**Intraoperative valuation of the resection margin with the usage of digital two-point sectorography (Faxitron BioVision)**

**Introduction.** Surgical method is fundamental in complex and combined approach of the treatment of the incipient breast cancer. It is a common fact, that purity of the resection margin is the main indicator of oncological safety of the conservative surgery carried out. The presence of tumor cells in examined margin is one of the predictors of the development of local recurrence after conservative surgery of patients with breast cancer. Currently the necessity of searching for adequate and quick method of intraoperative valuation of the state of the resection margin is kept. Intraoperative valuation of the resection margin state with the usage of digital two-point sectorography (Faxitron BioVision) appeared as the alternative of [urgent histological test](https://www.multitran.com/m.exe?s=urgent+histological+test&l1=1&l2=2), providing the optimum size of the information about adequacy of the carried out surgical treatment.

**Object of the study** – to evaluate diagnostic features of the digital two-point sectorography Faxitron BioVision in the intraoperative valuation of the resection margin status after the conducted surgical treatment in comparison with planned histologic study.

**Materials and methods.** 368 conducted conservative surgeries were analyzed, patients were divided in two groups depending on carrying out of non-adjuvant chemotherapy. The first group of patients included 236 patients, who didn`t received non-adjuvant chemotherapy before operative treatment stage; second group included 132 patients, who received non-adjuvant chemotherapy. Subset analysis of detection rate of the positive resection margin was carried out with the usage of the intraoperative valuation of the resection margin on the X-ray apparatus Faxitron BioVision or without carrying out this method. After each conservative surgery conducted when planned histologic study resection margin were tested for the presence of the tumor cells and the frequency of carrying out of reoperations when positive margin were found.

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**Results.** From 368 tested anatomic medications after conservative surgery positive resection margin (R1) is found in 25 cases, which is 6,8 %. From 236 patients of the first group after conservative surgery R1 is found in 20 cases, which is 8,5 %; from 132 conducted operations in the second group in 5 (3,8%) сases – the presence of R1 is found. Reoperations were conducted in 13 cases, when repeated [pathomorphological study](https://www.multitran.com/m.exe?s=pathomorphological+study&l1=1&l2=2) tumor cells found in 3 cases in the subgroup, which didn`t receive intraoperative valuation on the [X-ray apparatus](https://www.multitran.com/m.exe?s=X-ray+apparatus&l1=1&l2=2) Faxitron BioVision.

**Conclusion.** Assessing the results of our study we can make a conclusion about the positive experience of conducting of conservative surgery and intraoperative evaluation of conservative surgery and intraoperative valuation with the usage of the digital two-point sectorography (Faxitron BioVision) and low frequency of positive margin (3,8%) in comparison with refusal from carrying out of this method (8,5%).

**Key words:** conservative surgery, breast cancer, resection margin, intraoperative valuation, digital two-point sectorography (Faxitron BioVision)