

SOLID TUMOR TESTS HISTOPATHOLOGY & GENETICS

Detect&Act

Combined
testing solutions
to enhance patient
outcomes



MEDICOVER
GENETICS

WHAT IS **SOLID TUMOR TESTS Detect&Act?**

DETECT

Solid tumors are an abnormal mass of cells that may be benign (non-cancerous) or malignant (cancerous). They represent about 90% of adult cancers and can develop in many parts of the body. Tumor samples are analyzed to diagnose the cancer and identify its stage, which tells you how advanced the cancer is.

Two types of tests are used to diagnose a tumor: histopathology and genetic testing. Histopathology is a cellular analysis of the tumor, which involves examining cells and tissues under a microscope. Genetic testing is a molecular analysis of the tumor, which involves the study of DNA sequences to identify genetic alterations that have caused tumor formation.

We offer multiple test options combining both histopathology and genetic testing which can provide a complete picture of the tumor and could guide management plans, predict response to a therapy and possibly select appropriate clinical trials for new therapeutic solutions in your area.

ACT

In order to create the most appropriate treatment strategy, a complete tumor profile including its cellular and molecular features is needed. Customized treatment depends on the type, stage and genetic alterations in the tumor tissue. Targeted therapy or clinical trials can improve patient care and survival.

WHO COULD **BENEFIT FROM THIS TEST?**

You may benefit from this test if you have been diagnosed with a solid tumor and require pathology and/or a genetic test analysis.

OUR **SOLUTION**

We provide both histopathology and molecular genetic analyses, with the flexibility to select either service individually or to combine them for a more comprehensive approach to diagnosis and treatment planning.

HISTOPATHOLOGY

Microscopic examination of the tumor sample provides specific information about the type and stage of the tumor, its location and size, and if it has spread to other healthy parts of the body.

GENETIC TESTS

Based on the histopathological findings, genetic analysis may be recommended. Your physician can choose from individual targeted-therapy tests, or a single comprehensive gene panel.

DIAGNOSTIC PROCESS

Step 1: Biopsy

The tissue fragment is removed during surgery and sent to the laboratory for examination.

Step 2: Gross examination and tumor visualization

The tissue is examined macroscopically and relevant fragments are sampled. A variety of staining techniques are used to visualize cellular structure.

Step 3: Additional evaluation for breast and gastric cancers

HER2 protein levels are evaluated in breast and gastric cancers. This protein promotes cancer growth and HER2-positive cancers tend to be more aggressive, but treatments are very effective.

Step 4: Pathology report

A report is delivered to the ordering physician with a summary of pathology findings and recommendations for genetic testing, if appropriate.

SPEAK WITH YOUR DOCTOR ABOUT HEREDITARY CANCER PANELS PREDICT&PREVENT TO TEST IF YOUR TUMOR HAS A GENETIC CAUSE

Step 5: Molecular analysis of the tumor tissue

Based on the pathology findings, targeted-therapy tests, gene panels or a comprehensive panel may be recommended to guide treatment and management plans or identify appropriate clinical trials.

Step 6: Final report with pathology and genetic test results

A final report is delivered to the ordering physician with a summary of all findings, treatment recommendations and relevant clinical trials.

MEDICAL GENETIC COUNSELLING

Medical genetic counselling is an essential part of a genetic testing journey that we offer before and after testing. Genetic counsellors will obtain a detailed family history, explain the method of testing that will be used, its risks and benefits, the limitations of the diagnosis, and advise you on the consequences of the results including management options and recurrence risk. The goal of counselling is to provide you with a greater understanding of the results and the ability to make more informed choices.

Availability of genetic counselling services may vary by country. Please contact us to check for more information on access in your region.

COMBINED DIAGNOSTICS

Histopathology & targeted genetic testing

Comprehensive solid tumor panel

DNA-based gene analysis, RNA-based gene analysis for rearrangement detection and splicing events, microsatellite instability (MSI), tumor mutational burden (TMB), and homologous recombination deficiency (HRD)

Breast carcinoma

- *BRCA1, BRCA2, ERBB2, PIK3CA, PTEN*
- Fusion gene(s): *NTRK1/2/3, RET*
- MSI

Colon carcinoma

- *BRAF, KRAS, NRAS, POLE*
- Fusion gene(s): *NTRK1/2/3, RET*
- *MLH1* promotor methylation
- MSI

Endometrial carcinoma

- *POLE, TP53*
- Fusion gene(s): *NTRK1/2/3*
- MSI

Gastrointestinal stromal tumors (GIST)

- *BRAF, KIT, NF1, PDGFRA, SDHA*
- Fusion gene(s): *FGFR1/2/3, NTRK1/2/3*
- MSI

Glioblastoma

- *IDH1, IDH2, TERT* promotor
- *MGMT* promotor methylation
- Fusion gene(s): *NTRK1/2/3*
- MSI

Melanoma

- *BRAF, KIT, NRAS*
- Fusion gene(s): *ALK, BRAF, NTRK1/2/3, RET, ROS1*
- MSI

Non-small cell lung carcinoma

- *BRAF, EGFR, ERBB2, KRAS*
- Fusion gene(s): *ALK, NTRK1/2/3, RET, ROS1*
- MSI

Ovarian carcinoma

- *BRAF, BRCA1, BRCA2*
- Fusion gene(s): *NTRK1/2/3, RET*
- MSI

Pancreatic carcinoma

- *BRAF, BRCA1, BRCA2, KRAS, PALB2*
- Fusion gene(s): *ALK, FGFR2, NTRK1/2/3, RET, ROS1*
- MSI

Prostate carcinoma

- *ATM, BRAF, BRCA1, BRCA2, CHEK2, FANCA, PALB2, RAD51D*
- Fusion gene(s): *NTRK1/2/3*
- MSI

Urothelial carcinoma

- *ERBB2, FGFR2, FGFR3, PIK3CA*
- Fusion gene(s): *NTRK1/2/3*
- MSI

Analysis of rearrangements

- Solid tumors in general
 - Sarcoma
- Please find the up-to-date list of fusion genes on www.medicover-genetics.com.

WHAT ARE THE POSSIBLE OUTCOMES OF THE TEST?

A diagnostic report outlining the results of the histopathology and/or the sequencing results from genetic testing is provided to help your doctor with diagnosis and treatment.



HISTOPATHOLOGY REPORT

Macroscopic and microscopic descriptions of the tumor sample, results of all tests conducted, and conclusions based on the final histopathological diagnosis. Conclusions include details about the tumor's features, and potential recommendations, with the suggestion to perform genetic analyses included if necessary.

GENETIC TEST REPORT

Changes in DNA sequence alterations including single nucleotide variants, copy number variants (only for comprehensive panel) and fusion genes, as well as tumor mutational burden and microsatellite instability, as well as the effect on carcinogenesis (process by which normal cells are transformed into cancer cells). Possible therapy options and clinical trials relevant to your location will be listed.

TARGETED-THERAPY ANALYSIS

Targeted genetic testing and the comprehensive tumor panel are covered as part of the genetic test report where applicable.

Targeted-therapy analysis identifies specific genomic changes that are relevant to therapy with approved therapeutic products (targeted therapies).

Comprehensive tumor panel may identify additional genomic findings that are not prescriptive or conclusive for use of any targeted therapies. Use of these panels does not guarantee a patient will be matched to a treatment. A negative result does not rule out the presence of an alteration.

TURNAROUND TIMES

Histopathology analysis: 7-10 working days

Genetic analysis: 7-20 working days

HOW TO ORDER?



Visit a physician or one of our medical geneticists to choose the right test for you



Sequencing is performed in our accredited laboratory in Germany



The sample(s) is sent to **Medicover Genetics**



Discuss the medical report with your physician

MORE QUESTIONS?

If you have additional questions or concerns, please contact us at info.genetics@medicover.com



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