Summary

In the part devoted to discussion of different authors about the importance of the progesterone receptor (PR) value we concentrated primarily to the works of foreign authors published in professional journals.
We divided the opinions of this experts to such, which show that PR testing is needless and to the part about profitability of this testing.
In the chapter about importance PR testing some authors critize, that some patients – negative in estrogen receptors (ER) (such of them that are simultaneously PRpositive)
could be deprived in the possibility of hormonal therapy, because PR testing wouldn´t be made. And in the addition, the other – (in this case) the less effective treatment would be given them preferentially. PR testing is important also for detection of the group of ER-positive tumors with PR negativity. At this group is the smaller possibility that the tumors would respond to the hormonal treatment (in contrast to ER+/PR+).
In the part devoted to gene therapy we described first the information about learning from the textbooks. Futher we describe different modes of classification of the gene therapy of the breast cancer in the foreign literature.
We modified their classification further according to our necessity to these subheads: (1) mutation compensation of differentiation genes, (2) insertion of gene regulating the apoptosis, (3) insertion of gene causing the necrosis or inhibition of cell growth in nontoxic conditions, (4) insertion of gene increasing the sensitivity to administered chemicals, (5) antiangiogenic gene therapy, (6) genetic immunopotentiation, (7) protection of bone marrow by transplantation of the genetically modified cells, (8) ensuring of the tissue specificity with unsolved therapeutic mechanism.
Except of the works performed only in the tissue cultures, we found 10 works in which the gene therapy was performed in the animals – to those the breast cancer cells were implanted. Meantime, we found only 2 works in which the experimental gene therapy was performed even in the patients.

From the point of view of taking into account the ER and PR results in the breast cancer gene therapy – it is possible to say that we found such works, but they were in the minority – in comparison with the works e.g. about the transfering of the toxic genes. Only 1 from approximately 25 works (found by us) concerned the compenzation of ER negativity. Also only one work concerned the insertion of the gene (on the contrary) for PR – but not to the breast cancer but to the uterine cancer. Both these works do not speak about the in vivo results.