provides a summary of your results, while the remaining pages give more details.

1. Your details, your doctor's details and information about your specimen (the cancer tissue sample that was analysed)
2. Biomarker findings and genomic findings: A summary of mutations and other characteristics found in your cancer to help understand which targeted therapies, immunotherapies or clinical trials may be relevant to you.
3. Depending on current scientific knowledge and your cancer's mutations, the Foundation Medicine report may indicate:
   - a. Approved therapies according to the respective tumour type
   - b. Therapies approved in another tumour type
   - c. Clinical trials for you and your doctor to discuss together

The FoundationOne Liquid report is similar to the FoundationOne CDx report shown here. To see an example, please ask your care team for the FoundationOne Liquid brochure.

Discuss the next steps for your personalised treatment plan with your doctor

Foundation Medicine's comprehensive genomic profiling services help open up treatment possibilities for your cancer[1,22–24]

Where can you find more information?

For more information on cancer testing and **Foundation Medicine's** comprehensive genomic profiling services, please ask your care team or visit www.rochefoundationmedicine.com

Pricing and reimbursement is dependent on your country, please contact your local Foundation Medicine team for more information

<Space for local patient Medical Information contact details>

Glossary

Biomarker	A molecule that is a sign of a normal or abnormal process, or of a condition or disease. A biomarker may be used to see how well the body responds to a treatment for a disease or condition.[28]
Biopsy	The removal of cells or tissues for examination by a pathologist.[29]
Cell	The basic building blocks of all living things.[30]
Chemotherapy	Treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing.[31]
Clinical trial	Research studies that use human volunteers to test new drugs or other treatments to find out whether they are better than the current, standard treatment. Before giving the treatment to people, it is studied by scientists. If these studies suggest it will work, the next step is to test it in patients.[32]
Comprehensive genomic profiling	A type of cancer test that looks for several cancer-related DNA mutations across a broad region of the cancer cells' DNA in a single test.[1]
DNA	The genetic "blueprint" found in the nucleus (centre) of each cell. DNA holds genetic information on cell growth, division, and function.[6]
Gene	A section of DNA that contains the information to control the development one or more of a person's traits. A gene can be passed from parent to offspring.[33,34]
Immunotherapy	Treatments that use the body's immune system to fight cancer.[35]
Malignant tumour	A mass of cancer cells that may invade nearby tissues or spread (metastasise) to distant areas of the body.[36]
Mutation	A change in the DNA of a cell. All types of cancer are thought to be due to mutations that damage a cell's DNA.[5]
Nucleus	The centre of a cell where the DNA is found and where it reproduces.[37]
Radiotherapy	The use of high-energy radiation from x-rays, gamma rays, neutrons, protons, and other sources to kill cancer cells and shrink tumours.[38]
Solid tumour	An abnormal mass of tissue that usually does not contain cysts or liquid areas e.g. lung or breast cancer. Cancers of the blood (leukaemias) generally do not form solid cancers.[39]
Targeted therapy	Treatment that attacks some part of cancer cells that makes them different from normal cells. Targeted therapies tend to have different side effects to chemotherapy drugs with broader action.[40,41]

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