**Supplementary Table 3  Summary of GWAS for chemotherapy-induced alopecia with each drug subgroups (P < 10$^{-6}$)**

| Drug/drug subgroup | CHR | SNP | Gene | Allele 1/2 (risk) | RAF | | P-value | | | | OR[a] | 95% CI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | ADR[b] | Non-ADR[c] | Allelic | Dominant | Recessive | Pmin | | |
| CEF | 13 | rs3885907 | ALOX5AP | G/T (G) | 0.36 | 0.18 | 1.17E-05 | 1.38E-06 | 1.70E-01 | 1.38E-06 | 2.66 | (1.71-4.13) |
| | 13 | rs9508835 | ALOX5AP | T/G (T) | 0.30 | 0.13 | 1.16E-05 | 1.52E-06 | 4.48E-01 | 1.52E-06 | 2.90 | (1.78-4.72) |
| | 13 | rs10162089 | ALOX5AP | T/C (T) | 0.35 | 0.18 | 4.26E-05 | 2.66E-06 | 3.78E-01 | 2.66E-06 | 2.51 | (1.62-3.91) |
| | 1 | rs4474258 | LOC100130235 | G/A (A) | 0.58 | 0.43 | 1.21E-03 | 3.45E-01 | 5.29E-06 | 5.29E-06 | 1.89 | (1.29-2.75) |
| | 10 | rs7089227 | PRPF18 | G/T (G) | 0.58 | 0.41 | 3.34E-04 | 6.77E-06 | 2.80E-01 | 6.77E-06 | 1.99 | (1.37-2.90) |
| | 13 | rs4075692 | ALOX5AP | A/G (A) | 0.31 | 0.15 | 5.08E-05 | 7.48E-06 | 4.48E-01 | 7.48E-06 | 2.59 | (1.62-4.13) |
| | 13 | rs9671124 | ALOX5AP | T/C (T) | 0.31 | 0.15 | 5.08E-05 | 7.48E-06 | 4.48E-01 | 7.48E-06 | 2.59 | (1.62-4.13) |
| CAF | 1 | rs594206 | BCL9 | G/A (A) | 0.99 | 0.78 | 1.81E-06 | 5.91E-07 | 1.00E+00 | 5.91E-07 | 36.3 | (4.58-287) |
| | 1 | rs672203 | CTH | G/A (A) | 0.85 | 0.52 | 7.68E-06 | 1.62E-06 | 2.41E-02 | 1.62E-06 | 5.33 | (2.59-11.0) |
| | 9 | rs6475600 | SMARCA2 | T/C (C) | 0.93 | 0.63 | 1.86E-06 | 2.53E-06 | 7.66E-02 | 1.86E-06 | 7.78 | (3.25-18.6) |
| | 4 | rs6845621 | LCORL | C/T (C) | 0.59 | 0.20 | 1.91E-06 | 3.47E-06 | 1.58E-02 | 1.91E-06 | 5.53 | (2.61-11.7) |
| | 9 | rs10818894 | DENND1A | A/G (G) | 0.96 | 0.70 | 3.59E-06 | 2.16E-06 | 2.97E-01 | 2.16E-06 | 10.4 | (3.56-30.1) |
| | 8 | rs10112481 | LOC100129861 | A/C (A) | 0.59 | 0.22 | 4.30E-06 | 8.72E-04 | 5.26E-05 | 4.30E-06 | 5.12 | (2.46-10.6) |
| | 1 | rs8179319 | CTH | A/G (G) | 0.84 | 0.50 | 6.32E-06 | 6.92E-06 | 2.26E-02 | 6.32E-06 | 5.09 | (2.51-10.4) |
| | 18 | rs637644 | CDH7 | A/G (G) | 0.99 | 0.80 | 6.62E-06 | 4.80E-05 | 8.57E-02 | 6.62E-06 | 32.5 | (4.08-259) |
| | 16 | rs11644424 | CDH13 | G/T (T) | 0.73 | 0.44 | 3.82E-04 | 7.58E-06 | 3.30E-01 | 7.58E-06 | 3.32 | (1.71-6.44) |
| | 16 | rs11860092 | CDH13 | G/A (A) | 0.71 | 0.44 | 1.25E-03 | 9.66E-06 | 4.42E-01 | 9.66E-06 | 3.07 | (1.59-5.94) |
| Anti-microtubule[d] | 9 | rs1858231 | ZNF462 | C/T (C) | 0.43 | 0.22 | 1.95E-06 | 2.35E-05 | 6.22E-05 | 1.95E-06 | 2.71 | (1.79-4.12) |
| | 11 | rs1870323 | ME3 | C/T (T) | 0.84 | 0.64 | 2.23E-06 | 1.59E-05 | 8.06E-04 | 2.23E-06 | 2.92 | (1.87-4.57) |
| | 15 | rs4262906 | KLHL25 | C/T (C) | 0.57 | 0.35 | 3.04E-06 | 1.99E-04 | 4.41E-04 | 3.04E-06 | 2.50 | (1.71-3.67) |
| | 5 | rs2471042 | RPL10AP9 | T/C (T) | 0.40 | 0.21 | 1.60E-05 | 4.47E-06 | 9.07E-02 | 4.47E-06 | 2.51 | (1.64-3.81) |
| | 10 | rs11255615 | LOC100507143 | G/A (G) | 0.59 | 0.38 | 5.34E-06 | 9.77E-05 | 4.18E-04 | 5.34E-06 | 2.40 | (1.65-3.53) |
| | 5 | rs1493354 | RPL10AP9 | T/C (T) | 0.40 | 0.22 | 4.37E-05 | 8.53E-06 | 1.58E-01 | 8.53E-06 | 2.37 | (1.56-3.60) |
| | 5 | rs13161175 | RPL10AP9 | A/C (A) | 0.40 | 0.21 | 2.66E-05 | 8.53E-06 | 9.07E-02 | 8.53E-06 | 2.44 | (1.60-3.71) |
| | 18 | rs2032224 | SERPINB5 | C/A (A) | 0.78 | 0.62 | 2.71E-04 | 3.19E-02 | 8.75E-06 | 8.75E-06 | 2.16 | (1.42-3.27) |
| Paclitaxel_mono | 12 | rs11059635 | TMEM132C | A/G (G) | 0.93 | 0.67 | 3.91E-07 | 2.05E-07 | 1.21E-01 | 2.05E-07 | 6.63 | (2.95-14.9) |
| | 16 | rs3844412 | CDH13 | A/G (A) | 0.40 | 0.11 | 4.20E-07 | 4.42E-07 | 9.94E-03 | 4.20E-07 | 5.22 | (2.67-10.2) |
| | 5 | rs163818 | TRIO | C/T (C) | 0.22 | 0.02 | 1.35E-06 | 6.40E-07 | 4.75E-01 | 6.40E-07 | 11.5 | (3.37-39.3) |
| | 2 | rs698813 | C2orf34 | T/C (C) | 0.83 | 0.52 | 1.06E-06 | 1.08E-04 | 1.23E-04 | 1.06E-06 | 4.27 | (2.35-7.76) |
| | 16 | rs4783238 | CDH13 | A/C (A) | 0.40 | 0.12 | 1.12E-06 | 3.13E-06 | 4.44E-03 | 1.12E-06 | 4.83 | (2.50-9.31) |
| | 21 | rs2838088 | NCRNA00111 | A/G (A) | 0.38 | 0.12 | 4.04E-06 | 1.15E-06 | 1.01E-01 | 1.15E-06 | 4.48 | (2.32-8.66) |

| CHR | SNP | Gene | Allele (risk) | RAF[b] | RAF[c] | | | | | OR | CI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | rs11059618 | *TMEM132C* | G/A (A) | 0.89 | 0.63 | 4.63E-06 | 1.18E-06 | 1.20E-01 | 1.18E-06 | 4.58 | (2.32-9.07) |
| 12 | rs10773519 | *TMEM132C* | G/A (A) | 0.83 | 0.58 | 1.98E-05 | 8.41E-06 | 6.39E-02 | 8.41E-06 | 3.63 | (1.98-6.66) |
| Docetaxel_mono | | | | | | | | | | | |
| 15 | rs4262906 | *KLHL25* | C/T (C) | 0.66 | 0.31 | 6.62E-07 | 1.72E-04 | 3.34E-04 | 6.62E-07 | 4.36 | (2.41-7.89) |
| 3 | rs4234284 | *C3orf56* | T/C (T) | 0.47 | 0.23 | 4.32E-04 | 2.78E-06 | 1.00E+00 | 2.78E-06 | 3.01 | (1.62-5.60) |
| 3 | rs13095826 | *C3orf56* | G/T (G) | 0.48 | 0.24 | 7.57E-04 | 4.49E-06 | 1.00E+00 | 4.49E-06 | 2.91 | (1.57-5.36) |
| 20 | rs6117615 | *C20orf54* | C/T (C) | 0.55 | 0.24 | 8.53E-06 | 7.14E-06 | 2.77E-02 | 7.14E-06 | 3.89 | (2.10-7.18) |
| 1 | rs10443215 | *LOC100507652* | C/T (C) | 0.26 | 0.04 | 9.21E-06 | 1.01E-05 | 2.71E-01 | 9.21E-06 | 9.39 | (2.77-31.8) |

CEF, cyclophosphamide+epirubicin+/-5FU; CAF, cyclophosphamide+doxorubicin+/-5FU; CHR, chromosome; SNP, single nucleotide polymorphism; ADR, adverse drug reaction; RAF, risk allele frequency; OR, odds ratio; CI, confidence interval.

[a]ORs and Cis are calculated using the nonrisk genotyope as reference.
[b]Individuals who developed grade 2 alopecia.
[c]Individuals who did not developed any ADRs after chemotherapy.
[d]Paclitaxel and docetaxel administrated samples.