

REVISION ARTICLE

SEXUAL BEHAVIOR OF WOMEN IN RADIOTHERAPYTREATMENT

Karina Silveira de Almeida Hammerschmidt*

Luciana Martins da Rosa**

Angela Maria Alvarez***

Vera Radunz****

Andreise Viana Rosa Tomasi*****

Rafaela Vivian Valcarenghi*****

ABSTRACT

Women with cancer undergoing radiotherapy, radiotherapy and / or brachytherapy may change in sexual behavior, with influence on psychosocial, sexual and functional aspects as well as quality of life. This study aims to analyze the scientific evidence related to sexual behavior and quality of life of women who underwent radiotherapy. It is literature type integrative review. Data collection was conducted in May 2014 and was carried out through the Virtual Health Library, from the bottom of LILACS and MEDLINE, by combining the descriptors: "sexual behavior and radiotherapy" and "sexual behavior and brachytherapy". They selected 23 studies for the sample with no time limit. With the intention of promoting the contributions the production of knowledge about sexual behavior / symptoms after cancer treatment in women with brachytherapy and radiation, emerging two main themes: psychosocial, sexual and functional changes; quality of life. Identifies what is needed directed multidisciplinary action women with cancer in relation to sexuality, there are weaknesses in the care geared to these. Such assistance needs to be planned for the woman and her partner, so that living with cancer and treatment is quality.

Keywords: Sexual behavior. Radiotherapy. Brachytherapy. Women.

INTRODUCTION

In Brazil, in 2016 is estimated that there will be approximately 596,070 new cases of cancer. Among women, 300,870 are expected, according to information from the National Cancer Institute José Alencar Gomes da Silva (INCA). The type of cancer that has more incident between women are: breast (57,960), colon and rectum (17,620), uterine cervix (16,340), lung (10,860), stomach (7,600), corpus uteri (6,950), ovary (6,150), thyroid gland (5870) and non-Hodgkin Lymphoma (5030)⁽¹⁾. For the treatment of these types of cancers, are the chemotherapy,

radiotherapy and surgery, which can be used together⁽²⁾.

Approximately half of patients undergoing cancer treatment, will make use of the radiation in any evolutionary stage of his illness⁽³⁾, this method is able to destroy tumor cells employing beam of ionizing radiation, in which a pre-computed dose of radiation is applied at any given time, a volume that includes the tumor tissue, seeking to eradicate all tumor cells with the least amount of damage to surrounding normal cells⁽⁴⁾.

In order to destroy the tumor tissue even more specific, the radiation comes in two different ways: teletherapy, which employs radiation beams externally to the patient to destroy cancer cells on

* Nurse. PhD in nursing. Professor, Department of Nursing of the Federal University of Santa Catarina. Member of the Group of Studies Research Health Care Seniors (GESPI). Florianopolis, Santa Catarina, Brazil. E-mail: karina.h@ufsc.br

** Nurse. PhD in nursing. Professor, Department of Nursing and the Master's Program Management Professional Nursing Care of the Federal University of Santa Catarina. Member of the Research Group Caring & Comforting. Florianopolis, Santa Catarina, Brazil. E-mail: luciana.m.rosa@ufsc.br

*** Nurse. PhD in nursing. Professor, Department of Nursing of the Federal University of Santa Catarina. Member of the Group of Studies Research Health Care Seniors (GESPI). Florianopolis, Santa Catarina, Brazil. E-mail: alvarez@ccs.ufsc.br

**** Nurse. PhD in nursing. Professor of the Department and the Graduate Nursing of the Federal University of Santa Catarina Program. Leader Tending Research Group & Comforting. Florianopolis, Santa Catarina, Brazil. E-mail: radunz@ccs.ufsc.br

***** Physiotherapist. Master's Degree in nursing. Member of the Study Group of Elderly Health Care (GESPI). Florianopolis, Santa Catarina, Brazil. E-mail: andreisev@gmail.com

***** Nurse. Doctoral student in nursing. Member of the Study Group on Health Care Seniors (GESPI). Florianopolis, Santa Catarina, Brazil. E-mail: rafaelavalcarenghi@yahoo.com.br

the surface of the skin or deeper in the body and brachytherapy, characterized as a treatment done with use of radioactive nuclides where the radiation source is within walking distance in contact or even implanted in the region that is to receive the dose⁽⁵⁾.

These treatments can be used as a therapeutic modality for various types of cancers, being possible to obtain satisfactory results, as the staging of these tumors. However, some side effects that can vary, being usually transitory character such as: nausea, vomiting, Radio dermatitis, fatigue and anorexia of varying intensity, along with abdominal cramps, diarrhea, urinary burning, polyuria and late side effects or after-effects of radiation that are perennial, as retites and cystitis, Actinic, occurring less frequently colitis or subcutaneous fibrosis⁽⁶⁾.

Being cancer in women, an important cause of morbidity and mortality with impact for the public health system, patients, especially those undergoing teletherapy and brachytherapy, must be understood fully. This approach involves the performance of the health care professional in contact with issues related to sexual behavior. Unfortunately, there are barriers in relation to this issue mainly negative assumptions implied, on the part of women as professional's own⁽⁷⁾.

The sexual behavior of women needs to be addressed holistically, because sexuality is comprehensive construct, which requires integration of a variety of individual, social and cultural dimensions⁽⁸⁾. The physical discomforts (lack of vaginal lubrication, pain, fatigue, hot flashes) resulting from treatments for the cancer usually interfere negatively in sexuality^(9,10).

The understanding of sexual behavior as part of the adjustment facing the psychosocial impact of cancer, can be considered as a process of adaptation and adjustment of women with cancer⁽¹¹⁾. Improve care to these, especially on behavioral sphere, it is essential for integration of care. In this way, the relevance of the confrontation and the close relationship with the quality of life (QOL) of women subjected to radiation therapy.

Addressing the sexual behavior of women undergoing teletherapy and brachytherapy in the treatment of cancer is essential to encourage the quality of life and coping of those in oncological treatment, as well as qualify the health

assistance. Thus this study is intended to examine the scientific evidence related to sexual behavior and quality of life of women who performed treatment with radiotherapy.

METHODOLOGY

This is the revision type integrative bibliographical search. The review followed a few steps: formulating the guiding question; data collection; evaluation; analysis and interpretation of data; presentation of results^(12,13). After the establishment of the research problem and the theme of the review, the guiding question that conducted the study was: what the scientific evidence on the sexual behavior and quality of life after treatment radiation teletherapy and brachytherapy orin women?

Bibliographical selection was made in May 2014. The data collection took place in the Virtual Health Library (VHL), from databases, Latin American literature and Caribbean Health Sciences (LILACS) and *Medical Literature Analysis and System Online* (MEDLINE). In order to ensure the reliability of the search, were adopted the keywords included in Health Sciences descriptors (DeCS) and Medical Subject Headings (MeSH): sexual behavior/ *sexual behavior*/sexual conduct; radiation therapy/ *radiotherapy*/ radiation therapy; baquiterapia/ *brachytherapy*/brachytherapy. The search was made by combining descriptors: *sexual behavior and radiotherapy*; *sexual behavior and brachytherapy*.

The inclusion criteria established were: articles; published in Portuguese or English language or Spanish or French; which address the subject cancer of the ovary, cervix, breast, endometrium or straight, female literacy, no time limit. As exclusion criterion was: repeated articles found in databases, other types of cancer, other diseases and studies that addressed cancer in males.

The combined search keywords were identified 301 articles, after application of the criterion "full text" emerged 74, related to the first combination (*sexual behavior and radiotherapy*) was found 66 articles (MEDLINE and LILACS 1 65). The second combination of descriptors (*sexual behavior and brachytherapy*) it was found 08 articles, all on MEDLINE. But

of the 74 articles, only 52 were available, which held reading to ensure that it was the subject researched. Being deleted 29 (16 approached the male, repeated studies 02 05 studies in head and neck cancer, other diseases 06), totaling 23 articles that composed the *corpus* of analysis.

After this selection, all items included underwent comprehensive readings for identification and registration of the elements to be analyzed on the basis of specific form which included: article title, authors, journal, year of publication, purpose of study, type of study, data collection measures, subject of the research, results and final considerations. The results of the analysis are presented descriptively and qualitatively analyzed. Been complied with the ethical precepts regarding citation of sources and identifying the perpetrators, in accordance with the copyright.

RESULTS AND DISCUSSION

The *corpus* of analysis was in 23 articles. As the years of publication, published 6 articles in 2013 and other 2012 6:00 pm. In 2011, 2010 and 2009 was found from 2 to 4 articles (each year) and the remaining years with 1 article. Between 1994 and 2007 met publications, according to the criteria of this research. With the intention to promote the contributions of the production of knowledge about sexual behavior after cancer treatment in women with teletherapy and brachytherapy, or gone on two main themes: 12 articles in the category changes, sexual and functional and psychosocial 11 articles related to quality of life.

PSYCHOSOCIAL, SEXUAL AND FUNCTIONAL CHANGES

By analyzing the articles related to the subject, 12 manuscripts authors about the changes that occur in women who experience cancer, mainly in relation to the characteristics of the disease, treatment and its aftermath.

In a study on the psychological morbidity of women with gynecological cancer, identified that 45% had been affected by cancer of endometrium; 26% for ovarian cancer; 23% for cervical cancer and 6% for vulvar cancer. In this same survey, 48% of women had symptoms of depression (author reported), 23% for traumatic

stress symptoms; 10% had specific stress due to cancer; 26% stress by bodily changes; 31% decrease in quality of life and psychological 53% decrease in quality of life⁽¹⁴⁾.

Study that investigated the side effects in the long-term treatment on the sexual functioning of women who had cervical cancer of uterus and who were subjected to different forms of treatment, pointed out that women treated with radiation reported significant worsening in the physical, cognitive and social functioning. The level of symptoms such as nausea/vomiting, pain, loss of appetite, frequent urination, leaking urine, and the sense of narrowing of the vagina was significantly higher in patients with irradiation treatment⁽¹⁵⁾.

Survey of 69 women in the individual queries of Oncology, over a period of 5 months, showed that 50 were older than 60 years and had the diagnosis of cancer of the cervix or endometrium. Most women had current partner (69.6%), in the evaluation of female sexual morbidity after pelvic radiotherapy topics addressed in the consultations were: impact of pelvic radiotherapy in both intestines 81% (n = 56) and bladder in 70% (n = 48) ⁽¹⁶⁾.

Sexual dysfunction in women with cancer showed the importance of sexual health associated with cancer treatment. Between sexual problems, dispareunia and vaginal stenosis. In relation to the dispareunia, the use of vaginal dilators can help improve elasticity, and many times the consistent use improves this condition. Dilators may also be used to improve pelvic muscle relaxation. The patients may be instructed on use of dilators or referral to a physical therapist, in an attempt to steer on the exercise. In the case of vaginal stenosis, the vaginal tissue usually develops a whitish appearance, and the vagina loses its flexibility. It is unclear whether there is an initial phase where some intervention could prevent vaginal obstruction⁽¹⁷⁾.

The physical side effects of cancer treatment varied as: vaginal bleeding, anorexia, nausea, intake or weight gain, fatigue, weakness, Lymphedema, salute, psychological and social aspects of the disease, impact of illness in the family or social support and emotional sources. Vaginal bleeding was the most commonly reported symptom in the consultations, despite the emphasis on vaginal stenosis, shortening and

vaginal dryness as common toxicities after pelvic radiotherapy⁽¹⁶⁾.

In a systematic review, about the sexual functioning of patients who have had cervical cancer of uterus, identified that most studies do not shows differences in the ability to achieve orgasm. Reported more dyspareunia than the patients in the control group who were healthy and this was more frequent and prolonged after radiotherapy. In addition, there has also been greater occurrence of lack of lubrication and decreased interest and sexual activity after treatment⁽¹⁸⁾.

Study related to effects of brachytherapy intracavitary on sexual function and quality of life of women with endometrial cancer in its early stages showed that he there was no statistically significant difference in overall quality of life for patients treated only with surgery or brachytherapy intracavitary, most women in both groups reported excellent health status overall. Also there were no statistically significant differences in the physical, emotional, cognitive functioning or social between the two groups. The sexually active patients, 33% of women in the brachytherapy group intracavitary and 42% of patients in the surgical group said the sensation of vagina without lubrication during sexual activity; 17% of patients in the brachytherapy group intracavitary felt her vagina narrowed, compared with 29 percent in the group who performed surgery⁽¹⁹⁾.

In research on the Sudanese sexual health in women before and during hormonal treatment for breast cancer, showed that those in treatment showed problems in sexual function, as the largest loss of desire and sexual satisfaction when compared with healthy control group women. It was also verified that the sexual function of patients was affected by his age, educational level and length of the marriage. In addition, there were differences in sexual desire and satisfaction among the patients according to the type of cancer and treatment that they received. This study was the first to address issues of sexual health in Sudanese cultural context⁽²⁰⁾.

In research, was compared to sexuality in women who underwent mastectomy, with those that have undergone breast reconstruction after mastectomy, showing the improvement in sexual

function with those with breast reconstruction, probably as a result of a better self-esteem, as well as the improvement of body image⁽²¹⁾.

The diagnosis and treatment for cancer affect women's sexuality, many need help to overcome the trauma of the disease, treatment and to resume the practice of sexuality, so full. With regard to the involvement of partners in treatment, in 63 women survey reported that their partner had never participated in a clinical consultation, nor spoken with the doctor, and 41% reported that their partners would participate. Other key data showed: 44% of women felt unable to talk properly with your partner about your feelings in relation to cervical cancer, and 63% reported that their partners were unable to talk to them about those feelings. Most needed more information about cervical cancer, about his treatment and how to get help in rehab. Of the participants, 49% would like advice; 60% reported feeling better for having spoken about your experience after surgery and radiation treatment⁽²²⁾.

Must be stimulated positive patterns, optimistic and flexible to deal with the situations and feelings involved in stressful situations such as cancer, reducing the impact of stress and changes in various aspects, the women who undergo radiation therapy may have disturbing side effects with impact on psychosocial functioning and intimate relationships. The anxiety related to cancer can be ameliorated by comprehensive preparation for the treatment and informative approach to physical, psychological and psychosexual needs⁽²³⁾.

The presence of expert staff to treat sexual issues is essential, but these issues can also be addressed in a coordinated manner with oncologists, gynecologists and other health-care professionals in the detection, diagnosis and treatment⁽¹⁷⁾. The multidisciplinary care (MDC) refers to the team approach to health care that involves medical actions, nursing and allied health areas. The MDC to patients with cancer has been associated with the benefits of survival and better quality of life, decrease in length of stay, reduce health costs, improvement of personal satisfaction and better understanding of patient care. The MDC is essential to effective communication, improving confidence and

psychological, social and functional monitoring of women⁽²³⁾.

QUALITY OF LIFE

One of the selected articles, 11 raised the quality of life of women after treatment of cancer by teletherapy and/or brachytherapy. The types of cancers that appeared in these studies were: breast cancer, uterine cervix, rectum, endometrium and ovaries. The QOL-related aspects that permeated the studies show the negative influence on the quality of life of women in the short term, with confrontation and exchange of modest gains in their prospects for recovery⁽²⁴⁾.

There are many factors that contribute to changes in QOL of the women with cancer: secondary functional damage to treatments, surgeries that involve the removal of parts of the female anatomy and radiation that damages the mucosa and the epithelium; side effects of chemotherapy, which, in part, are common to radiation therapy; psychological factors, including erroneous beliefs about the origins of cancer, changes in self-image, low self-esteem, marital tensions, fears and concerns⁽¹¹⁾.

Study in France, discusses the General and prognostic factors with QV women sex with cervical cancer pointed out that all aspects of sexuality had some type of change. The survey results showed decreased sexual arousal, difficulty having orgasm and organic problems that affect sexuality, with complaints of strong vaginal discomfort during sex. The results of this study can be used for the implementation of assistance to this population, in order to provide adequate support for women and their partners⁽²⁵⁾.

Among the different instruments used to assess the QOL of the women who performed teletherapy treatment and/or brachytherapy 04, articles that used the *Medical Outcome Study 36-item Short Form*. (MOS SF-36), indicating worst QV on specific function for cancer of the cervix in women treated with radiation therapy⁽²⁶⁾. Women gained better overall survival compared to men after postoperative radiotherapy in rectal cancer^(27,28). Most women in another study showed unfavorable score in the MOS SF-36 compared to functional capacity, vitality, emotional and mental health limitations, after

undergoing breast reconstruction. In this way, specific health professionals in the area of Oncology may recognize the issues related to sexuality and QV, offering specific and meaningful support for cancer patients⁽²⁹⁾.

In addition to the MOS SF-36 questionnaire was also used the questionnaire *European Organization for Research and Treatment of Cancer Questionnaire* (EORTC QLQ-C30) and (QLQ-OV28). It was found that global health and emotional functioning performed EORTC QLQ questionnaire improves-30, as well as in relation to symptoms such as nausea and vomiting between 3 and 6 months after treatment of ovarian cancer. In the questionnaire QLQ-OV28 showed improvement on the scales for abdominal pain, attitude, illness and treatment. But reduction of the symptoms on the scales relating to body image and sexual concerns between 3 and 6 months after treatment⁽³⁰⁾.

Another study presented positive increase QOL after brachytherapy, the patients reported that after this type of treatment obtained better social relationships and lower scores of symptoms such as diarrhea, fecal incontinence and limitation in daily activities, compared with intestinal symptoms in radiotherapy. Except for the sexual symptoms were frequent in the two treatment groups (teletherapy and brachytherapy or)⁽³¹⁾. Include measures of QOL in women after cancer treatment with teletherapy and/or brachytherapy is challenging, because it presents physical, emotional and social impact caused by the disease, these measures seem to be crucial to assess the consequences of the disease in these women's lives. The QV is also influenced by the combat against cancer, which is experienced in different ways, some women use strategies like physical activity, and may provide relief and treatment of symptoms related to the disease. Women treated with chemotherapy and/or radiation therapy should receive special support to maximize your level of activity for targeted interventions during and after therapy⁽³²⁾.

Several studies have documented that the cancer has negative impact on QOL, there is evidence of treatment-related decreases, anguish and psychological well-being. The coping is related with the improvement in the QOL of the women with cancer⁽³³⁾.

Various dimensions of QOL (physical, emotional, social, and spiritual well-being) may be affected in the long-term survivors and/or newly diagnosed with cancer. Psychosocial interventions and psicoeducativas are beneficial treatments for cancer patients. This study argues that yoga emerges as empowering mind-body intervention, this ancient Indian Science has been used for therapeutic benefits in numerous health care concerns. The beneficial effects were evidenced in a variety of results, such as sleep quality, mood, stress, anxiety, symptoms related to cancer and QOL in General, as well as the functional and physiological measures⁽³³⁾.

QV women coupled with the expertise of health professionals, which can be characterized as positive and negative elements of experience. Some were described as support, providing the necessary information. Others were far apart, hindering access to tracking information⁽³⁴⁾. Professional action, educational sphere can help clarify, raise awareness and promote the knowledge of

women with information on the treatment, encouraging them to overcome obstacles regarding the projection of your life⁽²⁰⁾.

CONCLUSION

Through the study, it was possible to know the scientific literature on sexual behavior/symptoms and quality of life after cancer treatment in women with teletherapy and/or brachytherapy. The manuscripts examined issues related to psychosocial changes reflect, functional and sexual caused by cancer, the QOL of the women due to diagnosis and treatment, coping shapes in coexistence with this condition and the health assistance.

Identifies the need for multidisciplinary action for women with cancer in relation to sexuality, because through the studies, note that there is still fragility in the care back to these. Such assistance needs to be turned to the woman and her partner, so that the coexistence with cancer and treatment is of quality.

COMPORTAMENTO SEXUAL DAS MULHERES EM TRATAMENTO RADIOTERÁPICO

RESUMO

As mulheres com câncer submetidas à radioterapia, teleterapia e/ou braquiterapia podem ter alteração no comportamento sexual, com influência nos aspectos psicossociais, sexuais e funcionais, bem como na qualidade de vida. Este estudo tem como objetivo analisar as evidências científicas relacionadas ao comportamento sexual e qualidade de vida de mulheres que realizaram tratamento com radioterapia. Trata-se de pesquisa bibliográfica do tipo revisão integrativa. A coleta dos dados foi realizada no mês de maio de 2014, e ocorreu por meio da Biblioteca Virtual em Saúde, a partir das bases de dados LILACS e MEDLINE, através da combinação dos descritores: “*sexual behavior and radiotherapy*” e “*sexual behavior and brachytherapy*”. Foram selecionados 23 estudos para compor a amostra sem tempo limite. Com a intenção de promover os contributos da produção do conhecimento sobre o comportamento sexual/sintomas após tratamento de câncer em mulheres com braquiterapia e radioterapia, emergindo dois eixos temáticos: alterações psicossociais, sexuais e funcionais; qualidade de vida. Identifica-se que é necessária ação multidisciplinar direcionada as mulheres com câncer em relação à sexualidade, há fragilidade no cuidado voltado a essas. Tal assistência necessita ser planejada para a mulher e seu parceiro, de forma que a convivência com o câncer e tratamento seja de qualidade.

Palavras-chave: Comportamento sexual. Radioterapia. Braquiterapia. Mulheres.

COMPORTAMIENTO SEXUAL DE LAS MUJERES EN TRATAMIENTO RADIOTERÁPICO

RESUMEN

Las mujeres con cáncer sometidas a la radioterapia, teleterapia y/o braquiterapia pueden cambiar el comportamiento sexual, con influencia en los aspectos psicossociales, sexuales y funcionales, así como la calidad de vida. Este estudio tiene como objetivo analizar las evidencias científicas relacionadas con el comportamiento sexual y la calidad de vida de mujeres que se sometieron a tratamiento con radioterapia. Se trata de una investigación bibliográfica del tipo revisión integradora. La recolección de los datos se realizó en mayo de 2014 y se llevó a cabo a través de la Biblioteca Virtual en Salud, a partir de la base de datos LILACS y MEDLINE, mediante la combinación de los descriptores: “*sexual behavior and radiotherapy*” y “*sexual behavior and brachytherapy*”. Se seleccionaron 23 estudios para componer la muestra sin límite de tiempo. Con la intención de promover las contribuciones a la producción de conocimiento sobre el comportamiento sexual/síntomas después del tratamiento del cáncer en mujeres con braquiterapia y radioterapia, emergiendo dos ejes temáticos: cambios psicossociales, sexuales y funcionales; calidad de vida. Se identifica la necesidad de una acción multidisciplinaria dirigida a las mujeres sobre la sexualidad, pues existen deficiencias en la atención a ellas dirigida. Dicha atención

tiene que ser planificada para la mujer y su pareja, de modo que la convivencia con el cáncer y el tratamiento sea de calidad.

Palabras clave: Conducta sexual. Radioterapia. Braquiterapia. Mujeres.

REFERENCES

1. Ministério da Saúde (BR). Instituto Nacional de Câncer. INCA estima que haverá 596.070 novos casos de câncer em 2016. Rio de Janeiro: MS/INCA; 2016. [online]. 2015 nov. [citado 2016 jan 27]. Disponível em: URL: http://www2.inca.gov.br/wps/wcm/connect/agencianoticias/site/home/noticias/2015/estimativa_incidentia_cancer_2016.
2. Instituto Nacional do Câncer (BR). ABC do câncer: abordagens básicas para o controle do câncer. Rio de Janeiro: INCA; 2011.
3. Salvajoli J, Souhami L, Faria SL. Radioterapia em oncologia. São Paulo: Atheneu; 2013.
4. Ministério da Saúde (BR). Instituto Nacional do câncer. Ações de enfermagem para o controle do câncer: uma proposta de integração ensino-serviço. 3ª ed. Rio de Janeiro: INCA; 2008.
5. Scaff LAM. Física da radioterapia. São Paulo (SP): Sarvier; 1997.
6. Petitto JV. Câncer dos órgãos genitais: tratamento radioterápico. In: Halbe HW. Tratado de Ginecologia, 3ª ed. São Paulo: Roca; 2000. p. 2343-53.
7. Barton-Burke M, Gustason CJ. Sexuality in women with cancer. *Nur Clin North Am*. 2007; 42(4):531-54.
8. Fernandes FW, Kimura M. Qualidade de vida relacionada à saúde de mulheres com câncer de colo uterino. *Rev Latino-Am Enfermagem*. [online]. 2010 maio-jun. [citado 2014 jun 30]; 18(3):360-67. Disponível em: URL: http://www.scielo.br/pdf/rlae/v18n3/pt_10.pdf.
9. GeFatone AM, Moadel AB, Foley FW, Fleming M, Jandorf L. Urban voices: The quality-of-life experience among women of color with breast cancer. *Palliative and Supportive Care*. 2007; 5(2):115-25.
10. Ganz, PA, Kwan L, Stanton AL, Krupnick JL, Rowland JH, Meyerowitz BE et al. Quality of life at the end of primary treatment of breast cancer: first results from the moving beyond cancer randomized trial. *J Natl Cancer Inst*. 2004; 96(5):376-87.
11. National Cancer Institute. Sexuality and Reproductive Issues - Factors affecting sexual function in people with cancer. United States: U.S. National Institutes of Health. [online]. 2009 fev. [citado 2014 jun 30]. Disponível em: URL: <http://www.cancer.gov/cancertopics/pdq/supportivecare/sexuality/HealthProfessional/page3>.
12. Mendes KDS, Silveira RCCP, Galvão CM. Revisão integrativa: método de pesquisa para incorporação de evidências na saúde e na enfermagem. *Texto contexto enferm*. 2008; 17(4):758-64.
13. Ribeiro JP, Porto AR, Thofehrn MB. Prácticabaseda em evidencias: tendencias metodológicas enlaenfermería. *Evidentia*. 2012 Oct/Dec. [citado 2014 ago 20]; 9(40). Disponível em: URL: <http://www.index-f.com/evidentia/n40/ev7856.php>.
14. Levin AO, Carpenter KM, Fowler JM, Brothers BM, Andersen BL, Maxwell GL. Sexual morbidity associated with poorer psychological adjustment among gynecological cancer survivors. *Int J Gynecol Cancer*. 2010 Apr; 20(3):461-70.
15. Greimel ER, Winter R, Kapp KS, Haas J. Quality of life and sexual functioning after cervical cancer treatment: a long-term follow-up study. *Psychooncology*. 2009 May; 18(5):476-82.
16. White ID, Allan H, Faithfull S. Assessment of treatment-induced female sexual morbidity in oncology: is this a part of routine medical follow-up after radical pelvic radiotherapy? *Br J Cancer*. 2011; 105(7):903-10.
17. Falk SJ, Dizon DS. Sexual dysfunction in women with cancer. *Fertil Steril*. 2013 Oct; 100(4):916-21.
18. Lammerink EAG, Bock GH, Pras E, Reyners AKL, Mourits MJE. Sexual functioning of cervical cancer survivors: a review with a female perspective. *Maturitas*. 2012 Aug; 72(4):296-304.
19. Quick AM, Seamon LG, Abdel-Rasoul M, Salani R, Martin M. Sexual function after intracavitary vaginal brachytherapy for early-stage endometrial carcinoma. *Int J Gynecol Cancer*. 2012 May; 18(5):476-82.
20. Abasher SM. Sexual health issues in Sudanese women before and during hormonal treatment for breast cancer. *Psychooncology*. 2009 Aug; 18(8):858-65.
21. Sabino Neto M, Menezes MVA, Moreira JR, Garcia EB, Abila LEF, Ferreira LM. Sexuality after breast reconstruction post mastectomy. *Aesth Plast Surg*. 2013jun; 37(3):643-7.
22. Cull A, Cowie VJ, Farquharson DIM, Livingstone JRB, Smart GE, Elton RA. Early stage cervical cancer: psychosocial and sexual outcomes of treatment. *Br J Cancer*. 1993 Dec; 68(6):1216-20.
23. Schofield P, Juraskova I, Bergin R, Gough K, Mileskin L, Krishnasamy M, et al. A nurse- and peer-led support program to assist women in gynaecological oncology receiving curative radiotherapy, the pentagon study (Peer and nurse support trial to assist women in gynaecological oncology): study protocol for a randomised controlled trial. *Trials* 2013 Feb; 11; 14-39.
24. Muñoz M. Quality of life during treatment in young women with breast cancer. *Breast Cancer Res Treat*. 2010 Jul; 123:75-77.
25. Grangé C, Bonal M, Huyghe É, Lèguevaque P, Cances-Lauwers V, Motton S. Qualité de vie sexuelleet cancer du col localementavance. *Gynécol obstét fer*. 2013; 41(2):116-22.
26. Korfage IJ, Essink-Bot ML, Mols F, Poll-Franse LV, Kruitwagen R, Ballegooijen MV. Health-related quality of life in cervical cancer survivors: a population-based survey. *Int J Radiat Oncol Biol Phys*. 2009 Apr 1; 73(5):1501-09.
27. Zutshi M, Hull T, Shedda S, Lavery I, Hammel J. Gender differences in mortality, quality of life and function

after restorative procedures for rectal cancer. *Colorectal Dis.* 2013 Jan; 15(1):66-73.

28. Safarinejad MR, Shafiei N, Safarinejad S. Quality of life and sexual functioning in young women with early-stage breast cancer 1 year after lumpectomy. *Psychooncology.* 2013 Jun; 22(6):1242-48.

29. Manganiello A, Hoga LAK, Reberte LM, Miranda CM, Rocha CAM. Sexuality and quality of life of breast cancer patients post mastectomy. *Eur J Oncol Nurs.* 2011 Apr; 15(2):167-72.

30. Penar-Zadarko B, Binkowska-Bury M, Wolan M, Gawelko J, Urbanski K. Longitudinal assessment of quality of life in ovarian cancer patients. *Eur J Oncol Nurs.* 2013 Jun; 17(3):381-85.

31. Nout RA, Putter H, Jürgenliemk-Schulz IM, Jobsen JJ, Lutgens LCHW, Steen-Banasik EV, et al. Five-year quality of life of endometrial cancer patients treated in the

randomized Post Operative Radiation Therapy in Endometrial Cancer (PORTEC-2) trial and comparison with norm data. *Eur J Cancer.* 2012 Jul; 48(11):1638-48.

32. Huy C, Schmidt ME, Vrieling A, Chang-Claude J, Steindorf K. Physical activity in a German breast cancer patient cohort: one-year trends and characteristics associated with change in activity level. *Eur J Cancer.* 2012 Feb; 48(3):297-04.

33. Vadirajaa HS, Rao MR, Nagarathna R, Nagendra HR, Rekha M, Vanitha N, et al. Effects of yoga program on quality of life and affect in early breast cancer patients undergoing adjuvant radiotherapy: a randomized controlled trial. *Complement Ther Med.* 2009 Oct/Dec; 17(5-6):274-80.

34. Clemmens DA, Knafl K, Lev EL, Mccorkle R. Cervical cancer: patterns of long-term survival. *Oncol Nurs Forum.* 2008 Nov; 35(6):897-03.

Corresponding author: Karina Silveira de Almeida Hammerschmidt. Campus Universitário Reitor João David Ferreira Lima, Rua Delfino Conti, s/n, CEP: 88040-900, Bairro Trindade, Florianópolis, Santa Catarina, Brasil. Telephone: (48) 3721-2755. E-mail: karina.h@ufsc.br

Submitted: 13/01/2015

Accepted: 28/02/2016