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## Childhood/ Pediatric Cancer: Nursing care in oncopediatrics with a central focus on humanization

# Câncer Infantil/ Pediátrico: Os cuidados da enfermagem em oncopediatria com foco central na humanização

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Keyword— Oncology, Humanization, Patient, Nursing

Palavras chaves— Oncologia, Humanização, Paciente, Enfermagem.

Abstract— Care for cancer patients, in addition to its complexity, involves physical, psychological, social, spiritual and economic aspects, since the term, cancer is still much stigmatized and brings with it the idea of death, prejudice and taboos. An important component in cancer patient care that is essential to life is communication, which allows for the transmission and understanding of messages and influences interpersonal relationships and the behavior of the people involved. In this context, the present study aimed to: Analyze the role of nurses in welcoming children with cancer and the return of these patients to the respective treatment. The methodological framework: This is a bibliographic review, conducted through original and complex studies, published in the following databases: SCIELO, LILACS, BSV and Google Academico, between 2010 and 2022. The results indicate that the exercise of humanized care provided to the patient/child is a favorable practice, as it establishes the team-patient bond. Understanding

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the fragility of the patient at this stage, the nurse assumes a commitment to pre-establish nursing care in partnership, together with the other professionals of the multiprofessional team, in order to meet the patient's needs, and with a view, mainly, to to quality and effective treatment. Thus, this study concludes that humanized care becomes fundamental to go beyond a traditional service, verbal and non-verbal communication in a therapeutic way in which expressions and gestures can mean a lot to the patient, providing greater patient adherence to the proposed treatment.

Resumo— A assistência ao paciente oncológico, além de sua complexidade, envolve os aspectos físicos, psicológicos, sociais, espirituais e econômicos, pois o termo câncer, ainda é muito estigmatizado e traz consigo a idéia de morte, preconceitos e tabus. Um componente importante na assistência ao paciente oncológico e que é essencial à vida é a comunicação, que permite uma transmissão e compreensão de mensagens e influência nas relações interpessoais e no comportamento das pessoas envolvidas. Neste contexto o presente estudo teve por objetivo: Analisar o papel do enfermeiro no acolhimento da criança com câncer e o retorno desses pacientes ao respectivo tratamento. O referencial metodológico:Trata se de uma revisão bibliográfica, conduzida por meio de estudos originais e complexos, publicados nas bases: SCIELO, LILACS, BSV e Google Acadêmico, entre os anos de 2010 e 2022. Os resultados apontam que o exercício do cuidado humanizado prestado ao paciente/infantil configura-se uma prática favorável, porquanto estabelece o vínculo equipe-paciente. Compreendendo a fragilidade do paciente nesta fase, o (a) enfermeiro (a) assume compromisso de preestabelecer os cuidados de enfermagem em parceria, junto aos demais profissionais da equipe multiprofissional, de forma a atender às necessidades da paciente, e com vistas, principalmente, a um tratamento de qualidade e eficaz. Assim este estudo conclui que torna-se fundamental cuidado humanizado ir além de uma prestação de serviço tradicional, comunicação verbal e não verbal de forma terapêutica em que as expressões e gestos podem significar muito para o paciente propiciando maior adesão do paciente ao tratamento proposto.

### I. INTRODUCTION

According to data reported by INCA (2021), childhood cancer corresponds to a group of diseases (solid tumors and systemic diseases) that have in common the disorderly and uncontrolled proliferation of abnormal cells, compromising tissues and organs. The most common tumors in childhood and adolescence are leukemias (which affect white blood cells), those that affect the central nervous system and lymphomas (lymphatic system). Neuroblastoma (a tumor of cells of the peripheral nervous system, frequently located in the abdomen) also affects children and adolescents, Wilms' tumor (a type of renal tumor), retinoblastoma (affects the retina, back of the eyes), germinal tumor (of the cells that originate the ovaries and testes), osteosarcoma (osseous tumor) and sarcomas (soft tissue tumors) (INCA, 2021).

It is important for nurses to pay attention to complaints and observe changes such as: unexplained and continuous weight loss, pain in the bones or joints that impair games and activities, headaches accompanied by vomiting, usually in the morning, lumps that do not give in and usually appear on the neck, armpits, groin and abdomen, increased volume in the belly, petechiae, small reddish spots that indicate bleeding from blood vessels, usually capillaries, purple spots on the skin (bruises), without there being any in the place, whitish glow on one of the eyes when the retina is exposed to light, such as flashes, constant tiredness and pallor, anemia, persistent fever and with undetermined or unknown origin, frequent infections and low immunity (LORENZONI, 2018).

Thanks to advances in the treatment of childhood cancer in recent decades, more than 84% of children currently survive 5 years or more. Globally this is a

considerable advance since the mid-1970s, when the 5-year survival rate was only 58%. Still, survival rates vary with type of cancer and other factors. According to the World Health Organization (WHO), there were 474,519 new cases of leukemia in the world in 2020, and the disease occupies the 13th position among the most frequent types of cancer (MUTTI, 2018).

The treatment of childhood cancer is determined based on the evaluation and confirmation of diagnostic tests. Then we continue with the possibility of surgery, radiotherapy and/or chemotherapy. Some childhood cancers can be treated with high-dose chemotherapy followed by a stem cell transplant. New options such as targeted therapy and immunotherapy have also shown promise in treating some types of childhood cancers. Children undergoing cancer treatment need a humanized treatment that takes care not only of their biological body, but also of their subjectivity, the nurse must know how to correctly assess the feelings, perspectives, doubts and perceptions that are related to the patient. It is also essential to offer the child a different treatment, focused on their childhood needs (SILVA, 2016).

Thus, this study aims to describe the situation of children diagnosed with cancer, aiming to identify areas for intervention and planning of nursing care, with the aim of contributing to the early diagnosis of childhood cancer, since for therapeutic success, it is essential to reduce the time between the appearance of signs and symptoms and the definition of the diagnosis, thus increasing the expectation of cure. Assistance in oncology is developed through preventive, curative and palliative care. The nursing member of the multidisciplinary team in pediatric oncology, performs the most diverse functions on a daily basis (CAPRINI, 2017).

In this scenario, the family must be involved in the entire care process, and it is their right to receive relevant information about the disease and chosen treatment. In addition, the team needs to maintain a relationship of trust with the child, in order to prepare them for procedures, exams, among others, thus alleviating their fears, anxieties and discomforts (INCA, 2019).

The objective of this study is to identify the main factors of excellence for integrated nursing care in oncopediatrics.

### II. MATERIALS AND METHODS

This is a qualitative study carried out through a thorough literature review. This type of scrutiny makes it possible to analyze scientific research in a systematic and broad way, facilitating the characterization and dissemination of the resulting knowledge.

The bibliographical research raises the question: What is the importance of the humanized assistance of nurses in the treatment of children with cancer?

The following inclusion criteria were used: Complete articles on research objectives published in scientific journals and online libraries in Portuguese, English and Spanish between 2010 and 2022. Exclusion criteria were studies published in congresses, blogs, forums or studies that did not meet the to the objectives or deadlines of the research. For that, 28 scientific articles related to the theme, published between 2010 and 2022 in the following databases were analyzed: National Library of Medicine (PUBMED), Literature, Health Sciences of Latin America and the Caribbean (LILACS), Virtual Libraries of the Ministry of Health (BVS), Scientific Electronic Library Online (SciELO), Brazilian Journal of Nursing (REBEN) and Google Scholar.

This review, organized from December 2021 to January 2022, provides researchers with guidance on relevant topics so that they can formulate hypotheses for children seeking solutions to common care-related problems.

### III. RESULT AND DISCUSSION

### Cancer - Your childhood/youth development

Cancer arises from a genetic mutation, that is, from an alteration in the cell's DNA, which starts to receive wrong instructions for its activities. Changes can occur in special genes, called proto-oncogenes, which are initially inactive in normal cells. When activated, proto-oncogenes become oncogenes, responsible for transforming normal cells into cancer cells (OLIVEIRA et al, 2021).

This process consists of three stages:

- Initiation stage: the genes suffer the action of carcinogenic agents, which cause modifications in some of their genes. In this phase, the cells are genetically altered, but it is still not possible to detect a tumor clinically. They are prepared, that is, initiated for the action of a second group of agents that will act in the next stage (INCA, 2021).
- Promotion stage: genetically altered cells, that is, initiated, suffer the effect of carcinogenic agents classified as oncopromoters. The initiated cell is transformed into a malignant cell, slowly and gradually. For this transformation to occur, a long and continuous contact with the promoting

carcinogenic agent is necessary. Suspension of contact with promoting agents often interrupts the process at this stage. Some food components and excessive and prolonged exposure to hormones are examples of factors that promote the transformation of cells initiated into malignant ones (INCA, 2021).

• Progression stage: In the last stage, that is, in the progression stage, the cell begins to multiply in an uncontrolled way. In this last stage, the cancer is installed.

Cancer is an abnormal growth of cells that forms tumors, in a healthy body, cells grow, divide, die and are replaced in a controlled way, in a natural process called cell division. When cells suffer some kind of alteration in the DNA and begin to divide and reproduce in an uncontrolled way, problems arise. This unbridled growth results in a grouping of cells, which can cause the origin of a mass, popularly known as a tumor, but not every tumor is cancer, there are benign tumors (INCA, 2021).

Soon it is a differentiated disease because it does not have a single and easily identifiable cause, internal and external factors can contribute to the appearance of cancer. However, if the organism, for some reason (aging is one of them), is in a condition conducive to cell mutation, it facilitates the action of these factors. Cancer is born from this imbalance (BRASIL, 2013).

Cancer is one of the most complex public health problems facing the Brazilian health system, given its epidemiological, social and economic magnitude. It is noteworthy that at least one third of new cases of cancer that occur annually in the world could be prevented (INCA, 2016).

Childhood cancer has its own and very different characteristics compared to cancer in adults. Cells that undergo mutation in the genetic material cannot mature as they should and remain with characteristics similar to the embryonic cell, multiplying quickly and disorderly. Therefore, tumor proliferation is faster in children. On the other hand, it responds better to chemotherapy, with an 80% chance of cure, according to INCA.

Childhood cancer corresponds to a group that have in common the uncontrolled proliferation of abnormal cells and that can occur anywhere in the body. Unlike adult cancer, childhood cancer usually affects cells in the blood system and supporting tissues. Because they are predominantly embryonic in nature, tumors in children and adolescents are made up of indifferent cells, which generally provide a better response to current treatments (INCA 2021).

Cancer is a term that encompasses more than 100

different types of malignant diseases that have in common the disorderly growth of cells, which can invade adjacent tissues or distant organs. Dividing rapidly, these cells tend to be very aggressive and uncontrollable, leading to the formation of tumors that can spread to other regions of the body.

The different types of cancer correspond to the various types of cells in the body. When they start in epithelial tissues, such as the skin or mucous membranes, they are called carcinomas. If the starting point is the connective tissues, such as bone, muscle or cartilage, they are called sarcomas (INCA 2021). And in the midst of all these adversities, children experience profound and significant losses, such as changes in life and in the family, where the new and unknown universe is represented not only by the absence of health, but also by distancing and social isolation. (loss of school) and family, due to the loss of autonomy, as the child is resigned to the schedules and interventions of the health team, restrictions on visits, clothing, living with strangers, among many other situations (SCHLIEMANN, 2014).

Cancer is considered a Public Health problem, known as a chronic degenerative disease marked by disorderly and invasive cell growth. In general, it affects the population with an estimate of 80% and more than 20 million new cases for the year 2025 (BRASIL, 2020).

According to INCA (2018), "Cancer is the name given to a set of more than 100 diseases that have in common the disordered (malignant) growth of cells that invade tissues and organs, and can spread (metastasis) to other regions of the body". Cancer does not have a predetermined age to develop, children also develop the disease. "Childhood cancer" is a generic term that refers to a heterogeneous group of diseases that present morbidity and mortality rates, which depend on the type and extent of the disease, the age of the child and the effectiveness of the initial response to treatment.

According to Instituto Oncoguia (2017), childhood cancer is not related to the lifestyle of the child in question and commonly develops through changes in the DNA of cells, early in life or even before birth. With regard to their treatment, "With some exceptions, childhood cancers tend to respond better to treatments such as chemotherapy, as it is believed that the child's body tends to receive the treatment better when compared to the adult.

According to the National Cancer Institute (INCA) the number of cancers in the country grows significantly in children, becoming a constant health concern. Cancer is considered the first cause of death in this public in the age group between 1 and 19 years. According to the records in the Population-Based Cancer Registry System (RCBP),

3% were registered, which corresponds to 9,890 cases of pediatric tumors in the country (BRASIL, 2009; SANTOS et al., 2017).

### How the disease is divided

The most common tumors in childhood and adolescence are leukemias (which affect white blood cells), those that affect the central nervous system, lymphomas (lymphatic system). Also affecting children and adolescents are neuroblastoma (tumor of cells of the peripheral nervous system, frequently located in the abdomen), Wilms tumor (type of renal tumor), retinoblastoma (affects the retina, back of the eyes) germ tumor (of the cells that originate the ovaries and testes), osteosarcoma (bone tumour) and sarcoma (soft tissue tumours). Because they are predominantly embryonic in nature, tumors in children and adolescents are made up of undifferentiated cells, which generally provide a better response to current treatments (INCA, 2021).

White blood cells develop from stem cells in the bone marrow. Sometimes, errors occur in their maturation, and some fragments of the chromosomes are rearranged. The resulting abnormal chromosomes interfere with the normal control of cell division and cause the affected cells to multiply out of control or become resistant to natural cell death, which results in leukemia.

Types are defined according to how quickly they progress and the type and characteristics of white blood cells that become cancerous.

Acute leukemias progress rapidly and consist of immature cells.

Chronic leukemias progress slowly and consist of more mature cells.

Lymphocytic leukemias develop from cancerous changes in lymphocytes or in cells that normally produce lymphocytes.

Myeloid leukemias (myelocytic or myelogenous) develop from cancerous changes in cells that normally produce neutrophils, basophils, eosinophils and monocytes (INCA, 2021).

Leukemias are the most common childhood cancers and affect the bone marrow and blood. The most common types in children are acute lymphocytic leukemia (ALL) and acute myeloid leukemia (AML). Leukemia can cause bone and joint pain, fatigue, weakness, bleeding, fever, weight loss, and other symptoms. Acute leukemias can progress rapidly, so they need to be treated (usually with chemotherapy) as soon as the diagnosis is made.

Leukemia is cancer of the white blood cells (leukocytes) that begins in the bone marrow. In most cases, leukemia invades the blood very quickly and can spread to other organs, such as lymph nodes, spleen, liver and central nervous system (INCA, 2020).

Some childhood cancers, such as neuroblastoma or rhabdomyosarcoma, start in other organs and can spread to the bone marrow, but these cancers are not leukemias. It is important to diagnose leukemia in children as early as possible, determining the type so that treatment can provide the best chance of success.

Brain and central nervous system tumors are the second most common type in children, accounting for 26% of childhood cancers. There are many types of brain tumors and the treatment and prognosis for each one is different. Most brain tumors in children start in the lower part of the CNS, such as the cerebellum and brainstem. These tumors can cause headaches, nausea, vomiting, blurred or double vision, dizziness, and difficulty walking or manipulating objects.

Spinal cord tumors are less common than brain tumors in both children and adults (INCA, 2021).

Brain Tumors are the result of out-of-control growth of abnormal cells. In most other organs of the body, it is very important to distinguish between benign and malignant tumors. Benign tumors in other regions do not invade neighboring tissues or spread to other organs. One of the main reasons cancer is dangerous is because it can spread throughout the body (INCA, 2021).

Although brain tumors rarely spread to other organs, most can spread through the brain tissue itself. Even so-called benign tumors can, as they grow, destroy and compress normal brain tissue, causing damage that is often disabling and sometimes fatal. For this reason, doctors often speak of brain tumors rather than brain cancer. The main concern with brain tumors is the ease with which they can spread to the spinal cord or the brain itself (INCA, 2020).

Spinal cord and brain tumors are different in adults and children. They usually form in different places, develop from different types of cells and may have different prognoses and types of treatment (SILVA, 2016).

The main types of treatment used for CNS tumors in children include: surgery, radiotherapy, chemotherapy, targeted therapy and the use of other medications. Depending on the treatment options defined for each child, the medical team should be made up of specialists, such as a neurosurgeon, neurologist, oncologist, pediatric oncologist, radiotherapist and endocrinologist. But, many others may be involved during the treatment, such as

nurses, nutritionists, physiotherapists, psychologists and social workers (LORENZONI, 2018).

It is important that all treatment options are discussed with the doctor, as well as their possible side effects, to help make the decision that best suits the needs of each patient (LANZA, 2014).

Neuroblastoma is a form of cancer that starts early in nerve cells found in a developing embryo or fetus and accounts for about 6% of childhood cancers. This type of cancer occurs in infants and babies. It is rarely diagnosed in children older than 10 years. This tumor can start anywhere, but is usually diagnosed in the abdomen, being noticed by the appearance of swelling in the region. It can also cause bone pain and fever (MICHALOWSK, 2018).

Neuroblastoma is a common childhood cancer that grows in parts of the nervous system or in the adrenal glands (INCA, 2022). The cause of neuroblastoma is often not known (INCA, 2022).

Symptoms depend on where neuroblastomas develop, such as in the abdomen, chest, skin, or spinal cord.

Diagnosis usually involves imaging and biopsy (INCA, 2022).

Treatment depends on the child's age and the specific characteristics of the cancer and may include surgery, chemotherapy and radiation (INCA, 2022).

A neuroblastoma develops in a certain type of nerve tissue located in many areas of the body. It usually originates from nerves in the abdomen or chest, most often from the adrenal glands (located above each kidney). Neuroblastomas very rarely develop in the brain. In more than half of children the cancer has already spread to other parts of the body by the time a doctor is consulted.

Neuroblastoma is the most common cancer in babies and is one of the most common tumors in children of any age. About 90% of all neuroblastomas occur in children under five years of age. The cause of neuroblastoma is often unknown. Most of these tumors occur spontaneously. Neuroblastomas are rarely a family problem.

The treatment of neuroblastoma is complex and often requires a multidisciplinary team made up of specialists, such as a surgeon, pediatric oncologist and radiotherapist. But many others may be involved during the treatment, such as nurses, nutritionists, social workers, physiotherapists and psychologists (SILVA, 2010).

The approach to treating neuroblastoma depends on the stage of the disease, the child's age, and other factors such as prognostic markers. Types of treatment used may include surgery, chemotherapy, retinoid therapy, radiotherapy, stem cell transplantation, and immunotherapy. In many cases, more than one type of treatment is required (INCA, 2022).

Depending on the treatment options defined for each child, the medical team should be made up of specialists, such as a pediatric surgeon, pediatric oncologist, clinical oncologist and radiotherapist. But many others may be involved during the treatment, such as nurses, nutritionists, psychologists, social workers and physiotherapists (SILVA, 2010).

Wilms tumor is a tumor that starts in one or, rarely, both kidneys. It is most often diagnosed in children aged 3 to 4 years and is uncommon in older children and adults. It can appear as a swelling or lump in the abdomen. Sometimes, the child may have other symptoms, such as fever, pain, nausea, or lack of appetite. Wilms' tumor accounts for 5% of childhood cancers.

Wilms Tumor (also known as Nephroblastoma) is a malignant tumor originating in the kidney. It is the most common type of kidney tumor in childhood and can affect one or both kidneys (INCA, 2021).

This type of tumor can only be evidenced as a palpable mass in the abdomen (it can be observed by parents while bathing or dressing the child). The mass is firm and often large enough to be felt on both sides of the belly. It is usually not painful, but in some cases it can cause stomach pain (LOURENÇATTO, 2010).

Other associated symptoms may be presented, such as urinary tract infection, blood in the urine, high blood pressure and/or abdominal pain, fever, loss of appetite, nausea, shortness of breath and constipation. Most of the time, the general condition of the child with Wilms Tumor is good. In more severe cases, metastases may occur mainly to the lung (LOURENÇATTO, 2010).

Lymphomas start in lymphocytes, which are cells that are part of the immune system. Lymphomas often affect lymph nodes and lymphatic tissues such as tonsils or thymus. They can also affect the bone marrow and other organs, causing different symptoms depending on where they are developing (INCA, 2021).

Lymphoma arises in the lymphatic system, a network of small vessels and lymph nodes that is part of both the circulatory system and the immune system. The system collects and redirects to the circulatory system a clear liquid called lymph, which contains defense cells (white blood cells) called lymphocytes (INCA, 2021).

Lymph nodes (lymph nodes or lymph nodes) and organs such as the thymus, spleen and tonsils are also part

of this system, structures that are also involved in the production of lymphocytes (INCA, 2021).

Lymphomas can cause weight loss, fever, sweating, weakness, and enlarged lymph nodes in the neck, armpits, or groin. There are two main types of lymphoma: Hodgkin's lymphoma and non-Hodgkin's lymphoma. Both types can occur in both children and adults (LOURENÇATTO ,2016).

Like leukemia, lymphoma is also classified into subgroups: Hodgkin's Lymphoma, which spreads in an orderly fashion from one group of lymph nodes to another group, and Non-Hodgkin's Lymphoma, which spreads in an unordered manner and can start in anywhere on the body (BRASIL, 2022).

### **Symptoms**

As in developed countries, in Brazil, cancer is already the leading cause of death from disease among children and adolescents aged 1 to 19 years. Parents should be alert to the fact that the child does not invent symptoms and that at the sign of some abnormality, the children need to be taken to medical care to report the evolution of the condition that, in most cases, the symptoms are related to common diseases that occur in childhood, but this should not rule out a visit to a specialist ( LORENZONI et al, 2018).

The National Cancer Institute (INCA) warns of warning signs of recent appearance. They are: Vomiting accompanied by headaches; imbalance when walking; irritability; difficulty moving; bone or joint (joint) pain; sudden change in skin color (usually pale); frequent or persistent fever; weight loss; weakness; bleeding in general; frequent pains in the belly; rapidly growing, painless lumps or nodules, particularly in the neck, armpits, or groin; excessive night sweat; toothaches without having cavities; purple spots on the body or eyelids; nodules or patches on the skin that grow or change color; high pressure; frequent discharge from the ear; early adult sexual characteristics; difficulty seeing or double vision; in the eyes: white pupil or cat's eye reflex.

The diagnosis made in the early stages allows for a less aggressive treatment, with greater possibilities of cure and less sequelae from the disease or treatments (MICHALOWSKI, 2018).

In order to obtain high cure rates, medical care, correct diagnosis, referral to a treatment center and access to all prescribed therapy are also necessary (BRASIL, 2022).

## Commonly used lab tests to diagnose leukemia in children are:

Complete Blood Count and Peripheral Blood Study: These tests evaluate the different types of blood cells. Changes in the number and appearance of these cells help in the diagnosis of leukemia.

Coagulation and Blood Chemistry Tests: Blood chemistry tests measure the amounts of certain chemicals that circulate in the blood but are not used to diagnose leukemia. In women already diagnosed with the disease, these tests can help detect liver or kidney problems caused by leukemic cells or side effects of certain chemotherapy drugs (INCA, 2022).

Cytochemistry: is the application of biochemical dyes to blood and bone marrow cells, in order to show their composition without appreciably modifying their morphology. Cytochemical stains help in the diagnosis of leukemias and other hematological diseases (INCA, 2022).

Flow cytometry is performed with a device that can make individual measurements of thousands of cells, in an exact count that is essential for the efficiency of the treatment of the disease. This technique is often used to examine bone marrow cells, lymph nodes and blood samples for the diagnosis of leukemias (INCA, 2022).

In the immunohistochemical examination, blood cells or bone marrow samples are analyzed using monoclonal antibodies marked with fluorescent substances. Different types of lymphocytes have different antigens, which change as each cell matures. The cells of each leukemia patient have the same antigens because they are all derived from the same cell.

In addition to characterizing the antigens expressed by the cells involved, flow cytometry provides information regarding cell size and granularity. In acute leukemias, the test is indicated to determine the cell lineage, analysis of clonality and the state of maturation of leukemic cells, expression of aberrant antigen patterns typical of certain groups of leukemias and follow-up of treatment and detection of minimal residual disease (INCA, 2022).

Cytogenetics In this test, the chromosomes of the leukemia cells are analyzed to detect any abnormalities. In some cases of leukemia, the cells have chromosomal changes visible under a microscope.

Fluorescent In Situ Hybridization (FISH) FISH detects most chromosomal changes visible under the microscope in cytogenetic tests, as well as small changes not seen in cytogenetic tests. It can be used in blood tests or bone marrow samples (INCA, 2022).

Polymerase Chain Reaction This is a very sensitive DNA test, which allows the detection of small chromosomes, not visible under the microscope, even when few leukemic cells are present in the sample (INCA, 2022).

### **Treatment**

Treatment against childhood cancer, in most cases, takes a long time, exposing the child to a considerable period of hospitalization and to invasive and unpleasant procedures, both physically and emotionally. To adapt to this new situation, the child uses coping strategies, which will be articulated according to the child's personal characteristics, their beliefs and values as a result of the factors to which they are exposed (MOTTA et al, 2018).

Communication between the health team, the child and the family is very important, and the child needs to be informed about their own treatment, after confirming their diagnosis, in a way that is appropriate to their level of understanding, and the team and family need to be attentive to the meanings attributed by the child to the various aspects that involve this treatment, such as hospitalization, chemotherapy, surgery, possibility of cure, among others (LOURENÇALTO et al, 2010).

Some reasons given in the literature for refusal, non-cooperation and abandonment of treatment include physical discomfort of the patient, the parents' fear of losing their role as parents, misunderstanding and uncertainty about the merits of the medication, failure or inadequacy in communicating about the diagnosis and treatment and its side effects. The insufficiency and inappropriateness of communication between the doctor, the patient and the family correspond to one of the most important causes of non-cooperation (LANZA, 2014).

Chemotherapy is the treatment that uses chemical agents in the treatment of malignant tumors and it is usually part of the planning of the treatment of people who are unable to undergo a surgical approach or radiotherapy. It is one of the most common procedures in oncology and is used to reach every cell in the body. The first objective is to destroy malignant cells and maintain normal cells, but almost always the difference between these cells is small, due to this and the high degree of toxicity, undesirable side effects arise that are intense and leave their patients fragile (INCA, 2021).

To resort to chemotherapy, it is necessary to know how the tumor is in addition to its extension, in addition to the physical conditions of the patient. Some tumors are completely excluded with chemotherapy, for example: lymphomas, leukemias, childhood tumors and testicles. When chemotherapy is used as a palliative method, it reduces the tumor, stabilizes the clinical picture and ensures a better quality of life (INCA, 2021).

## The nurse's role in assisting a child diagnosed with cancer

Caring for a child with cancer is challenging, as it proposes, in addition to specific material and therapeutic resources, a health team that is attentive to what happens in the child's universe. It is imperative that professionals have responsibility, commitment, adequate preparation and sensitivity to care for the child.

Faced with this situation, we find the professional nurse, whose production of qualified care is influenced by the confrontation with the reality of childhood cancer, which includes practical and emotional aspects (SILVEIRA et al., 2021).

Assistance in pediatric oncology requires certain practice on the part of health professionals, requiring nurses to articulate knowledge and practices, and be able to respond consciously, regardless of the disease that the child experiences and how it develops in the family's daily life (THEOBAID et al, 2016).

The Code of Ethics for Nursing Professionals (COFEN, 2015) ensures that it is the nurse's responsibility and duty to provide assistance to the person, family and community free from damage resulting from malpractice, negligence or recklessness and that nursing must guarantee assistance safely and provide adequate information to the person and the family about the rights, risks, intercurrences and benefits regarding nursing care.

The Ministry of Health (2013) established the National Patient Safety Program with the objective of implementing assistance, educational and programmatic measures and initiatives aimed at patient safety in different areas of care, organization and management of health services through the implementation of risk management and Patient Safety Centers in health establishments.

Since professionals are responsible for planning and appropriate intervention in order to keep the environment safe, the development of nursing research on patient safety is vital (SILVA et al, 2016).

Nursing professionals in the care of children with cancer experience feelings such as suffering, sadness and exhaustion. Still, it is necessary to separate professional performance and emotion, so that there is no involvement and burnout of the professional, highlighting the need to develop multiprofessional action strategies among the team that cares, considering that they also need to be cared for (DUCCA et al. ,2020).

Nursing professionals are responsible for a large part of care actions and, therefore, are in a privileged position to reduce the possibility of incidents that affect the patient, in addition to detecting complications early and carrying out the necessary actions to minimize damage (MORAIS et al, 2016).

Nurses, when caring for children with oncological diseases beyond the possibility of a current cure, provide

assistance aimed at the human child, whose actions are centered on their needs, demanding attention, time, sensitivity and availability, in order to make them comfortable even when not healthy. Also noteworthy is the care for the family member, seeing it holistically and providing support in the face of the situation (SILVEIRA et al, 2021).

Cancer in children is seen as a loss of childhood pleasures, the freedom of a normal and healthy life. Feelings emerged, either negative (fear, sadness and revolt) or positive (hope, happiness and optimism). Thus, the act of playing in the context of the child's hospitalization constituted a viable communication resource used by nursing, providing moments of relaxation and the possibility for the child to express their anxieties, difficulties, desires and emotions (INCA, 2021).

Childhood cancer is a pathology that imposes great limitations, thus interrupting children's daily activities, moving them from their world of fantasies to a reality that is often harsh and cruel.

Thus, this study demonstrates the relevance of nursing care in pediatric oncology and emphasizes that in approaching this care it is necessary to ensure the quality of life of children. To adapt to the disease present in the child, the nurse must create strategies such as therapeutic toy and the construction of affective bonds, which constitute tools that allow the child to better express their feelings, easing the suffering, in addition to facilitating communication. and greater child/professional interaction (SILVEIRA et al, 2021).

### The nurse facing the ludic treatment

It is evident that the nurse has an indispensable role in the act of caring for the child with cancer, since he/she is involved in a humane way with the patient and his/her family, who are often sensitized by the whole situation that cancer imposes. It is necessary for the professional nurse to understand the pain of the other, in order to alleviate it, seeking recovery and a good standard of quality of life for the pediatric patient. Finally, the need for further studies on this topic is highlighted, in order to provide nurses with greater support for providing assistance in pediatric oncology, promoting health and preventing situations that increase the suffering generated by cancer, with a view to humanization of care (NEVES et al, 2017).

Ludic art or ludotherapy is considered a humanization strategy, which applies playing in different ways, this activity should be used daily by the health team, as it allows the individual both a continuity of child development and the reintegration of well-being physical and emotional, thus resulting in a less traumatizing hospitalization, because in addition to establishing an interaction between the child and the nursing team, it makes the environment in which it is inserted more pleasant. In this context, its practice allows the subject to expose negative feelings towards hospitalization, as well as the transformation of the subject's behavior (BOSCHETTI et al., 2019).

According to (OLIVEIRA, 2021), playing is used by the nursing team in three moments: during the daily routine; in the preparation of invasive procedures and during the performance of painful and unpleasant procedures.

The professional nurse who has greater contact with pediatric patients, in addition to empathy, must have creative capacity and sensitivity when approaching this client, thus being able to prove the importance that nurses have in alleviating the suffering resulting from hospitalization (PINHEIRO et al, 2021).

As a consequence of all these factors, there is a physiological change favoring an increase in the child's immunity and this fact implies a global improvement (BOSCHETTI et al, 2019).

The technical-scientific knowledge and the affectivity of the professional nurse in the daily life of oncology nursing are constitutive elements of care, which will be influencing the development of assistance provided to the sick person. Emotional support and creativity in the art of caring should be valued, requiring technical and empathic skills. When caring for the child, one must understand their particular world and the stages of childhood, holistically in terms of the child-family dyad, seeking to satisfy their needs, regardless of their current condition. The nursing team, along with the interdisciplinary team, must develop activities with the child and his family, seeking to maintain well-being(NEVES et al, 2017).

The involvement of the nursing team with the cancer patient has its good and bad sides. For example, for professionals who provide palliative care (to improve the patient's quality of life and have a dignified death) it is almost always painful, no matter how much he knows the patient's real situation, he hopes, creates hope that the situation can be reversed and this is not always what happens. In a way, the employee misses the patient, which causes him to mourn for a few days, even if only internally. Reading some research, we can see that professionals who avoid patients, do the procedure and leave soon, with the purpose of not getting involved. Maybe it's good for him, but it's no longer good for the patient, as there may be the impression that his cancer takes over and his emotional state is worse than it already was (ARRUDA et al, 2016).

### **Humanized Care**

The good side of getting emotionally involved with the patient is that the professional gives his entirety to the patient and tries in every way to take care of him in the best possible way, because somehow he managed to absorb the pain and suffering of the client (SILVA et al. 2016).

Some get so involved that they are afraid to perform invasive procedures and this somehow interferes with the patient's treatment, as the procedure may hurt, but it is part of the process and it cannot be delayed (LANZA et al, 2014).

The reaction of health professionals shows how divisive it is to care for cancer patients, balance is essential for the health team or otherwise, the professional can relate the patient's death to their emotions, in addition to ending up taking the patient's problems to the next level. your home and thus causing problems in your life (BRASIL, 2022).

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Reinforcing what was mentioned Santos (2013), stresses that creative problem solving must combine knowledge and intuition as part of the care process. The scientific and creative method for formulating strategies in nursing practice is of a fundamental nature (caring for the other), which involves a humanistic approach. Considering the child's peculiar universe in order to understand it reflects the concern to practice care aimed at the child's needs, considering particular aspects of development, to improve the understanding and interaction of this child in the hospital environment.

Childhood cancer is not a preventable disease, there is no scientific evidence that makes clear the association between the disease and environmental factors. Thus, the approach to pediatric cancer should be given to its early diagnosis and with timely referral for timely and quality treatment, which allows greater chances of cure. From the perception of symptoms to the diagnosis of childhood cancer, several factors are involved, characterizing a

complex process, and many are the variables that seem to influence it (INCA, 2021).

The precarious socioeconomic context of families and the lack of effective support from social policies are factors that impact oncological treatment. In this sense, we seek to reflect on the implications of the diagnosis on the socioeconomic conditions of families of children and adolescents with solid tumors, identifying the social policies that are accessed during cancer treatment and their respective return.

The role of the oncology nurse is to assist the patient in all stages of treatment from the diagnosis of the disease, to chemotherapy, radiotherapy or surgery. Emphasizing the prevention of complications, detecting side effects early and adopting measures to control them, providing differentiated, specialized care that incorporates the psychosocial aspects of the person and his family, thus obtaining a holistic care that responds to all the needs of the individual (INCA 2021).

Also pertinent to the oncologist nurse are the attributions of administrative activities to verify releases and schedule treatment procedures, in addition to having an educational role guiding both the patient and the family members during the treatment. This happens right after the diagnosis and the decision on the treatment made by the oncologist, the nurse evaluates the patient regarding aspects of venous access, checks the treatment protocol to be carried out, verifies the toxicity of the medications, provides guidance regarding the protocol, check information such as weight and height, chemotherapy doses and chemotherapy support medications. Thus characterizing the nursing consultation. Thus ensuring safety and greater effectiveness in the administration of protocols (BRASIL, 2021).

With the consultation, one of the most important behaviors of the nurse is the choice of the chemotherapy infusion device, which is very important for the success of the treatment. In this evaluation, the nurse analyzes the patient's venous network and, together with the multidisciplinary team, chooses the best option for the treatment to be carried out.

Some drugs may be infused into peripheral veins by peripheral puncture. However, for some medications, protocol, due to venous fragility or depending on the clinical evaluation, the implantation of the fully implanted catheter (Port-A – Cath) or the peripherally inserted central venous catheter (PICC) may be indicated, which are deeper access into a larger central vein. The Port-a-Cath is a siliconized rubber device, whose distal end is coupled to a punctureable camera, which remains under the skin, embedded in a pocket in the subcutaneous tissue of the

thoracic region, on a bone surface. It is implanted through a surgical procedure. This catheter, in addition to offering greater functional comfort, has a lower infection rate when compared to other available catheters (JOHAN et al. 2012).

### IV. CONCLUSION

From the results of this research, it was possible to know the care developed by nurses who work in pediatric oncology, their experiences of pleasure and suffering, as well as to identify the strategies used by them to provide care to children with cancer. In view of the analysis of the studies, although there are publications regarding the use of playful activities in the hospital environment, the reality is still far from what is observed in the articles, because, as observed, even among nursing professionals who know the benefits of playful resources, the resource is little used during the practice of care for the hospitalized child, with emotional support being the most used resources as strategies and is present in all the cited studies. As for the difficulties and facilities encountered by the nurses, it was observed that both the difficulties and the facilities are together in the nurses' routine, as both can be generated by the child's suffering, depending on the situation. Such as child care, living with the children's families and issues related to the work environment in which the nurse works.

We observed that oncology is one of the areas that most causes pain, suffering, anxiety and stress to pediatric nurses. Because of this, it is important to emphasize that the institutions where these professionals are inserted must adhere to a more humane policy and with a different look at these professionals who have suffering as their work routine. In view of this, much is still needed to advance in practice that includes more humane and individualized care in the treatment of children with cancer, not only routine procedures must be advocated, but the uniqueness and fantasy of each child.

In conclusion, the nursing team implements ludic activities in their daily practice, enabling their use in assessment, diagnosis and nursing intervention. And it is expected that the institutions where nurses work in the care of children with cancer, have a different look at these professionals.

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