

National Imaging Associates, Inc.*	
Clinical guidelines HEAD AND NECK CANCER	Original Date: June 2013
Radiation Oncology	Last Revised Date: February 2020
Guideline Number: NIA_CG_131	Implementation Date: January 2021

INDICATIONS FOR RADIATION THERAPY:

2D, 3D, IMRT and Brachytherapy techniques may be used as appropriate, depending on the tumor location and stage of disease (NCCN, 2018). Brachytherapy, where appropriate, may be utilized as a boost for 2D, 3D or IMRT courses of radiation therapy.

- Pre-operative radiation therapy
 - 2D/3D/IMRT – up to 35 fractions
- Definitive radiation therapy with or without concurrent chemotherapy
 - 2D/3D/IMRT – up to 42 fractions
 - Hyperfractionation - 81.6 Gy, 1.2 Gy per fraction BID (up to 68 fractions)
- Post-operative radiation therapy (up to 40 fractions)
 - Presence of adverse factors
 - pT3 or pT4 primary tumors
 - N2-3
 - Perineural invasion
 - Vascular tumor embolism
 - Extracapsular spread
 - Positive surgical margin
- Palliative radiation therapy if symptomatic up to 20 fractions
- Re-irradiation may be indicated if no metastatic disease present up to 34 fractions

TREATMENT OPTIONS REQUIRING PHYSICIAN REVIEW:

Stereotactic Body Radiation Therapy (SBRT)

Stereotactic Body Radiation Therapy is not a standard treatment option for the treatment of head and neck cancer. SBRT may be indicated for reirradiation (NCCN, 2018).

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Proton Beam Radiation Therapy (ASTRO, 2017)

Proton beam is not a standard treatment option for head and neck cancer and should not be used routinely. Proton Beam may be considered for advanced (e.g. T4) and/ or unresectable head and neck cancers. A physician review is required to determine medical necessity.

BACKGROUND:

According to the American Society of Clinical Oncology, about 3% of all cancers in the United States occur in the head and neck. The majority of these tumors are squamous cell carcinoma, with human papilloma virus infection, tobacco and alcohol use regarded as risk factors (ASCO, 2015). Due to the complexity of tumors arising from the head and neck region, it is not unusual for management to include an initial evaluation and development of a plan by a multidisciplinary team, including surgery, radiotherapy, medical oncology, and dental. Although single modality treatment with either surgery or radiotherapy is not uncommon with patients with early stage disease, combined modality therapy is appropriate for the majority of patients with locally or regionally advanced stage of disease (NCCN, 2018). The primary sites for head and neck tumors include paranasal sinuses, the lip, oral cavity, salivary glands, oropharynx, hypopharynx, glottic larynx, supraglottic larynx, nasopharynx, and occult head and neck primary sites.

This guideline outlines several methods suitable for delivering radiation therapy to the head and neck area. Various radiotherapy techniques may be used as appropriate, depending on the stage, location, and expertise of the radiation oncologist (NCCN, 2018). Multidisciplinary management is recommended to best achieve tumor control while reducing toxicity (ASCO, 2015). These are generally accepted practice guidelines, however, cannot incorporate all possible clinical variations, and thus are not intended to replace good clinical judgment or individualization of treatments.

IMRT, 3D, 2D, and brachytherapy techniques may be used as appropriate, depending on the tumor location, stage of disease, and experience/availability of dosimetry/medical physics support (NCCN, 2018). Intensely modulated radiation therapy (IMRT) has been shown to be useful in reducing long term side effects in oropharyngeal, paranasal sinus, and nasopharyngeal cancers by reducing dose to normal surrounding tissue, including the salivary gland and brain (including temporal lobes, auditory apparatus, and optic structures). The application of IMRT to other sites of the head and neck is evolving with the recommendation to use at the discretion of the treating physicians. IMRT can be delivered with various dose fractionation schemes, including simultaneous integrated boost, sequential boost, and concomitant accelerated boost. IMRT has been shown to be beneficial in treating certain head and neck cancers by reducing dose to the salivary glands, brain, auditory apparatus, and optic structures. Low dose or high dose brachytherapy may be appropriate in certain cases.

POLICY HISTORY:

Review Date: February 2019

Review Summary: Added and updated references

Review Date: February 2020

Review Summary:

- Proton Beam Added: Proton beam is not a standard treatment option for head and neck cancer and should not be used routinely. Proton Beam may be considered for advanced (e.g. T4) and/ or unresectable head and neck cancers.
- Added and updated reference

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