# QUALITY OF LIFE IN WOMEN WITH BREAST CANCER IN CHEMOTHERAPEUTIC TREATMENT<sup>1</sup>

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### **ABSTRACT**

The objective was to verify the impacts of chemotherapy treatment on the quality of life of women diagnosed with breast cancer. It is a cross-sectional, descriptive study with a quantitative approach, in which 39 women were interviewed for chemotherapy treatment at the Oswaldo Cruz University Hospital - Recife, from July to September 2016. A sociodemographic and clinical questionnaire was used in the data collection, in addition to two validated questionnaires, EORTC QLQ-C30 and QLQ-BR23. The results of the interviewed women, in view of the QLQ-C30, indicate a global state of intermediate health, a functional scale with a low emotional score, and the scale of symptoms, financial difficulty, insomnia and fatigue were the most frequently mentioned. In QLQ-BR23, the functional score showed that there is a good concern and future perspective, but impairment in function and sexual satisfaction. On the symptoms, the side effects resulting from the chemotherapy treatment are the ones that most interfered in the daily life. It is concluded that the results demonstrate the impacts of chemotherapy treatment on quality of life, and it is possible to verify that women present changes mainly in the emotional and functional domains.

Keywords: Breast neoplasms. Quality of life. Chemotherapy.

### INTRODUCTION

Breast neoplasm has an important impact on public health, considering its increasing incidence of involvement. It is considered one of the diseases most feared by women, because it carries with it a negative stigma of its prognosis, associated to psychological repercussions that reflect mainly in the autoimagem<sup>(1)</sup>.

Treatment has important implications for female identity. In addition to the loss of the breast or part of it, complementary treatments may impose hair loss, stop or cause irregular menstruation and infertility, further weakening the woman's sense of identity<sup>(2)</sup>.

Breast cancer is a disease that has several factors associated with its development and is the second most common among women in Brazil and the world, it is surpassed by non-melanoma skin cancer, accounting for about 25% of new cases each year. The National Cancer Institute (INCA) estimated that in the year 2016, 596,070 new cases of malignant

neoplasm appeared in the country, with breast cancer being one of the most incidents. This fact is partly attributed to the insertion of women in the labor market, which has led to a less reproductive life in recent years, increased exposure to pathogens, sedentary lifestyle and inadequate diet. The association of this set with the intrinsic factors leads to a greater vulnerability to the appearance of neoplasias<sup>(3)</sup>.

In general, there was a significant improvement in the survival of the woman, due to the possibility of earlier diagnoses and the evolution in the treatment methods. Thus, there is a greater concern in investigating the needs of affected women, aiming at a better quality of life<sup>(4)</sup>.

Quality of life is a broad and subjective term, and may fluctuate in the face of each individual's experiences and expectations. It is aimed at selfassessment and perception, thus helping in the evaluation of interventions, so that better care and,

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consequently, early rehabilitation is applied, besides understanding problems related to the functional and psychosocial part of the disease<sup>(5)</sup>.

Given the magnitude and relevance of the disease, it is imperative that there are professionals trained for a holistic view, so that they can maintain a posture that not only addresses the treatment of the disease, but also education and prevention, assuming care activities in all stages of the disease diagnosis and treatment<sup>(6)</sup>.

In addition, it is important to highlight the lack of tertiary care studies focused on the care and humanization of cancer care policies. Therefore, this study is justified by the epidemiological relevance of the morbidity of breast neoplasms, since adherence to the treatment and knowledge of its interference may contribute to good team practices in improving the quality of life of women with breast cancer.

In this context, the study aimed to verify the impacts of chemotherapy treatment on the quality of life of women diagnosed with breast cancer in a High Complexity Care Unit (UNACON) in Recife-PE.

### **METHODOLOGY**

This is a cross-sectional, descriptive study with a quantitative approach, developed at the Mastology Outpatient Clinic of the Oswaldo Cruz University Hospital (HUOC), Recife - PE. To select the sample, we opted for the technique of non-probabilistic sampling for convenience and, thus, the study counted on 39 participants who were under chemotherapeutic treatment. The collection took place from July to September 2016.

The inclusion criteria were women aged 18 or older, diagnosed with breast cancer, undergoing chemotherapy from the second cycle, so that the effects of treatment could be better identified. Women with cognitive deficits were excluded. All participants in the study signed the Informed Consent Term (TCLE).

In order to collect data, we used questionnaires containing sociodemographic variables, clinical aspects regarding the use of antidepressants, since their use may interfere with the chemotherapy action, and two questionnaires were prepared by the European Organization for Research and Treatment of Cancer (EORTC) and validated: the EORTC OLQ-C30 and the OLQ-BR23<sup>(7-8)</sup>.

The EORTC QLQ-C30 is a questionnaire consisting of 30 questions that aims to identify quality

of life in general, distributed on functional scales that deal with physical, cognitive, emotional, functional and social functions; and symptomatic, which includes fatigue, pain, nausea and vomiting, shortness of breath, insomnia, lack of appetite, constipation, diarrhea and financial difficulty; and the global state, generally identifying how the patient perceives herself before the course of the disease and treatment<sup>(7)</sup>.

The questionnaire QLQ-BR23 is a questionnaire consisting of 23 questions that aims to evaluate the adverse reactions of treatment in women with breast cancer and it is subdivided into two scales: functional (body image, future perspectives, functions and sexual pleasure); and the symptomatic one that includes aspects related to breast, arm, concern with hair loss and treatment effects. It must be applied to EORTC QLQ-C30<sup>(7)</sup>.

The data were stored in a Microsoft Excel 2016 spreadsheet for statistical analysis. Descriptive was used for sociodemographic characterization, calculating absolute and relative measures. The scores of the questionnaires were calculated according to the norms of the EORTC Scoring Manual where the result of the score of the questions is reached through the scale of the Likert type, and through a psychometric answer allows to know the degree of conformity on the questioning, varying between the minimum value of 0 and the maximum value of 100, the closest value of 100 corresponds to a better quality of life, except for the symptomatic scales that evaluate the severity of the symptoms, that is, the higher the value, the lower the quality of life<sup>(7)</sup>.

For the calculation of scores, the same method was used for both questionnaires. The mean of the items that contributed to the achievement of the gross score and then a linear transformation according to the EORTC scores manual was calculated in order to standardize the gross scores so that the value varies between 0 and 100<sup>(9)</sup>.

For the calculation of the EORTC - BR23 there are some caveats to the functional scale. Questions 44, 45 and 46 were recorded in the reverse direction: (1 = 4), (2 = 3), (3 = 2), (4 = 1), and questions 35 (on the symptomatic scale) and 46 functional scale) were only answered if the previous ones did not have the value 1 in response<sup>(7)</sup>.

All questionnaire data were organized into tables prepared in the Microsoft Excel 2013 program, and calculated with Epi Info software version 7.2 support.

This study complied with ethical principles according to Resolution 466/12 of the National Health Council, thus respecting bioethical principles, as well as secrecy and anonymity about the data of the research participants (10). The research was approved by the Research Ethics Committee of the Hospital Complex of HUOC / PROCAPE with Certificate of Presentation for Ethical Assessment (CAAE) of no 54884316.2.0000.5192.

### **RESULTS AND DISCUSSION**

The sample consisted of 39 women who were in chemotherapy treatment with diagnosis of breast cancer, and they were present at the time of collection. The sociodemographic characterization of the women in the study is shown in Table 1 below.

**Table 1.** Sociodemographic data of patients. Recife, 2016.

Variables	Frequency	%
Age		
18 to 29 years-old	1	2,56
30 to 45 years-old	14	35,90
46 to 59 years-old	17	43,59
60 or older	7	17,95
Occupation		
Retired	14	35,90
Self employed	4	10,26
Formal work	9	23,08
Housewife	12	30,77
Income		
Up to a salary	17	43,59
From 1 to 3 salaries	20	51,29
More than 3 salaries	2	5,12
Ethnicity		
White	16	41,03
Non-white	23	58,97
Marriage status		
Single	11	28,21
Married	22	56,41
Divorced	1	2,56
Widow	5	12,82
Education		
8 years of study or less	16	33,34
With more than 8 years of study	26	66,67

<sup>\*</sup> The minimum wage at the time of the survey was R\$ 880.00.

The age group of the participants presented a predominance of 46 to 59 years-old (43.59%). These findings were similar to studies conducted in Ceará and Minas Gerais, which invetigated the quality of life of women with breast cancer undergoing chemotherapy, confirming a higher incidence of women over 45 years-old<sup>(9,11)</sup>.

In regard to the auto-referred ethnic, nonwhite groups, which are represented by browns and blacks, the quantitative of white people stood out. According to data from a research developed with women attended at an oncology outpatient clinic of a University Hospital of the Interior of Minas Gerais11, it was divergent, pointing to breast cancer as the most prevalent in white women (57.1%). It is required to promote a universal health service to all social classes and patients, as well as most white and sophisticated women.

A study conducted at the University of Oxford

concluded that white women are more likely to have breast cancer compared to black and asymptomatic women because of their drinking habits, differences in reproduction, refusal to breastfeed and their sedentary lifestyle. However, as ethnicities would have equivalent risks if harmful habits were performed more frequently<sup>(12)</sup>.

For an analysis of the clinical data it was used or questioned about the association of antidepressant drugs to the antineoplastic treatment, identifying that more than 50% of the women do not use antidepressants without treatment. It is worth noting the presence of common emotional lability in the diagnosis and treatment of breast cancer, since the coping of the disease requires intrinsic factors of acceptance and extrinsic family support<sup>(13)</sup>.

In a study carried out in the city of Caxias - MA, with a sample of 52 patients12, the occurrence of depressive symptoms associated with the treatment

was observed. Chemotherapy obtained the second highest index (55.6%), second only to radiotherapy. It is possible to infer that chemotherapy causes a great impact in the life of the women, considering all its side effects and systemic aggressiveness<sup>(13)</sup>.

Associated with adverse effects, feelings of concern regarding physical appearance, marital status, employment, and fear of not being cured can still be observed. Although the negative impact initially reaches the physical, psychological or social, over time, one feeling begins to trigger others in cascade effect. Due to this fact, the importance of a multi-professional team in the evaluation of the patient in a holistic way is made<sup>(13)</sup>.

The family nucleus also becomes important, because it assists in adapting to the changes that are to come, and in the moment of negative feelings, stimulates the woman to discover new values, encouraging them in coping with the disease<sup>(14)</sup>.

Data on the QLQ-C30 questionnaire showed that the global status was considered intermediate, with a mean of 56.40 and a standard deviation of 20.89, according to the EORCT criteria, showing considerable changes in global quality of life and its interfaces. Table 2 shows the values of the EORTC questionnaire QLQ-C30.

Table 2. Mean and standard deviation of function and symptom items of EORTC QLQ-C30 questionnaire. Recife, 2016.

	Items	Mean	Standard Deviation
QLQ-C30 Functions	Physical	62,73	25,71
	Function Performance	61,96	32,88
	Cognitive	64,10	35,15
	Emotional	45,72	29,79
	Social	83,75	28,22
QLQ-C30 Symptoms	Fatigue	40,45	30,21
	Pain	37,60	36,01
	Nauseas and Vomiting	31,13	33,59
	Dyspneia	16,23	30,46
	Insomnia	43,85	41,80
	Loss of Appetite	29,05	41,30
	Cold	38,46	43,62
	Diarrhea	16,23	30,46
	Financial Difficulty	64,95	37,42

With respect to the functional scale, the general domain was found to be 61.07 as mean and 20.74 as the standard deviation, encompassing physical, emotional, cognitive, functional and social aspects.

It was identified that the scores related to physical, function performance, cognitive function, and mainly to social questioning, obtained values above 60, thus perceiving a good indication of quality of life. For the emotional aspect, 45,72 were found, thus recognizing the possible emotional fragility resulting from the aspects involved in the diagnosis and treatment of the disease.

It is possible to identify a probable anguish related to the physical and social impact of the treatment, anxiety, fear due to the stigma of death of the disease and a worsening of the quality of life. This data corroborates the other study that obtained as a lower score the emotional function, with a mean of 61.32, indicating the feeling of being angry, depressed or worried<sup>(9)</sup>.

In the general symptoms scale of the QLQ-C30, the value of 36.35 was obtained, with a standard deviation of 18.55, finding the highest scores related

to financial difficulty (64.95), insomnia (43.85), fatigue 40,45), constipation (38,46) and pain (37,60), respectively.

Reflects that the treatment and the new physicalemotional condition of the women interfere in their well-being as a whole, generating a great financial difficulty with repercussion for them and for their relatives, and the presence of the other highlighted symptoms, interfere moderately in their daily activities<sup>(11)</sup>.

Symptoms of insomnia (43.85), fatigue (40.45), constipation (38.46) and pain (37.60) follow the subsequent order of those most affected. It can be said that fatigue is one of the symptoms that most interfere in the daily life of women, and may persist until years after the treatment. Insomnia is often a reflection of the discomfort generated by fatigue that lasts throughout the day, which tends to increase during the treatment<sup>(13)</sup>. The same is observed in two studies, conducted in Fortaleza, Ceará, finding the most affected scores in insomnia (37,93) and fatigue (36.01), and in Campina Grande - PB in the center of cancerology, when there is a worsening of fatigue

after adjuvant chemotherapy sessions (9,15).

The literature draws attention to the fatigue symptom, since it can directly interfere with women's emotional well-being and quality of life. The caveat is for health professionals who must be prepared and attentive to guide patients, helping them to recognize

fatigue and clarifying appropriate ways of relieving this symptom<sup>(15)</sup>.

In the QLQ-BR23 instrument, it was found that the functions obtained 52.40 as mean and 24.40 in standard deviation, in which it evaluates: side effects, arm symptoms, breast, and concern with hair loss. Table 3 shows data for EORTC QLQ-BR23.

**Table 3.** Mean and standard deviation of the items of functions and symptoms of EORTC QLQ-BR23 questionnaire. Recife, 2016.

	Items	Mean	Standard Deviation
	Body Image	70,93	39,63
QLQ-BR23	Sexual Desire	22,64	28,73
Functions	Sexual Satisfaction	24,78	32,18
	Future Perspective	70,93	41,30
	Side Effects	46,88	16,58
QLQ-BR23	Symptoms of the Arm	31,33	26,10
Symptoms	Symptoms of Breast	42,09	27,56
	Concern With Loss of Hair	42,73	48,33

When each data was observed in more detail, the body image and future perspectives obtained a score of 70.93, thus identifying a good acceptance and future perspectives, since its approximation of the value of 100, determined by EORTC for a better quality of life. The sexual function (22.64) and sexual satisfaction (24.78) of the sample were unsatisfactory, thus representing that the disease interferes significantly in this aspect.

Quality of life associated with sexuality in women with breast cancer, during treatment, may be decreased or interrupted by the presence of dysfunction in this domain. The importance of a targeted approach becomes paramount since most of the consultations performed only cover the physical issue of the disease and not the acceptance of the woman to the body changes and all the complexity resulting from this neoplasm<sup>(16,17)</sup>.

In the symptoms of QLQ-BR23 analyzed, 42.53 were found as mean and 15.53 as the standard deviation, identifying the side effects (46,88) as the prevalence of the score, representing the greatest interference related to the adverse effects of the chemotherapy treatment.

Then, breast symptoms related to pain, edema, and increased sensitivity (42.09) and symptoms of arm associated with pain, edema, difficulty of movement (31,33), represented the lowest score obtained. Concerning hair loss, the score was 42.73.

Chemotherapy brings with it several commonly adverse effects expected during treatment, such as: nausea, vomiting, diarrhea or constipation, alopecia, among others. It is necessary to evaluate the cost-benefit of each treatment, since the answers are

individualized and requires a punctual and effective intervention to minimize them<sup>(11)</sup>.

### FINAL CONSIDERATIONS

Considering that the focus of the discussion is the woman with breast cancer, and not just the treatment, there is a need to establish a multi-professional team to follow up on these women, since the results presented demonstrate, through the domains evaluated, the impacts of chemotherapeutic treatment on quality of life.

Because of this, it is necessary to be alert to the prevention and early detection of symptoms, which increases not only the chances of cure, but also a balance of body and mind for a better coping of the disease.

In the study, it was possible to verify that the women present changes in the symptomatic domain represented by insomnia, fatigue, financial difficulty, adverse effects of the treatment, and in the functional domain, related to the emotional and sexual aspect, seeing the possibility of identifying interventions that minimize or prevent these changes.

It is noticed the need to carry out studies so that, in addition to the studied aspects, others are deepened such as access to health services, quality of care, knowledge about the importance of medication adherence, health education about self-care, among others, with the aim to reach a population that is increasingly empowered and responsible for the health-disease process.

The study, because it is cross-sectional, presents as a limitation, the impossibility of establishing a

causal nexus, once the data collection occurred in only one moment; however, the research contributed to elucidate the symptoms and factors that most affect the quality of life of women with breast cancer, and may serve to subsidize the construction of health policies aimed at this population.

# QUALIDADE DE VIDA EM MULHERES COM CÂNCER DE MAMA EM TRATAMENTO QUIMIOTERÁPICO

#### **RESUMO**

O objetivo foi verificar os impactos do tratamento quimioterápico na qualidade de vida das mulheres diagnosticadas com câncer de mama. Estudo transversal, descritivo e com abordagem quantitativa, onde foram entrevistadas 39 mulheres que realizavam tratamento quimioterápico no Hospital Universitário Oswaldo Cruz – Recife, no período de julho a setembro de 2016. Na coleta de dados foi utilizado um questionário sociodemográfico e clínico, além de dois questionários validados, o EORTC QLQ-C30 e o QLQ-BR23. Os resultados das mulheres entrevistadas, diante do QLQ-C30, indicam um estado global de saúde intermediária, escala funcional com um baixo escore para o âmbito emocional, e quanto à escala dos sintomas, a dificuldade financeira, insônia e fadiga foram os mais referidos. No QLQ-BR23, no escore funcional observou-se que há uma boa preocupação e perspectiva futura, mas prejuízo nas funções e satisfação sexual. Sobre os sintomas, os efeitos colaterais decorrentes do tratamento quimioterápico são os que mais interferiram no cotidiano. Conclui-se que os resultados demonstram os impactos do tratamento quimioterápico na qualidade de vida, sendo possível verificar que as mulheres apresentam mudanças principalmente no domínio emocional e no funcional.

Palavras-chave: Neoplasias da mama. Qualidade de vida. Quimioterapia.

# CALIDAD DE VIDA EN MUJERES CON CÁNCER DE MAMA EN TRATAMIENTO QUIMIOTERAPÉUTICO

### **RESUMEN**

El objetivo fue verificar los impactos del tratamiento quimioterapéutico en la calidad de vida de las mujeres diagnosticadas con cáncer de mama. Estudio transversal, descriptivo y con abordaje cuantitativo, donde fueron entrevistadas a 39 mujeres que realizaban tratamiento quimioterapéutico en el Hospital Universitario Oswaldo Cruz — Recife, en el período de julio a septiembre de 2016. En la recolección de los datos fue utilizado un cuestionario sociodemográfico y clínico, además de dos cuestionarios validados, el EORTC QLQ-C30 y el QLQ-BR23. Los resultados de las mujeres entrevistadas, delante del QLQ-C30, indican un estado global de salud intermedia, escala funcional con una baja puntuación para el ámbito emocional, y en cuanto a la escala de los síntomas, la dificultad financiera, insomnio y fatiga fueron los más referidos. En el QLQ-BR23, en la puntuación funcional se observó que hay una buena preocupación y perspectiva futura, pero perjuicio en las funciones y satisfacción sexual. Sobre los síntomas, los efectos secundarios resultantes del tratamiento quimioterapéutico son los que más interfirieron en el cotidiano. Se concluye que los resultados demuestran los impactos del tratamiento quimioterapéutico en la calidad de vida, siendo posible verificar que las mujeres presentan cambios principalmente en el dominio emocional y en el funcional

Palabras clave: Neoplasias de la mama. Calidad de vida. Quimioterapia.

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