

### Guidelines & References

ESPEN expert group recommendations for action against cancer-related malnutrition

ESPEN practical guide: Clinical nutrition in cancer

Clinical Oncology Society of Australia.

Position statement: Cancer-related malnutrition and sarcopenia

### Grading

Uses tumour biopsy

X to 4

Higher grade = undifferentiated = more intense treatment

### Staging

**TNM.** Higher number = more severe

**T** = tumour size

**N** = number of lymph nodes which contain cancer

**M** = Distant metastasised

*T4N3M1 = large tumour which has spread significantly to lymph nodes and has metastasised – will continue to grow & spread rapidly*

### Terminology

**Benign** (nonmalignant) = not cancer

**Malignant** = cancer

**Metastasis** = spread of cancer cells

**Neoadjuvant:** Treatment given as a first step to shrink a tumour before the main treatment (usually surgery). Includes chemo, radiation or hormone therapy

**Adjuvant:** Additional treatment given after the primary treatment to lower the risk of the cancer coming back. Includes chemo, radiation, hormones, biological or targeted therapy

**Cancer cachexia:** unintentional weight and muscle loss in people with cancer, not fully reversible by eating more

### Types of cancers

**Carcinomas** Most common. Arise from epithelia cells. Breast, prostate, lung, colorectal, melanoma.

**Lymphoma** Cancer of the lymphatic system (hodgkin lymphoma and non- Hodgkin lymphoma)

**Leukemia** Cancer of white blood cells, often starting in bone marrow

**Multiple myeloma** A cancer of plasma cells in the bone marrow.

**Sarcomas** From bone, muscle, fat. Osteosarcoma (bone), Leiomyosarcoma (smooth muscle tissue)

**Glioblastoma** An aggressive brain tumor.

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### Treatment

**Chemo** Oral, IV or injection

Given in cycles – gives the healthy cells a chance to grow back. C3D8 = cycle 3 (of 8), Day 8 (of the 14 day cycle)

S/E: V&D, constipation, dysphagia, fatigue, altered taste, oral thrush, thickened saliva, reflux, dry mouth, mucositis

**Immunotherapy** Helps the patients own immune system to fight cancer Eg. immune checkpoint inhibitors or monoclonal antibodies

Not as big effect on nutrition

**Radiation (XRT)** Kills or slows the growth of cells by damaging the DNA. In a big machine, similar to a CT scan. Measured in "grey" and given in "fractions"

S/S occur after 2 weeks of treatment & accumulate

S/E: Fatigue, dysphagia, diarrhea, vomiting, thick saliva, pain, taste changes, damage to bowels (eg bleeding)

### Intervention

Malnutrition assessment: SGA, PG-SGA SF (for chemo)

Malnutrition screening – MST, MUST

Sarcopenia screening (SARC-F)

HPHE - ONS/Fortification/EN

Educate: Food safety & hygiene – Immuno-compromised. Avoid illness

Depending on the person/prognosis: low-inflammatory foods – more so in people In remission



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### Intervention (cont)

**Consider:** site of cancer, refeeding risk, tube position (is it in the right place?)

### Nut Reqs

#### Energy ~125kJ

Chemo & Radiation: >125kJ/kg

Cancer cachexia: >125kJ/kg

Malnutrition = repletion (125-145kJ)

#### Protein ~1.2-1.5g

Chemo & Radiation: >1.2g/kg

Older/chronically ill/repletion: 1.2-1.5g/day

Renal failure: 1.0-1.2g/kg

Cancer cachexia: > 1.4g/kg

### Example PESS

*Inadequate oral intake related to loss of appetite and nausea 2 to chemotherapy, as evidenced by pt consuming ~\_\_% of EER and \_\_% of EPR\**

Food and nutrition knowledge deficit

Inadequate protein-energy intake

### Nutrition Strategies – based on S/S

*CTCAE Grading 1 to 5. 1 = mild, intervention not indicated. 5 = death related to S/S.*

#### Taste Changes

↓ **taste:** add salt or seasoning, ginger, pickles, honey, adding herbs/spices, pickles, marinades, sauces etc

↑ **taste:** use straw. No added sugar products. Low salt alternatives. Avoid fizzy drinks/mints/chewing gum

**Too salty:** Roast meats over deli meats. Add sugar or honey to food.

**Too sweet:** Avoid added sugars/fruit etc. Plain breakfast cereals. Add salt or lemon juice.

### Nutrition Strategies – based on S/S (cont)

**Metallic:** ginger, small sips of flavoured drinks. Non-metallic cutlery. Suck on boiled lollies  
Feel like “sand”, “straw” “cardboard” – Change the consistency of the food, soft, moist foods, add sauces/gravies, soups & smoothies, drink lots of water, medications to replace saliva

*pink lady* – Gaviscon + a numbing agent – pharmacist

#### Smell changes

Ask friends/family to cook for you

Cook in bulk and freeze

Bland foods.

Cold or room temp (avoid hot)

Avoid strong flavours: garlic, onion etc

**Anorexia** *Loss of appetite or desire to eat = ↓ food intake*

Educate on malnutrition & importance in treatment

Using smaller plates

More frequent small meals

EN/ONS

#### N/V

Medications – pharmacist

Cold food – usually better tolerated. sandwiches, salads, jelly, custard and yoghurt (NEMO)

Smaller frequent meals – avoid having an empty stomach  
Peppermint or ginger

Salty snacks/dry crackers, biscuits, noodles, cereal, toast, pretzels, crackers

Avoid alcohol and high volumes of coffee

### Nutrition Strategies – based on S/S (cont)

sucking on ice blocks

regular small sips of water or cold clear fluids – cordial, lemonade, ginger ale, juice

#### Mucositis & pain when swallowing

Artificial sweeteners

Sugar free gum

Avoiding hot food

Avoiding sources of trauma – hard toothbrush, crispy foods

#### Diarrhoea

Medical management – consult medical team/Pharmacist

*Monitor dehydration & electrolyte losses*

Consider non-treatment causes – Fibre, lactose, intolerances, sugar-free products

Adequate hydration – electrolyte solutions

Limiting fatty/greasy dishes, high fibre foods and fizzy drinks

Bland foods

Avoid caffeine

Try low lactose alternatives

#### Loss of appetite

Meds: Appetite stimulants

Early satiety: prokinetics (stimulates GI movement) – consider constipation

HPHE & ONS – Sustagen, up & go, milkshakes etc

6 smaller meals/day

Encourage to eat by the clock – avoid waiting until they are hungry

Eat when appetite is better – commonly morning



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### Nutrition Strategies – based on S/S (cont)

Encourage favourite foods – discuss with family

Social eating

Softer foods that don't require chewing

Cook in bulk and freeze – less exposure to food smells

Have ready-prepared meals/snacks

Encourage gentle exercise

### Oral Health

Regular sips of water to keep mouth hydrated & stimulates saliva

Gum, sucking on lollies

Sodium bicarb mouth wash



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