

MALNUTRITION AND CACHEXIA IN CANCER

CLINICAL CASE DISCUSSION

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DISCLOSURE

JA has received honoraria for an advisory role or lectures for Baxter, B. Braun, Chugai, Falk, Fresenius, Helsinn, Nutricia, Roche, Seca

Cancer Cachexia in Adult Patients: ESMO Clinical Practice Guidelines

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**Updated 2018 ESMO Clinical
Practice Guidelines
to be published later**

Malnutrition/Cachexia

Prevalence in hospitalised patients:
20-70%, depending on setting

Impact:

Quality of life

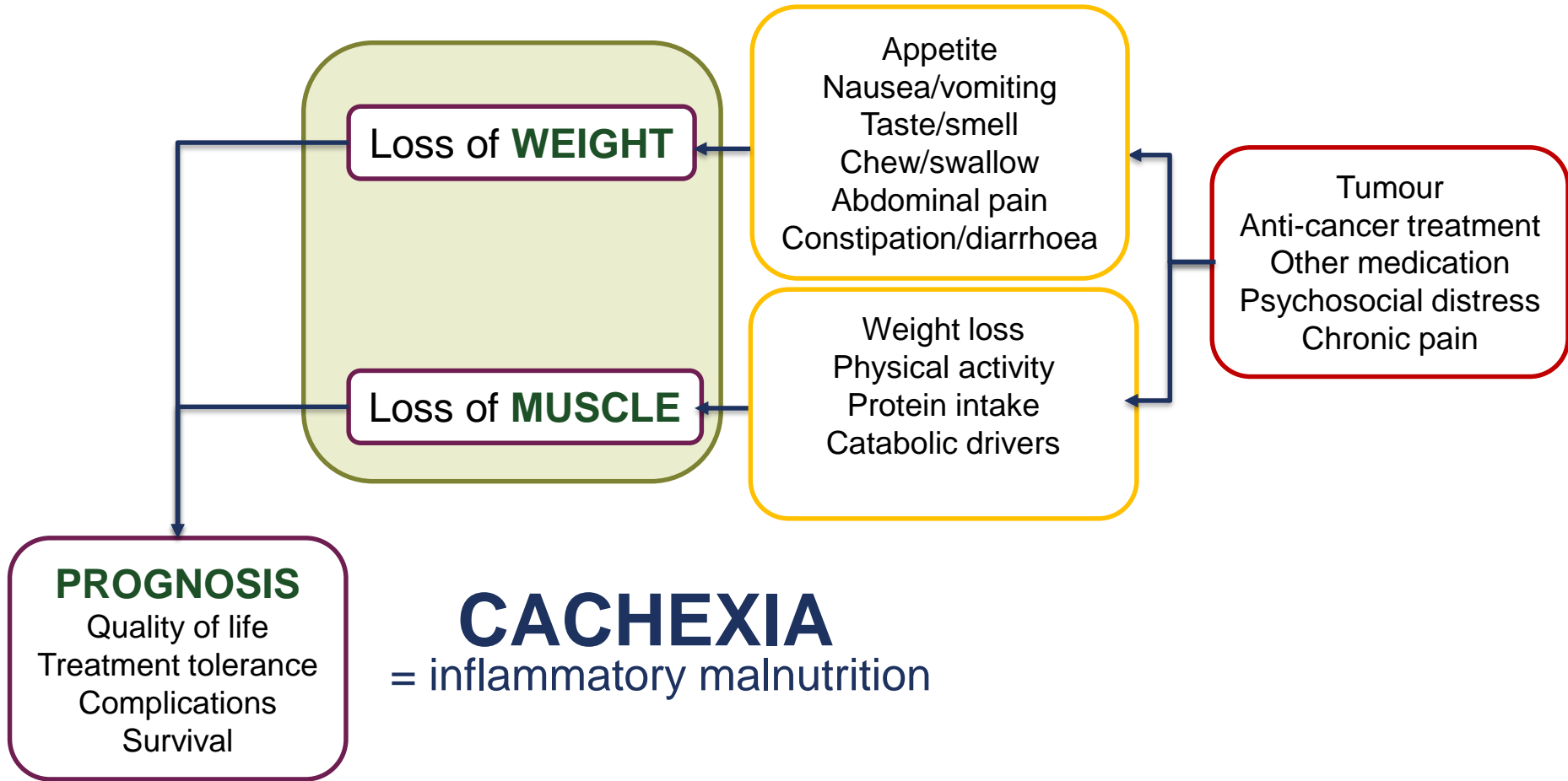
Treatment tolerance

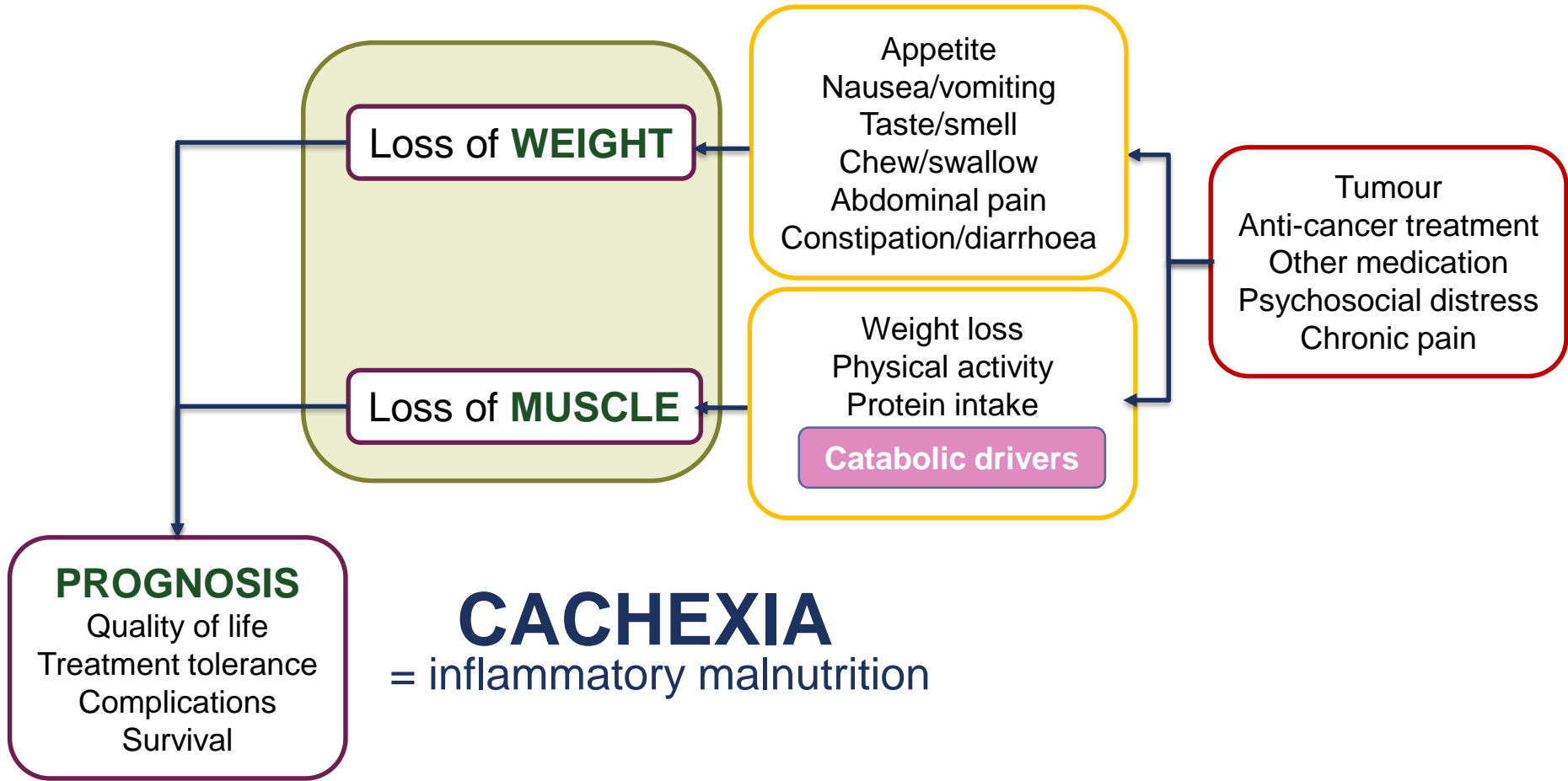
Complications

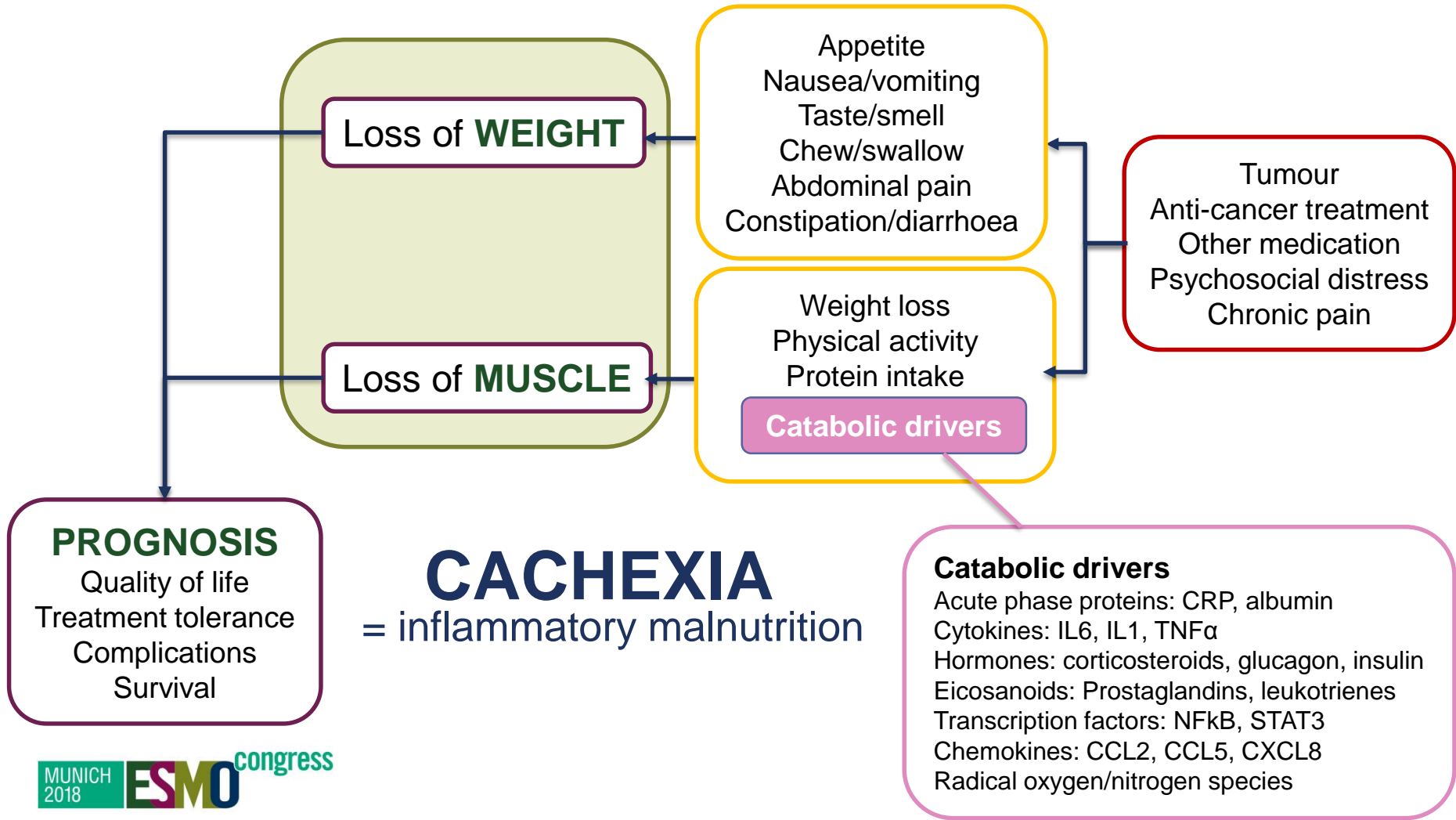
Survival

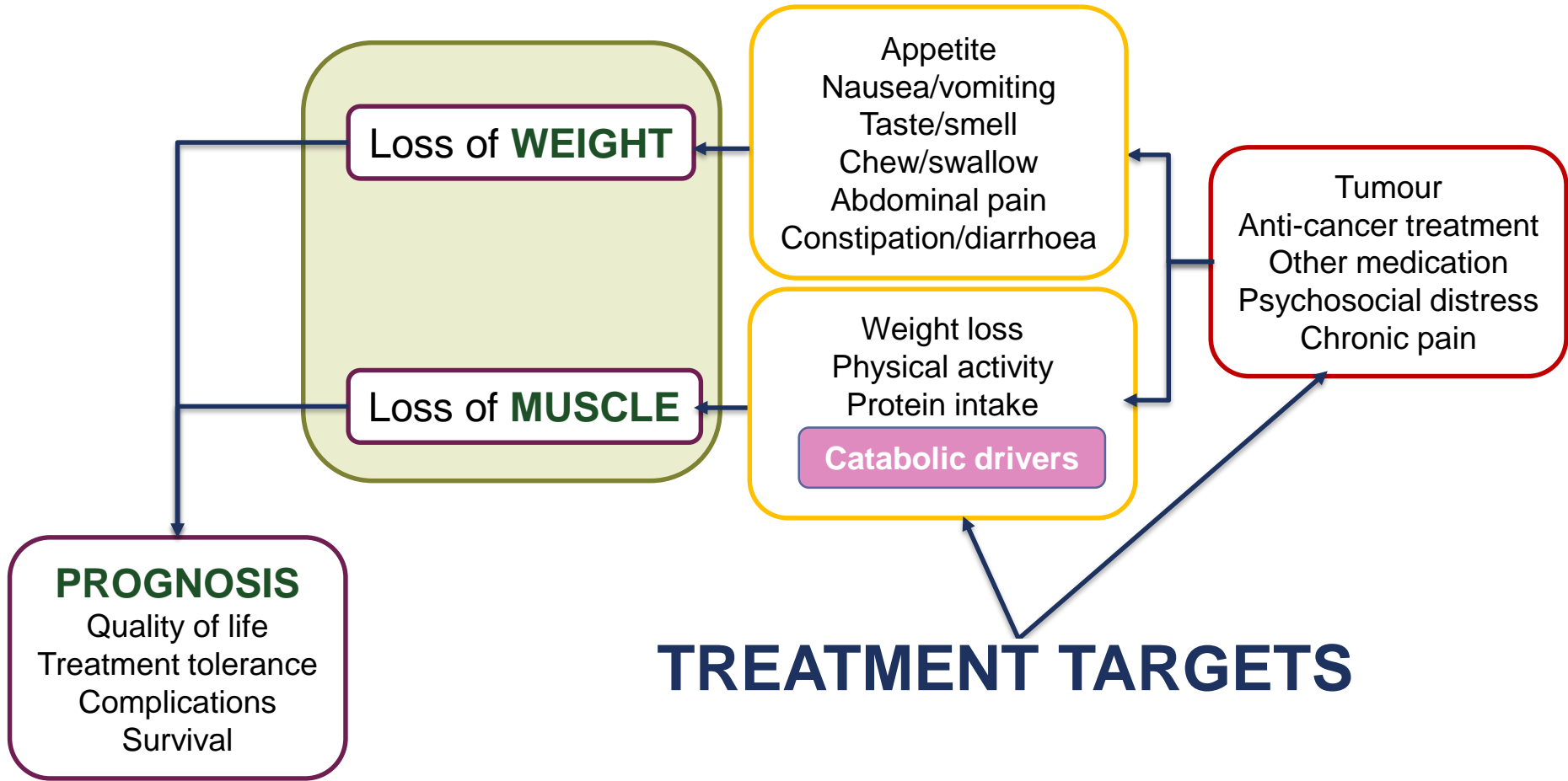
Reports of malnutrition prevalence in hospitalized patients with cancer.

Study, country	Cancer type	Malnutrition prevalence
Attar et al., 2016 [6] France	Upper gastrointestinal	52% of patients on chemotherapy
Planas et al., 2016 [5] Spain	Multiple types	34% at hospital admission, 36% at discharge
Fukuda et al., 2015 [20] Japan	Gastric	19% of those hospitalized for gastrectomy
Maasberg et al., 2015 [21] Germany	Neuroendocrine	25% at risk or actually malnourished
Silva et al., 2015 [17] Brazil	Multiple types	71%, with 35% moderate and 36% severe
Hebuterne et al., 2014 [4] France	Multiple types	39% overall prevalence, varying by cancer type
Aaldriks et al., 2013 [19] Netherlands	Advanced colorectal	39% in patients >70 years, prior to chemotherapy
Freijer et al., 2013 [18] Netherlands	Multiple types	30% in patients >18 and <60 years old 39% in patients ≥60 years
Pressoir et al., 2010 [1] France	Multiple types	31%, with 12% rated as severely malnourished
Wie et al., 2010 Korea [2]	Multiple	61% of all patients, varying by cancer type and stage









What is malnutrition: up-to-date definition 2018*

Global Leadership Initiative on Malnutrition (GLIM)

Malnutrition Risk Screening: positive

WEIGHT LOSS

> 5% in 6 M or > 10%**
> 10% in 6 M or > 20%***

<50% for >1 week
any reduction > 2 weeks
chronic impaired absorption

LOW FOOD INTAKE

LOW BMI

< 20 (< 70y) or < 22 (> 70y)
Asia: < 18.5 (< 70y) or < 20 (> 70y)

acute inflammation
chronic inflammation

SYSTEMIC INFLAMMATION

LOW MUSCLE MASS

appendicular skeletal muscle index
appendicular lean mass

Malnutrition screening

Screen:

all patients undergoing active anti-cancer treatment and all patients with life expectancy of at least a few months using a validated screening tool

NRS 2002 Nutrition risk screening

MUST Malnutrition universal screening tool

SGA Subjective global assessment

MNA Mini Nutritional Assessment

Criteria

Weight

Weight loss

Food intake

Metabolic stress

Malnutrition assessment

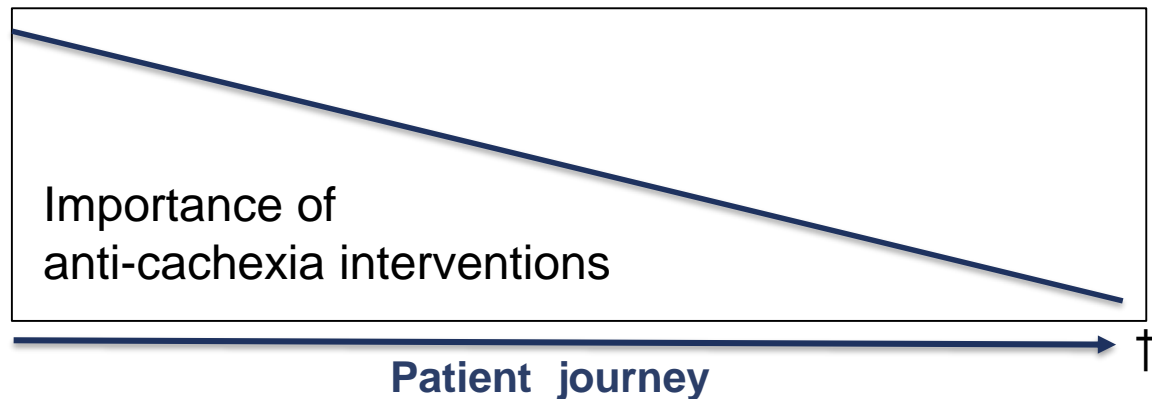
Repeat at regular intervals to guide treatment

If “at-risk”, assess:

- nutritional status (weight, weight loss, body composition)
- metabolic status (inflammatory state)
- physical activity
- nutrition impact symptoms (e.g. nausea, dysphagia)
- gastrointestinal dysfunction
- chronic pain
- psycho-social distress

Treatment strategy

- Provide adequate energy and nutrients
- Alleviate gastrointestinal defects and other impact symptoms
- Decrease catabolic drivers and increase anabolic stimuli



Scores to predict overall survival
Good for cohorts
Inadequate for individuals

Treatment strategy

Treat if inadequate intake for more than a few days

Use multi-targeted multi-professional approach

Offer dietary advice if able to eat; emphasis on protein and at least 5 meals/day

Treat conditions which interfere with food intake

Offer nutritional supplements

If oral intake is inadequate, offer tube feeding; if this is inadequate offer parenteral feeding

But: Offer PN or EN with NGT or PEG only if on anti-cancer treatment or if expected survival is at least several weeks

Treatment strategy

Estimated requirements

ENERGY: With enteral or parenteral nutrition aim for 25-30 kcal/kg/day

PROTEIN: Provide 1.0-1.5 g/kg/day

SUBSTRATES: In cachexia supply fat to account for 50% of non-protein calories

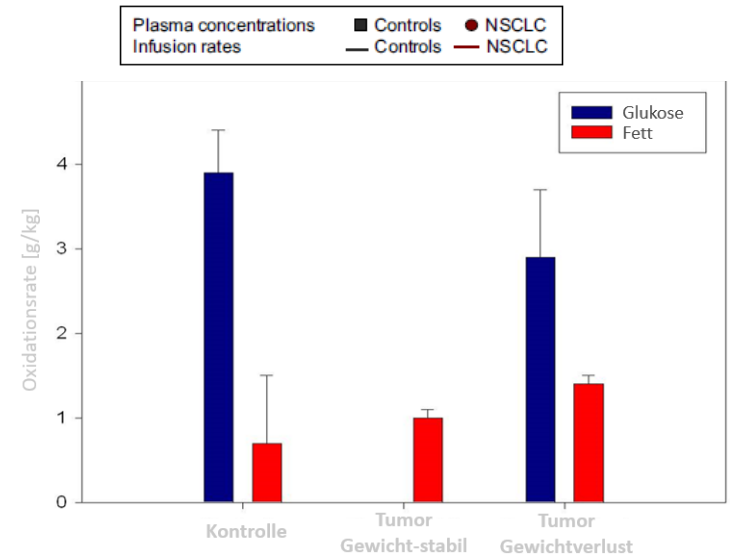
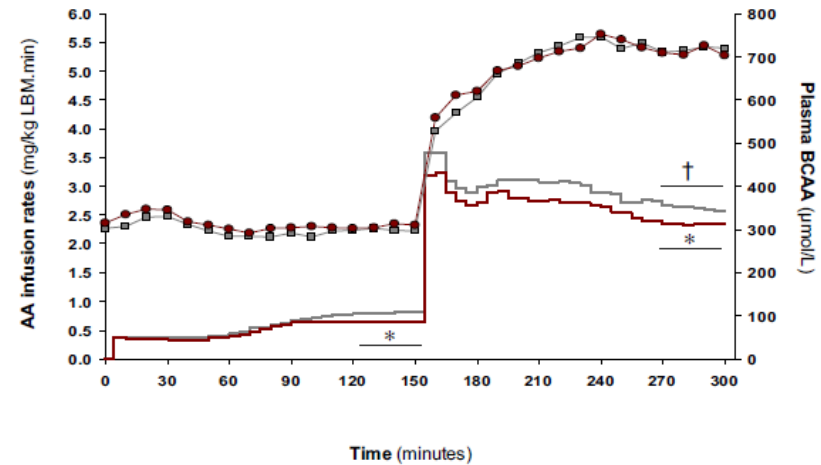
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Pharmaco-nutrients

Supplements enriched in ...

- N-3 fatty acids (EPA, eicosapentaenoic acid; DHA, docosahexaenoic acid)
→ inadequate evidence
- Leucine, arginine, glutamine
→ inadequate evidence

**Supplements
enriched in N-3 fatty
acids + protein***

→ potential benefit on
Body weight
Lean body mass
Quality of life

Tube feeding, parenteral nutrition (PN)

Use tube feeding to maintain stable weight or reduce losses in malnourished and dysphagic patients with head-neck or upper gastrointestinal cancers on anti-cancer treatment

Insert PEG if requiring 4 weeks or more of enteral feeding

Consider PN if enteral feeding is inadequate to improve nutritional status, physical function and QoL

Pharmacologic agents

A. The following agents may be considered:

Metoclopramide

Consider to treat anorexia or early satiety

Corticosteroids

Consider to use for up to 3 weeks to treat anorexia

Consider unwanted effects

Progestins

Consider to treat anorexia, body weight loss

No proven effects on muscle mass, quality of life, physical function

Consider unwanted effects: thromboembolism, oedema, adrenal insufficiency, hypogonadism in males

Pharmacologic agents

B. Insufficient evidence or proven ineffective

Insufficient evidence

Androgens
Cannabinoids
Olanzapine
Cyproheptadine
NSAIDs
Adenosine
Ginseng
Carnitine
Creatine

Proven ineffective

Thalidomide
Melatonin
Pentoxifylline

Physical exercise

Moderate physical exercise

- is safe in patients with cancer cachexia
- is recommended to maintain and improve muscle mass

Grand et al. J Cach Sarc Muscle/Cochrane 2015

Exercise training in cachexia

Systematic review: no RCT found!

Communicative interventions

Consider a psychosocial, educational and communicative intervention, to benefit both patients and their family carers

HCP should:

- empower patients and families to understand the nature and typical course of cachexia, thus promoting patient's hope in the care relationship
- address nutritional concerns of both patients and their family carers and provide tailored information about the role of nutritional support according to the disease stage
- routinely assess patients and their carers for a timely identification of any emotional distress

Multi-modal/combination therapy

We recommend offering multimodal treatment to improve weight loss, anorexia, reduced physical performance and QoL

This is, combining efforts to:

- normalise energy and nutrient intake
- physical activity
- metabolic balance between anabolism and catabolism
- alleviate psychosocial distress