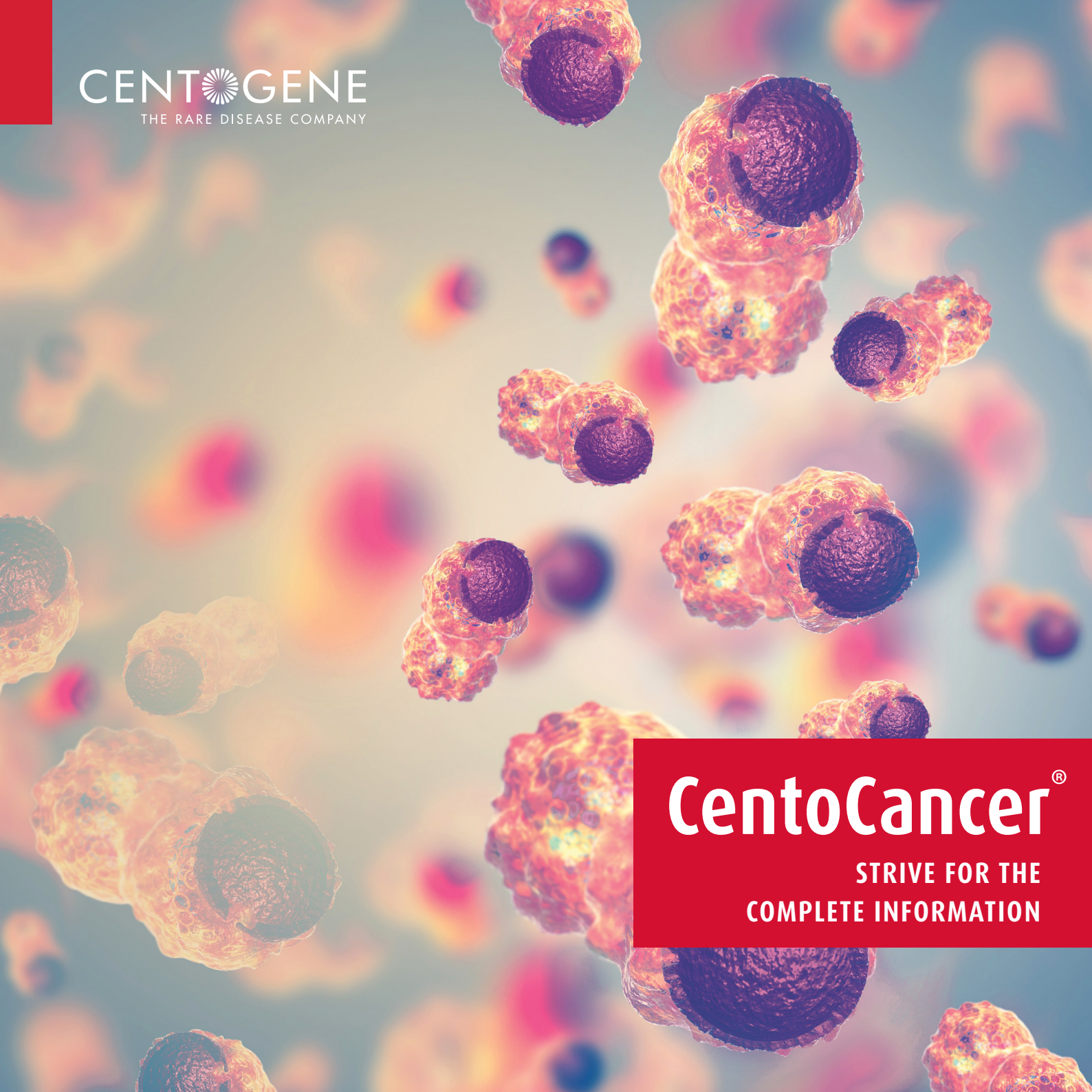
CENTOGENE
THE RARE DISEASE COMPANY



CentoCancer®

STRIVE FOR THE COMPLETE INFORMATION

CentoCancer® – Panel composition and methodology

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

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

KEY PANEL FACTS

- Next-generation sequencing (NGS) of all 70 genes in the panel, including all coding regions and +/-10bp exon/intron boundaries
- Coverage: ≥99.5% of target bases covered at >20x
- 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 CentoMD® are included
- Turnaround Time: 15 business days
- Required Material: ≥1µg DNA or ≥1ml 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

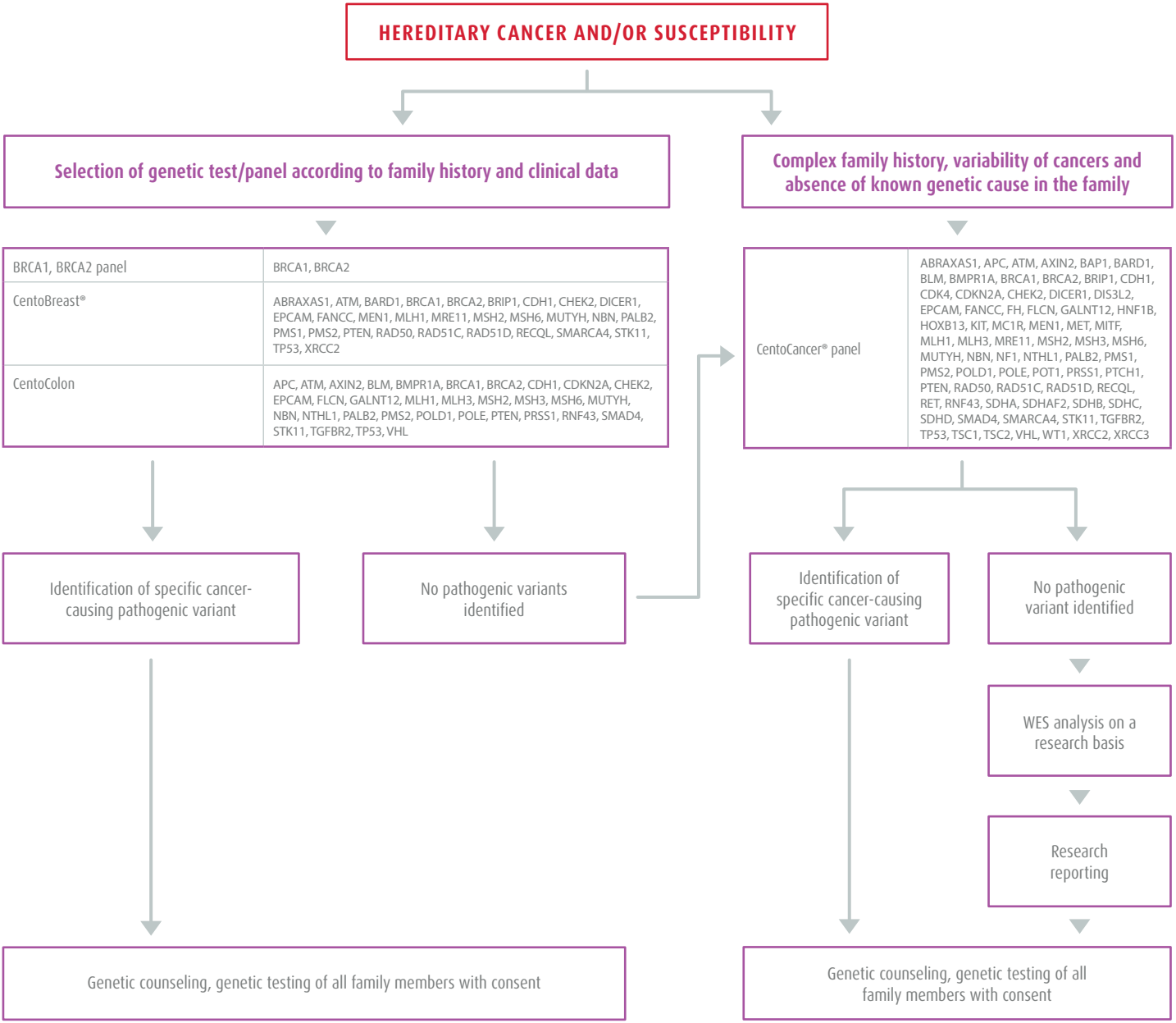
CentoCancer® offers complete answers to help you choose the best possible therapeutic approach for your patients. Each gene in CentoCancer® has been carefully selected based on its risk potential in the development of one or more of the following cancers:

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

WHO SHOULD CONSIDER CentoCancer® FOR GENETIC TESTING?

CentoCancer® is appropriate for:

- Individuals with a positive personal history of early-onset cancer, rare cancer, bilateral cancer, or multiple primary cancers
- Unaffected individuals with a positive family history of multiple generations of cancers, rare cancers, or early-onset cancers
- Individuals in whom the suspected genetic diagnoses for a suspected 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
Complex family history, variability of cancers and absence of known genetic cause in the family
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
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
No pathogenic variants identified
Identification of specific cancer-causing pathogenic variant
No pathogenic variant identified
WES analysis on a research basis
Research reporting
Genetic counseling, genetic testing of all family members with consent
Genetic counseling, genetic testing of all family members with consent

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

Your partner of choice

For further information and support, please contact our closest representative or our customer support team, easily accessible by phone or email.

www.centogene.com

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