Cancer Treatment Centers of America®

Oncology Nutrition for Symptom Control and Survivorship

Presented to: AOMA
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Disclosures

- We have no actual or potential conflicts of interest.
Abbreviations

- AICR – American Institute for Cancer Research
- NIS – Nutrition Impact Symptoms
- Xrt – Radiation
- TPN – Total Parenteral Nutrition
Objectives

1. State two parameters for assessment of nutrition risk

2. Name three AICR guidelines for cancer prevention that you can instantly apply to practice

3. Describe clinical scenarios for medical nutrition therapy versus nutrition education and counseling

Nutrition and Cancer

• 1/3 of cancers are preventable with diet and lifestyle
  – Plant rich diet
  – Regular physical activity
  – Healthy body weight

Malnutrition and Cancer

• Significant weight loss at time of diagnosis\(^1\)
  – Majority of lung and GI malignancies

• Malnutrition correlates to adverse outcomes\(^2\)
  – Increased morbidity/mortality
  – Decreased QOL
  – Poor prognosis
  – Treatment interruptions
  – Decreased tolerance to treatment


Goals of Nutrition Therapy

• Prevent/reverse malnutrition
  – Early recognition and detection of nutrition risk

• Improve tolerance and response to treatment

• Reduce side effects

• Maintain/improve quality of life
Nutrition Assessment

• Weight change

• Change in intake

• Presence of symptoms that impede ingestion, digestion, absorption

• Physical assessment
  – Muscle wasting, fat loss, fluid accumulation

Nutrition Intervention

• Recommendations change based on priority:
  – Degree of malnutrition
  – Symptom management
  – Oncology treatment plan

• Examples:
  – Diet modification
  – Vit/Min supplementation
  – Appetite stimulation
  – Nutrition Support

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Case studies

- Esophageal cancer, multiple nutrition impact symptoms (NIS)
- Colon cancer, intractable high output ileostomy
- Breast cancer, maintenance hormone treatment

Esophageal Cancer

Case Study
Esophageal Cancer

- 68 y/o M
- Height: 170cm / 67in
- Weight: 81.8kg / 180lb (BMI 28)
- Poorly differentiated adenocarcinoma of the esophagus
  - Mass at the GE junction infiltrating 2cm in the fundus and cardia of stomach

History of Present Illness

- Gastrointestinal: “Food sticks” in the distal thoracic esophagus and is associated with regurgitation
  - Poor tolerance to meat, thick liquids, rice
  - Nausea and stomach ache
  - Tolerates soft, moist foods
Nutrition Assessment

• Weight change
  – 10# x 1mo
  – 20# total
• Intake – much less than usual, 800 kcal, 40g pro
• Nutrition impact symptoms
  – Early satiety
  – Constipation
  – Nausea
  – Thick secretions
• Moderately Malnourished

Treatment Plan(s)

• Oncology
  – Chemoradiation with cisplatin and 5-fluorouracil
• GI
  – Bowel regimen
  – Stenting vs jejunostomy
  – RD consult
Nutrition Treatment plan

- **Early satiety** – small frequent meals, high calorie, high protein foods
  - Boost VHC nutritional supplement with yogurt, berries, banana, avocado
    - 750 kcal
    - MV/M

- **Constipation** – emphasized hydration and reinforced Miralax

- **Nausea** – 500-1000mg ginger⁵, peppermint⁶

- **Thick secretions/ropey salvia** – whole pineapple or papaya/juice⁷

- **J-tube** discussed

5. Grant et al. Am J Health Syst Pharm 57: 945-947, 2000

Three Week Nutrition Follow Up

- s/p 1 week of xrt and cycle 1 chemo
- **Intake**
  - slightly improved, ~900 kcal
- **Nutrition impact symptoms**
  - Xerostomia
  - Odynophagia/dysphagia
  - Ageusia
  - Sore throat
Revised Nutrition Plan

- Culinary team involvement
- Pureed meals
- Daily high protein/calorie drink (VHC)
- 4oz protein each meal using food + protein powder
- Benecalorie TID added to cream of wheat, mashed potatoes, pureed foods

Medical Food

Boost Very High Calorie

Benecalorie
Six Week Nutrition Follow Up

- Nutritional status improved to **well nourished**
- Weight maintenance
- Meeting calorie needs with Benecol, VHC
- Reports anorexia, Marinol started
- 6 days left of treatment
Colon Cancer

- 60 y/o F

- Stage IV adenocarcinoma of the colon

- s/p left hemi-colectomy; s/p open low anterior resection with end to end anastomosis and small bowel resection; post op course complicated requiring distal loop ileostomy

- Tolerated 4 cycles of Capecitabine and Oxaliplatin based treatment

- s/p cycle 5, admitted with ARF, hypovolemic hyponatremia and hypokalemia

- 27 day admission, complicated by high output ileostomy
High Output Ileostomy

Medical Management

Work Up
- Small bowel follow through
- Ileoscopy & upper endoscopy
- C Diff by PCR
- Stool Ova and Parasite
- Fecal fat assay +

Interventions
- Lomotil
- Imodium
- Octreotide
- Codeine
- Cholestyramine
- Tincture of Opium
- Empiric Cipro and Flagyl
- Pancreatic enzymes
Nutrition Management

• NPO x3 days

• TPN initiation

• Slow re-introduction of solids

• Low FODMAPs diet
  – Fermentable Oligo-, Di-, Mono-saccharides and Polyols

Discharge Plan

• Diet Advancement

• Weekly RD follow up in clinic

• Journal and symptom inventory

• Food challenge

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<th>Low FODMAP/Reintroduction</th>
<th>白米饭 and 蘿卜丝</th>
<th>鸡肉、鱼肉 and 蟹籽</th>
<th>鲜贝、海参</th>
<th>家禽 and 家畜</th>
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<td>炒鸡蛋 or 热狗</td>
<td>炒豆腐 or 炒面条</td>
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<td>Week One</td>
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* 1/2 tsp serving
** No high fructose corn syrup
Outcome

• High fructose foods identified as most troublesome

• Ileostomy output increase to 1L per ady

• After 35 days, oral intake meeting 75% of goal

• TPN was discontinued

Breast Cancer

Case Study
History of Present Illness

- Stage 1, ER+, PR and Her2-
- Left partial mastectomy
- IORT
- Adjuvant endocrine therapy – Letrozole
- Multiple courses of ABx

Significant Past Medical History

- T2DM
- HTN
- GERD
- Scleroderma
- Gilbert’s
Nutrition Assessment

• Ongoing severe diarrhea
  – Debilitating, 3-10x/day

• IDA

• Family h/o Celiac (daughter)

Nutrition Management

• Heal the gut
  – Prebiotics/Probiotics

• Eliminate inflammatory foods

• Work up for Celiac
Diet Optimization

- AICR
- Daily Dish – gut health

Questions?