

# Review Criteria

## Georgia Region



Title:	Dental Extractions for Radiation Therapy		
Department:	QUALITY RESOURCE MANAGEMENT	Page:	1 of 3
Section:	UTILIZATION MANAGEMENT	Policy Number:	01-46
Type:	( ) New	Effective Date:	8/3/2009
	(X) Reviewed / Revised	Date:	2/1/2016 3/20/2017 2/14/2018 2/4/2019 1/2/2020 1/21/2021 1/5/2022 1/30/2023

### Purpose

This policy provides the indications and contraindications necessary for the Quality Resource Management staff to make the most appropriate decision related to the medical necessity of the procedure listed.

**DIAGNOSIS/CONDITION:** ICD-10 D 00.00-D00.08; D02.3; C07; C08.0-1; C08.9; C03.0-1; C03.9; C14.2; C11.0-3; C11.8-9; C32.0-1; C41.1; D14.1; C76.0

**CPT-4/ HCPCS CODE AND DESCRIPTION: INDICATORS:** D7111; D7210, D7140

**1.0 INDICATIONS:** The following head and neck cancers require radiation therapy to the jaw and oral cavity and therefore patients with these cancers should have prophylactic dental extractions to prevent bone complications post therapy.

- Head and neck cancer (includes all of the below)
- Lip and oral cavity cancer (includes tongue, gums, palate, retromolar area)
- Pharyngeal cancer (includes base of tongue, tonsils, uvula, vallecula, branchial cleft, oropharynx, nasopharynx, pyriform sinus, postcricoid region, hypopharynx, Waldeyer's ring)
- Laryngeal cancer (includes epiglottis, glottis, supraglottis, subglottis, vocal cords)
- Cancer of the Nasal Cavity and Paranasal Sinuses (includes maxillary sinus, ethmoid sinus)
- Salivary Gland cancer (includes parotid gland, submandibular gland, sublingual gland)
- Mandibular (jaw) cancer
- Thyroid cancer
- Skin cancer of the head and neck

**Note:** Dental implants, restoration of teeth and dentures are **not a covered benefit**.

**2.0 CONTRAINDICATIONS:** None

**3.0 VIEWS OF THE SOUTHEAST PERMANENTE MEDICAL GROUP**

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- Prophylactic extraction of diseased teeth prior to irradiation of jaw or oral cavity for head and neck cancer is indicated to prevent or reduce risk of post radiation complications.

#### **4.0 CLINICAL SUMMARY:**

There are both acute and late effect complications associated with radiation therapy to the head and neck.

Acute complications include mucositis, dysphagia, pain, hoarseness, dermatitis, weight loss, xerostomia, loss of taste, and thick sputum and secretions.

**Late effects** — can occur at various sites within the head and neck. These include subcutaneous fibrosis, skin ulceration and necrosis, thyroid dysfunction, pharyngeal and esophageal stenosis, swallowing dysfunction, xerostomia, hoarseness, dysphonia, cartilage necrosis, osteoradionecrosis (particularly of the mandible), delayed wound healing, fistulae, dental decay, damage to the middle or inner ear, myelopathy, ischemic stroke, carotid stenosis, and neck contractures.

Dental carries are very common after radiotherapy. The treatment of dental carries becomes more difficult after radiotherapy; in particular, tooth extraction is made difficult because of the tendency toward non-healing and osteoradionecrosis following radiotherapy. Thus, patients should have pretreatment dental evaluation to include necessary tooth extractions, and to initiate fluoride treatments, and other preventative dental and oral hygiene. Long term follow-up by an experienced dentist should also be provided. Preliminary data suggest a possible benefit of amifostine on the prevention of dental caries following radiation therapy of HNC.

Tooth extraction and dental disease in irradiated regions are major factors in the development of both mandibular and maxillary ORN. Although opinion differs as to preirradiation versus postirradiation, many authors report that postirradiation extraction of diseased and nonrestorable teeth produce a higher rate of mandibular ORN. Furthermore, at least some data suggest that mandibular ORN associated with postirradiation extraction more often requires radical resection than cases of ORN that develop after preirradiation extraction (45 versus 12 percent, respectively). Repair of nonrestorable and diseased teeth prior to RT may reduce the risk of this complication. However, most authorities do not recommend the preirradiation extraction of healthy or restorable teeth.

**Osteoradionecrosis** – Osteoradionecrosis is defined as the presence of a nonhealing area of exposed necrotic bone after RT in the absence of recurrent or residual tumor. The primary risk factors associated

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with the development of osteoradionecrosis are dental extractions and surgery. Compromised teeth in an area that will receive at least 50 Gy and teeth that are outside of the RT treatment field but have a hopeless prognosis should be extracted prior to the initiation of therapy. There is no indication to extract healthy teeth. After therapy, routine dental care and supplemental [fluoride](#) are recommended. For mild cases of osteoradionecrosis, treatment with conservative debridement and antibiotics is usually sufficient. For more advanced cases of bone and soft tissue necrosis, extensive resection of the mandible with immediate microvascular reconstruction may provide better results. (See '[Osteoradionecrosis and soft tissue necrosis](#)' above.)

#### **5.0 REVIEW OF THE LITERATURE:**

Up to Date: [Overview of approach to long term survivors of Head and Neck Cancer](#); November 2021  
Robert I Haddad, MD, Sewanti Limaye, MD

#### **REFERENCES:**

Murray, CG, Herson, J, Daly, TE, Zimmerman, S. Radiation necrosis of the mandible: a 10-year study. Part I. Factors influencing the onset of necrosis. Int J Radiat Oncol Biol Phys 1980; 6:543.

#### **Kaiser Permanente 2009 - Evidence of Coverage**

**Expert Opinion: Dr. Harvey James Hamrick-Chief TSPMG Oncology July 2009**

**Reviewed on 1/30/23 by Karen Goodlett MD**

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