Psarris Alexandros Vlasios (GR) [1], Mavrogianni Despina (GR) [2], Vlismas Antonis (GR) [3], Konomos Georgios (GR) [4], Loutradis Dimitrios (GR) [5], Drakakis Petros (GR) [6]

Context
Recurrent spontaneous abortions are attributed to a wide spectrum of conditions, including anatomical, chromosomal, thrombophilic and autoimmune disorders. Cytokines play a major role both during implantation and sustenance of pregnancies. TNF? is a cytokine produced by T helper 1 (Th1) cells, while the balance of Th1-Th2 is essential for the success of a pregnancy.

Objective
This study was designed to determine the association of TNF? single nucleotide polymorphism (SNP) -238G/A with RSA.

Patients and Methods
94 women with unexplained RSA and 89 controls were included in the study. Blood samples from all subjects were submitted to DNA extraction followed by RT-PCR to determine the presence of the polymorphism. The data was analyzed using Fisher's exact test and binary logistic regression adjusted for age, BMI and smoking history.

Results
7/94 women with RSA and 4/89 controls presented with G/A genotype, while one woman with RSA had the A/A genotype. The difference in the frequency of the heterozygous genotype among the two groups (7.4% and 4.5% respectively) was not statistically significant (p=0.401), nor was the difference in the presence of either allele (95.2% and 87.7% for G, 4.8% and 2.3% for A respectively, p=0.189). The lack of statistically significant association of the heterozygous genotype with unexplained RSA was verified when adjusted for age, BMI and smoking history.

Conclusions
It has been suggested that TNF? gene promoter polymorphism -238G/A is associated with an increased risk for recurrent spontaneous abortions. However, published results worldwide are controversial so far. Ethnic differences or combinations of different SNPs may contribute to the diversity of the results. In our study, it has been demonstrated that there is no association between the presence of TNF? -238G/A polymorphism and otherwise unexplained RSA, in the native population.

[1] 1st Department of Obstetrics and Gynecology, University of Athens Medical School, Alexandra Maternity Hospital, Athens, Greece. [2] 1st Department of Obstetrics and Gynecology, University of Athens Medical School, Alexandra Maternity Hospital, Athens, Greece. [3] 1st Department of Obstetrics and Gynecology, University of Athens Medical School, Alexandra Maternity Hospital, Athens, Greece. [4] 1st Department of Obstetrics and Gynecology, University of Athens Medical School, Alexandra Maternity Hospital, Athens, Greece. [5] 1st Department of Obstetrics and Gynecology, University of Athens Medical School, Alexandra Maternity Hospital, Athens, Greece. [6] 1st Department of Obstetrics and Gynecology, University of Athens Medical School, Alexandra Maternity Hospital, Athens, Greece.