

Nutrition in Cancer

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It is clear that nutritional wasting in cancer is not due solely to a nutrient deficit or tumor/host competition for essential nutrients, but to complex metabolic changes in tissues arising from anorexia, tumor progression, systemic inflammation, reduced muscle mass and function, tumor catabolic factors, increased by proinflammatory cytokines, as well as the psychosocial *sequelae*. Knowledge of the wasting mechanisms may lead to improved treatments, which hopefully will extend lifespan as well as improve quality of life [1, 2].

Cancer is associated with malnutrition that may evolve to cancer cachexia. Cancer cachexia is multifactorial and is defined as ‘a multifactorial syndrome with loss of skeletal muscle mass (with or without loss of fat mass), which is not fully reversed by conventional nutritional support’. Regardless of the underlying mechanisms, cancer-related wasting is multidimensional and worsens patients’ well-being, tolerance to anti-neoplastic therapies and prognosis. Weight loss decreases immunological responses to tumor cells and resistance to infection, enhances susceptibility to postoperative complications, and increases disability and overall costs of care [3].

Thus it is now consensual that nutrition intervention is mandatory in all cancer patients. In clinical practice, oral nutrition is always the priority because it is a significant part of the patient’s daily routine and does contribute substantially to the patients’ autonomy. One has to bear in mind that eating is a source of pleasure and is a privileged time to spend with family and friends, avoiding the tendency for isolation in patients. The referral to a nutrition professional responsible for the individualized dietary counseling should always be based on evidence-based decision-making plans (fig. 1) [4, 5].

As clinicians, we have to recognize the dimensions that are determinant for patients. An adequate food intake is recognised by the patient, as well as by the family and caregivers, as essential to maintain the daily activity, energy and functional capacity and to overcome more successfully the treatment journey. To be effective, individualized counseling has

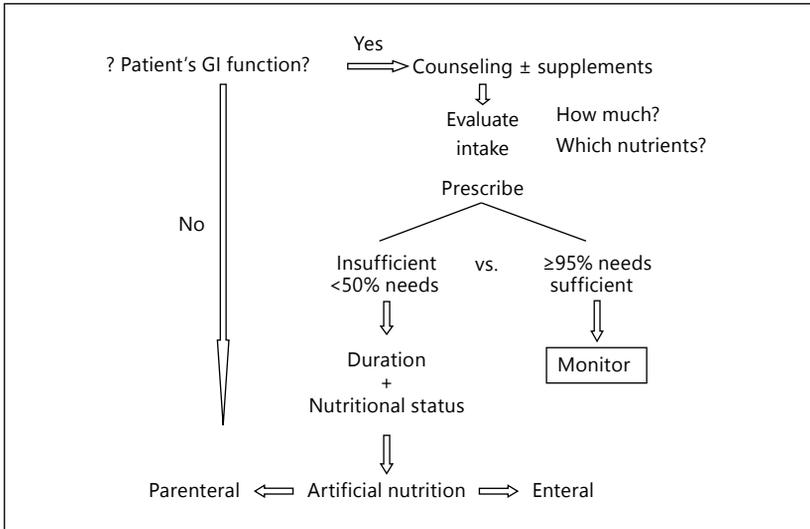


Fig 1. Evidence-based decision-making plan (adapted from ESPEN 2010). GI = Gastrointestinal.

Table 1. Common causes for a poor nutrient intake in cancer patients

Deterioration in taste, smell and appetite as a consequence of the tumor and/or therapy
Altered food preferences/food avoidance/food aversion
Eating problems (teeth/chewing)
Dysphagia, odynophagia or partial/total gastrointestinal obstruction
Early satiety, nausea and vomiting
Soreness, xerostomia, sticky saliva, painful throat and trismus
Oral lesions and esophagitis
Radiotherapy-/chemotherapy-induced mucositis
Acute or chronic radiation enteritis during and after radiotherapy
Depression and anxiety
Pain

to be based on a thorough assessment of various nutritional and clinical parameters evaluated in any nutrition consultation. A detailed symptom assessment is mandatory (table 1).

Intensive individualized nutritional counselling is the most effective and the most physiologic means of feeding patients. Notwithstanding, one has to acknowledge that this clinical approach requires nutrition

professionals that have to be differentiated in oncology. Due to its world-wide demonstrated efficacy, this integrated intervention should be fostered as the nutritional treatment of excellence in cancer patients.

Early nutritional intervention is paramount to prevent nutritional and physiological deficits and can modulate weight loss and morbidity, maintain an adequate nutritional and performance status and quality of life [5, 6]. It has the potential to stabilize or improve the patients' clinical status and augment the potential for favorable responses to therapy, recovery and prognosis. With the advent of more effective cancer therapies leading to greater numbers of affected long-term survivors, much more emphasis is urgently required to provide the best care during treatments, in order to improve patients' clinical course. Evidence argues for the integration of nutrition as part of a team approach for cancer treatment and patient management and to recognize the importance and necessity of good nutrition as therapy, strengthening the recognition of the patient's right of expecting adequate nutrition care, which is mandatory to sustain life throughout the disease journey. Early and timely intervention and sensible partnerships with patients are key to success.

References

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