

XXXII CONGRESSO NAZIONALE AIRO  
XXXIII CONGRESSO NAZIONALE AIRB  
XII CONGRESSO NAZIONALE AIRO GIOVANI

# AIRO2022

Radioterapia di precisione per un'oncologia innovativa e sostenibile

BOLOGNA, 25-27 NOVEMBRE  
PALAZZO DEI CONGRESSI

## La nutrizione nel paziente oncologico: Il punto di vista dell'Oncologo medico

**Maria Grazia Rodriquenz**

IRCCS «Casa Sollievo della Sofferenza»

San Giovanni Rotondo



## Disclosure

- Consulting: Roche
- Honoraria: IQVIA, Roche
- Travel expenses: Bristol Myers Squibb, Gilead, Incyte, Novartis AAA

# Today's Menu

## (...from the oncologist's perspective...)

- ✓ Why addressing nutritional issue is important for oncologists?
- ✓ Management of clinical nutrition (from the oncologist's perspective)
- ✓ Clinical nutrition issues in Special populations  
(Sarcopenic obesity; older cancer patients)
- ✓ AIOM commitment on clinical nutrition
- ✓ Future opportunities for research on clinical nutrition





# Old problems in new times

## The Skeleton in the Hospital Closet

*As awareness of the role of nutrition in recovery from disease increases, physicians are becoming alarmed by the frequency with which patients in our hospitals are being malnourished and even starved. One authority regards physician-induced malnutrition as one of the most serious nutritional problems of our time.*

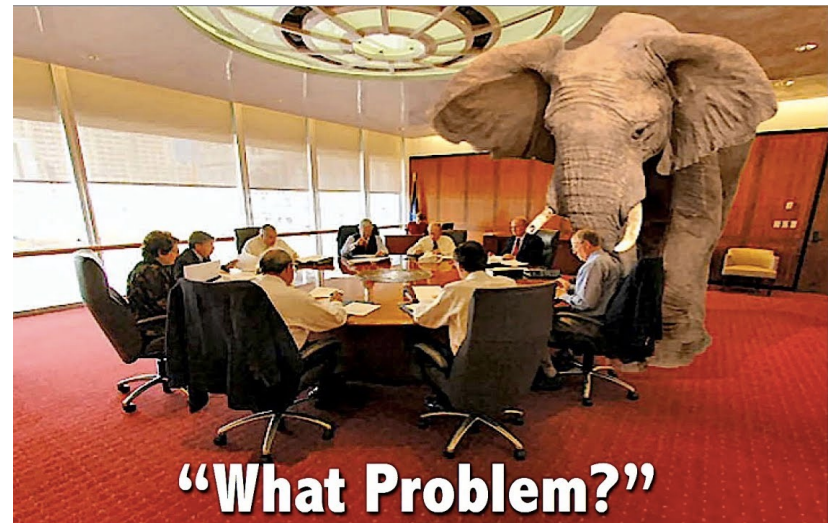
by CHARLES E. BUTTERWORTH, Jr., M.D.



1974

## editorial **Malnutrition in Cancer Care: Time to Address the Elephant in the Room**

Declan Walsh, MD, MSc<sup>1</sup>; Michele Szafranski, MS, RD, CSO, LDN<sup>1</sup>; Aynur Aktas, MD<sup>1</sup>; and Kunal C. Kadakia, MD<sup>1</sup>

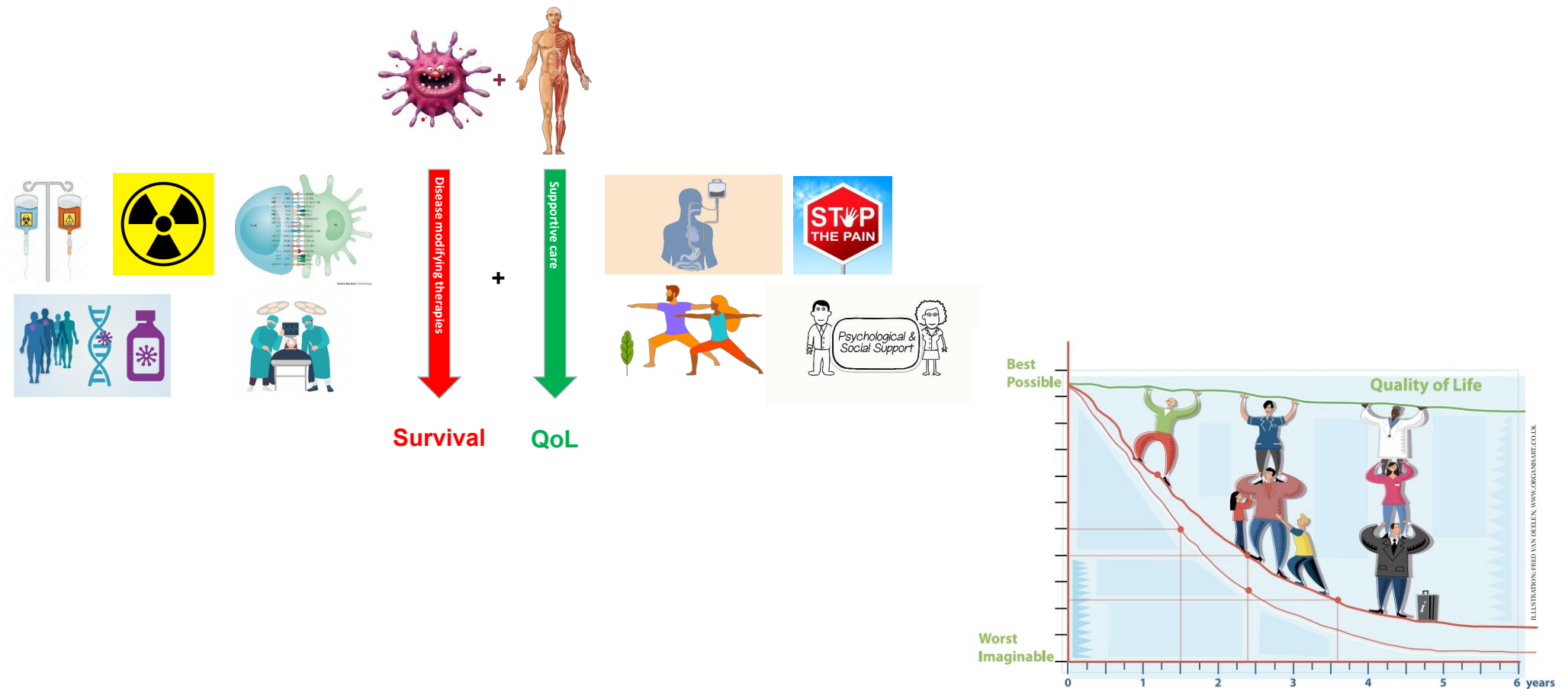


2019



# Why addressing nutritional issue is so important for oncologists?

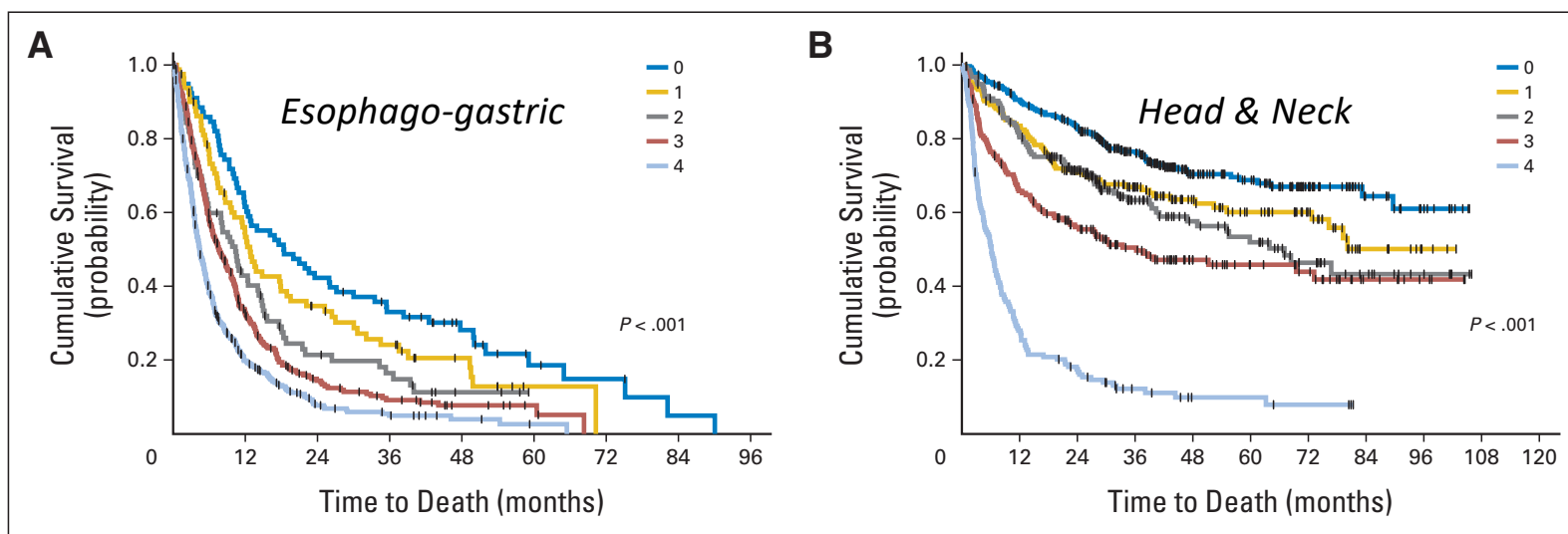
## *Integrative care of patients with cancer*



# Why addressing nutritional issue is so important for oncologists?

Nutrition (...and Malnutrition...) has impact on SURVIVAL

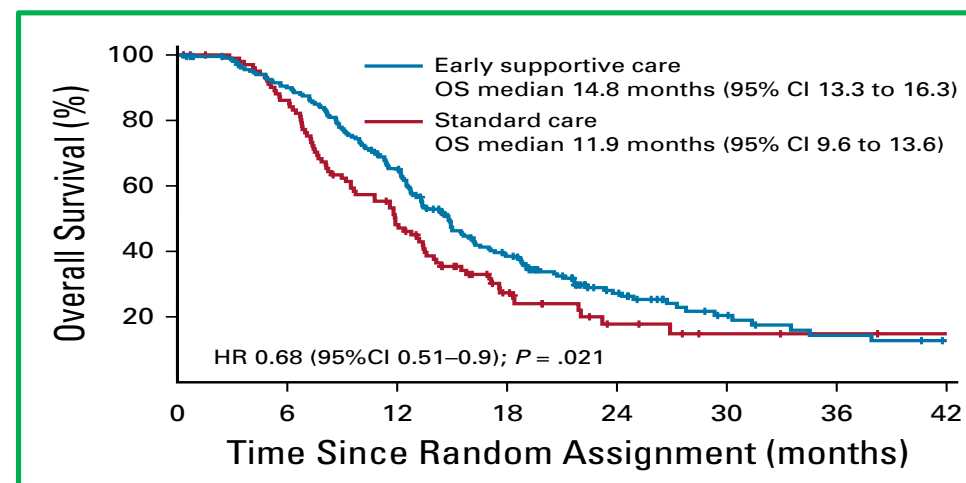
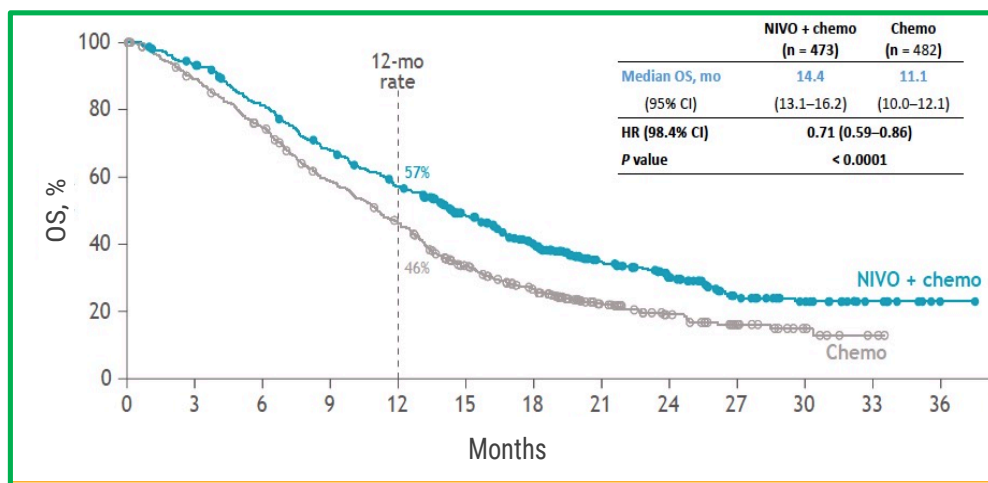
		BMI (kg/m <sup>2</sup> )					
		28	25	22	20		
Weight Loss (%)	2.5	21.5	19.9	15.7	13.5	8.4	17.3
	6	14.2	11.9	10.5	10.6	7.8	11.3
	11	10.7	9.2	6.8	6.7	4.7	7.5
	15	8.1	8.1	6.2	5.4	4.4	6.2
		7.1	4.8	4.7	3.7	4.1	4.4
		13.1	10.2	8.1	6.1	4.7	Overall



- Malnutrition (weight loss) is a negative prognostic factor  
→ Up to 20% of cancer patients may die because of the consequences of malnutrition, rather than cancer itself
- Malnutrition is often a **«modifiable»** prognostic factor with **early detection, timely intervention and adequate follow-up**

# Why addressing nutritional issue is so important for oncologists?

Nutrition (...and Malnutrition...) has impact on SURVIVAL



## First line Metastatic esophagogastric cancer

CheckMate 649 phase 3 trial - First line

XELOX or FOLFOX +/- Nivolumab

**Median OS: 14.4 vs 11.1 months**

**Δ OS 3.3 months**

Early interdisciplinary palliative care (Nutritional + psychological support)

Standard chemotherapy +/- supportive care

**Median OS: 14.8 vs 11.9 months**

**Δ OS 2.9 months**

Shitara et al, Nature 2022  
Lu et al, JCO 2022



# Improving SURVIVAL is not enough...the value of QUALITY OF LIFE

## Malnutrition is associated with worse QoL

Supportive Care in Cancer  
<https://doi.org/10.1007/s00520-020-05496-9>

ORIGINAL ARTICLE



## Nutritional intervention may improve QoL

### Impact of weight loss on cancer patients' quality of life at the beginning of the chemotherapy

Elena Álvaro Sanz<sup>1</sup> · Jimena Abilés<sup>1</sup> · Margarita Garrido Siles<sup>1</sup> · Elisabeth Pérez Ruiz<sup>2</sup> · Julia Alcaide García<sup>2</sup> · Antonio Rueda Domínguez<sup>3</sup>



#### Abstract

**Purpose** Among the prognostic factors relevant to the condition of oncological patients, nutritional status (NS) has the greatest single impact on quality of life (QL). The goals of our study were to evaluate the influence of NS, weight loss (WL), and the presence of cachexia, prior to the initiation of chemotherapy, on the patient's QL.

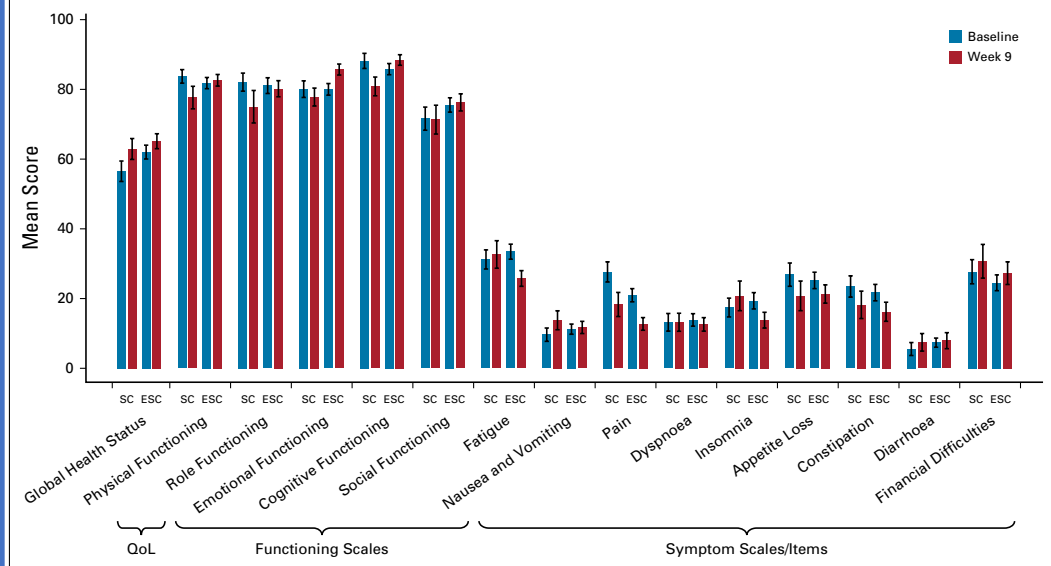
**Methods** Adult patients (aged  $\geq 18$  years) diagnosed with solid tumours for whom chemotherapy was started between April 2016 and June 2017 were eligible for inclusion in the study. They were asked to complete a QL questionnaire (Functional Assessment of Cancer Treatment (FACT-G)) at the beginning. The presence or absence of cachexia was evaluated at the outset, following the definition proposed by Fearon and nutritional assessment by the Patient-Generated Subjective Global Assessment (PG-SGA) scale.

**Results** A total of 177 patients completed the FACT-G, the 60% receiving curative therapy. At the start of the treatment, 58.2% of patients had experienced WL, with an average of  $4.4 \pm 7.4\%$ , and 19% were at risk of malnutrition. Patient who presented cachexia at diagnosis, were treated with palliative intention, had a Nutriscore  $\geq 5$  points or presented malnutrition in accordance with PG-SGA had a poorer QL ( $p < 0.05$ ). Greater WL was associated with a worsened QL ( $p = 0.001$ ). Breast cancer patients presented an inverse correlation between the %WL and the initial score in the FACT-G ( $r = -0.304, p = 0.023$ ), whereas no such correlation was observed for the other types of tumour ( $r = -0.012, p = 0.892$ ).

**Conclusions** These results underline the relation of NS before starting chemotherapy and QL. Greater WL was associated with a worsened QL, especially in women with breast cancer.

## Early Interdisciplinary Supportive Care in Patients With Previously Untreated Metastatic Esophagogastric Cancer: A Phase III Randomized Controlled Trial

Zhihao Lu, MD, PhD<sup>1</sup>; Yu Fang, MPH<sup>2</sup>; Chang Liu, BSc<sup>1</sup>; Xiaotian Zhang, MD, PhD<sup>1</sup>; Xiaowei Xin, MSc<sup>2</sup>; Yi He, MD<sup>3</sup>; Yanshuo Cao, MD, PhD<sup>1</sup>; Xi Jiao, BSc<sup>1</sup>; Tianqi Sun, BSc<sup>4</sup>; Ying Pang, MSc<sup>3</sup>; Yanli Wang, MCM<sup>2</sup>; Jun Zhou, MD, PhD<sup>1</sup>; Changsong Qi, MD, PhD<sup>1</sup>; Jifang Gong, MD, PhD<sup>1</sup>; Xicheng Wang, MD, PhD<sup>1</sup>; Jian Li, MD, PhD<sup>1</sup>; Lili Tang, MD<sup>3</sup>; and Lin Shen, MD, PhD<sup>1</sup>

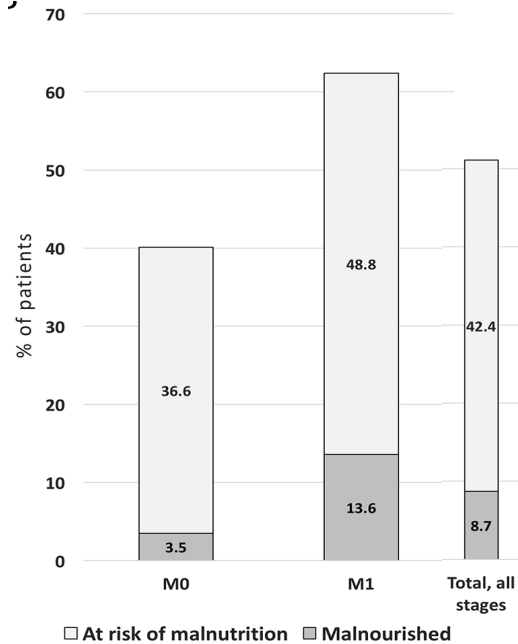


# Prevalence of malnutrition



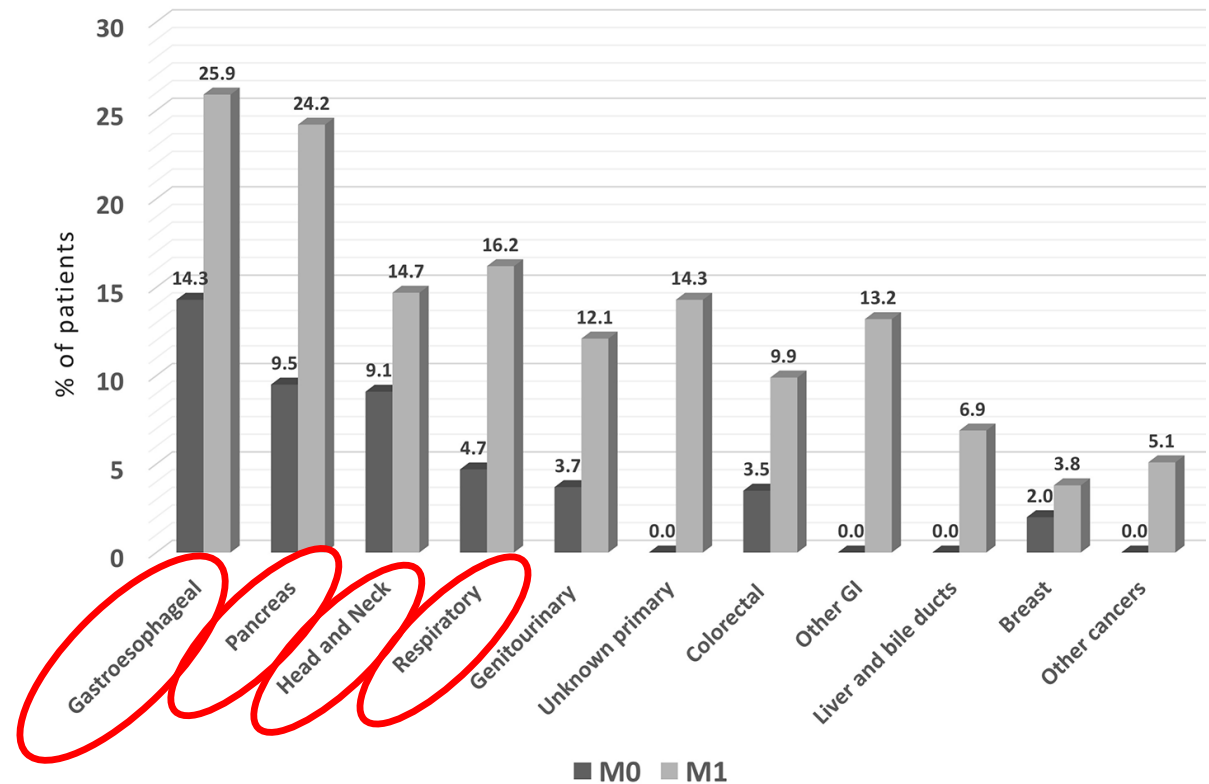
## Prevalence of malnutrition in patients at first medical oncology visit: the PreMiO study

Maurizio Muscaritoli<sup>1</sup>, Simone Lucia<sup>1</sup>, Alessio Farcomeni<sup>2</sup>, Vito Lorusso<sup>3</sup>, Valeria Saracino<sup>3</sup>, Carlo Barone<sup>4</sup>, Francesca Plastino<sup>4</sup>, Stefania Gori<sup>5</sup>, Roberto Magarotto<sup>5</sup>, Giacomo Carteni<sup>6</sup>, Bruno Chiurazzi<sup>6</sup>, Ida Pavese<sup>7</sup>, Luca Marchetti<sup>7</sup>, Vittorina Zagonel<sup>8</sup>, Eleonora Bergo<sup>9</sup>, Giuseppe Tonini<sup>9</sup>, Marco Imperatori<sup>9</sup>, Carmelo Iacono<sup>10</sup>, Luigi Maiorana<sup>10</sup>, Carmine Pinto<sup>11</sup>, Daniela Rubino<sup>11</sup>, Luigi Cavanna<sup>12</sup>, Roberto Di Cicilia<sup>12</sup>, Teresa Gamucci<sup>13</sup>, Silvia Quadrini<sup>13</sup>, Salvatore Palazzo<sup>14</sup>, Stefano Minardi<sup>14</sup>, Marco Merlano<sup>15</sup>, Giuseppe Colucci<sup>16</sup> and Paolo Marchetti<sup>17,18</sup>, on behalf of the PreMiO Study Group<sup>19</sup>



*Clear correlation between severity of malnutrition and tumor stage*

## Overt malnutrition by cancer site and stage



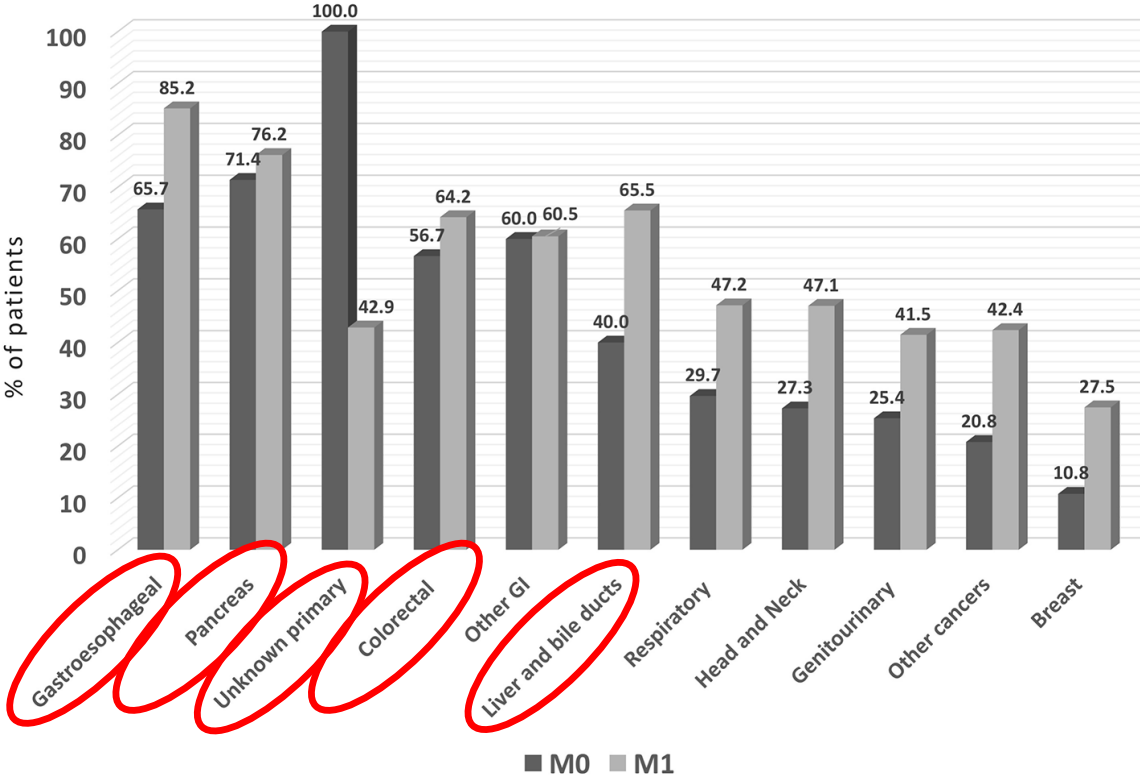
# Prevalence of malnutrition



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

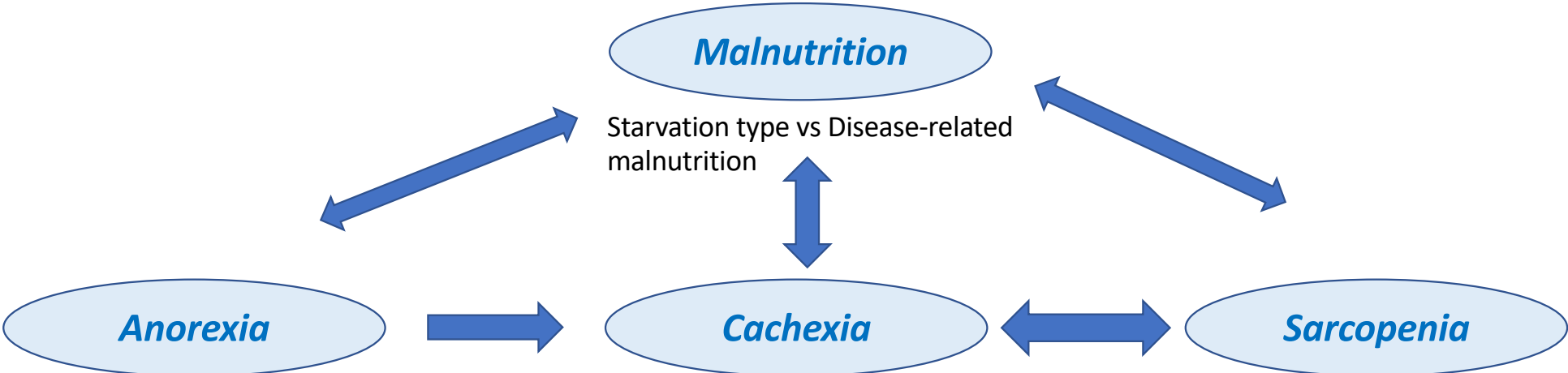
Maurizio Muscaritoli<sup>1</sup>, Simone Lucia<sup>1</sup>, Alessio Farcomeni<sup>2</sup>, Vito Lorusso<sup>3</sup>, Valeria Saracino<sup>3</sup>, Carlo Barone<sup>4</sup>, Francesca Plastino<sup>4</sup>, Stefania Gori<sup>5</sup>, Roberto Magarotto<sup>5</sup>, Giacomo Carteni<sup>6</sup>, Bruno Chiurazzi<sup>6</sup>, Ida Pavese<sup>7</sup>, Luca Marchetti<sup>7</sup>, Vittorina Zagonel<sup>8</sup>, Eleonora Bergo<sup>8</sup>, Giuseppe Tonini<sup>9</sup>, Marco Imperatori<sup>9</sup>, Carmelo Iacono<sup>10</sup>, Luigi Maiorana<sup>10</sup>, Carmine Pinto<sup>11</sup>, Daniela Rubino<sup>11</sup>, Luigi Cavanna<sup>12</sup>, Roberto Di Cicilia<sup>12</sup>, Teresa Gamucci<sup>13</sup>, Silvia Quadrini<sup>13</sup>, Salvatore Palazzo<sup>14</sup>, Stefano Minardi<sup>14</sup>, Marco Meriano<sup>15</sup>, Giuseppe Colucci<sup>16</sup> and Paolo Marchetti<sup>17,18</sup>, on behalf of the PreMiO Study Group<sup>19</sup>

Prevalence of cachexia by cancer site and stage

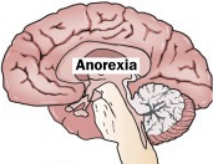




# Cancer-related nutritional impairment: a matter of terminology?



Major loss of appetite and aversion to food



	Precachexia	Cachexia	Refractory cachexia
Normal	[Green bar representing progression]		
	Weight loss ≤5% Anorexia and metabolic change	Weight loss >5% or BMI <20 and weight loss >2% or sarcopenia and weight loss >2% Often reduced food intake/systemic inflammation	Variable degree of cachexia Cancer disease both procatabolic and not responsive to anticancer treatment Low performance score <3 months expected survival



Stage	Muscle mass	Muscle strength	Performance
Pre-sarcopenia	↓		
Sarcopenia	↓	↓ or ↓	
Severe sarcopenia	↓	↓	↓

EWGSOP, European Working Group on Sarcopenia in Older People.



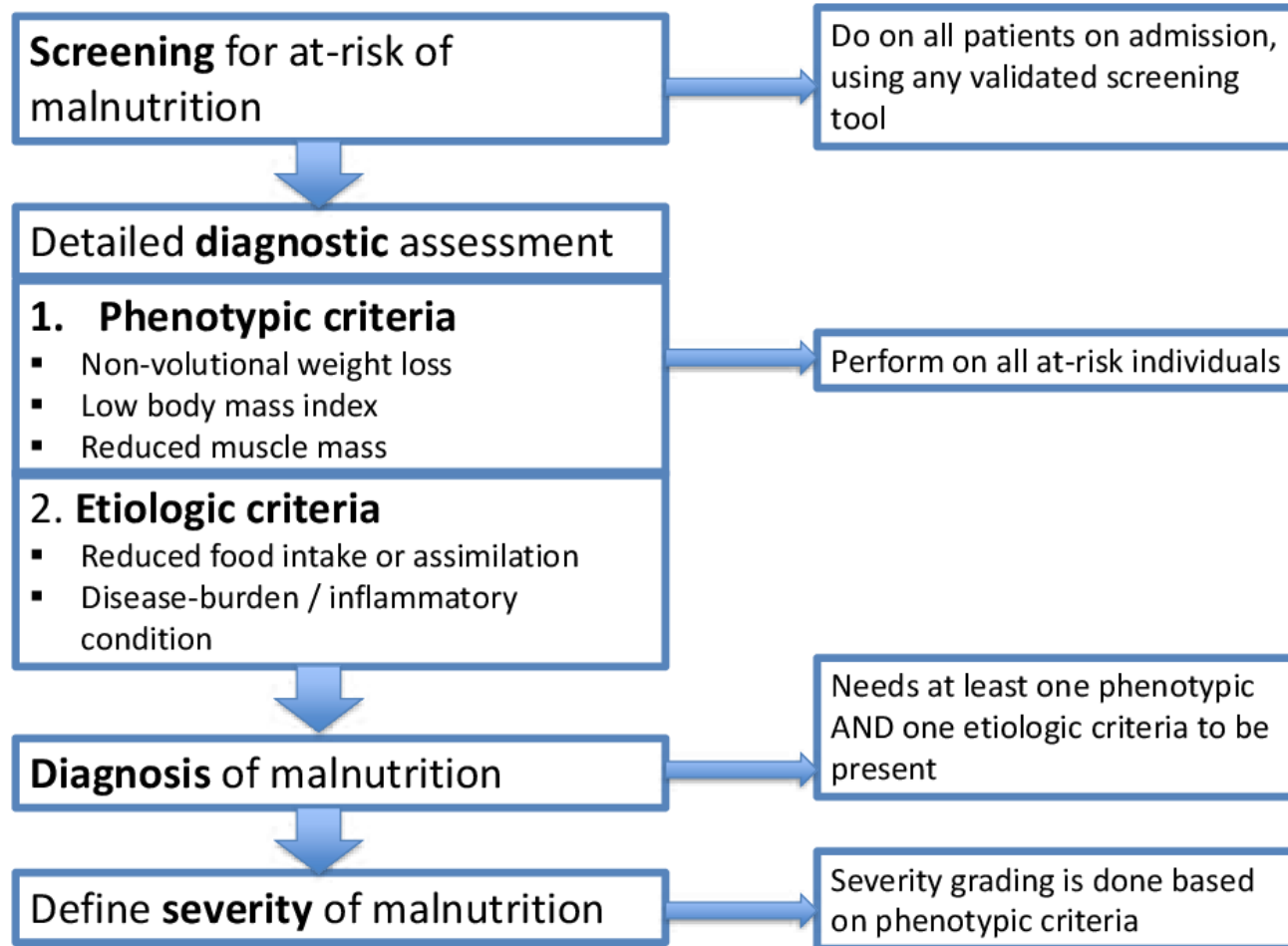
Fearon et al, Lancet 2011  
Moon et al, 2018

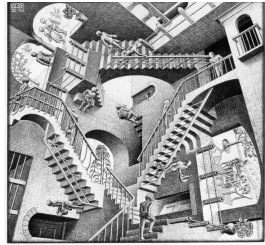


Two-step procedure

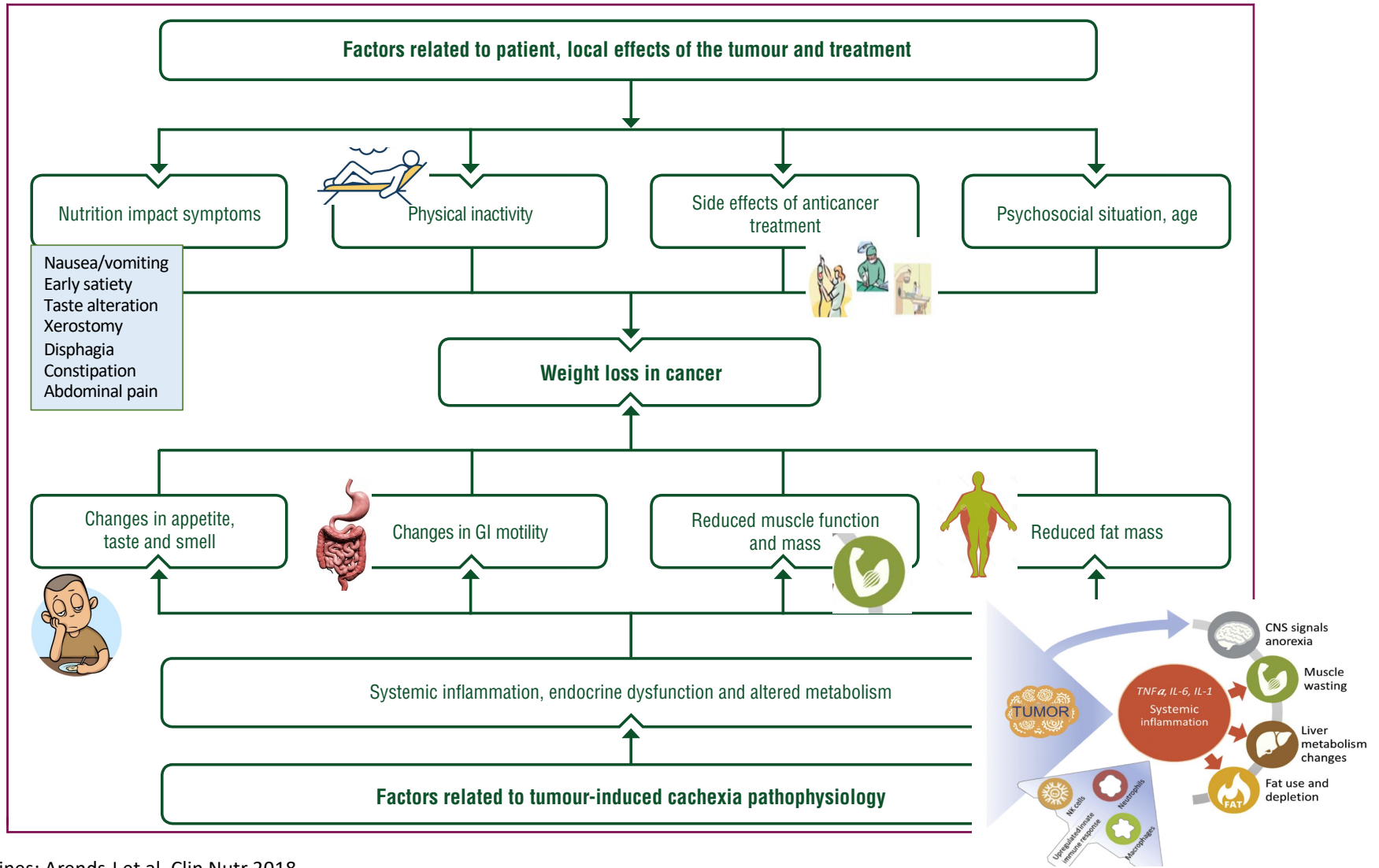
# A framework for diagnosing Adult Malnutrition

## Global Leadership Initiative on Malnutrition (GLIM) criteria





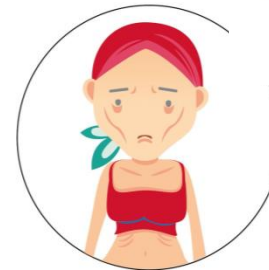
# Cancer-related malnutrition: a matter of complexity





# Malnutrition/Cachexia: consequences

- Changes in intestinal barrier
- Reduction in glomerular filtration
- Alteration in cardiac function
- Altered drug pharmacokinetics
- Delayed wound healing
- Increased **surgical complications**
- Higher incidence and severity of **treatment toxicity**
- Reduced **response to treatments**
- Impaired immunity
- Increase in **length of hospital stay**
- Increased **hospital readmissions**
- Increase in **mortality**
- Increased **treatment costs**
- Impaired **quality of life and functional status**
- Increased **caregiver burden**



# Malnutrition/Cachexia: consequences on treatment toxicity

OPEN ACCESS Freely available online



## Sarcopenia Predicts Early Dose-Limiting Toxicities and Pharmacokinetics of Sorafenib in Patients with Hepatocellular Carcinoma

Olivier Mir<sup>1,2\*</sup>, Romain Coriat<sup>1,3</sup>, Benoit Blanchet<sup>1,4</sup>, Jean-Philippe Durand<sup>1</sup>, Pascaline Boudou-Rouquette<sup>1</sup>, Judith Michels<sup>1</sup>, Stanislas Ropert<sup>1</sup>, Michel Vidal<sup>4</sup>, Stanislas Pol<sup>5</sup>, Stanislas Chaussade<sup>3</sup>, François Goldwasser<sup>1</sup>

The Oncologist®

Symptom Management and Supportive Care

## Nutritional Status, Body Surface, and Low Lean Body Mass/Body Mass Index Are Related to Dose Reduction and Severe Gastrointestinal Toxicity Induced by Afatinib in Patients With Non-Small Cell Lung Cancer

OSCAR ARRIETA,<sup>a</sup> MARTHA DE LA TORRE-VALLEJO,<sup>a</sup> DIEGO LÓPEZ-MACÍAS,<sup>a</sup> DAVID ORTA,<sup>a</sup> JENNY TURCOTT,<sup>a</sup> ELEAZAR-OMAR MACEDO-PÉREZ,<sup>a</sup> KARLA SÁNCHEZ-LARA,<sup>a</sup> LAURA-ALEJANDRA RAMÍREZ-TIRADO,<sup>a</sup> VICKIE E. BARACOS<sup>b</sup>

RESEARCH

Open Access

Impact of skeletal muscle mass in patients with unresectable gastric cancer who received palliative first-line chemotherapy based on 5-fluorouracil



ORIGINAL ARTICLE

## An exploratory study of body composition as a determinant of epirubicin pharmacokinetics and toxicity

Carla M. M. Prado · Isac S. F. Lima · Vickie E. Baracos · Robert R. Bies · Linda J. McCargar · Tony Reiman · John R. Mackey · Michelle Kuzma · Vijaya L. Damaraju · Michael B. Sawyer



ELSEVIER

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

journal homepage: [www.ejcancer.com](http://www.ejcancer.com)

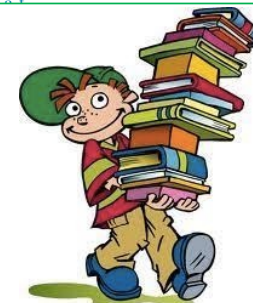


Original Research

## The impact of body composition parameters on severe toxicity of nivolumab



Laure Hirsch<sup>a,\*</sup>, Audrey Bellesoeur<sup>a</sup>, Pascaline Boudou-Rouquette<sup>a</sup>, Jennifer Arrondeau<sup>a</sup>, Audrey Thomas-Schoemann<sup>b,c</sup>



# Today's Menu

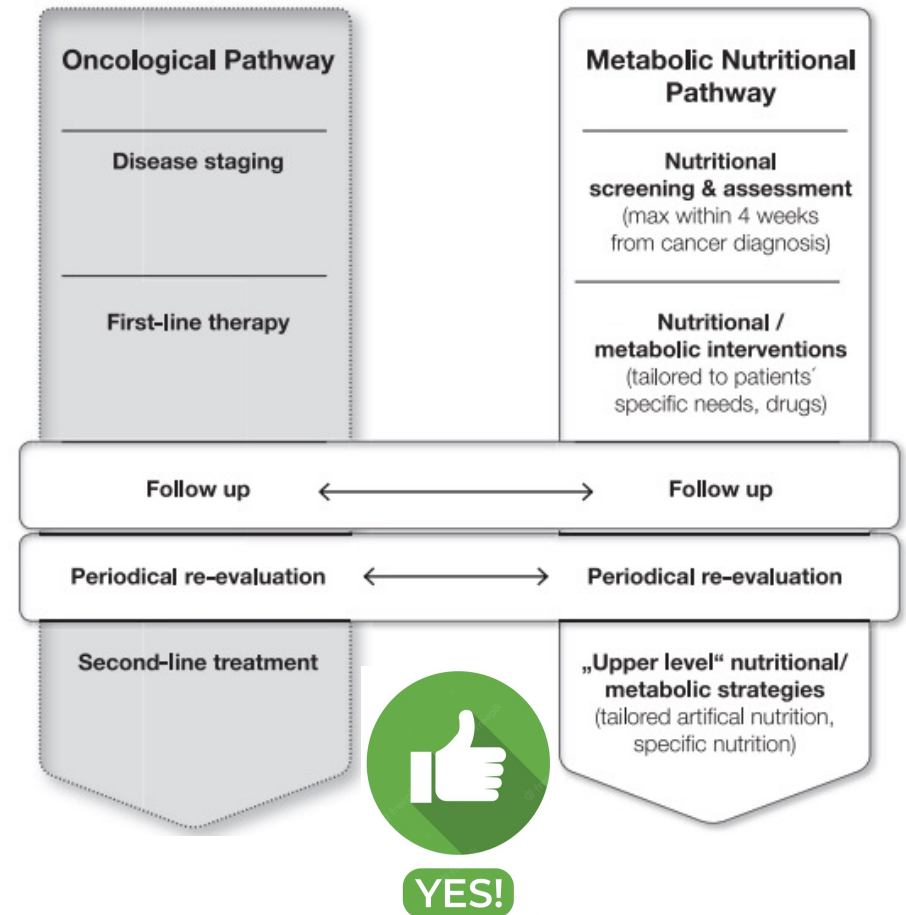
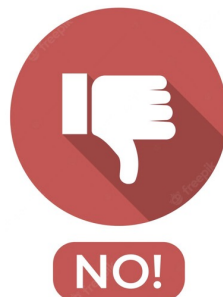
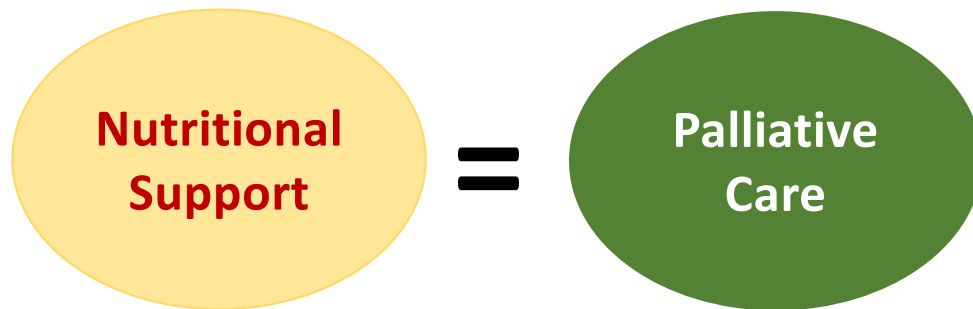
## (...from the oncologist's perspective...)

- ✓ Why addressing nutritional issue is important for oncologists?
- ✓ **Management of clinical nutrition (from the oncologist's perspective)**
- ✓ Clinical nutrition issues in Special populations  
(Sarcopenic obesity; older cancer patients)
- ✓ AIOM commitment on clinical nutrition
- ✓ Future opportunities for research on clinical nutrition

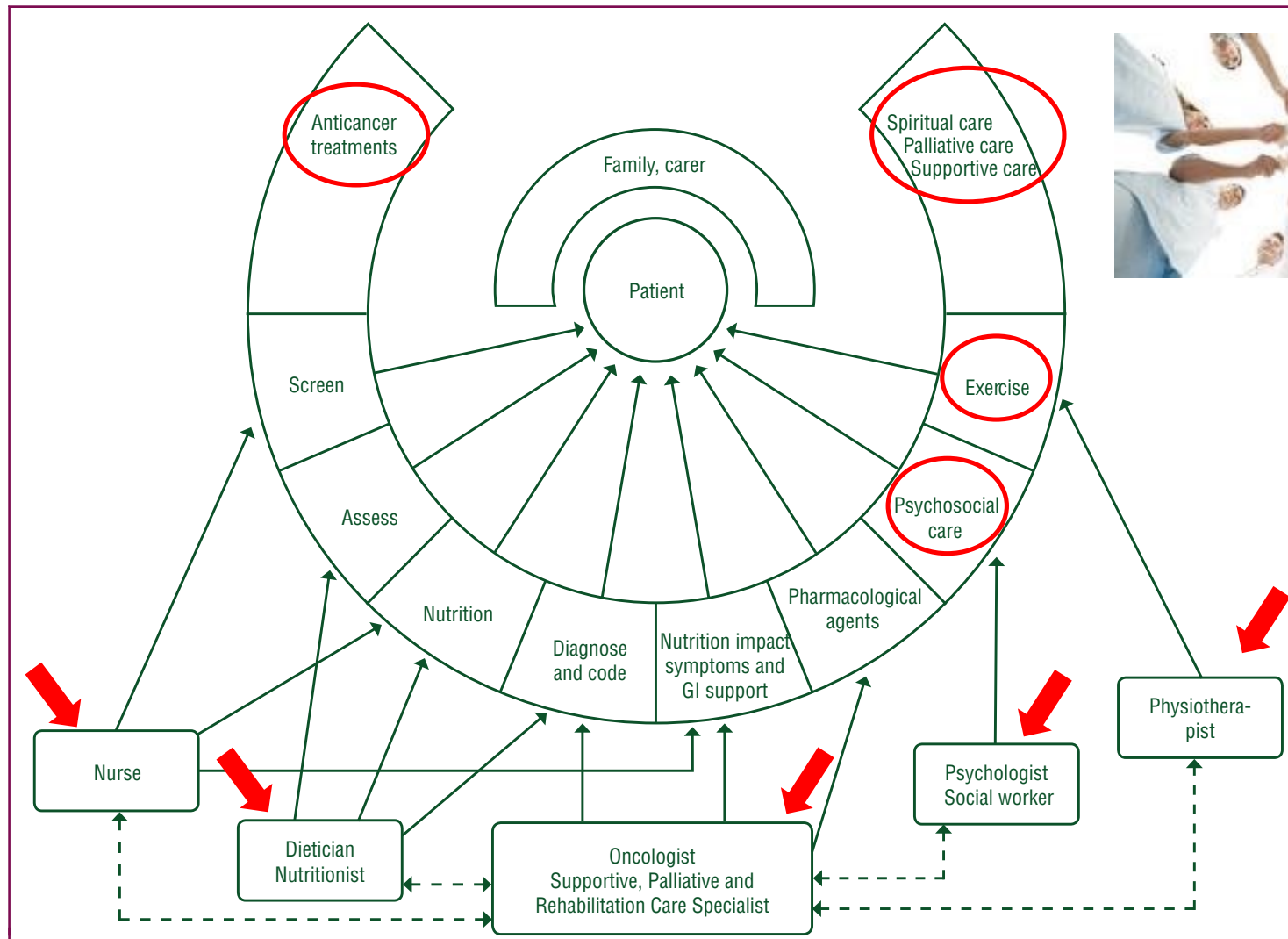


# The evolving paradigm of Nutritional intervention in Oncology

The parallel pathway and continuum of care





# Nutritional intervention: multimodal and multidisciplinary care approach





# Management of clinical nutrition in Oncology

Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

  **ESPEN**  
The European Society for  
Clinical Nutrition and Metabolism

**Clinical Nutrition**

journal homepage: <http://www.elsevier.com/locate/clnu>

ELSEVIER

ESPEN Guideline  
ESPEN practical guideline: Clinical Nutrition in cancer

## Management of Cancer Cachexia: ASCO Guideline

Journal of Clinical Oncology®  
An American Society of Clinical Oncology Journal

Eric J. Roeland, MD<sup>1</sup>; Kari Bohlke, ScD<sup>2</sup>; Vickie E. Baracos, PhD<sup>3</sup>; Eduardo Bruera, MD<sup>4</sup>; Egidio del Fabbro, MD<sup>5</sup>; Suzanne Dixon, MPH, MS, RD<sup>6</sup>; Marie Fallon, MD<sup>7</sup>; Jørn Herrstedt, MD, DMSci<sup>8</sup>; Harold Lau, MD<sup>9</sup>; Mary Platek, PhD, MS, RD<sup>10</sup>; Hope S. Rugo, MD<sup>11</sup>; Hester H. Schnipper, LICSW, BCD, OSW-C<sup>12</sup>; Thomas J. Smith, MD<sup>13</sup>; Winston Tan, MD<sup>14</sup>; and Charles L. Loprinzi, MD<sup>15</sup>

### SPECIAL ARTICLE

**ESMO**

## Cancer cachexia in adult patients: ESMO Clinical Practice Guidelines<sup>☆</sup>

J. Arends<sup>1</sup>, F. Strasser<sup>2,3</sup>, S. Gonella<sup>4,5</sup>, T. S. Solheim<sup>6,7</sup>, C. Madeddu<sup>8</sup>, P. Ravasco<sup>9,10,11</sup>, L. Buonaccorso<sup>12</sup>, M. A. E. de van der Schueren<sup>13,14</sup>, C. Baldwin<sup>15</sup>, M. Chasen<sup>16,17,18</sup> & C. I. Ripamonti<sup>19</sup>, on behalf of the ESMO Guidelines Committee<sup>\*</sup>

  
Clinical Guidelines

## A.S.P.E.N. Clinical Guidelines: Nutrition Support Therapy During Adult Anticancer Treatment and in Hematopoietic Cell Transplantation

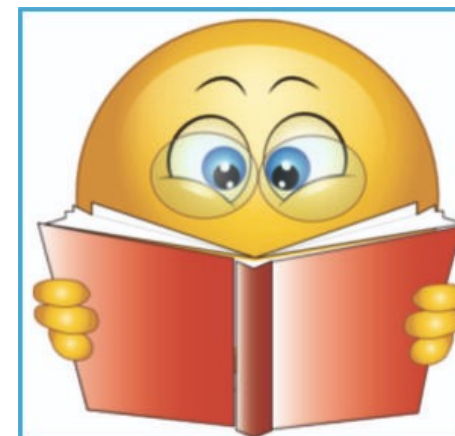
Journal of Parenteral and  
Enteral Nutrition  
Volume 33 Number 5  
September/October 2009 472-500  
© 2009 American Society for  
Parenteral and Enteral Nutrition  
10.1177/0148607109341804  
<http://jpen.sagepub.com>  
hosted at  
<http://online.sagepub.com>

  
Associazione Italiana di Oncologia Medica

Linee guida

## TRATTAMENTO E PREVENZIONE DELLA CACHESSIA NEOPLASTICA

Edizione 2021



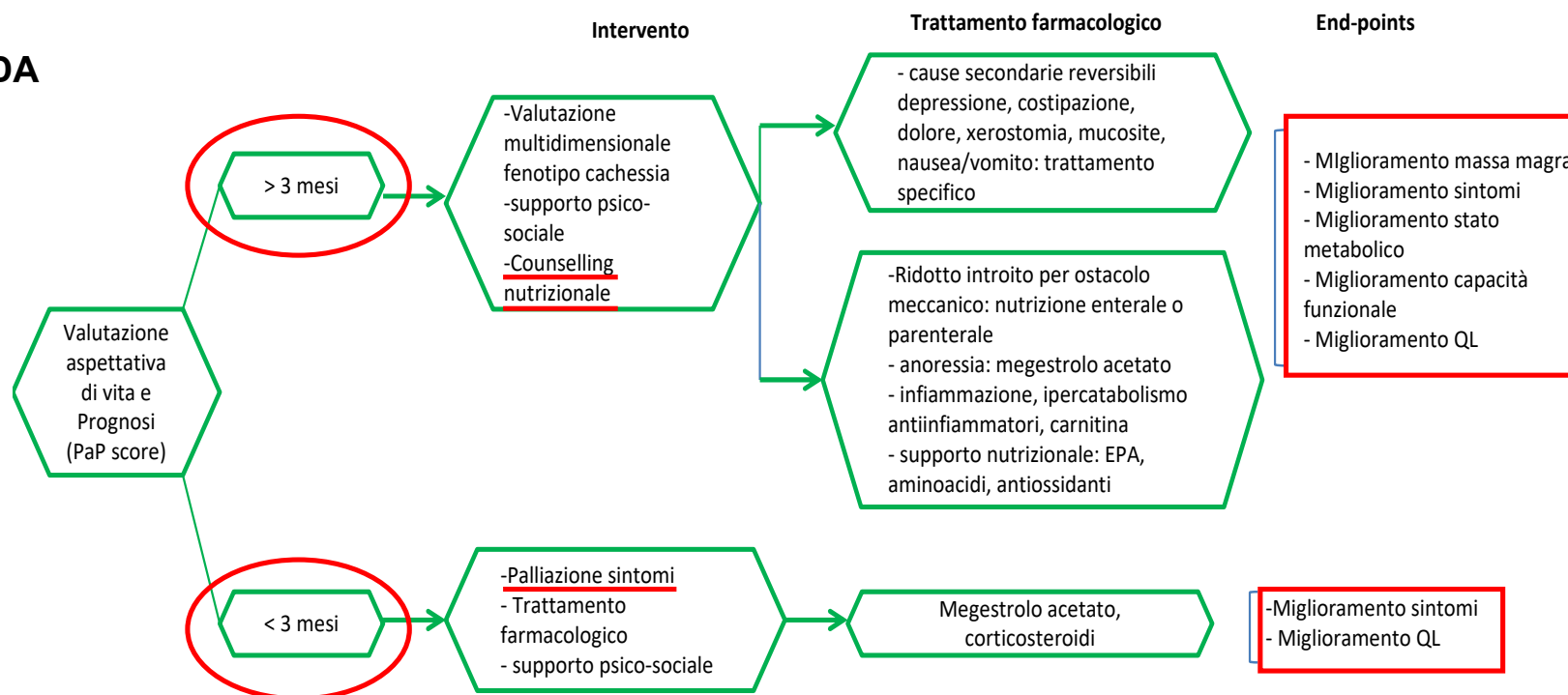
# Nutrition concept in Oncology

Do not underfeed → screen all patients

Do not overfeed → individualize at the end of life

FIGURA 6: ALGORITMO TERAPEUTICO DELLA CACHESSIA NEOPLASTICA

LINEE GUIDA  
2021

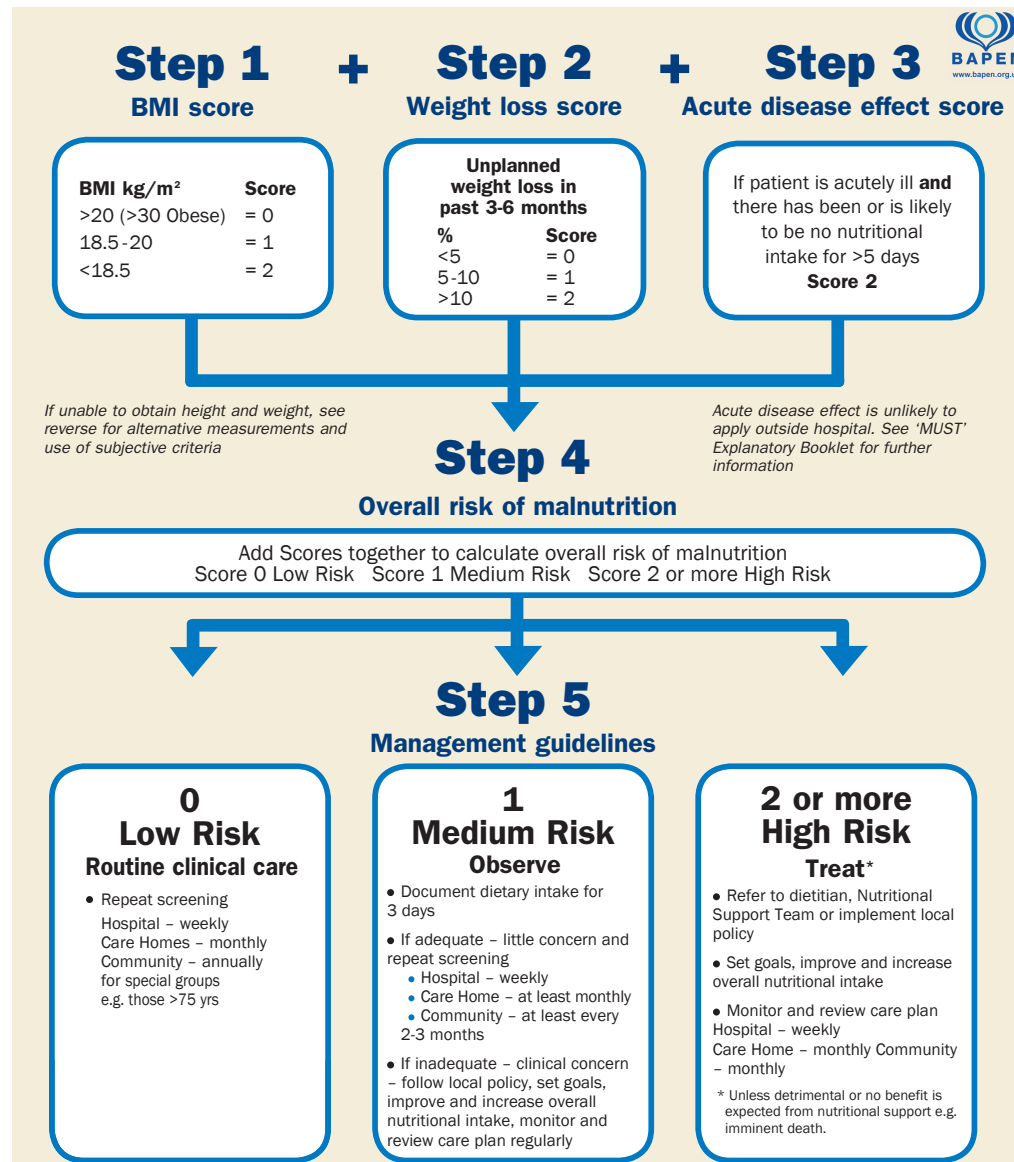


# Screening

- Screen patients at first visit
- Nutritional status is a dynamic concept  
Screening should be periodically repeated

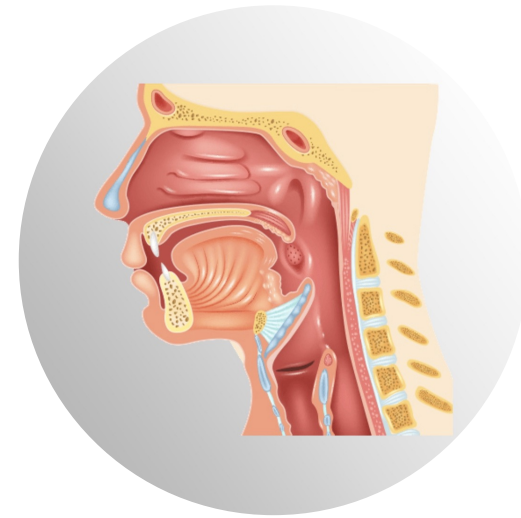
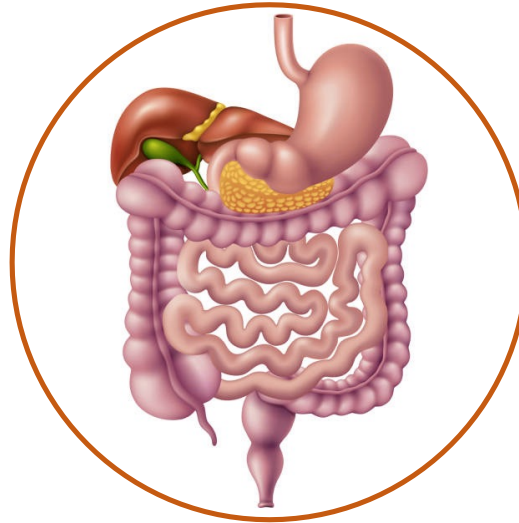
Factors evaluated:

- BMI
- Unintentional weight loss
- Food intake
- Severity of disease



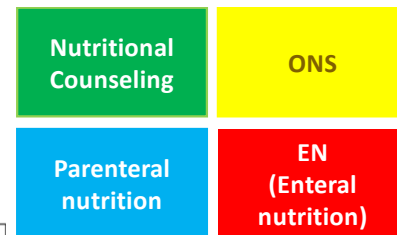
**Malnutrition Universal Screening Tool - MUST**

## Sometimes screening might be needless....



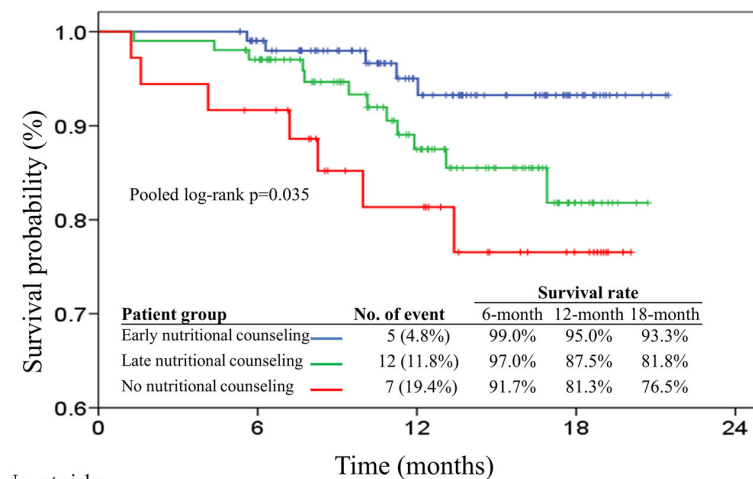
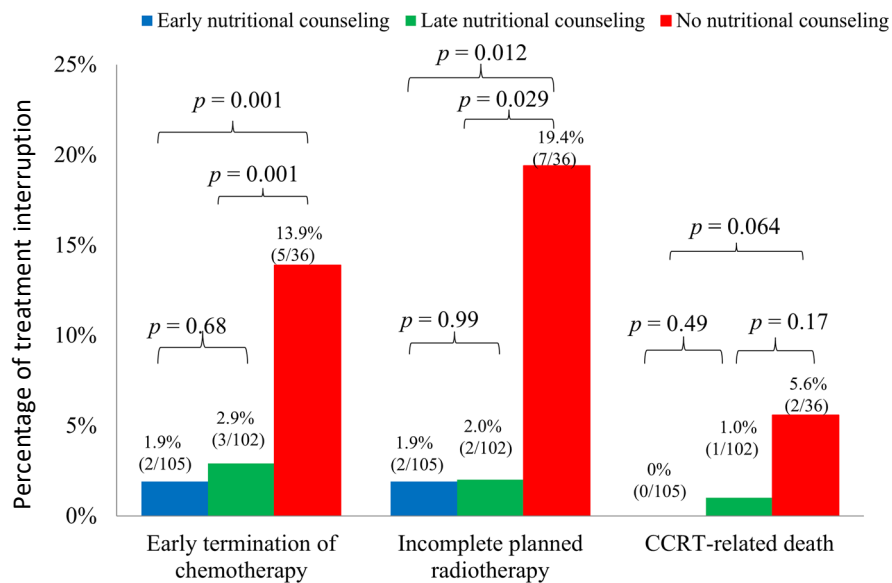
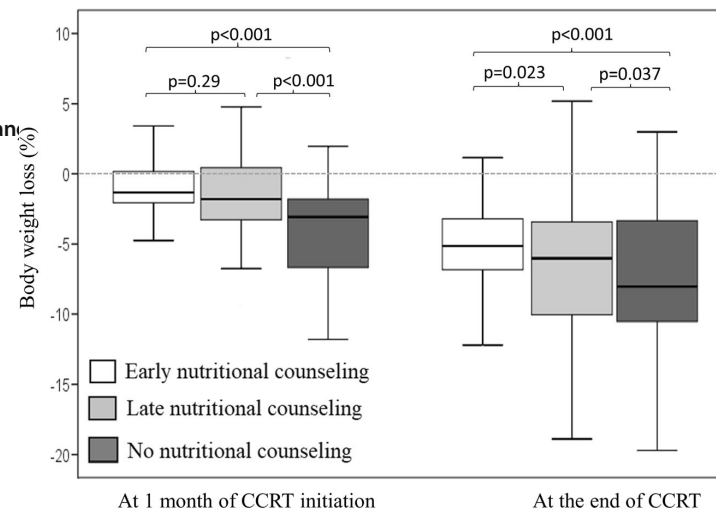
Patients with gastrointestinal, head & neck and lung cancer  
at **advanced disease stage**

or undergoing **aggressive treatment (i.e. multimodal treatments)**  
should be **immediately referred to a clinical nutrition specialist**  
independently of risk evaluation



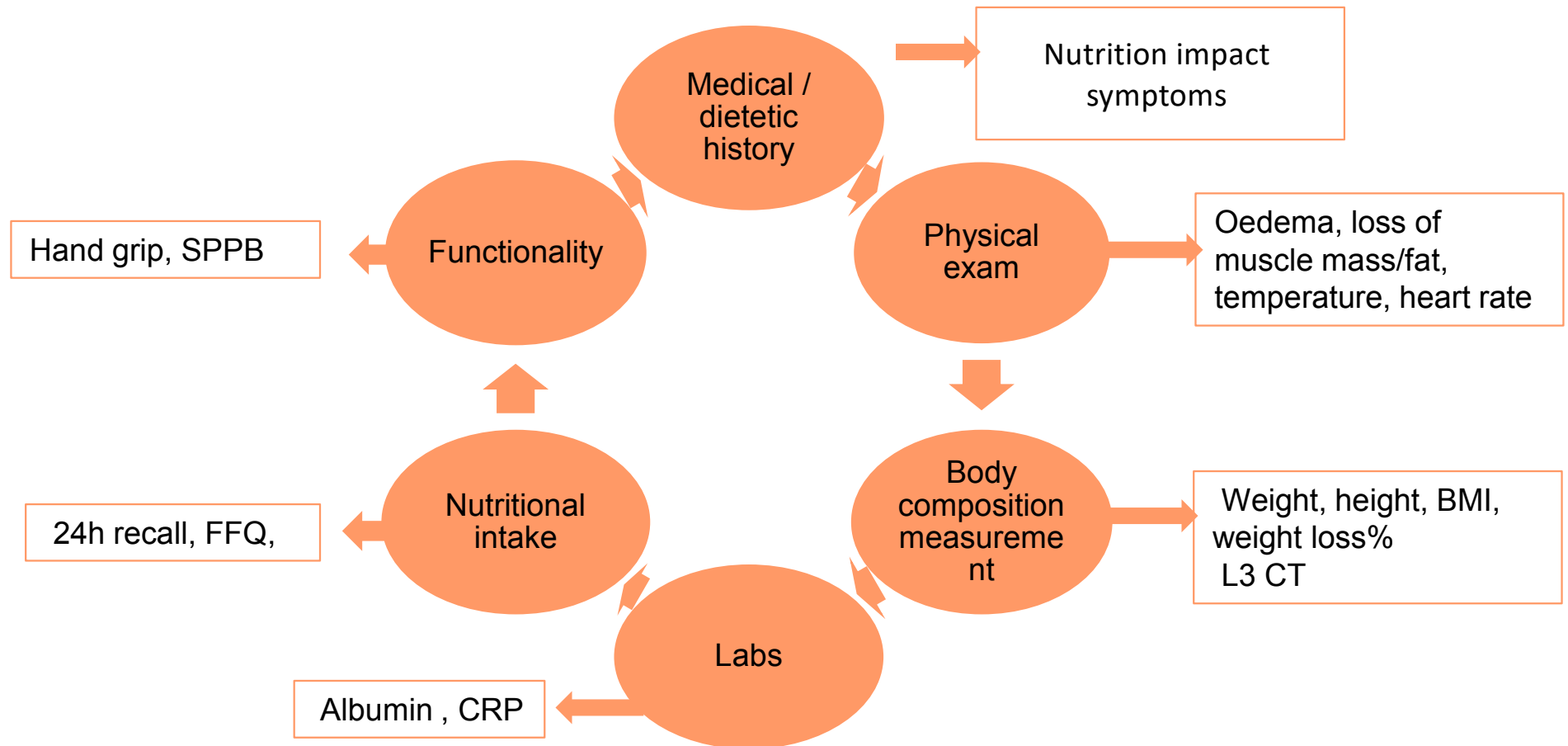
## Impact of early nutrition counseling in head and neck cancer patients with **normal nutritional status**

Ya-Wen Ho<sup>1,2</sup> · Kun-Yun Yeh<sup>3</sup> · Shun-Wen Hsueh<sup>3</sup> · Chia-Yen Hung<sup>1,4</sup> · Chang-Hsien Lu<sup>5</sup> · Ngan-Ming Tsan<sup>6</sup> · Hung-Ming Wang<sup>1</sup> · Yu-Shin Hung<sup>1</sup> · Wen-Chi Chou<sup>1</sup>





# Complete nutritional assessment



# Personalized nutritional intervention

- Improve food intake (protein- and energy-rich food and fluids)
- Management of the nutrition impacting symptoms
- Take into account ethnicity, patient's preference



**1**  
**Nutritional Counseling**

**2**  
**ONS**  
**(Oral nutritional supplementation)**

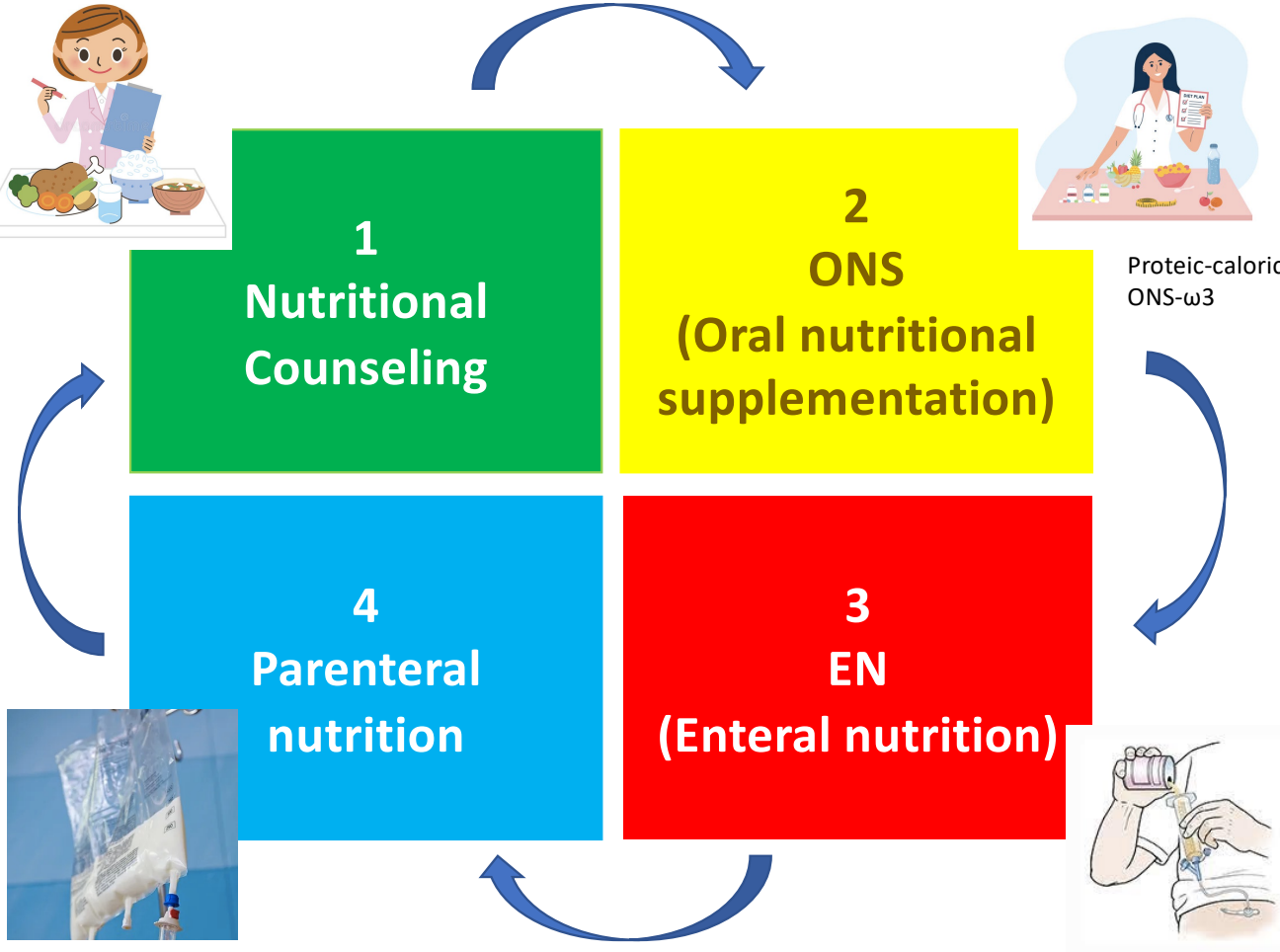


Protein-caloric  
ONS- $\omega$ 3

**4**  
**Parenteral nutrition**

**3**  
**EN**  
**(Enteral nutrition)**

If EN is not feasible or sufficient



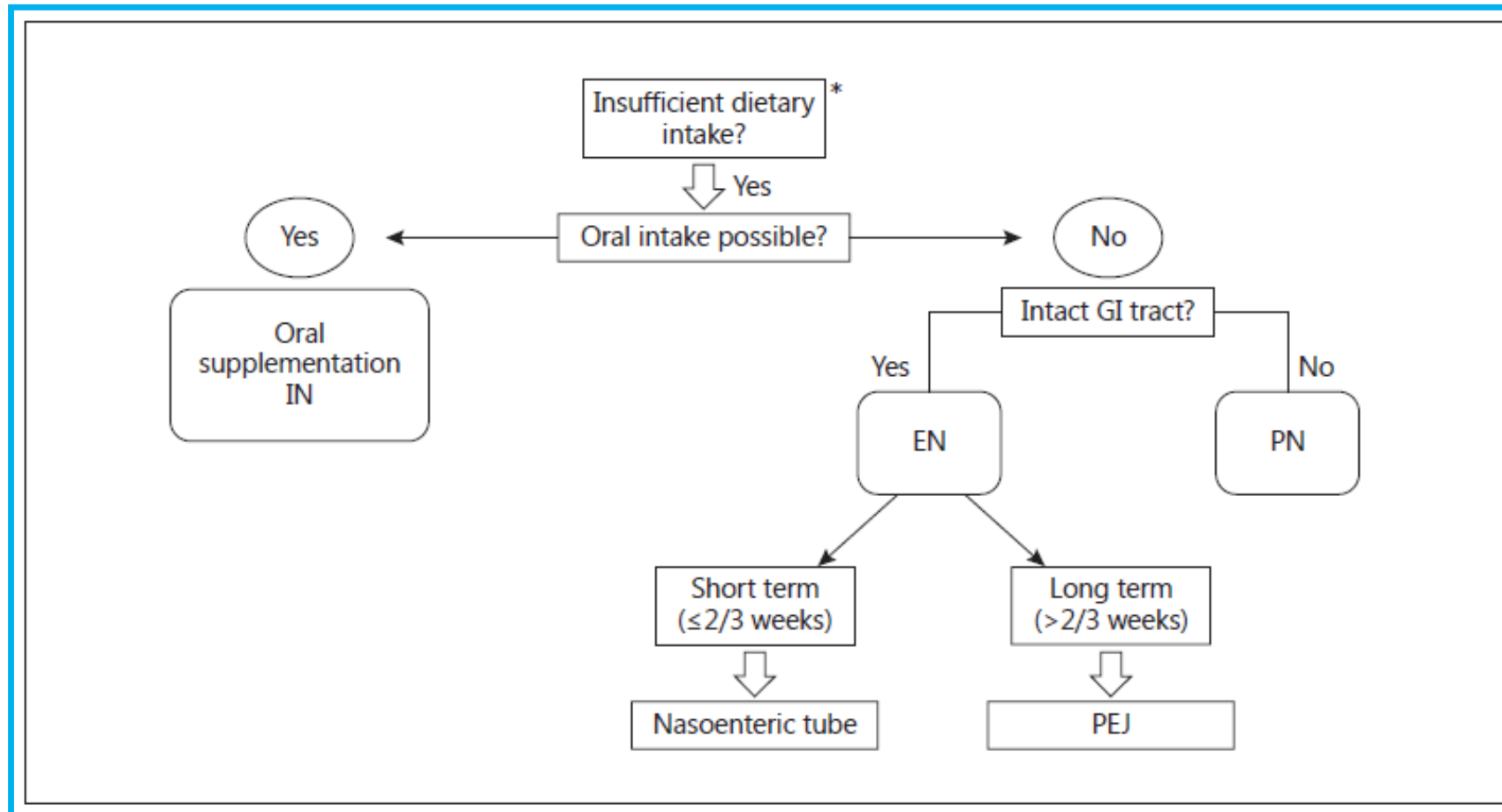
# Perioperative nutrition in esophago-gastric cancer

Nutritional  
Counseling

ONS

Parenteral  
nutrition

EN  
(Enteral  
nutrition)



# Today's Menu

## (...from the oncologist's perspective...)

- ✓ Why addressing nutritional issue is important for oncologists?
- ✓ Management of clinical nutrition (from the oncologist's perspective)
- ✓ **Clinical nutrition issues in Special populations  
(Sarcopenic obesity; older cancer patients)**
- ✓ AIOM commitment on clinical nutrition
- ✓ Future opportunities for research on clinical nutrition



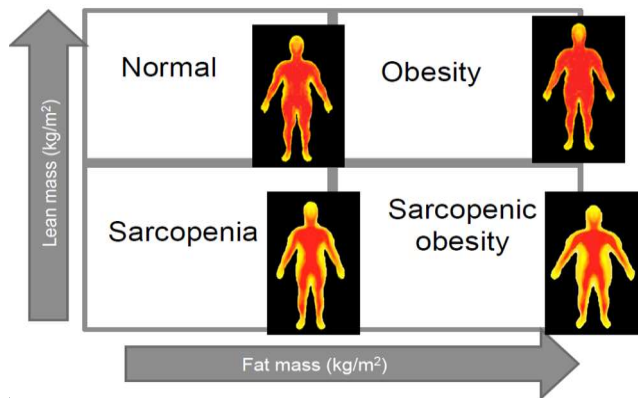
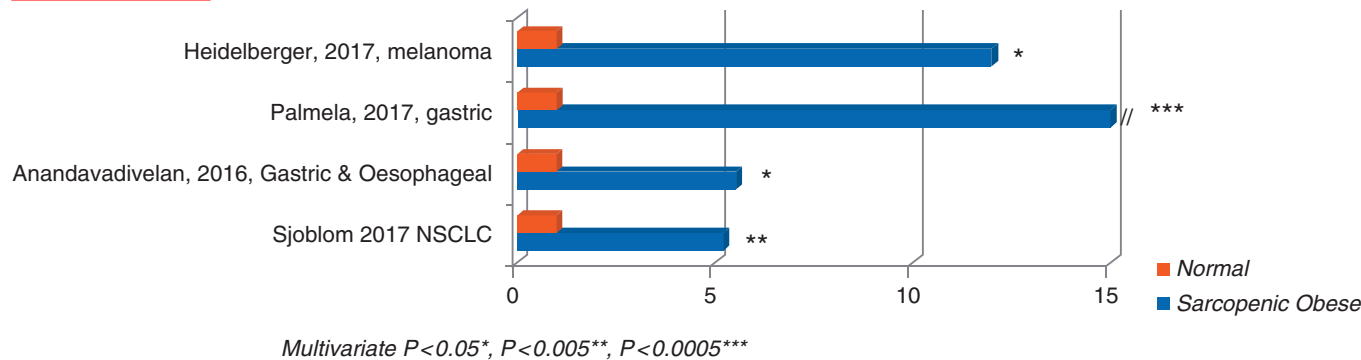
# Sarcopenic obesity: hidden muscle wasting

9% of advanced cancer patients

Nearly 25% of cancer patients with BMI >30 Kg/m<sup>2</sup>

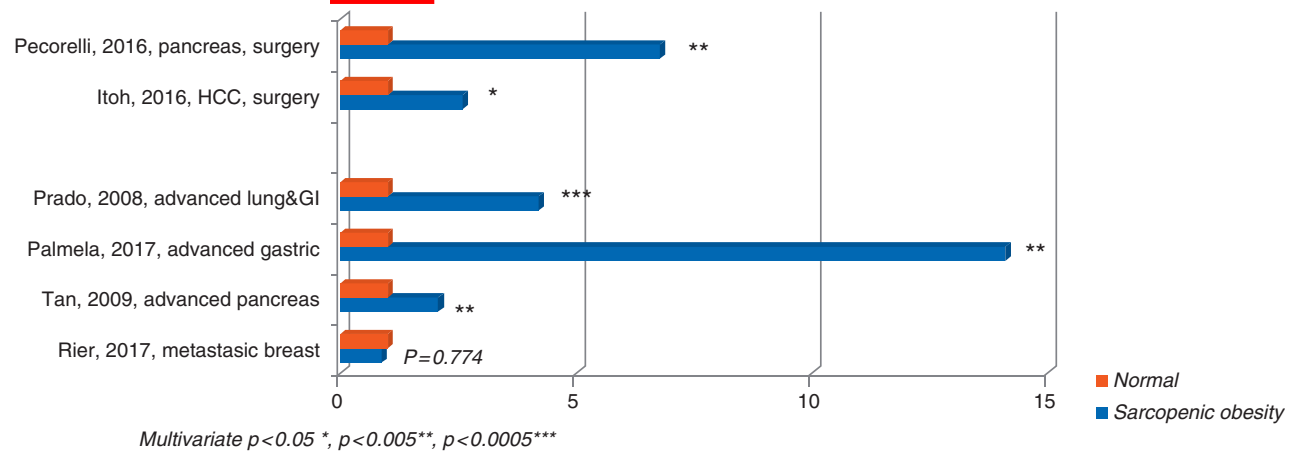


## Multivariate odds ratio for chemotherapy dose limiting toxicity



Baracos VE et al. Ann Oncol 2018

## Multivariate hazard ratio for death





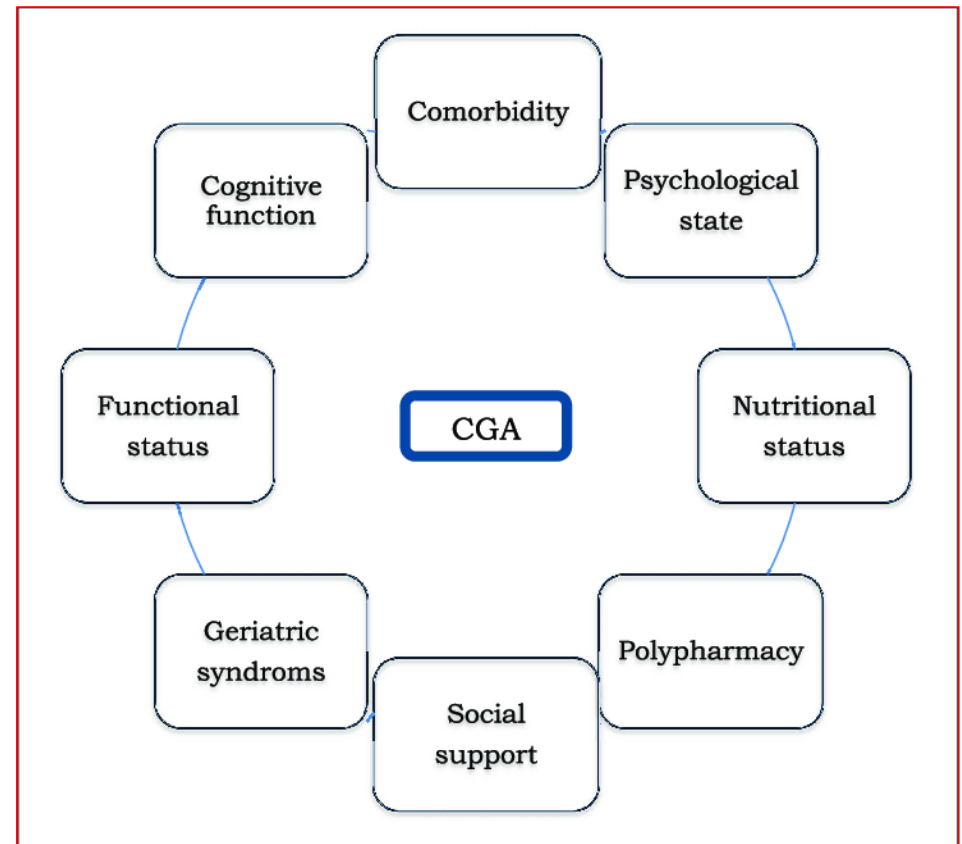
# The nutrition issue in older patients

- ✓ The aging process is associated with sarcopenia
- ✓ Decline in muscle is expected at a rate of up to 15% per decade at 70 years of age
- ✓ Aged > 70 years and malnutrition increase the risk of death 2 – 2.5 times, respectively
- ✓ Often more difficult to delineate age-related versus tumor-related effects on malnutrition



You are special

## Comprehensive Geriatric Assessment (CGA)



# Today's Menu

## (...from the oncologist's perspective...)

- ✓ Why addressing nutritional issue is important for oncologists?
- ✓ Management of clinical nutrition (from the oncologist's perspective)
- ✓ Clinical nutrition issues in Special populations  
(Sarcopenic obesity; older cancer patients)
- ✓ **AIOM commitment on clinical nutrition**
- ✓ Future opportunities for research on clinical nutrition



# Intersociety Italian Working Group for Nutritional Support in Cancer

(2015)



**SINPE**

Società Italiana di Nutrizione Artificiale e Metabolismo  
Membro della Federazione delle Società Italiane di Nutrizione (FeSIN)



**F.A.V.O.**

Federazione Italiana delle  
Associazioni di Volontariato  
in Oncologia

(2019-2021)



SOCIETÀ ITALIANA  
DI CHIRURGIA  
ONCOLOGICA

ESSO AFFILIATED





(2022-2023)

**FNOPI**

FEDERAZIONE NAZIONALE ORDINI PROFESSIONI INFERMIERISTICHE

# Intersociety Italian Working Group for Nutritional Support in Cancer

Contents lists available at [ScienceDirect](#)

 **Nutrition** 

journal homepage: [www.nutritionjrn.com](http://www.nutritionjrn.com)

Brief report



**Awareness and consideration of malnutrition among oncologists: Insights from an exploratory survey**

**2015**

Riccardo Caccialanza M.D.<sup>a</sup>, Emanuele Cereda M.D., Ph.D.<sup>a</sup>, Carmine Pinto M.D.<sup>b</sup>, Paolo Cotogni M.D., M.Sc.<sup>c</sup>, Gabriella Farina M.D.<sup>d</sup>, Cecilia Gavazzi M.D.<sup>e</sup>, Chiara Gandini M.D.<sup>f</sup>, Mariateresa Nardi M.D.<sup>g</sup>, Vittorina Zagonel M.D.<sup>h</sup>, Paolo Pedrazzoli M.D.<sup>f,\*</sup>

- ✓ Although malnutrition and nutritional support is perceived by as relevant factors for the efficacy of cancer treatment, it seems than **nutritional care practices may well be inappropriate**
- ✓ The **lack of collaboration between oncologists and clinical nutritionists** may be the first obstacle to overcome
- ✓ Educational intersociety initiatives aimed at improving nutritional support management for cancer patients in Italy appear urgently needed

Contents lists available at [ScienceDirect](#)

 **Current Problems in Cancer** 

journal homepage: [www.elsevier.com/locate/cpcancer](http://www.elsevier.com/locate/cpcancer)

**Cancer-related malnutrition management: A survey among Italian Oncology Units and Patients' Associations**

**2020**

Riccardo Caccialanza<sup>a,\*</sup>, Federica Lobascio<sup>a</sup>, Emanuele Cereda<sup>a</sup>, Giuseppe Aprile<sup>b</sup>, Gabriella Farina<sup>c</sup>, Francesca Traclò<sup>d</sup>, Valeria Borioli<sup>a</sup>, Marilisa Caraccia<sup>a</sup>, Annalisa Turri<sup>a</sup>, Francesco De Lorenzo<sup>d</sup>, Paolo Pedrazzoli<sup>e</sup>, on behalf of the AIOM-SINPE-FAVO and Fondazione AIOM Working Group

- ✓ According to 42% of oncologists, **nutritional assessment** was carried out **only after patients requested it**, while it was not performed at all for 45% of FAVO associates
- ✓ Almost 60% of patients were not aware of clinical referrals for home artificial nutrition management
- ✓ For almost all responders, **the evaluation of nutritional status was considered crucial** in predicting tolerance to anticancer treatment



# CARTA dei DIRITTI DEL PAZIENTE ONCOLOGICO

ALL' APPROPRIATO E TEMPESTIVO SUPPORTO NUTRIZIONALE

## 1-Diritto alla corretta informazione e al counseling nutrizionale

Ogni malato oncologico ha diritto a ricevere da parte di personale sanitario con documentate e riconosciute competenze di nutrizione clinica:

- informazioni esaustive, corrette e basate sulle evidenze cliniche riguardo al proprio stato di nutrizione, alle possibili conseguenze e ad esse associate e alle diverse opzioni terapeutiche nutrizionali;
- un counseling nutrizionale che fornisca indicazioni su come adeguare la propria alimentazione ai principi universalmente riconosciuti come utili nella prevenzione primaria e secondaria dei tumori, in relazione anche alle eventuali comorbidità, terapie mediche, chirurgiche o radioterapiche previste.

## 2-Diritto allo screening e alla valutazione dello stato nutrizionale

Ogni malato oncologico ha diritto allo screening nutrizionale finalizzato a individuare l'eventuale presenza del rischio di malnutrizione. Lo screening deve essere eseguito con strumenti validati alla diagnosi e ripetuto sistematicamente da parte dell'equipe curante a intervalli regolari, nel caso di neoplasie, che, per tipologia, stadio o trattamento, possono influenzare negativamente lo stato di nutrizione. Ogni malato a rischio di malnutrizione ha diritto alla valutazione completa e tempestiva del proprio stato nutrizionale da parte di personale sanitario afferente ai Servizi di Nutrizione Clinica o, comunque, con documentate e riconosciute competenze di nutrizione clinica. La valutazione nutrizionale deve essere parte integrante dei percorsi diagnostico-terapeutici e assistenziali elaborati dalle strutture oncologiche.

## 3-Diritto alle prescrizioni nutrizionali

Ogni malato oncologico malnutrito e con calo ponderale ha diritto alla prescrizione di un supporto nutrizionale appropriato da parte di personale medico afferente ai Servizi di Nutrizione Clinica o con documentate e riconosciute competenze di nutrizione clinica.

## 4-Diritto all'accesso all'integrazione nutrizionale orale

Ogni malato oncologico a rischio di malnutrizione ha diritto, in relazione alle condizioni cliniche e carenze presenti, su prescrizione di personale medico afferente ai Servizi di Nutrizione Clinica o con documentate e riconosciute competenze di nutrizione clinica, all'accesso gratuito agli integratori nutrizionali orali, compresi i supporti vitaminici e minerali.

## 5-Diritto a ricevere una nutrizione artificiale appropriata e tempestiva

La nutrizione artificiale è una metodica terapeutica complessa che richiede competenze mediche specifiche e che può presentare, se non condotta secondo criteri di qualità e sicurezza, complicanze anche gravi. Ogni malato oncologico a rischio di malnutrizione, non in grado di mantenere un soddisfacente stato di nutrizione attraverso il counseling nutrizionale ed eventuali integrazioni, ha diritto a ricevere sia in ospedale, sia nelle strutture residenziali, nell'ambito di un progetto di continuità assistenziale, un appropriato e tempestivo supporto di nutrizione artificiale, su prescrizione di personale medico afferente ai Servizi di Nutrizione Clinica o con documentate e riconosciute competenze di nutrizione clinica.

## 6-Diritto a ricevere una nutrizione artificiale domiciliare appropriata e sicura

Ogni malato oncologico che necessita di proseguire il supporto di nutrizione artificiale oltre i termini della degenza ospedaliera ha diritto a ricevere un trattamento di nutrizione artificiale domiciliare appropriato e sicuro, su prescrizione di personale medico afferente ai Servizi di Nutrizione Clinica o con documentate e riconosciute competenze di nutrizione clinica.

## 7-Diritto al monitoraggio del supporto nutrizionale

Ogni malato oncologico che necessita di un supporto nutrizionale ha diritto a ricevere la periodica rivalutazione dell'appropriatezza e dell'efficacia del trattamento da parte dell'oncologo e di personale sanitario afferente ai Servizi di Nutrizione Clinica o con documentate e riconosciute competenze di nutrizione clinica, nel contesto di percorsi sanitari integrati e condivisi da equipe multidisciplinari.

## 8-Diritto alla cura del sovrappeso associato alle terapie

Ogni malato oncologico ha diritto all'accesso gratuito ai Servizi di Nutrizione Clinica nell'ambito dei percorsi di riabilitazione oncologica durante e dopo i trattamenti attivi, al fine di recuperare il proprio peso ideale, anche in considerazione dell'impatto del sovrappeso sulla prognosi e sul decorso clinico di molte patologie neoplastiche.

## 9-Diritto al supporto psicologico

La malnutrizione per difetto e il sovrappeso incidono in modo rilevante sull'immagine corporea del malato e spesso innescano dinamiche intrafamiliari importanti. Ogni malato a rischio di variazioni significative del proprio stato nutrizionale ha diritto a un appropriato e tempestivo supporto psicologico gratuito.

## 10-Diritto a partecipare a studi clinici controllati in tema di nutrizione clinica

Ogni malato oncologico ha diritto, se lo desidera, a essere inserito in studi clinici controllati volti a contrastare la malnutrizione nelle diverse fasi della malattia.



## LINEE DI INDIRIZZO PERCORSI NUTRIZIONALI NEI PAZIENTI ONCOLOGICI

Documento approvato in sede di Conferenza Stato Regioni,  
con Accordo (Rep. Atti n. 224/CSR) del 14/12/2017

- **Primo accesso ai servizi ospedalieri:** valutazione dello stato nutrizionale, definizione del piano nutrizionale, programmazione del follow-up specifico
- **Reti nutrizionali territoriali:** definizione delle figure professionali in gioco, modelli organizzativi innovativi, integrazione tra i professionisti
- **Continuità assistenziale:** integrazione del territorio, gestione domiciliare, collaborazione con MMG



16. La mancata attuazione dell'Accordo Stato-Regioni 224/CSR 14/12/2017 sui percorsi nutrizionali in oncologia: riflessioni sulle possibili ragioni e prospettive

a cura di R. Caccialanza, F. Lobascio e P. Pedrazzoli – Fondazione IRCCS  
Policlinico San Matteo, Pavia  
F. De Lorenzo, L. Del Campo, E. Iannelli, F. Tracò – F.A.V.O.



F.A.V.O.  
Federazione Italiana delle  
Associazioni di Volontariato  
in Oncologia



SINPE  
Società Italiana di Nutrizione Artificiale e Metabolismo  
Membro della Federazione delle Società Italiane di Nutrizione (FESIN)



# LA CARTA DEI SERVIZI

dell'oncologia italiana 2021



Libro Bianco XI Edizione

## 5.3.1 Sede servizio nutrizione clinica di riferimento

N Strutture % sul totale % entro Macroregione	Interno all'azienda	Esterno all'azienda	Totale
Nord	148	5	153
	50,68	1,71	52,40
	96,73	3,27	100,00
Centro	68	2	70
	23,29	0,68	23,97
	97,14	2,86	100,00
Sud e Isole	68	1	69
	23,29	0,34	23,63
	98,55	1,45	100,00
Italia	284	8	292
	97,26	2,74	100,00



# 3-6 Sept 2022 VIENNA ESPEN CONGRESS

ON CLINICAL NUTRITION & METABOLISM

[www.espen.org](http://www.espen.org) [www.espencongress.com](http://www.espencongress.com)



## NUTRITIONAL CARE IS A HUMAN RIGHT

### The International Declaration to the Human Right to Nutritional Care "Vienna Declaration"


ESPEN FACT-SHEET

Endorsed by the four major international Clinical Nutrition Societies ASPEN, ESPEN, FELANPE and PENSA in conjunction with representatives of patients' associations (EPF), dietitians (EFAD), and a global network of more than 70 national Societies.



**RIGHT TO FOOD**

the right to adequate food and the right to freedom from hunger and malnutrition



**RIGHT TO NUTRITIONAL CARE**

Screening for malnutrition  
Diagnosis and assessment of DRM  
Food and evidence based medical nutrition therapy (including ANH)



**RIGHT TO HEALTH**

the right to the enjoyment of the highest attainable standard of physical and mental health

# The International Declaration on the Human Right to Nutritional Care

#### AIMS

- 1** Promote the recognition of the human right to nutritional care for all people with or at risk for disease related malnutrition, and the respect for human dignity in accordance with international laws on human rights and bioethics
- 2** Provide a frame of reference whose principles serve as the basis to the future development of actions plans from Clinical and Scientific Societies and any stakeholders in clinical nutrition
- 3** Define core values, goals, and principles to enhance the quality of care in clinical nutrition and to raise awareness of disease-related malnutrition and of the lack of nutritional care access.

#### PRINCIPLES

- 1 Fulfillment of the right to nutritional care**  
Public health policy must make the fulfillment of the right to nutritional care a fundamental axis in the fight against disease-related malnutrition
- 2 Clinical Nutrition Education & Research**  
Clinical nutrition education and research are a fundamental axis of the respect and the fulfillment of the right to nutritional care.
- 3 Ethical principles and values**  
Ethical principles and values in clinical nutrition including justice and equity in nutritional care access are basis for the right to nutritional care.
- 4 Institutional culture**  
Nutritional care requires an institutional culture that follows ethical principles and values and an interdisciplinary approach.
- 5 Patient empowerment**  
Patient empowerment is a key enabler to necessary action to optimize nutritional care.

# Today's Menu

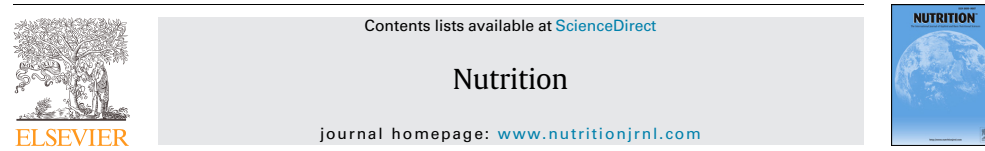
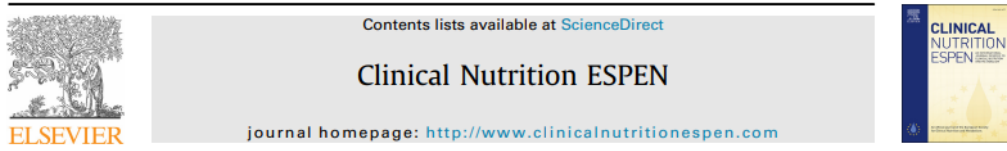
## (...from the oncologist's perspective...)

- ✓ Why addressing nutritional issue is important for oncologists?
- ✓ Management of clinical nutrition (from the oncologist's perspective)
- ✓ Clinical nutrition issues in Special populations  
(Sarcopenic obesity; older cancer patients)
- ✓ AIOM commitment on clinical nutrition
- ✓ **Future opportunities for research on clinical nutrition**



# Time to combine immunonutrition with immunotherapy?

*Modulation of tumor microenvironment by immunonutrition  
as a plausible rationale for combining immunotherapy with immunonutrition*



Original article

## Preoperative oral immunonutrition in gastrointestinal surgical patients: How the tumour microenvironment can be modified

Alessia D'Ignazio <sup>a,\*</sup>, Pawel Kabata <sup>b</sup>, Maria Raffaella Ambrosio <sup>a</sup>, Karol Polom <sup>b</sup>, Luigi Marano <sup>a</sup>, Luigi Spagnoli <sup>a</sup>, Alessandra Ongaro <sup>a</sup>, Linda Pieretti <sup>a</sup>, Daniele Marrelli <sup>a</sup>, Ivano Biviano <sup>a</sup>, Franco Roviello <sup>a</sup>

Comparison between immunophenotypic structure of tumor biopsy before surgery and surgical sample

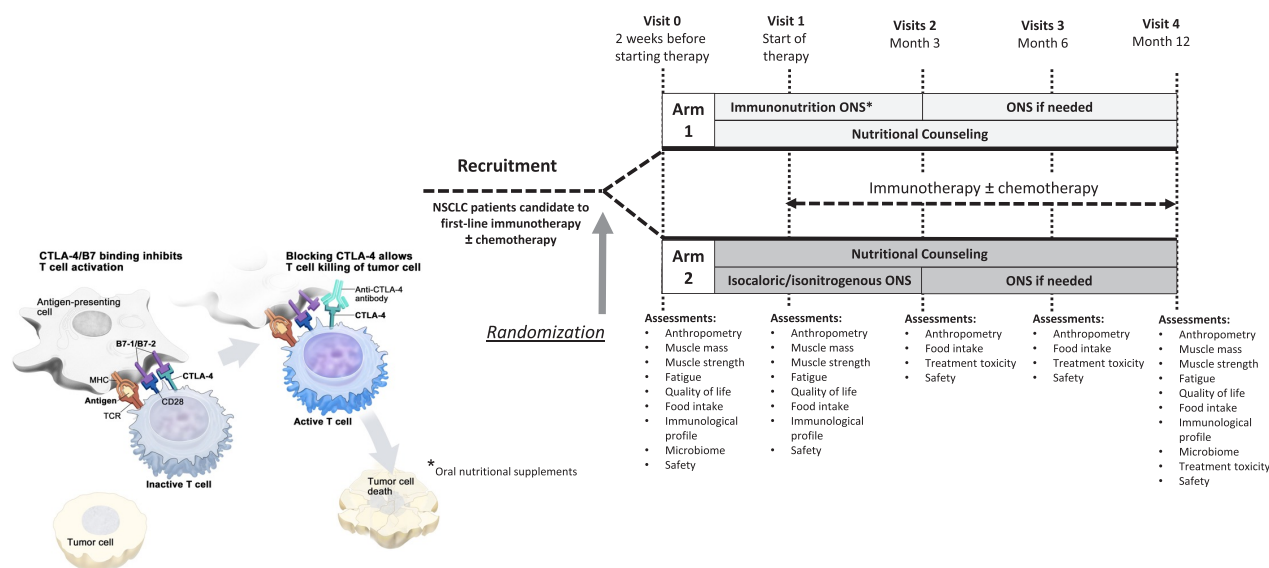
In patients receiving immunonutrition it was detected:

- Higher number of cell T-helper
- Lower number of Treg and T exhausted
- M1 polarization
- Inhibition of PD-1/PD-L1 pathway

Brief report

## Nutritional support in lung cancer: Time to combine immunonutrition with immunotherapy?

Sara Pilotto M.D. <sup>a</sup>, Francesco Agustoni M.D. <sup>b</sup>, Anna Maria Morelli M.D. <sup>c</sup>, Federica Lobascio M.D. <sup>d</sup>, Emanuele Cereda M.D., Ph.D. <sup>d</sup>, Paolo Bironzo M.D. <sup>c</sup>, Ilaria Trestini R.D. <sup>a</sup>, Michele Milella M.D. <sup>a</sup>, Silvia Novello M.D., Ph.D. <sup>c</sup>, Paolo Pedrazzoli M.D. <sup>b</sup>, Riccardo Caccialanza M.D. <sup>d,\*</sup>



# Take Home Messages

- ✓ Growing body of evidence demonstrated the impact of malnutrition and conversely of an adequate nutritional intervention on OS, QoL and toxicity from oncologic treatments
- ✓ Updated guidelines recommend to integrate nutritional care in clinical practice with multimodal and multidisciplinary care approach
- ✓ ...But we can do more...
  - ✓ Integrate nutrition education in our medical school
  - ✓ Undertake effective structural strategies and concrete actions aimed at facing the challenging issues of nutritional care involving the active participation of scientific societies and health authorities
  - ✓ Implement properly designed nutritional trials focusing on primary relevant clinical endpoints and integrate nutritional measurements in clinical trials addressing new drugs' efficacy







Associazione Italiana  
Radioterapia e Oncologia clinica



Associazione Italiana di Oncologia Medica

