SYMPOSIUM ABSTRACT BOOK

When nutritional care can improve patients' outcomes in older adults. Are we doing everything we can?

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19th Congress of the European Union Geriatric Medicine Society (EuGMS) - Helsinki, Finland

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Nestlé HealthScience

AGENDA

Introduction

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Changing the patterns of nutritional care in the ORTHOGERIATRIC wards

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Malnutrition, sarcopenia and frailty: corner stone in the management of the ONCOGERIATIC patient

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Challenges in the care of SARCOPENIC DYSPHAGIA in older adults with malnutrition

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Introduction

Prof Kaisu Pitkälä, MD, PhD.

Chair biography

Prof Pitkälä is professor emerita of General Practice at the University of Helsinki and researcher at the Helsinki University Hospital.

She has designed and participated in 20 randomized, controlled trials (RCT) on frail older people from which several care models have been implemented in health and social care. She has participated in two completed EU-projects (on nutrition: PROMISS; exercise on frailty: SPRINTT) and currently participating and leading Finnish RCT in one ongoing EU project: nature as intervention in loneliness (RECETAS). In addition, she has been conducting following longitudinal epidemiological studies: Helsinki Businessmen Study (HBS) from 1974, Helsinki Long-Term Care Nutrition and Drug Study from 2003 and Helsinki Ageing Cohort Study from 1989 -.

She is leading several large multi-diciplinary research groups of senior researchers conducting these studies. She has published 461 peer-reviewed scientific articles, 164 reviews or book chapters; 27 books, and 118 popular articles. She has supervised 30 doctoral PhD students who have completed their theses. She has received several honourships.

She has had a number of scientific reviewer's tasks for international research foundations and been a reviewer for more than 50 international journals (incl. BMJ, JAMA Int Med, and all major geriatric journals). She has been a board member in several scientific societies and she is a member in editorial boards/international advisor of following peer-reviewed research journals: JAMDA, Eur Geriatric Medicine; Experimental Gerontology, Journal of Nutrition, Health and Aging, Aging Clinical Experimental Research and Age Ageing.

Ad.Prof Merja Suominen, PhD.

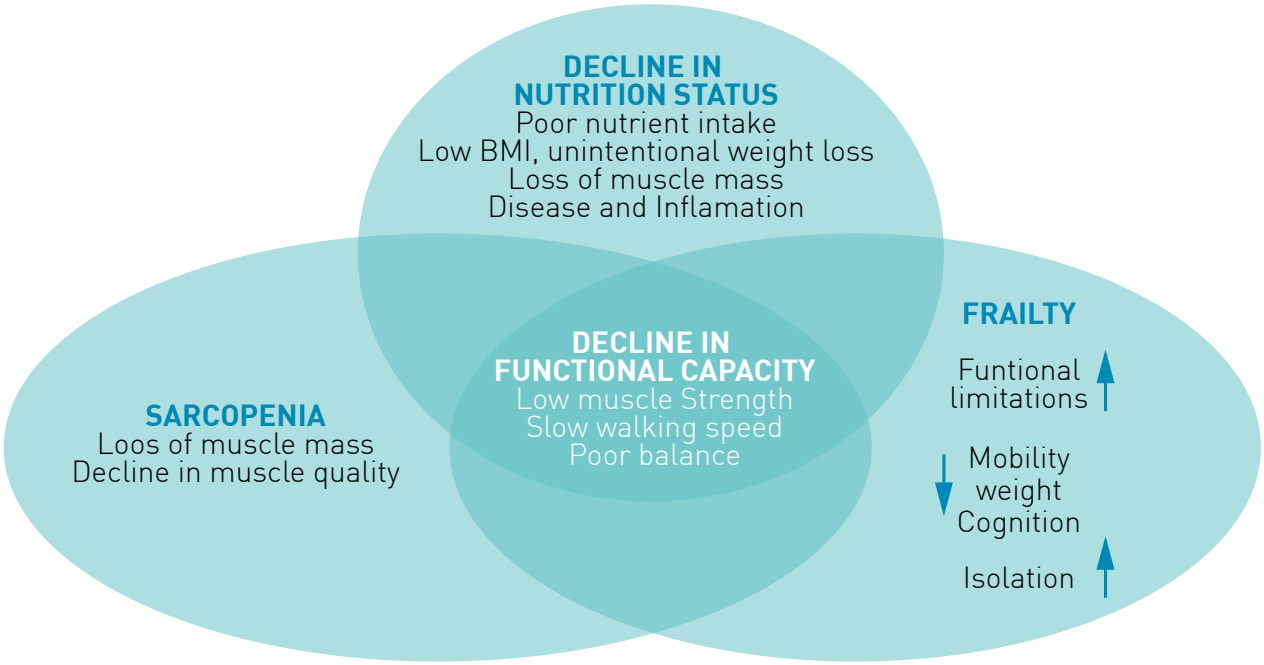
Chair biography

Ad. Prof Suominen is an executive director in the Society for Gerontological Nutrition in Finland and researcher at the University of Helsinki, Department of General Practice and Primary Health Care, and Helsinki University Central Hospital, Unit of Primary Health Care.

She has designed and participated several randomized, controlled trials on older peoples' nutrition and nutrition counseling including people with memory disorders, low protein intake and frailty. She participated in completed EU-projects on nutrition called PROMISS. In addition, she has been conducting longitudinal epidemiological studies: Helsinki Long-Term Care Nutrition and Drug Study from 2003 and nutrition part of the Helsinki Ageing Cohort Study in the year 2023. She has published 54 peer-reviewed scientific articles, 15 reviews or book chapters, and several popular articles.

Abstract

During the past 25 years malnutrition, frailty and sarcopenia have become core syndromes in geriatrics. Extensive research regarding the development of these syndromes has started to open up the interaction and mechanisms behind this triad.



The significance of malnutrition in prognosis and importance of nutrition management among older patients was introduced by geriatric research. Multimorbid and especially hip fracture and cancer patients were considered a target group for nutrition treatment. It was shown already in 2002 in randomized trials that nutritional supplements improve the prognosis of older people at risk of malnutrition[1] and nowadays recent guidelines (ESPEN, ICFSR) on clinical nutrition and hydration in geriatrics support the use of it in order to support adequate nutrition and hydration in older persons and to maintain or improve nutritional status and improve the clinical course and quality of life[2].

Older persons with malnutrition or at risk of malnutrition with chronic conditions shall be offered ONS when dietary counselling and food fortification are not sufficient to increase dietary intake and reach nutritional goals.
ESPEN GUIDELINE, Grade of recommendation GPP - Strong consensus (100% agreement).

Hospitalised older persons with malnutrition or at risk of malnutrition shall be offered ONS, in order to improve dietary intake and body weight, and to lower the risk of complications and readmission.
ESPEN GUIDELINE, Grade of recommendation A - Strong consensus (100% agreement).

After discharge from the hospital, older persons with malnutrition or at risk of malnutrition shall be offered ONS in order to improve dietary intake and body weight, and to lower the risk of functional decline.
ESPEN GUIDELINE, Grade of recommendation A - Strong consensus (100% agreement).

Oral nutritional supplements offered to an older person with malnutrition or at risk of malnutrition, shall provide at least 400 kcal/day including ≥ 30 g of protein/day.
ESPEN GUIDELINE, Grade of recommendation A - Strong consensus (97% agreement).

When offered to an older person with malnutrition or at risk of malnutrition, ONS shall be continued for at least one month. Efficacy and expected benefit of ONS shall be assessed once a month.
ESPEN GUIDELINE, Grade of recommendation GPP - Strong consensus (100% agreement).

For malnourished polymorbid medical hospitalised patients or those at high risk of malnutrition, nutrient-specific ONS should be administered, when they may maintain muscle mass, reduce mortality or improve quality of life.
ESPEN GUIDELINE, Grade of recommendation B - Consensus (89% agreement).

Consider protein supplementation and/or protein rich diet for older adults with sarcopenia.
ICFSR GUIDELINE, Strength of evidence: Conditional - Certainty of evidence: ++.

ONS: oral nutritional supplementation, GPP: Good Practice Point.

The link between nutrition and muscle health underpins the importance of maintaining an optimal nutritional status in the prevention of muscle function deterioration. Physical inactivity associated with bed rest due to hospitalization or as a result of acute events (falls, fractures, etc.) or chronic disease (cancer) increases the risk of sarcopenia and frailty, highly prevalent conditions in older adults.

Sarcopenia has been defined by European Working Group on Sarcopenia in Older People 2 (EWGSOP2) in 2019[3]. The definition[1] focuses on low muscle strength as a key characteristic of sarcopenia, uses detection of low muscle quantity and quality to confirm the sarcopenia diagnosis, and identifies poor physical performance as indicative of severe sarcopenia. With these new recommendations, EWGSOP2 called for healthcare professionals treating patients at risk for sarcopenia to take actions promoting early detection and treatment. This also encouraged more research in the field of sarcopenia in order to prevent or delay adverse health outcomes that incur a heavy burden for patients and healthcare systems.

Unlike sarcopenia, frailty still does not have a consensus definition. It may be defined as accumulation of geriatric problems, diseases, symptoms and signs (Frailty Index)[4]. It has also been defined as Frailty Phenotype, focusing on physical symptoms and signs (unintentional weight loss, self-reported exhaustion, weakness, slow walking speed, and low physical activity)[5]. Both definitions have shown strong prognostic validity regarding disabilities, quality-of-life, falls and mortality.

ACUTE EVENTS AND CHRONIC DISEASES THAT POSE A RISK TO PATIENT OUTCOMES IN OLDER ADULTS. NUTRITION

A group of people vulnerable to protein-energy malnutrition, sarcopenia and frailty are older people admitted and post-discharged from the Orthogeriatric Services. Falls are common with ageing, and one-third of people over 65 years old will fall each year. Hip fractures are considered the most serious fractures. For many people, a fracture is usually a significant and unexpected event. This can lead to loss of self-confidence, poor performance in daily activities and disabilities with a debilitating impact on poor nutritional intake and malnutition period[6] The importance of adequate energy-protein intake, calcium and vitamin D for maintaining skeletal integrity and improving dietary intake is crucial. The ESPEN Guidelines recommend (R43, Grade A, strong consensus 100%) to offer ONS postoperatively to improve dietary intake and reduce the risk of complications in older patients with hip fractures.[2]

Older adults with cancer are another vulnerable group of people for malnutrition, sarc/cachexia, and frailty. Malnutrition is highly prevalent (41%) and represents one of the mechanisms that contribute to sarcopenia in these patients. Their treatment, particularly chemotherapeutic agents, leading to anorexia, nausea and fatigue, exacerbate pre-existing muscle atrophy in older adults through pathways that increase proteasome activity, activate mitogen-activated protein kinase and extracellular regulatory kinase signaling, and induce mitochondrial dysfunction.[7,8]

Lately sarcopenia and frailty concepts have been expanded to oral sarcopenia and oral frailty. Swallowing difficulties and dysphagia are common in old age, and they are associated with sarcopenia[9]. Whereas presbyphagia (slow swallowing, prolonged meal duration, age-related condition) is often asymptomatic, dysphagia is a consequence of diseases and symptomatic: it indicates a risk for aspirations and further complications. Swallowing difficulties are related to malnutrition and development of weight loss and frailty.

Nutritional care plays a key role in treating eating difficulties, malnutrition, and weight loss in patients admitted into the orthogeriatric services, patients with cancer, and older adults with sarcopenic dysphagia, especially when recovering from those illnesses. There is strong evidence from randomized controlled trials that management of malnutrition, sarcopenia and frailty with nutritional supplements and physical exercise is beneficial for these patient groups[10-12].

Why are these three prevalent wasting conditions: 1) malnutrition, 2) sarcopenia, and 3) frailty are observed frequently in older adults with hip fracture, cancer, and dysphagia in hospitals and the community? Are we doing everything we can?

In this symposium we will briefly review the importance of nutritional care among patients in orthogeriatric wards, patients with cancer, and with sarcopenic dysphagia and guide on how to manage them and improve their health.

References

1. Milne AC, Potter J, Avenell A. Protein and energy supplementation in elderly people at risk from malnutrition. Cochrane Database Syst Rev. 2002;(3):CD003288.
2. Volkert D et al. ESPEN practical guideline: Clinical nutrition and hydration in geriatrics. Clin Nutr 2022 Apr;41(4):958-989.
3. Cruz-Jentoft AJ et al. Sarcopenia: revised European consensus on definition and diagnosis. Age Ageing. 2019;48:16-31. doi: 10.1093/ageing/afy169.
4. Rockwood K, Mitnitski A. Frailty in relation to the accumulation of deficits. J Gerontol A Biol Sci Med Sci. 2007 Jul;62(7):722-7.
5. Fried LP, Tangen CM, Walston J, Newman AB, Hirsch C, Gottdiener J, Seeman T, Tracy R, Kop WJ, Burke G, McBurnie MA; Cardiovascular Health Study Collaborative Research Group. Frailty in older adults: evidence for a phenotype. J Gerontol A Biol Sci Med Sci. 2001 Mar;56(3):M146-56.
6. Hei Chun Nicholas Chan et al. Post-discharge consequences of protein-energy malnutrition, sarcopenia, and frailty in older adults admitted to rehabilitation: A systematic review. Clin Nutr 2023; 54: 382e397
7. Xiaotao Zhang et al. Prevalence and factors associated with malnutrition in older patients with cancer J Geriatr Oncol 2019;10(5):763-769.
8. Williams GR et al. Sarcopenia in the Older Adult With Cancer. J Clin Oncol 2021 Jul 1;39(19):2068-2078.
9. Lindroos E. Swallowing difficulties, oral symptoms, and nutrition among older people in long-term care facilities. Medical thesis. University of Helsinki. Punamusta Oy. 2022.
10. Burgos R et al. ESPEN guideline clinical nutrition in neurology. Clinical Nutrition 2018; 37:354–396. DOI: 10.1016/j.clnu.2017.09.003
11. Muscaritoli et al. ESPEN practical guideline: Clinical Nutrition in cancer. Clinical Nutrition 2021; 40:2898–2913. DOI: 10.1016/j.clnu.2021.02.005
12. Lai WY, Chiu YC, Lu KC, Huang IT, Tsai PS, Huang CJ. Beneficial effects of preoperative oral nutrition supplements on postoperative outcomes in geriatric hip fracture patients: A PRISMA-compliant systematic review and meta-analysis of randomized controlled studies. Medicine (Baltimore). 2021 Nov 24;100(47):e27755.

Prof Alfonso J. Cruz-Jentoft, MD, PhD.

Changing the patterns of nutritional care in the ORTHOGERIATRIC wards

Speaker biography

Prof Cruz-Jentoft is a specialist in Geriatric Medicine. He is Chair of the Geriatric Department at the Hospital Universitario Ramón y Cajal in Madrid, and Associate Professor of Geriatrics at the Universidad Europea de Madrid, Spain. He also chairs the Spanish National Board of Geriatrics and is corresponding member of the Royal National Academy of Medicine of Spain.

Founder and Past President of the European Geriatric Medicine Society (EuGMS), he is currently Editor-in-Chief of European Geriatric Medicine, the official journal of this society and coordinates the European Working Group on Sarcopenia in Older People (EWGSOP). Member of the WHO Clinical Consortium on Healthy Ageing, he serves in the Editorial Board of most major geriatric medicine journals (Age Ageing, J Am Geriatr Soc, JAMDA, JNHA, Aging Clin Exp Res). Recognized in 2022 as Highly Cited Researcher (Clarivate).

Abstract

Hip fracture is a true geriatric syndrome: its incidence increases with age, it has a high mortality (around 20% at one year) and almost half of the patients will never recover the baseline functional status.

Malnutrition is prevalent in hip fracture patients on admission and increases rapidly; some 58% of those receiving rehabilitation will be malnourished[1,2]. Malnourished hip fracture patients have higher mortality, postoperative delirium, impaired cognition, more functional dependence with delayed mobilization and impaired gait at hospital discharge, a higher risk to end in a nursing home and of suffering periprosthetic fractures.

Although evidence is conflicting due to different baseline management of fracture and the complexity of studies, a recent meta-analysis shows that nutritional therapy is associated with a significant reduction in mortality (RR 0.61) and complications (RR 0.67) and improved grip strength in patients who are recovering from a hip fracture[3]. Orthogeriatric care is also associated with a shorter length of hospital stay and lower in-hospital and 1-year mortality (14%) and delirium[4]. Full orthogeriatric care always includes hydration and nutrition care. ESPEN recommended in the nutrition guidelines for older persons that hip fracture patients should receive routine postoperative ONS as part of a multidimensional, multidisciplinary team intervention[5]. Recent clinical guidelines of hip fracture care also include nutritional assessment and intervention as part of optimal care.

In our geriatrician-led multidisciplinary unit, we assess malnutrition and dysphagia on admission, start nutritional intervention from admission, use specific nutritional supplements (with high-quality protein, essential amino acids, calcium and vitamin D) routinely for three months, assess and treat all potential causes of malnutrition, and revise nutritional status at three months for optimization in those who still have nutritional problems. Our model may be useful to others to change the patterns of nutritional care in hip fracture care, in a quest to improve patient outcomes.

References

1. Foo MXE, Wong GJY, Lew CCH. A systematic review of the malnutrition prevalence in hospitalized hip fracture patients and its associated outcomes. JPEN J Parenter Enteral Nutr. 2021 Aug;45(6):1141-1152.

2. Wong AM, Xu BY, Low LL, Allen JC Jr, Low SG. Impact of malnutrition in surgically repaired hip fracture patients admitted for rehabilitation in a community hospital: A cohort prospective study. Clin Nutr ESPEN. 2021 Aug;44:188-193.

3. Takahashi K, Momosaki R, Yasufuku Y, Nakamura N, Maeda K. Nutritional Therapy in Older Patients With Hip Fractures Undergoing Rehabilitation: A Systematic Review and Meta-Analysis. J Am Med Dir Assoc. 2020 Sep;21(9):1364-1364.e6.

4. Van Heghe A, Mordant G, Dupont J, Dejaeger M, Laurent MR, Gielen E. Effects of Orthogeriatric Care Models on Outcomes of Hip Fracture Patients: A Systematic Review and Meta-Analysis. Calcif Tissue Int. 2022 Feb;110(2):162-184.

5. Volkert D, Beck AM, Cederholm T, Cruz-Jentoft A, Hooper L, Kiesswetter E, Maggio M, Raynaud-Simon A, Sieber C, Sobotka L, van Asselt D, Wirth R, Bischoff SC. ESPEN practical guideline: Clinical nutrition and hydration in geriatrics. Clin Nutr. 2022 Apr;41(4):958-989.

Prof Paula Ravasco. MD, RD, MSc, PhD.

Malnutrition, sarcopenia and frailty: corner stone in the management of the ONCOGERIATIC patient

Speaker biography

Prof. MD, RD, MSc, Ph.D. Is a specialist in Immuno-haemotology (OM55311), Nutritionist, Clinical Nutrition Specialist (ON0047N), Ph.D. Clinical Nutrition and Metabolism with competencies in Clinical Nutrition by ESPEN (European Society for Clinical Nutrition and Metabolism) and in clinical research by Faculty Medicine University Lisbon.

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Prof Ravasco is Team Leader and Principal Investigator at The Center for Interdisciplinary Research in Health at UCP & CatolicaMed Platfform https://fm.ucp.pt/investigacao/catolicamed, CAtólicaREsearch – CARE, UCP, Pure 5.20.2 (ucp.pt), Associate Professor of Physiological Biochemistry at the Instituto Universitário Egas Moniz (IUEM) and Principal Investigator at The Center for Interdisciplinary Research Egas Moniz (CiiEM), Instituto Universitário Egas Moniz (IUEM) Egas Moniz - Cooperativa de Ensino Superior

She is a member of the ESPEN Faculty and of the Guidelines committee ESPEN Guidelines (2016-), Associate Editor Clinical Nutrition - Journal - Elsevier (2018-), Specialty Chief Editor for Clinical Nutrition (specialty section of Frontiers in Nutrition | Clinical Nutrition).

Author and co-author of more than 80 original scientific articles published in peer-review journals.

Member of the Scientific Council of Conferences, Congresses, and Pre- and Post-graduate courses in clinical nutrition, metabolism, medicine, oncology.

Abstract

Cancer in elderly people is a growing problem. Worldwide, people aged >60 years old are growing faster than any other age group and it is forecast to reach 2 billion by 2050 (WHO 2013). Cancer is primarily a disease of older people (Cancer Research UK 2012); epidemiologic studies have shown that more than half of all newly diagnosed cancer patients and 71% of cancer deaths are in subjects ›65 years old.

While there is abundant literature on the nutritional aspects both of cancer patients and elderly people, studies focusing on nutrition of the elderly cancer patients are sparse. When facing this topic, we need to acknowledge that although malnutrition and its risk are common among older cancer patients and depend on the stage of the disease (from 40% to 62%)[1], patients with cancer-associated malnutrition are one of the most underdiagnosed patient groups leading to serious consequences (Figure 1)[2] .

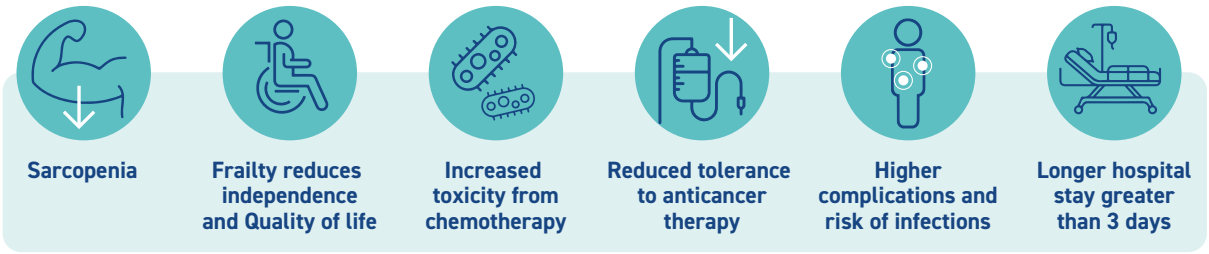


Figure 1: Consequences of malnutrition in patients with cancer

Malnutrition can significantly exacerbate the development of frailty and sarcopenia because low appetite along with long-term insufficient protein and energy intake frequently lead to significant weight loss, which is one of the five criteria for a frailty phenotype.

Frailty may also represent competing risks of morbidity and mortality, regardless of cancer and its treatment. The prevalence of frailty in older people with cancer is about 40% to 50%, with a wide range of 5% to 90% depending on the patient population[3].

Muscle wasting and cachexia in cancer, derive from a negative balance of protein and energy caused by various combinations of reduced food intake and metabolic abnormalities. The main features are a strong tendency toward catabolism and a negative protein–energy balance that is difficult to reverse.

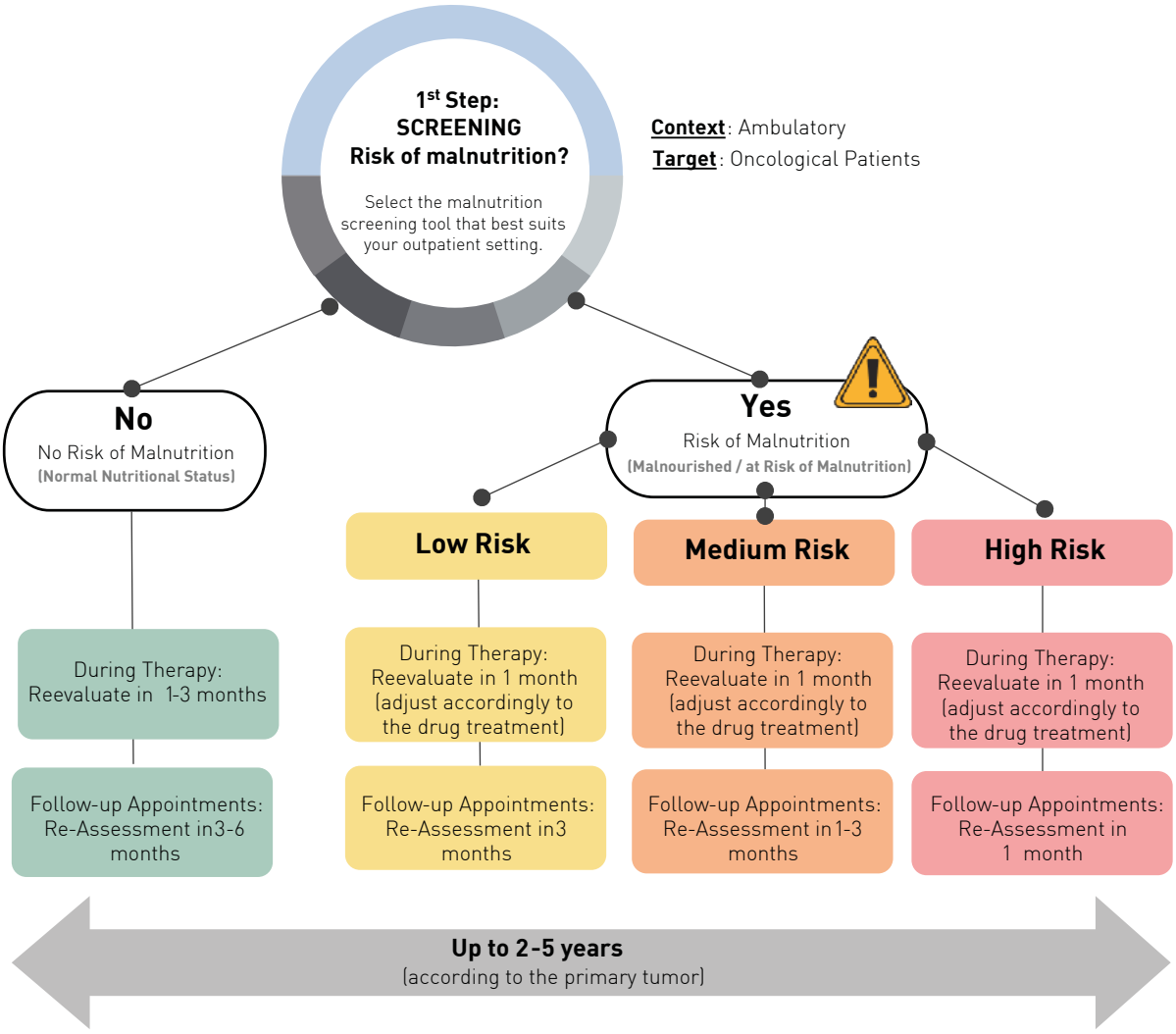
Therefore, in older adults with cancer malnutrition, sarcopenia, cachexia, and frailty should not be seen as isolated entities but as conditions that can occur simultaneously or sequentially, and deficient dietary/protein intake is a common factor denominator in these patients.

Early nutritional support has the potential to reduce the risk of therapy-threatening adverse events and to optimize the likelihood of treatment success and long-term survival. Although the optimal nutrient content for "an anti-cachexia diet" is still not defined, ESMO and the European Society for Clinical Nutrition and Metabolism (ESPEN) guidelines[4] stress the need for maintaining calorie intake, with a special focus on assuring adequate protein. Previously reported anabolic resistance may refer to a higher threshold needed for protein synthesis in response to an anabolic stimulus in elderly patients with cancer. Thus, a higher range of protein intake (1.2–1.5 g/kg/day) seems needed to promote muscle mass balance and energy (25-30 Kcal/kg/day)[5,6].

As malnutrition leads to poorer prognosis and severe malnutrition is difficult to reverse, nutritional therapy should preferably be initiated as early as possible with the aim to maintain or improve nutritional status. ESPEN on nutrition in cancer patients recommends nutritional intervention to increase oral intake in cancer patients who can eat but are malnourished or at risk of malnutrition[3]: 1) Dietary advice 2) Treatment of symptoms and derangements impairing food intake (nutrition impact symptoms) 3) Offering ONS. High-protein nutritional formulas could help to achieve the nutritional objectives and manage patients with cancer[7].

Our group developed a practical protocol based on clinical evidence and clinical practice that allows healthcare professionals caring for patients with cancer to identify patients with or at risk of malnutrition and/or muscle depletion for subsequent evaluation and follow-up by a multidisciplinary team (Figure 2).

Practical protocol for the identification and stratification of nutritional risk and muscle depletion in outpatients with cancer



Multidisciplinary intervention according to the nutritional risk and assessment of signs and symptoms in patients with cancer

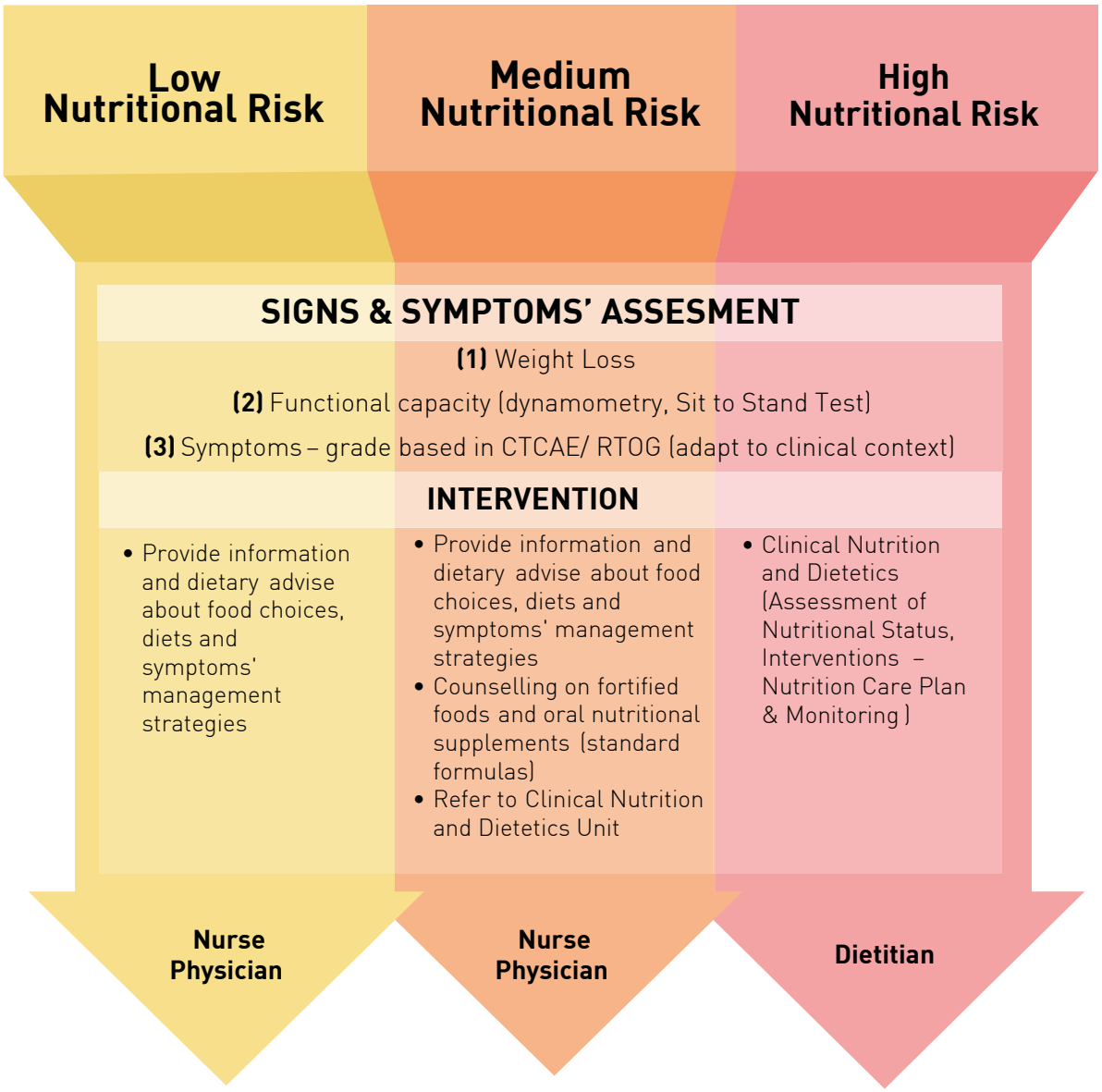


Figure 2: Early identification and intervention according to the nutritional risk in patients with cancer[8].

Recently in 2023, the American Society for Clinical Oncology (ASCO), in collaboration with the Cancer and Aging Research Group (CARG) and the International Society of Geriatric Oncology (SIOG), developed a "Practical Geriatric Assessment Proposed Scoring and Recommendations" guideline with a multidimensional approach (physical and cognitive assessment, nutrition/weight loss, social support, psychological function, comorbid conditions, risk of chemotherapy toxicity/polypharmacy) to provide care for all older patients with cancer[9].

Cooperation between different specialized professionals involved in cancer care is essential to assess and improve treatment efficiency and patient care.

References

1. Muscaritoli M, et al. Prevalence of malnutrition in patients at first medical oncology visit: the PreMiO study. Oncotarget, 2017, Vol. 8, (No. 45), pp: 79884-79896.
2. Cancer care: why nutrition matters.Infographic. Value of Medical Nutrition in Oncology - Evidence Dossier 2020 MNI.
3. Goede V. Frailty and Cancer: Current Perspectives on Assessment and Monitoring. Clin Interv Aging 2023; 18: 505–521.
4. Muscaritole M, et al. ESPEN guidelines on nutrition in cancer patients. Clin Nutr 2021: 2898e2913.
5. Prado CM, et al. Examining guidelines and new evidence in oncology nutrition: a position paper on gaps and opportunities in multimodal approaches to improving patient care. Support Care Cancer. 2020; 30:3073–83.
6. Academy of Nutrition and Dietetics - Nutrition Care Process and Model: An academic and practice odyssey. J. Ac. Nut Diet. 2014; 114, 12: 1879-1894.
7. Kim JM, et al. The Efficacy of Oral Nutritional Intervention in Malnourished Cancer Patients: a Systemic Review. Clin Nutr Res. Oct 2016;5(4):219-236. doi:10.7762/cnr.2016.5.4.219.
8. In press Acta Portuguesa de Nutrição, 2023.
9. Dale W, et al. Practical Assessment and Management of Vulnerabilities in Older Patients Receiving Systemic Cancer Therapy: ASCO Guideline Update. J Clin Oncol 2023 Jul 17.

Dr Elisabet Sánchez, MD, PhD.

Challenges in the care of SARCOPENIC DYSPHAGIA in older adults with malnutrition

Speaker biography

Elisabet Sanchez-Garcia MD PhD is a physician, specialist in Geriatric Medicine. Currently working at the Mater Private Hospital in Cork, Ireland; she earned her Doctor of Medicine degree in 2014 from Complutense University Madrid. She obtained a post-doctoral Graduate Diploma in "Statistics and Research Methodology in Health Sciences" from Universitat Autónoma de Barcelona. She is a member of the Editorial Board for the Spanish Geriatric Medicine Journal (Revista española de Geriatria y gerontología) as clinical editor. She is a peer reviewer for several international journals and has authored or co-authored peer-reviewed articles in international journals and book chapters. Her recent research focuses on sarcopenia and nutrition. She is the lead investigator in a European study in collaboration with Salamanca University and CENIE (International Center on Aging). This pragmatic study addresses the effectiveness of various methods for recruiting patients with sarcopenia.

Abstract

Sarcopenic dysphagia poses significant challenges in caring for elderly individuals, particularly when malnutrition is involved. Sarcopenic dysphagia is defined as the difficulty of swallowing due to sarcopenia of the swallowing and generalised skeletal muscles[1]. This problem has recently gained attention in scientific and clinical settings. Due to its novelty, the available evidence is limited, but the existing studies are intriguing and provide valuable insights for improving patient treatment. The Working Group on Sarcopenic Dysphagia has developed a validated 5-step diagnostic algorithm, which includes dysphagia and sarcopenia diagnosis, imaging tests confirming the loss of swallowing muscle mass or strength with no other identifiable cause of dysphagia considered as the main factor[2]. Both primary and secondary sarcopenia, caused by inactivity, malnutrition, or disease, are included in the definition of sarcopenic dysphagia[3,4]. The reported prevalence of sarcopenic dysphagia is high, reaching 81% among acute patients with pneumonia and dysphagia[5], 45%

in older adults living in institutions[6], and 32% in patients undergoing dysphagia rehabilitation[3]. Understanding the impact of oropharyngeal dysphagia on outcomes is crucial to address the challenges it presents. Research indicates that elderly individuals with dysphagia are at a higher risk of malnutrition, aspiration pneumonia, and reduced quality of life. These complications can further lead to increased healthcare utilisation, hospitalisations, and mortality rates[7]. Despite its prevalence and severity, oropharyngeal dysphagia is often under-diagnosed and left untreated. Geriatricians face numerous challenges in managing sarcopenic dysphagia. The management of dysphagia begins with Comprehensive Geriatric Assessment (CGA) and requires a multidisciplinary approach. Early diagnosis is crucial to prevent potential complications, and treatment plans should be tailored based on individual needs and capabilities, with active patient involvement in the decision-making process. A multidisciplinary team is typically involved in developing personalized treatment plans based on the underlying causes and severity of dysphagia. The primary treatments for oropharyngeal dysphagia include compensatory strategies such as postural adjustments, swallowing manoeuvres, and dietary modifications to improve safety during swallowing. Additionally, rehabilitative techniques such as exercises and therapies are employed to enhance swallowing function. Muscle strengthening methods for the treatment of sarcopenic dysphagia involve exercises targeting both oropharyngeal muscles (head-neck, tongue, and chewing muscles) and general muscles (lower extremities, anti-gravity, postural, and respiratory muscles)[8]. In addition to muscle strengthening, nutritional rehabilitation is essential. It is crucial to ensure adequate calorie and protein intake. General recommendations for nutritional rehabilitation in sarcopenic dysphagia include at least a calorie intake of >30 kcal/kg/day and a protein intake of ⩾1.2 g/kg/day[9]. Nutritional requirements can be higher in malnourished patients. According to the available evidence, meeting these requirements positively impacts swallowing function[10], tongue strength[11], the functional situation in individuals with sarcopenic dysphagia. Texture modification of food should be incorporated to improve the safety and efficiency of oral eating in patients with sarcopenic dysphagia[12]; clinicians should be aware that preparing food meeting protein nutritional needs with consistency modification can be challenging and time consuming for patients and caregivers, further hindering their ability to receive sufficient nutrition. The use of high-quality protein with essential amino acids oral nutritional supplement (ONS) is recommended to reinforce patients' diet and manage protein malnutrition and sarcopenic dysphagia. However, the preparation process required to thicken the ONS with thickening agents with the appropriated consistency may result in an unappealing, lumpy beverage which is likely to discourage use and lead to poor compliance[13,14] and risk of aspiration[15,16]. Pre-thickened-ONS are recommended and available to ensure the nutritional and consistency goals. Other relevant interventions in dysphagia treatment include education, ensuring oral hygiene[17], treating periodontal diseases, managing xerosis, and reviewing and adjusting medications. Geriatricians can also play an essential role in prevention of sarcopenic dysphagia. Sarcopenic dysphagia can result from iatrogenic interventions[18], such as unnecessary inactivity[19] or oral intake restrictions, inappropriate nutritional care management, iatrogenic diseases, or adverse drug events. Continued research and clinical trials are essential for advancing our understanding and developing effective management strategies for this condition.

References

1. Wakabayashi H. Presbyphagia and Sarcopenic Dysphagia: Association between Aging, Sarcopenia,and Deglutition Disorders. J Frailty Aging. 2014;3(2):97-103. doi: 10.14283/jfa.2014.8

2. Mori T, Fujishima I, Wakabayashi H, Oshima F, Itoda M, Kunieda K, Kayashita J, Nishioka S, Sonoda A, Kuroda Y, et al. Development, reliability, and validity of a diagnostic algorithm for sarcopenic dysphagia. JCSM Clin Rep. 2017;2:1-10

3. Fujishima I, Fujiu-Kurachi M, Arai H, Hyodo M, Kagaya H, Maeda K, Mori T, Nishioka S, Oshima F, Ogawa S, Ueda K, Umezaki T, Wakabayashi H, Yamawaki M, Yoshimura Y. Sarcopenia and dysphagia: Position paper by four professional organizations. Geriatr Gerontol Int. 2019 Feb;19(2):91-97. doi: 10.1111/ggi.13591

4. Chen KC, Jeng Y, Wu WT, Wang TG, Han DS, Özçakar L, Chang KV. Sarcopenic Dysphagia: A Narrative Review from Diagnosis to Intervention. Nutrients. 2021 Nov 12;13(11):4043. doi: 10.3390/nu13114043

5. Miyauchi N, Nakamura M, Nakamura I, Momosaki R. Effect of early versus delayed mobilization by physical therapists on oral intake in patients with sarcopenic dysphagia after pneumonia. Eur Geriatr Med. 2019 Aug;10(4):603-607. doi: 10.1007/s41999-019-00169-1

6. Moncayo-Hernández BA, Herrera-Guerrero JA, Vinazco S, Ocampo-Chaparro JM, Reyes-Ortiz CA. Sarcopenic dysphagia in institutionalised older adults. Endocrinol Diabetes Nutr (Engl Ed). 2021 Jul 1:S2530- 0164(21)00146-4. doi: 10.1016/j.endinu.2021.02.010

7. Baijens LW, Clavé P, Cras P, Ekberg O, Forster A, Kolb GF, Leners JC, Masiero S, Mateos-Nozal J, Ortega O, Smithard DG, Speyer R, Walshe M. European Society for Swallowing Disorders - European Union Geriatric Medicine Society white paper: oropharyngeal dysphagia as a geriatric syndrome. Clin Interv Aging. 2016 Oct 7;11:1403-1428. doi: 10.2147/CIA.S107750

8. Wakabayashi H, Matsushima M, Momosaki R, et al. The effects of resistance training of swallowing muscles on dysphagia in older people: a cluster, randomized, controlled trial. Nutrition. 2018;48:111-116

9. Chen KC, Jeng Y, Wu WT, Wang TG, Han DS, Özçakar L, Chang KV. Sarcopenic Dysphagia: A Narrative Review from Diagnosis to Intervention. Nutrients. 2021 Nov 12;13(11):4043. doi: 10.3390/nu13114043

10. Shimizu A, Fujishima I, Maeda K, Wakabayashi H, Nishioka S, Ohno T, et al. Nutritional Management Enhances the Recovery of Swallowing Ability in Older Patients with Sarcopenic Dysphagia. Nutrients [Internet]. 2021 Feb 11;13(2):596. Available from: http://dx.doi.org/10.3390/nu13020596.

11. Nagano A, Maeda K, Koike M, Murotani K, Ueshima J, Shimizu A, Inoue T, Sato K, Suenaga M, Ishida Y, Mori N. Effects of Physical Rehabilitation and Nutritional Intake Management on Improvement in Tongue Strength in Sarcopenic Patients. Nutrients. 2020 Oct 12;12(10):3104. doi: 10.3390/nu12103104

12. Newman R, Vilardell N, Clavé P, Speyer R. Effect of Bolus Viscosity on the Safety and Efficacy of Swallowing and the Kinematics of the Swallow Response in Patients with Oropharyngeal Dysphagia: White Paper by the European Society for Swallowing Disorders (ESSD). Dysphagia. 2016 Apr;31(2):232-49. doi: 10.1007/s00455-016-9696-8. PMID: 27016216; PMCID: PMC4929168.

13. Matta Z, Chambers Et, Mertz Garcia J, McGowan Helverson JM. Sensory characteristics of beverages prepared with commercial thickeners used for dysphagia diets. Journal of the American Dietetic Association. 2006;106(7):1049-1054.

14. Cichero JA. Thickening agents used for dysphagia management: effect on bioavailability of water, medication and feelings of satiety. Nutrition Journal. 2013;12(1):1-8.

15. McCormick SE, Stafford KM, Saqib G, Chroinin DN, Power D. The efficacy of pre-thickened fluids on total fluid and nutrient consumption among extended care residents requiring thickened fluids due to risk of aspiration. Age and ageing. 2008;37(6):714-715.

16. Steele CM, Alsanei WA, Ayanikalath S, et al. The influence of food texture and liquid consistency modification on swallowing physiology and function: a systematic review. Dysphagia. 2015;30(1):2-26.

17. an der Maarel-Wierink CD, Vanobbergen JN, Bronkhorst EM, Schols JM, de Baat C. Oral health care andaspiration pneumonia in frail older people: a systematic literature review. Gerodontology. 2013 Mar;30(1):3-9. doi: 10.1111/j.1741-2358.2012.00637.x. PMID: 22390255.

18. Nagano A, Nishioka S, Wakabayashi H. Rehabilitation Nutrition for Iatrogenic Sarcopenia and Sarcopenic Dysphagia. J Nutr Health Aging. 2019;23(3):256-265. doi: 10.1007/s12603-018-1150-1.PMID: 30820514.

19. Miyauchi N, Nakamura M, Nakamura I, Momosaki R. Effect of early versus delayed mobilization by physical therapists on oral intake in patients with sarcopenic dysphagia after pneumonia. Eur Geriatr Med. 2019Aug;10(4):603-607. doi: 10.1007/s419

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