PANCSEQ:
NGS GENETIC TEST FOR HEREDITARY PANCREATIC CANCER

PancSeq is an ultrasequencing panel (NGS), which analyzes simultaneously 12 genes associated with susceptibility to different types of hereditary pancreatic cancer.

Pancreatic cancer is the fourth leading cause of death from tumor in the western world. While cancer rates of major cancers (breast, prostate, lung and colon) showed a downward trend, on recent years, the rate of pancreatic cancer has increased at a rate of 0.9 % year. Unfortunately, pancreatic cancer is a difficult treatable disease. Identification of risk groups for pancreatic cancer could improve prognosis. Peutz Jeghers syndrome, hereditary pancreatitis and having a family history of pancreatic cancer are risk factors clearly related, while others, such as advanced age and smoking, taken into account.

Most pancreatic cancers are sporadic. Different studies have found that between 5-10 % of cases of pancreatic cancer are familial, especially in families where there are several people affected. Multiple known genes are involved in susceptibility to pancreatic cancer. PancSeq panel provides the possibility of simultaneous and accurate study of 12 genes related to pancreatic hereditary cancer.

Genes included in the panel and associated syndromes in PancSeq.

Known genes associated with pancreatic cancer derived from the literature.

GENES	REFERENCE
BRCA1	Chen S et al., 2007
BRCA2	Couch F et al., 2007
ATM	Roberts N et al., 2011
PALB2	Slater EP et al., 2010
STK11	Lim W et al., 2004
TP53	Olivier M et al., 2003
MLH1	Kastrinos F et al., 2009
MSH2	
MSH6	
PMS2	
APC	Shin E et al., 2012
CDH1	Guilford P et al., 2010

NGS Technology Advantages

1. NGS technology allows addressing the study of multiple genes in a time and cost similar to that used in studying one or two genes with other methodologies.
2. Massive sequencing exceeds microarray approach because it´s not being limited to known mutations of a particular population.
3. NGS technology offers the best cost / benefit in the diagnosis of genetic - hereditary diseases.

Indication

Although the literature has been reported that mutations in the genes included in the PancSeq panel are implicated in an increased risk of pancreatic cancer, the relative values at risk are not fully defined. However, depending on the mutation detected in any of these genes can be recommended more frequent revisions, risk reduction options and/or changes in the treatment of cancer.

AC-Gen Reading Life executes all processes *in-house!*

From sample reception to bioinformatics

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Test description

PancSeq Test is a panel of Target-directed sequencing or NGS that allows detection of mutations by sequencing 12 genes by their massive sequencing coding regions, with 25 nucleotides of the flanking introns.

The genomic DNA of patients is extracted using standard procedures. The enrichment of the selected regions for the analysis is performed by digestion and amplification with primers overlapping to each gene of interest. It then proceeds to perform the massive sequencing of interesting regions. The extracted information is processed through a comprehensive bioinformatic analysis. Detected DNA variants with clinical interest are additionally verified by Sanger sequencing. The sensitivity of the analysis method is 96-99% for the mutations described.

Test application

You can find our study application form on our website:
http://www.ac-gen.com/apply-for-test.html

Sample shipping requirements:

- Peripheral blood: 5-10 ml of peripheral blood. Delivery Recommended Temp 4-8 °C.
- Saliva: pickup with a Self Collection kit supplied by our laboratory.
- 10µg of genomic DNA, preferably diluted to 200ng/ul. OB DNA 260-280 ratio (1.8-1.9). Delivery Recommended Temp 4-8 °C.

Delivering address:
AC-Gen Reading Life S.L. (Att Laboratory)
Parque Científico UVa
Edif. CTTA 2ª planta
Paseo de Belén nº9
47011 - Valladolid - Spain

Call us and we will handle the shipping of samples

More information: info@acgen.es www.ac-gen.com