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ONCOPLASTIC BREST SURGERY IN BREST CANCER TREATMENT: POSITIVE EFFECTS ON PATIENT WELL-BEING AFTER COMBINED ONCOLOGICAL AND PLASTIC SURGICAL PROCEDURES

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ABSTRACT

Oncoplastic breast surgery is a rapidly evolving field that combines oncologic surgery with plastic and reconstructive surgery. From the perspective of oncologic surgery, the primary objective is effective cancer treatment, which means achieving clear surgical margins (i.e. oncological radicality). Equally important, however, are the preservation of breast function and the achievement of a satisfactory aesthetic outcome through the integration of oncologic and plastic surgical techniques. The aesthetic result of surgical breast cancer treatment can significantly enhance the recovery process and positively influence the overall effectiveness of treatment.

The aim of this publication is to present various surgical techniques used in therapeutic breast tumor excision combined with immediate breast reconstruction, using either the patient's own tissues or breast implants, and to discuss their impact on patient satisfaction. Selecting the most appropriate treatment method is crucial and depends on numerous factors. An individualized approach to each patient, as well as the careful selection of the optimal surgical technique, are essential for achieving satisfactory outcomes. The integration of oncologic and plastic surgical techniques in breast surgery has a positive effect on patients' physical and psychological well-being following treatment. These procedures help patients cope more effectively with the challenges of cancer therapy, adapt to visible changes in their bodies, and return to their normal lives. In addition, this publication briefly discusses the prevention and diagnosis of breast diseases in women.

KEYWORDS

Oncoplastic, Breast Cancer Treatment, Oncological Surgery, Plastic Surgery, Positive Effects Of Oncoplastic Breast Cancer Treatment, Prevention

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Introduction

Breast cancer is currently the most commonly diagnosed malignancy among women worldwide and remains one of the leading causes of cancer-related mortality, making it a major global public health challenge.[1] According to the World Health Organization, breast cancer, together with lung cancer, is among the most frequently diagnosed cancers worldwide.[2]

Data published in CA: A Cancer Journal for Clinicians indicate a continuing increase in the number of newly diagnosed breast cancer cases. This trend is likely associated with population aging, lifestyle factors, and environmental influences.[1]

In Poland alone, approximately 19,000 new cases of breast cancer are diagnosed annually.[3] Consequently, prevention and early detection remain essential components of breast cancer control.

Continuous advances in medicine and the growing body of evidence from clinical research have significantly improved treatment outcomes. In many cases, effective therapy enables long-term survival and allows patients to return to their normal daily activities. Prevention and early diagnosis play a fundamental role in improving treatment efficacy and patient prognosis.

Breast cancer prevention can be divided into primary and secondary prevention. Primary prevention focuses on modifiable risk factors, including maintaining a healthy diet, engaging in regular physical activity, controlling body weight, limiting alcohol consumption, and avoiding highly processed foods. These preventive measures may substantially reduce the incidence of breast cancer, particularly among women without a high genetic predisposition.[4] Breastfeeding has also been shown to exert a protective effect against breast cancer.[5]

Secondary prevention aims at the early detection of breast cancer through regular screening examinations, including mammography and breast ultrasonography. Magnetic resonance imaging (MRI) is recommended for women at high genetic risk of developing breast cancer. Breast self-examination also remains an important component of secondary prevention.

Breast ultrasonography is recommended primarily for younger women (under 40 years of age) and should generally be performed every 1–2 years. Screening mammography is considered the standard screening modality for women over the age of 40, while MRI is typically used as a complementary imaging technique.

Although secondary prevention does not reduce the incidence of breast cancer, it facilitates diagnosis at an early stage, thereby substantially improving treatment outcomes and survival rates. This is especially relevant given that breast cancer is increasingly being diagnosed in younger women. [6]

Imaging studies play a crucial role in the diagnostic workup of breast cancer. Mammography remains the cornerstone of breast imaging and is frequently complemented by ultrasonography, particularly in women with dense breast tissue, where mammographic sensitivity may be reduced.[7]

Special attention should also be given to national cancer screening programs. In Poland, one such initiative is the Breast Cancer Prevention Program.[8] The program currently offers free mammographic screening for women aged 45–74. Screening is performed every 24 months, or every 12 months for women with hereditary risk factors or based on physician recommendation.[8,9]

The Breast Cancer Prevention Program not only increases the detection rate of early-stage breast cancer but also improves public awareness regarding prevention, diagnosis, and treatment.[9] Furthermore, the use of mobile mammography units ("mammobuses") has significantly improved access to screening for women living in smaller towns and rural areas, particularly those experiencing transportation barriers, for whom this may represent the only opportunity to undergo mammographic examination.[10]

Although the Breast Cancer Prevention Program has been in place since 2006 and has substantially contributed to improved treatment outcomes, its importance has not diminished. The continued occurrence of diagnoses at advanced stages of disease highlights the need for ongoing promotion of breast cancer awareness and screening.[9]

Magnetic resonance imaging is also widely used, particularly in women with a high genetic risk of breast cancer.[11]

With regard to treatment, surgery remains the primary therapeutic approach in the majority of breast cancer cases.[12] Surgical management involves excision of the malignant tumor.[13,14] Depending on the size, extent, and location of the lesion, treatment may consist of breast-conserving therapy (BCT) or total mastectomy, which may additionally include axillary lymph node dissection when clinically indicated.[13–15]

Breast cancer remains a significant challenge for modern medicine. Achieving optimal therapeutic outcomes requires an integrated approach that encompasses prevention, early diagnosis, and effective treatment, all of which directly influence patients' quality of life. Successful management of breast cancer depends on close collaboration among multiple medical specialties, including the various disciplines of surgery.[16]

Advances in medical science and improvements in treatment efficacy have transformed the goals of breast cancer surgery. Contemporary surgical treatment is no longer limited to simple tumor excision.

Today, women not only face the physical and psychological burden of cancer itself but also the long-term aesthetic consequences of surgical treatment. The postoperative appearance of the breast often has a profound impact on body image, self-esteem, and quality of life. Hence, it may be perceived as unsatisfactory or unacceptable by many patients. Therefore, selecting an appropriate surgical technique that provides both effective oncological treatment and an optimal cosmetic outcome has become an essential component of modern breast cancer management. Integrating oncologic and reconstructive principles during surgery contributes significantly to improved patient satisfaction and long-term psychological well-being.[17,18]

Aim of the work

This study aims to summarise current medical knowledge about breast cancer treatment. Therefore, a literature review of medical articles was performed between 21 and 26 April 2026. Access to these papers was obtained from the PubMed database.

Methodology

Oncoplastic Techniques Used in Breast-Conserving Surgery

Oncoplastic surgery combines the principles of oncologic surgery and plastic and reconstructive surgery. The integration of these two surgical disciplines enables complete tumor excision while simultaneously restoring the natural shape and appearance of the breast.

Until relatively recently, surgical treatment of breast cancer focused exclusively on removing the malignant tissue, with little consideration given to the cosmetic outcome. Although patients often achieved successful oncological treatment, many experienced long-term impairment of body image, self-esteem, and quality of life. Advances in medical science and clinical research on breast-conserving surgery, together with the incorporation of plastic surgical techniques, have demonstrated that it is possible to achieve oncological safety while preserving an aesthetically satisfactory breast contour. As a result, patients' quality of life following breast cancer treatment has significantly improved.

Oncoplastic techniques used in breast-conserving surgery can be broadly divided into two main categories. The choice of technique is preceded by careful patient qualification and is individualized according to tumor characteristics, breast size, patient age, and patient expectations. One of these categories is volume displacement, which involves the redistribution of the patient's remaining breast tissue following tumor excision. After removal of the tumor, the residual breast tissue is mobilized, reshaped, and repositioned to fill the surgical defect while maintaining oncological radicality. Beyond the oncological component of the procedure, volume displacement techniques closely resemble those used in reduction mammoplasty and cosmetic breast reshaping. The most commonly employed procedures include local tissue rearrangement, glandular or dermoglandular flaps, reduction mammoplasty, and mastopexy.[19,20]

Volume displacement techniques are primarily indicated for patients with medium-sized or large breasts. When excision of a relatively large tumor results in substantial loss of breast volume, there is a considerable risk of postoperative breast asymmetry. In unilateral cases, simultaneous contralateral symmetrization may be undertaken, provided there are no medical contraindications. Appropriate redistribution of the remaining breast tissue allows restoration of a natural breast shape and size while reducing the need for more extensive reconstructive procedures in the future.

Furthermore, in patients with large breasts, failure to perform breast reshaping or contralateral reduction may result not only in marked breast asymmetry but also in musculoskeletal problems, such as chronic back pain caused by uneven weight distribution. These consequences may ultimately impair patient's physical activity and overall functional capacity.

Therefore, breast-conserving surgery combined with meticulous oncoplastic tissue remodeling allows the volume discrepancy between the treated and untreated breasts to be effectively minimized while maintaining adequate oncological margins.

Contralateral breast reduction performed to achieve symmetry may provide additional health benefits beyond aesthetic improvement. By reducing excessive breast volume and restoring balance between the breasts, the procedure may alleviate spinal discomfort, improve physical comfort during everyday activities, and contribute to enhanced psychological well-being.

A major advantage of volume displacement techniques is that they rely exclusively on the patient's own breast tissue, thereby preserving its natural consistency and appearance. Consequently, the restoration of breast shape, size, and texture has been shown to positively influence patients' psychological well-being, body image, and self-acceptance following breast cancer treatment.[21]

More advanced oncoplastic procedures are also available and are reserved for carefully selected patients following appropriate preoperative assessment.

In many cases, volume displacement techniques alone are insufficient to achieve the desired aesthetic outcome. Under such circumstances, volume replacement techniques may provide superior reconstructive results.

The second major category of oncoplastic procedures is volume replacement, which restores breast volume either by implant-based reconstruction using breast implants[19,22] or by autologous tissue reconstruction employing flaps harvested from other anatomical regions and transferred to the breast. The selection of the optimal reconstructive technique depends on several factors, including tumor size, tumor

location, the ratio of tumor volume to breast volume, available surgical options, and the patient's individual preferences.[19]

Volume replacement techniques are particularly suitable for patients with small breasts or for those in whom achieving oncological radicality requires excision of a substantial proportion of the breast. In these patients, the resulting tissue defect is often too extensive to allow satisfactory reshaping of the remaining breast tissue using volume displacement techniques alone.[23]

Large postoperative breast defects therefore require replacement with either autologous tissue harvested from another anatomical site or an alloplastic material, such as a breast implant. Restoration of breast volume using autologous tissue is achieved by transferring well-vascularized skin and adipose tissue flaps from donor sites outside the breast.

Among the most commonly used perforator flaps is the lateral intercostal artery perforator (LICAP) flap, which provides excellent cosmetic results and offers the advantage of relatively predictable perforator anatomy. However, its limited arc of rotation and restricted reach make it most suitable for reconstruction of defects located in the lateral quadrants of the breast.[24]

Another option is the anterior intercostal artery perforator (AICAP) flap, which provides favorable aesthetic outcomes, requires only limited flap rotation, and is particularly well suited for reconstruction of defects involving the lower quadrants of the breast. Its principal limitation is the anatomical variability of the perforating vessels.[25,26]

The thoracodorsal artery perforator (TDAP) flap is commonly used for reconstruction of larger defects, particularly those involving the upper outer quadrant of the breast. Its long and flexible vascular pedicle provides considerable freedom in flap positioning, facilitating optimal breast contouring. Furthermore, the flap offers sufficient tissue volume to reconstruct more extensive defects. Its main disadvantage is the necessity for meticulous preoperative identification of perforating vessels, which exhibit considerable anatomical variation.[27–30]

The primary purpose of these perforator flap techniques is to restore breast volume following tumor excision. An additional advantage is that they preserve the underlying muscles, thereby minimizing donor-site morbidity. Because these flaps retain their native blood supply, they generally demonstrate excellent tissue viability, which contributes to favorable surgical outcomes. Moreover, the use of the patient's own tissue provides a more natural breast appearance and consistency, resulting in superior aesthetic outcomes and greater patient satisfaction.

In women with small breasts, the residual breast tissue remaining after tumor excision is often insufficient to achieve satisfactory breast remodeling. In such patients, volume replacement techniques effectively restore lost breast volume while allowing reconstruction of an appropriate breast shape and size.[28]

Another important advantage of these reconstructive procedures is their association with shorter postoperative recovery times and lower complication rates in appropriately selected patients.[23]

However, the use of autologous tissue is not always feasible because of medical contraindications, patient-related factors, or insufficient donor tissue. In such circumstances, volume replacement may be accomplished using breast implants.

The decision to perform implant-based reconstruction depends on multiple factors, including the type and stage of the malignancy, tumor size, patient age, overall clinical condition, and, importantly, the patient's informed preference.

Breast implants are medical prostheses designed to restore or increase breast volume. Modern implants are manufactured from highly biocompatible materials that exhibit excellent long-term tolerance in the human body. Today, silicone implants filled with cohesive silicone gel are considered the standard of care. Saline-filled implants, which were more commonly used in the past, have largely been replaced by silicone implants in breast reconstruction, although saline-filled tissue expanders continue to be widely used during staged reconstructive procedures.

The widespread use of breast implants in both oncologic and aesthetic breast surgery has led to the availability of numerous implant designs. Implants can be selected according to shape (round or anatomical), surface characteristics (smooth, textured, microtextured, or nanotextured), projection (low, moderate, high, or extra-high profile), and, most importantly, volume.

Appropriate implant selection enables reconstruction of a breast with the desired size, shape, and projection. Contemporary silicone implants also closely resemble the consistency of natural breast tissue, contributing to improved cosmetic outcomes and high levels of patient acceptance.

Oncoplastic Techniques Used in Mastectomy

Patients who require mastectomy for oncological indications may also benefit from oncoplastic reconstructive techniques. Mastectomy involves removal of the entire breast gland and, in some cases, axillary lymph nodes. As a result, there is insufficient residual breast tissue to allow volume displacement procedures. Consequently, breast reconstruction relies on volume replacement techniques. Reconstruction may be performed either immediately during the same operation (immediate reconstruction) or as a delayed procedure in a second stage. The decision to perform immediate or delayed reconstruction depends on multiple factors, including the patient's individual characteristics, oncological treatment plan, and coexisting medical conditions.[31]

In patients undergoing implant-based breast reconstruction following mastectomy, placement of a tissue expander is frequently the first stage of reconstruction. In many cases, the use of a tissue expander is an essential step for optimizing the final reconstructive outcome. The purpose of the expander is to gradually stretch the skin and soft tissues of the chest wall, creating adequate space for definitive breast implant placement. Although similar in appearance to a breast implant, a tissue expander allows progressive volume expansion through serial filling procedures. Gradual expansion enables controlled stretching of the overlying skin and soft tissues until the desired breast volume is achieved. Implant-based reconstruction therefore represents one of the principal methods of breast restoration following mastectomy.[31]

Both patients undergoing breast-conserving surgery and those treated with mastectomy may also undergo autologous breast reconstruction using tissue harvested from other anatomical regions. The most commonly used techniques include the deep inferior epigastric perforator (DIEP) flap, the transverse rectus abdominis myocutaneous (TRAM) flap, and the latissimus dorsi flap.[32]

These procedures are technically demanding because they involve complex reconstructive surgery. Nevertheless, the use of autologous tissue often provides a more natural breast appearance and consistency and may result in superior long-term reconstructive outcomes.[32]

The TRAM (Transverse Rectus Abdominis Myocutaneous) flap involves harvesting skin, subcutaneous fat, and a portion of the rectus abdominis muscle from the lower abdomen.[33,34] The harvested tissue is then carefully shaped to reconstruct a new breast. This technique produces a breast with a natural appearance and soft consistency while maintaining its own vascular supply.[34,35]

An additional characteristic of TRAM reconstruction is that the reconstructed breast changes in volume and shape with fluctuations in body weight, similarly to native breast tissue.[35] Despite these changes occur over time, the reconstructive result is generally considered durable. Some patients also appreciate the additional aesthetic benefit of a flatter abdominal contour following tissue harvest. However, because the procedure sacrifices part of the rectus abdominis muscle, it carries a higher risk of donor-site complications, including abdominal wall weakness and postoperative ventral hernia, and is associated with a longer recovery period. Consequently, TRAM reconstruction has increasingly been replaced by the more advanced DIEP flap technique.[33,36,37]

The deep inferior epigastric perforator (DIEP) flap is currently regarded as one of the most advanced techniques in autologous breast reconstruction.[38–40]

Like the TRAM flap, the DIEP flap utilizes tissue harvested from the lower abdomen. However, only skin, subcutaneous fat, and perforating blood vessels are transferred, while the rectus abdominis muscle is preserved.[39,40]

The DIEP flap allows precise reconstruction of breast size and contour while maintaining excellent vascularization of the transferred tissue. The resulting breast demonstrates a highly natural appearance and consistency.[38–40]

The reconstructed breast generally provides a durable long-term result. Its size and shape may nonetheless gradually change with aging and fluctuations in body weight, closely resembling the behavior of natural breast tissue. [41]

Many patients also consider the improvement in abdominal contour, resulting from removal of excess lower abdominal tissue, to be an additional cosmetic benefit.[41,42]

Compared with the TRAM procedure, the DIEP flap better preserves abdominal wall integrity, substantially reducing the risk of abdominal weakness and postoperative hernia formation.[39,43] Furthermore, postoperative recovery is generally shorter following DIEP reconstruction than after TRAM flap surgery.[42,43]

The DIEP flap has become increasingly popular because it consistently provides excellent aesthetic outcomes. Nevertheless, it is a technically demanding microsurgical procedure requiring specialized expertise. Moreover, it is not appropriate for all patients. 40,44]

Overall, patients undergoing breast reconstruction commonly report high levels of satisfaction with the aesthetic appearance of the reconstructed breast. Successful outcomes are determined not only by oncological recovery but also by restoration of body image, psychological well-being, and the ability to return to normal daily activities.

Results

Benefits of Combining Oncological and Reconstructive Procedures in a Single Operation

Patient satisfaction and psychological well-being are among the most important outcomes of breast cancer treatment. Performing tumor excision and reconstructive breast surgery during a single operative procedure not only achieves oncological treatment goals but also provides significant psychological benefits. Combining these procedures reduces the emotional burden associated with undergoing multiple operations and minimizes treatment-related stress. These factors may contribute positively to the overall effectiveness of cancer treatment by improving patients' attitudes toward the therapeutic process.

The introduction of oncoplastic techniques into breast surgery has substantially increased patients' acceptance of postoperative changes in body image. In most cases, satisfactory aesthetic outcomes help preserve quality of life and facilitate psychological adaptation following breast cancer treatment.[45,46]

Many available publications containing research on the appearance of the breasts after surgical treatment show that it directly affects patients' well-being, self-perception in society, and overall life satisfaction. Patients who undergo surgery without oncoplastic techniques and who experience resulting deformities are expected to be more likely to have decreased self-esteem, feelings of discomfort, and weakened social relationships.

The use of oncoplastic techniques helps reduce these negative effects.

Additionally, performing oncoplastic procedures, in which a tumor is removed with immediate reconstruction, not only reduces the number of required anesthetics, but also prevents the patient from experiencing an intermediate stage but also spares patients an intermediate stage, such as a flat chest after mastectomy, which can contribute to chronic stress and social withdrawal. Immediate reconstruction eliminates such risks and helps patients accept the changes resulting from surgery. Patients who are satisfied with the aesthetic outcomes after the operation are less likely to report anxiety or depression.

The use of appropriate, individually tailored techniques by a multidisciplinary team of specialists helps meet patients' expectations and increases post-procedure satisfaction.

Breast reconstruction performed simultaneously with oncologically radical surgery allows patients to return more quickly to their normal daily activities while reducing the psychological burden of breast loss. Immediate reconstruction also decreases the likelihood of requiring additional reconstructive procedures in the future, thereby reducing cumulative surgical exposure and the risk of complications associated with multiple operations. Whenever oncologically feasible, simultaneous tumor excision and breast reconstruction represent the preferred therapeutic approach.

Performing surgery with immediate reconstruction also reduces the risk of postoperative complications. In some cases, a patient may require several surgical procedures; however, the number of operations is minimized whenever possible. Each additional procedure requires general anesthesia, which is not without risks for the body. Furthermore, every surgery carries the risk of postoperative bleeding, as well as the possibility of surgical site infection. Multiple procedures are also associated with an increased risk of delayed wound healing, which may ultimately result in the formation of aesthetically unfavorable scarring.

From an oncological perspective, once a single surgical procedure is completed and the wound has healed properly, the patient can proceed to the subsequent stages of treatment. In contrast, if multiple operations are required, the overall treatment process is prolonged. This is particularly important in oncology, since subsequent treatments such as chemotherapy or radiotherapy can only begin after surgical treatment is complete and the wound has adequately healed. Adhering to appropriate treatment timelines is essential in oncology, as it contributes to achieving the best possible therapeutic outcomes.

Overall, performing the procedure during a single operation not only has a positive impact on the patient's overall well-being but also reduces healthcare system costs. Faster recovery enables the patient to return to work and resume normal daily activities sooner, thereby shortening the duration of sick leave.

Nevertheless, delayed reconstruction remains necessary in selected patients and, when appropriately indicated, may ultimately provide superior clinical and reconstructive outcomes.[47]

Evidence from numerous systematic reviews indicates that oncological safety and favorable aesthetic outcomes can both be achieved within a single surgical procedure. Several authors have reported that immediate oncoplastic reconstruction "improves patient-reported outcomes and reduces the psychological burden associated with multiple surgeries." [46]

In conclusion, it can be stated that the combination of oncological surgery and plastic surgery has become an integral part of modern breast cancer treatment. Given the high incidence of breast cancer and the large number of patients requiring surgical intervention, this approach offers significant opportunities for the development of both surgical techniques and operative strategies. The large number of breast cancer procedures performed each year allows surgeons to build increasing clinical experience, which contributes to improved surgical quality, greater procedural efficiency, and continued oncological safety. Current evidence demonstrates that achieving oncological radicality in breast cancer surgery no longer requires sacrificing aesthetic outcomes. The integration of oncoplastic techniques allows surgeons to preserve oncological principles while providing patients with satisfactory cosmetic results. As a result, patients can benefit not only from effective cancer treatment but also from improved body image, psychological well-being, and overall quality of life.

Discussion

Evaluation of Patient Satisfaction

Studies evaluating patient satisfaction following breast-conserving surgery with oncoplastic tissue rearrangement have consistently demonstrated high levels of satisfaction, ranging from approximately 83% to 93%.[48]

A substantial proportion of patients report being "very satisfied" with the cosmetic outcomes, a factor widely considered crucial to the overall success of breast cancer treatment and postoperative recovery. [49]

An important tool for assessing patient-reported outcomes is the BREAST-Q questionnaire, a standardized patient-reported outcome measure (PROM) specifically developed for breast surgery. BREAST-Q evaluates patient satisfaction following a wide range of breast procedures, including breast reconstruction, reduction mammoplasty, and augmentation surgery. The questionnaire assesses satisfaction with breast appearance and overall aesthetic outcomes, as well as health-related quality of life, encompassing psychosocial, sexual, and physical well-being. It also includes domains evaluating pain, physical discomfort, as well as patient satisfaction with the quality of care provided by the healthcare team.[50,51]

The BREAST-Q instrument was developed through extensive qualitative research involving both patients and clinical experts and underwent rigorous psychometric validation in accordance with internationally accepted standards for patient-reported outcome measures.[50]

The questionnaire has been extensively validated across diverse patient populations and has demonstrated high reliability, validity, and responsiveness to clinically meaningful changes, making it one of the most valuable instruments for both clinical practice and scientific research.[51,52]

Consequently, BREAST-Q has emerged as a commonly employed tool for evaluating patient-reported outcomes following breast surgery. [53]

In a study by Gardfjell et al., patient satisfaction following oncoplastic breast surgery was assessed using the BREAST-Q questionnaire. The mean satisfaction score was 74 out of a possible 100 points. The authors also emphasized that most patients undergoing oncoplastic surgery did not require contralateral breast symmetrization to achieve satisfactory cosmetic outcomes.[54]

Similarly, Stolpner et al. prospectively evaluated BREAST-Q outcomes following oncoplastic breast surgery. In addition to overall patient satisfaction, the authors investigated the influence of factors such as incision type, body mass index (BMI), and psychosocial well-being. Their findings demonstrated that patients with higher BMI and lower baseline psychosocial well-being were more likely to report lower satisfaction with the final aesthetic results.[55]

These findings underscore that current standards of breast cancer treatment should extend beyond achieving oncological radicality alone. Comprehensive patient care should also address psychological well-being, social functioning, body image, sexual health, independence, and the ability to resume personal and professional life. Oncoplastic breast surgery has become one of the most effective approaches for addressing these broader patient-centered outcomes. Over recent years, oncoplastic techniques have contributed not only to excellent oncological results but also to substantial improvements in patients' psychological well-being and overall quality of life.[56,57]

Continuous advances in reconstructive and plastic surgery have enabled breast cancer patients to maintain a significantly higher level of psychological well-being following surgical treatment.[58,59]

Historically, many women treated surgically for breast cancer struggled with poor body image, diminished self-esteem, social withdrawal, reduced sexual activity, and difficulties returning to everyday life.[60,61]

Breast cancer treatment has also frequently been associated with depression and anxiety disorders, further emphasizing the importance of comprehensive patient-centered care.[62]

Oncoplastic breast surgery enables patients to focus on the overall oncological treatment process, including not only surgery but also adjuvant therapies such as radiotherapy, chemotherapy, and endocrine therapy.

Breast reconstruction facilitates patients' acceptance of postoperative body image following tumor removal and helps reduce the risk of social stigmatization. In many cases, postoperative changes become minimal or inconspicuous within a relatively short period after surgery, allowing patients to regain confidence in both their personal and social lives.[57,63]

Today, breast reconstruction should be regarded as an integral component of comprehensive breast cancer treatment rather than merely a cosmetic procedure. Successful reconstruction contributes not only to improved quality of life but also to the overall success of oncological treatment by facilitating patients' psychological recovery and enabling an earlier return to normal social and professional functioning.[59,64]

Conclusions

The incorporation of oncoplastic techniques into the surgical management of breast cancer enables superior aesthetic outcomes, resulting in greater patient satisfaction and improved long-term quality of life.[65,66]

The assessment of patient satisfaction following the integration of oncologic and plastic surgery has become increasingly reliable owing to the use of standardized patient-reported outcome measures, particularly the BREAST-Q questionnaire. By evaluating postoperative breast appearance, psychological well-being, and health-related quality of life, these validated instruments provide robust evidence of the benefits of oncoplastic breast surgery. Continued standardization of patient-reported outcome assessment remains essential for the further development of oncoplastic surgery and for optimizing treatment strategies. Nevertheless, currently available validated assessment tools already provide compelling evidence of the positive impact of oncoplastic techniques on patient satisfaction.[66]

The available evidence therefore supports the conclusion that combining oncologic surgery with reconstructive and plastic surgical techniques significantly improves both the physical and psychological aspects of patients' quality of life following breast cancer treatment.[65]

When planning, performing, and evaluating oncoplastic breast surgery, it is important to recognize that, for most women, the breast represents an essential aspect of feminine identity.[59,67]

Breasts constitute one of the principal determinants of women's perception of their own bodies.[59] From both historical and sociocultural perspectives, they symbolize femininity, motherhood, sexuality, and physical attractiveness.[59]

For these reasons, successful breast reconstruction plays a fundamental role in preserving the psychological well-being of women treated for breast cancer and may substantially influence the overall success of comprehensive oncological care.

As a relatively young and continuously evolving discipline, oncoplastic breast surgery continues to face significant challenges.

Not all patients are suitable candidates for currently available reconstructive techniques following breast tumor excision. Factors such as tumor size, disease stage, general health status, and the need for adjuvant oncological treatment may preclude the use of specific oncoplastic procedures.

In addition, shortages of appropriately trained surgical specialists and limited access to specialized medical equipment may significantly restrict the availability of breast reconstruction for patients with breast cancer.[68]

Despite the substantial importance of breast reconstruction in improving patient-centered outcomes, the primary objective of breast cancer surgery must always remain the achievement of oncological radicality and effective cancer control.[67,69]

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