Early diagnosis and prediction of malignant tumors is still an actual problem of modern gynecology. A promising direction in solving this problem is the introduction to the gynecological practice of new molecular and cellular technologies, including the identification of specific markers of growth of tumor formation in the circulating blood. The most informative markers in assessment of tumor growth are the protein p 53 and antiapoptotic protein Bcl-2. The appearance of apoptotic protein p 53 and antiapoptotic Bcl-2 protein in blood serum caused by proliferative processes in cells, destruction of cell membranes, their permeability enhancement and exit of cytosolic enzymes, proteins and fragments structures into the circulating blood. The function of the protein p 53 is removing from the pool of replicating cells those cells which are potentially oncogenic. In rapidly dividing (proliferating) cells usually found to increase the protein concentration of 53 p, comparing with the slowly dividing. An important limiting factor in the growth of cells is 53 p is in-apoptous Bcl-2 protein. The family protein Bcl-2 is in dynamic equilibrium with the protein p 53. It is believed that the ratio of active forms of these proteins and determines the outcome of cells. At the same time, the intervention in relation inducer/inhibitor of Bcl-2 family may be promising to determine not only the fate of the cells, but the cell and the body as a whole.

Considering that as more tissue is damaged as more tumor markers appear in the blood are given the opportunity to use them as one of additional diagnostic and prognostic tests for benign ovarian tumors.

The purpose of the study - to determine the content of apoptosis markers - proteins p 53 and Bcl-2 in the blood and tissues of tumors to evaluate their diagnostic and prognostic value in women with benign tumors and tumor-like of the ovary (BTO and TLO).

Research methods. We studied 35 patients with TLO and 40 patients with BTO. Women ranged in age from 26 to 50 (48,8 ± 5,8) years. Diagnosis BTO and TLO was established based on anamnesis and complaints, ultrasound and CT scans, as well as after laparoscopic surgery. All patients performed endoscopic surgery to remove BTO and TLO. Prior to surgery in blood, during the operation in tumor tissue, as well as within the healthy ovarian tissue was determined the contents of the markers of apoptosis - a protein p 53 and Bcl-2 protein, which was determined by solid-phase immune-enzyme method on the analyzer FE-858 (manufactured by Shanghai C3 ANTAI Diagnostics Co., LTD) and using a set of test systems of the ELISA - Austria.

The protein content in the homogenates of the tumor tissues was determined by OH Lowry et al. (1951). Control for assessment of apoptosis markers in the serum data were obtained from 20 apparently healthy women aged 41,2 ± 4,9 years. For the control of ovarian biopsy specimens were obtained from 5-6 points within healthy tissue. The data were statistically processed using E-test and a computer program Statistica.

Results and discussion. In the blood serum of women with TLO and BTO the content of pro-apoptotic protein p 53 and the antiapoptotic protein Bcl-2 in the control data exceeded significantly from
22.7-26.0% and 42.4-16.3%, accordingly to the forms of the pathological process in the ovaries.
In assessing of the content of soluble serum markers of apoptosis in ovarian tumor tissues revealed that women with TLO protein level greater than 53 p data control - by 22.1 % (P <0.05), Bcl-2 by 30.0 % (P < 0.01) and in women with BTO - accordingly - 70.8 and 48.9 (P < 0.001) %.
It is believed that the increasing in serum markers of apoptosis in women with BTO and TLO caused by the processes of degradation and enhanced membrane permeability in the tissues of the ovary.
Consequently, the increase in blood levels of women with BTO and TLO is directly related to tumor process. In this regard, it can be assumed that, depending on the ratio of the level of p 53 protein and Bcl- 2 in the tumor tissues, and hence in the blood determined dysmetabolic processes in the body and in the ovaries determining clinical forms of disease in women with BTO and TLO. We can also assume that women with TTO increase the level of Bcl- 2 is an adequate response to tumor growth and proliferative processes in the tissues of the ovary, the expression of pro-apoptotic protein p 53, it defines a less aggressive process in the tumor tissue, and women with BTO adequate increasing of the antiapoptotic protein Bcl-2, increases expression of p 53 transformation and more aggressive tumor tissues in women with BTO. In our study we observed varying degrees of changes in the blood parameters of apoptosis - p 53 and Bcl- 2, so it represents the interest to study their diagnostic and prognostic significance.
The obtained data, a more pronounced difference integral factor p 53/Bcl-2 women with BTO than in women with TLO can be used as an important differential diagnostic and prognostic criteria between these forms of the disease and at a higher rate of growth indicates a poor outcome in transforming ovarian tumor tissue.
Conclusion. Thus, studies have shown that at women with BTO and TLO there is increased pro-apoptotic protein p 53 and anti-apoptotic protein Bcl- 2 in the tumor tissue, which are adequately increased in serum. This shows the importance of their pathogenetic role and progression of the tumor, as well as allow to recommend them for the differential diagnosis and prognosis of these diseases.