Summary-ESPEN practical guideline: Clinical Nutrition in cancer

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Nestlé Health Science

Preface

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Neoplastic diseases represent the second leading cause of death in the world and the number of new cases is expected to increase significantly in the coming decades. Malnutrition is a common feature in cancer patients, it's the consequence of the presence of cancer itself and cancer treatments, and has a negative impact on the quality of life and toxicity of cancer therapies.

10-20% of cancer patients die from the consequences of malnutrition rather than from the cancer itself. Therefore, nutrition plays a crucial role in multimodal cancer care. Current evidence indicates that nutritional aspects should be taken into account from the moment of cancer diagnosis, within a diagnostic and therapeutic pathway, parallel to the oncological treatment.[1]

The Practical Guidelines on Clinical Nutrition in Oncology (ESPEN practical guideline: Clinical Nutrition in cancer)[2] include 43 recommendations and are based on the ESPEN Guidelines on Nutrition in Cancer Patients[3] of which represent a more agile and easier to read version.

The original recommendations, developed according to the PICO model[4], have not been modified, but the presentation of the contents has been transformed, where possible, into decision-making flow-charts of considerable visual impact.

These practical guidelines have been developed to translate current best evidence and expert opinions into recommendations for multidisciplinary teams responsible for identifying, preventing and treating malnutrition in adult cancer patients.

ESPEN practical guideline: Clinical Nutrition in cancer – The rationale

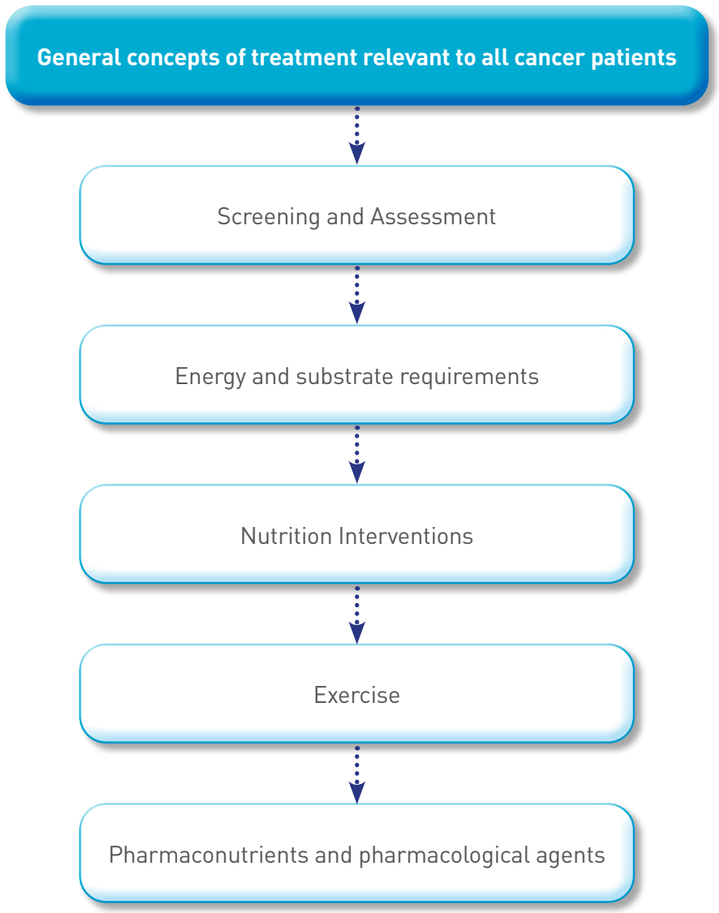
- Malnutrition is a common feature in cancer patients and negatively impacts on quality of life, treatment toxicities and survival
- Currently available evidence indicates that nutritional issues should be taken into account since the time of cancer diagnosis, and that nutritional care should be running in parallel to the oncologic treatments and follow-up
- The present practical guideline consists of 43 recommendations, based on ESPEN guidelines on nutrition in cancer patients [5]
- The original recommendations were not changed
- Wherever possible the presentation of the content was transformed into user-friendly graphical decision-making flow charts
- These evidence-based recommendations are intended for multi-disciplinary teams responsible for the identification, prevention, and treatment of malnutrition in adult cancer patients

Literature references:

1. Muscaritoli M, Arends J, Bachmann P, et al. ESPEN practical guideline: Clinical Nutrition in cancer. Clin Nutr. 2021;40: 2898-2913.
2. Muscaritoli M, Molfino A, Gioia G, Laviano A, Rossi Fanelli F. The "parallel pathway": a novel nutritional and metabolic approach to cancer patients. Intern Emerg Med. 2011;6: 105-12.
3. Arends J, Bachmann P, Baracos V, Barthelemy N, Bertz H, Bozzetti F, et al. ESPEN guidelines on nutrition in cancer patients. Clin Nutr 2017; 36:11-48.
4. Preiser J-C, Schneider SM. ESPEN disease-specific guideline framework. Clin Nutr 2011; 30:549-52.
5. Arends J, et al. Clinical Nutrition, 2017

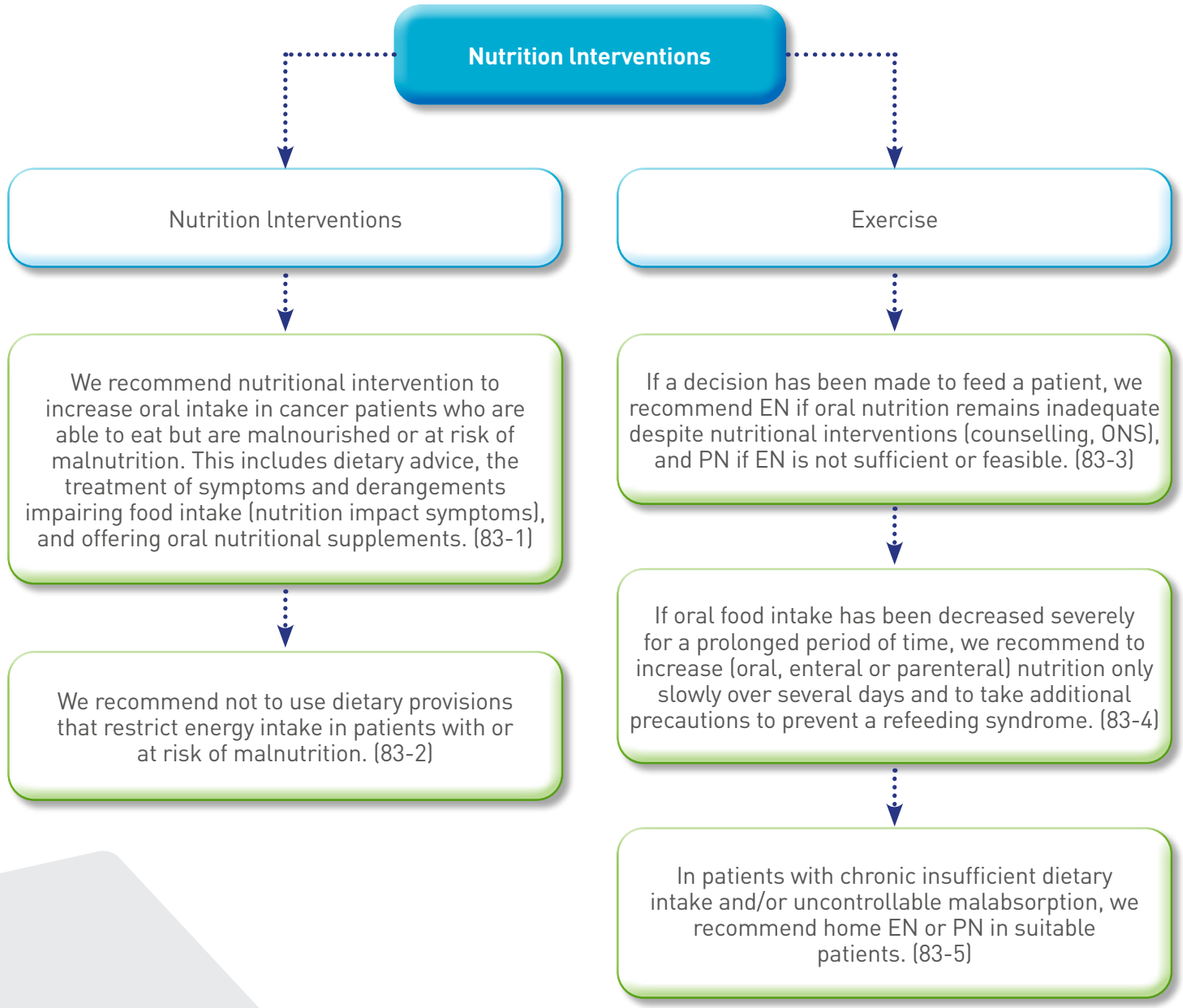
General concepts of treatment relevant to all cancerpatients

- Regularly evaluate nutritional intake, weight change, and body mass index (BMI), beginning with cancer diagnosis and repeated, depending on the stability of the clinical situation
- In patients with abnormal screening, it is recommended to perform an objective and quantitative assessment of nutritional intake, nutrition impact symptoms, muscle mass, physical performance and the degree of systemic inflammation
- Energy expenditure (TEE) of cancer patients, if not measured individually, it is assumed to be similar to healthy subjects and generally ranging between 25 and 30 kcal/kg/day
- Protein intake should be above 1 g/kg/day and, if possible, up to 1.5 g/kg/day
- Vitamins and minerals should be supplied in amounts approximately equal to the recommended daily allowance and the use of high-dose micronutrients is discouraged
- In weight-losing cancer patients with insulin resistance, it is recommended to increase the ratio of energy from fat to energy from carbohydrates. This is intended to increase the energy density of the diet and to reduce the glycemic load



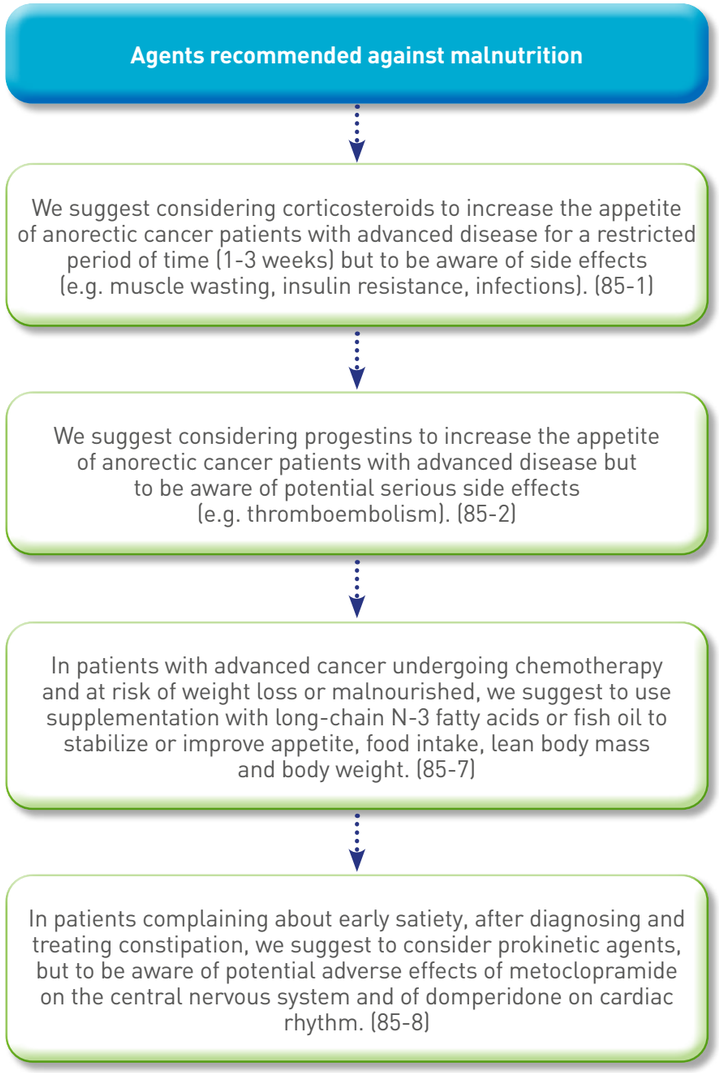
Nutritional interventions

- Nutritional therapy should preferably be initiated when patients are not yet severely malnourished
- Additional use of ONS is advised when an enriched diet is not sufficient to reach nutritional goals
- Medical nutrition (enteral, parenteral) is indicated if patients are unable to eat adequately (e.g. less than 50% of the requirement for more than one week or only 50-75% of the requirements for more than two weeks)



Pharmaconutrient and pharmacological agents

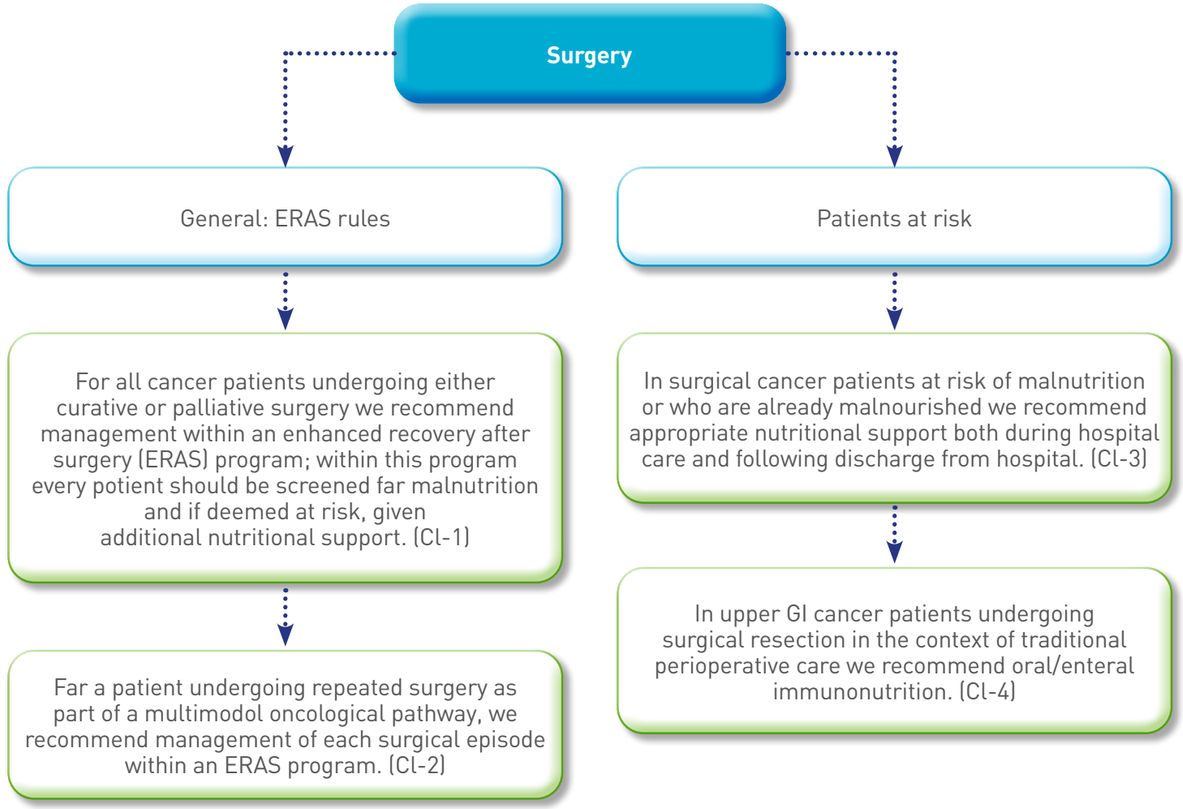
- Long-chain N-3 fatty acids improve appetite, body weight, post-surgical morbidity, and quality of life in weight-losing cancer patients
- Long-chain N-3 fatty acids in cancer cachexia patients during chemo and/or radiotherapy have beneficial effects, most prominently conservation of body composition, reduction of some chemotherapy-induced toxicities, like peripheral neuropathy
- There are insufficient consistent clinical data to recommend the supplementation with branched-chain or other amino acids or metabolites to improve fat-free mass
- There are insufficient consistent clinical data to recommend cannabinoids to improve taste disorders or anorexia in cancer patients



Interventions relevant to specific patient categories

SURGERY

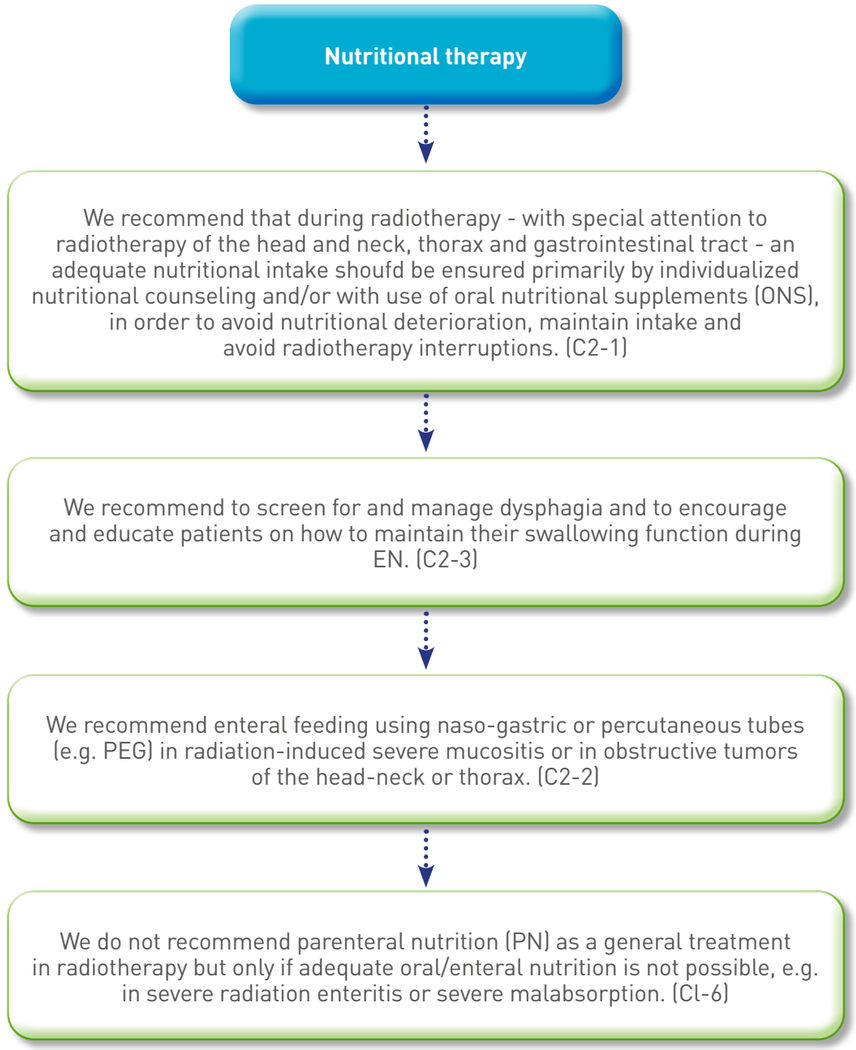
- Nutritional components of ERAS include avoiding fasting, pre-operative fluid and carbohydrate load, a recommencement of oral diet on the first post operative day
- Patients at moderate or severe nutritional risk (especially those undergoing upper GI cancer surgery) should be considered for routine post-operative nutritional support
- Upper GI cancer patients managed within a traditional pattern of peri-operative care experienced a reduction in post-operative infective complications when given oral/enteral so-called "immune-modulating nutrition" in the peri-operative period



Interventions relevant to specific patient categories

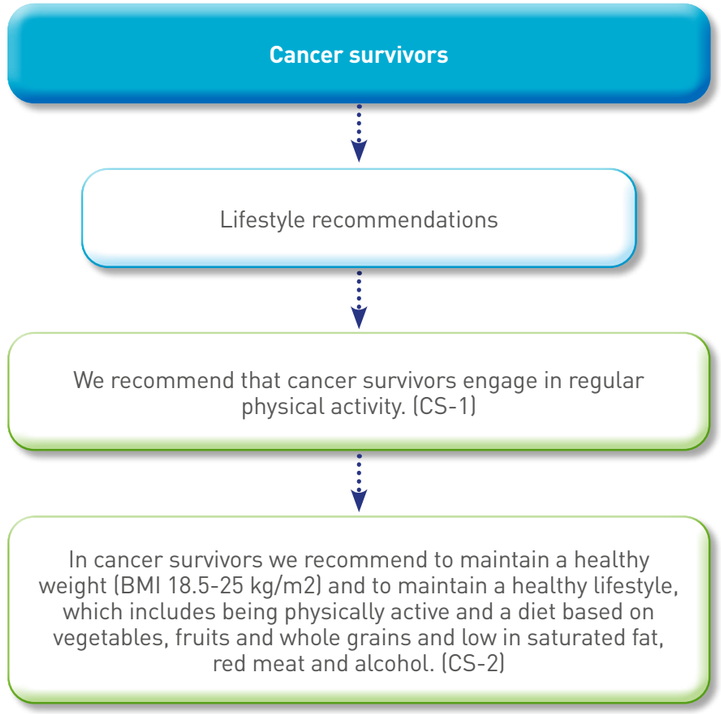
RADIOTHERAPY

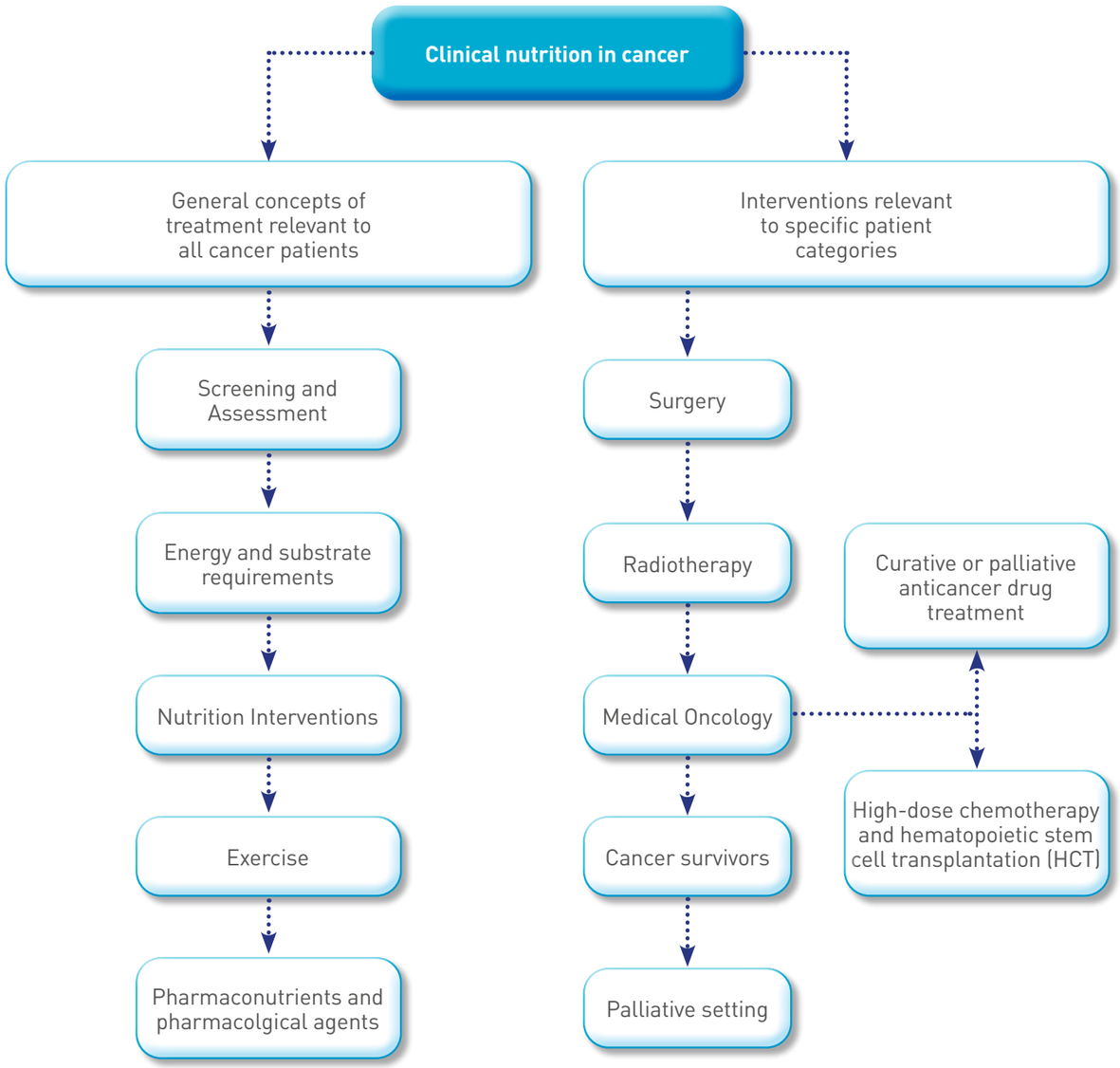
- All patients undergoing radiation of the GI tract, or the head and neck region should receive thorough nutrition assessment, adequate nutritional counseling and, if necessary, nutritional support according to symptoms and nutritional status
- Dysphagia assessment and prophylactic as well as therapeutic interventions should be used regularly
- There are insufficient consistent clinical data to recommend
  - glutamine to prevent radiation-induced enteritis/diarrhea, stomatitis, esophagitis or skin toxicity
  - probiotics to reduce radiation-induced diarrhea
  - glutamine supplementation during conventional cytotoxic or targeted therapy



Cancer survivors

- Physical activity is associated with reduced recurrence and mortality among breast and colon cancer survivors, however, there is currently insufficient evidence regarding the association between physical activity and mortality for survivors of other cancers
- Cancer survivors should strive to maintain a healthy weight and avoid excessive weight gain throughout life by balancing calorie intake with physical activity





Structure of the ESPEN practical guideline: "Clinical nutrition in cancer"

Note

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