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## SURGERY IN BREAST CANCER - CONSERVATIVE APPROACH OR MASTECTOMY

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### ABSTRACT

In recent 30 years the understanding of breast cancer surgery (BCS) underwent significant development from radical mastectomy to organ-preserving surgery. So, in nowadays organ-preserving surgery becomes the “gold standart” in these patients. Today, more than half of the newly diagnosed BC are suitable for quadrantectomy or lumpectomy with axillary lymph node dissection and subsequent radiation therapy.

The mastectomy with axillary dissection has its own place in the modern concept of BCS - in locally advanced tumors with low grade and in cases with no effect from neoadjuvant therapy.

In conclusion BCS aims to provide the clinical diagnosis, to determine the pathological stage, to help the determination of prognostic markers and to ensure the disease loco regional control.

**Key words:** breast cancer; quadrantectomy; mastectomy

### INTRODUCTION

The modern surgical treatment of breast cancer has begun since more than 30 years and the beginning of the organ-preserve surgery was established. Subsequently it led to the implementation of oncoplastic approaches in the surgical practice. These tendency have started. In Western Europe over 60%-80% of new diagnosed breast cancers are appropriate for quadrantectomy with lymph node dissection and subsequent radiotherapy at the moment. Further, the mastectomy remains a choice for invasive cancers, for ones, in which clean margins could not be achieved or with proven multifocal distribution.

### Conservative surgery

The last decade has radically changed our knowledge of biology of breast cancer. This fact led to the introduction of new effective therapeutic behavior which increased the survival of patients.

The radiation therapy proved its effect on the achievement of the local control over the illness. As a result conditions were created for the introduction of organ-preserving surgery as “the gold standard”, which in combination with the complex treatment provided analogical survival in comparison with the radical mastectomy.

In conservative surgery, a careful histological assessment determines the following results. The determination of clean resection margins creates the following treatment in addition. (1)

### Mastectomy

Currently the radical mastectomy is the removal of the glandular tissue of the breast, preserving the pectoralis major muscle with or without the removal of the pectoralis minor muscle with lymph node dissection at three levels.

Indications for this volume of surgical intervention are:

- absence of an effect of neoadjuvant therapy
- large tumors, fixed to the underlying fascia and the pectoralis major muscle.
- in locoregional recurrence after conservative surgery
- in multifocality and multicentricity of the prime tumor

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- when a bad esthetic result is expected after conservative surgery
- an adverse correlation between the size of the tumor and the volume of the gravity
- medical contraindications for the conduction of adjuvant therapy
- the wish of the patient

European directions for treatment recommend the reconstruction of the breast to be provided to all women requiring mastectomy.(2) In this way the reconstruction could be useful perspective in some cases. However, the immediate reconstruction is not shown when the patient is not agree or in the cases of inflammatory cancer. Autological techniques with the patient's own tissues seem to tolerate postoperative radiotherapy in comparison with the implant technique, where the radiotherapy has an unfavorable esthetic effect.(3,4) An alternative of the standard mastectomy is the subcutaneous surgical procedure, which is an easy reconstructive approach.

After all the best time and the technique of reconstruction have to be discussed with the patient and the standards have to be followed. It is influenced by a range of factors such as the breast implant type because silicone gel implants are safe and preferred in the reconstructive surgery.

Autological techniques, using m.latisimus dorsi or m.rectus abdominis, a flap connected with the superior gluteal artery or with free m.gracilis, may replace relatively large amount of the missing glandular tissue. There is no evidence that the reconstruction contributes to subsequent local recurrence and there is no reason for the outdated perceptions that the patients have to wait from 1 to 2 years after mastectomy if a reconstruction is suggested.

#### **Advantages of axillary staging**

Locoregional status of the lymph nodes remains one of the strongest predictors associated with longterm prognosis for new-found breast cancer. 3%-5% of women after lymphadenectomy develop lymphedema but this frequency relatively grows till 40% after subsequent radiotherapy of the axilla.

Nowadays sentinel lymph node biopsy is accepted as the "gold standard" when a decision is taken for axillar lymph node dissection. If the axilla is positive on ultrasonography and subsequent biopsy then axillar dissection is indicated. When

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there are well prepared staff the use of radicoloid/blue or indocyanine green fluorescence account acceptable low fake negative results with this method.(5) The advantages of the method due to the lack of stiffness of the hand, the lack of lymphedema, short hospital stay and better quality of life. Although this technique has been practiced for 10 years in Europe, still there is no united consensus for pathological mark via sentinel biopsy. The significance of occult micrometastases is untended from the point of view of surgical behavior and outcome. (6) The rules of the American Society of Clinical Oncology, the National Comprehensive Cancer Network and others do not recommend routine immunohistochemistry and PCR for evaluation of sentinel lymph nodes.(7) The optimal behavior with data for micrometastases is a subject of current scientific studies and as well as the detections of isolated tumor cells. Results based on IBCSG 23-01 research show that extra lymph node dissection is not acquired when there is data for micrometastases in sentinel lymph nodes.(0.2-2mm).(8) However when there is data for micrometastases in sentinel biopsy, the axillar lymph node dissection is acquired. Results from recent research with 6.3 years tracing of groups with clinical staging T1 – T2 cN0 invasive cancer and with 1 to 2 positive for metastases in sentinel lymph nodes were treated with conservative surgery and adjuvant radiotherapy. Results did not show worse disease-free survival (DFS), larger frequency of local recurrence and overall survival (OS).(9) In this way patients with isolated cancer cells(0,2mm) in a sentinel lymph node or those with negative biopsy are not indicated for axillar dissection. However the results should be analyzed in future meta-analyses.

#### **An operation for in situ breast cancer (intraepithelial malignancy)**

**DCIS** can be treated with organ-preserving operation or total mastectomy but with the condition that clean margins could be achieved. There is no common consensus for adequate border but longitudinal margins < 2 mm are thought to be insufficient.(10) The sentinel biopsy is not required in therapeutic approaches of patients with in situ carcinoma but it could be discussed in a situation when mastectomy is necessary. The lobular malignancy (called earlier LCIS) unlike DCIS, is said to be not obligate malignancy of invasive cancer and it is the most considered risk factor for the future development

of the invasive cancer in both breasts (the relative risk (RR) 5.4-12) and in this way active treatment is acquired. Pleomorphic versions of the lobular malignancy run as DCIS and they have to be treated in the same way.

### **Operative treatment after neoadjuvant system therapy**

In a range of cases the neoadjuvant chemotherapy is followed by surgery according to the accepted principles. Size reduction of a large unifocal prime cancer will allow the inclusion of conservative surgery in patients, who are primary indicated for mastectomy.

Multifocal disease or insufficient reduction of the cancer size are indications for mastectomy. The placement of clips at the cancer bed would facilitate the tracking and the subsequent surgical procedure when the surgery is uncertain and there is a high risk for local recurrence.

In conclusion, organ-preserving operations with subsequent radiotherapy have similar DFS and OS as the radical modified mastectomy in women at stage I and II (11,12). So organ-preserving surgery has to be first treatment of choice when it is indicated. This is extremely important for young patients with breast cancer. The modern organ-preserving surgery is aimed - removal of the malignant lesion via minimal excision of the glandular tissue.(13) In those with postoperative asymmetry consequently it is necessary to be suggested plastic reconstruction for achievement of optimal cosmetic result. The survival of simultaneous reconstruction after mastectomy is exactly the same as the mastectomy without reconstruction.

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