To PEG or Not to PEG? Current Guidelines in the Head and Neck Cancer Population

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October 30th, 2018

Non-Disclosure Statement
- The presenter has nothing to disclose
Today’s Outline

- Brief overview of head and neck cancer (HNC)
  - Location and risk factors
- Potential treatment-related side-effects
- Guidelines specific to head and neck cancer and tube feeding placement
- Review of the literature
  - PEG placement vs. NGT placement
  - Prophylactic vs. reactive placement
  - Pros/cons of feeding tube placement
- Opportunities and barriers (patient perspective) to feeding tube use
- Case studies
- Future opportunities for RDs

Objectives

- At the conclusion of this activity participants will be able to:
  - Describe structures involved in head and neck cancer and nutrition impact symptoms related to treatment
  - Identify key guidelines available to practitioners regarding the use of feeding tubes in the head and neck cancer population
  - Identify which patients, according to guidelines, would be most appropriate for feeding tube placement and type of tube (PEG vs. NGT)
  - Apply evidence-based practice within their practice setting
Points of Clarification

Feeding tubes:
- Nasogastric feeding tube (NG)
- Percutaneous endoscopic gastrostomy (PEG)
- Proactive, prophylactic and/or therapeutic
- Reactive

Head and Neck Cancer (HNC)

HNC places patients at high risk of malnutrition
- Impact of malnutrition on outcomes can be severe
- Weight loss is a strong independent predictor of survival
- Undernutrition is associated with poor treatment outcomes:
  - Morbidity and mortality
  - Infections
  - Poor wound healing
  - Recurrence
  - Poor quality of life (QOL)

Nutritional Goals for HNC

- Weight maintenance during and post treatment
- Successful completion of treatment without breaks
- Minimal, if any, weight loss for obese/overweight patients, minimize weight loss until fully recovered from treatment
- Weight maintenance during transition from enteral to oral intake
- Goals may be different with recurrence

Head and Neck Cancer Overview

- Accounts for 3% of cancers diagnosed in the US
- Cancer anatomically located
  - Nasal cavity and paranasal sinuses
  - Oral cavity
    - Lip, anterior two-thirds of the tongue, gums, oral mucosa, floor of mouth, hard palate, maxilla and mandible
  - Pharynx
    - Nasopharynx, oropharynx (soft palate, tongue base, tonsils, adenoids) and hypopharynx
  - Salivary glands
  - Larynx
    - Supraglottic, glottic, and subglottic regions
HNC Overview: Risk Factors

- Tobacco use (including marijuana)
- Frequent and heavy alcohol consumption
  - Using ETOH and tobacco together ↑ risk
- Prolonged sun exposure
- Human papillomavirus (HPV) infection, particularly HPV-16
- Epstein-Barr Virus (EBV)
- Poor oral hygiene or dentition
- Gender
- Age (>50 years)
- Environmental/occupational inhalants (asbestos, wood dust, paint fumes)
- Consumption of maté
- Poor nutrition

HNC Overview: Human Papillomavirus (HPV) related HNC

- Incidence of HPV associated HNC
  - ↑ 225% from 1998 to 2004
  - Proportion of oropharyngeal cancers testing HPV+, 70%
  - Will surpass incidence of cervical cancer by 2020
  - Often present with more advanced neck disease/smaller primary tumors
  - Survival 80+% vs. 57%
    - Current treatment options
  - Subset of HPV+
    - Tobacco exposure was independently associated with survival for both HPV+ and HPV- HNC
    - Risk of death in cancer progression ↑ by 1% for each pack-year of tobacco smoking; as pack-years ↑, survival ↓

HNC Overview: Staging

- TNM staging model (Stage 0-IV)
  - Tumor size and/or location (T)—indicates extent of primary tumor; are site specific
  - Degree of lymph node involvement (N)
  - Presence/absence of distant metastasis (M)
- Does this matter?
  - Treatment based on staging
  - Early stage (I or II)
    - Surgery or radiation
  - Late stage (III or IV)
    - Surgery
    - Chemotherapy
    - Radiation therapy
    - Combination of modalities

Nutrition Impact after HNC Surgery

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Compromised Swallowing/Apiration Potential</th>
<th>Delayed Swallow (&gt;10 sec)</th>
<th>Dysphagia, Odynophagia, Postoperative Swelling</th>
<th>Dental Extractions/Altered Dentition</th>
<th>Dry Mouth/Altered Taste</th>
<th>Inability to Meet Energy Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base of Tongue Resection</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Total Glossectomy</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Partial Glossectomy</td>
<td>X</td>
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<tr>
<td>FOM Resection</td>
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<td>X</td>
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<tr>
<td>Hypopharyngeal Resection</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Total Laryngectomy</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Partial Laryngectomy</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Total Mastectomy</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Pharyngo- laryngectomy</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td></td>
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<tr>
<td>Oropharyngeal Resection</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Nasopharyngeal resection</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Mandiblectomy</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Buccal/ Mucosal Resection</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Loss of 7th Cranial Nerve</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</table>

### Nutrition Impact Symptom—Radiation

<table>
<thead>
<tr>
<th>Side-effects associated with HNC Radiation</th>
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</thead>
<tbody>
<tr>
<td>Candida</td>
</tr>
<tr>
<td>Dysgeusia</td>
</tr>
<tr>
<td>Dysphagia</td>
</tr>
<tr>
<td>Fatigue</td>
</tr>
<tr>
<td>Esophagitis</td>
</tr>
<tr>
<td>Odynophagia</td>
</tr>
<tr>
<td>Oral Mucositis</td>
</tr>
<tr>
<td>Osteoradionecrosis</td>
</tr>
<tr>
<td>Trismus</td>
</tr>
<tr>
<td>Viscous Saliva</td>
</tr>
<tr>
<td>Xerostomia</td>
</tr>
</tbody>
</table>

![Image of candida and mucositis](image1)


### Common Chemotherapy for Treatment in HNC

<table>
<thead>
<tr>
<th>Chemotherapy</th>
<th>Common Nutrition Impact Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carboplatin (Paraplatin®)</td>
<td>Myelosuppression</td>
</tr>
<tr>
<td></td>
<td>Nausea &amp; Vomiting (N/V)</td>
</tr>
<tr>
<td></td>
<td>Fatigue</td>
</tr>
<tr>
<td></td>
<td>Renal Toxicity</td>
</tr>
<tr>
<td></td>
<td>Peripheral neuropathy</td>
</tr>
<tr>
<td>Cetuximab (Erbitux®)</td>
<td>N/V</td>
</tr>
<tr>
<td></td>
<td>Diarrhea (D)</td>
</tr>
<tr>
<td>Cisplatin (Platino®)</td>
<td>Myelosuppression</td>
</tr>
<tr>
<td></td>
<td>Taste changes</td>
</tr>
<tr>
<td></td>
<td>Nausea &amp; Vomiting</td>
</tr>
<tr>
<td></td>
<td>SIADH</td>
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<tr>
<td></td>
<td>Renal toxicity</td>
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<tr>
<td></td>
<td>Hypomagnesemia</td>
</tr>
<tr>
<td></td>
<td>Peripheral neuropathy</td>
</tr>
<tr>
<td>Docetaxel (Taxotere®)</td>
<td>N/V/D</td>
</tr>
<tr>
<td></td>
<td>Mouth sores</td>
</tr>
</tbody>
</table>

## Common Chemotherapy for Treatment in HNC

<table>
<thead>
<tr>
<th>Chemotherapy</th>
<th>Common Nutrition Impact Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorouracil (5-FU®)</td>
<td>Myelosuppression</td>
</tr>
<tr>
<td></td>
<td>N/V/D</td>
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<tr>
<td></td>
<td>Mucositis</td>
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<tr>
<td></td>
<td>Hand-foot syndrome</td>
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<tr>
<td></td>
<td>Cardiac toxicity</td>
</tr>
<tr>
<td></td>
<td>Photosensitivity</td>
</tr>
<tr>
<td>Gemcitabine (Gemzar®)</td>
<td>N/V/D</td>
</tr>
<tr>
<td></td>
<td>Poor appetite</td>
</tr>
<tr>
<td></td>
<td>Mouth sores</td>
</tr>
<tr>
<td>Methotrexate (MTX)</td>
<td>N/V/D</td>
</tr>
<tr>
<td></td>
<td>Poor appetite</td>
</tr>
<tr>
<td></td>
<td>Mouth sores</td>
</tr>
<tr>
<td>Paclitaxel (Taxol®)</td>
<td>Myelosuppression</td>
</tr>
<tr>
<td></td>
<td>Diarrhea</td>
</tr>
<tr>
<td></td>
<td>Mucositis</td>
</tr>
<tr>
<td></td>
<td>Neuropathy</td>
</tr>
</tbody>
</table>


## Head and Neck Cancer Specific Guidelines
HNC Specific Guidelines

<table>
<thead>
<tr>
<th>Guidelines</th>
<th>Nutritional Management/ Use of Feeding Tube Addressed</th>
<th>Accessible</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Comprehensive Cancer Network (NCCN) 2018</td>
<td>Yes, identifies the need for close monitoring; multidisciplinary approach, including dietitians</td>
<td>Requires a one time registration <a href="http://www.nccn.org">www.nccn.org</a></td>
</tr>
<tr>
<td>Clinical Oncology Society of Australia (COSA)—Evidenced Based Practice Guidelines for the Nutritional Management of Adult Head and Neck Cancer Patients</td>
<td>Yes, a dietitian should be part of the multidisciplinary team for treating patients with head and neck cancer throughout the continuum of care</td>
<td><a href="https://wiki.cancer.org.au/australia/COSA:Head_and_neck_cancer_nutrition_guidelines">https://wiki.cancer.org.au/australia/COSA:Head_and_neck_cancer_nutrition_guidelines</a></td>
</tr>
<tr>
<td>Head and Neck Cancer Survivorship Care Guideline: American Society of Clinical Oncology (ASCO)</td>
<td>Yes, endorsed ACS HNC Survivorship Guidelines</td>
<td></td>
</tr>
</tbody>
</table>

HNC Specific Guidelines and Feeding Tubes: To PEG or Not to PEG?
### National Comprehensive Cancer Network (NCCN) 2018

**Guidelines**

- Does not recommend prophylactic PEG or NG tube placement in patients with very good performance status (PS) and without significant pretreatment weight loss, significant airway obstruction, or severe dysphagia

**Prophylactic FT placement should be considered if:**
- Severe wt. loss prior to treatment, 5% wt. loss over prior 1 month, or 10% wt. loss over 6 months
- Ongoing dehydration/dysphagia, anorexia, or pain interfering with the ability to eat/drink adequately
- Significant comorbidities that may be aggravated by poor tolerance of dehydration, lack of caloric intake, or if difficulty swallowing necessary medications
- Severe aspiration; or mild aspiration in elderly patients or pts. with compromised cardiopulmonary function
- Patients for whom long-term swallowing disorders are likely, including those anticipated to receive large fields of high-dose radiation to the mucosa and adjacent connective tissue
- To maintain swallow function during/following treatment, pts. who have a FT placed should be encouraged to take oral intake if they can swallow without aspiration. Alterations in swallowing function can occur long after treatment, and should be monitored for the lifetime of the patient

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### United Kingdom National Multidisciplinary Guidelines; Nutritional Management in HNC

**Guideline**

- Start medical nutrition therapy (MNT) if undernutrition already exists or if it is anticipated pt. will be unable to eat for more than 7 days. Enteral nutrition (EN) should be started if inadequate food intake (60% of estimated energy expenditure or EEE) is anticipated for more than 10 days. Use standard polymeric feeding.
- Consider gastrostomy insertion if long-term TF is necessary (>4 weeks).
- Offer prophylactic tube feeding as part of locally agreed guidelines, where oral nutrition is inadequate.

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HNC Specific Guidelines—Feeding Tube Placement

<table>
<thead>
<tr>
<th>Guideline</th>
<th>Feeding Tube Placement</th>
</tr>
</thead>
</table>
| Clinical Oncology Society of Australia (COSA)—Evidenced Based Practice Guidelines for the Nutritional Management of Adult Head and Neck Cancer Patients | • Prophylactic enteral feeding should be considered to improve nutritional status, cost and patient outcomes for patients who have T4 or hypopharyngeal tumors undergoing CCR.  
• Other groups should be considered by the multidisciplinary team on an individual basis dependent on clinical factors such as tumor site, staging, effect of multimodality treatments, radiotherapy treatment fields and dose, type of surgical procedure, nutritional status, dysphagia and social support. |

Clinical Oncology Society of Australia—Evidenced Based Practice Guidelines for the Nutritional Management of Adult Patients with HNC.  

HNC Specific Guidelines—Feeding Tube Placement

The Royal Brisbane and Women’s Hospital Swallowing and Nutrition Management Guidelines for Patients with Head and Neck Cancer

<p>| |</p>
<table>
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<tbody>
<tr>
<td>• Validated to assist early identification of swallowing and nutrition risk</td>
</tr>
<tr>
<td>• Guides decision making on proactive gastrostomy tube insertion</td>
</tr>
<tr>
<td>• Before, during and after treatment</td>
</tr>
<tr>
<td>• <a href="#">Schematic</a></td>
</tr>
</tbody>
</table>

Brown T, et al. EJCN 2016;70:574-581
Review of the Literature: PEG vs. NGT


- Reviewed current guidelines, ongoing RCT and current evidence.
- **Timing:**
  - Lack of evidence as to best approach to optimize nutrition
  - Prophylactic FT advantages:
    - Reduced wt. loss
    - Reduction in unplanned hospital admissions and LOS can lead to reduction in costs
  - Reactive NGT:
    - Placed without significant problems
    - QOL:
      - Improved at 6 months
      - Lower QOL with FT dependence

Lack of consensus about when and which enteral feeding routes (gastrostomy or NG) should be used

Local guidelines should be used or generated to guide practice

Canadian Agency for Drugs and Technologies in Health 2014. Nasogastric Feeding Tubes vs. PEG for Patients with Head or Neck Cancer: A Review of Clinical Effectiveness and Guidelines.

### #1 What is the clinical effectiveness of NG FT vs. PEG for patients with HNC?

- Superio to traditional use of NGT employed on an pm basis
- Lower tube dislodgement
- Improved mobility
- Enhanced cosmesis
- Improved QOL

### #2 What are the EBG regarding the use of NGT in an outpatient setting for patients with HNC?

- Associated with delay in return to oral diet
- Prolonged duration of RT
- Increased incidence of pain and dysphagia
- Increased costs

9 studies included

### #1 PEG:

- Improved at 6 months
- Lower QOL with FT dependence

### Conclusions:

Current evidence unable to demonstrate superiority of one method over another
## Review of the Literature: PEG vs. NGT

<table>
<thead>
<tr>
<th>Study/Resource</th>
<th>Assessment</th>
<th>Subjects/Inclusion</th>
<th>Results</th>
<th>Conclusions</th>
</tr>
</thead>
</table>
| Cochrane Database of Systematic Reviews 2013 | Objective: to compare effectiveness of different enteral feeding methods used in the nutritional management of patients with HNC receiving radiation, CCR, using clinical outcomes, nutritional status, QoL, and rate of complications | N/A; one study met inclusion | • Wt. loss greater in NG group at 6 wks. post treatment vs. PEG (p=.001)  
• 6 months post treatment, no significant difference  
• Duration of PEG feeding significantly longer in PEG vs. NG group (p=0.0056)  
• Cost of PEG feeding greater, though not significant findings | Not sufficient evidence to determine the optimal method of enteral feeding for patients with HNC receiving radiation or CCR. Further trials are needed |
| Corry J, et al. Head Neck 2009;31:867 | Prospective study to compare PEG tubes vs. NGT; assessed nutritional outcomes, complications, patient satisfaction and cost | N=32 PEG and 73 NGT patients | • PEG significantly less weight loss at 6 weeks post treatment (p <.001)  
• High site infection rate (41%)  
• Longer median duration of use (146 vs 57 days, p <.001)  
• More grade 3 dysphagia at 6 months (25% vs. 8%, p=.07)  
• Pt. self-assessed general condition and QoL scores similar  
• Costs significantly higher in PEG patients | PEG use should be selective, not routine |

## Review of the Literature: Proactive vs. Reactive Feeding Tubes
### Review of the Literature: Proactive vs. Reactive

<table>
<thead>
<tr>
<th>Study/Resource</th>
<th>Subjects/Inclusion</th>
<th>Results</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soria A, et al. Nutr Hosp 2017;34(3):512</td>
<td>N=40 patients with HNC with moderate or severe malnutrition; offered prophylactic PEG or option to place NG when/if needed</td>
<td>• No significant change in regard to weight, BMI or serum proteins • PEG group received EN for longer period of time (p=0.007)</td>
<td>Both PEG and NG feedings were effective; no difference between them in terms of avoiding further nutritional deterioration</td>
</tr>
<tr>
<td>Brown T et al. J Acad Nutr Diet 2016;118(4):627</td>
<td>N=130; 69 in prophylactic PEG group, n=61 in no PEG group.</td>
<td>• Statistically significant less wt. loss in the prophylactic PEG group (7.0% vs 9.0%; p=0.048) • More unplanned admission in the no PEG group (82% vs. 73%;p=0.029) • No PEG group, 26 patients (43%) required a FT or had ≥ 10% wt. loss</td>
<td>Prophylactic PEG improved nutrition outcomes and reduced unplanned hospital admissions</td>
</tr>
<tr>
<td>Kramer S, et al. Otolaryngology—Head and Neck Surgery 2014;150(3):407</td>
<td>N=74 patients with HNC, underwent CCR, they received either prophylactic PEG before treatment began or after (reactive)</td>
<td>• Pts. with reactive PEG tubes were in place fewer days vs prophylactic FT (227 vs. 139 days, p &lt;0.01) • No difference found in % wt. loss at 2, 6 or 12 months • No difference in survival or disease control between groups</td>
<td>Reactive PEG tube placement may allow for a shorter duration of FT usage without incurring greater weight loss or poorer oncologic outcomes</td>
</tr>
<tr>
<td>Lewis S, et al. Head Neck 2014;36(12):1789</td>
<td>Retrospective, exploratory study; N=109 patients with Stage III/IV HNC who completed standard CRT. Assessed for prophylactic FT, reactive FT or no FT.</td>
<td>PFT: • Significantly less wt. loss during CRT • Fewer nutrition related ED visits or hospitalizations • Higher proportions of chemotherapy cycles completed • 12 months post-CRT no relationship between PFT and FT dependency</td>
<td>Use of PFT produced better outcomes when compared to both RFT or no FT without higher rates of long-term dysphagia</td>
</tr>
<tr>
<td>Locher J, et al. JPEN 2011;35(3):365</td>
<td>Literature Review; described prevalence of PEG placement, factors associated with PEG tube placement and described reported potential benefits/risks associated with PEG placement</td>
<td>Assessed both the benefits and harm associated with prophylactic PEG placement in patients undergoing HNC treatment</td>
<td>There is insufficient evidence to make any recommendations regarding whether prophylactic PEG placement in HNC patients results in net benefits to patients</td>
</tr>
</tbody>
</table>
Summary of Literature Review

- **PEG vs. NGT (4)**
  - Three indicate insufficient evidence to support one method over the other
  - One indicates PEG use should be selective, not routine

- **Proactive vs. Reactive (5)**
  - Two supported the use of prophylactic FT placement
  - One states insufficient evidence to make recommendation
  - One indicated both prophylactic and reactive NG FT were adequate to meet needs
  - One supported use of reactive PEG placement

Review of the Literature: Pros of Prophylactic Tube Placement

- Reduced weight loss
- Completion of more cycles of chemotherapy
- Earlier initiation of nutrition support
- Improved nutrition and hydration status
- Improved quality of life
- Reduced hospital admissions
- Decrease in health care costs

Review of the Literature: Cons of Feeding Tube Placement

- Complications with placement
  - Pain, infection or leakage at site
  - Need for replacement
  - Occlusion of feeding tube
  - Perforated bowel
- Feeding tube dependence post treatment
- Increased incidence of dysphagia
- Concern regarding seeding of metastatic tumors with pull through method
- Cost of placement, especially if feeding tube not used

Bossola M. Nutrients 2015;7:246

Feeding Tube Placement

- No agreed upon consensus on indications, timing and long-term nutritional and functional benefit of TF in patients undergoing treatment for HNC
- The use of FT has an impact on QoL
- Osborne et al
  - Qualitative review; N=51 PEG tube
  - 84% felt “positive/neutral effect” on QOL
  - 90% felt was “very much” or “quite a bit” worthwhile
  - 96% would recommend to another patient
- Barriers to compliance or desire to have FT placed
  - Approach
    - Educate
    - Fear factor
  - Provider

**Feeding Tube Placement: Patient Perspective**

- Possible barriers and solutions to compliance
  - Consider the care giver
  - Be mindful, this requires physical, practical, emotional and psychosocial adjustments within the home
  - Educate. A perceived benefit of FT placement eases establishing a routine and increases confidence
  - Optimal treatment should focus on the impact on daily living and QoL, not just clinical outcomes

- Common patient reported barriers to compliance
  - Feeling full quickly
  - Nausea
  - Treatment related factors
  - Reflux
  - Time required to administer feeds
  - “No problem eating”

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**Qualitative research**

- Dichotomy in viewpoints
  - Knowledge and understanding of why FT was necessary
    - Patient more + outlook, caregiver more – viewpoint
  - Caregiver impacted by effect to their daily activities
  - Patient more + with cooking, caregivers stressed over laborious activity to fortify/increase calories and many “trials”.
  - Patient had less favorable view of oral nutrition supplements; caregiver + view as a means to ↑ calorie/protein

- Agreement
  - FT would help with weight management and recognized they would not have survived treatment without FT
  - Concerns in difficulty in weaning off FT
  - Timely nutrition management helped wean off FT with more confidence
Feeding Tube Placement

- Predictive factors for FT dependence
  - Older age
  - Male, living alone
  - Heavy ETOH use
  - Significant preoperative weight loss

- When to remove FT
  - When swallowing is assessed to be safe
  - When consuming adequate oral intake to maintain weight
  - When FT has not been used for 4 weeks

Case Studies
Case Study Number One

- 64 year old male
- Stage IV (T4, N2b, M0) oral cancer, HPV-
- Treatment includes:
  - Surgery
  - Chemotherapy (weekly Cisplatin)
  - Radiation (bilateral, seven weeks/5 days/week)
- Weight loss of >12% in past 6 months, BMI 19.7
- PMH:
  - History of tobacco use (quit 5 years ago)
  - History of alcohol use (currently reports 4-6 beers/day)
  - Divorced, social support lacking
  - Poor intake per patient report (limited cooking skills)
  - Poor PS

Case Study Number Two

- 40 year old female
- Diagnosis: Stage III (T3, N1, M0) oropharynx cancer, HPV+
- Treatment includes:
  - Surgery
  - Chemotherapy (Cisplatin)
  - Radiation (seven weeks/5 days/week)
- Weight loss, 3% in 3 months, BMI 26
- PMH:
  - No tobacco or alcohol use
  - Pre-diabetes
  - Married, social support good
  - Motivated to maintain intake; trying to “bulk up” and regain weight prior to treatment starting
Future Directions

- Registered Dietitian Led Head and Neck Clinics
    - 88.9% reduction in nutrition related ER visits (p=.016)
    - 78.1% reduction in readmissions (p=.027)
    - Estimated per patient cost reduction $6831
  - Kiss NK, et al. Support Care Cancer 2012 20(9):2111-2120
    - Reduced nutrition related admissions from 12% to 4.5% (p=.0029)
    - Unplanned NG tube insertions 75% to 39% (p=.02)
    - Improved transition to oral diet post treatment 68.3% to 76.7% (p=.10)
    - Reduced radiation oncologist review at 2 weeks post radiation from 32% to 15% (p=.009)
  - There is a need for more randomized controlled trials to determine best practice

Conclusions

- Take home points
  - No agreed upon consensus at this time
  - Each patient assessed individually
  - RD needs to be part of interdisciplinary team
    - Potential for RD to lead HNC team
  - Utilize guidelines to identify patients appropriate for FT placement
    - Patient wishes
    - Provider practice
  - If FT placed education is key (patient and caregiver)
  - Follow post treatment (minimum of 6 months)
Thank You for Your Time and Attention

Recommended Resources

- National Comprehensive Cancer Network Guidelines. [www.nccn.org](http://www.nccn.org)