

## Fatores que influenciam na qualidade de vida de homens com neoplasias malignas: uma revisão integrativa

Factors influencing the quality of life of men with malignant neoplasms: an integrating review

Factores que influncian en la calidad de vida de hombres con neoplasias malignas: una revisión integrativa

Mércio Gabriel de Araújo<sup>1</sup>; Jovanka Bittencourt Leite de Carvalho<sup>2</sup>; Alexandra do Nascimento Cassiano<sup>3</sup>; Thaís Rosental Gabriel Lopes<sup>4</sup>

### How to quote this article:

Araújo MG; Carvalho JBL; Cassiano AN; et al. Factors influencing the quality of life of men with malignant neoplasms: an integrating review. Rev Fund Care Online. 2017 jul/sep; 9(3):875-881. DOI: <http://dx.doi.org/10.9789/2175-5361.2017.v9i3.875-881>

### ABSTRACT

**Objective:** To review factors that influence the quality of life of men with malignant neoplasms. **Methods:** This is an integrative literature review performed in SCOPUS, CINAHL, LILACS and PUBMED databases. **Results:** After applying the inclusion and exclusion criteria, a sample of eight articles was obtained as a result. Then, three categories emerged: Physical activity as an improvement to the quality of life of men with malignant neoplasms; Sexual functioning and marital status of the male population as factors for life quality; Self-esteem and well-being: determining factors for the quality of life of men with cancer. **Conclusion:** It was observed that studies focused on the male population with malignant neoplasms are insufficient and need attention to this understudied group.

**Descriptors:** Quality of Life; Cancer; Human Health.

<sup>1</sup> Nurse. Professor of the State University of Rio Grande do Norte (UERN). Master in Nursing by the Federal University of Rio Grande do Norte (PPgEnf/UFRN). E-mail: [mercio\\_gabriel@hotmail.com](mailto:mercio_gabriel@hotmail.com).

<sup>2</sup> Nurse. Professor of the Health School at the Federal University of Rio Grande do Norte (ESUFRN). Ph.D. in Health Science by the Federal University of Rio Grande do Norte (CCS/UFRN). E-mail: [jovanak@es.ufrn.br](mailto:jovanak@es.ufrn.br).

<sup>3</sup> Nurse. Multiprofessional Resident in Mother and Child Health at University Hospital Ana Bezerra of the Federal University of Rio Grande do Norte. E-mail: [anc\\_enfa@hotmail.com](mailto:anc_enfa@hotmail.com).

<sup>4</sup> Nurse. Professor of the Health School at the Federal University of Rio Grande do Norte (ESUFRN). Specialist in Oncology Nursing at the Federal University of Minas Gerais (UFMG). E-mail: [thaisrg12@hotmail.com](mailto:thaisrg12@hotmail.com).

## RESUMO

**Objetivo:** Revisar fatores que influenciam na qualidade de vida de homens com neoplasias malignas. **Métodos:** Trata-se de uma revisão integrativa da literatura realizada nas bases de dados SCOPUS, CINAHL, LILACS e PUBMED. **Resultados:** Após a aplicação dos critérios de inclusão e exclusão obteve-se como resultado uma amostra de oito artigos. Logo, emergiram três categorias: atividade física como melhoria para a qualidade de vida de homens com neoplasias malignas; O funcionamento sexual e o estado civil da população masculina como fatores para a qualidade de vida; e Autoestima e bem-estar: fatores condicionantes para a qualidade de vida do homem com câncer. **Conclusão:** Observou-se que estudos voltados para a população masculina com neoplasias malignas são insuficientes e necessita-se de atenção para este grupo pouco estudado. **Descritores:** Qualidade de Vida; Neoplasia; Saúde do Homem.

## RESUMEN

**Objetivo:** Revisar factores que influyen en la calidad de vida de hombres con neoplasias malignas. **Métodos:** Se trata de una revisión integradora de la literatura realizada en las bases de datos SCOPUS, CINAHL, LILACS y PUBMED. **Resultados:** Después de la aplicación de los criterios de inclusión y exclusión se obtuvo como resultado una muestra de ocho artículos. Luego, surgieron tres categorías: Actividad física como mejora para la calidad de vida de hombres con neoplasias malignas; El funcionamiento sexual y el estado civil de la población masculina como factores para la calidad de vida; Autoestima y bienestar: factores condicionantes para la calidad de vida del hombre con cáncer. **Conclusión:** Se observó que estudios dirigidos para la población masculina con neoplasias malignas son insuficientes y necesitan de atención para este grupo poco estudiado. **Descritores:** Calidad de Vida; Neoplasia; Salud del Hombre.

## INTRODUCTION

The diagnosis of cancer can bring important changes in the way of living of people, due to physical and emotional changes, discomfort, pain, disfigurement, dependence and loss of self-esteem. It is common to associate the word “cancer” to a threat to live and consider the disease “morally contagious,” avoiding to pronounce even its name. Also, the patient begins to face different types of treatment, such as surgery, radiotherapy and chemotherapy treatments, which often is directly related to adverse side effects that can influence the quality of life (QOL).<sup>1</sup>

The evaluation of the QOL has been highlighted in oncology since the appearance of the chronicity of the disease and the potential demand for various care and treatment that are usually debilitating as surgery, chemotherapy and radiotherapy. This conditions can foster a decline in cancer patient’s QOL.

In Brazil, it is estimated that in 2014 and 2015 approximately 576,000 new cases of cancer will be diagnosed, with 69,000 prostate cancer, 33,000 colon and rectum cancer and 20,000 stomach cancer, those that affect more men.<sup>2</sup> Malignant neoplasms represent a major challenge for diagnosed patients since fear and stigma are still striking in society. It is known that for cultural reasons, men less access health services than women, interfering with

the early diagnosis contributing to cancer has a significant representation of the epidemiological profile.

In 2008, the federal government launched the National Policy for Integral Attention of Men’s Health (PNAISH) providing major advances to stimulate male co-participation in health care.<sup>3</sup>

One of the main actions developed for men’s health was the promotion of actions aimed at early detection of prostate cancer. However, there are many cancers affecting this group. Thus, it becomes important to understand the factors that interfere in QOL of men with cancer.

QOL has a set of responses to physical and mental factors that contribute to a healthy life. In it, it can be understood the functional ability, socioeconomic status, self-care, self-esteem, family support, lifestyle, cultural, ethical, religious values, and emotional and behavioral aspects involved. Conceptual diversity that allows us to infer that QOL part of a eminent human perception with multiple definitions.<sup>4</sup>

Therefore, this study adopts the concept of QOL advocated by the World Health Organization (WHO), given its subjectivity features, multidimensionality and bipolarity, namely “individual’s perception of their position in life in the context of culture and value system in which they live and in relation to their goals, expectations, standards and concerns”.<sup>5</sup>

It is assumed that men with malignant neoplasms have QOL compromised as a result of treatment with chemotherapy or radiotherapy. In this perspective, the following guiding question emerged: What factors affect the quality of life of men with malignant neoplasms?

Therefore, the study aims to review the factors that influence the quality of life of men with malignant neoplasms.

## METHODS

It is an integrative literature review characterized as a broad revision method comprising studies with different methodological approaches (qualitative and quantitative). The literature provides together studies on a particular topic to build complete synthetic studies carried out separately, however, investigating identical or similar problems.<sup>6</sup>

For this study, the description of the steps that make up the integrative review were followed: elaboration of guiding question, establishment of the review objectives and criteria for inclusion and exclusion of articles; definition of the information to be drawn from the research; selection of articles in the literature; analyzes of the results; discussion of findings and presentation of the review.<sup>7</sup>

The search was conducted in Scopus, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Latin American and Caribbean Health Sciences (LILACS) and PUBMED databases, in November 2014. Thus, the clipping was articles published until November 2014 with no previous limits, a fact that made it possible to broaden the scope of research.

For the selection of the material, the following inclusion criteria were: being full articles available for free in searchable databases; available in English, Portuguese, and Spanish; that answer the research question. Letters to the editor, editorials, theses and dissertations, as well as other literature reviews, were excluded.

The keywords identified in the Medical Subject Headings (MESH) were: Quality of life; Men's health; Neoplasms. After crossings were performed with the AND Boolean operator, presented as follows: Quality of life AND Men's Health; Quality of life AND Malignant Neoplasms; Men's health AND Neoplasms; Quality of life AND Men's health AND Neoplasms.

As a product of the crossings, it was obtained Quality of life AND Men's Health (SCOPUS=5; CINAHL=53; PUBMED=109; LILACS=4); Quality of life AND Malignant Neoplasms (SCOPUS=389; CINAHL=4; PUBMED=5; LILACS=2); Malignant Neoplasms AND Men's Health (SCOPUS=4; CINAHL=0; PUBMED=0; LILACS=0); Quality of life AND Malignant Neoplasms AND Men's Health (SCOPUS=0; CINAHL=1; PUBMED=0; LILACS=0). After the initial data collection, the inclusion and exclusion criteria was applied, resulting eight articles sample, one in SCOPUS, five in CINAHL, zero in LILACS and two in PUBMED (Table 1).

**Table 1** - Articles found and selected in databases. Natal, Rio Grande do Norte, Brazil, 2014

Artigos/Bases	SCOPUS	CINAHL	LILACS	PUBMED	TOTAL	%
FOUND	398	58	4	150	610	100
EXCLUDED	397	53	4	148	602	98.68
SELECTED	1	5	0	2	8	1.32

Source: Research data, 2014.

## RESULTS AND DISCUSSION

The results of the studies are arranged in a figure (Figure 1) and analyzed using the following variables: year, country, article references, factors that influence (FI) and article method.

**Figure 1** - Distribution of articles according to the ordinal identification, year, and country of origin, reference, identified strategies, and methods. Natal, Rio Grande do Norte, Brazil, 2014

Nº	YEAR	ORIGIN COUNTRY	ARTICLE REFERENCE	FI	METHOD
01	2011	Brazil	Bortoluzzi MC, Lutz E, Presta AA. The quality of life, prevalence, and profile of patients with malignant neoplasm: A case-control population-based. Rev Acta Portuguesa. 2011; 24(2):241-246.	Physical activity	Case-control
02	2011	Australia	Claike MJ, Livingston PM, Botti M. An exploratory study of the factors that influence physical activity for the prostate. Support Care Cancer. 2011;19(1):1019-1028.	Physical activity	Transversal
03	2005	United States	Galbraith ME, Arechiga A, Ramirez J, Pedro LW. Prostate cancer survivors' and partners' self-reports of health-related quality of life, treatment symptoms, and marital satisfaction 2.5-5.5 years after treatment. Oncol nurs fórum. 2005;32(2):30-41.	Sexual functioning	Longitudinal
04	2003	United States	Rondorf-Klin L, Colling J. Quality of life after radical prostatectomy. Oncology nursing forum. 2001;30(2):24-32.	Self-esteem	Transversal
05	2012	Northern Ireland	Caughan E, Sorley O, Prue G, Parahoo K, Bunting B, Sullivan JO et al. Quality of life in men receiving radiotherapy and neoadjuvant androgen deprivation for prostate cancer: results from a prospective longitudinal study. J Adv Nurs. 2012;69(1):53-61.	Marital status	Longitudinal

(To be continued)

(Continuation)

Nº	YEAR	ORIGIN COUNTRY	ARTICLE REFERENCE	FI	METHOD
06	2006	England	Burns SM, Mahalik J. R. Physical health, self-reliance, and emotional control as moderators of the relationship between locus of control and mental health among men treated for prostate cancer. <i>Journal of Behavioral Medicine</i> . 2006;2(6):561-572.	Physical activity	Transversal
07	2004	United States	Potolsky AL, Davis WW, Hoffman RM, Stanford JL, Stephenson RA, Penson DF et al. Five-year outcomes after prostatectomy or radiotherapy for prostate cancer: the prostate cancer outcomes study. <i>J Natl Cancer Inst</i> . 2004;96(18):1358-1367.	Sexual functioning	Cohort
08	2010	Canada	Selby D, Wright F, Stilos K, Daines P, Moravan V, Gill A et al. Room for improvement? Quality-of-life assessment in patients with malignant bowel obstruction. <i>Palliat Med</i> . 2010;24(1):38-45.	Well-being	Cohort

Source: Research data, 2014.

Faced with the variables found in the characterization of articles as shown in Figure 1, three categories emerged: Physical activity as improving the quality of life of men with malignant neoplasms; Sexual functioning and marital status of the male population as factors for their quality of life; Self-esteem and well-being: determining factors for the quality of life of men with cancer.

### Physical activity as improving quality of life of men with malignant neoplasms

A male population is a group with significant representation in various cancers, among which there are prostate, stomach and penis cancers highlighted. From the diagnosis, these patients are subjected to degrading treatment such as chemotherapy and radiation that have adverse side effects, causing serious problems in QOL of men with cancer.

Thus, physical activity emerges as one of the factors for improving the QOL of the male population. The use of physical exercise appears as a therapeutic modality in improving the physical and emotional capabilities to assist in coping with diagnosis and recovery of cancer patients.<sup>16</sup>

As a result, a study in Brazil sought to identify the QOL of patients with cancer. It showed physiotherapy and physical activity as a strategy for improving QOL and reducing the impact of the disease on the lives of these patients.<sup>8</sup>

The use of physical exercise has shown significant results for people with cancer because its use reduces fatigue, probably the most common symptom in cancer patients. The radiotherapy causes a transient increase in cumulative fatigue over weeks and reaches one month after completion of treatment. Thus, physical, role, cognitive and social functions are reduced during treatment and returned to a baseline month follow-up.<sup>17</sup>

An Australian research of men who had ended treatment for prostate cancer and who performed physical activity before to diagnosis showed that the return to physical

practice has been compromised due to lack of confidence after treatment to comorbidities, advanced age, physical decline and lack of time.<sup>9</sup>

These findings can be considered relevant because of the lack of information provided by health professionals to the male population at prudence, importance and waiting time for physical exercise. Thus, it is necessary that health professionals contribute to the return of the routine of patients who present cured of cancer as encouraging physical activity contributing to minimize the risk of disease recurrence.

Another article selected from a study conducted in England with 230 men who were diagnosed with prostate cancer showed that physical activity was directly linked to their mental health, and that influenced the treatment, for those who have poor physical condition were more easily depressed during treatment.<sup>13</sup>

Another study showed that mental illnesses are present in the lives of cancer patients, reaching values of incidence ranging from 5% to 50%. Still, such comorbidity is often underestimated and undertreated in clinical and oncological hospitals.<sup>18</sup>

From this perspective, it is observed that the exercise represents an alternative to minimize mental health issues that pervade the lives of patients with cancer.

Thus, it appears that the practice is presented as a factor influencing the QOL of these subjects to minimize fatigue, reducing mental problems and the strategy to reduce the impact of cancer on patients' lives emerged as an intervention.

### Sexual functioning and marital status of the male population as factors for quality of life

Patients with malignant neoplasms may have difficulty relating to others. Initially, the diagnosis of cancer is still seen with segregation by society. Then the patient himself is afraid to expose his condition before others for fear of exclusion. So this is a challenge for these individuals with such difficulties.

Consequently, when diagnosed with malignancy, people living a stable relationship with their partner go through unusual situations that endanger the union. In this understanding, for cultural reasons, a man exposes his manhood markedly, it is necessary to show strength, insensibility and invulnerability to any situation. However, many men to be diagnosed with cancer suffer psychologically because they believe they will be unable to perform sexually.

One study indicated that men diagnosed with prostate cancer were more concerned about sexual issues than other side effects related to the treatment of this disease. This was evidenced by claiming that they were not able to have normal sex, and they were not satisfied with their sexual functioning.<sup>10</sup>

Also, almost two-thirds of men said they were not able to achieve adequate erections for intercourse, and more than half said that they had had no sexual intercourse in the month before the interview. Almost 60% of men said they were bothered by their lack of sexual activity, but only about a quarter of the sample reported that they had received no surgical treatment for impotence. This indicates a critical need for information and assistance for this group of men.<sup>10</sup>

Although these men had been challenged in their sexual ability, most of them reported interest in sex and felt uncomfortable in the face of decreased functionality. However, 23% of men indicated that they were not bothered by the lack of sexual activity, it may reflect the advanced age of the respondents as most prostate cancer survivors are the aging population group, having no more active sex life.<sup>10</sup>

It is necessary to clarify to men who are diagnosed with malignant neoplasms that their sex life will not extinct, but, depending on the type of cancer, they can return to their sex life. Many men believe that there will be a reduction of masculinity after treatment with radiotherapy and chemotherapy. Therefore, healthcare providers can develop strategies to minimize or resolve these doubts that pervade the imagination of the male population.

Another research conducted in the United States showed that men aged 55-74 years old, who were diagnosed with prostate cancer and after the past five years of treatment, they showed continuous decline in erectile function.<sup>14</sup>

The increased sexual decline is also related to the age of these men because the hormonal and sexual issues are factors that favor sexual erection. Thus, despite the completion of chemotherapy procedures in these individuals, it cannot be said that these are the main causes for sexual decline of that group.<sup>12</sup>

Commonly, men do not usually report on consultations issues about their sexuality. This demonstrates that there are barriers both among the population and among professionals who do not seek to address the issue. Therefore, it is understood that health professionals consider sex as an exclusive youth activity or advancing age closes sexual activities.<sup>19</sup>

The marital status of men with malignant neoplasms was also evidenced in this integrative review. In a study in Northern Ireland, it was found that single men have better

knowledge about QOL featuring sports activities and healthy eating habit. These are relevant because health professionals including nurses may use that knowledge to encourage the patient in the treatment not to abandon their habits and clarify the need for such activities.<sup>12</sup>

Thus, it was identified that the man with cancer has sexual activity as a challenge during and after chemotherapy, for fear of diminishing manhood. The increased sexual decline was reported. However, it is observed that the studied population has an age group that can contribute to decreased sexual practice. Finally, the marital status was assessed by one of the studies on the QOL of men with cancer and showed that singles have healthier living habits.

### **Self-esteem and well-being: determining factors for the quality of life of men with cancer**

Man's QOL has mostly been studied after the transformations that society has suffered from the rise of cities, intense working hours and urban mobility. With the new lifestyle, several diseases arose such as hypertension, sedentary lifestyle, and diabetes. Cancer has emerged on these factors, decreasing the population's welfare.

The man with cancer has his self-esteem committed after diagnosis. Therefore, throughout the treatment, these feature improvements and regain their self-esteem.

A study conducted in the United States pointed out that the self-esteem of men with prostate cancer was compromised to the realization of radical prostatectomy, after obtained improvement in their quality of life, receiving family support, decreasing symptoms of apparent anger and depression.<sup>11</sup>

In this sense, it is observed the need for the professional to perform activities that stimulate the QOL of the men who are unmotivated before the diagnosis. Also, the encouragement of family inclusion in treatment was relevant to improving QOL.

It is important to note that the autonomy and independence to perform daily activities are esse are essential for the well-being of the patient with cancer. It is imperative that both relatives and health services contribute to the permanence and development of their skills, and must be encouraged to create practices that strengthen these men to have a more active life and QOL.<sup>20</sup>

Research developed in Canada, with thirty-five men affected by cancer showed that the well-being directly influenced the QOL of these individuals.<sup>15</sup>

The well-being depends on the health of the individual, so after the cancer diagnosis, the patient is depressed, compromising his psychological conditions. After starting treatment, patients begin to see results and promote improvements in their well-being. Many patients also report nausea due to drugs used, but the professional can explain the importance of these for health conditions.

Thus, it is observed that the self-esteem and well-being were identified in studies as key factors affecting the QOL of men with malignant neoplasms. Therefore, it is necessary

that the professional launch strategies that seek to improve the health conditions of this group even in the face of the difficulties inherent in the experiences of the disease.

## CONCLUSION

The integrative review aimed to identify the factors that interfere in the QOL of men with cancer from evidence in national and international scientific production. It was noted that studies focused on the male population with malignant neoplasms are insufficient and need attention to this understudied group.

The results show a sexual functioning, physical activity, well-being, and self-esteem as factors that interfere in the QOL of men with malignant neoplasms. Thus, it was realized that sexual functioning has been studied with emphasis on the decrease after treatment. Physical activity was described as a QOL improvement strategy. Finally, self-esteem and well-being were presented as essential for the male population to be diagnosed with cancer since they interfere with psychological issues and treatment outcomes.

Therefore, the research allowed summarizing some factors that affect the QOL of men with malignant neoplasms. Moreover, it is necessary to propose new studies covering the cultural, social and subjective issues involving men, because it is understood that the participation of this group in the health sector is still restricted.

## REFERENCES

1. Mansano-Schlosser TC, Ceolim MF. Qualidade de vida de pacientes com câncer no período de quimioterapia. *Rev Texto Contexto Enferm* [Internet]. 2012 [cited 2014 dez 19];21(3):600-07. Available from: <http://www.scielo.br/pdf/tce/v21n3/v21n3a15.pdf>.
2. Facina T. Estimativa 2014- Incidência do câncer no Brasil. *Rev bras cancerologia* [Internet]. 2014 [cited 2014 dez 16];60(1):63. Available from: [http://www.inca.gov.br/rbc/n\\_60/v01/pdf/11-resenha-estimativa-2014-incidencia-de-cancer-no-brasil.pdf](http://www.inca.gov.br/rbc/n_60/v01/pdf/11-resenha-estimativa-2014-incidencia-de-cancer-no-brasil.pdf).
3. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de ações programáticas e estratégicas. Política Nacional de Atenção Integral à saúde do homem: princípios e diretrizes. Brasília (DF): Ministério da Saúde. 2008 [cited 2014 dez 15]. Available from: [http://portal.saude.gov.br/portal/arquivos/pdf/politica\\_nacional\\_homem.pdf](http://portal.saude.gov.br/portal/arquivos/pdf/politica_nacional_homem.pdf).
4. Ferreira CG, Alexandre TS, Lemos ND. Fatores associados à qualidade de vida de cuidadores de idosos em assistência domiciliar. *Saúde soc* [Internet]. 2011 [cited 2014 jun 11];20(2):398-409. Available from: <http://www.scielo.br/pdf/sausoc/v20n2/12.pdf>.
5. WHOQOL Group. The world health organization quality of life assessment (WHOQOL): position paper from the world health organization. *Soc Sci Med* [Internet]. 1995 [cited 2014 dez 16];41(10):1403-9. Available from: <http://www.sciencedirect.com/science/article/pii/027795369500112K>.
6. Pompeo DA, Rossi LA, Galvão CM. Revisão integrativa: etapa inicial do processo de validação de diagnóstico de enfermagem. *Acta paul Enferm* [internet]. 2009 [cited 2014 dez 13];22(4):434-8. Available from: <http://www.scielo.br/pdf/ape/v22n4/a14v22n4.pdf>.
7. Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer. *Einstein* [Internet]. 2010 [cited 2014 dez 17];8(1):102-6. Available from: [http://apps.einstein.br/revista/arquivos/PDF/1134-Einsteinv8n1\\_p102-106\\_port.pdf](http://apps.einstein.br/revista/arquivos/PDF/1134-Einsteinv8n1_p102-106_port.pdf)
8. Bortoluzzi MC, Lutz E, Presta AA. Qualidade de vida, prevalência e perfil do paciente com neoplasia maligna: Um estudo de caso-controlado de base populacional. *Rev Acta Port* [Internet]. 2011 [cited 2014 dez 05];24(2):241-6. Available from: <http://ojs.josekarvalho.net/index.php/pubmed2ojs/article/view/434>.
9. Claike MJ, Livingston PM, Botti M. An exploratory study of the factors that influence physical activity for prostate. *Support Care Cancer* [Internet]. 2011 [cited 2014 dez 14];19(1):1019-28. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/20623146>.
10. Galbraith ME, Arechiga A, Ramirez J, Pedro LW. Prostate cancer survivors' and partners' self-reports of health-related quality of life, treatment symptoms, and marital satisfaction 2.5-5.5 years after treatment. *Oncol nurs forum* [Internet]. 2005 [cited 2014 dez 06];32(2):30-41. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/15759059>.
11. Rondorf-Klin L, Colling J. Quality of life after radical prostatectomy. *Oncol nurs forum* [Internet]. 2003 [cited 2014 dez 14];30(2):24-32. Available from: <https://onf.ons.org/onf/30/2/quality-life-after-radical-prostatectomy>.
12. Caughan E, Sorley O, Prue G, Parahoo K, Bunting B, Sullivan JO et al. Quality of life in men receiving radiotherapy and neo-adjuvant androgen deprivation for prostate cancer: results from a prospective longitudinal study. *J Adv Nurs* [Internet]. 2012 [cited 2014 dez 05];69(1):53-61. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/22458267>.
13. Burns SM, Mahalik JR. Physical health, self-reliance, and emotional control as moderators of the relationship between locus of control and mental health among men treated for prostate cancer. *J Behav Med* [Internet]. 2006 [cited 2014 dez 05];29(6):561-72. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/16988886>.
14. Potolsky AL, Davis WW, Hoffman RM, Stanford JL, Stephenson RA, Penson DF et al. Five-year outcomes after prostatectomy or radiotherapy for prostate cancer: the prostate cancer outcomes study. *J Natl Cancer Inst* [Internet]. 2004 [cited 2014 dez 14];96(18):1358-67. Available from: <http://jnci.oxfordjournals.org/content/96/18/1358.short>.
15. Selby D, Wright F, Stilos K, Daines P, Moravan V, Gill A et al. Room for improvement? A quality-of-life assessment in patients with malignant bowel obstruction. *Palliat Med* [Internet]. 2010 [cited 2014 dez 16];24(1):38-45. Available from: <http://pmj.sagepub.com/content/early/2009/10/01/0269216309346544.full.pdf>.
16. Soares WTE. Parâmetros, considerações e modulação de programas de exercício físico para pacientes oncológicos- uma revisão sistemática. *Rev Bras Med Esporte* [Internet]. 2011 [cited 2014 dez 16];17(4):284-9. Available from: <http://www.scielo.br/pdf/rbme/v17n4/v17n4a15.pdf>.
17. Janaki MG, Kadam AR, Mukesh S, Nirmala S, Ponni A, Ramesh BS et al. Magnitude of fatigue in cancer patients receiving radiotherapy and its short term effect on quality of life. *Cancer Journal* [Internet]. 2010 [cited 2014 dez 15];6(1):22-6. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/20479542>.
18. Mazzotti E, Cappellini GCA, Buconovo S, Morese R, Scoppola A, Sebastiani C et al. Treatment-related side effects and quality of life in cancer patients. *Support Care Cancer* [Internet]. 2012 [cited 2014 dez 12];20(1):2553-7. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/22270087>.
19. Laroque MF, Alffeldt AB, Cardoso DH, Souza GL, Santana MG, Lange C. Sexualidade do idoso: comportamento para a prevenção de DST/ AIDS. *Rev gaúcha enferm* [Internet]. 2011 [cited 2014 dez 06];32(4):774-80. Available from: <http://www.scielo.br/pdf/rgenf/v32n4/v32n4a19.pdf>.
20. Guimarães ACA, Scotti AV, Soares A, Fernandes S, Machado Z. Percepção da qualidade de vida e da finitude de adultos de meia idade e idoso praticantes e não praticantes de atividade física. *Rev bras geriat gerontol* [Internet]. 2012 [cited 2014 dez 12];15(4): 661-70. Available from: <http://www.scielo.br/pdf/rbagg/v15n4/07.pdf>.

Received on: 27/02/2016

Reviews required: No

Approved on: 02/02/2016

Published on: 10/07/2017

**Author responsible for correspondence:**

Mércio Gabriel de Araújo  
Rua João Raimundo Pereira, 110, Centro  
São José do Seridó, Rio Grande do Norte  
ZIP-code: 59378-000  
E-mail: mercio\_gabriel@hotmail.com