Figure S1. Gel electrophoresis result of tetra-amplification refractory mutation system-PCR products for the three banding patterns of the rs10741657 polymorphism in the *CYP2R1* gene. Lane L: 100-bp ladder; the asterisk indicates the band size of 500 bp. The size of the outer fragment is 416 bp. Lanes 4, 6, 9, 11, and 12 represent the homozygous GG genotype (270 bp); lanes 1-3, 5, 8, 10, 13 and 14 represent the heterozygous AG genotype (270 and 201 bp), and lanes 7 and 15 represent the AA genotype (201 bp).

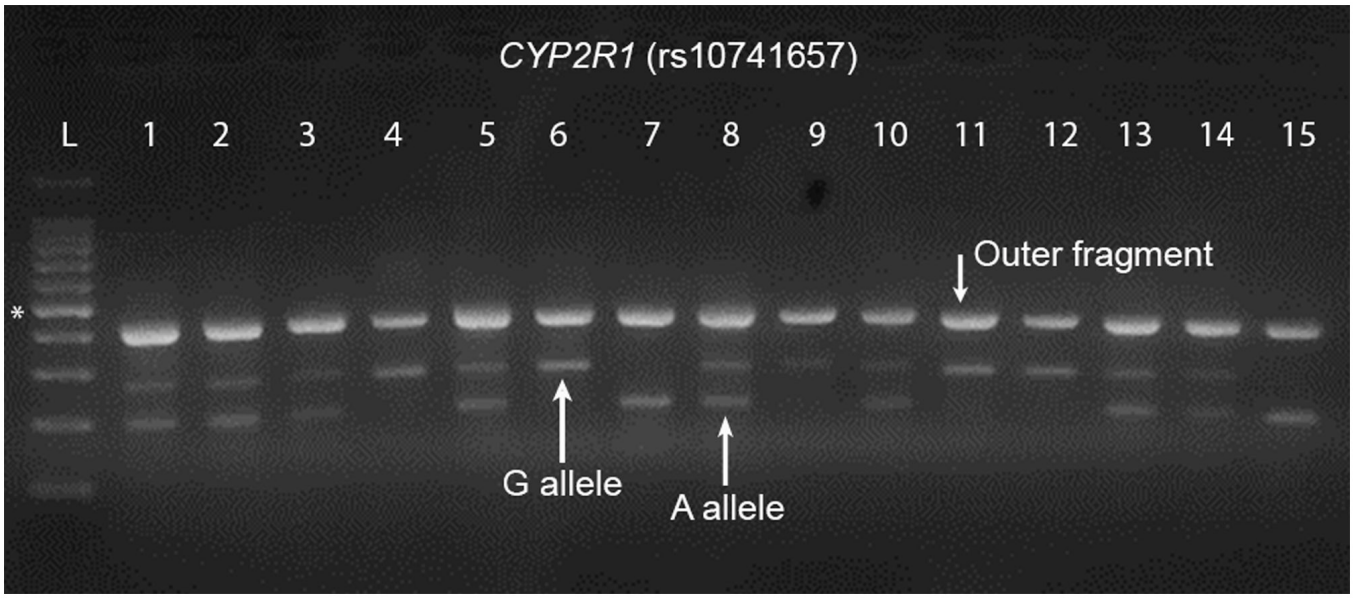

Figure S2. Gel electrophoresis result of tetra-amplification refractory mutation system-PCR products for the three banding patterns of the rs10877012 polymorphism in the *CYP27B1* gene. Lane L: 100-bp ladder; the asterisk indicates the band size of 500 bp. The size of the outer fragment is 420 bp. Lanes 1-3, 5, 6, 8, 10-13 and 15 represent the homozygous GG genotype (275 bp), lanes 4 and 9 represent the heterozygous GT genotype (275 and 205 bp), and lanes 7 and 14 represent the TT genotype (205 bp).

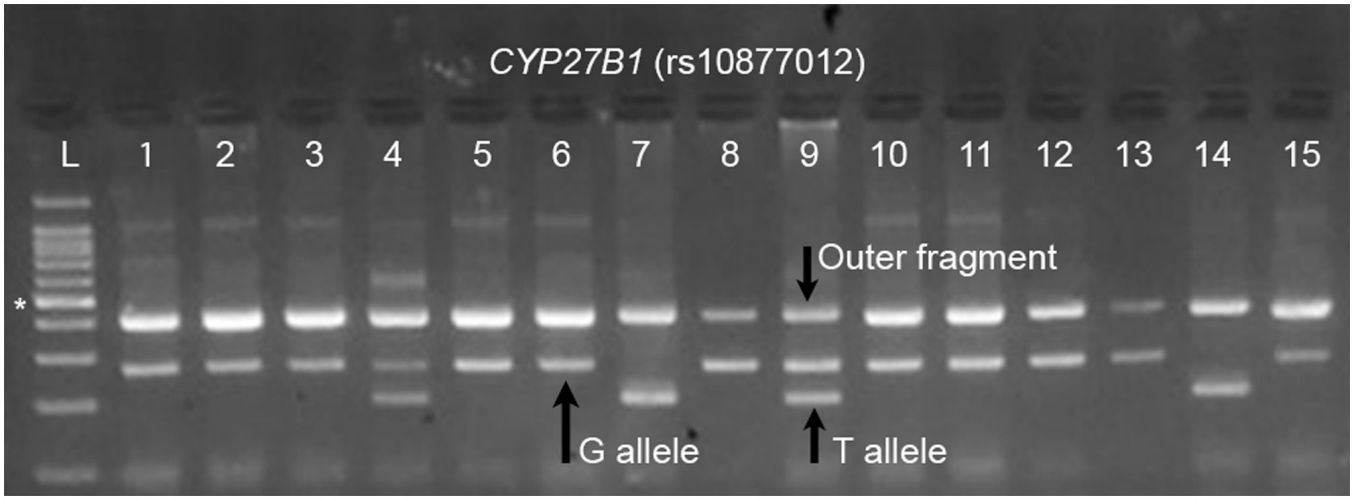

Figure S3. Gel electrophoresis result of tetra-amplification refractory mutation system-PCR products for the three banding patterns of the rs4646536 polymorphism in the *CYP27B1* gene. Lane L: 100-bp ladder; the asterisk indicates the band size of 500 bp. The size of the outer fragment is 394 bp. Lanes 1-3, 5, 9, 11, 13 and 14 represent the homozygous AA genotype (253 bp), lanes 4, 6-8, 10 and 12 represent the heterozygous AG genotype (253 and 200 bp), and lane 15 indicates the GG genotype (200 bp).

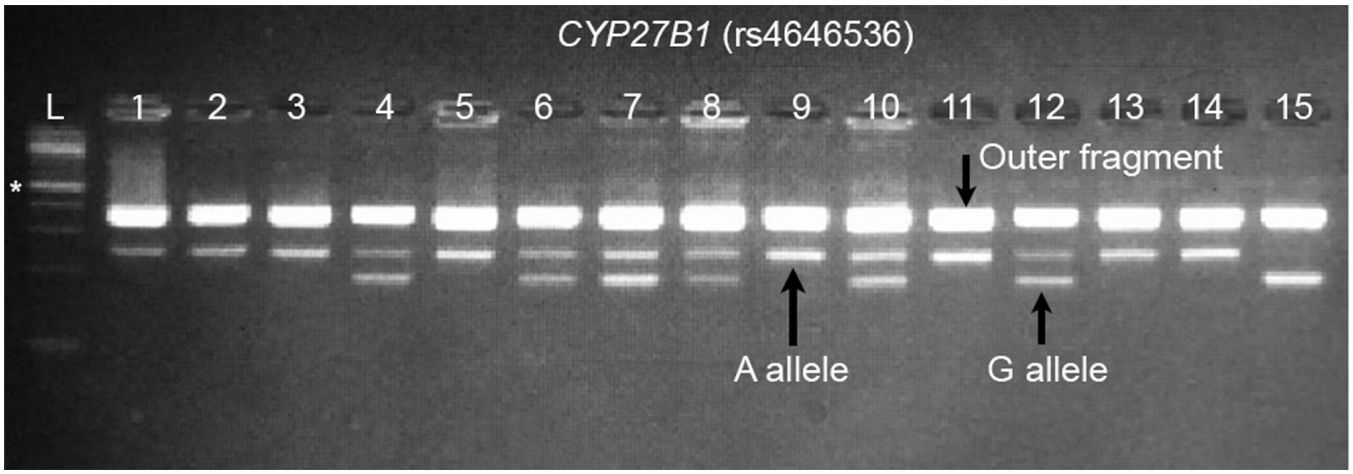

Figure S4. Gel electrophoresis result of tetra-amplification refractory mutation system-PCR products for the three banding patterns of the rs6013897 polymorphism in the *CYP24A1* gene. Lane L: 100-bp ladder; the asterisk indicates the band size of 500 bp. The size of the outer fragment is 477 bp. Lanes 2-6, 10, 13 and 15 represent the homozygous TT genotype (300 bp), lanes 1, 8, 11 and 12 represent the heterozygous TA genotype (300 and 229 bp), and lanes 7, 9 and 14 represent the AA genotype (229 bp).

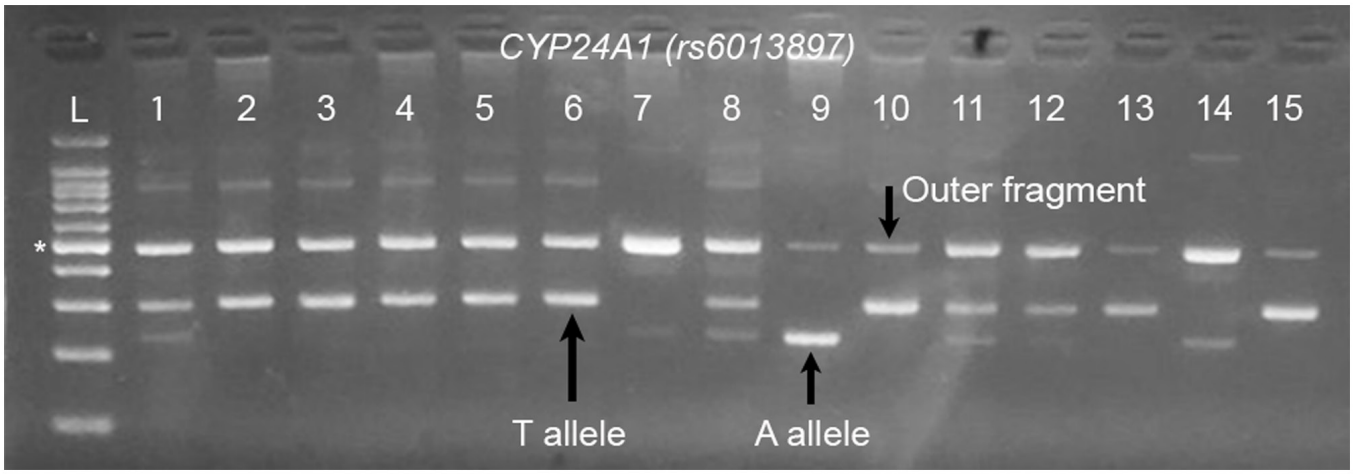

Figure S5. Gel electrophoresis result of tetra-amplification refractory mutation system-PCR products for the three banding patterns of the *FokI* polymorphism (rs2228570) in the *VDR* gene. Lane L: 100-bp ladder; the asterisk indicates the band size of 500 bp. The size of the outer fragment is 388 bp. Lanes 1-3 represent the homozygous GG genotype (187 bp), and lanes 4-6 and 7-9 represent the heterozygous AG genotype (258 and 187 bp). The A allele band size is 258 bp.

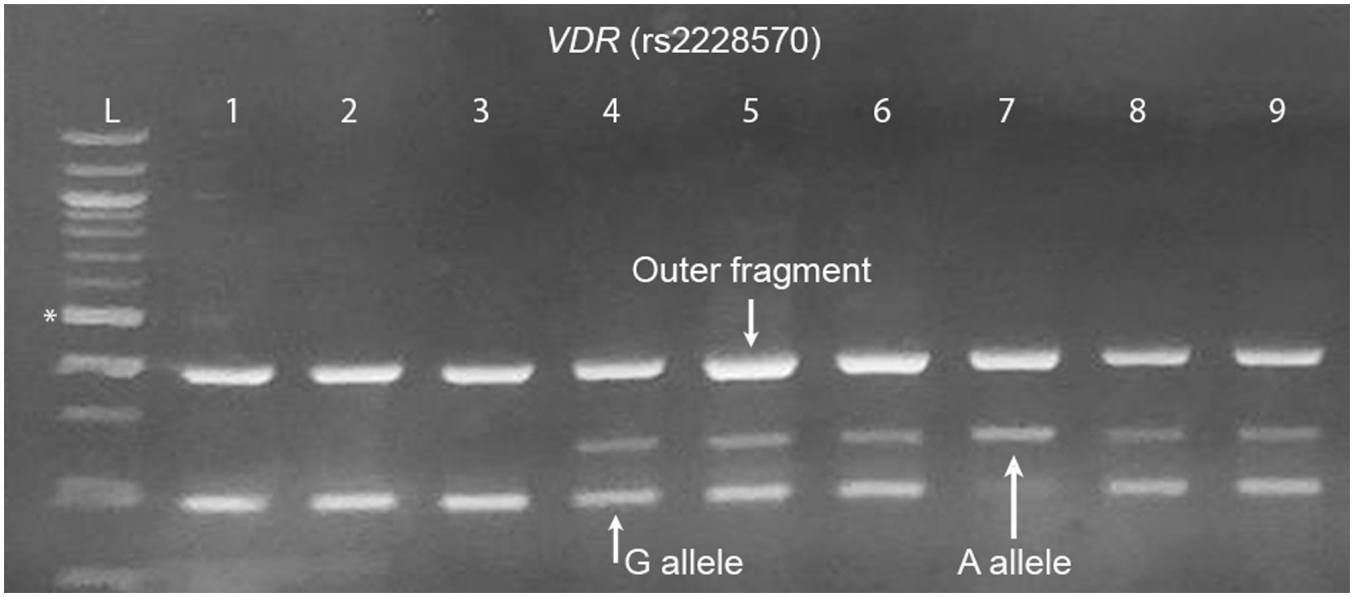

Figure S6. Gel electrophoresis result of tetra-amplification refractory mutation system-PCR products of the *BsmI* polymorphism (rs1544410) in the *VDR* gene. The size of the outer fragment is 403 bp. Lane L: 100-bp ladder; the asterisk indicates the band size of 500 bp. Lanes 9 and 13 represent the homozygous CC genotype (260 bp), lanes 1, 5, 6, 11, 12, and 14, represent the heterozygous genotype CT (260 and 201 bp), and lanes 2-4, 7, 8 and 10 represent the TT genotype (201 bp).

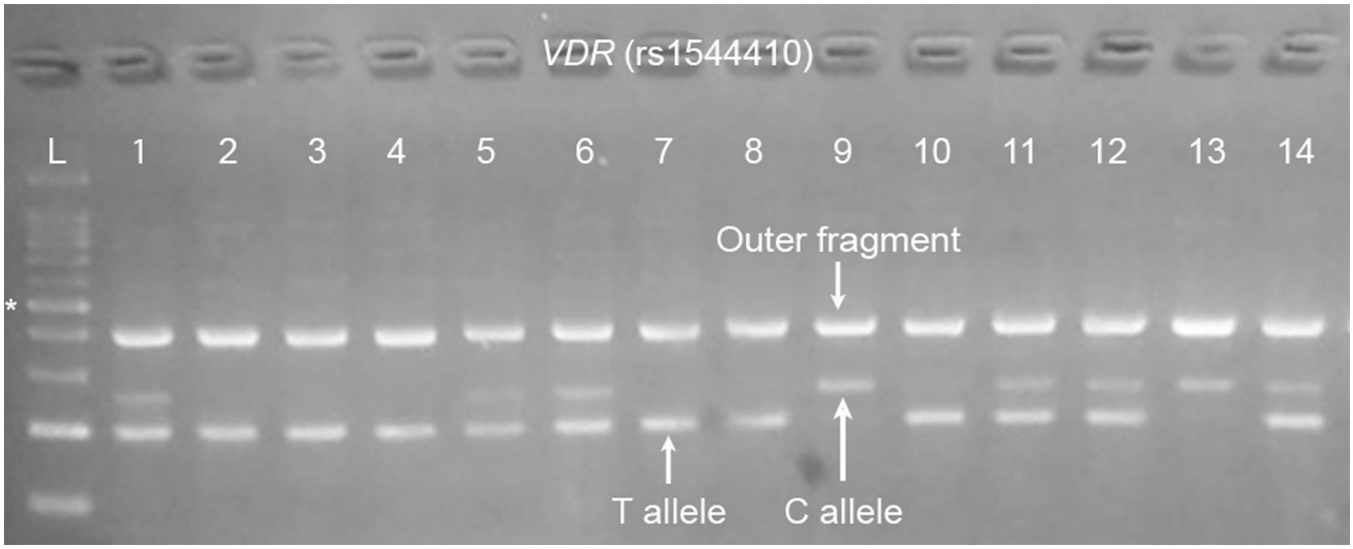

Figure S7. Gel electrophoresis result of tetra-amplification refractory mutation system-PCR products of the *TaqI* polymorphism (rs731236) in the *VDR* gene. The size of the outer fragment is 448 bp. Lane L: 100-bp ladder; the asterisk indicates the band size of 500 bp. Lanes 2, 3, 5-8, 11 and 12 represent the AA genotype (284 bp), lanes 1, 9 and 15 represent the homozygous GG genotype (216 bp), and lanes 4, 10, 13, 14 and 16 represent the heterozygous AG genotype (284 and 216 bp).

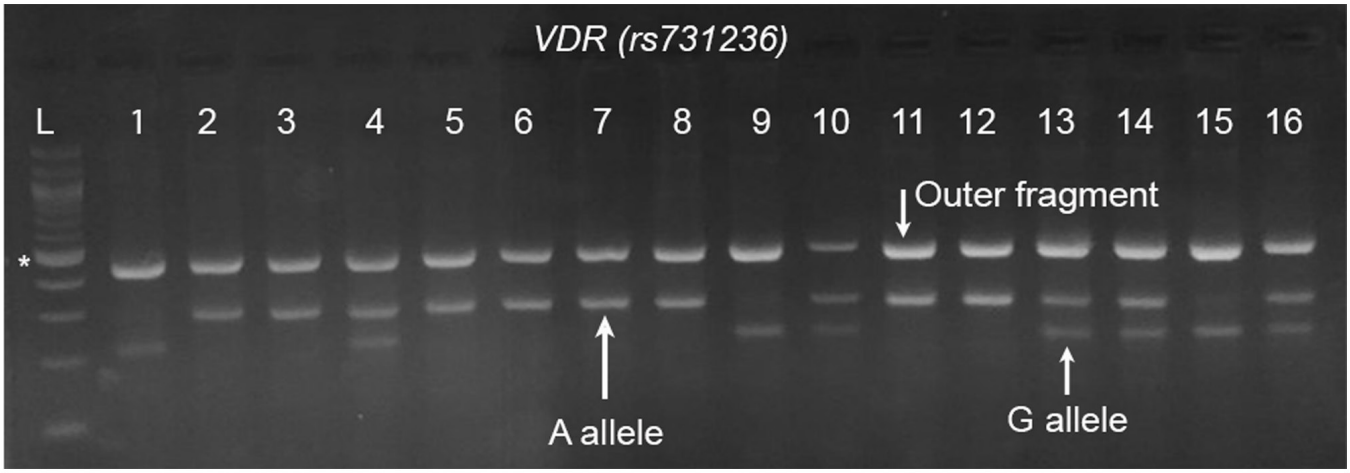

Figure S8. Gel electrophoresis result of tetra-amplification refractory mutation system-PCR products of the *ApaI* polymorphism (rs7975232) in the *VDR* gene. The size of the outer fragment is 356 bp. Lane L: 100-bp ladder; the asterisk indicates the band size of 500 bp. Lanes 3, 10, 11 and 13 represent the CC genotype (192 bp), lanes 2, 4, 6 and 12 represent the homozygous AA genotype (216 bp), and lanes 1, 5, 7-9 and 14 represent the heterozygous CA genotype (216 and 192 bp).

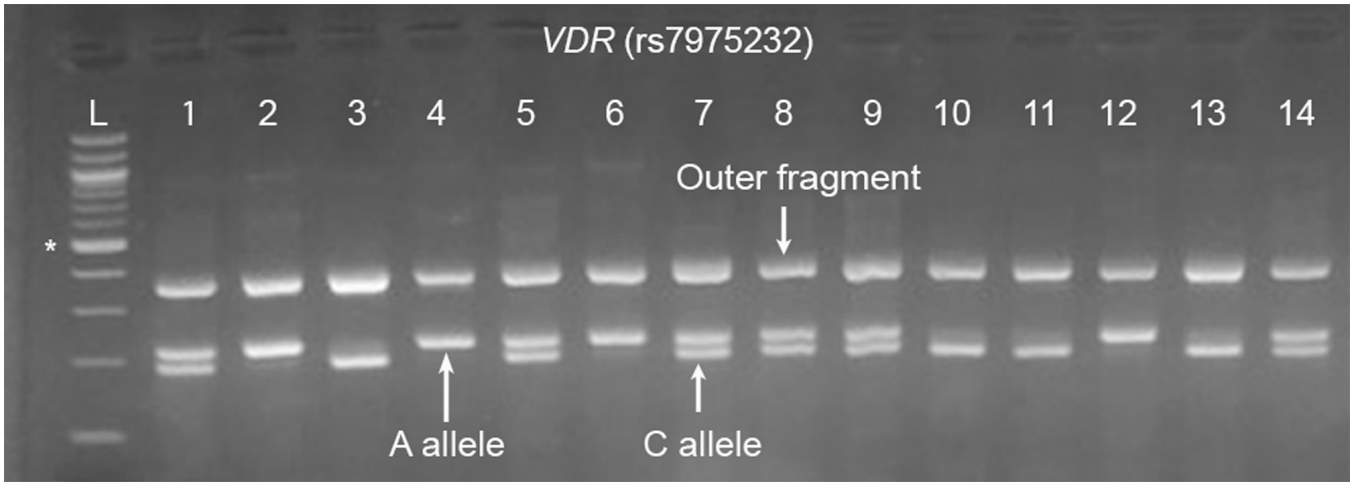

Figure S9. LD heatmap plot for all investigated SNPs in the present study. The color key denoting r^2 values ranges from blue to orange, with orange indicating tight LD. Numbers 1-8 represent the studied SNPs. SNPs, single nucleotide polymorphisms; LD, linkage disequilibrium.