

## **Descriptions of Additional Supplementary Files**

### **Supplementary Data 1**

**Description:** Descriptive statistics of cohorts in the sporadic and multiple consecutive miscarriage GWAS meta-analysis (.xlsx).

### **Supplementary Data 2**

**Description:** Genotyping, quality control and association analysis details for participating cohorts (.xlsx).

### **Supplementary Data 3**

**Description:** Genome-wide significant variants from miscarriage GWAS meta-analyses (.xlsx).

### **Supplementary Data 4**

**Description:** Look-up of the markers previously associated with recurrent miscarriage (PMID: 27842992) in sporadic miscarriage (SM) EUR and multiple consecutive miscarriage (MCM) GWAS meta-analyses (.xlsx).

### **Supplementary Data 5**

**Description:** Model fit and parameter estimates (with 95% confidence intervals) for heritability calculations (.xlsx).

### **Supplementary Data 6**

**Description:** Results of the LD Score regression (LDSC) analysis for sporadic miscarriage EUR ancestry GWAS meta-analysis (.xlsx).

### **Supplementary Data 7**

**Description:** ICD codes associated with sporadic miscarriage (.xlsx).

### **Supplementary Data 8**

**Description:** ICD codes associated with multiple consecutive miscarriage (.xlsx).

### **Supplementary Data 9**

**Description:** Mendelian randomization association of smoking, alcohol and body mass index with sporadic miscarriage (.xlsx).

### **Supplementary Data 10**

**Description:** Top ten outcomes with the lowest p-values in the association with per MCM allele association and p-value (.xlsx).

### **Supplementary Data 11**

**Description:** Results of the FUMA candidate SNP mapping for SM European ancestry meta-analysis (.xlsx).

### **Supplementary Data 12**

**Description:** Results of the FUMA candidate gene mapping for SM European ancestry meta-analysis (.xlsx).

### **Supplementary Data 13**

**Description:** Results of the FUMA candidate SNP mapping for MCM meta-analysis (.xlsx).

### **Supplementary Data 14**

**Description:** Results of the FUMA candidate gene mapping for MCM meta-analysis (.xlsx).

### **Supplementary Data 15**

**Description:** Selection of most likely candidate gene for each region based on multiple data sources (.xlsx).