Prostate Cancer

More than 1.1 million cases of prostate cancer were recorded in 2012, accounting for around 8 percent of all new cancer cases and 15 percent in men. Age-adjusted incidence rates of prostate cancer have increased dramatically and this is largely because of the increased availability of screening for prostate-specific antigen (PSA) in men without symptoms of the disease. This test leads to detection of many prostate cancers that are small and/or would otherwise remain unrecognized, and which may or may not develop further into higher stage disease.

Germline Genetic Testing Service Process

1. Consult your physicians about Germline Genetic Testing
2. Collect 4mL whole blood
3. Analyze samples in Abnova Diagnostics lab
4. Generate your report in 14 days
5. View test results under physician guidance

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Germline Genetic Testing for Prostate Cancer

See your health in a new light

Introduction

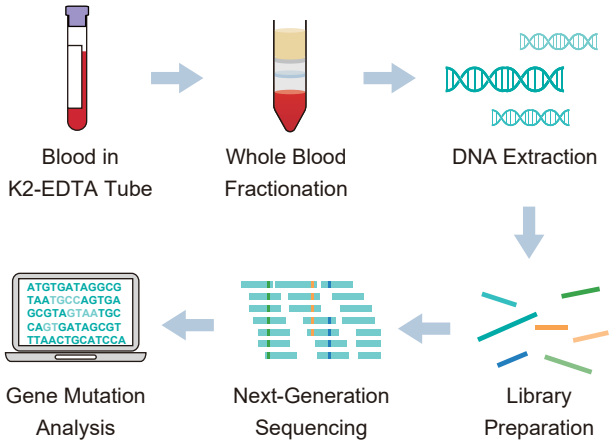
In prostate cancer, inherited gene mutations are responsible for approximately 10 percent of hereditary cancers. Hereditary cancers could be resulted from a single gene mutation causing multiple cancers, or various mutated genes leading to one specific cancer. Individuals who are carrying inherited gene mutations have higher cancer rate and higher risk of transmitting the mutations to offspring than individuals without gene mutations. Early detection of inherited gene mutations help us identifies possibility of cancers risk beforehand, thereby adopting preventive measures.

Indications

- High-risk groups with family history of cancer
- Cancer patients with family history of cancer
- Patients with multiple primary tumors occurring in the same organ
- Patients with early-onset cancer diagnosed at ealier age than usual
- Individuals suspected themselves of cancer predisposition gene carriers

Testing Workflow

Abnova Diagnostics offers germline genetic testing for prostate cancer service to requesting medical centers, clinics, and interested individuals. Leveraging on the next-generation sequencing (NGS) platform, we provide efficient, high-throughput identification and analysis of heritable predisposing genes and their variants across the human genome. Only 4mL whole blood needs to be collected during the test and undergoes blood fractionation, DNA fractionation, DNA extraction, NGS and gene mutation analysis to generate an interpretative report. The report includes sequences of cancer gene mutations as well as their germline variants based on NGS, inherited cancer genes annotation and comparison with dataset, and additional heritable predisposing gene testing per customer's request.



Advantage

Perform targeted sequencing of heritable predisposing genes: ATM, BRCA1, BRCA2, FANCA, PALB, established by the national clinical cancer guidelines.

- NCCN Guiedlines V3 2018, Prostate Cancer.
- Pritchard CC, et al. Inherited DNA-Repair Gene Mutations in Men with Metastatic Prostate Cancer. N Engl J Med. 2016 Aug 4;375(5):443-53. doi:10.1056/NEJMoa 1603144.
- Emmanuel S. Antonarakis, et al. Germline DNA Repair Mutations and Response to Hormonal Therapy. European Urology. Volume 74, Issue 2, August 2018, Pages 218-225.
- Wilkes, David C, et al. A germline FANCA alteration that is associated with increased sensitivity to DNA damaging agents. Cold Spring Harbor molecular case studies, 3(5) Cold Spring Harbor Laboratory Press 10.1101/mcs.a001487

Benefits of Genetic Testing

Genetic testing for prostate cancer can help inform treatment and medical management:

Patients

1. Risk stratification and surveillance
2. Genetic information can benefit close relatives and allow for risk stratification
3. Treatment decision-making for targeted therapy such as PARP inhibitors

Family members

1. Relatives at high risk can undergo enhanced surveillance, while those without the family variant may be able to avoid unnecessary procedures
2. A positive result may enable cancer prevention and early detection for the patient's family members

Specimen Requirement

1. Human whole blood: collect at least 4ml whole blood in K2-EDTA tube (purple cap) at room temperature.
2. Sample shipment: keep whole blood sample in room temperature after blood collection and throughout transportation.
3. DNA preparation: extract genomic DNA from the buffy coat fraction of the whole blood sample on the same day of collection and store at 4C ◦ .