

Analysis of a case of breast cancer with recurrence**Análise de um caso de câncer de mama com recidiva****Análisis de un caso de cáncer de mama com recurrencia****Received: 04/04/2017****Approved: 10/15/2017****Published: 07/05/2018****Ricardo Dias da Silva¹**

This is a case study that aims to assess a case of breast cancer with recurrence in a patient of a cancer hospital from the following parameters: risk factors, diagnosis, prognostic factors, treatment and recurrence. Medical records and patient exams were carefully examined from June 2013 and June 2016. The diagnosis found was infiltrating ductal carcinoma grade II; risk factors: female, age; race; emotional stress, dense breast tissue, smoking, alcoholism, high-fat diet, hormone replacement therapy, family history of breast cancer (first-degree relative) and nulliparity; treatment: mastectomy, radiation, chemotherapy and hormone therapy; relapse in three years. We concluded that multiple risk factors for breast cancer were present, as well as late diagnosis, adequate treatment and occurrence of relapse in the expected time.

Descriptors: Breast neoplasms; Risk factors; Recurrence.

Este é um estudo de caso que tem como objetivo avaliar um caso de câncer de mama com recidiva em uma paciente de um hospital de câncer a partir dos seguintes parâmetros: fatores de risco, diagnóstico, fatores prognósticos, tratamento e recidiva. Analisou-se criteriosamente o prontuário e exames da paciente entre junho de 2013 e junho de 2016. O diagnóstico encontrado foi carcinoma ductal infiltrante grau II; fatores de risco: sexo feminino, idade; raça; estresse emocional, tecido mamário denso, tabagismo, etilismo, dieta rica em gorduras, terapia de reposição hormonal, história familiar de câncer de mama (parente de primeiro grau) e nuliparidade; tratamento: mastectomia, radioterapia, quimioterapia e hormonioterapia; recidiva em três anos. Concluiu-se que houve presença de vários fatores de risco para o câncer de mama, diagnóstico tardio, tratamento adequado e ocorrência de recidiva no tempo esperado.

Descritores: Neoplasias da mama; Fatores de risco; Recidiva.

Este es un estudio de caso que tiene como objetivo evaluar un caso de cáncer de mama con recurrencia en una paciente de un hospital de cáncer a partir de los siguientes parámetros: factores de riesgo, diagnóstico, factores pronósticos, tratamiento y recaída. Se analizó criteriosamente el prontuario y exámenes de la paciente entre junio de 2013 y junio de 2016. El diagnóstico encontrado fue carcinoma ductal infiltrante grado II; factores de riesgo: sexo femenino, edad; raza; estrés emocional, tejido mamario denso, tabaquismo, alcoholismo, dieta rica en grasas, terapia de reposición hormonal, historia familiar de cáncer de mama (pariente de primer grado) y nuliparidad; tratamiento: mastectomía, radioterapia, quimioterapia y hormonoterapia; recurrencia en tres años. Se concluye que hubo presencia de varios factores de riesgo para el cáncer de mama, diagnóstico tardío, tratamiento adecuado y ocurrencia de recaída en el tiempo esperado.

Descriptores: Neoplasias de la mama; Factores de riesgo; Recurrencia.

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INTRODUCTION

Malignant neoplasms result from an uncontrollable proliferation of abnormal cells that arise with heritable or acquired genetic damage¹. Cancer is one of the most complex public health problems that Brazilian health system faces due to its epidemiological, social and economic magnitude^{2,3}. A third of new cases of cancer that occur around the world each year could be prevented with specific health promotion and prevention⁴.

Breast cancer is currently the neoplasm with the largest mortality in women in the world, both in developed and developing countries^{1,3-5}. According to the National Cancer Institute (INCA), the mortality rate in Brazil was 14 for every 100,000 women in 2013³. 57,960 new cases of malignant breast neoplasm in women are estimated in Brazil for the year 2016, and 5,160 cases for Minas Gerais State, characterizing it as the most incident cancer in women, disregarding the non melanoma skin cancer (NMSC)³.

Mammary neoplasia is a very feared disease among women, since it involves psychological factors, self-image and sexuality^{4,6-8}. Breast cancer is a heterogeneous disease, with different clinical presentations, genetic variations and treatment responses^{1,4-6}. During this process the patient experiences problems such as depression and decreased self-esteem, and constant adaptations to physical, psychological, social, family and emotional changes^{7,8}.

Constant aggressions in certain parts of the DNA cause genetic lesions with proto-oncogenes activation and inhibition of tumor suppressor genes⁹. The natural history of breast cancer is divided into preclinical phase, which is the interval of time between the emergence of the first malignant cell to tumor development with clinical diagnosis, and the clinical phase, which occurs from that event¹. The main sites of breast cancer metastasis are bones, lungs, liver, brain, ovary and skin¹. The beginning of a neoplastic process in the breast is understood as multifactorial, since several factors act⁹. Between them, we can

mention environmental, genetic and intrinsic causes to the person's life habits^{1,6,9}.

There is a consensus on the risk factors for breast cancer, being some of them still questionable. Between them, there are female sex; race/ethnic; age; sedentary lifestyle; dense mammary tissue; high-fat and hypercaloric diet; diet poor in fibers; obesity; alcoholism; familiar history of breast cancer; presence of the mutant allele of the genes BRCA1, BRCA2 and p53; alteration in the genes of IGF family; alterations in the insulin and leptin levels; prolonged estrogen stimulation (early menarche, late menopause and first gestation with more than 30 years old); nulliparities; hormonal contraception; hormonal replacement therapy (HRT); ionizing radiation^{3-6,8-14}.

Breast cancer diagnosis should be directed towards early detection, which increases the chance of favorable prognosis^{3,6,8,14}. The diagnostic investigation methods are the breast clinical examination (BCE); the methods of image that include: diagnostic and screening mammography (MMG), ultrasound (USG) and magnetic resonance imaging (MR); invasive methods: surgical biopsy, percutaneous core-needle biopsy (PNB) or gross needle puncture (GNP); fine needle puncture (FNP); vacuum puncture biopsy or mammotomy¹.

Immuno-Histochemical techniques (IMQ) help to characterize cancer, allowing the analysis of molecular variables and greater precision of an injury or its sub classification^{5,6,16}. It is an important instrument for diagnosis detailing⁶.

The most found classification among breast malignant neoplasms is mainly epithelial⁸. The most common diagnosis of breast cancer is infiltration ductal carcinoma, with 47% to 75% of the cases^{1,9}. Other common diagnoses are invasive lobular carcinoma (0.7% to 15%), "in-situ" ductal carcinoma (0.2% to 18.2%), "in-situ" lobular carcinoma (0.3% to 3.8%), mucinous or colloid carcinoma (1% to 6%), Paget's disease (1% to 2%) among others⁹.

The recurrence of breast cancer is a possible reality in women affected by the disease. The uncertainties of the woman

diagnosed with breast cancer in relation to the treatment, coexistence with the disease and possibility of the disease are evident¹⁴.

The prognosis factors in breast neoplasia are indispensable for the prognosis and treatment, and they are: age; the size of the tumor; condition of axillary lymph nodes; family history; histological degree; socioeconomic level; age; angiogenesis/neovascularization and lymph angiogenesis; proliferative index; Nottingham prognostic index; cathepsin D; gene expression index/deoxyribonucleic acid (DNA); p53; micro metastasis in bone marrow; hormonal receptors; c-erb B-2^{5,15}.

These factors are possible to be measured at the time of the diagnosis and they are very important to determine the treatment of the mammary neoplasia^{5,15}.

Clinical trials of large size are lacking in oncology, but breast cancer is one of the most studied diseases in cancerology¹⁶. Although this is an isolated and specific case study, there is the possibility of further deepening in this area, specifically for breast cancer.

The objective of the study was to evaluate a case of breast cancer with recurrence in a patient of a cancer hospital from the following parameters: risk factors, diagnosis, prognosis factors, treatment and recurrence.

METHOD

This is a descriptive, quantitative and retrospective case study of a user with diagnosis of breast malignant neoplasm and with recurrence, attended in a cancer hospital of a city in the state of Minas Gerais, region of Triângulo Mineiro/Alto Paranaíba, with a population of 89,333 inhabitants and human development index (HDI) of 0,729^{17,18}.

The data evaluated in this research were withdrawn from the medical records and examinations of the patient from the institution in which she carried out the treatment.

The study did not evaluate any data source from outside the domains of the institution where the research took place. The variables were analyzed judiciously and are

included in the period from June 2013 to June 2016, and they are: risk factors, diagnosis, prognosis factors, treatment modalities and recurrence presence.

Data taken from secondary registry sources were placed in tables and graph. The prognosis factors were assessed from the medical records, biopsy and immuno-histochemistry (IHC), tests performed by the patient. The modalities of treatment and presence of recurrence were found in medical records.

The data were processed and managed in Excel ® 2007 software, in the format of table to analyze the presence of the specific risk factors of breast cancer found and the diagnostic tests used to detect the primary tumor; a chart to evaluate the presence of prognostic factors recorded in medical records.

To collect the information and carry out the study we requested a two-ways, written prior authorization of the institution by the competent authority, upon delivery of a free consent and clarified term (TCLE). This research was authorized by the institution that holds the patient's records and data. The patient's identity privacy was guaranteed throughout the research process. The study is appropriate to the criteria of resolution 466/2012 of the National Health Council (CNS).

RESULTS

The patient was admitted in the institution in June 2013, at 58 years old, with malignant neoplasm in the left breast (LB), divorced, urban resident. This information suggests that the diagnosis of breast cancer occurred before she entered the institution, which was confirmed by verifying the date of the USG exams and the gross needle biopsy (GNB) performed by the patient. The registry only provides the information that the user entered the institution after referral, with no specifications.

The risk factors of breast cancer found were: female; age (≥ 50 years), race (white color), emotional stress, dense breast tissue, smoking, alcoholism, fat-rich diet, HRT, family

history of breast cancer in first-degree relative (sister) and nulliparity.

The patient reported history of different malignant neoplasms in her family: leukemia in her mother and throat cancer in her brother; information is presented without details.

For the HRT risk factor, there is information that she realized “months of this modality of treatment” after menopause (52 years old). She daily drunk alcohol and smoked 40 cigarettes a day. The data is presented in Table 1.

Table 1. Risk factors for breast cancer (in the literature and those found in the patient) between June 2013 to June 2016. Hospital do Câncer Dr. José Figueiredo. Patrocínio / MG.

Risk factors	Risk factors reported in medical records-	Yes (%)	No/NI* (%)
Female	Yes	5%	0%
Age (> 50 years old)	Yes	5%	0%
Race/Ethnicity (White)	Yes	5%	0%
Sedentary lifestyle	Yes	5%	0%
Dense breast tissue	Yes	5%	0%
High-fat and hypercaloric diet	Yes	5%	0%
Diet low in fiber	NI	0%	5%
Overweight/obesity	No	0%	5%
Alcoholism	Yes	5%	0%
Smoking	Yes	5%	0%
Family history of breast cancer	Yes	5%	0%
Presence of mutant genetic allele	NI	0%	5%
Changes in serum levels of insulin and leptin	NI	5%	0%
Early menarche	No	0%	5%
Late menopause **	No	0%	5%
First pregnancy over 30 years old	No	0%	5%
Nulliparity	Yes	5%	0%
Hormonal contraception***	NI	0%	5%
RHT	Yes	5%	0%
Ionizing irradiation	NI	0%	5%
Total	100%	55%	45%

*NI (no information)

**There is controversy in the literature about the age for menopause late. The patient was 40 years in menarche and never get pregnant. More detailed research is needed on this risk factor in the specific case.

***This is a controversial risk factor in bibliographic sources.

Medical records report a BCE in March 2013 suggesting solid nodules in LB present for five years, located in the upper right quadrant (URQ) and upper left quadrant (ULQ). There is no report whether the BCE was carried out for screening and early detection or by spontaneous demand.

GNP technique was carried out in May 2013 and confirmed the diagnosis of moderately differentiated ductal carcinoma grade II. Tumor staging was classified as pT2 pN1b Mx; PT2 (tumor \geq 2cm and \leq 5 cm); pN1b (micrometastases or macrometastases in internal breast lymph nodes detected by

biopsy); and Mx (distance metastases cannot be properly evaluated).

Immuno-immunohistochemistry (IHC) exam was requested for a detailed diagnosis of the primary tumor and the patient's prognosis elaboration. The report, held in April 2013, presents: SP1 positive antibody panel in about 90% of neoplastic cells; PGR (anti RP) positive in about 10% of neoplastic cells; KI-67 positive in about 20% of neoplastic cells; c-Erb B2 (clone EP1045Y) negative/score 0; Positive E-cadherin. IHC technique concludes a confirmation of diagnosis of invasive ductal carcinoma and breast carcinoma with positive reactions to hormone receptors of estrogen and progesterone.

Among all the modalities of the diagnostic method, only the MR and MMG were not used in the diagnostic investigation (not in the records) of the primary tumor. It is noted that the MMG examination was requested only after the recurrence of the cancer. However, all the modalities of treatment were present at different times of the patient's follow-up: therapy, chemotherapy, radiotherapy and mastectomy.

The initial treatment was done with mastectomy in quadrantectomy mode and axilla emptying in LB. After the surgical procedure the user evolved with an infection by *Staphylococcus Sp.* in the surgical wound, treated with amoxicillin and clavulanic acid, presenting a good response to the treatment. The product of the surgery revealed Scarff infiltration ductal carcinoma grade III measuring 2.5 cm in diameter on the largest axle, with 0.3 cm from the caudal margin and neoplastic commitment of 3 of the 15 dissected lymph nodes.

Subsequently, it was requested an evaluation for chemotherapy and adjuvant radiotherapy treatment in March 2014. Radiotherapy procedure was carried out in LB between April and May 2014. MMG and USG exams were also requested. Chemotherapy began in the same period of radiotherapy- Doxorubicin Hydrochloride + Cyclophosphamide and Taxol. Then she was treated with hormones therapy with Tamoxifen- no positive effects- and subsequently with Anastrozole.

The exams were presented in August 2014: MMG with BI-RADS (breast Imaging reporting and Data System) 0 – Inconclusive-

in LB and BI-RADS 2 – found benign-in right breast (RB). The USG suggested Fibroadenomas in the right breast.

The user returns between April 2014 and May 2015 when clinical and laboratory examinations presented no changes; she complaint of low back pain and short breath. She was referred to the mastologist and physiotherapist.

In June 2015 the patient fell from her own height and fractured her upper left limb (ULL), in the elbow region. She was referred to the orthopedic surgeon and complaint of pain for several months, with no fracture.

In March 2016, the user noticed a nodulation in LB. It was scheduled MMG and USG of total abdomen and referred to the Mastologist. Biopsy was requested in April 2016 with a report of invasive carcinoma of the non-special relapsed grade II type with a size of 0.9 cm.

When recurrence was confirmed, a new examination of IHC and computed tomography (CT) of the thorax was requested in May 2016, confirming a calcified nodule of benign aspect in the right upper lobe (RUL) with 6 mm in size, signs of chronic obstructive pulmonary disease (COPD) and a small hiatal hernia (HI). The chest X-ray previously made- March 2016- had not detected any changes. From the USG exam – April 2016 – signs of hepatic steatosis were verified. In this period of the treatment the patient reports anxiety and anguish.

After recurrence, a new IMQ and surgical risk assessment were requested, and the surgical procedure was released in June 2016. At that time, the medical records do not provide more information on the treatment of the user. Data in Table 2.

Table 2. Diagnostic methods and modalities of treatment for breast cancer from June 2013 and June 2016. Hospital do Câncer Dr. José Figueiredo. Patrocínio/MG.

Diagnostic methods	Diagnostic methods used	Treatment	Treatment used
BCE	Yes	Hormone therapy	Yes
Mammography*	Yes	Chemotherapy	Yes
USG	Yes	Radiotherapy	Yes
Biopsy	Yes	Mastectomy	Yes
IMQ**	Yes	-	-
MR	No	-	-

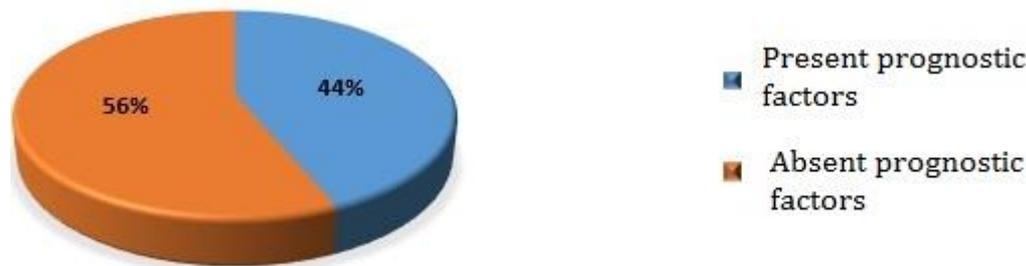
*Held after recurrence diagnosis.

**Complementation and detailing diagnosis⁶.

The prognosis factors reported in the medical records are: age; tumor size – The prognosis factors reported in the chart are: age; tumor size – TNM classification; condition of axillary lymph nodes; histological type; histological degree; c-Erb B2; hormonal receptors. Reports of absence or presence of

the prognosis factors are absent: angiogenesis/neovascularization; cathepsin D; proliferative index; Nottingham prognostic index; gene expression index/deoxyribonucleic acid (DNA); p53; micro metastasis in bone marrow; socio-economic level, as in Graph 1.

Graph 1. Relation of the prognostic factors of breast cancer found in the patient's chart in May 2013. Hospital do Câncer Dr. José Figueiredo. Patrocínio / MG.



DISCUSSION

Breast cancer is considered a public health problem in Brazil^{1,2,4}. The actions of prevention, screening and early detection of breast cancer need to be emphasized in the female population and society^{1, 2, 4, 10,16,19}. Between 2003 and 2013 deaths caused by breast cancer increased 52%^{20,21}. This index shows the increase in incidence and the presence of other factors related to the late diagnosis or onset of the correct treatment of mammary malignant neoplasm^{20,21}.

The risk factors found in this case serve as a warning and reflection for the general population and the professionals and managers in the area of health. Among them, age is considered the most important, since it increases the risk of having the disease from 70% to 80% as well as mortality^{1,16,22,23}.

HRT, among the risk factors present in the study, is troubling, since it is a widespread practice in Gynecology^{13,22-24}. A study conducted in the UK in 2011 shows the relationship of the combined HRT (estrogen and progesterone) and only estrogenic HRT with breast cancer in women evaluated²². It is emphasized that HRT can also increase the chances to die of breast cancer¹¹. HRT is a practice that must go through rigorous control and medical evaluation²³.

The family history has not elevated incidence (5% to 10%) in the face of other factors, but is present in this case and should be emphasized the screening and necessary measures for the users' relatives^{1,9,23}. The estimate 2016: incidence of cancer in Brazil, according to the National Institute of Cancer (INCA), points out that 9 out of 10 women with breast neoplasms have no family history involved³.

The American Cancer Society (ACS) brings to that same evaluation the number of 8 to 10 women¹¹. In general, heredity is related to 15% of all types of cancers².

It is also emphasized the importance of the urban lifestyle that comes from the demographic transition and the nutritional transition experienced in Brazil^{2,4,25-27}. The change in the Brazilian food standard and the social role of women increases exposure to environmental risk factors. Environmental injuries such as stress and pollution are associated with genetic changes in the breast neoplasia²⁸. The evaluated user lives in urban area, is presented as a nervous person, with bad eating habits, sedentary lifestyle, smoker and alcoholic habits. It is given in medical records the suspicion of liver steatosis diagnosis in the user, which enables to assume the occurrence of an inadequate diet, rich in fatty foods.

Many risk parameters for breast cancer in this case are also among the general causes for several types of malignant neoplasms: smoking, alcoholism, high-fat diet, sedentary lifestyle and alcoholism^{4,6,13,28}.

It is important to develop awareness campaigns about modifiable risk factors and external causes of neoplasms, since estimates point to worrying finding: in ten years neoplasms will be the leading cause of death in Brazil^{2,6,28}.

The study clearly demonstrates that the diagnosis of breast malignant neoplasm in the patient was late, when the user was 61 years old and had a palpable nodule for five years. The existing awareness and screening campaigns for early detection (BCE and MMG) must be well delineated and effective^{1,23}. They did not conceive early diagnosis, so important to reduce the stage of cancer presentation (*down-standing*)¹. There is a failure of both primary and secondary care services and of the user herself, in her self-care and autonomy with her health in a general way. The National Policy of Basic Attention (NPBA) reinforces the importance of this autonomy^{1,29}.

The early diagnosis gives the possibility of a good prognosis^{1,2,4,9,13,15,16,30}. The cancer survival in developing countries is lower, having among the probable causes the late diagnosis and limited access to the treatment³⁰.

The diagnostic methods were used in a judicious and illuminating manner in the case analyzed. As soon as the user entered the institution BCE, USG, GNP and IHC were carried out, which confirmed the diagnosis. There was no need for MMG verification in this case, as the nodules were palpable and solid, and many risk factors were present. For the diagnosis of tangible lesions, USG is requested^{9,19}. The diagnosis found-invasive ductal carcinoma- is the most common among breast malignant neoplasms^{1,4-6,9,16}.

The treatment followed the logical sequence of quadrantectomy with axillary emptying due to the diagnosis and from its staging. The indication of the type of surgery depends on the clinical staging (TNM classification) and the histological type, which may be conservative: resection of a breast

segment (stereotomy, lumpectomy and quadrantectomy), withdrawing the axillary lymph nodes or sentinel lymph node; non-conservative: (mastectomy)^{4,19}.

The staging ranks the disease according to its locoregional extension and distance, setting standards that guide the treatment and prognosis of the cases^{4,16,31}. The clinical staging showed its importance to conduct the appropriate treatment in the reported case^{16,19,31}. Without this parameter the difficulties of conduct become an aggravating for the prognosis of the user.

The radiotherapy and chemotherapy adjuvant treatment carried out after the surgical intervention was pertinent^{6,16,19}. Radiotherapy treatment can be used before surgery: to decrease tumor size; or after it: to destroy remnant cells^{6,16,19}.

Women with mastectomy indication as primary treatment can undergo neoadjuvant chemotherapy, followed by conservative surgical treatment, supplemented by radiotherapy¹⁹. In cases of positive hormonal receptors, therapy is recommended¹⁹. IMQ found positive hormonal receptors for estrogen and progesterone.

It is important to report that, despite the protocols of approaches and treatments, the treatment approach must also be guided in the general and individual conditions of the patient¹. An approach within a multiprofessional and integrality context must be stimulated^{1,14,19}. The treatment of the user took place in a correct way, within a unit of high complexity in oncology, according to the national policy of oncological attention (PNAO)¹.

The evaluated prognosis factors are not reported in a standardized form in the medical records, and these are found only after careful analysis. These parameters are of fundamental importance to define the therapeutic scheme and should be enumerated at the time of the diagnosis^{5,15}. The increasing incidence, the biological heterogeneity and the high mortality rate of breast cancer make it very valid to identify the parameters that assist in understanding the disease⁵. Among these factors, axillary commitment is highlighted due to the

possibility of detection or exclusion of metastases⁵.

Recurrence is a reality in breast malignant neoplasm and its fear is an experience shared by women in a specific study realized¹⁴. The case analyzed presented a tumor relapse in three years, which matches with the evaluated literature³²⁻³⁴. There was no compromising of axillary lymph nodes reported in the medical records and the tumor was considered moderately differentiated – in the first diagnosis – which confers with the sources evaluated^{31,35}. The presence of positive hormonal receptors was found, which differs from the analyzed sources regarding the presence of recurrence³²⁻³⁵.

According to the prognosis, there is the possibility of recurrence of the tumor of up to 30% in cases with negative axillary lymph node and about 70% of cases with positive axillary lymph node^{32,33}. A research with 20,027 American women showed recurrence rate of breast neoplasia in ten years of 36,8%^{32,34}. Most of them occurred in the first five years after the diagnosis (81.9%), associated to the advanced stage, neoplasms with histological degree not differentiated and with negative hormonal receptor^{32,34}.

In a research conducted in Brazil, in Salvador – BA, with 271 women without axillary metastases, recurrence was present in 11.8%. Another study conducted in Uberlândia, between 1999 and 2003, with 102 patients according to the type of mastectomy, showed 53.9% of recurrence, being the recurrence rate lower when was done a radical mastectomy, contrary to literature, according to analysis³⁶. In the case studied there was recurrence and the surgical technique performed was not radical mastectomy (quadrantectomy with axillary emptying).

Cancer is a health problem of social magnitude and transcendence in Brazil and the world^{1-4,16}. It is estimated that in the year 2020, 60% of the cases of malignant neoplasms will be concentrated in the developing countries, which is the case of Brazil⁴. In front of this framework it is important to study, implement and evaluate measures in the oncology area with the aim of

improving the approach and assistance in the health services^{1, 3, 4,16,37}.

Specifically, for breast cancer, which after CPNM is the most incident cancer in women in Brazil (except Northern region), actions of low, medium and high complexity should be emphasized to carry out effective screening campaigns, stimulating the realization of AEM, acquisition of healthy life habits, early detection and access to effective treatment and humanized in appropriate time^{1,3,4,37}.

CONCLUSION

In the case evaluated there is the significant presence of various risk factors for breast cancer, late diagnosis, proper treatment and recurrence occurrence.

We look for the need for a standardized and detailed evaluation of the prognosis factors. It is important taking notes adequately in unified records between professionals of different categories and it is relevant a multiprofessional approach and the integrality in the institutions where they provide oncologic assistance.

REFERENCES

1. Ministério da Saúde (Br). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Controle dos cânceres do colo do útero e da mama. – 2. ed. – Brasília: Editora do Ministério da Saúde, 2013. 124 p.: il. (Cadernos de Atenção Básica, n. 13)
2. Ministério da Saúde (Br). Instituto Nacional de Câncer. ABC do Câncer: abordagens básicas para o controle do câncer / Instituto Nacional de Câncer. – Rio de Janeiro: INCA, 2011. 128 p.: il.
3. Ministério da Saúde (Br). Instituto Nacional do Câncer. Estimativa 2016: incidência de câncer no Brasil / Instituto Nacional de Câncer José Alencar Gomes da Silva – Rio de Janeiro: INCA, 2015.
4. Ministério da Saúde (Br). Instituto Nacional do Câncer. Ações de enfermagem para o controle do câncer: uma proposta de integração ensino-serviço. 3 ed. atual. amp. – Rio de Janeiro: INCA, 2008. 488 p.: il.
5. Bogliolo, L. Patologia / (editor) Geraldo Brasileiro Filho. 8 ed. (Reimpr.) Rio de Janeiro: Guanabara Koogan, 2012.
6. Hoff PMG. (Orgs.). Tratado de Oncologia. São Paulo: Editora Atheneu, 2013.

7. Venâncio JL. Importância da atuação do psicólogo no tratamento de mulheres com câncer de mama. *Rev Bras Cancerol*. 2004; 50(1):55-63.
8. Impacto do tratamento do câncer na qualidade de vida. *Revista Brasileira de Cancerologia* 2008; 54(4):367-71.
9. Vieira SC; Lustosa AML; Barbosa CLB et al. *Oncologia Básica* 1. ed. Teresina, PI: Fundação Quixote, 2012.
10. Ministério da Saúde (Br). Instituto Nacional de Câncer. Coordenação de Prevenção e Vigilância – (Conprev) Falando sobre câncer de mama. – Rio de Janeiro: MS/INCA, 2002. 66 p.
11. ACS - American Cancer Society. [Internet] [cited in Nov 26, 2016] Available in: <http://www.cancer.org/cancer/breastcancer/detailedguide/breast-cancer-risk-factors>
12. Robbins e Cotran. *Bases epidemiológicas das doenças* / Vinay Kumar et al.; (tradução de Patrícia Dias Fernandes et al. Rio de Janeiro: Elsevier, 2010. 4456 p.
13. Longo, DL (organizador). *Hematologia e oncologia de Harrison*. 2 ed. Porto Alegre: AMGH: 2015.
14. Pinho LS, Campos ACS, Fernandes AFC, Lobo SA. Câncer de mama: da descoberta à recorrência da doença. *Rev Eletr Enf*. 2007;9(1):154-65.
15. Abreu E, Koifman S. Fatores prognósticos no câncer de mama feminino. *Revista Brasileira de Cancerologia* 2002; 48(1):113-31
16. Ministério da Saúde (Br). Secretaria de Atenção à Saúde. Protocolos clínicos e diretrizes terapêuticas em Oncologia/Ministério da Saúde, Secretaria de Atenção à Saúde – Brasília: Ministério da Saúde, 2014. XXX p. : il.
17. IBGE. Instituto Brasileiro de Geografia e Estatística. [Internet] [cited in Nov 26, 2016. [Internet] Available in: <http://www.cidades.ibge.gov.br/xtras/perfil.php?lang=&codmun=314810&search=||inifogr%E1ficos:-informa%E7%F5es-completas>
18. IBGE. Instituto Brasileiro de Geografia e Estatística. [Internet] [cited in Nov 26, 2016]. [Internet] Available in: <http://www.cidades.ibge.gov.br/xtras/temas.php?lang=&codmun=314810&idtema=118&search=minas-gerais|patrocinio|%C3%8Dndice-de-desenvolvimento-humano-municipal-idhm->
19. Ministério da Saúde (Br). Instituto Nacional de Câncer. Controle do câncer de mama: documento de consenso [Internet]. Rio de Janeiro: INCA; 2004 [cited in Nov 28, 2016]. Available in: <http://www.inca.gov.br/publicacoes/Consensointegrapdf>
20. Luchetti JC, Fonseca MRCC, Traldi MC. Vulnerabilidade social e autocuidado relacionado à prevenção do câncer de mama e de colo uterino. *REFACS* [Internet]. 2016 [cited in Nov 28, 2016]; 4(2). Available in: <http://seer.uftm.edu.br/revistaeletronica/index.php/refacs/article/viewFile/1639/1472>. DOI: 10.18554/refacs.v4i2.1639.
21. Ministério da Saúde (Br). Instituto Nacional de Câncer José de Alencar Gomes da Silva (INCA). Atlas online da mortalidade, 2014. [Internet]. Rio de Janeiro: INCA; 2014 [cited in Nov 28, 2016] Available in: <https://mortalidade.inca.gov.br/MortalidadeWeb/pages/Modelo01/consultar.xhtml#panelResultado>
22. CRU. Cancer Research Uk. Breast cancer: UK incidence statistics. [Internet][cited in Nov 29, 2016]. Available in: <http://www.cancerresearchuk.org/about-cancer/type/breast-cancer/about/risks/>
23. Ministério da saúde (Br). Instituto Nacional de Câncer. Coordenação Geral de Prevenção e Vigilância, Divisão de Detecção Precoce e Apoio à Organização de Rede. A mulher e o câncer de mama no Brasil. – Rio de Janeiro: INCA, 2014. 46 p. : il.
24. Associação Brasileira de Climatério (SOBRAC) Wender MCO, Pompei LM, Fernandes CE. *Consenso Brasileiro de Terapêutica Hormonal da Menopausa* – São Paulo: Leitura Médica, 2014.
25. Lebrão ML. O envelhecimento do Brasil: aspectos da transição epidemiológica e demográfica. *Saúde colet*. (Barueri). 2007; 4(17):135-40.
26. Duarte EC, Barreto SM. Transição demográfica e epidemiológica: a epidemiologia e serviços de saúde revisita e atualiza o tema. *Epidemiol Serv Saúde*. 2012; 21(4):529-32.
27. Ministério da Saúde (Br), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Política nacional de alimentação e nutrição. Brasília: Ministério da Saúde; 2012. 84 p.
28. Duncan BB, Schmidt MI, Giuliani ERJ, organizadores. *Medicina ambulatorial: condutas clínicas em atenção primária*. 3ed. Porto Alegre: Artes Médicas; 2004.
29. Ministério da Saúde (Br), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Política Nacional de Atenção Básica. Brasília: Ministério da Saúde; 2012. 110p.
30. Ministério da Saúde (Br). Instituto Nacional do Câncer. [Internet]. [cited in Nov 26, 2016]. Available in: http://www2.inca.gov.br/wps/wcm/connect/tiposdecancer/site/home/mama/deteccao_precoce
31. Ministério da Saúde (Br). Instituto Nacional do Câncer. [Internet]. [cited in Nov 30, 2016].

- Available in: http://www.inca.gov.br/conteudo_view.asp?ID=54
32. Peres VC, Veloso DLC, Xavier RM, Salge AKM, Guimarães JV. Câncer de mama em mulheres: recidiva e sobrevida em cinco anos. *Texto Contexto Enferm.* 2015; 24(3):740-7.
33. Cardoso F, Senkus-Konefka E, Fallowfield L, Costa A, Castiglione M. Locally recurrent or metastatic breast cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol.* 2010; 21(5):15-9.
34. Cheng L, Swartz MD, Zhao H, Kapadia AS, Lai D, Rowan PJ, et al. Hazard of recurrence among women after primary breast cancer treatment – a 10-year follow-up using data from SEER-Medicare. *Cancer Epidemiol Biomarkers Prev.* 2012; 21(5):800-9.
35. Filho AOAR, Castro TWN, Rêgo MAVR, O Alves OF, Almeida LC, Sousa MV, Vieira MGSV, Schaer-
Barbosa H. Fatores preditivos de recidiva do carcinoma mamário axila-negativo. *Revista Brasileira de Cancerologia* 2002; 48(4):499-503
36. Copati FN, Neto CC. Recidiva do câncer de mama em plastrão em mulheres mastectomizadas na cidade de Uberlândia entre os anos de 1999 a 2003. [Internet] [cited in Dec 01, 2016]. Available in: www.seer.ufu.br/index.php/horizontecientifico/article/download/4098/3049
37. Ministério da Saúde (Br). Instituto Nacional do Câncer. [Internet]. [cited in Nov 30, 2016]. Available in: <http://www2.inca.gov.br/wps/wcm/connect/tip/osdecancer/site/home/mama+/prevencao>

CONTRIBUTIONS

Ricardo Dias da Silva was responsible for developing all phases of the manuscript construction.

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