

# A Genome-Wide Association Study Identifies Susceptibility Loci for Ovarian Cancer at 2q31 and 8q24

## Supplementary Data

**Supplementary Note:** Membership of WTCCC (Wellcome Trust Case-Control Consortium) is as follows:

Membership of the Wellcome Trust Case–Control Consortium (WTCCC)

*Management Committee:* Paul R Burton<sup>1</sup>, David G Clayton<sup>2</sup>, Lon R Cardon<sup>3</sup>, Nick Craddock<sup>4</sup>, Panos Deloukas<sup>5</sup>, Audrey Duncanson<sup>6</sup>, Dominic P Kwiatkowski<sup>3,5</sup>, Mark I McCarthy<sup>3,7</sup>, Willem H Ouwehand<sup>8,9</sup>, Nilesh J Samani<sup>10</sup>, John A Todd<sup>2</sup>, Peter Donnelly (Chair)<sup>11</sup>

*Analysis Committee:* Jeffrey C Barrett<sup>3</sup>, Paul R Burton<sup>1</sup>, Dan Davison<sup>11</sup>, Peter Donnelly<sup>11</sup>, Doug Easton<sup>12</sup>, David Evans<sup>3</sup>, Hin-Tak Leung<sup>2</sup>, Jonathan L Marchini<sup>11</sup>, Andrew P Morris<sup>3</sup>, I CA Spencer<sup>11</sup>, Martin D Tobin<sup>1</sup>, Lon R Cardon (co-chair)<sup>3</sup>, David G Clayton (co-chair)<sup>2</sup>

*UK Blood Services and University of Cambridge Controls:* Antony P Attwood<sup>5,8</sup>, James P Boorman<sup>8,9</sup>, Barbara Cant<sup>8</sup>, Ursula Everson<sup>13</sup>, Judith M Hussey<sup>14</sup>, Jennifer D Jolley<sup>8</sup>, Alexandra S Knight<sup>8</sup>, Kerstin Koch<sup>8</sup>, Elizabeth Meech<sup>15</sup>, Sarah Nutland<sup>2</sup>, Christopher V Prowse<sup>16</sup>, Helen E Stevens<sup>2</sup>, Niall C Taylor<sup>8</sup>, Graham R Walters<sup>17</sup>, Neil M Walker<sup>2</sup>, Nicholas A Watkins<sup>8,9</sup>, Thilo Winzer<sup>8</sup>, John A Todd<sup>2</sup>, Willem H Ouwehand<sup>8,9</sup>

*1958 Birth Cohort Controls:* Richard W Jones<sup>18</sup>, Wendy L McArdle<sup>18</sup>, Susan M Ring<sup>18</sup>, David P Strachan<sup>19</sup>, Marcus Pembrey<sup>18,20</sup>

*Bipolar Disorder:* Aberdeen – Gerome Breen<sup>21</sup>, David St Clair<sup>21</sup>; Birmingham – Sian Caesar<sup>22</sup>, Katherine Gordon-Smith<sup>22,23</sup>, Lisa Jones<sup>22</sup>; Cardiff – Christine Fraser<sup>23</sup>, Elaine K Green<sup>23</sup>, Detelina Grozeva<sup>23</sup>, Marian L Hamshere<sup>23</sup>, Peter A Holmans<sup>23</sup>, Ian R Jones<sup>23</sup>, George Kirov<sup>23</sup>, Valentina Moskvina<sup>23</sup>, Ivan Nikolov<sup>23</sup>, Michael C O'Donovan<sup>23</sup>, Michael J Owen<sup>23</sup>, Nick Craddock<sup>23</sup>; London – David A Collier<sup>24</sup>, Amanda Elkin<sup>24</sup>, Anne Farmer<sup>24</sup>, Richard Williamson<sup>24</sup>, Peter McGuffin<sup>24</sup>; Newcastle – Allan H Young<sup>25</sup>, I Nicol Ferrier<sup>25</sup>

*Coronary Artery Disease:* Leeds – Stephen G Ball<sup>26</sup>, Anthony J Balmforth<sup>26</sup>, Jennifer H Barrett<sup>26</sup>, D Timothy Bishop<sup>26</sup>, Mark M Iles<sup>26</sup>, Azhar Maqbool<sup>26</sup>, Nadira Yuldasheva<sup>26</sup>, Alistair S Hall<sup>26</sup>; Leicester – Peter S Braund<sup>10</sup>, Paul R Burton<sup>1</sup>, Richard J Dixon<sup>10</sup>, Massimo Mangino<sup>10</sup>, Suzanne Stevens<sup>10</sup>, Martin D Tobin<sup>1</sup>, John R Thompson<sup>1</sup>, Nilesh J Samani<sup>10</sup>

*Crohn's Disease:* Cambridge – Francesca Bredin<sup>27</sup>, Mark Tremelling<sup>27</sup>, Miles Parkes<sup>27</sup>; Edinburgh – Hazel Drummond<sup>28</sup>, Charles W Lees<sup>28</sup>, Elaine R Nimmo<sup>28</sup>, Jack Satsangi<sup>28</sup>; London – Sheila A Fisher<sup>29</sup>, Alastair Forbes<sup>30</sup>, Cathryn M Lewis<sup>29</sup>, Clive M Onnie<sup>29</sup>, Natalie J Prescott<sup>29</sup>, Jeremy Sanderson<sup>31</sup>, Christopher G Mathew<sup>29</sup>; Newcastle – Jamie Barbour<sup>32</sup>, M Khalid Mohiuddin<sup>32</sup>, Catherine E Todhunter<sup>32</sup>, John C Mansfield<sup>32</sup>; Oxford – Tariq Ahmad<sup>33</sup>, Fraser R Cummings<sup>33</sup>, Derek P Jewell<sup>33</sup>

*Hypertension:* Aberdeen – John Webster<sup>34</sup>; Cambridge – Morris J Brown<sup>35</sup>, David G Clayton<sup>2</sup>; Evry, France – G Mark Lathrop<sup>36</sup>; Glasgow – John Connell<sup>37</sup>, Anna Dominiczak<sup>37</sup>; Leicester – Nilesh J Samani<sup>10</sup>; London – Carolina A Braga Marcano<sup>38</sup>, Beverley Burke<sup>38</sup>, Richard Dobson<sup>38</sup>, Johannie Gungadoo<sup>38</sup>, Kate L Lee<sup>38</sup>, Patricia B Munroe<sup>38</sup>, Stephen J Newhouse<sup>38</sup>, Abiodun Onipinla<sup>38</sup>, I Wallace<sup>38</sup>, Mingzhan Xue<sup>38</sup>,

Mark Caulfield<sup>38</sup>; Oxford – Martin Farrall<sup>39</sup>

*Rheumatoid Arthritis*: Anne Barton<sup>40</sup>, The Biologics in RA Genetics and Genomics Study Syndicate (BRAGGS) Steering Committee, Ian N Bruce<sup>40</sup>, Hannah Donovan<sup>40</sup>, Steve Eyre<sup>40</sup>, Paul D Gilbert<sup>40</sup>, Samantha L Hider<sup>40</sup>, Anne M Hinks<sup>40</sup>, Sally L John<sup>40</sup>, Catherine Potter<sup>40</sup>, Alan J Silman<sup>40</sup>, Deborah PM Symmons<sup>40</sup>, Wendy Thomson<sup>40</sup>, Jane Worthington<sup>40</sup>

*Type 1 Diabetes*: David G Clayton<sup>2</sup>, David B Dunger<sup>2,41</sup>, Sarah Nutland<sup>2</sup>, Helen E Stevens<sup>2</sup>, Neil M Walker<sup>2</sup>, Barry Widmer<sup>2,41</sup>, John A Todd<sup>2</sup>

*Type 2 Diabetes*: Exeter – Timothy M Frayling<sup>42,43</sup>, Rachel M Freathy<sup>42,43</sup>, Hana Lango<sup>42,43</sup>, John R B Perry<sup>42,43</sup>, Beverley M Shields<sup>43</sup>, Michael N Weedon<sup>42,43</sup>, Andrew T Hattersley<sup>42,43</sup>; London – Graham A Hitman<sup>44</sup>; Newcastle – Mark Walker<sup>45</sup>; Oxford – Kate S Elliott<sup>3,7</sup>, Christopher J Groves<sup>7</sup>, Cecilia M Lindgren<sup>3,7</sup>, Nigel W Rayner<sup>3,7</sup>, Nicholas J Timpson<sup>3,46</sup>, Eleftheria Zeggini<sup>3,7</sup>, Mark I McCarthy<sup>3,7</sup>

*Tuberculosis*: Gambia – Melanie Newport<sup>47</sup>, Giorgio Sirugo<sup>47</sup>; Oxford – Emily Lyons<sup>3</sup>, Fredrik Vannberg<sup>3</sup>, Adrian VS Hill<sup>3</sup>

*Ankylosing Spondylitis*: Linda A Bradbury<sup>48</sup>, Claire Farrar<sup>49</sup>, Jennifer J Pointon<sup>48</sup>, Paul Wordsworth<sup>49</sup>, Matthew A Brown<sup>48,49</sup>

*Autoimmune Thyroid Disease*: Jayne A Franklyn<sup>50</sup>, Joanne M Heward<sup>50</sup>, Matthew J Simmonds<sup>50</sup>, Stephen CL Gough<sup>50</sup>

*Breast Cancer*: Sheila Seal<sup>51</sup>, Breast Cancer Susceptibility Collaboration (UK)\*, Michael R Stratton<sup>51,52</sup>, Nazneen Rahman<sup>51</sup>

*Multiple Sclerosis*: Maria Ban<sup>53</sup>, An Goris<sup>53</sup>, Stephen J Sawcer<sup>53</sup>, Alastair Compston<sup>53</sup>

*Gambian Controls*: Gambia – David Conway<sup>47</sup>, Muminatou Jallow<sup>47</sup>, Melanie Newport<sup>47</sup>, Giorgio Sirugo<sup>47</sup>; Oxford – Kirk A Rockett<sup>3</sup>, Dominic P Kwiatkowski<sup>3,5</sup>

*DNA, Genotyping, Data QC and Informatics*: Wellcome Trust Sanger Institute, Hinxton – Claire Bryan<sup>5</sup>, Suzannah J Bumpstead<sup>5</sup>, Amy Chaney<sup>5</sup>, Kate Downes<sup>2,5</sup>, Jilur Ghori<sup>5</sup>, Rhian Gwilliam<sup>5</sup>, Sarah E Hunt<sup>5</sup>, Michael Inouye<sup>5</sup>, Andrew Keniry<sup>5</sup>, Emma King<sup>5</sup>, Ralph McGinnis<sup>5</sup>, Simon Potter<sup>5</sup>, Rathi Ravindrarajah<sup>5</sup>, Pamela Whittaker<sup>5</sup>, David Withers<sup>5</sup>, Panos Deloukas<sup>5</sup>; Cambridge – Hin-Tak Leung<sup>2</sup>, Sarah Nutland<sup>2</sup>, Helen E Stevens<sup>2</sup>, Neil M Walker<sup>2</sup>, John A Todd<sup>2</sup>

*Statistics*: Cambridge – Doug Easton<sup>12</sup>, David G Clayton<sup>2</sup>; Leicester – Paul R Burton<sup>1</sup>, Martin D Tobin<sup>1</sup>; Oxford – Jeffrey C Barrett<sup>3</sup>, David Evans<sup>3</sup>, Andrew P Morris<sup>3</sup>, Lon R Cardon<sup>3</sup>; Oxford – Niall J Cardin<sup>11</sup>, Dan Davison<sup>11</sup>, Teresa Ferreira<sup>11</sup>, Joanne Pereira-Gale<sup>11</sup>, Ingeleif B Hallgrimsdóttir<sup>11</sup>, Bryan N Howie<sup>11</sup>, Jonathan L Marchini<sup>11</sup>, I CA Spencer<sup>11</sup>, Zhan Su<sup>11</sup>, Yik Ying Teo<sup>3,11</sup>, Damjan Vukcevic<sup>11</sup>, Peter Donnelly<sup>11</sup>

*PIs*: David Bentley<sup>5,54</sup>, Matthew A Brown<sup>48,49</sup>, Lon R Cardon<sup>3</sup>, Mark Caulfield<sup>38</sup>, David G Clayton<sup>2</sup>, Alistair Compston<sup>53</sup>, Nick Craddock<sup>23</sup>, Panos Deloukas<sup>5</sup>, Peter Donnelly<sup>11</sup>, Martin Farrall<sup>39</sup>, Stephen CL Gough<sup>50</sup>, Alistair S Hall<sup>26</sup>, Andrew T Hattersley<sup>42,43</sup>, Adrian VS Hill<sup>3</sup>, Dominic P Kwiatkowski<sup>3,5</sup>, Christopher G Mathew<sup>29</sup>, Mark I McCarthy<sup>3,7</sup>, Willem H Ouwehand<sup>8,9</sup>, Miles Parkes<sup>27</sup>, Marcus Pembrey<sup>18,20</sup>, Nazneen Rahman<sup>51</sup>, Nilesh J Samani<sup>10</sup>, Michael R Stratton<sup>51,52</sup>, John A Todd<sup>2</sup>, Jane Worthington<sup>40</sup>

<sup>1</sup>Genetic Epidemiology Group, Department of Health Sciences, University of Leicester, Adrian Building, University Road, Leicester LE1 7RH, UK; <sup>2</sup>Juvenile Diabetes Research Foundation/Wellcome Trust Diabetes and Inflammation Laboratory, Department of Medical Genetics, Cambridge Institute for Medical Research, University of Cambridge, Wellcome Trust/MRC Building, Cambridge CB2 0XY, UK; <sup>3</sup>Wellcome Trust Centre for Human Genetics, University of Oxford, Roosevelt Drive, Oxford OX3 7BN, UK; <sup>4</sup>Department of Psychological Medicine, Henry Wellcome Building, School of Medicine, Cardiff University, Heath Park, Cardiff CF14 4XN, UK; <sup>5</sup>The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton, Cambridge CB10 1SA, UK; <sup>6</sup>The Wellcome Trust, Gibbs Building, 215 Euston Road, London NW1 2BE, UK; <sup>7</sup>Oxford Centre for Diabetes, Endocrinology and Medicine, University of Oxford, Churchill Hospital, Oxford OX3 7LJ, UK; <sup>8</sup>Department of Haematology, University of Cambridge, Long Road, Cambridge CB2 2PT, UK; <sup>9</sup>National Health Service Blood and Transplant, Cambridge Centre, Long Road, Cambridge CB2 2PT, UK; <sup>10</sup>Department of Cardiovascular Sciences, University of Leicester, Glenfield Hospital, Groby Road, Leicester LE3 9QP, UK; <sup>11</sup>Department of Statistics, University of Oxford, 1 South Parks Road, Oxford OX1 3TG, UK; <sup>12</sup>Cancer Research UK Genetic Epidemiology Unit, Strangeways Research Laboratory, Worts Causeway, Cambridge CB1 8RN, UK; <sup>13</sup>National Health Service Blood and Transplant, Sheffield Centre, Longley Lane, Sheffield S5 7JN, UK; <sup>14</sup>National Health Service Blood and Transplant, Brentwood Centre, Crescent Drive, Brentwood CM15 8DP, UK; <sup>15</sup>The Welsh Blood Service, Ely Valley Road, Talbot Green, Pontyclun CF72 9WB, UK; <sup>16</sup>The Scottish National Blood Transfusion Service, Ellen's Glen Road, Edinburgh EH17 7QT, UK; <sup>17</sup>National Health Service Blood and Transplant, Southampton Centre, Coxford Road, Southampton SO16 5AF, UK; <sup>18</sup>Avon Longitudinal Study of Parents and Children, University of Bristol, 24 Tyndall Avenue, Bristol BS8 1TQ, UK; <sup>19</sup>Division of Community Health Services, St George's University of London, Cranmer Terrace, London SW17 0RE, UK; <sup>20</sup>Institute of Child Health, University College London, 30 Guilford St, London WC1N 1EH, UK; <sup>21</sup>University of Aberdeen, Institute of Medical Sciences, Foresterhill, Aberdeen AB25 2ZD, UK; <sup>22</sup>Division of Neuroscience, Department of Psychiatry, Birmingham University, Birmingham B15 2QZ, UK; <sup>23</sup>Department of Psychological Medicine, Henry Wellcome Building, School of Medicine, Cardiff University, Heath Park, Cardiff CF14 4XN, UK; <sup>24</sup>King's College London, SGDP, The Institute of Psychiatry, De Crespigny Park Denmark Hill London SE5 8AF, UK; <sup>25</sup>School of Neurology, Neurobiology and Psychiatry, Royal Victoria Infirmary, Queen Victoria Road, Newcastle upon Tyne NE1 4LP, UK; <sup>26</sup>Faculty of Medicine and Health, LIGHT and LIMM Research Institutes, University of Leeds, Leeds LS1 3EX, UK; <sup>27</sup>IBD Research Group, Addenbrooke's Hospital, University of Cambridge, Cambridge CB2 2QQ, UK; <sup>28</sup>Gastrointestinal Unit, School of Molecular and Clinical Medicine, University of Edinburgh, Western General Hospital, Edinburgh EH4 2XU, UK; <sup>29</sup>King's College London School of Medicine, Department of Medical and Molecular Genetics, 8th Floor Guy's Tower, Guy's Hospital, London SE1 9RT, UK; <sup>30</sup>Institute for Digestive Diseases, University College London Hospitals Trust, London NW1 2BU, UK; <sup>31</sup>Department of Gastroenterology, Guy's and St Thomas' NHS Foundation Trust, London SE1 7EH, UK; <sup>32</sup>Department of Gastroenterology and Hepatology, University of Newcastle upon Tyne, Royal Victoria Infirmary, Newcastle upon Tyne NE1 4LP, UK; <sup>33</sup>Gastroenterology Unit, Radcliffe Infirmary, University of Oxford, Oxford OX2 6HE, UK; <sup>34</sup>Medicine and Therapeutics, Aberdeen Royal Infirmary, Foresterhill, Aberdeen, Grampian AB9 2ZB, UK; <sup>35</sup>Clinical Pharmacology Unit and the Diabetes and Inflammation Laboratory, University of Cambridge, Addenbrookes Hospital, Hills Road, Cambridge CB2 2QQ, UK; <sup>36</sup>Centre National de Genotypage, 2, Rue Gaston Cremieux, Evry, Paris 91057; <sup>37</sup>BHF Glasgow Cardiovascular Research Centre, University of Glasgow, 126 University Place, Glasgow G12 8TA, UK; <sup>38</sup>Clinical Pharmacology and Barts and The London Genome Centre, William Harvey Research Institute, Barts and The London, Queen Mary's School of Medicine, Charterhouse Square, London EC1M 6BQ, UK; <sup>39</sup>Cardiovascular Medicine, University of Oxford, Wellcome Trust Centre for Human Genetics, Roosevelt Drive, Oxford OX3 7BN, UK; <sup>40</sup>arc Epidemiology Research Unit, University of Manchester, Stopford Building, Oxford Rd, Manchester M13 9PT, UK; <sup>41</sup>Department of Paediatrics, University of Cambridge, Addenbrooke's Hospital, Cambridge CB2 2QQ, UK; <sup>42</sup>Genetics of Complex Traits, Institute of Biomedical and Clinical Science, Peninsula Medical School, Magdalen Road, Exeter EX1 2LU UK; <sup>43</sup>Diabetes Genetics, Institute of Biomedical and Clinical Science, Peninsula Medical School, Barrack Road, Exeter EX2 5DU UK; <sup>44</sup>Centre for Diabetes and Metabolic Medicine, Barts and The London, Royal London

Hospital, Whitechapel, London E1 1BB UK; <sup>45</sup>Diabetes Research Group, School of Clinical Medical Sciences, Newcastle University, Framlington Place, Newcastle upon Tyne NE2 4HH, UK; <sup>46</sup>The MRC Centre for Causal Analyses in Translational Epidemiology, Bristol University, Canynge Hall, Whiteladies Rd, Bristol BS2 8PR, UK; <sup>47</sup>MRC Laboratories, Fajara, The Gambia; <sup>48</sup>Diamantina Institute for Cancer, Immunology and Metabolic Medicine, Princess Alexandra Hospital, University of Queensland, Woolloongabba, Qld 4102, Australia; <sup>49</sup>Botnar Research Centre, University of Oxford, Headington, Oxford OX3 7BN, UK; <sup>50</sup>Division of Medical Sciences, Department of Medicine, Institute of Biomedical Research, University of Birmingham, Edgbaston, Birmingham B15 2TT, UK; <sup>51</sup>Section of Cancer Genetics, Institute of Cancer Research, 15 Cotswold Road, Sutton SM2 5 NG, UK; <sup>52</sup>Cancer Genome Project, The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton, Cambridge CB10 1SA, UK; <sup>53</sup>Department of Clinical Neurosciences, University of Cambridge, Addenbrooke's Hospital, Hills Road, Cambridge CB2 2QQ, UK; <sup>54</sup>PRESENT ADDRESS: Illumina Cambridge, Chesterford Research Park, Little Chesterford, Nr Saffron Walden, Essex CB10 1XL, UK.

**Supplementary Table 1: GWAS Participating Studies**

Abbrev.	Name	Country	Cases	Controls	Platform	Cases	Controls
<b>Phase I</b>							
Supplemen Phase I	UK SEARCH Ovarian Cancer Study; United Kingdom Ovarian Cancer Population Study (UKOPS); Royal Marsden Hospital Ovarian Cancer Study; Cancer Research UK Familial Ovarian Cancer Register; 1958 Birth Cohort; Colorectal Tumor Gene Identification consortium (CORGI)	United Kingdom	Four collections including 1) cases <70 years from East Anglian West Midlands & Trent regions of England (prevalent cases diagnosed 1991-1998; incident cases diagnosed 1998 onwards); 2) Cases attending ten major Gynecological Oncology NHS centers in England, Wales & Northern Ireland from 2006 onwards; 3) Royal Marsden Hospital-based case collection; 4) Cancer Research UK Familial Ovarian Cancer Register	Two collections including 1) controls selected from the UK 1958 Birth cohort; and 2) controls selected from a population-based UK colorectal control set	Illumina 610K/ Illumina 550K	1,768	2,354
<b>Sub-Total</b>						<b>1,768</b>	<b>2,354</b>
<b>Phase II</b>							
AUS	Australian Cancer Study (ACS) Ovary; Australian Ovarian Cancer Study (AOCS)	Australia	Diagnosed from 2002-2006; recruited through surgical treatment centers throughout Australia & cancer registries of Queensland South Australia & West Australia (AOCS) & cancer registries of New South Wales & Victoria (ACS).	Randomly selected from Commonwealth electoral roll. Frequency matched for age & geographical region.	Illumina iSelect	964	1,099
DOV	Diseases of the Ovary and their Evaluation Study (DOVE)	United States	Cases diagnosed with primary invasive ovarian cancer between 2002 and 2005 from a 13-county area of Western Washington state.	Random-digit dial identification from study area. Frequency matched to cases for race/ethnicity & 5-year age group.	Illumina iSelect	700	727
POC	Polish Ovarian Cancer Study (POCS)	Poland	Cases diagnosed with epithelial ovarian cancer in five gynecological oncology centers in the cities of Szczecin, Opole, Poznan, Rzeszów in Poland; between 1998 and 2006.	Healthy women from the general population were randomly selected and matched to cases with the same year of birth and geographical region.	Illumina iSelect	514	507
MAL	Danish Malignant Ovarian Tumor Study (MALOVA)	Denmark	Incident cases (35-79 years) diagnosed 1994-1999 from municipalities of Copenhagen, Frederiksberg & surrounding counties.	Random sample of general female population (35-79 years) in study area selected using computerized Central Population Register. Matched to cases for age & address.	Illumina iSelect	444	551

Abbrev.	Name	Country	Cases	Controls	Platform	Cases	Controls
GR+HOP	Gilda Radner Familial Ovarian Cancer Register; Hormones and Ovarian Cancer Prediction Study (HOPE)	United States	Gilda Radner Familial Ovarian Cancer Register; HOPE used variable sources including physician offices, cancer registries & pathology databases from counties of Western Pennsylvania, Eastern Ohio & Western New York.	Identified in same regions as HOPE cases. Frequency matched for age & ethnicity. All participants underwent home interviews.	Illumina iSelect	467	372
SEA+UKO	UK SEARCH Ovarian Cancer Study; United Kingdom Ovarian Cancer Population Study (UKOPS)	United Kingdom	SEARCH cases <70 years from East Anglian, West Midlands & Trent regions of England. Prevalent cases diagnosed 1991-1998; incident cases diagnosed 1998 onwards; UKOPS cases attending ten major Gynecological Oncology NHS centers in England, Wales, & Northern Ireland from 2006 onwards.	Apparently healthy postmenopausal women aged 50 to 74 years from the general population participating in the United Kingdom Collaborative Trial of Ovarian Cancer Screening (UKCTOCS). All women followed up for cancers through the Office of National Statistics.	Illumina iSelect	197	450
USC	Los Angeles County Case-Control Studies of Ovarian Cancer (LAC-CCOC)	United States	Rapid case ascertainment through Los Angeles Cancer Surveillance program from 1993 onwards.	Neighborhood recruited controls frequency matched to cases for socio-economic status age & ethnicity.	Illumina iSelect	260	352
STA	Genetic Epidemiology of Ovarian Cancer (GEOCS)	United States	Consecutive cases diagnosed from 1997-2002 in Greater Bay Area Cancer Registry San Francisco.	Random-digit dial identification from study area. Frequency matched to cases for race/ethnicity & 5 year age group.	Illumina iSelect	234	330
POL	NCI Ovarian Cancer Case-Control Study in Poland (NCI-POCS)	Poland	Cases collected from cities of Warsaw & Lodz 2001-2003 by rapid ascertainment at participating hospitals.	Identified at random through The Polish Electronic System. Stratified by city & 5-year age categories.	Illumina iSelect	237	228
BAV	Bavarian Ovarian Cancer Cases and Controls (BOCC)	Germany	Hospital based study from Erlangen, Northern Bavaria, Germany, recruitment from May 2002 to August 2008.	Random selected woman from Erlangen, Northern Bavaria, Germany Recruitment from May 2002 to August 2008.	Illumina iSelect	145	194
<b>Sub-Total</b>						<b>4,162</b>	<b>4,810</b>
<b>Phase III</b>							
TOR	Familial Ovarian Tumor Study (FOTS)	Canada	Enrollment of patients aged 20-79 years of age and diagnosed between January 1, 1995 and December 31, 1999 with epithelial ovarian cancer identified by the Ontario Cancer Registry.	Two control series are included: family-based controls and population-based controls drawn from women attending a screening clinic at Women's College Hospital for blood	Illumina 610K	724	556

Abbrev.	Name	Country	Cases	Controls	Platform	Cases	Controls
				pressure checks, bone density measurement, mammograms, or cholesterol checks.			
NCO	North Carolina Ovarian Cancer Study (NCOCS)	United States	Cases from 1999 onwards identified from 48 counties within the region by rapid-case ascertainment.	Selected using random digit dialing and matched by age (5-year categories) & race (black vs. non-black).	Illumina 610K	495	655
MAY	Mayo Clinic Ovarian Cancer Case-Control Study	United States	Cases attending Mayo Clinic diagnosed from 2000 onwards identified in a six-state surrounding region.	Identified through Mayo Clinic. Women seeking general medical examination. Frequency-matched to cases on age & region of residence.	Illumina 610K	361	520
OVA	Ovarian Cancer in Alberta and British Columbia Study (OVAL-BC)	Canada	Cases diagnosed 2002-2007 identified through the British Columbia Cancer Registry.	Identified through the British Columbia provincial health roster.	iPlex/Taqman	413	437
NTH	Nijmegen Polygene Study & Nijmegen Biomedical Study (POLYGENE)	Netherlands	Women diagnosed with ovarian cancer between 1989 and 2006 and still alive in 2008, identified from the population-based cancer registry of the Comprehensive Cancer Center East in the Mid-Eastern part of the Netherlands.	An age-stratified random sample of the general population of the municipality of Nijmegen in 2002, frequency age-matched to the cases.	iPlex/Taqman	245	577
HJO	Hannover-Jena Ovarian Cancer Study (HJOCS)	Germany	Cases attending the Gynecology Clinics at Hannover Medical School or Friedrich Schiller University Jena.	Unselected healthy German female blood donors at Hannover Medical School.	iPlex/Taqman	210	591
HOC	Helsinki Ovarian Cancer Study (HOCS)	Finland	Cases treated between 1989-2003 at the Department of Obstetrics and Gynecology of the Helsinki University Central Hospital, where treatment of ovarian cancer patients from southern Finland is centralized.	Healthy women from the same geographical region in Southern Finland.	iPlex/Taqman	248	454
SOC+UKO	Southampton Ovarian Cancer Study (SOCS); United Kingdom Ovarian Cancer Population Study (UKOPS)	United Kingdom	SOCS cases represent a sequential series of patients undergoing primary surgery or epithelial ovarian cancer at hospitals in the Wessex region of Southern England between 1993 and 1998; UKOPS cases attending ten major Gynecological Oncology NHS centers in England, Wales, & Northern Ireland from 2006 onwards.	Apparently healthy postmenopausal women aged 50 to 74 years from the general population participating in the United Kingdom Collaborative Trial of Ovarian Cancer Screening (UKCTOCS). All women followed up for cancers through the Office of National Statistics.	iPlex/Taqman	362	384

<b>Abbrev.</b>	<b>Name</b>	<b>Country</b>	<b>Cases</b>	<b>Controls</b>	<b>Platform</b>	<b>Cases</b>	<b>Controls</b>
BEL	Belgian Ovarian Cancer Study (BELOCS)	Belgium	Cases attending the Gynecologic Oncology Unit at the Leuven University Hospital diagnosed with incident ovarian cancer from 2009 onwards.	Apparently healthy women with self-declared Belgian/Flemish ancestry for three generations recruited at the Blood Transfusion Center of the Leuven University Hospital.	iPlex/Taqman	166	432
GER	German Ovarian Cancer Study (GOCS)	Germany	Incident cases (20-75 years) diagnosed 1993 -1996 from two study areas in Southern Germany and identified through frequent monitoring of hospitals serving the study areas.	Two controls per case matched by age & study area were selected from a random sample of the general female population in study area selected using population registries.	iPlex/Taqman	187	398
HMO	Hannover-Minsk Ovarian Cancer Study (HMOCS)	Germany	Hospital-based case series of Byelorussian patients with epithelial ovarian cancer who had been recruited during the years 2006–2009 at the Byelorussian Institute for Oncology and Medical Radiology Aleksandrov N.N. in Minsk, Belarus.	Healthy female Byelorussian volunteers who had been recruited during the same time period at the Institute for Inherited Diseases or at the Institute for Transfusion Medicine in Minsk, Belarus.	iPlex/Taqman	195	335
TBO	Tampa Bay Ovarian Cancer Study (TBOCS)	United States	Rapid case ascertainment (18-80 years) diagnosed 2000-2008 from the 2-county Tampa Bay metropolitan area.	Recruited from same geographic region matched for age (5-year category) and race.	Illumina 610K	260	181
NCI	National Cancer Institute Ovarian Cancer Collaboration	United States	Cases recruited from Memorial Sloan Kettering, MD Andersen Cancer Center, Fox Chase Cancer Center, and Brigham and Women's Hospital.	Controls recruited from Brigham and Women's Hospital.	Illumina 317K	252	142
UCI	UC Irvine Ovarian Cancer Study	United States	Rapid case ascertainment through Orange and San Diego Cancer Surveillance program from 1993-2003.	Random-digit dial identification from study area. Frequency matched to cases for race/ethnicity & 5-year age group.	iPlex/Taqman	154	198
HAW	Hawaii Ovarian Cancer Study	United States	Rapid case ascertainment through Hawaii Tumor Registry from 1993 onwards.	Randomly selected from Hawaii Department of Health Annual Survey of the representative households. Matched to cases for age (5-year categories) & ethnicity.	iPlex/Taqman	81	161
<b>Sub-Total</b>						<b>4,353</b>	<b>6,021</b>
<b>Meta-Analysis Only</b>							



<b>Abbrev.</b>	<b>Name</b>	<b>Country</b>	<b>Cases</b>	<b>Controls</b>	<b>Platform</b>	<b>Cases</b>	<b>Controls</b>
ICE	deCODE Ovarian Cancer Nested-Case Control Study	Iceland	Identified based on records from the nation-wide Icelandic Cancer Registry (ICR; www.krabbameinsskra.is) which includes information on the age, month and year of diagnosis, month and year of death, SNOMED code & ICD-10 classification. 94.5% of diagnoses in the ICR have histological confirmation. Includes all prevalent cases available at the start of recruitment in the year 2001, and all incident cases since then. The median age at diagnosis was 55 years (range 12-88).	2,900 controls without ovarian cancer and other controls selected from over 40,000 individuals from ongoing genome-wide association studies at deCODE.	Centaurus, Illumina 317K, Illumina HumanCNV37 0-duo	194	40,933
<b>Total</b>						<b>10,477</b>	<b>54,018</b>

Studies are sorted by decreasing total sample size within each phase. Participants in these studies were self-reported white European participants were from several collections of invasive epithelial OC cases and collections of unaffected control individuals.

**Supplementary Table 2: Associations at Additional SNPs and Loci**

Locus	SNP	Phase I		Phase II		Phase III			Combined		
		OR (95% CI)	p-value	OR (95% CI)	p-value	N sites	OR (95% CI)	p-value	N Cases: N Controls	OR (95% CI)	p-value
<b>ALL CASES</b>											
1p36	rs7517829	1.21 (1.11,1.33)	2.8x10 <sup>-5</sup>	1.07 (1.01,1.14)	0.02	5	1.05 (0.96,1.15)	0.26	8,017:9,214	1.10 (1.05,1.15)	1.8x10 <sup>-5</sup>
	rs2744721	0.84 (0.77,0.92)	1.7x10 <sup>-4</sup>	0.95 (0.89,1.01)	0.07	5	0.94 (0.86,1.03)	0.19	8,021:9,218	0.92 (0.88,0.96)	1.5x10 <sup>-4</sup>
	rs7521902	1.18 (1.07,1.31)	1.4x10 <sup>-3</sup>	1.10 (1.02,1.17)	9.5x10 <sup>-3</sup>	5	1.14 (1.03,1.26)	0.01	8,018:9,215	1.12 (1.07,1.18)	4.9x10 <sup>-6</sup>
	rs3920498	1.17 (1.05,1.31)	4.2x10 <sup>-3</sup>	1.10 (1.02,1.19)	8.9x10 <sup>-3</sup>	15	1.08 (1.01,1.16)	0.03	10,473:16,352	1.10 (1.06,1.16)	1.6x10 <sup>-5</sup>
1p31	rs12730089	1.19 (1.08,1.32)	7.4x10 <sup>-4</sup>	1.07 (1.00,1.14)	0.05	5	1.03 (0.94,1.14)	0.52	8,022:9,217	1.09 (1.04,1.14)	5.8x10 <sup>-4</sup>
	rs7512893	1.19 (1.04,1.35)	9.5x10 <sup>-3</sup>	1.07 (0.98,1.17)	0.13	5	1.08 (0.94,1.23)	0.26	8,020:9,218	1.10 (1.03,1.18)	2.9x10 <sup>-3</sup>
	rs12131772	1.50 (1.30,1.73)	4.3x10 <sup>-8</sup>	1.07 (0.98,1.17)	0.13	5	1.08 (0.92,1.27)	0.34	8,022:9,218	1.16 (1.08,1.24)	2.2x10 <sup>-5</sup>
2p22	rs4670981	1.32 (1.15,1.50)	3.7x10 <sup>-5</sup>	1.10 (1.01,1.20)	0.03	15	0.96 (0.88,1.05)	0.35	10,247:13,148	1.08 (1.02,1.14)	9.1x10 <sup>-3</sup>
	rs12469949	1.29 (1.13,1.47)	1.5x10 <sup>-4</sup>	1.11 (1.02,1.22)	0.02	15	0.96 (0.88,1.05)	0.39	10,464:38,378	1.07 (1.02,1.13)	0.01
	rs10181603	1.37 (1.18,1.58)	2.2x10 <sup>-5</sup>	1.10 (1.00,1.21)	0.04	15	0.98 (0.89,1.07)	0.63	10,468:17,267	1.08 (1.02,1.15)	8.7x10 <sup>-3</sup>
	rs17024636	1.37 (1.19,1.58)	2.0x10 <sup>-5</sup>	1.10 (1.00,1.21)	0.05	5	0.95 (0.83,1.09)	0.47	8,022:9,218	1.12 (1.04,1.20)	1.7x10 <sup>-3</sup>
2q31	rs2301301	0.87 (0.79,0.96)	4.4x10 <sup>-3</sup>	0.91 (0.86,0.97)	6.1x10 <sup>-3</sup>	5	0.92 (0.84,1.02)	0.10	8,015:9,216	0.91 (0.86,0.95)	2.8x10 <sup>-5</sup>
7p21	rs7793050	0.88 (0.80,0.98)	0.02	0.98 (0.91,1.05)	0.53	5	1.04 (0.94,1.16)	0.41	8,022:9,218	0.97 (0.92,1.02)	0.23
	rs10249817	0.91 (0.83,0.99)	0.03	0.96 (0.90,1.02)	0.16	15	1.00 (0.94,1.06)	0.93	10,467:17,420	0.97 (0.93,1.00)	0.09
	rs17138237	0.87 (0.79,0.95)	1.7x10 <sup>-3</sup>	0.94 (0.88,0.99)	0.03	5	1.04 (0.95,1.14)	0.39	8,152:13,393	0.95 (0.91,0.99)	0.02
8q24	rs1516982	0.87 (0.78,0.99)	0.03	0.86 (0.79,0.93)	3.1x10 <sup>-4</sup>	15	0.85 (0.79,0.92)	9.4x10 <sup>-5</sup>	10,472:54,111	<b>0.86 (0.82,0.91)</b>	<b>2.0x10<sup>-8</sup></b>
	rs10098821	0.83 (0.72,0.96)	0.01	0.89 (0.81,0.98)	0.02	15	0.79 (0.71,0.86)	6.0x10 <sup>-7</sup>	10,414:16,136	<b>0.83 (0.78,0.89)</b>	<b>4.7x10<sup>-9</sup></b>
11p14	rs12791486	1.26 (1.10,1.45)	1.2x10 <sup>-3</sup>	1.13 (1.03,1.24)	0.01	5	1.12 (0.98,1.28)	0.10	7,994:9,196	1.16 (1.08,1.24)	1.8x10 <sup>-5</sup>
	rs12800697	1.24 (1.07,1.43)	3.2x10 <sup>-3</sup>	1.16 (1.06,1.28)	1.6x10 <sup>-3</sup>	15	1.06 (0.97,1.16)	0.18	10,240:13,138	1.14 (1.07,1.20)	2.6x10 <sup>-5</sup>
	rs12794435	1.31 (1.11,1.55)	1.6x10 <sup>-3</sup>	1.17 (1.06,1.28)	1.6x10 <sup>-3</sup>	15	1.08 (0.98,1.19)	0.14	10,464:16,343	1.16 (1.09,1.23)	5.3x10 <sup>-6</sup>
	rs17241923	1.24 (1.07,1.42)	3.4x10 <sup>-3</sup>	1.16 (1.06,1.28)	2.1x10 <sup>-3</sup>	5	1.08 (0.94,1.25)	0.25	8,013:9,208	1.16 (1.09,1.25)	1.5x10 <sup>-5</sup>
17q21	rs17680229	1.23 (1.09,1.39)	7.2x10 <sup>-4</sup>	1.13 (1.04,1.23)	3.4x10 <sup>-3</sup>	5	0.99 (0.87,1.13)	0.86	8,022:9,218	1.12 (1.06,1.19)	2.0x10 <sup>-4</sup>
	rs2084881	1.20 (1.09,1.32)	1.7x10 <sup>-4</sup>	1.13 (1.06,1.21)	3.2x10 <sup>-4</sup>	5	1.03 (0.94,1.14)	0.53	8,021:9,218	1.12 (1.07,1.18)	2.0x10 <sup>-6</sup>
	rs7219985	1.20 (1.09,1.33)	1.7x10 <sup>-4</sup>	1.13 (1.06,1.21)	3.4x10 <sup>-4</sup>	5	1.03 (0.94,1.14)	0.51	8,001:9,201	1.12 (1.07,1.18)	2.0x10 <sup>-6</sup>
	rs1533057	1.21 (1.09,1.34)	2.3x10 <sup>-4</sup>	1.11 (1.04,1.19)	3.3x10 <sup>-3</sup>	5	1.04 (0.93,1.15)	0.50	8,016:9,215	1.12 (1.06,1.18)	2.1x10 <sup>-5</sup>
	rs8072770	1.21 (1.10,1.35)	2.0x10 <sup>-4</sup>	1.11 (1.04,1.19)	3.2x10 <sup>-3</sup>	5	1.03 (0.93,1.14)	0.57	8,020:9,214	1.12 (1.06,1.17)	2.5x10 <sup>-5</sup>
<b>SEROUS SUBTYPE ONLY</b>											
1p36	rs7517829	1.22 (1.09,1.37)	6.7x10 <sup>-4</sup>	1.10 (1.02,1.18)	9.6x10 <sup>-3</sup>	5	1.02 (0.92,1.12)	0.76	4,665:9,214	1.10 (1.04,1.16)	3.2x10 <sup>-4</sup>
	rs2744721	0.85 (0.76,0.96)	6.2x10 <sup>-3</sup>	0.92 (0.85,0.99)	0.02	5	0.97 (0.88,1.08)	0.62	4,668:9,218	0.92 (0.87,0.97)	1.2x10 <sup>-3</sup>
	rs7521902	1.14 (1.00,1.30)	0.05	1.12 (1.03,1.21)	6.3x10 <sup>-3</sup>	5	1.15 (1.02,1.29)	0.02	4,666:9,215	1.13 (1.06,1.19)	8.2x10 <sup>-5</sup>
	rs3920498	1.13 (0.98,1.30)	0.08	1.10 (1.01,1.20)	0.03	15	1.08 (0.99,1.17)	0.08	5,925:16,352	1.09 (1.04,1.16)	1.4x10 <sup>-3</sup>
1p31	rs12730089	1.22 (1.07,1.38)	2.7x10 <sup>-3</sup>	1.05 (0.97,1.13)	0.23	5	1.09 (0.97,1.22)	0.13	4,669:9,217	1.09 (1.03,1.16)	1.9x10 <sup>-3</sup>
	rs7512893	1.27 (1.08,1.50)	3.6x10 <sup>-3</sup>	1.04 (0.94,1.16)	0.42	5	1.12 (0.97,1.30)	0.13	4,669:9,218	1.11 (1.03,1.20)	5.3x10 <sup>-3</sup>

Locus	SNP	Phase I		Phase II		Phase III			Combined		
		OR (95% CI)	p-value	OR (95% CI)	p-value	N sites	OR (95% CI)	p-value	N Cases: N Controls	OR (95% CI)	p-value
	rs12131772	<b>1.62 (1.36,1.94)</b>	<b>1.2x10<sup>-7</sup></b>	1.04 (0.94,1.16)	0.41	5	1.12 (0.93,1.33)	0.22	4,669:9,218	1.16 (1.07,1.25)	3.4x10 <sup>-4</sup>
2p22	rs4670981	1.44 (1.23,1.69)	5.3x10 <sup>-6</sup>	1.18 (1.06,1.30)	1.6x10 <sup>-3</sup>	15	0.95 (0.86,1.06)	0.35	5,824:13,148	1.12 (1.05,1.19)	8.8x10 <sup>-4</sup>
	rs12469949	1.43 (1.22,1.68)	1.2x10 <sup>-5</sup>	1.19 (1.07,1.31)	9.1x10 <sup>-4</sup>	15	0.96 (0.86,1.06)	0.39	5,835:38,378	1.12 (1.05,1.20)	5.5x10 <sup>-4</sup>
	rs10181603	1.52 (1.28,1.81)	2.5x10 <sup>-6</sup>	1.17 (1.05,1.30)	4.9x10 <sup>-3</sup>	15	0.97 (0.86,1.08)	0.53	5,925:17,267	1.13 (1.05,1.21)	7.7x10 <sup>-4</sup>
	rs17024636	1.52 (1.28,1.82)	2.2x10 <sup>-6</sup>	1.16 (1.04,1.30)	7.1x10 <sup>-3</sup>	5	0.98 (0.84,1.15)	0.83	4,669:9,218	1.18 (1.09,1.27)	7.2x10 <sup>-5</sup>
2q31	rs2301301	0.91 (0.81,1.03)	0.13	0.89 (0.83,0.96)	3.9x10 <sup>-3</sup>	5	0.91 (0.81,1.01)	0.07	4,664:9,216	0.90 (0.85,0.95)	2.2x10 <sup>-4</sup>
7p21	rs7793050	0.82 (0.72,0.94)	3.7x10 <sup>-3</sup>	0.93 (0.85,1.01)	0.07	5	1.02 (0.90,1.14)	0.79	4,669:9,218	0.93 (0.87,0.98)	0.01
	rs10249817	0.84 (0.75,0.94)	2.0x10 <sup>-3</sup>	0.93 (0.87,0.99)	0.03	15	1.02 (0.95,1.09)	0.58	5,922:17,420	0.95 (0.91,1.00)	0.03
	rs17138237	0.82 (0.73,0.92)	8.3x10 <sup>-4</sup>	0.90 (0.84,0.97)	3.4x10 <sup>-3</sup>	5	1.02 (0.92,1.13)	0.67	4,716:13,393	0.91 (0.87,0.96)	6.2x10 <sup>-4</sup>
8q24	rs1516982	0.77 (0.66,0.90)	1.4x10 <sup>-3</sup>	0.81 (0.74,0.90)	7.1x10 <sup>-5</sup>	15	0.82 (0.75,0.91)	7.6x10 <sup>-5</sup>	5,926:54,111	<b>0.81 (0.76,0.86)</b>	<b>3.3x10<sup>-11</sup></b>
	rs10098821	0.69 (0.57,0.84)	2.7x10 <sup>-4</sup>	0.82 (0.73,0.93)	1.6x10 <sup>-3</sup>	15	<b>0.71 (0.64,0.80)</b>	<b>2.1x10<sup>-8</sup></b>	5,888:16,136	<b>0.75 (0.70,0.81)</b>	<b>2.3x10<sup>-13</sup></b>
11p14	rs12791486	1.31 (1.10,1.57)	2.5x10 <sup>-3</sup>	1.08 (0.97,1.21)	0.17	5	1.11 (0.95,1.29)	0.19	4,649:9,196	1.14 (1.05,1.24)	1.4x10 <sup>-3</sup>
	rs12800697	1.21 (1.01,1.45)	0.04	1.10 (0.98,1.23)	0.09	15	1.05 (0.94,1.17)	0.37	5,818:13,138	1.10 (1.02,1.18)	8.4x10 <sup>-3</sup>
	rs12794435	1.24 (1.00,1.53)	0.05	1.10 (0.99,1.24)	0.08	15	1.07 (0.95,1.21)	0.24	5,923:16,343	1.12 (1.04,1.20)	4.0x10 <sup>-3</sup>
	rs17241923	1.20 (1.00,1.43)	0.05	1.10 (0.98,1.23)	0.09	5	1.05 (0.90,1.23)	0.52	4,662:9,208	1.11 (1.03,1.21)	9.8x10 <sup>-3</sup>
17q21	rs17680229	1.36 (1.17,1.58)	8.1x10 <sup>-5</sup>	1.15 (1.04,1.26)	57x10 <sup>-3</sup>	5	1.02 (0.88,1.18)	0.79	4,669:9,218	1.16 (1.08,1.24)	7.6x10 <sup>-5</sup>
	rs2084881	1.29 (1.15,1.46)	3.3x10 <sup>-5</sup>	1.13 (1.04,1.22)	2.1x10 <sup>-3</sup>	5	1.07 (0.96,1.20)	0.20	4,668:9,218	1.15 (1.08,1.21)	1.6x10 <sup>-6</sup>
	rs7219985	1.29 (1.15,1.46)	3.3x10 <sup>-5</sup>	1.13 (1.04,1.22)	2.3x10 <sup>-3</sup>	5	1.08 (0.96,1.20)	0.20	4,657:9,201	1.15 (1.08,1.21)	1.7x10 <sup>-6</sup>
	rs1533057	1.28 (1.12,1.45)	1.8x10 <sup>-4</sup>	1.11 (1.02,1.21)	0.01	5	1.06 (0.94,1.19)	0.35	4,664:9,215	1.13 (1.06,1.20)	6.9x10 <sup>-5</sup>
	rs8072770	1.27 (1.12,1.45)	2.3x10 <sup>-4</sup>	1.11 (1.03,1.21)	0.01	5	1.05 (0.94,1.19)	0.38	4,669:9,214	1.13 (1.06,1.20)	6.5x10 <sup>-5</sup>

Phase I and Phase II adjusted for study site and first principal component; Phase III adjusted for study site; combined analyses of all cases adjusted for study site and included additional ICE data for rs3920498, rs12469949, rs10181603, rs10249817, rs17138237, rs1516982, rs10098821, and rs12794435; bold indicates  $p < 10^{-7}$ .

**Supplementary Table 3: Subtype-Specific Associations, Additional SNPs and Loci**

Locus	SNP	Subtype	N		OR (95% CI)	p-value	Heterogeneity p-value
			cases	controls			
1p36	rs7517829	Serous	4,665	9,214	1.10 (1.04, 1.16)	3.2x10 <sup>-4</sup>	0.42
		Endometrioid	1,225	9,214	1.08 (1.00, 1.18)	0.07	
		Mucinous	567	9,214	1.04 (0.92, 1.17)	0.58	
		Clear Cell	577	9,214	1.19 (1.06, 1.34)	4.7x10 <sup>-3</sup>	
	rs2744721	Serous	4,668	9,218	0.92 (0.87, 0.97)	1.2x10 <sup>-3</sup>	0.37
		Endometrioid	1,225	9,218	0.95 (0.87, 1.04)	0.26	
		Mucinous	567	9,218	0.92 (0.81, 1.04)	0.19	
		Clear Cell	578	9,218	0.83 (0.74, 0.95)	4.3x10 <sup>-3</sup>	
	rs7521902	Serous	4,666	9,215	1.13 (1.06, 1.19)	8.2x10 <sup>-5</sup>	0.07
		Endometrioid	1,225	9,215	1.14 (1.03, 1.26)	8.4x10 <sup>-3</sup>	
		Mucinous	567	9,215	0.97 (0.84, 1.12)	0.70	
		Clear Cell	578	9,215	1.25 (1.09, 1.42)	1.2x10 <sup>-3</sup>	
rs3920498	Serous	5,925	16,352	1.09 (1.04, 1.16)	1.3x10 <sup>-3</sup>	<b>0.04</b>	
	Endometrioid	1,607	16,352	1.14 (1.04, 1.25)	3.9x10 <sup>-3</sup>		
	Mucinous	797	16,352	0.97 (0.86, 1.11)	0.69		
	Clear Cell	733	16,352	1.26 (1.12, 1.43)	2.1x10 <sup>-4</sup>		
1p31	rs12730089	Serous	4,669	9,217	1.09 (1.03, 1.16)	1.9x10 <sup>-3</sup>	0.34
		Endometrioid	1,225	9,217	1.02 (0.92, 1.12)	0.74	
		Mucinous	567	9,217	1.07 (0.94, 1.22)	0.33	
		Clear Cell	578	9,217	1.16 (1.01, 1.32)	0.03	
	rs7512893	Serous	4,669	9,218	1.11 (1.03, 1.20)	1.9x10 <sup>-3</sup>	0.63
		Endometrioid	1,225	9,218	1.04 (0.92, 1.18)	0.53	
		Mucinous	567	9,218	1.14 (0.96, 1.36)	0.14	
		Clear Cell	578	9,218	1.17 (0.99, 1.39)	0.07	
	rs12131772	Serous	4,669	9,218	1.12 (1.05, 1.19)	8.8x10 <sup>-4</sup>	0.62
		Endometrioid	1,225	9,218	1.08 (0.95, 1.24)	0.24	
		Mucinous	567	9,218	1.18 (0.98, 1.42)	0.08	
		Clear Cell	578	9,218	1.24 (1.04, 1.48)	0.02	
2p22	rs4670981	Serous	5,824	13,148	1.13 (1.06, 1.21)	1.6x10 <sup>-4</sup>	0.20
		Endometrioid	1,571	13,148	1.00 (0.89, 1.12)	0.95	
		Mucinous	764	13,148	1.10 (0.95, 1.28)	0.21	
		Clear Cell	715	13,148	1.06 (0.91, 1.24)	0.46	
	rs12469949	Serous	5,920	38,378	1.12 (1.05, 1.20)	5.6x10 <sup>-4</sup>	0.23
		Endometrioid	1,607	38,378	1.00 (0.90, 1.12)	0.99	
		Mucinous	797	38,378	1.07 (0.92, 1.24)	0.40	
		Clear Cell	731	38,378	1.03 (0.88, 1.20)	0.71	
	rs10181603	Serous	5,925	17,267	1.13 (1.05, 1.21)	7.7x10 <sup>-4</sup>	0.27
		Endometrioid	1,605	17,267	1.02 (0.91, 1.15)	0.72	
		Mucinous	797	17,267	1.04 (0.89, 1.23)	0.61	

Locus	SNP	Subtype	N cases	N controls	OR (95% CI)	p-value	Heterogeneity p-value	
2q31	rs17024636	Clear Cell	732	17,267	1.02 (0.86, 1.21)	0.81	0.17	
		Serous	4,669	9,218	1.18 (1.09, 1.27)	7.2x10 <sup>-5</sup>		
		Endometrioid	1,225	9,218	1.03 (0.90, 1.19)	0.63		
		Mucinous	567	9,218	1.08 (0.89, 1.31)	0.42		
	rs2301301	Clear Cell	578	9,218	1.04 (0.86, 1.26)	0.71	0.84	
		Serous	4,664	9,216	0.90 (0.85, 0.95)	2.2x10 <sup>-4</sup>		
		Endometrioid	1,224	9,216	0.89 (0.81, 0.97)	0.01		
		Mucinous	567	9,216	0.94 (0.83, 1.07)	0.37		
		Clear Cell	578	9,216	0.93 (0.82, 1.06)	0.26		
7p21	rs7793050	Serous	4,669	9,218	0.93 (0.87, 0.98)	0.01	<b>0.03</b>	
		Endometrioid	1,225	9,218	1.06 (0.96, 1.17)	0.21		
		Mucinous	567	9,218	0.94 (0.81, 1.08)	0.36		
		Clear Cell	578	9,218	1.05 (0.92, 1.21)	0.48		
	rs10249817	Serous	5,922	17,420	0.95 (0.91, 1.00)	0.03	<b>0.05</b>	
		Endometrioid	1,608	17,420	0.95 (0.89, 1.03)	0.21		
		Mucinous	796	17,420	0.99 (0.90, 1.10)	0.89		
	rs17138237	Clear Cell	730	17,420	1.10 (0.99, 1.22)	0.06	0.12	
		Serous	4,716	13,393	0.91 (0.87, 0.96)	5.5x10 <sup>-4</sup>		
		Endometrioid	1,248	13,393	0.99 (0.91, 1.08)	0.79		
		Mucinous	589	13,393	0.97 (0.86, 1.09)	0.59		
	8q24	rs1516982	Serous	5,926	54,111	<b>0.81 (0.76, 0.86)</b>	<b>2.3x10<sup>-11</sup></b>	<b>4.9x10<sup>-4</sup></b>
Endometrioid			1,607	54,111	0.91 (0.82, 1.01)	0.07		
Clear Cell			732	54,111	1.12 (0.98, 1.29)	0.09		
Mucinous			795	54,111	0.91 (0.79, 1.05)	0.22		
rs10098821		Serous	5888	16,136	<b>0.75 (0.70, 0.81)</b>	<b>2.3x10<sup>-13</sup></b>	<b>3.5x10<sup>-6</sup></b>	
		Endometrioid	1,602	16,136	0.93 (0.82, 1.05)	0.21		
		Mucinous	792	16,136	0.94 (0.79, 1.11)	0.44		
		Clear Cell	731	16,136	1.16 (0.99, 1.35)	0.07		
11p14		rs12791486	Serous	4,649	9,196	1.14 (1.05, 1.24)	1.4x10 <sup>-3</sup>	0.41
			Endometrioid	1,223	9,196	1.15 (1.01, 1.32)	0.04	
			Mucinous	566	9,196	1.11 (0.92, 1.34)	0.29	
			Clear Cell	576	9,196	1.35 (1.13, 1.61)	1.0x10 <sup>-3</sup>	
	rs12800697	Serous	5,818	13,138	1.10 (1.02, 1.18)	8.4x10 <sup>-3</sup>	0.16	
		Endometrioid	1,573	13,138	1.10 (0.98, 1.24)	0.12		
		Mucinous	765	13,138	1.26 (1.08, 1.47)	3.9x10 <sup>-3</sup>		
	rs12794435	Clear Cell	714	13,138	1.29 (1.10, 1.52)	1.8x10 <sup>-3</sup>	0.14	
		Serous	5,923	16,343	1.12 (1.04, 1.20)	4.0x10 <sup>-3</sup>		
		Endometrioid	1,605	16,343	1.09 (0.96, 1.23)	0.18		
			Mucinous	796	16,343	1.30 (1.10, 1.52)	1.6x10 <sup>-3</sup>	

Locus	SNP	Subtype	N cases	N controls	OR (95% CI)	p-value	Heterogeneity p-value
17q21	rs17241923	Clear Cell	732	16,343	1.30 (1.10,1.54)	1.9x10 <sup>-3</sup>	0.12
		Serous	4,662	9,208	1.11 (1.03,1.21)	9.8x10 <sup>-3</sup>	
		Endometrioid	1,224	9,208	1.16 (1.02,1.33)	0.03	
		Mucinous	567	9,208	1.21 (1.01,1.46)	0.04	
	rs17680229	Clear Cell	577	9,208	1.41 (1.19,1.68)	1.1x10 <sup>-4</sup>	0.61
		Serous	4,669	9,218	1.16 (1.08, 1.24)	7.6x10 <sup>-5</sup>	
		Endometrioid	1,225	9,218	1.09 (0.97, 1.23)	0.16	
		Mucinous	567	9,218	1.08 (0.91, 1.28)	0.37	
	rs2084881	Clear Cell	578	9,218	1.03 (0.87, 1.22)	0.74	0.48
		Serous	4,668	9,218	1.15 (1.08, 1.21)	1.6x10 <sup>-6</sup>	
		Endometrioid	1,225	9,218	1.08 (0.98, 1.19)	0.11	
		Mucinous	567	9,218	1.08 (0.94, 1.23)	0.27	
	rs7219985	Clear Cell	578	9,218	1.07 (0.93, 1.22)	0.4	0.5
		Serous	4,657	9,201	1.15 (1.08,1.21)	1.7x10 <sup>-6</sup>	
		Endometrioid	1,221	9,201	1.08 (0.98,1.18)	0.12	
		Mucinous	565	9,201	1.08 (0.94,1.23)	0.26	
	rs1533057	Clear Cell	576	9,201	1.06 (0.93,1.22)	0.36	0.66
		Serous	4,664	9,215	1.13 (1.06,1.20)	6.9x10 <sup>-5</sup>	
		Endometrioid	1,224	9,215	1.15 (1.04,1.27)	4.6x10 <sup>-3</sup>	
		Mucinous	567	9,215	1.05 (0.91,1.21)	0.54	
rs8072770	Clear Cell	578	9,215	1.08 (0.94,1.25)	0.27	0.62	
	Serous	4,669	9,214	1.13 (1.06,1.20)	6.5x10 <sup>-5</sup>		
	Endometrioid	1,225	9,214	1.15 (1.04,1.27)	4.7x10 <sup>-3</sup>		
	Mucinous	567	9,214	1.04 (0.90,1.20)	0.57		
		Clear Cell	578	9,214	1.07 (0.93,1.24)	0.32	

Heterogeneity p-value examined heterogeneity of risk across histologic subtypes excluding the ICE study; serous analysis adjusted for study; additional ICE data included for rs3920498, rs12469949, rs10181603, rs10249817, rs17138237, rs1516982, rs10098821, and rs12794435; bold indicates subtype p<10<sup>-7</sup> and heterogeneity p≤0.05.

**Supplementary Table 4: SNP Associations by Age**

Locus	SNP	Age, years	N Cases	N Controls	OR (95% CI)	Interaction p-value
1p36	rs7517829	< 40	280	468	1.05 (0.85, 1.31)	0.47
		40 - 49	1,092	1,388	1.03 (0.92, 1.16)	
		50 - 59	1,885	2,072	1.14 (1.04, 1.24)	
		> 60	2,992	2,931	1.04 (0.97, 1.12)	
	rs2744721	< 40	280	469	1.01 (0.81, 1.26)	0.18
		40 - 49	1,093	1,388	0.97 (0.86, 1.09)	
		50 - 59	1,887	2,075	0.87 (0.79, 0.95)	
		> 60	2,993	2,931	0.98 (0.91, 1.06)	
	rs7521902	< 40	280	469	1.14 (0.89, 1.45)	0.48
		40 - 49	1,093	1,386	1.02 (0.89, 1.16)	
		50 - 59	1,886	2,074	1.16 (1.05, 1.29)	
		> 60	2,991	2,931	1.10 (1.01, 1.20)	
rs3920498	< 40	339	1,162	1.17 (0.97, 1.41)	0.69	
	40 - 49	1,140	1,731	1.07 (0.94, 1.20)		
	50 - 59	1,990	2,413	1.13 (1.03, 1.25)		
	> 60	3,003	3,267	1.07 (0.99, 1.16)		
1p31	rs12730089	< 40	206	340	1.10 (0.88, 1.38)	0.93
		40 - 49	814	994	1.05 (0.92, 1.19)	
		50 - 59	1,390	1,505	1.09 (0.98, 1.20)	
		> 60	2,037	2,155	1.04 (0.96, 1.13)	
	rs7512893	< 40	280	469	1.05 (0.77, 1.42)	0.86
		40 - 49	1,092	1,388	1.02 (0.86, 1.20)	
		50 - 59	1,887	2,075	1.12 (0.98, 1.28)	
		> 60	2,993	2,931	1.08 (0.97, 1.20)	
	rs12131772	< 40	206	339	1.05 (0.77, 1.44)	0.86
		40 - 49	810	986	1.04 (0.87, 1.24)	
		50 - 59	1,376	1,487	1.13 (0.98, 1.31)	
		> 60	2,023	2,139	1.06 (0.94, 1.19)	
2p22	rs4670981	< 40	411	1,291	0.91 (0.72, 1.15)	0.58
		40 - 49	1,417	2,128	1.04 (0.90, 1.19)	
		50 - 59	2,492	2,992	1.09 (0.97, 1.22)	
		> 60	3,957	4,049	1.02 (0.93, 1.12)	
	rs12469949	< 40	413	1,292	0.95 (0.75, 1.20)	0.82
		40 - 49	1,423	2,132	1.05 (0.91, 1.20)	
		50 - 59	2,497	3,000	1.07 (0.96, 1.21)	
		> 60	3,969	4,058	1.03 (0.94, 1.13)	
	rs10181603	< 40	340	1,163	0.95 (0.74, 1.22)	0.75

Locus	SNP	Age, years	N Cases	N Controls	OR (95% CI)	Interaction p-value	
	rs17024636	40 - 49	1,143	1,732	1.09 (0.93, 1.26)	0.84	
		50 - 59	1,988	2,418	1.07 (0.95, 1.21)		
		> 60	3,009	3,280	1.02 (0.92, 1.12)		
		< 40	207	340	1.01 (0.71, 1.44)		
		40 - 49	813	989	1.09 (0.91, 1.29)		
		50 - 59	1,381	1,495	1.09 (0.95, 1.26)		
		> 60	2,036	2,160	1.01 (0.90, 1.14)		
2q31	rs2301301	< 40	279	469	0.77 (0.61, 0.97)	0.53	
		40 - 49	1,092	1,388	0.93 (0.82, 1.06)		
		50 - 59	1,886	2,074	0.93 (0.84, 1.02)		
		> 60	2,990	2,930	0.92 (0.85, 1.00)		
	rs2072590	< 40	411	1,291	1.23 (1.04, 1.45)		0.43
		40 - 49	1,421	2,134	1.23 (1.11, 1.36)		
		50 - 59	2,499	3,000	1.13 (1.04, 1.22)		
> 60	3,972	4,058	1.13 (1.06, 1.21)				
3q25	rs2665390	< 40	409	1,289	1.48 (1.12, 1.97)	0.42	
		40 - 49	1,412	2,117	1.15 (0.96, 1.38)		
		50 - 59	2,485	2,983	1.24 (1.08, 1.43)		
		> 60	3,940	4,037	1.16 (1.04, 1.31)		
7p21	rs7793050	< 40	280	469	1.05 (0.81, 1.35)	0.79	
		40 - 49	1,093	1,388	1.04 (0.91, 1.19)		
		50 - 59	1,887	2,075	1.01 (0.91, 1.12)		
		> 60	2,994	2,931	0.97 (0.89, 1.05)		
	rs10249817	< 40	413	1,291	0.91 (0.78, 1.07)	0.66	
		40 - 49	1,421	2,132	0.96 (0.87, 1.05)		
		50 - 59	2,500	2,997	1.01 (0.93, 1.09)		
		> 60	3,973	4,058	0.98 (0.92, 1.04)		
	rs17138237	< 40	275	467	0.89 (0.72, 1.11)	0.69	
		40 - 49	1,084	1,373	0.97 (0.86, 1.09)		
		50 - 59	1,872	2,050	1.01 (0.92, 1.10)		
		> 60	2,962	2,911	0.95 (0.88, 1.02)		
8q24	rs1516982	< 40	413	1,293	0.99 (0.79, 1.24)	0.36	
		40 - 49	1,424	2,135	0.80 (0.70, 0.91)		
		50 - 59	2,500	3,002	0.89 (0.80, 1.00)		
		> 60	3,973	4,057	0.85 (0.77, 0.93)		
	rs10088218	< 40	413	1,292	0.95 (0.74, 1.22)		0.24
		40 - 49	1,422	2,134	0.75 (0.64, 0.87)		
		50 - 59	2,495	2,997	0.89 (0.79, 1.00)		



Locus	SNP	Age, years	N Cases	N Controls	OR (95% CI)	Interaction p-value
	rs10098821	> 60	3,969	4,058	0.83 (0.76, 0.92)	0.35
		< 40	411	1,293	0.98 (0.75, 1.28)	
		40 - 49	1,414	2,124	0.76 (0.65, 0.89)	
		50 - 59	2,486	2,991	0.87 (0.77, 0.99)	
		> 60	3,955	4,045	0.83 (0.75, 0.93)	
11p14	rs12791486	< 40	204	337	1.11 (0.78, 1.56)	0.81
		40 - 49	804	981	1.21 (1.02, 1.45)	
		50 - 59	1,371	1,486	1.09 (0.94, 1.25)	
		> 60	2,007	2,125	1.13 (1.00, 1.27)	
	rs12800697	< 40	410	1,288	1.23 (0.96, 1.57)	0.38
		40 - 49	1,417	2,126	1.24 (1.07, 1.45)	
		50 - 59	2,489	2,993	1.08 (0.95, 1.21)	
	rs12794435	> 60	3,956	4,045	1.09 (0.98, 1.20)	0.25
		< 40	337	1,157	1.26 (0.98, 1.61)	
		40 - 49	1,140	1,731	1.29 (1.10, 1.52)	
	rs17241923	50 - 59	1,988	2,412	1.09 (0.96, 1.24)	0.53
		> 60	2,998	3,266	1.09 (0.98, 1.21)	
		< 40	278	468	1.18 (0.84, 1.66)	
		40 - 49	1,093	1,385	1.28 (1.07, 1.53)	
	17q21	rs17680229	50 - 59	1,882	2,073	1.12 (0.97, 1.29)
> 60			2,992	2,927	1.09 (0.97, 1.22)	
< 40			206	339	1.17 (0.87, 1.58)	
40 - 49			810	986	1.05 (0.89, 1.23)	
rs2084881		50 - 59	1,376	1,487	1.15 (1.02, 1.31)	0.33
		> 60	2,022	2,139	1.06 (0.95, 1.17)	
		< 40	280	469	1.22 (0.96, 1.53)	
rs7219985		40 - 49	1,093	1,388	1.02 (0.90, 1.16)	0.35
		50 - 59	1,887	2,075	1.16 (1.05, 1.28)	
		> 60	2,993	2,931	1.08 (0.99, 1.17)	
rs9303542		< 40	278	467	1.20 (0.95, 1.52)	0.41
		40 - 49	1,090	1,382	1.02 (0.90, 1.16)	
		50 - 59	1,882	2,070	1.16 (1.05, 1.29)	
		> 60	2,983	2,927	1.08 (1.00, 1.17)	
rs1533057		< 40	335	1,145	1.10 (0.92, 1.31)	0.32
	40 - 49	1,136	1,724	1.08 (0.97, 1.21)		
	50 - 59	1,977	2,392	1.17 (1.07, 1.27)		
		> 60	2,984	3,236	1.06 (0.99, 1.14)	

Locus	SNP	Age, years	N Cases	N Controls	OR (95% CI)	Interaction p-value
		40 - 49	1,091	1,388	1.03 (0.90, 1.18)	
		50 - 59	1,886	2,074	1.15 (1.04, 1.28)	
		> 60	2,991	2,929	1.06 (0.97, 1.15)	
	rs8072770	< 40	280	469	1.27 (0.98, 1.64)	0.29
		40 - 49	1,092	1,388	1.02 (0.89, 1.17)	
		50 - 59	1,887	2,073	1.15 (1.03, 1.28)	
		> 60	2,993	2,929	1.06 (0.97, 1.15)	

Analyses carried out for subjects with non-missing age values; interaction p-value assessed modification of SNP associations by age categories; adjusted for study-site; bold indicates  $p \leq 0.05$ .

**Supplementary Table 5: SNP Associations by Family History**

Locus	SNP	FH+	N Cases	N Controls	OR (95% CI)	Interaction p-value
1p36	rs7517829	no	3,706	4,882	1.09 (1.03, 1.16)	0.91
		yes	232	140	1.12 (0.82, 1.52)	
	rs2744721	no	3,707	4,883	0.94 (0.88, 1.00)	0.39
		yes	232	140	1.08 (0.79, 1.48)	
	rs7521902	no	3,706	4,882	1.13 (1.05, 1.21)	0.73
		yes	232	140	1.20 (0.83, 1.74)	
rs3920498	no	3,226	4,505	1.11 (1.03, 1.19)	0.38	
	yes	219	123	1.32 (0.90, 1.92)		
1p31	rs12730089	no	2,802	3,691	1.10 (1.03, 1.18)	<b>0.01</b>
		yes	193	110	0.71 (0.50, 1.00)	
	rs7512893	no	3,708	4,883	1.13 (1.03, 1.23)	<b>4.3x10<sup>-3</sup></b>
		yes	232	140	0.58 (0.38, 0.91)	
	rs12131772	no	2,786	3,666	1.13 (1.03, 1.24)	<b>0.01</b>
		yes	193	108	0.59 (0.38, 0.94)	
2p22	rs4670981	no	4,134	5,711	1.10 (1.01, 1.19)	0.63
		yes	257	155	0.98 (0.63, 1.53)	
	rs12469949	no	4,144	5,722	1.10 (1.01, 1.20)	0.65
		yes	258	155	0.99 (0.63, 1.55)	
	rs10181603	no	3,230	4,516	1.09 (0.99, 1.19)	0.24
		yes	219	123	0.81 (0.50, 1.31)	
rs17024636	no	2,795	3,684	1.08 (0.98, 1.19)	0.29	
	yes	193	108	0.82 (0.49, 1.36)		
2q31	rs2301301	no	3,703	4,882	0.92 (0.86, 0.98)	0.42
		yes	232	140	0.80 (0.58, 1.10)	
	rs2072590	no	4,147	5,723	1.16 (1.10, 1.24)	0.70
		yes	258	155	1.10 (0.82, 1.47)	
3q25	rs2665390	no	4,133	5,706	1.26 (1.14, 1.40)	0.88
		yes	258	154	1.22 (0.74, 2.01)	
7p21	rs7793050	no	3,708	4,883	1.01 (0.94, 1.08)	1.00
		yes	232	140	1.01 (0.72, 1.41)	
	rs10249817	no	4,148	5,719	0.99 (0.94, 1.05)	0.55
		yes	258	154	1.08 (0.82, 1.42)	
	rs17138237	no	3,681	4,857	0.96 (0.90, 1.02)	0.93
		yes	232	139	0.95 (0.70, 1.28)	
8q24	rs1516982	no	4,149	5,723	0.82 (0.76, 0.89)	0.50
		yes	258	154	0.94 (0.64, 1.39)	
	rs10088218	no	4,144	5,718	0.81 (0.74, 0.89)	0.38

Locus	SNP	FH+	N Cases	N Controls	OR (95% CI)	Interaction p-value
	rs10098821	yes	258	154	0.67 (0.45, 1.02)	0.85
		no	4,124	5,701	0.81 (0.73, 0.89)	
		yes	255	155	0.77 (0.50, 1.20)	
11p14	rs12791486	no	2,765	3,652	1.09 (0.99, 1.20)	0.64
		yes	192	108	1.23 (0.75, 2.04)	
	rs12800697	no	4,144	5,717	1.08 (0.99, 1.18)	0.21
		yes	258	155	1.48 (0.91, 2.41)	
	rs12794435	no	3,224	4,506	1.08 (0.98, 1.19)	0.19
		yes	219	123	1.53 (0.92, 2.55)	
rs17241923	no	3,703	4,878	1.07 (0.97, 1.18)	0.39	
	yes	232	139	1.35 (0.81, 2.24)		
17q21	rs17680229	no	2,785	3,666	1.12 (1.03, 1.22)	0.38
		yes	193	108	1.38 (0.87, 2.17)	
	rs2084881	no	3,707	4,883	1.12 (1.05, 1.20)	0.78
		yes	232	140	1.06 (0.74, 1.53)	
	rs7219985	no	3,692	4,875	1.12 (1.05, 1.20)	0.78
		yes	232	140	1.07 (0.74, 1.54)	
	rs9303542	no	3,215	4,487	1.13 (1.06, 1.21)	0.94
		yes	219	123	1.12 (0.79, 1.58)	
	rs1533057	no	3,708	4,882	1.12 (1.05, 1.21)	0.44
		yes	231	140	0.96 (0.65, 1.42)	
	rs8072770	no	3,707	4,879	1.12 (1.05, 1.21)	0.43
		yes	232	140	0.96 (0.65, 1.42)	

Analyses carried out for subjects with non-missing family history values; interaction p-value assessed modification of SNP associations by family history categories; adjusted for study-site; FH+ represents first-degree OC family history; bold indicates  $p \leq 0.05$ .

**Supplementary Table 6:** Results of *in silico* SNP Analysis

Locus	Genotyped SNP	p-value	N tagged SNPs	Tagged SNPs <sup>^</sup>	Nuc. position (build 36)	Gene location	Location	Possible function (Pupasuite)	Conservation in mice	r <sup>2</sup> between significant genotyped SNPs
2q31.1	rs2072590	8.06x10 <sup>-13</sup>	2	-	176,750,879	between <i>HOXD3</i> and <i>HOXD1</i> downstream of <i>HOXD4</i> within <i>HOXD3</i>	intergenic	no predicted function	conserved	
				rs4972504	176,726,972		intergenic	no predicted function	conserved	
				rs711830	176,745,557		3' UTR	potential exonic splice enhancer	conserved	
3q25.31	rs2665390	8.72x10 <sup>-7</sup>	1	-	157,880,443	within <i>TiPARP</i>	intron 2	no predicted function	not conserved	
				rs344008	157,889,093	within <i>TiPARP</i>	intron 2	no predicted function	conserved	
8q24.21	rs1516982	2.82x10 <sup>-8</sup>	1	-	129,802,828	downstream <i>MYC</i> ; upstream <i>THEM75</i>	intergenic	no predicted function	conserved	r2=0.56 between rs10088218 & rs1516982
				rs11774451	129,574,018		intergenic	no predicted function	conserved	
	rs10088218	1.33x10 <sup>-9</sup>	10	-	129,613,131	downstream <i>MYC</i> ; upstream <i>THEM75</i>	intergenic	no predicted function	conserved	r2=0.80 between rs10088218 & rs10098821
	rs10098821	7.64x10 <sup>-9</sup>	8	-	129,628,410	downstream <i>MYC</i> ; upstream <i>THEM75</i>	intergenic	no predicted function	not conserved	
				rs1516973	129,614,439		intergenic	no predicted function	conserved	
				rs1516975	129,617,375		intergenic	no predicted function	not conserved	
				rs1516976	129,617,440		intergenic	no predicted function	conserved	
				rs2011527	129,624,714		intergenic	no predicted function	conserved	
rs6470637	129,625,345	intergenic	no predicted function	conserved						

Locus	Genotyped SNP	p-value	N tagged SNPs	Tagged SNPs <sup>^</sup>	Nuc. position (build 36)	Gene location	Location	Possible function (Pupasuite)	Conservation in mice	r <sup>2</sup> between significant genotyped SNPs
				rs16903097	129,625,538		intergenic	function no predicted function	conserved	
				rs6651252	129,636,363		intergenic	no predicted function	conserved	
				rs1516974 *	129,617,316		intergenic	no predicted function	conserved	
				rs938651 *	129,624,625		intergenic	no predicted function	conserved	
17q21.31	rs9303542	1.2x10 <sup>-7</sup>	16	-	43,766,499	within <i>SKAP1</i>	intron 4	no predicted function	conserved	
				rs4451990	43,755,652		intron 4	no predicted function	conserved	
				rs7222452	43,764,990		intron 4	no predicted function	conserved	
				rs7209855	43,743,802		intron 4	no predicted function	conserved	
				rs9916227	43,744,911		intron 4	no predicted function	not conserved	
				rs9894812	43,744,952		intron 4	no predicted function	conserved	
				rs12452212	43,746,077		intron 4	no predicted function	conserved	
				rs7213513	43,747,293		intron 4	no predicted function	conserved	
				rs7219816	43,748,793		intron 4	no predicted function	conserved	
				rs12450081	43,750,242		intron 4	no predicted function	conserved	
				rs7221770	34,754,834		intron 4	no predicted function	not conserved	
				rs8074443	34,772,812		intron 4	no predicted function	not conserved	
				rs1553753	43,775,805		intron 4	no predicted function	conserved	

Locus	Genotyped SNP	p-value	N tagged SNPs	Tagged SNPs <sup>^</sup>	Nuc. position (build 36)	Gene location	Location	Possible function (Pupasuite)	Conservation in mice	r <sup>2</sup> between significant genotyped SNPs
				rs9897162	43,779,788		intron 3	function no predicted function	conserved	
				rs9909002	43,781,467		intron 3	no predicted function	conserved	
				rs12944592	43,785,404		intron 3	no predicted function	conserved	
				rs9907699	43,789,137		intron 3	no predicted function	not conserved	

<sup>^</sup> tagged SNPs r<sup>2</sup>>0.8 within 300kb either side of validated SNP; \* Two SNPs tagged by rs10088218 but not rs10098821; Pupasuite predicts intronic































