Geriatric Case Navigator:
Implications of Juvenile-Onset ALS on HNSCC
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Case Presentation
• 83 yo male
• Retired, widower
• PMH: HTN, pacemaker, h/o colon polyps, juvenile-onset ALS
• NKDA
• Wheelchair dependent x 12 years, ECOG 3
• Distant tobacco history, quit 1957
• Daily alcohol, 1 glass wine/day

Case Presentation
• Persistent hoarseness
• June 2009: fibrosed hemorrhagic polyp on videostroboscopy
• December 2010: Evaluated by laryngologist > mid-cord lesion on Right TVC
• Biopsy via TNE
• T1aNoMo SCC

Treatment Plan
• Definitive XRT w/opposing lateral fields
• 6300 cGy in 28 fractions
• IMRT
• Toxicities: oropharyngeal secretions
• ED w/SOB end of week 5 > emergent tracheotomy

Amyotrophic Lateral Sclerosis (ALS)
• Rapidly progressive
• Motor neuron disease
• Degeneration and death of motor neurons
• 20,000-30,000 affected in USA
• 5,000 new cases diagnosed annually
• 5-10% cases are inherited
ALS
- Degeneration of motor neurons
- Affects both upper and lower motor neurons
- Affects voluntary muscles
- No loss of cognitive function
- Most patients die of respiratory failure within 3-5 years from onset of symptoms

Glutamate and ALS
- Neurotransmitter
- Higher concentrations of glutamate seen in patients with ALS
- Prolonged glutamate exposure leads to calcium flooding and nerve damage

Treatment of ALS

Juvenile-Onset ALS
- 3 loci for juvenile onset ALS (2q33, 15q12-21, and 9q34)
- Onset prior to age 25
- Slower disease progression
- Longer survival

Autosomal Dominant Juvenile-Onset ALS
- Early-onset
- Progressive amyotrophy, weakness, pathologic hyper-reflexia
- Normal sensation in 90%
- Anterior horn cell dysfunction without evidence of peripheral neuropathy
- Relative lack of bulbar and respiratory muscle weakness

Functional Limitations
- Quadriplegic
- Full sensation
- Wheelchair dependent
- 24/7 caregivers
Dietary Implications

- LOVED to eat
- Full, regular diet prior to XRT
- Odynophagia w/XRT
- Dietary modifications with minimal weight loss

Pulmonary Implications

- Unable to wean
- Did not tolerate cuff deflation/in-line speaking valve
- Oropharyngeal secretions
- Blom trach with intermittent voice production
- Home vent

ALS and Head-Neck Cancer

- Little is known!
- Consider:
  - QoL and Prognosis
  - Age
  - Bulbar onset and features
  - Baseline swallow evaluation
  - Anesthesia and muscle relaxants
  - Chemo and ALS

Classes of Geriatric Patients

<table>
<thead>
<tr>
<th>Class</th>
<th>Definition</th>
<th>Clinical indicators</th>
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</thead>
<tbody>
<tr>
<td>Class II</td>
<td>No functional impairment or ALS but with significant comorbidity and/or cognitive impairment</td>
<td>Subjective/functional indicators of decline</td>
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<tr>
<td>Class III</td>
<td>Severe</td>
<td>Clinical indicators of severe dysfunction</td>
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Aging and Response to Cancer Treatment

- Impact on older adults patients who have cancer
- Decreasing hemostatic reserve
- Decreased ability to tolerate cancer treatment without adverse effects on co-morbidities
- Assessment is needed to measure functional reserve (e.g., exhaustion, depression, smoking
- Treatment protocols that are well character and have age-specific strengths with acceptable levels of safety and quality of life (e.g., comparison functional status)
- A particular and least extensive adequate reserve in some organ systems and more limited reserve in others
- Declining ability to deal with stress
- Potential for poor feed intake, higher risk of infections, and reduced blood pressure

Benefits of Comprehensive Geriatric Assessment

- Predict complications and side effects
- Estimate survival
- Assist in treatment decision-making
- Improved pain control
- Detection of other problems
- Identification and treatment of new problems
- Improved mental health and well-being

Decision Making Related to CGA

- Mental status > fully intact
- Emotional status > sad related to functional losses, finds pleasure in "the little things"
- Functional status > ECOG 3 related to juvenile-onset ALS, compensated w/caregivers and devices
- Social support > active and involved family, 24 hr caregivers
- Nutrition > weight and labs WNL
- Polypharmacy > no
**NCCN Guidelines Older Adults and Head & Neck Cancer**

- **Surgery**
  - Similar efficacy
  - ↑ complications with ↑ comorbidities

- **Radiation**
  - Similar overall survival
  - ↑ mucositis
  - No significant difference in late toxicities
Thoughts???