



Mutational Spectrum in a Worldwide Study of 29,700 Families with BRCA1 or BRCA2 Mutations

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Complete List of Authors:	<p>Rebbeck, Timothy; Dana Farber Cancer Institute, Friebel, Tara; Dana Farber Cancer Institute Friedman, Eitan; Chaim Sheba Medical Center, The Suzanne Levy Gertner Oncogenetics Unit Hamann, Ute; <none>, Huo, Dezheng; Univeristy of Chicago Kwong, Ava; Stanford University School of Medicine, Department of Surgery; The University of Hong Kong Li Ka Shing School of Medicine, Division of Breast Surgery, Department of Surgery Olah, Edith; National Institute of Oncology, Molecular Genetics Olopade, Olufunmilayo; <none> Solano, Angela; Centro de Estudios Médicos e Investigaciones Clínicas, Laboratorio de Genotipificación y Cáncer Hereditario. Departamento de Análisis Clínicos Teo, Soo-Hwang; Subang Jaya Medical Centre Thomassen, Mads; Odense University Hospital, Department of Clinical Genetics Weitzel, Jeffrey; City of Hope National Medical Center, Clinical Cancer Genetics Chan, TL; Hong Kong Sanatorium and Hospital, Department of Pathology Couch, Fergus; Mayo Clinic, Department of Laboratory Medicine and Pathology and Department of Health Sciences Research; Goldgar, David; University of Utah School of Medicine, Room 4B454, Department of Dermatology; Kruse, Torben; Odense Universitetshospital, Department of Clinical Genetics Palmero, Edenir; Barretos Cancer Hospital, Molecular Oncology Research Center Park, Sue K.; Seoul National University College of Medicine, Department of preventive medicine Torres, Diana; Deutsches Krebsforschungszentrum, Molcular Genetics of Breast Cancer van Rensburg, Elizabeth; University of Pretoria, Genetics McGuffog, Lesley ; Centre for Cancer Genetic Epidemiology, Department of Public Health and Primary Care, University of Cambridge Parsons, Michael; Queensland Institute of Medical Research, Cancer Biology Leslie, Goska; University of Cambridge Department of Public Health and Primary Care, Center for Cancer Genetic Epidemiology</p>

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	<p>Aalfs, Cora M.; <none>, Abugattas, Julio; City of Hope National Medical Center Adlard, Julian; Chapel Allerton Hospital, Yorkshire Regional Genetics Service Agata, Simona; Veneto Institute of Oncology, Immunology and Molecular Oncology Unit Aittomäki, Kristiina; Department of Clinical Genetics, Helsinki University Hospital, University of Helsinki Andrews, Lesley; Prince of Wales Hospital and Community Health Services, Hereditary Cancer Clinic Andrulis, Irene; Lunenfeld-Tanenbaum Research Institute Arason, Adalgeir; Landspítali University Hospital Arnold, Norbert; <none>, Arun, Banu; Howard Hughes Medical Institute - University of Texas MD Anderson Cancer Center, Department of Breast Medical Oncology and Clinical Cancer Genetics Program Asseryanis, Ella; Medical University of Vienna , Department of OB/GYN and Comprehensive Cancer Center Auerbach, Leo; Medical University of Vienna , Department of OB/GYN and Comprehensive Cancer Center Azzollini, Jacopo; Fondazione IRCCS (Istituto Di Ricovero e Cura a Carattere Scientifico) Istituto Nazionale Tumori (INT), Department of Preventive and Predictive Medicine Balmaña, Judith; University Hospital Vall Hebron, Medical Oncology Department Barile, Monica; Istituto Europeo di Oncologia, Division of Cancer Prevention and Genetics Barkardotti, Rosa; Landspítali University Hospital Barrowdale, Daniel; University of Cambridge Strangeways Research Laboratory, Department of Public Health and Primary Care Benitez, Javier; Centro Nacional de Investigaciones Oncologicas, Human Genetics Group berger, andreas; Medical University of Vienna, Department of OB/GYN Berger, Raanan ; Sheba Cancer Center and Institute of Oncology Blanco, Amie; UCSF Cancer Genetics and Prevention Program Blazer, Kathleen; City of Hope, Clinical Cancer Genetics Blok, Marinus; Maastricht University Medical Center (MUMC+), Clinical Genetics; Maastricht University Medical Center (MUMC+), School for Oncology & Developmental Biology (GROW) Bonadona, Valerie; Centre Leon Berard, Unité de Prévention et d'Epidémiologie Génétique Bonanni, Bernardo; Istituto Europeo di Oncologia, Bradbury, Angela; University of Pennsylvania Perelman School of Medicine Brewer, Carole; Royal Devon and Exeter Hospital, Department of Clinical Genetics Buecher, Bruno; Institut Curie - Site Paris, Service de génétique Buys, Sandra; Huntsman Cancer Institute, Department of Medicine Caldes, Trinidad; Hospital Clinico San Carlos. IdISCC, Caliebe, Almuth; Christian-Albrechts University Kiel, Institute of Human Genetics Caligo, Adelaide Maria; Università di Pisa, Dipartimento di Medicina di Laboratorio Campbell, Ian; Peter MacCallum Cancer Centre, Research Division CAPUTO, Sandrine; Institut Curie - Site Paris, Service de génétique Chiquette, Jocelyne; Hopital du Saint-Sacrement Chung, Wendy; Columbia University, pediatrics Claes, Kathleen; Ghent University Hospital, Center for Medical Genetics Collee, J; Erasmus University Medical Center, Department of Clinical Genetics Cook, Jackie; Sheffield Children's Hospital Davidson, Rosemarie; Queen Elizabeth University Hospital</p>
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1
2
3
4 de la Hoya, Miguel; Hospital Clínico San Carlos, Laboratorio de Oncología
5 Molecular;
6 De Leeneer, Kim; Ghent University Hospital, Center for Medical Genetics
7 de Pauw, Antoine; Institut Curie, Service de Genetique
8 Delnatte, Capucine; ICO-Centre Rene Gauducheau
9 Diez, Orland; Vall d'Hebron University Hospital, Oncogenetics Group
10 Ding, Yuan; Beckman Research Institute
11 Ditsch, Nina; Ludwig Maximilians Universität, Department for Obstetrics
12 and Gynaecology
13 Domchek, Susan; University of Pennsylvania Perelman School of Medicine,
14 Department of Medicine
15 Dorfling, Cecilia; University of Pretoria, Cancer Genetics Laboratory
16 durán, Mercedes; IBGM, ;
17 Dworniczak, Bernd; University of Munster
18 Eason, Jacqueline; Nottingham University Hospitals NHS Trust
19 Easton, Douglas; University of Cambridge, CR-UK Genetic Epidemiology
20 Unit;
21 Eeles, Ros; Royal Marsden NHS Foundation Trust, The Institute of Cancer
22 Research
23 Ehrencrona, Hans; Lund University, Department of Clinical Genetics
24 Ejlersen, Bent; Copenhagen University Hospital, Department of Oncology
25 EMBRACE, Study; Centre for Cancer Genetic Epidemiology, Department of
26 Public Health and Primary Care, University of Cambridge
27 Engel, Christoph; University of Leipzig, Institute for Medical Informatics
28 Engert, Stefanie; Technical University Munich, Department of Gynaecology
29 and Obstetrics, Division of Tumor Genetics
30 Evans, Gareth ; The University of Manchester, Genetic Medicine
31 Faivre, Laurence; Dijon Hospital, medical Genetics;
32 Feliubadaló, Lúcia; Catalan Institute of Oncology (ICO-IDIBELL), Hereditary
33 Cancer Program, Genetic Diagnosis Unit
34 Fert Ferrer, Sandra; Hotel Dieu Centre Hospitalier, Laboratoire de
35 Genetique Chromosomique
36 Foretova, Lenka; <none>,
37 Fowler, Jeffrey; Ohio State University, Columbus Cancer Council
38 Frost, Debra; University of Cambridge Strangeways Research Laboratory,
39 Department of Public Health and Primary Care
40 Galvao, Henrique; Hospital de Cancer de Barretos
41 Ganz, Patricia; University of California Los Angeles Jonsson Comprehensive
42 Cancer Center
43 Garber, Judy E; Dana-Farber Cancer Institute, Boston
44 Gauthier-Villars, Marion; Institut Curie
45 Gehrig, Andrea; Institute of Human Genetics University Wurzburg,
46 Department of Medical Genetics
47 Stoppa-Lyonnet, Dominique; Institut Curie, Département de Biopathologie
48 Gerdes, Anne-Marie; Rigshospitalet, Department of Clinical Genetics
49 Gesta, Paul; CHR Georges Renon, Service d'oncologie
50 Giannini, Giuseppe; University La Sapienza, Dept. Experimental medicine
51 and Pathology
52 Giraud, Sophie ; Centre Leon Berard
53 Glendon, Gord; Lunenfeld-Tanenbaum Research Institute
54 Godwin, Andrew; Fox Chase Cancer Center, ; University of Kansas Medical
55 Center, Department of Pathology and Laboratory Medicine
56 Greene, Mark; US National Cancer Institute, DCEG, Clinical Genetics
57 Branch
58 Gronwald, Jacek; Pomeranian Medical University, Department of Genetics
59 and Pathology
60 Gutierrez-Barrera, Angelica; University of Texas MD Anderson Cancer
Center
Hahnen, Eric; University Hospital Cologne, Center for Hereditary Breast
and Ovarian Cancer and Center for Integrated Oncology 35 (CIO), Medical
Faculty

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	<p>Hauke , Jan; Center for Hereditary Breast and Ovarian Cancer, University Hospital of Cologne Study, HEBON; Nederlands Kanker Instituut - Antoni van Leeuwenhoek Ziekenhuis Henderson, Alex; International Centre for Life, Institute of Genetic Medicine Hentschel, Julia; University of Leipzig, Institute of Human Genetics Hogervorst, Frans; the Netherlands Cancer Institute, DNA diagnostic laboratory of the Family Cancer Clinic; Honisch, Ellen; Universitätsklinikum Dusseldorf, Department of Gynaecology and Obstetrics Imyanitov, Evgeny; N.N. Petrov Institute of Oncology, Molecular Diagnostics Isaacs, Claudine; Georgetown Lombardi Comprehensive Cancer Center Izatt, Louise; Guy's and St Thomas' NHS Foundation Trust, Clinical Genetics Department Izquierdo, Angel; Institut Catala d' Oncologia, Genetic Counseling Unit, Hereditary Cancer Program, IDIBGI (Institut d'Investigació Biomèdica de Girona) Jakubowska, Anna; Pomeranian Medical University, Department of Genetics and Pathology James, Paul; Peter MacCallum Cancer Centre, Familial Cancer Centre Janavičius, Ramūnas; Vilnius University Hospital Santariskiu Clinics, Hematology, oncology and transfusion medicine center; Birk Jensen, Uffe; Arhus Universitetshospital, Klinisk Genetisk Afdeling John, Esther; Cancer Prevention Institute of California, ; Stanford University School of Medicine , Joseph, Vijai; Memorial Sloan-Kettering Cancer Center, Medicine; Kaczmarek, Katarzyna; Pomeranian Medical University, Department of Genetics and Pathology Karlán, Beth; Cedars-Sinai Medical Center Samuel Oschin Comprehensive Cancer Institute Kast, Karin; University of Dresden, Obstetrics and Gynaecology Investigators, kConFab; Peter MacCallum Cancer Centre, Kim, Sung-Won; Seoul National University Bundang Hospital, Department of Surgery Konstantopoulou, Irene; National Centre for Scientific Research- Demokritos, Molecular Diagnostics Laboratory, INRASTES (Institute of Nuclear and Radiological Sciences and Technology) Korach, Jacob; Chaim Sheba Medical Center, The Gyneco-Oncology Department Laitman, Yael; Chaim Sheba Medical Center , The Susanne Levy Gertner Oncogenetics Unit, Institute of Human Genetics Lasa, Adriana; Hospital de la Santa Creu i Sant Pau., Lasset, Christine; Center Leon Berard, Unité de Prévention et d'Epidémiologie Génétique Lázaro, Conxi; Catalan Institute of Oncology (ICO), Translational Research Laboratory; Lee, Annette; The Feinstein Institute for Medical Research Lee, Min Hyuk; Soonchunhynag University Hospital, Department of Surgery Lester, Jenny; Cedars-Sinai Medical Center Samuel Oschin Comprehensive Cancer Institute Lesueur, Fabienne; INSERM, U900, Mines ParisTech, Institut Curie Liljegren, Annelie; Karolinska Universitetssjukhuset, Department of Oncology Lindor, Noralane; Mayo Clinic , Department of Health Sciences Research Longy, Michel; Institut Bergonie, Molecular Genetics Laboratory Loud, Jennifer; NCI, NIH, Clinical Genetics Branch, DCEG Lu, Karen ; University of Texas MD Anderson Cancer Center, Department of Gynecological Oncology and Clinical Cancer Genetics Program Lubinski, Jan; Pomeranian Medical University, Department of Genetics and</p>
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1	
2	
3	
4	Pathology
5	Machackova, Eva; cancer institute, cancer epidemiology and genetics
6	Manoukian, Siranoush; Fondazione IRCCS (Istituto Di Ricovero e Cura a
7	Carattere Scientifico) Istituto Nazionale Tumori (INT), Department of
8	Preventive and Predictive Medicine
9	Mari, Veronique; Centre Antoine-Lacassagne
10	Martinez-Bouzas, Cristina; BioCruces Health Research Institute
11	Matrai, Zoltan; National Institute of Oncology , Department of Surgery
12	Mebirouk, Noura; Institut Curie, Mines Paris Tech, PSL University, Genetic
13	Epidemiology of Cancer team
14	Meijers, Hanne; VU medical centre,
15	Meindl, Alfons; Technical University, Muenich, Department of Gynaecology
16	and Obstetrics
17	Mensenkamp, Arjen; Radboud university medical center,
18	Mickys, Ugnius; National Center of Pathology,
19	Miller, Austin; Roswell Park Cancer Insitut, Statistics and Data
20	Management Center
21	Montagna, Marco; Veneto Institute of Oncology IOV - IRCCS
22	Moysich, Kirsten; Roswell Park Cancer Institute, Department of Cancer
23	Prevention and Control
24	Mulligan, Anna Marie; University of Toronto, Department of Laboratory
25	Medicine and Pathobiology
26	Musinsky, Jacob; Memorial Sloan-Kettering Cancer Center , Clinical
27	Genetics Research Laboratory
28	Neuhausen, Susan; Beckman Research Institute of the City of Hope,
29	Department of Population Sciences
30	Nevanlinna, Heli; <none> ,
31	Ngeow, Joanne; National Cancer Centre Signapore, Cancer Genetics
32	Service
33	Nguyen, Huu; University of Teubingen, Institute of Medical Genetics and
34	Applied Genomics
35	Niederacher, Dieter; Universitätsklinikum Dusseldorf, Department of
36	Gynaecology and Obstetrics
37	Nielsen, Henriette; Odense Universitetshospital, Department of Human
38	Genetics
39	Nielsen, Finn; Rigshospitalet, Center for Genomic Medicine
40	Nussbaum, Robert; UCSF
41	Offit, Kenneth; <none>
42	Ofverholm, Anna; Sahlgrenska universitetssjukhuset, Department of
43	Clinical Genetics
44	Ong, Kai-ren; Birmingham Women's Hospital Healthcare NHS Trust, West
45	Midlands Regional Genetics Service
46	Osorio, Ana; Centro Nacional Investigaciones Oncologicas,
47	Papi, Laura; University of Florence, Department of Biomedical Experimental
48	and Clinical Sciences
49	Papp, Janos; National Institute of Oncology, Molecular Genetics
50	Pasini, Barbara; University of Turin, Department of Genetics, Biology and
51	Biochemistry
52	Pedersen, Inge; Aalborg Univeristy Hospital, Section of Moleular
53	Diagnostics, Department of Biochemistry
54	Peixoto, Ana; Portuguese Oncology Institute , Department of Genetics
55	Peruga, Nina; Pomeranian Medical University , Department of Genetics and
56	Pathology
57	Peterlongo, Paolo; Fondazione IRCCS Istituto Nazionale Tumori (INT),
58	Department of Preventive and Predictive Medicine, Unit of Molecular Bases
59	of Genetic Risk and Genetic Testing; Fondazione Istituto FIRC di Oncologia
60	Molecolare (IFOM)
	Pohl, Esther ; University Hospital of Cologne, Centre of Familial Breast and
	Ovarian Cancer, Department of Gynaecology and Obstetrics and Centre for
	Integrated Oncology (CIO), Center for Molecular Medicine Cologne (CMMC)
	Pradhan, Nisha; Memorial Sloan-Kettering Cancer Center, Clinical Genetics

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	<p>Research Laboratory, Department of Medicine Prajzendanc, Karolina; Pomeranian Medical University, Department of Genetics and Pathology Prieur, Fabienne; Hôpital Nord, Service de Génétique Clinique Chromosomique et Moléculaire Jean-Marc, Rey; Hôpital Arnaud de Villeneuve, Laboratoire de Biologie Cellulaire et Hormonale Radice, Paolo; Istituto Nazionale Tumori, Ramus, Susan ; School of Women's and Children's Health, UNSW Sydney; Kinghorn Cancer Center , Garvin Institute of Medical Research Rantala, Johanna; Karolinska Universitetssjukhuset, Department of Clinical Genetics Rashid, Muhammad; Deutsches Krebsforschungszentrum, Molecular Genetics of Breast Cancer Rhiem, Kerstin; University Hospital of Cologne, Centre of Familial Breast and Ovarian Cancer, Department of Gynaecology and Obstetrics and Centre for Integrated Oncology (CIO), Center for Molecular Medicine Cologne (CMMC) Robson, Mark; Memorial Sloan Kettering Cancer Center, Medicine Rodriguez, Gustavo; NorthShore University HealthSystem, Division of Gynecologic Oncology Rogers, Mark; University Hospital of Wales, All Wales Medical Genetics Services Rudaitis, Vilius; Vilnius University Hospital Santariskiu Clinics, Department of Gynecology, Centre of Women's Physiology and Pathology Schmidt, Ane; Center for Genomic Medicine, Rigshospitalet, University of Copenhagen Schmutzler, Rita; University Hospital of Cologne, Department of Gynaecology and Obstetrics Senter, Leigha; The Ohio State University, Clinical Cancer Genetics Program, Division of Human Genetics, Department of Internal Medicine, The Comprehensive Cancer Center, Shah, Payal; University of Pennsylvania Perelman School of Medicine, Department of Medicine Sharma, Priyanka; University of Kansas Medical Center, Department of Hematology and Oncology Side, Lucy ; North East Thames Regional Genetics Service, Great Ormond Street Hospital for Children NHS Trust Simard, Jacques; Cancer Genomics Laboratory, Anatomy and Physiology Singer, Christian; medical university of vienna, Skytte, Anne-Bine; Aarhus University Hospital , Department of Clinical Genetics Slavin, Thomas; City of Hope, Clinical Cancer Genetics Snape, Katie; St George's, University of London, Medical Genetics Unit Sobol, Hagay; Institut Paoli-Calmettes, Cancer Genetics; Aix-Marseille Universite Faculte de Medecine, Southey, Melissa; The University of Melbourne, Pathology Steele, Linda; Beckman Research Institute, Clinical Cancer Genetics Steinemann, Doris; Hannover Medical School , Institute of Cell and Molecular Patology Sukiennicki, Grzegorz; Pomeranian Medical School , Department of Genetics and Pathology Sutter, Christian; Institute of Human Genetics, University of Heidelberg Szabo, Csilla; National Institutes of Health , National Human Genome Research Institute Tan, Yen Yen; Medical University of Vienna , Department of OB/GYN Teixeira, Manuel; Portuguese Oncology Institute-Porto, Dept. Genetics Terry, Mary Beth; Columbia University , Department of Epidemiology Teulé, Alex; Institut Català d'Oncologia-IDIBELL, Programa de Consell Genètic en Càncer Thomas, Abigail; Mayo Clinic , Department of Health Sciences Research</p>
--	---

	<p>Thull, Darcy; Magee-Womens Hospital of UPMC, Department of Medicine Tischkowitz, Marc; McGill University, Departments of Human Genetics and Oncology; Jewish General Hospital, Segal Cancer Centre Tognazzo, Silvia; Veneto Institute of Oncology IOV-IRCCS, Immunology and Molecular Oncology Unit Toland, Amanda; The Ohio State University, Department of Molecular Virology, Immunology and Medical Genetics, Division of Human Cancer Genetics; Department of Internal Medicine, Division of Human Genetics, OSU Comprehensive Cancer Center Topka, Sabine; Memorial Sloan-Kettering Cancer Center , Clinical Genetics Research Laboratory Trainer, Alison; Parkville Familial Cancer Centre, Royal Melbourne Hospital Tung, Nadine; Beth Israel Deaconess Medical Center, Department of Medical Oncology van Asperen, Christi; Leiden University Medical Center, Clinical Genetics van der Hout, Annemieke; University of Groningen, University Medical Center Groningen, Department of Genetics van der Kolk, Lizet; NKI, van der Luijt, Rob; UMC Utrecht, Medical Genetics Van Heetvelde, Mattias; Ghent University Hospital, Center for Medical Genetics Varesco, Liliana; IRCCS AOU San Martino-IST, Unit of Hereditary Cancer Varon, Raymonda; Charité University Medical Center, Institute of Human Genetics; Vega, Ana; Fundación Pública Galega Medicina Xenómica, Villarreal-Garza, Cynthia; Instituto Nacional de Cancerología, Departamento de Investigación y de Tumores Mamaros; Centro de Cáncer de Mama del Hospital Zambrano Hellion, Tecnológico de Monterrey von Wachenfeldt, Anna; Karolinska Universitetssjukhuset, Department of Oncology Walker, Lisa; Oxford Regional Genetics Service, Churchill Hospital Wang-Gohrke, Shan; University Hospital Ulm, Department of Gynaecology and Obstetrics Wappenschmidt, Barbara; University Hospital of Cologne, Department of Gynaecology and Obstetrics Weber, Bernhard H.F.; University of Regensburg, Institute of Human Genetics Yannoukakos, Drakoulis; National Centre for Scientific Research "Demokritos", Molecular Diagnostics Laboratory, (INRASTES) Institute of Nuclear and Radiological Sciences and Technology Yoon, Sook-Yee; Subang Jaya Medical Centre, Cancer Research Initiatives Foundation Zanzottera, Cristina; Fondazione IRCCS (Istituto Di Ricovero e Cura a Carattere Scientifico) Istituto Nazionale Tumori (INT), Unit of Medical Genetics, Department of Preventive and Predictive Medicine Zidan, Jamal; Rivka Ziv Medical Center, Institute of Oncology Zorn, Kristin; Magee-Womens Hospital of UPMC Selkirk, Christina; Northshore Univeristy Health System, Center for Medical Genetics Hulick, Peter; NorthShore Research Institute, Northwestern University Chenevix-Trench, Georgia ; Department of Genetics and Computational Biology, QIMR Berghofer Medical Research Institute Spurdle, Amanda; Queensland Institute of Medical Research, Cancer Biology Antoniou, Antonis; University of Cambridge, Centre for Cancer Genetic Epidemiology, Department of Public Health and Primary Care Nathanson, Katherine; University of Pennsylvania Perelman School of Medicine, Department of Medicine, Abramson Cancer Center</p>
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**Mutational Spectrum in a Worldwide Study of
29,700 Families with *BRCA1* or *BRCA2* Mutations**

Timothy R. Rebbeck PhD¹, Tara M. Friebel MPH¹, Eitan Friedman MD, PhD², Ute Hamann PhD³, Dezheng Huo⁴, Ava Kwong⁵, Edith Olah PhD DSc⁶, Olufunmilayo I. Olopade⁴, Angela R. Solano PhD⁷, Soo-Hwang Teo⁸, Mads Thomassen⁹, Jeffrey N. Weitzel MD¹⁰, TL Chan MBBS¹¹, PhD, FRCS, Fergus J. Couch PhD¹², David E. Goldgar PhD¹³, Torben A. Kruse PhD⁹, Edenir Inêz Palmero PhD¹⁴, Sue Kyung Park MD, PhD¹⁵, Diana Torres PhD^{3,16}, Elizabeth J. van Rensburg PhD¹⁷, Lesley McGuffog¹⁸, Michael T. Parsons¹⁹, Goska Leslie MEng¹⁸, Cora M. Aalfs MD, PhD²⁰, Julio Abugattas MD²¹, Julian Adlard²², Simona Agata PhD²³, Kristiina Aittomäki MD, PhD²⁴, Lesley Andrews MBBS (Hons), MD, FRCAP, ANZGOG²⁵, Irene L. Andrulis²⁶, Adalgeir Arason BSc²⁷, Norbert Arnold PhD²⁸, Banu K. Arun MD²⁹, Ella Asseryanis MD³⁰, Leo Auerbach MD³⁰, Jacopo Azzollini³¹, Judith Balmaña MD, PhD³², Monica Barile³³, Rosa B. Barkardottir CandSci³⁴, Daniel Barrowdale BSc¹⁸, Javier Benitez PhD³⁵, Andreas Berger MD³⁶, Raanan Berger MD, PhD³⁷, Amie M. Blanco MS³⁸, Kathleen R. Blazer EdD¹⁰, MS, Marinus J. Blok³⁹, Valérie Bonadona⁴⁰, Bernardo Bonanni³³, Angela R. Bradbury⁴¹, Carole Brewer⁴², Bruno Buecher MD⁴³, Sandra S. Buys MD⁴⁴, Trinidad Caldes MD, PhD⁴⁵, Almuth Caliebe MD⁴⁶, Maria A. Caligo⁴⁷, Ian Campbell PhD⁴⁸, Sandrine Caputo PhD⁴³, Jocelyne Chiquette MD⁴⁹, Wendy K. Chung⁵⁰, Kathleen B.M. Claes⁵¹, J. Margriet Collée MD⁵², Jackie Cook⁵³, Rosemarie Davidson⁵⁴, Miguel de la Hoya PhD⁴⁵, Kim De Leeneer MD, PhD⁵¹, Antoine de Pauw⁴³, Capucine Delnatte MD⁵⁵, Orland Diez PhD⁵⁶, Yuan Chun Ding PhD⁵⁷, Nina Ditsch MD⁵⁸, Susan M. Domchek⁴¹, Cecilia M. Dorfling MSc¹⁷, Mercedes Duran PhD⁵⁹, Bernd Dworniczak MD⁶⁰, Jacqueline Eason⁶¹, Douglas F. Easton PhD¹⁸, Ros Eeles⁶², Hans Ehrencrona⁶³, Bent Ejlersten MD⁶⁴, EMBRACE¹⁸, Christoph Engel MD⁶⁵, Stefanie Engert PhD⁶⁶, D. Gareth Evans⁶⁷, Laurence Faivre⁶⁸, Lidia Feliubadaló⁶⁹, Sandra Fert Ferrer MD⁷⁰, Lenka Foretova⁷¹, Jeffrey Fowler⁷², Debra Frost¹⁸, Henrique C. R. Galvão MD⁷³, Patricia A. Ganz⁷⁴, Judy Garber MD MPH⁷⁵, Marion Gauthier-Villars⁴³, Andrea Gehrig⁷⁶, GEMO Study Collaborators⁷⁷, Anne-Marie Gerdes MD⁷⁸, Paul Gesta MD⁷⁹, Giuseppe Giannini⁸⁰, Sophie Giraud⁸¹, Gord Glendon MSc⁸², Andrew K. Godwin⁸³, Mark H. Greene MD⁸⁴, Jacek Gronwald MD, PhD⁸⁵, Angelica Gutierrez-Barrera MS²⁹, Eric Hahnen PhD⁸⁶, Jan Hauke⁸⁶, HEBON⁸⁷, Alex Henderson⁸⁸, Julia Hentschel PhD⁸⁹, Frans B.L. Hogervorst⁹⁰, Ellen Honisch PhD⁹¹, Evgeny N. Imyanitov⁹², Claudine Isaacs⁹³, Louise Izatt⁹⁴, Angel Izquierdo⁹⁵, Anna Jakubowska PhD⁸⁵, Paul James MBBS, PhD, FRACP, FRANZCR⁹⁶, Ramunas Janavicius MD, PhD⁹⁷, Uffe Birk Jensen⁹⁸, Esther M. John PhD⁹⁹, Vijai Joseph PhD¹⁰⁰, Katarzyna Kaczmarek MSc⁸⁵, Beth Y. Karlan MD¹⁰¹, Karin Kast¹⁰², KConFab Investigators¹⁰³, Sung-Won Kim MD, PhD¹⁰⁴, Irene Konstantopoulou PhD¹⁰⁵, Jacob Korach MD¹⁰⁶, Yael Laitman MSc², Adriana Lasa PhD¹⁰⁷, Christine Lasset⁴⁰, Conxi Lázaro⁶⁹, Annette Lee¹⁰⁸, Min Hyuk Lee MD, PhD¹⁰⁹, Jenny Lester MPH¹⁰¹, Fabienne Lesueur PhD¹¹⁰, Annelie Liljegren¹¹¹, Noralane M. Lindor¹¹², Michel Longy¹¹³, Jennifer T. Loud DNP, CRNP¹¹⁴, Karen H. Lu¹¹⁵, Jan Lubinski MD, PhD⁸⁵, Eva Machackova⁷¹, Siranoush Manoukian³¹, Véronique Mari¹¹⁶, Cristina Martínez-Bouzas PhD¹¹⁷, Zoltan Matrai MD, PhD¹¹⁸, Noura Mebirouk¹¹⁰, Hanne E.J. Meijers-Heijboer PhD¹¹⁹, Alfons Meindl⁶⁶, Arjen R. Mensenkamp¹²⁰, Ugnius Mickys¹²¹, Austin Miller PhD¹²², Marco Montagna PhD²³, Kirsten B. Moysich MS, PhD¹²³, Anna Marie Mulligan¹²⁴, Jacob Musinsky BA¹⁰⁰, Susan L. Neuhausen PhD⁵⁷, Heli Nevanlinna PhD¹²⁵, Joanne Ngeow MBBS, MRCP, MPH¹²⁶, Huu Phuc Nguyen MD¹²⁷, Dieter Niederacher PhD⁹¹, Henriette Roed Nielsen⁹, Finn Cilius Nielsen MD¹²⁸, Robert L. Nussbaum MD¹²⁹, Kenneth Offit MD, MPH¹³⁰, Anna Öfverholm MD¹³¹, Kai-ren Ong¹³², Ana Osorio PhD¹³³, Laura Papi¹³⁴, Janos Papp PhD⁶, Barbara Pasini¹³⁵, Inge Sokilde Pedersen PhD¹³⁶, Ana Peixoto MSc¹³⁷, Nina Peruga MSc⁸⁵, Paolo Peterlongo¹³⁸, Esther Pohl PhD⁸⁶, Nisha Pradhan BA¹⁰⁰, Karolina Prajzandanc MSc⁸⁵, Fabienne Prieur MD¹³⁹, Pascal Pujol MD¹⁴⁰, Paolo Radice¹⁴¹, Susan J. Ramus^{142,143}, Johanna Rantala PhD¹⁴⁴, Muhammad Usman Rashid MBBS^{3,145}, PhD, Kerstin Rhiem⁸⁶, Mark Robson MD¹⁴⁶, Gustavo C. Rodriguez MD¹⁴⁷, Mark T. Rogers¹⁴⁸, Vilius Rudaitis¹⁴⁹, Ane Y. Schmidt¹²⁸, Rita Katharina

Schmutzler MD⁸⁶, Leigha Senter MS¹⁵⁰, Payal D. Shah MD⁴¹, Priyanka Sharma MD¹⁵¹, Lucy E. Side¹⁵², Jacques Simard PhD¹⁵³, Christian F. Singer MD, MPH³⁰, Anne-Bine Skytte MD, PhD⁹⁸, Thomas P. Slaviv MD¹⁰, Katie Snape¹⁵⁴, Hagay Sobol¹⁵⁵, Melissa Southey PhD¹⁵⁵, Linda Steele⁵⁷, Doris Steinemann PhD¹⁵⁷, Grzegorz Sukiennicki⁸⁵, Christian Sutter¹⁵⁸, Csilla I. Szabo¹⁵⁹, Yen Y. Tan PhD³⁶, Manuel R. Teixeira PhD¹³⁷, Mary Beth Terry PhD¹⁶⁰, Alex Teulé MD¹⁶¹, Abigail Thomas MPH¹⁶², Darcy L. Thull MS¹⁶³, Marc Tischkowitz MD, PhD¹⁶⁴, Silvia Tognazzo MSc²³, Amanda Ewart Toland PhD¹⁶⁵, Sabine Topka PhD¹⁰⁰, Alison H Trainer MBBS, PhD, FRACP¹⁶⁶, Nadine Tung MD¹⁶⁷, Christi J. van Asperen¹⁶⁸, Annemieke H. van der Hout¹⁶⁹, Lizet E. van der Kolk MD, PhD¹⁷⁰, Rob B. van der Luijt PhD¹⁷¹, Mattias Van Heetvelde MSc⁵¹, Liliana Varesco¹⁷², Raymonda Varon-Mateeva¹⁷³, Ana Vega¹⁷⁴, Cynthia Villarreal-Garza, MD, PhD¹⁷⁵, Anna von Wachenfeldt MD, PhD¹⁷⁶, Lisa Walker¹⁷⁷, Shan Wang-Gohrke MD¹⁷⁸, Barbara Wappenschmidt⁸⁵, Bernhard H. F. Weber PhD¹⁷⁹, Drakoulis Yannoukakos¹⁰⁵, Sook-Yee Yoon⁸, Cristina Zanzottera³¹, Jamal Zidan MD¹⁸⁰, Kristin K. Zorn MD¹⁸¹, Christina G. Hutten Selkirk¹⁸², Peter J. Hulick MD¹⁸³, Georgia Chenevix-Trench PhD¹⁹, Amanda B. Spurdle¹⁹, Antonis C. Antoniou PhD¹⁸, Katherine L. Nathanson MD⁴¹ for the CIMBA Consortium

¹Harvard TH Chan School of Public Health and Dana Farber Cancer Institute, 1101 Dana Building, 450 Brookline Ave, Boston, MA 02215, USA

²The Susanne Levy Gertner Oncogenetics Unit, Institute of Human Genetics, Chaim Sheba Medical Center, Ramat Gan 52621, and the Sackler School of Medicine, Tel-Aviv University, Tel-Aviv, Israel

³Molecular Genetics of Breast Cancer, German Cancer Research Center (DKFZ), Im Neuenheimer Feld 580, 69120 Heidelberg, Germany

⁴5841 South Maryland Avenue, MC 2115 Chicago, IL, USA

⁵The Hong Kong Hereditary Breast Cancer Family Registry, Cancer Genetics Center, Hong Kong Sanatorium and Hospital, Hong Kong

⁶Department of Molecular Genetics, National Institute of Oncology, Budapest, Hungary

⁷INBIOMED, Faculty of Medicine, University of Buenos Aires/CONICET and CEMIC, Department of Clinical Chemistry, Medical Direction, Buenos Aires, Paraguay 2155, C1121ABG, Argentina

⁸Cancer Research Initiatives Foundation, Sime Darby Medical Centre, 1 Jalan SS12/1A, Subang Jaya, 47500, Malaysia

⁹Department of Clinical Genetics, Odense University Hospital, Sonder Boulevard 29, Odense C, Denmark

¹⁰Clinical Cancer Genetics, City of Hope, 1500 East Duarte Road, Duarte, California 91010 USA

¹¹Division of Molecular Pathology, Department of Pathology, Hong Kong Sanatorium & Hospital, 1/F Li Shu Fan Block, 2 Village Road, Happy Valley, Hong Kong

¹²Department of Laboratory Medicine and Pathology, and Health Sciences Research, Mayo Clinic, 200 First Street SW, Rochester, Minnesota, USA

¹³Department of Dermatology, University of Utah School of Medicine, 30 North 1900 East, SOM 4B454, Salt Lake City, UT 84132, USA

¹⁴Molecular Oncology Research Center, Barretos Cancer Hospital, Barretos, São Paulo, Brazil

¹⁵1) Department of Preventive Medicine, Seoul National University College of Medicine; 2) Department of Biomedical Science, Seoul National University Graduate School; 3) Cancer Research Center, Seoul National University, 103 Daehak-ro, Jongno-gu, Seoul, Korea

¹⁶Institute of Human Genetics, Pontificia Universidad Javeriana, Carrera 7, Bogota, 11001000, Colombia

¹⁷Cancer Genetics Laboratory, Department of Genetics, University of Pretoria, Private Bag X323, Arcadia 0007, South Africa

¹⁸Centre for Cancer Genetic Epidemiology, Department of Public Health and Primary Care, University of Cambridge, Strangeways Research Laboratory, Worts Causeway, Cambridge, UK

¹⁹Genetics and Computational Biology Department, QIMR Berghofer Medical Research Institute, Herston Road, Brisbane, QLD 4006, Australia

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60

²⁰Department of Clinical Genetics, Academic Medical Center, P.O. Box 22700, 1100 DE Amsterdam, The Netherlands

²¹City of Hope Clinical Cancer Genomics Community Research Network, 1500 East Duarte Road, Duarte, CA 91010, USA

²²Yorkshire Regional Genetics Service, Chapel Allerton Hospital, Leeds, UK

²³Immunology and Molecular Oncology Unit, Veneto Institute of Oncology IOV - IRCCS, Via Gattamelata 64, Padua, Italy

²⁴Department of Clinical Genetics, Helsinki University Hospital, P.O. BOX 160 (Meilahdentie 2), 00029 HUS, Finland

²⁵Hereditary Cancer Clinic, Prince of Wales Hospital, High Street, Randwick, NSW 2031 Australia

²⁶Lunenfeld-Tanenbaum Research Institute, Sinai Health System, Toronto, Ontario M5G 1X5, Canada; Department of Molecular Genetics, University of Toronto, Toronto, Ontario

²⁷Department of Pathology, hus 9, Landspítali-LSH v/Hringbraut, 101 Reykjavik, Iceland

²⁸Department of Gynaecology and Obstetrics, University Hospital of Schleswig-Holstein, Campus Kiel, Christian-Albrechts University Kiel, Germany

²⁹Department of Breast Medical Oncology and Clinical Cancer Genetics Program, University Of Texas MD Anderson Cancer Center, 1515 Pressler Street, CBP 5, Houston, TX, USA

³⁰Dept of OB/GYN and Comprehensive Cancer Center, Medical University of Vienna, Vienna, Austria, Waehringer Guertel 18-20, A 1090 Vienna, Austria

³¹Unit of Medical Genetics, Department of Medical Oncology and Hematology, Fondazione IRCCS (Istituto Di Ricovero e Cura a Carattere Scientifico) Istituto Nazionale Tumori (INT), Via Giacomo Venezian 1, 20133 Milan, Italy

³²Department of Medical Oncology. University Hospital, Vall d'Hebron, Barcelona, Spain

³³Division of Cancer Prevention and Genetics, Istituto Europeo di Oncologia (IEO), via Ripamonti 435, 20141 Milan, Italy

³⁴Laboratory of Cell Biology, Department of Pathology, hus 9, Landspítali-LSH v/Hringbraut, 101 Reykjavik, Iceland and BMC (Biomedical Centre), Faculty of Medicine, University of Iceland, Vatnsmyrarvegi 16, 101 Reykjavik, Iceland

³⁵Human Genetics Group and Genotyping Unit (CEGEN), Human Cancer Genetics Programme, Spanish National Cancer Research Centre (CNIO), Madrid, Spain. Biomedical Network on Rare Diseases (CIBERER), Madrid, Spain

³⁶Dept of OB/GYN, Comprehensive Cancer Center, Medical University of Vienna, Vienna, Austria, Waehringer Guertel 18-20, 1090 Vienna, Austria

³⁷The Institute of Oncology, Chaim Sheba Medical Center, Ramat Gan 52621, Israel

³⁸UCSF Cancer Genetics and Prevention Program, San Francisco, CA 94143-1714

³⁹Department of Clinical Genetics, Maastricht University Medical Center, P.O. Box 5800, 6202 AZ Maastricht, The Netherlands

⁴⁰Unité de Prévention et d'Epidémiologie Génétique, Centre Léon Bérard, 28 rue Laënnec, Lyon, France

⁴¹Department of Medicine, Abramson Cancer Center, Perelman School of Medicine at the University of Pennsylvania, 3400 Civic Center Boulevard, Philadelphia, PA 19104, USA

⁴²Department of Clinical Genetics, Royal Devon & Exeter Hospital, Exeter, UK

⁴³Service de Génétique, Institut Curie, 26, rue d'Ulm, Paris Cedex 05, France

⁴⁴Department of Medicine, Huntsman Cancer Institute, 2000 Circle of Hope, Salt Lake City, UT 84112, USA

⁴⁵Molecular Oncology Laboratory, Hospital Clinico San Carlos, IdISSC, CIBERONC. Martin Lagos s/n, Madrid, Spain

⁴⁶Institute of Human Genetics, University Hospital of Schleswig-Holstein, Campus Kiel, Christian-Albrechts University Kiel, Germany

⁴⁷Section of Genetic Oncology, Dept. of Laboratory Medicine, University and University Hospital of Pisa, Pisa, Italy

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57
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- ⁴⁸Research Division, Peter MacCallum Cancer Centre, 305 Gratten Street, Melbourne, VIC 3000, Australia
- ⁴⁹CRCHU de Quebec-oncologie, Centre des maladies du sein Deschênes-Fabia, Hôpital du Saint-Sacrement, 1050, chemin Sainte-Foy, Québec Canada
- ⁵⁰Departments of Pediatrics and Medicine, 1150 St. Nicholas Avenue, Columbia University, New York, NY, 10032 USA
- ⁵¹Center for Medical Genetics, Ghent University, De Pintelaan 185, 9000 Gent, Belgium
- ⁵²Department of Clinical Genetics, Family Cancer Clinic, Erasmus University Medical Center, P.O. Box 2040, 3000 CA Rotterdam, The Netherlands
- ⁵³Sheffield Clinical Genetics Service, Sheffield Children's Hospital, Sheffield, UK
- ⁵⁴Department of Clinical Genetics, South Glasgow University Hospitals, Glasgow, UK
- ⁵⁵Unité d'oncogénétique, ICO-Centre René Gauducheau, Boulevard Jacques Monod, 44805 Nantes Saint Herblain Cedex, France
- ⁵⁶Oncogenetics Group, Vall d'Hebron Institute of Oncology (VHIO), Clinical and Molecular Genetics Area, Vall d'Hebron University Hospital, Passeig Vall d'Hebron 119-129, Barcelona, Spain
- ⁵⁷Department of Population Sciences, Beckman Research Institute of City of Hope, Duarte, CA USA
- ⁵⁸Department of Gynaecology and Obstetrics, Ludwig-Maximilian University Munich, Germany
- ⁵⁹Cáncer Hereditario, Instituto de Biología y Genética Molecular, IBGM, Universidad de Valladolid, Centro Superior de Investigaciones Científicas, UVA-CSIC. Valladolid, Spain
- ⁶⁰Institute of Human Genetics, University of Münster, Münster, Germany
- ⁶¹Nottingham Clinical Genetics Service, Nottingham University Hospitals NHS Trust, Nottingham, UK
- ⁶²Oncogenetics Team, The Institute of Cancer Research and Royal Marsden NHS Foundation Trust, Sutton, UK
- ⁶³Department of Clinical Genetics, Lund University Hospital, Lund, Sweden
- ⁶⁴Department of Oncology, Rigshospitalet, Copenhagen University Hospital, Blegdamsvej 9, DK-2100 Copenhagen, Denmark
- ⁶⁵Institute for Medical Informatics, Statistics and Epidemiology, University of Leipzig, Germany
- ⁶⁶Department of Gynaecology and Obstetrics, Division of Tumor Genetics, Klinikum rechts der Isar, Technical University Munich, Germany
- ⁶⁷Genomic Medicine, Manchester Academic Health Sciences Centre, Division of Evolution and Genomic Sciences, University of Manchester, Central Manchester University Hospitals NHS Foundation Trust, Manchester, UK
- ⁶⁸Centre de Lutte Contre le Cancer Georges François Leclerc, 1 rue Professeur Marion, BP 77 980, Dijon Cedex, France and Genomic and Immunotherapy Medical Institute, Dijon University Hospital, Dijon, France
- ⁶⁹Molecular Diagnostic Unit, Hereditary Cancer Program, ICO-IDIBELL (Catalan Institute of Oncology-Bellvitge Biomedical Research Institute), CIBERONC, Gran Via de l'Hospitalet, 199-203. 08908 L'Hospitalet. Barcelona, Spain
- ⁷⁰Laboratoire de Génétique Chromosomique, Hôtel Dieu Centre Hospitalier, BP 1125 Chambéry, France
- ⁷¹Department of Cancer Epidemiology and Genetics, Masaryk Memorial Cancer Institute, Zluty kopec 7, Brno, 65653, Czech Republic
- ⁷²Ohio State University /Columbus Cancer Council, Columbus, OH 43221, USA
- ⁷³Oncogenetics Department, Barretos Cancer Hospital, Barretos, São Paulo, Brazil
- ⁷⁴UCLA Schools of Medicine and Public Health, Division of Cancer Prevention & Control Research, Jonsson Comprehensive Cancer Center, 650 Charles Young Drive South, Room A2-125 HS, Los Angeles, CA 90095-6900, USA
- ⁷⁵Cancer Risk and Prevention Clinic, Dana-Farber Cancer Institute, 450 Brookline Avenue, Boston, MA, USA
- ⁷⁶Centre of Familial Breast and Ovarian Cancer, Department of Medical Genetics, Institute of Human Genetics, University Würzburg, Germany

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- ⁷⁷Institut Curie, Department of Tumour Biology, Paris, France; Institut Curie, INSERM U830, Paris, France
- ⁷⁸Department of Clinical Genetics, Rigshospitalet 4062, Blegdamsvej 9, København Ø, Denmark
- ⁷⁹Service Régional Oncogénétique Poitou-Charentes, Centre Hospitalier, 79021 Niort
- ⁸⁰Department of Molecular Medicine, University La Sapienza, and Istituto Pasteur - Fondazione Cenci-Bolognetti, viale Regina Elena 291, 00161 Rome, Italy
- ⁸¹Bâtiment Cheney D, Centre Léon Bérard, 28 rue Laënnec, Lyon, France
- ⁸²Ontario Cancer Genetics Network: Lunenfeld-Tanenbaum Research Institute, Mount Sinai Hospital, Toronto, Ontario M5G 1X5, Canada
- ⁸³Department of Pathology and Laboratory Medicine, 3901 Rainbow Boulevard, 4019 Wahl Hall East, MS 3040, University of Kansas Medical Center, Kansas City, Kansas, USA
- ⁸⁴Clinical Genetics Branch, DCEG, NCI, NIH, 9609 Medical Center Drive, Room 6E-454, Bethesda, MD, USA
- ⁸⁵Department of Genetics and Pathology, Pomeranian Medical University, Unii Lubelskiej 1, Szczecin, Poland
- ⁸⁶Center for Familial Breast and Ovarian Cancer, Center for Integrated Oncology (CIO), Medical Faculty, University Hospital Cologne, Cologne, Germany
- ⁸⁷The Hereditary Breast and Ovarian Cancer Research Group Netherlands (HEBON), Coordinating center: Netherlands Cancer Institute, Amsterdam, The Netherlands
- ⁸⁸Institute of Genetic Medicine, Centre for Life, Newcastle Upon Tyne Hospitals NHS Trust, Newcastle upon Tyne, UK
- ⁸⁹Institute of Human Genetics, University Leipzig, 04107 Leipzig, Germany
- ⁹⁰Family Cancer Clinic, Netherlands Cancer Institute, P.O. Box 90203, 1006 BE Amsterdam, The Netherlands
- ⁹¹Department of Gynaecology and Obstetrics, University Hospital Düsseldorf, Heinrich-Heine University Düsseldorf, Germany
- ⁹²N.N. Petrov Institute of Oncology, St.-Petersburg 197758, Russia
- ⁹³Lombardi Comprehensive Cancer Center, Georgetown University, 3800 Reservoir Road NW, Washington, DC, USA
- ⁹⁴Clinical Genetics, Guy's and St. Thomas' NHS Foundation Trust, London, UK
- ⁹⁵Genetic Counseling Unit, Hereditary Cancer Program, IDIBGI (Institut d'Investigació Biomèdica de Girona), Catalan Institute of Oncology, CIBERONC, Av. França s/n. 1707 Girona, Spain
- ⁹⁶Parkville Familial Cancer Centre, Peter MacCallum Cancer Centre, 305 Gratten Street, Melbourne, VIC 3000, Australia
- ⁹⁷Vilnius University Hospital Santariskiu Clinics, Hereditary Cancer Competence Center Hematology, Oncology and Transfusion Medicine Center Room P519 Santariskiu st. 2, LT-08661 Vilnius, Lithuania
- ⁹⁸Department of Clinical Genetics, Aarhus University Hospital, Brendstrupgaardsvej 21C, Aarhus N, Denmark
- ⁹⁹Department of Epidemiology, Cancer Prevention Institute of California, 2201 Walnut Avenue, Suite 300, Fremont, CA 94538, USA and Department of Health Research and Policy (Epidemiology) and Stanford Cancer Institute, Stanford University School of Medicine, Stanford, CA, USA
- ¹⁰⁰Clinical Genetics Research Laboratory, Dept. of Medicine, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10044, USA
- ¹⁰¹Women's Cancer Program at the Samuel Oschin Comprehensive Cancer Institute, Cedars-Sinai Medical Center, 8700 Beverly Boulevard, Suite 290W, Los Angeles, CA, USA
- ¹⁰²Department of Gynecology and Obstetrics, Medical Faculty and University Hospital Carl Gustav Carus, Technische Universität Dresden, Germany
- ¹⁰³Research Department, Peter MacCallum Cancer Centre, Melbourne, Victoria, Australia and The Sir Peter MacCallum Department of Oncology University of Melbourne, Parkville, Australia

- 1
2
3 ¹⁰⁴Department of Surgery, Daerim St. Mary's Hospital, 657 Siheung-daero, Yeongdeungpo-gu, Seoul,
4 Korea
5 ¹⁰⁵Molecular Diagnostics Laboratory, INRASTES (Institute of Nuclear and Radiological Sciences and
6 Technology), National Centre for Scientific Research "Demokritos", Patriarchou Gregoriou & Neapoleos
7 str., Aghia Paraskevi Attikis, Athens, Greece
8 ¹⁰⁶The Gyneco-Oncology Department, Chaim Sheba Medical Center, Ramat Gan 52621, Israel
9 ¹⁰⁷Servicio de Genética-CIBERER U705, Hospital de la Santa Creu i Sant Pau, Barcelona
10 ¹⁰⁸The Feinstein Institute for Medical Research 350 Community Drive Manhasset NY
11 ¹⁰⁹Department of Surgery, Soonchunhyang University and Seoul Hospital, 59 Daesagwan-Ro,
12 Yongsan-Gu, Seoul, Korea
13 ¹¹⁰Institut Curie, PSL Research University, Mines ParisTech, Inserm U900, 26 rue d'Ulm, F-75005
14 Paris, France
15 ¹¹¹Department of Oncology Radiumhemmet and Institution of Oncology and Patology
16 Karolinska University Hospital and Karolinska Institutet
17 ¹¹²Department of Health Sciences Research, Mayo Clinic, 13400 E. Scottsdale Blvd., Scottsdale, AZ,
18 USA
19 ¹¹³Oncogénétique, Institut Bergonié, 229 cours de l'Argonne, 33076 Bordeaux, France
20 ¹¹⁴Clinical Genetics Branch, DCEG, NCI, NIH, 9609 Medical Center Drive, Room 6E-536, Bethesda,
21 MD, USA
22 ¹¹⁵Department of Gynecological Oncology and Clinical Cancer Genetics Program, University Of Texas
23 MD Anderssen Cancer Center, 1515 Pressler Street, CPB 6, Houston, TX, USA
24 ¹¹⁶Centre Antoine Lacassagne, 33 Avenue de Valombrose, Nice, France
25 ¹¹⁷Laboratorio de Genética Molecular, Servicio de Genética, Hospital Universitario Cruces, BioCruces
26 Health Research Institute, Spain
27 ¹¹⁸Department of Surgery, National Institute of Oncology, Budapest, Hungary
28 ¹¹⁹Department of Clinical Genetics, VU University Medical Center, P.O. Box 7057, 1007 MB
29 Amsterdam, The Netherlands
30 ¹²⁰Department of Human Genetics, Radboud University Medical Center, P.O. Box 9101, 6500 HB
31 Nijmegen, The Netherlands
32 ¹²¹Vilnius university Santariskiu hospital, National Center of Pathology, Baublio st. 5, Vilnius, Lithuania
33 ¹²²NRG Oncology, Statistics and Data Management Center, Roswell Park Cancer Institute, Elm St &
34 Carlton St, Buffalo, NY 14263, USA
35 ¹²³Department of Cancer Prevention and Control, Roswell Park Cancer Institute, Buffalo, NY, USA
36 ¹²⁴Department of Laboratory Medicine and Pathobiology, University of Toronto, Toronto, ON, Canada
37 ¹²⁵Department of Obstetrics and Gynecology, University of Helsinki and Helsinki University Hospital,
38 Biomedicum Helsinki, P.O. BOX 700 (Haartmaninkatu 8), 00029 HUS, Finland
39 ¹²⁶Cancer Genetics Service, Division of Medical Oncology, National Cancer Centre Singapore, 11
40 Hospital Drive, Singapore 169610
41 ¹²⁷Institute of Medical Genetics and Applied Genomics, University of Tuebingen, Germany
42 ¹²⁸Center for Genomic Medicine, Rigshospitalet, University of Copenhagen, Denmark
43 ¹²⁹513 Parnassus Ave., HSE 901E, San Francisco, CA. 94143 - 0794, USA
44 ¹³⁰Clinical Genetics Research Laboratory, Dept. of Medicine, Cancer Biology and Genetics, Memorial
45 Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10044, USA
46 ¹³¹Department of Clinical Genetics, Sahlgrenska University Hospital, Gothenburg, Sweden
47 ¹³²West Midlands Regional Genetics Service, Birmingham Women's Hospital Healthcare NHS Trust,
48 Edgbaston, Birmingham, UK
49 ¹³³Human Genetics Group, Human Cancer Genetics Programme, Spanish National Cancer Research
50 Centre (CNIO), Madrid, Spain. Biomedical Network on Rare Diseases (CIBERER), Madrid, Spain
51 ¹³⁴Unit of Medical Genetics, Department of Biomedical, Experimental and Clinical Sciences, University
52 of Florence, Viale Morgagni 50, 50134 Florence, Italy
53 ¹³⁵Department of Medical Sciences, University of Turin, Via Santena 19, 10126 Turin, Italy
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- ¹³⁶Section of Molecular Diagnostics, Department of Biochemistry, Aalborg University Hospital, Reberbansgade 15, Aalborg, Denmark
- ¹³⁷Department of Genetics, Portuguese Oncology Institute of Porto (IPO Porto), Porto, Portugal, and Biomedical Sciences Institute (ICBAS), University of Porto, Porto, Portugal
- ¹³⁸IFOM, The FIRC (Italian Foundation for Cancer Research) Institute of Molecular Oncology, via Adamello 16, 20139 Milan, Italy.
- ¹³⁹Service de Génétique Clinique Chromosomique et Moléculaire, Hôpital Nord, CHU Saint Etienne, St Etienne cedex 2, France
- ¹⁴⁰Unité d'Oncogénétique, CHU Arnaud de Villeneuve, 34295 Montpellier Cedex 5, France
- ¹⁴¹Unit of Molecular Bases of Genetic Risk and Genetic Testing, Department of Research, Fondazione IRCCS (Istituto Di Ricovero e Cura a Carattere Scientifico) Istituto Nazionale Tumori (INT), c/o Amaedeolab, via GA Amadeo 42, 20133 Milan, Italy
- ¹⁴²School of Women's and Children's Health, UNSW Sydney, Australia
- ¹⁴³The Kinghorn Cancer Centre, Garvan Institute of Medical Research, Australia
- ¹⁴⁴Department of Clinical Genetics, Karolinska University Hospital L5:03, Stockholm S-171 76, Sweden
- ¹⁴⁵Department of Basic Sciences, Shaukat Khanum Memorial Cancer Hospital and Research Centre (SKMCH & RC) 7A, Block R3, Johar Town, Lahore, Punjab 54000, Pakistan
- ¹⁴⁶Clinical Genetics Services, Dept. of Medicine, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY, USA
- ¹⁴⁷Division of Gynecologic Oncology, North Shore University Health System, Clinical Professor, University of Chicago, 2650 Ridge Avenue, Suite 1507 Walgreens, Evanston, IL 60201, USA
- ¹⁴⁸All Wales Medical Genetics Services, University Hospital of Wales, Cardiff, UK
- ¹⁴⁹Vilnius University Hospital Santariskiu Clinics, Centre of Woman's Health and pathology, Department of Gynecology, Santariskiu st. 2, Vilnius, Lithuania
- ¹⁵⁰Clinical Cancer Genetics Program, Division of Human Genetics, Department of Internal Medicine, The Comprehensive Cancer Center, The Ohio State University, Columbus, USA
- ¹⁵¹Department of Hematology and Oncology, University of Kansas Medical Center, Suite 210, 2330 Shawnee Mission Parkway, Westwood, KS, USA
- ¹⁵²North East Thames Regional Genetics Service, Great Ormond Street Hospital for Children NHS Trust, London, UK
- ¹⁵³Genomics Center, Centre Hospitalier Universitaire de Québec Research Center and Laval University, 2705 Laurier Boulevard, Quebec City (Quebec), Canada
- ¹⁵⁴Medical Genetics Unit, St George's, University of London, UK
- ¹⁵⁵Département Oncologie Génétique, Prévention et Dépistage, Institut Paoli-Calmettes, 232 boulevard Sainte-Margueritte, Marseille, France
- ¹⁵⁶Genetic Epidemiology Laboratory, Department of Pathology, University of Melbourne, Parkville, Victoria, Australia
- ¹⁵⁷Institute of Cell and Molecular Pathology, Hannover Medical School, Hannover, Germany
- ¹⁵⁸Department of Human Genetics, University Hospital Heidelberg, Germany
- ¹⁵⁹National Human Genome Research Institute, National Institutes of Health Building 50, Room 5312, 50 South Drive, MSC 004, Bethesda, MD, USA
- ¹⁶⁰Department of Epidemiology, Columbia University, New York, NY, USA
- ¹⁶¹Genetic Counseling Unit, Hereditary Cancer Program, IDIBELL (Bellvitge Biomedical Research Institute), Catalan Institute of Oncology, CIBERONC, Gran Via de l'Hospitalet, 199-203. 08908 L'Hospitalet, Barcelona, Spain
- ¹⁶²Department of Health Sciences Research, Mayo Clinic, 200 First Street SW, Rochester, Minnesota, USA
- ¹⁶³Department of Medicine, Magee-Womens Hospital, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA
- ¹⁶⁴Program in Cancer Genetics, Departments of Human Genetics and Oncology, McGill University, Montreal, Quebec, Canada

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- ¹⁶⁵Division of Human Genetics, Departments of Internal Medicine and Cancer Biology and Genetics, Comprehensive Cancer Center, The Ohio State University, 460 W. 12th Avenue, Columbus, OH, USA
- ¹⁶⁶Parkville Familial Cancer Centre, Royal Melbourne Hospital, Melbourne, Australia
- ¹⁶⁷Department of Medical Oncology, Beth Israel Deaconess Medical Center, 330 Brookline Avenue Boston, Massachusetts 02215, USA
- ¹⁶⁸Department of Clinical Genetics, Leiden University Medical Center, P.O. Box 9600, 2300 RC Leiden, The Netherlands
- ¹⁶⁹Department of Genetics, University Medical Center Groningen, University Groningen, The Netherlands
- ¹⁷⁰Family Cancer Clinic, Netherlands Cancer Institute, Amsterdam, The Netherlands
- ¹⁷¹Department of Medical Genetics, University Medical Center Utrecht, The Netherlands
- ¹⁷²Unit of Hereditary Cancer, Department of Epidemiology, Prevention and Special Functions, IRCCS (Istituto Di Ricovero e Cura a Carattere Scientifico) AOU San Martino - IST Istituto Nazionale per la Ricerca sul Cancro, largo Rosanna Benzi 10, 16132 Genoa, Italy
- ¹⁷³Institute of Human Genetics, Campus Virchow Klinikum, Charite Berlin, Germany
- ¹⁷⁴Fundación Pública Galega Medicina Xenómica, calle Choupana s/n, Edificio de Consultas, Planta menos dos Santiago de Compostal, A Coruña, Spain
- ¹⁷⁵Departamento de Investigacion y de Tumores Mamarios del Instituto Nacional de Cancerologia, Mexico City; and Centro de Cancer de Mama del Hospital Zambrano Hellion, Tecnologico de Monterrey, San Pedro Garza Garcia, Nuevo Leon.
- ¹⁷⁶Department of Oncology, Karolinska University Hospital, Stockholm, Sweden
- ¹⁷⁷Oxford Regional Genetics Service, Churchill Hospital, Oxford, UK
- ¹⁷⁸Department of Gynaecology and Obstetrics, University Hospital Ulm, Germany
- ¹⁷⁹Institute of Human Genetics, University Regensburg, Germany
- ¹⁸⁰Institute of Oncology, Rivka Ziv Medical Center, 13000 Zefat, Israel
- ¹⁸¹Magee-Womens Hospital, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA
- ¹⁸²Center for Medical Genetics, NorthShore University HealthSystem, 1000 Central St, Suite 620, Evanston, IL, USA
- ¹⁸³Medical Director, Center for Medical Genetics, North Shore University Health System, Clinical Assistant Professor of Medicine, University of Chicago Pritzker School of Medicine, 1000 Central Street, Suite 620, Evanston, IL 60201, USA

Corresponding Author:

Timothy R. Rebbeck, PhD

1101 Dana, 450 Brookline Avenue

Dana Farber Cancer Institute, Boston, MA 02215

T: 617-632-6128

Email: Timothy_Rebbeck@dfci.harvard.edu

Key Words: *BRCA1*, *BRCA2*, breast cancer, ovarian cancer, mutation, ethnicity, geography

Abstract

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3 The prevalence and spectrum of germline mutations in *BRCA1* and *BRCA2* have been reported in
4 single populations, with the majority of reports focused on Caucasians in Europe and North America.
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7 The Consortium of Investigators of Modifiers of *BRCA1/2* (CIMBA) has assembled data on 18,435
8 families with *BRCA1* mutations and 11,351 families with *BRCA2* mutations ascertained from 69 centers
9 in 49 countries on 6 continents. This study comprehensively describes the characteristics of the 1,650
10 unique *BRCA1* and 1,731 unique *BRCA2* deleterious (disease-associated) mutations identified in the
11 CIMBA database. We observed substantial variation in mutation type and frequency by geographical
12 region and race/ethnicity. In addition to known founder mutations, common mutations were identified in
13 specific racial/ethnic or geographic groups that may reflect founder mutations and which could be used
14 in targeted (panel) first pass genotyping for specific populations. Knowledge of the population-specific
15 mutational spectrum in *BRCA1* and *BRCA2* could inform efficient strategies for genetic testing and may
16 justify a more broad-based oncogenetic testing in some populations.
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BACKGROUND

Women who carry germline mutations in either *BRCA1* [OMIM 113705] or *BRCA2* [600185] are at a greatly increased risk of breast and ovarian cancers. Estimates of cancer risk associated with *BRCA1* and *BRCA2* mutations vary depending on the population studied. For mutations in *BRCA1*, the estimated average risk of breast and ovarian cancers ranges from 57-65% and 20-50%, respectively (Chen and Parmigiani, 2007; Kuchenbaecker, et al., 2017). For *BRCA2*, average risk estimates range from 35-57% and 5-23%, respectively (Chen and Parmigiani, 2007; Kuchenbaecker, et al., 2017). Mutation-specific cancer risks have been reported that suggest breast cancer cluster regions (BCCR) and ovarian cancer cluster regions (OCCR) exist in both *BRCA1* and *BRCA2* (Kuchenbaecker, et al., 2017; Rebbeck, et al., 2015). The identification of mutations in *BRCA1* or *BRCA2* has important clinical implications, as knowledge of their presence is important for risk assessment and informs medical management for patients. Interventions, such as risk-reducing bilateral mastectomy and salpingo-oophorectomy or annual breast MRI screening, are available to women who carry deleterious *BRCA1* or *BRCA2* mutations to enable early detection of breast cancer and for active risk reduction by risk-reducing surgery (Domchek, et al., 2010; Rebbeck, et al., 2002; Saslow, et al., 2007). The presence of *BRCA1* or *BRCA2* mutations also can influence cancer treatment decisions, principally around the use of platinum agents or poly (ADP-ribose) polymerase (PARP) inhibitors (Lord and Ashworth, 2017) or contralateral risk-reducing mastectomy. Increasing numbers of women are having clinical genetic testing for *BRCA1* and *BRCA2* mutations, and recommendations continue to expand to whom testing should be offered (NCCN, 2016).

In whites drawn from the general populations in North America and the United Kingdom, the prevalence of *BRCA1* and *BRCA2* mutations has been estimated around a broad range from 0.1-0.3%, and 0.1-0.7%, respectively (Peto, et al., 1999; Struewing, et al., 1997; Whittemore, et al., 2004). The Australian Lifepool study, studying a control population consisting of cancer-free women ascertained via population-based mammographic screening program, estimated the overall frequency of *BRCA1* and

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3 *BRCA2* mutations to be 0.65% (1:153), with *BRCA1* mutations at 0.20% (1:500) and *BRCA2* mutations
4 at 0.45% (1:222) (Thompson, et al., 2016). Estimates from the Exome Aggregation Consortium (ExAC)
5 are similar, with frequencies of *BRCA1* and *BRCA2* mutations (excluding The Cancer Genome Atlas
6 (TCGA) data) at 0.21% (1:480) and 0.31% (1:327), respectively; or combined at 0.51% (1:195)
7 (Maxwell, et al., 2016). As they do not include large genomic rearrangements, some newer population-
8 based estimates may still under-represent the total number of *BRCA1* and *BRCA2* mutations. Although
9 the overall prevalence of *BRCA1* and *BRCA2* mutations in most general populations is low, many
10 hundreds of thousands of yet-to-be-tested individuals worldwide carry these mutations.
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22 The prevalence of founder mutations in some racial/ethnic groups is much higher. For example, the
23 common mutations *BRCA1* c.5266dup (5382insC), *BRCA1* c.68_69del (185delAG) and *BRCA2*
24 c.5946del (6174delT), have a combined prevalence of 2-3% in U.S. Ashkenazi Jews (Roa, et al., 1996;
25 Struewing, et al., 1997; Whittemore, et al., 2004). For these mutations, double heterozygotes in *BRCA1*
26 and *BRCA2* also have been reported (Friedman, et al., 1998; Moslehi, et al., 2000; Ramus, et al., 1997;
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28 Rebbeck, et al., 2016). Several other founder mutations have been identified, including the Icelandic
29 founder mutation *BRCA2* c.771_775del (999del5) (Thorlacius, et al., 1996); the French Canadian
30 mutations *BRCA1* c.4327C>T (C4446T) and *BRCA2* c.8537_8538del (8765delAG) (which is also the
31 most common mutation in Yemenite Jews and Sardinia) (Manning, et al., 2001; Oros, et al., 2006b;
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33 Pisano, et al., 2000; Tonin, et al., 1999; Tonin, et al., 2001); the Polish mutations *BRCA1* c.181T>G,
34 and c.4035del (Gorski, et al., 2000); the *BRCA1* c.548-?4185+?del in Mexico(Villarreal-Garza, et al.,
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36 2015b; Weitzel, et al., 2013), and others. These mutations represent the majority of mutations observed
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38 in these populations and have been confirmed as true founder mutations as they have common
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40 ancestral haplotypes (Laitman, et al., 2013; Neuhausen, et al., 1996; Oros, et al., 2006a). Common
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42 mutations have been identified in other populations, but they represent a smaller proportion of all
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44 unique *BRCA1* and *BRCA2* mutations, and have not been characterized as true founder mutations.
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There are multiple common mutations in Scandinavian, Dutch, French, and Italian populations (Ferla, et

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3 al., 2007). Similarly, a number of common mutations specific to non-European populations also have
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5 been reported in Hispanic/Mexican, African-American, Middle Eastern, and Asian populations (Bu, et
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7 al., 2016; Ferla, et al., 2007; Kurian, 2010; Lang, et al., 2017; Ossa and Torres, 2016; Villarreal-Garza,
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9 et al., 2015b).

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13 The mutational spectra in *BRCA1* and *BRCA2* are best delineated in whites from Europe and North
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15 America. However, data on mutational spectra in non-white populations of Asian, African,
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17 Mediterranean, South-American and Mexican Hispanic descent have also been reported (Abugattas, et
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19 al., 2015; Ahn, et al., 2007; Alemar, et al., 2016; Bu, et al., 2016; Eachkoti, et al., 2007; Ferla, et al.,
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21 2007; Gao, et al., 2000; Gonzalez-Hormazabal, et al.; Ho, et al., 2000; Jara, et al., 2006; John, et al.,
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23 2007; Kurian, 2010; Laitman, et al.; Lang, et al., 2017; Lee, et al., 2003; Li, et al., 2006; Nanda, et al.,
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25 2005; Ossa and Torres, 2016; Pal, et al., 2004; Rodríguez, et al., 2012; Seong, et al., 2009; Sharifah, et
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27 al.; Solano, et al., 2017; Song, et al., 2005; Song, et al., 2006; Toh, et al., 2008; Torres, et al., 2007;
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29 Troudi, et al., 2007; Villarreal-Garza, et al., 2015b; Vogel, et al., 2007; Weitzel, et al., 2005; Weitzel, et
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31 al., 2007; Zhang, et al., 2009). In the current study, we provide a global description of *BRCA1* and
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33 *BRCA2* mutations by geography and race/ethnicity from the investigators of the Consortium of
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35 Investigators of Modifiers of *BRCA1/2* (CIMBA).
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41 **METHODS**

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43 Details of centers participating in CIMBA and data collection protocols have been reported previously
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45 (Antoniou, et al., 2007). Details of the CIMBA initiative and information about the participating centers
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47 can be found at <http://cimba.ccge.medschl.cam.ac.uk/h> (Chenevix-Trench, et al., 2007). All included
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49 mutation carriers participated in clinical or research studies at the host institutions after providing
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51 informed consent under IRB-approved protocols. Sixty-nine centers and multicenter consortia
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53 submitted data that met the CIMBA inclusion criteria (Antoniou, et al., 2007). Only female carriers with
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55 pathogenic *BRCA1* and/or *BRCA2* mutations were included in the current analysis. One mutation
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3 carrier per family in the CIMBA database was included in this report. The actual family relationships
4 (e.g., pedigrees) were not available, but a variable that defined family membership supplied by each
5 center was used for this purpose. Less than 1% of families (86 of 29,700) had two family members with
6 two different mutations. In these situations, each mutation observed in the family was included in the
7 analysis. In the case of the 94 dual mutation carriers (i.e., individuals with both *BRCA1* and *BRCA2*
8 mutations), one of the two mutations was chosen at random for inclusion in the analysis.
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18 The CIMBA data set was used to describe the distribution of mutations by effect and function. For the
19 remaining analyses, mutations were excluded if self-reported race/ethnicity data were missing.
20 Pathogenicity of mutation was defined as follows: 1) generating a premature termination codon (PTC),
21 except variants generating a PTC after codon 1854 in *BRCA1* and after codon 3309 of *BRCA2*; 2) large
22 in-frame deletions that span one or more exons; and 3) deletion of transcription regulatory regions
23 (promoter and/or first exon) expected to cause lack of expression of mutant allele. We also included
24 missense variants considered pathogenic by using multifactorial likelihood approaches (Bernstein, et
25 al., 2006; Goldgar, et al., 2004). Mutations that did not meet the above criteria but have been classified
26 as pathogenic by Myriad Genetics, Inc. (Salt Lake City, UT) also were included. Classification of
27 nonsense-mediated decay (NMD) was based on *in-silico* predictions and was not based on molecular
28 classification (Anczukow, et al., 2008).
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45 Contingency table analysis using a chi-square test was used to test for differences in dichotomous
46 variables, as was a t-test for continuous variables. Mutation counts are presented as the number of
47 families with the mutation. Fisher's exact tests were used if sample sizes in any contingency table cell
48 were less than five. Analyses were done in STATA, v. 14.2.
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RESULTS

Mutations in *BRCA1* and *BRCA2*

From the 26,861 *BRCA1* and 16,954 *BRCA2* mutation carriers in the CIMBA data set as of June 2017, 18,435 families with *BRCA1* mutations and 11,351 families with *BRCA2* mutations were studied to count only one occurrence of a mutation per family. From among these families, 1,650 unique *BRCA1* and 1,731 unique *BRCA2* mutations were identified. The unique mutations and number of families in which each mutation was observed are listed in **Supplementary Table 1**. In each gene, the five most common mutations (including founder mutations) accounted for 33% of all mutations in *BRCA1* (8,739 of 26,861 mutation carriers) and 19% of all mutations in *BRCA2* (3,244 of 16,954 mutation carriers). A web site containing information about the most common mutations reported here can be found at: <http://apps.ccge.medschl.cam.ac.uk/consortia/cimba/>. This information may be periodically updated as new data become available.

Mutation Type and Effect

Table 1 presents a summary of the type of *BRCA1* or *BRCA2* mutations and their predicted effect on transcription and translation. The most common mutation type was frameshift followed by nonsense. The most common effect of *BRCA1* and *BRCA2* mutations was premature translation termination and most of the mutant mRNAs were predicted to undergo nonsense-mediated mRNA decay (NMD) (Anczukow, et al., 2008). Despite having the same spectrum of mutations in *BRCA1* and *BRCA2*, the frequency distribution by mutation type, effect, or function differed significantly ($p < 0.05$) between *BRCA1* and *BRCA2* mutation carriers for many groups, as shown in **Table 1**. These observed differences are largely because genomic rearrangements and missense mutations account for a much higher proportion of mutations in *BRCA1* when compared with *BRCA2*, as previously described (Welsh and King, 2001).

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3 We and others have found that breast (BCCR) and ovarian (OCCR) cancer cluster regions exist that
4 may confer differential cancer risks (Gayther, et al., 1997; Gayther, et al., 1995; Kuchenbaecker, et al.,
5 2017; Rebbeck, et al., 2015). **Figure 1** reports the relative frequency of mutations in the BCCR and
6 OCCR by race/ethnicity. Compared with whites, we observed differences in the relative frequency of
7 mutations in the *BRCA1* BCCR and OCCR in Asians and Hispanics, and in the *BRCA2* OCCR in
8 Hispanics. To the degree that the mutations within the BCCRs and OCCRs conferred differential
9 cancer risks, these data suggest that *BRCA1* and *BRCA2* mutation-associated cancer risks may vary
10 by race/ethnicity.
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23 **Geography and Race/Ethnicity**

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25 The most common mutations by country are summarized in **Table 2** (*BRCA1*) and **Table 3** (*BRCA2*).
26 The locations of the mutations that were observed in African American, Asian, and Hispanic
27 populations are depicted in **Figure 2** (*BRCA1*) and **Figure 3** (*BRCA2*). Some countries (Albania,
28 Bosnia, Costa Rica, Ireland, Honduras, Japan, Norway, Peru, Philippines, Qatar, Saudi Arabia,
29 Romania, Venezuela and Turkey) contributed fewer than 10 mutation carriers to the CIMBA database.
30 Many of these mutations were submitted to the central database by CIMBA centers that ascertained
31 these patients, but these patients originated from a different country. Based on such small numbers, it
32 was impossible to make inferences about the relative importance of mutations in these locations.
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45 The mutational distribution among the major racial/ethnic groups and by geography are summarized in
46 **Tables 4** and **5**. Table 4 includes only those individuals for whom self-identified race/ethnicity was
47 recorded. Note that in some countries it is prohibited to collect data on race and ethnicity, so this
48 information is missing. Among the 10 most common *BRCA1* mutations in each racial/ethnic group, a
49 few were seen in several populations, including the common Jewish and Eastern European founder
50 mutations c.5266dup (5382insC) and c.68_69del (185delAG); c.815_824dup in African-Americans and
51 Hispanics; c.3756_3759del in Caucasian and Jews; and c.5503C>T and c.3770_3771del in Asians and
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3 Jews. Similarly, common mutations in *BRCA2* included c.5946del (6174delT) in whites and Jews;
4 c.2808_2811del in whites, African Americans, Asians, Hispanics, and Jews; c.6275_6276del in whites
5 and Hispanics; c.3847_3848del in whites and Jews; c.658_659del in African Americans and Hispanics;
6 and c.3264dup in Hispanics and Jews. The majority of other common *BRCA1* and *BRCA2* mutations
7 were only common within a single racial/ethnic group, particularly African Americans, Asians, and
8 Hispanics. Of note, the vast majority of women who self-identified as Jewish carry the common
9 Ashkenazi Jewish founder mutations *BRCA1* c.5266dup and c.68_69del and *BRCA2* c.5946del. Only
10 72 (3.9%) of 1,852 *BRCA1* mutation carrier families and 55 (5.6%) of 990 *BRCA2* mutation carrier
11 families who self-identified as being Jewish carried other (non-founder) mutations. However, since
12 many individuals of self-identified Jewish ancestry are only tested for the three common founder
13 mutations, this number is likely to be underestimated.

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29 In African Americans, the majority of *BRCA1* mutations were not observed in any other racial/ethnic
30 group, implying these mutations may be of African origin. In Hispanics, the most common *BRCA1*
31 mutations also were observed among individuals from other regions who did not self-identify as
32 Hispanic, including *BRCA1* c.3331_3334del (also observed in Australia, Europe, USA, and the UK),
33 and *BRCA1* c.68_69del (the common Jewish founder mutation) (Weitzel, et al., 2013; Weitzel, et al.,
34 2005). The *BRCA1* c.815_824dup mutation has been reported as being of African origin, but has also
35 been reported as a common mutation in Mexican-Americans, perhaps as a reflection of the complex
36 continental admixture of this population (Villarreal-Garza, et al., 2015b). *BRCA1* c.390C>A and
37 c.5496_5506delinsA were most commonly found in the Asian population. In *BRCA2*, c.2808_2811del
38 was found among the 10 most frequent mutations in all races/ethnicities.

51 52 53 **Recurrent Mutations**

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55 As expected, the most common mutations in the entire data set were the common founder mutations
56 *BRCA1* c.5266dup (5382insC), *BRCA1* c.68_69del (185delAG), and *BRCA2* c.5946del (6174delT). In
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3 part, the high frequency of these mutations is a consequence of panels that facilitate testing for these
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5 three mutations in women of Jewish descent. However, these two *BRCA1* mutations also are relatively
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7 common in regions with a low proportion of individuals who self-identify as Jewish (e.g., Hungary,
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9 Czech Republic, France, Germany, Italy, Poland Spain, Russia, and UK). *BRCA1* c.5266dup is a
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11 founder mutation thought to have originated 1800 years ago in Scandinavia/Northern Russia, entering
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13 the Ashkenazi-Jewish population 400-500 years ago, and thus has origins and a spread pattern
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15 independent of the Ashkenazim (Hamel, et al., 2011). Haplotype studies have been used to determine
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17 the origin of *BRCA1* c.68_69delAG in populations not considered to have a high proportion of Jewish
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19 ancestry. In some populations, such as the Hispanics in the USA and Latin American, it is associated
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21 with the Ashkenazi Jewish haplotype, presumably due to unrecognized (Jewish) ancestry (Ah Mew, et
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23 al., 2002; Velez, et al., 2012; Weitzel, et al., 2005). In other populations, such as Pakistani and
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25 Malaysians, where *BRCA1* c.68_69del is a common mutation, it appears to have arisen independently,
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27 as it is carried on a distinct haplotype (Kadalmani, et al., 2007; Rashid, et al., 2006). A different
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29 haplotype was also reported for several British families (the 'Yorkshire haplotype') that is distinct from
30
31 both the Jewish and the Indian-Pakistani haplotypes (Laitman, et al., 2013; Neuhausen, et al., 1996).
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38 The only locations in which these three founder mutations were not commonly observed were Belgium
39
40 and Iceland. Iceland has another common founder mutation (i.e., *BRCA2* c.771_775del). Yet other
41
42 common founder mutations included *BRCA1* c.4327C>T and *BRCA2* c.8537_8538del in Quebec. This
43
44 latter mutation in *BRCA2* also is the most common mutation in high-risk families in Sardinia (Pisano, et
45
46 al., 2000) and was also reported in a few Jewish Yemenite families, with a distinct haplotype (Palomba,
47
48 et al., 2007). The *BRCA1* c.181T>G mutation was common in Central Europe (Austria, Czech Republic,
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50 Germany, Hungary, Italy and Poland), but also observed in the US, Argentina, Latvia, Lithuania and
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52 Israel. This mutation has been found on a common haplotype in individuals of Polish and Ashkenazi
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54 Jewish ancestry, suggesting it is an Eastern European founder mutation (Kaufman, et al., 2009). The
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56 large rearrangement mutation in *BRCA1* c.548-?4185+?del (ex9-12del) appears to be an important
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3 founder mutation in Mexico, with findings of a common haplotype and an estimated age at 74
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5 generations (~1,500 years) (Weitzel, et al., 2013).
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10 We observed a number of other common mutations. *BRCA1* c.3331_3334del comprised more than half
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12 of all mutations identified in Colombia, consistent with a previous report that this is a founder mutation
13
14 in the Colombian population (Torres, et al., 2007). However, this mutation has not been found at high
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16 rates in a second Colombian population (Cock-Rada, et al., 2017). *BRCA2* c.2808_2811del was
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18 frequently observed, not only as the most common mutation in France and Colombia, but also in other
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20 Western and Southern European countries, and destinations to which individuals from these countries
21
22 have migrated. It estimated to have arisen approximately 80 (46-134) generations ago. However, due
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24 to the diversity of the haplotypes, multiple independent origins could not be ruled out (Neuhausen, et
25
26 al., 1998). *BRCA2* c.6275_6276del was a common *BRCA2* mutation in Australia, the UK, Belgium,
27
28 Spain and the Netherlands, and relatively common throughout North America. This mutation has been
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30 estimated to have originated 52 (24-98) generations ago from a single founder (Neuhausen, et al.,
31
32 1998). Recurrent or founder mutations were common in diverse populations. For example, the
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34 c.115T>G (Cys39Gly) mutation has been described as being common in Greenlanders (Hansen, et al.,
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36 2009). The c.2641G >T and c.7934del mutations have both been reported as founder mutation in
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38 South African Afrikaners (Reeves, et al., 2004).
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44 **DISCUSSION**

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46 We have reported worldwide distribution of *BRCA1* and *BRCA2* mutations curated in the CIMBA
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48 dataset. These results may aid in the understanding of the mutation distribution in specific populations
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50 as well as imparting clinical and biological implications for our understanding of *BRCA1*- and *BRCA2*-
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52 associated carcinogenesis.
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3 Clinical testing for *BRCA1* and *BRCA2* mutations has benefited substantially from knowledge about
4 common mutations in specific populations. In many countries, the three common Ashkenazi-Jewish
5 mutations are offered as a mutation testing panel for self-reported Ashkenazim, based on their
6 frequency. This approach is much less expensive than comprehensive gene sequencing. The
7 identification of commonly-occurring mutations in other populations could lead to more efficient and
8 cost-effective mutation testing for *BRCA1* and *BRCA2*. For example, Villareal-Garza et al. (Villarreal-
9 Garza, et al., 2015a) have developed the HISPANEL of mutations that optimizes testing in
10 Hispanic/Latino populations. In the present study, we have identified mutations that may exist at a
11 sufficient prevalence to warrant consideration for population-specific mutation testing panels. Criteria
12 for developing such panels for *BRCA1* and *BRCA2* mutation screening are not available. However,
13 mutations that are common in a specific population and that capture a sufficient percentage of
14 mutations in high risk individuals and families in that population may be appropriate for use in targeted
15 genetic testing. Before such panels can be developed, population-based studies of mutation frequency
16 in specific populations should be undertaken. The data reported herein provide a list of the likely
17 common mutations around which such panels could be developed, but the frequencies are not
18 population-based, particularly in settings where founder mutations are preferentially screened (e.g., the
19 common Jewish founder panels). Similarly, putative founder mutations identified by assessing common
20 ancestral origins of specific mutations (rather than just high prevalence; **Table 5**) may form the basis of
21 population-specific *BRCA1* and *BRCA2* mutation screening panels.
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46 We report the distribution of *BRCA1* and *BRCA2* mutations in nearly 30,000 families of bona-fide
47 disease-associated mutations. The strengths of this report include the large sample size that reflects a
48 geographically and racially/ethnically diverse set of *BRCA1* and *BRCA2* mutation carriers. However,
49 some limitations need to be considered. First, the sample set presented here does not reflect a
50 systematic study of these populations or races/ethnicities; the data reflect patterns of recruitment (e.g.,
51 individuals with higher risk or prior diagnosis of cancer who consented to participate in research
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3 protocols) that contributed to the CIMBA consortium. Certain racial/ethnic or socio-demographic groups
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5 are under- or over-represented or missing in our data set and, as a consequence, mutations may be
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7 over- or under-represented. For example, the existence of a commercial panel of three Jewish founder
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9 mutations enhances genetic testing for those mutations. As a result, the most common mutations in
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11 some populations (e.g., the USA) reflect the widespread use of this testing panel in the USA population.
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13 Similar arguments may also apply for other populations, where testing for certain founder mutations
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15 may be more frequent. Therefore the relative frequencies of mutations by population in the present
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17 study may be subject to such testing biases. Comparing the relative frequencies is also complicated by
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19 the inclusion of related individuals.
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25 Second, although the CIMBA data represent most regions around the world, there are limitations
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27 related to which groups of individuals have been tested and which centers contributed data. In
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29 particular, non-white ancestry populations are still under-represented in research reports of mutation
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31 spectrum and frequency. Genetic testing in the developing world remains limited.
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36 Third, we presented the mutations in terms of type or effect (**Table 1**), but these designations are not
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38 always based on experimental evidence. For example, NMD mutation status is almost always defined
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40 by a prediction rule rather than *in vitro* experiments that confirm the presence of nonsense mediated
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42 decay.
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46 Fourth, we presented the occurrence of putative founder mutations. Some of these founder mutations
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48 (e.g., *BRCA1* c.68_69del, *BRCA2* c.771_775del) have been demonstrated to be true founder mutations
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50 based on actual ancestry analyses. Others, however, have only been identified as occurring commonly
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52 in certain populations, but haplotype or similar analyses of founder status may not have been done.
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3 Fifth, our analysis was based on self-reported race/ethnicity of study participants, but this information
4 may misclassify some groups of individuals. For example, some Middle Eastern groups may have been
5 classified as “Caucasian” based on the data available, but in fact may represent a distinct group that
6 was not captured here. Moreover, in some large centers participating in CIMBA, collecting information
7 on race/ethnicity is prohibited and these mutation carriers were excluded from the comparisons.
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12 Finally, we evaluated mutations by racial/ethnic and geographic designations, but some of these may
13 be misclassified. For example, while *BRCA1* c.68_69del has been shown to arise independently of the
14 common Jewish founder mutation in Pakistan (Rashid, et al., 2006), we cannot determine if the
15 identified group also contains some Ashkenazi Jewish individuals.
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20 The data presented herein provide new insights into the worldwide distribution of *BRCA1* and *BRCA2*
21 mutations. The identification of common mutations in some racial/ethnic groups or geographical
22 locations raises the possibility of defining more efficient strategies for genetic testing. Three common
23 Jewish founder mutations *BRCA1* c.5266dup (5382insC) and *BRCA1* c.68_69del (185delAG) and
24 *BRCA2* c.5946del (6174delT) have long been used as a primary genetic screening test for women of
25 Jewish descent. The identification here of other mutations that are relatively common in specific
26 populations may similarly provide the basis for other mutation-specific panels. For example, *BRCA1*
27 c.5266dup (5382insC) may be a useful as a single mutation screening test in Central-Eastern European
28 populations before undertaking full sequencing. However, this basic test may be supplemented with
29 screening for *BRCA1* c.181T>G, as the second most common mutation of the region, and for some
30 special cases, to include most common Hungarian *BRCA2* founder mutation c.9097dup (9326insA) for
31 those with Hungarian ancestry (van der Looij, et al., 2000, Ramus, et al., 1997b). In Iceland, only two
32 mutations were reported: the common founder mutation *BRCA2* c.771_775del and the rarer *BRCA1*
33 c.5074G>A (Bergthorsson, et al., 1998). A number of other situations can be identified in which specific
34 mutations explain a large proportion of the total mutations observed in a population. These and other
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such examples suggest that targeted mutation testing panels which include specific mutations could be developed for use in specific populations. Finally, we focused on female *BRCA1* and *BRCA2* mutation carriers in this report. However, the growing knowledge about *BRCA1* and *BRCA2*-associated cancers in men, particularly prostate cancer (Ostrander and Udler, 2008; Pritchard, et al., 2016), suggests that the information presented herein will also have value in genetic testing of men.

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Table 1: Characteristics of *BRCA1* and *BRCA2* Mutations in the CIMBA Database (by unique mutation)

			<i>BRCA1</i>	(N=1,650)	<i>BRCA2</i>	(N=1,731)	p-value
Designation	Definition	N	%	N	%		
Mutation Type	Large Deletion (DL)	Genomic DNA deletion (encompassing at least 1 exon)	130	7.9	34	1.9	<0.0001
	Large Duplication (DP)	Genomic DNA duplication (encompassing at least 1 exon)	27	1.6	11	0.6	0.010
	Frameshift (FS)	Deletion or insertion resulting in a disruption of the open reading frame	948	57.5	1,141	65.9	<0.0001
	In-Frame Deletion (IFD)	Small deletions, splice site mutations or large genomic rearrangements that result in a change in the mRNA but do not change the open reading frame	1	<0.1	2	0.1	0.518
	Missense (MS)	Results in an altered amino acid	46	2.8	13	0.8	0.0001
	Nonsense (NS)	Point mutation resulting in a stop codon	313	19.0	380	22.0	0.027
	Splice (SP)	Results in aberrant RNA splicing	166	10.1	131	7.6	0.013
	Multiple Types (including those listed above)		20	1.1	19	1.1	1.00
	Mutation Effect	No RNA	Mutation is predicted to abrogate RNA production	21	1.3	6	0.3
Premature Termination Codon (PTC)		Result of a nonsense substitution, frameshift due to small deletion or insertion, aberrant splicing, or large genomic rearrangement	1,331	81.0	1,542	89.0	<0.0001
Unknown/Other		Unknown effect	298	18.0	183	10.6	<0.0001
Mutation Function	Nonsense-Mediated Decay (NMD)* (Anczukow, et al., 2008)	Mutation is predicted to result in reduced transcript level due to decay of RNA and/or degradation/instability of truncated proteins	1,213	73.9	1,523	88.0	<0.0001
	No NMD	Mutations generating a premature stop codon in the first or last exon that is predicted not to result in NMD	58	3.5	16	0.9	<0.0001
	No RNA	Loss of expression due to deletion of promoter and/or transcription start site	21	1.3	6	0.4	0.003
	Re-Initiation	Mutations presumed to result in translation re-initiation but produce unstable proteins	4	0.2	0	0.0	0.294

			<i>BRCA1</i>	(N=1,650)	<i>BRCA2</i>	(N=1,731)	p-value
	Designation	Definition	N	%	N	%	
	NMD/Re-initiation	Mutations presumed to result in translation re-initiation but produce unstable protein	60	3.7	0	0.0	--
	Unknown/Other	Unknown function	294	17.8	187	10.7	<0.0001
Mutation Class	1	Mutations predicted to be associated with unstable or no protein	1,298	78.6	1,529	88.3	<0.0001
	2	Mutations predicted to be associated with stable mutant proteins	112	6.8	36	2.1	<0.0001
	3	Unknown function	240	14.6	167	9.6	<0.0001

*References (Anczukow, et al., 2008; Buisson, et al., 2006; Mikaelssdottir, et al., 2004; Perrin-Vidoz, et al., 2002; Ware, et al., 2006)

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Table 2: Common *BRCA1* Mutations by Country of Origin (by family)

					Five Most Common Mutations (Number Observed)				
Continent	Country	Families	Unique Mutations	1	2	3	4	5	
Africa	Nigeria	20	15	c.303T>G(4)	c.191G>A(2)	c.3268C>T(2)	c.4240dup(1)	c.4122_4123del(1)	
	South Africa	49	16	c.2641G>T(18)	c.5266dup(7)	c.1374del(4)	c.68_69del(4)	c.3228_3229del(4)	
Asia	Hong Kong	70	45	c.470_471del(7)	c.4372C>T(5)	c.2635G>T(4)	c.5406+1_5406+3del(4)	c.3342_3345del(4)	
	Israel	679	7	c.68_69del(510)	c.5266dup(151)	c.2934T>G(13)	c.181T>G(2)	c.981_982del(1)	
	Korea	158	61	c.390C>A(19)	c.5496_5506delinsA(17)	c.922_924delinsT(11)	c.5030_5033del(9)	c.3627dup(8)	
	Malaysia	72	47	c.2635G>T(5)	c.68_69del(4)	c470_471del(3)	c.4148C>G(3)	c.3770_3771del(3)	
	Pakistan	93	45	c.5503C>T(11)	c.3770_3771del(8)	c.4508C>A(8)	c.66dup(6)	c.2269del(1)	
	Singapore	28	18	c.2726dup(9)	c.2617dup(2)	c.2635G>T(2)	c.213-12A>G(1)	c.3214del(1)	
	Turkey	1	1	c.3333del(1)					
Australia	Australia	581	173	c.68_69del(56)	c.5266dup(45)	c.4065_4068del(23)	c.3756_3759del(22)	c.5503C>T(16)	
Europe	Albania	1	1	c.4225C>T(1)					
	Austria	391	115	c.181T>G(51)	c.5266dup(46)	c.3018_3021del(35)	c.1687C>T(26)	c.962G>A(17)	
	Belgium	166	41	c.2359dup(40)	c.212+3A>G(26)	c.3661G>T(12)	c.3607C>T(10)	c.3841C>T(9)	
	Bosnia	1	1	c.4158_4162del(1)					
	Czech Rep.	208	42	c.5266dup(87)	c.3700_3704del(25)	c.181T>G(20)	c.1687C>T(16)	c.3756_3759del(6)	
	Denmark	667	101	c.2475del(91)	c.3319G>T(81)	c.5266dup(41)	c.3710del(39)	c.c.5213G>A(30)	
	Finland	57	31	c.3485del(8)	c.4097-2A>G(5)	c.5266dup(4)	c.1687C>T(42)	c.4327C>T(3)	
	France	1,522	418	c.5266dup(118)	c.3481_3491del(70)	c.68_69del(63)	c.4327C>T(49)	c.3839_3843delinsA GGC(40)	
	Germany	2,287	381	c.5266dup(411)	c.181T>G(196)	c.4689C>G(63)	c.1687C>T(62)	c.3481_3491del(55)	
	Greece	208	41	c.5266dup(47)	c.5212G>A(29)	c.5406+644_*8273del(24)	c.5468-285_5592+4019delinsCACAG(23)	c.5251C>T(13)	
	Hungary	235	47	c.5266dup(78)	c.181T>G(60)	c.68_69del(22)	c.5278-?_5406+?del(5)	c.5251C>T(4)	
	Iceland	3	1	c.5074G>A(3)					
	Ireland	2	2	c.547+1G>T(1)	c.427G>T(1)				
	Italy	1,120	254	c.5266dup(124)	c.181T>G(44)	c.190T>C(43)	c.1687C>T(39)	c.1380dup(37)	
	Latvia	100	9	c.5266dup(49)	c.4035del(40)	c.181T>G(5)	c.3756_3759del(1)	c.4675G>A(1)	
	Lithuania	223	21	c.4035del(112)	c.5266dup(58)	c.181T>G(221)	c.1687C>T(5)	c.5177_5180del(4)	
Netherlands	782	126	c.5333-36_5406+400del(87)	c.5277+1G>A(66)	c.2685_2686del(60)	c.2197_2201del(41)	c.5266dup(40)		
Poland	1,064	8	c.5266dup(711)	c.181T>G(276)	c.4035del(69)	c.5333-36_5406+400del(3)	c.68_69del(2)		
Portugal	49	23	c.3331_3334del(15)	c.2037delinsCC(7)	c.3817C>T(3)	c.21A>G(2)	c.5266dup(2)		
Romania	1	1	c.5266dup(1)						
Russia	160	10	c.5266dup(135)	c.4035del(11)	c.68_69del(7)	c.5026_5027del(1)	c.4185+2T>C(1)		
Spain	678	181	c.211A>G(78)	c.68_69del(62)	c.5123C>A(61)	c.3770_3771del(23)	c.3331_3334del(23)		
Sweden	438	108	c.3048_3052dup(68)	c.1687C>T(31)	c.2475del(27)	c.1082_1092del(26)	c.5266dup(19)		
UK	1,389	297	c.68_69del(134)	c.4065_4068del(104)	c.4186-?_4357+?dup(78)	c.3756_3759del(62)	c.5266dup(60)		

Table 2: Common BRCA1 Mutations by Country of Origin (Continued)

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Continent	Country	Families	Unique Mutations	1	2	3	4	5
North America	Canada	450	112	c.68_69del(99)	c.4327C>T(66)	c.5266dup(50)	c.2834_2836delinsC(16)	c.3756_3759del(12)
	USA	4,219	613	c.68_69del(1130)	c.5266dup(554)	c.181T>G(113)	c.4065_4068del(58)	c.3756_3759(49)
South/Central America	Argentina	89	35	c.68_69del(22)	c.5266dup(12)	c.211A>G(11)	c.181T>G(6)	c.427G>T(3)
	Brazil	101	39	c.5266dup(31)	c.3331_3334del(18)	c.135-?_441+?del(4)	c.1687C>T(4)	c.3916_3917del(3)
	Colombia	55	2	c.3331_3334del(36)	c.5123C>A(19)			
	Mexico	25	15	c.548-?4185+?del(8)	c.68_69del(2)	c.824_825ins10(2)	c.211A>G(2)	c.5030_5033del(1)
	Peru	1	1	c.4986+6T>C(1)				
Venezuela	1	1	c.5123C>A(1)					

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Table 3: Common BRCA2 Mutations by Country of Origin (by Family)

Continent	Country	Families	Unique Mutations	Five Most Common Mutations (Number Observed)				
				1	2	3	4	5
Africa	Nigeria	12	9	c.1310_1313del(3)	c.8817_8820delA(2)	c.5241_5242insTA(1)	c.2402_2412del(1)	c.994del(1)
	South Africa	103	18	c.7934del(80)	c.5946del(6)	c.6944_6947del(2)	c.5213_5216del(1)	c.6939del(1)
Asia	Hong Kong	91	45	c.3109C>T(22)	c.2808_2811del(5)	c.7878G>A(5)	c.7007G>T(4)	c.9294C>G(4)
	Israel	339	5	c.5946del(330)	c.8537_8538del(5)	c.4936_4939del(2)	c.3847_3848del(1)	c.6024dup(1)
	Japan	1	1	c.5645C>A(1)				
	Korea	220	93	c.7480C>T(40)	c.3744_3747del(18)	c.1399A>T(16)	c.5576_5579del(14)	c.6724_6725del(6)
	Malaysia	64	47	c.262_263del(8)	c.2808_2811del(3)	c.3109C>T(3)	c.5073dup(3)	c.809C>G(2)
	Pakistan	19	17	c.5222_5225del(3)	c.8754+1G>T(1)	c.92G>A(1)	c.6468_6469del(1)	c.2990T>G(1)
	Philippines	1	1	c.2023del(1)				
	Qatar	1	1	c.7977-1G>C(1)				
	Saudi Arabia	1	1	c.473C>A(1)				
Australia	Singapore	10	10	c.200_1910-877dup(1)	c.2808_2811del(1)	c.8961_8964del(1)	c.8915del(1)	c.956dup(1)
Australia	Australia	496	178	c.5946del(53)	c.6275_6276del(25)	c.7977-1G>C(11)	c.5682C>G(10)	c.3487_3848del(10)
Europe	Austria	185	87	c.8364G>A(17)	c.8755-1G>A(15)	c.3860del(11)	c.1813dup(8)	c.7846del(6)
	Belgium	116	39	c.6275_6276del(17)	c.516+1G>T(16)	c.8904del(14)	c.1389_1390del(9)	c.3847_3848del(7)
	Czech Republic	81	42	c.8537_8538del(12)	c.7913_7917del(5)	c.5645C>A(4)	c.2808_2811del(4)	c.9403del(4)
	Denmark	442	101	c.7617+1G>A(61)	c.6373del(44)	c.1310_1313del (25)	c.6486_6489del(25)	c.3847_3848del(16)
	Finland	52	16	c.9118-2A>G(18)	c.7480C>T(12)	c.771_775del(7)	c.8327T>G(2)	c.1286T>G(2)
	France	997	375	c.2808_2811del(34)	c.5946del(27)	c.9026_9030del(22)	c.8364G>A(22)	c.5909C>A(19)
	Germany	1,109	367	c.1813dup(51)	c.3847_3848del(34)	c.2808_2811del(29)	c.5946del(29)	c.5682C>G(23)
	Greece	28	22	c.7976G>A(3)	c.5722_5723del(2)	c.9097dup(2)	c.9501+1G>A(2)	c.5722_5723del(2)
	Hungary	81	39	c.9097dup(17)	c.5946del(11)	c.7913_7917del(4)	c.6656C>G(3)	c.9403del(3)
	Iceland	89	1	c.771_775del(89)				
	Ireland	2	2	c.8951C>G(1)	c.5576_5579del(1)			
	Italy	706	242	c.8878C>T(33)	c.6468_6469del(31)	c.7180A>T(29)	c.5682C>G(25)	c.8247_8248delGA(18)
	Lithuania	26	11	c.658_659del(13)	c.3847_3848del(4)	c.6580dup(1)	c.6410del(1)	c.7879A>T(1)
	Netherlands	493	167	c.6275_6276del(38)	c.8067T>A(26)	c.5946del(25)	c.9672dupA(23)	c.5213_5216del (21)
	Norway	2	1	c.771_775del(2)				
	Poland	23	20	c.5946del(3)	c.8946del(2)	c.7913_7917del(1)	c.9294C>A(1)	c.635_636del(1)
	Portugal	71	22	c.156_157insAlu(39)	c.9097dup(5)	c.9382C>T(3)	c.682-2A>C(2)	c.5645G>A(2)
	Romania	1	1	c.9097dup(1)				
	Russia	3	3	c.3682_3685del(1)	c.5410_5411del(1)	c.5946del(1)		
Spain	670	217	c.3264dup(58)	c.2808_2811del(56)	c.9026_9030del(52)	c.6275_6276del(32)	c.9018C>A(16)	
Sweden	123	68	c.4258del(11)	c.2830A>T(7)	c.1796_1800del(6)	c.3847_3848del(6)	c.7558C>T(5)	
UK	1,200	308	c.6275_6276del(107)	c.5946del(66)	c.4478_4481del(37)	c.755_758del(36)	c.5682C>G(33)	
North America	Canada	311	108	c.8537_8538del(48)	c.5946del(45)	c.2808_2811del(13)	c.6275_6276del(11)	c.5857G>T(10)
	USA	3,064	626	c.5946del(742)	c.2808_2811del(86)	c.1813dup(62)	c.658_659del(50)	c.6275_6276del(49)
	Argentina	49	21	c.5946del(18)	c.2808_2811del(5)	c.6037A>T(4)	c.9026_9030del(2)	c.5645C>G(2)
	Brazil	47	33	c.2T>G(5)	c.2808_2811del(4)	c.156_157insAlu(4)	c.6405_6409del(3)	c.1138del(2)
	South/Central	Colombia	19	4	c.2808_2811del(15)	c.5946del(2)	c.6275_6276del(1)	c.93G>A(1)
	Costa Rica	1	1	c.9235del(1)				

Human Mutation Most Common Mutations (Number Observed)

	Continent	Country	Families	Unique Mutations	Human Mutation				
					1	2	3	4	5
1	America	Honduras	1	1	c.7558C>T(1)				
2		Mexico	6	6	c.3264dup (1)	c.6275_6276del (1)	c.2224C>T (1)	c.5542del (1)	c.6502G>T (1)

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Table 4. Ten Most Common Mutations by Self-Identified Race/Ethnicity (N) (by Family)

Common Mutation Rank	Caucasian	African American	Asian	Hispanic/Latino	Jewish	Other	
BRCA1	1	c.5266dup(1962)	c.815_824dup(28)	c.390C>A(21)	c.68_69del(48)	c.68_69del(1341)	c.5266dup(535)
	2	c.181T>G (696)	c.5324T>G (13)	c.5496_5506delinsA (17)	c.3331_3334del(41)	c.5266dup(439)	c.68_69del(268)
	3	c.68_69del(625)	c.5177_5180del(9)	c.470_471del(14)	c.5123C>A(37)	c.3756_3759del(5)	c.181T>G(208)
	4	c.4035del(275)	c.4357+1G>A(8)	c.5503C>T(13)	c.548-?_4185+?del(30)	c.1757del(5)	c.5333-36_5406+400del(93)
	5	c.4065_4068del(202)	c.190T>G(6)	c.922_924delinsT(13)	c.211A>G(20)	c.2934T>G(3)	c.3481_3491del(91)
	6	c.3756_3759del(185)	c.68_69del(6)	c.68_69del(13)	c.815_824del(13)	c.5503C>T(2)	c.1687C>T (91)
	7	c.1687C>T(183)	c.5467+1G>A(6)	c.3770_3771del(12)	c.2433del(11)	c.4185+1G>T(2)	c.4065_4068del(69)
	8	c.4327C>T(176)	c.182G>A(5)	c.2635G>T(12)	c.1960A>T(11)	c.4689C>G(2)	c.5277+1G>A (68)
	9	c.2475del(171)	c.5251C>T(4)	c.2726dup(12)	c.3029_3030del(10)	c.3770_3771del(2)	c.2685_2686del(68)
	10	c.4186-?_4357+?dup(158)	c.4484G>T(4)	c.3627dup(11)	c.4327C>T(9)	c.4936del(2)	c.4327C>T(66)
Families	11,258	174	550	408	1,852	4,583	
Unique Mutations	1,206	77	240	104	56	765	
BRCA2	1	c.5946del(332)	c.2808_2811del(8)	c.7480C>T(42)	c.3264dup(36)	c.5946del(935)	c.5946del(128)
	2	c.6275_6276del(245)	c.4552del(8)	c.3109C>T(30)	c.2808_2811del(19)	c.3847_3848del(4)	c.6275_6276del(89)
	3	c.2808_2811del(223)	c.9382C>T(6)	c.3744_3747del(19)	c.145G>T(11)	c.1754del(4)	c.2808_2811del(64)
	4	c.771_775del(119)	c.1310_1313del(5)	c.1399A>T(18)	c.9026_9030del(6)	c.9382C>T(3)	c.1813dup(63)
	5	c.3847_3848del(119)	c.5616_5620del(5)	c.5576_5579del(15)	c.658_659del(6)	c.5621_5624del(2)	c.5645C>A(50)
	6	c.5682C>G(114)	c.6405_6409del(4)	c.2808_2811del(13)	c.5542del(6)	c.2808_2811del(2))	c.1310_1313del(46)
	7	c.1813dup(107)	c.658_659del(4)	c.7878G>A(10)	c.3922G>T(6)	c.4829_4830del(2)	c.3847_3848del(40)
	8	c.8537_8538del(94)	c.2957_2958insG(3)	c.262_263del(8)	c.1813dup(4)	c.5238del(2)	c.5682C>G(31)
	9	c.658_659del(91)	c.7024C>T(2)	c.7133C>G(7)	c.9699_9702del(4)	c.9207T>A(1)	c.9672dup(28)
	10	c.7934del(89)	c.6531_6534del(2)	c.5164_5165del(7)	c.6275_6276del(4)	c.3264dup(1)	c.658_659del(28)
Families	7,156	125	538	207	990	2,551	
Unique Mutations	1,242	77	248	91	44	753	

Table 5. Ten Most Common Mutations by Continent of Ascertainment (N) (by Family)

		North America	Africa	Asia	South/Central America	Europe	Australia
BRCA1	1	c.68_69del(1229)	c.2641G>T(18)	c.68_69del(516)	c.3331_3334del(54)	c.5266dup(2046)	c.68_69del(56)
	2	c.5266dup(604)	c.5266dup(7)	c.5266dup(151)	c.5266dup(44)	c.181T>G(761)	c.5266dup(45)
	3	c.181T>G(117)	c.1374del(4)	c.390C>A(19)	c.68_69del(25)	c.68_69del(413)	c.4065_4068del(23)
	4	c.4327C>T(114)	c.68_69del(4)	c.5496_5506delinsA(17)	c.5123C>A(23)	c.4035del(273)	c.3756_3759del(22)
	5	c.4065_4068del(62)	c.3228_3229del(4)	c.5503C>T(13)	c.211A>G(14)	c.1687C>T(219)	c.5503C>T(16)
	6	c.3756_3759del(61)	c.303T>G(4)	c.2934T>G(13)	c.181T>G(8)	c.4065_4068del(185)	c.4186-?_4357+?dup(15)
	7	c.213-11T>G(45)	c.4838_4839insC(2)	c.3770_3771del(12)	c.548-?_4183+8?del(8)	c.3481_3491del(167)	c.4327C>T(13)
	8	c.1687C>T(44)	c.3268C>T(2)	c.2726dup(12)	c.1687C>T(5)	c.2475del(162)	c.5278-?_5592+?del(11)
	9	c.4186-?4357+?dup(43)	c.1504_1508del(2)	c.470_471del(11)	c.135-?_441+?del(4)	c.3756_3759del(155)	c.70_80del(11)
	10	c.1175_1214del(42)	c.191G>A(2)	c.922_924delinsT(11)	c.5030_5033del(4)	c.3770_3704del(128)	c.1961del(10)
Families		4,669	69	1,100	271	11,748	581
Unique Mutations		654	30	187	75	1282	173
BRCA2	1	c.5946del(787)	c.7934del(80)	c.5946del(330)	c.2808_2811del(24)	c.6275_6276del(241)	c.5946del(53)
	2	c.2808_2811del(99)	c.5946del(6)	c.7480C>T(40)	c.5946del(19)	c.5946del(182)	c.6275_6276del(25)
	3	c.8537_8538del(74)	c.1310_1313del(3)	c.3109C>T(25)	c.2T>G(5)	c.2808_2811del(181).	c.7977-1G>C(11)
	4	c.1813dup(67)	c.6944_6947del(2)	c.3744_3747del(18)	c.156_157insAlu(4)	771_775del(119)	c.5682C>G(10)
	5	c.6275_6276del(60)	c.8817_8820del(2)	c.1399A>T(16)	c.6037A>T(4)	c.3847_3848del(100)	c.3847_3848del(10)
	6	c.3847_3848del(51)	c.5213_5216del(1)	c.5576_5579del(15)	c.6405_6409del(3)	c.1813dup(97)	c.2808_2811del(10)
	7	c.658_659del(50)	c.6535_6536insA(1)	c.2808_2811del(9)	c.5645C>G(2)	c.5682C>G(97)	c.755_758del(10)
	8	c.9382C>T(41)	c.774_775del(1)	c.262_263del(8)	c.658_659del(2)	c.1310_1313del(92)	c.4478_4481del(9)
	9	c.3264dup(40)	c.6393del(1)	c.8537_8538del(7)	c.7180A>T(2)	c.5645C>A(78)	c.8297del(9)
	10	c.55073dup(37)	c.5042_5043del(1)	c.7878G>A(6)	c.5851_5854del(2)	c.9026_9030del(76)	c.250C>T(9)
Families		3,375	170	976	222	10,175	1,047
Unique Mutations		660	27	187	58	1,315	179

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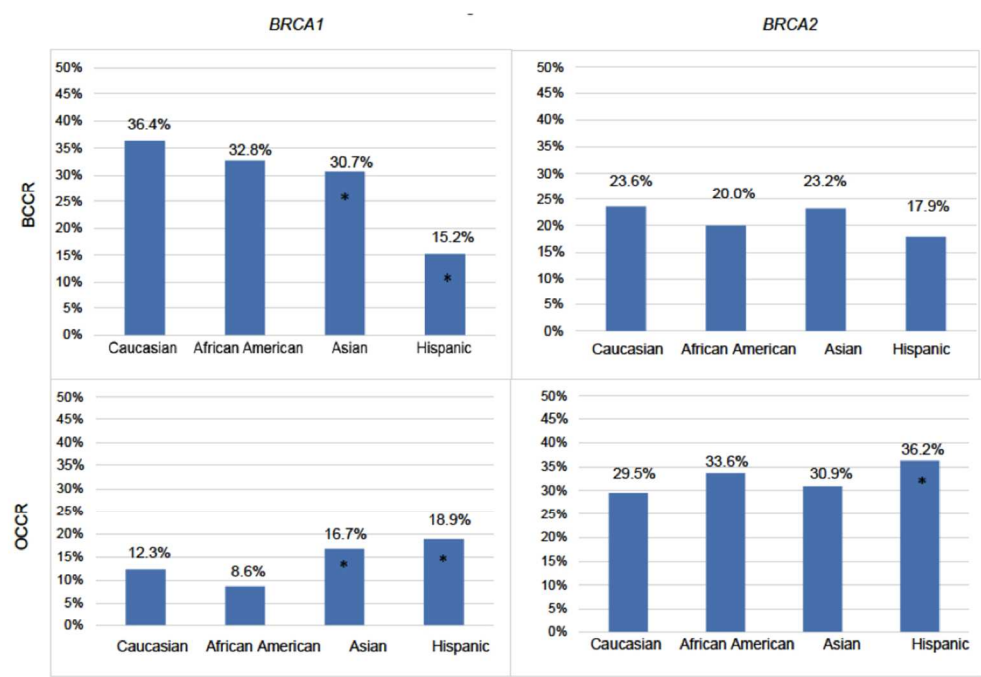


Figure 1: Proportion of Mutations in the Breast Cancer Cluster Regions (BCCR) and Ovarian Cancer Cluster Region (OCCR) in BRCA1 and BRCA2 by Ethnicity as defined previously (Rebbeck, et al., 2015). Asterisk indicates proportion is significantly different than Caucasian proportion (p-value < 0.05).

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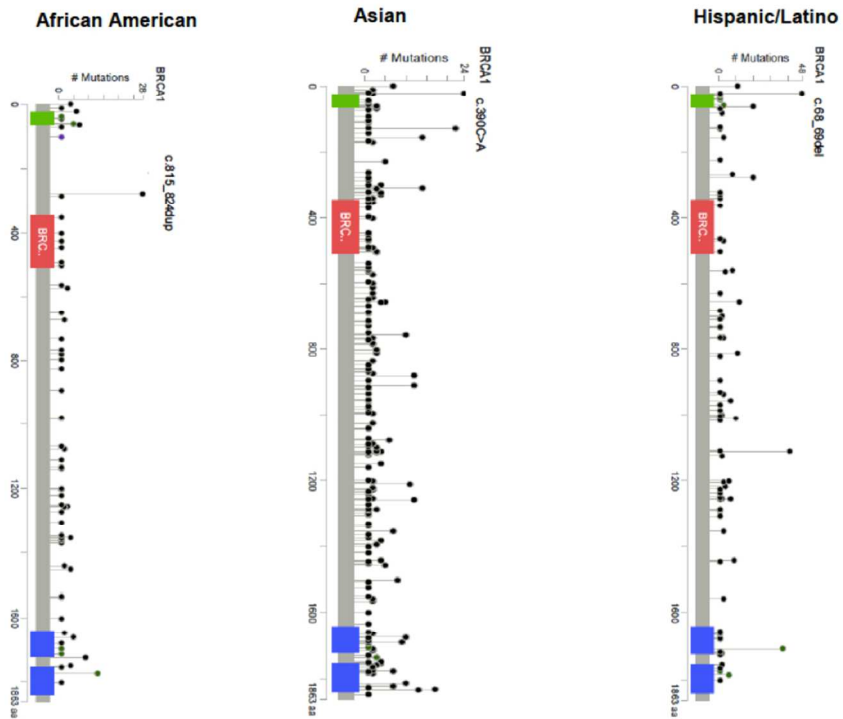


Figure 2: BRCA1 Mutation Distribution in African American, Asian, and Hispanic. Length of mutation indicator reflects the number of observed mutations. Domains are Zinc/Ring finger (green); BRCT domain (red); BRCT (C terminus) (blue). Mutation type is indicated for each mutation by color: green: missense mutations; black: truncating mutations (nonsense, nonstop, frameshift deletion, frameshift insertion, splice site, in-frame mutations); purple: all other types of mutations.

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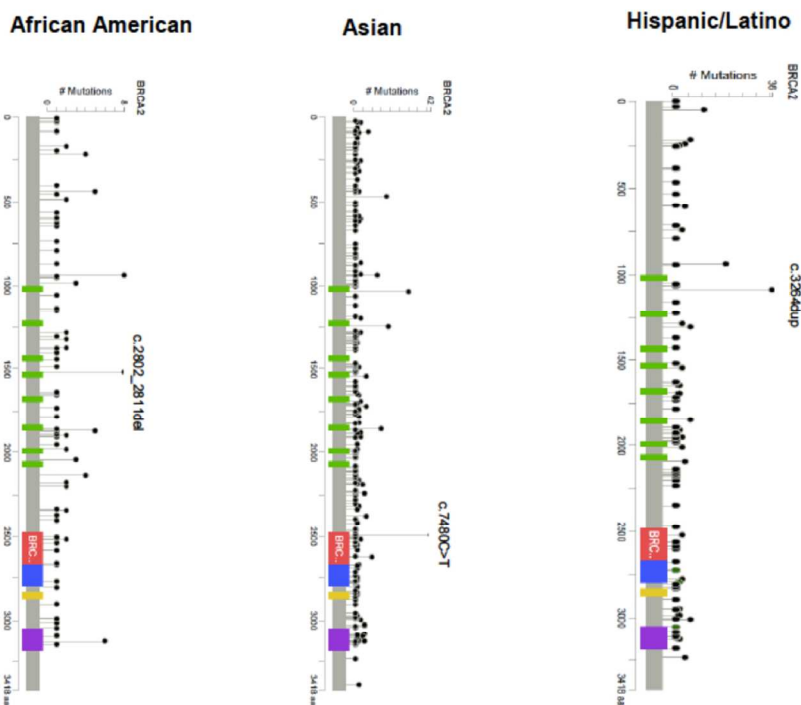


Figure 3: BRCA2 Mutation Distribution in African American, Asian, and Hispanic CIMBA Sample (per family). Length of mutation indicator reflects the number of observed mutations. Domains are BRCA repeats (green); BRCA helica (red); OB binding domain (blue); tower (yellow) and OB3 binding domain (purple). Mutation type is indicated for each mutation by color: green: missense mutations; black: truncating mutations (nonsense, nonstop, frameshift deletion, frameshift insertion, splice site, in-frame mutations); purple: all other types of mutations.

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Gene	HGVS Designation	Mutation Type	Mutation Function	Mutation Effect	Mutation Class	Number of Families Observed
<i>BRCA1</i>	c.(671_4096)ins(300)	ins	unknown	Unknown	3	1
<i>BRCA1</i>	c.[5243_5277+2788del;5277+2916_5277+2946 delinsGG]	DL	Unknown	Unknown	3	1
<i>BRCA1</i>	c.1008dup	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.101_105del	FS	NMD / Re-initi	PTC	1	1
<i>BRCA1</i>	c.1012A>T	NS	NMD	PTC	1	4
<i>BRCA1</i>	c.1016_1017insC	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1016del	FS	NMD	PTC	1	9
<i>BRCA1</i>	c.1016dup	FS	NMD	PTC	1	62
<i>BRCA1</i>	c.1017_1018insA	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1018del	FS	NMD	PTC	1	14
<i>BRCA1</i>	c.102del	FS	NMD / Re-initi	PTC	1	1
<i>BRCA1</i>	c.1039_1040del	FS	NMD	PTC	1	3
<i>BRCA1</i>	c.1044_1045insTCAC	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1044_1047del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1045G>T	NS	NMD	PTC	1	1
<i>BRCA1</i>	c.1049_1050del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1054del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1054G>T	NS	NMD	PTC	1	4
<i>BRCA1</i>	c.1058G>A	NS	NMD	PTC	1	3
<i>BRCA1</i>	c.1059G>A	NS	NMD	PTC	1	2
<i>BRCA1</i>	c.1066C>T	NS	NMD	PTC	1	11
<i>BRCA1</i>	c.1067del	FS	NMD	PTC	1	12
<i>BRCA1</i>	c.1068_1077del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1072del	FS	NMD	PTC	1	2
<i>BRCA1</i>	c.1080C>A	NS	NMD	PTC	1	2
<i>BRCA1</i>	c.1082_1092del	FS	NMD	PTC	1	36
<i>BRCA1</i>	c.1082C>G	NS	NMD	PTC	1	4
<i>BRCA1</i>	c.1086_1087del	FS	NMD	PTC	1	3
<i>BRCA1</i>	c.1086_1141del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1088del	FS	NMD	PTC	1	33
<i>BRCA1</i>	c.1091del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1101_1102insC	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1102G>T	NS	NMD	PTC	1	1
<i>BRCA1</i>	c.1104del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1105dup	FS	NMD	PTC	1	2
<i>BRCA1</i>	c.1115G>A	NS	NMD	PTC	1	3
<i>BRCA1</i>	c.1116G>A	NS	NMD	PTC	1	5
<i>BRCA1</i>	c.112_113del	FS	NMD / Re-initi	PTC	1	4
<i>BRCA1</i>	c.1121_1123delinsT	FS	NMD	PTC	1	9
<i>BRCA1</i>	c.1121del	FS	NMD	PTC	1	18
<i>BRCA1</i>	c.1125_1132del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1127del	FS	NMD	PTC	1	8
<i>BRCA1</i>	c.1129dup	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1138C>T	NS	NMD	PTC	1	1
<i>BRCA1</i>	c.1140del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1141A>T	NS	NMD	PTC	1	1
<i>BRCA1</i>	c.1148_1149del	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.1150G>T	NS	NMD	PTC	1	2
<i>BRCA1</i>	c.1152dup	FS	NMD	PTC	1	1
<i>BRCA1</i>	c.115T>A	MS	MS	MS	2	3
<i>BRCA1</i>	c.115T>C	MS	MS	MS	2	9
<i>BRCA1</i>	c.115T>G	MS	MS	MS	2	27
<i>BRCA1</i>	c.1165del	FS	NMD	PTC	1	2
<i>BRCA1</i>	c.116G>A	MS	MS	MS	2	10

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2	BRCA1	c.116G>T	MS	MS	MS	2	1
3	BRCA1	c.117_118del	FS	NMD / Re-initi	PTC	1	11
4	BRCA1	c.1171G>T	NS	NMD	PTC	1	1
5	BRCA1	c.1174del	FS	NMD	PTC	1	1
6	BRCA1	c.1175_1214del	FS	NMD	PTC	1	63
7	BRCA1	c.1179_1180insT	FS	NMD	PTC	1	1
8	BRCA1	c.117T>G	MS	MS	MS	2	1
9	BRCA1	c.1190del	FS	NMD	PTC	1	1
10	BRCA1	c.1204del	FS	NMD	PTC	1	2
11	BRCA1	c.1204G>T	NS	NMD	PTC	1	2
12	BRCA1	c.1209_1210del	FS	NMD	PTC	1	1
13	BRCA1	c.1209dup	FS	NMD	PTC	1	1
14	BRCA1	c.1210_1211insCT	FS	NMD	PTC	1	1
15	BRCA1	c.1222A>T	NS	NMD	PTC	1	1
16	BRCA1	c.1227_1230dup	FS	NMD	PTC	1	1
17	BRCA1	c.122A>G	MS	MS	MS	2	2
18	BRCA1	c.1232_1233del	FS	NMD	PTC	1	1
19	BRCA1	c.1241dup	FS	NMD	PTC	1	1
20	BRCA1	c.124del	FS	NMD / Re-initi	PTC	1	18
21	BRCA1	c.1251_1252delinsA	FS	NMD	PTC	1	1
22	BRCA1	c.1252dup	FS	NMD	PTC	1	1
23	BRCA1	c.1252G>T	NS	NMD	PTC	1	5
24	BRCA1	c.1255del	FS	NMD	PTC	1	1
25	BRCA1	c.1257del	FS	NMD	PTC	1	1
26	BRCA1	c.1261G>T	NS	NMD	PTC	1	2
27	BRCA1	c.1266T>G	NS	NMD	PTC	1	7
28	BRCA1	c.1273dup	FS	NMD	PTC	1	2
29	BRCA1	c.1277C>A	NS	NMD	PTC	1	1
30	BRCA1	c.1277C>G	NS	NMD	PTC	1	2
31	BRCA1	c.1287dup	FS	NMD	PTC	1	14
32	BRCA1	c.1292dup	FS	NMD	PTC	1	26
33	BRCA1	c.1292T>G	NS	NMD	PTC	1	4
34	BRCA1	c.1297del	FS	NMD	PTC	1	3
35	BRCA1	c.130del	FS	NMD / Re-initi	PTC	1	1
36	BRCA1	c.130T>A	MS	MS	MS	2	24
37	BRCA1	c.1319del	FS	NMD	PTC	1	3
38	BRCA1	c.131G>A	MS	MS	MS	2	3
39	BRCA1	c.131G>T	MS	MS	MS	2	14
40	BRCA1	c.1323_1324del	FS	NMD	PTC	1	1
41	BRCA1	c.1326T>A	NS	NMD	PTC	1	4
42	BRCA1	c.1327_1345del	FS	NMD	PTC	1	1
43	BRCA1	c.132C>T	S	Unknown	Unknown	3	2
44	BRCA1	c.133_134+3delinsT	FS	NMD / Re-initi	PTC	1	1
45	BRCA1	c.133_134del	S	NMD / Re-initi	PTC	1	2
46	BRCA1	c.1333del	FS	NMD	PTC	1	1
47	BRCA1	c.1333G>T	NS	NMD	PTC	1	3
48	BRCA1	c.1335_1336del	FS	NMD	PTC	1	2
49	BRCA1	c.1336del	FS	NMD	PTC	1	1
50	BRCA1	c.1338dup	FS	unknown	Unknown	3	2
51	BRCA1	c.134+1G>A	S	NMD / Re-initi	PTC	1	2
52	BRCA1	c.134+1G>T	S	Unknown	Unknown	3	1
53	BRCA1	c.134+2del	S	Unknown	Unknown	3	1
54	BRCA1	c.134+2T>C	S	Unknown	Unknown	3	2
55	BRCA1	c.134+2T>G	S	Unknown	Unknown	3	1
56	BRCA1	c.134+3_134+6del	S	NMD / Re-initi	PTC	1	3
57	BRCA1	c.134+3A>C	S	NMD / Re-initi	PTC	1	8
58	BRCA1	c.1340_1341insG	FS	NMD	PTC	1	4
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2	BRCA1	c.1347del	FS	NMD	PTC	1	1
3	BRCA1	c.135-?_212+?del	DL	Unknown	Unknown	3	11
4	BRCA1	c.135-?_301+?del	DL	Unknown	Unknown	3	1
5	BRCA1	c.135-?_4185+?del	DL	Unknown	Unknown	3	1
6	BRCA1	c.135-?_441+?del	DL	Unknown	Unknown	3	15
7	BRCA1	c.135-?_441+?dup	DP	Unknown	Unknown	3	2
8	BRCA1	c.135-?_4484+?del	DL	Unknown	Unknown	3	3
9	BRCA1	c.135-?_547+?del	DL	Unknown	Unknown	3	2
10	BRCA1	c.135-?_547+?dup	DP	Unknown	Unknown	3	1
11	BRCA1	c.135-?_5592+?del	DL	Unknown	Unknown	3	1
12	BRCA1	c.135-?_670+?del	DL	Unknown	Unknown	3	3
13	BRCA1	c.135-1004_441+1609del	DL	Unknown	Unknown	3	1
14	BRCA1	c.135-1206_441+1607del	DL	NMD / Re-initi	PTC	1	1
15	BRCA1	c.135-1G>C	S	Unknown	Unknown	3	6
16	BRCA1	c.135-1G>T	S	IFD	IFD	2	19
17	BRCA1	c.135-2A>G	S	Unknown	Unknown	3	2
18	BRCA1	c.1352C>A	NS	NMD	PTC	1	2
19	BRCA1	c.135-485_4484+1054del	DL	Unknown	Unknown	3	1
20	BRCA1	c.1354del	FS	NMD	PTC	1	1
21	BRCA1	c.1356del	FS	NMD	PTC	1	2
22	BRCA1	c.1360_1361del	FS	NMD	PTC	1	27
23	BRCA1	c.1371del	FS	NMD	PTC	1	8
24	BRCA1	c.1374del	FS	NMD	PTC	1	5
25	BRCA1	c.1375A>T	NS	NMD	PTC	1	1
26	BRCA1	c.1378dup	FS	NMD	PTC	1	1
27	BRCA1	c.1379del	FS	NMD	PTC	1	1
28	BRCA1	c.1380dup	FS	NMD	PTC	1	40
29	BRCA1	c.1386del	FS	NMD	PTC	1	1
30	BRCA1	c.1390del	FS	NMD	PTC	1	1
31	BRCA1	c.1390dup	FS	NMD	PTC	1	1
32	BRCA1	c.1392del	FS	NMD	PTC	1	1
33	BRCA1	c.1393_1394ins(10)	FS	NMD	PTC	1	1
34	BRCA1	c.139T>A	MS	MS	MS	2	1
35	BRCA1	c.140_141insT	FS	NMD / Re-initi	PTC	1	1
36	BRCA1	c.1403del	FS	NMD	PTC	1	1
37	BRCA1	c.1405del	FS	NMD	PTC	1	1
38	BRCA1	c.1407_1408del	FS	NMD	PTC	1	3
39	BRCA1	c.140G>A	MS	MS	MS	2	10
40	BRCA1	c.140G>T	MS	MS	MS	2	6
41	BRCA1	c.1412dup	FS	NMD	PTC	1	1
42	BRCA1	c.1421T>G	NS	NMD	PTC	1	1
43	BRCA1	c.1428_1437del	FS	NMD	PTC	1	1
44	BRCA1	c.1439dup	FS	NMD	PTC	1	1
45	BRCA1	c.143del	FS	NMD / Re-initi	PTC	1	8
46	BRCA1	c.1440_1441insA	FS	NMD	PTC	1	2
47	BRCA1	c.1444_1447del	FS	NMD	PTC	1	4
48	BRCA1	c.1444del	FS	NMD	PTC	1	1
49	BRCA1	c.144del	FS	NMD / Re-initi	PTC	1	2
50	BRCA1	c.1450G>T	NS	NMD	PTC	1	2
51	BRCA1	c.1465G>T	NS	NMD	PTC	1	2
52	BRCA1	c.1471C>T	NS	NMD	PTC	1	9
53	BRCA1	c.1480C>T	NS	NMD	PTC	1	14
54	BRCA1	c.1483_1498del	FS	NMD	PTC	1	4
55	BRCA1	c.1488del	FS	NMD	PTC	1	1
56	BRCA1	c.1492del	FS	NMD	PTC	1	1
57	BRCA1	c.1499del	FS	NMD	PTC	1	1
58	BRCA1	c.1504_1507del	FS	NMD	PTC	1	4
59							
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2	BRCA1	c.1504_1508del	FS	NMD	PTC	1	52
3	BRCA1	c.1505_1509del	FS	NMD	PTC	1	12
4	BRCA1	c.1505T>G	NS	NMD	PTC	1	2
5	BRCA1	c.1508del	FS	NMD	PTC	1	4
6	BRCA1	c.150del	FS	NMD	PTC	1	1
7	BRCA1	c.1510del	FS	NMD	PTC	1	4
8	BRCA1	c.1511dup	FS	NMD	PTC	1	3
9	BRCA1	c.1512dup	FS	NMD	PTC	1	3
10	BRCA1	c.1513_1514insT	FS	NMD	PTC	1	1
11	BRCA1	c.1513A>T	NS	NMD	PTC	1	2
12	BRCA1	c.1523del	FS	NMD	PTC	1	4
13	BRCA1	c.1529C>A	NS	NMD	PTC	1	1
14	BRCA1	c.1529C>G	NS	NMD	PTC	1	9
15	BRCA1	c.1530del	FS	NMD	PTC	1	2
16	BRCA1	c.1551del	FS	NMD	PTC	1	2
17	BRCA1	c.1556del	FS	NMD	PTC	1	47
18	BRCA1	c.1575del	FS	NMD	PTC	1	1
19	BRCA1	c.1576C>T	NS	NMD	PTC	1	3
20	BRCA1	c.1579_1580del	FS	NMD	PTC	1	1
21	BRCA1	c.1600C>T	NS	NMD	PTC	1	4
22	BRCA1	c.1601_1602del	FS	NMD	PTC	1	2
23	BRCA1	c.1601dup	FS	NMD	PTC	1	1
24	BRCA1	c.1604_1612delins(13)	FS	NMD	PTC	1	1
25	BRCA1	c.160C>T	NS	NMD	PTC	1	4
26	BRCA1	c.1612C>T	NS	NMD	PTC	1	6
27	BRCA1	c.1616_1625del	FS	NMD	PTC	1	1
28	BRCA1	c.1618G>T	NS	NMD	PTC	1	1
29	BRCA1	c.1621C>T	NS	NMD	PTC	1	25
30	BRCA1	c.1623dup	FS	NMD	PTC	1	1
31	BRCA1	c.1630C>T	NS	NMD	PTC	1	4
32	BRCA1	c.1637_1685delinsGAAAG	FS	NMD	PTC	1	1
33	BRCA1	c.1642_1643del	FS	NMD	PTC	1	1
34	BRCA1	c.1642_1650delins(2)	FS	NMD	PTC	1	1
35	BRCA1	c.1649del	FS	NMD	PTC	1	1
36	BRCA1	c.1651_1652insC	FS	NMD	PTC	1	4
37	BRCA1	c.1669del	FS	NMD	PTC	1	3
38	BRCA1	c.1673_1674del	FS	NMD	PTC	1	2
39	BRCA1	c.1674del	FS	NMD	PTC	1	13
40	BRCA1	c.1687C>T	NS	NMD	PTC	1	273
41	BRCA1	c.1693G>T	NS	NMD	PTC	1	1
42	BRCA1	c.1713_1717del	FS	NMD	PTC	1	3
43	BRCA1	c.1714G>T	NS	NMD	PTC	1	2
44	BRCA1	c.1716del	FS	NMD	PTC	1	2
45	BRCA1	c.171del	FS	NMD / Re-initi	PTC	1	3
46	BRCA1	c.171dup	FS	NMD	PTC	1	1
47	BRCA1	c.1723G>T	NS	NMD	PTC	1	1
48	BRCA1	c.1729G>T	NS	NMD	PTC	1	3
49	BRCA1	c.1733_1734del	FS	NMD	PTC	1	1
50	BRCA1	c.1747A>T	NS	NMD	PTC	1	2
51	BRCA1	c.1757del	FS	NMD	PTC	1	12
52	BRCA1	c.1762dup	FS	NMD	PTC	1	1
53	BRCA1	c.176C>A	NS	NMD	PTC	1	1
54	BRCA1	c.1772del	FS	NMD	PTC	1	5
55	BRCA1	c.1779_1785del	FS	NMD	PTC	1	1
56	BRCA1	c.178C>T	NS	NMD / Re-initi	PTC	1	10
57	BRCA1	c.1793T>A	NS	NMD	PTC	1	4
58	BRCA1	c.1793T>A/G	NS	NMD	PTC	1	2
59							
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2	BRCA1	c.1793T>G	NS	NMD	PTC	1	2
3	BRCA1	c.1795_1798del	FS	NMD	PTC	1	1
4	BRCA1	c.179dup	FS	NMD	PTC	1	1
5	BRCA1	c.1803del	FS	NMD	PTC	1	1
6	BRCA1	c.1805del	FS	NMD	PTC	1	2
7	BRCA1	c.1808C>G	NS	NMD	PTC	1	1
8	BRCA1	c.1812del	FS	NMD	PTC	1	2
9	BRCA1	c.1819A>T	NS	NMD	PTC	1	3
10	BRCA1	c.181T>A	MS	MS	MS	2	2
11	BRCA1	c.181T>C	MS	MS	MS	2	7
12	BRCA1	c.181T>G	MS	MS	MS	2	897
13	BRCA1	c.182_183del	FS	NMD	PTC	1	1
14	BRCA1	c.182_183insGCCG	FS	NMD	PTC	1	1
15	BRCA1	c.1820_1823del	FS	NMD	PTC	1	1
16	BRCA1	c.1823_1826del	FS	NMD	PTC	1	25
17	BRCA1	c.1823del	FS	NMD	PTC	1	1
18	BRCA1	c.182G>A	MS	MS	MS	2	6
19	BRCA1	c.1831del	FS	NMD	PTC	1	2
20	BRCA1	c.1840A>T	NS	NMD	PTC	1	2
21	BRCA1	c.1844_1845insG	FS	NMD	PTC	1	1
22	BRCA1	c.1860del	FS	NMD	PTC	1	2
23	BRCA1	c.1870G>T	NS	NMD	PTC	1	2
24	BRCA1	c.1874_1877dup	FS	NMD	PTC	1	39
25	BRCA1	c.1878_1879insTAGT	FS	NMD	PTC	1	1
26	BRCA1	c.1881_1884del	FS	NMD	PTC	1	10
27	BRCA1	c.1885del	FS	NMD	PTC	1	1
28	BRCA1	c.1887_1900dup	FS	NMD	PTC	1	3
29	BRCA1	c.188T>A	NS	NMD	PTC	1	3
30	BRCA1	c.188T>A/G	NS	NMD	PTC	1	1
31	BRCA1	c.1892dup	FS	NMD	PTC	1	16
32	BRCA1	c.1893_1894insT	FS	NMD	PTC	1	5
33	BRCA1	c.1898del	FS	NMD	PTC	1	1
34	BRCA1	c.-19-?_5592+?del	DL	Unknown	Unknown	3	10
35	BRCA1	c.-19-?_80+?del	DL	Unknown	Unknown	3	10
36	BRCA1	c.-19-?_80+?dup	DP	Unknown	Unknown	3	3
37	BRCA1	c.19_47del	FS	NMD / Re-initi	PTC	1	4
38	BRCA1	c.1905_1909del	FS	NMD	PTC	1	1
39	BRCA1	c.1906del	FS	NMD	PTC	1	1
40	BRCA1	c.1908_1911del	FS	NMD	PTC	1	1
41	BRCA1	c.190T>C	MS	MS	MS	2	53
42	BRCA1	c.190T>G	S	NMD / Re-initi	PTC	1	9
43	BRCA1	c.1912del	FS	NMD	PTC	1	7
44	BRCA1	c.1912G>T	NS	NMD	PTC	1	1
45	BRCA1	c.1916T>A	NS	NMD	PTC	1	13
46	BRCA1	c.1918C>T	NS	NMD	PTC	1	3
47	BRCA1	c.191G>A	MS	MS	MS	2	53
48	BRCA1	c.1921dup	FS	NMD	PTC	1	2
49	BRCA1	c.-19-2A>G	S	Unknown	Unknown	3	1
50	BRCA1	c.192T>G	MS	MS	MS	2	1
51	BRCA1	c.1930del	FS	NMD	PTC	1	1
52	BRCA1	c.1936del	FS	NMD	PTC	1	1
53	BRCA1	c.1938_1945del	FS	NMD	PTC	1	1
54	BRCA1	c.1938_1947del	FS	NMD	PTC	1	3
55	BRCA1	c.1942G>T	NS	NMD	PTC	1	1
56	BRCA1	c.1945G>T	NS	NMD	PTC	1	1
57	BRCA1	c.1949_1950del	FS	NMD	PTC	1	2
58	BRCA1	c.1949_1952del	FS	NMD	PTC	1	1
59							
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2	<i>BRCA1</i>	c.-19-49_80+248delinsU77841.1:g.2145_2536	DL	No RNA	No RNA	1	1
3	<i>BRCA1</i>	c.1952del	FS	NMD	PTC	1	1
4	<i>BRCA1</i>	c.1952dup	FS	NMD	PTC	1	3
5	<i>BRCA1</i>	c.1953_1956del	FS	NMD	PTC	1	32
6	<i>BRCA1</i>	c.1953del	FS	NMD	PTC	1	1
7	<i>BRCA1</i>	c.1953dup	FS	NMD	PTC	1	3
8	<i>BRCA1</i>	c.1958_1961del	FS	NMD	PTC	1	1
9	<i>BRCA1</i>	c.195del	FS	NMD / Re-initi	PTC	1	1
10	<i>BRCA1</i>	c.1960A>T	NS	NMD	PTC	1	11
11	<i>BRCA1</i>	c.1961del	FS	NMD	PTC	1	78
12	<i>BRCA1</i>	c.1961dup	FS	NMD	PTC	1	29
13	<i>BRCA1</i>	c.1962dup	FS	unknown	Unknown	3	1
14	<i>BRCA1</i>	c.1963_1964insG	FS	NMD	PTC	1	1
15	<i>BRCA1</i>	c.1965C>A	NS	NMD	PTC	1	1
16	<i>BRCA1</i>	c.1969C>T	NS	NMD	PTC	1	1
17	<i>BRCA1</i>	c.1972del	FS	NMD	PTC	1	1
18	<i>BRCA1</i>	c.1978del	FS	NMD	PTC	1	1
19	<i>BRCA1</i>	c.1996del	FS	NMD	PTC	1	2
20	<i>BRCA1</i>	c.1A>G	MS/?	Re-initiation	MS	1	17
21	<i>BRCA1</i>	c.-20+330_80+1609del2534	DL	Unknown	Unknown	3	1
22	<i>BRCA1</i>	c.-200-?_80+?del36935	DL	No RNA	No RNA	1	1
23	<i>BRCA1</i>	c.2001dup	FS	NMD	PTC	1	2
24	<i>BRCA1</i>	c.2012dup	FS	NMD	PTC	1	4
25	<i>BRCA1</i>	c.2014A>T	NS	NMD	PTC	1	1
26	<i>BRCA1</i>	c.2017G>T	NS	NMD	PTC	1	2
27	<i>BRCA1</i>	c.2019del	FS	NMD	PTC	1	30
28	<i>BRCA1</i>	c.202dup	FS	NMD	PTC	1	1
29	<i>BRCA1</i>	c.2035A>T	NS	NMD	PTC	1	30
30	<i>BRCA1</i>	c.2037delinsCC	FS	NMD	PTC	1	9
31	<i>BRCA1</i>	c.2043dup	FS	NMD	PTC	1	9
32	<i>BRCA1</i>	c.2059C>T	NS	NMD	PTC	1	1
33	<i>BRCA1</i>	c.2063_2066del	FS	NMD	PTC	1	1
34	<i>BRCA1</i>	c.2066_2069del	FS	NMD	PTC	1	2
35	<i>BRCA1</i>	c.2068A>T	NS	NMD	PTC	1	1
36	<i>BRCA1</i>	c.2070_2071del	FS	NMD	PTC	1	1
37	<i>BRCA1</i>	c.2071del	FS	NMD	PTC	1	32
38	<i>BRCA1</i>	c.2074del	FS	NMD	PTC	1	2
39	<i>BRCA1</i>	c.2077_2078insTA	FS	NMD	PTC	1	3
40	<i>BRCA1</i>	c.2077delinsATA	FS	NMD	PTC	1	1
41	<i>BRCA1</i>	c.2078_2079insTA	FS	NMD	PTC	1	1
42	<i>BRCA1</i>	c.2080dup	FS	NMD	PTC	1	1
43	<i>BRCA1</i>	c.2086_2089del	FS	NMD	PTC	1	1
44	<i>BRCA1</i>	c.2086dup	FS	NMD	PTC	1	1
45	<i>BRCA1</i>	c.2090dup	FS	NMD	PTC	1	2
46	<i>BRCA1</i>	c.2105del	FS	NMD	PTC	1	1
47	<i>BRCA1</i>	c.2105dup	FS	NMD	PTC	1	5
48	<i>BRCA1</i>	c.2110_2111del	FS	NMD	PTC	1	2
49	<i>BRCA1</i>	c.2112_2131dup	FS	NMD	PTC	1	1
50	<i>BRCA1</i>	c.211A>G	S	NMD / Re-initi	PTC	1	128
51	<i>BRCA1</i>	c.211del	FS	NMD / Re-initi	PTC	1	9
52	<i>BRCA1</i>	c.212+1G>A	S	Unknown	Unknown	3	33
53	<i>BRCA1</i>	c.212+1G>C	S	Unknown	Unknown	3	1
54	<i>BRCA1</i>	c.212+1G>T	S	NMD / Re-initi	PTC	1	17
55	<i>BRCA1</i>	c.212+2T>C	S	Unknown	Unknown	3	3
56	<i>BRCA1</i>	c.212+3A>G	S	NMD / Re-initi	PTC	1	56
57	<i>BRCA1</i>	c.2125_2126insA	FS	NMD	PTC	1	15
58	<i>BRCA1</i>	c.2125_2126insAGT	FS	NMD	PTC	1	1
59							
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2	BRCA1	c.2126_2127del	FS	NMD	PTC	1	2
3	BRCA1	c.2127_2128insGA	FS	NMD	PTC	1	1
4	BRCA1	c.2127del	FS	NMD	PTC	1	1
5	BRCA1	c.212G>A	S	NMD / Re-initi	PTC	1	3
6	BRCA1	c.212G>C	S?	Unknown	Unknown	3	2
7	BRCA1	c.212G>T	S?	Unknown	Unknown	3	1
8	BRCA1	c.213-?_441+?del	DL	Unknown	Unknown	3	1
9	BRCA1	c.2131_2132del	FS	NMD	PTC	1	1
10	BRCA1	c.213-11T>G	S	NMD / Re-initi	PTC	1	62
11	BRCA1	c.213-12A>G	S	NMD / Re-initi	PTC	1	30
12	BRCA1	c.213-15A>G	S	NMD	PTC	1	1
13	BRCA1	c.213-1G>A	S	Unknown	Unknown	3	3
14	BRCA1	c.213-2A>C	S	Unknown	Unknown	3	4
15	BRCA1	c.213-2A>G	S	NMD / Re-initi	PTC	1	5
16	BRCA1	c.2135_2136del	FS	NMD	PTC	1	1
17	BRCA1	c.2138_2139dup	FS	NMD	PTC	1	1
18	BRCA1	c.2138C>A	NS	NMD	PTC	1	4
19	BRCA1	c.2138C>G	NS	NMD	PTC	1	6
20	BRCA1	c.2142_2144delinsAG	FS	NMD	PTC	1	1
21	BRCA1	c.2142del	FS	NMD	PTC	1	1
22	BRCA1	c.2149G>T	NS	NMD	PTC	1	1
23	BRCA1	c.2155_2168del	FS	NMD	PTC	1	1
24	BRCA1	c.2155_2221dup	FS	NMD	PTC	1	1
25	BRCA1	c.2155A>T	NS	NMD	PTC	1	1
26	BRCA1	c.2157_2160del	FS	NMD	PTC	1	1
27	BRCA1	c.2157dup	FS	NMD	PTC	1	1
28	BRCA1	c.2158G>T	NS	NMD	PTC	1	2
29	BRCA1	c.2161_2162insG	FS	NMD	PTC	1	1
30	BRCA1	c.2176_2177del	FS	NMD	PTC	1	2
31	BRCA1	c.2185_2189del	FS	NMD	PTC	1	1
32	BRCA1	c.2188_2195delinsAAAAAGG	FS	NMD	PTC	1	1
33	BRCA1	c.2188_2201del	FS	NMD	PTC	1	1
34	BRCA1	c.2192_2196del	FS	NMD	PTC	1	1
35	BRCA1	c.2193del	FS	NMD	PTC	1	1
36	BRCA1	c.2194delinsAA	FS	NMD	PTC	1	2
37	BRCA1	c.2194G>T	NS	NMD	PTC	1	2
38	BRCA1	c.2197_2201del	FS	NMD	PTC	1	55
39	BRCA1	c.2197G>T	NS	NMD	PTC	1	2
40	BRCA1	c.2198dup	FS	NMD	PTC	1	1
41	BRCA1	c.2199del	FS	NMD	PTC	1	4
42	BRCA1	c.22_50del	FS	NMD / Re-initi	PTC	1	1
43	BRCA1	c.2202dup	FS	NMD	PTC	1	1
44	BRCA1	c.2205del	FS	NMD	PTC	1	1
45	BRCA1	c.220C>T	NS	NMD / Re-initi	PTC	1	15
46	BRCA1	c.2210_2211del	FS	NMD	PTC	1	4
47	BRCA1	c.2210del	FS	NMD	PTC	1	3
48	BRCA1	c.2211dup	FS	NMD	PTC	1	1
49	BRCA1	c.2212_2215del	FS	NMD	PTC	1	2
50	BRCA1	c.2213_2214dup	FS	NMD	PTC	1	2
51	BRCA1	c.2214_2218delinsAAA	FS	NMD	PTC	1	2
52	BRCA1	c.2214dup	FS	NMD	PTC	1	1
53	BRCA1	c.2215_2216insCT	FS	NMD	PTC	1	1
54	BRCA1	c.2215A>T	NS	NMD	PTC	1	3
55	BRCA1	c.2216_2217del	FS	NMD	PTC	1	3
56	BRCA1	c.2217dup	FS	NMD	PTC	1	5
57	BRCA1	c.2218del	FS	NMD	PTC	1	1
58	BRCA1	c.2222_2223del	FS	NMD	PTC	1	1
59							
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2	BRCA1	c.2223dup	FS	NMD	PTC	1	1
3	BRCA1	c.2241del	FS	NMD	PTC	1	4
4	BRCA1	c.2241dup	FS	NMD	PTC	1	1
5	BRCA1	c.2242_2251del	FS	NMD	PTC	1	2
6	BRCA1	c.2253_2254del	FS	NMD	PTC	1	3
7	BRCA1	c.2255T>A/G	NS	NMD	PTC	1	1
8	BRCA1	c.2263del	FS	NMD	PTC	1	1
9	BRCA1	c.2263G>T	NS	NMD	PTC	1	10
10	BRCA1	c.2269del	FS	NMD	PTC	1	39
11	BRCA1	c.2273del	FS	NMD	PTC	1	1
12	BRCA1	c.2283_2284del	FS	NMD	PTC	1	1
13	BRCA1	c.2292_2310dup	FS	NMD	PTC	1	2
14	BRCA1	c.2293G>T	NS	NMD	PTC	1	1
15	BRCA1	c.2296_2297del	FS	NMD	PTC	1	12
16	BRCA1	c.2298dup	FS	NMD	PTC	1	1
17	BRCA1	c.2299del	FS	NMD	PTC	1	1
18	BRCA1	c.2307_2313del	FS	NMD	PTC	1	1
19	BRCA1	c.2309C>A	NS	NMD	PTC	1	17
20	BRCA1	c.2309C>G	NS	NMD	PTC	1	7
21	BRCA1	c.2311_2312insC	FS	NMD	PTC	1	1
22	BRCA1	c.2314_2315del	FS	NMD	PTC	1	1
23	BRCA1	c.-232-?_134+?del	DL	No RNA	No RNA	1	11
24	BRCA1	c.-232-?_-19+?del	DL	No RNA	No RNA	1	2
25	BRCA1	c.-232-?_4096+?del	DL	No RNA	No RNA	1	1
26	BRCA1	c.-232-?_4185+?del	DL	No RNA	No RNA	1	10
27	BRCA1	c.-232-?_4357+?del	DL	No RNA	No RNA	1	6
28	BRCA1	c.-232-?_4357+?del(;);4987-?_5277+?del	DL	No RNA	No RNA	1	1
29	BRCA1	c.-232-?_441+?del	DL	No RNA	No RNA	1	12
30	BRCA1	c.-232-?_4484+?del	DL	No RNA	No RNA	1	3
31	BRCA1	c.-232-?_5074+?del	DL	No RNA	No RNA	1	25
32	BRCA1	c.-232-?_5193+?del	DL	No RNA	No RNA	1	1
33	BRCA1	c.-232-?_5277+?del	DL	No RNA	No RNA	1	1
34	BRCA1	c.-232-?_5332+?del	DL	No RNA	No RNA	1	1
35	BRCA1	c.-232-?_5406+?del	DL	No RNA	No RNA	1	1
36	BRCA1	c.-232-?_5406+?dup	DP	Unknown	Unknown	3	1
37	BRCA1	c.-232-?_5467+?del	DL	No RNA	No RNA	1	22
38	BRCA1	c.-232-?_5592+?del	DL	No RNA	No RNA	1	19
39	BRCA1	c.-232-?_80+?del	DL	No RNA	No RNA	1	103
40	BRCA1	c.-232-?_80+?dup	DP	Unknown	Unknown	3	1
41	BRCA1	c.2322del	FS	NMD	PTC	1	1
42	BRCA1	c.-232-31433_80+4171del	DL	No RNA	No RNA	1	4
43	BRCA1	c.2329del	FS	NMD	PTC	1	1
44	BRCA1	c.232del	FS	NMD / Re-initi	PTC	1	1
45	BRCA1	c.2331T>G	NS	NMD	PTC	1	1
46	BRCA1	c.2338C>T	NS	NMD	PTC	1	64
47	BRCA1	c.2340_2343del	FS	NMD	PTC	1	2
48	BRCA1	c.2346dup	FS	NMD	PTC	1	1
49	BRCA1	c.2350_2351del	FS	NMD	PTC	1	3
50	BRCA1	c.2354T>A	NS	NMD	PTC	1	2
51	BRCA1	c.2355dup	FS	NMD	PTC	1	1
52	BRCA1	c.2357del	FS	NMD	PTC	1	3
53	BRCA1	c.2359dup	FS	NMD	PTC	1	47
54	BRCA1	c.2361del	FS	NMD	PTC	1	1
55	BRCA1	c.2368_2369del	FS	NMD	PTC	1	1
56	BRCA1	c.237del	FS	NMD / Re-initi	PTC	1	2
57	BRCA1	c.2386_2387delinsT	FS	NMD	PTC	1	1
58	BRCA1	c.2386dup	FS	NMD	PTC	1	1
59							
60							

1							
2	BRCA1	c.2389_2390del	FS	NMD	PTC	1	5
3	BRCA1	c.2389G>T	NS	NMD	PTC	1	8
4	BRCA1	c.239_241delinsTT	FS	NMD	PTC	1	1
5	BRCA1	c.2396del	FS	NMD	PTC	1	1
6	BRCA1	c.2398_2411del	FS	NMD	PTC	1	1
7	BRCA1	c.2403T>A	NS	NMD	PTC	1	2
8	BRCA1	c.2405_2406del	FS	NMD	PTC	1	20
9	BRCA1	c.2406_2409del	FS	NMD	PTC	1	1
10	BRCA1	c.2410C>T	NS	NMD	PTC	1	5
11	BRCA1	c.2411_2412del	FS	NMD	PTC	1	54
12	BRCA1	c.2411del	FS	NMD	PTC	1	1
13	BRCA1	c.2418del	FS	NMD	PTC	1	1
14	BRCA1	c.2418dup	FS	NMD	PTC	1	1
15	BRCA1	c.241C>T	NS	NMD / Re-initi	PTC	1	5
16	BRCA1	c.2424del	FS	NMD	PTC	1	1
17	BRCA1	c.2429del	FS	NMD	PTC	1	4
18	BRCA1	c.2429dup	FS	NMD	PTC	1	1
19	BRCA1	c.2433del	FS	NMD	PTC	1	15
20	BRCA1	c.2434A>T	NS	NMD	PTC	1	1
21	BRCA1	c.2437G>T	NS	NMD	PTC	1	2
22	BRCA1	c.2442_2443insT	FS	NMD	PTC	1	1
23	BRCA1	c.2445_2448del	FS	NMD	PTC	1	2
24	BRCA1	c.2457del	FS	NMD	PTC	1	37
25	BRCA1	c.246del	FS	NMD / Re-initi	PTC	1	4
26	BRCA1	c.2473del	FS	NMD	PTC	1	1
27	BRCA1	c.2474dup	FS	NMD	PTC	1	2
28	BRCA1	c.2475del	FS	NMD	PTC	1	206
29	BRCA1	c.2476del	FS	NMD	PTC	1	9
30	BRCA1	c.2477_2478del	FS	NMD	PTC	1	2
31	BRCA1	c.2477_2492delinsTG	FS	NMD	PTC	1	1
32	BRCA1	c.2481del	FS	NMD	PTC	1	1
33	BRCA1	c.2487_2488insCCCCT	FS	NMD	PTC	1	1
34	BRCA1	c.2487del	FS	NMD	PTC	1	3
35	BRCA1	c.2487dup	FS	NMD	PTC	1	8
36	BRCA1	c.2488_2497dup	FS	NMD	PTC	1	1
37	BRCA1	c.2489_2492del	FS	NMD	PTC	1	1
38	BRCA1	c.2490_2497dup	FS	NMD	PTC	1	1
39	BRCA1	c.2501del	FS	NMD	PTC	1	1
40	BRCA1	c.2504_2505ins(17)	FS	NMD	PTC	1	2
41	BRCA1	c.2507_2508del	FS	NMD	PTC	1	2
42	BRCA1	c.250G>T	NS	NMD / Re-initi	PTC	1	2
43	BRCA1	c.2515del	FS	NMD	PTC	1	8
44	BRCA1	c.2517_2518del	FS	NMD	PTC	1	1
45	BRCA1	c.2518del	FS	NMD	PTC	1	1
46	BRCA1	c.2524dup	FS	NMD	PTC	1	3
47	BRCA1	c.2524G>T	NS	NMD	PTC	1	1
48	BRCA1	c.2529_2530del	FS	NMD	PTC	1	1
49	BRCA1	c.2532_2536del	FS	NMD	PTC	1	1
50	BRCA1	c.2536G>T	NS	NMD	PTC	1	1
51	BRCA1	c.2538_2540delinsG	FS	NMD	PTC	1	1
52	BRCA1	c.2542_2545del	FS	NMD	PTC	1	1
53	BRCA1	c.2545G>T	NS	NMD	PTC	1	1
54	BRCA1	c.2551G>T	NS	NMD	PTC	1	1
55	BRCA1	c.2552_2553del	FS	NMD	PTC	1	1
56	BRCA1	c.2552_2553dup	FS	NMD	PTC	1	1
57	BRCA1	c.2558dup	FS	NMD	PTC	1	1
58	BRCA1	c.2560_2561dup	FS	NMD	PTC	1	12
59							
60							

1							
2	BRCA1	c.2561_2565del	FS	NMD	PTC	1	6
3	BRCA1	c.2562_2563insGC	FS	NMD	PTC	1	1
4	BRCA1	c.2563C>T	NS	NMD	PTC	1	4
5	BRCA1	c.2568T>G	NS	NMD	PTC	1	2
6	BRCA1	c.2572C>T	NS	NMD	PTC	1	5
7	BRCA1	c.2577_2578insTT	FS	NMD	PTC	1	1
8	BRCA1	c.2586_2593del	FS	NMD	PTC	1	1
9	BRCA1	c.2587del	FS	NMD	PTC	1	2
10	BRCA1	c.2594del	FS	NMD	PTC	1	1
11	BRCA1	c.2599C>T	NS	NMD	PTC	1	1
12	BRCA1	c.2603C>G	NS	NMD	PTC	1	14
13	BRCA1	c.260T>A	NS	NMD / Re-initi	PTC	1	1
14	BRCA1	c.2611_2612del	FS	NMD	PTC	1	1
15	BRCA1	c.2612_2613insT	FS	NMD	PTC	1	13
16	BRCA1	c.2612delinsTT	FS	NMD	PTC	1	7
17	BRCA1	c.2617del	FS	NMD	PTC	1	1
18	BRCA1	c.2617dup	FS	NMD	PTC	1	2
19	BRCA1	c.2635G>T	NS	NMD	PTC	1	12
20	BRCA1	c.2637del	FS	NMD	PTC	1	1
21	BRCA1	c.2641G>T	NS	NMD	PTC	1	22
22	BRCA1	c.2643del	FS	NMD	PTC	1	3
23	BRCA1	c.2646_2648del	FS	NMD	PTC	1	6
24	BRCA1	c.2648_2649insGGCA	FS	NMD	PTC	1	1
25	BRCA1	c.2649_2650del	FS	NMD	PTC	1	1
26	BRCA1	c.2649_2650insGGCA	FS	NMD	PTC	1	1
27	BRCA1	c.2652dup	FS	NMD	PTC	1	1
28	BRCA1	c.2657_2658del	FS	NMD	PTC	1	4
29	BRCA1	c.2659dup	FS	NMD	PTC	1	1
30	BRCA1	c.2670del	FS	NMD	PTC	1	2
31	BRCA1	c.2675T>G	NS	NMD	PTC	1	1
32	BRCA1	c.2678dup	FS	NMD	PTC	1	1
33	BRCA1	c.2679_2682del	FS	NMD	PTC	1	30
34	BRCA1	c.2681_2682del	FS	NMD	PTC	1	83
35	BRCA1	c.2682del	FS	NMD	PTC	1	1
36	BRCA1	c.2683_2686del	FS	NMD	PTC	1	1
37	BRCA1	c.2683C>T	NS	NMD	PTC	1	3
38	BRCA1	c.2685_2686del	FS	NMD	PTC	1	78
39	BRCA1	c.2686dup	FS	NMD	PTC	1	1
40	BRCA1	c.2687_2693del	FS	NMD	PTC	1	3
41	BRCA1	c.269_281del	FS	NMD	PTC	1	1
42	BRCA1	c.2694del	FS	NMD	PTC	1	1
43	BRCA1	c.2694dup	FS	NMD	PTC	1	2
44	BRCA1	c.2702_2703del	FS	NMD	PTC	1	3
45	BRCA1	c.2704del	FS	NMD	PTC	1	1
46	BRCA1	c.2706_2707dup	FS	NMD	PTC	1	2
47	BRCA1	c.2709_2710del	FS	NMD	PTC	1	1
48	BRCA1	c.2709del	FS	NMD	PTC	1	1
49	BRCA1	c.2710G>T	NS	NMD	PTC	1	1
50	BRCA1	c.2713C>T	NS	NMD	PTC	1	3
51	BRCA1	c.2719_2722del	FS	NMD	PTC	1	4
52	BRCA1	c.2719del	FS	NMD	PTC	1	1
53	BRCA1	c.2719G>T	NS	NMD	PTC	1	1
54	BRCA1	c.2722G>T	NS	NMD	PTC	1	54
55	BRCA1	c.2726_2730del	FS	NMD	PTC	1	1
56	BRCA1	c.2726dup	FS	NMD	PTC	1	12
57	BRCA1	c.2727_2730del	FS	NMD	PTC	1	20
58	BRCA1	c.2728del	FS	NMD	PTC	1	1
59							
60							

1							
2	BRCA1	c.2740G>T	NS	NMD	PTC	1	1
3	BRCA1	c.2749dup	FS	NMD	PTC	1	1
4	BRCA1	c.2750del	FS	NMD	PTC	1	2
5	BRCA1	c.2751del	FS	NMD	PTC	1	1
6	BRCA1	c.2753_2755delinsCA	FS	NMD	PTC	1	1
7	BRCA1	c.2761C>T	NS	NMD	PTC	1	3
8	BRCA1	c.2762del	FS	NMD	PTC	1	1
9	BRCA1	c.2764_2767del	FS	NMD	PTC	1	2
10	BRCA1	c.2766del	FS	NMD	PTC	1	2
11	BRCA1	c.2776_2777del	FS	NMD	PTC	1	1
12	BRCA1	c.2776_2777insTA	FS	NMD	PTC	1	1
13	BRCA1	c.2778dup	FS	NMD	PTC	1	1
14	BRCA1	c.2787_2788insTTATCACTGCAGGCTTT	FS	NMD	PTC	1	1
15	BRCA1	c.2800C>T	NS	NMD	PTC	1	6
16	BRCA1	c.2805dup	FS	NMD	PTC	1	2
17	BRCA1	c.2806_2809del	FS	NMD	PTC	1	5
18	BRCA1	c.2808_2811del	FS	NMD	PTC	1	1
19	BRCA1	c.280C>T	NS	NMD / Re-initi	PTC	1	3
20	BRCA1	c.2814del	FS	NMD	PTC	1	4
21	BRCA1	c.2823del	FS	NMD	PTC	1	1
22	BRCA1	c.2834_2836delinsC	FS	NMD	PTC	1	23
23	BRCA1	c.2835dup	FS	NMD	PTC	1	1
24	BRCA1	c.2836_2837del	FS	NMD	PTC	1	1
25	BRCA1	c.2840_2841del	FS	NMD	PTC	1	2
26	BRCA1	c.2843del	FS	NMD	PTC	1	1
27	BRCA1	c.2850_2851insC	FS	NMD	PTC	1	1
28	BRCA1	c.2850dup	FS	NMD	PTC	1	1
29	BRCA1	c.2856_2857del	FS	NMD	PTC	1	1
30	BRCA1	c.2861dup	FS	NMD	PTC	1	1
31	BRCA1	c.2864C>A	NS	NMD	PTC	1	11
32	BRCA1	c.2864C>G	NS	NMD	PTC	1	1
33	BRCA1	c.2866_2870del	FS	NMD	PTC	1	2
34	BRCA1	c.2868del	FS	NMD	PTC	1	2
35	BRCA1	c.2869C>T	NS	NMD	PTC	1	1
36	BRCA1	c.2875del	FS	NMD	PTC	1	1
37	BRCA1	c.2878_2879del	FS	NMD	PTC	1	1
38	BRCA1	c.288_292delins(7)	FS	NMD	PTC	1	2
39	BRCA1	c.2882del	FS	NMD	PTC	1	1
40	BRCA1	c.2887del	FS	NMD	PTC	1	3
41	BRCA1	c.2890G>T	NS	NMD	PTC	1	2
42	BRCA1	c.2898del	FS	NMD	PTC	1	2
43	BRCA1	c.290_291del	FS	NMD / Re-initi	PTC	1	2
44	BRCA1	c.2901_2902dup	FS	NMD	PTC	1	5
45	BRCA1	c.2903_2904insTC	FS	NMD	PTC	1	1
46	BRCA1	c.2906_2908delinsCT	FS	NMD	PTC	1	1
47	BRCA1	c.2906del	FS	NMD	PTC	1	1
48	BRCA1	c.2914G>T	NS	NMD	PTC	1	1
49	BRCA1	c.2921T>A	NS	NMD	PTC	1	11
50	BRCA1	c.2923C>T	NS	NMD	PTC	1	12
51	BRCA1	c.2934T>G	NS	NMD	PTC	1	31
52	BRCA1	c.2940del	FS	NMD	PTC	1	2
53	BRCA1	c.2951_2952del	FS	NMD	PTC	1	1
54	BRCA1	c.2952del	FS	NMD	PTC	1	2
55	BRCA1	c.2952dup	FS	NMD	PTC	1	2
56	BRCA1	c.2954_2958delins(3)	FS	NMD	PTC	1	1
57	BRCA1	c.2959A>T	NS	NMD	PTC	1	1
58	BRCA1	c.2960dup	FS	NMD	PTC	1	5
59							
60							

1							
2	BRCA1	c.2963C>A	NS	NMD	PTC	1	3
3	BRCA1	c.2970del	FS	NMD	PTC	1	1
4	BRCA1	c.2971A>T	NS	NMD	PTC	1	1
5	BRCA1	c.2973_2979del	FS	NMD	PTC	1	2
6	BRCA1	c.2980del	FS	NMD	PTC	1	1
7	BRCA1	c.2981_2982del	FS	NMD	PTC	1	2
8	BRCA1	c.2981del	FS	NMD	PTC	1	1
9	BRCA1	c.2989_2990dup	FS	NMD	PTC	1	21
10	BRCA1	c.2990del	FS	NMD	PTC	1	1
11	BRCA1	c.2995_2996delinsTA	NS	NMD	PTC	1	4
12	BRCA1	c.2999del	FS	NMD	PTC	1	5
13	BRCA1	c.2T>C	MS	Unknown	Unknown	3	1
14	BRCA1	c.3001G>T	NS	NMD	PTC	1	3
15	BRCA1	c.3005del	FS	NMD	PTC	1	33
16	BRCA1	c.3008_3009del	FS	NMD	PTC	1	11
17	BRCA1	c.301+1G>A	S	Unknown	Unknown	3	1
18	BRCA1	c.301+1G>C	S	Unknown	Unknown	3	1
19	BRCA1	c.3010G>T	NS	NMD	PTC	1	1
20	BRCA1	c.3013del	FS	NMD	PTC	1	5
21	BRCA1	c.3018_3021del	FS	NMD	PTC	1	69
22	BRCA1	c.302-?_593+?del	DL	NMD / Re-initi	PTC	1	1
23	BRCA1	c.3020_3023del	FS	NMD	PTC	1	1
24	BRCA1	c.3020C>A/G	NS	NMD	PTC	1	1
25	BRCA1	c.3020C>G	NS	NMD	PTC	1	1
26	BRCA1	c.302-1G>A	S	Unknown	Unknown	3	11
27	BRCA1	c.302-1G>T	S	Unknown	Unknown	3	2
28	BRCA1	c.302-2A>C	S	Unknown	Unknown	3	4
29	BRCA1	c.302-2A>G	S	Unknown	Unknown	3	1
30	BRCA1	c.302-2del	S	Unknown	Unknown	3	22
31	BRCA1	c.302-3C>G	S	NMD / Re-initi	PTC	1	4
32	BRCA1	c.3024dup	FS	NMD	PTC	1	1
33	BRCA1	c.3029_3030del	FS	NMD	PTC	1	10
34	BRCA1	c.3037_3038del	FS	NMD	PTC	1	2
35	BRCA1	c.303T>A	NS/S?	Unknown	Unknown	3	2
36	BRCA1	c.303T>G	NS/S?	Unknown	Unknown	3	9
37	BRCA1	c.3044dup	FS	NMD	PTC	1	1
38	BRCA1	c.3048_3052dup	FS	NMD	PTC	1	87
39	BRCA1	c.3049_3050ins(7)	FS	NMD	PTC	1	1
40	BRCA1	c.3049G>T	NS	NMD	PTC	1	4
41	BRCA1	c.3052_3053ins(5)	FS	NMD	PTC	1	5
42	BRCA1	c.3053_3054insTGAGA	FS	NMD	PTC	1	19
43	BRCA1	c.3066del	FS	NMD	PTC	1	2
44		c.3075_3076insGGAAAACCTTTGAGGAACATTCA					
45	BRCA1	ATGTCACCTGAAAGAGAAATGGGAAATGAGATC	FS	NMD	PTC	1	1
46		ATTCCAAGTACAGTGAGCACA					
47	BRCA1	c.3076_3077ins(76)	FS	NMD	PTC	1	1
48	BRCA1	c.3084_3094del	FS	NMD	PTC	1	4
49	BRCA1	c.3087_3100dup	FS	NMD	PTC	1	1
50	BRCA1	c.3097G>T	NS	NMD	PTC	1	2
51	BRCA1	c.3108dup	FS	NMD	PTC	1	15
52	BRCA1	c.3109_3110insT	FS	NMD	PTC	1	4
53	BRCA1	c.310del	FS	NMD / Re-initi	PTC	1	3
54	BRCA1	c.3112G>T	NS	NMD	PTC	1	4
55	BRCA1	c.3114_3117delinsGA	FS	NMD	PTC	1	1
56	BRCA1	c.3115del	FS	NMD	PTC	1	2
57	BRCA1	c.3117_3120del	FS	NMD	PTC	1	1
58	BRCA1	c.3122C>G	NS	NMD	PTC	1	1
59							
60							

1							
2	BRCA1	c.3129_3138del	FS	NMD	PTC	1	1
3	BRCA1	c.3143del	FS	NMD	PTC	1	1
4	BRCA1	c.3145del	FS	NMD	PTC	1	1
5	BRCA1	c.3150_3208dup	FS	NMD	PTC	1	1
6	BRCA1	c.3155del	FS	NMD	PTC	1	3
7	BRCA1	c.3168del	FS	NMD	PTC	1	1
8	BRCA1	c.3174del	FS	NMD	PTC	1	1
9	BRCA1	c.3178G>T	NS	NMD	PTC	1	13
10	BRCA1	c.3182del	FS	NMD	PTC	1	1
11	BRCA1	c.3193dup	FS	NMD	PTC	1	8
12	BRCA1	c.3194_3195insG	FS	NMD	PTC	1	1
13	BRCA1	c.3203_3206del	FS	NMD	PTC	1	1
14	BRCA1	c.3205del	FS	NMD	PTC	1	2
15	BRCA1	c.3210dup	FS	NMD	PTC	1	1
16	BRCA1	c.3211_3212dup	FS	NMD	PTC	1	1
17	BRCA1	c.3214del	FS	NMD	PTC	1	1
18	BRCA1	c.3217_3218del	FS	NMD	PTC	1	1
19	BRCA1	c.321del	FS	NMD / Re-initi	PTC	1	1
20	BRCA1	c.3226del	FS	NMD	PTC	1	1
21	BRCA1	c.3228_3229del	FS	NMD	PTC	1	60
22	BRCA1	c.3239T>A	NS	NMD	PTC	1	5
23	BRCA1	c.3243_3288dup	FS	NMD	PTC	1	2
24	BRCA1	c.3253dup	FS	NMD	PTC	1	6
25	BRCA1	c.3254_3255dup	FS	NMD	PTC	1	6
26	BRCA1	c.3256_3257insGA	FS	NMD	PTC	1	8
27	BRCA1	c.3257T>A	NS	NMD	PTC	1	2
28	BRCA1	c.3257T>G	NS	NMD	PTC	1	19
29	BRCA1	c.3258del	FS	NMD	PTC	1	1
30	BRCA1	c.3262_3277del	FS	NMD	PTC	1	1
31	BRCA1	c.3262del	FS	NMD	PTC	1	1
32	BRCA1	c.3266del	FS	NMD	PTC	1	1
33	BRCA1	c.3266T>A	NS	NMD	PTC	1	1
34	BRCA1	c.3268C>T	NS	NMD	PTC	1	3
35	BRCA1	c.3279del	FS	NMD	PTC	1	1
36	BRCA1	c.3282T>G	NS	NMD	PTC	1	2
37	BRCA1	c.3285del	FS	NMD	PTC	1	16
38	BRCA1	c.3286C>T	NS	NMD	PTC	1	2
39	BRCA1	c.3288_3289del	FS	NMD	PTC	1	2
40	BRCA1	c.3289dup	FS	NMD	PTC	1	1
41	BRCA1	c.3296del	FS	NMD	PTC	1	9
42	BRCA1	c.329del	FS	NMD / Re-initi	PTC	1	4
43	BRCA1	c.329dup	FS	NMD / Re-initi	PTC	1	18
44	BRCA1	c.330_331insA	FS	NMD	PTC	1	1
45	BRCA1	c.3308_3309insC	FS	NMD	PTC	1	1
46	BRCA1	c.3309T>A	FS	NMD	PTC	1	1
47	BRCA1	c.3314del	FS	NMD	PTC	1	1
48	BRCA1	c.3319G>T	NS	NMD	PTC	1	85
49	BRCA1	c.331del	FS	NMD	PTC	1	1
50	BRCA1	c.3326_3329del	FS	NMD	PTC	1	5
51	BRCA1	c.3329_3330del	FS	NMD	PTC	1	1
52	BRCA1	c.3329del	FS	NMD	PTC	1	2
53	BRCA1	c.3329dup	FS	NMD	PTC	1	2
54	BRCA1	c.3330del	FS	NMD	PTC	1	1
55	BRCA1	c.3331_3334del	FS	NMD	PTC	1	189
56	BRCA1	c.3331_3335del	FS	NMD	PTC	1	2
57	BRCA1	c.3331C>T	NS	NMD	PTC	1	3
58	BRCA1	c.3331del	FS	NMD	PTC	1	3
59							
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2	BRCA1	c.3333_3336del	FS	NMD	PTC	1	2
3	BRCA1	c.3333del	FS	NMD	PTC	1	6
4	BRCA1	c.3339_3341del	FS	NMD	PTC	1	3
5	BRCA1	c.3339T>G	NS	NMD	PTC	1	2
6	BRCA1	c.3340G>T	NS	NMD	PTC	1	1
7	BRCA1	c.3342_3345del	FS	NMD	PTC	1	5
8	BRCA1	c.3343del	FS	NMD	PTC	1	2
9	BRCA1	c.3351dup	FS	NMD	PTC	1	3
10	BRCA1	c.3352C>T	NS	NMD	PTC	1	1
11	BRCA1	c.3354_3355del	FS	NMD	PTC	1	2
12	BRCA1	c.3358_3359del	FS	NMD	PTC	1	8
13	BRCA1	c.3359_3360del	FS	NMD	PTC	1	7
14	BRCA1	c.335del	FS	NMD	PTC	1	1
15	BRCA1	c.3360dup	FS	NMD	PTC	1	1
16	BRCA1	c.3362del	FS	NMD	PTC	1	1
17	BRCA1	c.3365_3366del	FS	NMD	PTC	1	1
18	BRCA1	c.3373dup	FS	NMD	PTC	1	2
19	BRCA1	c.3375_3376del	FS	NMD	PTC	1	3
20	BRCA1	c.3377del	FS	NMD	PTC	1	1
21	BRCA1	c.3381T>G	NS	NMD	PTC	1	1
22	BRCA1	c.3384_3391del	FS	NMD	PTC	1	1
23	BRCA1	c.3388_3408delins(16)	FS	NMD	PTC	1	1
24	BRCA1	c.3388del	FS	NMD	PTC	1	1
25	BRCA1	c.3389C>G	NS	NMD	PTC	1	1
26	BRCA1	c.3390del	FS	NMD	PTC	1	3
27	BRCA1	c.3395del	FS	NMD	PTC	1	1
28	BRCA1	c.3396del	FS	NMD	PTC	1	1
29	BRCA1	c.3397_3398del	FS	NMD	PTC	1	1
30	BRCA1	c.3398T>G	NS	NMD	PTC	1	3
31	BRCA1	c.3400G>T	NS	NMD	PTC	1	48
32	BRCA1	c.3403C>T	NS	NMD	PTC	1	11
33	BRCA1	c.3412G>T	NS	NMD	PTC	1	1
34	BRCA1	c.3413dup	FS	NMD	PTC	1	2
35	BRCA1	c.3416_3427delinsC	FS	NMD	PTC	1	1
36	BRCA1	c.3417del	FS	NMD	PTC	1	1
37	BRCA1	c.3428delinsTA	FS	NMD	PTC	1	1
38	BRCA1	c.342del	FS	NMD	PTC	1	1
39	BRCA1	c.3430C>T	NS	NMD	PTC	1	1
40	BRCA1	c.3442del	FS	NMD	PTC	1	4
41	BRCA1	c.3461T>G	NS	NMD	PTC	1	1
42	BRCA1	c.3462dup	FS	NMD	PTC	1	1
43	BRCA1	c.3477_3479delinsC	FS	NMD	PTC	1	5
44	BRCA1	c.3477_3480del	FS	NMD	PTC	1	29
45	BRCA1	c.3478_3479del	FS	NMD	PTC	1	1
46	BRCA1	c.3479_3483del	FS	NMD	PTC	1	1
47	BRCA1	c.3481_3491del	FS	NMD	PTC	1	203
48	BRCA1	c.3482_3492del	FS	NMD	PTC	1	1
49	BRCA1	c.3485_3488del	FS	NMD	PTC	1	2
50	BRCA1	c.3485_3491del	FS	NMD	PTC	1	1
51	BRCA1	c.3485del	FS	NMD	PTC	1	77
52	BRCA1	c.3489_3499del	FS	NMD	PTC	1	1
53	BRCA1	c.3494_3495del	FS	NMD	PTC	1	1
54	BRCA1	c.3498del	FS	NMD	PTC	1	1
55	BRCA1	c.34C>T	NS	NMD / Re-initi	PTC	1	18
56	BRCA1	c.3504_3505insA	FS	NMD	PTC	1	1
57	BRCA1	c.3511A>T	NS	NMD	PTC	1	1
58	BRCA1	c.3512del	FS	NMD	PTC	1	1
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2	BRCA1	c.3514G>T	NS	NMD	PTC	1 7
3	BRCA1	c.3531del	FS	NMD	PTC	1 1
4	BRCA1	c.3534del	FS	NMD	PTC	1 2
5	BRCA1	c.3541_3542del	FS	NMD	PTC	1 1
6	BRCA1	c.3541del	FS	NMD	PTC	1 1
7	BRCA1	c.3544C>T	NS	NMD	PTC	1 2
8	BRCA1	c.3549_3550delinsT	FS	NMD	PTC	1 10
9	BRCA1	c.3553G>T	NS	NMD	PTC	1 1
10	BRCA1	c.355A>T	NS	NMD	PTC	1 2
11	BRCA1	c.3564dup	FS	NMD	PTC	1 1
12	BRCA1	c.357_358delinsT	FS	NMD / Re-initi	PTC	1 1
13	BRCA1	c.3571del	FS	NMD	PTC	1 1
14	BRCA1	c.3578dup	FS	NMD	PTC	1 4
15	BRCA1	c.3580del	FS	NMD	PTC	1 1
16	BRCA1	c.3582_3589del	FS	NMD	PTC	1 3
17	BRCA1	c.3583_3590del	FS	NMD	PTC	1 3
18	BRCA1	c.3583del	FS	NMD	PTC	1 1
19	BRCA1	c.3586dup	FS	NMD	PTC	1 1
20	BRCA1	c.3587dup	FS	NMD	PTC	1 1
21	BRCA1	c.3593T>A	NS	NMD	PTC	1 1
22	BRCA1	c.3596_3602del	FS	NMD	PTC	1 2
23	BRCA1	c.3598C>T	NS	NMD	PTC	1 34
24	BRCA1	c.36_39del	FS	NMD / Re-initi	PTC	1 1
25	BRCA1	c.3604del	FS	NMD	PTC	1 1
26	BRCA1	c.3605dup	FS	NMD	PTC	1 1
27	BRCA1	c.3607C>T	NS	NMD	PTC	1 109
28	BRCA1	c.3612del	FS	NMD	PTC	1 9
29	BRCA1	c.361dup	FS	NMD	PTC	1 1
30	BRCA1	c.3624del	FS	NMD	PTC	1 1
31	BRCA1	c.3624dup	FS	NMD	PTC	1 1
32	BRCA1	c.3625_3626insA	FS	NMD	PTC	1 2
33	BRCA1	c.3626del	FS	NMD	PTC	1 13
34	BRCA1	c.3626T>G	NS	NMD	PTC	1 3
35	BRCA1	c.3627dup	FS	NMD	PTC	1 39
36	BRCA1	c.3628del	FS	NMD	PTC	1 1
37	BRCA1	c.3629dup	FS	NMD	PTC	1 3
38	BRCA1	c.363_364del	FS	NMD / Re-initi	PTC	1 1
39	BRCA1	c.3640G>T	NS	NMD	PTC	1 1
40	BRCA1	c.3642_3643del	FS	NMD	PTC	1 1
41	BRCA1	c.3648dup	FS	NMD	PTC	1 8
42	BRCA1	c.3649_3650insA	FS	NMD	PTC	1 6
43	BRCA1	c.3651dup	FS	NMD	PTC	1 1
44	BRCA1	c.3661G>T	NS	NMD	PTC	1 23
45	BRCA1	c.3664G>T	NS	NMD	PTC	1 5
46	BRCA1	c.3668_3671dup	FS	NMD	PTC	1 23
47	BRCA1	c.3669del	FS	NMD	PTC	1 1
48	BRCA1	c.3672del	FS	NMD	PTC	1 2
49	BRCA1	c.3675C>A	NS	NMD	PTC	1 1
50	BRCA1	c.3679C>T	NS	NMD	PTC	1 2
51	BRCA1	c.3683del	FS	NMD	PTC	1 1
52	BRCA1	c.3689T>G	NS	NMD	PTC	1 10
53	BRCA1	c.3693dup	FS	NMD	PTC	1 1
54	BRCA1	c.3695del	FS	NMD	PTC	1 2
55	BRCA1	c.3700_3704del	FS	NMD	PTC	1 157
56	BRCA1	c.3704_3707del	FS	NMD	PTC	1 1
57	BRCA1	c.3704del	FS	NMD	PTC	1 1
58	BRCA1	c.3706_3707del	FS	NMD	PTC	1 2
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2	BRCA1	c.3710del	FS	NMD	PTC	1	48
3	BRCA1	c.3718C>T	NS	NMD	PTC	1	17
4	BRCA1	c.3729_3730insGACACTTGTTATTTGGTAAAGTA	FS	NMD	PTC	1	3
5		AACAATATACCTTCTCAGTCTACTAGG					
6	BRCA1	c.372del	FS	NMD	PTC	1	1
7	BRCA1	c.3731_3738del	FS	NMD	PTC	1	1
8	BRCA1	c.3731_3743del	FS	NMD	PTC	1	1
9	BRCA1	c.3736del	FS	NMD	PTC	1	1
10	BRCA1	c.3748G>T	NS	NMD	PTC	1	79
11	BRCA1	c.375_376insT	FS	NMD	PTC	1	1
12	BRCA1	c.3750del	FS	NMD	PTC	1	2
13	BRCA1	c.3753T>A	NS	NMD	PTC	1	2
14	BRCA1	c.3756_3757del	FS	NMD	PTC	1	3
15	BRCA1	c.3756_3759del	FS	NMD	PTC	1	240
16	BRCA1	c.3756_3760del	FS	NMD	PTC	1	1
17	BRCA1	c.3759_3760del	FS	NMD	PTC	1	6
18	BRCA1	c.3759dup	FS	NMD	PTC	1	6
19	BRCA1	c.3760_3761insT	FS	NMD	PTC	1	3
20	BRCA1	c.3761_3762insTT	FS	NMD	PTC	1	2
21	BRCA1	c.3762_3763del	FS	NMD	PTC	1	1
22	BRCA1	c.3764dup	FS	NMD	PTC	1	5
23	BRCA1	c.3765del	FS	NMD	PTC	1	1
24	BRCA1	c.3767_3768del	FS	NMD	PTC	1	6
25	BRCA1	c.3770_3771del	FS	NMD	PTC	1	79
26	BRCA1	c.3774_3775del	FS	NMD	PTC	1	1
27	BRCA1	c.3779del	FS	NMD	PTC	1	5
28	BRCA1	c.3782del	FS	NMD	PTC	1	1
29	BRCA1	c.3785C>A	NS	NMD	PTC	1	2
30	BRCA1	c.3794del	FS	NMD	PTC	1	1
31	BRCA1	c.3810C>A	NS	NMD	PTC	1	1
32	BRCA1	c.3814_3815insT	FS	NMD	PTC	1	1
33	BRCA1	c.3817C>T	NS	NMD	PTC	1	10
34	BRCA1	c.3820del	FS	NMD	PTC	1	2
35	BRCA1	c.3820dup	FS	NMD	PTC	1	8
36	BRCA1	c.3821dup	FS	NMD	PTC	1	1
37	BRCA1	c.3837_3840del	FS	NMD	PTC	1	1
38	BRCA1	c.3839_3843del	FS	NMD	PTC	1	1
39	BRCA1	c.3839_3843delinsAGGC	FS	NMD	PTC	1	48
40	BRCA1	c.3840_3850del	FS	NMD	PTC	1	1
41	BRCA1	c.3841C>T	NS	NMD	PTC	1	38
42	BRCA1	c.3844del	FS	NMD	PTC	1	1
43	BRCA1	c.385_386delinsC	FS	NMD	PTC	1	1
44	BRCA1	c.3851_3852dup	FS	NMD	PTC	1	1
45	BRCA1	c.3856del	FS	NMD	PTC	1	1
46	BRCA1	c.3858_3861del	FS	NMD	PTC	1	4
47	BRCA1	c.3862G>T	NS	NMD	PTC	1	3
48	BRCA1	c.3868A>T	NS	NMD	PTC	1	1
49	BRCA1	c.3869_3870del	FS	NMD	PTC	1	8
50	BRCA1	c.3874del	FS	NMD	PTC	1	18
51	BRCA1	c.3885del	FS	NMD	PTC	1	1
52	BRCA1	c.3893C>A	NS	NMD	PTC	1	3
53	BRCA1	c.3895C>T	NS	NMD	PTC	1	1
54	BRCA1	c.3901_3902del	FS	NMD	PTC	1	7
55	BRCA1	c.3904G>T	NS	NMD	PTC	1	9
56	BRCA1	c.3907_3908delinsGGA	FS	NMD	PTC	1	2
57	BRCA1	c.3908_3909dup	FS	NMD	PTC	1	1
58	BRCA1	c.390C>A	NS	NMD	PTC	1	23
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2	BRCA1	c.390C>G	NS	NMD	PTC	1
3	BRCA1	c.3910del	FS	NMD	PTC	4
4	BRCA1	c.3914del	FS	NMD	PTC	3
5	BRCA1	c.3916_3917del	FS	NMD	PTC	20
6	BRCA1	c.3917del	FS	NMD	PTC	1
7	BRCA1	c.391A>T	NS	NMD	PTC	1
8	BRCA1	c.3921_4357+1203del	DL	Unknown	Unknown	3
9	BRCA1	c.3926del	FS	NMD	PTC	2
10	BRCA1	c.3928dup	FS	NMD	PTC	1
11	BRCA1	c.3931_3934del	FS	NMD	PTC	4
12	BRCA1	c.3937C>T	NS	NMD	PTC	20
13	BRCA1	c.3947_3950del	FS	NMD	PTC	3
14	BRCA1	c.3952_3955del	FS	NMD	PTC	1
15	BRCA1	c.3959del	FS	NMD	PTC	1
16	BRCA1	c.3961del	FS	NMD	PTC	1
17	BRCA1	c.3967C>T	NS	NMD	PTC	8
18	BRCA1	c.3967del	FS	NMD	PTC	2
19	BRCA1	c.3968_3971del	FS	NMD	PTC	1
20	BRCA1	c.3972_3974delinsAA	FS	NMD	PTC	1
21	BRCA1	c.3973del	FS	NMD	PTC	1
22	BRCA1	c.3981del	FS	NMD	PTC	1
23	BRCA1	c.3985_3987delinsTTTC	FS	NMD	PTC	1
24	BRCA1	c.3990_3993del	FS	NMD	PTC	1
25	BRCA1	c.3991C>T	NS	NMD	PTC	1
26	BRCA1	c.3995_4001del	FS	NMD	PTC	1
27	BRCA1	c.3G>A	MS/?	Re-initiation	MS	3
28	BRCA1	c.3G>C	MS/?	Re-initiation	MS	1
29	BRCA1	c.3G>T	MS/?	Re-initiation	MS	1
30	BRCA1	c.4001del	FS	NMD	PTC	5
31	BRCA1	c.4002_4005del	FS	NMD	PTC	1
32	BRCA1	c.4013del	FS	NMD	PTC	1
33	BRCA1	c.4016_4017insTT	FS	NMD	PTC	1
34	BRCA1	c.4033G>T	NS	NMD	PTC	1
35	BRCA1	c.4035del	FS	NMD	PTC	302
36	BRCA1	c.4038_4041del	FS	NMD	PTC	2
37	BRCA1	c.4039dup	FS	NMD	PTC	1
38	BRCA1	c.4041_4042del	FS	NMD	PTC	11
39	BRCA1	c.4042G>T	NS	NMD	PTC	1
40	BRCA1	c.4043del	FS	NMD	PTC	1
41	BRCA1	c.4052T>A	NS	NMD	PTC	1
42	BRCA1	c.4054G>T	NS	NMD	PTC	1
43	BRCA1	c.4057_4061del	FS	NMD	PTC	2
44	BRCA1	c.4062_4066del	FS	NMD	PTC	1
45	BRCA1	c.4062_4068del	FS	NMD	PTC	2
46	BRCA1	c.4065_4068del	FS	NMD	PTC	275
47	BRCA1	c.4066_4069del	FS	NMD	PTC	5
48	BRCA1	c.4066C>T	NS	NMD	PTC	1
49	BRCA1	c.4066del	FS	NMD	PTC	1
50	BRCA1	c.4069G>T	NS	NMD	PTC	1
51	BRCA1	c.406del	FS	NMD	PTC	1
52	BRCA1	c.406dup	FS	NMD	PTC	5
53	BRCA1	c.4071del	FS	NMD	PTC	5
54	BRCA1	c.4072G>T	NS	NMD	PTC	1
55	BRCA1	c.4074_4090del	FS	NMD	PTC	1
56	BRCA1	c.4075C>T	NS	NMD	PTC	1
57	BRCA1	c.4079del	FS	NMD	PTC	1
58	BRCA1	c.407del	FS	NMD	PTC	2
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2	BRCA1	c.4088C>G	NS	NMD	PTC	1	3
3	BRCA1	c.4092_4093del	FS	NMD	PTC	1	1
4	BRCA1	c.4094T>G	NS	NMD	PTC	1	1
5	BRCA1	c.4096+1G>A	S	IFD	IFD	2	16
6	BRCA1	c.4097-2A>G	S	Unknown	Unknown	3	6
7	BRCA1	c.4097-78_4185+69del	DL	NMD	PTC	1	3
8	BRCA1	c.40del	FS	NMD	PTC	1	1
9	BRCA1	c.4107_4108insATCT	FS	NMD	PTC	1	1
10	BRCA1	c.4107_4110dup	FS	NMD	PTC	1	5
11	BRCA1	c.411_414del	FS	NMD	PTC	1	1
12	BRCA1	c.4113del	FS	NMD	PTC	1	3
13	BRCA1	c.4116del	FS	NMD	PTC	1	1
14	BRCA1	c.4117G>T	NS	NMD	PTC	1	15
15	BRCA1	c.411del	FS	NMD	PTC	1	2
16	BRCA1	c.4120_4121del	FS	NMD	PTC	1	4
17	BRCA1	c.4122_4123del	FS	NMD	PTC	1	1
18	BRCA1	c.4123G>T	NS	NMD	PTC	1	2
19	BRCA1	c.4126_4129del	FS	NMD	PTC	1	1
20	BRCA1	c.4127del	FS	NMD	PTC	1	2
21	BRCA1	c.4129del	FS	NMD	PTC	1	1
22	BRCA1	c.4136_4137del	FS	NMD	PTC	1	2
23	BRCA1	c.4137_4138del	FS	NMD	PTC	1	1
24	BRCA1	c.4139_4140del	FS	NMD	PTC	1	1
25	BRCA1	c.4146_4155dup	FS	NMD	PTC	1	6
26	BRCA1	c.4148C>G	NS	NMD	PTC	1	4
27	BRCA1	c.4158_4162del	FS	NMD	PTC	1	5
28	BRCA1	c.415C>T	NS	NMD	PTC	1	5
29	BRCA1	c.4161_4162del	FS	NMD	PTC	1	10
30	BRCA1	c.4162_4163del	FS	NMD	PTC	1	1
31	BRCA1	c.4165_4166del	FS	NMD	PTC	1	32
32	BRCA1	c.4165_4166dup	FS	NMD	PTC	1	1
33	BRCA1	c.4167_4168del	FS	NMD	PTC	1	2
34	BRCA1	c.416dup	FS	NMD	PTC	1	1
35	BRCA1	c.4175del	FS	NMD	PTC	1	1
36	BRCA1	c.4183C>T	NS	NMD	PTC	1	88
37	BRCA1	c.4185_4185+3del	S	Unknown	Unknown	3	3
38	BRCA1	c.4185+1G>T	S	Unknown	Unknown	3	4
39	BRCA1	c.4185+2_4185+22delinsA	S	Unknown	Unknown	3	10
40	BRCA1	c.4185+2T>C	S	Unknown	Unknown	3	1
41	BRCA1	c.4185G>A	S	NMD	PTC	1	12
42	BRCA1	c.4186-?_4357+?del	DL	Unknown	Unknown	3	6
43	BRCA1	c.4186-?_4357+?dup	DP	Unknown	Unknown	3	179
44	BRCA1	c.4186-?_4484+?del	DL	Unknown	Unknown	3	1
45	BRCA1	c.4186-?_4675+?del	DL	Unknown	Unknown	3	21
46	BRCA1	c.4186-?_5193+?del	DL	Unknown	Unknown	3	4
47	BRCA1	c.4186-?_5277+?del	DL	Unknown	Unknown	3	1
48	BRCA1	c.4186-1643_4357+2020del	DL	NMD	PTC	1	41
49	BRCA1	c.4186-1783_4358-1665dup	DP	NMD	PTC	1	7
50	BRCA1	c.4186-1787_4357+4122dup	DP	NMD	PTC	1	51
51	BRCA1	c.4186-832_4357+1955del	DL	NMD	PTC	1	1
52	BRCA1	c.4186C>T	NS/S?	Unknown	Unknown	3	7
53	BRCA1	c.418dup	FS	NMD	PTC	1	1
54	BRCA1	c.4195_4196del	FS	NMD	PTC	1	4
55	BRCA1	c.4197del	FS	NMD	PTC	1	1
56	BRCA1	c.4201C>T	NS	NMD	PTC	1	7
57	BRCA1	c.4205del	FS	NMD	PTC	1	1
58	BRCA1	c.4206_4207del	FS	NMD	PTC	1	1
59							
60							

1							
2	BRCA1	c.4210del	FS	NMD	PTC	1	4
3	BRCA1	c.4214del	FS	NMD	PTC	1	1
4	BRCA1	c.4216A>T	NS	NMD	PTC	1	2
5	BRCA1	c.4218del	FS	NMD	PTC	1	1
6	BRCA1	c.4222C>T	NS	NMD	PTC	1	25
7	BRCA1	c.4225C>T	NS	NMD	PTC	1	2
8	BRCA1	c.4228G>T	NS	NMD	PTC	1	2
9	BRCA1	c.4239del	FS	NMD	PTC	1	4
10	BRCA1	c.4240dup	FS	NMD	PTC	1	1
11	BRCA1	c.4243del	FS	NMD	PTC	1	5
12	BRCA1	c.4251_4252del	FS	NMD	PTC	1	12
13	BRCA1	c.4258C>T	NS	NMD	PTC	1	4
14	BRCA1	c.4266dup	FS	NMD	PTC	1	1
15	BRCA1	c.4270C>T	NS	NMD	PTC	1	1
16	BRCA1	c.427G>T	NS	NMD	PTC	1	94
17	BRCA1	c.4281_4282insTAAGCTGTGTTAGAACAGCATG	FS	NMD	PTC	1	5
18		GGAGCCAGCCTTCTAAC					
19	BRCA1	c.4284_4285delinsG	FS	NMD	PTC	1	1
20	BRCA1	c.4285dup	FS	NMD	PTC	1	2
21	BRCA1	c.4289dup	FS	NMD	PTC	1	1
22	BRCA1	c.4290_4296del	FS	NMD	PTC	1	1
23	BRCA1	c.4300dup	FS	NMD	PTC	1	2
24	BRCA1	c.4309del	FS	NMD	PTC	1	1
25	BRCA1	c.431del	FS	NMD	PTC	1	1
26	BRCA1	c.431dup	FS	NMD	PTC	1	3
27	BRCA1	c.4321dup	FS	NMD	PTC	1	3
28	BRCA1	c.4327C>T	NS	NMD	PTC	1	252
29	BRCA1	c.4331_4332del	FS	NMD	PTC	1	1
30	BRCA1	c.4335_4338dup	FS	NMD	PTC	1	1
31	BRCA1	c.4339C>T	NS	NMD	PTC	1	2
32	BRCA1	c.4342dup	FS	NMD	PTC		1
33	BRCA1	c.4349C>G	NS	NMD	PTC	1	2
34	BRCA1	c.4354A>T	NS	NMD	PTC	1	1
35	BRCA1	c.4357+1_4357+10del	S	Unknown	Unknown	3	2
36	BRCA1	c.4357+1514_4484+547del	DL	NMD	PTC	1	1
37	BRCA1	c.4357+1del	S	Unknown	Unknown	3	2
38	BRCA1	c.4357+1G>A	S	Unknown	Unknown	3	16
39	BRCA1	c.4357+1G>C	S	Unknown	Unknown	3	1
40	BRCA1	c.4357+1G>T	S	Unknown	Unknown	3	1
41	BRCA1	c.4357+6T>C	S	NMD	PTC	1	12
42	BRCA1	c.4358-?_4484+?del	DL	Unknown	Unknown	3	3
43	BRCA1	c.4358-?_4484+?dup	DP	Unknown	Unknown	3	1
44	BRCA1	c.4358-?_4986+?del	DL	Unknown	Unknown	3	3
45	BRCA1	c.4358-?_4986+?dup	DP	Unknown	Unknown	3	1
46	BRCA1	c.4358-?_5074+?del	DL	Unknown	Unknown	3	3
47	BRCA1	c.4358-?_5193+?del	DL	Unknown	Unknown	3	2
48	BRCA1	c.4358-?_5277+?del	DL	Unknown	Unknown	3	31
49	BRCA1	c.4358-1729_4986+736dup	DP	NMD	PTC	1	3
50	BRCA1	c.4358-3A>G	S	NMD	PTC	1	1
51	BRCA1	c.4364T>G	NS	NMD	PTC	1	1
52	BRCA1	c.4372C>T	NS	NMD	PTC	1	9
53	BRCA1	c.4373_4389del	FS	NMD	PTC	1	1
54	BRCA1	c.4375A>T	NS	NMD	PTC	1	1
55	BRCA1	c.438_439ins(25)	FS	NMD	PTC	1	1
56	BRCA1	c.4389C>A	NS	NMD	PTC	1	6
57	BRCA1	c.4391_4393delinsTT	FS	NMD	PTC	1	15
58	BRCA1	c.4391del	FS	NMD	PTC	1	15
59							
60							

1							
2	BRCA1	c.4393del	FS	NMD	PTC	1	1
3	BRCA1	c.4397_4398insA	FS	NMD	PTC	1	1
4	BRCA1	c.4399C>T	NS	NMD	PTC	1	1
5	BRCA1	c.4401del	FS	NMD	PTC	1	1
6	BRCA1	c.4408G>T	NS	NMD	PTC	1	3
7	BRCA1	c.441+1G>A	S	Unknown	Unknown	3	1
8	BRCA1	c.441+2T>G	S	NMD	PTC	1	1
9	BRCA1	c.4416_4417delinsG	FS	NMD	PTC	1	9
10	BRCA1	c.4417del	FS	NMD	PTC	1	1
11	BRCA1	c.442-?_4185+?del	DL	Unknown	Unknown	3	2
12	BRCA1	c.442-?_4357+?del	DL	Unknown	Unknown	3	36
13	BRCA1	c.442-?_5277+?dup	DP	NMD	PTC	1	1
14	BRCA1	c.442-?_5467+?del	DL	Unknown	Unknown	3	1
15	BRCA1	c.442-?_547+?del	DL	Unknown	Unknown	3	23
16	BRCA1	c.442-?_547+?dup	DP	Unknown	Unknown	3	2
17	BRCA1	c.442-?_5592+?del	DL	Unknown	Unknown	3	1
18	BRCA1	c.442-?_593+?del	DL	Unknown	Unknown	3	6
19	BRCA1	c.442-?_670+?del	DL	Unknown	Unknown	3	1
20	BRCA1	c.442-1129_547+223del	DL	Unknown	Unknown	3	2
21	BRCA1	c.442-1235_976del	DL	Unknown	Unknown	3	1
22	BRCA1	c.442-1783_4358-1285del	DL	NMD	PTC	1	3
23	BRCA1	c.442-7T>A	S	NMD	PTC	1	1
24	BRCA1	c.442-822_593+506del	DL	NMD	PTC	1	1
25	BRCA1	c.442-952_547dup	DP	Unknown	Unknown	3	1
26	BRCA1	c.4453_4474del	FS	NMD	PTC	1	1
27	BRCA1	c.4456del	FS	NMD	PTC	1	2
28	BRCA1	c.4457del	FS	NMD	PTC	1	1
29	BRCA1	c.4480G>T	NS	NMD	PTC	1	2
30	BRCA1	c.4482_4483del	FS	NMD	PTC	1	2
31	BRCA1	c.4484+1del	S	Unknown	Unknown	3	1
32	BRCA1	c.4484+1G>A	FS	NMD	PTC	1	8
33	BRCA1	c.4484+1G>T	S	Unknown	Unknown	3	1
34	BRCA1	c.4484+5G>C	FS/S?	NMD	PTC	1	2
35	BRCA1	c.4484G>A	S	NMD	PTC	1	2
36	BRCA1	c.4484G>C	S?	Unknown	Unknown	3	2
37	BRCA1	c.4484G>T	S	NMD	PTC	1	54
38	BRCA1	c.4485-?_4675+?del	DL	Unknown	Unknown	3	5
39	BRCA1	c.4485-?_4675+?dup	DP	Unknown	Unknown	3	2
40	BRCA1	c.4485-?_4986+?del	DL	Unknown	Unknown	3	11
41	BRCA1	c.4485-?_5074+?del	DL	Unknown	Unknown	3	6
42	BRCA1	c.4485-1118_5277+4813del	DL	NMD	PTC	1	1
43	BRCA1	c.4485-1G>A	S	Unknown	Unknown	3	3
44	BRCA1	c.4485-1G>C	S	Unknown	Unknown	3	2
45	BRCA1	c.4485-1G>T	S	Unknown	Unknown	3	1
46	BRCA1	c.4485-2A>G	S	Unknown	Unknown	3	5
47	BRCA1	c.4493del	FS	NMD	PTC	1	1
48	BRCA1	c.4503C>A	NS	NMD	PTC	1	1
49	BRCA1	c.4508C>A	NS	NMD	PTC	1	10
50	BRCA1	c.4516del	FS	NMD	PTC	1	1
51	BRCA1	c.4524G>A	NS	NMD	PTC	1	28
52	BRCA1	c.4527C>A	NS	NMD	PTC	1	1
53	BRCA1	c.4533_4534del	FS	NMD	PTC	1	11
54	BRCA1	c.4566C>A	NS	NMD	PTC	1	1
55	BRCA1	c.4566C>G	NS	NMD	PTC	1	1
56	BRCA1	c.4569_4570insCC	FS	NMD	PTC	1	1
57	BRCA1	c.4569_4572del	FS	NMD	PTC	1	1
58	BRCA1	c.4570del	FS	NMD	PTC	1	1
59							
60							

1							
2	BRCA1	c.4573C>T	NS	NMD	PTC	1	1
3	BRCA1	c.4574_4575del	FS	NMD	PTC	1	21
4	BRCA1	c.4575_4585del	FS	NMD	PTC	1	7
5	BRCA1	c.4576G>T	NS	NMD	PTC	1	1
6	BRCA1	c.4591del	FS	NMD	PTC	1	1
7	BRCA1	c.4593dup	FS	NMD	PTC	1	1
8	BRCA1	c.4603G>T	NS	NMD	PTC	1	2
9	BRCA1	c.4609C>T	NS	NMD	PTC	1	4
10	BRCA1	c.4611_4612insG	FS	NMD	PTC	1	1
11	BRCA1	c.4612C>T	NS	NMD	PTC	1	4
12	BRCA1	c.4618_4621delinsAAA	FS	NMD	PTC	1	2
13	BRCA1	c.4622_4623del	FS	NMD	PTC	1	1
14	BRCA1	c.4625_4626del	FS	NMD	PTC	1	5
15	BRCA1	c.4656C>G	NS	NMD	PTC	1	2
16	BRCA1	c.4668dup	FS	NMD	PTC	1	1
17	BRCA1	c.4674del	FS/S?	Unknown	Unknown	3	1
18	BRCA1	c.4675+1G>A	S	Unknown	Unknown	3	31
19	BRCA1	c.4675+1G>C	S	Unknown	Unknown	3	1
20	BRCA1	c.4675+2T>A	S	Unknown	Unknown	3	2
21	BRCA1	c.4675+2T>C	S	Unknown	Unknown	3	1
22	BRCA1	c.4675G>A	MS	MS	MS	2	5
23	BRCA1	c.4675G>C	MS	MS	MS	2	1
24	BRCA1	c.4676-?_4986+?del	DL	Unknown	Unknown	3	4
25	BRCA1	c.4676-?_5074+?del	DL	IFD	IFD	2	14
26	BRCA1	c.4676-?_5193+?del	DL	Unknown	Unknown	3	1
27	BRCA1	c.4676-?_5467+?del	DL	Unknown	Unknown	3	2
28	BRCA1	c.4676-1420_4986+900del	DL	NMD	PTC	1	3
29	BRCA1	c.4676-1G>A	S	Unknown	Unknown	3	4
30	BRCA1	c.4676-1G>T	S	Unknown	Unknown	3	1
31	BRCA1	c.4678G>T	NS	NMD	PTC	1	1
32	BRCA1	c.4681del	FS	NMD	PTC	1	3
33	BRCA1	c.4684_4685del	FS	NMD	PTC	1	3
34	BRCA1	c.4688_4694delinsG	FS	unknown	Unknown	3	1
35	BRCA1	c.4688dup	FS	NMD	PTC	1	1
36	BRCA1	c.4689C>G	NS	NMD	PTC	1	99
37	BRCA1	c.4695dup	FS	NMD	PTC	1	1
38	BRCA1	c.4696_4697insA	FS	NMD	PTC	1	1
39	BRCA1	c.4699_4708del	FS	NMD	PTC	1	1
40	BRCA1	c.470_471del	FS	NMD	PTC	1	31
41	BRCA1	c.4700_4710delinsA	FS	NMD	PTC	1	1
42	BRCA1	c.4712_4716del	FS	NMD	PTC	1	1
43	BRCA1	c.4724del	FS	NMD	PTC	1	2
44	BRCA1	c.4741G>T	NS	NMD	PTC	1	1
45	BRCA1	c.4743del	FS	NMD	PTC	1	2
46	BRCA1	c.4754_4755del	FS	NMD	PTC	1	11
47	BRCA1	c.4758_4759insA	FS	NMD	PTC	1	1
48	BRCA1	c.4784del	FS	NMD	PTC	1	1
49	BRCA1	c.4801A>T	NS	NMD	PTC	1	1
50	BRCA1	c.4806del	FS	NMD	PTC	1	1
51	BRCA1	c.4810C>T	NS	NMD	PTC	1	11
52	BRCA1	c.4834C>T	NS	NMD	PTC	1	1
53	BRCA1	c.4834del	FS	NMD	PTC	1	1
54	BRCA1	c.4837del	FS	NMD	PTC	1	1
55	BRCA1	c.4838_4839insC	FS	NMD	PTC	1	2
56	BRCA1	c.4843dup	FS	NMD	PTC	1	2
57	BRCA1	c.485_486del	FS	NMD	PTC	1	2
58	BRCA1	c.4868C>G	MS	MS	MS	2	4
59							
60							

1							
2	BRCA1	c.4873_4885del	FS	NMD	PTC	1	1
3	BRCA1	c.4875T>A	NS	NMD	PTC	1	1
4	BRCA1	c.4877del	FS	NMD	PTC	1	1
5	BRCA1	c.4878dup	FS	NMD	PTC	1	1
6	BRCA1	c.4885dup	FS	NMD	PTC	1	1
7	BRCA1	c.4887_4893del	FS	NMD	PTC	1	1
8	BRCA1	c.4891del	FS	NMD	PTC	1	1
9	BRCA1	c.4903G>T	NS	NMD	PTC	1	1
10	BRCA1	c.4905_4906del	FS	NMD	PTC	1	2
11	BRCA1	c.4921del	FS	NMD	PTC	1	1
12	BRCA1	c.493_494del	FS	NMD	PTC	1	1
13	BRCA1	c.4930G>T	NS	NMD	PTC	1	1
14	BRCA1	c.4932_4933dup	FS	NMD	PTC	1	7
15	BRCA1	c.4936del	FS	NMD	PTC	1	10
16	BRCA1	c.4941del	FS	NMD	PTC	1	1
17	BRCA1	c.4945_4947delinsTTTT	FS	NMD	PTC	1	5
18	BRCA1	c.4945del	FS	NMD	PTC	1	3
19	BRCA1	c.494dup	FS	NMD	PTC	1	8
20	BRCA1	c.4964_4979del	FS	NMD	PTC	1	1
21	BRCA1	c.4964_4982del	FS	NMD	PTC	1	69
22	BRCA1	c.4976del	FS	NMD	PTC	1	2
23	BRCA1	c.4981G>T	NS	NMD	PTC	1	1
24	BRCA1	c.4986+1_4986+2ins65	S	Unknown	Unknown	3	1
25	BRCA1	c.4986+1G>A	S	Unknown	Unknown	3	2
26	BRCA1	c.4986+1G>T	S	Unknown	Unknown	3	1
27	BRCA1	c.4986+2T>C	S	Unknown	Unknown	3	1
28	BRCA1	c.4986+3G>C	S	NMD	PTC	1	32
29	BRCA1	c.4986+4A>C	S	NMD	PTC	1	9
30	BRCA1	c.4986+4A>T	S	NMD	PTC	1	3
31	BRCA1	c.4986+5G>A	S	NMD	PTC	1	1
32	BRCA1	c.4986+5G>C	S	NMD	PTC	1	1
33	BRCA1	c.4986+6T>C	S	NMD	PTC	1	8
34	BRCA1	c.4986+6T>G	S	NMD	PTC	1	15
35	BRCA1	c.4986+890_5075-984del	DL	Unknown	Unknown	3	2
36	BRCA1	c.4986+955_5074+751del	DL	NMD	PTC	1	5
37	BRCA1	c.4987-?_5074+?del	DL	Unknown	Unknown	3	24
38	BRCA1	c.4987-?_5152+?del	DL	Unknown	Unknown	3	1
39	BRCA1	c.4987-?_5193+?del	DL	Unknown	Unknown	3	10
40	BRCA1	c.4987-?_5277+?del	DL	Unknown	Unknown	3	1
41	BRCA1	c.4987-?_5592+?del	DL	Unknown	Unknown	3	1
42	BRCA1	c.4987_5074del	DL	Unknown	Unknown	3	3
43	BRCA1	c.4987-1G>A	S	Unknown	Unknown	3	4
44	BRCA1	c.4987-1G>T	S	Unknown	Unknown	3	1
45	BRCA1	c.4987-2341_5074+2676del	DL	NMD	PTC	1	2
46	BRCA1	c.4987-2508_5074+84del	DL	NMD	PTC	1	25
47	BRCA1	c.4987-2A>G	S	Unknown	Unknown	3	4
48	BRCA1	c.4987-577_5074+343del	DL	NMD	PTC	1	1
49	BRCA1	c.4987-5T>A	S	NMD	PTC	1	1
50	BRCA1	c.4987-5T>C	S	NMD	PTC	1	1
51	BRCA1	c.4987del	FS/S?	Unknown	Unknown	3	1
52	BRCA1	c.4995_5007dup	FS	NMD	PTC	1	1
53	BRCA1	c.4999A>T	NS	NMD	PTC	1	1
54	BRCA1	c.500_501del	FS	NMD	PTC	1	1
55	BRCA1	c.5013dup	FS	NMD	PTC	1	1
56	BRCA1	c.5019del	FS	NMD	PTC	1	1
57	BRCA1	c.5026_5027del	FS	NMD	PTC	1	1
58	BRCA1	c.5026_5036del	FS	NMD	PTC	1	1
59							
60							

1							
2	BRCA1	c.5027del	FS	NMD	PTC	1	1
3	BRCA1	c.5027T>A	NS	NMD	PTC	1	2
4	BRCA1	c.502A>T	NS	NMD	PTC	1	1
5	BRCA1	c.5030_5033del	FS	NMD	PTC	1	83
6	BRCA1	c.5030_5033dup	FS	NMD	PTC	1	1
7	BRCA1	c.5033_5034ins(4)	FS	NMD	PTC	1	1
8	BRCA1	c.5035_5039del	FS	NMD	PTC	1	31
9	BRCA1	c.5035del	FS	NMD	PTC	1	3
10	BRCA1	c.5038_5041dup	FS	NMD	PTC	1	2
11	BRCA1	c.5041_5042insTTAA	FS	NMD	PTC	1	1
12	BRCA1	c.5042del	FS	NMD	PTC	1	1
13	BRCA1	c.5044_5048delinsT	FS	NMD	PTC	1	1
14	BRCA1	c.5047G>T	NS	NMD	PTC	1	1
15	BRCA1	c.5050_5051del	FS	NMD	PTC	1	2
16	BRCA1	c.5053A>G	MS	MS	MS	2	2
17	BRCA1	c.5054C>T	MS	MS	MS	2	1
18	BRCA1	c.5056dup	FS	NMD	PTC	1	1
19	BRCA1	c.5058_5059insCAAC	FS	NMD	PTC	1	1
20	BRCA1	c.505C>T	NS	NMD	PTC	1	8
21	BRCA1	c.5062_5064del	IFD	IFD	IFD	2	36
22	BRCA1	c.5065dup	FS	NMD	PTC	1	1
23	BRCA1	c.5066T>G	MS	Unknown	Unknown	3	2
24	BRCA1	c.5068A>T	NS	NMD	PTC	1	1
25	BRCA1	c.5071dup	FS	NMD	PTC	1	4
26	BRCA1	c.5074+1G>A	S	Unknown	Unknown	3	11
27	BRCA1	c.5074+1G>C	S	Unknown	Unknown	3	1
28	BRCA1	c.5074+1G>T	S	Unknown	Unknown	3	5
29	BRCA1	c.5074+2T>C	S	Unknown	Unknown	3	3
30	BRCA1	c.5074+991_5193+1541del	DL	NMD	PTC	1	1
31	BRCA1	c.5074G>A	S	Unknown	Unknown	3	7
32	BRCA1	c.5074G>C	S	NMD	PTC	1	6
33	BRCA1	c.5074G>T	S	Unknown	Unknown	3	1
34	BRCA1	c.5075-?_5152+?del	DL	Unknown	Unknown	3	1
35	BRCA1	c.5075-?_5193+?del	DL	Unknown	Unknown	3	12
36	BRCA1	c.5075-?_5193+?dup	DP	Unknown	Unknown	3	4
37	BRCA1	c.5075-?_5277+?del	DL	Unknown	Unknown	3	1
38	BRCA1	c.5075-?_5277+?dup	DP	Unknown	Unknown	3	3
39	BRCA1	c.5075-?_5592+?del	DL	Unknown	Unknown	3	1
40	BRCA1	c.5075-1093_5277+2089dup	DP	NMD	PTC	1	1
41	BRCA1	c.5075-1447_5193+5179delins27	DL	Unknown	Unknown	3	3
42	BRCA1	c.5075-1G>C	S	Unknown	Unknown	3	1
43	BRCA1	c.5075-2A>C	S	NMD	PTC	1	2
44	BRCA1	c.5075-2A>G	S	NMD	PTC	1	1
45	BRCA1	c.5075-2del	S	Unknown	Unknown	3	1
46	BRCA1	c.5075-8T>G	S	NMD	PTC	1	1
47	BRCA1	c.5076del	FS	NMD	PTC	1	1
48	BRCA1	c.5077_5080delinsTTGATTCTGC	S	IFD	IFD	2	2
49	BRCA1	c.5078_5080del	S	IFD	IFD	2	9
50	BRCA1	c.5080G>T	S	IFD	IFD	2	29
51	BRCA1	c.5083_5084insG	FS	NMD	PTC	1	1
52	BRCA1	c.5084_5085del	FS	NMD	PTC	1	6
53	BRCA1	c.5095C>T	MS	MS	MS	2	35
54	BRCA1	c.5102_5103del	FS	NMD	PTC	1	6
55	BRCA1	c.5106del	FS	NMD	PTC	1	8
56	BRCA1	c.5109T>G	NS	NMD	PTC	1	12
57	BRCA1	c.5114_5121del	FS	NMD	PTC	1	1
58	BRCA1	c.5117G>A	MS	MS	MS	2	18
59							
60							

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2	BRCA1	c.5123C>A	MS	MS	MS	2	168
3	BRCA1	c.5126del	FS	NMD	PTC	1	2
4	BRCA1	c.5128G>T	NS	NMD	PTC	1	3
5	BRCA1	c.5131A>T	NS	NMD	PTC	1	2
6	BRCA1	c.5135G>A	NS	NMD	PTC	1	2
7	BRCA1	c.5136G>A	NS	NMD	PTC	1	3
8	BRCA1	c.5137del	FS	NMD	PTC	1	24
9	BRCA1	c.5143A>C	MS	MS	MS	2	6
10	BRCA1	c.5145C>G	MS	MS	MS	2	1
11	BRCA1	c.514C>T	NS	NMD	PTC	1	6
12	BRCA1	c.514del	FS	NMD	PTC	1	40
13	BRCA1	c.5150del	FS	NMD	PTC	1	1
14	BRCA1	c.5152+149_5193+2200delinsTTTTTTTTTTTT	DL	Unknown	Unknown	3	1
15	BRCA1	c.5152+1G>A	S	Unknown	Unknown	3	2
16	BRCA1	c.5152+1G>C	S	IFD	IFD	2	10
17	BRCA1	c.5152+1G>T	S	IFD	IFD	2	10
18	BRCA1	c.5152+2dup	S	Unknown	Unknown	3	1
19	BRCA1	c.5152+2T>A	S	Unknown	Unknown	3	1
20	BRCA1	c.5152+3A>C	S	Unknown	Unknown	3	5
21	BRCA1	c.5152+5G>A	S	IFD	IFD	2	6
22	BRCA1	c.5153-?_5193+?del	DL	Unknown	Unknown	3	1
23	BRCA1	c.5153-1G>A	S	Unknown	Unknown	3	19
24	BRCA1	c.5153-1G>C	S	Unknown	Unknown	3	10
25	BRCA1	c.5153-2A>G	S	Unknown	Unknown	3	1
26	BRCA1	c.5153-2del	S	NMD	PTC	1	20
27	BRCA1	c.5153G>A	NS/S?	Unknown	Unknown	3	12
28	BRCA1	c.5154G>A	NS	NMD	PTC	1	19
29	BRCA1	c.5155del	FS	NMD	PTC	1	1
30	BRCA1	c.5155dup	FS	NMD	PTC	1	1
31	BRCA1	c.5161_5165del	FS	NMD	PTC	1	1
32	BRCA1	c.5161C>T	NS	NMD	PTC	1	4
33	BRCA1	c.5161del	FS	Unknown	Unknown	3	1
34	BRCA1	c.5162del	FS	NMD	PTC	1	1
35	BRCA1	c.5163_5164insC	FS	NMD	PTC	1	2
36	BRCA1	c.5165C>T	MS	MS	MS	2	2
37	BRCA1	c.5177_5178del	FS	NMD	PTC	1	1
38	BRCA1	c.5177_5180del	FS	NMD	PTC	1	54
39	BRCA1	c.5179A>T	NS	NMD	PTC	1	15
40	BRCA1	c.518del	FS	NMD	PTC	1	2
41	BRCA1	c.5193+1del	S	NMD	PTC	1	9
42	BRCA1	c.5193+1G>A	S	Unknown	Unknown	3	4
43	BRCA1	c.5193+1G>C	S	Unknown	Unknown	3	1
44	BRCA1	c.5193+2628_5277+670del	DL	IFD	IFD	2	1
45	BRCA1	c.5193+2del	S	NMD	PTC	1	15
46	BRCA1	c.5193+2T>G	S	NMD	PTC	1	1
47	BRCA1	c.5194-?_5277+?del	DL	Unknown	Unknown	3	45
48	BRCA1	c.5194-?_5277+?delinsG	DL	NMD	PTC	1	6
49	BRCA1	c.5194-?_5277+?dup	DP	Unknown	Unknown	3	1
50	BRCA1	c.5194-?_5592+?del	DL	Unknown	Unknown	3	1
51	BRCA1	c.5194-12G>A	S	Unknown	Unknown	3	2
52	BRCA1	c.5194-1699_5277+1996delins236	DL	Unknown	Unknown	3	1
53	BRCA1	c.5194-1730_5277+1996delins268	DL	Unknown	Unknown	3	1
54	BRCA1	c.5194-1G>C	S	Unknown	Unknown	3	1
55	BRCA1	c.5194-1G>T	S	Unknown	Unknown	3	1
56	BRCA1	c.5194-2840_5406+536del	DL	IFD	IFD	2	6
57	BRCA1	c.5194-2A>G	S	Unknown	Unknown	3	7
58	BRCA1	c.5194-452_5277+3638del	DL	IFD	IFD	2	1
59							
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2	BRCA1	c.5194-5858_5277+2206del	DL	IFD	IFD	11
3	BRCA1	c.51del	FS	NMD	PTC	1
4	BRCA1	c.5208_5247delinsTC	FS	No NMD	PTC	1
5	BRCA1	c.5209A>T	NS	NMD	PTC	2
6	BRCA1	c.5209dup	FS	No NMD	PTC	1
7	BRCA1	c.520del	FS	NMD	PTC	12
8	BRCA1	c.5212G>A	MS	MS	MS	38
9	BRCA1	c.5212G>T	NS	NMD	PTC	1
10	BRCA1	c.5213del	FS	NMD	PTC	2
11	BRCA1	c.5213G>A	MS	MS	MS	35
12	BRCA1	c.5221_5224del	FS	NMD	PTC	1
13	BRCA1	c.5230_5237del	FS	NMD	PTC	1
14	BRCA1	c.5239C>T	NS	NMD	PTC	1
15	BRCA1	c.5239del	FS	NMD	PTC	2
16	BRCA1	c.5251C>T	NS	NMD	PTC	94
17	BRCA1	c.5256_5278-2757del	DL	NMD	PTC	11
18	BRCA1	c.5257dup	FS	No NMD	PTC	1
19	BRCA1	c.5259del	FS	NMD	PTC	2
20	BRCA1	c.5260G>T	NS	NMD	PTC	4
21	BRCA1	c.5266C>T	NS	NMD	PTC	4
22	BRCA1	c.5266dup	FS	No NMD	PTC	2897
23	BRCA1	c.5267_5268insC	FS	No NMD	PTC	6
24	BRCA1	c.5277+1del	S	Unknown	Unknown	1
25	BRCA1	c.5277+1G>A	S	Unknown	Unknown	81
26	BRCA1	c.5277+2100_5467+344dup	DP	No NMD	PTC	1
27	BRCA1	c.5277+833_5277+1671delins141	DL	NMD	PTC	1
28	BRCA1	c.5277G>A	S?	Unknown	Unknown	1
29	BRCA1	c.5278-?_5332+?del	DL	Unknown	Unknown	3
30	BRCA1	c.5278-?_5406+?del	DL	Unknown	Unknown	13
31	BRCA1	c.5278-?_5406+?dup	DP	Unknown	Unknown	2
32	BRCA1	c.5278-?_5467+?del	DL	Unknown	Unknown	3
33	BRCA1	c.5278-?_5467+?dup	DP	Unknown	Unknown	1
34	BRCA1	c.5278-?_5592+?del	DL	Unknown	Unknown	30
35	BRCA1	c.5278-1G>A	S	NMD	PTC	4
36	BRCA1	c.5278-1G>C	S	Unknown	Unknown	3
37	BRCA1	c.5278-1G>T	S	Unknown	Unknown	8
38	BRCA1	c.5278-2A>G	S	Unknown	Unknown	2
39	BRCA1	c.5278-2del	S	No NMD	PTC	1
40	BRCA1	c.5282del	FS	NMD	PTC	1
41	BRCA1	c.5289del	FS	NMD	PTC	2
42	BRCA1	c.5289dup	FS	No NMD	PTC	4
43	BRCA1	c.5291T>C	MS	MS	MS	6
44	BRCA1	c.5297T>A	MS	MS	MS	1
45	BRCA1	c.5297T>G	MS	MS	MS	2
46	BRCA1	c.5299del	FS	NMD	PTC	1
47	BRCA1	c.529del	FS	NMD	PTC	1
48	BRCA1	c.5300_5301del	FS	NMD	PTC	1
49	BRCA1	c.5301T>A	NS	NMD	PTC	1
50	BRCA1	c.5302del	FS	NMD	PTC	1
51	BRCA1	c.5307T>A	NS	NMD	PTC	1
52	BRCA1	c.5310del	FS	NMD	PTC	1
53	BRCA1	c.5311_5332+1del	FS/S?	Unknown	Unknown	1
54	BRCA1	c.5315del	FS	NMD	PTC	1
55	BRCA1	c.5319dup	FS	No NMD	PTC	5
56	BRCA1	c.531del	FS	NMD	PTC	1
57	BRCA1	c.5320_5321del	FS	No NMD	PTC	1
58	BRCA1	c.5324T>A	MS	MS	MS	3
59						
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2	BRCA1	c.5324T>G	MS	MS	MS	2	19
3	BRCA1	c.5328dup	FS	NMD	PTC	1	3
4	BRCA1	c.5331_5332+6delinsCAACAT	FS/S?	Unknown	Unknown	3	1
5	BRCA1	c.5332+1G>A	S	Unknown	Unknown	3	9
6	BRCA1	c.5332+1G>T	S	Unknown	Unknown	3	1
7	BRCA1	c.5332+2T>A	S	NMD	PTC	1	1
8	BRCA1	c.5332+2T>C	S	Unknown	Unknown	3	2
9	BRCA1	c.5332+4A>G	S	NMD	PTC	1	1
10	BRCA1	c.5332G>A	S	Unknown	Unknown	3	1
11	BRCA1	c.5333-?_5406+?del	DL	Unknown	Unknown	3	38
12	BRCA1	c.5333-198_5387del	DL	Unknown	Unknown	3	2
13	BRCA1	c.5333-1G>C	S	Unknown	Unknown	3	2
14	BRCA1	c.5333-1G>T	S	No NMD	PTC	2	1
15	BRCA1	c.5333-2A>C	S	Unknown	Unknown	3	1
16	BRCA1	c.5333-36_5406+400del	DL	No NMD	PTC	2	116
17	BRCA1	c.5333-3T>G	FS/S?	Unknown	Unknown	3	1
18	BRCA1	c.5335C>T	NS	NMD	PTC	1	2
19	BRCA1	c.5335del	FS	NMD	PTC	1	9
20	BRCA1	c.5341_5343delinsTG	FS	NMD	PTC	1	1
21	BRCA1	c.5341del	FS	NMD	PTC	1	5
22	BRCA1	c.5341G>T	NS	NMD	PTC	1	1
23	BRCA1	c.5345G>A	NS	NMD	PTC	1	10
24	BRCA1	c.5346G>A	NS	NMD	PTC	1	3
25	BRCA1	c.5352dup	FS	No NMD	PTC	2	2
26	BRCA1	c.5353_5354dup	FS	NMD	PTC	1	1
27	BRCA1	c.5353C>T	NS	NMD	PTC	1	4
28	BRCA1	c.5359T>A	MS	MS	MS	2	8
29	BRCA1	c.5361_5362del	FS	No NMD	PTC	2	3
30	BRCA1	c.5363G>T	MS	MS	MS	2	5
31	BRCA1	c.5386del	FS	No NMD	PTC	2	1
32	BRCA1	c.5389dup	FS	No NMD	PTC	2	1
33	BRCA1	c.5390C>G	NS	NMD	PTC	1	2
34	BRCA1	c.5406+1_5406+3del	S?	Unknown	Unknown	3	6
35	BRCA1	c.5406+1G>A	S	Unknown	Unknown	3	3
36	BRCA1	c.5406+2del	S	No NMD	PTC	2	3
37	BRCA1	c.5406+3A>T	S	No NMD	PTC	2	1
38	BRCA1	c.5406+5G>A	S	No NMD	PTC	2	2
39	BRCA1	c.5406+5G>C	S	No NMD	PTC	2	3
40	BRCA1	c.5406+664_*8273del	DL	Unknown	Unknown	3	26
41	BRCA1	c.5407-?_5467+?del	DL	Unknown	Unknown	3	3
42	BRCA1	c.5407-?_5467+?dup	DP	Unknown	Unknown	3	3
43	BRCA1	c.5407-?_5592+?del	DL	Unknown	Unknown	3	9
44	BRCA1	c.5407-1G>A	S	Unknown	Unknown	3	1
45	BRCA1	c.5407-1G>C	S	Unknown	Unknown	3	1
46	BRCA1	c.5407-2A>G	S	Unknown	Unknown	3	1
47	BRCA1	c.5417del	FS	No NMD	PTC	2	2
48	BRCA1	c.5419del	FS	No NMD	PTC	2	6
49	BRCA1	c.5419dup	FS	No NMD	PTC	2	1
50	BRCA1	c.5431C>T	NS	NMD	PTC	1	5
51	BRCA1	c.5434C>G	S	Unknown	Unknown	3	2
52	BRCA1	c.5444G>A	NS	NMD	PTC	1	22
53	BRCA1	c.5445G>A	NS	NMD	PTC	1	11
54	BRCA1	c.5449G>T	NS	NMD	PTC	1	4
55	BRCA1	c.5450_5451del	FS	No NMD	PTC	2	1
56	BRCA1	c.5453A>G	S	Unknown	Unknown	3	1
57	BRCA1	c.5463_5464insT	FS	unknown	Unknown	3	1
58	BRCA1	c.5467+1del	S	Unknown	Unknown	3	1
59							
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2	BRCA1	c.5467+1G>A	S	Unknown	Unknown	3	11
3	BRCA1	c.5467+2T>C	S	Unknown	Unknown	3	3
4	BRCA1	c.5467G>A	S	No NMD	PTC	2	11
5	BRCA1	c.5468-?-5592+?del	DL	Unknown	Unknown	3	24
6	BRCA1	c.5468-11_5520dup	FS	No NMD	PTC	2	1
7	BRCA1	c.5468-1G>A	S	Unknown	Unknown	3	2
8	BRCA1	c.5468-285_5592+4019delinsCACAG	DL	No RNA	No RNA	1	24
9	BRCA1	c.5468-2A>G	S	Unknown	Unknown	3	2
10	BRCA1	c.5468-2A>T	S	Unknown	Unknown	3	1
11	BRCA1	c.547+1G>T	S	Unknown	Unknown	3	7
12	BRCA1	c.547+240_5193+178del	DL	NMD	PTC	1	1
13	BRCA1	c.547+2T>A	S	Unknown	Unknown	3	10
14	BRCA1	c.547+3A>T	FS	NMD	PTC	1	1
15	BRCA1	c.5470_5477del	FS	NMD	PTC	1	7
16	BRCA1	c.5478_5479dup	FS	NMD	PTC	1	3
17	BRCA1	c.548-?-4185+?del	DL	Unknown	Unknown	3	36
18	BRCA1	c.548-?-5193+?del	DL	Unknown	Unknown	3	2
19	BRCA1	c.5483del	FS	No NMD	PTC	2	1
20	BRCA1	c.5485dup	FS	No NMD	PTC	2	4
21	BRCA1	c.5486_5510del	FS	No NMD	PTC	2	1
22	BRCA1	c.5490del	FS	No NMD	PTC	2	1
23	BRCA1	c.5492del	FS	No NMD	PTC	2	11
24	BRCA1	c.5493_5494insTT	FS	No NMD	PTC	2	1
25	BRCA1	c.5496_5499del	FS	No NMD	PTC	2	1
26	BRCA1	c.5496_5506delinsA	FS	No NMD	PTC	2	17
27	BRCA1	c.5502_5503dup	FS	No NMD	PTC	2	1
28	BRCA1	c.5503_5506del	FS	No NMD	PTC	2	1
29	BRCA1	c.5503_5564del	FS	No NMD	PTC	2	7
30	BRCA1	c.5503C>T	NS	No NMD	PTC	2	176
31	BRCA1	c.5503del	FS	No NMD	PTC	2	2
32	BRCA1	c.5503dup	FS	No NMD	PTC	2	3
33	BRCA1	c.5506G>T	NS	No NMD	PTC	2	1
34	BRCA1	c.5510G>A	NS	No NMD	PTC	2	5
35	BRCA1	c.5511G>A	NS	No NMD	PTC	2	2
36	BRCA1	c.5512del	FS	No NMD	PTC	2	1
37	BRCA1	c.5513T>A	MS	No NMD	PTC	2	4
38	BRCA1	c.5521del	FS	No NMD	PTC	2	1
39	BRCA1	c.5534_5539delins(20)	FS	No NMD	PTC	2	1
40	BRCA1	c.5535C>A	NS	No NMD	PTC	2	2
41	BRCA1	c.5535C>G	NS	No NMD	PTC	2	1
42	BRCA1	c.5536C>T	NS	No NMD	PTC	2	7
43	BRCA1	c.5537_5556del	FS	No NMD	PTC	2	1
44	BRCA1	c.5542C>T	NS	No NMD	PTC	2	1
45	BRCA1	c.5548del	FS	No NMD	PTC	2	1
46	BRCA1	c.5551del	FS	No NMD	PTC	2	1
47	BRCA1	c.5553dup	FS	No NMD	PTC	2	1
48	BRCA1	c.5556_5560del	FS	No NMD	PTC	2	1
49	BRCA1	c.5558dup	FS	No NMD	PTC	2	1
50	BRCA1	c.5560del	FS	No NMD	PTC	2	2
51	BRCA1	c.55C>T	NS	NMD / Re-initi	PTC	1	1
52	BRCA1	c.569_570insAACG	FS	NMD	PTC	1	1
53	BRCA1	c.594-?-4484+?del	DL	Unknown	Unknown	3	1
54	BRCA1	c.594_597del	FS	NMD	PTC	1	1
55	BRCA1	c.61del	FS	NMD / Re-initi	PTC	1	1
56	BRCA1	c.62_65del	FS	NMD	PTC	1	1
57	BRCA1	c.626del	FS	NMD	PTC	1	1
58	BRCA1	c.628C>T	NS	NMD	PTC	1	1
59							
60							

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2	BRCA1	c.64_65dup	FS	NMD / Re-initi	PTC	1	2
3	BRCA1	c.640del	FS	NMD	PTC	1	1
4	BRCA1	c.65T>C	MS	MS	MS	3	5
5	BRCA1	c.667_668del	FS	NMD	PTC	1	1
6	BRCA1	c.668del	FS	NMD	PTC	1	1
7	BRCA1	c.668dup	FS	NMD	PTC	1	1
8	BRCA1	c.66dup	FS	NMD / Re-initi	PTC	1	80
9	BRCA1	c.670+1del	S	Unknown	Unknown	3	1
10	BRCA1	c.671-?_4185+?del	DL	Unknown	Unknown	3	8
11	BRCA1	c.671-?_4484+?del	DL	Unknown	Unknown	3	1
12	BRCA1	c.671-?_4675+?del	DL	Unknown	Unknown	3	6
13	BRCA1	c.671-1G>A	S	Unknown	Unknown	3	1
14	BRCA1	c.671-1G>T	S	Unknown	Unknown	3	1
15	BRCA1	c.671-215_901del	DL	Unknown	Unknown	3	1
16	BRCA1	c.671-26_1781del	DL	Unknown	Unknown	3	1
17	BRCA1	c.671-2A>C	S	Unknown	Unknown	3	2
18	BRCA1	c.671-2A>G	S	Unknown	Unknown	3	1
19	BRCA1	c.671-2A>T	S	Unknown	Unknown	3	1
20	BRCA1	c.676del	FS	NMD	PTC	1	37
21	BRCA1	c.678T>A	NS	NMD	PTC	1	3
22	BRCA1	c.679G>T	NS	unknown	Unknown	3	1
23	BRCA1	c.68_69del	FS	NMD / Re-initi	PTC	1	2242
24	BRCA1	c.685del	FS	NMD	PTC	1	8
25	BRCA1	c.689_692del	FS	NMD	PTC	1	2
26	BRCA1	c.68dup	FS	NMD / Re-initi	PTC	1	3
27	BRCA1	c.697_698del	FS	NMD	PTC	1	3
28	BRCA1	c.69dup	FS	NMD / Re-initi	PTC	1	1
29	BRCA1	c.70_73dup	FS	NMD / Re-initi	PTC	1	6
30	BRCA1	c.70_80del	FS	NMD / Re-initi	PTC	1	20
31	BRCA1	c.707del	FS	NMD	PTC	1	1
32	BRCA1	c.70T>C	MS	MS	MS	3	3
33	BRCA1	c.71_72del	FS	NMD / Re-initi	PTC	1	2
34	BRCA1	c.712_713ins(31)	FS	NMD	PTC	1	1
35	BRCA1	c.718C>T	NS	NMD	PTC	1	2
36	BRCA1	c.743_744insA	FS	NMD	PTC	1	1
37	BRCA1	c.750_751del	FS	NMD	PTC	1	1
38	BRCA1	c.-7620_80+468delins(8)	DL	No RNA	No RNA	1	2
39	BRCA1	c.763G>T	NS	NMD	PTC	1	3
40	BRCA1	c.778_779dup	FS	NMD	PTC	1	1
41	BRCA1	c.783T>G	NS	NMD	PTC	1	3
42	BRCA1	c.784C>T	NS	NMD	PTC	1	3
43	BRCA1	c.784del	FS	NMD	PTC	1	2
44	BRCA1	c.788dup	FS	NMD	PTC	1	1
45	BRCA1	c.791_794del	FS	NMD	PTC	1	2
46	BRCA1	c.798_799del	FS	NMD	PTC	1	76
47	BRCA1	c.799dup	FS	NMD	PTC	1	2
48	BRCA1	c.80+1G>A	S	Unknown	Unknown	3	3
49	BRCA1	c.80+1G>C	S	Unknown	Unknown	3	1
50	BRCA1	c.80+1G>T	S	Unknown	Unknown	3	1
51	BRCA1	c.80+2T>A	S	Unknown	Unknown	3	1
52	BRCA1	c.80+2T>G	S	Unknown	Unknown	3	1
53	BRCA1	c.80+5G>A	S	Unknown	Unknown	3	3
54	BRCA1	c.800C>G	NS	NMD	PTC	1	1
55	BRCA1	c.807_817dup	FS	NMD	PTC	1	1
56	BRCA1	c.81-?_134+?del	DL	Unknown	Unknown	3	45
57	BRCA1	c.81-?_134+?dup	DP	Unknown	Unknown	3	1
58	BRCA1	c.81-?_4185+?del	DL	Unknown	Unknown	3	3
59							
60							

1							
2	BRCA1	c.81-?_441+?del	DL	Unknown	Unknown	3	1
3	BRCA1	c.81-?_4986+?del	DL	Unknown	Unknown	3	31
4	BRCA1	c.81-?_5152+?dup	DP	Unknown	Unknown	3	1
5	BRCA1	c.81-?_5193+?del	DL	Unknown	Unknown	3	1
6	BRCA1	c.81-?_547+?dup	DP	Unknown	Unknown	3	8
7	BRCA1	c.81-1588_134+1725del	DL	Unknown	Unknown	3	3
8	BRCA1	c.81-1G>A	S	Unknown	Unknown	3	4
9	BRCA1	c.81-1G>C	S	NMD	PTC	1	9
10	BRCA1	c.814G>T	NS	NMD	PTC	1	1
11	BRCA1	c.815_816insTCCATGTGGA	FS	NMD	PTC	1	1
12	BRCA1	c.815_824dup	FS	NMD	PTC	1	47
13	BRCA1	c.81-5858_135-4943del	DL	Unknown	Unknown	3	1
14	BRCA1	c.824_825ins10	FS	NMD	PTC	1	9
15	BRCA1	c.829_830del	FS	NMD	PTC	1	1
16	BRCA1	c.829_836del	FS	NMD	PTC	1	1
17	BRCA1	c.83_84del	FS	NMD / Re-initi	PTC	1	3
18	BRCA1	c.832dup	FS	NMD	PTC	1	1
19	BRCA1	c.835del	FS	NMD	PTC	1	4
20	BRCA1	c.841_842dup	FS	NMD	PTC	1	1
21	BRCA1	c.843_846del	FS	NMD	PTC	1	54
22	BRCA1	c.844_850dup	FS	NMD	PTC	1	5
23	BRCA1	c.848T>G	NS	NMD	PTC	1	1
24	BRCA1	c.850C>T	NS	NMD	PTC	1	3
25	BRCA1	c.851_852ins(7)	FS	NMD	PTC	1	3
26	BRCA1	c.856G>T	NS	NMD	PTC	1	1
27	BRCA1	c.85G>T	NS	NMD	PTC	1	1
28	BRCA1	c.861_862dup	FS	NMD	PTC	1	1
29	BRCA1	c.862del	FS	NMD	PTC	1	1
30	BRCA1	c.869T>G	NS	unknown	Unknown	3	1
31	BRCA1	c.873dup	FS	NMD	PTC	1	1
32	BRCA1	c.874del	FS	NMD	PTC	1	1
33	BRCA1	c.882del	FS	NMD	PTC	1	1
34	BRCA1	c.892-?_4096+?dup	DP	Unknown	Unknown	3	1
35	BRCA1	c.895_896del	FS	NMD	PTC	1	5
36	BRCA1	c.898G>T	NS	NMD	PTC	1	1
37	BRCA1	c.89T>A	NS	NMD / Re-initi	PTC	1	1
38	BRCA1	c.904del	FS	NMD	PTC	1	1
39	BRCA1	c.922_924delinsT	FS	NMD	PTC	1	13
40	BRCA1	c.923_924del	FS	NMD	PTC	1	1
41	BRCA1	c.923del	FS	NMD	PTC	1	4
42	BRCA1	c.924del	FS	NMD	PTC	1	1
43	BRCA1	c.925A>T	NS	NMD	PTC	1	2
44	BRCA1	c.927del	FS	NMD	PTC	1	1
45	BRCA1	c.928C>T	NS	NMD	PTC	1	6
46	BRCA1	c.929del	FS	NMD	PTC	1	15
47	BRCA1	c.930del	FS	NMD	PTC	1	6
48	BRCA1	c.93del	FS	NMD	PTC	1	1
49	BRCA1	c.944_1007del	FS	NMD	PTC	1	1
50	BRCA1	c.949C>T	NS	NMD	PTC	1	1
51	BRCA1	c.952_1015del	FS	NMD	PTC	1	13
52	BRCA1	c.953del	FS	NMD	PTC	1	1
53	BRCA1	c.958del	FS	NMD	PTC	1	1
54	BRCA1	c.959_960del	FS	NMD	PTC	1	1
55	BRCA1	c.962G>A	NS	NMD	PTC	1	44
56	BRCA1	c.963G>A	NS	NMD	PTC	1	3
57	BRCA1	c.964del	FS	NMD	PTC	1	5
58	BRCA1	c.966del	FS	NMD	PTC	1	1
59							
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2	BRCA1	c.979del	FS	NMD	PTC	1	1
3	BRCA1	c.98_105del	FS	NMD	PTC	1	1
4	BRCA1	c.981_982del	FS	NMD	PTC	1	31
5	BRCA1	c.984_988del	FS	NMD	PTC	1	4
6	BRCA2	c.10150C>T	NS	no NMD	PTC	2	3
7	BRCA2	c.3879_3880del	FS	unknown	Unknown	3	1
8	BRCA2	c.476-3C>A	S	unknown	Unknown	3	3
9	BRCA2	c.5158_5159insA	FS	unknown	Unknown	3	1
10	BRCA2	c.516_516+1insC	FS	NMD	PTC	1	1
11	BRCA2	c.5197_5198del	FS	unknown	Unknown	3	1
12	BRCA2	c.6611del	FS	unknown	Unknown	3	1
13	BRCA2	c.6752dup	FS	unknown	Unknown	3	1
14	BRCA2	c.7977-7C>G	S	NMD	PTC	1	1
15	BRCA2	c.8713del	FS	unknown	Unknown	3	1
16	BRCA2	c.9257-?_9501+?del	DL	Unknown	Unknown	3	1
17	BRCA2	c.(9257_9501)ins(400)	ins	unknown	Unknown	3	1
18	BRCA2	c.-227-?_10257+?del	DL	no RNA	no RNA	1	2
19	BRCA2	c.-227-?_425+?del	DL	no RNA	no RNA	1	1
20	BRCA2	c.-227-?_67+?del	DL	no RNA	no RNA	1	26
21	BRCA2	c.-227-?_67+?dup	DP	unknown	Unknown	3	1
22	BRCA2	c.-227-?_6841+?del	DL	no RNA	no RNA	1	3
23	BRCA2	c.-227-?_7007+?del	DL	no RNA	no RNA	1	1
24	BRCA2	c.-227-?_9256+?del	DL	no RNA	no RNA	1	2
25	BRCA2	c.-39-?_67+?del	DL	unknown	Unknown	3	10
26	BRCA2	c.100G>T	NS	NMD	PTC	1	12
27	BRCA2	c.1023T>A	NS	NMD	PTC	1	1
28	BRCA2	c.1029del	FS	NMD	PTC	1	6
29	BRCA2	c.103dup	FS	NMD	PTC	1	1
30	BRCA2	c.1053dup	FS	NMD	PTC	1	1
31	BRCA2	c.1054dup	FS	NMD	PTC	1	4
32	BRCA2	c.1055dup	FS	NMD	PTC	1	1
33	BRCA2	c.1058C>A	NS	NMD	PTC	1	1
34	BRCA2	c.1058C>G	NS	NMD	PTC	1	2
35	BRCA2	c.1069del	FS	NMD	PTC	1	1
36	BRCA2	c.1097T>G	NS	NMD	PTC	1	1
37	BRCA2	c.1097dup	FS	NMD	PTC	1	1
38	BRCA2	c.10G>T	NS	NMD	PTC	1	2
39	BRCA2	c.1103C>A	NS	NMD	PTC	1	3
40	BRCA2	c.110C>A	NS	NMD	PTC	1	1
41	BRCA2	c.110C>G	NS	NMD	PTC	1	2
42	BRCA2	c.1117C>T	NS	NMD	PTC	1	2
43	BRCA2	c.1128del	FS	NMD	PTC	1	7
44	BRCA2	c.1134del	FS	NMD	PTC	1	1
45	BRCA2	c.1138del	FS	NMD	PTC	1	7
46	BRCA2	c.1147del	FS	NMD	PTC	1	6
47	BRCA2	c.1153A>T	NS	NMD	PTC	1	1
48	BRCA2	c.1156del	FS	NMD	PTC	1	3
49	BRCA2	c.115del	FS	NMD	PTC	1	6
50	BRCA2	c.1184G>A	NS	NMD	PTC	1	1
51	BRCA2	c.1189_1190ins(4)	FS	NMD	PTC	1	14
52	BRCA2	c.1189_1190insCAAC	FS	NMD	PTC	1	4
53	BRCA2	c.1189_1190insTTAG	FS	NMD	PTC	1	13
54	BRCA2	c.1189_1190insTTAT	FS	NMD	PTC	1	1
55	BRCA2	c.1195del	FS	NMD	PTC	1	1
56	BRCA2	c.1205del	FS	NMD	PTC	1	1
57	BRCA2	c.120_123del	FS	NMD	PTC	1	1
58	BRCA2	c.1212del	FS	NMD	PTC	1	1
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2	BRCA2	c.1225del	FS	NMD	PTC	1
3	BRCA2	c.1225delinsTTT	FS	NMD	PTC	1
4	BRCA2	c.1226del	FS	NMD	PTC	1
5	BRCA2	c.1231del	FS	NMD	PTC	1
6	BRCA2	c.1232_1242delinsACAT	FS	NMD	PTC	1
7	BRCA2	c.1233dup	FS	NMD	PTC	1
8	BRCA2	c.1237del	FS	NMD	PTC	1
9	BRCA2	c.1238del	FS	NMD	PTC	1
10	BRCA2	c.1249del	FS	NMD	PTC	1
11	BRCA2	c.1253C>A	NS	NMD	PTC	1
12	BRCA2	c.1253C>G	NS	NMD	PTC	1
13	BRCA2	c.1257del	FS	NMD	PTC	1
14	BRCA2	c.1261C>T	NS	NMD	PTC	1
15	BRCA2	c.1265del	FS	NMD	PTC	1
16	BRCA2	c.127_128del	FS	NMD	PTC	1
17	BRCA2	c.1286T>G	NS	NMD	PTC	1
18	BRCA2	c.1287dup	FS	NMD	PTC	1
19	BRCA2	c.1296_1297del	FS	NMD	PTC	1
20	BRCA2	c.1298dup	FS	NMD	PTC	1
21	BRCA2	c.1300_1303del	FS	NMD	PTC	1
22	BRCA2	c.1308_1309del	FS	NMD	PTC	1
23	BRCA2	c.1310_1313del	FS	NMD	PTC	1
24	BRCA2	c.1317del	FS	NMD	PTC	1
25	BRCA2	c.1318_1319dup	FS	NMD	PTC	1
26	BRCA2	c.1325C>A	NS	NMD	PTC	1
27	BRCA2	c.1327G>T	NS	NMD	PTC	1
28	BRCA2	c.1334del	FS	NMD	PTC	1
29	BRCA2	c.1362del	FS	NMD	PTC	1
30	BRCA2	c.1368_1369del	FS	NMD	PTC	1
31	BRCA2	c.1368_1369dup	FS	NMD	PTC	1
32	BRCA2	c.1376T>G	NS	NMD	PTC	1
33	BRCA2	c.1389_1390del	FS	NMD	PTC	1
34	BRCA2	c.1399A>T	NS	NMD	PTC	1
35	BRCA2	c.1404_1413del	FS	NMD	PTC	1
36	BRCA2	c.1405_1406del	FS	NMD	PTC	1
37	BRCA2	c.1408dup	FS	NMD	PTC	1
38	BRCA2	c.1411G>T	NS	NMD	PTC	1
39	BRCA2	c.1414C>T	NS	NMD	PTC	1
40	BRCA2	c.1448_1451dup	FS	NMD	PTC	1
41	BRCA2	c.1449_1451delinsTTCC	FS	NMD	PTC	1
42	BRCA2	c.1454del	FS	NMD	PTC	1
43	BRCA2	c.1456C>T	NS	NMD	PTC	1
44	BRCA2	c.145G>T	NS	NMD	PTC	1
45	BRCA2	c.1484dup	FS	NMD	PTC	1
46	BRCA2	c.1496_1497del	FS	NMD	PTC	1
47	BRCA2	c.1499del	FS	NMD	PTC	1
48	BRCA2	c.1508del	FS	NMD	PTC	1
49	BRCA2	c.1511_1512del	FS	NMD	PTC	1
50	BRCA2	c.1514del	FS	NMD	PTC	1
51	BRCA2	c.1528_1529del	FS	NMD	PTC	1
52	BRCA2	c.1538_1541del	FS	NMD	PTC	1
53	BRCA2	c.1540dup	FS	NMD	PTC	1
54	BRCA2	c.1560_1561del	FS	NMD	PTC	1
55	BRCA2	c.156_157insAlu	ins	unknown	Unknown	3
56	BRCA2	c.1572del	FS	NMD	PTC	1
57	BRCA2	c.1587_1590del	FS	NMD	PTC	1
58	BRCA2	c.1587delinsCA	FS	NMD	PTC	1
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2	BRCA2	c.1593dup	FS	NMD	PTC	1	10
3	BRCA2	c.1594G>T	NS	NMD	PTC	1	1
4	BRCA2	c.1594_1595del	FS	NMD	PTC	1	1
5	BRCA2	c.1595_1599del	FS	NMD	PTC	1	1
6	BRCA2	c.1597del	FS	NMD	PTC	1	11
7	BRCA2	c.1599_1600del	FS	NMD	PTC	1	1
8	BRCA2	c.161del	FS	NMD	PTC	1	3
9	BRCA2	c.1621G>T	NS	NMD	PTC	1	1
10	BRCA2	c.1636del	FS	NMD	PTC	1	4
11	BRCA2	c.1642C>T	NS	NMD	PTC	1	4
12	BRCA2	c.1648dup	FS	NMD	PTC	1	1
13	BRCA2	c.1654del	FS	NMD	PTC	1	4
14	BRCA2	c.1668_1671delinsATT	FS	NMD	PTC	1	1
15	BRCA2	c.1670T>G	NS	NMD	PTC	1	6
16	BRCA2	c.1670_1683del	FS	NMD	PTC	1	1
17	BRCA2	c.1671_1674del	FS	NMD	PTC	1	1
18	BRCA2	c.1672del	FS	NMD	PTC	1	1
19	BRCA2	c.1674_1680del	FS	NMD	PTC	1	1
20	BRCA2	c.1675del	FS	NMD	PTC	1	1
21	BRCA2	c.1689G>A	NS	NMD	PTC	1	13
22	BRCA2	c.1693_1696del	FS	NMD	PTC	1	1
23	BRCA2	c.1705_1706del	FS	NMD	PTC	1	1
24	BRCA2	c.1705del	FS	NMD	PTC	1	3
25	BRCA2	c.1707_1708del	FS	NMD	PTC	1	4
26	BRCA2	c.170dup	FS	NMD	PTC	1	1
27	BRCA2	c.171C>G	NS	NMD	PTC	1	1
28	BRCA2	c.1739_1754del	FS	NMD	PTC	1	1
29	BRCA2	c.1748T>A	NS	NMD	PTC	1	1
30	BRCA2	c.1748del	FS	NMD	PTC	1	2
31	BRCA2	c.1754del	FS	NMD	PTC	1	7
32	BRCA2	c.1755_1759del	FS	NMD	PTC	1	13
33	BRCA2	c.1762_1766del	FS	NMD	PTC	1	3
34	BRCA2	c.1763A>G	S	IFD	IFD	2	1
35	BRCA2	c.1763_1766del	FS	NMD	PTC	1	6
36	BRCA2	c.1765_1766del	FS	NMD	PTC	1	1
37	BRCA2	c.1773_1776del	FS	NMD	PTC	1	14
38	BRCA2	c.1774_1777del	FS	NMD	PTC	1	1
39	BRCA2	c.1792del	FS	NMD	PTC	1	5
40	BRCA2	c.1796_1800del	FS	NMD	PTC	1	37
41	BRCA2	c.1797_1801del	FS	NMD	PTC	1	1
42	BRCA2	c.1798_1802del	FS	NMD	PTC	1	1
43	BRCA2	c.17_18del	FS	NMD	PTC	1	2
44	BRCA2	c.1800T>A	NS	NMD	PTC	1	3
45	BRCA2	c.1800T>G	NS	NMD	PTC	1	1
46	BRCA2	c.1805del	FS	NMD	PTC	1	2
47	BRCA2	c.1811_1812delinsG	FS	NMD	PTC	1	2
48	BRCA2	c.1813del	FS	NMD	PTC	1	43
49	BRCA2	c.1813dup	FS	NMD	PTC	1	172
50	BRCA2	c.1815dup	FS	NMD	PTC	1	12
51	BRCA2	c.1832C>A	NS	NMD	PTC	1	7
52	BRCA2	c.1832C>G	NS	NMD	PTC	1	2
53	BRCA2	c.1841_1844del	FS	NMD	PTC	1	1
54	BRCA2	c.1842dup	FS	NMD	PTC	1	6
55	BRCA2	c.1845_1846del	FS	NMD	PTC	1	2
56	BRCA2	c.1850C>G	NS	NMD	PTC	1	1
57	BRCA2	c.1854_1855insA	FS	NMD	PTC	1	1
58	BRCA2	c.1855C>T	NS	NMD	PTC	1	3
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2	BRCA2	c.1888_1889insAA	FS	NMD	PTC	1	1
3	BRCA2	c.1888del	FS	NMD	PTC	1	1
4	BRCA2	c.1889del	FS	NMD	PTC	1	8
5	BRCA2	c.1899_1900insTT	FS	NMD	PTC	1	6
6	BRCA2	c.1900_1901insTT	FS	NMD	PTC	1	1
7	BRCA2	c.1906del	FS	NMD	PTC	1	1
8	BRCA2	c.1909+1G>A	S	unknown	Unknown	3	1
9	BRCA2	c.1913T>G	NS	NMD	PTC	1	1
10	BRCA2	c.1929del	FS	NMD	PTC	1	64
11	BRCA2	c.1943C>G	NS	NMD	PTC	1	1
12	BRCA2	c.1945C>T	NS	NMD	PTC	1	3
13	BRCA2	c.196C>T	NS	NMD	PTC	1	5
14	BRCA2	c.1981_1984dup	FS	NMD	PTC	1	1
15	BRCA2	c.1989del	FS	NMD	PTC	1	1
16	BRCA2	c.200_1910-877dup	DP	unknown	Unknown	3	1
17	BRCA2	c.201_202dup	FS	NMD	PTC	1	1
18	BRCA2	c.2023del	FS	NMD	PTC	1	1
19	BRCA2	c.2025_2026del	FS	NMD	PTC	1	1
20	BRCA2	c.2026del	FS	NMD	PTC	1	1
21	BRCA2	c.2049_2050del	FS	NMD	PTC	1	2
22	BRCA2	c.204del	FS	NMD	PTC	1	5
23	BRCA2	c.2086G>T	NS	NMD	PTC	1	1
24	BRCA2	c.2091dup	FS	NMD	PTC	1	1
25	BRCA2	c.2092del	FS	NMD	PTC	1	4
26	BRCA2	c.2094del	FS	NMD	PTC	1	4
27	BRCA2	c.2095C>T	NS	NMD	PTC	1	1
28	BRCA2	c.2095_2096del	FS	NMD	PTC	1	1
29	BRCA2	c.2103_2106del	FS	NMD	PTC	1	1
30	BRCA2	c.2111del	FS	NMD	PTC	1	1
31	BRCA2	c.2129C>G	NS	NMD	PTC	1	2
32	BRCA2	c.212dup	FS	NMD	PTC	1	1
33	BRCA2	c.2137C>T	NS	NMD	PTC	1	3
34	BRCA2	c.2147dup	FS	NMD	PTC	1	1
35	BRCA2	c.2150del	FS	NMD	PTC	1	2
36	BRCA2	c.2151T>A	NS	NMD	PTC	1	2
37	BRCA2	c.215delinsTT	FS	NMD	PTC	1	1
38	BRCA2	c.2175dup	FS	NMD	PTC	1	4
39	BRCA2	c.2197del	FS	NMD	PTC	1	1
40	BRCA2	c.2202_2203insAA	FS	NMD	PTC	1	1
41	BRCA2	c.2206del	FS	NMD	PTC	1	1
42	BRCA2	c.2208del	FS	NMD	PTC	1	1
43	BRCA2	c.2209_2216del	FS	NMD	PTC	1	1
44	BRCA2	c.2214T>A	NS	NMD	PTC	1	3
45	BRCA2	c.2224C>T	NS	NMD	PTC	1	3
46	BRCA2	c.2231C>G	NS	NMD	PTC	1	6
47	BRCA2	c.2244_2245del	FS	NMD	PTC	1	1
48	BRCA2	c.2245_2246insTTCAAAAGTGAATTCAAAA	FS	NMD	PTC	1	1
49	BRCA2	c.224_225insA	FS	NMD	PTC	1	1
50	BRCA2	c.2251dup	FS	NMD	PTC	1	1
51	BRCA2	c.2255dup	FS	NMD	PTC	1	1
52	BRCA2	c.2259del	FS	NMD	PTC	1	2
53	BRCA2	c.2271_2272del	FS	NMD	PTC	1	1
54	BRCA2	c.2278_2279del	FS	NMD	PTC	1	2
55	BRCA2	c.227C>G	NS	NMD	PTC	1	2
56	BRCA2	c.22_23del	FS	NMD	PTC	1	5
57	BRCA2	c.2312T>G	NS	NMD	PTC	1	2
58	BRCA2	c.2330dup	FS	NMD	PTC	1	13
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2	BRCA2	c.2339C>A/G	NS	NMD	PTC	1	1
3	BRCA2	c.2339C>G	NS	NMD	PTC	1	2
4	BRCA2	c.2368G>T	NS	NMD	PTC	1	3
5	BRCA2	c.2376C>A	NS	NMD	PTC	1	1
6	BRCA2	c.2380dup	FS	NMD	PTC	1	1
7	BRCA2	c.2397del	FS	NMD	PTC	1	1
8	BRCA2	c.2399dup	FS	NMD	PTC	1	1
9	BRCA2	c.2402_2412del	FS	NMD	PTC	1	1
10	BRCA2	c.2402_2420del	FS	NMD	PTC	1	1
11	BRCA2	c.2409T>G	NS	NMD	PTC	1	4
12	BRCA2	c.2421dup	FS	NMD	PTC	1	1
13	BRCA2	c.2430_2437del	FS	NMD	PTC	1	1
14	BRCA2	c.2435del	FS	NMD	PTC	1	2
15	BRCA2	c.244A>T	NS	NMD	PTC	1	10
16	BRCA2	c.2450del	FS	NMD	PTC	1	2
17	BRCA2	c.2451_2452dup	FS	NMD	PTC	1	1
18	BRCA2	c.2455C>T	NS	NMD	PTC	1	3
19	BRCA2	c.2471T>G	NS	NMD	PTC	1	1
20	BRCA2	c.2471_2476del	FS	NMD	PTC	1	1
21	BRCA2	c.2471del	FS	NMD	PTC	1	1
22	BRCA2	c.247G>T	NS	NMD	PTC	1	1
23	BRCA2	c.248_249del	FS	NMD	PTC	1	1
24	BRCA2	c.2490_2491insT	FS	NMD	PTC	1	1
25	BRCA2	c.2509_2513del	FS	NMD	PTC	1	1
26	BRCA2	c.250C>T	NS	NMD	PTC	1	25
27	BRCA2	c.250del	FS	NMD	PTC	1	1
28	BRCA2	c.2514del	FS	NMD	PTC	1	4
29	BRCA2	c.2514dup	FS	NMD	PTC	1	2
30	BRCA2	c.2517C>A	NS	NMD	PTC	1	2
31	BRCA2	c.2526dup	FS	NMD	PTC	1	1
32	BRCA2	c.2537C>G	NS	NMD	PTC	1	1
33	BRCA2	c.2539A>T	NS	NMD	PTC	1	1
34	BRCA2	c.2539dup	FS	NMD	PTC	1	2
35	BRCA2	c.2545del	FS	NMD	PTC	1	1
36	BRCA2	c.2548C>T	NS	NMD	PTC	1	1
37	BRCA2	c.2553del	FS	NMD	PTC	1	1
38	BRCA2	c.2564_2565del	FS	NMD	PTC	1	1
39	BRCA2	c.2588dup	FS	NMD	PTC	1	15
40	BRCA2	c.2593G>T	NS	NMD	PTC	1	1
41	BRCA2	c.2595del	FS	NMD	PTC	1	4
42	BRCA2	c.2603del	FS	NMD	PTC	1	1
43	BRCA2	c.2606C>G	NS	NMD	PTC	1	5
44	BRCA2	c.2612C>A	NS	NMD	PTC	1	3
45	BRCA2	c.2617dup	FS	NMD	PTC	1	1
46	BRCA2	c.2618dup	FS	NMD	PTC	1	1
47	BRCA2	c.262_263del	FS	NMD	PTC	1	24
48	BRCA2	c.2636_2637del	FS	NMD	PTC	1	1
49	BRCA2	c.2641G>T	NS	NMD	PTC	1	1
50	BRCA2	c.2648del	FS	NMD	PTC	1	1
51	BRCA2	c.2650del	FS	NMD	PTC	1	1
52	BRCA2	c.2651C>G	NS	NMD	PTC	1	1
53	BRCA2	c.2653_2656del	FS	NMD	PTC	1	5
54	BRCA2	c.2657del	FS	NMD	PTC	1	3
55	BRCA2	c.266del	FS	NMD	PTC	1	1
56	BRCA2	c.2684del	FS	NMD	PTC	1	1
57	BRCA2	c.26del	FS	NMD	PTC	1	16
58	BRCA2	c.2701del	FS	NMD	PTC	1	9
59							
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2	BRCA2	c.2703del	FS	NMD	PTC	1
3	BRCA2	c.271_272del	FS	NMD	PTC	1
4	BRCA2	c.273C>A	NS	NMD	PTC	1
5	BRCA2	c.273C>G	NS	NMD	PTC	1
6	BRCA2	c.2743_2747del	FS	NMD	PTC	1
7	BRCA2	c.2745_2746del	FS	NMD	PTC	1
8	BRCA2	c.2748T>A	NS	NMD	PTC	1
9	BRCA2	c.2748del	FS	NMD	PTC	1
10	BRCA2	c.2753del	FS	NMD	PTC	1
11	BRCA2	c.2758_2759insATGG	FS	NMD	PTC	1
12	BRCA2	c.2760del	FS	NMD	PTC	1
13	BRCA2	c.2764_2777del	FS	NMD	PTC	1
14	BRCA2	c.2765dup	FS	NMD	PTC	1
15	BRCA2	c.276_317-722delinsCCAT	DL	NMD	PTC	1
16	BRCA2	c.276dup	FS	NMD	PTC	1
17	BRCA2	c.2775dup	FS	NMD	PTC	1
18	BRCA2	c.2778_2782delins(12)	FS	NMD	PTC	1
19	BRCA2	c.2781_2785del	FS	NMD	PTC	1
20	BRCA2	c.2786del	FS	NMD	PTC	1
21	BRCA2	c.2786dup	FS	NMD	PTC	1
22	BRCA2	c.2798_2799del	FS	NMD	PTC	1
23	BRCA2	c.2808_2811del	FS	NMD	PTC	1
24	BRCA2	c.2812_2815del	FS	NMD	PTC	1
25	BRCA2	c.2818C>T	NS	NMD	PTC	1
26	BRCA2	c.2830A>T	NS	NMD	PTC	1
27	BRCA2	c.2833_2834insTT	FS	NMD	PTC	1
28	BRCA2	c.2834_2835del	FS	NMD	PTC	1
29	BRCA2	c.2835del	FS	NMD	PTC	1
30	BRCA2	c.2836_2837del	FS	NMD	PTC	1
31	BRCA2	c.2836del	FS	NMD	PTC	1
32	BRCA2	c.2845del	FS	NMD	PTC	1
33	BRCA2	c.2847T>A	NS	NMD	PTC	1
34	BRCA2	c.2858del	FS	NMD	PTC	1
35	BRCA2	c.2870del	FS	NMD	PTC	1
36	BRCA2	c.2880del	FS	NMD	PTC	1
37	BRCA2	c.2881C>T	NS	NMD	PTC	1
38	BRCA2	c.2896dup	FS	NMD	PTC	1
39	BRCA2	c.2899_2900del	FS	NMD	PTC	1
40	BRCA2	c.289G>T	NS	NMD	PTC	1
41	BRCA2	c.2905C>T	NS	NMD	PTC	1
42	BRCA2	c.2912T>G	NS	NMD	PTC	1
43	BRCA2	c.2930_2940del	FS	NMD	PTC	1
44	BRCA2	c.2945del	FS	NMD	PTC	1
45	BRCA2	c.2954_2957del	FS	NMD	PTC	1
46	BRCA2	c.2957_2958insG	FS	NMD	PTC	1
47	BRCA2	c.2957del	FS	NMD	PTC	1
48	BRCA2	c.2957dup	FS	NMD	PTC	1
49	BRCA2	c.2960dup	FS	NMD	PTC	1
50	BRCA2	c.2971_2983del	FS	NMD	PTC	1
51	BRCA2	c.2978G>A	NS	NMD	PTC	1
52	BRCA2	c.2979G>A	NS	NMD	PTC	1
53	BRCA2	c.2983G>T	NS	NMD	PTC	1
54	BRCA2	c.2990T>G	NS	NMD	PTC	1
55	BRCA2	c.2T>G	MS	unknown	Unknown	3
56	BRCA2	c.3009_3010del	FS	NMD	PTC	1
57	BRCA2	c.3018del	FS	NMD	PTC	1
58	BRCA2	c.3043A>T	NS	NMD	PTC	1
59						
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2	BRCA2	c.3046G>T	NS	NMD	PTC	1	5
3	BRCA2	c.3051del	FS	NMD	PTC	1	2
4	BRCA2	c.3066dup	FS	NMD	PTC	1	3
5	BRCA2	c.3067_3071del	FS	NMD	PTC	1	1
6	BRCA2	c.3068del	FS	NMD	PTC	1	2
7	BRCA2	c.3068dup	FS	NMD	PTC	1	1
8	BRCA2	c.306dup	FS	NMD	PTC	1	1
9	BRCA2	c.3075_3076delinsTT	MS/FS	NMD	PTC	1	1
10	BRCA2	c.3076A>T	NS	NMD	PTC	1	2
11	BRCA2	c.3100dup	FS	NMD	PTC	1	1
12	BRCA2	c.3103G>T	NS	NMD	PTC	1	10
13	BRCA2	c.3109C>T	NS	NMD	PTC	1	32
14	BRCA2	c.3146del	FS	NMD	PTC	1	1
15	BRCA2	c.314T>G	NS	NMD	PTC	1	10
16	BRCA2	c.3150_3153delinsATTTT	FS	NMD	PTC	1	1
17	BRCA2	c.3158T>G	NS	NMD	PTC	1	12
18	BRCA2	c.316+1G>A	S	unknown	Unknown	3	1
19	BRCA2	c.316+1G>C	S	unknown	Unknown	3	3
20	BRCA2	c.316+2T>G	S	unknown	Unknown	3	1
21	BRCA2	c.3160_3163del	FS	NMD	PTC	1	8
22	BRCA2	c.3166C>T	NS	NMD	PTC	1	2
23	BRCA2	c.3167_3170del	FS	NMD	PTC	1	2
24	BRCA2	c.317-?_425+?dup	DP	unknown	Unknown	3	1
25	BRCA2	c.317-?_631+?del	DL	unknown	Unknown	3	1
26	BRCA2	c.3170_3174del	FS	NMD	PTC	1	19
27	BRCA2	c.3171_3172del	FS	NMD	PTC	1	2
28	BRCA2	c.3172A>T	NS	NMD	PTC	1	4
29	BRCA2	c.3187C>T	NS	NMD	PTC	1	3
30	BRCA2	c.3189_3192del	FS	NMD	PTC	1	5
31	BRCA2	c.3195_3198del	FS	NMD	PTC	1	7
32	BRCA2	c.3195del	FS	NMD	PTC	1	1
33	BRCA2	c.3199del	FS	NMD	PTC	1	19
34	BRCA2	c.3202del	FS	NMD	PTC	1	1
35	BRCA2	c.3217C>T	NS	NMD	PTC	1	1
36	BRCA2	c.3226_3230del	FS	NMD	PTC	1	2
37	BRCA2	c.3244A>T	NS	NMD	PTC	1	1
38	BRCA2	c.3248del	FS	NMD	PTC	1	1
39	BRCA2	c.3248dup	FS	NMD	PTC	1	1
40	BRCA2	c.3264dup	FS	NMD	PTC	1	102
41	BRCA2	c.3265C>T	NS	NMD	PTC	1	1
42	BRCA2	c.3267_3268del	FS	NMD	PTC	1	1
43	BRCA2	c.3269del	FS	NMD	PTC	1	1
44	BRCA2	c.3277del	FS	NMD	PTC	1	1
45	BRCA2	c.3283C>T	NS	NMD	PTC	1	1
46	BRCA2	c.3283del	FS	NMD	PTC	1	1
47	BRCA2	c.3296C>A	NS	NMD	PTC	1	5
48	BRCA2	c.3303_3336dup	FS	NMD	PTC	1	1
49	BRCA2	c.3319C>T	NS	NMD	PTC	1	3
50	BRCA2	c.3335del	FS	NMD	PTC	1	1
51	BRCA2	c.3337_3338del	FS	NMD	PTC	1	1
52	BRCA2	c.3346_3347del	FS	NMD	PTC	1	1
53	BRCA2	c.3352_3356del	FS	NMD	PTC	1	1
54	BRCA2	c.3353_3355del	FS	NMD	PTC	1	2
55	BRCA2	c.3354del	FS	NMD	PTC	1	2
56	BRCA2	c.3362C>G	NS	NMD	PTC	1	3
57	BRCA2	c.3405C>A	NS	NMD	PTC	1	10
58	BRCA2	c.3407_3408ins(100)	FS	NMD	PTC	1	1
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2	BRCA2	c.3409_3421del	FS	NMD	PTC	1
3	BRCA2	c.3412C>T	NS	NMD	PTC	1
4	BRCA2	c.3422del	FS	NMD	PTC	1
5	BRCA2	c.3442C>T	NS	NMD	PTC	1
6	BRCA2	c.3451_3452del	FS	NMD	PTC	1
7	BRCA2	c.3452dup	FS	NMD	PTC	1
8	BRCA2	c.3453del	FS	NMD	PTC	1
9	BRCA2	c.3455T>A	NS	NMD	PTC	1
10	BRCA2	c.3455T>G	NS	NMD	PTC	1
11	BRCA2	c.3458del	FS	NMD	PTC	1
12	BRCA2	c.3465_3466del	FS	NMD	PTC	1
13	BRCA2	c.3481_3482dup	FS	NMD	PTC	1
14	BRCA2	c.3487del	FS	NMD	PTC	1
15	BRCA2	c.3489del	FS	NMD	PTC	1
16	BRCA2	c.3492dup	FS	NMD	PTC	1
17	BRCA2	c.3497del	FS	NMD	PTC	1
18	BRCA2	c.3500_3501del	FS	NMD	PTC	1
19	BRCA2	c.3502dup	FS	NMD	PTC	1
20	BRCA2	c.3523C>T	NS	NMD	PTC	1
21	BRCA2	c.3530_3533del	FS	NMD	PTC	1
22	BRCA2	c.3545_3546del	FS	NMD	PTC	1
23	BRCA2	c.3554_3555del	FS	NMD	PTC	1
24	BRCA2	c.3564_3567del	FS	NMD	PTC	1
25	BRCA2	c.3570del	FS	NMD	PTC	1
26	BRCA2	c.3593dup	FS	NMD	PTC	1
27	BRCA2	c.3596_3599del	FS	NMD	PTC	1
28	BRCA2	c.3599_3600del	FS	NMD	PTC	1
29	BRCA2	c.3603del	FS	NMD	PTC	1
30	BRCA2	c.3631G>T	NS	NMD	PTC	1
31	BRCA2	c.3637del	FS	NMD	PTC	1
32	BRCA2	c.3641dup	FS	NMD	PTC	1
33	BRCA2	c.3645_3646delinsTAAAAAG	FS	NMD	PTC	1
34	BRCA2	c.3680_3681del	FS	NMD	PTC	1
35	BRCA2	c.3682_3685del	FS	NMD	PTC	1
36	BRCA2	c.3685_3686del	FS	NMD	PTC	1
37	BRCA2	c.3689del	FS	NMD	PTC	1
38	BRCA2	c.368_372del	FS	NMD	PTC	1
39	BRCA2	c.36dup	FS	NMD	PTC	1
40	BRCA2	c.3708dup	FS	NMD	PTC	1
41	BRCA2	c.370_374del	FS	NMD	PTC	1
42	BRCA2	c.370del	FS	NMD	PTC	1
43	BRCA2	c.3717del	FS	NMD	PTC	1
44	BRCA2	c.3723_3725delinsAT	FS	NMD	PTC	1
45	BRCA2	c.3723del	FS	NMD	PTC	1
46	BRCA2	c.3724dup	FS	NMD	PTC	1
47	BRCA2	c.3728dup	FS	NMD	PTC	1
48	BRCA2	c.3739del	FS	NMD	PTC	1
49	BRCA2	c.3741del	FS	NMD	PTC	1
50	BRCA2	c.3744_3747del	FS	NMD	PTC	1
51	BRCA2	c.3751dup	FS	NMD	PTC	1
52	BRCA2	c.3772del	FS	NMD	PTC	1
53	BRCA2	c.3778_3779del	FS	NMD	PTC	1
54	BRCA2	c.3779del	FS	NMD	PTC	1
55	BRCA2	c.3779dup	FS	NMD	PTC	1
56	BRCA2	c.3785C>G	NS	NMD	PTC	1
57	BRCA2	c.37G>T	NS	NMD	PTC	1
58	BRCA2	c.37_44del	FS	NMD	PTC	1
59						
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2	BRCA2	c.3812C>G	NS	NMD	PTC	1	2
3	BRCA2	c.3814_3815insC	FS	NMD	PTC	1	3
4	BRCA2	c.3819dup	FS	NMD	PTC	1	1
5	BRCA2	c.3824_3827del	FS	NMD	PTC	1	1
6	BRCA2	c.3829_3830del	FS	NMD	PTC	1	1
7	BRCA2	c.3837del	FS	NMD	PTC	1	1
8	BRCA2	c.3847_3848del	FS	NMD	PTC	1	164
9	BRCA2	c.3847del	FS	NMD	PTC	1	9
10	BRCA2	c.3849_3852del	FS	NMD	PTC	1	1
11	BRCA2	c.3860_3863del	FS	NMD	PTC	1	1
12	BRCA2	c.3860del	FS	NMD	PTC	1	29
13	BRCA2	c.3860dup	FS	NMD	PTC	1	6
14	BRCA2	c.3861_3864del	FS	NMD	PTC	1	2
15	BRCA2	c.3865_3868del	FS	NMD	PTC	1	16
16	BRCA2	c.3866_3867del	FS	NMD	PTC	1	1
17	BRCA2	c.3866_3869del	FS	NMD	PTC	1	2
18	BRCA2	c.3867dup	FS	NMD	PTC	1	1
19	BRCA2	c.3871C>T	NS	NMD	PTC	1	1
20	BRCA2	c.3873del	FS	NMD	PTC	1	2
21	BRCA2	c.3881T>G	NS	NMD	PTC	1	3
22	BRCA2	c.3915del	FS	NMD	PTC	1	12
23	BRCA2	c.3919del	FS	NMD	PTC	1	1
24	BRCA2	c.391del	FS	NMD	PTC	1	1
25	BRCA2	c.3920_3941del	FS	NMD	PTC	1	1
26	BRCA2	c.3922G>T	NS	NMD	PTC	1	31
27	BRCA2	c.3936_3954del	FS	NMD	PTC	1	2
28	BRCA2	c.3939C>A	NS	NMD	PTC	1	4
29	BRCA2	c.3957_3958del	FS	NMD	PTC	1	1
30	BRCA2	c.3967A>T	NS	NMD	PTC	1	2
31	BRCA2	c.3968_3971del	FS	NMD	PTC	1	1
32	BRCA2	c.396T>A	NS	NMD	PTC	1	4
33	BRCA2	c.3972_3973del	FS	NMD	PTC	1	1
34	BRCA2	c.3972_3975del	FS	NMD	PTC	1	1
35	BRCA2	c.3975_3978dup	FS	NMD	PTC	1	10
36	BRCA2	c.3978_3979insTTGC	FS	NMD	PTC	1	10
37	BRCA2	c.3G>A	MS	unknown	Unknown	3	11
38	BRCA2	c.3del	FS	unknown	Unknown	3	6
39	BRCA2	c.4001T>A	NS	NMD	PTC	1	2
40	BRCA2	c.4003G>T	NS	NMD	PTC	1	4
41	BRCA2	c.4005dup	FS	NMD	PTC	1	1
42	BRCA2	c.4014_4015insGG	FS	NMD	PTC	1	1
43	BRCA2	c.4021del	FS	NMD	PTC	1	1
44	BRCA2	c.4021dup	FS	NMD	PTC	1	1
45	BRCA2	c.4030_4035delinsC	FS	NMD	PTC	1	6
46	BRCA2	c.4037_4038del	FS	NMD	PTC	1	8
47	BRCA2	c.4042dup	FS	NMD	PTC	1	1
48	BRCA2	c.4051A>T	NS	NMD	PTC	1	1
49	BRCA2	c.4058_4062del	FS	NMD	PTC	1	1
50	BRCA2	c.4076del	FS	NMD	PTC	1	1
51	BRCA2	c.407del	FS	NMD	PTC	1	7
52	BRCA2	c.4092dup	FS	NMD	PTC	1	1
53	BRCA2	c.4095del	FS	NMD	PTC	1	3
54	BRCA2	c.4098_4099insCATC	FS	NMD	PTC	1	1
55	BRCA2	c.4101del	FS	NMD	PTC	1	1
56	BRCA2	c.4111C>T	NS	NMD	PTC	1	4
57	BRCA2	c.4121del	FS	NMD	PTC	1	1
58	BRCA2	c.4124del	FS	NMD	PTC	1	1
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2	BRCA2	c.4127_4130del	FS	NMD	PTC	1	4
3	BRCA2	c.4131_4132insTGAGGA	FS	NMD	PTC	1	17
4	BRCA2	c.4133_4136del	FS	NMD	PTC	1	7
5	BRCA2	c.4137_4141del	FS	NMD	PTC	1	2
6	BRCA2	c.4146_4149del	FS	NMD	PTC	1	1
7	BRCA2	c.4151T>A	NS	NMD	PTC	1	1
8	BRCA2	c.4154C>A	NS	NMD	PTC	1	1
9	BRCA2	c.4163_4164delinsA	FS	NMD	PTC	1	20
10	BRCA2	c.4168_4169del	FS	NMD	PTC	1	1
11	BRCA2	c.4169del	FS	NMD	PTC	1	9
12	BRCA2	c.4169dup	FS	NMD	PTC	1	1
13	BRCA2	c.4171del	FS	NMD	PTC	1	4
14	BRCA2	c.4188del	FS	NMD	PTC	1	4
15	BRCA2	c.4211C>G	NS	NMD	PTC	1	2
16	BRCA2	c.4211_4215del	FS	NMD	PTC	1	1
17	BRCA2	c.4211del	FS	NMD	PTC	1	2
18	BRCA2	c.4222C>T	NS	NMD	PTC	1	14
19	BRCA2	c.4223del	FS	NMD	PTC	1	1
20	BRCA2	c.4229_4230insA	FS	NMD	PTC	1	1
21	BRCA2	c.4243G>T	NS	NMD	PTC	1	2
22	BRCA2	c.425+1G>A	S	unknown	Unknown	3	2
23	BRCA2	c.4258del	FS	NMD	PTC	1	18
24	BRCA2	c.425G>A	MS/FS	NMD	PTC	1	2
25	BRCA2	c.426-2A>G	S	unknown	Unknown	3	1
26	BRCA2	c.426-2A>T	S	unknown	Unknown	3	1
27	BRCA2	c.426-6_438del	S	unknown	Unknown	3	1
28	BRCA2	c.426-?_631+?del	DL	unknown	Unknown	3	2
29	BRCA2	c.426-?_6841+?dup	DP	unknown	Unknown	3	3
30	BRCA2	c.4264_4270del	FS	NMD	PTC	1	1
31	BRCA2	c.4271del	FS	NMD	PTC	1	1
32	BRCA2	c.4276dup	FS	NMD	PTC	1	5
33	BRCA2	c.4277del	FS	NMD	PTC	1	2
34	BRCA2	c.4284dup	FS	NMD	PTC	1	31
35	BRCA2	c.4285_4286insT	FS	NMD	PTC	1	1
36	BRCA2	c.428dup	FS	NMD	PTC	1	5
37	BRCA2	c.4304del	FS	NMD	PTC	1	1
38	BRCA2	c.4305del	FS	NMD	PTC	1	2
39	BRCA2	c.4306_4307del	FS	NMD	PTC	1	3
40	BRCA2	c.4314del	FS	NMD	PTC	1	3
41	BRCA2	c.4319_4320del	FS	NMD	PTC	1	2
42	BRCA2	c.4325C>A	NS	NMD	PTC	1	2
43	BRCA2	c.4334_4338del	FS	NMD	PTC	1	1
44	BRCA2	c.433_437del	FS	NMD	PTC	1	1
45	BRCA2	c.4366G>T	NS	NMD	PTC	1	1
46	BRCA2	c.4380_4381del	FS	NMD	PTC	1	2
47	BRCA2	c.4385dup	FS	NMD	PTC	1	1
48	BRCA2	c.438del	FS	NMD	PTC	1	1
49	BRCA2	c.4397T>A	NS	NMD	PTC	1	1
50	BRCA2	c.4398_4402del	FS	NMD	PTC	1	9
51	BRCA2	c.439C>T	NS	NMD	PTC	1	1
52	BRCA2	c.4402_4403insA	FS	NMD	PTC	1	1
53	BRCA2	c.4404dup	FS	NMD	PTC	1	1
54	BRCA2	c.4405_4409del	FS	NMD	PTC	1	6
55	BRCA2	c.4409_4413del	FS	NMD	PTC	1	1
56	BRCA2	c.4414_4415del	FS	NMD	PTC	1	2
57	BRCA2	c.4415_4418del	FS	NMD	PTC	1	10
58	BRCA2	c.441del	FS	NMD	PTC	1	1
59							
60							

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2	BRCA2	c.4424dup	FS	NMD	PTC	1	2
3	BRCA2	c.4429del	FS	NMD	PTC	1	1
4	BRCA2	c.4440T>G	NS	NMD	PTC	1	4
5	BRCA2	c.4449del	FS	NMD	PTC	1	28
6	BRCA2	c.4456_4459del	FS	NMD	PTC	1	3
7	BRCA2	c.4458del	FS	NMD	PTC	1	1
8	BRCA2	c.4460_4461del	FS	NMD	PTC	1	1
9	BRCA2	c.4467_4474delinsTGTTTTT	FS	NMD	PTC	1	3
10	BRCA2	c.4472_4475del	FS	NMD	PTC	1	6
11	BRCA2	c.4476dup	FS	NMD	PTC	1	1
12	BRCA2	c.4478_4481del	FS	NMD	PTC	1	73
13	BRCA2	c.4480dup	FS	NMD	PTC	1	1
14	BRCA2	c.4519del	FS	NMD	PTC	1	1
15	BRCA2	c.4525C>T	NS	NMD	PTC	1	1
16	BRCA2	c.4530del	FS	NMD	PTC	1	1
17	BRCA2	c.4533del	FS	NMD	PTC	1	1
18	BRCA2	c.4535del	FS	NMD	PTC	1	1
19	BRCA2	c.4539_4540ins(4)	FS	NMD	PTC	1	1
20	BRCA2	c.4540_4541insCGAT	FS	NMD	PTC	1	1
21	BRCA2	c.4551_4554del	FS	NMD	PTC	1	1
22	BRCA2	c.4552G>T	NS	NMD	PTC	1	1
23	BRCA2	c.4552del	FS	NMD	PTC	1	8
24	BRCA2	c.4554del	FS	NMD	PTC	1	9
25	BRCA2	c.4556del	FS	NMD	PTC	1	2
26	BRCA2	c.4563_4564del	FS	NMD	PTC	1	3
27	BRCA2	c.4576dup	FS	NMD	PTC	1	2
28	BRCA2	c.4588A>T	NS	NMD	PTC	1	5
29	BRCA2	c.4593dup	FS	NMD	PTC	1	2
30	BRCA2	c.4615_4616del	FS	NMD	PTC	1	1
31	BRCA2	c.462_463del	FS	NMD	PTC	1	13
32	BRCA2	c.4631del	FS	NMD	PTC	1	12
33	BRCA2	c.4631dup	FS	NMD	PTC	1	9
34	BRCA2	c.4638_4640delinsGG	FS	NMD	PTC	1	1
35	BRCA2	c.4638del	FS	NMD	PTC	1	17
36	BRCA2	c.4647_4650del	FS	NMD	PTC	1	3
37	BRCA2	c.4648G>T	NS	NMD	PTC	1	1
38	BRCA2	c.466_467del	FS	NMD	PTC	1	1
39	BRCA2	c.4691dup	FS	NMD	PTC	1	1
40	BRCA2	c.469_470del	FS	NMD	PTC	1	12
41	BRCA2	c.470_474del	FS	NMD	PTC	1	7
42	BRCA2	c.470del	FS	NMD	PTC	1	1
43	BRCA2	c.470dup	FS	NMD	PTC	1	1
44	BRCA2	c.4712_4713del	FS	NMD	PTC	1	2
45	BRCA2	c.471_472insA	FS	NMD	PTC	1	3
46	BRCA2	c.4722dup	FS	NMD	PTC	1	2
47	BRCA2	c.473C>A	NS	NMD	PTC	1	1
48	BRCA2	c.4740_4741dup	FS	NMD	PTC	1	1
49	BRCA2	c.4741delinsAA	FS	NMD	PTC	1	1
50	BRCA2	c.475+1G>A	S	NMD	PTC	1	2
51	BRCA2	c.475+1G>T	S	NMD	PTC	1	8
52	BRCA2	c.475+3A>G	S	NMD	PTC	1	1
53	BRCA2	c.475+3A>T	S	NMD	PTC	1	1
54	BRCA2	c.475G>A	MS/S	unknown	PTC	3	2
55	BRCA2	c.476-2A>C	S	NMD	PTC	1	3
56	BRCA2	c.476-2A>G	S	NMD	PTC	1	8
57	BRCA2	c.476-4_476-1del	S	NMD	PTC	1	1
58	BRCA2	c.4766del	FS	NMD	PTC	1	1
59							
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2	BRCA2	c.4780del	FS	NMD	PTC	1 2
3	BRCA2	c.4783C>T	NS	NMD	PTC	1 1
4	BRCA2	c.4797del	FS	NMD	PTC	1 1
5	BRCA2	c.4799del	FS	NMD	PTC	1 1
6	BRCA2	c.4808del	FS	NMD	PTC	1 2
7	BRCA2	c.4828dup	FS	NMD	PTC	1 2
8	BRCA2	c.4829_4830del	FS	NMD	PTC	1 7
9	BRCA2	c.4853delinsGCTCT	FS	NMD	PTC	1 1
10	BRCA2	c.4859T>G	NS	NMD	PTC	1 1
11	BRCA2	c.4876_4877del	FS	NMD	PTC	1 26
12	BRCA2	c.4889C>G	NS	NMD	PTC	1 35
13	BRCA2	c.4894_4895del	FS	NMD	PTC	1 1
14	BRCA2	c.48_50delinsATCGATCGAT	FS	NMD	PTC	1 1
15	BRCA2	c.4904dup	FS	NMD	PTC	1 1
16	BRCA2	c.4912A>T	NS	NMD	PTC	1 1
17	BRCA2	c.4930_4937del	FS	NMD	PTC	1 1
18	BRCA2	c.4935del	FS	NMD	PTC	1 9
19	BRCA2	c.4936_4939del	FS	NMD	PTC	1 35
20	BRCA2	c.4939dup	FS	NMD	PTC	1 1
21	BRCA2	c.4940_4941del	FS	NMD	PTC	1 4
22	BRCA2	c.4947_4948del	FS	NMD	PTC	1 2
23	BRCA2	c.4952del	FS	NMD	PTC	1 1
24	BRCA2	c.4960dup	FS	NMD	PTC	1 2
25	BRCA2	c.4963del	FS	NMD	PTC	1 4
26	BRCA2	c.4964dup	FS	NMD	PTC	1 3
27	BRCA2	c.4965C>A	NS	NMD	PTC	1 2
28	BRCA2	c.4965C>A/G	NS	NMD	PTC	1 2
29	BRCA2	c.4965C>G	NS	NMD	PTC	1 26
30	BRCA2	c.4965del	FS	NMD	PTC	1 3
31	BRCA2	c.4981del	FS	NMD	PTC	1 1
32	BRCA2	c.4985C>G	NS	NMD	PTC	1 1
33	BRCA2	c.5016C>G	NS	NMD	PTC	1 2
34	BRCA2	c.5035del	FS	NMD	PTC	1 3
35	BRCA2	c.5039_5040del	FS	NMD	PTC	1 1
36	BRCA2	c.5042_5043del	FS	NMD	PTC	1 4
37	BRCA2	c.5049_5050del	FS	NMD	PTC	1 1
38	BRCA2	c.5050_5065del	FS	NMD	PTC	1 1
39	BRCA2	c.506del	FS	NMD	PTC	1 1
40	BRCA2	c.5073dup	FS	NMD	PTC	1 63
41	BRCA2	c.5080A>T	NS	NMD	PTC	1 1
42	BRCA2	c.5086_5087insA	FS	NMD	PTC	1 1
43	BRCA2	c.5101C>T	FS	NMD	PTC	1 1
44	BRCA2	c.5110_5113del	FS	NMD	PTC	1 2
45	BRCA2	c.5110del	FS	NMD	PTC	1 1
46	BRCA2	c.5115_5119delinsG	FS	NMD	PTC	1 1
47	BRCA2	c.5116_5119del	FS	NMD	PTC	1 14
48	BRCA2	c.5119_5122del	FS	NMD	PTC	1 1
49	BRCA2	c.5119dup	FS	NMD	PTC	1 2
50	BRCA2	c.5125_5129del	FS	NMD	PTC	1 1
51	BRCA2	c.5130_5133del	FS	NMD	PTC	1 22
52	BRCA2	c.5141_5144del	FS	NMD	PTC	1 7
53	BRCA2	c.5146_5149del	FS	NMD	PTC	1 15
54	BRCA2	c.5154_5158del	FS	NMD	PTC	1 1
55	BRCA2	c.5157_5161del	FS	NMD	PTC	1 2
56	BRCA2	c.5158dup	FS	NMD	PTC	1 11
57	BRCA2	c.5159C>G	NS	NMD	PTC	1 1
58	BRCA2	c.516+1G>A	S	unknown	Unknown	3 3
59						
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2	BRCA2	c.516+1G>C	S	unknown	Unknown	3	2
3	BRCA2	c.516+1G>T	S	unknown	Unknown	3	24
4	BRCA2	c.516+1del	S	unknown	Unknown	3	1
5	BRCA2	c.516+2T>A	S	unknown	Unknown	3	3
6	BRCA2	c.5160_5168delinsTACAA	FS	NMD	PTC	1	1
7	BRCA2	c.5161_5169delins(5)	FS	NMD	PTC	1	1
8	BRCA2	c.5164_5165del	FS	NMD	PTC	1	13
9	BRCA2	c.516G>A	S	unknown	Unknown	3	7
10	BRCA2	c.517-1G>A	S	unknown	Unknown	3	1
11	BRCA2	c.517-1G>T	S	unknown	Unknown	3	1
12	BRCA2	c.517-2A>G	S	unknown	Unknown	3	16
13	BRCA2	c.5170dup	FS	NMD	PTC	1	1
14	BRCA2	c.517G>C	MS/S	unknown	Unknown	3	1
15	BRCA2	c.5180del	FS	NMD	PTC	1	1
16	BRCA2	c.5180dup	FS	NMD	PTC	1	1
17	BRCA2	c.518del	FS	NMD	PTC	1	3
18	BRCA2	c.5195del	FS	NMD	PTC	1	1
19	BRCA2	c.5197dup	FS	NMD	PTC	1	1
20	BRCA2	c.5198_5199dup	FS	NMD	PTC	1	1
21	BRCA2	c.51_52del	FS	NMD	PTC	1	5
22	BRCA2	c.51dup	FS	NMD	PTC	1	1
23	BRCA2	c.5205del	FS	NMD	PTC	1	1
24	BRCA2	c.5207_5208del	FS	NMD	PTC	1	1
25	BRCA2	c.5208del	FS	NMD	PTC	1	2
26	BRCA2	c.5213_5216del	FS	NMD	PTC	1	35
27	BRCA2	c.5213del	FS	NMD	PTC	1	1
28	BRCA2	c.5216dup	FS	NMD	PTC	1	2
29	BRCA2	c.5217T>A	NS	NMD	PTC	1	2
30	BRCA2	c.5217_5218delinsA	FS	NMD	PTC	1	1
31	BRCA2	c.5217_5220del	FS	NMD	PTC	1	4
32	BRCA2	c.5217_5221del	FS	NMD	PTC	1	2
33	BRCA2	c.5217_5223del	FS	NMD	PTC	1	11
34	BRCA2	c.5217_5224del	FS	NMD	PTC	1	2
35	BRCA2	c.5218_5224del	FS	NMD	PTC	1	1
36	BRCA2	c.5219del	FS	NMD	PTC	1	2
37	BRCA2	c.5219dup	FS	NMD	PTC	1	1
38	BRCA2	c.5222_5225del	FS	NMD	PTC	1	6
39	BRCA2	c.5238dup	FS	NMD	PTC	1	34
40	BRCA2	c.5239_5240insT	FS	NMD	PTC	1	2
41	BRCA2	c.5241_5242insTA	FS	NMD	PTC	1	1
42	BRCA2	c.5254del	FS	NMD	PTC	1	1
43	BRCA2	c.5263G>T	NS	NMD	PTC	1	1
44	BRCA2	c.5270_5273del	FS	NMD	PTC	1	1
45	BRCA2	c.5270_5286del	FS	NMD	PTC	1	2
46	BRCA2	c.5279C>G	NS	NMD	PTC	1	10
47	BRCA2	c.5281G>T	NS	NMD	PTC	1	1
48	BRCA2	c.5286T>A	NS	NMD	PTC	1	4
49	BRCA2	c.5290_5291del	FS	NMD	PTC	1	3
50	BRCA2	c.5298del	FS	NMD	PTC	1	1
51	BRCA2	c.52_61del	FS	NMD	PTC	1	1
52	BRCA2	c.5303_5304del	FS	NMD	PTC	1	16
53	BRCA2	c.5303_5311delinsA	FS	NMD	PTC	1	1
54	BRCA2	c.5329_5334delinsG	FS	NMD	PTC	1	1
55	BRCA2	c.5334_5340del	FS	NMD	PTC	1	1
56	BRCA2	c.5338dup	FS	NMD	PTC	1	1
57	BRCA2	c.5344C>T	NS	NMD	PTC	1	4
58	BRCA2	c.5350_5351del	FS	NMD	PTC	1	61
59							
60							

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2	BRCA2	c.5350_5351delinsT	FS	NMD	PTC	1	2
3	BRCA2	c.5350_5351dup	FS	NMD	PTC	1	2
4	BRCA2	c.5351del	FS	NMD	PTC	1	15
5	BRCA2	c.5351dup	FS	NMD	PTC	1	25
6	BRCA2	c.5352del	FS	NMD	PTC	1	3
7	BRCA2	c.5353_5354del	FS	NMD	PTC	1	1
8	BRCA2	c.5353del	FS	NMD	PTC	1	1
9	BRCA2	c.5355dup	FS	NMD	PTC	1	1
10	BRCA2	c.5357del	FS	NMD	PTC	1	1
11	BRCA2	c.5365A>T	NS	NMD	PTC	1	1
12	BRCA2	c.5378del	FS	NMD	PTC	1	1
13	BRCA2	c.538_539del	FS	NMD	PTC	1	2
14	BRCA2	c.538_539dup	FS	NMD	PTC	1	20
15	BRCA2	c.5410_5411del	FS	NMD	PTC	1	20
16	BRCA2	c.541del	FS	NMD	PTC	1	3
17	BRCA2	c.5434G>T	NS	NMD	PTC	1	1
18	BRCA2	c.5442_5445dup	FS	NMD	PTC	1	1
19	BRCA2	c.5459_5460dup	FS	NMD	PTC	1	1
20	BRCA2	c.5471del	FS	NMD	PTC	1	3
21	BRCA2	c.5471dup	FS	NMD	PTC	1	1
22	BRCA2	c.5472_5473insA	FS	NMD	PTC	1	3
23	BRCA2	c.5482_5486del	FS	NMD	PTC	1	5
24	BRCA2	c.5542del	FS	NMD	PTC	1	6
25	BRCA2	c.5550_5551del	FS	NMD	PTC	1	2
26	BRCA2	c.5550_5566delinsTTGGCT	FS	NMD	PTC	1	1
27	BRCA2	c.5557del	FS	NMD	PTC	1	2
28	BRCA2	c.5560_5561del	FS	NMD	PTC	1	3
29	BRCA2	c.5564C>A	NS	NMD	PTC	1	1
30	BRCA2	c.5569G>T	NS	NMD	PTC	1	3
31	BRCA2	c.5569_5573del	FS	NMD	PTC	1	3
32	BRCA2	c.5576_5579del	FS	NMD	PTC	1	57
33	BRCA2	c.5577_5580del	FS	NMD	PTC	1	1
34	BRCA2	c.5577del	FS	NMD	PTC	1	1
35	BRCA2	c.5580_5583del	FS	NMD	PTC	1	19
36	BRCA2	c.5583dup	FS	NMD	PTC	1	1
37	BRCA2	c.5585_5588del	FS	NMD	PTC	1	2
38	BRCA2	c.5590_5591del	FS	NMD	PTC	1	2
39	BRCA2	c.5592_5593del	FS	NMD	PTC	1	1
40	BRCA2	c.5595_5596del	FS	NMD	PTC	1	3
41	BRCA2	c.5603_5606del	FS	NMD	PTC	1	1
42	BRCA2	c.5609_5610delinsAG	NS	NMD	PTC	1	14
43	BRCA2	c.5609dup	FS	NMD	PTC	1	1
44	BRCA2	c.5614A>T	NS	NMD	PTC	1	9
45	BRCA2	c.5616_5620del	FS	NMD	PTC	1	9
46	BRCA2	c.5616del	FS	NMD	PTC	1	1
47	BRCA2	c.5621_5624del	FS	NMD	PTC	1	22
48	BRCA2	c.5623A>T	NS	NMD	PTC	1	1
49	BRCA2	c.5624del	FS	NMD	PTC	1	1
50	BRCA2	c.5635G>T	NS	NMD	PTC	1	2
51	BRCA2	c.5641_5644del	FS	NMD	PTC	1	14
52	BRCA2	c.5645C>A	NS	NMD	PTC	1	100
53	BRCA2	c.5645C>G	NS	NMD	PTC	1	7
54	BRCA2	c.5651_5652insA	FS	NMD	PTC	1	1
55	BRCA2	c.5653dup	FS	NMD	PTC	1	1
56	BRCA2	c.5655C>A	NS	NMD	PTC	1	6
57	BRCA2	c.5656C>T	NS	NMD	PTC	1	8
58	BRCA2	c.5665del	FS	NMD	PTC	1	1
59							
60							

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2	BRCA2	c.5669_5673del	FS	NMD	PTC	1 3
3	BRCA2	c.566_567insG	FS	NMD	PTC	1 1
4	BRCA2	c.5677_5678insA	FS	NMD	PTC	1 1
5	BRCA2	c.5681dup	FS	NMD	PTC	1 23
6	BRCA2	c.5682C>A	NS	NMD	PTC	1 4
7	BRCA2	c.5682C>A/G	NS	NMD	PTC	1 2
8	BRCA2	c.5682C>G	NS	NMD	PTC	1 144
9	BRCA2	c.568_575del	FS	NMD	PTC	1 1
10	BRCA2	c.5692del	FS	NMD	PTC	1 2
11	BRCA2	c.5699C>A	NS	NMD	PTC	1 1
12	BRCA2	c.5701_5714del	FS	NMD	PTC	1 1
13	BRCA2	c.5702_5703del	FS	NMD	PTC	1 1
14	BRCA2	c.5720_5723del	FS	NMD	PTC	1 10
15	BRCA2	c.5722_5723del	FS	NMD	PTC	1 104
16	BRCA2	c.5723_5724del	FS	NMD	PTC	1 5
17	BRCA2	c.572delinsCT	FS	NMD	PTC	1 3
18	BRCA2	c.5734G>T	NS	NMD	PTC	1 2
19	BRCA2	c.574_575del	FS	NMD	PTC	1 26
20	BRCA2	c.5750C>A	NS	NMD	PTC	1 1
21	BRCA2	c.5754_5755del	FS	NMD	PTC	1 6
22	BRCA2	c.5763dup	FS	NMD	PTC	1 5
23	BRCA2	c.5771_5774del	FS	NMD	PTC	1 5
24	BRCA2	c.5778_5779del	FS	NMD	PTC	1 1
25	BRCA2	c.5782G>T	NS	NMD	PTC	1 4
26	BRCA2	c.5789T>A	NS	NMD	PTC	1 1
27	BRCA2	c.5789del	FS	NMD	PTC	1 2
28	BRCA2	c.5791C>T	NS	NMD	PTC	1 2
29	BRCA2	c.5796_5797del	FS	NMD	PTC	1 35
30	BRCA2	c.5799_5802del	FS	NMD	PTC	1 5
31	BRCA2	c.5800C>T	NS	NMD	PTC	1 1
32	BRCA2	c.5809_5812del	FS	NMD	PTC	1 2
33	BRCA2	c.5811_5812del	FS	NMD	PTC	1 1
34	BRCA2	c.581G>A	NS	NMD	PTC	1 5
35	BRCA2	c.5823del	FS	NMD	PTC	1 3
36	BRCA2	c.5828del	FS	NMD	PTC	1 9
37	BRCA2	c.582G>A	NS	NMD	PTC	1 2
38	BRCA2	c.5835_5842dup	FS	NMD	PTC	1 9
39	BRCA2	c.5835dup	FS	NMD	PTC	1 1
40	BRCA2	c.583del	FS	NMD	PTC	1 1
41	BRCA2	c.584C>G	NS	NMD	PTC	1 1
42	BRCA2	c.5851_5854del	FS	NMD	PTC	1 27
43	BRCA2	c.5855T>A	NS	NMD	PTC	1 1
44	BRCA2	c.5855_5856insAGTT	FS	NMD	PTC	1 1
45	BRCA2	c.5857G>T	NS	NMD	PTC	1 50
46	BRCA2	c.5862_5863del	FS	NMD	PTC	1 1
47	BRCA2	c.5863del	FS	NMD	PTC	1 1
48	BRCA2	c.5864C>A	NS	NMD	PTC	1 30
49	BRCA2	c.5898del	FS	NMD	PTC	1 3
50	BRCA2	c.5904_5907del	FS	NMD	PTC	1 11
51	BRCA2	c.5904dup	FS	NMD	PTC	1 1
52	BRCA2	c.5909C>A	NS	NMD	PTC	1 59
53	BRCA2	c.5918del	FS	NMD	PTC	1 1
54	BRCA2	c.5934dup	FS	NMD	PTC	1 2
55	BRCA2	c.5945dup	FS	NMD	PTC	1 1
56	BRCA2	c.5946del	FS	NMD	PTC	1 1376
57	BRCA2	c.5948del	FS	NMD	PTC	1 1
58	BRCA2	c.594_598dup	FS	NMD	PTC	1 1
59						
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2	BRCA2	c.5959C>T	NS	NMD	PTC	1
3	BRCA2	c.595_598del	FS	NMD	PTC	1
4	BRCA2	c.5966C>G	NS	NMD	PTC	1
5	BRCA2	c.5966dup	FS	NMD	PTC	1
6	BRCA2	c.5967dup	FS	NMD	PTC	1
7	BRCA2	c.5969del	FS	NMD	PTC	1
8	BRCA2	c.596_6540del	DL	unknown	Unknown	3
9	BRCA2	c.5975C>G	NS	NMD	PTC	1
10	BRCA2	c.5980C>T	NS	NMD	PTC	1
11	BRCA2	c.5984dup	FS	NMD	PTC	1
12	BRCA2	c.5985_5986insA	FS	NMD	PTC	1
13	BRCA2	c.5992C>T	NS	NMD	PTC	1
14	BRCA2	c.5993_5994del	FS	NMD	PTC	1
15	BRCA2	c.5994del	FS	NMD	PTC	1
16	BRCA2	c.5del	FS	NMD	PTC	1
17	BRCA2	c.6010_6014del	FS	NMD	PTC	1
18	BRCA2	c.6011_6017del	FS	NMD	PTC	1
19	BRCA2	c.6012_6016del	FS	NMD	PTC	1
20	BRCA2	c.6016_6019del	FS	NMD	PTC	1
21	BRCA2	c.6024dup	FS	NMD	PTC	1
22	BRCA2	c.6025C>T	NS	NMD	PTC	1
23	BRCA2	c.6033_6034del	FS	NMD	PTC	1
24	BRCA2	c.6033_6034insGT	FS	NMD	PTC	1
25	BRCA2	c.6037A>T	NS	NMD	PTC	1
26	BRCA2	c.6039del	FS	NMD	PTC	1
27	BRCA2	c.6048del	FS	NMD	PTC	1
28	BRCA2	c.6049A>T	NS	NMD	PTC	1
29	BRCA2	c.6052_6053del	FS	NMD	PTC	1
30	BRCA2	c.6058G>T	NS	NMD	PTC	1
31	BRCA2	c.6059_6062del	FS	NMD	PTC	1
32	BRCA2	c.6065C>G	NS	NMD	PTC	1
33	BRCA2	c.6067_6076del	FS	NMD	PTC	1
34	BRCA2	c.6070C>T	NS	NMD	PTC	1
35	BRCA2	c.6078_6079del	FS	NMD	PTC	1
36	BRCA2	c.6079dup	FS	NMD	PTC	1
37	BRCA2	c.6081dup	FS	NMD	PTC	1
38	BRCA2	c.6082G>T	NS	NMD	PTC	1
39	BRCA2	c.6082_6083del	FS	NMD	PTC	1
40	BRCA2	c.6082_6086del	FS	NMD	PTC	1
41	BRCA2	c.6085G>T	NS	NMD	PTC	1
42	BRCA2	c.6096dup	FS	NMD	PTC	1
43	BRCA2	c.6099del	FS	NMD	PTC	1
44	BRCA2	c.610del	FS	NMD	PTC	1
45	BRCA2	c.6124C>T	NS	NMD	PTC	1
46	BRCA2	c.6129del	FS	NMD	PTC	1
47	BRCA2	c.6129dup	FS	NMD	PTC	1
48	BRCA2	c.6137_6138del	FS	NMD	PTC	1
49	BRCA2	c.6145del	FS	NMD	PTC	1
50	BRCA2	c.6169G>T	NS	NMD	PTC	1
51	BRCA2	c.6199del	FS	NMD	PTC	1
52	BRCA2	c.6201del	FS	NMD	PTC	1
53	BRCA2	c.6202dup	FS	NMD	PTC	1
54	BRCA2	c.6203_6204insA	FS	NMD	PTC	1
55	BRCA2	c.6206T>G	NS	NMD	PTC	1
56	BRCA2	c.6209_6212del	FS	NMD	PTC	1
57	BRCA2	c.6225dup	FS	NMD	PTC	1
58	BRCA2	c.6240dup	FS	NMD	PTC	1
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2	BRCA2	c.6244G>T	NS	NMD	PTC	1	3
3	BRCA2	c.6246del	FS	NMD	PTC	1	1
4	BRCA2	c.6260_6263del	FS	NMD	PTC	1	1
5	BRCA2	c.6262del	FS	NMD	PTC	1	1
6	BRCA2	c.6267_6269delinsC	FS	NMD	PTC	1	8
7	BRCA2	c.6268_6269del	FS	NMD	PTC	1	1
8	BRCA2	c.6270_6271del	FS	NMD	PTC	1	4
9	BRCA2	c.6275_6276del	FS	NMD	PTC	1	329
10	BRCA2	c.6277dup	FS	NMD	PTC	1	1
11	BRCA2	c.6302del	FS	NMD	PTC	1	2
12	BRCA2	c.6304_6305del	FS	NMD	PTC	1	1
13	BRCA2	c.6308C>A	NS	NMD	PTC	1	2
14	BRCA2	c.631+1G>A	S	unknown	Unknown	3	1
15	BRCA2	c.631+2T>A	S	unknown	Unknown	3	1
16	BRCA2	c.631+2T>G	S	NMD	PTC	1	23
17	BRCA2	c.631+3A>G	S	NMD	PTC	1	2
18	BRCA2	c.631+4A>G	S	unknown	Unknown	3	1
19	BRCA2	c.6313del	FS	NMD	PTC	1	2
20	BRCA2	c.631G>A	S	NMD	PTC	1	7
21	BRCA2	c.631G>C	MS/S	unknown	Unknown	3	9
22	BRCA2	c.632-1G>A	S	unknown	Unknown	3	3
23	BRCA2	c.632-2A>G	S	unknown	Unknown	3	7
24	BRCA2	c.632-2del	S	unknown	Unknown	3	1
25	BRCA2	c.6320del	FS	NMD	PTC	1	1
26	BRCA2	c.6325_6326del	FS	NMD	PTC	1	1
27	BRCA2	c.6331_6332del	FS	NMD	PTC	1	1
28	BRCA2	c.6332dup	FS	NMD	PTC	1	2
29	BRCA2	c.6340_6341del	FS	NMD	PTC	1	1
30	BRCA2	c.6352_6353del	FS	NMD	PTC	1	2
31	BRCA2	c.6353_6366del	FS	NMD	PTC	1	1
32	BRCA2	c.6356dup	FS	NMD	PTC	1	1
33	BRCA2	c.6359C>G	NS	NMD	PTC	1	1
34	BRCA2	c.635_636del	FS	NMD	PTC	1	12
35	BRCA2	c.6361_6362del	FS	NMD	PTC	1	6
36	BRCA2	c.6372_6373dup	FS	NMD	PTC	1	1
37	BRCA2	c.6373del	FS	NMD	PTC	1	44
38	BRCA2	c.6373dup	FS	NMD	PTC	1	3
39	BRCA2	c.6374_6375insA	FS	NMD	PTC	1	3
40	BRCA2	c.6385G>T	NS	NMD	PTC	1	1
41	BRCA2	c.6392_6396del	FS	NMD	PTC	1	3
42	BRCA2	c.6393del	FS	NMD	PTC	1	1
43	BRCA2	c.6396dup	FS	NMD	PTC	1	3
44	BRCA2	c.6397dup	FS	NMD	PTC	1	1
45	BRCA2	c.63del	FS	NMD	PTC	1	2
46	BRCA2	c.6401_6404del	FS	NMD	PTC	1	1
47	BRCA2	c.6405_6409del	FS	NMD	PTC	1	72
48	BRCA2	c.6407_6411del	FS	NMD	PTC	1	2
49	BRCA2	c.6408_6414del	FS	NMD	PTC	1	8
50	BRCA2	c.6410del	FS	NMD	PTC	1	1
51	BRCA2	c.6419del	FS	NMD	PTC	1	1
52	BRCA2	c.6420_6421insA	FS	NMD	PTC	1	1
53	BRCA2	c.6428C>G	NS	NMD	PTC	1	1
54	BRCA2	c.6434_6441del	FS	NMD	PTC	1	1
55	BRCA2	c.6434del	FS	NMD	PTC	1	1
56	BRCA2	c.643G>T	NS	NMD	PTC	1	3
57	BRCA2	c.6443_6444del	FS	NMD	PTC	1	8
58	BRCA2	c.6444_6447del	FS	NMD	PTC	1	4
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2	BRCA2	c.6444del	FS	NMD	PTC	1 5
3	BRCA2	c.6444dup	FS	NMD	PTC	1 5
4	BRCA2	c.6445_6446del	FS	NMD	PTC	1 9
5	BRCA2	c.6446_6450del	FS	NMD	PTC	1 4
6	BRCA2	c.6447_6448dup	FS	NMD	PTC	1 6
7	BRCA2	c.6449_6450del	FS	NMD	PTC	1 2
8	BRCA2	c.6449_6450insTA	FS	NMD	PTC	1 4
9	BRCA2	c.6450dup	FS	NMD	PTC	1 6
10	BRCA2	c.6466_6469del	FS	NMD	PTC	1 2
11	BRCA2	c.6468_6469del	FS	NMD	PTC	1 51
12	BRCA2	c.6469C>T	NS	NMD	PTC	1 3
13	BRCA2	c.6478C>T	NS	NMD	PTC	1 2
14	BRCA2	c.6485_6486del	FS	NMD	PTC	1 2
15	BRCA2	c.6486_6489del	FS	NMD	PTC	1 64
16	BRCA2	c.6490C>T	NS	NMD	PTC	1 1
17	BRCA2	c.6490_6492delinsGACT	FS	NMD	PTC	1 3
18	BRCA2	c.6490del	FS	NMD	PTC	1 1
19	BRCA2	c.6491_6494del	FS	NMD	PTC	1 3
20	BRCA2	c.6500T>A	NS	NMD	PTC	1 1
21	BRCA2	c.6502G>T	NS	NMD	PTC	1 1
22	BRCA2	c.6509_6510del	FS	NMD	PTC	1 3
23	BRCA2	c.6514_6515del	FS	NMD	PTC	1 2
24	BRCA2	c.6515C>A	NS	NMD	PTC	1 1
25	BRCA2	c.6528_6535dup	FS	NMD	PTC	1 1
26	BRCA2	c.6531_6534del	FS	NMD	PTC	1 3
27	BRCA2	c.6531dup	FS	NMD	PTC	1 2
28	BRCA2	c.6532_6533insT	FS	NMD	PTC	1 1
29	BRCA2	c.6535_6536ins(8)	FS	NMD	PTC	1 3
30	BRCA2	c.6535_6536insA	FS	NMD	PTC	1 12
31	BRCA2	c.6541G>T	NS	NMD	PTC	1 1
32	BRCA2	c.6547G>T	NS	NMD	PTC	1 1
33	BRCA2	c.6553del	FS	NMD	PTC	1 2
34	BRCA2	c.6557C>A	NS	NMD	PTC	1 2
35	BRCA2	c.6557C>G	NS	NMD	PTC	1 2
36	BRCA2	c.6566del	FS	NMD	PTC	1 1
37	BRCA2	c.6566dup	FS	NMD	PTC	1 4
38	BRCA2	c.6575_6588del	FS	NMD	PTC	1 1
39	BRCA2	c.6580dup	FS	NMD	PTC	1 1
40	BRCA2	c.6585dup	FS	NMD	PTC	1 1
41	BRCA2	c.6588_6589del	FS	NMD	PTC	1 8
42	BRCA2	c.658_659del	FS	NMD	PTC	1 128
43	BRCA2	c.6591_6592del	FS	NMD	PTC	1 36
44	BRCA2	c.6591del	FS	NMD	PTC	1 1
45	BRCA2	c.6596del	FS	NMD	PTC	1 1
46	BRCA2	c.6600_6601del	FS	NMD	PTC	1 7
47	BRCA2	c.6601del	FS	NMD	PTC	1 1
48	BRCA2	c.6602del	FS	NMD	PTC	1 1
49	BRCA2	c.6625dup	FS	NMD	PTC	1 1
50	BRCA2	c.6626_6627del	FS	NMD	PTC	1 6
51	BRCA2	c.6626_6627dup	FS	NMD	PTC	1 1
52	BRCA2	c.6629_6630del	FS	NMD	PTC	1 4
53	BRCA2	c.662_663del	FS	NMD	PTC	1 4
54	BRCA2	c.6634_6637del	FS	NMD	PTC	1 2
55	BRCA2	c.6641dup	FS	NMD	PTC	1 7
56	BRCA2	c.6643del	FS	NMD	PTC	1 1
57	BRCA2	c.6644_6647del	FS	NMD	PTC	1 33
58	BRCA2	c.6644dup	FS	NMD	PTC	1 3
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2	BRCA2	c.6645C>G	NS	NMD	PTC	1	2
3	BRCA2	c.6645_6648del	FS	NMD	PTC	1	1
4	BRCA2	c.664_665del	FS	NMD	PTC	1	1
5	BRCA2	c.6656C>G	NS	NMD	PTC	1	14
6	BRCA2	c.6658_6661del	FS	NMD	PTC	1	1
7	BRCA2	c.6658_6662del	FS	NMD	PTC	1	1
8	BRCA2	c.6663_6664insAAAG	FS	NMD	PTC	1	1
9	BRCA2	c.6673del	FS	NMD	PTC	1	1
10	BRCA2	c.6676G>T	NS	NMD	PTC	1	1
11	BRCA2	c.6676_6677del	FS	NMD	PTC	1	1
12	BRCA2	c.6678del	FS	NMD	PTC	1	1
13	BRCA2	c.6682dup	FS	NMD	PTC	1	2
14	BRCA2	c.6688del	FS	NMD	PTC	1	2
15	BRCA2	c.6692del	FS	NMD	PTC	1	1
16	BRCA2	c.6696del	FS	NMD	PTC	1	1
17	BRCA2	c.6698del	FS	NMD	PTC	1	1
18	BRCA2	c.67+1154_316+2261del	DL	unknown	Unknown	3	1
19	BRCA2	c.67+1G>A	S	unknown	Unknown	3	16
20	BRCA2	c.67+1G>T	S	unknown	Unknown	3	2
21	BRCA2	c.67+1del	S	unknown	Unknown	3	1
22	BRCA2	c.67+2T>C	S	unknown	Unknown	3	1
23	BRCA2	c.6715G>T	NS	NMD	PTC	1	1
24	BRCA2	c.6722_6723dup	FS	NMD	PTC	1	2
25	BRCA2	c.6724_6725del	FS	NMD	PTC	1	6
26	BRCA2	c.6727del	FS	NMD	PTC	1	1
27	BRCA2	c.6730A>T	NS	NMD	PTC	1	1
28	BRCA2	c.6732del	FS	NMD	PTC	1	1
29	BRCA2	c.673_676del	FS	NMD	PTC	1	3
30	BRCA2	c.6743_6755del	FS	NMD	PTC	1	4
31	BRCA2	c.674del	FS	NMD	PTC	1	1
32	BRCA2	c.6753_6754del	FS	NMD	PTC	1	1
33	BRCA2	c.6754dup	FS	NMD	PTC	1	2
34	BRCA2	c.6757_6758del	FS	NMD	PTC	1	6
35	BRCA2	c.6761_6762del	FS	NMD	PTC	1	3
36	BRCA2	c.6763dup	FS	NMD	PTC	1	2
37	BRCA2	c.6768T>A	NS	NMD	PTC	1	1
38	BRCA2	c.67G>T	S	unknown	Unknown	3	2
39	BRCA2	c.681+4A>G	S	NMD	PTC	1	2
40	BRCA2	c.6814del	FS	NMD	PTC	1	2
41	BRCA2	c.6815_6816del	FS	NMD	PTC	1	1
42	BRCA2	c.6816_6817del	FS	NMD	PTC	1	7
43	BRCA2	c.6816_6820del	FS	NMD	PTC	1	1
44	BRCA2	c.682-2A>C	S	unknown	Unknown	3	2
45	BRCA2	c.682-2A>G	S	unknown	Unknown	3	3
46	BRCA2	c.682-?_1909+?del	DL	unknown	Unknown	3	1
47	BRCA2	c.682-?_793+?del	DL	unknown	Unknown	3	1
48	BRCA2	c.6825del	FS	NMD	PTC	1	1
49	BRCA2	c.6833_6837del	FS	NMD	PTC	1	5
50	BRCA2	c.6841+1del	S	unknown	Unknown	3	2
51	BRCA2	c.6842-?_6937+?del	DL	unknown	Unknown	3	1
52	BRCA2	c.6842-?_7007+?del	DL	unknown	Unknown	3	7
53	BRCA2	c.6879del	FS	NMD	PTC	1	1
54	BRCA2	c.6896dup	FS	NMD	PTC	1	1
55	BRCA2	c.6899_6906dup	FS	NMD	PTC	1	1
56	BRCA2	c.6901G>T	NS	NMD	PTC	1	2
57	BRCA2	c.6937+1G>A	S	unknown	Unknown	3	1
58	BRCA2	c.6937+594T>G	S	NMD	PTC	1	8
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2	BRCA2	c.6938-1G>A	S	unknown	Unknown	3	1
3	BRCA2	c.6938-2A>C	S	unknown	Unknown	3	1
4	BRCA2	c.6938-2A>G	S	unknown	Unknown	3	1
5	BRCA2	c.6938-?_7007+?dup	DP	unknown	Unknown	3	1
6	BRCA2	c.6941del	FS	NMD	PTC	1	2
7	BRCA2	c.6944_6947del	FS	NMD	PTC	1	12
8	BRCA2	c.6947_6950del	FS	NMD	PTC	1	1
9	BRCA2	c.6948_6949insTT	FS	NMD	PTC	1	1
10	BRCA2	c.694dup	FS	NMD	PTC	1	1
11	BRCA2	c.6952C>T	NS	NMD	PTC	1	11
12	BRCA2	c.6959T>A	NS	NMD	PTC	1	1
13	BRCA2	c.6959del	FS	NMD	PTC	1	2
14	BRCA2	c.6960del	FS	NMD	PTC	1	1
15	BRCA2	c.6976del	FS	NMD	PTC	1	1
16	BRCA2	c.6980del	FS	NMD	PTC	1	1
17	BRCA2	c.6990_6994del	FS	NMD	PTC	1	8
18	BRCA2	c.6996_7004delins(20)	FS	NMD	PTC	1	4
19	BRCA2	c.6998dup	FS	NMD	PTC	1	5
20	BRCA2	c.6999_7000insT	FS	NMD	PTC	1	1
21	BRCA2	c.7002del	FS	NMD	PTC	1	1
22	BRCA2	c.7003_7007del	FS/S?	unknown	Unknown	3	1
23	BRCA2	c.7006del	FS	NMD	PTC	1	2
24	BRCA2	c.7006dup	FS	NMD	PTC	1	1
25	BRCA2	c.7007+1G>C	S	unknown	Unknown	3	3
26	BRCA2	c.7007+2T>A	S	unknown	Unknown	3	1
27	BRCA2	c.7007+4A>G	S	unknown	Unknown	3	2
28	BRCA2	c.7007G>A	S	IFD	IFD	2	44
29	BRCA2	c.7007G>C	S?	unknown	Unknown	3	5
30	BRCA2	c.7007G>T	S?	unknown	Unknown	3	4
31	BRCA2	c.7008-1G>A	S	unknown	Unknown	3	11
32	BRCA2	c.7008-1G>T	S	unknown	Unknown	3	1
33	BRCA2	c.7008-2A>G	S	unknown	Unknown	3	1
34	BRCA2	c.7008-2A>T	S	NMD	PTC	1	11
35	BRCA2	c.7008-?_7435+?del	DL	unknown	Unknown	3	1
36	BRCA2	c.7008-?_7805+?del	DL	unknown	Unknown	3	37
37	BRCA2	c.7008-?_8331+?del	DL	unknown	Unknown	3	4
38	BRCA2	c.7008-?_9117+?del	DL	unknown	Unknown	3	1
39	BRCA2	c.7008-?_9117+?dup	DP	unknown	Unknown	3	1
40	BRCA2	c.7008-?_9256+?[3]	TP	unknown	Unknown	3	3
41	BRCA2	c.700del	FS	NMD	PTC	1	9
42	BRCA2	c.7024C>T	NS	NMD	PTC	1	3
43	BRCA2	c.7024_7044delinsTG	FS	NMD	PTC	1	1
44	BRCA2	c.7025_7026del	FS	NMD	PTC	1	5
45	BRCA2	c.702del	FS	NMD	PTC	1	2
46	BRCA2	c.7032dup	FS	NMD	PTC	1	2
47	BRCA2	c.7033C>T	NS	NMD	PTC	1	1
48	BRCA2	c.7047del	FS	NMD	PTC	1	2
49	BRCA2	c.7060C>T	NS	NMD	PTC	1	5
50	BRCA2	c.7063G>T	NS	NMD	PTC	1	1
51	BRCA2	c.7069_7070del	FS	NMD	PTC	1	103
52	BRCA2	c.7075_7076insAlu	FS	unknown	Unknown	3	1
53	BRCA2	c.7092del	FS	NMD	PTC	1	1
54	BRCA2	c.7097dup	FS	NMD	PTC	1	1
55	BRCA2	c.7109_7110del	FS	NMD	PTC	1	1
56	BRCA2	c.7110dup	FS	NMD	PTC	1	1
57	BRCA2	c.7115C>G	NS	NMD	PTC	1	1
58	BRCA2	c.7124T>G	NS	NMD	PTC	1	1
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2	BRCA2	c.712G>T	NS	NMD	PTC	1	3
3	BRCA2	c.7133C>G	NS	NMD	PTC	1	7
4	BRCA2	c.7147dup	FS	NMD	PTC	1	1
5	BRCA2	c.7151_7152del	FS	NMD	PTC	1	1
6	BRCA2	c.7152del	FS	NMD	PTC	1	1
7	BRCA2	c.715del	FS	NMD	PTC	1	2
8	BRCA2	c.715dup	FS	NMD	PTC	1	3
9	BRCA2	c.7177dup	FS	NMD	PTC	1	5
10	BRCA2	c.7180A>T	NS	NMD	PTC	1	38
11	BRCA2	c.7183del	FS	NMD	PTC	1	1
12	BRCA2	c.7184_7187del	FS	NMD	PTC	1	1
13	BRCA2	c.7187T>A	NS	NMD	PTC	1	1
14	BRCA2	c.7191del	FS	NMD	PTC	1	1
15	BRCA2	c.71T>G	NS	NMD	PTC	1	3
16	BRCA2	c.71del	FS	NMD	PTC	1	1
17	BRCA2	c.7208_7211del	FS	NMD	PTC	1	2
18	BRCA2	c.7209_7212delinsGG	FS	NMD	PTC	1	1
19	BRCA2	c.7210A>T	NS	NMD	PTC	1	1
20	BRCA2	c.7211_7212del	FS	NMD	PTC	1	1
21	BRCA2	c.7212del	FS	NMD	PTC	1	1
22	BRCA2	c.7226del	FS	NMD	PTC	1	1
23	BRCA2	c.7234_7235insG	FS	NMD	PTC	1	3
24	BRCA2	c.7235_7236insG	FS	NMD	PTC	1	1
25	BRCA2	c.723del	FS	NMD	PTC	1	3
26	BRCA2	c.7248del	FS	NMD	PTC	1	1
27	BRCA2	c.7251_7252del	FS	NMD	PTC	1	2
28	BRCA2	c.7254_7255del	FS	NMD	PTC	1	2
29	BRCA2	c.7258G>T	NS	NMD	PTC	1	3
30	BRCA2	c.7261C>T	NS	NMD	PTC	1	1
31	BRCA2	c.7266T>A	NS	NMD	PTC	1	1
32	BRCA2	c.7277_7283del	FS	NMD	PTC	1	3
33	BRCA2	c.7283T>A	NS	NMD	PTC	1	1
34	BRCA2	c.728dup	FS	NMD	PTC	1	1
35	BRCA2	c.729_730insC	FS	NMD	PTC	1	1
36	BRCA2	c.729_732del	FS	NMD	PTC	1	4
37	BRCA2	c.7301del	FS	NMD	PTC	1	7
38	BRCA2	c.7303C>T	NS	NMD	PTC	1	1
39	BRCA2	c.7309del	FS	NMD	PTC	1	2
40	BRCA2	c.7322del	FS	NMD	PTC	1	1
41	BRCA2	c.7338_7339ins(4)	FS	NMD	PTC	1	1
42	BRCA2	c.733A>T	NS	NMD	PTC	1	1
43	BRCA2	c.7342_7343del	FS	NMD	PTC	1	1
44	BRCA2	c.7355del	FS	NMD	PTC	1	1
45	BRCA2	c.7360del	FS	NMD	PTC	1	2
46	BRCA2	c.7363del	FS	NMD	PTC	1	2
47	BRCA2	c.7366C>T	NS	NMD	PTC	1	1
48	BRCA2	c.7368_7371del	FS	NMD	PTC	1	1
49	BRCA2	c.736_755del	FS	NMD	PTC	1	3
50	BRCA2	c.7375A>T	NS	NMD	PTC	1	1
51	BRCA2	c.7379_7382del	FS	NMD	PTC	1	1
52	BRCA2	c.7379del	FS	NMD	PTC	1	2
53	BRCA2	c.7389_7392del	FS	NMD	PTC	1	1
54	BRCA2	c.739_740del	FS	NMD	PTC	1	1
55	BRCA2	c.73G>T	NS	NMD	PTC	1	1
56	BRCA2	c.7408_7409del	FS	NMD	PTC	1	1
57	BRCA2	c.7409dup	FS	NMD	PTC	1	2
58	BRCA2	c.7412_7421del	FS	NMD	PTC	1	1
59							
60							

1							
2	BRCA2	c.7414_7415del	FS	NMD	PTC	1	3
3	BRCA2	c.7419_7420del	FS	NMD	PTC	1	19
4	BRCA2	c.7425del	FS	NMD	PTC	1	2
5	BRCA2	c.7434dup	FS	NMD	PTC	1	1
6	BRCA2	c.7435+1G>C	S	unknown	Unknown	3	1
7	BRCA2	c.7436-1G>C	S	unknown	Unknown	3	1
8	BRCA2	c.7436-2A>G	S	unknown	Unknown	3	4
9	BRCA2	c.7436-2A>T	S	unknown	Unknown	3	2
10	BRCA2	c.7436-?_7805+?del	DL	unknown	Unknown	3	5
11	BRCA2	c.7436-?_7805+?dup	DP	unknown	Unknown	3	1
12	BRCA2	c.7436-?_8331+?dup	DP	unknown	Unknown	3	1
13	BRCA2	c.7443del	FS	NMD	PTC	1	2
14	BRCA2	c.7469del	FS	NMD	PTC	1	1
15	BRCA2	c.7471C>T	NS	NMD	PTC	1	2
16	BRCA2	c.7471del	FS	NMD	PTC	1	2
17	BRCA2	c.7480C>T	NS	NMD	PTC	1	84
18	BRCA2	c.7485dup	FS	NMD	PTC	1	1
19	BRCA2	c.7495C>T	NS	NMD	PTC	1	1
20	BRCA2	c.7501C>T	NS	NMD	PTC	1	1
21	BRCA2	c.7503_7506del	FS	NMD	PTC	1	1
22	BRCA2	c.7516C>T	NS	NMD	PTC	1	2
23	BRCA2	c.7517dup	FS	NMD	PTC	1	1
24	BRCA2	c.7518del	FS	NMD	PTC	1	1
25	BRCA2	c.7530_7531del	FS	NMD	PTC	1	1
26	BRCA2	c.7538del	FS	NMD	PTC	1	1
27	BRCA2	c.7543del	FS	NMD	PTC	1	1
28	BRCA2	c.7543dup	FS	NMD	PTC	1	5
29	BRCA2	c.754_755del	FS	NMD	PTC	1	1
30	BRCA2	c.7558C>T	NS	NMD	PTC	1	57
31	BRCA2	c.7558del	FS	NMD	PTC	1	1
32	BRCA2	c.755_758del	FS	NMD	PTC	1	73
33	BRCA2	c.7565_7568del	FS	NMD	PTC	1	1
34	BRCA2	c.7567_7568del	FS	NMD	PTC	1	3
35	BRCA2	c.756_757del	FS	NMD	PTC	1	1
36	BRCA2	c.756_759del	FS	NMD	PTC	1	13
37	BRCA2	c.757_758del	FS	NMD	PTC	1	2
38	BRCA2	c.7595_7596insTT	FS	NMD	PTC	1	2
39	BRCA2	c.7612A>T	NS	NMD	PTC	1	1
40	BRCA2	c.7615C>T	NS	NMD	PTC	1	1
41	BRCA2	c.7617+1G>A	S	unknown	Unknown	3	75
42	BRCA2	c.7617+1G>T	S	unknown	Unknown	3	8
43	BRCA2	c.7617+2T>G	S	unknown	Unknown	3	3
44	BRCA2	c.7618-1G>A	S	unknown	Unknown	3	11
45	BRCA2	c.7618-2A>G	S	unknown	Unknown	3	5
46	BRCA2	c.7624dup	FS	NMD	PTC	1	1
47	BRCA2	c.7627dup	FS	NMD	PTC	1	2
48	BRCA2	c.7631del	FS	NMD	PTC	1	1
49	BRCA2	c.7638_7647del	FS	NMD	PTC	1	1
50	BRCA2	c.7643_7644del	FS	NMD	PTC	1	1
51	BRCA2	c.7647C>A	NS	NMD	PTC	1	1
52	BRCA2	c.7654dup	FS	NMD	PTC	1	2
53	BRCA2	c.7655_7658del	FS	NMD	PTC	1	1
54	BRCA2	c.765_770delinsAAACAAT	FS	NMD	PTC	1	1
55	BRCA2	c.7666_7667dup	FS	NMD	PTC	1	2
56	BRCA2	c.7667dup	FS	NMD	PTC	1	1
57	BRCA2	c.7668_7669insA	FS	NMD	PTC	1	1
58	BRCA2	c.7671del	FS	NMD	PTC	1	3
59							
60							

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2	BRCA2	c.7673_7674del	FS	NMD	PTC	1	11
3	BRCA2	c.7679_7680del	FS	NMD	PTC	1	1
4	BRCA2	c.767_768del	FS	NMD	PTC	1	5
5	BRCA2	c.767del	FS	NMD	PTC	1	2
6	BRCA2	c.7680dup	FS	NMD	PTC	1	20
7	BRCA2	c.7681C>T	NS	NMD	PTC	1	4
8	BRCA2	c.7681_7682insT	FS	NMD	PTC	1	6
9	BRCA2	c.7689del	FS	NMD	PTC	1	2
10	BRCA2	c.7707del	FS	NMD	PTC	1	2
11	BRCA2	c.7708A>T	NS	NMD	PTC	1	1
12	BRCA2	c.771_775del	FS	NMD	PTC	1	134
13	BRCA2	c.772C>T	NS	NMD	PTC	1	4
14	BRCA2	c.7738C>T	NS	NMD	PTC	1	1
15	BRCA2	c.7744del	FS	NMD	PTC	1	2
16	BRCA2	c.774_775del	FS	NMD	PTC	1	8
17	BRCA2	c.7757G>A	NS	NMD	PTC	1	20
18	BRCA2	c.7758G>A	NS	NMD	PTC	1	10
19	BRCA2	c.7762_7764delinsTT	FS	NMD	PTC	1	25
20	BRCA2	c.7762_7766dup	FS	NMD	PTC	1	3
21	BRCA2	c.7781dup	FS	NMD	PTC	1	1
22	BRCA2	c.778_779del	FS	NMD	PTC	1	4
23	BRCA2	c.7795G>T	NS	NMD	PTC	1	1
24	BRCA2	c.7795_7797del	IFD	IFD	IFD	2	12
25	BRCA2	c.7805+1G>A	S	unknown	Unknown	3	2
26	BRCA2	c.7805+2T>G	S	unknown	Unknown	3	1
27	BRCA2	c.7805+3A>C	S	unknown	Unknown	3	1
28	BRCA2	c.7805G>C	S	unknown	Unknown	3	2
29	BRCA2	c.7806-1G>T	S	unknown	Unknown	3	2
30	BRCA2	c.7806-2A>G	S	IFD	IFD	2	21
31	BRCA2	c.7806-2A>T	S	unknown	Unknown	3	1
32	BRCA2	c.7806-9T>G	S	unknown	Unknown	3	1
33	BRCA2	c.7806-?_8331+?del	DL	unknown	Unknown	3	3
34	BRCA2	c.7806_7807insAG	FS/S?	NMD	PTC	1	3
35	BRCA2	c.7815_7816del	FS	NMD	PTC	1	1
36	BRCA2	c.7816_7819dup	FS	NMD	PTC	1	1
37	BRCA2	c.7846del	FS	NMD	PTC	1	7
38	BRCA2	c.7856G>A	NS	NMD	PTC	1	1
39	BRCA2	c.7857G>A	NS	NMD	PTC	1	6
40	BRCA2	c.7858del	FS	NMD	PTC	1	1
41	BRCA2	c.7861del	FS	NMD	PTC	1	1
42	BRCA2	c.7863T>A	NS	NMD	PTC	1	1
43	BRCA2	c.7865dup	FS	NMD	PTC	1	1
44	BRCA2	c.7872_7873del	FS	NMD	PTC	1	1
45	BRCA2	c.7877G>A	NS	NMD	PTC	1	1
46	BRCA2	c.7878G>A	NS	NMD	PTC	1	12
47	BRCA2	c.7878G>C	MS	MS	MS	2	8
48	BRCA2	c.7878_7881dup	FS	NMD	PTC	1	1
49	BRCA2	c.7879A>T	MS	MS	MS	2	15
50	BRCA2	c.7884dup	FS	NMD	PTC	1	4
51	BRCA2	c.7887G>A	NS	NMD	PTC	1	1
52	BRCA2	c.7908T>A	NS	NMD	PTC	1	1
53	BRCA2	c.7911_7912insGAAA	FS	NMD	PTC	1	1
54	BRCA2	c.7913_7917del	FS	NMD	PTC	1	37
55	BRCA2	c.7921_7926delinsAG	FS	NMD	PTC	1	3
56	BRCA2	c.793+1G>A	S	unknown	Unknown	3	4
57	BRCA2	c.793+1G>T	S	unknown	Unknown	3	1
58	BRCA2	c.793+2T>G	S	unknown	Unknown	3	1
59							
60							

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2	BRCA2	c.7933A>T	NS	NMD	PTC	1	2
3	BRCA2	c.7934del	FS	NMD	PTC	1	92
4	BRCA2	c.794-?_6937+?del	DL	unknown	Unknown	3	1
5	BRCA2	c.7940_7941insC	FS	NMD	PTC	1	1
6	BRCA2	c.7947dup	FS	NMD	PTC	1	1
7	BRCA2	c.7958T>C	MS	unknown	Unknown	3	1
8	BRCA2	c.7963C>T	NS	NMD	PTC	1	2
9	BRCA2	c.7974C>A	NS	NMD	PTC	1	3
10	BRCA2	c.7974C>A/G	NS	NMD	PTC	1	1
11	BRCA2	c.7974C>G	NS	NMD	PTC	1	1
12	BRCA2	c.7976+1G>A	S	unknown	Unknown	3	5
13	BRCA2	c.7976+1G>C	S	unknown	Unknown	3	1
14	BRCA2	c.7976+2C>A	S	unknown	Unknown	3	1
15	BRCA2	c.7976+3_7976+4del	S	unknown	Unknown	3	1
16	BRCA2	c.7976+5G>A	S	unknown	Unknown	3	1
17	BRCA2	c.7976G>A	S	IFD	IFD	2	21
18	BRCA2	c.7977-1G>A	S	unknown	Unknown	3	3
19	BRCA2	c.7977-1G>C	S	unknown	Unknown	3	36
20	BRCA2	c.7977-2A>T	S	unknown	Unknown	3	1
21	BRCA2	c.7977-2del	S	unknown	Unknown	3	4
22	BRCA2	c.7977-3_7977-1delinsAA	FS/S?	unknown	Unknown	3	1
23	BRCA2	c.7980T>G	NS	NMD	PTC	1	3
24	BRCA2	c.7980_7984del	FS	NMD	PTC	1	1
25	BRCA2	c.7984dup	FS	NMD	PTC	1	2
26	BRCA2	c.7987del	FS	NMD	PTC	1	3
27	BRCA2	c.7988A>T	MS	MS	MS	2	18
28	BRCA2	c.798del	FS	NMD	PTC	1	1
29	BRCA2	c.7996A>T	NS	NMD	PTC	1	1
30	BRCA2	c.8002A>T	NS	NMD	PTC	1	6
31	BRCA2	c.8002_8008dup	FS	NMD	PTC	1	1
32	BRCA2	c.8008_8030del	FS	NMD	PTC	1	1
33	BRCA2	c.8009C>A	NS	NMD	PTC	1	6
34	BRCA2	c.8009del	FS	NMD	PTC	1	2
35	BRCA2	c.8020_8021del	FS	NMD	PTC	1	1
36	BRCA2	c.8021del	FS	NMD	PTC	1	4
37	BRCA2	c.8021dup	FS	NMD	PTC	1	3
38	BRCA2	c.8023A>G	S	unknown	Unknown	3	6
39	BRCA2	c.8029_8030del	FS	NMD	PTC	1	2
40	BRCA2	c.8029del	FS	NMD	PTC	1	1
41	BRCA2	c.8032_8033dup	FS	NMD	PTC	1	2
42	BRCA2	c.8042_8043del	FS	NMD	PTC	1	4
43	BRCA2	c.8049_8050insT	FS	NMD	PTC	1	1
44	BRCA2	c.8053del	FS	NMD	PTC	1	3
45	BRCA2	c.8056del	FS	NMD	PTC	1	1
46	BRCA2	c.8058del	FS	NMD	PTC	1	3
47	BRCA2	c.805dup	FS	NMD	PTC	1	1
48	BRCA2	c.8064_8065del	FS	NMD	PTC	1	2
49	BRCA2	c.8067T>A	NS	NMD	PTC	1	27
50	BRCA2	c.8067_8068insTT	FS	NMD	PTC	1	1
51	BRCA2	c.8067del	FS	NMD	PTC	1	1
52	BRCA2	c.8068_8069del	FS	NMD	PTC	1	4
53	BRCA2	c.8070_8071dup	FS	NMD	PTC	1	3
54	BRCA2	c.8072_8073del	FS	NMD	PTC	1	1
55	BRCA2	c.8084C>G	NS	NMD	PTC	1	1
56	BRCA2	c.8087T>A	NS	NMD	PTC	1	1
57	BRCA2	c.809C>G	NS	NMD	PTC	1	2
58	BRCA2	c.8113dup	FS	NMD	PTC	1	1
59							
60							

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2	BRCA2	c.8130del	FS	NMD	PTC	1	1
3	BRCA2	c.8140C>T	NS	NMD	PTC	1	10
4	BRCA2	c.8160_8196dup	FS	NMD	PTC	1	1
5	BRCA2	c.8164del	FS	NMD	PTC	1	1
6	BRCA2	c.8165C>G	MS	MS	MS	2	6
7	BRCA2	c.8167G>C	MS	MS	MS	2	68
8	BRCA2	c.8168A>G	MS	MS	MS	2	11
9	BRCA2	c.8172_8175dup	FS	NMD	PTC	1	4
10	BRCA2	c.8174G>A	NS	NMD	PTC	1	2
11	BRCA2	c.8174_8185delinsTT	FS	NMD	PTC	1	1
12	BRCA2	c.8178T>A	NS	NMD	PTC	1	6
13	BRCA2	c.818C>A	NS	NMD	PTC	1	1
14	BRCA2	c.818C>G	NS	NMD	PTC	1	2
15	BRCA2	c.8195T>G	NS	NMD	PTC	1	1
16	BRCA2	c.8195_8202del	FS	NMD	PTC	1	1
17	BRCA2	c.8201del	FS	NMD	PTC	1	1
18	BRCA2	c.8205_8206del	FS	NMD	PTC	1	2
19	BRCA2	c.8206dup	FS	NMD	PTC	1	4
20	BRCA2	c.8207del	FS	NMD	PTC	1	1
21	BRCA2	c.8208_8209insAG	FS	NMD	PTC	1	1
22	BRCA2	c.8234_8237del	FS	NMD	PTC	1	5
23	BRCA2	c.8234dup	FS	NMD	PTC	1	2
24	BRCA2	c.8238_8241del	FS	NMD	PTC	1	1
25	BRCA2	c.8243G>A	MS	MS	MS	2	9
26	BRCA2	c.8247_8248del	FS	NMD	PTC	1	36
27	BRCA2	c.8253dup	FS	NMD	PTC	1	2
28	BRCA2	c.8272_8273delinsTA	NS	NMD	PTC	1	1
29	BRCA2	c.8276_8279del	FS	NMD	PTC	1	1
30	BRCA2	c.8278_8279ins(71)	FS	NMD	PTC	1	1
31	BRCA2	c.8283_8284dup	FS	NMD	PTC	1	1
32	BRCA2	c.8285del	FS	NMD	PTC	1	2
33	BRCA2	c.8290dup	FS	NMD	PTC	1	1
34	BRCA2	c.8295T>A	NS	NMD	PTC	1	1
35	BRCA2	c.8297del	FS	NMD	PTC	1	68
36	BRCA2	c.8298_8299dup	FS	NMD	PTC	1	1
37	BRCA2	c.8301del	FS	NMD	PTC	1	1
38	BRCA2	c.8312del	FS	NMD	PTC	1	3
39	BRCA2	c.8314G>T	NS	NMD	PTC	1	1
40	BRCA2	c.8316_8317dup	FS	NMD	PTC	1	1
41	BRCA2	c.831dup	FS	NMD	PTC	1	1
42	BRCA2	c.8322dup	FS	NMD	PTC	1	3
43	BRCA2	c.8323dup	FS	NMD	PTC	1	4
44	BRCA2	c.8324_8325insA	FS	NMD	PTC	1	1
45	BRCA2	c.8327T>G	NS	NMD	PTC	1	2
46	BRCA2	c.8327_8331del	FS	NMD	PTC	1	1
47	BRCA2	c.8329A>T	NS	NMD	PTC	1	1
48	BRCA2	c.8330del	FS	NMD	PTC	1	1
49	BRCA2	c.8331+1G>A	S	unknown	Unknown	3	4
50	BRCA2	c.8331+2T>C	S	unknown	Unknown	3	3
51	BRCA2	c.8332-1G>A	S	unknown	Unknown	3	1
52	BRCA2	c.8332-1G>T	S	unknown	Unknown	3	1
53	BRCA2	c.8332-2A>G	S	unknown	Unknown	3	5
54	BRCA2	c.8332-?_8487+?del	DL	unknown	Unknown	3	1
55	BRCA2	c.8332-?_8632+?del	DL	unknown	Unknown	3	5
56	BRCA2	c.8332-?_8632+?dup	DP	Unknown	Unknown	3	4
57	BRCA2	c.8340_8343del	FS	NMD	PTC	1	1
58	BRCA2	c.8347del	FS	NMD	PTC	1	1
59							
60							

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2	BRCA2	c.8362_8363del	FS	NMD	PTC	1	1
3	BRCA2	c.8363G>A	NS	NMD	PTC	1	6
4	BRCA2	c.8364G>A	NS	NMD	PTC	1	44
5	BRCA2	c.8374_8384delinsA	FS	NMD	PTC	1	1
6	BRCA2	c.8377G>A	MS	MS	MS	2	2
7	BRCA2	c.8385del	FS	NMD	PTC	1	3
8	BRCA2	c.8393_8396dup	FS	NMD	PTC	1	1
9	BRCA2	c.8393_8399del	FS	NMD	PTC	1	1
10	BRCA2	c.8393dup	FS	NMD	PTC	1	1
11	BRCA2	c.8394_8396delinsAA	FS	NMD	PTC	1	1
12	BRCA2	c.8395A>T	NS	NMD	PTC	1	1
13	BRCA2	c.8395del	FS	NMD	PTC	1	1
14	BRCA2	c.8401_8403delinsAAAA	FS	NMD	PTC	1	2
15	BRCA2	c.8414_8416delinsC	FS	NMD	PTC	1	2
16	BRCA2	c.842_843del	FS	NMD	PTC	1	1
17	BRCA2	c.8434_8435insC	FS	NMD	PTC	1	5
18	BRCA2	c.8438del	FS	NMD	PTC	1	1
19	BRCA2	c.8451T>A	NS	NMD	PTC	1	2
20	BRCA2	c.8463dup	FS	NMD	PTC	1	5
21	BRCA2	c.8466dup	FS	NMD	PTC	1	1
22	BRCA2	c.846_847del	FS	NMD	PTC	1	1
23	BRCA2	c.8470A>T	NS	NMD	PTC	1	1
24	BRCA2	c.8474del	FS	NMD	PTC	1	6
25	BRCA2	c.8478C>A/G	NS	NMD	PTC	1	1
26	BRCA2	c.8478C>G	NS	NMD	PTC	1	1
27	BRCA2	c.8485C>T	NS	NMD	PTC	1	4
28	BRCA2	c.8486A>G	S	IFD	IFD	2	1
29	BRCA2	c.8487+1G>A	S	IFD	IFD	2	24
30	BRCA2	c.8487+2T>C	S	unknown	Unknown	3	2
31	BRCA2	c.8488-1G>A	S	unknown	Unknown	3	9
32	BRCA2	c.8488-1G>T	S	unknown	Unknown	3	1
33	BRCA2	c.8488-?_8632+?del	DL	unknown	Unknown	3	4
34	BRCA2	c.8488-?_8632+?dup	DP	unknown	Unknown	3	2
35	BRCA2	c.8489G>A	NS	NMD	PTC	1	2
36	BRCA2	c.8490G>A	NS	NMD	PTC	1	1
37	BRCA2	c.8501del	FS	NMD	PTC	1	1
38	BRCA2	c.8504C>A	NS	NMD	PTC	1	2
39	BRCA2	c.8504C>G	NS	NMD	PTC	1	1
40	BRCA2	c.8513T>A	NS	NMD	PTC	1	2
41	BRCA2	c.8517C>A	NS	NMD	PTC	1	2
42	BRCA2	c.8518del	FS	NMD	PTC	1	2
43	BRCA2	c.8535_8538del	FS	NMD	PTC	1	4
44	BRCA2	c.8536G>T	NS	NMD	PTC	1	2
45	BRCA2	c.8537_8538del	FS	NMD	PTC	1	108
46	BRCA2	c.8546del	FS	NMD	PTC	1	3
47	BRCA2	c.8560del	FS	NMD	PTC	1	5
48	BRCA2	c.8561dup	FS	NMD	PTC	1	2
49	BRCA2	c.8562del	FS	NMD	PTC	1	1
50	BRCA2	c.8566del	FS	NMD	PTC	1	1
51	BRCA2	c.8572C>T	NS	NMD	PTC	1	3
52	BRCA2	c.8575C>T	NS	NMD	PTC	1	4
53	BRCA2	c.8575del	FS	NMD	PTC	1	54
54	BRCA2	c.8579del	FS	NMD	PTC	1	2
55	BRCA2	c.857_860dup	FS	NMD	PTC	1	2
56	BRCA2	c.8585dup	FS	NMD	PTC	1	10
57	BRCA2	c.8620G>T	NS	NMD	PTC	1	1
58	BRCA2	c.8629G>T	NS	NMD	PTC	1	1
59							
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2	BRCA2	c.8632+1G>A	S	unknown	Unknown	3	1
3	BRCA2	c.8633-1G>A	S	unknown	Unknown	3	2
4	BRCA2	c.8633-24_8634del	S	unknown	Unknown	3	1
5	BRCA2	c.8633-2A>G	S	unknown	Unknown	3	3
6	BRCA2	c.8633-2A>T	S	unknown	Unknown	3	1
7	BRCA2	c.8633-?_8754+?del	DL	unknown	Unknown	3	6
8	BRCA2	c.8633-?_8754+?dup	DP	unknown	Unknown	3	3
9	BRCA2	c.8633-?_9256+?del	DL	unknown	Unknown	3	7
10	BRCA2	c.8636dup	FS	NMD	PTC	1	1
11	BRCA2	c.8639_8640del	NS	NMD	PTC	1	1
12	BRCA2	c.8645_8646del	FS	NMD	PTC	1	1
13	BRCA2	c.8646del	FS	NMD	PTC	1	1
14	BRCA2	c.8652T>G	NS	NMD	PTC	1	1
15	BRCA2	c.8673_8674del	FS	NMD	PTC	1	4
16	BRCA2	c.8676del	FS	NMD	PTC	1	1
17	BRCA2	c.8677C>T	NS	NMD	PTC	1	3
18	BRCA2	c.8680del	FS	NMD	PTC	1	2
19	BRCA2	c.8695C>T	NS	NMD	PTC	1	10
20	BRCA2	c.8710_8711insAG	FS	NMD	PTC	1	1
21	BRCA2	c.8717_8718del	FS	NMD	PTC	1	1
22	BRCA2	c.8730del	FS	NMD	PTC	1	1
23	BRCA2	c.8754+1G>A	S	unknown	Unknown	3	1
24	BRCA2	c.8754+1G>T	S	unknown	Unknown	3	3
25	BRCA2	c.8754+3G>C	S	unknown	Unknown	3	1
26	BRCA2	c.8754+4A>G	S	NMD	PTC	1	13
27	BRCA2	c.8754+5G>A	FS/S	unknown	Unknown	3	3
28	BRCA2	c.8754G>A	S?	unknown	Unknown	3	1
29	BRCA2	c.8755-1G>A	S	NMD	PTC	1	30
30	BRCA2	c.8755-375_9256+681del	DL	unknown	Unknown	3	1
31	BRCA2	c.8755-?_9117+?del	DL	unknown	Unknown	3	1
32	BRCA2	c.8755-?_9256+?del	DL	unknown	Unknown	3	1
33	BRCA2	c.8756del	FS	NMD	PTC	1	2
34	BRCA2	c.8760T>G	NS	NMD	PTC	1	1
35	BRCA2	c.8767_8776del	FS	NMD	PTC	1	1
36	BRCA2	c.8770G>T	NS	NMD	PTC	1	3
37	BRCA2	c.8773C>T	NS	NMD	PTC	1	2
38	BRCA2	c.8777T>A	NS	NMD	PTC	1	1
39	BRCA2	c.8798_8802del	FS	NMD	PTC	1	1
40	BRCA2	c.8800del	FS	NMD	PTC	1	1
41	BRCA2	c.880G>T	NS	NMD	PTC	1	3
42	BRCA2	c.8817_8820del	FS	NMD	PTC	1	2
43	BRCA2	c.8821C>T	NS	NMD	PTC	1	2
44	BRCA2	c.8830del	FS	NMD	PTC	1	1
45	BRCA2	c.8839G>T	NS	NMD	PTC	1	2
46	BRCA2	c.8848_8851del	FS	NMD	PTC	1	1
47	BRCA2	c.8848delinsCT	FS	NMD	PTC	1	2
48	BRCA2	c.884del	FS	NMD	PTC	1	2
49	BRCA2	c.8850_8851dup	FS	NMD	PTC	1	1
50	BRCA2	c.8869C>T	NS	NMD	PTC	1	4
51	BRCA2	c.8875G>T	NS	NMD	PTC	1	1
52	BRCA2	c.8878C>T	NS	NMD	PTC	1	38
53	BRCA2	c.8887del	FS	NMD	PTC	1	1
54	BRCA2	c.8888C>G	NS	NMD	PTC	1	2
55	BRCA2	c.8904del	FS	NMD	PTC	1	67
56	BRCA2	c.8910G>A	NS	NMD	PTC	1	1
57	BRCA2	c.8915T>A	NS	NMD	PTC	1	1
58	BRCA2	c.8915del	FS	NMD	PTC	1	2
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2	BRCA2	c.8919dup	FS	NMD	PTC	1	1
3	BRCA2	c.891_898delins(10)	FS	NMD	PTC	1	8
4	BRCA2	c.8924del	FS	NMD	PTC	1	3
5	BRCA2	c.8930del	FS	NMD	PTC	1	4
6	BRCA2	c.8931T>A	NS	NMD	PTC	1	1
7	BRCA2	c.8933C>A	NS	NMD	PTC	1	1
8	BRCA2	c.8938A>T	NS	NMD	PTC	1	2
9	BRCA2	c.8940dup	FS	NMD	PTC	1	1
10	BRCA2	c.8941G>T	NS	NMD	PTC	1	2
11	BRCA2	c.8941_8942del	FS	NMD	PTC	1	4
12	BRCA2	c.8941del	FS	NMD	PTC	1	1
13	BRCA2	c.8946del	FS	NMD	PTC	1	3
14	BRCA2	c.8946dup	FS	NMD	PTC	1	6
15	BRCA2	c.8947dup	FS	NMD	PTC	1	1
16	BRCA2	c.8948_8953+5del	FS	NMD	PTC	1	1
17	BRCA2	c.8951C>A	NS	NMD	PTC	1	2
18	BRCA2	c.8951C>G	NS	NMD	PTC	1	3
19	BRCA2	c.8953+1G>A	S	unknown	Unknown	3	4
20	BRCA2	c.8953+1G>T	S	unknown	Unknown	3	15
21	BRCA2	c.8953+2T>G	S	unknown	Unknown	3	1
22	BRCA2	c.8954-15T>G	FS	NMD	PTC	1	1
23	BRCA2	c.8954-1_8955delinsAA	S	IFD	IFD, PTC	2	3
24	BRCA2	c.8954-5A>G	FS/S?	unknown	Unknown	3	4
25	BRCA2	c.8954-?_9256+?del	DL	unknown	Unknown	3	1
26	BRCA2	c.8959_8962del	FS	NMD	PTC	1	1
27	BRCA2	c.8961_8964del	FS	NMD	PTC	1	10
28	BRCA2	c.8965del	FS	NMD	PTC	1	2
29	BRCA2	c.8970G>A	NS	NMD	PTC	1	2
30	BRCA2	c.8972_9097del	IFD	IFD	IFD	2	1
31	BRCA2	c.8978C>A	NS	NMD	PTC	1	3
32	BRCA2	c.8978_8991del	FS	NMD	PTC	1	1
33	BRCA2	c.8986_8987insAGAT	FS	NMD	PTC	1	1
34	BRCA2	c.8991T>G	NS	NMD	PTC	1	4
35	BRCA2	c.8993_9024del	FS	NMD	PTC	1	1
36	BRCA2	c.9016_9017del	FS	NMD	PTC	1	4
37	BRCA2	c.9017dup	FS	NMD	PTC	1	2
38	BRCA2	c.9018C>A	NS	NMD	PTC	1	19
39	BRCA2	c.9019_9020insTCTA	FS	NMD	PTC	1	1
40	BRCA2	c.9024_9046del	FS	NMD	PTC	1	1
41	BRCA2	c.9025del	FS	NMD	PTC	1	1
42	BRCA2	c.9025dup	FS	NMD	PTC	1	1
43	BRCA2	c.9026_9030del	FS	NMD	PTC	1	87
44	BRCA2	c.9027del	FS	NMD	PTC	1	2
45	BRCA2	c.9034dup	FS	NMD	PTC	1	1
46	BRCA2	c.9041C>A	NS	NMD	PTC	1	3
47	BRCA2	c.9052del	FS	NMD	PTC	1	1
48	BRCA2	c.9054_9055del	FS	NMD	PTC	1	3
49	BRCA2	c.905_906insA	FS	NMD	PTC	1	1
50	BRCA2	c.9060dup	FS	NMD	PTC	1	2
51	BRCA2	c.9063_9064dup	FS	NMD	PTC	1	1
52	BRCA2	c.9063_9078del	FS	NMD	PTC	1	3
53	BRCA2	c.9069_9076del	FS	NMD	PTC	1	3
54	BRCA2	c.906del	FS	NMD	PTC	1	1
55	BRCA2	c.9074_9075del	FS	NMD	PTC	1	1
56	BRCA2	c.9076C>T	NS	NMD	PTC	1	7
57	BRCA2	c.9089del	FS	NMD	PTC	1	1
58	BRCA2	c.9097del	FS	NMD	PTC	1	15
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2	BRCA2	c.9097dup	FS	NMD	PTC	1	55
3	BRCA2	c.9098_9099insA	FS	NMD	PTC	1	25
4	BRCA2	c.9099_9100del	FS	NMD	PTC	1	4
5	BRCA2	c.9100C>T	NS	NMD	PTC	1	2
6	BRCA2	c.9105T>G	NS	NMD	PTC	1	1
7	BRCA2	c.9106C>T	NS	NMD	PTC	1	5
8	BRCA2	c.9106delinsTACT	FS	NMD	PTC	1	2
9	BRCA2	c.9109C>T	NS	NMD	PTC	1	3
10	BRCA2	c.9117+1G>A	S	unknown	Unknown	3	7
11	BRCA2	c.9117+1G>T	S	NMD	PTC	1	2
12	BRCA2	c.9117+2T>C	S	NMD	PTC	1	1
13	BRCA2	c.9117G>A	S	NMD	PTC	1	67
14	BRCA2	c.9117G>T	MS/S?	MS	MS	2	1
15	BRCA2	c.9118-1G>A	S	NMD	PTC	1	1
16	BRCA2	c.9118-2A>C	S	unknown	Unknown	3	1
17	BRCA2	c.9118-2A>G	S	NMD	PTC	1	21
18	BRCA2	c.9118-2A>T	S	NMD	PTC	1	1
19	BRCA2	c.9118-7_9121del	FS/S?	unknown	Unknown	3	1
20	BRCA2	c.9127G>T	NS	NMD	PTC	1	2
21	BRCA2	c.9134del	FS	NMD	PTC	1	1
22	BRCA2	c.9139C>T	NS	NMD	PTC	1	1
23	BRCA2	c.9147C>A	NS	NMD	PTC	1	1
24	BRCA2	c.9148C>T	NS	NMD	PTC	1	1
25	BRCA2	c.9154C>T	MS	MS	MS	2	22
26	BRCA2	c.9157del	FS	NMD	PTC	1	4
27	BRCA2	c.9177del	FS	NMD	PTC	1	2
28	BRCA2	c.9182T>A	NS	NMD	PTC	1	3
29	BRCA2	c.9182T>G	NS	NMD	PTC	1	1
30	BRCA2	c.918dup	FS	NMD	PTC	1	1
31	BRCA2	c.9196C>T	NS	NMD	PTC	1	17
32	BRCA2	c.919_920insT	FS	NMD	PTC	1	1
33	BRCA2	c.9207T>A	NS	NMD	PTC	1	1
34	BRCA2	c.9218_9219insATTT	FS	NMD	PTC	1	1
35	BRCA2	c.9227del	FS	NMD	PTC	1	4
36	BRCA2	c.9235del	FS	NMD	PTC	1	1
37	BRCA2	c.9247A>T	NS	NMD	PTC	1	1
38	BRCA2	c.9252_9255delinsTT	FS	NMD	PTC	1	6
39	BRCA2	c.9253del	FS	NMD	PTC	1	6
40	BRCA2	c.9253dup	FS	NMD	PTC	1	31
41	BRCA2	c.9256+1G>A	S	NMD	PTC	1	1
42	BRCA2	c.9256+1G>C	S	unknown	Unknown	3	2
43	BRCA2	c.9256G>T	NS	NMD	PTC	1	1
44	BRCA2	c.9256_9256+2delinsACAG	S	unknown	Unknown	3	1
45	BRCA2	c.9257-1G>C	S	unknown	Unknown	3	7
46	BRCA2	c.9257-2A>G	S	unknown	Unknown	3	3
47	BRCA2	c.9257-2_9261dup	FS	NMD	PTC	1	1
48	BRCA2	c.9257-3_9258del	S	unknown	Unknown	3	1
49	BRCA2	c.9257-?_10257+?del	DL	unknown	Unknown	3	1
50	BRCA2	c.9269dup	FS	NMD	PTC	1	4
51	BRCA2	c.926C>A	NS	NMD	PTC	1	1
52	BRCA2	c.9275_9276del	FS	NMD	PTC	1	2
53	BRCA2	c.9275_9278del	FS	NMD	PTC	1	2
54	BRCA2	c.9276T>G	NS	NMD	PTC	1	1
55	BRCA2	c.9277_9287del	FS	NMD	PTC	1	2
56	BRCA2	c.9286G>T	NS	NMD	PTC	1	6
57	BRCA2	c.9286dup	FS	NMD	PTC	1	1
58	BRCA2	c.9291_9306del	FS	NMD	PTC	1	2
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2	BRCA2	c.9294C>A	NS	NMD	PTC	1	15
3	BRCA2	c.9294C>G	NS	NMD	PTC	1	27
4	BRCA2	c.92G>A	NS	NMD	PTC	1	2
5	BRCA2	c.9310_9311del	FS	NMD	PTC	1	9
6	BRCA2	c.9311dup	FS	NMD	PTC	1	1
7	BRCA2	c.9317G>A	NS	NMD	PTC	1	4
8	BRCA2	c.9318G>A	NS	NMD	PTC	1	1
9	BRCA2	c.9331_9335delinsCCT	FS	NMD	PTC	1	1
10	BRCA2	c.9350del	FS	NMD	PTC	1	1
11	BRCA2	c.9351dup	FS	NMD	PTC	1	1
12	BRCA2	c.9352_9353del	FS	NMD	PTC	1	1
13	BRCA2	c.9352_9353insAT	FS	NMD	PTC	1	1
14	BRCA2	c.9354_9355del	FS	NMD	PTC	1	3
15	BRCA2	c.9356T>A	NS	NMD	PTC	1	1
16	BRCA2	c.9356T>G	NS	NMD	PTC	1	1
17	BRCA2	c.9357_9360del	FS	NMD	PTC	1	4
18	BRCA2	c.9371A>T	MS	MS	MS	2	10
19	BRCA2	c.9376C>T	NS	NMD	PTC	1	2
20	BRCA2	c.9380G>A	NS	NMD	PTC	1	11
21	BRCA2	c.9381G>A	NS	NMD	PTC	1	1
22	BRCA2	c.9381_9388del	FS	NMD	PTC	1	1
23	BRCA2	c.9382C>T	NS	NMD	PTC	1	97
24	BRCA2	c.9393del	FS	NMD	PTC	1	1
25	BRCA2	c.93G>A	NS	NMD	PTC	1	2
26	BRCA2	c.9401del	FS	NMD	PTC	1	11
27	BRCA2	c.9403del	FS	NMD	PTC	1	24
28	BRCA2	c.9408del	FS	NMD	PTC	1	2
29	BRCA2	c.9409_9412del	FS	NMD	PTC	1	1
30	BRCA2	c.9413T>G	NS	NMD	PTC	1	1
31	BRCA2	c.9413dup	FS	NMD	PTC	1	1
32	BRCA2	c.9418_9430del	FS	NMD	PTC	1	2
33	BRCA2	c.9423del	FS	NMD	PTC	1	1
34	BRCA2	c.9429_9430del	FS	NMD	PTC	1	1
35	BRCA2	c.9430del	FS	NMD	PTC	1	1
36	BRCA2	c.9435_9436del	FS	NMD	PTC	1	29
37	BRCA2	c.9440dup	FS	NMD	PTC	1	1
38	BRCA2	c.9453del	FS	NMD	PTC	1	1
39	BRCA2	c.9455_9456del	FS	NMD	PTC	1	4
40	BRCA2	c.9455_9456dup	FS	NMD	PTC	1	2
41	BRCA2	c.9458del	FS	NMD	PTC	1	3
42	BRCA2	c.9463_9467delinsGAATGATC	IFI/FS	NMD	PTC	1	1
43	BRCA2	c.9474del	FS	NMD	PTC	1	1
44	BRCA2	c.9481A>T	NS	NMD	PTC	1	8
45	BRCA2	c.9498del	FS	unknown	PTC	3	4
46	BRCA2	c.9499_9501+2del	S	unknown	Unknown	3	1
47	BRCA2	c.949del	FS	NMD	PTC	1	1
48	BRCA2	c.9501+1G>A	S	unknown	Unknown	3	3
49	BRCA2	c.9501+1G>T	S	unknown	Unknown	3	4
50	BRCA2	c.9502-2A>C	S	unknown	Unknown	3	1
51	BRCA2	c.9507del	FS	unknown	PTC	3	2
52	BRCA2	c.952A>T	NS	NMD	PTC	1	3
53	BRCA2	c.9537_9544del	FS	NMD	PTC	1	1
54	BRCA2	c.9537dup	FS	NMD	PTC	1	1
55	BRCA2	c.9550_9563dup	FS	NMD	PTC	1	2
56	BRCA2	c.956del	FS	NMD	PTC	1	2
57	BRCA2	c.956dup	FS	NMD	PTC	1	8
58	BRCA2	c.9572G>A	NS	NMD	PTC	1	3
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2	<i>BRCA2</i>	c.9580_9581del	FS	NMD	PTC	1 3
3	<i>BRCA2</i>	c.961C>T	NS	NMD	PTC	1 2
4	<i>BRCA2</i>	c.9666del	FS	no NMD	PTC	2 4
5	<i>BRCA2</i>	c.9672dup	FS	no NMD	PTC	2 31
6	<i>BRCA2</i>	c.9676del	FS	no NMD	PTC	2 5
7	<i>BRCA2</i>	c.9682del	FS	no NMD	PTC	2 1
8	<i>BRCA2</i>	c.968_971del	FS	NMD	PTC	1 3
9	<i>BRCA2</i>	c.9699_9702del	FS	no NMD	PTC	2 14
10	<i>BRCA2</i>	c.9728del	FS	no NMD	PTC	2 1
11	<i>BRCA2</i>	c.9739C>T	FS	no NMD	PTC	2 1
12	<i>BRCA2</i>	c.9748dup	FS	no NMD	PTC	2 1
13	<i>BRCA2</i>	c.9789_9790del	FS	no NMD	PTC	2 1
14	<i>BRCA2</i>	c.979A>T	NS	NMD	PTC	1 1
15	<i>BRCA2</i>	c.97G>T	NS	NMD	PTC	1 4
16	<i>BRCA2</i>	c.9808del	FS	NMD	PTC	1 1
17	<i>BRCA2</i>	c.9846dup	FS	no NMD	PTC	2 1
18	<i>BRCA2</i>	c.9871del	FS	no NMD	PTC	2 2
19	<i>BRCA2</i>	c.9883C>T	NS	no NMD	PTC	2 3
20	<i>BRCA2</i>	c.9924C>A	NS	no NMD	PTC	2 1
21	<i>BRCA2</i>	c.9924C>G	NS	no NMD	PTC	2 13
22	<i>BRCA2</i>	c.9925G>T	NS	no NMD	PTC	2 1
23	<i>BRCA2</i>	c.994del	FS	NMD	PTC	1 7
24	<i>BRCA2</i>	c.994dup	FS	NMD	PTC	1 3
25	<i>BRCA2</i>	c.995_996insA	FS	NMD	PTC	1 1
26	<i>BRCA2</i>	c.995_996insG	FS	NMD	PTC	1 1
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