



Nutrición Hospitalaria



SENPE Working Group

Nutritional support in cancer patients — Perceptions of healthcare professionals and patients *Soporte nutricional en pacientes con cáncer: percepción de profesionales sanitarios y pacientes*

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Abstract

Introduction: malnutrition in patients with cancer negatively impacts their quality of life, treatment response, survival, and other clinical outcomes. Despite its importance, the access to specialized nutritional support remains limited in clinical practice.

Objective: to analyse the perceptions and practices of healthcare professionals and patients regarding nutritional support in oncology in Spain. A secondary objective was to identify the main barriers and strengths in its implementation.

Methods: an observational study was conducted using a structured survey, targeting healthcare professionals who were members of various scientific societies, as well as individuals with cancer affiliated with patient associations in Spain.

Results: a total of 393 responders were obtained from healthcare professionals and 165 from patients. Although most responders recognized the importance of nutritional status in cancer care, only 27.3 % of patients had access to specialized nutritional support. The main barriers identified included a lack of resources and limited time availability, hindering the routine implementation of nutritional screening.

Conclusions: the findings of this study highlight the need to establish standardized protocols and promote training in oncology nutrition to optimized nutritional care and improve the quality of life of patients with cancer in Spain.

Keywords:

Nutritional support. Cancer. Malnutrition. Oncology. Survey.

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Resumen

Introducción: la desnutrición en pacientes con cáncer tiene un impacto negativo en su calidad de vida, respuesta al tratamiento, supervivencia y otros resultados clínicos. A pesar de su relevancia, el acceso al soporte nutricional especializado sigue siendo limitado en la práctica clínica.

Objetivo: analizar la percepción y la práctica clínica de los profesionales sanitarios y pacientes en relación con el soporte nutricional en oncología en España. Como objetivo secundario, identificar las principales barreras y fortalezas en su implementación.

Métodos: se realizó un estudio observacional mediante una encuesta estructurada, dirigida a profesionales sanitarios miembros de diversas sociedades científicas y a personas con cáncer pertenecientes a asociaciones de pacientes en España.

Resultados: se obtuvieron un total de 393 respuestas de profesionales sanitarios y 165 de pacientes. Aunque la mayoría de los encuestados reconoce la importancia del estado nutricional en la atención oncológica, solo el 27,3 % de los pacientes con cáncer tuvo acceso a una atención nutricional especializada. Entre las principales barreras identificadas destacan la falta de recursos y la limitada disponibilidad de tiempo, lo que dificulta la implementación de un cribado nutricional rutinario.

Conclusiones: los resultados de este estudio evidencian la necesidad de establecer protocolos estandarizados para mejorar la atención nutricional de los pacientes y de fomentar la formación específica en nutrición oncológica para optimizar la atención nutricional y mejorar la calidad de vida de los pacientes con cáncer en España.

Palabras clave: Soporte nutricional. Cáncer. Desnutrición. Oncología. Encuesta.

INTRODUCTION

Malnutrition is highly prevalent among cancer patients and can negatively impact their quality of life, survival, and other clinical outcomes (1). Early and appropriate nutritional support has been shown to mitigate the adverse effects of malnutrition, improving clinical progression and tolerance to oncological treatments (2). Current evidence supports the integration of nutrition into the comprehensive care of cancer patients, and several international clinical practice guidelines from oncology and nutrition societies have emphasized the importance of its systematic implementation in daily care (3-5). However, several barriers still hinder its effective and consistent implementation in real-world clinical practice (6).

Some countries have developed specific strategies to improve the quality of nutritional care in oncology. In Scotland and Italy, for example, systematic nutritional screening has been implemented for all patients diagnosed with cancer as part of standard care (7,8). In 2017, the Italian Ministry of Health, in collaboration with the Working Group of the Italian Association of Medical Oncology (AIOM), the Italian Society of Artificial Nutrition and Metabolism (SINPE), the Italian Federation of Volunteer-Based Cancer Organizations (FAVO), and the AIOM Foundation, published official guidelines on nutritional support in cancer patients (9). Furthermore, this same group promoted the Charter of Rights for Cancer Patients on Nutritional Support, which emphasizes the need for timely and appropriate nutritional care. This document was endorsed in 2018 by the European Cancer Patient Coalition (ECPC) (10). In 2021, the European Society for Clinical Nutrition and Metabolism (ESPEN) released a practical guideline aimed at healthcare professionals involved in the care of cancer patients, with the aim of optimizing their nutritional management (11).

In Spain, as in many other countries, significant variability in clinical practice, insufficient training across healthcare disciplines, and institutional barriers have limited the adoption of standardized national guidelines for nutritional care (12). Moreover, oncologists' perceptions of malnutrition often differ from the actual nutritional status of their patients, limiting early identification and timely intervention. The absence of an adequate nutritional approach may further compromise patients' quality

of life, increase treatment-related toxicity, and contribute to the development of additional comorbidities (13,14).

The Oncology Working Group (GTO) of the Spanish Society for Clinical Nutrition and Metabolism (SENPE) has proposed the development of a consensus document, in collaboration with other scientific societies and working groups, to guide the nutritional management of cancer patients in Spain. As a preliminary step, it was considered essential to assess current clinical practice and identify the main barriers preventing the integration of appropriate nutritional support into oncology care. In this context, the present study reports the results of a national survey conducted by SENPE, to explore the perceptions and opinions of cancer patients and caregivers, along with those of the various healthcare professionals involved in their care.

METHODOLOGY

STUDY DESIGN

A panel of experts from SENPE's Oncology Working Group (GTO), who are listed as authors of this study, designed three surveys targeting different healthcare professionals involved in the care of cancer patients (medical oncologists, radiation oncologists, surgeons, and other professionals included those in the field of nutrition), as well as cancer patients themselves.

The online questionnaires included seven multiple-choice questions with either a single or multiple possible answer, depending on the question. SENPE sent a formal invitation to participate in the survey to the Spanish Society of Radiation Oncology (SEOR), the Spanish Society of Medical Oncology (SEOM), the Spanish Foundation for the Treatment of Head and Neck Tumors (FETTCC), and the Spanish Cancer Patients Group (GEPAC), with the aim of distributing the survey among their members. The survey was launched on November 1, 2022, and each society sent at least two follow-up reminders to its members to encourage participation.

In addition, the survey was distributed among SENPE members in order to gather further information on current nutritional management in cancer patients from the perspective of clinical nutrition units and professionals.

PARTICIPATION

Healthcare professionals affiliated with the aforementioned scientific societies were informed and invited to participate through their respective organizations. Similarly, patients and their caregivers were invited through GEPAC. The survey aimed to include a representative sample of professionals from various specialties involved in oncology care, as well as patients with different tumor sites, disease stages, and cancer survivors.

Participation in the survey was entirely voluntary and anonymous.

DATA COLLECTION

Data were collected anonymously from November 2022 to January 2023 through an external web-based platform specifically designed for this purpose. In addition to questions related to respondents' specialty and professional setting, the survey was structured into four main sections: 1) identification of malnutrition; 2) perceived importance of nutritional status and nutritional support; 3) management of nutritional support; and 4) strategies to improve nutritional care.

Additional questions were included for SENPE members, focusing on the methods used for nutritional screening and assessment, as well as coding and management of nutritional support.

Descriptive statistical analysis of the data was performed in February 2023.

RESULTS

PARTICIPANT CHARACTERISTICS

A total of 393 responses were collected from healthcare professionals and 165 from patients and caregivers. The SEOM de-

clined to participate in the distribution of the survey to its members due to an overload of concurrent surveys.

The overall response rate was low, ranging from 9 % to 18.1 % among healthcare professionals, and 29.3 % among patients. In addition to participation from medical and radiation oncologists, six surgeons affiliated with FETCC responded to the survey. Among SENPE members, the most represented groups were physicians (45.5 %) and dietitians (33.3 %). Over 90 % of the professionals who responded worked in public hospitals, and 81.6 % of the patients reported receiving care in public health-care institutions.

IMPORTANCE OF NUTRITIONAL STATUS

Although between 91.5 % and 95.5 % of healthcare professionals reported having access to nutrition services or clinical nutrition units at their centers, only 27.3 % of patients were assessed by a nutrition specialist, despite 47 % perceiving their nutritional status as poor. In addition, 20.9 % of these patients accessed nutritional care through private consultations, and the majority considered the visit to be very helpful.

Given the limited nutritional intervention received during treatment, more than two-thirds of surveyed patients (78.2 %) sought additional information about nutrition, primarily through the internet (70.5 %), books (60.5 %), patient associations (32.6 %), private consultations (20.9 %), and family or friends (17.1 %). For most respondents, nutritional status and sarcopenia were considered very or extremely important factors in the selection of cancer treatment (Fig. 1).

SCREENING FOR MALNUTRITION

Regarding nutritional screening in routine clinical practice, its implementation was reported by 83.1 % of SEOR respon-

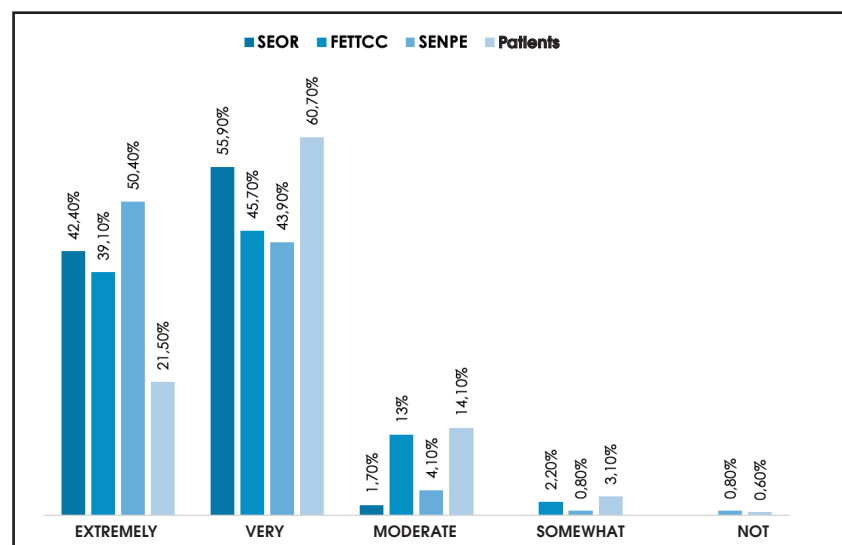


Figure 1.

Perceived importance of nutritional status and sarcopenia (SEOR: Spanish Society of Radiation Oncology; FETCC: the Spanish Foundation for the Treatment of Head and Neck Tumors; SENPE: Spanish Society for Clinical Nutrition and Metabolism).

dents, 78.3 % of FETTCC, and 69.7 % of SENPE members, with screening being conducted primarily by nutrition professionals (Fig. 2). According to respondents, nutritional screening is most often performed during the initial oncology diagnosis visit (SEOR 53.1 %; FETTCC 58.3 %; SENPE 43.5 %) and less frequently during follow-up visits, typically in cases of weight loss or treatment-related toxicity (Fig. 3). Referral for nutritional assessment most commonly originates from medical oncology (69.9 %) and surgery (58.5 %), whereas only 14.6 % of referrals come from radiation oncology,

12.2 % from hematology, and just 4.8 % from palliative care services.

The main barriers to implementing nutritional screening varied across respondent groups. Among SEOR members, the most frequently cited obstacles were lack of time (66.7 %), insufficient resources (55.6 %), and lack of tools or skills (44.4 %). According to respondents from FETTCC, nutritional screening is not considered a priority in their daily clinical practice (42.9 %). In contrast, SENPE members identified lack of resources as the primary barrier (69.7 %) (Fig. 4).

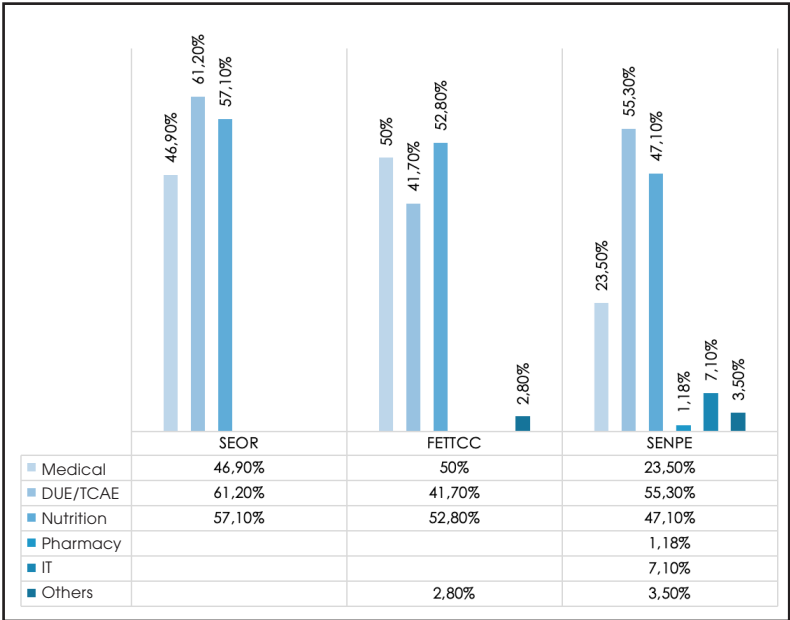


Figure 2. Distribution of healthcare professionals performing nutritional screening (SEOR: Spanish Society of Radiation Oncology; FETTCC: the Spanish Foundation for the Treatment of Head and Neck Tumors; SENPE: Spanish Society for Clinical Nutrition and Metabolism).

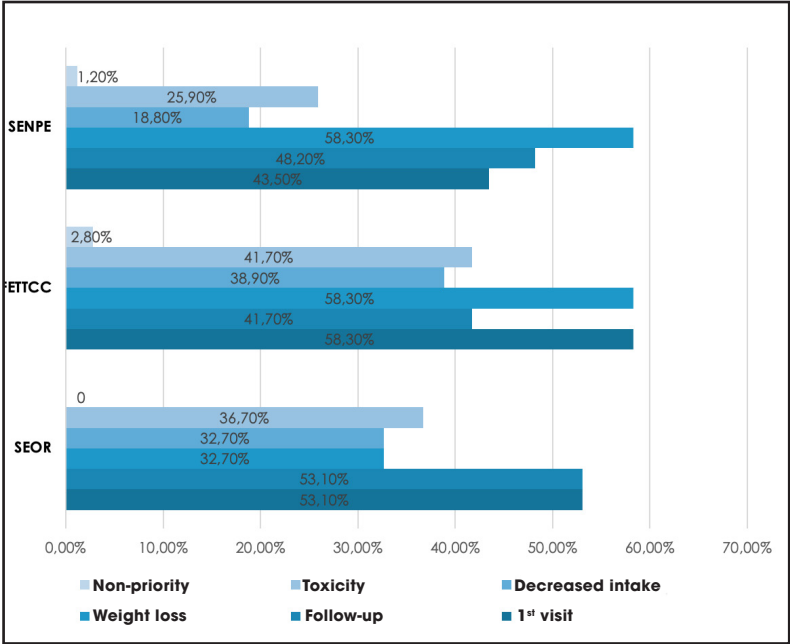


Figure 3. Frequency of timing for nutritional screening implementation (SEOR: Spanish Society of Radiation Oncology; FETTCC: the Spanish Foundation for the Treatment of Head and Neck Tumors; SENPE: Spanish Society for Clinical Nutrition and Metabolism; DK/NA: don't know / no answer).

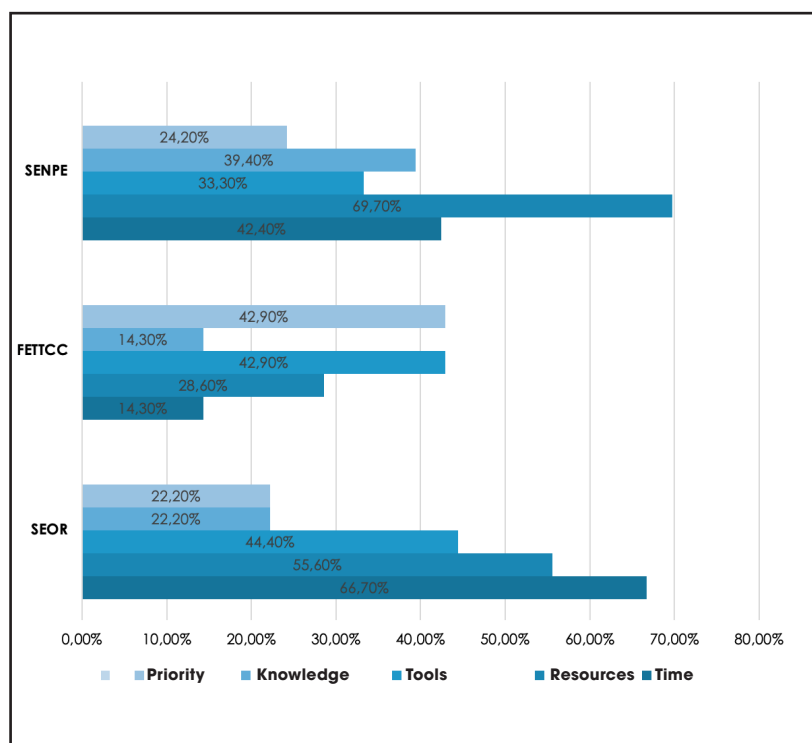


Figure 4.

Barriers to the implementation of nutritional screening (SEOR: Spanish Society of Radiation Oncology; FETTCC: the Spanish Foundation for the Treatment of Head and Neck Tumors; SENPE: Spanish Society for Clinical Nutrition and Metabolism).

DIAGNOSIS OF MALNUTRITION

Nutritional assessment and follow-up were mainly carried out by dietitians (61.8 %), physicians (58.5 %), nurses (32.5 %), and, to a lesser extent, pharmacists (5.4 %). Among SENPE members, the most commonly used methods for nutritional assessment were the GLIM criteria (Global Leadership Initiative on Malnutrition) in 49.6 % of cases, comprehensive clinical nutritional assessment in 21.8 %, Subjective Global Assessment (SGA) or Patient-Generated SGA (PG-SGA) in 7.6 %, and clinical experience or other alternative methods in 13.4 %. In addition, 68.2 % of respondents reported routinely including body composition assessment, with anthropometry being the most commonly used method (86.8 %), followed by bioelectrical impedance analysis (BIA) (82.9 %), computed tomography (CT) (9.2 %), and dual-energy X-ray absorptiometry (DEXA) (4 %). A total of 34.2 % of respondents used other body composition assessment methods.

Regarding functional assessment, 52.1 % of respondents incorporated it into their routine practice, using tools such as handgrip strength dynamometry (9.5 %), the Timed Up and Go test (33.3 %), the Sit-to-Stand test (25.4 %), the Short Physical Performance Battery (SPPB) (19 %), and gait speed tests (4 m and 6 m walking tests) in 11.1 % and 4.8 % of cases, respectively.

According to SENPE respondents, malnutrition is coded in 65 % of the centers where nutrition professionals are employed.

PRESCRIPTION AND FOLLOW-UP OF NUTRITIONAL SUPPORT

Regarding the prescription of nutritional support, differences were observed across the responses from each society. According to SEOR respondents, nutritional support is mainly prescribed by radiation oncologists (74.6 %) or dietitians (55.9 %). Respondents from FETTCC indicated that prescription is primarily carried out by nutrition professionals (Table I). Among SENPE members, nutritional support is most commonly prescribed by specialists in endocrinology and clinical nutrition (67.5 %), followed by dietitians (52 %), medical oncologists (30.1 %), nurses (22 %), surgeons (18.7 %), radiation oncologists (15.4 %), professionals from other specialties (14.6 %), and pharmacists (6.5 %).

With regard to nutritional interventions in cancer patients, the most frequently implemented approaches were dietary counseling, oral nutritional supplementation, and tube enteral nutrition, reported in 95.9 % of cases. A high degree of variability was observed in the follow-up of prescribed nutritional support.

STRATEGIES TO ENHANCE NUTRITIONAL CARE

Given the wide variability in the professionals involved in nutritional support within the Spanish healthcare system, the survey

Table I. Frequency of professionals prescribing nutritional supplementation

Healthcare Professionals	SEOR		FETTCC		SENPE	
	Indication	Follow-up	Indication	Follow-up	Indication	Follow-up
Endocrinologists and Nutrition specialist	61	55.9	58.7	47.8	67.5	57.7
Radiation oncologists	74.6	55.9	28.3	13	15.2	0
Medical oncologists	25.4	18.6	45.7	37	30.1	0
Dietitians	55.9	61	50	50	52	56.9
Nurses	10	23.7	0	21.7	22	30.9
Surgeons	11.9	1.7	6.5	4.3	18.7	0
Pharmacists	0	0	2	2.1	6.5	0
Other specialists	0	0	2.8	2.8	14.6	0

All values are expressed as percentages (%). SEOR: Spanish Society of Radiation Oncology; FETTCC: the Spanish Foundation for the Treatment of Head and Neck Tumors; SENPE: Spanish Society for Clinical Nutrition and Metabolism).

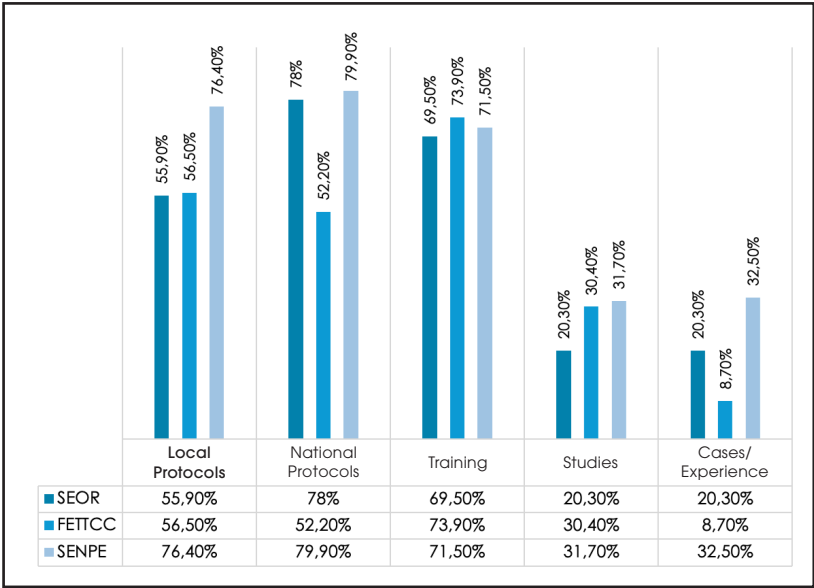


Figure 5. Strategies to improve nutritional care (SEOR: Spanish Society of Radiation Oncology; FETTCC: the Spanish Foundation for the Treatment of Head and Neck Tumors; SENPE: Spanish Society for Clinical Nutrition and Metabolism).

explored potential strategies to improve nutritional care in oncology. Among the proposed options, respondents highlighted the development of local and national protocols, improved training and specialized education, as well as reassessment of clinical experience and case analysis. These perspectives are reflected in figure 5.

DISCUSSION

This study analyzes the perceptions of different healthcare professionals and patients regarding nutritional care during cancer treatment, its integration into routine clinical practice, and its incorporation into comprehensive care. It also provides an updated overview of the current situation in Spain compared to previous surveys (10,15), expanding on different aspects of the process and proposing strategies for improvement.

Malnutrition in cancer is associated with poorer disease progression, reduced response to treatment, increased risk of radiotherapy- and/or chemotherapy-induced toxicity, higher risk of infections, and greater morbidity and mortality (15). In our cohort, the importance patients assigned to nutritional status was slightly lower than that reported in other studies (16). Sixty percent of patients considered it “very important,” 21 % “extremely important,” and only 3 % rated it as “somewhat important,” whereas other studies have reported considerably higher rates of positive perception (17). Healthcare professionals’ perceptions of the influence of nutritional status on disease progression vary considerably across studies and relative to our cohort. In previous studies, between 83 % and 89 % of professionals rated the role of nutritional status in disease progression as “extremely important” or “crucial” (14). However, in our cohort, only 39 % to 42 % of professionals gave it this highest rating, while 45 % to 55 % considered it “very important.” In other studies, such as

that by Caccialanza et al. (17), 50 % of professionals described the importance of nutritional status as “crucial,” and 47 % as “very important” or “decisive.”. These differences across studies highlight the variability in perception depending on the region and professional background (17,18). In our study, between 45 % and 55 % of professionals from FETTCC and SEOR rated nutrition as “very important,” while fewer than 3 % considered it “somewhat important.” As expected, nutrition professionals rated its importance higher than professionals from other disciplines.

The variability in perceptions of nutritional status and sarcopenia between healthcare professionals and patients underscores the need to improve communication and implement educational strategies that help patients and caregivers better understand their importance during treatment and recovery (18,19). Improved information in this area could contribute to greater adherence to nutritional interventions and help optimize clinical outcomes.

More than 90 % of surveyed healthcare professionals reported the existence of specialized nutritional support units, suggesting that these resources are available. However, patient survey results indicate that accessibility remains limited, as fewer than one-third of patients were seen by a nutrition specialist. This contrasts with findings from other European countries, where access to nutritional support is more widespread (16). This gap may help explain the high percentage of patients who sought information from sources outside the healthcare system, particularly the internet and popular science books, as reported in other studies (20). In our study, the need to seek information outside of established clinical nutrition units occurred with similar frequency to consultations with private healthcare professionals. This pattern may be explained by structural limitations, such as a shortage of human resources within public clinical nutrition teams, or by economic barriers, including the high cost of private care, limited access to public or free services, and additional expenses related to nutritional support, such as purchasing supplements or travel time. This trend may indicate an unmet need for reliable and accessible nutritional guidance, which has been linked to poorer quality of life and increased nutrition-related distress in cancer patients (21,22).

Regarding nutritional screening, implementation rates among respondents ranged from 69 % to 80 %, which is higher than those reported in other countries, where rates exceed 50 % (17). Screening is carried out by a wide range of healthcare professionals, with nursing teams playing a prominent role, alongside nutrition professionals. However, this approach may be inefficient. Nutritional screening should aim to detect early risk of malnutrition and be performed by frontline healthcare staff, ensuring that only patients at risk are referred to nutrition professionals for a detailed assessment. Delegating this task to nutrition professionals represents a suboptimal use of resources.

Moreover, standardizing the timing of screening remains a challenge. Although the first oncology visit is the most common moment for implementation, there is considerable variability in daily practice.

The identification of nutritional problems is mainly based on changes in body weight (28-58 %), whereas alterations in food intake are less frequently considered (18-38 %). This difference may be attributed to the routine practice of weight measurement

in clinical settings, whereas monitoring of dietary intake or eating-related issues is not as well standardized (16).

Regarding nutritional diagnosis, the GLIM criteria were the most commonly used, and anthropometric assessment remains the primary method for evaluating body composition. However, the use of bioelectrical impedance analysis (BIA) and computed tomography (CT) has increased. A notable finding of this study is that one-third of respondents reported using other assessment methods, suggesting a growing interest in tools such as muscle ultrasound and morphofunctional assessment.

Another important parameter in the nutritional status of oncology patients is muscle strength loss. Fifty percent of respondents reported performing some type of functional test in their workplace, with handgrip dynamometry being the most frequently used. This growing interest in both functional and body composition assessment highlights the need for new reference parameters—such as phase angle and skeletal muscle mass—to support clinical decision-making in nutritional care (23).

As observed in other countries (17,20), nutritional interventions most often involve dietary counseling and oral nutritional supplementation. Dietitians appear to be the healthcare professional group primarily responsible for the nutritional follow-up of cancer patients during treatment, although not reaching the 98 % follow-up rates reported by other authors (19). This follow-up is shared with physicians and nursing teams, in line with observations from other countries (24).

Among the limitations of this study, the low response rate (9-18.1 % for professionals and 29.3 % for patients) may have reduced the representativeness of the results, limiting the generalizability of the conclusions to the specific sample of participants. The absence of participation by SEOM—one of the key societies involved in cancer care—may also have affected a more comprehensive interpretation of the state of nutritional support in oncology in Spain. In addition, the survey-based methodology may have introduced a self-selection bias, as respondents may have had greater awareness or interest in nutrition.

Nevertheless, one of the study's strengths lies in the diversity of professionals involved, including healthcare providers from different specialties as well as patients and caregivers, which provides a comprehensive perspective. Moreover, the use of a structured questionnaire and the endorsement of various scientific societies strengthen the reliability of the data collected, offering a solid foundation for future research and strategic planning in oncological nutrition in Spain.

In conclusion, this study provides a comprehensive overview of current perceptions and practices related to nutritional support in oncology in Spain, highlighting the importance of integrating nutritional care into cancer treatment and the existing barriers that hinder its implementation. The growing interest in body composition assessment reflects ongoing efforts to improve the evaluation of nutritional status in cancer patients. The adoption of standardized protocols and enhanced training in oncological nutrition may represent key steps toward optimizing care and promoting multidisciplinary collaboration, with the ultimate goal of improving quality of life in cancer patients.

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