CENTOGENE
THE RARE DISEASE COMPANY

CentoCancer®

Strive for the complete information

CentoCancer® – Panel Composition and Methodology

CentoCancer® includes the following 70 most relevant cancer associated genes:

ABRAXAS1	*BRIP1*	*FLCN*	*MLH3*	*PMS1*	*RAD51D*	*SMARCA4*
APC	*CDH1*	*GALNT12*	*MRE11*	*PMS2*	*RECQL*	*STK11*
ATM	*CDK4*	*HNF1B*	*MSH2*	*POLD1*	*RET*	*TGFBR2*
AXIN2	*CDKN2A*	*HOXB13*	*MSH3*	*POLE*	*RNF43*	*TP53*
BAP1	*CHEK2*	*KIT*	*MSH6*	*POT1*	*SDHA*	*TSC1*
BARD1	*DICER1*	*MC1R*	*MUTYH*	*PRSS1*	*SDHAF2*	*TSC2*
BLM	*DIS3L2*	*MEN1*	*NBN*	*PTCH1*	*SDHB*	*VHL*
BMPR1A	*EPCAM*	*MET*	*NF1*	*PTEN*	*SDHC*	*WT1*
BRCA1	*FANCC*	*MITF*	*NTHL1*	*RAD50*	*SDHD*	*XRCC2*
BRCA2	*FH*	*MLH1*	*PALB2*	*RAD51C*	*SMAD4*	*XRCC3*

Key panel facts

- Next-generation sequencing (NGS) of all 70 genes in the panel, including all coding regions and +/-10 bp exon/intron boundaries
- Coverage: ≥ 99.5 % of target bases covered at > 20 x
- NGS-based CNV (copy number variant) analysis for all genes
- Low quality single nucleotide variants (SNVs) and all relevant deletion/insertion variants are confirmed by Sanger sequencing or MLPA/qPCR prior to reporting
- All relevant deep intronic variants described in the current version of HGMD® and our rare disease-centric Bio/Databank are included
- Turnaround Time: 15 business days
- Required Material: ≥ 1 µg DNA or ≥ 1 ml EDTA blood or ≥ 1 CentoCard®

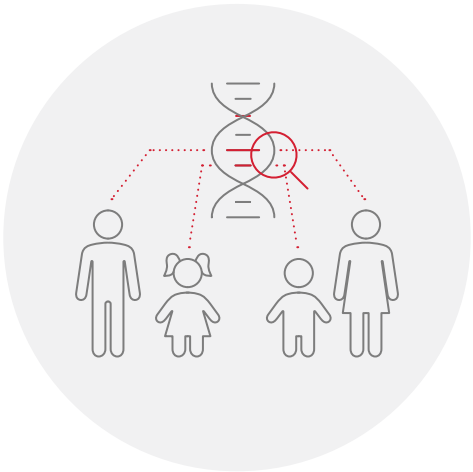
CentoCancer – Our Comprehensive Oncogenetics Panel for Hereditary Mutations

Hereditary pathogenic variants confer an increased risk of developing cancers during an individual's lifetime. Early identification of pathogenic variants in genes which have a predisposition to cancer is a fundamental first step in the diagnosis, management and treatment of individuals and families with hereditary cancer syndromes.

Panel Composition

CentoCancer offers complete answers to help you choose the best possible therapeutic approach for your patients. Each gene in CentoCancer has been carefully selected based on its risk potential in the development of one or more of the following cancers:

- Breast
- Colorectal
- Thyroid
- Pancreatic
- Renal
- Ovarian
- Gastric
- Endometrial
- Melanoma
- Prostate



Who should consider CentoCancer for genetic testing?

CentoCancer is appropriate for:

1. Individuals with a positive personal history of early-onset cancer, rare cancer, bilateral cancer, or multiple primary cancers
2. Unaffected individuals with a positive family history of multiple generations of cancers, rare cancers, or early-onset cancers
3. Individuals in whom the suspected genetic diagnoses for a suspecte familial cancer risk are not covered by a single targeted panel, or if a targeted panel testing was previously negative

Hereditary Cancer and / or Susceptibility

SELECTION OF GENETIC TEST/PANEL ACCORDING TO FAMILY HISTORY AND CLINICAL DATA

***BRCA1, BRCA2* panel**	*BRCA1, BRCA2*
CentoBreast®	*ABRAXAS1, ATM, BARD1, BRCA1, BRCA2, BRIP1, CDH1, CHEK2, DICER1, EPCAM, FANCC, MEN1, MLH1, MRE11, MSH2, MSH6, MUTYH, NBN, PALB2, PMS1, PMS2, PTEN, RAD50, RAD51C, RAD51D, RECQL, SMARCA4, STK11, TP53, XRCC2*
CentoColon	*APC, ATM, AXIN2, BLM, BMPR1A, BRCA1, BRCA2, CDH1, CDKN2A, CHEK2, EPCAM, FLCN, GALNT12, MLH1, MLH3, MSH2, MSH3, MSH6, MUTYH, NBN, NTHL1, PALB2, PMS2, POLD1, POLE, PTEN, PRSS1, RNF43, SMAD4, STK11, TGFBR2, TP53, VHL*

Identification of specific cancer-causing pathogenic variant

Genetic counseling, genetic testing of all family members with consent

No pathogenic variants identified

COMPLEX FAMILY HISTORY, VARIABILITYOF CANCERS AND ABSENCE OF KNOWN GENETIC CAUSE IN THE FAMILY

CentoCancer panel	*ABRAXAS1, APC, ATM, AXIN2, BAP1, BARD1, BLM, BMPR1A, BRCA1, BRCA2, BRIP1, CDH1, CDK4, CDKN2A, CHEK2, DICER1, DIS3L2, EPCAM, FANCC, FH, FLCN, GALNT12, HNF1B, HOXB13, KIT, MC1R, MEN1, MET, MITF, MLH1, MLH3, MRE11, MSH2, MSH3, MSH6, MUTYH, NBN, NF1, NTHL1, PALB2, PMS1, PMS2, POLD1, POLE, POT1, PRSS1, PTCH1, PTEN, RAD50, RAD51C, RAD51D, RECQL, RET, RNF43, SDHA, SDHAF2, SDHB, SDHC, SDHD, SMAD4, SMARCA4, STK11, TGFBR2, TP53, TSC1, TSC2, VHL, WT1, XRCC2, XRCC3*

Identification of specific cancer-causing pathogenic variant

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WES analysis on a research basis

Research reporting

Some Common Cancer Predisposition Syndromes Covered by CentoCancer

Syndromes	Associated Cancers
HEREDITARY BREAST/OVARIAN CANCER *BRCA1, BRCA2*	Breast, ovarian, prostate, pancreatic, melanoma
LI-FRAUMENI SYNDROME *TP53*	Breast, sarcomas, adrenocortical carcinoma, leukemia, brain tumors
COWDEN SYNDROME *PTEN*	Breast, thyroid, benign lesions of skin, hamartoma, renal cell carcinoma, uterine
HNPCC (LYNCH SYNDROME) *MLH1, MSH2, MSH6, PMS1, PMS2*	Colorectal endometrial, ovarian, small bowel, stomach, pancreas, ureter, renal pelvis
FAMILIAL ADENOMATOUS POLYPOSIS *APC*	Polyposis, colorectal, thyroid, gastric, periampullary carcinoma, hepatoblastoma
VON HIPPEL-LINDAU *VHL*	Renal cell carcinoma, retinal angioma, cerebellar hemangioblastoma, pheochromocytoma, pancreatic cysts, islet cell tumor
MULTIPLE ENDOCRINE NEOPLASIA *MEN1, RET*	Parathyroid tumors, pancreatic tumors, pituitary tumors, medullary thyroid cancer, pheochromocytoma, neuromas

Please visit our website for more information:
www.centogene.com

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