**Table S1.** Comparison between results from literature and results from the present GWAS for all the SNPs extracted from literature.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene or Locus** | **dbSNP ID; Variant** | **Reference** | **Cases** | **Contr.** | **Pop.** | **Published allelic OR** | **Allelic OR**  **(present GWAS)** | **Published OR for the additive model** | **OR of the additive model**  **(present GWAS)** |
| **DNA repair** | | | | | | | | | |
| *ADPRT* | rs1136410; Val762Ala | Santos et al.,2012(1) | 108 | 216 | Ca | 1.29 (0.79-2.10) | 0.93 (0.73-1.19) | 1.35 (0.79-2.29)a | 0.96 (0.72-1.27)a |
|  |  |  |  |  |  |  |  | - | 0.73 (0.29-1.81)b |
|  |  | Chiang et al.,2008(2) | 283 | 469 | As | 1.19 (0.97-1.48) |  | 1.42 (0.93-2.17)a |  |
|  |  |  |  |  |  |  |  | 1.28 (0.93-1.75)b |  |
| *ALKBH3* | rs10838192 | Neta et al.,2011(3) | 344 | 452 | Ca | **-** | 1.03 (0.84-1.28) | **1.74 (1.25-2.41)**a | 1.12 (0.86-1.45)a |
|  |  |  |  |  |  |  |  | **2.33 (1.05-5.17)**b | 0.88 (0.51-1.54)b |
| *APEX1* | rs1130409; Asp148Glu | Sigurdson et al.,2009(4) | 865 | 887 | Ca | 1.05 (0.92-1.09) | 0.95 (0.79-1.13) | 1.18 (0.96-1.46)a | 0.80 (0.61-1.06)a |
|  |  |  |  |  |  |  |  | 1.06 (0.81-1.40)b | 0.96 (0.66-1.38)b |
|  |  | Santos et al.,2012(1) | 78 | 217 | Ca | 0.90 (0.65-1.24 |  | 0.91 (0.53-1.58)a |  |
|  |  |  |  |  |  |  |  | 0.81 (0.43-1.53)b |  |
|  |  | Chiang et al.,2008(2) | 283 | 469 | As | 1.09 (0.88-1.34) |  | 1.07 (0.77-1.48)a |  |
|  |  |  |  |  |  |  |  | 1.18 (0.77-1.81)b |  |
| *ATM* | rs609429; IVS48+238C>G | Akulevich et al.,2009(5) | 254 | 594 | Ca | 1.10 (0.89-1.36) | 1.09 (0.90-1.32) | 1.11 (0.80-1.55)a | 1.07 (0.83-1.38)a |
|  |  |  |  |  |  |  |  | 1.21 (0.78-1.87)b | 1.23 (0.78-1.93) |
| *ATM* | rs664677; IVS22-77T>C | Akulevich et al.,2009(5) | 255 | 593 | Ca | 1.08 (0.87-1.33) | LD with rs609429 | 1.06 (0.76-1.47)a | LD with rs609429 |
|  |  |  |  |  |  |  |  | 1.20 (0.75-1.91)b |  |
|  |  | Gu et al.,2013(6) | 354 | 360 | As | 1.04 (0.84-1.29) |  | 1.17 (0.84-1.62)a |  |
|  |  |  |  |  |  |  |  | 1.03 (0.66-1.61)b |  |
| *ATM* | rs189037; -570C>T | Gu et al.,2013(6) | 355 | 360 | As | 1.07 (0.87-1.31) | LD with rs609429 | 1.18 (0.83-1.66)a | LD with rs609429 |
|  |  |  |  |  |  |  |  | 1.13 (0.73-1.76)b |  |
| *ATM* | rs1800054; 146C>G | Xu et al.,2012(7) | 592 | 884 | Mi | 1.50 (0.75-3.01) |  | 1.51 (0.75-3.04)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *ATM* | rs4986761; Ser707Pro | Xu et al.,2012(7) | 592 | 882 | Mi | 1.22 (0.65-2.29) |  | 1.23 (0.65-2.31)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *ATM* | rs1801516; Asp1853Asn | Akulevich et al.,2009(5) | 254 | 596 | Ca | **0.71 (0.52-0.97)** |  | 0.74 (0.51-1.06)a |  |
|  |  |  |  |  |  |  |  | 0.49 (0.18-1.31)b |  |
| *ATM* | rs373759 | Gu et al.,2013(6) | 354 | 360 | As | 1.02 (0.83-1.27) |  | 1.32 (0.96-1.82)a |  |
|  |  |  |  |  |  |  |  | 0.88 (0.56-1.39)b |  |
| *ATM* | rs4988099 | Gu et al.,2013(6) | 353 | 360 | As | 1.02 (0.64-1.63) |  | 1.09 (0.66-1.79)a |  |
|  |  |  |  |  |  |  |  | 0.51 (0.05-5.68)b |  |
| *BRCA1* | rs799917; Pro871Leu | Sturgis et al.,2005(8) | 131 | 163 | Ca | 0.81 (0.57-1.15) | 1.04 (0.86-1.25) | 0.83 (0.51-1.35)a | 1.04 (0.80-1.34)a |
|  |  |  |  |  |  |  |  | 0.66 (0.30-1.45)b | 1.08 (0.72-1.61)b |
|  |  | Xu et al.,2012(9) | 303 | 511 | Mi | 0.86 (0.69-1.05) |  | 0.77 (0.56-1.05)a |  |
|  |  |  |  |  |  |  |  | 0.80 (0.53-1.22)b |  |
| *BRCA1* | rs16941; Glu1038Gly | Sturgis et al.,2005(8) | 134 | 165 | Ca | 0.81 (0.57-1.14) |  | 0.90 (0.55-1.46)a | LD with rs799917 |
|  |  |  |  |  |  |  |  | 0.61 (0.28-1.32)b |  |
|  |  | Xu et al.,2012(9) | 303 | 511 | Mi | 0.90 (0.73-1.12) |  | 0.74 (0.55-1.01)a |  |
|  |  |  |  |  |  |  |  | 1.00 (0.62-1.59)b |  |
| *BRCA1* | rs16942; Lys1183Arg | Sturgis et al.,2005(8) | 129 | 165 | Ca | 0.73 (0.51-1.05) | LD with rs799917 | 0.80 (0.49-1.29)a | LD with rs799917 |
|  |  |  |  |  |  |  |  | 0.41 (0.15-1.10)b |  |
|  |  | Xu et al.,2012(9) | 303 | 511 | Mi | 0.85 (0.68-1.06) |  | **0.73 (0.54-0.99)a** |  |
|  |  |  |  |  |  |  |  | 0.86 (0.52-1.42)b |  |
| *BRCA1* | rs1799966; Ser1613Gly | Sturgis et al.,2005(8) | 134 | 165 | Ca | 0.77 (0.54-1. 09) | LD with rs799917 | 0.93 (0.58-1.51)a | LD with rs799917 |
|  |  |  |  |  |  |  |  | 0.45 (0.19-1.08)b |  |
|  |  | Xu et al.,2012(9) | 303 | 511 | Mi | 0.90 (0.72-1.11) |  | 0.79 (0.59-1.07)a |  |
|  |  |  |  |  |  |  |  | 0.93 (0.56-1.53)b |  |
| *BRCA1* | 1988A>G | Xu et al.,2012(9) | 303 | 511 | Mi | 0.86 (0.69-1.07) |  | **0.66 (0.49-0.90)a** |  |
|  |  |  |  |  |  |  |  | 0.98 (0.62-1.56)b |  |
| *BRCA1* | rs1799950; Gln315Arg | Xu et al.,2012(9) | 303 | 511 | Mi | 1.35 (0.90-2.03) |  | 1.11 (0.71-1.74)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *BRCA1* | rs1060915; Ser1436Ser | Xu et al.,2012(9) | 303 | 511 | Mi | 0.94 (0.76-1.15) | LD with rs799917 | 0.76 (0.55-1.04)a | LD with rs799917 |
|  |  |  |  |  |  |  |  | 0.97 (0.63-1.49)b |  |
| *BRCA2* | rs144848; Asn372His | Sturgis et al.,2005(8) | 129 | 165 | Ca | 0.87 (0.59-1.26) |  | 0.79 (0.50-1.27)a |  |
|  |  |  |  |  |  |  |  | 0.92 (0.24-3.57)b |  |
|  |  | Sigurdson et al.,2009(4) | 975 | 901 | Ca | 1.12 (0.96-1.30) |  | 1.12 (0.92-1.36)a |  |
|  |  |  |  |  |  |  |  | 1.24 (0.83-1.87)b |  |
| *BRCA2* | rs1799944; Asn991Asp | Sturgis et al.,2005(8) | 127 | 165 | Ca | 1.43 (0.64-3.19) |  | 1.45 (0.64-3.31)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *BRIP1* | rs2048718; -1918G>A | Sigurdson et al.,2009(4) | 877 | 903 | Ca | 0.94 (0.82-1.08) | 1.12 (0.93-1.34) | **0.75 (0.57-0.98)a** | 1.13 (0.86-1.48)a |
|  |  |  |  |  |  |  |  | 0.82 (0.62-1.08)b | 1.24 (0.86-1.77)b |
| *BRIP1* | rs4986764; Ser919Pro | Sigurdson et al.,2009(4) | 816 | 855 | Ca | 1.03 (0.90-1.18) | 0.91 (0.79-1.13) | 0.93 (0.75-1.15)a | 0.82 (0.63-1.07)a |
|  |  |  |  |  |  |  |  | 1.11 (0.83-1.47)b | 0.97 (0.67-1.42)b |
| *CHEK2* | 1100delC | Sigurdson et al.,2009(4) | 807 | 834 | Ca | 0.52 (0.09-2.82) |  | 0.52 (0.09-2.82)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *ERCC2* | rs1799793; Asp312Asn | Silva et al.,2005(10) | 108 | 213 | Ca | 1.35 (0.96-1.91) |  | 1.16 (0.70-1.91)a |  |
|  |  |  |  |  |  |  |  | 2.05 (0.98-4.30)b |  |
| *ERCC2* | rs13181; Lys751Gln | Silva et al.,2005(10) | 108 | 213 | Ca | 1.29 (0.92-1.81) | 0.92 (0.77-1.10) | 1.21 (0.73-2.02)a | 0.88 (0.67-1.16)a |
|  |  |  |  |  |  |  |  | 1.66 (0.84-3.29)b | 0.86 (0.31-1.21)b |
| *HUS1* | rs2708906 | Neta et al.,2011(3) | 344 | 452 | Ca | - | 1.11 (0.93-1.32) | **1.55 (1.11-2.18)a** | 1.21 (0.91-1.61)a |
|  |  |  |  |  |  |  |  | **2.40 (1.51-3.82)b** | 1.20 (0.92-1.57)b |
| *MGMT* | rs4751109 | Neta et al.,2011(3) | 344 | 452 | Ca | - |  | **1.66 (1.15-2.39)a** |  |
|  |  |  |  |  |  |  |  | **2.50 (1.24-5.03)b** |  |
| *MTF1* | rs11488567; 2193T>A | Akulevich et al.,2009(5) | 253 | 595 | Ca | 0.94 (0.76-1.16) | 0.91 (0.76-1.08) | 1.13 (0.82-1.57)a | 0.85 (0.65-1.13)a |
|  |  |  |  |  |  |  |  | 0.79 (0.77-1.42)b | 0.84 (0.65-1.10) |
| *MTF1* | rs3912368; 20433G>A | Akulevich et al.,2009(5) | 255 | 596 | Ca | 0.89 (0.71-1.11) | 1.08 (0.90-1.30) | 1.04 (0.77-1.42)a | 0.96 (0.73-1.24)a |
|  |  |  |  |  |  |  |  | 0.63 (0.36-1.11)b | 1.27 (0.87-1.85)b |
| *MUTYH* | rs3219489; Gln335His | Santos et al.,2012(1) | 78 | 216 | Ca | 0.79 (0.54-1.16) |  | 0.65 (0.40-1.05)a |  |
|  |  |  |  |  |  |  |  | 1.04 (0.33-3.30)b |  |
| *LIG4* | rs1805388; Thr9Ile | Gomes et al.,2010(11) | 109 | 217 | Ca | 1.22 (0.88-1.70) | 0.80 (0.61-1.05) | 1.28 (0.76-2.18)a | 0.85 (0.65-1.15)a |
|  |  |  |  |  |  |  |  | 1.49 (0.74-2.98)b | 0.42 (0.15-1.20)b |
| *Ku80* | Ex21-238G>A | Gomes et al.,2010(11) | 77 | 216 | Ca | 1.22 (0.88-1.70) |  | 1.28 (0.76-2.18)a |  |
|  |  |  |  |  |  |  |  | 1.49 (0.74-2.98)b |  |
| *Ku80* | Ex21+338T>C | Gomes et al.,2010(11) | 109 | 216 | Ca | 1.17 (0.72-1.91) |  | 1.28 (0.74-2.21)a |  |
|  |  |  |  |  |  |  |  | 0.70 (0.07-6.79)b |  |
| *Ku80* | Ex21-352C>A | Gomes et al.,2010(11) | 107 | 216 | Ca | 1.15 (0.70-1.89) |  | 1.25 (0.72-2.17)a |  |
|  |  |  |  |  |  |  |  | 0.70 (0.07-6.88)b |  |
| *Ku80* | Ex21+466A>G | Gomes et al.,2010(11) | 109 | 216 | Ca | 0.79 (0.46-1.37) |  | 0.70 (0.37-1.30)a |  |
|  |  |  |  |  |  |  |  | 1.25 (0.20-7.59)b |  |
| *NBS1* | rs1805794; Glu185Gln | Bastos et al.,2009(12) | 109 | 217 | Ca | 0.95 (0.66-1.36) | 1.11 (0.92-1.35) | 1.07 (0.66-1.75)a | **1.33 (1.03-1.73)a** |
|  |  |  |  |  |  |  |  | 0.78 (0.34-1.80)b | 1.00 (0.65-1.53)b |
| *OGG1* | rs1052133; Ser326Cys | García-Qu. et al.,2011(13) | 397 | 467 | Ca | 1.00 (0.79-1.26) | 0.87 (0.70-1.08) | 0.94 (0.71-1.26)a | 0.93 (0.72-1.21)a |
|  |  |  |  |  |  |  |  | 1.16 (0.60-2.24)b | 0.61 (0.33-1.13)b |
|  |  | Santos et al.,2012(1) | 108 | 217 | Ca | 0.82 (0.53-1.28) |  | 0.78 (0.48-1.29)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *RAD18* | rs373572; Arg302Gln | Sigurdson et al.,2009(4) | 859 | 887 | Ca | 0.97 (0.84-1.11) | 1.08 (0.88-1.34) | 1.02 (0.83-1.25)a | 1.06 (0.82-1.37)a |
|  |  |  |  |  |  |  |  | 0.92 (0.70-1.20)b | 1.25 (0.71-2.17)b |
| *RAD51* | rs1801320; 135G>C | Sturgis et al.,2005(8) | 129 | 166 | Ca | 1.12 (0.59-2.12) |  | 1.13 (0.58-2.19)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *RAD51* | rs1801321; Ex1-59G>T | Bastos et al.,2009(12) | 109 | 217 | Ca | **1.41 (1.02-1.95)** | 0.86 (0.72-1.03) | 1.41 (0.82-2.45)a | 0.84 (0.64-1.11)a |
|  |  |  |  |  |  |  |  | **1.89 (1.00-3.58)b** | 0.73 (0.51-1.05)b |
| *RAD51C* | rs304267; 15452658T>C | Siraj et al.,2008(14) | 50 | 215 | Ca | 0.78 (0.49-1.23) | **1.19 (1.00-1.42)** | 0.89 (0.46-1.72)a | 1.13 (0.86-1.49)a |
|  |  |  |  |  |  |  |  | 0.54 (0.19-1.54)b | **1.47 (1.02-2.13)b** |
| *RAD51C* | rs304270; 15455419A>G | Siraj et al.,2008(14) | 159 | 199 | Ca | 1.06 (0.78-1.45) | 0.91 (0.76-1.10) | 0.97 (0.63-1.51)a | 0.99 (0.76-1.29)a |
|  |  |  |  |  |  |  |  | 1.27 (0.61-2.62)b | 0.78 (0.52-1.15)b |
| *RAD52* | 38207T>C | Sturgis et al.,2005(8) | 116 | 165 | Ca | 0.90 (0.63-1.28) |  | 0.97 (0.58-1.60)a |  |
|  |  |  |  |  |  |  |  | 0.56 (0.18-1.71)b |  |
| *RAD52* | rs11226; \*744C>T | Siraj et al.,2008(14) | 210 | 228 | Ca | **2.07 (1.51-2.84)** | 0.92 (0.76-1.10) | **1.53 (1.03-2.28)a** | 0.82 (0.63-1.06)a |
|  |  |  |  |  |  |  |  | **-** | 0.93 (0.62-1.38)b |
| *RAD52* | rs4987206; Gln221Glu | Siraj et al.,2008(14) | 210 | 217 | Ca | **16.3 (7.01-37.7)** |  | **15.6 (6.56-36.9)a** |  |
|  |  |  |  |  |  |  |  | **-** |  |
| *XRCC1* | rs1799782; Arg194Trp | Ho et al.,2009(15) | 251 | 503 | Ca | **1.49 (1.02-2.17)** | 1.08 (0.78-1.50) | 1.39 (0.92-2.10)a | 1.02 (0.73-1.44)a |
|  |  |  |  |  |  |  |  | - | 2.00 (0.40-9.98)b |
|  |  | Sigurdson et al.,2009(4) | 876 | 906 | Ca | **0.80 (0.66-0.97)** |  | 0.88 (0.71-1.11)a |  |
|  |  |  |  |  |  |  |  | **0.46 (0.25-0.86)b** |  |
|  |  | Fard-Esf. et al.,2011(16) | 157 | 187 | Ca | 1.32 (0.73-2.41) |  | 1.10 (0.56-2.16)a |  |
|  |  |  |  |  |  |  |  | 3.66 (0.38-35.6)b |  |
|  |  | Santos et al.,2012(1) | 77 | 217 | Ca | 1.16 (0.56-2.40) |  | 0.76 (0.33-1.78)a |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Chiang et al.,2008(2) | 283 | 469 | As | **1.27 (1.02-1.59)** |  | 1.10 (0.81-1.51)a |  |
|  |  |  |  |  |  |  |  | **1.89 (1.14-3.15)b** |  |
|  |  | Ryu et al.,2011(17) | 111 | 100 | AS | **0.61 (0.40-0.91)** |  | **0.55 (0.31-0.98)a** |  |
|  |  |  |  |  |  |  |  | 0.40 (0.16-1.03)b |  |
|  | **Meta-analyses from:** | Qian et al.,2012(18) | 433 | 1596 | Ca | - |  | 1.30 (0.92-1.85)a |  |
|  |  |  |  |  |  |  |  | 4.84 (0.97-24.2)b |  |
|  |  | Bao et al.,2013(19) | 262 | 404 | Ca | 1.27 (0.80-2.02) |  | 0.96 (0.57-1.63)a |  |
|  |  |  |  |  |  |  |  | 5.43 (0.90-32.8)b |  |
|  |  | Hu et al.,2013(20) | 446 | 1602 | Ca | 1.44 (1.05-1.98) |  | 1.30 (0.92-1.85)a |  |
|  |  |  |  |  |  |  |  | 1.71 (0.38-8.43)b |  |
| *XRCC1* | rs25489; Arg280His | Siraj et al.,2008(14) | 50 | 229 | Ca | 0.79 (0.47-1.32) | 0.83 (0.60-1.15) | 0.59 (0.29-1.22)a | 0.85 (0.61-1.20)a |
|  |  |  |  |  |  |  |  | 0.93 (0.33-2.65)b | 0.43 (0.07-2.59)b |
|  |  | Ho et al.,2009(15) | 251 | 503 | Ca | 0.88 (0.53-1.46) |  | 0.87 (0.51-1.47)a |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Akulevich et al.,2009(5) | 255 | 593 | Ca | 1.15 (0.70-1.87) |  | 1.16 (0.70-1.91)a |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | García-Qu. et al.,2011(13) | 398 | 473 | Ca | **1.57 (1.07-2.30)** |  | **1.67 (1.10-2.53)a** |  |
|  |  |  |  |  |  |  |  | 1.26 (0.25-6.30)b |  |
|  |  | Fard-Esf. et al.,2011(16) | 170 | 193 | Ca | 1.31 (0.73-2.38) |  | 1.51 (0.79-2.92)a |  |
|  |  |  |  |  |  |  |  | 0.59 (0.05-6.60)b |  |
|  |  | Chiang et al.,2008(2) | 283 | 469 | As | 0.81 (0.59-1.12) |  | 0.74 (0.52-1.07)a |  |
|  |  |  |  |  |  |  |  | 1.11 (0.35-3.59)b |  |
|  | **Meta-analyses from:** | Qian et al.,2012(18) | 1149 | 2887 | Ca | - |  | 1.18 (0.93-1.49)a |  |
|  |  |  |  |  |  |  |  | 0.95 (0.42-2.16)b |  |
|  |  | Bao et al.,2013(19) | 823 | 1259 | Ca | **1.38 (1.05-1.80)** |  | **1.45 (1.09-1.93)a** |  |
|  |  |  |  |  |  |  |  | 0.99 (0.26-3.70)b |  |
|  |  | Hu et al.,2013(20) | 1153 | 2898 | Ca | 1.15 (0.93-1.42) |  | 1.18 (0.93-1.49)a |  |
|  |  |  |  |  |  |  |  | 0.95 (0.42-2.16)b |  |
| *XRCC1* | rs25487; Arg399Gln | Siraj et al.,2008(14) | 50 | 229 | Ca | 0.72 (0.41-1.26) | 0.87 (0.72-1.05) |  | **0.76 (0.59-0.99)a** |
|  |  |  |  |  |  |  |  |  | 0.87 (0.58-1.34)b |
|  |  | Ho et al.,2009(15) | 251 | 503 | Ca | **0.70 (0.56-0.89)** |  |  | 0.76 (0.55-1.05)a |
|  |  |  |  |  |  |  |  |  | **0.47 (0.27-0.82)b** |
|  |  | Sigurdson et al.,2009(4) | 857 | 892 | Ca | 1.05 (0.91-1.21) |  |  | 1.18 (0.97-1.44)a |
|  |  |  |  |  |  |  |  |  | 0.95 (0.68-1.32)b |
|  |  | Akulevich et al.,2009(5) | 255 | 595 | Ca | 0.86 (0.69-1.07) |  | **0.68 (0.50-0.94)a** |  |
|  |  |  |  |  |  |  |  | 0.90 (0.56-1.45)b |  |
|  |  | García-Qu. et al.,2011(13) | 386 | 474 | Ca | 1.00 (0.82-1.22) |  | 1.12 (0.84-1.50)a |  |
|  |  |  |  |  |  |  |  | 0.91 (0.59-1.40)b |  |
|  |  | Fard-Esf. et al.,2011(16) | 155 | 190 | Ca | 0.87 (0.63-1.20) |  | 0.73 (0.47-1.15)a |  |
|  |  |  |  |  |  |  |  | 0.90 (0.44-1.85)b |  |
|  |  | Santos et al.,2012(1) | 78 | 217 | Ca | 0.96 (0.69-1.35) |  | 0.90 (0.55-1.47)a |  |
|  |  |  |  |  |  |  |  | 0.98 (0.46-2.10)b |  |
|  |  | Chiang et al.,2008(2) | 283 | 469 | As | 1.25 (0.98-1.59) |  | 1.23 (0.90-1.68)a |  |
|  |  |  |  |  |  |  |  | 1.57 (0.87-2.84)b |  |
|  |  | Ryu et al.,2011(17) | 111 | 100 | As | 0.72 (0.43-1.20) |  | 0.74 (0.36-1.53)a |  |
|  |  |  |  |  |  |  |  | 0.64 (0.23-1.81)b |  |
|  | **Meta-analyses from:** | Qian et al.,2012(18) | 1121 | 2883 | Ca | - |  | **0.84 (0.72-0.98)a** |  |
|  |  |  |  |  |  |  |  | 0.81 (0.63-1.04)b |  |
|  |  | Bao et al.,2013(19) | 902 | 1476 | Ca | 0.92 (0.82-1.05) |  | 0.87 (0.73-1.04)a |  |
|  |  |  |  |  |  |  |  | 0.90 (0.69-1.19)b |  |
|  |  | Hu et al.,2013(20) | 1875 | 5766 | Ca | **0.86 (0.77-0.96)** |  | **0.84 (0.71-0.98)a** |  |
|  |  |  |  |  |  |  |  | **0.77 (0.60-0.99)b** |  |
| *XRCC1* | rs2682585; 310C>T | Ho et al.,2009(15) | 251 | 503 | Ca | 1.12 (0.86-1.45) | 0.93 (0.74-1.17) | 1.15 (0.83-1.58)a | 0.92 (0.70-1.20)a |
|  |  |  |  |  |  |  |  | 1.17 (0.53-2.60)b | 0.89 (0.43-1.85)b |
| *XRCC1* | 539..542 delG | Ho et al.,2009(15) | 251 | 503 | Ca | 0.88 (0.70-1.10) |  | 0.73 (0.53-1.02)a |  |
|  |  |  |  |  |  |  |  | 0.88 (0.55-1.39)b |  |
| *XRCC1* | rs3213245; 1915T>C | Ho et al.,2009(15) | 251 | 503 | Ca | 0.91 (0.73-1.13) | 1.10 (0.92-1.32) | 0.81 (0.58-1.13)a | 1.02 (0.78-1.34)a |
|  |  |  |  |  |  |  |  | 0.87 (0.56-1.35)b | 1.24 (0.87-1.79)b |
| *XRCC2* | rs3218536; Arg188His | Bastos et al.,2009(12) | 78 | 217 | Ca | 0.76 (0.40-1.44) |  | 0.74 (0.38-1.44)a |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | García-Qu. et al.,2011(13) | 397 | 477 | Ca | 1.08 (0.69-1.26) |  | 0.88 (0.21-3.63)a |  |
|  |  |  |  |  |  |  |  | 0.82 (0.20-3.30)b |  |
| *XRCC3* | rs861539; Thr241Met | Sturgis et al.,2005(8) | 134 | 161 | Ca | **1.61 (1.15-2.27)** | 1.09 (0.91-1.30) | **2.12 (1.29-3.50)a** | 1.16 (0.88-1.52)a |
|  |  |  |  |  |  |  |  | 2.05 (0.99-4.27)b | 1.16 (0.81-1.66)b |
|  |  | Siraj et al.,2008(14) | 37 | 227 | Ca | 1.05 (0.62-1.75) |  | 0.62 (0.28-1.35)a |  |
|  |  |  |  |  |  |  |  | 1.51 (0.57-4.01)b |  |
|  |  | Akulevich et al.,2009(5) | 252 | 596 | Ca | 0.94 (0.75-1.16) |  | 0.93 (0.68-1.27)a |  |
|  |  |  |  |  |  |  |  | 0.88 (0.54-1.43)b |  |
|  |  | Bastos et al.,2009(12) | 78 | 214 | Ca | 1.17 (0.84-1.63) |  | 0.70 (0.42-1.19)a |  |
|  |  |  |  |  |  |  |  | 1.63 (0.85-3.15)b |  |
| *XRCC3* | rs1799796; ISV7-14A>G | García-Qu. et al.,2011(13) | 398 | 478 | Ca | 0.85 (0.68-1.06) | 0.86 (0.70-1.06) | 0.92 (0.69-1.21)a | 0.80 (0.62-1.03)a |
|  |  |  |  |  |  |  |  | 0.60 (0.33-1.11)b | 0.87 (0.51-1.48)b |
| *XRCC4* | 894-7G>A | Siraj et al.,2008(14) | 192 | 227 | Ca | 0.84 (0.61-1.16) |  | 0.73 (0.49-1.11)a |  |
|  |  |  |  |  |  |  |  | 0.97 (0.41-2.28)b |  |
| *XRCC4* | rs1805377; Asn298Ser | Gomes et al.,2010(11) | 109 | 217 | Ca | **0.56 (0.32-0.99)** | 1.01 (0.76-1.34) | 0.60 (0.32-1.13)a | 0.99 (0.72-1.35)a |
|  |  |  |  |  |  |  |  | 0.30 (0.04-2.51)b | 1.14 (0.44-2.92)b |
| *XRCC4* | rs28360135; Thr134Ile | Gomes et al.,2010(11) | 109 | 216 | Ca | 1.24 (0.61-2.53) |  | 1.26 (0.60-2.62)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *XRCC7* | rs7003908; 6721T>G | Sturgis et al.,2005(8) | 134 | 166 | Ca | 1.06 (0.76-1.48) | 1.11 (0.93-1.33) | 1.22 (0.75-2.00)a | 1.28 (0.97-1.68)a |
|  |  |  |  |  |  |  |  | 1.01 (0.49-2.09)b | 1.17 (0.83-1.66)b |
| *XRCC7* | rs7830743; Ile3434Thr | Siraj et al.,2008(14) | 206 | 229 | Ca | 0.99 (0.65-1.49) | 1.07 (0.78-1.47) | 0.96 (0.60-1.54)a | 1.07 (0.77-1.50)a |
|  |  |  |  |  |  |  |  | 1.11 (0.27-4.49)b | 1.12 (0.27-4.72)b |
|  |  | Rahimi et al.,2012(21) | 173 | 204 | Ca | **1.90 (1.29-2.79)** |  | **2.42 (1.55-3.81)a** |  |
|  |  |  |  |  |  |  |  | 1.16 (0.25-5.29)b |  |
| *ZNF350* | rs2278420; Leu66Pro | Sigurdson et al.,2009(4) | 877 | 911 | Ca | 0.99 (0.84-1.16) | 0.85 (0.67-1.09) | 1.05 (0.86-1.28)a | 0.86 (0.65-1.13)a |
|  |  |  |  |  |  |  |  | 0.83 (0.53-1.32)b | 0.70 (0.29-1.66)b |
| *ZNF350* | rs4986771; Ser472Pro | Sigurdson et al.,2009(4) | 862 | 896 | Ca | 1.01 (0.63-1.62) |  | 1.01 (0.63-1.63)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *ZNF350* | rs2278415; Arg501Ser | Sigurdson et al.,2009(4) | 847 | 871 | Ca | 1.07 (0.89-1.28) | 0.81 (0.63-1.05) | 1.08 (0.88-1.32)a | 0.81 (0.61-1.08)a |
|  |  |  |  |  |  |  |  | - | 0.63 (0.23-1.68)b |
| **Cell-cycle regulation and apoptosis** | | | | | | | | | |
| *BAK1* | rs493871 | Neta et al.,2011(3) | 344 | 452 | Ca | - | 0.92 (0.77-1.10) | 1.41 (0.98-2.04)a | 0.94 (0.72-1.23)a |
|  |  |  |  |  |  |  |  | **2.29 (1.49-3.50)b** | 0.83 (0.58-1.21)b |
| *BCL2* | rs1801018; Thr7Thr | Eun et al.,2011(22) | 92 | 222 | As | 0.58 (0.32-1.08) | 1.00 (0.84-1.20) | 0.53 (0.27-1.05)a | 1.13 (0.86-1.49)a |
|  |  |  |  |  |  |  |  | 0.72 (0.07-7.00)b | 0.96 (0.67-1.37)b |
| *BCL2* | rs2279115; -938A>C | Eun et al.,2011(22) | 92 | 222 | As | 0.88 (0.62-1.26) | 0.97 (0.82-1.16) | 0.68 (0.40-1.16)a | 1.01 (0.76-1.33)a |
|  |  |  |  |  |  |  |  | 0.91 (0.44-1.87)b | 0.94 (0.66-1.34)b |
|  |  | Wang et al.,2012(23) | 92 | 102 | As | **1.55 (1.12-2.16)** |  | 1.38 (0.84-2.26)a |  |
|  |  |  |  |  |  |  |  | **2.80 (1.36-5.76)b** |  |
| *BIRC5* | rs9904341; -31G>C | Yazdani et al.,2012(24) | 123 | 131 | Ca | **1.76 (1.21-2.57)** |  | 1.51 (0.89-2.55)a |  |
|  |  |  |  |  |  |  |  | **3.96 (1.54-10.1)b** |  |
| *BIRC5* | rs2071214; Glu129Lys | Wang et al.,2013(25) | 122 | 193 | As | **0.57 (0.39-0.83)** |  | **0.55 (0.33-0.92)a** |  |
|  |  |  |  |  |  |  |  | **0.44 (0.20-0.97)b** |  |
| *CASP8* | -652 6N ins/del | Wang et al.,2012(23) | 118 | 213 | As | 1.15 (0.80-1.65) |  | 0.92 (0.36-2.32)a |  |
|  |  |  |  |  |  |  |  | 1.15 (0.46-2.86)b |  |
| *CASP9* | -1263A>G | Wang et al.,2012(23) | 118 | 213 | AS | 1.32 (0.96-1.83) |  | **2.27 (1.17-4.38)a** |  |
|  |  |  |  |  |  |  |  | **2.02 (1.01-4.04)b** |  |
| *CDKN1B* | rs34330; -79C>T | Landa et al.,2010(26) | 328 | 385 | Ca | - | 0.93 (0.75-1.16) | 0.96 (0.70-1.32)a | 0.88 (0.68-1.14)a |
|  |  |  |  |  |  |  |  | 1.44 (0.81-2.56)b | 1.06 (0.55-2.05)b |
| *CDKN2A* | rs3731249; Ala148Thr | Debniak et al.,2006(27) | 173 | 223 |  | 0.55 (0.14-2.14) | 1.16 (0.77-1.75) | 0.55 (0.14-2.14)a | 1.00 (0.66-1.51)b |
|  |  |  |  |  |  |  |  | - | - |
| *CDKN2C* | rs11587909; -361G>A | Neta et al.,2011(3) | 344 | 452 | Ca | **-** |  | **1.36 (0.99-1.88)a** |  |
|  |  |  |  |  |  |  |  | **2.44 (1.46-4.08)b** |  |
| *FAS* | rs2234767; 37G>A | Ho et al.,2008(28) | 279 | 510 | Mi | 1.08 (0.79-1.47) | 1.12 (0.84-1.49) | 1.16 (0.81-1.67)a | 1.22 (0.90-1.66)a |
|  |  |  |  |  |  |  |  | 0.75 (0.23-2.42)b | 0.55 (0.15-2.06)b |
| *FAS* | rs2234768; 744A>G | Ho et al.,2008(28) | 279 | 510 | Mi | 1.14 (0.93-1.40) |  | 1.28 (0.90-1.82)a |  |
|  |  |  |  |  |  |  |  | 1.29 (0.85-1.96)b |  |
| *FAS* | rs2229521; Thr74Thr | Ho et al.,2008(28) | 279 | 510 | Mi | 1.35 (0.90-2.01) |  | 1.18 (0.76-1.82)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *FAS* | rs2234978; Thr193Thr | Ho et al.,2008(28) | 279 | 510 | MI | 1.00 (0.79-1.27) | 0.88 (0.73-1.06) | 1.00 (0.74-1.36)a | 0.85 (0.66-1.10)a |
|  |  |  |  |  |  |  |  | 1.00 (0.54-1.87)b | 0.78 (0.50-1.23)b |
| *TGFB1* | rs1800472; Thr263Ile | Sigurdson et al.,2009(4) | 877 | 914 | Ca | **0.67 (0.49-0.90)** | 1.17 (0.82-1.68) | **0.50 (0.30-0.84)a** | 1.05 (0.73-1.51)a |
|  |  |  |  |  |  |  |  | 0.76 (0.45-1.26)b | - |
| *TP53* | rs1042522; Pro72Arg | Rogounovitch et al.,2006(29) | 68 | 313 | Ca | 0.81 (0.51-1.32) | 0.93 (0.76-1.14) | 0.71 (0.38-1.33)a | 1.01 (0.78-1.31)a |
|  |  |  |  |  |  |  |  | 0.86 (0.28-2.64)b | 0.77 (0.47-1.25)b |
|  |  | Siraj et al.,2008(14) | 46 | 225 | Ca | 0.91 (0.58-1.42) |  | 0.72 (0.33-1.58)a |  |
|  |  |  |  |  |  |  |  | 0.82 (0.36-1.90)b |  |
|  |  | Akulevich et al.,2009(5) | 251 | 592 | Ca | 1.13 (0.90-1.43) |  | 1.16 (0.85-1.58)a |  |
|  |  |  |  |  |  |  |  | 1.25 (0.73-2.14)b |  |
|  |  | Granja et al.,2004(30) | 98 | 153 | Mi | 1.14 (0.78-1.65) |  | 0.68 (0.40-1.18)a |  |
|  |  |  |  |  |  |  |  | **5.51 (1.45-20.9)b** |  |
|  |  | Reis et al.,2010(31) | 35 | 134 | Mi | **2.89 (1.68-4.95)** |  | **6.91 (2.58-18.5)a** |  |
|  |  |  |  |  |  |  |  | **5.70 (1.76-18.5)b** |  |
| *WDR3* | rs4233455 | Akdi et al.,2010(32) | 152 | 113 | Ca | 1.23 (0.84-1.74) | **0.83 (0.70-1.00)** | 1.01 (0.57-1.80)a | **0.65 (0.49-0.86)a** |
|  |  |  |  |  |  |  |  | 1.54 (0.77-3.08)b | 0.74 (0.52-1.06)b |
| *WDR3* | rs2208375 | Akdi et al.,2010(32) | 152 | 114 | Ca | 1.17 (0.83-1.65) | LD with rs4233455 | 1.01 (0.56-1.82)a | LD with rs4233455 |
|  |  |  |  |  |  |  |  | 1.37 (0.69-2.72)b |  |
| *WDR3* | rs3754127 | Akdi et al.,2010(32) | 150 | 118 | Ca | 1.07 (0.76-1.51) | LD with rs4233455 | 0.79 (0.45-1.37)a | LD with rs4233455 |
|  |  |  |  |  |  |  |  | 1.24 (0.61-2.51)b |  |
| *WDR3* | rs1321665 | Akdi et al.,2010(32) | 145 | 114 | Ca | 1.25 (0.88-1.77) | LD with rs4233455 | 0.98 (0.55-1.76)a | LD with rs4233455 |
|  |  |  |  |  |  |  |  | 1.61 (0.80-3.27)b |  |
| *WDR3* | rs6680844 | Akdi et al.,2010(32) | 149 | 114 | Ca | 1.25 (0.89-1.77) | LD with rs4233455 | 0.94 (0.53-1.67)a | LD with rs4233455 |
|  |  |  |  |  |  |  |  | 1.61 (0.80-3.24)b |  |
| *WDR3* | rs3765501 | Akdi et al.,2010(32) | 155 | 116 | Ca | 1.19 (0.85-1.67) | LD with rs4233455 | 0.98 (0.55-1.73)a | LD with rs4233455 |
|  |  |  |  |  |  |  |  | 1.44 (0.72-2.85)b |  |
| *WDR3* | rs1321666 | Akdi et al.,2010(32) | 147 | 114 | Ca | 1.20 (0.85-1.69) | LD with rs4233455 | 0.95 (0.53-1.70)a | LD with rs4233455 |
|  |  |  |  |  |  |  |  | 1.46 (0.73-2.94)b |  |
| *WDR3* | rs4658973 | Baida et al.,2008(33) | 214 | 145 | Ca | **0.35 (0.25-0.47)** | LD with rs4233455 | **0.40 (0.26-0.62)a** | LD with rs4233455 |
|  |  |  |  |  |  |  |  | **0.07 (0.03-0.18)b** |  |
|  |  | Akdi et al.,2010(32) | 145 | 114 | Ca | 1.09 (0.77-1.55) |  | 0.81 (0.46-1.41)a |  |
|  |  |  |  |  |  |  |  | 1.29 (0.63-2.64)b |  |
| *WDR3* | rs6685906 | Akdi et al.,2010(32) | 152 | 113 | Ca | 1.25 (0.88-1.76) | LD with rs4233455 | 1.00 (0.56-1.77)a | LD with rs4233455 |
|  |  |  |  |  |  |  |  | 1.58 (0.79-3.15)b |  |
| *WDR3* | rs6678671 | Akdi et al.,2010(32) | 153 | 116 | Ca | 1.22 (0.87-1.72) | LD with rs4233455 | 0.98 (0.55-1.74)a | LD with rs4233455 |
|  |  |  |  |  |  |  |  | 1.51 (0.76-2.99)b |  |
| *XAF1* | rs2271232; Arg132His | Kim et al.,2013(34) | 89 | 276 | As | 1.39 (0.77-2.52) |  | 0.94 (0.46-1.94)a |  |
|  |  |  |  |  |  |  |  | - |  |
| *XAF1* | rs34195599; Glu85Gly | Kim et al.,2013(34) | 89 | 276 | As | 3.17 (1.01-9.97) |  | 3.25 (1.02-10.4)a |  |
|  |  |  |  |  |  |  |  | - |  |
| **Xenobiotic metabolism** | | | | | | | | | |
| *CYP1A1* | rs4646903; 3801T>C\_m1 | Siraj et al.,2008(35) | 47 | 509 | Ca | 1.42 (0.88-2.30) | 1.28 (0.95-1.73) | 1.16 (0.60-2.24)a | 1.32 (0.96-1.80)a |
|  |  |  |  |  |  |  |  | 2.42 (0.86-6.83)b | 1.40 (0.26-7.70)b |
|  |  | Reis et al.,2010(31) | 35 | 134 | Mi | 1.08 (0.61-1.90) |  | 0.92 (0.42-2.04)a |  |
|  |  |  |  |  |  |  |  | 1.39 (0.39-4.92)b |  |
| *CYP1A1* | rs1048943; Ile462Val\_m2 | Reis et al.,2010(31) | 35 | 134 | Mi | 0.97 (0.51-1.83) |  | 0.64 (0.27-1.49)a |  |
|  |  |  |  |  |  |  |  | 2.09 (0.46-9.40)b |  |
| *CYP1A1* | rs1799814; 4887C>A\_m4 | Siraj et al.,2008(35) | 202 | 511 | Ca | **1.87 (1.44-2.42)** | **1.85 (1.27-2.70)** | **1.91 (1.36-2.70)a** | **1.77 (1.20-2.60)a** |
|  |  |  |  |  |  |  |  | **3.48 (1.74-6.96)b** | **5.03 (0.62-41.1)b** |
| *CYP2D6* | rs3892097; CYP2D6\*4 | Lemos et al.,2007(36) | 187 | 256 | Ca | **0.56 (0.39-0.80)** |  | **0.60 (0.39-0.93)a** |  |
|  |  |  |  |  |  |  |  | **0.24 (0.01-0.86)b** |  |
| *CYP19A1* | rs4774585 | Schonfeld et al.,2012(37) | 344 | 452 | Ca | **1.49 (1.16-1.90)** | 0.96 (0.77-1.20) | **1.55 (1.14-2.09)a** | 0.97 (0.74-1.26)a |
|  |  |  |  |  |  |  |  | **2.04 (0.97-4.29)b** | 0.93 (0.51-1.71)b |
| *CYP19A1* | rs1004984 | Schonfeld et al.,2012(37) | 330 | 430 | Ca | **1.41 (1.14-1.74)** | 0.89 (0.74-1.06) | **1.37 (1.00-1.87)a** | 0.82 (0.62-1.08)a |
|  |  |  |  |  |  |  |  | **2.03 (1.29-3.20)b** | 0.81 (0.56-1.17)b |
| *CYP19A1* | rs7163193 | Schonfeld et al.,2012(37) | 274 | 523 | Ca | **1.84 (1.44-2.35)** | 0.99 (0.81-1.20) | **1.97 (1.44-2.71)a** | 1.00 (0.77-1.29)a |
|  |  |  |  |  |  |  |  | **2.67 (1.46-4.89)b** | 0.95 (0.59-1.53)b |
| *CYP19A1* | rs752760 | Schonfeld et al.,2012(37) | 343 | 452 | Ca | **1.37 (1.12-1.67)** |  | **1.46 (1.06-2.01)a** |  |
|  |  |  |  |  |  |  |  | **1.85 (1.22-2.81)b** |  |
| *CYP19A1* | rs2414099 | Schonfeld et al.,2012(37) | 273 | 421 | Ca | **1.47 (1.11-1.94)** | 0.84 (0.66-1.06) | **1.61 (1.15-2.24)a** | 0.91 (0.69-1.19)a |
|  |  |  |  |  |  |  |  | 1.60 (0.61-4.23)b | 0.52 (0.25-1.07)b |
| *CYP19A1* | rs1004982 | Schonfeld et al.,2012(37) | 344 | 452 | Ca | **1.37 (1.12-1.68)** | LD with rs1004984 | **1.39 (1.02-1.88)a** | LD with rs1004984 |
|  |  |  |  |  |  |  |  | **1.86 (1.20-2.89)b** |  |
| *CYP26B1* | rs12622950 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.10 (0.88-1.38) | 1.32 (0.96-1.83)a | 1.04 (0.79-1.36)a |
|  |  |  |  |  |  |  |  | 1.69 (0.72-3.95)b | 1.41 (0.76-2.60)b |
| *CYP26B1* | rs6546742 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.20 (0.98-1.48) | 0.65 (0.34-1.24)a | 1.16 (0.90-1.51)a |
|  |  |  |  |  |  |  |  | 0.57 (0.30-1.08)b | 1.50 (0.90-2.51)b |
| *CYP26B1* | rs7606254 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.14 (0.89-1.46) | 1.07 (0.76-1.53)a | 1.11 (0.84-1.46)a |
|  |  |  |  |  |  |  |  | 2.07 (0.80-5.34)b | 1.57 (0.64-3.87)b |
| *CYP26B1* | rs887844 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - |  | 1.12 (0.82-1.53)a |  |
|  |  |  |  |  |  |  |  | 1.49 (0.80-2.99)b |  |
| *CYP26B1* | rs887843 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - |  | 1.12 (0.82-1.53)a |  |
|  |  |  |  |  |  |  |  | 1.55 (0.92-2.41)b |  |
| *CYP26B1* | rs707718 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 0.99 (0.79-1.25) | 0.80 (0.57-1.13)a | 0.90 (0.69-1.17)a |
|  |  |  |  |  |  |  |  | 2.05 (0.86-4.91)b | 1.51 (0.68-3.35)b |
| *CYP26B1* | rs2241057 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.12 (0.87-1.45) | 1.04 (0.74-1.45)a | 1.15 (0.86-1.53)a |
|  |  |  |  |  |  |  |  | 0.56 (0.19-1.64)b | 1.12 (0.46-2.72)b |
| *CYP26B1* | rs975612 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - |  | 0.81 (0.51-1.28)a |  |
|  |  |  |  |  |  |  |  | 0.79 (0.49-1.27)b |  |
| *CYP26B1* | rs11681809 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - |  | 0.92 (0.39-2.15)a |  |
|  |  |  |  |  |  |  |  | 1.13 (0.49-2.60)b |  |
| *CYP26B1* | rs194243 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - |  | 0.99 (0.73-1.36)a |  |
|  |  |  |  |  |  |  |  | 1.24 (0.73-2.12)b |  |
| *CYP8B1* | rs6788947 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | **1.38 (1.13-1.68)** | 1.02 (0.86-1.22) | 1.24 (0.87-1.75)a | 1.22 (0.91-1.65)a |
|  |  |  |  |  |  |  |  | **1.88 (1.26-2.80)b** | 1.04 (0.74-1.46)b |
| *CYP8B1* | rs7614670 | Asc.-Kilfoy et al.,2012(38) | 342 | 450 | Ca | **0.75 (0.61-0.93)** | 1.04 (0.86-1.25) | **0.71 (0.52-0.95)a** | 1.14 (0.88-1.48)a |
|  |  |  |  |  |  |  |  | 0.62 (0.38-1.01)b | 0.99 (0.67-1.46)b |
| *CYP8B1* | rs11715464 | Asc.-Kilfoy et al.,2012(38) | 343 | 452 | Ca | **1.33 (1.09-1.63)** | 0.99 (0.83-1.19) | 1.31 (0.96-1.80)a | 1.08 (0.83-1.41)a |
|  |  |  |  |  |  |  |  | **1.79 (1.17-2.72)b** | 0.93 (0.64-1.35)b |
| *DHRS9* | rs16856430 | Asc.-Kilfoy et al.,2012(38) | 344 | 452 | Ca | 0.70 (0.55-0.92) |  | 0.68 (0.49-0.93)a |  |
|  |  |  |  |  |  |  |  | 0.60 (0.29-1.28)b |  |
| *FMO3* | rs10911641 | Asc.-Kilfoy et al.,2012(38) | 343 | 452 | Ca | **0.78 (0.61-0.99)** | 0.93 (0.76-1.14) | **0.74 (0.55-1.00)a** | 0.88 (0.68-1.14)a |
|  |  |  |  |  |  |  |  | **0.69 (0.55-0.98)b** | 0.96 (0.58-1.60)b |
| *GPX3* | rs3763013 | Lin et al.,2009(39) | 268 | 375 | As | 1.13 (0.88-1.45) |  | 1.17 (0.84-1.62)a |  |
|  |  |  |  |  |  |  |  | 1.19 (0.63-2.25)b |  |
| *GPX3* | rs3792796 | Lin et al.,2009(39) | 268 | 371 | As | 1.15 (0.90-1.46) | 1.08 (0.90-1.29) | 1.25 (0.90-1.74)a | 1.02 (0.78-1.33)a |
|  |  |  |  |  |  |  |  | 1.19 (0.66-2.16)b | 1.19 (0.83-1.72)b |
| *GPX3* | rs8177412 | Lin et al.,2009(39) | 268 | 377 | As | 1.23 (0.92-1.63) | 0.99 (0.77-1.28) | 1.35 (0.96-1.91)a | 1.03 (0.77-1.37)a |
|  |  |  |  |  |  |  |  | 1.07 (0.45-2.55)b | 0.85 (0.38-1.89)b |
| *GPX3* | rs3805435 | Lin et al.,2009(39) | 268 | 371 | As | 0.86 (0.69-1.08) | 1.24 (0.94-1.65) | 0.69 (0.47-1.00)a | 1.14 (0.84-1.54)a |
|  |  |  |  |  |  |  |  | 0.75 (0.48-1.18)b | 3.00 (0.85-10.6)b |
| *GPX3* | rs3828599 | Lin et al.,2009(39) | 368 | 374 | As | 0.86 (0.69-1.08) | 1.14 (0.94-1.39) | 0.69 (0.47-1.02)a | 1.18 (0.91-1.52)a |
|  |  |  |  |  |  |  |  | 0.75 (0.48-1.16)b | 1.24 (0.78-1.99)b |
| *GPX3* | rs2070593 | Lin et al.,2009(39) | 268 | 378 | As | 0.99 (0.78-1.25) | 1.04 (0.84-1.28) | 0.88 (0.63-1.22)a | 0.97 (0.74-1.25)a |
|  |  |  |  |  |  |  |  | 1.12 (0.65-1.92)b | 1.27 (0.73-2.20)b |
| *GSTM1* | GSTM1\*0 | Canbay et al.,2003(40) | 19 | 25 | Ca | **-** |  | **-** |  |
|  |  |  |  |  |  |  |  | **4.79 (1.30-7.13)b** |  |
|  |  | Hernández et al.,2003(41) | 134 | 116 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.37 (0.83-2.26)b |  |
|  |  | Gaspar et al.,2004(42) | 103 | 204 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.18 (0.72-1.92)b |  |
|  |  | Lemos et al.,2008(43) | 188 | 247 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 0.83 (0.56-1.21)b |  |
|  |  | Hernández et al.,2008(44) | 125 | 161 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.52 (0.95-2.44)b |  |
|  |  | Siraj et al.,2008(35) | 203 | 513 | Ca | **-** |  | **-** |  |
|  |  |  |  |  |  |  |  | **0.72 (0.52-0.99)b** |  |
|  |  | Ho et al.,2006(45) | 201 | 680 | As | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.10 (0.80-1.50)b |  |
|  |  | Bufalo et al.,2006(46) | 212 | 204 | Mi | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.05 (0.70-1.56)b |  |
|  |  | Guilhen et al.,2009(47) | 164 | 196 | Mi | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.58 (0.89-2.80)b |  |
|  |  | Reis et al.,2010(31) | 35 | 134 | Mi | - |  | - |  |
|  |  |  |  |  |  |  |  | 2.29 (1.05-4.98)b |  |
|  | **Meta-analyses from:** | Adjadj et al.,2009(48) | 537 | 1344 | Mi | **-** |  | **-** |  |
|  |  |  |  |  |  |  |  | **1.30 (1.00-1.40)b** |  |
|  |  | Li et al.,2012(49) | 728 | 880 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.17 (0.96-1.43)b |  |
| *GSTT1* | GSTT1\*0 | Hernández et al.,2003(41) | 105 | 116 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.27 (0.64-2.53)b |  |
|  |  | Gaspar et al.,2004(42) | 73 | 204 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.46 (0.77-2.76)b |  |
|  |  | Lemos et al.,2008(43) | 188 | 247 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 0.66 (0.39-1.12)b |  |
|  |  | Hernández et al.,2008(44) | 174 | 161 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.08 (0.62-1.87)b |  |
|  |  | Siraj et al.,2008(35) | 207 | 513 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | **3.48 (2.48-4.88)b** |  |
|  |  | Ho et al.,2006(45) | 201 | 680 | As | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.40 (0.90-2.00)b |  |
|  |  | Bufalo et al.,2006(46) | 95 | 204 | Mi | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.22 (0.66-2.26)b |  |
|  |  | Guilhen et al.,2009(47) | 164 | 196 | Mi | - |  | - |  |
|  |  |  |  |  |  |  |  | 1.72 (0.81-3.66)b |  |
|  |  | Reis et al.,2010(31) | 35 | 134 | Mi | - |  | - |  |
|  |  |  |  |  |  |  |  | **0.39 (0.18-0.85)b** |  |
|  | **Meta-analyses from:** | Adjadj et al.,2009(48) | 505 | 1300 | Mi | - |  | - |  |
|  |  |  |  |  |  |  |  | **1.03 (1.00-1.60)b** |  |
|  |  | Li et al.,2012(49) | 696 | 836 | Ca | - |  | - |  |
|  |  |  |  |  |  |  |  | 0.81 (0.61-0.99)b |  |
| *GSTP1* | rs1695; Ile105Val | Hernández et al.,2003(41) | 134 | 116 | Ca | 0.86 (0.59-1.27) | 1.07 (0.89-1.30) | 0.85 (0.50-1.47)a | 0.97 (0.75-1.26)a |
|  |  |  |  |  |  |  |  | 0.80 (0.36-1.47)b | 1.29 (0.83-1.99)b |
|  |  | Hernández et al.,2008(44) | 125 | 161 | Ca | 0.89 (0.63-1.24) |  | 0.77 (0.48-1.23)a |  |
|  |  |  |  |  |  |  |  | 0.94 (0.46-1.92)b |  |
|  |  | Siraj et al.,2008(35) | 47 | 507 | Ca | 0.82 (0.53-1.28) |  | 0.87 (0.46-1.65)a |  |
|  |  |  |  |  |  |  |  | 0.57 (0.19-1.75)b |  |
|  |  | Granja et al.,2004(50) | 77 | 157 | Mi | **4.56 (2.31-8.98)** |  | **8.44 (2.64-26.9)a** |  |
|  |  |  |  |  |  |  |  | **3.64 (1.11-11.9)b** |  |
| *GSTP1* | rs1138272; Ala114Val | Siraj et al.,2008(35) | 40 | 510 | Ca | 1.22 (0.64-2.31) |  | 0.92 (0.41-2.06)a |  |
|  |  |  |  |  |  |  |  | 3.24 (0.66-15.9)b |  |
| *MTF2* | rs549938 | Asc.-Kilfoy et al.,2012(38) | 341 | 449 | Ca | **0.68 (0.50-0.86)** | 1.10 (0.90-1.35) | **0.67 (0.50-0.90)a** | 1.01 (0.78-1.30)a |
|  |  |  |  |  |  |  |  | **0.43 (0.22-0.87)b** | 1.49 (0.87-2.57)b |
| *MTHFR* | rs1801133; Ala222Val | Siraj et al.,2008(35) | 49 | 511 | Ca | 1.47 (0.87-2.47) | 1.11 (0.93-1.33) | 1.77 (0.96-3.29)a | 1.20 (0.90-1.60)a |
|  |  |  |  |  |  |  |  | 0.95 (0.12-7.54)b | 1.21 (0.86-1.71)b |
|  |  | Prasad et al.,2011(51) | 97 | 241 | Ca | **2.20 (1.00-4.86)** |  | 2.21 (0.92-5.30)a |  |
|  |  |  |  |  |  |  |  | 2.65 (0.16-42.9)b |  |
|  |  | Fard-Esf. et al.,2011(52) | 154 | 198 | As | 1.04 (0.76-1.43) |  | 0.78 (0.50-1.21)a |  |
|  |  |  |  |  |  |  |  | 2.08 (0.82-5.25)b |  |
|  |  | Ozdemir et al.,2012(53) | 60 | 50 | Af | **1.92 (1.03-3.58)** |  | 2.11 (0.92-4.81)a |  |
|  |  |  |  |  |  |  |  | 2.75 (0.65-11.6)b |  |
| *MTHFR* | rs1801131; Glu429Ala | Ozdemir et al.,2012(53) | 60 | 50 | Af | 1.30 (0.73-2.29) | **0.80 (0.66-0.97)** | 1.64 (0.74-3.61)a | 0.86 (0.66-1.11)a |
|  |  |  |  |  |  |  |  | 1.36 (0.32-5.74)b | **0.60 (0.40-0.91)b** |
| *NAT1* | rs7003890 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.15 (0.96-1.37) | 0.82 (0.58-1.15)a | 1.04 (0.78-1.37)a |
|  |  |  |  |  |  |  |  | 0.80 (0.52-1.21)b | 1.34 (0.94-1.91)b |
| *NAT1* | rs15561 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.02 (0.84-1.23) | 0.66 (0.35-1.25)a | 0.91 (0.70-1.18)a |
|  |  |  |  |  |  |  |  | 0.81 (0.43-1.50)b | 1.19 (0.77-1.85)b |
| *NAT1* | rs4986993 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.01 (0.83-1.22) | 0.85 (0.62-1.17)a | 0.91 (0.70-1.18)a |
|  |  |  |  |  |  |  |  | 1.23 (0.66-2.28)b | 1.16 (0.75-1.80)b |
| *NAT1* | rs9650592 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - |  | 1.12 (0.77-1.61)a |  |
|  |  |  |  |  |  |  |  | 0.72 (0.19-2.71)b |  |
| *NAT1* | rs7387059 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - |  | 0.82 (0.54-1.25)a |  |
|  |  |  |  |  |  |  |  | 0.92 (0.61-1.40)b |  |
| *NAT1* | rs7837181 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - |  | 0.92 (0.67-1.26)a |  |
|  |  |  |  |  |  |  |  | 0.67 (0.40-1.15)b |  |
| *NAT1* | rs7829368 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.11 (0.92-1.34) | 1.17 (0.70-1.98)a | 1.03 (0.80-1.33)a |
|  |  |  |  |  |  |  |  | 1.19 (0.71-1.99)b | 1.36 (0.88-2.09)b |
| *NAT1* | rs7821390 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.14 (0.95-1.36) | 0.82 (0.59-1.15)a | 1.00 (0.76-1.31)a |
|  |  |  |  |  |  |  |  | 0.93 (0.61-1.42)b | 1.35 (0.94-1.93)b |
| *NAT2* | rs1799930; Arg197Gln | Hernández et al.,2008(44) | 109 | 148 | Ca | 1.22 (0.85-1.74) | 0.96 (0.79-1.16) | 1.22 (0.74-2.02)a | 1.00 (0.77-1.29)a |
|  |  |  |  |  |  |  |  | 1.34 (0.65-2.76)b | 0.86 (0.55-1.34)b |
|  |  | Siraj et al.,2008(35) | 198 | 512 | Ca | 1.14 (0.88-1.48) |  | 1.28 (0.91-1.82)a |  |
|  |  |  |  |  |  |  |  | 1.10 (0.61-1.98)b |  |
| *NAT2* | rs1799929; Leu161Leu | Hernández et al.,2008(44) | 109 | 148 | Ca | **0.70 (0.51-0.96)** | 0.97 (0.81-1.16) | 0.64 (0.37-1.10)a | 0.85 (0.64-1.11)a |
|  |  |  |  |  |  |  |  | **0.51 (0.27-0.96)b** | 0.99 (0.69-1.43)b |
| *NAT2* | rs1799931; Gly286Gln | Hernández et al.,2008(44) | 109 | 148 | Ca | 1.55 (0.59-4.05) |  | 2.22 (0.75-6.54)a |  |
|  |  |  |  |  |  |  |  | 0.34 (0.01-8.31)b |  |
| *NQO1* | rs1800566; Pro187Ser | Siraj et al.,2008(35) | 49 | 504 | Ca | 0.82 (0.49-1.36) | 0.94 (0.76-1.16) | 1.00 (0.54-1.85)a | 0.92 (0.71-1.19)a |
|  |  |  |  |  |  |  |  | 0.31 (0.04-2.33)b | 0.92 (0.53-1.61)b |
| *SOD1* | rs1041740 | Asc.-Kilfoy et al.,2012(38) | 339 | 443 | Ca | **1.42 (1.14-1.76)** | 1.12 (0.93-1.34) | **1.48 (1.09-2.00)a** | 1.20 (0.92-1.57)a |
|  |  |  |  |  |  |  |  | **1.86 (1.15-3.02)b** | 1.17 (0.80-1.71)b |
| *SOD1* | rs12626475 | Asc.-Kilfoy et al.,2012(38) | 344 | 452 | Ca | **1.33 (1.08-1.64)** | 1.10 (0.92-1.33) | 1.33 (0.98-1.79)a | 1.18 (0.91-1.54)a |
|  |  |  |  |  |  |  |  | **1.73 (1.09-2.73)b** | 1.16 (0.80-1.69)b |
| *UGT2B7* | rs3924194 | Asc.-Kilfoy et al.,2012(38) | 342 | 447 | Ca | **0.66 (0.49-0.88)** | 0.84 (0.61-1.16) | 0.74 (0.53-1.05)a | 0.82 (0.59-1.14)a |
|  |  |  |  |  |  |  |  | **0.31 (0.12-0.85)b** | 0.97 (0.16-5.82)b |
| *UGT2B7* | rs7657426 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 0.90 (0.75-1.09) | 0.88 (0.64-1.20)a | 0.84 (0.65-1.09)a |
|  |  |  |  |  |  |  |  | 1.54 (0.92-2.59)b | 0.87 (0.58-1.30)b |
| *UGT2B7* | rs7699955 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.02 (0.85-1.22) | 1.14 (0.77-1.68)a | 0.91 (0.69-1.20)a |
|  |  |  |  |  |  |  |  | 0.96 (0.63-1.49)b | 1.08 (0.76-1.53)b |
| *UGT2B7* | rs7375178 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | LD with rs7699955 | 0.89 (0.59-1.34)a | LD with rs7699955 |
|  |  |  |  |  |  |  |  | 0.85 (0.50-1.31)b |  |
| *UGT2B7* | rs10028494 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 0.89 (0.71-1.11) | 1.28 (0.93-1.77)a | 0.85 (0.66-1.11)a |
|  |  |  |  |  |  |  |  | 1.25 (0.65-2.43)b | 0.88 (0.45-1.71)b |
| *UGT2B7* | rs3924192 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | LD with rs7699955 | 1.02 (0.73-1.43)a | LD with rs7699955 |
|  |  |  |  |  |  |  |  | 1.15 (0.75-1.77)b |  |
| *UGT2B7* | rs7435335 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.05 (0.83-1.32) | 0.22 (0.05-1.01)a | 0.95 (0.72-1.24)a |
|  |  |  |  |  |  |  |  | 0.28 (0.06-1.24)b | 1.49 (0.74-2.99)b |
| *UGT2B7* | rs4356975 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 0.91 (0.75-1.09) | 0.91 (0.66-1.24)a | 0.87 (0.67-1.13)a |
|  |  |  |  |  |  |  |  | 1.54 (0.92-2.60)b | 0.85 (0.57-1.27)b |
| *UGT2B7* | rs6600893 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | 1.06 (0.89-1.27) | 0.90 (0.61-1.34)a | 0.95 (0.71-1.27)a |
|  |  |  |  |  |  |  |  | 0.88 (0.58-1.36)b | 1.12 (0.80-1.57)b |
| *UGT2B7* | rs4535394 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | - | LD with rs6600893 | 0.92 (0.62-1.37)a | LD with rs6600893 |
|  |  |  |  |  |  |  |  | 0.89 (0.58-1.36)b |  |
| **Thyroid function** | | | | | | | | | |
| *CFTR* | rs4148682; -175T>G | Oh et al.,2012(54) | 105 | 323 | As | 1.14 (0.84-1.56) | 0.79 (0.55-1.15) | 1.11 (0.65-1.90)a | 0.80 (0.55-1.17)a |
|  |  |  |  |  |  |  |  | 1.29 (0.70-2.37)b | 0.64 (1.13-3.21)b |
| *CFTR* | rs213950; Val470Met | Oh et al.,2012(54) | 105 | 323 | As | 1.23 (0.89-1.68) | 1.06 (0.88-1.28) | 1.13 (0.68-1.88)a | 1.03 (0.80-1.34)a |
|  |  |  |  |  |  |  |  | 1.50 (0.81-2.78)b | 1.15 (0.78-1.70)b |
| *TG* | Gln2511Arg | Matakidou et al.,2004(55) | 304 | 396 | Ca | **1.33 (1.07-1.64)** |  | **1.48 (1.00-2.18)a** |  |
|  |  |  |  |  |  |  |  | **1.85 (1.19-2.89)b** |  |
| *TG* | rs180223; Ser734Ala | Akdi et al.,2011(56) | 393 | 474 | Ca | **1.34 (1.10-1.62)** | 0.91 (0.76-1.09) | **1.50 (1.10-2.03)a** | 0.80 (0.61-1.05)a |
|  |  |  |  |  |  |  |  | **1.70 (1.16-2.50)b** | 0.87 (0.61-1.25)b |
| *TG* | rs853326; Met1028Val | Akdi et al.,2011(56) | 396 | 474 | Ca | **1.33 (1.10-1.62)** | LD with rs180223 | **1.51 (1.11-2.05)a** | LD with rs180223 |
|  |  |  |  |  |  |  |  | **1.70 (1.16-2.49)b** |  |
| *TG* | rs2076740; Arg1999Trp | Akdi et al.,2011(56) | 317 | 452 | Ca | 0.91 (0.75-1.12) |  | 0.89 (0.66-1.20)a |  |
|  |  |  |  |  |  |  |  | 0.85 (0.56-1.29)b |  |
| *THRA* | rs939348 | Pastor et al.,2012(57) | 395 | 478 | Ca | 1.13 (0.91-1.40) | 1.02 (0.85-1.24) | 0.95 (0.72-1.26)a | 1.13 (0.87-1.45)a |
|  |  |  |  |  |  |  |  | **1.82 (1.04-3.19)b** | 0.91 (0.58-1.44)b |
| *THRB* | rs3752874; Phe245Phe | Pastor et al.,2012(57) | 337 | 478 | Ca | 0.86 (0.66-1.11) |  | 0.86 (0.64-1.16)a |  |
|  |  |  |  |  |  |  |  | 0.64 (0.21-1.93)b |  |
| *THRB* | rs826377 | Pastor et al.,2012(57) | 395 | 478 | Ca | 1.01 (0.79-1.29) | 1.00 (0.81-1.24) | 1.08 (0.81-1.45)a | 1.13 (0.87-1.46)a |
|  |  |  |  |  |  |  |  | 0.80 (0.67-1.73)b | 0.76 (0.44-1.32)b |
| *THRB* | rs844107 | Pastor et al.,2012(57) | 332 | 462 | Ca | 0.95 (0.78-1.16) | 0.97 (0.81-1.16) | 0.91 (0.68-1.21)a | 0.99 (0.75-1.30)a |
|  |  |  |  |  |  |  |  | 0.94 (0.62-1.42)b | 0.92 (0.64-1.33)b |
| *TPO* | rs2048722; 1495800A>G | Cipollini et al.,2013(58) | 1071 | 1244 | Ca | 0.90 (0.80-1.01) | 0.98 (0.82-1.17) | 0.98 (0.81-1.17)a | 1.01 (0.77-1.34)a |
|  |  |  |  |  |  |  |  | **0.79 (0.62-0.99)b** | 0.95 (0.67-1.36)b |
|  |  | Cipollini et al.,2013(58) | 393 | 475 | Ca | 1.14 (0.94-1.38) |  | **1.43 (1.04-1.95)a** |  |
|  |  |  |  |  |  |  |  | 1.25 (0.84-1.84)b |  |
| *TPO* | rs732609; Thr725Pro | Cipollini et al.,2013(58) | 1089 | 1280 | Ca | **0.86 (0.76-0.96)** | 0.96 (0.80-1.15) | 0.91 (0.77-1.08)a | 0.93 (0.71-1.21)a |
|  |  |  |  |  |  |  |  | **0.72 (0.57-0.91)b** | 0.94 (0.64-1.38)b |
|  |  | Cipollini et al.,2013(58) | 394 | 475 | Ca | **1.22 (1.00-1.47)** |  | **1.37 (1.02-1.84)a** |  |
|  |  |  |  |  |  |  |  | 1.39 (0.93-2.08)b |  |
| *TPO* | rs1042589; 1546327C>G | Cipollini et al.,2013(58) | 1180 | 1202 | Ca | 0.94 (0.84-1.05) | 0.89 (0.74-1.06) | 0.98 (0.81-1.18)a | 0.76 (0.56-1.03)a |
|  |  |  |  |  |  |  |  | 0.87 (0.69-1.10)b | 0.78 (0.54-1.11)b |
|  |  | Cipollini et al.,2013(58) | 337 | 475 | Ca | 0.94 (0.78-1.14) |  | 0.88 (0.65-1.19)a |  |
|  |  |  |  |  |  |  |  | 0.90 (0.62-1.32)b |  |
| *TRHR* | rs4129682; -9138C>T | Akdi et al.,2011(56) | 396 | 472 | Ca | 0.99 (0.82-1.19) | 0.88 (0.74-1.05) | 1.15 (0.83-1.58)a | 1.09 (0.83-1.44)a |
|  |  |  |  |  |  |  |  | 0.96 (0.65-1.41)b | 0.74 (0.52-1.04)b |
| *TRHR* | rs7823804; -1895T>G | Akdi et al.,2011(56) | 396 | 472 | Ca | 0.94 (0.77-1.14) | 0.94 (0.77-1.14) | 0.91 (0.69-1.22)a | 1.03 (0.80-1.34)a |
|  |  |  |  |  |  |  |  | 0.89 (0.57-1.41)b | 0.80 (0.52-1.22)b |
| *TSHR* | rs1991517; Asp727Glu | Sigurdson et al.,2009(4) | 828 | 843 | Ca | 1.00 (0.84-1.21) |  | 1.06 (0.85-1.32)a |  |
|  |  |  |  |  |  |  |  | 0.85 (0.49-1.48)b |  |
| *TSHR* | rs2075179; Asn187Asn | Sigurdson et al.,2009(4) | 847 | 873 | Ca | 0.99 (0.85-1.15) | 1.21 (0.91-1.61) | 0.99 (0.81-1.21)a | **1.37 (1.00-1.88)a** |
|  |  |  |  |  |  |  |  | 0.99 (0.70-1.39)b | 0.70 (0.26-1.89)b |
|  |  | Lönn et al.,2007(59) | 160 | 477 | Mi | 0.72 (0.48-1.08) |  | 0.70 (0.45-1.10)a |  |
|  |  |  |  |  |  |  |  | 0.61 (0.13-2.86)b |  |
| *TSHR* | IVS1+8651A>G | Sigurdson et al.,2009(4) | 824 | 852 | Ca | 1.02 (0.85-1.21) |  | 0.96 (0.78-1.18)a |  |
|  |  |  |  |  |  |  |  | 1.29 (0.74-2.23)b |  |
|  |  | Lönn et al.,2007(59) | 159 | 482 | Mi | 1.11 (0.80-1.52) |  | 0.94 (0.63-1.41)a |  |
|  |  |  |  |  |  |  |  | 1.84 (0.78-4.32)b |  |
| *TSHR* | rs11845164 | Pastor et al.,2012(57, 59) | 395 | 475 | Ca | 1.08 (0.83-1.41) | LD with rs2075179 | 0.96 (0.71-1.31)a | LD with rs2075179 |
|  |  |  |  |  |  |  |  | 2.22 (0.81-6.07)b |  |
| *TSHR* | rs8019570 | Pastor et al.,2012(57) | 395 | 478 | Ca | 1.09 (0.83-1.42) | LD with rs2075179 | 0.99 (0.73-1.35)a | LD with rs2075179 |
|  |  |  |  |  |  |  |  | 2.04 (0.73-5. 67)b |  |
| **MAPK pathway** | | | | | | | | | |
| *BRAF* | rs1042179; 2168G>A | Zhang et al.,2013(60) | 185 | 255 | As | 1.00 (0.69-1.44) |  | 1.12 (0.72-1.74)a |  |
|  |  |  |  |  |  |  |  | 0.70 (0.23-2.10)b |  |
| *BRAF* | rs11762469; 15353T>A | Zhang et al.,2013(60) | 186 | 255 | As | 1.11 (0.78-1.57) | 0.92 (0.77-1.10) | 1.13 (0.75-1.70)a | 0.84 (0.63-1.13)a |
|  |  |  |  |  |  |  |  | 1.14 (0.30-4.35)b | 0.84 (0.59-1.20)b |
| *BRAF* | rs17161747; 70825C>G | Zhang et al.,2013(60) | 186 | 254 | As | 0.94 (0.66-1.33) |  | 0.85 (0.56-1.30)a |  |
|  |  |  |  |  |  |  |  | 1.17 (0.44-3.11)b |  |
| *BRAF* | rs3748093; 129114A>T | Zhang et al.,2013(60) | 186 | 250 | As | 1.30 (0.94-1.81) |  | **1.74 (1.16-2.62)a** |  |
|  |  |  |  |  |  |  |  | 0.74 (0.27-2.01)b |  |
| *EPAC* | rs12422983; Gly332Ser | Lönn et al.,2007(59) | 159 | 482 | Mi | 0.85 (0.59-1.23) | 0.89 (0.71-1.12) | 0.87 (0.56-1.34)a | 0.88 (0.68-1.15)a |
|  |  |  |  |  |  |  |  | 0.73 (0.24-2.22)b | 0.80 (0.37-1.72)b |
| *HRAS* | rs12628; 81T>C | Khan et al.,2012(61) | 140 | 170 | Ca | **5.82 (3.80-8.93)** | **1.23 (1.02-1.48)** | **6.66 (3.66-12.1)a** | **1.51 (1.16-1.96)a** |
|  |  |  |  |  |  |  |  | **9.86 (4.08-23.8)b** | 1.31 (0.89-1.92)b |
| *PDGFRA* | rs6554162; -1309A>G | Kim et al.,2012(62) | 93 | 212 | As | **0.52 (0.33-0.81)** | 1.05 (0.85-1.30) | **0.39 (0.23-0.69)a** | 1.07 (0.83-1.39)a |
|  |  |  |  |  |  |  |  | 0.54 (0.17-1.75)b | 1.04 (0.57-1.89)b |
| *PDGFRA* | rs1800812; -635G>T | Kim et al.,2012(62) | 93 | 212 | As | **0.54 (0.31-0.94)** | 1.06 (0.83-1.36) | **0.43 (0.23-0.81)a** | 1.06 (0.80-1.40)a |
|  |  |  |  |  |  |  |  | 0.95 (0.17-5.29)b | 1.12 (0.49-2.60)b |
| *PDGFRB* | rs3828610; -202A>C | Kim et al.,2012(62) | 93 | 211 | As | 0.79 (0.55-1.14) | **1.22 (1.03-1.46)** | 0.81 (0.49-1.36)a | **1.49 (1.12-2.00)a** |
|  |  |  |  |  |  |  |  | 0.54 (0.22-1.35)b | **1.46 (1.04-2.05)b** |
| *RET* | rs1800858; Ala45Ala | Ho et al.,2005(63) | 101 | 174 | Ca | 1.14 (0.77-1.71) |  | 1.50 (0.89-2.52)a |  |
|  |  |  |  |  |  |  |  | 0.76 (0.26-2.23)b |  |
|  |  | Sigurdson et al.,2009(4) | 859 | 895 | Ca | 0.92 (0.80-1.06) |  | **0.82 (0.67-1.00)a** |  |
|  |  |  |  |  |  |  |  | 0.95 (0.70-1.30)b |  |
|  |  | Lönn et al.,2007(59) | 156 | 484 | Mi | 0.90 (0.67-1.22) |  | 0.83 (0.56-1.23)a |  |
|  |  |  |  |  |  |  |  | 0.97 (0.46-2.06)b |  |
|  | **Meta-analysis from:** | Adjadj et al.,2009(48) | 509 | 980 | MI | 0.90 (0.70-1.20) |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
| *RET* | rs1800860; Ala432Ala | Ho et al.,2005(63) | 101 | 174 | Ca | 1.15 (0.78-1.69) | 0.92 (0.75-1.12) | **2.00 (1.20-3.36)a** | 0.80 (0.62-1.04)a |
|  |  |  |  |  |  |  |  | 0.39 (0.11-1.39)b | 1.06 (0.65-1.72)b |
| *RET* | rs1799939; Gly691Ser | Ho et al.,2005(63) | 101 | 174 | Ca | 0.79 (0.50-1.25) | 1.14 (0.92-1.41) | 0.67 (0.38-1.19)a | 1.29 (0.99-1.67)a |
|  |  |  |  |  |  |  |  | 0.97 (0.32-3.07)b | 0.93 (0.51-1.67)b |
|  |  | Sigurdson et al.,2009(4) | 871 | 900 | Ca | 1.04 (0.88-1.23) |  | 1.02 (0.84-1.25)a |  |
|  |  |  |  |  |  |  |  | 1.15 (0.69-1.93)b |  |
|  |  | Lönn et al.,2007(59) | 159 | 487 | Mi | **1.40 (1.00-1.89)** |  | 1.37 (0.93-2.03)a |  |
|  |  |  |  |  |  |  |  | 1.84 (0.76-4.45)b |  |
|  | **Meta-analysis from:** | Adjadj et al.,2009(48) | 509 | 980 | Mi | 0.90 (0.70-1.20) |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
| *RET* | rs1800861; Leu769Leu | Ho et al.,2005(63) | 101 | 174 | Ca | 1.19 (0.78-1.82) | 0.97 (0.79-1.19) | 1.50 (0.90-2.51)a | 0.95 (0.74-1.23)a |
|  |  |  |  |  |  |  |  | 0.56 (0.11-2.79)b | 0.96 (0.57-1.64)b |
|  |  | Sigurdson et al.,2009(4) | 869 | 902 | Ca | 1.03 (0.90-1.18) |  | 1.01 (0.83-1.24)a |  |
|  |  |  |  |  |  |  |  | 1.07 (0.81-1.41)b |  |
|  |  | Lönn et al.,2007(59) | 158 | 482 | Mi | 0.89 (0.66-1.22) |  | 0.78 (0.53-1.15)a |  |
|  |  |  |  |  |  |  |  | 1.10 (0.49-2.47)b |  |
|  | **Meta-analysis from:** | Adjadj et al.,2009(48) | 509 | 980 | Mi | 0.90 (0.70-1.20) |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
| *RET* | rs1800862; Ser836Ser | Ho et al.,2005(63) | 101 | 174 | Ca | 2.44 (0.97-6.19) |  | 2.54 (0.99-6.53)a |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Sigurdson et al.,2009(4) | 879 | 911 | Ca | **1.43 (1.02-2.00)** |  | **1.45 (1.03-2.05)a** |  |
|  |  |  |  |  |  |  |  | **-** |  |
|  |  | Lönn et al.,2007(59) | 161 | 484 | Mi | 0.93 (0.49-1.75) |  | 0.92 (0.48-1.77)a |  |
|  |  |  |  |  |  |  |  | - |  |
|  | **Meta-analysis from:** | Adjadj et al.,2009(48) | 509 | 980 | Mi | 1.00 (0.70-1.50) |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
| *RET* | rs1800863; Ser904Ser | Ho et al.,2005(63) | 101 | 174 | Ca | 0.78 (0.49-1.22) | LD with rs1799939 | 0.65 (0.37-1.16)a | LD with rs1799939 |
|  |  |  |  |  |  |  |  | 0.96 (0.30-3.04)b |  |
| **Immune response and inflammation** | | | | | | | | | |
| *ALOX12* | rs1126667; Gln261Arg | Prasad et al.,2012(64) | 101 | 317 | Ca | **2.06 (1.45-2.93)** | 0.99 (0.83-1.89) | **3.01 (1.88-4.82)a** | **1.34 (1.02-1.75)a** |
|  |  |  |  |  |  |  |  | 2.75 (0.49-15.6)b | 0.85 (0.59-1.22)b |
| *HEMGN* | rs10984462 | Brenner et al.,2013(65) | 343 | 452 | Ca | **0.69 (0.54-0.87)** |  | 0.78 (0.58-1.06)a |  |
|  |  |  |  |  |  |  |  | **0.37 (0.19-0.71)b** |  |
| *IL1B* | rs1143627; -31C>T | Ban et al.,2012(66) | 93 | 324 | As | 0.81 (0.58-1.12) | 1.05 (0.87-1.26) | 1.21 (0.70-2.11)a | 0.95 (0.73-1.23)a |
|  |  |  |  |  |  |  |  | 0.62 (0.31-1.24)b | 1.19 (0.80-1.77)b |
| *IL1B* | rs3917356 | Ban et al.,2012(66) | 93 | 324 | As | 0.85 (0.61-1.18) | 0.95 (0.79-1.13) | 1.17 (0.69-1.97)a | 0.97 (0.73-1.28)a |
|  |  |  |  |  |  |  |  | 0.64 (0.31-1.31)b | 0.89 (0.62-1.26)b |
| *IL1B* | rs1143630 | Ban et al.,2012(66) | 93 | 324 | As | 1.04 (0.70-1.55) | 1.02 (0.76-1.37) | 1.03 (0.62-1.70)a | 0.94 (0.68-1.30)a |
|  |  |  |  |  |  |  |  | 1.11 (0.39-3.14)b | 1.65 (0.51-5.31)b |
| *IL1B* | rs3136558 | Ban et al.,2012(66) | 93 | 324 | As | 0.74 (0.53-1.03) | 1.03 (0.83-1.28) | 0.67 (0.40-1.15)a | 0.89 (0.69-1.16)a |
|  |  |  |  |  |  |  |  | 0.55 (0.28-1.07)b | 1.66 (0.86-3.20)b |
| *IL1B* | rs1143633 | Ban et al.,2012(66) | 93 | 324 | As | 1.25 (0.90-1.74) | 1.01 (0.84-1.22) | **1.79 (1.05-3.05)a** | 1.10 (0.85-1.43)a |
|  |  |  |  |  |  |  |  | 1.40 (0.67-2.93)b | 0.96 (0.65-1.41)b |
| *IL1B* | rs1143637 | Ban et al.,2012(66) | 93 | 324 | As | 0.57 (0.22-1.49) | 1.02 (0.83-1.26) | 0.56 (0.21-1.48)a | 1.03 (0.80-1.33)a |
|  |  |  |  |  |  |  |  | - | 1.02 (0.60-1.73)b |
| *IL1B* | rs1143643 | Ban et al.,2012(66) | 93 | 324 | As | 1.20 (0.87-1.67) | LD with rs1143633 | **1.92 (1.07-3.45)a** | LD with rs1143633 |
|  |  |  |  |  |  |  |  | 1.45 (0.70-2.99)b |  |
| *IL1R1* | rs3917225; -1099A>G | Park et al.,2012(67) | 118 | 347 | As | 0.88 (0.65-1.19) | 0.98 (0.81-1.18) | 0.77 (0.49-1.21)a | 1.04 (0.80-1.36)a |
|  |  |  |  |  |  |  |  | 0.85 (0.45-1.60)b | 0.91 (0.61-1.35)b |
| *IL1R1* | rs2192752; -1028A>C | Park et al.,2012(67) | 118 | 347 | As | 1.34 (0.92-1.97) | 0.89 (0.74-1.08) | 1.37 (0.86-2.17)a | 0.95 (0.74-1.23)a |
|  |  |  |  |  |  |  |  | 1.63 (0.54-4.91)b | 0.71 (0.45-1.13)b |
| *IL1R1* | rs949963; -615G>A | Park et al.,2012(67) | 115 | 347 | As | 0.82 (0.58-1.15) | **1.28 (1.03-1.60)** | 0.71 (0.45-1.11)a | **1.45 (1.11-1.90)a** |
|  |  |  |  |  |  |  |  | 0.87 (0.37-2.03)b | 1.15 (0.63-2.09)b |
| *IL11* | rs1126757; Ala82Ala | Eun et al.,2012(68) | 94 | 213 | As | 1.02 (0.69-1.50) |  | 0.84 (0.50-1.40)a |  |
|  |  |  |  |  |  |  |  | 1.45 (0.56-3.76)b |  |
| *IL11RA* | rs1061758; -106A>G | Eun et al.,2012(68) | 94 | 213 | As | **1.62 (1.14-2.28)** | **1.29 (1.02-1.65)** | **3.03 (1.52-6.06)a** | 1.24 (0.94-1.64)a |
|  |  |  |  |  |  |  |  | **3.16 (1.42-7.04)b** | 1.87 (0.89-3.93)b |
| *IL32* | rs28372698 | Plantinga et al.,2013(69) | 139 | 138 | Ca | 1.39 (0.98-1.97) |  | **1.78 (1.07-3.00)a** |  |
|  |  |  |  |  |  |  |  | 1.62 (0.78-3.38)b |  |
| *MASP1* | rs850316 | Brenner et al.,2013(65) | 344 | 452. | Ca | **1.46 (1.20-1.78)** | 1.07 (0.90-1.28) | **1.66 (1.19-2.33)a** | 0.99 (0.74-1.31)a |
|  |  |  |  |  |  |  |  | **2.11 (1.40-3.18)b** | 1.17 (0.82-1.67)b |
| *OSMR* | rs2278329; Asp553Asn | Hong et al.,2011(70) | 85 | 286 | As | 0.70 (0.47-1.03) |  | 0.75 (0.45-1.25)a |  |
|  |  |  |  |  |  |  |  | 0.45 (0.17-1.23)b |  |
| *OSMR* | rs2292016; -100G>T | Hong et al.,2011(70) | 84 | 273 | As | 0.73 (0.49-1.07) |  | 0.64 (0.38-1.09)a |  |
|  |  |  |  |  |  |  |  | 0.66 (0.28-1.53)b |  |
| *SERPINA5* | rs6115; Ser64Asn | Brenner et al.,2013(65) | 338 | 443 | Ca | **1.72 (1.40-2.12)** | LD with rs6112 | **1.76 (1.29-2.41)a** | LD with rs6112 |
|  |  |  |  |  |  |  |  | **2.52 (1.66-3.83)b** |  |
| *SERPINA5* | rs6112; Pro159Pro | Brenner et al.,2013(65) | 344 | 452 | Ca | **1.61 (1.31-1.99)** | 1.02 (0.85-1.24) | **1.76 (1.30-2.37)a** | 1.09 (0.84-1.41)a |
|  |  |  |  |  |  |  |  | **2.74 (1.63-4.62)b** | 0.98 (0.65-1.49)b |
| *SERPINA5* | rs6108 | Brenner et al.,2013(65) | 342 | 450 | Ca | **1.48 (1.20-1.81)** | 1.04 (0.86-1.26) | **1.39 (1.02-1.89)a** | 1.09 (0.84-1.41)a |
|  |  |  |  |  |  |  |  | **2.41 (1.53-3.78)b** | 1.02 (0.67-1.56)b |
| *SERPINA5* | rs10139508 | Brenner et al.,2013(65) | 342 | 452 | Ca | **1.38 (1.12-1.70)** |  | **1.59 (1.18-2.15)a** |  |
|  |  |  |  |  |  |  |  | **1.81 (1.11-2.94)b** |  |
| *TICAM1* | rs2292151; Asp557Asp | Brenner et al.,2013(65) | 344 | 449 | Ca | **1.46 (1.16-1.84)** | 1.09 (0.89-1.34) | **1.43 (1.06-1.93)a** | 0.91 (0.70-1.18)a |
|  |  |  |  |  |  |  |  | **2.15 (1.19-3.88)b** | 1.69 (0.99-2.91)b |
| *TLR1* | rs4833095; Asn248Ser | Kim et al.,2013(71) | 94 | 325 | As | 0.88 (0.63-1.24) | 1.05 (0.88-1.26) | 0.68 (0.41-1.13)a | 1.06 (0.81-1.40)a |
|  |  |  |  |  |  |  |  | 0.94 (0.48-1.13)b | 1.10 (0.77-1.57)b |
| *TLR2* | rs3804099; Asn199Asn | Kim et al.,2012(72) | 130 | 321 | As | 0.94 (0.68-1.28) | 1.02 (0.85-1.22) | 1.22 (0.80-1.86)a | 1.08 (0.82-1.43)a |
|  |  |  |  |  |  |  |  | 0.59 (0.26-1.34)b | 1.02 (0.72-1.45)b |
| *TLR2* | rs3804100; Ser450Ser | Kim et al.,2012(72) | 133 | 321 | As | 0.97 (0.71-1.33) | 1.19 (0.83-1.71) | 1.29 (0.85-1.97)a | 1.26 (0.87-1.81)a |
|  |  |  |  |  |  |  |  | 0.61 (0.27-1.38)b | - |
| *TLR6* | rs5743818; Ala644Ala | Kim et al.,2013(71) | 94 | 325 | As | 0.43 (0.10-1.87) | 1.10 (0.88-1.38) | 0.42 (0.10-1.86)a | 1.11 (0.85-1.46)a |
|  |  |  |  |  |  |  |  | - | 1.17 (0.62-2.20)b |
| *TLR6* | rs3821985; Thr361Thr | Kim et al.,2013(71) | 94 | 325 | As | 1.28 (0.91-1.81) | LD with rs3775073 | 1.21 (0.74-1.99)a | LD with rs3775073 |
|  |  |  |  |  |  |  |  | 1.68 (0.80-3.47)b |  |
| *TLR6* | rs3775073; Lys421Lys | Kim et al.,2013(71) | 94 | 325 | As | 1.28 (0.91-1.81) | 1.14 (0.94-1.38) | 1.21 (0.74-1.99)a | 1.12 (0.86-1.44)a |
|  |  |  |  |  |  |  |  | 1.67 (0.80-3.47)b | 1.34 (0.87-2.06)b |
| *TLR10* | rs11096957; His241Asn | Kim et al.,2013(71) | 94 | 325 | As | 1.08 (0.77-1.50) | **1.22 (1.02-1.45)** | 1.17 (0.71-1.95)a | 1.08 (0.81-1.44)a |
|  |  |  |  |  |  |  |  | 1.11 (0.57-2.13)b | **1.48 (1.05-2.09)b** |
| *TLR10* | rs11466653; Thr326Met | Kim et al.,2013(71) | 94 | 325 | As | 0.77 (0.45-1.30) | **2.06(1.30-3.26)** | 0.69 (0.39-1.24)a | **2.03 (1.29-3.17)a** |
|  |  |  |  |  |  |  |  | 1.61 (0.14-17.9)b | **-** |
| *TLR10* | rs11096955; Ile369Leu | Kim et al.,2013(71) | 94 | 325 | As | 1.08 (0.77-1.50) | LD with rs11096957 | 1.17 (0.71-1.95)a | LD with rs11096957 |
|  |  |  |  |  |  |  |  | 1.11 (0.57-2.13)b |  |
| *TLR10* | rs4129009; Val775Ile | Kim et al.,2013(71) | 94 | 325 | As | 1.00 (0.72-1.40) | 0.90 (0.74-1.09) | 0.97 (0.58-1.60)a | 0.92 (0.71-1.20)a |
|  |  |  |  |  |  |  |  | 1.02 (0.51-2.04)b | 0.78 (0.50-1.21)b |
| **Other cancer genes** | | | | | | | | | |
| *ATG16L1* | rs2241880; Thr300Ala | Huijbers et al.,2012(73) | 139 | 1964 | Ca | **0.76 (0.60-0.98)** | **0.83 (0.70-0.99)** | 0.67 (0.44-1.01)a | 0.97 (0.73-1.30)a |
|  |  |  |  |  |  |  |  | **0.57 (0.35-0.93)b** | **0.67 (0.47-0.95)b** |
| *BMP3* | rs13138132; -1919C>A | Kim et al.,2013(74) | 105 | 324 | As | 1.24 (0.82‑1.86) | 1.11 (0.90-1.39) | 1.29 (0.80-2.07)a | 1.18 (0.90-1.53)a |
|  |  |  |  |  |  |  |  | 1.34 (0.25-7.07)b | 1.07 (0.60-1.93)b |
| *BMP3* | rs3733549; Arg192Gln | Kim et al.,2013(74) | 103 | 324 | As | 1.36 (0.93-2.00) | 0.88 (0.62-1.26) | 1.07 (0.66-1.75)a | 0.94 (0.64-1.34)a |
|  |  |  |  |  |  |  |  | **3.96 (1.28‑12.2)b** | - |
| *CDH1* | rs16260; -160C>A | Wang et al.,2012(75) | 92 | 169 | As | **1.71 (1.17-2.49)** | 0.92 (0.76-1.11) | **2.42 (1.39-4.22)a** | 1.15 (0.89-1.49)a |
|  |  |  |  |  |  |  |  | 2.10 (0.90-4.87)b | **0.66 (0.44-1.00)b** |
| *CDH1* | rs3743674; +54T>C | Wang et al.,2012(75) | 95 | 163 | As | 0.98 (0.64-1.50) | 1.31 (0.97-1.76) | 0.88 (0.50-1.55)a | 1.32 (0.97-1.81)a |
|  |  |  |  |  |  |  |  | 1.11 (0.43-2.87)b | 1.64 (0.42-6.39)b |
| *CDH1* | rs5030625; -347G>GA | Wang et al.,2012(75) | 97 | 165 | As | **0.46 (0.29-0.74)** |  | **0.45 (0.25-0.83)a** |  |
|  |  |  |  |  |  |  |  | **0.32 (0.10-1.00)b** |  |
| *COL11A1* | rs12731843; Lys276Asn | Park et al.,2011(76) | 98 | 336 | As | 0.69 (0.36-1.34) | 1.01 (0.71-1.42) | 0.76 (0.38-1.51)a | 1.00 (0.70-1.43)a |
|  |  |  |  |  |  |  |  | 0.51 (0.03-9.94)b | 1.02 (0.17-6.15)b |
| *COL11A1* | rs3753841; Pro1335Leu | Park et al.,2011(76) | 98 | 336 | As | 0.71 (0.50-1.01) | 1.05 (0.88-1.26) | 0.67 (0.42-1.07)a | 1.11 (0.85-1.44)a |
|  |  |  |  |  |  |  |  | 0.56 (0.25-1.26)b | 1.07 (0.74-1.54)b |
| *COL11A1* | rs1763347; Gly1516Gly | Park et al.,2011(76) | 98 | 336 | As | **0.61 (0.42-0.89)** | 1.06 (0.85-1.33) | **0.59 (0.37-0.95)a** | 1.23 (0.94-1.60)a |
|  |  |  |  |  |  |  |  | 0.37 (0.13-1.09)b | 0.76 (0.42-1.39)b |
| *COL11A1* | rs2229783; Ile1602Ile | Park et al.,2011(76) | 98 | 336 | As | **0.62 (0.44-0.88)** | 1.04 (0.87-1.24) | **0.66 (0.41-1.06)a** | 1.16 (0.88-1.52)a |
|  |  |  |  |  |  |  |  | **0.35 (0.15-0.83)b** | 1.03 (0.72-1.45)b |
| *DACT3* | rs314659 | Neta et al.,2011(3) | 344 | 452 | Ca | **-** |  | **1.59 (1.16-2.18)a** |  |
|  |  |  |  |  |  |  |  | **2.18 (1.26-3.77)b** |  |
| *ESR1* | rs2228480; Thr594Thr | Rebaї et al.,2009(77) | 106 | 229 | Af | **4.29 (3.04-6.07)** | 0.78 (0.61-1.01) | **8.81 (4.46-17.1)a** | 0.81 (0.61-1.07)a |
|  |  |  |  |  |  |  |  | **17.8 (7.81-40.8)b** | 0.51 (0.21-1.24)b |
| *FOSB* | rs12373539; -158G>A | Han et al.,2012(78) | 94 | 260 | As | 0.79 (0.55-1.14) | 0.84 (0.63-1.12) | 0.74 (0.45-1.22)a | 0.84 (0.63-1.11)a |
|  |  |  |  |  |  |  |  | 0.66 (0.27-1.62)b | 0.87 (0.39-1.91)b |
| *FOSB* | rs2282695; Ala39Ala | Han et al.,2012(78) | 94 | 260 | As | **1.57 (1.10-2.24)** |  | **1.67 (1.01-2.78)a** |  |
|  |  |  |  |  |  |  |  | **2.21 (1.02-4.79)b** |  |
| *FTO* | rs17817288 | Kitahara et al.,2012(79) | 340 | 444 | Ca | **1.37 (1.12-1.68)** | **1.28 (1.07-1.53)** | **1.46 (1.01-2.11)a** | 1.31 (0.99-1.74)a |
|  |  |  |  |  |  |  |  | **1.98 (1.30-3.02)b** | **1.63 (1.15-2.30)b** |
| *FTO* | rs11642841 | Kitahara et al.,2012(79) | 341 | 444 | Ca | **0.74 (0.60-0.91)** | **0.78 (0.65-0.93)** | **0.64 (0.47-0.87)a** | 0.88 (0.67-1.16)a |
|  |  |  |  |  |  |  |  | **0.61 (0.40-0.94)b** | **0.59 (0.42-0.84)b** |
| *FTO* | rs8047395 | Kitahara et al.,2012(79) | 341 | 440 | Ca | **1.39 (1.13-1.69)** |  | 1.23 (0.86-1.75)a |  |
|  |  |  |  |  |  |  |  | **1.97 (1.30-2.96)b** |  |
| *FTO* | rs1121980 | Kitahara et al.,2012(79) | 340 | 442 | Ca | **0.76 (0.62-0.93)** | **0.75 (0.63-0.89)** | **0.70 (0.51-0.96)a** | 0.84 (0.63-1.19)a |
|  |  |  |  |  |  |  |  | **0.60 (0.39-0.92)b** | **0.55 (0.39-0.78)b** |
| *FTO* | rs8050136 | Kitahara et al.,2012(79) | 340 | 443 | Ca | **0.77 (0.62-0.94)** | LD with rs1121980 | **0.73 (0.54-1.00)a** | LD with rs1121980 |
|  |  |  |  |  |  |  |  | **0.59 (0.38-0.93)b** |  |
| *FTO* | rs9939609 | Kitahara et al.,2012(79) | 340 | 443 | Ca | **0.77 (0.62-0.94)** | **0.77 (0.65-0.93)** | **0.74 (0.54-1.00)a** | **0.88 (0.67-1.16)a** |
|  |  |  |  |  |  |  |  | **0.60 (0.38-0.93)b** | **0.58 (0.41-0.83)b** |
| *FTO* | rs1477196 | Kitahara et al.,2012(79) | 339 | 439 | Ca | **1.31 (1.07-1.62)** | 1.12 (0.93-1.36) | 1.28 (0.94-1.75)a | 1.05 (0.82-1.36)a |
|  |  |  |  |  |  |  |  | **1.76 (1.14-2.72)b** | 1.36 (0.87-2.11)b |
| *FTO* | rs7202116 | Kitahara et al.,2012(79) | 341 | 443 | Ca | **0.77 (0.63-0.95)** | LD with rs1121980 | 0.74 (0.55-1.01)a | LD with rs1121980 |
|  |  |  |  |  |  |  |  | **0.60 (0.38-0.93)b** |  |
| *FTO* | rs1861867 | Kitahara et al.,2012(79) | 340 | 444 | Ca | **1.30 (1.06-1.59)** |  | **1.46 (1.07-2.01)a** |  |
|  |  |  |  |  |  |  |  | **1.54 (1.03-2.31)b** |  |
| *GNB3* | rs5443; 825C>T | Sheu et al.,2007(80) | 104 | 321 | Ca | **0.64 (0.44-0.92)** | 1.09 (0.84-1.40) | 0.66 (0.42-1.05)a | 1.10 (0.85-1.42)a |
|  |  |  |  |  |  |  |  | 0.29 (0.09-1.01)b | 1.04 (0.70-1.56)b |
| *GNRH2* | rs4815558 | Schonfeld et al.,2012(37) | 274 | 423 | Ca | **0.67 (0.49-0.92)** |  | **0.72 (0.50-1.03)a** |  |
|  |  |  |  |  |  |  |  | **0.32 (0.09-1.14)b** |  |
| *HDAC4* | rs6749348 | Neta et al.,2011(3) | 344 | 452 | Ca | **-** | 0.85 (0.62-1.16) | **0.41 (0.26-0.65)a** | 0.78 (0.56-1.08)a |
|  |  |  |  |  |  |  |  | **0.28 (0.03-2.46)b** | 1.92 (0.39-9.56)b |
| *HDAC4* | rs507159 | Neta et al.,2011(3) | 344 | 425 | Ca | **-** |  | **0.68 (0.49-0.93)a** |  |
|  |  |  |  |  |  |  |  | **0.39 (0.23-0.67)b** |  |
| *HDAC4* | rs7584828 | Neta et al.,2011(3) | 344 | 425 | Ca | **-** | 0.82 (0.64-1.05) | **0.55 (0.38-0.79)a** | **0.76 (0.58-1.00)a** |
|  |  |  |  |  |  |  |  | **0.33 (0.08-1.28)b** | **0.96 (0.41-2.25)b** |
| *HER2* | rs1801200 | Rebaї et al.,2009(81) | 106 | 286 | Af | **1.88 (1.18-3.01)** | 1.00 (0.79-1.28) | 1.36 (0.78-2.37)a | 0.96 (0.73-1.26)a |
|  |  |  |  |  |  |  |  | - | 1.32 (0.53-3.31)b |
| *HSD17B3* | rs10739847 | Schonfeld et al.,2012(37) | 452 | 91 | Ca | **1.24 (1.01-1.51)** |  | 1.12 (0.80-1.56)a |  |
|  |  |  |  |  |  |  |  | **1.52 (1.02-2.24)b** |  |
| *HSD3B1* | rs3765945 | Baida et al.,2008(33) | 199 | 16 | Ca | 1.09 (0.79-1.51) | 0.99 (0.83-1.18) | 1.14 (0.72-1.81)a | 0.96 (0.73-1.26)a |
|  |  |  |  |  |  |  |  | 1.19 (0.50-2.82)b | 0.99 (0.69-1.42)b |
| *IGF1R* | rs3743262; Thr766Thr | Cho et al.,2012(82) | 105 | 312 | As | 0.76 (0.54-1.06) |  | 0.78 (0.49-1.24)a |  |
|  |  |  |  |  |  |  |  | 0.52 (0.23-1.20)b |  |
| *IGF1R* | rs2229765; Glu1043Glu | Cho et al.,2012(82) | 105 | 312 | As | **0.56 (0.39-0.80)** | 0.94 (0.79-1.13) | **0.56 (0.35-0.90)a** | 0.86 (0.66-1.13)a |
|  |  |  |  |  |  |  |  | **0.28 (0.11-0.76)b** | 0.94 (0.64-1.38)b |
| *IGF1* | CA repeat | Xu et al.,2012(83) | 151 | 398 | Ca | 0.96 (0.73-1.28) |  | 1.23 (0.83-1.82)a |  |
|  |  |  |  |  |  |  |  | 0.67 (0.33-1.37)b |  |
| *INSR* | rs919275 | Kitahara et al.,2012(79) | 336 | 440 | Ca | **0.79 (0.64-0.97)** | 1.03 (0.86-1.23) | **0.67 (0.49-0.93)a** | 0.94 (0.71-1.24)a |
|  |  |  |  |  |  |  |  | **0.64 (0.41-0.98)b** | 1.09 (0.77-1.56)b |
| *ITGA6* | rs2141698; -1687A>G | Kim et al.,2011(84) | 104 | 318 | As | 0.94 (0.55-1.58) | 0.97 (0.80-1.19) | 1.07 (0.61-1.89)a | 0.94 (0.73-1.21)a |
|  |  |  |  |  |  |  |  | 0.34 (0.02-6.35)b | 1.01 (0.61-1.69)b |
| *ITGA6* | rs11895564; Ala380Thr | Kim et al.,2011(84) | 104 | 318 | As | **2.04 (1.24-3.37)** | 1.15 (0.95-1.39) | **1.96 (1.12-3.43)a** | 1.01 (0.78-1.31)a |
|  |  |  |  |  |  |  |  | 7.03 (0.64-78.5)b | 1.44 (0.96-2.18)b |
| *ITGB1* | rs2298141; Cys261Cys | Eun et al.,2013(85) | 94 | 123 | As | 0.83 (0.55-1.25) | 0.97 (0.78-1.20) | 0.79 (0.46-1.35)a | 1.00 (0.77-1.31)a |
|  |  |  |  |  |  |  |  | 0.80 (0.32-2.03)b | 0.83 (0.45-1.55)b |
| *ITGB1* | rs2230396; Gly392Gly | Eun et al.,2013(85) | 94 | 213 | As | 0.90 (0.63-1.28) | 0.85 (0.65-1.12) | 0.67 (0.39-1.15)a | 0.78 (0.58-1.06)a |
|  |  |  |  |  |  |  |  | 0.97 (0.46-2.06)b | 1.16 (0.43-3.17)b |
| *ITGB2* | rs2070946; -149A>G | Eun et al.,2013(85) | 88 | 216 | As | 1.30 (0.78-2.14) | 0.85 (0.78-1.17) | 1.73 (0.98-3.04)a | 1.01 (0.78-1.31)a |
|  |  |  |  |  |  |  |  | 0.25 (0.01-4.57)b | 0.82 (0.50-1.34)b |
| *ITGB2* | rs235326; Val441Val | Eun et al.,2013(85) | 94 | 213 | As | 0.80 (0.52-1.26) | 0.91 (0.75-1.11) | 0.70 (0.40-1.23)a | 0.92 (0.71-1.20)a |
|  |  |  |  |  |  |  |  | 0.93 (0.31-2.79)b | 0.83 (0.54-1.28)b |
| *ITGB2* | rs2070947 | Eun et al.,2013(85) | 94 | 213 | As | 0.69 (0.45-1.05) | 1.00 (0.82-1.21) | **0.49 (0.29-0.85)a** | 0.97 (0.75-1.24)a |
|  |  |  |  |  |  |  |  | 0.97 (0.34-2.75)b | 1.05 (0.65-1.68)b |
| *MDR1* | rs1045642; Ile1145Ile | Ozdemir et al.,2013(86) | 60 | 58 | Af | **2.85 (1.58-5.14)** | 0.86 (0.72-1.03) | **2.63 (1.10-6.26)a** | 0.82 (0.61-1.10)a |
|  |  |  |  |  |  |  |  | **4.42 (1.42-13.7)b** | 0.75 (0.54-1.06)b |
| *OPN* | rs17524488; -156G>GG | Mu et al.,2013(87) | 363 | 413 | As | 0.86 (0.71-1.05) | 0.95 (0.78-1.14) | 0.82 (0.59-1.15)a | 0.81 (0.63-1.04)a |
|  |  |  |  |  |  |  |  | 0.74 (0.48-1.11)b | 1.08 (0.70-1.66)b |
| *OPN* | rs11730582; -443C>T | Mu et al.,2013(87) | 363 | 413 | As | **2.14 (1.74-2.62)** | 1.04 (0.87-1.24) | **2.05 (1.46-2.90)a** | 0.80 (0.59-1.08)a |
|  |  |  |  |  |  |  |  | **4.31 (2.85-6.52)**b | 1.08 (0.76-1.54)b |
| *OPN* | rs28357094; -66T>G | Mu et al.,2013(87) | 363 | 413 | As | 1.01 (0.80-1.24) |  | 1.01 (0.72-1.42)a |  |
|  |  |  |  |  |  |  |  | 1.03 (0.70-1.52)b |  |
| *PIK3CA* | rs17849071; 105T>G | Xing et al.,2012(88) | NA | NA | Ca | - | 0.71 (0.51-0.99) | 0.52 (0.23-1.19)a | 0.67 (0.47-0.96)a |
|  |  |  |  |  |  |  |  | - | 0.79 (0.21-2.95)b |
| *PTPRJ* | rs4752904; Asp872Glu | Iuliano et al.,2010(89) | 299 | 339 | Ca | **0.82 (0.65-1.02)** | 1.07 (0.90-1.28) | **0.58 (0.41-0.83)a** | 0.96 (0.72-1.28)a |
|  |  |  |  |  |  |  |  | **0.73 (0.47-1.15)b** | 1.19 (0.83-1.71)b |
| *SULF1* | rs6472462 | Schonfeld et al.,2012(37) | 343 | 450 | Ca | **1.28 (1.05-1.56)** | 1.09 (0.91-1.30) | 1.40 (0.97-2.02)a | 0.92 (0.69-1.23)a |
|  |  |  |  |  |  |  |  | **1.67 (1.11-2.50)b** | 1.19 (0.84-1.68)b |
| *VEGFA* | rs699947; -2578C>A | Hsiao et al.,2007(90) | 56 | 112 | Ca | **1.66 (1.11-2.50)** | 1.19 (0.99-1.42) | **1.89 (1.08-3.32)a** | 1.23 (0.94-1.63)a |
|  |  |  |  |  |  |  |  | 2.30 (0.87-6.13)b | 1.38 (0.97-1.96)b |
| *WWOX* | rs3764340; Pro282Ala | Cancemi et al.,2011(91) | 1741 | 1042 | Ca | **1.46 (1.13-1.87)** |  | **1.57 (1.21-2.06)a** |  |
|  |  |  |  |  |  |  |  | 0.63 (0.16-2.51)b |  |
| **GWAS or intergenic regions** | | | | | | | | | |
| 1p12-13 | rs4659200 | Baida et al.,2008(33) | 200 | 136 | Ca | 0.84 (0.61-1.15) | 0.97 (0.81-1.17) | 0.99 (0.62-1.60)a | 1.15 (0.88-1.50)a |
|  |  |  |  |  |  |  |  | 0.66 (0.35-1.26)b | 0.85 (0.58-1.24)b |
| 1p12-13 | rs2145418 | Baida et al.,2008(33) | 197 | 137 | Ca | **4.03 (2.86-5.66)** | 1.03 (0.82-1.30) | **4.94 (2.89-8.47)a** | 1.03 (0.79-1.34)a |
|  |  |  |  |  |  |  |  | **8.40 (4.37-16.2)b** | 1.09(0.54-2.20)b |
| 1p12-13 | rs7515409 | Baida et al.,2008(33) | 222 | 199 | Ca | 1.02 (0.78-1.34) | 0.94 (0.79-1.12) | 0.84 (0.54-1.31)a | 0.80 (0.60-1.07)a |
|  |  |  |  |  |  |  |  | 1.11 (0.62-1.97)b | 0.89 (0.63-1.26)b |
| 1p12-13 | rs1241 | Baida et al.,2008(33) | 201 | 135 | Ca | 0.90 (0.65-1.25) | 0.92 (0.76-1.10) | 0.69 (0.44-1.10)a | 1.09 (0.84-1.42)a |
|  |  |  |  |  |  |  |  | 0.74 (0.48-1.16)b | 0.73 (0.49-1.08)b |
| 1p31.3 | rs334725 | Gudmundsson et al.,2012(92) | 1156 | 42617 | Ca | **1.31 (1.08-1.60)** | 1.39 (0.91-2.13) | **-** | 1.33 (0.86-2.05)a |
|  |  |  |  |  |  |  |  | **-** | 2.74 (0.30-24.6)b |
| 2q35 | rs966423 | Gudmundsson et al.,2012(92) | 1150 | 414488 | Ca | **1.34 (1.22-1.47)** | **1.26 (1.06-1.51)** | **-** | 0.98 (0.74-1.28)a |
|  |  |  |  |  |  |  |  | **-** | **1.74 (1.21-2.50)b** |
|  |  | Liyanarachchi et al.,2013(93) | 605 | 916 | Ca | **1.30 (1.12-1.51)** |  | **-** |  |
|  |  |  |  |  |  |  |  | **-** |  |
|  |  | Liyanarachchi et al.,2013(93) | 1633 | 1663 | Ca | **1.14 (1.01-1.29)** |  | **-** |  |
|  |  |  |  |  |  |  |  | **-** |  |
|  |  | Wang et al.,2013(94) | 845 | 1005 | As | **1.31 (1.12-1.55)** |  | 1.33 (0.78-2.26)a |  |
|  |  |  |  |  |  |  |  | **1.76 (1.05-2.95)b** |  |
| 5q24 | rs2910164 | Jazdzewski et al.,2008(95) | 608 | 901 | Ca | 1.14 (0.96-1.34) | 0.95 (0.78-1.16) | **1.55 (1.25-1.91)a** | 0.94 (0.73-1.22)a |
|  |  |  |  |  |  |  |  | **0.50 (0.28-0.89)b** | 0.91 (0.56-1.47)b |
|  |  | Jones et al.,2012(96) | 748 | 6058 | Ca | 1.00 (0.88-1.14) |  | 1.01 (0.86-1.19)a |  |
|  |  |  |  |  |  |  |  | 0.98 (0.70-1.38)b |  |
|  |  | Wei et al.,2013(97) | 753 | 760 | As | 0.95 (0.82-1.09) |  | 0.88 (0.71-1.10)a |  |
|  |  |  |  |  |  |  |  | 0.93 (0.70-1.24)b |  |
| 8p12 | rs2439302 | Gudmundsson et al.,2012(92) | 1134 | 5625 | Ca | **1.36 (1.23-1.50)** | 1.12 (0.94-1.34) | **-** | 1.10 (0.83-1.45)a |
|  |  |  |  |  |  |  |  | **-** | 1.28 (0.90-1.83)b |
|  |  | Liyanarachchi et al.,2013(93) | 605 | 916 | Ca | **1.46 (1.26-1.70)** |  | **-** |  |
|  |  |  |  |  |  |  |  | **-** |  |
|  |  | Liyanarachchi et al.,2013(93) | 1633 | 1663 | Ca | **1.23 (1.09-1.38)** |  | **-** |  |
|  |  |  |  |  |  |  |  | **-** |  |
|  |  | Wang et al.,2013(94) | 845 | 1005 | As | **1.40 (1.20-1.65)** |  | **1.39 (1.14-1.70)a** |  |
|  |  |  |  |  |  |  |  | **1.96 (1.25-3.08)b** |  |
| 8q24 | rs6983267 | Akdi et al.,2011(56) | 330 | 463 | Ca | 0.98 (0.81-1.18) | 1.02 (0.86-1.22) | 1.14 (0.83-1.57)a | 1.15 (0.56-1.54)a |
|  |  |  |  |  |  |  |  | 0.94 (0.65-1.36)b | 1.03 (0.73-1.46)b |
|  |  | Jones et al.,2012(96) | 751 | 6115 | Ca | **1.14 (1.03-1.27)** |  | 1.01 (0.83-1.23)a |  |
|  |  |  |  |  |  |  |  | **1.27 (1.03-1.57)b** |  |
|  |  | Wang et al.,2013(94) | 845 | 1005 | As | 1.01 (0.88-1.15) |  | 0.99 (0.80-1.21)a |  |
|  |  |  |  |  |  |  |  | 1.01 (0.78-1.32)b |  |
| 8q24 | rs1447295 | Akdi et al.,2011(56) | 393 | 477 | Ca | 1.19 (0.83-1.71) | 1.00 (0.70-1.43) | 1.12 (0.75-1.66)a | 1.17 (0.81-1.69)a |
|  |  |  |  |  |  |  |  | 2.07 (0.49-8.71)b | - |
| 9q22 | rs965513 | Gudmundsson et al.,2009(98) | 962 | 38923 | Ca | **1.75 (1.59-1.94)** | **1.78 (1.48-2.14)** | - | **1.80 (1.37-2.35)a** |
|  |  |  |  |  |  |  |  | - | **3.08 (2.10-4.53)b** |
|  |  | Takahashi et al.,2010(99) | 667 | 620 | Ca | **1.65 (1.43-1.91)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Jones et al.,2012(96) | 751 | 6120 | Ca | **1.96 (1.76-2.18)** |  | **2.12 (1.77-2.55)a** |  |
|  |  |  |  |  |  |  |  | **3.89 (3.10-4.86)b** |  |
|  |  | Tomaz et al.,2012(100) | 80 | 130 | Ca | **2.81 (1.87-4.22)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Liyanarachchi et al.,2013(93) | 605 | 916 | Ca | **2.09 (1.80-2.42)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Liyanarachchi et al.,2013(93) | 1633 | 1663 | Ca | **1.81 (1.59-2.06)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Matsuse et al.,2013(101) | 479 | 2764 | As | **1.69 (1.29-2.21)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Wang et al.,2013(94) | 845 | 1005 | As | **1.53 (1.23-1.90)** |  | **1.60 (1.26-2.04)a** |  |
|  |  |  |  |  |  |  |  | 1.63 (0.64-4.14)b |  |
| 9q22 | rs7048394 | Landa et al.,2009(102) | 520 | 504 | Ca | **1.46 (1.19-1.78)** | **1.55 (1.29-1.87)** | - | **1.39 (1.07-1.80)a** |
|  |  |  |  |  |  |  |  | - | **2.78 (1.80-4.28)b** |
| 9q22 | rs894673 | Landa et al.,2009(102) | 520 | 504 | Ca | **1.39 (1.17-1.65)** | **1.65 (1.38-1.97)** | - | **1.46 (1.09-1.95)a** |
|  |  |  |  |  |  |  |  | - | **2.92 (2.02-4.22)b** |
| 9q22 | rs3758249 | Landa et al.,2009(102) | 517 | 503 | Ca | **1.39 (1.17-1.66)** | LD with rs894673 | - | LD with rs894673 |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs907577 | Landa et al.,2009(102) | 518 | 503 | Ca | **1.39 (1.17-1.65)** | LD with rs894673 | - | LD with rs894673 |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs3021526; Ser275Ser | Landa et al.,2009(102) | 475 | 495 | Ca | **1.32 (1.11-1.58)** | LD with rs7048394 | - | LD with rs7048394 |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Tomaz et al.,2012(100) | 80 | 130 | Ca | **1.89 (1.27-2.82)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs10119760 | Landa et al.,2009(102) | 518 | 504 | Ca | **1.47 (1.23-1.75)** | LD with rs894673 | - | LD with rs894673 |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs1867277 | Takahashi et al.,2010(99) | 660 | 820 | Ca | **1.48 (1.27-1.71)** | LD with rs894673 | - | LD with rs894673 |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Jones et al.,2012(96) | 753 | 6087 | Ca | **1.75 (1.57-1.94)** |  | **1.99 (1.64-2.41)a** |  |
|  |  |  |  |  |  |  |  | **3.08 (2.46-3.84)b** |  |
|  |  | Tomaz et al.,2012(100) | 80 | 130 | Ca | **1.76 (1.18-2.62)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs7849497 | Tomaz et al.,2012(100) | 80 | 130 | Ca | **2.45 (1.60-3.76)** | LD with rs7048394 | - | LD with rs7048394 |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs1867278 | Tomaz et al.,2012(100) | 80 | 130 | Ca | **1.76 (1.18-2.62)** | LD with rs894673 | - | LD with rs894673 |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs1867279 | Tomaz et al.,2012(100) | 80 | 130 | Ca | **2.52 (1.64-3.86)** | LD with rs7048394 | - | LD with rs7048394 |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs1867280 | Tomaz et al.,2012(100) | 80 | 130 | Ca | **1.68 (1.13-2.49)** | LD with rs894673 | - | LD with rs894673 |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | rs3021523; Leu129Leu | Tomaz et al.,2012(100) | 80 | 130 | Ca | **2.39 (1.56-3.67)** | LD with rs894673 | - | LD with rs894673 |
|  |  |  |  |  |  |  |  | - |  |
| 9q22 | PolyA | Tomaz et al.,2012(100) | 80 | 130 | Ca | **2.44 (1.61-3.68)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
| 14q13 | rs944289 | Gudmundsson et al.,2009(98) | 1006 | 37196 | Ca | **1.37 (1.24-1.52)** | **1.25 (1.05-1.49)** | - | 1.13 (0.81-1.58)a |
|  |  |  |  |  |  |  |  | - | **1.48 (1.04-2.09)b** |
|  |  | Takahashi et al.,2010(99) | 660 | 820 | Ca | 1.13 (0.95-1.36) |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Jones et al.,2012(96) | 753 | 6120 | Ca | **1.33 (1.19-1.49)** |  | **1.31 (1.02-1.68)a** |  |
|  |  |  |  |  |  |  |  | **1.76 (1.37-2.25)b** |  |
|  |  | Liyanarachchi et al.,2013(93) | 605 | 916 | Ca | **1.25 (1.08-1.46)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Liyanarachchi et al.,2013(93) | 1633 | 1663 | Ca | **1.22 (1.09-1.38)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Matsuse et al.,2013(101) | 467 | 2766 | As | **1.21 (1.04-1.39)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Wang et al.,2013(94) | 845 | 1005 | As | **1.53 (1.33-1.72)** |  | **1.87 (1.50-2.34)a** |  |
|  |  |  |  |  |  |  |  | **2.23 (1.71-2.90)b** |  |
| 14q13 | rs116909374 | Gudmundsson et al.,2012(92) | 1138 | 5340 | Ca | **2.09 (1.68-2.60)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Liyanarachchi et al.,2013(93) | 605 | 916 | Ca | **2.28 (1.57-3.36)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |
|  |  | Liyanarachchi et al.,2013(93) | 1633 | 1663 | Ca | **1.66 (1.13-2.44)** |  | - |  |
|  |  |  |  |  |  |  |  | - |  |

Population: Af, African; As, Asian; Ca, Caucasian; Mi, Mixed.

a, Heterozygotes; b, Rare homozygotes.

**Table S2.** Data published in literature where only one genetic model (either dominant or recessive) was reported in the manuscript. No allelic OR or additive model could be evaluated according to the data reported in the manuscript.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene or Locus** | **dbSNP ID; Variant** | **Reference** | **Cases** | **Contr.** | **Pop.** | **Published OR**  **(dominant model)** | **OR of the dominant model**  **(present GWAS)** | **Published OR (recessive model)** | **OR of the recessive model**  **(present GWAS)** |
| **DNA repair** | | | | | | | | | |
| *ATM* | rs228589; -736A>T | Xu et al., 2012(7) | 590 | 881 | Mi | 0.80 (0.60-1.00) | 1.09 (0.86-1.39) |  |  |
| *ATM* | rs189037; -570C>T | Xu et al., 2012(7) | 590 | 883 | Mi | 0.80 (0.60-1.00) | LD with rs228589 |  |  |
| *ATM* | rs1800057; Pro1054Arg | Xu et al., 2012(7) | 586 | 876 | Mi | **1.90 (1.10-3.10)** |  |  |  |
| *ATM* | rs1801516; Asp1853Asn | Xu et al.,2012(7) | 592 | 885 | Mi | 0.90 (0.70-1.10) |  |  |  |
| *XRCC1* | rs25489; Arg280His | Sigurdson et al.,2009(4) | 865 | 896 | Ca | 1.00 (0.70-1.30) | 0.83 (0.60-1.17) |  |  |
| **Cell-cycle regulation and apoptosis** | | | | | | | | | |
| *CDKN2A* | rs3731217 | Zhang et al.,2013(103) | 303 | 511 | Mi | **1.70 (1.20-2.30)** | 0.96 (0.73-1.27) |  |  |
| *CDKN2A* | rs3088440 | Zhang et al.,2013(103) | 303 | 511 | Mi | 1.10 (0.70-1.50) |  |  |  |
| *MDM2* | rs2279744 | Zhang et al.,2013(103) | 303 | 511 | Mi |  |  | **1.50 (1.10-2.00)** | 1.27 (0.91-1.77) |
| *MDM2* | rs937283 | Zhang et al.,2013(103) | 303 | 511 | Mi | 1.00 (0.70-1.30) | 1.09 (0.85-1.39) |  |  |
| *TP53* | rs1042522; Pro72Arg | Bufalo et al.,2006(46) | 63 | 116 | Mi | **3.52 (1.69-7.36)** | 0.97 (0.76-1.24) |  |  |
| *CYP1A1* | rs4646903; 3801T>C\_m1 | Bufalo et al.,2006(46) | 139 | 277 | Mi | **0.56 (0.36-0.89)** | 1.32 (0.97-1.80) |  |  |
|  |  | Guilhen et al.,2009(47) | 164 | 196 | Mi | **0.49 (0.27-0.90)** |  |  |  |
| *CYP1A1* | rs1048943; Ile462Val\_m2 | Bufalo et al.,2006(46) | 136 | 277 | Mi | 0.96 (0.62-1.49) |  |  |  |
|  |  | Guilhen et al.,2009(47) | 164 | 196 | Mi | 1.31 (0.73-2.34) |  |  |  |
| *GSTP1* | rs1695; Ile105Val | Gaspar et al.,2004(42) | 103 | 204 | Ca | 1.25 (0.77-2.03) | 1.02 (0.80-1.31) |  |  |
|  |  | Bufalo et al.,2006(46) | 180 | 203 | Mi | 0.77 (0.50-1.19) |  |  |  |
|  |  | Guilhen et al.,2009(47) | 195 | 196 | Mi | 1.28 (0.84-2.49) |  |  |  |
|  | **Meta-analyses from:** | Adjadj et al.,2009(48) | 348 | 523 | Mi | 1.10 (0.80-1.50) |  |  |  |
|  |  | Li et al.,2012(49) | 514 | 534 | Ca | 0.81 (0.62-1.06) |  |  |  |
| *GSTO1* | rs4925; Ala140Asp | Bufalo et al.,2006(46) | 110 | 184 | Mi | 1.49 (0.74-3.00) | 0.99 (0.77-1.27) |  |  |
| *NAT1* | rs11777998 | Asc.-Kilfoy et al.,2012(38) | NA | NA | Ca | 1.10 (0.76-1.59) | 0.99 (0.75-1.30) |  |  |
| *NAT2* | rs1041983; Tyr94Tyr | Guilhen et al.,2009(47) | 195 | 196 | Mi | **0.24 (0.15-0.38)** | 1.03 (0.80-1.31) |  |  |
| *NAT2* | rs1799930; Arg197Gln | Guilhen et al.,2009(47) | 164 | 196 | Mi | 0.65 (0.40-1.06) |  |  |  |
| *NAT2* | rs1799929; Leu161Leu | Guilhen et al.,2009(47) | 164 | 196 | Mi | 0.94 (0.59-1.50) |  |  |  |
| *NAT2* | rs1208; Arg268Lys | Guilhen et al.,2009(47) | 195 | 196 | Mi | **1.88 (1.19-2.97)** | 0.94 (0.73-1.23) |  |  |
| *NAT2* | rs1799931; Gly286Gln | Guilhen et al.,2009(47) | 164 | 196 | Mi | 0.62 (0.32-2.01) |  |  |  |
| *NAT2* | rs1801279; Arg64Gln | Guilhen et al.,2009(47) | 195 | 196 | Mi | **0.15 (0.07-0.35)** |  |  |  |
| **Thyroid function** | | | | | | | | | |
| *TSHR* | rs2234919; Pro52Thr | Matakidou et al.,2004(55) | 304 | 317 | Ca | 0.90 (0.50-1.50) |  |  |  |
| *TSHR* | rs1991517; Asp727Glu | Matakidou et al.,2004(55) | 304 | 324 | Ca | 0.80 (0.40-1.30) |  |  |  |
|  |  | Lönn et al.,2007(59) | 160 | 483 | Mi | 0.80 (0.40-1.30) |  |  |  |
| **MAPK pathway** | | | | | | | | | |
| *EPAC* | rs12422983; Gly332Ser | Sigurdson et al.,2009(4) | 811 | 826 | Ca | 1.00 (0.80-1.20) | 0.88 (0.68-1.13) |  |  |
| *GFRA1* | rs45568534; -193C>G | Sigurdson et al.,2009(4) | 871 | 902 | Ca | **1.80 (1.00-3.10)** |  |  |  |
|  |  | Lönn et al.,2007(59) | 161 | 477 | Mi | 0.70 (0.30-1.50) |  |  |  |
| *GFRA3* | rs77536832; IVS7+39G>A | Sigurdson et al.,2009(4) | 847 | 881 | Ca | 0.90 (0.70-1.20) |  |  |  |
|  |  | Lönn et al.,2007(59) | 160 | 485 | Mi | 1.40 (0.80-2.20) |  |  |  |
| **Other cancer genes** | | | | | | | | | |
| *IGFBP3* | rs2132571 | Xu et al.,2012(83) | 173 | 401 | Ca | 0.80 (0.60-1.10) | 1.03 (0.81-1.31) |  |  |
| *IGFBP3* | rs2132572 | Xu et al.,2012(83) | 156 | 401 | Ca | **0.60 (0.40-0.80)** | 0.86 (0.66-1.13) |  |  |
| *IGFBP3* | rs2854744 | Xu et al.,2012(83) | 173 | 401 | Ca | **1.60 (1.00-2.40)** | 0.96 (0.74-1.26) |  |  |
| *IGFBP3* | rs13241830 | Xu et al.,2012(83) | 173 | 401 | Ca | 0.80 (0.60-1.20) | LD with rs2132571 |  |  |

Population: Af, African; As, Asian; Ca, Caucasian; Mi, Mixed.

**Table S3.** Meta-analyses of the literature data for the SNPs evaluated in two or more than one study.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gene or Locus** | **dbSNP ID; Variant** | **OR**  **(allelic model)** | **Pass** | **OR**  **(additive model)** | **Pass** |
| **DNA repair** | |  |  |  |  |
| *ADPRT* | rs1136410; Val762Ala | 1.21 (0.99-1.46) | 0.06 | 1.39 (1.00-1.94)a | 0.05 |
|  |  |  |  | - |  |
| *APEX1* | rs1130409; Asp148Glu | 1.05 (0.97-1.13) | 0.25 | 1.22 (0.95-1.33)a | 0.18 |
|  |  |  |  | 1.06 (0.85-131)b | 0.62 |
| *ATM* | rs664677; IVS22-77T>C | 1.06 (0.91-1.23) | 0.45 | 1.11 (0.88-1.41)a | 0.36 |
|  |  |  |  | 1.11 (0.80-1.53)b | 0.53 |
| *BRCA1* | rs799917; Pro871Leu | 0.85 (0.71-1.01) | 0.07 | 0.79 (0.61-1.03)a | 0.08 |
|  |  |  |  | 0.77 (0.53-1.11)b | 0.16 |
| *BRCA1* | rs16941; Glu1038Gly | 0.87 (0.71-1.01) | 0.15 | 0.78 (0.60-1.01)a | 0.06 |
|  |  |  |  | 0.88 (0.59-1.31)b | 0.52 |
| *BRCA1* | rs16942; Lys1183Arg | 0.82 (0.68-0.99) | 0.03 | 0.75 (0.58-0.97)a | 0.03 |
|  |  |  |  | 0.74 (0.47-1.16)b | 0.19 |
| *BRCA1* | rs1799966; Ser1613Gly | 0.86 (0.72-1.04) | 0.12 | 0.83 (0.64-1.07)a | 0.14 |
|  |  |  |  | 0.78 (0.50-1.20)b | 0.25 |
| *BRCA2* | rs144848; Asn372His | 1.08 (0.94-1.25) | 0.27 | 1.06 (0.89-1.27)a | 0.51 |
|  |  |  |  | 1.21 (0.82-1.79)b | 0.34 |
| *OGG1* | rs1052133; Ser326Cys | 0.96 (0.78-1.18) | 0.68 | 0.90 (0.70-1.15)a | 0.39 |
|  |  |  |  | - |  |
| *XRCC1* | rs1799782; Arg194Trp | 1.00 (0.88-1.13) | 0.95 | 0.96 (0.83-1.12)a | 0.63 |
|  |  |  |  | 0.95 (0.67-1.36)b | 0.79 |
| *XRCC1* | rs25489; Arg280His | 1.03 (0.86-1.24) | 0.73 | 1.03 (0.84-1.25)a | 0.79 |
|  |  |  |  | 1.01 (0.51-1.97)b | 0.99 |
| *XRCC1* | rs25487; Arg399Gln | 0.95 (0.88-1.03) | 0.24 | 0.93 (0.80-1.09)a | 0.37 |
|  |  |  |  | 0.98 (0.77-1.25)b | 0.87 |
| *XRCC2* | rs3218536; Arg188His | 1.01 (0.77-1.33) | 0.92 | 0.76 (0.42-1.40)a | 0.38 |
|  |  |  |  | - |  |
| *XRCC3* | rs861539; Thr241Met | 1.11 (0.95-1.29) | 0.18 | 1.01 (0.81-1.27)a | 0.94 |
|  |  |  |  | 1.29 (0.93-1.78)b | 0.13 |
| *XRCC7* | rs7830743; Ile3434Thr | 1.40 (1.06-1.86) | 0.02 | 1.56 (1.13-2.16)a | 0.01 |
|  |  |  |  | 1.13 (0.40-3.19)b | 0.81 |
| **Cell-cycle regulation and apoptosis** | |  |  |  |  |
| *BCL2* | rs2279115; -938A>C | 1.19 (094-1.52) | 0.15 | 0.99 (0.69-1.43)a | 0.97 |
|  |  |  |  | 1.60 (0.96-2.66)b | 0.07 |
| *TP53* | rs1042522; Pro72Arg | 1.15 (0.98-1.35) | 0.09 | 1.04 (0.83-1.31)a | 0.72 |
|  |  |  |  | 1.45 (0.99-2.11)b | 0.05 |
| *WDR3* | rs4658973 | 0.58 (0.46-0.74) | 7.07×10-6 | 0.52 (0.37-0.74)a | 7.07×10-6 |
|  |  |  |  | 0.41 (0.24-0.72)b | 1.46×10-3 |
| **Xenobiotic metabolism** | |  |  |  |  |
| *CYP1A1* | rs4646903; 3801T>C\_m1 | - |  | 1.06 (064-1.75)a | 0.84 |
|  |  |  |  | 1.94 (0.87-4.32)b | 0.11 |
| *CYP1A1* | rs1048943; Ile462Val\_m2 | 1.07 (0.78-1.53)c | 0.69 |  |  |
| *GSTM1* | GSTM1\*0 | - |  | - |  |
|  |  |  |  | 1.12 (0.97-1.28)b | 0.13 |
| *GSTT1* | GSTT1\*0 | - |  | - |  |
|  |  |  |  | 1.50 (1.26-1.78)b | 4.22×10-6 |
| *GSTP1* | rs1695; Ile105Val | 1.01 (0.82-1.25) | 0.93 | 0.96 (0.71-1.29)a | 0.77 |
|  |  |  |  | 0.98 (0.64-1.50)b | 0.93 |
| *MTHFR* | rs1801133; Ala222Val | 1.31 (1.03-1.65) | 0.03 | 1.25 (0.92-1.70)a | 0.15 |
|  |  |  |  | 2.06 (1.02-4.18)b | 0.05 |
| *NAT2* | rs1799930; Arg197Gln | 1.17 (0.95-1.44) | 0.15 | 1.26 (0.95-1.68)a | 0.11 |
|  |  |  |  | 1.19 (0.75-1.88)b | 0.46 |
| **Thyroid function** | |  |  |  |  |
| *TPO* | rs2048722; 1495800A>G | 0.96 (0.87-1.06) | 0.41 | 1.08 (0.92-1.27)a | 0.35 |
|  |  |  |  | 0.89 (0.73-1.09)b | 0.26 |
| *TPO* | rs732609; Thr725Pro | 0.95 (0.86-1.04) | 0.27 | 1.01 (0.87-1.17)a | 0.93 |
|  |  |  |  | 0.85 (0.69-1.04)b | 0.12 |
| *TPO* | rs1042589; 1546327C>G | 0.94 (0.85-1.04) | 0.21 | 0.95 (0.81-1.12)a | 0.54 |
|  |  |  |  | 0.88 (0.72-1.07)b | 0.20 |
| *TSHR* | rs1991517; Asp727Glu | 0.80 (0.53-1.21)c | 0.29 |  |  |
| *TSHR* | rs2075179; Asn187Asn | 0.95 (0.83-1.10) | 0.50 | 0.93 (0.78-1.12)a | 0.47 |
|  |  |  |  | 0.97 (0.71-1.24)b | 0.85 |
| *TSHR* | IVS1+8651A>G | 1.04 (0.89-1.21) | 0.62 | 0.96 (0.80-1.15)a | 0.63 |
|  |  |  |  | 1.43 (0.90-2.28)b | 0.13 |
| **MAPK pathway** | |  |  |  |  |
| *GFRA1* | rs45568534; -193C>G | 1.32 (0.83-2.09)c | 0.24 |  |  |
| *GFRA3* | rs77536832; IVS7+39G>A | 0.99 (0.78-1.26)c | 0.95 |  |  |
| *RET* | rs1800858; Ala45Ala | 0.94 (0.83-1.06) | 0.28 | 0.88- (0.74-1.04)a | 0.12 |
|  |  |  |  | 0.94 (0.71-1.24)b | 0.65 |
| *RET* | rs1799939; Gly691Ser | 1.07 (0.93-1.24) | 0.32 | 1.04 (0.85-1.19)a | 0.66 |
|  |  |  |  | 1.25 (0.82-1.88)b | 0.30 |
| *RET* | rs1800861; Leu769Leu | 1.02 (0.91-1.15) | 0.75 | 1.00 (0.85-1.19)a | 0.97 |
|  |  |  |  | 1.06 (0.82-1.37)b | 0.68 |
| *RET* | rs1800862; Ser836Ser | 1.38 (1.04-1.83) | 0.03 | 1.40 (1.05-1.87)a | 0.02 |
|  |  |  |  | - |  |
| **GWAS or intergenic regions** | |  |  |  |  |
| 2q35 | rs966423 | 1.28 (1.20-1.36) | 1.06×10-14 | - |  |
|  |  |  |  | - |  |
| 5q24 | rs2910164 | 1.02 (0.93-1.10) | 0.72 | 1.10 (0.98-1.23)a | 0.10 |
|  |  |  |  | 0.88 (0.72-1.08)a | 0.21 |
| 8p12 | rs2439302 | 1.35 (1.26-1.43) | 1.47×10-20 | - |  |
|  |  |  |  | - |  |
| 8q24 | rs6983267 | 1.07 (0.99-1.15) | 0.07 | 1.02 (0.90-1.17)a | 0.74 |
|  |  |  |  | 1.12 (0.97-1.30)b | 0.14 |
| 9q22 | rs965513 | 1.83 (1.74-1.92) | <10-20 | - |  |
|  |  |  |  | - |  |
| 9q22 | rs3021526; Ser275Ser | 1.40 (1.19-1.65) | 5.44×10-5 | - |  |
|  |  |  |  | - |  |
| 9q22 | rs1867277 | 1.66 (1.53-1.81) | <10-20 | - |  |
|  |  |  |  | - |  |
| 14q13 | rs944289 | 1.31 (1.25-1.37) | <10-20 | - |  |
|  |  |  |  | - |  |
| 14q13 | rs116909374 | 2.14 (1.77-2.58) | 2.48×10-15 | - |  |
|  |  |  |  | - |  |

a, heterozygotes; b, rare homozygotes; c, only dominant model available.

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