

<b>Supplemental table 1. Characteristics of studies included in the analysis: Ovarian Cancer Association Consortium<sup>1</sup>.</b>												
<b>Study acronym</b>	<b>Study name</b>	<b>Study location, year of diagnosis</b>	<b>Data collection method</b>	<b>Endometriosis</b>	<b>Asthma</b>	<b>Auto immune</b>	<b>Depression</b>	<b>Osteoporosis</b>	<b>Gallbladder disease</b>	<b>Kidney disease</b>	<b>Liver disease</b>	<b>Neurological disease</b>
AOV	Alberta Ovarian Tumor Types Study	Canada 1978-2010	MRR	MRR: reporting of disease	-	-	-	-	-	-	-	-
AUS <sup>2</sup>	Australian Ovarian Cancer Study	Australia 2002-2006	Self-completed questionnaire	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease
BAV <sup>2</sup>	Bavarian Ovarian Cancer Cases and Controls	Germany 2002-2006	In-person interview	Q: disease found during surgery	-	-	-	-	-	-	-	-
CON	Connecticut Ovarian Cancer Study	USA: CT 1998-2003	In-person interview	Q:Disease diagnosed by physician	-	-	-	-	-	-	-	-
DOV	Disease of the Ovary and their Evaluation Study	USA: WA 2002-2005 (DOV) 2006-2009 (DVE)	In-person interview	Q:Disease diagnosed by physician	-	Q:Disease diagnosed by physician	-	-	-	-	-	-
GER	German Ovarian Cancer Study	Germany 1993-1996	Self-administered questionnaire	Q:Disease diagnosed by physician	-	-	-	-	Q:Disease diagnosed by physician	-	-	-
HAW <sup>2</sup>	Hawaii Ovarian Cancer Study	USA: HI 1993-2008	In-person interview	Q:Disease diagnosed by physician	-	Q:Disease diagnosed by physician	Q:Disease diagnosed by physician	-	-	-	-	-
HJO <sup>2</sup>	Hannover-Jena Ovarian Cancer Study	Germany 2007-2011	MRR	MRR: reporting of disease		MRR: reporting of disease			MRR: reporting of disease			
HOP <sup>2</sup>	Hormones and Ovarian Cancer Prediction Study	USA: PA, OH, and NY 2003-2009	In-person interview, MRR	Q:Ever having disease; MRR: reporting of disease	Q:Disease diagnosed by physician MRR: reporting of disease	Q:Disease diagnosed by physician MRR: reporting of disease	MRR: reporting of disease	MRR: reporting of disease	MRR: reporting of disease	MRR: reporting of disease	MRR: reporting of disease	MRR: reporting of disease
JPN <sup>2</sup>	Hospital-based Research Program at Aichi Cancer Center	Japan 2001-2005	In-person interview	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease
LAX <sup>2</sup>	Women's Cancer Program at the Samuel Oschin Comprehensive Cancer Institute	USA: CA 1989-present	MRR	MRR: reporting of disease	-	MRR: reporting of disease	-	-	MRR: reporting of disease	-	-	-

MAC <sup>2</sup>	Mayo Clinic Case-Only Ovarian Cancer Study	USA 2000-2011	Self-completed questionnaire	Q:Ever diagnosed with disease	-	-	-	-	-	-	-	-
MAL <sup>2</sup>	<u>MAL</u> ignnant <u>OV</u> arian cancer	Denmark 1994-1999	In-person interview	Q:Disease diagnosed by physician	Q:Determined based on medication intake	Q:Disease diagnosed by physician	Q:Determined based on medication intake	Q:Disease diagnosed by physician	-	-	Q:Disease diagnosed by physician	-
MAY <sup>2</sup>	Mayo Clinic Ovarian Cancer Case-Control Study	USA: MN, SD, ND, IL, IA, WI 2003-2009	In-person interview	Q:Ever diagnosed with disease	-	-	-	-	-	-	-	-
NCO <sup>2</sup>	North Carolina Ovarian Cancer Study	USA: NC	Self-completed questionnaire	Q:Disease diagnosed by physician	-	Q:Disease diagnosed by physician	Q:Disease diagnosed by physician	Q:Disease diagnosed by physician	Q:Disease diagnosed by physician	-	-	-
NEC <sup>2</sup>	New England Case-Control Study of Ovarian Cancer	USA:NH and MA 1992-2003	In-person interview	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease	Q:Ever having disease
NJO	New Jersey Ovarian Cancer Study	USA: NJ 2002-2008	Phone interview	Q:Disease diagnosed by physician	-	Q:Disease diagnosed by physician	Q:Disease diagnosed by physician	Q:Disease diagnosed by physician	-	-	-	Q:Disease diagnosed by physician
NTH	Nijmegen Ovarian Cancer Study	Netherlands 1989-2006	Self-completed questionnaires MRR	Q:Disease diagnosed by physician MRR: reporting of disease	Q:Disease diagnosed by physician MRR: reporting of disease	Q: Disease diagnosed by physician	-	Q:Disease diagnosed by physician MRR: reporting of disease	-	Q:Disease diagnosed by physician MRR: reporting of disease	Q:Disease diagnosed by physician MRR: reporting of disease	Q:Disease diagnosed by physician MRR: reporting of disease
TBO	Tampa Bay Ovarian Cancer Study	USA:FL 2000-present	Self-completed questionnaires	Q:Disease diagnosed by physician	-	-	-	-	-	-	-	-
UCI	University of California, Irvine Ovarian Cancer Study	USA: CA 1995-2005	Self-completed questionnaires	Q:Disease diagnosed by physician	-	-	-	-	-	-	-	-
UKO	United Kingdom Ovarian Cancer Population Study	United Kingdom 2006-2010	Self-completed questionnaires	Q:Disease diagnosed by physician	-	-	-	-	-	-	-	-
USC	University of Southern California, Study of Lifestyle and Women's Health OR	USA: CA 1993-2005	In-person interview	Q:Diagnosed by physician	-	-	-	-	-	-	-	-

	Los Angeles County Case-Control Studies of Ovarian Cancer											
WOC	Warsaw Ovarian Cancer Study	Poland	Self-administered questionnaire	-	Ever having disease	Ever having disease	Ever having disease	Ever having disease	Ever having disease	Ever having disease	Ever having disease	Ever having disease

**<sup>1</sup>AOV:** Kelemen LE, Köbel M, Chan A, Taghaddos S, Dinu I. Differentially methylated loci distinguish ovarian carcinoma histological types: Evaluation of a DNA methylation assay in FFPE tissue. *Biomed Res Int Pathol* 2013;2013:815894.

**AUS:** Merritt MA, Green AC, Nagle CM, Webb PM, Australian Cancer Study, Australian Ovarian Cancer Study Group. Talcum powder, chronic pelvic inflammation and NSAIDs in relation to risk of epithelial ovarian cancer. *Int J Cancer*, 2008; 122: 170-6. (PMID 17721999)

**BAV, HJO:** Song H, Ramus SJ, Tyrer J, Bolton KL, Gentry-Maharaj A, Wozniak E, Anton-Culver H, Chang-Claude J, Cramer DW, DiCioccio R, Dörk T, Goode EL, Goodman MT, Schildkraut JM, Sellers T, Baglietto L, Beckmann MW, Beesley J, Blaakaer J, Carney ME, Chanock S, Chen Z, Cunningham JM, Dicks E, Doherty JA, Dürst M, Ekici AB, Fenstermacher D, Fridley BL, Giles G, Gore ME, De Vivo I, Hillemanns P, Hogdall C, Hogdall E, Iversen ES, Jacobs IJ, Jakubowska A, Li D, Lissowska J, Lubiński J, Lurie G, McGuire V, McLaughlin J, Medrek K, Moorman PG, Moysich K, Narod S, Phelan C, Pye C, Risch H, Runnebaum IB, Severi G, Southey M, Stram DO, Thiel FC, Terry KL, Tsai YY, Tworoger SS, Van Den Berg DJ, Vierkant RA, Wang-Gohrke S, Webb PM, Wilkens LR, Wu AH, Yang H, Brewster W, Ziogas A; Australian Cancer (Ovarian) Study; Australian Ovarian Cancer Study Group; Ovarian Cancer Association Consortium, Houlston R, Tomlinson I, Whittemore AS, Rossing MA, Ponder BA, Pearce CL, Ness RB, Menon U, Kjaer SK, Gronwald J, Garcia-Closas M, Fasching PA, Easton DF, Chenevix-Trench G, Berchuck A, Pharoah PD, Gayther SA. A genome-wide association study identifies a new ovarian cancer susceptibility locus on 9p22.2. *Nat Genet.* 2009 Sep;41(9):996-1000. Epub 2009 Aug 2. (PMID 19648919)

**CON:** Risch HA, Bale AE, Beck PA, Zheng W. PGR +331A/G and increased risk of epithelial ovarian cancer. *Cancer Epidemiol Biomarkers Prev* 2006;15:1738-41. (PMID 16985038)

**DOV:** Bodelon C, Cushing-Haugen KL, Wicklund KG, Doherty JA, Rossing MA. Sun exposure and risk of epithelial ovarian cancer. *Cancer Causes Control*.2012 Dec;23(12):1985-94. Epub 2012 Oct 12. (PMID: 23065074)

**GER:** Royar J, Becher H, Chang-Claude J. Low-dose oral contraceptives: protective effect on ovarian cancer risk. *Int J Cancer.* 2001 Nov 20;95(6):370-4. (PMID 11668519)

**HAW:** Goodman MT, Lurie G, Thompson PJ, McDuffie KE, Carney ME. Association of two common single-nucleotide polymorphisms in the CYP19A1 locus and ovarian cancer risk. *Endocr Relat Cancer.* Dec2008; 15(4):1055-1066. (PMID 18667686)

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**JPN:** Hamajima N, Matsuo K, Saito T, Hirose K, Inoue M, Takezaki T, Kuroishi T, Tajima K. Gene-environment Interactions and Polymorphism Studies of Cancer Risk in the Hospital-based Epidemiologic Research Program at Aichi Cancer Center II (HERPACC-II). *Asian Pac J Cancer Prev.* 2001, 2(2):99-107. (PMID 12718640)

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**MAL:** Glud E, Kjaer SK, Thomasen BL, Hogdall C, Christensen L, Hogdall E, Bock JE, Blaakaer J. Hormone Therapy and the Impact of Estrogen Intake on the Risk of Ovarian Cancer. *Arch Intern Med* 2004; 164(29): 2253-2259. (PMID 15534163 )

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**NEC:** Terry KL, De Vivo I, Titus-Ernstoff L, Shih MC, Cramer DW. Androgen receptor cytosine, adenine, guanine repeats, and haplotypes in relation to ovarian cancer risk. *Cancer Res.* 2005;65:5974-81.(PMID 15994977)

**NJO:** Bandera EV, Williams-King MG, Chandran U, Paddock L, Rodriguez-Rodriguez L, Lu S-E, Faulkner S, Pulick K, Olson SH. Phytoestrogen consumption from food and supplements and ovarian cancer risk. *BMC Women's Health* 2011 Sept 23;11:40 . (PMID 21943063)

**NTH :** Goode EL, Chenevix-Trench G, Song H, Ramus SJ, Notaridou M, Lawrenson K, Widschwendter M, Vierkant RA, Larson MC, Kjaer SK, Birrer MJ, Berchuck A, Schildkraut J, Tomlinson I, Kiemeny LA, Cook LS, Gronwald J, Garcia-Closas M, Gore ME, Campbell I, Whittemore AS, Sutphen R, Phelan C, Anton-Culver H, Pearce CL, Lambrechts D, Rossing MA, Chang-Claude J, Moysich KB, Goodman MT, Dörk T, Nevanlinna H, Ness RB, Rafnar T, Hogdall C, Hogdall E, Fridley BL, Cunningham JM, Sieh W, McGuire V, Godwin AK, Cramer DW, Hernandez D, Levine D, Lu K, Iversen ES, Palmieri RT, Houlston R, van Altena AM, Aben KK, Massuger LF, Brooks-Wilson A, Kelemen LE, Le ND, Jakubowska A, Lubinski J, Medrek K, Stafford A, Easton DF, Tyrer J, Bolton KL, Harrington P, Eccles D, Chen A, Molina AN, Davila BN, Arango H, Tsai YY, Chen Z, Risch HA, McLaughlin J, Narod SA, Ziogas A, Brewster W, Gentry-Maharaj A, Menon U, Wu AH, Stram DO, Pike

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**TBO:** Pal T, Permuth-Wey J, Betts JA et al. (2005) BRCA1 and BRCA2 mutations account for a large proportion of ovarian carcinoma cases. *Cancer* 104:2807-2816 (PMID 16284991); Pal T, Permuth-Wey J, Kapoor R, Cantor A, Sutphen R. (2007) Improved survival in BRCA2 carriers with ovarian cancer. *Familial Cancer* 6:113-119 (PMID 17160431)

**UCI:** Ziogas A, Gildea M, Cohen P, Bringman D, Taylor TH, Seminara D, Barker D, Casey G, Haile R, Liao SY, Thomas D, Noble B, Kurosaki T, Anton-Culver H. Cancer risk estimates for family members of a population-based family registry for breast and ovarian cancer. *Cancer Epidemiol Biomarkers Prev.* 2000 Jan;9(1):103-11. (PMID 10667470)

**UKO:** Balogun N, Gentry-Maharaj A, Wozniak EL, Lim A, Ryan A, Ramus SJ, Ford J, Burnell M, Widschwendter M, Gessler SF, Gayther SA, Jacobs IJ, Menon U. Recruitment of newly diagnosed ovarian cancer patients proved challenging in a multicentre biobanking study. *J Clin Epidemiol.* 2011 May;64(5):525-30. doi:10.1016/j.jclinepi.2010.07.008. Epub 2010 Nov 13. PubMed PMID: 21074968.

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*Infertility, Fertility Drugs, and Ovarian Cancer: A Pooled Analysis of Case-Control Studies.* Roberta B. Ness, Daniel W. Cramer, Marc T. Goodman, Susanne Krüger Kjaer, Kathy Mallin, Berit Jul Mosgaard, David M. Purdie, Harvey A. Risch, Ronald Vergona, and Anna H. Wu. *Am J Epidemiol.* 2002 Feb 1;155(3):217-24. (PMID 11821246)

**WOC:** A novel germline PALB2 deletion in Polish breast and ovarian cancer patients. Dansonka-Mieszkowska A, Kluska A, Moes J, Dabrowska M, Nowakowska D, Niwinska A, Derlatka P, Cendrowski K, Kupryjanczyk J. *BMC Med Genet.* 2010 Feb 2;11:20. (PMID 20122277)

<sup>2</sup> Studies that provided information on progression-free survival

Abbreviations used: MRR-medical records review, Q-question.