Difficult Base of Tongue Cancer
Contouring: MD Anderson Cancer Center

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Head and Neck Radiation Oncology
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BOT Cases

• **Case**: Induction chemotherapy → chemoradiation therapy
Case

- 46 year old male
- Unhealing dental extraction
- Developed odynophagia, trismus, right sided jaw pain, right neck mass
- CT Head and Neck imaging obtained:
CT Head and Neck
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CT Head and Neck Findings:

- Heavy involvement of the right tongue base with extension into the extrinsic tongue musculature
- Involvement laterally to the right retromolar trigone and mandibular gingiva (with mandibular destruction of an extensive nature)
- Extension upward to involve the tonsillopharyngeal wall and up into the nasopharynx
- Lateral extension through the parapharyngeal space and into the masticator musculature
- Extensive ipsilateral necrotic nodal metastases and several contralateral nodal metastases
Stage?
AJCC Stage Descriptions

• T4a - invades larynx, **deep/extrinsic muscles of the tongue**, medial pterygoid, hard palate, or mandible

• T4b - invades lateral pterygoid, pterygoid plates, **lateral nasopharynx**, skull base, or encases carotid
Stage: T4bN2c

• Treatment options:
  – For N2-3 disease:
    • Concurrent chemoradiation
    • Induction chemotherapy followed by RT or chemoradiation
    • Surgery for primary and neck
    • Multimodality clinical trials
Chemoradiation treatment plan

• Radiation treatment
  – 70 Gy in 33 fractions to gross disease and areas of previous gross disease
  – 60 Gy in 33 fractions to at risk areas
  – Matched to low neck field:
    – 40 Gy in 20 daily fractions with larynx block
    – 10 Gy in 5 fractions with midline block
    – 10 Gy in 5 fractions for right neck boost LAO/RPO
    – 6 Gy in 3 fractions right low neck boost
Matched to low neck field:
- 40 Gy in 20 daily fractions AP/PA with larynx block
Matched to low neck field:

- 40 Gy in 20 daily fractions AP/PA with larynx block
Matched to low neck field:
  – 10 Gy in 5 fractions with midline block
Matched to low neck field:
- 10 Gy in 5 fractions for bilateral boost
Matched to low neck field:

- 6 Gy in 3 fractions right low neck boost
Thank you!

• Dr. Adam S. Garden
  – Professor
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