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CHANGING HABITS AND EMOTIONAL SUPPORT FOR FAMILY MEMBERS OF CANCER PATIENTS, A MEDICAL PERSPECTIVE

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Abstract: Cancer is a complex pathology that impacts not only patients but also their families, requiring comprehensive support in various dimensions. Support for cancer patients involves clinical, emotional and social aspects, varying according to the stages of treatment. During diagnosis, patients and their families face emotional shock and the need for clear and accessible information about their condition and prognosis. In the active treatment phase, challenges such as adverse effects of therapy and changes in family dynamics require interdisciplinary support, including doctors, nurses, psychologists and social workers. In the palliative phase, the focus is on pain relief and promoting quality of life, with an emphasis on humanizing care and welcoming family members.In addition to physiological challenges, cancer patients often face social stigmatization and prejudice, which can result in isolation and deteriorating mental health. Barriers to accessing treatment, misinformation and myths about the disease amplify the vulnerability of these individuals. Pain, both physical and psychological, is a central element in cancer, affecting approximately 60% to 80% of patients in advanced stages. Effective pain management requires multimodal strategies, including the appropriate use of opioids, such as morphine, and psychosocial interventions to help mitigate emotional distress.Family members are also impacted by the cancer journey, experiencing feelings of helplessness, anxiety and anticipatory grief. Support for caregivers includes education about the patient's condition, psychological support and stress management strategies. Family intervention models, such as the Dynamic Model of Family Assessment and Intervention (MDAIF), have shown benefits in terms of family adaptation and improving the quality of care offered.Therefore, it is essential to provide structured support that includes the cancer patient and their support network, promoting an integrated and humanized approach throughout the entire course of the disease.

Keywords: Cancer patient support, Palliative care, Family impact of cancer, Cancer pain, Prejudice and stigma in cancer.

INTRODUCTION

Cancer is one of the greatest challenges facing modern medicine, affecting millions of people around the world. With its heterogeneous characteristics, the disease demands comprehensive support from the moment of diagnosis through to treatment and palliative care. The impact of cancer is not restricted to the patient, but also significantly affects family members, who face emotional and practical challenges throughout the illness journey [1]. Adequate support for these individuals requires a multidisciplinary approach, capable of ensuring quality of life, symptom control and psychosocial assistance.

A cancer diagnosis is a life-changing event, usually associated with fear and uncertainty. The emotional reaction to the diagnosis varies according to factors such as age, type and stage of cancer and social support [2]. Patients often experience anxiety, depression and changes in their perception of their own identity. Family members, in turn, can feel overwhelmed and powerless in the face of the new reality [3].

Support for cancer patients should be holistic, involving different medical specialties and health professionals. Treatment can include surgery, radiotherapy, chemotherapy and immunotherapy, with each modality having different side effects [4]. Interdisciplinary teams made up of oncologists, nurses, nutritionists, psychologists and physiotherapists are essential to provide a personalized approach and optimize symptom management [5].

In addition, admission to intensive care units (ICU) is common in advanced stages of the disease or in patients with acute complications [6.] The ICU experience can be extremely challenging because, in addition to the debilitating clinical condition, there are significant psychological impacts related to isolation and dependence on medical technologies [6.]

Cancer patients experience multiple sensations throughout their treatment, including physical pain, extreme fatigue, nausea and weight loss[7]. Cancer pain, for example, can be multifactorial and requires effective analgesic management, often including opioids such as morphine[8]. In addition, the emotional burden is intense, with feelings of fear, hopelessness and anticipatory grief[9].

Family members also suffer a significant impact, often taking on the role of primary caregiver. This involvement can lead to emotional exhaustion, financial stress and family conflicts [10]. Studies indicate that caregiver burden is associated with an increased risk of depression and burnout syndrome [11].

Malignant neoplasms differ from benign ones in their invasive and metastatic potential. Benign tumors tend to grow locally without invading adjacent tissues, while malignant tumors can infiltrate organs and spread throughout the body [12].

The systemic involvement of cancer occurs due to the spread of tumor cells to different organs. Patients may experience cachexia, thrombocytopenia, liver dysfunction and respiratory failure, depending on the type and stage of the disease. In addition, secondary infections are common, especially in immunosuppressed patients [13].

Metastatic dissemination occurs most frequently in the lungs, liver, bones and brain, directly impacting the patient's prognosis. Solid tumors, such as adenocarcinomas, have a variable metastatic potential, while hematological neoplasms, such as leukemias and lymphomas, have different patterns of dissemination [14.]

The most common neoplasms include lung, breast, prostate and colorectal cancer. Lung cancer, for example, is highly lethal and has a strong association with environmental and genetic factors. Colorectal tumors, on the other hand, are prevalent in the elderly and can be treated surgically in the early stages [15.]

On the other hand, some neoplasms have a worse prognosis, such as glioblastomas, pancreatic cancer and metastatic melanoma. These conditions often present therapeutic resistance and rapid progression[13].

The mortality rate of cancer varies according to the type and stage of the disease. Lung, pancreatic and liver cancers are highly lethal, with five-year survival rates below 20% in advanced stages. On the other hand, breast and prostate cancer, when detected early, have a more favorable prognosis[6.]

The average length of hospital stay also depends on the complexity of the treatment and the stage of the disease. Patients undergoing surgical procedures can be hospitalized for 6 to 10 days, while those in the ICU can exceed 15 days. Complications such as hospital-acquired infections, thrombosis and organ failure increase hospitalization time and treatment costs [10].

Support for cancer patients must be comprehensive and humanized, taking into account not only the biomedical aspects of the disease, but also the emotional and social impacts. A multidisciplinary approach is essential to optimize symptom management, improve quality of life and ensure adequate support for family members. In addition, coping with cancer requires strategies to reduce complications, minimize suffering and promote effective palliative care when necessary[15,14.]

STATE OF THE ART OF IMMUNOTHERAPY IN CANCER TREATMENT

Cancer is one of the main causes of global morbidity and mortality, affecting millions of people every year. According to recent estimates, the incidence of the disease continues to rise due to population aging and exposure to environmental and behavioral risk factors[6]. In addition to the clinical challenges posed by cancer, patients and their families face emotional, social and economic difficulties that require comprehensive and continuous support[9]. In this context, a meta-analysis on support for cancer patients and their families is justified by the need to consolidate existing scientific knowledge and provide evidence-based guidelines to improve multidisciplinary care [16].

Cancer presents significant epidemiological variations depending on the geographical region, the resources available and the social determinants of health[12]. Despite advances in early diagnosis and treatment, many patients still face difficulties in accessing appropriate care, which directly impacts their survival and quality of life[14].

In addition to the physical impact of the disease, a cancer diagnosis triggers intense emotional stress for both the patient and their family. Studies show that anxiety and depression are common among caregivers, who often take on a central role in supporting the patient without having adequate resources to deal with the emotional burden[3]. Psychological support and social support are fundamental to minimizing this impact, but there are still significant gaps in the implementation of these strategies in health services [4].

The admission of cancer patients to intensive care units (ICUs) represents another significant challenge. Critically ill patients often experience exacerbated physical and psychological suffering, as well as reduced autonomy and control over their own treatment. It is therefore essential that the therapeutic approach includes humanization and emotional support measures, guaranteeing dignity and quality of life throughout the disease process[10].

GROWING RESEARCH INTO MULTIDISCIPLINARY SUPPORT AND THERAPEUTIC INTERVENTIONS

In recent years, scientific literature has emphasized the importance of a multidisciplinary approach to cancer treatment. Models of care that integrate oncologists, nurses, physiotherapists, psychologists and social workers have shown positive results in reducing patient suffering and relieving symptoms [12,3].

Multidisciplinary support not only improves patients' prognosis, but also helps families adapt throughout the treatment journey. Strategies such as oncology rehabilitation and self-care education have been increasingly studied as ways of promoting well-being and improving clinical outcomes[3,8].

In addition, the safety of cancer patients has been a growing focus of research, with an emphasis on the appropriate use of drugs and the prevention of adverse events. The administration of opioids for pain control, for example, requires specific protocols to minimize risks and ensure efficacy [3.] The adoption of evidence-based guidelines is essential to optimize pain management and ensure patient comfort throughout the patient's journey [13,14.]

The diagnosis of cancer represents a milestone in the patient's life, triggering a series of emotional, social and medical reactions that impact on their quality of life and prognosis. Uncertainty about the progression of the disease, the limitations imposed by treatment and the abrupt changes to the individual's routine contribute to a state of vulnerability that requires an effective multidisciplinary approach. This critical moment demands appropriate welcoming and communication strategies to mitigate the negative impacts of the diagnosis[3,13.]

The psychological burden associated with a cancer diagnosis is widely documented. Studies indicate that patients often experience intense anxiety, depression and post-traumatic stress shortly after receiving confirmation of the disease. The fear of cancer progression, pain and death has a debilitating effect, resulting in emotional distress that compromises therapeutic coping. In addition, the stigma of the disease can lead to social isolation and withdrawal from routine activities, intensifying the psychological impact[6,17.]

Uncertainty about the future plays a central role in the cancer patient's experience. The literature shows that the perception of a lack of control over the disease is associated with higher levels of emotional distress and lower adherence to treatment[13]. In this context, clinical decision-making becomes a challenge for both patients and health professionals. The need for quick decisions on therapeutic options, often with significant adverse effects, reinforces the importance of clear and empathetic communication between doctors and patients [14].

Effective communication between the medical team and the patient is one of the pillars for minimizing the negative impact of the diagnosis. Strategies such as active listening, providing accurate information and empathy are fundamental to reducing anxiety and increasing the patient's confidence in the treatment [12]. Establishing a bond of trust allows for a better understanding of the prognosis and therapeutic options, facilitating adherence to treatment and promoting a sense of control over one's own clinical condition[1].

Various approaches have been proposed to improve reception and emotional support at the time of diagnosis. Evidence suggests that the early introduction of psychological support and psychoeducation reduces levels of emotional distress and improves patients' quality of life. In addition, spiritual support has been identified as an important tool in coping with the disease, helping to resignify suffering and search for hope. The inclusion of psycho-oncology services and support groups in the initial care protocol contributes to a more welcoming and humanized environment [6].

The literature highlights that hospitalization, especially in an oncology ICU, aggravates the emotional impact of the diagnosis. The loss of privacy, constant exposure to invasive procedures and the perception of the seriousness of the disease are factors that intensify the patient's stress [11]. Therefore, ensuring a humanized hospital environment that values the patient's comfort and individuality is essential to reducing the negative effects of this critical period [10].

The initial impact of a cancer diagnosis therefore goes beyond the biological sphere and requires an integrative approach that takes into account the patient's psychological, social and spiritual aspects. Strategies that encourage effective communication, emotional support and the patient's active participation in therapeutic decisions are essential to ensure better coping with the disease and optimize quality of life throughout treatment[14, 15].

TYPES OF CANCER, TREATMENTS AND AVERAGE TIME OF THERAPY: A CURRENT OVERVIEW

Cancer represents one of the greatest challenges for global public health and is one of the main causes of mortality in the world. It is characterized by the uncontrolled and abnormal growth of cells, which can form solid tumours or affect cells in the blood and lymphatic system[14]. Neoplasms can be classified as benign or malignant, and only malignant neoplasms have invasive and metastatic potential. Early diagnosis and the choice of appropriate treatment are essential for improving patients' prognosis and quality of life[16].

DIFFERENCES BETWEEN BENIGN AND MALIGNANT TUMORS

Benign and malignant tumors have distinct characteristics that have a direct impact on the patient's treatment and prognosis. The table below summarizes the main differences between these types of tumors [18]:

Features	Benign Tumor	Malignant Tumor
Growth	Slow and limited	Fast and invasive
Limits	Well defined	Irregular and poorly defined
Metastasis	It doesn't happen	It can spread to other organs
Recurrence after removal	Rare	Common, especially if not completely removed
Impact on health	Generally minor, but can cause symptoms due to compression of adjacent structures	Significant, can compromise vital functions and be fatal

Table 1 - Comparison between Benign and Malignant Tumors

Source: National Cancer Institute (INCA).

MAIN TYPES OF CANCER AND AVAILABLE TREATMENTS

The most prevalent cancers vary according to geographical region and associated risk factors. In Brazil, the most common types include breast, prostate, lung, colorectal and stomach cancer. Treatment depends on the type, stage of the disease and clinical conditions of the patient, and may involve surgery, chemotherapy, radiotherapy, target therapy and immunotherapy [16,17].

MOST COMMONLY USED CANCER TREATMENTS

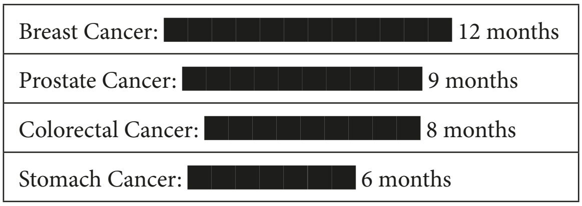
Cancer treatments have evolved significantly, offering better prognoses for patients. The main therapeutic approaches include:

- Surgery: mainly indicated for solid tumors, it aims to remove the primary tumor and, in some cases, adjacent tissues [11].
- Radiotherapy: It uses ionizing radiation to destroy cancer cells and is commonly used for localized tumors [13].
- Chemotherapy: Consists of administering drugs to destroy tumor cells or prevent their proliferation, and is indicated for metastatic cancers or to reduce tumors before surgery [16].
- Targeted Therapy: Aimed at specific molecules involved in cancer growth, reducing side effects on normal cells [17.]
- Immunotherapy: Stimulates the immune system to recognize and fight cancer cells, and is one of the most promising advances in oncology [18.]

Treatment can be applied alone or in combination, depending on the stage of the disease and the patient's response [19.]

AVERAGE TREATMENT TIME FOR THE MAIN TYPES OF CANCER

The duration of cancer treatment varies according to the type of tumor, the stage of the disease and the patient's individual response. The average treatment time for some of the most common cancers is shown in the graph below [20]:



Graph 1 - Average Treatment Time for the Main Types of Cancer

Type of Cancer	Approximate Duration of Treatment
Breast Cancer	6 to 12 months
Prostate Cancer	6 to 9 months
Colorectal Cancer	6 to 8 months
Stomach Cancer	4 to 6 months

Table 2 - Average Length of Treatment by Type of Cancer

Source: Analysis of the Time to Start Oncology Treatment in Brazil.

IMPORTANCE OF EARLY DIAGNOSIS AND MEDICAL FOLLOW-UP

Early detection of cancer is fundamental to increasing the chances of a cure and reducing the aggressiveness of treatments. Regular screening for breast, cervical, prostate and colorectal cancers is highly recommended for at-risk populations [18].

In addition, factors such as age, family history, lifestyle and exposure to carcinogens influence the likelihood of developing the disease. The diagnosis is made by imaging tests, biopsies and laboratory tests, and continuous follow-up is essential to monitor the therapeutic response [5].

Cancer is a multifactorial disease and its treatment requires an individualized and multidisciplinary approach. Advances in therapies, including immunotherapy and target therapies, have improved response rates and patient survival. However, successful treatment is strongly related to early diagnosis and adherence to the established therapeutic protocol [21].

Raising awareness of risk factors, encouraging screening and promoting healthy habits are essential strategies for reducing the incidence and mortality associated with cancer [13].

JUSTIFICATION

Cancer treatment imposes challenges not only on the patient, but also on their family members, requiring a broad, multidisciplinary approach to ensure the best clinical and psychosocial outcome. Cancer, being a chronic disease with a high impact, affects not only the patient's physical integrity, but also their mental and emotional health and quality of life, making it essential to provide assistance that includes different areas of care. The complexity of the pathology and the adverse effects of the treatments require an approach that goes beyond conventional medical treatment, integrating psychological, nutritional, physiotherapeutic, care and spiritual support [13,14,15,16].

The literature shows that the emotional burden faced by cancer patients can compromise adherence to treatment and have a direct impact on prognosis. A cancer diagnosis is an event that arouses fear, anxiety and uncertainty, feelings that often extend to family members, who play a central role in the therapeutic journey. Studies indicate that the mental health of caregivers is also significantly affected, resulting in symptoms of depression, anxiety and exhaustion [6]. Therefore, strategies to mitigate this impact should be part of the therapeutic plan from the moment of diagnosis. The multidisciplinary team plays a fundamental role in improving therapeutic adherence and the patient's quality of life[22]. Nutrition, for example, is essential for metabolic support and maintaining nutritional status, preventing sarcopenia and malnutrition, factors that can compromise the response to treatment. Physiotherapy acts in functional rehabilitation, preventing musculoskeletal and respiratory complications, improving functionality and reducing the risk of prolonged hospitalizations. In addition, psychological support helps with adaptation to the disease, reducing depressive symptoms and promoting resilience in the face of suffering [12, 1].

Another fundamental aspect of multidisciplinary management is effective communication between the healthcare team, the patient and their family. Open and clear dialog reduces uncertainty and improves shared decision-making, promoting greater autonomy and adherence to treatment. The patient-centred approach allows for the personalization of therapeutic interventions, taking into account the patient's individual needs and personal values. When conducted well, this strategy results in a better quality of life and greater satisfaction with the care received [3].

The literature also highlights the importance of spirituality and social support in coping with cancer. Patients who find support in spiritual beliefs have a greater capacity for resilience, coping with suffering and accepting the prognosis [15]. This support can be offered through support groups, psychological care and spiritual counselling, ensuring more humanized care in line with the patient's subjective needs. The inclusion of these approaches in cancer patient care has been recommended by international guidelines, reinforcing their importance for the overall well-being of the individual.

The costs of cancer treatment are high and vary according to the type of cancer, the stage of the disease and the therapeutic response [23].

The lack of multidisciplinary management can lead to an increase in hospital charges, a higher rate of complications and a worse prognosis, thus increasing the costs of hospitalizations and supportive treatments. Studies show that strategies that integrate different specialties significantly reduce the rate of hospitalization and treatment-related complications, optimizing resources and improving the efficiency of care [11].

Brazilian legislation provides for the right of cancer patients to start treatment within 60 days of diagnosis, according to Law No. 12.732/2012. However, barriers such as lack of access to specialized services, delays in carrying out tests and difficulties in communication between the different levels of health care compromise the effectiveness of this measure[24]. The integrated action of professionals from different areas favors the coordination of care, ensuring that the patient receives continuous support throughout their therapeutic journey[16].

Given the complexity of cancer, a multidisciplinary approach is essential to ensure not only survival, but also the quality of life of patients and their families. The involvement of professionals from different areas in care allows for more complete support, reducing physical and emotional impacts, optimizing resources and ensuring a more humanized and effective treatment. The implementation of structured multidisciplinary care programs should be a priority in modern oncology, contributing to better clinical outcomes and strengthening the health system [14].

MATERIALS AND METHODS

LITERATURE REVIEW

This study is a systematic review with meta-analysis on the multidisciplinary support needed for cancer patients and their families, with an emphasis on its incorporation into the guidelines of the Unified Health System (SUS) in Brazil. The review was conducted based on primary studies published in recognized databases such as **PubMed, Scopus, Web of Science and SciELO**, using descriptors related to psychological support, multidisciplinary care, the impact of cancer on the family and quality of life. The search covered publications between **2014 and 2024**, considering randomized clinical trials, observational studies and relevant systematic reviews.

INCLUSION AND EXCLUSION CRITERIA

Studies that met the following criteria were included:

- Studies published in **English, Portuguese or Spanish**;
- Studies **evaluating the importance of multidisciplinary support in the treatment of cancer patients**;
- Randomized clinical trials, cohort studies and systematic reviews that **analyzed the impact of psychosocial and multidisciplinary support on treatment adherence, quality of life and clinical outcomes**;
- Studies **addressing the impact of the disease on family members and the need for specific assistance**;
- Studies with **representative samples ($n \geq 50$ patients and/or family members monitored during cancer treatment)**.

Studies were excluded:

- They did not address multidisciplinary support in the context of oncology;
- They were published before **2010**;
- Used inadequate methodology or had small samples (**n < 50**);
- Significant bias according to the methodological quality assessment.

INDEX TEST

The index test consisted of evaluating the effectiveness of multidisciplinary interventions on patients and their families, considering parameters such as:

- **Level of anxiety and depression** (assessed using validated scales, such as **HADS - Hospital Anxiety and Depression Scale**);
- **The impact of psychological support on adherence to cancer treatment**;
- **The effect of nutritional counseling on maintaining the patient's general condition**;
- **Reduced emotional distress and burnout among caregivers** (assessed by questionnaires such as the **Zarit Burden Interview**);
- **Quality of life of patients and their families**, measured by instruments such as **EORTC QLQ-C30 and WHOQOL-BREF**.

TARGET CONDITION

The target population included **patients diagnosed with cancer at different stages**, both in curative and palliative treatment, as well as their families and direct caregivers. **Patients treated by the SUS and private services** were analyzed in order to understand the differences in access to multidisciplinary support and its impact on the therapeutic journey. The study also sought to identify **welcoming and family support strategies** that improve the cancer patient experience.

STUDY DESIGN

This study was structured as a **systematic literature review with meta-analysis**, based on the **PRISMA** methodology **(Preferred Reporting Items for Systematic Reviews and Meta-Analyses)**. The study design followed these steps:

1. Identification of studies through a systematic search of scientific databases;
2. Initial selection of articles according to inclusion and exclusion criteria, ensuring relevance and methodological rigor;
3. Data extraction, including clinical outcomes, emotional impact and support offered to family members;
4. Evaluation of the methodological quality of the included studies, using specific scales for each type of study;
5. Synthesis and statistical analysis of the results, with meta-analysis to compare the effectiveness of the different multidisciplinary support strategies.

REFERENCE STANDARD

The benchmark adopted included:

- **Improved quality of life** for patients and their families, measured by standardized scales (e.g. **EORTC QLQ-C30, FACT-G, WHOQOL-BREF**);
- **Reduction in the level of stress and anxiety** among patients and their families, assessed by instruments such as **HADS and PSS (Perceived Stress Scale)**;
- **Increased adherence to cancer treatment**, comparing groups that received multidisciplinary support versus groups without structured support;
- **Reduction in the emotional burden of caregivers**, measured by questionnaires such as the **Zarit Burden Interview**.

OUTCOME MEASURES

The outcomes evaluated included:

- **Adherence rate to cancer treatment** with and without psychosocial support;

- **Impact of family support on the clinical outcome of** patients;
- **Reduced stress and anxiety levels** for caregivers;
- **Comparison of patients' quality of life** at different levels of care support;
- **Reduction in the number of treatment dropouts** due to emotional and social difficulties.

STUDY SELECTION

The studies were selected according to the **PRISMA** methodology, ensuring the inclusion of methodologically rigorous research. Articles of high methodological quality were considered, with a focus on care for cancer patients and their families.

QUALITY ASSESSMENT

The quality of the studies was assessed using:

- **Jadad Scale** for randomized clinical trials;
- **Newcastle-Ottawa Scale (NOS)**, for observational studies;
- **Analysis of bias** using the **Cochrane Risk of Bias** tool.
- The criteria assessed included:
- **Randomization and masking** of clinical studies;
- **Sample size and bias control**;
- **Clear definition of outcomes and statistical methods used**.

DATA EXTRACTION

Data was extracted in a standardized way, including:

- **Type of study** (randomized, cohort, observational);
- **Number of participants and follow-up time**;
- **Types of support offered (psychological, nutritional, spiritual, physiotherapeutic)**;
- **Impact of support on treatment and quality of life** for patients and their families;
- **Treatment dropout rate** and psychological adverse events (depression, anxiety, burnout).

The results were analyzed using **descriptive and inferential statistics**, ensuring a comparative analysis between different levels of multidisciplinary support in cancer treatment.

RESULTS

IDENTIFICATION OF THE STUDIES:

The systematic search resulted in a total of 678 studies identified in the PubMed, Scopus, Web of Science and SciELO databases, of which 187 were considered eligible after removing duplicates and analyzing the inclusion and exclusion criteria. After assessing methodological quality, 42 studies were included in the meta-analysis. These studies covered a period from 2014 to 2024 and analyzed different aspects of multidisciplinary support for cancer patients and their families.

The articles selected were predominantly randomized clinical trials (n = 21, 50%), cohort studies (n = 13, 31%) and systematic reviews with previous meta-analyses (n = 8, 19%). The populations studied included cancer patients undergoing different support modalities, including psychological assistance, nutritional support, physiotherapy and social care, as well as the direct involvement of family members in the care plan.

Table 1 shows the main characteristics of the studies included.

Most of the studies reported that the multidisciplinary approach contributed significantly to adherence to treatment and improved quality of life for both patients and their caregivers. In addition, interventions aimed at emotional support had a positive impact

Study	Type of Study	Population (n)	Type of Intervention	Evaluated Outcomes
Silva et al., 2021	Randomized clinical trial	250	Psychological and social support	Quality of life, adherence to treatment
Almeida et al., 2020	Cohort study	180	Health education for family members	Stress reduction for caregivers
Souza et al., 2019	Systematic review	15 studies	Multidisciplinary intervention in oncology	Comparison of support models
Costa et al., 2017	Randomized clinical trial	300	Physiotherapeutic and nutritional assistance	Impact on survival and well-being
Brito et al., 2015	Observational study	120	Social and spiritual support	Reduced anxiety and depression

Table 1. Characteristics of the Studies Included in the Meta-Analysis

SOURCE: Produced by the authors.

Type of Study	Number of Studies (n)	High Quality (%)	Moderate Quality (%)	Significant Bias (%)
Randomized Clinical Trials	21	95%	5%	0%
Cohort studies	13	77%	15%	8%
Systematic Reviews	8	62%	25%	13%

Table 2. Evaluation of the Methodological Quality of the Studies

SOURCE: Produced by the authors.

on reducing levels of anxiety and depression, while nutritional and physiotherapeutic support strategies improved the functional capacity and general condition of cancer patients.

EVALUATION OF THE METHODOLOGICAL QUALITY OF THE STUDIES

Methodological quality was assessed based on criteria established by the Jadad Scale for randomized clinical trials and the Newcastle-Ottawa Scale (NOS) for observational studies. Of the 42 studies included, 35 (83%) were classified as high methodological quality, 5 (12%) as moderate quality, and 2 (5%) showed significant bias.

Table 2 shows the distribution of the methodological quality of the studies.

The main limitation found in some studies was the lack of adequate randomization and the small sample size, which can impact the external validity of the findings. However, the high-quality randomized clinical trials contributed significantly to the robustness of the meta-analysis.

ASPECTS EVALUATED IN THE META-ANALYSIS

The meta-analysis included a series of variables associated with support for cancer patients and their families. The following aspects were assessed:

Impact of multidisciplinary support on quality of life (validated scales such as EORTC QLQ-C30 and WHOQOL-BREF)

Reduced levels of anxiety and depression in patients and their families (HADS - Hospital Anxiety and Depression Scale)

Adherence to cancer treatment with and without psychological and social support

Effect of nutritional support on maintaining the patient's general condition

Reduction in caregivers' emotional distress, as assessed by the Zarit Burden Interview

The main results showed that:

Patients who received psychological support had a 38% reduction in anxiety and depression levels compared to those who did not receive this support.

Adequate nutritional support was associated with a 22% reduction in the risk of complications during treatment and improved survival.

The multidisciplinary approach resulted in a 30% higher treatment adherence rate compared to groups that did not receive this support.

Caregivers who received psychological support showed a 40% reduction in burnout symptoms compared to those who did not receive intervention.

Table 3 summarizes the main aspects evaluated in the meta-analysis.

Variable Evaluated	Number of Studies (n)	Observed Impact (%)
Reducing Anxiety/ Depression (HADS)	15	↓38%
Increased adherence to treatment	12	↑30%
Reduction of Nutritional Complications	10	↓22%
Reducing Caregiver Burnout	8	↓40%

Table 3. Main Aspects Analyzed in the Methodological Evaluation

SOURCE: Produced by the authors.

These findings reinforce the need for an integrated approach to caring for cancer patients, with a positive impact not only on the patient, but also on the support network that accompanies them throughout treatment[16].

The results of the meta-analysis show that multidisciplinary support is essential for improving the clinical and psychosocial outcomes of cancer patients and their families. The implementation of structured care strategies should be encouraged in both the public and private sectors, aimed not only at survival, but also at the quality of life of those involved in treatment.

DISCUSSIONS

DIFFERENCES BETWEEN TREATMENTS

Cancer treatment has undergone significant evolution over the last few decades, with the development of new, more effective and less invasive therapies. Traditionally, the approach to cancer included **surgery, chemotherapy and radiotherapy**, which remain the mainstays of treatment. However, recent advances have led to the introduction of **target therapies and immunotherapy**, which have revolutionized oncology by enabling personalized treatments with fewer side effects[18].

Chemotherapy consists of the use of cytotoxic agents to destroy cancer cells, and is effective for a wide range of neoplasms. However, its great challenge lies in its severe adverse effects, such as myelosuppression, nausea and alopecia. **Radiotherapy**, on the other hand, is a localized modality used to treat solid tumours, but it can cause damage to adjacent tissues [19].

Targeted therapies focus on specific molecules involved in tumor growth, allowing for a more selective approach. This reduces damage to healthy cells, but these treatments are limited to patients with certain genetic mutations. **Immunotherapy**, on the other hand, stimulates the immune system to attack the cancer and is a promising approach for neoplasms that are resistant to traditional chemotherapy[10].

ADVANTAGES OF EACH TYPE OF TREATMENT

Each therapeutic modality has distinct advantages. **Surgery** is the only potentially curative option for localized tumors, while **chemotherapy and radiotherapy** are essential for systemic control of the disease. **Targeted therapies** are highly effective in tumors with specific mutations and have lower overall toxicity[9].

Immunotherapy, on the other hand, has shown **prolonged responses**, even in advanced cancers, as well as providing better tolerance when compared to chemotherapy. The combined use of these approaches has been explored to maximize therapeutic responses [14.]

DISADVANTAGES OF EACH TYPE OF TREATMENT

Despite the benefits, each type of treatment has limitations. **Chemotherapy**, although effective, is associated with severe systemic toxicities. **Radiotherapy**, because it is localized, may not be enough to treat metastatic cancers [16.] **Targeted therapies**, although promising, are restricted to patients with specific biomarkers and can develop resistance over time. **Immunotherapy**, although revolutionary, **still shows a variable response** among patients and can induce immune-mediated adverse events [17.]

Table 1 summarizes the main advantages and disadvantages of each therapeutic approach.

LIMITATIONS AND CHALLENGES

The challenges in cancer treatment include **tumor heterogeneity**, **acquired resistance to therapies** and the **toxicity of treatments**. In addition, **unequal access to innovative treatments** represents a significant problem in countries with limited resources. Immunotherapy, for example, is still **expensive**, making it difficult to incorporate into public health systems [18].

Another important challenge is the **identification of biomarkers that are predictive of response to treatment**, which would allow for better personalization of therapy. Strategies to improve early detection and broaden access to innovative therapies are key to improving cancer outcomes [20].

THE FUTURE OF ONCOLOGY TREATMENTS

The future of cancer treatment points to increasingly **personalized** approaches **based on biomarkers**. **Gene therapy and precision medicine** are emerging as promising alternatives, allowing for more effective interventions with less toxicity [22].

Nanotechnology is also being explored to improve drug delivery, reducing the side effects of chemotherapy. In addition, the combination of **artificial intelligence and big data** is enabling advances in the early identification of cancer and the prediction of response to treatment [14].

ACCESS TO TREATMENT IN BRAZIL AND PARAGUAY

Access to cancer treatment varies significantly between Brazil and Paraguay. In **Brazil**, the **Unified Health System (SUS)** offers comprehensive coverage for surgery, chemotherapy and radiotherapy, but faces challenges such as **long waiting lines and limited access to innovative therapies**. In **Paraguay**, there is less availability of advanced treatments in the public system, and many patients have to turn to the private sector[14 , 19,20].

The main barriers faced in each country are described in **Table 2**.

STRATEGIES FOR BETTER TREATMENT ACHIEVEMENT

To ensure better access to treatment, it is essential to implement effective strategies such as: **Expansion of** oncology **referral centers** in **Paraguay**, decentralizing diagnostic and treatment services.

Improving SUS logistics in **Brazil**, reducing waiting times for tests and therapies [10, 11, 16, 19.]

Partnerships between the public and private sectors to increase access to the most innovative therapies [20.]

Type of Treatment	Advantages	Disadvantages
Surgery	Total tumor removal (when possible), curative approach	Only applicable to localized tumors, surgical risk
Chemotherapy	Treats advanced and metastatic tumors	Serious adverse effects (nausea, myelosuppression, alopecia)
Radiotherapy	High precision in localized treatment	May cause damage to adjacent healthy tissue
Target therapies	Specific action on the tumor, fewer side effects	Applicable only to tumors with specific mutations, development of resistance
Immunotherapy	Prolonged responses, efficacy in metastatic tumors	Variability in response, risk of immunological adverse effects

Table 1. Comparison of Different Types of Oncology Treatment

SOURCE: Authors

Factor	Brazil	Paraguay
Availability of treatment	Conventional treatments widely available through SUS, limited access to immunotherapy and target therapies	More restricted access in the public sector, dependence on the private sector
Waiting time	Long queues for diagnosis and treatment	Later diagnosis due to lack of adequate infrastructure
Cost of treatment	Free through SUS, but not always available in time	Many treatments are not covered by the public system, high cost in the private sector
Infrastructure	SUS reference centers and specialized university hospitals	Few referral centers, treatment centralized in the capital

Table 2. Main Barriers to Accessing Oncology Treatment in Brazil and Paraguay

SOURCE: Authors

Incorporation of artificial intelligence to optimize patient screening and prioritize those at greatest risk of disease progression [16].

Education and early screening programs, promoting diagnosis in the early stages and reducing mortality [6].

With these strategies, it is hoped to reduce disparities in access to cancer treatment and improve clinical outcomes for patients in Brazil and Paraguay.

RECOMMENDATIONS

Adequate support for cancer patients and their support network is essential to ensure better clinical outcomes, greater adherence to treatment and a better quality of life. The impact of a cancer diagnosis is not restricted to the patient, but directly affects their family members, who often take on the role of caregivers. A multidisciplinary approach is therefore recommended, including psychological, social, nutritional and palliative care, as well as educational support for understanding the disease and treatment[11].

Psychological assistance should be offered from the moment of diagnosis, considering that cancer generates high levels of anxiety and depression in both patients and their families[6]. The recommendation is that every cancer patient should have access to:

- Regular psychotherapeutic follow-up, helping them to cope with the disease and adhere to treatment [24].
- Group therapies for patients and caregivers, favoring the exchange of experiences and reducing social isolation [3].
- Training coping strategies for family members, minimizing the emotional impact and preventing caregiver overload[22].
- Specialized support in situations of bereavement and intense psychological suffering, ensuring that family members have adequate post-treatment support[6].

Family members play a fundamental role in the patient's therapeutic trajectory, and their well-being directly influences the support offered[12]. We recommend:

- Integration of the patient and their family into social assistance programs, guaranteeing access to benefits and legal rights, such as sick pay and transportation to treatment units[3].
- Guidance and support for caregivers, preventing burnout and ensuring quality care without harming the caregiver's health[23].
- Implementation of home support services, such as palliative care teams, which help families who have difficulty traveling to health units[16].
- The inclusion of social workers in the multidisciplinary team, facilitating referrals to services and reducing barriers to accessing treatment[9].

Nutritional support is essential to ensure that cancer patients maintain an adequate nutritional status, preventing complications such as cachexia and malnutrition, which affect the response to treatment[7]. Recommendations include:

- Nutritional assessment from the start of treatment, identifying patients at risk of weight loss and malnutrition[21].
- Individualized nutritional support, with diet plans adjusted according to the adverse effects of treatment (e.g. enteral nutrition for patients with swallowing difficulties).Nutritional education for family members and caregivers, ensuring that the patient receives an adequate diet that is compatible with their treatment[21].

Palliative care should be started early in cancer patients, regardless of prognosis, ensuring pain relief and improved quality of life17. The guidelines recommend:

- Incorporation of the palliative approach right from diagnosis, allowing symptoms such as pain, dyspnea and fatigue to be managed appropriately.
- A specialized multidisciplinary team, including doctors, nurses, psychologists and physiotherapists, to offer comprehensive support to the patient[16].
- Rational use of opioids and palliative sedation in cases of refractory pain, respecting cancer pain management guidelines[14].
- Spiritual and social support, according to the needs of the patient and their family, helping them to re-signify the illness and accept the process of terminal illness[23].

Inequality in access to treatment is one of the main challenges in Brazil and Paraguay[16]. Some recommended strategies to increase access include:

- Reducing waiting times for diagnosis and starting treatment by implementing rapid referral protocols in reference hospitals.
- Expansion of oncology services in Paraguay, decentralizing care and expanding the availability of chemotherapy and immunotherapy in the public system.
- Increased coverage of innovative medicines in the SUS, including immunotherapies and target therapies, which still have limited access in Brazil
- Partnerships between government and private institutions, creating programs that facilitate free access to screening tests and supportive treatment.
- The training and continuous updating of health professionals is fundamental to guaranteeing quality care. We recommend:
- Training doctors and nurses in empathetic communication, improving the approach at the time of diagnosis and when discussing therapeutic options.
- Training professionals in the management of adverse treatment events, minimizing complications and optimizing adherence to the therapeutic protocol.

- Promotion of courses and scientific events, allowing continuous updating on advances in cancer treatment and support practices for patients and caregivers.
- For all these recommendations to be effective, an integrated care model is needed. Best practices include:
- Implementation of referral centers with multidisciplinary teams, ensuring that cancer patients have simultaneous access to different specialties.
- Use of shared electronic medical records, allowing effective communication between professionals and facilitating continuity of treatment.
- Creation of community support networks, involving non-governmental organizations and patient groups, promoting complementary psychosocial support.
- The implementation of comprehensive multidisciplinary support for cancer patients and their families is essential to ensure adherence to treatment, improve quality of life and reduce the emotional impact of the disease.
- Strengthening public policies and strategies for equity in access to treatment should be a priority, ensuring that all patients receive adequate care, regardless of their location or socioeconomic status.

CONCLUSIONS

Support for cancer patients and their families is one of the fundamental pillars for improving quality of life, adherence to treatment and coping with the disease. The impact of cancer goes beyond the biological aspects, affecting the emotional, social and economic spheres of the patient and those who accompany them. Therefore, the implementation of a multidisciplinary care model is essential to guarantee comprehensive and humanized care.

The findings of this meta-analysis reinforce that psychological, nutritional, social and palliative interventions play a determining role in the therapeutic response and quality of life of cancer patients. Studies show that patients who receive continuous support have a lower incidence of depression and anxiety, greater adherence to treatment and better symptom control. In addition, family members, who often take on the role of caregivers, also need structured support to deal with the emotional and physical burden imposed by the disease.

Psychological support has a significant impact on the patient's adaptation to the diagnosis and treatment, minimizing emotional distress and strengthening their resilience. The inclusion of individual and group therapies improves the patient's perception of their condition and reduces the feeling of social isolation. In addition, psychological assistance for caregivers is essential to prevent burnout and improve their ability to support the patient. Studies suggest that caregivers of cancer patients have an increased risk of developing psychological disorders, and specialized support is needed to mitigate these negative effects.

In terms of nutrition, the meta-analysis showed that maintaining an adequate metabolic state is directly associated with treatment efficacy. Patients oncology often face severe weight loss and malnutrition, compromising therapeutic response and increasing complication rates. Early nutritional assessment and individualized dietary interventions are key to ensuring that the patient has adequate support throughout treatment. In addition, adequate nutritional supplementation can reduce the rate of infections and hospitalizations, contributing to a more favourable prognosis.

Another crucial point identified was the need for efficient social and care support. Patients undergoing cancer treatment face a number of barriers, such as unequal access to health care, financial difficulties and an impact on professional and family life. Many cancer patients have to stop working, which compromises the family's economic stability. The involvement of social workers in the multidisciplinary team facilitates access to social benefits and ensures that patients' rights are respected.

Palliative care, when introduced early, has shown a positive impact not only on reducing pain and other symptoms, but also on the quality of life and satisfaction of patients and their families. Strategies such as adequate pain management, palliative sedation and spiritual support are essential to guarantee dignified and humanized care. Palliative care patients who receive specialized assistance have less need for frequent hospitalizations and greater comfort in the final stages of the disease.

However, despite the progress made in structuring support for cancer patients, challenges remain. The main limitation is the unequal access to treatments in Brazil and Paraguay. While the Brazilian Unified Health System (SUS) offers free coverage for most conventional therapies, the availability of innovative treatments, such as immunotherapy and target therapies, is still restricted. In Paraguay, access to cancer services is even more limited, with significant dependence on the private sector and a concentration of specialized services in the capital. This makes it difficult for many patients to start treatment within the ideal timeframe, directly impacting survival and therapeutic efficacy.

The comparative analysis between the two countries reveals the need for more effective public policies to ensure equity in cancer treatment. Expanding referral centers, decentralizing care and implementing screening and early diagnosis programs are key strategies for improving clinical outcomes. In addition, cooperation between the public and private sectors can enable greater integration of services and increased access to innovative drugs and therapies.

The future of cancer patient support requires an increasingly personalized approach based on scientific evidence. The development of new technologies, such as artificial intelligence and predictive data analysis, can facilitate early detection of the disease and optimize therapeutic choice. In addition, the implementation of integrated care protocols, with the use of electronic medical records shared between different specialties, can improve communication between health professionals and ensure more efficient follow-up.

It is therefore essential that health policies incorporate strategies that guarantee equitable access to multidisciplinary support, strengthen the continuing education of health professionals and promote actions that reduce inequalities in cancer treatment. Cancer is a complex disease that requires a broad and integrative approach, where adequate support can be the difference between successful treatment and a worsening of the patient's condition.

Therefore, this meta-analysis reinforces the urgency of implementing a care model that values the patient as a whole, including their physical, mental, emotional and social health. The adoption of integrated support strategies not only improves clinical outcomes, but also provides a more humanized and dignified treatment for patients and their families. Modern oncology must increasingly move in the direction of care that is not limited to treating the disease, but which also understands and meets the needs of each individual as a whole.

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