

Supplementary Table 1 Patients' characteristics

Stage	Platform	Source	Age (Mean)	No. of samples
GWAS_All ^b				
ADR ^c	Illimina Human OmniExpress	BioBank Japan	53.7	303
Non-ADR ^d	Illimina Human OmniExpress	BioBank Japan	58.0	880
Combined analysis ^a				
ADR	Invader assay	Tokushima Breast Care Clinic	51.4	23

^aWe collected case sample only. All patients received combination of docetaxel and cyclophosphamide

^bMost of the patients received combination therapy

^cIndividuals who developed grade 2 alopecia

^dIndividuals who did not developed any ADRs after chemotherapy

Category	Grade2*	Grade1**	Grade0***
All	303	184	880
Age (Mean)	53.7	53.4	58.0
Subgroup analysis			
Cyclophosphamide + Epirubicin +/- 5FU (CEF)	116	44	108
Cyclophosphamide + Doxorubicin +/- 5FU (CAF)	64	33	27
Anti-microtubules treatment	119	55	105
Paclitaxel monotherapy	57	36	63
Doxorubicin monotherapy	62	19	42

* Individuals with grade 2 alopecia indicate complete hair loss after receiving chemotherapeutic agents

** Individuals with grade 1 alopecia indicate partial hair loss after receiving chemotherapeutic agents

*** Individuals with grade 0 alopecia indicate no incidence of hair loss loss after receiving chemotherapeutic agents