



**THE INFLUENCE OF NUTRITIONAL FACTORS ON THE QUALITY OF LIFE OF
CANCER PATIENTS: A SCOOPING REVIEW**

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ABSTRACT

Cancer is a condition of abnormal cell growth, cells lose their normal control and mechanisms resulting in rapid and uncontrolled cell growth, as well as local tissue invasion and distant metastases. Quality of life is influenced by health status. A decrease in nutritional status often occurs as a result of cancer and its therapy. Due to the lack of food intake such as appetite, swallowing ability, absorption in the body and treatment therapy actions taken, coupled with chemotherapy. The aim of this study was to determine the effect of nutrition on the quality of life of cancer patients. Methods: Researchers used the scoping review method. The article search used databases from Scencedirect, Scopus, and Pubmed with the research time January 2019 to December 2023, with the keywords influence"AND 'nutrition' AND 'quality life' AND 'Patient' AND 'Cancer'. The results were 10 articles analyzed, all of which were quantitative articles. Based on identification, there are 67 articles from search engines from Scencedirect, Scopus, and Pubmed. The final results obtained were 10 articles that fit the criteria after going through the selection process. Nutritional factors have an important role in the quality of life of patients. The better the nutrition obtained, the higher the patient's quality of life. Researchers used the PEO question format (population, exposure, outcome) to find related research articles. Improved nutrition helps prevent weight loss, which can affect tolerance to treatment and reduce its side effects. The nutritional status of cancer patients tends to change and deteriorate during intensive treatment. Maintenance of a healthy weight during cancer therapy is considered important in health management. By understanding the relationship between nutrition, diet and quality of life in cancer patients, appropriate nutrition interventions can be designed to improve treatment outcomes and patient well-being.

Keywords: cancer; nutrition; patients; quality of life

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INTRODUCTION

Cancer is a condition of abnormal cell growth, cells lose their normal control and mechanism resulting in rapid and uncontrolled cell growth, as well as local tissue invasion and distant metastases (Wahyuni et al., 2021). Nasopharyngeal cancer in Indonesia is the 4th most common malignancy after breast cancer, cervical cancer, and skin cancer. Meanwhile, in Indonesia, there are 348,809 new cases and 207,210 deaths caused by nasopharyngeal cancer (International Agency for Research on Cancer, 2020). Cancer has several risk factors including smoking history, gender, dietary factors, environmental factors, alcohol consumption, and genetic factors (Kuswandi et al., 2020). Achieving good health status and maintaining optimal physical function or ability is the goal of improving the quality of life of cancer patients (Bray et al., 2018).

Someone who has a good quality of life will have a strong desire to recover and can improve their health status. Conversely, when the quality of life decreases, the desire to recover also decreases (Haryati & Sari, 2019). It is expected that the more prosperous cancer patients are, the higher the quality of life (Elis & Daeli, 2018). The quality of life of cancer patients is influenced by nutritional status, a decrease in nutritional status often occurs as a result of cancer and its therapy. What often happens in cancer patients is that a decrease in nutritional status often occurs as a result of cancer and its therapy. And also patients feel nausea, vomiting, stomatitis, dry throat and difficulty swallowing so it is difficult to achieve optimal food intake targets (Li et al., 2022) Due to poor food intake such as appetite, swallowing ability, absorption in the body and therapeutic treatment actions carried out, coupled with chemotherapy (Sari & Bura Mare, 2022).

The health condition of cancer patients will reduce the quality of life as much as 20% of cancer patients die due to malnutrition rather than the malignancy of the disease. Undernutrition in cancer patients results in increased costs, including time lost due to inability to work, fatigue, inability to carry out normal activities (Norhasanah & Dewi, 2021). Quality of life is one of the important outcomes in cancer patients. Nutritional status has an effect on quality of life and feelings of well-being in cancer patients. Specific factors such as oral pain, hoarseness, avoidance of eating in public places, slurred speech are associated with poor quality of life in cancer patients (Greathouse et al., 2022). Cancer patients who have a good quality of life will have good physical and spiritual health, and can live in society according to their respective roles. Quality of life can help determine certain problems that may arise in cancer patients (Netherby-Winslow et al., 2023).

Many review articles have been conducted to find out what factors can affect the quality of life of nasopharyngeal cancer patients. Research (Baggs et al., 2023) states that there is a relationship between nutritional status and the quality of life of nasopharyngeal cancer patients. Many research articles on nutritional status have been conducted to find out these factors in the quality of life of nasopharyngeal cancer patients, but still in general about the relationship between nutritional status in influencing the quality of life of nasopharyngeal cancer patients and have not specifically discussed the types of nutrients, namely macronutrients and micronutrients and their influence on the quality of life of nasopharyngeal cancer patients. So that researchers conducted a scoping review, related to the influence of nutritional status factors on the quality of life of cancer patients. The purpose of this study was to obtain a clear picture of the influence of nutritional status factors on the quality of life of cancer patients.

METHOD

Researchers use the scoping review method to conduct a systematic review in identifying available evidence on a predetermined topic to find key factors of a concept (Munn et al., 2018). Scoping review is used to identify literature in depth from various sources that have relevance to the research topic (Arksey & O'Malley, 2005). The stages in compiling a scoping review refer to Arksey & O'Malley (2005) which have been modified by Levac, Colquhoun and O'Brien including identifying research questions clearly and objectively; identifying relevant articles; selection of related literature from articles and data extraction; organizing, summarizing, and analyzing; reporting data results (Arksey & O'Malley, 2005). The research question was "Is there an effect of nutrition on the quality of life of cancer patients?"

Articles used in the scoping review. The literature used is in English. Participants in the reviewed articles are cancer patients. The interventions provided by nutrition influence the

quality of life of cancer patients. Did not use a comparison. The expected outcome is the effect of nutrition on cancer patients. Study design quasi-experimental studies randomized control and trial, cross-sectional studies, qualitative studies. Articles were selected based on inclusion and exclusion criteria. Inclusion criteria in this research article search included: free fulltext, open access, publication in the last 5 years (2019-2023), English literature with nasopharyngeal cancer patient population, quantitative and/or qualitative literature. The exclusion criteria for articles were research that was not the result of a review.

Searching for related literature, this article uses data based on Scencedirect, Scopus and Pubmed with a research time of January 2019 to December 2023. In the literature search using Boolean operators “OR/AND”. The keywords used in the search are “influence” AND “nutrition” AND “quality life” AND “patient” AND “cancer”. In conducting this scoping review, the literature was searched independently through trusted databases. Articles that have been obtained are analyzed, differences, and duplication. Figure 1 describes the process of searching and selecting articles as literature using Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) (Moher et al., 2009).

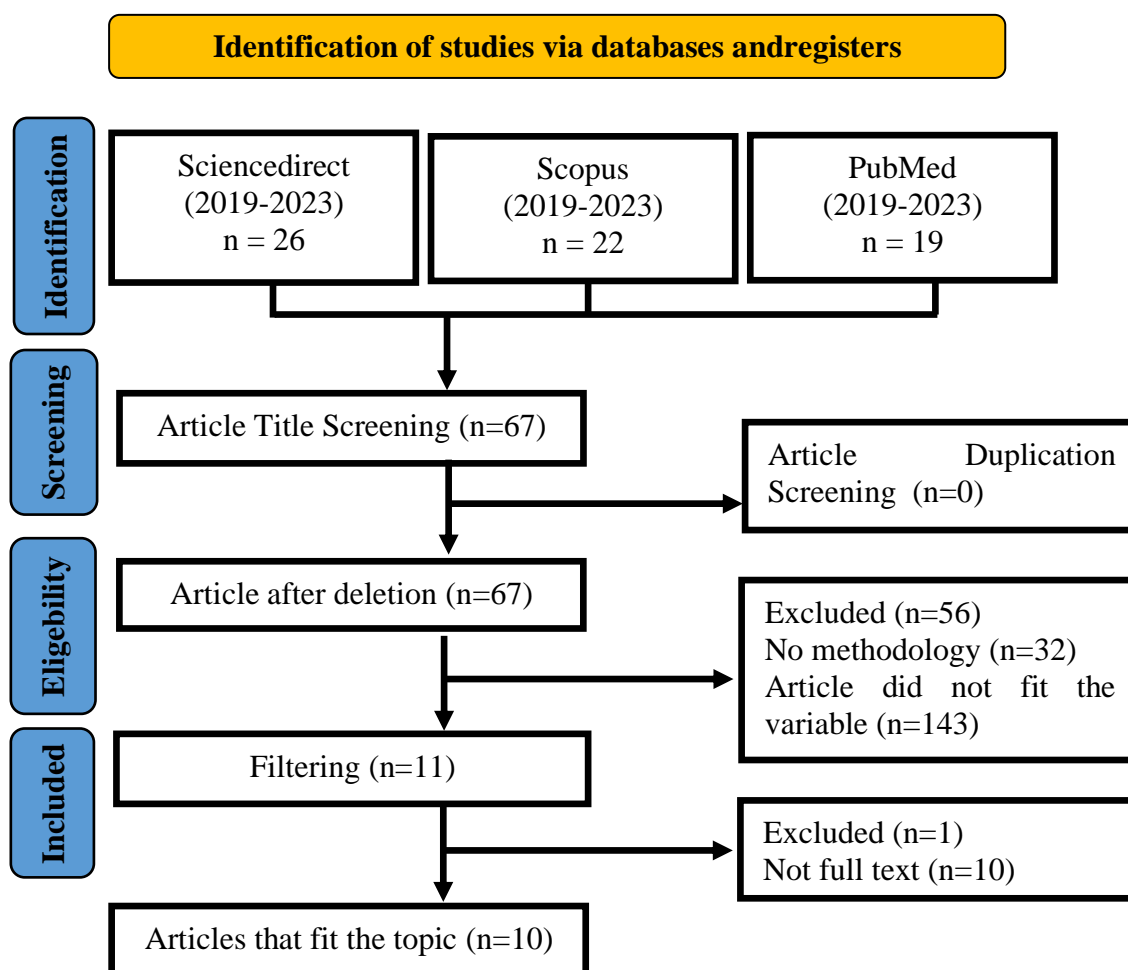


Figure 1.
PRISMA flow diagram of studies search

Articles that have been obtained are extracted in the form of a matrix in Microsoft Word. The domains used in data extraction include the name of the researcher, year, country, article title, design, respondents or participants, and findings, see Figure 1. The data selection process is

carried out through several stages, starting from selecting articles that are in accordance with the research objectives, namely The influence of nutritional factors on the quality of life of cancer patients through article titles and abstracts the articles were obtained from various search engines such as Scienccedirect, Scopus, and PubMed. Appropriate articles were then analyzed in more depth by reading the entire content of the article including year of publication, location and year of research, research design, population characteristics. The collected literature was then analyzed according to the inclusion and exclusion criteria determined by the researcher and then mapped articles based on characteristics.

RESULT

A total of 67 articles were obtained as literature from Scienccedirect (26 articles), Scopus (22 articles), and PubMed (19 articles). There were no similar articles in the data base to exclude and 67 articles remained. Of the 67 articles, 56 articles were excluded because 32 had no methodology, 5 only theory and discussion and 19 articles were not related to the topic. The results of filtering articles obtained 11 and excluded related explanations and complete articles obtained 10 related articles. Of the 10 articles analyzed, all were quantitative articles. The results of the systematic review of articles can be seen in the following table:

Table 1.
Results of Article Review

No	Title	Author	Year	Objective	Methods	Population and Sampling	Results
1	<i>Influence of Enteral Nutrition on Quality of Life in Head and Neck Cancer and Upper Gastrointestinal Tract Cancer Patients within a Pair-Matched Sample</i>	Elwira Gliwska, Dominika Głabska, Zuzanna Jacek, Sobocki, Dominika Guzek,	2023	To determine the effect of enteral nutrition on the quality of life of patients with head and neck cancer and upper gastrointes tinal cancer.	This study is based on self-report collected with the EORTC QLQ C30 questionnaire and retrospective analysis of medical records.	The study involved a group of 50 patients diagnosed with head and neck or upper gastrointestina l tract cancer. Patients were recruited for the study through purposive sampling	The study revealed that the studied group more often received lower results on the functional scale while having higher scores on the symptom scale. In addition, it was revealed that the studied group more often experienced loss of appetite, shortness of breath, or financial difficulties. For patients with head and neck and upper gastrointestinal cancers, age, weight loss, and enteral nutrition are the most important factors affecting their quality of life
2	<i>Implementation of a Low Carbohydrate Diet Improves the Quality of Life of Cancer Patients An</i>	Julia Tulipan, Barbara Kofler	2021	Gathering informatio n, how cancer patients apply the KD or LC	This study, using descriptive analysis including the use of a proposed	Recruitment of participants was conducted via social media platforms, forums and	The KD or LC diet improved self-reported quality of life in more than two-thirds of study participants. The KD had a

No	Title	Author	Year	Objective	Methods	Population and Sampling	Results
	<i>Online Survey</i>			diet, what resources they rely on, whether they perceive the benefits of the diet on quality of life (QOL).	online questionnaire, was approved by the ethics committee of Donauuniversität Krems.	cooperating physicians (April 2018 to November 2018). To be eligible for the study, participants had to be diagnosed with cancer and on the KD or LC diet at the time of participating in the study or have been on the KD or LC diet during cancer treatment.	normalizing effect on body weight. The majority of participants rated the diet as easy or very easy to follow in the long term. There is a clear gap between patients' desire for professional dietary counseling and what is currently offered by healthcare providers.
3	<i>Survey and analysis of the nutritional status in hospitalized patients with malignant gastric tumors and its influence on the quality of life</i>	Zeng Qing Guo, Jia Mi Yu & Wei Li & Zhen Ming Fu	2019	To analyze the nutritional status of hospitalized patients with malignant gastric tumors and its effect on quality of life	cross-sectional observational study	A total of 2,322 gastric cancer patients were included from January 2012 to August 2016 in several tertiary general hospitals in China	Malnutrition is common in gastric cancer patients and has a significant impact on quality of life. We should pay full attention at the time of clinical diagnosis and treatment and screen the presence of malnourished patients, provide timely and reasonable nutritional interventions to improve their tolerance to antitumor therapy, and improve the quality of life of patients.
4	<i>Cost-Effectiveness Analyses of Home Parenteral Nutrition for Incurable Gastrointestinal Cancer Patients</i>	Wenqian Li, Hanfei Guo, Lingyu Li and Jiuwei Cui	2022	To analyze the Cost-Effectiveness of Home Parenteral Nutrition for Incurable Gastrointestinal Cancer Patients	Randomization method	A total of 234 patients were eligible for inclusion, with 47 patients receiving enrollment. The minimization procedure of the restricted randomization method was	Malnutrition is a common comorbidity in patients with incurable gastrointestinal cancer. Given the unmet nutritional needs, we conducted a cost-effectiveness analysis on the implementation of

No	Title	Author	Year	Objective	Methods	Population and Sampling	Results
						performed between two groups	sHPN for patients with incurable gastrointestinal cancer, which showed that sHPN is cost-effective and worthy of further promotion in China.
5	<i>A poorer nutritional status impacts quality of life in a sample population of elderly cancer patients</i>	Tatiane Correia Rios, Lucivalda Pereira Magalhães de Oliveira, Maria Lúcia Varjão da Costa.	2021	Untuk Mengetahui i apakah Status gizi buruk berdampak pada kualitas hidup populasi sampel pasien kanker lanjut usia	Studi cross-sectional	Dengan Teknik purpose sampling, 461 pasien yang menyetujui direkrut, namun 29 peserta tidak menyelesaikan penilaian.	Status gizi yang lebih buruk secara signifikan dikaitkan dengan memburuknya domain kualitas hidup fisik, sosial, emosional dan fungsional pada pasien kanker lanjut usia. Status gizi yang buruk merupakan faktor risiko independen terhadap memburuknya kualitas hidup. Kebijakan masa depan yang ditujukan pada kelompok masyarakat rentan dapat meningkatkan kualitas hidup dan hasil kesehatan.
6	<i>Nutrition Indicators, Physical Function, and Health-Related Quality of Life in Breast Cancer Patients</i>	Krystal Ng Lu Shin, Chan Yoke Mun, Zalilah Mohd Shariff	2020	untuk membahas pengetahuan terkini tentang pola asupan makanan dan malnutrisi di kalangan pasien kanker dan dampaknya terhadap hasil pengobatan.	Studi cross sectional	Total 163 pasien kanker payudara. Sampel diambil dari bangsal onkologi rawat inap dan tempat penitipan anak. pusat berdasarkan purposive sampling.	Pasien kanker payudara melaporkan status gizi baik secara keseluruhan dan kualitas hidup sedang selama pengobatan. Dengan mendapatkan gizi yang baik, peningkatan kualitas hidup dan kekuatan genggam tangan dapat menjadi proksi potensial terhadap hasil fungsional serta kualitas hidup secara keseluruhan
7	<i>Effect of Early Nutrition Intervention on</i>	Lingbin Meng, Jinlong Wei,	2019	To investigate the effect	Cohort Studi	This study included 78 NPC patients	Early nutritional intervention provided beneficial

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	<i>Advanced Nasopharyngeal Carcinoma Patients Receiving Chemoradiotherapy</i>	Rui Ji, Bin Wang, Xiaochun Xu, Ying Xin, Xin Jiang,		of early nutritional intervention in advanced KNF patients with CRT by evaluating nutritional status and CRT treatment tolerance.		who received medical treatment between March 2015 and March 2018 at the First Hospital of Jilin University (Jilin, China).	outcomes for NPC patients by maintaining their nutritional status and improving CRT treatment tolerance. Our results also suggest early nutritional intervention can reduce hospital costs and improve patients' quality of life.
8	<i>The influence of nutrition literacy, self-care self-efficacy and social support on the dietary practices of breast cancer patients undergoing chemotherapy: A multicentre study</i>	Han Tang, Ruibo Wang, Wei Liu d, Han Xia, Haihong Jing	2023	To explore the dietary practices of Chinese breast cancer patients undergoing chemotherapy and analyze the influence of nutritional literacy, self-care self-efficacy, and perceived social support on dietary practices.	This study was a multicenter cross-sectional survey.	There were 300 respondents in total. Reporting Observational Studies in Epidemiology	Healthcare should emphasize the dietary practices of breast cancer patients during chemotherapy, and dietary interventions should be designed by oncology nurses based on patients' nutritional literacy, self-care efficacy, and perceived social support. Female patients who have higher body mass index and income, live in rural areas, have lower education levels, have stage I cancer and have undergone multiple cycles of chemotherapy are the focus population for the intervention.
9	<i>Impact of Nutrition Counseling in Head and Neck Cancer Sufferers Undergoing Antineoplastic Therapy: A Randomized Controlled Pilot Study</i>	Wangshu Dai Shu-An Wang, Kongcheng Wang , Chen Chen	2022	This study aims to determine the physical and psychological effects of nutritional counseling on HNC patients.	Prospective study	This is a prospective study involving HNC patients who received radical CCRT from June 2018 to December 2019 at the Comprehensive Cancer	HNC patients undergoing CCRT therapy usually face complex nutritional issues due to the specific anatomical location of the cancer. Both the disease itself and the treatment compromise organs that are important for maintaining

No	Title	Author	Year	Objective	Methods	Population and Sampling	Results
						Center of Drum Tower Hospital, Clinical Cancer Institute of Nanjing University.	swallowing function, further impairing the ability to maintain adequate nutritional intake. Our research shows nutritional counseling is beneficial for maintaining patients' nutritional intake, which has a positive impact on the physical and psychological condition of HNC patients.
10	<i>Impact of a specialized oral nutritional supplement on quality of life in older adults following hospitalization: Post-hoc analysis of the NOURISH trial</i>	Geraldine E. Baggs a, Carly Middleton, Jeffrey. Nelson, Suzette. Pereira, Refaat. Hegazi a,Laura Matarese , Eric Matheson	2023	To determine the impact of special oral nutritional supplements on the quality of life of the elderly after hospitalization.	This study is an exploratory post-hoc analysis of life data. Our analysis sought to evaluate the treatment effect of the study product.	A total of 652 patients were involved, but 622 patients were included in the group analysis to treat.	In hospitalized elderly people with cardiopulmonary disease and evidence of poor nutritional status, daily intake of S-ONS compared to placebo improved post-discharge quality of life scores for mental health.

DISCUSSION

Based on the three literature sources that have been determined, some important points in the influence of nutrition on quality of life are as follows: The three studies in this review identified 4 themes of the influence of nutrition on the quality of life of cancer patients. Research Rios et al., (2021) details that cancer patients who received nutritional enhancements during treatment had a better prognosis. This could mean that nutritional enhancement provides significant benefits in supporting patient health and recovery. Nutritional enhancement helps maintain the amount of nutrient intake, which in turn can prevent weight loss. This is important as weight loss can affect tolerance to treatment and worsen its side effects. Although nutritional enhancement can make a positive contribution, the nutritional status of people with cancer tends to change and deteriorate during cancer treatment. This reflects the challenges faced in maintaining optimal nutrition during intensive treatment periods. Cancer in general can cause weight loss in cancer survivors, and nutritional enhancement is reported to have a positive impact in addressing such loss. This is indicated by the statement that weight loss in the intervention group receiving enhanced nutrition was more manageable compared to the control group. Improved nutrition in the intervention group led to better maintenance of calorie and protein intake compared to the control group.

This can contribute to the maintenance of nutritional balance and prevent malnutrition in patients. In addition to maintaining nutritional intake, improved nutrition can also have a positive impact on patients' quality of life and reduce treatment-related toxicities. It is

important to note that while improved nutrition may provide benefits, there are still some challenges, such as decreased caloric intake and body weight in both groups. These results highlight the importance of continuous nutritional attention during the treatment period of head and neck cancer. The results of a study Li et al (2022) showed significant improvements in quality of life, in terms of both physical and mental aspects, with the application of enteral nutritional supplements, specifically S-ONS (Customized Oral Nutritional Supplements). Other systematic reviews and meta-analyses also confirmed the positive correlation between nutritional status and quality of life in elderly populations in aged care settings. S-ONS is used with the aim of improving nutritional status, especially nutrients that are important for muscle health, including higher protein and HMB (active metabolite of leucine). This is thought to help reduce muscle loss during hospitalization, restore muscle strength and function, and may have a positive impact on mental health and cognition, such as working memory and neural plasticity.

Maintaining physical health, maintaining mental health, and having a sense of well-being, reflected in the quality of life domain, are identified as key factors for long-term health in older people. Focus group studies emphasize that these factors have a significant impact on the quality of life of older people. To achieve the best management of older people at risk of malnutrition, special attention to patient-relevant outcomes, such as function and quality of life, is required. Clear guidelines for the prevention and treatment of malnutrition in older adults are considered key to quality care and improved quality of life. Medical professionals are faced with the challenge of best nutrition care practices to early identify and treat malnutrition in the elderly. Nutrition education to patients and caregivers was also considered important to support efforts to prevent and treat malnutrition.

The study Meng et al. (2019) asked participants questions regarding the effect of chemotherapy on their ability to perform daily tasks. More than half of the participants (47%) stated that they felt restricted or mildly restricted in performing daily activities as an effect of chemotherapy. Participants were asked to consider whether their diet had an influence on standard cancer therapy side effects and weight. Of those who felt diet had an influence (24%), most reported that chemotherapy side effects improved due to dietary changes. Participants were asked to provide their perception of changes in well-being after implementing the diet. The majority of participants (63%) reported feeling stronger due to the dietary changes, while a minority (1%) reported feeling weaker. A small number of participants (16%) did not perceive any change. These points illustrate that diet can have a significant impact on the quality of life and physical well-being of people undergoing chemotherapy.

The results of the study Dai et al. (2022) suggest that for most participants, dietary changes can help reduce the side effects of chemotherapy, improve physical well-being and provide additional strength. Nonetheless, it is important to keep in mind that responses to dietary changes may vary between individuals, and it is important to consider individualized factors in planning nutritional interventions. Individual perception of diet feasibility is considered an important factor for long-term success. Questions were posed to the study participants regarding how easy or difficult they found and adhered to the diet. Most participants in another study from Baggs et al (2023) (77%) stated that they enjoyed cooking, and the majority (89%) had no difficulty in finding suitable recipes. Respondents who disliked cooking tended to rate the diet as difficult to adhere to in the long term. Overall, most participants (67%) found long-term diet adherence easy or very easy. Only a small proportion (11%) stated that it was difficult. Dietary adherence was influenced by factors such as dietary

advice, professional support, and social and medical support. Most participants (58%) recorded their daily food intake, while only 18% sought professional support from a dietitian.

Despite this, most participants (82%) adopted the diet on their own, without supervision or counseling. Social support and a close and trusting relationship with the doctor were considered important for the success of the dietary intervention. Good relationships with family and physician support can contribute to diet continuation and adherence. Most participants (41%) agreed that they liked professional support. However, only a small proportion sought direct support from dietitians. Whereas in another study Tulipan & Kofler (2021) according to Low carbohydrate or low cholesterol diets improved self-reported quality of life in more than two-thirds of study participants. Low carbohydrates have a normalizing effect on body weight. The majority of participants rated the diet as easy or very easy to follow in the long term. There is a clear gap between patients' desire for professional dietary improvement and what is currently offered by healthcare providers.

In the future, efforts should be made to invest in dietitians trained in low-carbohydrate to support cancer patients with low-carbohydrate implementation. This is comparable to research from Guo et al (2020) which states that malnutrition can be a determining factor in quality of life if a person has adequate nutrition, quality of life increases and when experiencing malnutrition, quality of life can decrease. In another study Zaczek & Sobocki (2023) Caechexia (loss of body weight and muscle mass) and uncontrolled weight loss can worsen tumor progression and overall prognosis. This points to the importance of maintaining a healthy weight throughout the cancer therapy process. Clinicians are cautious about changing diets, as uncontrolled weight loss can have a negative impact on tumor progression. Therefore, nutrition planning and weight management are important aspects of cancer care. Overweight and obesity are identified as factors that negatively affect prognosis. This suggests that, while uncontrolled weight loss is undesirable, maintaining a healthy weight is also an important consideration.

At the time of primary diagnosis, study participants had a varied weight distribution, with a certain percentage being underweight, normal, overweight or obese. A number of participants reported weight changes during cancer therapy, including weight loss. Analysis showed a significant correlation between weight loss and the severity of overweight before starting the diet. It is important to evaluate weight change in the context of initial weight at the time of diagnosis. This may help in interpreting the effect of cancer therapy on weight and identifying participants at risk of more severe weight loss. Participants who reported the highest weight loss before or during cancer therapy were those who were overweight or obese before starting the diet. This reflects the complexity of the relationship between initial body weight and weight change during cancer therapy. By understanding this relationship, nurses and clinicians can design appropriate nutritional interventions to maintain a healthy weight and minimize the negative impact on prognosis and quality of life of cancer survivors (Tang et al., 2023).

Loss of body mass is associated with age, and balanced nutrition is considered a complementary element as it can reverse the impact of body mass loss. This relationship is also reflected in the relationship between age and the need for balanced nutrition in cancer patients. Balanced nutrition is considered important in improving the quality of life of cancer patients, especially when patients do not desire balanced nutrition. Balanced nutrition recommendations should be considered not only in terms of improving patients' chances but also from the need to improve their quality of life. Clinical nutrition in oncology is often

considered a life-saving procedure, especially in patients with cachexia or dysphagia (Shin et al., 2020). Adequate nutritional status can affect the ability to start or continue oncologic treatment. Education of healthcare practitioners, patients and the wider public on the impact of balanced nutrition on prognosis, life expectancy and quality of life in head and neck or upper gastrointestinal cancers is considered very important. This includes understanding that balanced nutrition not only has a physical impact but can also affect aspects of a patient's quality of life.

A holistic understanding of the relationship between age, body mass loss, balanced nutrition and quality of life in cancer patients is an important step in designing effective nutrition interventions and improving treatment outcomes and patient well-being. There is an observed association between the adoption of balanced nutrition and quality of life in cancer patients. A systematic review by Gliwska and colleagues showed that enteral nutrition can be applied to prevent and treat malnutrition in cancer patients, while improving their quality of life. The implementation of balanced nutrition is considered important whenever possible, especially for cancer patients. The goal is not only to maintain nutritional status and prevent loss of body mass but also to improve patients' quality of life. It should be noted that in palliative care, the use of enteral nutrition may be associated with a decrease in quality of life. However, this decline is not due to the negative impact of enteral nutrition itself, but rather may be due to its use in advanced stage patients who may experience greater challenges in maintaining quality of life (Guo et al., 2020).

Cancer-related malnutrition is a complex phenomenon, as numerous elements come together to impede food intake, increase dietary requirements and nutrient loss, and decrease anabolic triggers such as physical activity, as well as alter metabolic functions in various organs or tissues (Ortega, 2023). The various factors contributing to malnutrition form the basis for a number of treatment approaches aimed at addressing malnutrition in cancer patients (Rangwala, 2012). In many cases, it is not possible to meet an individual's nutrient needs through regular diet alone. Therefore, there is a clear need for specialized nutritional care in oncology (Poulsen, 2014). The recommendation of enteral nutrition to patients must result not only from the increase in the patient's chances but also from the need to improve their quality of life, which is especially necessary when patients do not want enteral nutrition, which is one of the common obstacles to the use of this type of treatment (Nasrah, 2020). Noteworthy, clinical nutrition in oncology is often considered as a life-saving procedure, for example, in patients with cachexia or dysphagia (Amano, 2021). Moreover, adequate nutritional status in many cases influences the ability to start or continue oncological treatment. Educating healthcare practitioners, patients, and the broader community about the impact of enteral nutrition on the prognosis, life expectancy, and quality of life in head and neck or upper gastrointestinal cancers appears to be of considerable importance.

CONCLUSION

Based on the analysis of 10 literatures, it can be concluded that cancer patients who receive improved nutrition during treatment have a better prognosis. Improved nutrition helps prevent weight loss, which can affect tolerance to treatment and reduce its side effects. The nutritional status of cancer patients tends to change and deteriorate during intensive treatment. While improved nutrition can have positive benefits, there are still challenges in maintaining optimal nutrition during intensive treatment periods. Maintenance of a healthy weight during cancer therapy is considered important in health management. By understanding the relationship between nutrition, diet and quality of life in people with cancer, appropriate nutrition interventions can be designed to improve treatment outcomes and patient well-being.

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