

Table SI. List of all 10 patient sample contributors participating in the study.

Patient sample contributors	Number of patients included in the study
The Bank of Clinical Samples, First Faculty of Medicine, Charles University, Prague, Czech Republic	235
Institute of Medical Biochemistry and Laboratory Diagnostics, First Faculty of Medicine, Charles University and General University Hospital in Prague, Prague, Czech Republic	51
Department of Cancer Epidemiology and Genetics, Masaryk Memorial Cancer Institute, Brno, Czech Republic	29
Department of Medical Genetics, AGEL Laboratories, AGEL Research and Training Institute, Novy Jicin, Czech Republic	15
Centre for Medical Genetics and Reproductive Medicine, Gennet, Prague, Czech Republic	140
Institute of Biology and Medical Genetics, First Faculty of Medicine and General University Hospital in Prague, Prague, Czech Republic	25
Department of Medical Genetics, GHC Genetics, Prague, Czech Republic	4
Department of Medical Genetics, Faculty of Medicine in Pilsen, Charles University, and University Hospital Pilsen, Pilsen, Czech Republic	10
Department of Medical Genetics, Pronatal, Prague, Czech Republic	2
Department of Medical Genetics, University Hospital Olomouc, Faculty of Medicine and Dentistry, Palacky University Olomouc, Czech Republic	16

Table SII. List of all 226 genes included in the CZECA panel with used transcript variants and full names.

A, Established EC-predisposition genes (N=19)		
Gene name	Transcript variant	Gene name (alternative denominations)
<i>ATM</i>	NM_000051.3	Ataxia telangiectasia mutated
<i>BARD1</i>	NM_000465.3	BRCA1 associated RING domain 1
<i>BRCA1</i>	NM_007294.3	Breast cancer 1, early onset
<i>BRCA2</i>	NM_000059.3	Breast cancer 2, early onset
<i>BRIP1</i>	NM_032043.2	BRCA1 interacting protein C-terminal helicase 1
<i>CDH1</i>	NM_004360.4	Cadherin 1, type 1, E-cadherin
<i>EPCAM</i> <sup>a</sup>	NM_002354.2	Epithelial cell adhesion molecule
<i>CHEK2</i>	NM_007194.3	Checkpoint kinase 2
<i>MLH1</i>	NM_000249.3	mutL homolog 1, colon cancer, nonpolyposis type 2
<i>MSH2</i>	NM_000251.2	mutS homolog 2, colon cancer, nonpolyposis type 1
<i>MSH6</i>	NM_000179.2	mutS homolog 6
<i>NF1</i>	NM_000267.3	Neurofibromin 1
<i>PALB2</i>	NM_024675.3	Partner and localizer of BRCA2
<i>PMS2</i>	NM_000535.6	PMS1 homolog 2
<i>PTEN</i>	NM_000314.6	Phosphatase and tensin homolog
<i>RAD51C</i>	NM_058216.2	RAD51 homolog C
<i>RAD51D</i>	NM_002878.3	RAD51 homolog D
<i>STK11</i>	NM_000455.4	Serine/threonine kinase 11
<i>TP53</i>	NM_000546.5	Tumor protein p53
B, Candidate genes (N=207)		
Gene name	Transcript variant	Gene name (alternative denominations)

<i>AIP</i>	NM_003977.3	Aryl hydrocarbon receptor interacting protein
<i>ALK</i>	NM_004304.4	Anaplastic lymphoma kinase
<i>APC</i>	NM_000038.5	Adenomatous polyposis coli
<i>APEX1</i>	NM_001641.3	APEX nuclease (multifunctional DNA repair enzyme) 1
<i>ATMIN</i>	NM_015251.2	ATM interactor
<i>ATR</i>	NM_001184.3	Ataxia telangiectasia and Rad3 related
<i>ATRIP</i>	NM_130384.2	ATR interacting protein
<i>AURKA</i>	NM_198433.2	Aurora kinase A
<i>AXIN1</i>	NM_003502.3	Axin 1
<i>BABAM1</i>	NM_001033549.2	BRISC and BRCA1 A complex member 1
<i>BAP1</i>	NM_004656.3	BRCA1 associated protein-1 (ubiquitin carboxy-terminal hydrolase)
<i>BLM</i>	NM_000057.3	Bloom syndrome, RecQ helicase-like
<i>BMPRIA</i>	NM_004329.2	Bone morphogenetic protein receptor, type IA
<i>BRAP</i>	NM_006768.4	BRCA1 associated protein
<i>BRCC3</i>	NM_024332.3	BRCA1/BRCA2-containing complex, subunit 3
<i>BRE</i>	NM_004899.4	Brain and reproductive organ-expressed (TNFRSF1A modulator)
<i>BUB1B</i>	NM_001211.5	Budding uninhibited by benzimidazoles 1 homolog beta
<i>CASP8</i>	NM_001080125.1	Caspase 8, apoptosis-related cysteine peptidase
<i>CCND1</i>	NM_053056.2	Cyclin D1
<i>CDC73</i>	NM_024529.4	Cell division cycle 73, Paf1/RNA polymerase II complex component, homolog

<i>CDK4</i>	NM_000075.3	Cyclin-dependent kinase 4
<i>CDKN1B</i>	NM_004064.4	Cyclin-dependent kinase inhibitor 1B (p27, Kip1)
<i>CDKN1C</i>	NM_000076.2	Cyclin-dependent kinase inhibitor 1C (p57, Kip2)
<i>CDKN2A</i>	NM_000077.4	Cyclin-dependent kinase inhibitor 2A
<i>CEBPA</i>	NM_004364.4	CCAAT/enhancer binding protein (C/EBP), alpha
<i>CEP57</i>	NM_014679.4	Centrosomal protein 57kDa
<i>CLSPN</i>	NM_022111.3	Claspin
<i>CSNK1D</i>	NM_001893.4	Casein kinase 1, delta
<i>CSNK1E</i>	NM_001894.4	Casein kinase 1, epsilon
<i>CWF19L2</i>	NM_152434.2	CWF19-like 2, cell cycle control
<i>CYLD</i>	NM_015247.2	Cylindromatosis (turban tumor syndrome)
<i>DCLRE1C</i>	NM_001033855.2	DNA cross-link repair 1C
<i>DDB2</i>	NM_000107.2	Damage-specific DNA binding protein 2, 48kDa
<i>DHFR</i>	NM_000791.3	Dihydrofolate reductase
<i>DICER1</i>	NM_030621.4	Dicer 1, ribonuclease type III
<i>DIS3L2</i>	NM_152383.4	DIS3 like 3'-5' exoribonuclease 2
<i>DMBT1</i>	NM_007329.2	Deleted in malignant brain tumors 1
<i>DMC1</i>	NM_007068.3	DMC1 dosage suppressor of mck1 homolog, meiosis-specific homologous recombination
<i>DNAJC21</i>	NM_194283.3	DnaJ (Hsp40) homolog, subfamily C, member 21
<i>DPYD</i>	NM_000110.3	Dihydropyrimidine dehydrogenase
<i>EGFR</i>	NM_005228.3	Epidermal growth factor receptor
<i>EMSY</i>	NM_001300942.1	EMSY transcriptional repressor, BRCA2 interacting
<i>EPHX1</i>	NM_000120.3	Epoxide hydrolase 1

<i>ERCC1</i>	NM_001983.3	Excision repair cross-complementing rodent repair deficiency, complementation group 1
<i>ERCC2</i>	NM_000400.3	Excision repair cross-complementing rodent repair deficiency, complementation group 2
<i>ERCC3</i>	NM_000122.1	Excision repair cross-complementing rodent repair deficiency, complementation group 3
<i>ERCC4</i>	NM_005236.2	Excision repair cross-complementing rodent repair deficiency, complementation group 4
<i>ERCC5</i>	NM_000123.3	Excision repair cross-complementing rodent repair deficiency, complementation group 5
<i>ERCC6</i>	NM_000124.3	Excision repair cross-complementing rodent repair deficiency, complementation group 6
<i>ESR1</i>	NM_000125.3	Estrogen receptor 1
<i>ESR2</i>	NM_001437.2	Estrogen receptor 2 (ER beta)
<i>EXO1</i>	NM_006027.4	Exonuclease 1
<i>EXT1</i>	NM_000127.2	Exostosin 1
<i>EXT2</i>	NM_000401.3	Exostosin 2
<i>EYA2</i>	NM_005244.4	Eyes absent homolog 2
<i>EZH2</i>	NM_004456.4	Enhancer of zeste homolog 2
<i>FAAP24</i>	NM_152266.4	FA core complex associated protein 24
<i>FAM175A</i>	NM_139076.2	Family with sequence similarity 175, member A
<i>FAM175B</i>	NM_032182.3	Family with sequence similarity 175, member B
<i>FAN1</i>	NM_014967.4	FANCD2/FANCI-associated nuclease 1

<i>FANCA</i>	NM_000135.2	Fanconi anemia, complementation group A
<i>FANCB</i>	NM_001018113.2	Fanconi anemia, complementation group B
<i>FANCC</i>	NM_000136.2	Fanconi anemia, complementation group C
<i>FANCD2</i>	NM_033084.4	Fanconi anemia, complementation group D2
<i>FANCE</i>	NM_021922.2	Fanconi anemia, complementation group E
<i>FANCF</i>	NM_022725.3	Fanconi anemia, complementation group F
<i>FANCG</i>	NM_004629.1	Fanconi anemia, complementation group G
<i>FANCI</i>	NM_001113378.1	Fanconi anemia, complementation group I
<i>FANCL</i>	NM_001114636.1	Fanconi anemia, complementation group L
<i>FANCM</i>	NM_020937.3	Fanconi anemia, complementation group M
<i>FBXW7</i>	NM_033632.3	F-box and WD repeat domain containing 7, E3 ubiquitin protein ligase
<i>FH</i>	NM_000143.3	Fumarate hydratase
<i>FLCN</i>	NM_144997.5	Folliculin
<i>GADD45A</i>	NM_001924.3	Growth arrest and DNA-damage-inducible, alpha
<i>GATA2</i>	NM_001145661.1	GATA binding protein 2
<i>GPC3</i>	NM_004484.3	Glypican 3
<i>GRB7</i>	NM_001242442.1	Growth factor receptor-bound protein 7
<i>HELQ</i>	NM_133636.3	Helicase, POLQ-like
<i>HNF1A</i>	NM_001306179.1	HNF1 homeobox A

<i>HOXB13</i>	NM_006361.5	Homeobox B13
<i>HRAS</i>	NM_005343.3	v-Ha-ras Harvey rat sarcoma viral oncogene homolog
<i>HUS1</i>	NM_004507.3	HUS1 checkpoint homolog
<i>CHEK1</i>	NM_001114122.2	Checkpoint kinase 1
<i>KAT5</i>	NM_182710.2	K(lysine) acetyltransferase 5
<i>KCNJ5</i>	NM_000890.3	Potassium inwardly-rectifying channel, subfamily J, member 5
<i>KIT</i>	NM_000222.2	V-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
<i>LIG1</i>	NM_000234.2	Ligase I, DNA, ATP-dependent
<i>LIG3</i>	NM_013975.3	Ligase III, DNA, ATP-dependent
<i>LIG4</i>	NM_002312.3	Ligase IV, DNA, ATP-dependent
<i>LMO1</i>	NM_002315.2	LIM domain only 1
<i>LRIG1</i>	NM_015541.2	Leucine-rich repeats and immunoglobulin-like domains 1
<i>MAX</i>	NM_002382.4	MYC associated factor X
<i>MCPH1</i>	NM_024596.4	Microcephalin 1
<i>MDC1</i>	NM_014641.2	Mediator of DNA-damage checkpoint 1
<i>MDM2</i>	NM_002392.5	Mdm2, p53 E3 ubiquitin protein ligase homolog
<i>MDM4</i>	NM_002393.4	Mdm4 p53 binding protein homolog
<i>MEN1</i>	NM_000244.3	Multiple endocrine neoplasia I
<i>MET</i>	NM_001127500.2	Met proto-oncogene (hepatocyte growth factor receptor)
<i>MGMT</i>	NM_002412.4	O-6-methylguanine-DNA methyltransferase
<i>MLH3</i>	NM_001040108.1	mutL homolog 3
<i>MMP8</i>	NM_002424.2	Matrix metalloproteinase 8 (neutrophil collagenase)
<i>MPL</i>	NM_005373.2	Myeloproliferative leukemia virus oncogene

<i>MRE11</i>	NM_005591.3	MRE11 meiotic recombination 11 homolog A
<i>MSH3</i>	NM_002439.4	mutS homolog 3
<i>MSH5</i>	NM_002441.4	mutS homolog 5
<i>MSR1</i>	NM_138715.2	Macrophage scavenger receptor 1
<i>MUS81</i>	NM_025128.4	MUS81 endonuclease homolog
<i>MUTYH</i>	NM_001128425.1	mutY homolog
<i>NAT1</i>	NM_000662.7	N-acetyltransferase 1 (arylamine N-acetyltransferase)
<i>NBN</i>	NM_002485.4	Nibrin
<i>NCAM1</i>	NM_001242607.1	Neural cell adhesion molecule 1
<i>NELFB</i>	NM_015456.4	Cofactor of BRCA1
<i>NF2</i>	NM_000268.3	Neurofibromin 2 (merlin)
<i>NFKBIZ</i>	NM_031419.3	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, zeta
<i>NHEJ1</i>	NM_024782.2	Nonhomologous end-joining factor 1
<i>NSD1</i>	NM_022455.4	Nuclear receptor binding SET domain protein 1
<i>OGG1</i>	NM_002542.5	8-oxoguanine DNA glycosylase
<i>PARP1</i>	NM_001618.3	Poly (ADP-ribose) polymerase 1
<i>PCNA</i>	NM_002592.2	Proliferating cell nuclear antigen
<i>PHB</i>	NM_002634.3	Prohibitin
<i>PHOX2B</i>	NM_003924.3	Paired-like homeobox 2b
<i>PIK3CG</i>	NM_002649.3	Phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit gamma
<i>PLA2G2A</i>	NM_000300.3	Phospholipase A2, group IIA
<i>PMS1</i>	NM_000534.4	PMS1 postmeiotic segregation increased 1
<i>POLB</i>	NM_002690.2	Polymerase (DNA directed), beta
<i>POLD1</i>	NM_002691.3	Polymerase (DNA directed), delta 1, catalytic subunit

<i>POLE</i>	NM_006231.3	Polymerase (DNA directed), epsilon, catalytic subunit
<i>PPM1D</i>	NM_003620.3	Protein phosphatase, Mg <sup>2+</sup> /Mn <sup>2+</sup> dependent, 1D
<i>PREX2</i>	NM_024870.3	Phosphatidylinositol-3,4,5-trisphosphate-dependent Rac exchange factor 2
<i>PRF1</i>	NM_001083116.1	Perforin 1 (pore forming protein)
<i>PRKARIA</i>	NM_212471.2	Protein kinase, cAMP-dependent, regulatory, type I, alpha
<i>PRKDC</i>	NM_006904.6	Protein kinase, DNA-activated, catalytic polypeptide
<i>PTCH1</i>	NM_000264.3	Patched 1
<i>PTTG2</i>	NM_006607.2	Pituitary tumor-transforming 2
<i>RAD1</i>	NM_002853.3	RAD1 homolog
<i>RAD17</i>	NM_133338.2	RAD17 homolog
<i>RAD18</i>	NM_020165.3	RAD18 homolog
<i>RAD23B</i>	NM_002874.4	RAD23 homolog B
<i>RAD50</i>	NM_005732.3	RAD50 homolog
<i>RAD51</i>	NM_133487.3	RAD51 homolog
<i>RAD51API</i>	NM_001130862.1	RAD51 associated protein 1
<i>RAD51B</i>	NM_133509.3	RAD51 homolog B
<i>RAD52</i>	NM_134424.3	RAD52 homolog
<i>RAD54B</i>	NM_012415.3	RAD54 homolog B
<i>RAD54L</i>	NM_003579.3	RAD54-like
<i>RAD9A</i>	NM_004584.2	RAD9 homolog A
<i>RBI</i>	NM_000321.2	Retinoblastoma 1
<i>RBBP8</i>	NM_002894.2	Retinoblastoma binding protein 8
<i>RECQL</i>	NM_002907.3	RecQ protein-like (DNA helicase Q1-like)
<i>RECQL4</i>	NM_004260.3	RecQ protein-like 4
<i>RECQL5</i>	NM_004259.6	RecQ protein-like 5
<i>RET</i>	NM_020975.4	Ret proto-oncogene

<i>RFC1</i>	NM_002913.4	Replication factor C (activator 1) 1, 145kDa
<i>RFC2</i>	NM_181471.2	Replication factor C (activator 1) 2, 40kDa
<i>RFC4</i>	NM_181573.2	Replication factor C (activator 1) 4, 37kDa
<i>RHBDF2</i>	NM_024599.5	Rhomboid 5 homolog 2
<i>RNF146</i>	NM_001242844.1	Ring finger protein 146
<i>RNF168</i>	NM_152617.3	Ring finger protein 168, E3 ubiquitin protein ligase
<i>RNF8</i>	NM_003958.3	Ring finger protein 8, E3 ubiquitin protein ligase
<i>RPA1</i>	NM_002945.3	Replication protein A1, 70kDa
<i>RUNX1</i>	NM_001754.4	Runt-related transcription factor 1
<i>SBDS</i>	NM_016038.2	SBDS ribosome maturation factor
<i>SDHA</i>	NM_004168.3	Succinate dehydrogenase complex flavoprotein subunit A
<i>SDHAF2</i>	NM_017841.2	Succinate dehydrogenase complex assembly factor 2
<i>SDHB</i>	NM_003000.2	Succinate dehydrogenase complex, subunit B, iron sulfur (Ip)
<i>SDHC</i>	NM_003001.3	Succinate dehydrogenase complex subunit C
<i>SDHD</i>	NM_003002.3	Succinate dehydrogenase complex subunit D
<i>SETBP1</i>	NM_002894.2	SET binding protein 1
<i>SETX</i>	NM_015046.5	Senataxin
<i>SHPRH</i>	NM_001042683.2	SNF2 histone linker PHD RING helicase, E3 ubiquitin protein ligase
<i>SLX4</i>	NM_032444.2	SLX4 structure-specific endonuclease subunit homolog
<i>SMAD4</i>	NM_005359.5	SMAD family member 4

<i>SMARCA4</i>	NM_001128849.1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4
<i>SMARCB1</i>	NM_003073.4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily b, member 1
<i>SMARCE1</i>	NM_003079.4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily e, member 1
<i>SUFU</i>	NM_016169.3	Suppressor of fused homolog
<i>TCL1A</i>	NM_021966.2	T-cell leukemia/lymphoma 1A
<i>TELO2</i>	NM_016111.3	TEL2, telomere maintenance 2, homolog
<i>TERF2</i>	NM_005652.4	Telomeric repeat binding factor 2
<i>TERT</i>	NM_198253.2	Telomerase reverse transcriptase
<i>TLR2</i>	NM_003264.4	Toll-like receptor 2
<i>TLR4</i>	NM_138554.4	Toll-like receptor 4
<i>TMEM127</i>	NM_017849.3	Transmembrane protein 127
<i>TOPBP1</i>	NM_007027.3	Topoisomerase (DNA) II binding protein 1
<i>TP53BP1</i>	NM_133487.3	Tumor protein p53 binding protein 1
<i>TSC1</i>	NM_000368.4	Tuberous sclerosis 1
<i>TSC2</i>	NM_000548.4	Tuberous sclerosis 2
<i>TSHR</i>	NM_000369.2	Thyroid stimulating hormone receptor
<i>UBE2A</i>	NM_003336.3	Ubiquitin-conjugating enzyme E2A
<i>UBE2B</i>	NM_003337.3	Ubiquitin-conjugating enzyme E2B
<i>UBE2I</i>	NM_003345	Ubiquitin-conjugating enzyme E2I
<i>UBE2V2</i>	NM_003350.2	Ubiquitin-conjugating enzyme E2 variant 2
<i>UBE4B</i>	NM_001105562.2	Ubiquitination factor E4B
<i>UIMC1</i>	NM_001199297.2	Ubiquitin interaction motif containing 1

<i>VHL</i>	NM_000551.3	Von Hippel-Lindau tumor suppressor, E3 ubiquitin protein ligase
<i>WRN</i>	NM_000553.4	Werner syndrome, RecQ helicase-like
<i>WT1</i>	NM_024426.4	Wilms tumor 1
<i>XPA</i>	NM_000380.3	Xeroderma pigmentosum, complementation group A
<i>XPC</i>	NM_004628.4	Xeroderma pigmentosum, complementation group C
<i>XRCC1</i>	NM_006297.2	X-ray repair complementing defective repair in Chinese hamster cells 1
<i>XRCC2</i>	NM_005431.1	X-ray repair complementing defective repair in Chinese hamster cells 2
<i>XRCC3</i>	NM_005432.3	X-ray repair complementing defective repair in Chinese hamster cells 3
<i>XRCC4</i>	NM_022406.3	X-ray repair complementing defective repair in Chinese hamster cells 4
<i>XRCC5</i>	NM_021141.3	X-ray repair complementing defective repair in Chinese hamster cells 5
<i>XRCC6</i>	NM_001469.4	X-ray repair complementing defective repair in Chinese hamster cells 6
<i>ZNF350</i>	NM_021632.3	Zinc finger protein 350
<i>ZNF365</i>	NM_014951.2	Zinc finger protein 365

<sup>a</sup>Only deletions causing inactivation of *MSH2* were considered. EC, endometrial cancer; N, number.

Table SIII. List of all carriers of pathogenic variant in EC-predisposition genes, including their clinical information.

Gene groups	Gene	Variant	Age at EC diagnosis, years	Histology	Fulfilled LS criteria	Fulfilled HBOC criteria	ClinVar ID
LS	<i>MLH1</i>	c.350C>T, p.(Thr117Met)	46	Endometrioid	Yes	Yes	17094
LS	<i>MLH1</i>	c.677G>A, p.(Arg226Gln)	60	Endometrioid	Yes	No	90318
LS	<i>MLH1</i>	c.790+1G>A, p.(?)	58	Endometrioid	No	No	90356
LS	<i>MLH1</i>	c.1489dup, p.(Arg497ProfsTer6)	55	Endometrioid	Yes	No	89753
LS	<i>MLH1</i>	Deletion of exons 1-13	50	Endometrioid	Yes	No	<sup>a</sup>
LS	<i>MSH2</i>	c.1500dup, p.(Arg501GlnfsTer12)	46	Endometrioid	Yes	Yes	90683
LS	<i>MSH2</i>	c.1720del, p.(Gln574ArgfsTer16)	45	Unknown	Yes	No	90761
LS	<i>MSH2</i>	c.2459-2_2472del, p.(Gly820fs)	51	Unknown	Yes	Yes	2430176
LS	<i>MSH2</i>	Deletion of exons 1-8	29	Endometrioid	Yes	No	<sup>a</sup>
LS	<i>MSH2</i>	Deletion of exons 1-16	32	Endometrioid	Yes	No	<sup>a</sup>
LS	<i>MSH2</i>	Deletion of exons 3	42	Endometrioid	Yes	No	<sup>a</sup>
LS	<i>MSH2</i>	Deletion of exons 5-6	54	Unknown	Yes	No	<sup>a</sup>
LS	<i>MSH6</i>	c.643del, p.(Val215Ter)	67	Endometrioid	No	No	479909
LS	<i>MSH6</i>	c.741dup, p.(Arg248ThrfsTer8)	55	Unknown	Yes	No	410494
LS	<i>MSH6</i>	c.885dup, p.(Val296SerfsTer16)	73	Endometrioid	Yes	No	641585

LS	<i>MSH6</i>	c.964_967del, p.(Ala322ProfsTer15)	62	Endometrioid/clear cell	No	No	2430174
LS	<i>MSH6</i>	c.1444C>T, p.(Arg482Ter)	65	Endometrioid	No	No	89194
LS	<i>MSH6</i>	c.1754T>C, p.(Leu585Pro)	53	Endometrioid/serous	No	No	89220
LS	<i>MSH6</i>	c.1754T>C, p.(Leu585Pro)	43	Endometrioid	Yes	No	89220
LS	<i>MSH6</i>	c.2348_2349del, p.(Cys783Ter)	45	Endometrioid/clear cell	Yes	No	89274
LS	<i>MSH6</i>	c.2677_2678del, p.(Leu893AlafsTer6)	42	Endometrioid	Yes	No	821660
LS	<i>MSH6</i>	c.2759del, p.(Lys920ArgfsTer25)	51	Unknown	Yes	No	428433
LS	<i>MSH6</i>	c.3261del, p.(Phe1088SerfsTer2)	62	Endometrioid	Yes	No	89363
LS	<i>MSH6</i>	c.3261dup, p.(Phe1088LeufsTer5)	49	Endometrioid	Yes	Yes	89364
LS	<i>MSH6</i>	c.3995T>G, p.(Leu1332Ter)	60	Endometrioid	Yes	No	2430173
LS/HBOC	<i>MLH1/BRC A1</i>	c.1483dup, p.(His495ProfsTer29)/c.5266dup, p.(Gln1756ProfsTer74)	48	Endometrioid	Yes	Yes	2430175/17677
LS/HBOC	<i>MSH2/ATM</i>	c.1676del, p.(Leu559Ter)/c.8147T>C p.(Val2716Ala)	53	Unknown	Yes	No	90743/142700
HBOC	<i>ATM</i>	c.601C>T, p.(Gln201Ter)	78	Endometrioid	No	No	265611
HBOC	<i>ATM</i>	c.2921+1G>A, p.(?)	55	Endometrioid	No	No	141182
HBOC	<i>ATM</i>	c.3250C>T, p.(Gln1084Ter)	63	papillary serous	Yes	Yes	665551
HBOC	<i>ATM</i>	Deletion of exons 35-44	70	Unknown	No	No	<sup>a</sup>

HBOC	<i>BARD1</i>	c.1690C>T, p.(Gln564Ter)	28	Endometrioid	Yes	Yes	127720
HBOC	<i>BRCA1</i>	c.68_69del, p.(Glu23ValfsTer17)	N.A.	Endometrioid	Yes	No	17662
HBOC	<i>BRCA1</i>	c.1687C>T, p.(Gln563Ter)	80	EIN	No	No	37426
HBOC	<i>BRCA1</i>	c.2411_2412del, p.(Gln804LeufsTer5)	53	EIN	Yes	Yes	37466
HBOC	<i>BRCA1</i>	c.5095C>T, p.(Arg1699Trp)	69	Endometrioid	Yes	Yes	55396
HBOC	<i>BRCA1</i>	c.5510G>A, p.(Trp1837Ter)	N.A.	Unknown	Yes	No	55608
HBOC	<i>BRCA1</i>	c.5266dup, p.(Gln1756ProfsTer74)	61	Unknown	Yes	Yes	17677
HBOC	<i>BRCA1</i>	c.5266dup, p.(Gln1756ProfsTer74)	68	Leiomyosarcoma	No	Yes	17677
HBOC	<i>BRCA1</i>	c.5266dup, p.(Gln1756ProfsTer74)	N.A.	Unknown	Yes	Yes	17677
HBOC	<i>BRCA1</i>	c.5266dup, p.(Gln1756ProfsTer74)	41	Papillary serous	Yes	Yes	17677
HBOC	<i>BRCA1</i>	Deletion of exons 1-17	57	Endometrioid	No	Yes	<sup>a</sup>
HBOC	<i>BRCA2</i>	c.658_659del, p.(Val220IlefsTer4)	N.A.	Unknown	No	No	9342
HBOC	<i>BRCA2</i>	c.2808_2811del, p.(Ala938ProfsTer21)	41	Unknown	Yes	No	9322
HBOC	<i>BRCA2</i>	c.5213_5216del, p.(Thr1738IlefsTer2)	50	Endometrioid	No	No	37951
HBOC	<i>BRCA2</i>	c.5946del, p.(Ser1982ArgfsTer22)	55	Endometrioid	No	No	9325
HBOC	<i>BRCA2</i>	c.6275_6276del, p.(Leu2092ProfsTer7)	57	Endometrioid	No	Yes	9318
HBOC	<i>BRCA2</i>	c.6591_6592del, p.(Glu2198AsnfsTer4)	62	Unknown	No	No	9319
HBOC	<i>BRCA2</i>	c.7878G>C, p.(Trp2626Cys)	63	Leiomyosarcoma	No	No	38125
HBOC	<i>BRIP1</i>	c.2038_2039dup, p.(Leu680PhefsTer9)	71	Leiomyosarcoma	No	No	128166
HBOC	<i>CHEK2</i>	c.444+1G>A, p.(Gln149IlefsTer6)	62	Endometrioid	No	No	128075
HBOC	<i>CHEK2</i>	c.444+1G>A, p.Gln149IlefsTer6	37	Unknown	Yes	Yes	128075

HBOC	<i>CHEK2</i>	c.846+4_846+7del, p.Asp265_His282del	64	Endometrioid	No	No	216652
HBOC	<i>CHEK2</i>	c.846+4_846+7del, p.Asp265_His282del	65	Unknown	Yes	No	216652
HBOC	<i>CHEK2</i>	c.846+4_846+7del, p.Asp265_His282del	44	Endometrioid	Yes	No	216652
HBOC	<i>CHEK2</i>	c.894T>G, p.(Tyr298Ter)	61	Unknown	Yes	No	232048
HBOC	<i>PALB2</i>	c.761C>G, p.(Ser254Ter)	53	Leiomyosarcoma	Yes	No	632930
HBOC	<i>PTEN</i>	c.170T>G, p.(Leu57Trp)	57	Unknown	Yes	No	185713
HBOC	<i>RAD51C</i>	c.502A>T, p.(Arg168Ter)	62	Endometrioid	Yes	Yes	141095
HBOC	<i>RAD51C</i>	c.1026+5_1026+7del	34	Unknown	Yes	Yes	128201

<sup>a</sup>Copy number variations were not submitted to ClinVar because the exact nucleotide coordinates of the breakpoints required for the ClinVar submission were not determined. EC, endometrial cancer; EIN, endometrial intraepithelial neoplasia; HBOC, hereditary breast and ovarian cancer; LS, Lynch syndrome; N.A., not available.

Table SIV. Frequencies of germline PV in 207 candidate genes.

Germline PV	Indication for germline genetic testing				All EC-predisposition gene-negative patients, n (%) (N=467)	EC-predisposition gene-negative PMC, n (%) (N=1616)	All patients with EC vs. PMC	
	LS, n (%) (N=126)	HBOC, n (%) (N=13)	LS + HBOC, n (%) (N=67)	Non-indicated, n (%) (N=261)			OR (95% CI)	P-value
ATRIP <sup>a</sup>	0	0	1 <sup>a</sup> (1.5)	1 (0.4)	2 <sup>a</sup> (0.4)	3 (0.2)	2.3 (0.4-13.9)	0.3
CASP8	0	0	1 (1.5)	0	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
CWF19L2	0	0	0	0	0	2 (0.1)	N.A.	
DMBT1 <sup>b,c</sup>	0	1 <sup>b</sup> (7.7)	1 <sup>c</sup> (1.5)	1 (0.4)	3 <sup>b,c</sup> (0.6)	1 (0.1)	9.5 (1-91.5)	0.1
EMSY	0	0	0	1 (0.4)	1 (0.2)	0	N.A.	
EPHX1	1 (0.8)	0	0	0	1 (0.2)	2 (0.1)	1.6 (0.1-17.4)	0.7
ERCC3 <sup>d,e</sup>	0	0	1 <sup>d</sup> (1.5)	1 <sup>e</sup> (0.4)	2 <sup>d,e</sup> (0.4)	7 (0.4)	1 (0.2-4.7)	>0.9
ERCC4 <sup>f</sup>	0	0	1 <sup>f</sup> (1.5)	0	1 <sup>f</sup> (0.2)	2 (0.1)	1.6 (0.1-17.4)	0.7
ERCC5	0	0	0	1 (0.4)	1 (0.2)	0	N.A.	
ERCC6 <sup>e</sup>	0	0	1 (1.5)	2 <sup>e</sup> (0.8)	3 <sup>e</sup> (0.6)	0	N.A.	
EXO1	2 (1.6)	0	1 (1.5)	0	3 (0.6)	2 (0.1)	4.8 (0.8-28.5)	0.1
FAN1	1 (0.8)	0	0	1 (0.4)	2 (0.4)	3 (0.2)	2.3 (0.4-13.9)	0.3
FANCA	2 (1.6)	0	0	2 (0.8)	4 (0.9)	10 (0.6)	1.3 (0.4-4)	0.7
FANCD2	1 (0.8)	0	0	0	1 (0.2)	0	N.A.	
FANCE	1 (0.8)	0	0	0	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
FANCG	0	0	0	1 (0.4)	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4

FANCI	1 (0.8)	0	0	0	1 (0.2)	7 (0.4)	0.5 (0.1-3.7)	0.7
FANCL <sup>g</sup>	0	0	1 <sup>g</sup> (1.5)	0	1 <sup>g</sup> (0.2)	0	N.A.	
FANCM	1 (0.8)	0	0	1 (0.4)	2 (0.4)	3 (0.2)	2.3 (0.4-13.9)	0.3
KCNJ5	0	0	0	1 (0.4)	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
LIG3	0	0	1 (1.5)	1 (0.4)	2 (0.4)	4 (0.2)	1.6 (0.3-8.6)	0.6
LRIG1	0	0	0	1 (0.4)	1 (0.2)	0	N.A.	
MCPH1	0	0	0	2 (0.8)	2 (0.4)	7 (0.4)	1 (0.2-4.7)	>0.9
MEN1	1 (0.8)	0	0	0	1 (0.2)	0	N.A.	
MLH3	0	0	0	1 (0.4)	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
MRE11A	0	0	0	1 (0.4)	1 (0.2)	0	N.A.	
MUTYH <sup>d</sup>	0	0	2 <sup>d</sup> (3)	3 (1.1)	5 <sup>d</sup> (1.1)	18 (1.1)	0.9 (0.3-2.4)	0.8
NBN <sup>h</sup>	2 <sup>h</sup> (1.6)	0	0	0	2 <sup>h</sup> (0.4)	7 (0.4)	1.0 (0.2-4.7)	>0.9
PIK3CG	0	0	0	0	0	0	N.A.	
POLD1 <sup>g</sup>	0	0	1 <sup>g</sup> (1.5)	0	1 <sup>g</sup> (0.2)	0	N.A.	
POLE	0	0	1 (1.5)	1 (0.4)	2 (0.4)	1 (0.1)	6.3 (0.6-69.8)	0.1
PREX2	0	0	0	0	0	1 (0.1)	N.A.	
PRF1 <sup>a</sup>	0	0	1 <sup>a</sup> (1.5)	0	1 <sup>a</sup> (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
RAD1	0	0	1 (1.5)	0	1 (0.2)	0	N.A.	
RAD17 <sup>b,c</sup>	0	1 <sup>b</sup> (7.7)	1 <sup>c</sup> (1.5)	0	2 <sup>b,c</sup> (0.4)	2 (0.1)	3.2 (0.4-22.5)	0.2
RAD50	0	0	0	0	0	8 (0.5)	N.A.	
RAD51B	0	0	0	1 (0.4)	1 (0.2)	0	N.A.	

RAD54L <sup>f</sup>	0	0	1 <sup>f</sup> (1.5)	0	1 <sup>f</sup> (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
RBBP8	0	0	0	1 (0.4)	1 (0.2)	0	N.A.	
RCF4 <sup>h</sup>	1 <sup>h</sup> (0.8)	0	0	0	1 <sup>h</sup> (0.2)	2 (0.1)	1.6 (0.1-17.4)	0.7
RECQL	0	1 (7.7)	0	0	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
RECQL4	0	0	1 (1.5)	0	1 (0.2)	8 (0.5)	1.1 (0.2-5.2)	>0.9
RECQL5	0	0	0	0	0	6 (0.4)	N.A.	
RNF168	1 (0.8)	0	0	0	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
SBDS	0	0	0	1 (0.4)	1 (0.2)	21 (1.3)	0.3 (0.1-1.3)	0.1
SETX	0	0	0	1 (0.4)	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
SLX4	0	0	0	1 (0.4)	1 (0.2)	1 (0.1)	3.2 (0.2-50.5)	0.4
XRCC4	0	0	1 (1.5)	1 (0.4)	2 (0.4)	1 (0.1)	6.3 (0.6-69.8)	0.1
All PV	15	3	19	29	66	139		
All carriers	14 <sup>h</sup> (11.1)	2 <sup>b</sup> (15.4)	14 <sup>a,c,d,f,g</sup> (20.9)	28 <sup>e</sup> (10.7)	58 <sup>a-h</sup> (12.4)	139 (8.6)		

Pathogenic variants in two candidate cancer susceptibility genes: <sup>a</sup>ATRIP/PRF1, <sup>b</sup>DMBT1/RAD17, <sup>c</sup>DMBT1/RAD17, <sup>d</sup>ERCC3/MUTYH, <sup>e</sup>ERCC3/ERCC6, <sup>f</sup>ERCC4/RAD54L, <sup>g</sup>FANCL/POLD1, <sup>h</sup>NBN/RCF4. Frequencies of germline PV found in a subgroup of patients fulfilling criteria for germline genetic testing for LS, HBOC, LS and HBOC, individuals not fulfilling any criteria (non-indicated), an aggregated group of all patients with EC, and a group of PMC. CI, confidence interval; EC, endometrial cancer; HBOC, hereditary breast and ovarian cancer; LS, Lynch syndrome; N, number; N.A., not available; OR, odds ratio; PMC, population-matched controls; PV, pathogenic variant.