Cancer Anorexia Cachexia Syndrome (CACS)

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Objectives

- Define CACS
- Identify contributing factors in CACS
- Describe the effects of CACS on patient outcomes
58 year old
Male
Lung Cancer
No appetite
Significant weight loss: muscle and fat
Decreased physical ability and function
Family forcing food
Patient socially withdrawn
Cancer Anorexia Cachexia Syndrome (CACS)

- Multifactoral syndrome
- Negative protein and energy balance
- Ongoing loss of skeletal muscle mass (with/without loss of fat mass)
- Leads to progressive functional impairment
Underlying Mechanisms

Cancer diagnosis

Progression of cachexia

Tumor-induced inflammation

- TNF-α
- IL-6
- IL-1
- INF-γ

- ↑ Protein catabolism
- ↓ Protein anabolism
- ↓ Caloric intake
- ↑ Insulin resistance
- ↑ Lipolysis
- ↑ REE

- Loss of muscle mass and strength
- Ineffective host antitumor response
- Loss of whole body fat
- Impaired immunity
- Fatigue

- ↓ Physical function
- ↓ Independence, activities of daily living
- ↑ Hospitalizations
- ↓ Response to therapy
- ↑ Toxicity
- ↓ Quality of life

Definition and Classification of Cancer Cachexia
An International Consensus

Normal

Pre-cachexia
Weight loss ≤ 5%
Anorexia and metabolic change

Cachexia
Weight loss > 5% or BMI < 20 kg/m² and weight loss > 2% or sarcopenia and weight loss > 2%
Often reduced food intake/systemic inflammation

Refractory cachexia
Variable degree of cachexia
Cancer disease both procatabolic and not responsive to anticancer treatment
Low performance score
< 3-month expected survival

Symptoms of CACS

- Poor appetite
- Involuntary weight loss
- Increased fatigue
- Loss of physical strength
Cachexia is NOT...

- Starvation
- Fully reversed by conventional nutritional support or artificial nutrition
- Intentional
Negative Outcomes

- **Treatment**
  - Poor tolerance to treatment options
  - Not eligible for treatment due to performance status

- **Physical**
  - Decreased function and ability to complete ADLs

- **Psychosocial**
  - Decreased quality of life
  - Altered body image
  - Source of patient/family emotional distress and conflict
PATIENTS & CAREGIVERS NEED SUPPORT TO COPE WITH THE DISTRESS OF CACHEXIA
Prevalence

- Varies by tumor type
- Under recognized
  - $\frac{1}{2}$ of cancer patients have cachexia
  - Approx. 30% die from cachexia
- Under treated
  - Condition could be present in an obese patient
CACS Nutritional Impact

- Primary Cachexia → CACS direct impact on nutrition
- Secondary Cachexia → Impact of cancer & treatment
- Tertiary Cachexia → Psychosocial impact
Obstacles Leading to Malnutrition

- **Primary Cachexia**
  - Metabolic obstacles
    - Inflammatory cytokines decrease drive to eat (anorexia) while slowing GI motility (feels full quickly)

- **Secondary Cachexia**
  - Physical obstacles

- **Tertiary Cachexia**
  - Psychosocial obstacles
Secondary Cachexia

- Contributing factors that lead to malnutrition
  - Constipation, nausea, vomiting, diarrhea, pain, taste & smell alterations, depression or dysphagia

- Other causes may decrease appetite/lean body mass
  - Abnormal TSH, serum vitamin B12, testosterone, and cortisol
Tertiary Cachexia: Psychological impact

- Fading away
- Physiological changes in appetite resulting in weight loss
- Coping responses
- Visuality of cachexia
- Conflict over food
- Response from care professionals
- Weight loss interpreted as a bad sign
Multidisciplinary Approach

- Physician
- Physical therapist
- Patient and Family
- Dietitian
- Nurse
- Social worker
Moffitt Approach

- Vigor-promoting rehabilitation
- Information & guidance for patients & caregivers
- Treatment of symptoms that interfere with eating
- Appetite enhancement strategies
- Leveraging of energy conservation techniques
- Interventions to support best nutrition
- Testing to optimize care
- Your individualized vitality plan
How Can Nurses Help?

- Early identification
- Education
- Appropriate referrals
Questions?

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References


http://dx.doi.org/10.1188/10.CJON.283-287