

The Nursing Care at Emergency Cancer Care: an integrative review

O Cuidado de Enfermagem no Atendimento de Emergências Oncológicas: uma revisão integrativa

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Abstract

This study deals with nursing care in oncologic emergencies. The aim is to highlight the knowledge about nursing care to people living with neoplasms and who are in an oncologic emergency situation. This is an integrative review with the following guiding question: how does nursing care take place in an oncologic emergency, bearing in mind the enhancement of care? The search of the publications was performed in the LILACS, PUBMED and BVS databases. Concerning the inclusion criteria, we selected papers published between 2007 and 2016, using the following descriptors: Emergency Nursing, Nursing Care and Neoplasms. The knowledge evidenced in the selected publications proved to be reduced. Nevertheless, among the nursing papers related to oncologic emergencies, most were limited to describing specific nursing interventions for each situation, such as observing the patient, favoring of the physical comfort, guidance to the patient and to their family members. In conclusion, there is a need for greater encouragement for this field of research, so that the nurses are increasingly trained and based on scientific principles, thus achieving a good performance in their function.

Keywords: Emergency Nursing; Nursing Care; Neoplasms.

Resumo

Este estudo versa sobre a assistência de enfermagem nas emergências oncológicas. Objetiva-se destacar o conhecimento sobre o cuidado de enfermagem no atendimento a pessoas que vivem com neoplasias e encontram-se em situação de emergência oncológica. Trata-se de uma revisão integrativa com a seguinte questão norteadora: como se dá o cuidado de enfermagem numa emergência oncológica, tendo em vista o aprimoramento da assistência? A busca das publicações foi realizada nas bases de dados LILACS, PUBMED e BVS. Como critério de inclusão, foram selecionados artigos publicados entre os anos de 2007 e 2016, utilizando-se os seguintes descritores: Enfermagem em Emergência, Cuidados de Enfermagem e Neoplasias. O conhecimento evidenciado nas publicações selecionadas mostrou-se reduzido. Todavia, entre os artigos de enfermagem relativos às emergências oncológicas, a maioria limitou-se a descrever as intervenções específicas para cada situação, tais como: observação do paciente, favorecimento do conforto físico, orientações ao paciente e seus familiares. Conclui-se a necessidade de um maior incentivo para estudos nesta temática, para que os enfermeiros estejam cada vez mais capacitados e embasados em princípios científicos, contribuindo para um melhor desempenho da prática profissional.

Palavras-chave: Enfermagem em Emergência; Cuidados de Enfermagem; Neoplasias.

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Introduction

The causes of cancer are varied, and can be internal and external, and may or may not be interconnected. External causes refer to the environment, habits, and customs of a society. Internal causes relate to the body's defense capacity to external aggressions, genetic, psychological, reproductive, and environmental factors, life habits, irradiation, and viruses.

Cancer accounts for more than 12% of all causes of death in the world. More than 7 million people die each year after an oncology diagnosis. The Unified Health System increased its capacity to serve this clientele in order to achieve a diagnosis as early as possible⁽¹⁾.

In Brazil, the increased incidence of cancer occurs due to the greater exposure of individuals to carcinogens. Changes in lifestyle, nutrition, and consumption triggered by the global process of industrialization have important repercussions in the epidemiology of populations. Increased life expectancy and population aging have increased the incidence of chronic-degenerative diseases, as well as of cancer⁽²⁾.

Thus, this bibliographic research aims to highlight the knowledge about

nursing care in the care of people who are in an oncological emergency.

Method

This is an integrative review with the following guiding question: how does the nursing care occur in an oncological emergency, with a view to the improvement of care?

For the selection of articles, the following databases were accessed: Latin American and Caribbean Literature in Health Sciences (LILACS), Virtual Health Library (VHL), and VHL Oncology. Articles published between the years 2007 and 2016 were selected. This time cut was due to the period of construction and specialization in clinical oncology in the city of Rio de Janeiro. Complete articles, available online, published in Portuguese, English, and Spanish languages were included. Articles that did not address the theme in question and with repeated texts were excluded.

In order to obtain the greatest number of articles on the chosen theme, search strategies were developed in the databases, using the crossing of the descriptors *Enfermagem em Emergência* AND *Neoplasias*. There were 246 productions found, of which 153 were

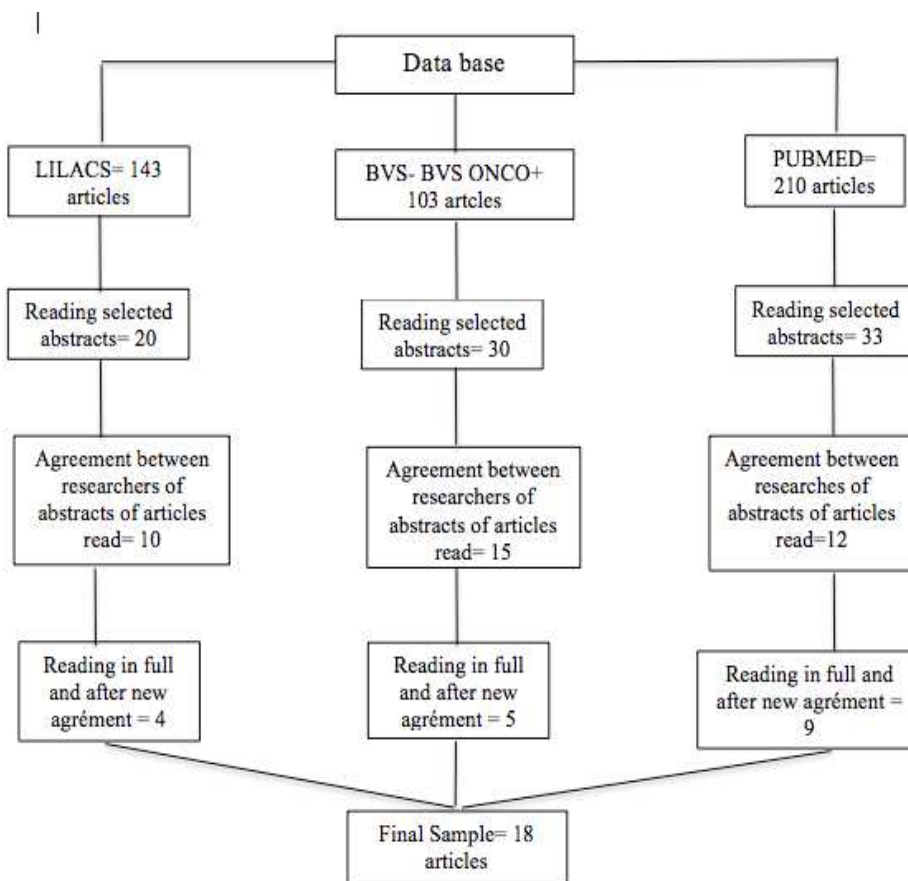
available. Then, we also crossed the descriptors *Enfermagem em Emergência* AND *Cuidados de Enfermagem* AND *Neoplasias*. We selected nine articles that met the criteria adopted for reading in full and later discussion.

Another search was carried out in the Medical Publications (PUBMED) database, in which only articles in English are published. In this research, 3,093 publications were found. When the

intersection of the Mesh Terms Emergency Nursing and Nursing Care AND Neoplasms was used, 210 articles were found. Repeated articles and those that did not address the theme of the study were excluded. At the end, nine articles were found and added to the discussion board.

A flowchart that synthesizes the search of the 18 articles that composed the final review sample is shown above.

Flowchart 1. Search and selection of 18 articles. Rio de Janeiro, RJ, Brazil, 2017.



Source: research data.

Results and discussion

Tabela 1. Expository table of articles researched in this study. Rio de Janeiro, RJ, Brazil, 2017.

| AUTHOR/YEAR | TITLE | OBJECTIVES |
|--------------------------|--|---|
| KARASOULI, E et al/ 2016 | <i>Qualitative critical incidente study of patient's experiences leading to emergency hospital admission with advanced respiratory illness.</i> | To explore the experiences of patients with advanced respiratory cancer, their caregivers, and health professionals within the hospital emergency. |
| WANG, X. & CAO, H/ 2015 | <i>A meta-analysis of comprehensive care on quality of life in patients with lung câncer.</i> | To evaluate the effectiveness of comprehensive care on quality of life in patients with lung cancer. |
| KAO YH, CHIANG, JK/ 2015 | <i>Effects of hospice care on quality indicators of end-of-life care among patients with liver câncer: a natiobal longitudinal population-basedstudyin Taiwan 2000-2011.</i> | To evaluate the effect of care for patients with advanced liver cancer among hospital admissions, therapies, and emergencies. |
| HENSON, LA et al/ 2015 | <i>Factors associated with agressive end of life câncer care.</i> | To investigate the sociodemographic, clinical, and community health care factors associated with the aggressive care of end-of-life cancer. |
| RAST, AC. et al/2015 | <i>Procalcitonin improves the Glasgow prognostic score for outcomeprediction in emergency patients with cancer: a cohort study.</i> | To validate the Glasgow prognostic index for mortality prevention in patients with some cancer-related medical urgency. |
| BAKITAS, MA. et al/ 2015 | <i>Early versus delayed initiation of concurrent palliative oncology care: patient outcomes in the ENABLE III Randomized controlled trial.</i> | To monitor monthly the care of patients with advanced cancer in services such as emergency, intensive care, and hospitalization units. |
| BRYANT, AL. et al/ 2015 | <i>Use of ED and hospital services for patients with acute leucemia after induction therapy: one-year follow-up.</i> | To examine the main reasons for admission in the emergency department related to the care of patients with acute leukemia after induction therapy up to one year after discharge. |
| RUEGG, TA. 2013 | <i>A nurse practitioner-led urgente care center: meeting the need sof the patient with cancer.</i> | To describe an emergency care center for cancer patients, led by nurses. |
| LEONARD, K. 2012 | <i>A European survey relating to câncer therapy and neutropenic infections: nurse and patients view points.</i> | To evaluate the perspectives of nurses on the prevention of infection in patients receiving chemotherapy, avoiding oncological emergencies. |

| | | |
|-------------------------------|--|---|
| ALVES, NLA. et al./ 2012 | <i>Nursing care in cancer emergencies due to the toxicities of cancer treatment</i> | To analyze nursing care in cancer emergencies due to the toxicities of chemotherapy treatment. |
| MANZI, NM. et al./ 2012 | <i>Nursing interventions related to the treatment of syndromic oncological emergencies</i> | To report on oncological emergencies and the main related nursing interventions present in the literature. |
| PINHEIRO, APB. et al./2011 | <i>A reflection on nursing care in oncological emergency</i> | To contribute to the reflection about the nursing care in the hospital emergency services to the client affected with cancer. |
| PEIXOTO, IC. et al./ 2011 | <i>Analysis of the profile of cancer patients with no current therapeutic possibilities of cure: verification of the demand for palliative care in a university hospital</i> | To categorize patients in oncologic palliative care, to analyze this demand according to the type of cancer and degree of staging, and to identify the main paraneoplastic syndromes present in these patients. |
| GOMES, A.R. et al./ 2010 | <i>Potential demand for a pediatric oncological emergency service: the nurse's role</i> | To identify the potential demand of patients seen at the Pediatric Oncology Emergency Service of the National Cancer Institute. |
| CALIL, AM./ 2010 | <i>Evaluation of cancer patients in the emergency room: a literature review</i> | To identify prevalent clinical and/or surgical conditions in patients seeking the oncology emergency service. |
| SMITH, LH./ 2009 | <i>Emergency Response in Outpatient Oncology Care: Improving Patient Safety</i> | To analyze the participation of the nurse in a specialized and multidisciplinary group for the care of cancer patients in the emergency room. |
| PIGNATARI, SC. et al/ 2008 | <i>Oncological Emergencies: Nursing care proposed in the literature</i> | To identify knowledge about nursing care in oncological emergencies for rapid interventions. |
| DE CAMARGOS, MG. et al./ 2007 | <i>Nurses' performance in face of major oncological emergencies</i> | To describe the main oncological emergencies and the nurses' performance against them. |

Source: research data.

In the survey of scientific articles, there is little research material for nursing care. In some cases, the nursing care to the

emergency oncologic patient was inserted in articles focused on palliative care.

The main emergencies and

interventions addressed in the studies are superior vena cava syndrome with assessment of respiratory rate and elevation of the patient's head; tumor lysis syndrome, focusing on cardiac, neurological, and gastrointestinal evaluation; medullar compression, paying attention to the semiology of pain and patient mobility; hypercalcemia and hyponatremia, emphasizing attention to hydration and replacement of electrolytes and monitoring of venous access; and febrile neutropenia, with emphasis on physical examination for finding infectious foci, correct administration of antibiotics, and care with infusion devices.

Category 1- Nursing in cancer emergency: main signs and symptoms

Oncological emergencies are classified as metabolic, neurological, cardiovascular, hematological, respiratory, and urologic, or are related to the side effects of the treatment⁽⁴⁾. A subclassification of these emergencies could be performed as follows: structural or obstructive emergencies (caused by compression of the tumor mass to the body structures), metabolic emergencies, and emergencies secondary to treatment. Some have insidious onset, taking months to develop, while others manifest themselves in hours, causing

devastating results, such as paralysis and death⁽⁵⁾.

The most common oncological emergencies are related to medullary compression syndrome, representing an oncologic emergency that usually occurs with the growth of the tumor in the epidural region⁽⁶⁾. In the superior vena cava syndrome, the superior vena cava obstruction may be caused by thrombosis, extrinsic compression or direct vein invasion, and often by an association of these factors⁽⁷⁾. Correct positioning of the patient, with the head and lower limbs elevated, optimizes respiratory comfort. Rigorous water management, maintenance of absolute rest, hydroelectrolytic control, and continuous management of pain are some of the indispensable care in these emergencies.

The most common cancers associated with hypercalcemia are breast, lung, and multiple myeloma. Metabolic emergencies such as hypercalcemia are relatively common in cancer patients, occurring in approximately 20 to 30% of cases in the development of the disease. Cancer patients also suffer from hyponatremia, and pathophysiology is not always understood. It is a frequent electrolyte alteration in clinical practice, which reflects a change in the water balance, with a consequent decrease in plasma

osmolarity⁽⁸⁾. The control of venous hydration and evaluation of the respiratory pattern aim to decrease the discomfort of the patient and help in the treatment of this disorder.

Another frequent symptom is the shortness of breath, being one of the reasons that lead the patients to look for the oncological emergency service⁽²⁸⁾. Shortness of breath can also be observed in patients who have comorbidities, such as Chronic Obstructive Pulmonary Disease (COPD). It also occurs due to obstructions of blood flow, caused by the compression of the tumors. Lung cancer patients often seek emergency units with pain complaints, often caused by respiratory impairment⁽²⁸⁾. The evaluation of the pain scale and administration of prescribed analgesia favors patient's comfort and the control of the evolution of the clinical picture.

Tumor Lysis Syndrome (TLS) is characterized by the massive destruction of malignant cells. Such syndrome is often associated with non-Hodgkin's lymphoma (NHL), particularly Burkitt's lymphoma and leukemias (Acute Myeloid Leukemia and Acute Lymphocytic Leukemia), after the onset of chemotherapy⁽⁸⁾. Guiding regarding hydration 24 to 48 hours before cytotoxic therapy helps preventing emergency and the possibility of renal failure.

Emergencies secondary to cancer treatment

Febrile neutropenia is one of the main complications associated with chemotherapy. The risk of developing such an emergency depends on the depth and duration of NADIR (time elapsed between drug application and the onset of the lowest hematological neutrophil count, occurring on average 5-10 days after the last dose of chemotherapy), and the intensity and duration of the chemotherapeutic regimen, as well as comorbidities and complications, such as mucositis⁽⁴⁻⁹⁻³²⁾.

In this sense, nurses should know the concepts about the disease, its biological aspects, and factors that influence in the context of the oncological emergency, besides being able to recognize the main signs and symptoms of this type of emergency. Thus, nurses will be able to act in several levels of health care, according to the degree of complexity, developing a quality nursing care to cancer patients⁽¹⁰⁾. The study⁽¹¹⁾ also shows a series of clinical conditions that motivate the patient with some type of oncologic disease to seek the hospital, such as: infectious pictures, dehydration, intestinal obstruction, anemia, metabolic disorders, among others. Therefore, there are important knowledge gaps in the national literature.

The early detection of these clinical conditions, their signs and symptoms and nursing guidelines given to patients and their families, such as improved water intake, control of analgesia, information about the adverse reactions of radiotherapy and chemotherapy, causes a response satisfactory to the oncological treatment in the emergencies. It also helps that the treatment causes a progressive improvement of the health of the patient with emergency oncologic diseases⁽¹²⁾.

A review of the most common oncological emergencies is still carried out with greater emphasis on prevention, warning signs, diagnosis and treatment. Such emergencies represent a variety of situations that can occur at any time during the course of the malignant disease. Therefore, it is important that all professionals who care for people living with cancer have a solid knowledge of the major oncological emergencies and are alert to the warning signs of each specific situation⁽⁴⁾.

This study⁽¹³⁾ also addresses the TLS, stating that the correction of the symptoms facilitates the quick relief of the metabolic alterations. It should be emphasized that the risk factors for this condition should be promptly recognized, so that appropriate prophylaxis and treatment are taken⁽¹⁴⁾.

This issue is particularly important for pediatric patients, as about 70% can be cured with adequate chemotherapeutic regimen. In addition, cases of spontaneous tumor lysis, although less common, are particularly critical, since they often occur in children who are not yet under the care of specialists. This highlights the need for pediatric, clinical, and intensive care nurses to have the knowledge and confidence essential for the proper conduction of cases⁽¹⁴⁾.

Emergency professionals deal with the different symptoms of cancer patients. However, oncological emergencies with high patient demand may not be the best environments for cancer patients because neutropenia increases the risk of developing other bacterial, viral, and fungal infections⁽³⁴⁾.

Category 2- Nursing care in cancer emergencies: seeing, hearing and intervening

Out of the 18 articles, only three dealt with comprehensive care, which also includes the patient-family binomial. The family is part of the life support of cancer patients. The biopsychosocial aspect must be fully understood, and professionals need to be prepared to address the emotional, psychological, and social issues of this specific clientele⁽¹⁵⁾.

Rapid intervention of the team is necessary to avoid death or a permanent and severe injury. The client's problems and needs are identified through communication. Therefore, one of the challenges in emergency care is knowing how to listen properly so that one can intervene, according to the expectations of the person and the family. In addition to the technical knowledge of emergencies, the team needs to have mastery over the emotional and social issues, both for the clientele and for the family, in order to provide a quality care⁽¹⁶⁾.

The nursing interventions related to syndromic oncological emergencies are also important are, such as pain care and correct administration of analgesics and anti-inflammatories. The importance of position change and of the benefits that this procedure provides, improving the compression of some organs and relieving the pain complaints is also emphasized. Such technical and scientific knowledge, coupled with emotional support and home guidance, is important in the effectiveness of actions for the assisted clientele, improving the physical well-being of cancer patients and contributing to the quality of life of individuals⁽⁵⁻³⁵⁾.

In general, there is a little knowledge about the care to this specific

clientele, and the demand for care in the high complexity units has grown. The implementation of a care plan also becomes important in the resolution of the presented problems, which were collected through interview and nursing history⁽¹⁷⁾.

Other articles dealt with nursing care in the face of oncological emergencies, focused specifically on the technical aspect, not covering subjective aspects of care, such as family relations and strategies in the follow-up of cancer patients. The interpretation of blood markers provides useful information that improves management and decision making during an emergency nursing care, especially if the oncologic emergency in question is a febrile neutropenia, but the subjective aspects are equally important⁽³²⁾.

One of the studies⁽¹⁸⁾ addresses the oncological patient's visit to the emergency department due to the intense alterations resulting from the toxicities of the chemotherapy treatment, being the nursing team's responsibility to provide the initial assistance. The author states that nursing care for cancer patients is a challenge and requires a great deal of knowledge about the different techniques and procedures. There are also the changes in the daily lives of families, who always have many doubts about when is the exact time to seek the

emergency service.

Nursing care is performed interdependently according to the prescription and guidance of the physician. However, nurses are qualified to evaluate and identify the health care problems of the patient in crisis situations, especially in oncological emergencies. Such interventions are aimed at observing both the patient's physical conditions and physiological parameters; favoring of physical comfort; guiding the patient and his/her family members on the most diverse aspects; pain management, tissue injury, and metabolic, hemodynamic, and hematological alterations⁽¹⁹⁾.

One of the studies⁽²⁰⁾ emphasized the care in spinal cord compression syndrome, with a focus on technical care in this emergency situation. The importance of interpreting the main signs presented by these patients is highlighted, such as pain, for which is recommended position change for the relief of the local compression and the transmission of guidelines to the family.

Other article⁽²¹⁾ clarified the importance of nurses' performance in the face of the demand for prompt pediatric oncology care. The technical knowledge of the most common pathologies for a good performance in attending this clientele was

reinforced.

It was also reinforced that the main elements in the attendance of the metabolic urgencies are the capacity of interpretation of the laboratory exams and the rapid correction of the hydroelectrolytic disorders⁽⁸⁾. In the case of the clinical picture of febrile neutropenia, it was emphasized the importance of the use of broad-spectrum antibiotics, favoring a better response to treatments with more aggressive chemotherapeutics⁽²³⁾.

One of the articles⁽¹⁸⁾ found addresses nursing care in cancer emergencies related to chemotherapy treatment. The author believes that it is of great relevance to look for new methods and strategies that assist in nursing care to these patients, trying to minimize their pain and their suffering. As said before, it is not enough to know the care to be provided literally, but to know how to apply it qualitatively.

Thus, all health professionals should reassess their behavior towards cancer patients, since one of the main objectives of treatment is the maintenance of human dignity. An instrument of articulation between the different health categories, similar to the data collection, should be created, favoring the integration of information, making them more complete to the health teams. This way, professionals will

be able to know care in its entirety and know how to apply them for the improvement of the individual's health⁽¹⁷⁾.

The number of studies on nursing interventions in the oncology area is still small. Some professionals know the importance of care, but cannot apply it during care, causing the quality of actions to fall and care becomes mechanized by performing tasks repetitively⁽¹⁹⁾.

Regardless of the emergency situation and waiting for the nursing professional to know about the behaviors to be provided, it is important that there is also good sense, dedication, respect, agility, asepsis, self-protection, and technical care in order to ensure safe and effective environment in emergencies. However, some higher education institutions on health do not approach this subject in depth, leaving gaps in the preparation of the professional to attend one of the diseases, which consists of the highest incidence in the world population⁽¹⁰⁾.

Emphasis is given to the importance of in-depth knowledge of the major oncological emergencies by the different health teams, which must be alert to the warning signs of numerous pathologies⁽⁴⁾. The opinion of multidisciplinary teams in the attendance of oncological emergencies is a crucial factor for the provision of good care

and a better prognosis of this specific public⁽²⁴⁾.

During emergency care, in a general hospital, it is often difficult to assess the cancer patient and treat their complications. In view of this, there is a need to promote systematic technical studies and reviews for emergency aspects to be addressed so that a good prognosis and an improvement in the quality of life are achieved as final results⁽³⁵⁾.

The faster and the better these subjects are approached with patients, the sooner they will return to their life routines. It is also mentioned that the knowledge of the oncological pathologies assists in the care and treatment⁽²¹⁾.

Category 3 - Nursing palliative care in cancer emergencies

For patients with advanced cancer, visits to emergency departments are common. These patients have need of palliative care triggered by the worsening of cancer and complaints such as pain, shortness of breath, or vomiting that cannot be controlled and end up debilitating the individual.

Palliative care uses an interdisciplinary, collaborative, team-based approach to reduce pain and suffering for patients with advanced disease. In these

cases, the goal is to achieve the best quality of life possible, including physical, psychological, social and spiritual aspects for patients and families, through specific knowledge and skills. This care is not limited to end-of-life care and is offered simultaneously with extended life therapies for people living with severe chronic illness. It has been shown to significantly improve the quality of life of patients and family members, while reducing the costs of health services⁽³⁷⁾.

The quality of life of individuals seeking emergency services improves not only with benefits to the signs and symptoms in the human body offered by professionals, but also in the issue of mood. The survival of the individual, most of the times, is achieved by their social well-being. Care in cancer emergencies is not only a technical issue but also a way of looking at the individual in their entirety⁽³³⁾.

Improving the quality of cancer patients is very important, especially for non-curable patients. Creating a good environment for the patient during reception in the emergency room improves physical function and emotional function. In addition, this care and reception vary greatly from one individual to another, due to cultural and social demographic characteristics. Nursing care in the totality view, causes the

difference in the lives of patients and their families⁽³⁰⁾.

Conclusion

The nurse must be able to evaluate and identify the problems caused by oncological emergencies. Nursing interventions such observing both the patient's physical conditions and physiological parameters; promoting physical comfort; guiding the patient and his/her relatives on the most diverse aspects; pain management, tissue injury, metabolic, hemodynamic, and hematological alterations are performed with the purpose of safeguarding the patient's integrity.

However, there was shortage of knowledge about nursing care in oncology emergencies in the selected publications. However, among the articles researched, most presented specific nursing interventions for each situation. The patient-family binomial must be well monitored during an emergency so that the patient is seen in both the biological, psychological, cultural, and social spheres.

Nursing interventions are performed interdependently according to the prescribing and guidance of the physician. However, considering that the team is

qualified to receive this type of patient, evaluating and identifying the problems presented in oncological emergencies, it is necessary that there is a greater incentive for this area of research, so that the professionals are updated and based on scientific principles, thus achieving a good performance. The encouragement to the development of researches and the training of the team improves nurses' practices.

The purpose of this study was to contribute to the increase of knowledge regarding nursing care with the patient in the oncological emergency, making it possible to carry out new research on the subject, thus demonstrating that the quality of care provided is crucial and makes a difference in the health practices.

The social contribution is due to the emergency care in these cases, carried out with effectiveness, bringing significant improvements to the patient and their families, facilitating their return to their daily lives. The contribution to nursing education will be given by the involvement of undergraduate and graduate students in this practice scenario, thus enriching the nurses' scientific knowledge and leading to changes in their professional training.

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