Pathogenesis of endometriosis is still poorly understood. It seems that endometrium plays an important role in the development of the disease, but the exact mechanisms of its action are unknown.

Objectives:

to evaluate angiogenic factors: Il-8 and PDGF-A expression in the endometrium of patients with endometriosis; the second aim of the study was to assess the sensitivity of non-invasive diagnostic test in endometriosis combined of the mentioned biomarkers and Ca125, VEGF, IL-1β and CRP concentration in plasma.

Design and methods:
103 Caucasian women diagnosed laparoscopically for endometriosis were divided in study and comparative group. Endometrium biopsy was taken to establish cycle phase - only women in their first cycle phase were included. Expression of Il-8 and PDGF-A of 23 randomly chosen patients was evaluated in Real-Time RT-PCR. Plasma concentrations of biomarkers in all patients were measured in ELISA methods.

Results:
Endometriosis was confirmed in 68,9% women (n=71). The study group presented significantly higher concentration of Ca125 and significantly lower of VEGF in plasma. Expression of Il-8 was significantly higher in study group, but PDGF-A significantly lower. The sensitivity of the non-invasive test for endometriosis reached 60% in stepwise regression.

Conclusions:
Changes in Il-8 and PDGF-A expression in endometriosis patients prove that angiogenesis play a pivotal role in the disease with endometrium as a place were this process begins.