

# ONCOLOGIC AND RECONSTRUCTIVE PRINCIPLES APPLIED TO VIDEO - ASSISTED MASTECTOMY WITH IMMEDIATE IMPLANT - BASED BREAST RECONSTRUCTION

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## BACKGROUND & AIMS

**Video-assisted mastectomy (VAM)** is an advantageous alternative to conventional nipple-sparing mastectomy. This technique integrates oncologic and reconstructive principles to enable immediate implant-based breast reconstruction while aiming to **reduce postoperative morbidity, enhance cosmetic outcomes and reduce healthcare burden**. The aim of this study is to evaluate the applicability and effectiveness of video-assisted mastectomy with immediate breast reconstruction as a **minimally invasive and aesthetically favorable option** to conventional or robotic approaches.



Figure 1. VAM performed through a single port, axillary approach (left breast)

## METHODS

We performed a study on **37 patients** admitted to the Plastic Surgery Department of the Clinical Emergency Hospital "Prof. Dr Agrippa Ionescu", Bucharest, Romania. All the patients underwent video-assisted nipple-sparing mastectomy followed by direct-to-implant breast reconstruction, performed either for **breast cancer treatment** or as a **prophylactic procedure**. We emphasize the surgical procedure, postoperative outcomes, and quality-of-life assessment at one-year follow-up.

## RESULTS

In all 37 cases, the procedure was completed without the need for conversion to an open approach. Breast reconstruction was carried out using **prepectoral polyurethane or microtextured implants**. A total of 17 VAM were performed in breast cancer patients, the rest of 20 were prophylactic.

In most cases, delayed or second stage reconstruction on the contralateral breast was carried out concurrently with VAM. Moreover, some patients underwent additional sentinel lymph node biopsy or gynecological minimally invasive procedures (prophylactic hysterectomy and salpingo-oophorectomy) during the same operation.

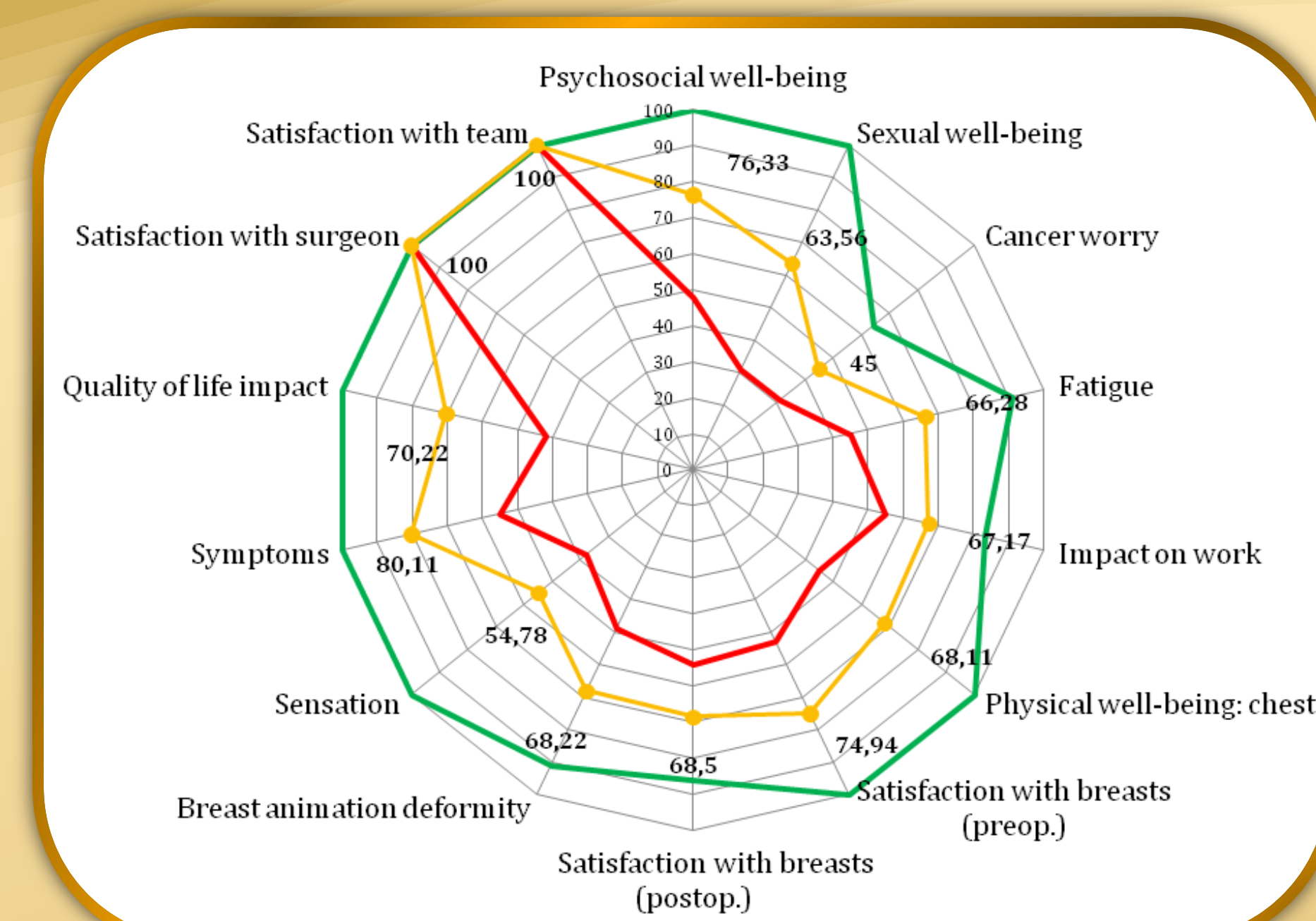
During short-term follow-up (6-12 months), no cancer recurrences were detected. Reported complications were generally minor, such as localized areolar congestion.

In terms of quality of life (QoL), the one-year postoperative **BREAST-Q** assessment revealed the highest score in the Symptoms domain (85.16), followed by Psychosocial Well-being (83.14) and QoL Impact (78.3), highlighting the benefits of a minimally invasive approach.



Figure 2. VAM with reconstruction (left breast) with secondary reconstruction of the right breast using latissimus dorsi flap and implant

## BREAST-Q



## KEY FIGURES

- Mean age: 61.8 years.
- Average mastectomy time: 110,33 min., the subcutaneous plane dissection lasting longer (62,44 min.) than prepectoral plane dissection (28,89 min.).
- Average reconstructive time: 92,38 min., including the procedures performed simultaneously, mainly expander to implant exchange (15/37 patients).



Figure 3. VAM with reconstruction (right breast) with simultaneous contralateral expander to implant exchange.

## CONCLUSIONS

Video-assisted mastectomy is a feasible and safe technique that **preserves the skin envelope while allowing single-stage implant reconstruction**. Its reproducibility, low complication profile with satisfactory aesthetic and oncologic outcomes support its consideration as a practical cost-efficient alternative to robotic surgery in selected patients.

