Nutritional Issues in the Cancer Patient

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Practical Nutrition Workshop for NPs Workshop
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Outline

- What kinds of patients will you encounter?
- Impact of nutrition and weight loss in adult cancer patients
- Screening and assessment of nutritional status
- Symptom management
- Nutritional requirements
- Alternative vs integrative nutrition

Effectively Balancing Goals In Oncology

Identifying patients who are at risk for malnutrition

Symptom Management for QOL/independence

- Strategies to maintain nutrition during treatment and in survivorship

Integration of Alternative and Conventional therapies

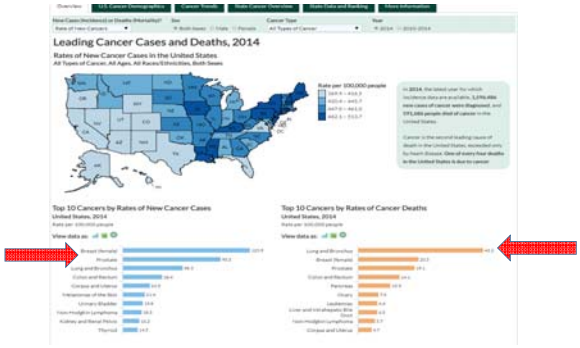
- **Optimize recovery, limit recurrence**
- **Evidence-based Integrative therapies that may provide benefit**
- **Handling Myths/alternative practices**
  - Does Sugar Feed the Tumor; Ketogenic diets
  - Overstated themes: Immune support, detoxification

Valid themes: Weight management, exercise, plant-based diets in prevention and survivorship

Who are your patients?

- Cancer patients undergoing treatment
  - What kind of symptoms and issues will they have?
- Cancer survivors
  - What kind of follow up will they need and what kind of issues will they have?
- Healthy adults who are at risk for cancer
  - What kind of questions and concerns will they have?

Cancer cases



https://nccd.cdc.gov/USCSDataViz/rdPage.aspx

Cancers most associated with malnutrition

- US Cancer Statistics Working Group: 85% of gastric cancer, 83% of pancreatic cancer, and 61% of nonsmall cell lung cancer patients exhibit significant weight loss (≥5%), loss of muscle mass, and develop cachexia, with or without the presence of anorexia.
- Head and neck, lung and gastrointestinal cancer patients are most commonly identified as malnourished Comparison of the prevalence of malnutrition diagnosis in head and neck, gastrointestinal and lung cancer patients by three classification methods, Platek ME et al, *Clin Nurs*, 2011 Sept-Oct (34-5), 410-416.

Impact of Malnutrition

- *30-85% of cancer patients are malnourished**
  - Older adults may be at even higher risk
  - Approximately 60 percent of new cancer cases and 70 percent of mortality from cancer occur in patients ≥65 years of age (UpToDate, accessed 11/15/16)
- Impairs physical & cognitive function

*https://www.cancer.gov/about-cancer/treatment/side-effects/appetite-loss/nutrition-hp-pdq

Impact of Malnutrition

- Increases risk of infection
- Impairs immunity
- Affects wound healing
- Impacts drug metabolism
- Bone marrow replenishment is retarded
- *What do we know is that unplanned weight loss of 5% affects prognosis*
- *In hospitalized patients, malnutrition is associated with increased length of stay*

Significant Weight Loss

- Weight loss as surrogate for malnutrition, correlated with adverse outcomes: severity of treatment side effects & increased risk for infection – may impact survival
- Associated with poor prognosis - cancer cachexia
- Moderate malnutrition (non-severe) based on unintentional weight loss %
  - 1-2% x 1 week / 5% x 1mo / 7.5% x 3 mo / 10% x 6 mo / 20% x 1 year
- Severe malnutrition based on weight loss %
  - >2% x 1 week / >5% x 1 mo / > 7.5% x 3 mo / >10% x 6 mo / >20% x 1 year

https://www.cancer.gov/about-cancer/treatment/side-effects/appetite-loss/nutrition-hp-pdq

Screening Tools

- Screening forms: Hospitals required by TJC to have some sort of screening in all admitted patients
  - –Weight
  - –Symptoms
  - –Diet

There is no requirement for screening for nutrition in the out-patient oncology setting

Screening Tools

- PG SGA – Patient Generated Subjective Global Assessment

http://pt-global.org/wp-content/uploads/2014/09/PG-SGA-Sep-2014-teaching-document-140914.pdf

- MST (Malnutrition Screening Tool)® - easy to use, validated for use in oncology patients

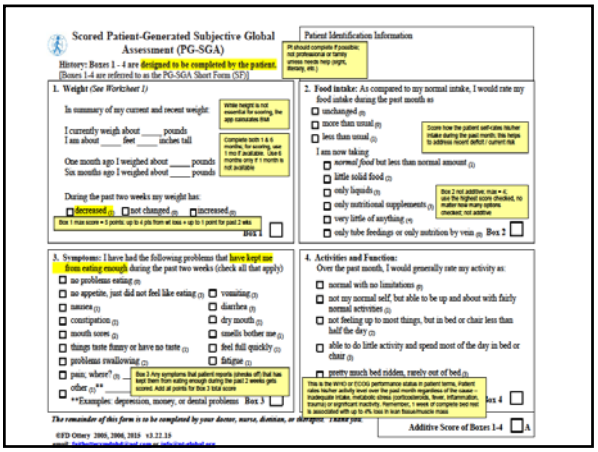
https://www.andeal.org/template.cfm?key=4185

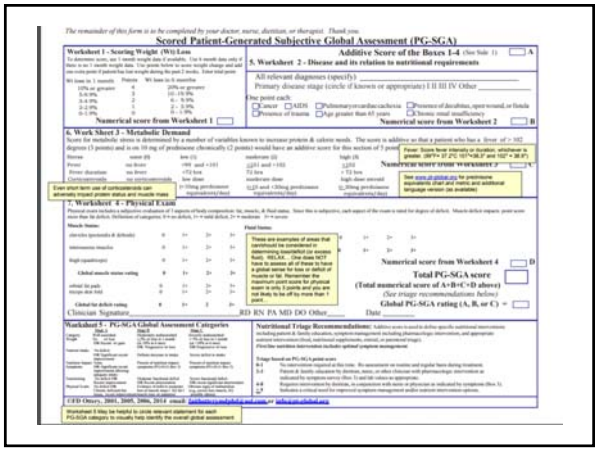
- Mini Nutritional Assessment (MNA) MNA® validated nutrition screening and assessment tool that can identify geriatric patients age 65 and > who are malnourished or at risk of malnutrition. Developed nearly 20 years ago and is the most well validated nutrition screening tool for the elderly.

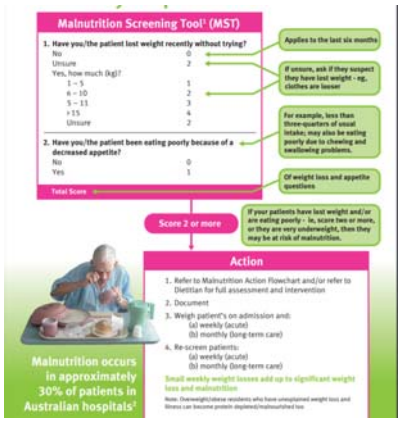
http://www.mna-elderly.com/forms/mini/mna_mini_english.pdf

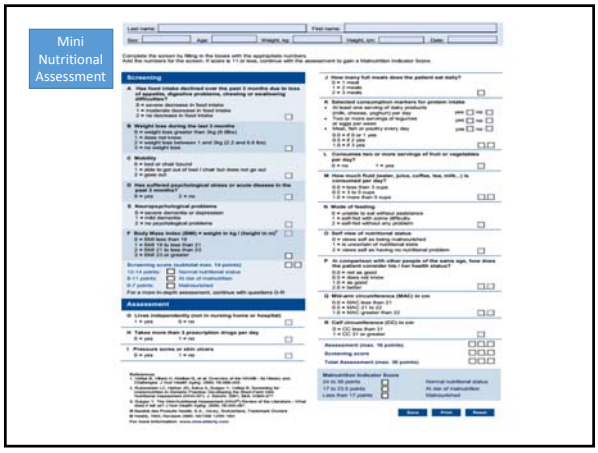
-validated screening tool often used to assess nutritional status of elderly cancer patients

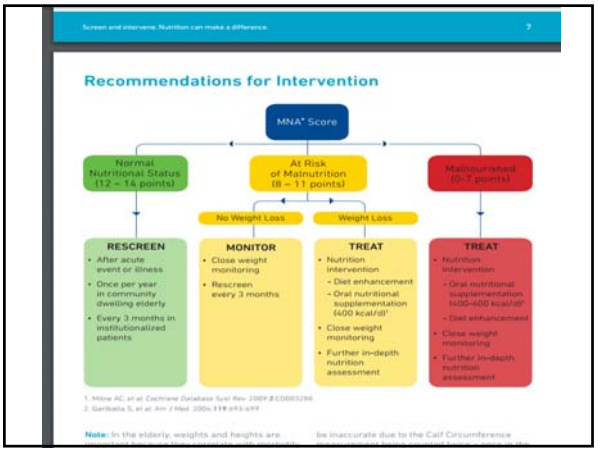
-scored - max 14 points: 12-14 pt = normal nutritional risk, 8-11= at risk for malnutrition, 0-7 = indicates malnutrition











Assessment – Clinical Parameters

- Weight
- Comparing UBW w/ CBW (can use IBW if UBW not known)
- Treatments
  - (Surgery, XRT, Chemotherapy)
- Comorbidities
- Functional status
- Medications/polypharmacy
- Use of vitamins, herbs, supplements
- Lab values
- Nutritional deficiencies
- Immunosuppressed
- Diet recall
- Sarcopenia – muscle loss related to aging, rate of muscle loss may increase in elderly cancer patients
- Poor dentition
- Dysphagia

Assessment - Psychosocial

- Availability/access of food/nutrition/lack of transportation to purchase foods
- Alternative/restrictive diets (e.g. “no sugar” or low sodium)
- Cultural issues r/t food
- Financial status
- Use of drugs, alcohol
- Depression, anxiety
- Social situation – isolation
- Altered mental status/dementia

Symptom Management

Symptoms

- Mucositis
- Xerostomia
- Taste alterations/ aversions
- Anorexia
- Dysgeusia/ageusia
- Thrush (may be associated w/older age and malnutrition)
- Early satiety
- Altered GI motility
- Esophagitis
- Acid reflux
- Fatigue
- Nausea & vomiting
- Dyspnea
- Pain
- Depression/anxiety
- Diarrhea/constipation
- Poorly controlled blood glucose (hyper and hypo)

Cancer Cachexia

- Loss of appetite and wasting
- Causes: cytokines, increased catecholamine activity, hyper-metabolism, gluconeogenesis, alterations in fatty acid metabolism
- Contributing factors: adjuvant treatments, surgery, obstructions, hyper-metabolism
- Anorexia-cachexia syndrome
  - metabolic changes
  - changes in REE
  - weight loss
  - sarcopenia

Appetite Stimulants

- Progestational agents
  - Megace
- Cannabinoids
  - Marinol (less effective w/pancreatic cancer)
- Anabolic agents
  - Oxandrin
- Glucocorticoids

https://www.uptodate.com/contents/pharmacologic-management-of-cancer-anorexia-cachexia

Nontraditional

- Antidepressants/ serotonin antagonist
  - Remeron
- Antihistamine
  - Periactin
- Melatonin
- EPA
- Thalidomide
- Medical marijuana
- Anamorelin, an oral ghrelin mimetic

Calorie Requirements

- How to determine calorie needs
  - Equations: e.g. Harris-Benedict
  - Quick method:
    - Maintain: weight in kg x 25-35 = calorie range
    - Gain: add 500 calories/day to maintenance needs
    - Lose: decrease caloric intake by 300-500 calories/day for gradual, sustainable weight loss if current weight is in overweight or obese category

http://www.bmi-calculator.net/bmr-calculator/

Fluid Requirements

- 2/3 of the body is water
- Symptoms of dehydration: fatigue, dry mouth, light headed, headaches, irritability, constipation, nausea
- ~ 64 oz a day for most
- Calculation: Estimated calorie needs ÷ 240 = cups/day fluid
  - Grape vs raisin

Survivorship

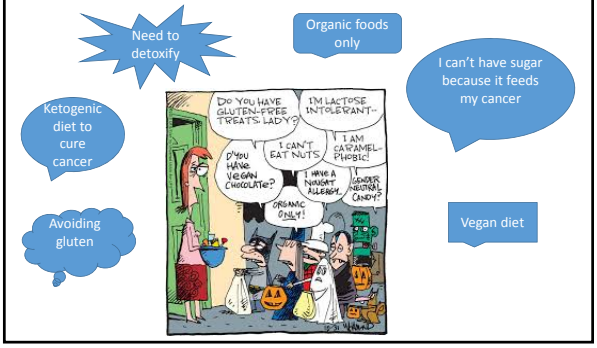
- American Institute for Cancer Research and American Cancer Society guidelines
- Routine monitoring for other diseases
  - Lipids, A1c, Vitamin D, bone density, pulmonary function, etc.
  - Reduce risk for second cancers: diet and lifestyle changes
  - Monitor and address late effects and chronic issues related to cancer: peripheral neuropathies, lymphedema, fatigue, deconditioning, swallowing issues (dysphagia), dental / oral health, weight gain (common in breast cancer patients who have been treated with chemo and/or are on hormone therapy), unintentional weight loss, new onset diabetes

American Institute of Cancer Research Nutrition Guidelines (these apply to older adults as well as younger people)

1. Be as lean as possible without becoming underweight
2. Be physically active for at least 30 minutes every day
3. Avoid sugary drinks. Limit consumption of energy-dense foods (particularly processed foods high in added sugar, or low in fiber, or high in fat)
4. Eat more of a variety of vegetables, fruits, whole grains and legumes such as beans
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats
6. If consuming at all, limit alcoholic drinks to 2 for men and 1 for women a day
7. Limit consumption of salty foods and foods processed with salt (sodium)
8. Don't use supplements to protect against cancer

http://www.aicr.org/site/PageServer?pagename=dc_home_guides

When I was diagnosed I googled my symptoms…



Alternative Practices

Concerns:

- Interactions w/chemotherapy, radiation and medications e.g. antioxidants
- Lack of purity and standardization: contamination, variable amounts of compounds e.g. Chinese herbals
- Restrictive and alternative diets e.g. Gerson, Budwig, Macrobiotics, Ketogenic, no sugar/white flour diets, etc…
- Questionable practices: coffee enemas, oxygen therapy, chelation therapy, etc…
- Don't believe everything you read on the internet

Plant-based diets – not just a fad

"I started my vegetarianism for health reasons, then it became a moral choice, and now it's just to annoy people."

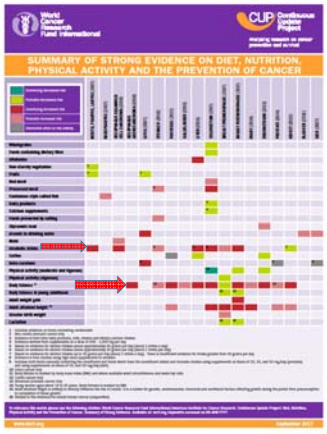
https://wcrf.org/int/research-we-fund/continuous-update-project-findings-reports/continuous-update-project-cup-matrix

The strongest risk factors for most cancers are body fatness and alcoholic drinks

The most convincing factors for decreasing risk for a variety of cancers include foods containing dietary fiber, whole grains, non-starchy vegetables. Physical activity (moderate and vigorous) may be protective.

Consumption of processed meats and red meat are associated with increased risk for colorectal and stomach cancers but not other cancers

The take away message: prevent excessive weight gain during young adulthood and maintain a healthy body weight throughout the continuum of adulthood. Limit or avoid alcoholic beverage intake.
Eat lots of fruits, vegetables and whole grains which will provide dietary fiber. Be active.



Evidence-based integrative approaches

- Plant-based diets, does not have to be vegan or vegetarian
- Use of acupuncture, Reiki, aromatherapy when provided by a reliable and trained practitioner*
- Botanical/herbal/dietary supplements when provided by a reliable and trained MD who collaborates with the oncology clinicians
- Traditional Chinese Medicine (TCM) and Ayurvedic Medicine – potential interactions and toxicities

https://nccih.nih.gov/health/chinesemed

https://nccih.nih.gov/health/ayurveda/introduction.htm

*https://integrativeonc.org/

What can working with an oncology RDN do for your patients?

- Address cultural issues, access to food, restrictive diets
- Nutrition support (tube feedings and IV nutrition)
- Provide reliable information regarding alternative nutrition therapies
- Wellness nutrition and cancer protective diets
- Provide medical nutrition therapy appropriate for cancer patients
- Nutrition expert and resource for evidence-based nutrition information
- To find a registered dietitian-nutritionist and consumer information: http://www.eatright.org/ look for RDNs who have the Certification of Oncology Specialist (CSO)

Working collaboratively to provide comprehensive cancer care

Common responsibilities

Providing education and support to the patient and family

Identifying special needs (access to food, need for oral nutrition supplements, feeding issues, etc.)

Developing patient care plans that are appropriate all along the continuum of care

Coordinating with multidisciplinary care team

Nutrition suggestions and recommendations to help manage nutrition impact symptoms

Serving as resource for survivorship and end-of-life nutrition

Providing evidence-based nutrition recommendations and dispelling nutrition "myths"

Helping improve quality of life

Thank you!