HEREDITARY CANCER PANELS

Predict&Prevent

Estimating hereditary cancer risk for early intervention

MEDICOVER GENETICS

WHAT IS **HEREDITARY CANCER PANELS Predict&Prevent**?

PREDICT

90-95% of most cancers occur sporadically without an inherited genetic cause, while 5-10% are associated with a genetic cause, for which we offer 14 separate gene panels covering >30 cancer types spanning across >10 organs, and one large targeted comprehensive panel that includes genes associated with many cancer types. The outcome of the test can be a risk estimation of developing cancer from a genetic cause.

PREVENT

Estimating the risk of developing hereditary cancer allows you to be proactive about your health by taking preventative measures and undergoing routine monitoring. Carriers should be offered frequent screening checks, preventive surgical measures if necessary, and psycho-oncological care.

WHO COULD **BENEFIT** FROM THIS TEST?

- You have relatives diagnosed with cancer at a young age (<50)
- You have a strong family history of cancer (three or more close relatives diagnosed with cancer)
- You have been diagnosed with cancer and would like to know if there is a genetic cause
- You have a family member with a genetic variant that is linked to cancer development
- You have a physical finding that is linked to an inherited cancer (such as having many colon polyps)

IMPORTANCE OF GETTING TESTED

If you or a family member has an estimated high cancer risk, certain actions can be taken to reduce the likelihood of developing the cancer. Additionally, family members can be informed and encouraged to get tested. Our genetic counsellors can provide medical advice.

For complete information about services and our panels, including gene list, please visit: www.medicover-genetics.com

OUR TESTS

We offer a variety of molecular genetic tests to confirm suspected diagnoses, secure accurate diagnoses, guide medication and dosage decisions, manage patient care, and screen at-risk family members.

Comprehensive hereditary cancer panel Includes all the genes from the individual panels		
Breast and ovarian cancer *BRCA1*, *BRCA2* | Core | Extended	Fanconi anemia	Pancreatic tumors
Colon cancer Core | Extended	Gastrointestinal tumors	Prostate cancer
Endocrine tumors	Kidney cancer	Skin tumors
	Nervous system/Brain tumors	Unspecific tumor syndromes

DISORDERS INCLUDED

- Basal cell carcinoma syndrome / Gorlin-Goltz syndrome
- Birt-Hogg-Dub syndrome
- Breast cancer
- Colorectal cancer
- Constitutional mismatch repair deficiency
- DICER1 syndrome
- Familial adenomatous polyposis
- Fanconi anemia
- Gastric cancer
- Hereditary mixed polyposis
- Hyperparathyroidism-Jaw tumor syndrome
- Juvenile polyposis syndrome
- Leiomyomatosis and renal cell cancer
- Li-Fraumeni syndrome
- Lynch syndrome
- Medullary thyroid carcinoma
- Melanoma
- Multiple endocrine neoplasia (MEN) 1
- MEN2
- MEN4
- Neurofibromatosis type I
- Ovarian cancer
- Pancreatic cancer
- Paragangliomas
- Parathyroid carcinoma
- Peutz-Jeghers syndrome
- Pheochromocytoma
- PTEN hamartoma tumor syndrome
- Renal cell carcinoma
- Sessile serrated polyposis cancer syndrome
- Tumor predisposition syndrome
- Von Hippel-Lindau syndrome

BENEFITS OF HEREDITARY CANCER PANELS Predict&Prevent

A **MULTIGENERATIONAL** ISSUE

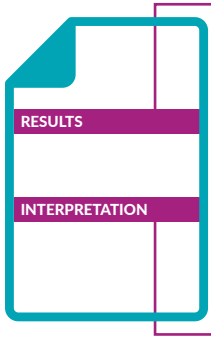
Up to 10% of most cancers are caused by inherited genetic changes, known as germline variants, which are present in all cells of the body. These variants can remain undetected for years but may significantly increase the risk of developing cancer over a lifetime. In many cases, they follow an autosomal dominant inheritance pattern, meaning a single inherited variant from one parent is enough to elevate risk. However, proactive measures such as routine medical check-ups and, when appropriate, preventive surgery can help reduce this risk and improve health outcomes.

RECOMMENDATIONS FROM PROFESSIONAL BODIES

Professional bodies and societies, including the National Institute for Health and Care Excellence (NICE), the National Comprehensive Cancer Network (NCCN), the Scottish Intercollegiate Guidelines Network (SIGN), the European Society for Medical Oncology (ESMO), the College of American Pathologists (CAP), and the Association for Molecular Pathology (AMP), emphasize the importance of germline genetic testing in managing hereditary cancer. These guidelines help healthcare providers understand the benefits of such testing and provide information about the most appropriate gene panels, enabling them to offer more personalized and effective care for cancer patients.

WHAT ARE THE POSSIBLE **OUTCOMES** OF THE TEST?

A molecular genetic diagnostic report outlining the results of the sequencing analysis is provided. Changes in DNA sequences (variants) can be detrimental and eventually lead to cancer development. We will report on the following types of variants:



PATHOGENIC AND LIKELY PATHOGENIC VARIANTS

The genetic cause of the observed symptoms has been identified and may help determine the right treatment and management plan.

VARIANTS OF UNKNOWN SIGNIFICANCE

There was not enough evidence to classify the variant as either pathogenic or neutral. Annual variant reclassification and testing family members is recommended. It is important to note that a **negative result** does not guarantee the absence of a disorder or that the disorder does not have a genetic cause. Genetic testing is an evolving field and may not detect all variants or there may not currently be enough evidence to classify all variants that lead to an inherited disease.

Summary of the results and recommendations.

Interpretation of the molecular genetic results relies on an accurate clinical picture of the patients

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.

HOW TO **ORDER**?

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

The sample is sent to **Medicover Genetics**

Discuss the medical report with your physician

Arrange sample collection at your nearest blood drawing point (accepted samples: EDTA blood, buccal swab)

Sequencing is performed in our accredited laboratory in Germany

MORE **QUESTIONS**?

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

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www.medicover-genetics.com

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