Quality of Life and Emotional Impact after Immediate Breast Reconstruction

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Abstract: ***Background:*** Mastectomy is the main method of treating breast cancer and carries a mutilating stigma. Breast reconstruction restores body aesthetics, influencing psychosocial aspects and quality of life. Thus, the aim of the study was to analyze interpersonal and emotional relationships after immediate breast reconstruction. ***Methods:*** A qualitative, descriptive and prospective study, was performed through the application of a quality life questionnaire - Breast Evaluation Questionnaire (BEQ 55) in patients who had immediate breast reconstruction, between 2010 to 2019. ***Results:*** From the 89 (n=89) women registered in the clinic's database during the study period, 15 (n=15) of them agreed to participate. The average age was 46 years. Physical domain showed high scores, regarding intimate and sexual activities, professional and work activities, as well as social and recreation activities. Patient's comfort in front of men were progressive smaller regarding the body dressed, in a swimsuit and naked. The same pattern was observed intimate women and with health professionals. Considering sexual domain scores showed that the more covered, the greater the satisfaction, with an improvement regarding the breasts (73.3%) when compared to the whole body (60.0%). The same pattern was observed regarding the patients' comfort when being alone, revealing an improvement in the valorization of the breasts in relation to the whole body in the sense of self-image. ***Conclusion:*** This study allowed a better understanding of the impact of immediate breast reconstruction showing that this experience can be less traumatic and gradually overcome if there is support from family and health professionals.

Keywords: Breast neoplasms; Mastectomy; Mammaplasty; Quality of life; Oncology.

INTRODUCTION

Breast cancer is a worldwide public health problem and the second leading women's cause of death in several countries, including the United States and Brazil [1]. This disease has a negative impact over patients who is often materialized as physical symptoms such as sleep, eating and sexual disorders [2]. Some women are able to understand this moment without major psychological impacts. However, many of them can show emotional disorders after diagnosis that can become disabling diseases. These aspects became a relevant element in the health's cancer patients and, therefore, the Canadian Strategy for Cancer Control included this emotional distress as a vital sign to be analyzed routinely [3].

The emotional trajectory faced in this period occurs and remain during the establishment of a prognosis and treatment [3,4]. These are defined by the location of the tumor, age at presentation, staging and early therapeutic approach, in addition to risk factors according to the histopathological, biological and, more recently, molecular and genetic criteria. Therapeutic options for breast cancer include primary tumor surgery, assessment of axillary involvement and radiation therapy as a type of local treatment and neoadjuvant and/or adjuvant systemic drug therapy. The combined therapeutic modalities can have a curative or palliative purpose, in spite of each one can be used alone with a palliative purpose [4].

Mastectomy is the main treatment for breast cancer, and the approach can be done with total or partial, conservative technique [5]. These surgical procedures were improved to be less invasive, without affecting patients' curability, with better aesthetic results. However, such procedures still remain relatively mutilating, since they disrupt or remove structures related to a female sexual symbol who harms the quality of life of these women. Reconstructive surgery is usually indicated in patients who have undergone total or radical mastectomy [6]. It can be immediate, in cases of initial disease and without indication for adjuvant radiotherapy, being related to greater patient satisfaction; or late, usually reserved for initially advanced disease, with indication for radiotherapy or patients at higher surgical risk. Contralateral breast surgery may be necessary for symmetrization [4]. Thus, breast reconstruction aims to restore body aesthetics, restoring the lost volume and ensuring symmetry with the contralateral breast [5,6].

From this perspective, breast repair influences patients' psychosocial aspects, thus changing their self-image and quality of life, demonstrated in the positive attitudes adopted by these women associated with satisfaction with appearance [7]. Concomitantly, it has the potential to present itself as a tool for modifying trauma related to cancer, with a reduction of fear of the disease recurrence after repair [6].

Considering the biopsychosocial impact of the mastectomy on the lives of patients, the study of the impact of breast reconstruction in the quality of life of them becomes relevant due to the high prevalence of breast cancer in the world.

OBJECTIVE

The present study aimed to evaluate the impact of immediate breast reconstruction in the quality life of these patients.

METHODS

Study Design

This is a qualitative, descriptive and prospective study, when the structured and standardized quality of life questionnaire - Breast Evaluation Questionnaire (BEQ 55) was applied. The study followed the guidelines of the Declaration of Helsinki and was approved by the Research Ethics Committee of the Centro Universitário Municipal de Franca - SP.

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Casuistic

Eighty-nine patients (n = 89) who underwent breast reconstruction by the same surgical team from 2010 to 2019 in a private hospital were contacted by phone.

Inclusion criteria was patients who underwent immediate reconstruction, uni or bilateral, with silicone expanders / implants and who signed the free and informed consent form. Patients who underwent late reconstruction and those who did not agree to participate in the study were excluded from the study.

Breast Evaluation Questionnaire (BEQ 55)

After selecting the sample, the Breast Evaluation Questionnaire (BEQ 55) was applied [8]. It is a self-administered questionnaire, with 55 questions, developed to assess satisfaction with the breasts and changes in quality of life in patients undergoing breast surgery. Answers are given on a scale of one to five, with 1 being very dissatisfied / uncomfortable and 5 very satisfied / comfortable. The questionnaire is divided into three parts:

- The first part is about satisfaction with the size, shape and firmness of the breasts in three different situations: sexual, social and professional activities.

- The second part checks the degree of comfort with the general personal appearance or with the aspect of the breasts when she is fully dressed and with swimsuits or undressed. This aspect is evaluated when she's alone, with an intimate partner, with men in general, women in their relationship, women not so intimate or health professionals.

- The third part present two questions, the first is about the level of satisfaction with the aspect of the breasts for herself, for the partner, parents, siblings and friends. The last question asks to classify the importance of the size of the breasts for herself and the people in her relationship.

Statistical Analysis

The answers were separated by physical, mental, social and sexual domains. The quantitative analysis and tab were done using the Excel® tool (Microsoft 365®). The statistical analysis was performed using the Kruskal-Wallis test through the online platform Social Sciences Statistics (www.socscitatisitics.com), considering 5% the level of statistical significance ($p<0.05$).

RESULTS

From the 89 (n=89) women registered in the clinic's database during the study period, 25 (n=25) met the inclusion criteria. However, 15 (n=15) of them agreed to participate in the study. Therefore, the final sample was 15 patients (n = 15). The average age was 46 years, ranging from 33 to 69 years and the mean follow-up period was 4 years.

The Table 1 shows the results of all of the domains of the Breast Evaluation Questionnaire (BEQ 55).

PHYSICAL DOMAIN	**Very dissatisfied**		**Slightly Dissatisfied**		**Indifferent**		**Reasonably Satisfied**		**Very satisfied**	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Social Activity / Leisure										
Size	(1)	6,70%	-	-	-	-	-	-	(14)	93,30%
Format	(1)	2,00%	-	-	(2)	4,70%	-	-	(12)	93,30%
Firmness	(2)	13,30%	-	-	(1)	6,70%	-	-	(12)	80,00%
Work and Professional Activities										
Size	-	-	-	-	(1)	6,70%	-	-	(14)	93,30%
Format	(1)	6,70%	-	-	-	-	-	-	(14)	93,30%
Firmness	(2)	20,00%	-	-	-	-	-	-	(13)	80,00%
Intimate and sexual activities										
Size	(2)	13,30%	-	-	-	-	-	-	(13)	86,70%
Format	(1)	6,70%	-	-	-	-	-	-	(14)	93,30%
Firmness	(5)	26,70%	-	-	-	-	-	-	(10)	73,30%
SOCIAL AREA	**Very dissatisfied**		**Slightly Dissatisfied**		**Indifferent**		**Reasonably Satisfied**		**Very satisfied**	
	n	%	n	%	n	%	n	%	n	%
Satisfaction with Appearance										
Mother/ Father **	-	-	-	-	(3)	23,10%	-	-	(12)	76,90%
Sister/ Brother (s)	-	-	-	-	(6)	42,90%	-	-	(9)	57,10%
Friend(s)	-	-	-	-	(3)	20,00%	-	-	(12)	80,00%
*** 3 patients were not evaluated for these criteria due to death - (mother / father)*										
Importance to family members and close people	**Totally Unimportant**		**Not important**		**Indifferent**		**Reasonably Important**		**Very Important**	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Mother/ Father **	(1)	8,30%	-	-	(4)	25,00%	-	-	(10)	66,70%
Sister/ Brother(s)	-	-	-	-	(9)	60,00%	-	-	(6)	40,00%
Friend(s)	-	-	-	-	(3)	20,00%	-	-	(12)	80,00%
*** 3 patients were not evaluated for these criteria due to death - (mother / father)*										
SEXUAL DOMAIN	**Very dissatisfied**		**Slightly Dissatisfied**		**Indifferent**		**Reasonably Satisfied**		**Very satisfied**	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Work and Professional Activities										
Fully Dressed	-	-	-	-	(1)	6,70%	-	-	(14)	93,30%
With Swimsuit	-	-	(6)	33,30%	-	-	-	-	(9)	66,70%
Completely Naked	-	-	(7)	40,00%	-	-	-	-	(8)	60,00%
Breast Dressed	-	-	-	-	-	-	-	-	(15)	100,00%
Breast Swimsuit	-	-	(5)	26,70%	-	-	-	-	(10)	73,30%
Naked Breast	-	-	(5)	26,70%	-	-	-	-	(10)	73,30%

Table 1: Breast Evaluation Questionnaire (BEQ 55) answers of the 15 (n=15) patients regarding physical domain, social area and sexual domain.

Results regarding physical domain showed high scores, in the three parameters analyzed - intimate and sexual activities (Figure 1), professional and work activities, as well as social and recreation activities. Despite differences, there were no statistical significance when the parameters were compared (Table 1).

Considering social domain (question 2), the degree of comfort was assessed in multiple scenarios. When the patient's comfort in front of men was analyzed, the results were progressive smaller regarding the body dressed, in a swimsuit and naked (Figure 2), then, the more covered, the less discomfort. However, when these data were compared, there was no statistically significant difference ($p<0.05$). The same pattern was observed about patient's comfort with more and intimate women and with health professionals. However, in relation to the naked body, there was less satisfaction with men, when compared to the other groups, but without statistically significant difference ($p<0.05$).

Aspects related to the results of the reconstruction (social domain - question 3) among people linked to the family, showed that the majority was satisfied (Table 1). When the size of the breasts was considered by family and close people (question 4), it was observed high scores among parents and friends when compared to siblings (Table 1); however, there was no difference when these values were compared ($p<0.05$).

Sexual domain evaluated the patient's comfort with the partner, considering their whole body and the post-mastectomy breasts. In these aspects it was observed that the more covered, the greater the satisfaction, with an improvement in the positive evaluation regarding the breasts (73.3%) when compared to the whole body (60.0%) (figure 3), but there was no significant difference when these values were compared ($p<0.05$). The same pattern was observed in the psychological domain regarding the patient's comfort when being alone, revealing an improvement in the valorization of the breasts in relation to the whole body in the sense of self-image.

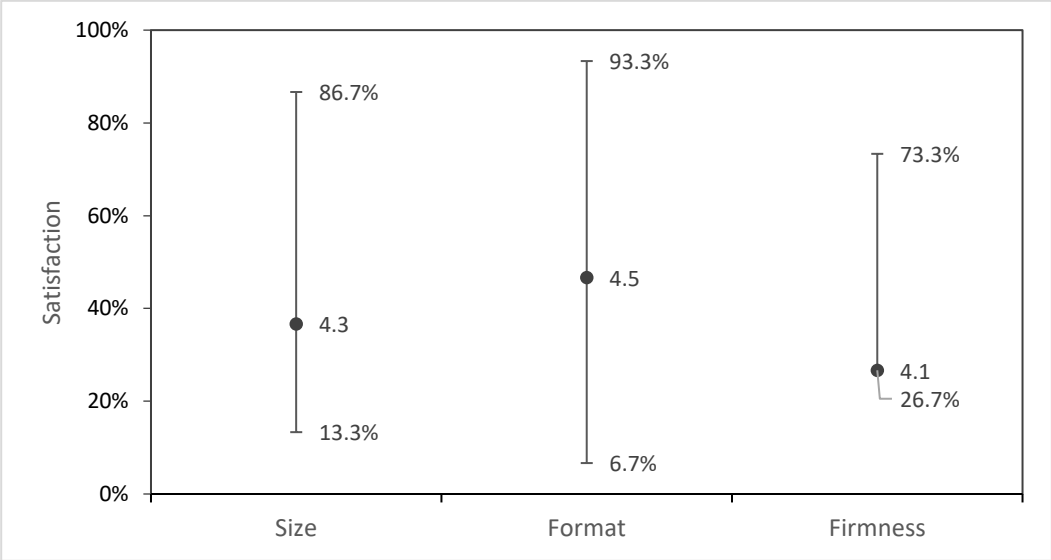

Figure 1: Intimate and sexual activities after mastectomy with immediate breast reconstruction.

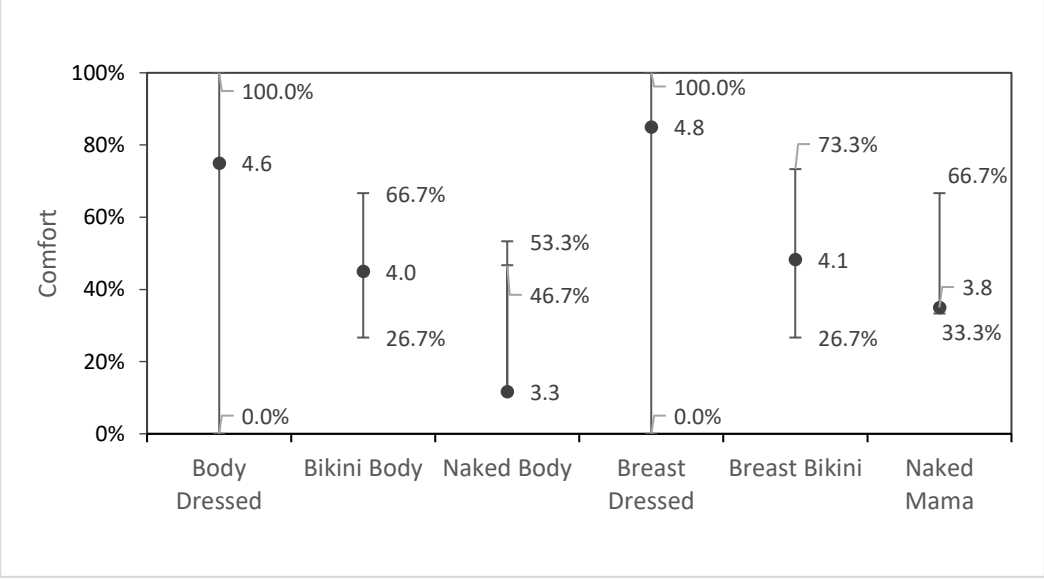

Figure 2: Comfort with men after mastectomy with immediate breast reconstruction.

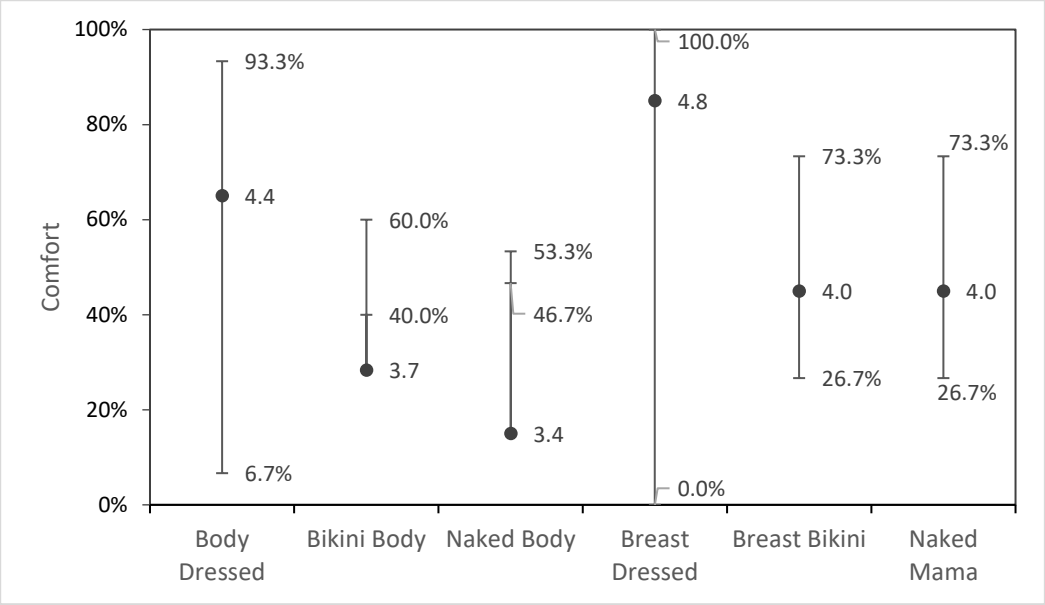

Figure 3: Comfort with partners (sexual domain) after mastectomy with immediate breast reconstruction.

DISCUSSION

For many decades, the only option of treatment for breast cancer was mastectomy with very limited possibilities of reconstruction [6]. The chest deformity after the radical surgery was always followed by a “mutilating experience” who can be described as the sensation of physical non-recognition with a deep negative impact on the psychosocial aspects [4]. Considering the great importance and occurrence of breast cancer, many studies have been developed with the purpose to develop and improve the approach of breast cancer as well as the surgical techniques of breast reconstruction.

There are three surgical ways to treat breast cancer: conservative surgery (quadrantectomy and lumpectomy), mastectomy with immediate or late reconstruction, and mastectomy without reconstruction. The choice of the best option will depend on biological aspect of the neoplasm and the staging of the disease [9].

The possibility of immediate breast reconstruction opened new perspectives in the treatment of patients [10]. Although the "new" breast is not functional, breast reconstruction should be considered more than just cosmetic surgery, mainly because, many studies have shown a high positive impact on quality of life after the procedure [2-6,11].

The higher negative impact in quality of life has been reported in patients who underwent mastectomy without reconstruction. This impact was related to emotional, social and sexual domains mainly after five years of the initial treatment. Therefore, psychological care must be continuous even after the end of treatment [5]. However, when the immediate breast reconstruction is performed this perspective changes, and a positive psychosocial impact is observed [9].

Women with greater emotional stability demonstrate satisfaction with the appearance of the breast, indicating that this is an important factor for an improvement in the quality of life. In the other way, although other domains, such as physical, social and environmental relationships do not have significant correlations, breast reconstruction also present a positive effect among them [12]. Then, it is possible to say that the immediate or late breast reconstruction presents a lot of benefits on the women quality of life. Furthermore, where breast reconstruction is delayed by patient’s personal choice or medical advice and is planned to be performed after treatment, it can provide benefits equivalent to immediate reconstruction in quality of life and body image [9,13].

In the present study, the choice for immediate breast reconstruction was based on the main objective of analyzing the impact of this surgical approach on self-image in patients who did not experience long period without the breast as suggested by Eltahir et al. 2013[12]. It was observed that the best scores were with the satisfaction of the attributes of the breasts and the general appearance when dressed. The worst were the overall appearance when they were with swimsuit or naked, as well as the appearance of the naked breast. These results can be explained by the sample, which presented mostly young patients (mean age 46 years), with a stable partner and a high degree of expectation with the results of the surgery.

All of the described aspects reinforce the primary objective of reconstructive surgery to give back the natural aspect of the breast when dressed [2,4,6]. Despite both the scars and asymmetries could be evident when patients were naked, for many of them, they are well tolerated if the entire process of illness were considered.

The BEQ-55 questionnaire obtains a part of the impact of breast reconstruction according to the patient’s perspective and its impact on quality of life. In the social dimension, greater relevance was found given to friends in relation to the size of the breasts, when compared to family members. This result seems to be related to the cultural aspect on the breast and its representativeness in the woman's life [7,8]. The breast concept in the society/culture, has been transcended the aspect related to motherhood, and it is also an object of expression of femininity, showing the need for reconstruction [10,12,13].

Issues that expressed patient's comfort related to her new breast in the presence of the partner presented positive scores when dressed (sexual domain). However, when they were naked or with a swimsuit the values were proportionally lower. This is probably explained because female sexuality is negatively impacted after breast cancer, with potentially problematic changes [2,3,5,7]. Intrapsychic changes include fear of loss of fertility, sensuality, femininity and a negative perception of self-image, correlated with fear of social and marital rejection [10,13]. In this way, any possibility to restore the normality has an intense impact on the women emotional dynamics. Then, when breast cancer is considered, these aspects are more than necessary: they are needful. So, many countries, such as Brazil, included in their health public system the possibility of immediate or late breast reconstruction, depending on medical indication [11].

This study presented limitations such as the reduced sample. In the same way, another aspect to be considered is the limitations of the BEQ-55 questionary, mainly regarding the satisfaction with sexual life, emotional support from family and friends and the return to the job market.

Finally, it is important to stress that this study allowed a better understanding of the impact of immediate breast reconstruction after mastectomy in this group of women which the level of satisfaction is close to the results obtained in other similar studies, showing that this experience can be less traumatic and gradually overcome if there is support from family and health professionals when considering immediate breast reconstruction as a treatment option, when possible.

REFERENCES

[1] Rebecca L, Siegel MPH, Kimberly D, Miller MPH, Ahmedin Jemal DVM. Cancer statistics, 2018. CA Cancer J Clin 2018;68:7-30. https://doi.org/10.3322/caac.21442

[2] Roth RS, Lowery JC, Davis J, Wilkins EG. Quality of life and affective distress in women seeking immediate versus delayed breast reconstruction after mastectomy for breast cancer 2005;16(4):994-1002. https://doi.org/10.1097/01.prs.0000178395.19992.ca

[3] Bultz BD, Carlson LE. Emotional distress: The sixth vital sign-future directions in cancer care. Psycho-Oncology 2006;15:93-95. https://doi.org/10.1002/pon.1022

[4] Zhong T, McCarthy C, Min S, Zhang J, Beber B, Pusic AL, Hofer SOP. Patient satisfaction and health-related quality of life after autologous tissue breast reconstruction. Cancer 2012;118:1701-9. https://doi.org/10.1002/cncr.26417

[5] Paredes CG, Pessoa SGP, Peixoto DTT, Amorim DN, Araújo JS, Barreto PRA. Impacto da reconstrução mamária na qualidade de vida de pacientes mastectomizadas atendidas no Serviço de Cirurgia Plástica do Hospital Universitário Walter Cantídio. Rev Bras Cir Plast 2013;28(1):100-104. https://doi.org/10.1590/s1983-51752013000100017

[6] Jahkola T, Asko-Seljavaara S, von Smitten K. Immediate breast reconstruction. Scand J Plast Surg 2003;92:249-56. https://doi.org/10.1177/145749690309200403

[7] Anderson RC, Cunningham B, Tafesse E, Lenderking WR. Validation of the breast evaluation questionnaire for use with breast surgery patients. Plast Reconstr Surg 2006; 18(3):597-60. https://doi.org/10.1097/01.prs.0000233040.82665.15

[8] Ferreira LF, Sabino Neto M, Silva MMA, Resende VCL, Ferreira LM. Tradução para a língua portuguesa, adaptação cultural e validação do Breast Evaluation Questionnaire. Rev Soc Bras Cir Plast 2013;28(2):270-5. https://doi.org/10.1590/s1983-51752013000200017

[9] Spear SL, Majidian A. Immediate breast reconstruction in two stages using textured, integrated-valve, tissue expanders and breast implants: A retrospective review of 171 consecutive breast reconstructions from 1989 to 1996. Plast Reconstr Surg 1998;101(1):54-63. https://doi.org/10.1097/00006534-199801000-00010

[10] Dauplat J, Kwiatkowski F, Rouanet P, Delay E, Clough K, Verhaeghe JL, Raoust I, Houvenaeghel G, Lemasurier P, Thivat E, Pomel C. Prospective multicentre STIC-RMI study on quality-of-life outcomes after mastectomy with or without immediate breast reconstruction. Br J Surg 2017;104(9):1197-1206. https://doi.org/10.1002/bjs.10537

[11] Moreira JR, Sabino Neto M, Pereira JB, Biasi T, Garcia EB, Ferreira LM. Sexuality of women that suffered mastectomy and those who had been submitted to the mammary reconstruction. Rev Bras Mastologia 2010;20(4):177-182.

[12] Eltahir Y, Werners LLCH, Dreise MM, van Emmichoven IAZ, Jansen L, Werker PMN, de Bock GH. Quality-of-Life outcomes between mastectomy alone and breast reconstruction: Comparison of patient-reported BREAST-Q and other health-related quality-of-life measures. Plast Reconstr Surg 2013;132(2):201-9. https://doi.org/10.1097/prs.0b013e31829586a7

[13] Newman LA, Kuerer HM, Hunt KK, AFC, Ross MI, Theriault R, Fry N, Kroll SS, Robb GL, Singletary SE. Feasibility of Immediate Breast Reconstruction for Locally Advanced Breast Cancer 1999;6(6):671-5. https://doi.org/10.1007/s10434-999-0671-6

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