

Nutritional and Metabolic Derangements in Patients with Cancer and Cancer Survivors: Results from an European Cancer Patient Coalition (ECPC) 2016 Survey

Prof. Maurizio Muscaritoli

DIPARTIMENTO
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SAPIENZA
UNIVERSITÀ DI ROMA





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Clinical Research Paper

Prevalence of malnutrition in patients at first medical oncology visit: the PreMiO study

Maurizio Muscaritoli¹, Simone Lucia¹, Alessio Farcomeni², Vito Lorusso³, Valeria Saracino³, Carlo Barone⁴, Francesca Plastino⁴, Stefania Gori⁵, Roberto Magarotto⁵, Giacomo Carteni⁶, Bruno Chiurazzi⁶, Ida Pavese⁷, Luca Marchetti⁷, Vittorina Zagonel⁸, Eleonora Bergo⁸, Giuseppe Tonini⁹, Marco Imperatori⁹, Carmelo Iacono¹⁰, Luigi Maiorana¹⁰, Carmine Pinto¹¹, Daniela Rubino¹¹, Luigi Cavanna¹², Roberto Di Cicilia¹², Teresa Gamucci¹³, Silvia Quadrini¹³, Salvatore Palazzo¹⁴, Stefano Minardi¹⁴, Marco Merlano¹⁵, Giuseppe Colucci¹⁶ and Paolo Marchetti^{17,18}, on behalf of the PreMiO Study Group¹⁹

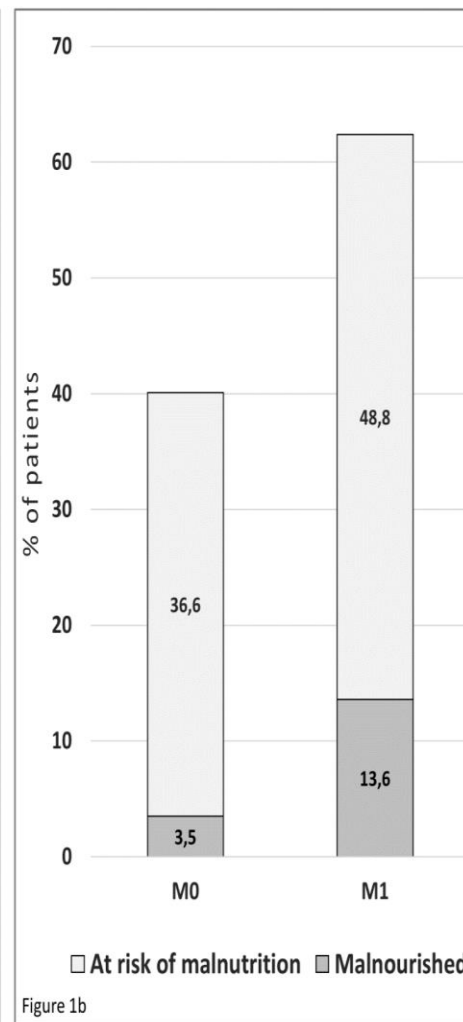
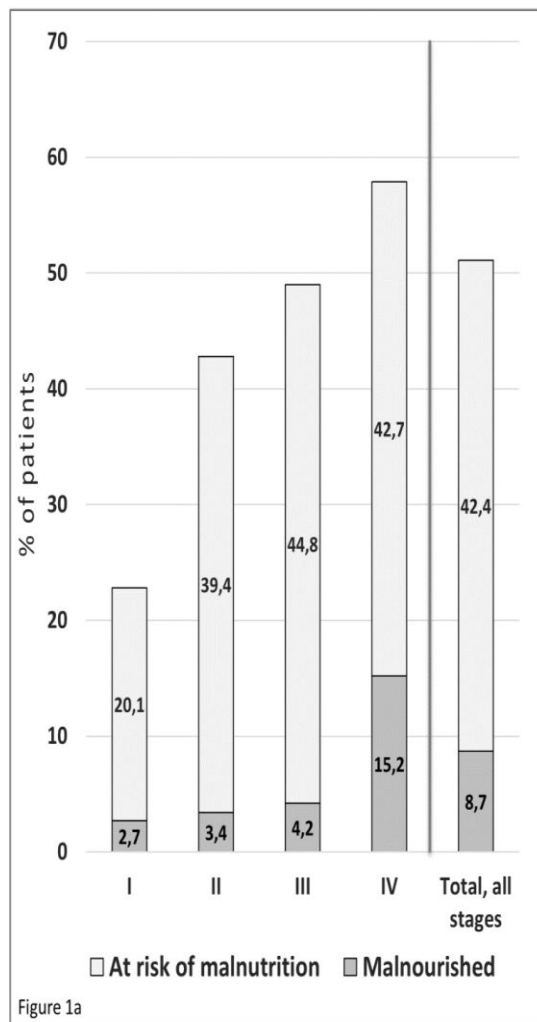
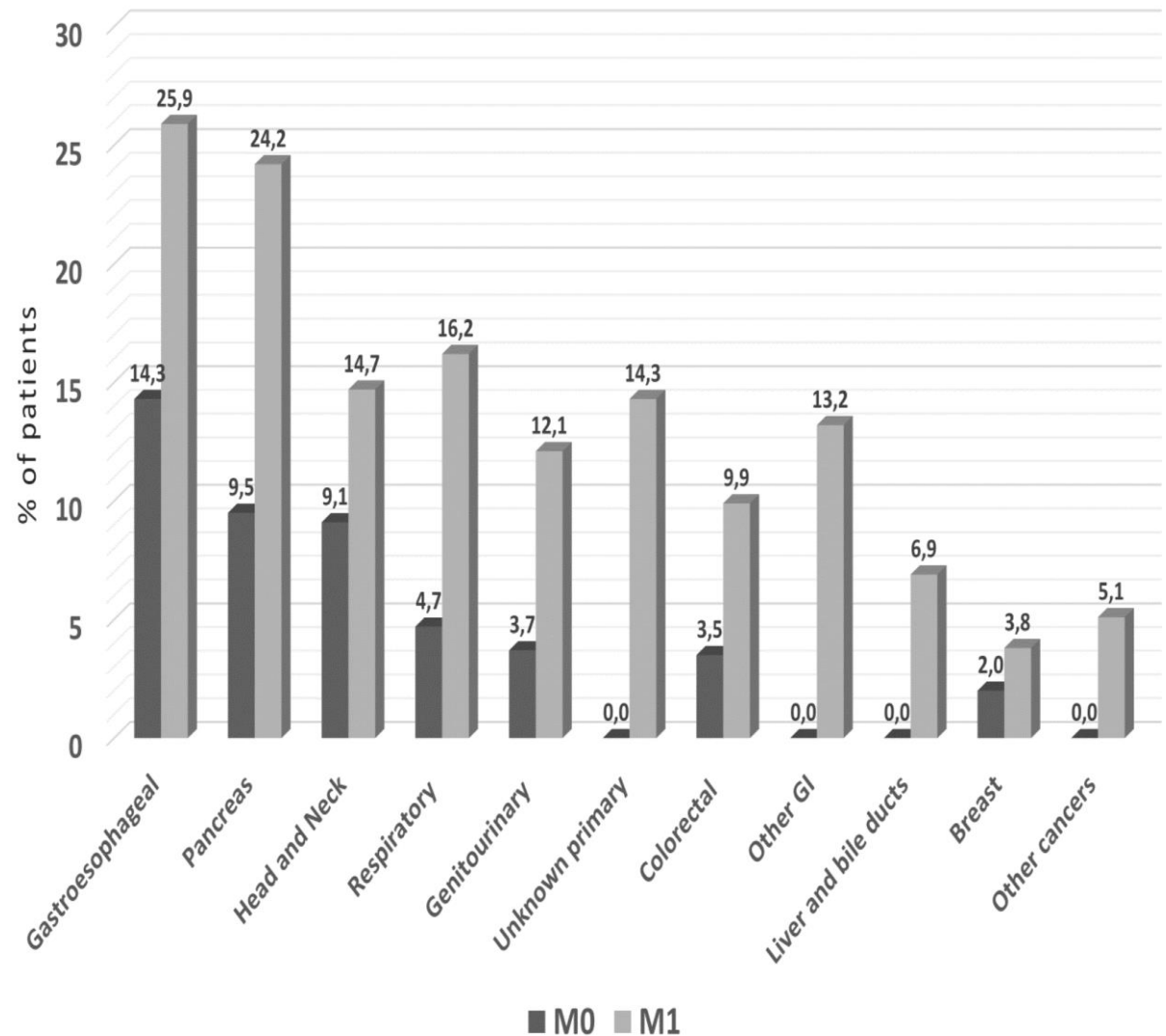


Figure 1. PreMiO patients with malnutrition or malnutrition risk using MNA scoring with results shown by tumor stage and for all tumors (Figure 1a) as well as classified in M0 and M1 groups (Figure 1b) (N = 1925) ($p < 0.001$ at ANOVA among cancer stage groups). Malnutrition was defined as MNA score < 17 , while risk of malnutrition was represented by a MNA scores of 17 to 23.5). M0 = stage I-III, M1 = stage IV



Overt malnutrition by cancer site and stage

Prevalence of overt malnutrition by cancer site (% of patients with specified tumor type), with malnutrition defined as MNA score < 17 (N = 1925). M0 = stage I-III, M1 = stage IV (p<0.001 at ANOVA among cancer site groups)

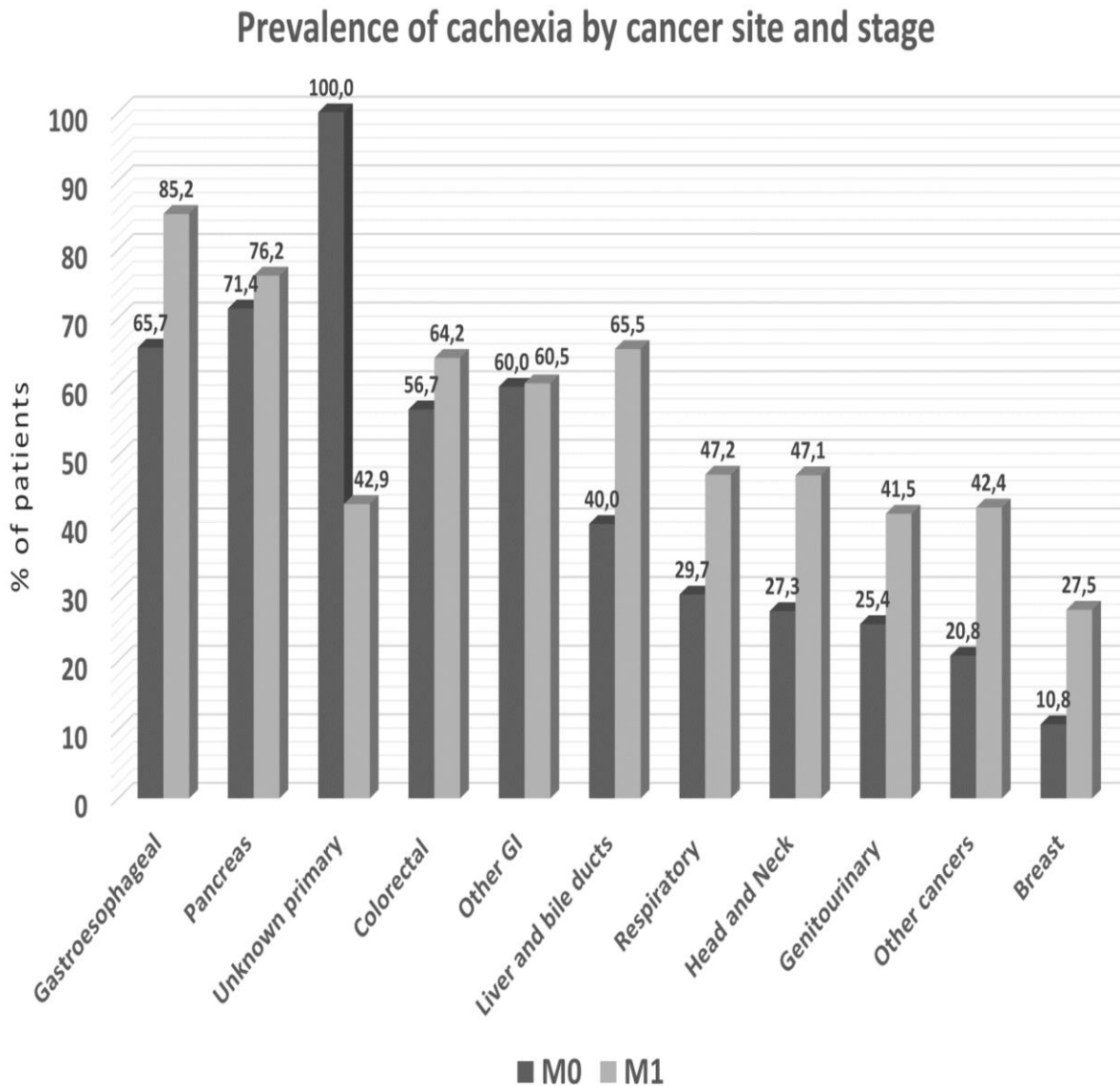


Muscaritoli M, et al. Oncotarget 2017, in press



Prevalence of cachexia by primary tumor type in the study population (N = 1952).

M0 = stage I-III, M1 = stage IV. ($p < 0.001$ at ANOVA among cancer site groups)



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ECPC Survey on Nutrition in the Oncology Patient

WHY FOCUS ON NUTRITION IN ONCOLOGY?

- Nutrition is a fundamental aspect of the therapeutic course of cancer patients
- Adequate nutrition can:
 - Prevent weight loss and help in weight gain;
 - Improve adherence to therapy and minimise collateral effects;
 - Improve the efficacy of anticancer therapy;
 - Improve physical status, strength and quality of life;
 - Prevent the development of serious conditions such as cachexia during treatment.



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OBJECTIVES OF THE SURVEY

- Measuring the awareness rate of oncologic patients about the importance of nutrition during oncologic therapy
- Discovering from the patients' answers, if and how much nutritional problems during and after oncologic therapy are perceived to be important by the physician
- Obtaining from the patient information important to draw up a practical guidance on how to eat better on a daily basis, especially during therapy



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PATIENTS' INFORMATION

- Gender
- Age
- Disease status (Patient or Survivor)
- Type of cancer (Blood, Bone, Chest / Thoracic, Skin, Lung, Liver/Kidney/Pancreas, Gastric, Head and neck, Genital-urinary, Other)
- Illness duration from the first diagnosis
- Treatment duration from the first diagnosis
- Country of origin

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DOMAINS OF THE SURVEY

- **A. Eating habits during disease and therapy**
- **B. Appetite and body weight**
- **C. Loss of muscle mass and physical activity**
- **D. Nutritional interventions**
- **E. Cachexia**
- **F. Impact of food on social and psychological aspects**

A structured questionnaire was disseminated by the European Cancer Patient Coalition to its members in 10 countries.

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10
European
countries

907
patients
and
survivors



Characteristic	Total population (N = 907)
Gender, n/N valid (%)	
Male	283/907 (31.2)
Female	624/907 (68.8)
Age (years), n (%)	
18-29	44 (4.9)
30-45	183 (20.2)
46-55	224 (24.7)
56-65	269 (29.7)
65+	187 (20.6)
Disease status, n (%)	
Survivor	438 (48.3)
Patients	469 (51.7)
Type of cancer	
Hematologic	200 (22.1)
Chest/Thoracic	200 (22.1)
Genitourinary	173 (19.1)
Gastric	136 (15.0)
Head and Neck	45 (5.0)
Liver/Kidney/Pancreatic	36 (4.0)
Lung	36 (4.0)
Bone	36 (4.0)
Skin	27 (3.0)
Other	18 (2.0)
Illness duration from the first diagnosis (years), n (%)	
<1 year	327 (36.1)
1-3 years	210 (23.2)
3-5 years	117 (12.9)
>5 years	253 (27.9)
Treatment duration from the first diagnosis (years), n (%)	
<1 year	419 (46.2)
1-3 years	216 (23.8)
3-5 years	99 (10.9)
>5 years	173 (19.1)

Baseline characteristics and demographics of survey respondents



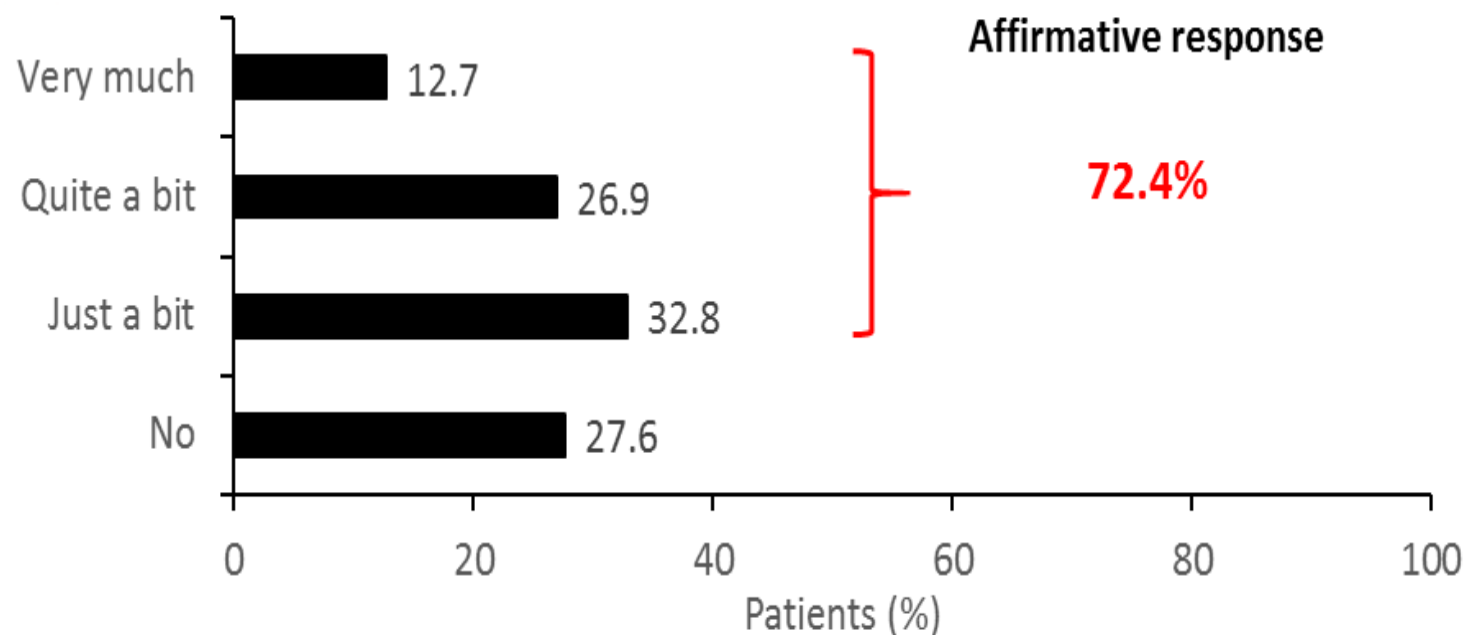
Patients' Nutritional and Knowledge Profile

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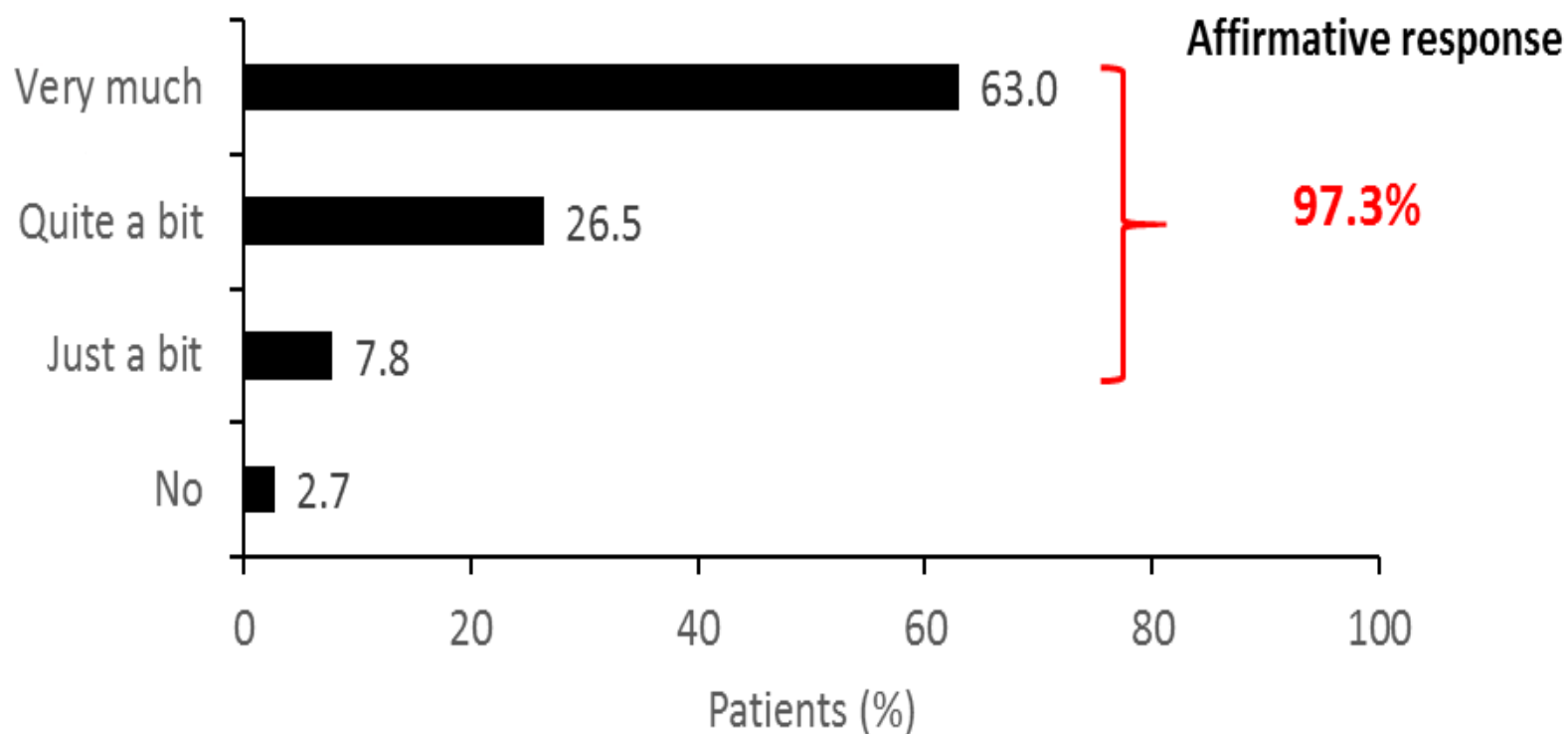
Survey question:

Have you encountered any feeding problems during the illness and/or therapy?



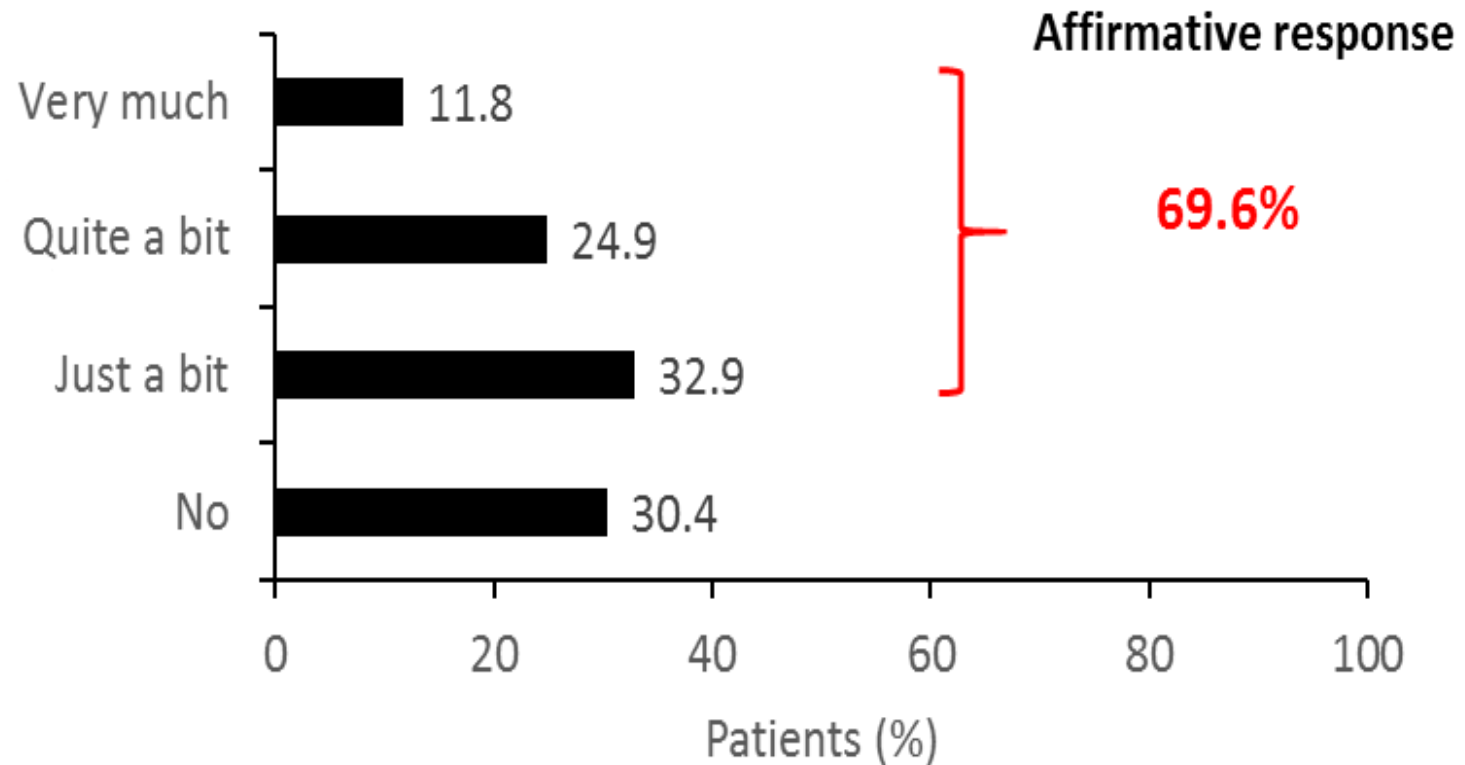


Survey question:
Is it important to have an adequate nutrition during therapy?





Survey question:
Did you lose weight during the illness?

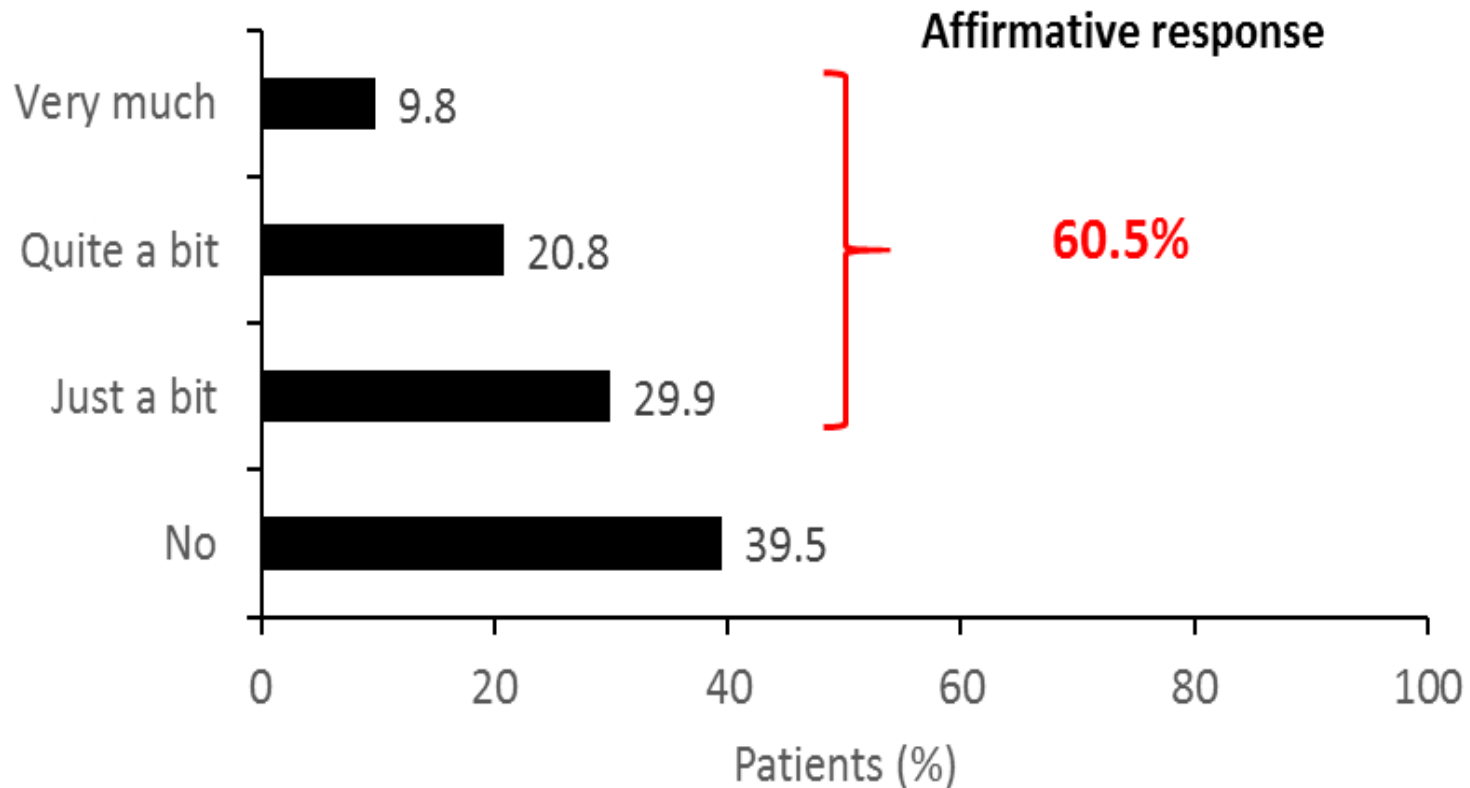


Effect of feeding problems on personal, family and social life



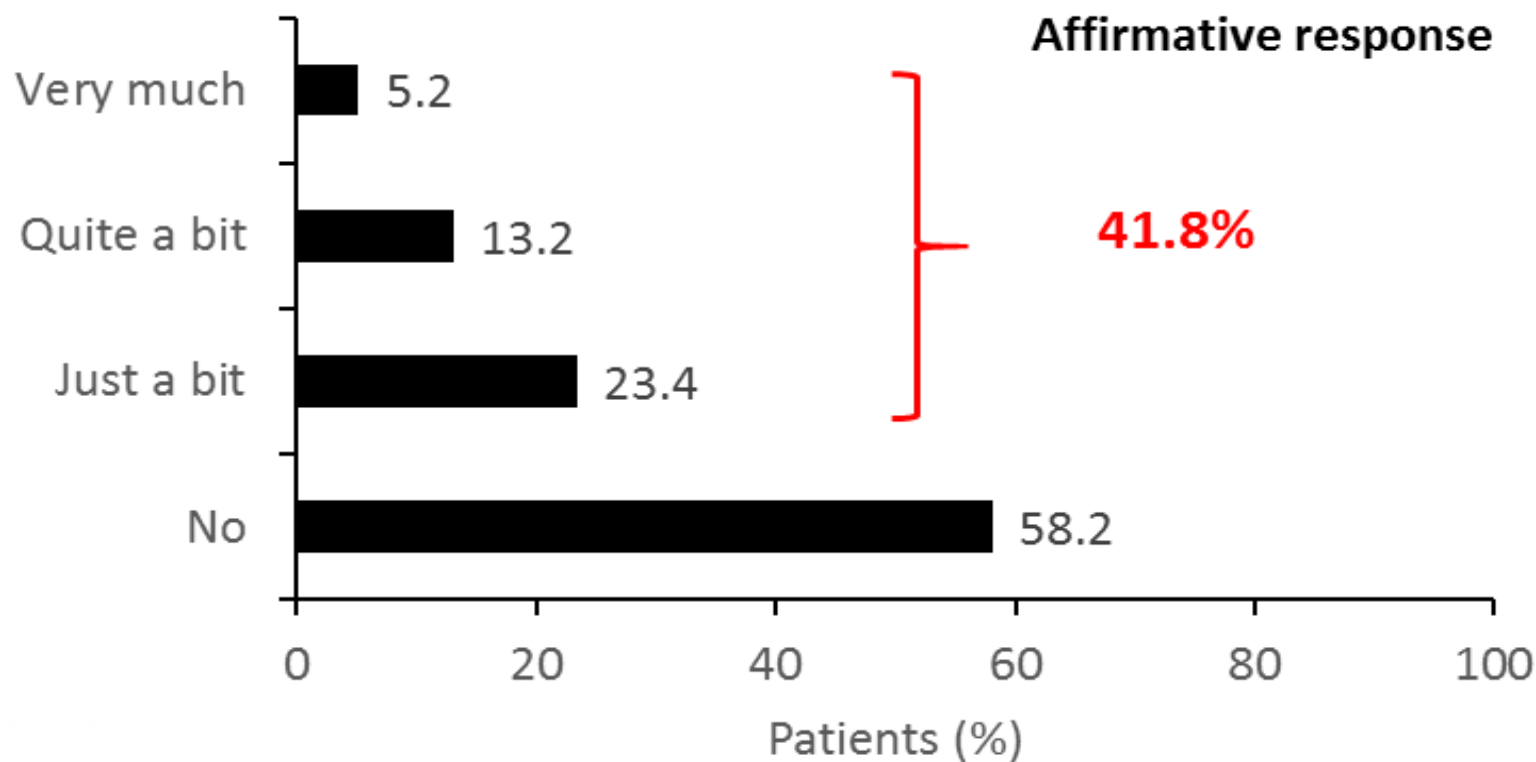
Survey question:

Is the topic of "food" worrisome for yourself and your family?

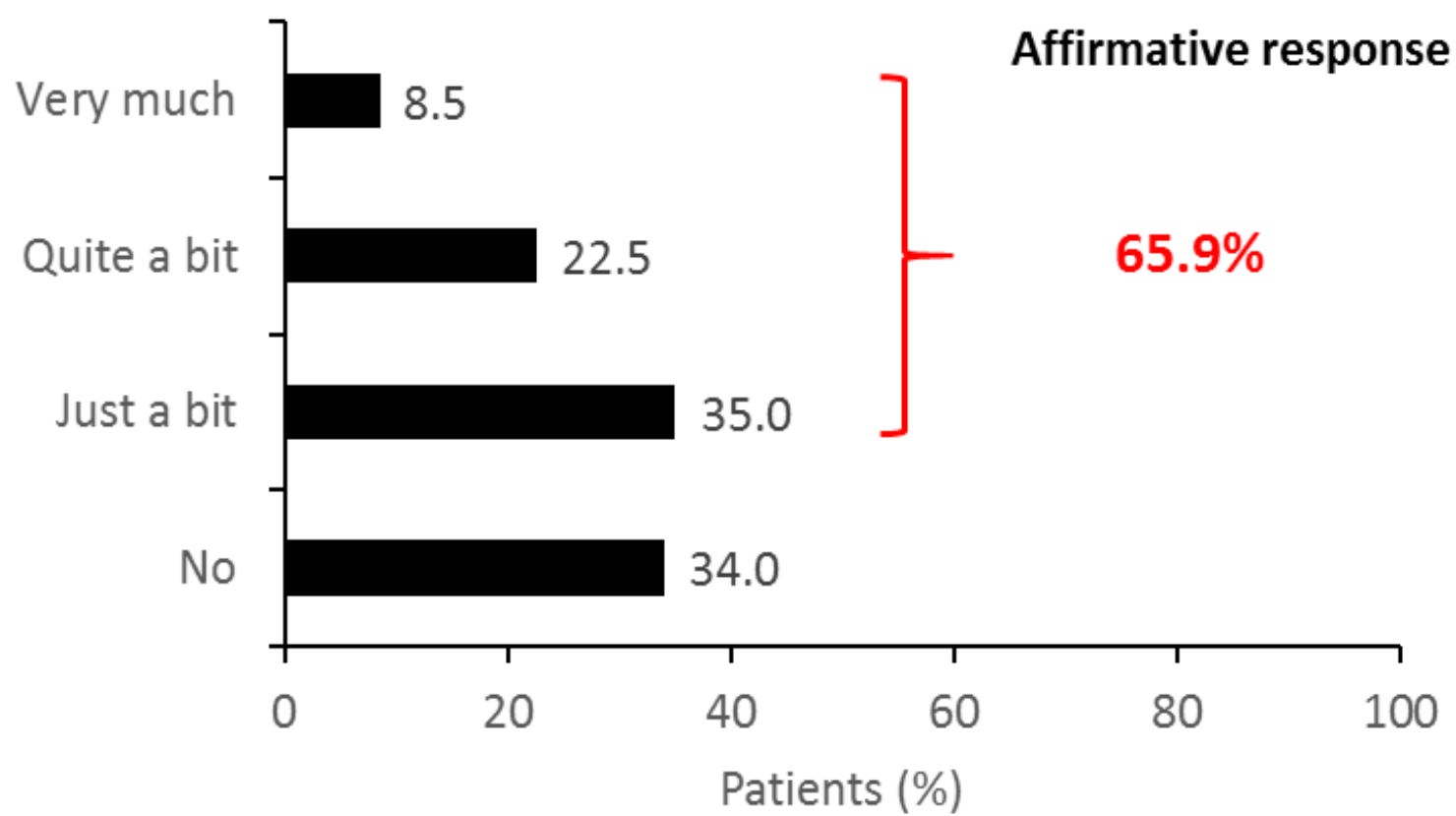




Survey question:
Do you feel to have been "forced to eat" by your family or caregiver?

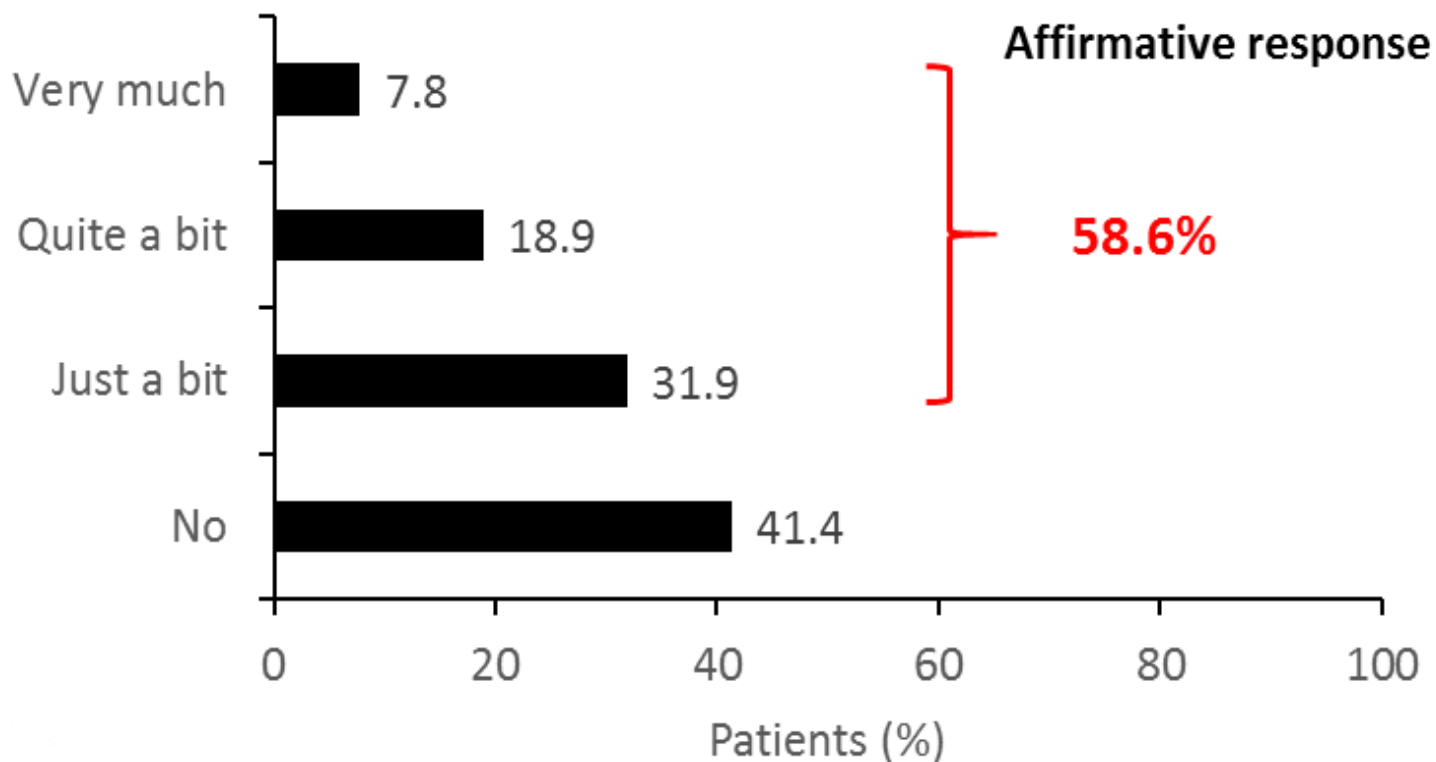


Survey question:
Did loss of or reduced appetite influence your mood?





Survey question:
Did problems related to eating habits influence your daily
life and social interactions with others?





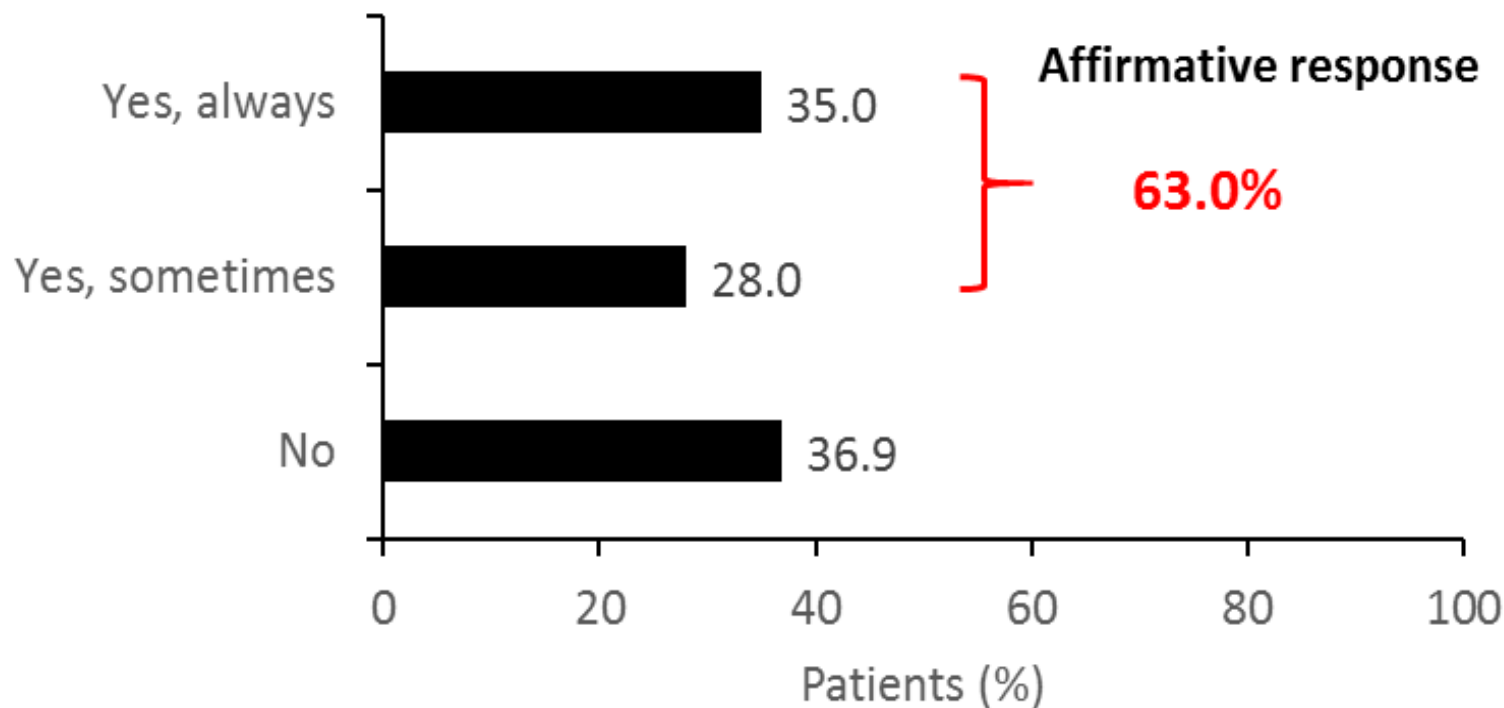
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Physicians' Approach to Nutrition

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Survey question:
Does your physician/oncologist check your weight
during your visits?



Questions related to physicians' approach to nutrition Yes (%)

Did your physician ask whether you had any feeding problems during therapies? (867 responses)	46.1%
If your previous answer was YES, did the physician/oncologist refer you to either a nutritionist or a dietician? (602 responses)	23.3%
Does your physician/oncologist check your weight during your visits? (842 responses)	63.0%
Does your physician give importance to cancer-related weight loss? (842 responses)	54.3%
Did your physician/oncologist give you advice to improve your appetite and to allow for adequate nutrition? (830 responses)	37.3%
Did your physician recommend a certain level of physical activity even if you feel tired? (836 responses)	53.8%
Did your physician/oncologist give to you or your relatives any information about cachexia? (827 responses)	7.6%



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SYNTHETIC RESULTS / 1*

- Most part of the sample was affected by cancer since less than 3 years, and treated for it from less than 1 year .
- The majority of the sample experienced feeding problems during illness or therapy and the totality of responders declared to be well aware about feeding importance .
- Responders also declared to believe that their feeding problems were linked to illness or therapy and that avoiding weight loss during therapy was important . Despite this, a significant share of the sample had no information about how to artificially improve or manage nutrition .



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SYNTHETIC RESULTS / 2*

- Physicians are prevalently not checking the nutritional status of their patients, and almost half of physicians do not pay attention to weight loss, neither provide any advice to improve appetite .
- 2/3 of the patients lose weight during illness or therapy, and for 1/3 this loss was moderate to severe. More than half of them was convinced that this could worsen therapies' side effects.
- While more than 2/3 of the patients was convinced about the importance to maintain physical activity, barely half of physicians is advising to do so.
- More than half of the patients know nothing about the potential negative effects on therapy of taking vitamins or antioxidants

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SYNTHETIC RESULTS / 3*

- Almost 2/3 of the sample knew that persistent loss of appetite could be caused by the tumour.
- More than 2/3 of the sample did not know the meaning of the term “cachexia” and almost the entire sample did not receive any information about it.
- Almost 2/3 of the patients were worried by “food” problem and almost half of them thought to be somewhat forced to eat.
- Almost 2/3 of the patients felt their mood was influenced by appetite loss and more than half of them thought that nutritional problems negatively impact on their social relations.



CONCLUSIONS

- Patients and physicians have different perspectives on the nutritional aspects of cancer/cancer therapy.
- An increased physician focus on nutrition during treatment in addition to providing patients with information on optimising nutrition, is essential to improving patients' quality of life.