

# Health-related quality of life among patients with advanced cancer: an integrative review

QUALIDADE DE VIDA RELACIONADA À SAÚDE DE PACIENTES COM CÂNCER AVANÇADO: UMA REVISÃO INTEGRATIVA

CALIDAD DE VIDA RELACIONADA CON LA SALUD DE LOS PACIENTES CON CÁNCER AVANZADO: UNA REVISIÓN INTEGRADORA

Maria Eliane Moreira Freire<sup>1</sup>, Namie Okino Sawada<sup>2</sup>, Inácia Sátiro Xavier de França<sup>3</sup>, Solange Fátima Geraldo da Costa<sup>4</sup>, Cecília Danielle Bezerra Oliveira<sup>5</sup>

## ABSTRACT

This integrative literature review aimed to characterize scientific articles on health-related quality of life – HRQoL – among patients with advanced cancer from national and international literature, and summarize those factors evidenced in the literature that contributed to the improvement or worsening of HRQoL among patients with advanced cancer. The search for materials was conducted in the following databases: CINAHL, EMBASE, PubMed, Scielo and LILACS. Among the 21 articles in the sample, 13 showed an improvement of HRQoL among patients with advanced cancer related to the development of physical, emotional and spiritual interventions. In eight studies, we identified predictive symptoms of low HRQoL, such as pain, fatigue, sleep disorders, depression, nutritional changes, and others. The results showed that clinical manifestations, which many times were inherent in cancer, such as factors that can lower patients' HRQoL, while physical, psychological and spiritual benefits resulting from therapeutic interventions may promote its improvement.

## DESCRIPTORS

Neoplasms  
Terminally ill  
Quality of life  
Oncologic nursing  
Review

## RESUMO

Esta revisão integrativa da literatura objetivou caracterizar artigos abordando a qualidade de vida relacionada à saúde – QVRS – de pacientes com câncer avançado nas literaturas nacional e internacional e sumarizar os fatores contribuintes para a melhora ou a piora da QVRS de pacientes com câncer avançado, evidenciados na literatura pesquisada. A busca foi realizada nas bases eletrônicas CINAHL, EMBASE, PUBMED, SCIELO e LILACS. Dentre os 21 artigos que compuseram a amostra, 13 evidenciaram melhora da QVRS de pacientes com câncer avançado mediante a realização de intervenções físicas, emocionais e espirituais. Em oito estudos, foram identificados sinais e sintomas preditores de baixa QVRS, como dor, fadiga, distúrbio do sono, depressão, alterações nutricionais, entre outros. Os resultados mostram que manifestações clínicas inerentes ao câncer são fatores que podem rebaixar a QVRS do paciente, enquanto os benefícios físicos, psicológicos e espirituais resultantes de intervenções terapêuticas, podem promover a melhora.

## DESCRITORES

Neoplasias  
Doente terminal  
Qualidade de vida  
Enfermagem oncológica  
Revisão

## RESUMEN

Esta revisión integradora de la literatura tuvo como objetivo caracterizar los artículos de la literatura nacional e internacional que abordan la calidad de vida relacionada con la salud (CVRS) de los pacientes con cáncer avanzado y resumir los factores evidenciados en la literatura que contribuyen a mejorarla o empeorarla. La búsqueda se realizó en las bases de datos electrónicas CINAHL, EMBASE, LILACS, SCIELO y PUBMED. De los 21 artículos de la muestra, 13 estudios mostraron una mejoría de la CVRS de los pacientes con cáncer avanzado mediante la realización de intervenciones físicas, emocionales y espirituales. En ocho estudios se identificaron signos y síntomas predictores de baja de la CVRS citados como dolor, fatiga, trastornos del sueño, depresión, cambios nutricionales, entre otros. Los resultados muestran que las manifestaciones clínicas inherentes al cáncer son factores que pueden reducir la CVRS del paciente, mientras que los beneficios físicos, psicológicos y espirituales resultantes de las intervenciones terapéuticas pueden promover su mejora.

## DESCRIPTORES

Neoplasias  
Enfermo terminal  
Calidad de vida  
Enfermería oncológica  
Revisión

<sup>1</sup> Assistant Professor, Department of Clinic Nursing, Federal University of Paraíba, João Pessoa, PB, Brazil. [enfelimoreirafreire@gmail.com](mailto:enfelimoreirafreire@gmail.com) <sup>2</sup> Associated Professor at the Nursing Department, Ribeirão Preto School of Nursing, University of Sao Paulo, Ribeirão Preto, and SP, Brazil. <sup>3</sup> Professor at State University of Paraíba, Joao Pessoa, PB, Brazil. <sup>4</sup> Professor at the Nursing Graduate Program, Federal University of Paraíba, João Pessoa, PB, Brazil. <sup>5</sup> Professor at the Santa Emília Rodat University, João Pessoa, PB, Brazil.

## INTRODUCTION

Cancer, in its process of development, configures a public health concern. Studies reveal an incremental tendency of this disease, with six million new cases in developed countries and 9.3 million in developing countries expected for the year of 2020<sup>(1)</sup>.

The diagnosis of cancer causes a great emotional impact on patients and their families, especially when it progresses to an advanced stage with no prospect of cure. It is important to mention that, when the patient reaches a terminal stage, care ceases its aim of preservation of life, and the maximization of comfort in a broader sense and the preservation of this human being's dignity become imperative<sup>(2-3)</sup>. Physical, psychosocial and spiritual discomforts experienced by patients with cancer occur alongside other confrontations, and the endless struggle during the disease decreases quality of life (QoL), deserving health professionals' attention<sup>(4)</sup>.

The individual's perception about cultural, social, political and economic influences in one's life background, which promotes the achievement of his/her goals, projects and expectations and gives an individual the opportunities of free will, is recognized as quality of life<sup>(5)</sup>. Although studies over the years show no consensus on the concept of QoL by its inherent subjectivity of individual perceptions, a multicenter project involving different cultures highlighted three aspects of great relevance to the QoL construct: the subjectivity of the human being, who is enhanced by thoughts, feelings and emotions that compose one's internal world, inherent in each human being; the multidimensionality of QoL, which includes dimensions of physical, psychological, social and spiritual order that bring significant repercussions; and the bipolarity caused by positive and negative influences that permeate peoples' daily lives<sup>(6)</sup>.

The concern about QoL has been highlighted in the health sciences area. The terminology *qualidade de vida relacionada à saúde* (QVRS) is a translation of the English term, Health-Related Quality of Life (HRQoL). The expression *to be healthy* is no longer understood as the absence of disease, and is now conceived as a condition of physical, mental and social well-being<sup>(7)</sup>. In this context, the concept of HRQoL refers to the value that can be attributed to life, due to changes that may occur by damages to the functional status, perceptions and social factors influenced by diseases or injuries, treatments and health policies<sup>(8)</sup>.

Considering the magnitude of the cancer and the possibility for some patients to develop therapeutically uncontrollable stages of disease, it is necessary to identify factors that may be associated with the improvement or worsening of their QoL. This will allow the planning of actions that maximize factors that may influence an

improved QoL of patients, in order to prevent, eliminate or minimize those that contribute to worsen it.

So, considering the existence of factors that contribute to modifying cancer patients' HRQoL, this study aimed to characterize scientific articles that address health-related quality of life among patients with advanced cancer in the national and international literature and summarize those factors evidenced in the literature, which contribute to the improvement or worsening of HRQoL among patients with advanced cancer.

## METHOD

The integrative literature review has been used as a methodological tool that uses a systematic strategy to gather and summarize the findings of studies on a particular topic, in order to deepen and strengthen certain areas of scientific knowledge and support professional decision-making<sup>(9)</sup>.

The method of integrative literature review consists of six steps: to establish the review hypothesis or question, to select the sample of materials to be analyzed, to categorize these studies, to analyze those included in the study, to interpret their results, and to present the review and the knowledge synthesis<sup>(9-10)</sup>.

The guiding question for this study was: What is the characteristic of scientific papers on HRQoL among patients with advanced cancer, published in the national and international literature?

To build the body of articles for this study we conducted the search in January of 2013. The electronic databases were the following: CINAHL (Cumulative Index to Nursing and Allied Health Literature), EMBASE, by including MeSH terms (Medical Subject Headings), and also including all MEDLINE database (Medical Literature Analysis and Retrieval System Online), LILACS (Latin American and Caribbean Literature in Social Sciences and Health), SciELO (Scientific Electronic Library Online), and PUBMED (National Library of Medicine) developed and maintained by the National Center for Biotechnology Information (NCBI), including the fields of biomedicine and health.

The search for articles in the databases CINAHL, EMBASE, LILACS, SciELO and PUBMED was performed using the health terminology found on CINAHL Information Systems – List of Topical Subheadings in Emtree term (EMBASE), on the Health Sciences Subject Headings (DeCS/Bireme) and those from the Medical Subject Headings (MeSH/PubMed), respectively, where we identified the keywords *quality of life*, *oncology*, *cancer* or *neoplasms*, and *terminally ill*.

To select the sample, the following inclusion criteria were used: papers discussing QoL among adult patients with

advanced cancer, indexed in the selected databases and published in the period of 2002 to 2012, in English, Portuguese and/or Spanish languages. Exclusion criteria were: no abstracts available, papers related to methodological research on design and/or validation of QoL evaluation tools; and literature reviews, either integrative or systematic. The full text articles were obtained online and by the Integrated Library System from the University of São Paulo.

A total number of 183 articles were found, of which 43 were excluded due to duplication in the databases EMBASE, PUBMED and SCIELO when compared to those contained in CINAHL, which was the first database used for this search; and 29 due to lack of available abstracts. After reading the abstracts of the remaining articles, 71 were excluded for not meeting the inclusion criteria of the study. Then we proceeded to the in-depth reading of the articles in full text, and 19 were excluded due since they did not contemplate the research question and the objectives proposed in this study.

Finally, the corpus of the integrative review was composed of 21 articles, which were organized and archived in folders, and named according to the database in which they were located.

To facilitate the analysis of the articles included in this literature review, an adapted version of a validated instrument was developed for data collection<sup>(11)</sup>, with items related to the study objectives, such as: information about the title of the journal, article title, authors, corresponding author, country of origin of the study, year of publication, language, study objectives, design and methodological features, findings and final considerations.

The process of analysis involved the translation, reading and re-reading of articles and completion of the form with data from all aforementioned items. Then the data were analyzed based on their content, and the ratio of data to the object of interest featured in each study was analyzed, using descriptive statistics techniques (frequency distribution in absolute numbers and percentage).

## RESULTS

### *Characterization of the studies*

As for the publication year of the articles included in the study, it was found that, in the decade of 2002 to 2012, the years 2009 and 2011 are highlighted with the highest number of publications per year, counting an amount of three articles published in each of those years. In the years of 2007, 2008 and 2010, there were two publications in each year. In the other years, one article was published per year.

Regarding the characterization of the 21 articles in the sample, it is highlighted that the publications were

distributed in 16 journals. The Palliative Medicine Journal had the highest number of publications on the subject (four articles). The São Paulo Medical Journal stands out as the editor of a paper on QoL among patients with lung cancer in the Brazilian scenario, authored by a physical therapist and two physicians. Among the 16 journals listed, six were specific to issues related to cancer, and two about palliative care.

With regard to academic education of the articles' principle author, 15 were physicians; three were nurses, two were psychologists and one was a physiotherapist. These results reveal that when it comes to the theme of QoL and patients with advanced cancer, publications authored by medical professionals predominated and, despite the increasing concern among other health professionals, the authorship is still incipient in national and international contexts, indicating that these professionals must seek new knowledge to support clinical practice and promote better QoL for patients with advanced cancer in terminal phases.

Among the countries where the studies were conducted, the United States of America stands out with seven papers, Colombia with three studies, and Australia with two articles. England, Holland, Brazil, Greece, Austria, Italy, Japan, Malaysia and India participated in one study each. We noticed a predominance of investigative studies of cancer in developed countries.

Regarding the methodological design, 13 studies were classified as observational and eight were interventional. Concerning handling of direct interventions on the object under study, two were characterized as experimental studies, five as quasi-experimental, and 14 were nonexperimental. Experimental studies were randomized controlled trials. Regarding the analytical profile, 18 were descriptive, three were analytical, and among analytical studies, one was a cohort. Regarding the temporal tracking of studies, 15 were prospective, with longitudinal observation, and six were cross-sectional. All studies were quantitative.

Regarding the objectives of the studies, there were several factors associated with the improvement or worsening of HRQoL in patients with advanced cancer. The results of these studies were grouped into two thematic categories: physical, emotional and spiritual interventions that improved HRQoL, and the most common signs and symptoms that worsened HRQoL.

Thirteen studies evaluated the HRQoL of patients by performing therapeutic interventions, distributed as follows: six were on physical interventions<sup>(12-17)</sup>, four were on emotional interventions<sup>(18-21)</sup>, and three were on spiritual interventions<sup>(22-24)</sup> (Chart 1). Finally, eight studies addressed the signs and the symptoms that negatively affected the HRQoL of patients with advanced cancer<sup>(25-32)</sup> (Chart 2).

**Chart 1** - Summary of physical, emotional and spiritual interventions that improved HRQoL of patients with advanced cancer, as identified in the Integrative Literature Review

Authors	Physical interventions that improved the HRQoL of patients with advanced cancer	
	Interventions	Outcomes
Pacheco, Agudelo, Rúa et al. <sup>(12)</sup>	Insertion of self-expandable metal prosthesis in the esophagus and in the bile ducts, and percutaneous nephrostomy.	Improvement of all parameters in the QoL questionnaire after the first month of the procedure.
Madhusudhan, Saluja, Pal et al. <sup>(13)</sup>	Insertion of self-expandable stent.	Improvement in swallowing and feeding. Use of others symptoms scales, except pain.
Saad, Botega e Toro <sup>(14)</sup>	Resection of lung parenchyma.	Best performance in forced vital capacity and in the walk test, achieved around the 3rd to the 6th month after surgery.
Santangelo, Testai, Barbagallo et al. <sup>(15)</sup>	Treatment of bone pain with clodronate disodium.	Reducing pain, maintaining levels of autonomy and self-sufficiency and consequent improvement in the QoL.
Shima, Ohtsu, Shirao et al. <sup>(16)</sup>	Application of Octreotide (SMS 201-995) at doses of 300 mg/day, subcutaneously for 6 days.	Progressive improvement of nausea and vomiting, contributing to improving the QoL among patients.
Correa-Velez, Clavarino, Barnett et al. <sup>(17)</sup>	Use of Complementary and Alternative Medicine (CAM) in the last months of life.	Levels of anxiety and pain are elevated two months before death; patients report less satisfaction with traditional medicine and less need of control over treatment, when compared with the decisions of CAM non-users.
Authors	Emotional interventions that improved the HRQoL of patients with advanced cancer	
	Interventions	Outcomes
Wright, Zhang, Ray et al. <sup>(18)</sup>	Interviews with caregivers patient using and the guiding question: "Have you and your doctor discussed some particular desire about the care you want to receive at the end of life?"	Discussions at the end of life were associated with low rates of ventilation, resuscitation and ICU admission and early palliative care, with improved patient QoL.
Bakitas, Lyons, Hehel et al. <sup>(19)</sup>	Use of advanced nursing practice in four weekly educational sessions and monthly follow-up until death or study completion.	Higher QoL for the total sample, a trend of lower intensity of symptoms, less tendency for depressed mood among the group that received the intervention compared to usual care.
Payán, Vinaccia, Quiceno et al. <sup>(20)</sup>	Palliative Care	Improved QoL in the area of physical, psychological and existential well-being.
Chochinov, Kristjanson, Breitbart, et al. <sup>(21)</sup>	Use of Dignity Therapy, Palliative Care and Patient-centered care.	The Dignity therapy was significantly better than the patient-centered care in the improvement of spiritual well-being and it was also better than standardized palliative in terms of reduction of sadness and depression.
Authors	Spiritual interventions that improved the HRQoL of patients with advanced cancer	
	Interventions	Outcomes
Daugherty, Fitchett, Murphy, et al. <sup>(22)</sup>	Evaluation of the role of spirituality in volunteers and in patients on conventional treatment included in a phase I clinical trial.	Positive association between spirituality and QoL of participants.
Prince-Paul. <sup>(23)</sup>	Assessment of acts of communication, love, gratitude and forgiveness of adult patients in palliative home care.	Strong positive correlations were found between social and spiritual well-being, communicative acts and QoL at the end of life. The social well-being domain had great contribution to overall QoL.
Balboni, Paulk, Balboni et al. <sup>(24)</sup>	Spiritual care to terminally ill patients with advanced cancer.	Significantly higher QoL scores among those who received spiritual assistance.

**Chart 2** – Summary chart of the most frequent signs and symptoms that worsened HRQoL of patients with advanced cancer, as identified in the literature review.

Authors	Most frequent signs and symptoms that worsened HRQoL of patients with advanced cancer	
	Interventions	Outcomes
Echteld, Van Zuylen, Bannink, et al. <sup>(25)</sup>	Correlation of individual quality of life (IQoL) with pain, fatigue and reconceptualization.	IQoL and pain had a moderate and negative correlation at admission. There were strong negative correlations between fatigue, pain and IQoL at discharge. The increase in the number of changes in everyday life was moderately associated with worsening of IQoL.
Gómez, Caycedo, Aguillón et al. <sup>(26)</sup>	Assessment of QoL and psychological well-being	The psychological well-being and QoL were hampered by constant pain, which is refractory to treatment, little energy to perform daily activities, lack of social and family support, and the feeling of dependence.
Mystakidou, Parpa, Tsilaka et al. <sup>(27)</sup>	Assessment of the relationship between sleep quality and pain, QoL, post-traumatic experience, depression and psychological stress.	The worsening of pain and a poor quality of sleep were significantly correlated to a worse QoL of patients in physical, psychological, social and spiritual domains.
Green, Montague e Hart-Johnsn. <sup>(28)</sup>	Longitudinal comparison of characteristics, quality and treatment of consistent and progressive pain.	Several measures of BTP (Breakthrough Pain) consistently reduced consistent and persistent pain over time; while not a great reduction was observed, it significantly affected health and QoL.
Giesinger, Wintner, Obergugeberg et al. <sup>(29)</sup>	Evaluation of the intensity of the QoL impairment.	The assessment of HRQoL showed deficiency of physical function, role performance, cognitive function and overall QoL, with intensification of pain, fatigue and dyspnea, decreased appetite, sleep disturbances and altered sense of taste.
Hermann e Looney <sup>(30)</sup>	Associations between QoL and discomfort, frequency and severity of symptoms, depression, anxiety and functional status.	A worse HRQoL was associated with discomfort due to exacerbation of symptoms.
Roe, Leslie e Drinnan <sup>(31)</sup>	Description of the experience of 11 patients with dysphagia and malignancies (excluding head and neck cancer) who received specialized palliative care.	Seven patients reported some degree of dysphagia, with substantial impact on their HRQoL, with four or more affected domains.
Shahmoradi, Kandiah e Peng <sup>(32)</sup>	Association between nutritional status and HRQoL in 61 patients with advanced cancer and palliative care.	The scores of nutritional status and QoL among patients with advanced cancer showed a significant association between worsening in quality of life and malnutrition.

Among the studies that reported results that positively affected the HRQoL of patients after performing physical<sup>(12-17)</sup> interventions, the highlights were three interventions with invasive procedure<sup>(12-14)</sup>, two with pharmacological interventions<sup>(15-16)</sup> and one with alternative therapy<sup>(17)</sup>.

Interventions with invasive procedures were described in quasi-experimental and longitudinal studies, with insertion of self-expandable metal prosthesis in the esophagus and in the bile ducts in patients with inoperable esophageal dysphagia and cancer<sup>(12-13)</sup>. Patients were evaluated by using instruments such as the QoL *Short Form Survey - SF -36* and *The European Organization for the Research and Treatment of Cancer - EORTC QLQ - C30* and the EORTC QLQ - C30 – ESOPHAGUS, before and after the procedure. During treatment, improvement of dysphagia and nutritional status were observed, as reflected in higher scores on the global health status and in all functional scores. The evaluation of patients after procedures showed a positive impact on their HRQoL.

Another invasive intervention was addressed in a quasi-experimental, longitudinal study, in which resection of lung parenchyma was performed in 36 patients with lung cancer<sup>(14)</sup>. Following the postoperative period, patients were enrolled in a respiratory therapy program. The results revealed that after six months, the good performance in forced vital capacity and in walks resulting from intervention was considered a significant predictor of physical component outcomes and positively affected the QoL of these patients when assessed by the Short Form Survey SF -36.

Pharmacological interventions were addressed in two studies, one quasi-experimental and another longitudinal type<sup>(15-16)</sup>. In one, the authors treated 35 patients with bone metastasis who reported severe pain with 300 mg IV clodronate disodium (diphosphonates, analogs of pyrophosphates compounds, whose main actions are to prevent tumor-induced osteolytic activity, inhibiting bone resorption, etc.), every two day for over three



months<sup>(15)</sup>. In this study, the authors show that those patients who experienced less pain intensity remained autonomous and self-sufficient, with supposedly improved QoL. However, the authors did not mention the use of scale -specific QoL.

Another study of pharmacological intervention was conducted in Japan and used Octreotide subcutaneously in 25 patients presenting malignant bowel obstruction refractory to other antiemetic drugs<sup>(16)</sup>. Octreotide is a somatostatin analogue that has relative resistance to enzymatic degradation and present inhibitory activity on gastrointestinal motility and secretion, with benefits for patients who undergo surgery for intestinal obstruction, clinical treatment of malignant bowel obstruction and reversal of intestinal transit<sup>(33)</sup>. In this study, the authors suggest that the symptomatic improvement observed after the use of this drug would have a positive impact on QoL of these patients. We also emphasize that in this study no specific quality of life scale was used.

The study that used alternative therapeutic intervention<sup>(17)</sup> refers to the modality called complementary and alternative medicine (CAM), which consists of a set of practices and medical products used in health care, such as acupuncture, homeopathy, massage, nutritional supplements, herbs and other. We use the term alternative medicine when there is a replacement with allopathic methods, and complementary medicine therapy when there is a combination. Patients opting for CAM are seeking to recover health and improve QoL<sup>(34)</sup>. The study under review was non-experimental, prospective, with longitudinal observation, attended by 111 patients with advanced cancer and of those, 36 made use of CAM. No statistically significant differences were found in the reduction of symptoms and improved QoL. However, the results suggest that the dimensions of QoL can be influenced when people with advanced cancer decide using complementary and alternative therapies<sup>(17)</sup>. In this study, the authors chose not to use a specific QoL instrument, but rather instruments to measure physical symptoms, psychological factors and social factors, applied independently.

The emotional interventions included in the studies analyzed in this review involved communication strategies with advanced cancer patients. One of the articles analyzed had discussions with physicians about end-of-life care and proximity of death. This was a cohort study, longitudinal and prospective study conducted in 123 patients with advanced cancer<sup>(18)</sup>. The results showed that those who received less aggressive medical care and were referred for palliative care early were associated with better QoL, unlike those referred for intensive care units receiving more aggressive care, who had worse QoL assessed by the McGill Quality of Life Index. A second study, conducted as a randomized controlled clinical trial<sup>(19)</sup>, described the use of a psychoeducational intervention performed by nurses in 322 patients with

advanced cancer followed longitudinally until death or until the number of planned care was achieved (n=161). The findings, based on validated instruments for functional assessment of depressive symptoms, revealed that the intensity of symptoms tended to decrease in the intervention group, who presented scores that evidenced psychosocial and emotional well-being and lower incidence of depression. These results indicated that interventions of this nature can contribute to improving the QoL of patients with cancer, as showed by the scores obtained by the Functional Assessment of Chronic Illness Therapy for Palliative Care – the FACIT tool.

As for communication about the health status of cancer patients, a non-experimental, cross-sectional<sup>(20)</sup> study was conducted with 50 Colombian patients with advanced cancer in palliative care after receiving information about their diagnosis and prognosis, evaluated with the McGill Quality of Life Questionnaire – MQoL. The results showed that after the intervention patients reported a favorable perception about psychological symptoms, manifested by the control of negative emotions such as sadness, anxiety, and uncertainty about the future, among others, which favored an improved QoL.

The third study focused on emotional interventions described the experience of dignity therapy as a therapeutic recourse, conducting a prospective randomized clinical trial with the participation of 165 patients with advanced cancer whose QoL was compared to 140 patients in palliative care and 136 advanced cancer patients receiving patient centered healthcare<sup>(21)</sup>. The findings revealed that the participants of dignity therapy perceived changes in how their family perceived and valued them, felt more useful to their families and reported increased sense of dignity. There was also reduction of sadness and depression, with a greater sense of spiritual well-being, which may prove the positive impact on the QoL of these participants evidenced in the scores obtained in the Quality of Life Scale instrument.

In studies conducting spiritual interventions, three papers of non-experimental type were analyzed: two transverse<sup>(22-23)</sup> and a prospective longitudinal study<sup>(24)</sup>. There was a participation of 549 patients with advanced cancer. The studies aimed to evaluate how spiritual assistance influence the QoL among these patients. The results revealed that patients receiving spiritual or religious assistance showed in the specific instruments' assessment a strong and positive association between spirituality, social and emotional well-being and QoL. Estimates measures of QoL, as determined by the McGill QoL Questionnaire and the Quality of Life the End of Life – EOL-QoL, applied to patients next to death presented significantly higher scores among those receiving spiritual care.

In the analysis of the studies included in this literature review, we highlight eight articles that described

signs and symptoms that negatively affected the QoL of patients suffering from advanced cancer in the final stage of life<sup>(25-32)</sup>. Among the signs and symptoms cited in the studies we highlight those by orders of magnitude: pain, fatigue, poor quality sleep, discomfort with an increased frequency, severity of symptoms, depression, dysphagia, poor appetite, poor nutritional status, changes in the sense of taste, lack of family and social support, and a sense of dependence.

Regarding the impact of pain on HRQoL among patients with advanced cancer, a longitudinal study of 29 patients admitted to palliative care<sup>(25)</sup> showed, by using the scores obtained in the Schedule for the Evaluation of Individual Quality of Life, Direct Weighting version (SEIQoL-DW), that individual pain and QoL presented a moderate negative correlation when a patient was admitted to the palliative care unit. However, in a second evaluation performed seven days after the first one, there was a strong correlation. The authors reported that activities like spending quality time with children and grandchildren were seriously damaged by fatigue and that the increment in symptoms proved to be associated with decreases in the QoL among patients.

Two cross-sectional studies with a total of 82 and 83 patients with advanced cancer, as assessed by McMaster Quality of Life Scale (MQOLS)<sup>(26)</sup> and the 12-Item Short Form Health Survey (SF -12)<sup>(27)</sup>, respectively, showed that perception of psychological well-being and QoL among patients in palliative care was shown to be significantly affected by pain and poor quality of sleep, causing strong impact in the daily QoL. The poor quality of sleep can cause many physical and cognitive symptoms such as decreased concentration, signs of fatigue, increased levels of anxiety, nervousness, irritability, gastrointestinal symptoms and predisposition to accidents. These symptoms, especially when associated, are predictors that affect the well-being and cause negative impact on QoL<sup>(27)</sup>.

A longitudinal and prospective study<sup>(28)</sup> evaluated 96 patients presenting cancer in III-IV stage, in treatment for consistent and progressive pain (Breakthrough Pain - BTP). The results showed that, over a six-month evaluation, the pain was persistent and caused a negative impact on the HRQoL of these patients. The authors evaluated HRQoL using the EORTC QLQ-C30 instrument.

Fatigue is a subjective symptom reported by the patient as a sense of physical, emotional and cognitive fatigue, which may be related to cancer or its treatment. The impact of fatigue on HRQoL of patients with cancer has been evaluated through specific measurement instruments showing a strong association between this symptom and the patient's QoL. This was expressed in three non-experimental studies that have integrated this revision<sup>(25, 26-29)</sup>. These studies showed that QoL of patients in palliative care is compromised due to the lack

of autonomy they have to perform daily activities, and this makes them more dependent on the care of others.

In the psychological sphere, depression was also identified as a symptom that affects the QoL of patients with advanced cancer in a longitudinal, prospective study involving 80 patients with advanced lung cancer<sup>(30)</sup>. The study shows that patients who experience increased frequency and severity of psychological symptoms reported worse HRQoL.

In the study, the instrument used to assess HRQoL was the Hospice Quality of Life Index (HQLI). Nutritional disorders were cited in three studies that have integrated this revision, describing a list of signs and symptoms affecting patients with advanced cancer, including dysphagia, loss of appetite, altered sense of taste and loss of weight, recognized as predictors of a lower HRQoL<sup>(29, 31-32)</sup>. We highlight that, in one of these studies<sup>(29)</sup>, the psychological well-being and QoL of these patients were affected by physical symptoms and the functional dependence for the daily care, and by the feeling of being a burden on his family or the caregiver. The HRQoL instruments used in the studies were the SWAL-QoL<sup>(31)</sup> and the HQLI<sup>(32)</sup>.

## DISCUSSION

The analysis of 21 studies that were integrated into this review revealed a concern, still quite emphatic, from medical professionals, who sought, through instruments of general and specific measures, to identify predictors that may positively or negatively affect the HRQoL among patients with advanced cancer without therapeutic possibilities of cure. For this reason, it is necessary to intensify palliative care. These studies provided evidence of signs and symptoms of varying intensity that can affect the HRQoL of patients.

Patients with advanced malignant disease, especially when the disease affects areas such as the head and neck, often experience dysphagia. This is a symptom recognized as a factor significantly associated with malnutrition and dehydration and, consequently, to decreased survival. Corroborating the analyzed studies<sup>(12-13)</sup>, a study of 87 patients with head and neck cancer showed that the prevalence of dysphagia was approximately 51% of the sample. Of these, about 62% avoided eating in front of others, and about 37% reported feeling ashamed at mealtimes. As for the QoL evaluation of these patients, a study showed that those with dysphagia symptom showed more impairment in their QoL than those without problems of food intake<sup>(35)</sup>. Therefore, therapeutic intervention with auto-expandable stents brings considerable relief to the patient and helps one to regain the feeling of pleasure in eating.

Lung cancer can affect the patient's QoL, depending on the stage of the disease, the type and characteristics of the treatment, and the intrinsic aspects of each patient. Similar

results in relation to pulmonary resection procedure, were also found in a study in Cambridge, with 111 patients who had undergone this intervention and were followed for six months with physiotherapy, having better control of symptoms and complications, with improved QoL<sup>(36)</sup>.

Pharmacological interventions have been implemented to alleviate chronic, persistent pain, as well as other discomforts, such as vomiting, present in patients with gastrointestinal cancer symptom. Studies that evaluated patients with obstructive bowel tumor presenting vomiting and refractory to other drugs demonstrated a good response to treatment with Octreotide, by reduction or absence of vomiting in the majority of participants<sup>(33)</sup>. Therefore, interventions that may provide relief of symptoms should be investigated continuously in search of evidence to support clinical practice and promote better QoL of patients.

The use of Complementary and Alternative Medicine, addressed in the analyzed studies<sup>(17)</sup>, reveals that the patient's decision to adhere to this treatment modality has a very strong relationship with his/her culture, age and expectations in relation to survival. A phase 1 clinical trial study carried out with 212 patients with advanced cancer in use of CAM aimed to assess the QoL of the patients. The findings revealed that those who knew that their life expectancy was about a year were more likely to accept the use of CAM before death. However, this study also found that patients who used CAM had lower QoL scores compared to non-users<sup>(37)</sup>. Therefore, it is necessary to inform patients about the therapeutic responses he/she may receive according to the modalities available for its treatment.

The analyzed studies also focused on another important point that has been the subject of debate: communication with patients diagnosed with cancer. A systematic review conducted in 2009 included 24 articles with the theme, communicating bad news to patients with cancer. Of these, only five were developed in Asian countries, and 19 were derived from Western countries. In these studies, we identified four important components on communicating bad news: defining the situation, strategies of communication, how the information is provided to patients, and emotional support<sup>(38)</sup>.

Communication is a valuable tool because it enables, consciously, the patient to make therapeutic decisions. The assessment of their preferences regarding treatment is imperative, since it can lead to other therapeutic choices, considering life expectancy and QoL. It is noteworthy that the patient's ability to participate in decisions about his/her treatment has several limitations, such as the severity of the disease and the emotional burnout to plan and establish therapeutic objectives. Patients' preferences reflect the comprehensiveness they have about the severity of the disease, as well as the knowledge inherent in the risks and benefits of his/her therapeutic choices. It is possible that those patients who know their life

expectancy to be more than six months choose more aggressive treatments that will lengthen their life<sup>(39)</sup>.

Dignity therapy is one of the emotional interventions, defined as brief and individualized psychotherapy, aimed to minimize the psychosocial and existential distress among terminally ill patients, allowing them to regain a sense of meaning and purpose to relieve suffering in their terminality<sup>(40)</sup>. The discovery of a malignant disease can cause great impact on the life of the person who receives this diagnosis, a reason to mobilize coping mechanisms to deal with this situation, especially spirituality and religiosity. Spirituality has been defined as a constant search of man for divine values, considering life experiences, and explanations for the meaning of life, to transcend. Thus, the spiritual dimension occupies a prominent place in people's lives<sup>(41)</sup>.

Studies on the subject under discussion have shown that spirituality has a strong influence on the HRQoL of people with advanced disease and the evaluation of its dimensions cannot be measured without considering the dimension of spirituality, at the risk of not having a proper assessment<sup>(22, 24)</sup>. Thus, these studies may lead to reflections on the role of caregivers as enablers of the inclusion of spiritual need in the context of a holistic patient and family care.

Patients with advanced cancer experience a range of symptoms that are persistent, discomforting, and intensely limiting, which harms one's well-being with a negative impact on his/her QoL. Pain has been described as one of the leading and most severe symptoms reported in approximately 70-90% of patients with advanced cancer. It is classified as acute, sub-acute, chronic or intermittent pain. It can also be identified as breakthrough pain (BTP), defined as a transitory exacerbation of pain when it was previously stabilized by treatment with analgesics<sup>(28,42)</sup>. Thus, the primary goal of any treatment strategy adopted for these patients is to relieve pain. Commonly, it is a challenge for healthcare professionals to evaluate it properly and treat it effectively, because it is a subjective symptom that requires professional training and skills.

A study with 977 patients with advanced cancer identified that, among physical symptoms, there was a fatigue incidence of 57% reported by patients who were not receiving palliative care, with negative impact on QoL<sup>(43)</sup>. The impact of fatigue in patients with cancer has been evaluated through specific measurement instruments and has demonstrated a strong association between this symptom and the HRQoL<sup>(25,29)</sup>.

Depression usually affects patients with cancer with significant emotional and physical repercussions that negatively affect their HRQoL. Studies have reported that depression is more prevalent among hospitalized patients, especially when the end of life approaches, and that the association of symptoms such as fatigue, depression and sleep disorders cause significant impact on HRQoL of people living with cancer<sup>(44-45)</sup>.



Symptoms such as pain, nausea and vomiting compromise the nutritional status of about 75% of patients, with or without antineoplastic treatment, implying increased morbidity, mortality, and treatment costs; and decrease the chances of survival, with significant impact on health-related QoL<sup>(46)</sup>. Regarding the burden of symptoms among advanced cancer patients, the severity of symptoms and functional status are important dimensions of HRQoL when the end of life is near. The anguish felt by the severity of symptoms has been recognized as a statistically significant predictor of QoL. Hospitalized patients reported greater severity of distress caused by the symptoms and lower QoL scores, whereas those receiving palliative care in the domicile obtained better scores on the QoL related to functional status, being more capable of performing activities of daily living at home<sup>(47)</sup>.

## CONCLUSION

The interest in studying HRQoL in patients with advanced disease has had an increase in the last two decades, by scholars trying to find out, through their study questions, the factors with the greatest implications in these patients while improving QoL measurement instruments to identify with more reliability the physical, emotional, social and spiritual factors that are accentuated in patients suffering from cancer at any stage, considering the relevant demographic and social varieties each group.

This review study allowed us to identify therapeutic interventions for physical, emotional and spiritual aspects that promote the improvement of health conditions of patients with advanced cancer and their QoL as measured by validated scales with reliable statistical power, as described in their studies. Some studies

were also identified in which, through descriptive statistical analyses, the signs and symptoms were identified of low QoL predictors, such as pain, fatigue, sleep disturbance, depression, nutritional changes, and others. The results showed that health professionals should evaluate patients with advanced cancer, advise on measures that reduce symptoms, treat them with dignity and respect, and consider them as individuals with a right to be part of therapeutic decision-making. These measures make a difference in HRQoL across those terminally ill.

It is worth noting that the findings regarding association of signs and symptoms depend on HRQoL determinants at the time of the investigation, as the stage of the cancer, its location, the presence or absence of metastases, the intensity and frequency of symptoms, type of treatment the patient is receiving – palliative or to prolong life – and if the care facility is the hospital or the home.

The analyzed studies have limitations in relation to the theme studied, the sample determined for each type of study, and the cognitive and physical condition of patients, which implies some bias in the findings.

Further studies are suggested using the methodology of systematic review to find even stronger evidence to support clinical practice. We stress the importance of studies whose results may raise the leaders of healthcare institutions of public or private to reflect, plan, develop and expand palliative care units, aiming to provide patients with advanced cancer or those with chronic conditions and their families a full, dignified and respectful care, with the aim of improving their HRQoL. Such care should be initiated at the time of diagnosis and follow through the grieving process of caregivers and family.

## REFERENCES

1. World Health Organization (WHO). National Cancer Control Programme. Manuals for Training in Cancer Control [Internet]. 2005 [Cited 2013 Feb 13]. Available from: <http://www.who.int/cancer/en/index.html>
2. World Health Organization (WHO). National Cancer Control Programmes: policies and managerial guidelines [Internet]. 2th ed. Geneva; 2002. Available from: <http://www.who.int/cancer>
3. Muñiz MS, Pérez CG. Reflections about the ethical and bioethical problems in treatment presenting with a terminal disease. *Rev Cubana Med Gen Integr*. 2009 25(4):98-106.
4. Wittmann-Vieira R, Goldim JR. Bioética e cuidados paliativos: tomada de decisões e qualidade de vida. *Acta Paul Enferm* [Internet]. 2012 [citado 2013 jun. 12]; 25(3):334-9. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_artext&pid=S0103-21002012000300003](http://www.scielo.br/scielo.php?script=sci_artext&pid=S0103-21002012000300003)
5. Whoqol Group. The World Health Organization quality of life assessment (WHOQOL): position paper from the World Health Organization. *Soc Sci Med*. 1995;41(10):1403-9.
6. Kluthcovsky ACGC, Takayanagui AMM. Quality of life: conceptual issues. *Salus*. 2007;1(1):13-5.
7. Minayo MCS, Hartz ZMA, Buss PM. Qualidade de vida e saúde: um debate necessário. *Ciênc Saúde Coletiva*. 2000;5(1):7-18.
8. Patrick DL, Erickson P. Health status and health policy. Quality of life in health care evaluation and resource allocation. Oxford: Oxford University Press; 1993.
9. Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer. *Einstein (São Paulo)* [Internet]. 2010 [citado 2013 ago. 5];8(1):102-6. Disponível em: [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).

10. 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.
11. Ursi ES, Galvão CM. Prevenção de lesões de pele no perioperatório: revisão integrativa da literatura. *Rev Latino Am Enferm.* 2006;14(1):124-31.
12. Patiño Pacheco JH, García Rúa LF, Agudelo LHL, Paternina Agudelo IC, Lugo Agudelo LH, Gúzman T. Calidad de vida de pacientes con obstrucción maligna del esófago, la vía biliar y la vía urinaria sometidos a intervencionismo radiológico paliativo. *latreia.* 2005;18(2):141-59.
13. Madhusudhan C, Saluja SS, Pal S, Ahuja V, Saran P, Dash NR, et al. Palliative stenting for relief of dysphagia in patients with inoperable esophageal cancer: impact on quality of life. *Dis Esophagus.* 2009;22(4):331-6.
14. Saad IAB, Botega NJI, Toro FC. Predictors of quality of life improvement following pulmonary resection due to lung cancer. *São Paulo Med J.* 2007;125(1):46-9.
15. Santangelo A, Testai M, Barbagallo P, Manuele S, Di Stefano A, Tomarchio M, et al. The use of bisphosphonates in palliative treatment of bone metastases in a terminally ill, oncological elderly population. *Arch Gerontol Geriatr.* 2006;43(2):187-92.
16. Shima Y, Ohtsu A, Shirao K, Sasaki Y. Clinical efficacy and safety of octreotide (SMS201-995) in terminally ill Japanese cancer patients with malignant bowel obstruction. *Jpn J Clin Oncol.* 2008;38(5):354-9.
17. Correa-Velez I, Clavarino A, Barnett AG, Eastwood H. Use of complementary and alternative medicine and quality of life: changes at the end of life. *Palliat Med.* 2003;17(8):695-703.
18. Wright AA, Zhang B, Ray A, Mack JW, Trice E, Balboni T, et al. Associations between end-of-life discussions, patient mental health, medical care near death, and caregiver bereavement adjustment. *JAMA.* 2008;300(14):1665-73.
19. Bakitas M, Lyons KD, Hegel MT, Balan S, Brokaw FC, Seville J, et al. Effects of a palliative care intervention on clinical outcomes in patients with advanced cancer: the Project ENABLER II randomized controlled trial. *JAMA.* 2009;302(7):741-9.
20. Payán EC, Vinaccia S, Quiceno JM. Cognición hacia la enfermedad, bienestar espiritual y calidad de vida en pacientes con cáncer en estado terminal. *Acta Colomb Psicol.* 2011;14(2):79-89.
21. Chochinov HM, Kristjanson LJ, Breitbart W, McClement S, Hack TF, Hassard T, et al. Effect of dignity therapy on distress and end-of-life experience in terminally ill patients: a randomised controlled trial. *Lancet Oncol.* 2011;12(8):753-62.
22. Daugherty CK, Fitchett G, Murphy PE, Peterman AH, Banik DM, Hlubocky F, et al. Trusting God and medicine: spirituality in advanced cancer patients volunteering for clinical trials of experimental agents oncology. *Psychooncology.* 2005;14(2):135-46.
23. Prince-Paul M. Relationships among communicative acts, social well-being, and spiritual well-being on the quality of life at the end of life in patients with cancer enrolled in hospice. *J Palliat Med.* 2008;11(1):20-5.
24. Balboni TA, Paulk ME, Balboni MJ, Phelps AC, Loggers ET, Wright AA, et al. Provision of spiritual care to patients with advanced cancer: associations with medical care and quality of life near death. *J Clin Oncol.* 2010;28(3):445-52.
25. Echteld MA, van Zuylen L, Bannink M, Witkamp E, Van der Rijt CC. Changes in and correlates of individual quality of life in advanced cancer patients admitted to an academic unit for palliative care. *Palliat Med.* 2007;21(3):199-205.
26. Gómez MMN, Caycedo C, Aguillón M, Suárez Ávarez RA. Calidad de vida y bienestar psicológico en pacientes adultos con enfermedad avanzada y en cuidado paliativo en Bogotá. *Pensamiento Psicol [Internet].* 2008 [citado 2013 mar. 20];4(10):177-92. Disponible en: <http://www.redalyc.org/articulo.oa?id=80111670012>
27. Mystakidou K, Parpa E, Tsilaka E, Gennatas C, Galanos A, Vlahos L. How is sleep quality affected by the psychological and symptom distress of advanced cancer patients? *Palliat Med.* 2009;23(1):46-53.
28. Green CR, Montague L, Hart-Johnson TA. Consistent and breakthrough pain in diverse advanced cancer patients: a longitudinal examination. *J Pain Symptom Manage.* 2009;37(5):831-47.
29. Giesinger JM, Wintner LM, Oberguggenberger AS, Gamper EM, Fiegl M, Denz H, et al. Quality of life trajectory in patients with advanced cancer during the last year of life. *J Palliat Med.* 2011;14(8):904-12.
30. Hermann CP, Looney SW. Determinants of quality of life in patients near the end of life: a longitudinal perspective. *Oncol Nurs Forum.* 2011;28(1):23-31.
31. Roe JWG, Leslie P, Drinnan MJ. Oropharyngeal dysphagia: the experience of patients with non-head and neck cancers receiving specialist palliative care. *Palliat Med.* 2007;21(7):567-74.
32. Shahmoradi N, Kandiah M, Peng LS. Impact of nutritional status on the quality of life of advanced cancer patients in hospice home care. *Asian Pac J Cancer Prev.* 2009;10(6):1003-9.
33. Ripamonti C, Mercadante S. How to use octreotide for malignant bowel obstruction. *J Support Oncol.* 2004;2(4):357-64.

34. Frenkel M, Ben-Arye E, Cohen L. Communication in cancer care: discussing complementary and alternative medicine. *Integr Cancer Ther.* 2010;9(2):177-85.
35. García-Peris P, Parón L, Velasco C, de la Cuerda C, Camblor M, Bretón I, et al. Long-term prevalence of oropharyngeal dysphagia in head and neck cancer patients: Impact on quality of life. *Clin Nutr.* 2007;26(6):710-7.
36. Dogan O, Ertekin S, Dogan S. Sleep quality in hospitalized patients. *J Clin Nurs.* 2005;14(1):107-13.
37. Hlubocky FJ, Ratain MJ, Wen M, Daugherty CK. Complementary and alternative medicine among advanced cancer patients enrolled on phase I trials: a study of prognosis, quality of life, andp for decision making. *J Clin Oncol.* 2007;25(5):548-54.
38. Fujimori M, Uchitomi Y. Preferences of cancer patients regarding communication of bad news: a systematic literature review. *Jpn J Clin Oncol.* 2009;39(4):201-16.
39. Weeks JC, Cook EF, O'Day SJ, Peterson LM, Wenger N, Reading D, et al. Relationship between cancer patients' predictions of prognosis and their treatment preferences. *JAMA.* 1998;279(21):1709-14.
40. Chochinov HM. Dignity therapy: a novel psychotherapeutic intervention for patients near the end of life. *J Clin Oncol.* 2005;23(24):5520-5.
41. Guerrero GP, Zago MMF, Sawada NO, Pinto MH. Relação entre espiritualidade e câncer: perspectiva do paciente. *Rev Bras Enferm.* 2011;64(1):53-9.
42. Hagen NA, Stiles C, Nekolaichuk C, Biondo P, Carlson LE, Fisher K, et al. The Alberta Breakthrough Pain Assessment Tool for cancer patients: a validation study using a Delphi process and patient think-aloud interviews. *J Pain Symptom Manage.* 2008;35(2):136-52.
43. Johnsen AT, Petersen MA, Pedersen L, Groenvold M. Symptoms and problems in a nationally representative sample of advanced cancer patients. *Palliat Med.* 2009;23(6):491-501.
44. Patrick DL, Ferketich SL, Frame PS, Harris JJ, Hendricks CB, Levin B, et al. National Institutes of Health State Of-the-Science Conference Statement. Symptom Management in Cancer: Pain, Depression, and Fatigue, July 15-17, 2002. *J Natl Cancer Inst.* 2003;95(15):1110-7.
45. Andrade V, Sawada NO, Barichello E. Quality of life in hematologic oncology patients undergoing chemotherapy. *Rev Esc Enferm USP [Internet].* 2013 [cited 2013 June 10];47(2):355-61. Available from: [http://www.scielo.br/pdf/reeusp/v47n2/en\\_12.pdf](http://www.scielo.br/pdf/reeusp/v47n2/en_12.pdf)
46. Michelone APC, Santos VLGC. Qualidade de vida de adultos com câncer colorretal com e sem ostomia. *Rev Latino Am Enferm.* 2004;12(6):875-83.
47. Peters L, Sellick K. Quality of life of cancer patients receiving inpatient and home-based palliative care. *J Adv Nurs.* 2006;53(5):524-33.