Pocket Guide To

TNM STAGING OF HEAD AND NECK CANCER AND NECK DISSECTION CLASSIFICATION

Edited by
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AAO–HNS/F

American Head and Neck Society

Pocket Guide to

NECK DISSECTION CLASSIFICATION AND TNM STAGING OF HEAD AND NECK CANCER

Committee for Head and Neck Surgery and Oncology

American Academy of Otolaryngology–Head and Neck Surgery

Neck Dissection Classification Committee
American Head and Neck Society

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I. INTRODUCTION

The tumor, node, metastasis (TNM) staging system allows clinicians to categorize tumors of the head and neck region in a specific manner to assist with the assessment of disease status, prognosis, and management. All available clinical information may be used in staging: physical exam, radiographic, intraoperative, and pathologic findings, Other than histopathologic analysis, biomarkers and molecular studies are not yet included in the staging of head and neck cancers.

Three categories comprise the system: T—the characteristics of the tumor at the primary site (this may be based on size, location, or both); N—the degree of regional lymph node involvement; and M—the absence or presence of distant metastases. The specific TNM status of each patient is then tabulated to give a numerical status of Stage I, II, III, or IV. Specific subdivisions may exist for each stage and may be denoted with an a, b, or c status. In general, early-stage disease is denoted as Stage I or II disease, and advanced-stage disease as Stage III or IV disease. Of importance is that any positive metastatic disease to the neck will classify the disease as advanced, except in select nasopharynx and thyroid cancers.

A. Upper Aerodigestive Tract Sites

The majority of tumors arising in the head and neck (other than nonmelanoma skin cancers) arise from the squamous mucosa that lines the upper aerodigestive tract (UADT) and are predominately squamous cell carcinomas. The UADT begins where the skin meets the mucosa at the nasal vestibule and the vermillion borders of the lips and continues to the junction of the cricoid cartilage and the cervical trachea and at the level of the cricoid where the hypopharynx meets the cervical esophagus. The UADT is organized into several major sites that are subdivided to several anatomic subsites. The major sites include (1) the oral cavity, (2) the oropharynx, (3) the hypopharynx,

(4) the larynx, (5), the nasopharynx, (6) and the nose and paranasal sinuses.

1. Oral Cavity

The oral cavity is a common site for squamous cell cancers of the UADT, probably because it is the first entry point for many carcinogens. The anterior aspect of the oral cavity is the contact point of the skin with the vermilion of the lips extending posteriorly to the junction of the hard and soft palates, and with the anterior tonsillar pillars and the circumvallate papillae forming the posterior limits. The major subsites of the oral cavity are the lips, anterior tongue, floor of mouth, buccal mucosa, upper and lower alveolar ridges, hard palate, and retromolar trigone. The trigone consists of the mucosa overlying the anterior aspect of the ascending ramus of the mandible. Tumors of the oral cavity tend to spread regionally to lymph nodes of the submandibular region (Level I) and to the upper and middle jugular chain lymph nodes (Levels II and III).

Because of accessibility and the risk of involvement of bony structures, treatment with radiotherapy can lead to radionecrosis of the mandible or maxilla. Moreover, oral cavity squamous cell carcinomas may be less sensitive to chemotherapy and radiation, relative to oropharyngeal or laryngeal cancers. Thus, primary treatment for most tumors is surgical. Positive surgical margins, multiple involved lymph nodes, and/or extracapsular tumor extension call for consideration of postoperative chemoradiotherapy, to improve local disease control.

2. Oropharynx

This structure begins where the oral cavity ends at the junction of the hard and soft palates superiorly and the circumvallate papillae inferiorly and extends from the level of the soft palate superiorly, which separates it from the nasopharynx and to the level of the hyoid bone inferiorly, where the hypopharynx begins. The subsites of the

oropharynx are the tonsil, base of tongue, soft palate, and pharyngeal walls. Cancers of the oropharynx often metastasize to upper and middle jugular chain lymph nodes (Levels II and III), but can also spread to retropharyngeal lymph nodes, which distinguishes them from oral cavity tumors and must be considered when treating oropharyngeal cancers. Tumors in this site are generally treated with radiotherapy, as a single modality for T 1/2 or N 0/1 stages. Increasingly, some of these cancers are associated with human papilloma virus 16 infection, especially in nonsmokers. However, for patients with more advanced disease, T 3/4 or N 2 b/c/3 staging, chemoradiotherapy most often with a concomitant approach has become standard. Cisplatin, administered during weeks 1, 4, and 7 has most often been studied and may be considered a standard. Nonetheless, other regimens, carboplatin, taxanes, and drug combinations, such as cisplatin or carboplatin with fluorouracil, are also reported. Induction chemotherapy before radiotherapy (or chemoradiotherapy) remains an investigational strategy.

3. Hypopharynx

The hypopharynx has its superior limit at the hyoid bone, where it is contiguous with the oropharynx and it extends inferiorly to the cricopharyngeus muscle, where it meets the cervical esophagus. The major subsites of the hypopharynx are the pyriform sinuses, the postcricoid region, and the pharyngeal walls. Tumors often present here at advanced stages and can be difficult to cure, and because of their location can impact swallowing and speech function adversely. Spread to the upper, middle, and lower jugular lymph nodes (Levels II–IV) and the retropharyngeal nodes is common in these cancers. Two other hallmarks of hypopharyngeal cancers are submucosal spread and skip areas of spread. Surgery had been the mainstay of primary treatment for hypopharyngeal cancers for many years, but increasingly radiotherapy and chemoradiotherapy are used to treat cancers in this location with success.

4. Larynx

The larynx is the most complex of the mucosal lined structures of the UADT. Its important roles in speech, swallowing, and airway protection make the treatment considerations of cancers of this structure varied and controversial. The larynx is bordered by the oropharynx superiorly, the trachea inferiorly, and the hypopharynx laterally and posteriorly. The larynx is comprised of a cartilaginous framework, and is subdivided vertically by the vocal cords into the supraglottic, glottic, and subglottic subsites. The supraglottic larynx includes the epiglottis, which has both lingual and laryngeal surfaces, the false vocal cords, the arytenoids cartilages, and the aryepiglottic folds. Anterior to the supraglottis is the pre-epiglottic space. This is a complex space with a rich lymphatic network that contributes to the early and bilateral spread of tumors that arise from supraglottic structures to upper, middle, and lower jugular chain lymph nodes.

The glottic larynx describes the true vocal cords, and where they come together anteriorly at the anterior commissure, as well as where they meet the mobile laryngeal cartilages at the posterior commissure. The glottic larynx extends from the ventricle to 1 cm below the level of the true cords. The vocal cords are lined with stratified squamous epithelia, which contrasts with the pseudostratified ciliated respiratory mucosa lining the remainder of the larynx. Glottic laryngeal cancers tend to metastasize unilaterally and spread regionally less commonly than supraglottic tumors do. Between the thyroid cartilage and the vocal cord lies the paraglottic space, which is continuous with the pre-epiglottic space. This serves as a pathway for submucosal spread of tumors from the glottis to the supraglottis, or vice versa, which is known as transglottic spread. The subglottic larynx starts 1 cm below the vocal folds and continues to the inferior aspect of the cricoid cartilage. While it is rare for tumors to arise initially in the subglottis, tumors arising in the supraglottic or glottic larynx commonly spread in a “transglottic” fashion to involve the

subglottic larynx. Subglottic tumors tend to metastasize to paratracheal (Level VI) as well as middle or lower jugular lymph (Levels III and IV) node groups.

Treatment of laryngeal cancers varies widely from center to center, and for early-stage lesions radiotherapy or transoral endoscopic excision are the most common treatment options. Both yield excellent tumor control, but proponents of each modality often disagree on the functional sequelae of the two types of treatment. However, good long-term functional data are lacking. Treatment of more advanced tumors can be even more controversial, but while total laryngectomy was long held as the gold standard for treating T3 and T4 larynx cancers, chemoradiotherapy has been shown to be quite effective in achieving local regional control, survival, and organ preservation. Concomitant chemoradiotherapy may be most appropriate for T3 primary lesions. Treatment of both sides of the neck must be taken into consideration when treating supra- and subglottic tumors, and unilateral neck treatment is considered for patients with advanced glottic tumors.

5. Nasopharynx

The nasopharynx is a cuboidal structure bounded anteriorly by the choanae at the back of the nose where pseudostratified ciliated columnar cells are found. The roof and posterior walls of the nasopharynx are made up of the sphenoid bone and the upper cervical vertebrae, covered with a stratified squamous epithelial lining. Inferiorly, at the level of the soft palate, the nasopharynx meets the superior oropharynx. The opening of the Eustachian tube is found at the posterior-superior aspect of either lateral nasopharyngeal wall; therefore, impingement of this opening by a nasopharyngeal tumor can lead to Eustachian dysfunction manifested by a middle-ear effusion and hearing loss. Thus, all adult patients with an unexplained unilateral middle-ear effusion, particularly in areas where nasopharyngeal carcinoma is endemic (such as southern China, northern

Africa, and Greenland), should have their nasopharynx examined. The adenoids, consisting of mucosa-covered lymphoid tissue, are found posteriorly and superiorly in the nasopharynx and are more prominent in children than adults.

While minor salivary tumors can occur in the nasopharynx, most nasopharyngeal cancers are derived from the mucosal lining and fit into one of the three histologic subtypes described by the World Health Organization (WHO). WHO Type I nasopharyngeal carcinoma (NPC) is keratinizing squamous carcinoma, and WHO Type II is nonkeratinizing squamous cell carcinoma. WHO Type III is an undifferentiated tumor, also known as lymphoepithelioma. The Epstein-Barr virus is thought to play a pathogenic role in the development of Type II and III tumors. Nasopharyngeal carcinoma may also metastasize to retropharyngeal and parapharyngeal lymph nodes, as well as lymph nodes along the upper, lower, and middle jugular (Levels II–IV) chains and the posterior triangle of the neck (Level V). Early-stage NPC is most often treated with radiotherapy alone, and in more advanced cases, T 3/4 N +/ concomitant chemotherapy is being increasingly utilized. Surgery is rarely used in salvage situations at the primary site or neck.

6. Nasal Cavity and Paranasal Sinuses

The paranasal sinuses consist of the paired maxillary sinuses, the superior frontal sinuses, the bilateral ethmoid system, and the central spenoids. This region includes the lining of the nasal cavity (medial maxillary walls) as well as the nasal septum. The majority of sinonasal carcinomas arise in the maxillary sinuses and are most commonly squamous cell carcinomas, although adenocarcinomas are described, especially in woodworkers. Because of inherent bone involvement, initial treatment is usually surgical, with consideration for adjuvant radiation therapy based upon stage and pathologic findings. Reconstruction and rehabilitation, especially in cases with orbital involvement, may be prosthetic or tissue based. Sinonasal

carcinomas of the anterior skull base include a variety of pathologies. Standard treatment is multidisciplinary, including craniofacial surgical intervention with adjuvant radiation and chemotherapy.

B. Radiation Therapy and Chemotherapy

External beam radiation therapy (RT) alone or in conjunction with chemotherapy has a well-established role in the treatment of head and neck cancer as definitive therapy or as adjuvant to primary surgical treatment. The last two decades have seen tremendous technological developments in targeting and delivery of RT in a complex treatment site such as the head and neck. Three-dimensional (3-D) conformal RT marked a significant improvement over the conventional two-dimensional 3-field setup in better delineation of tumor volume and nodal volume. This improvement allows limited dosing to normal tissue, while adequately treating the tumor. However, 3-D conformal planning does not always result in optimal shielding of critical normal tissues (e.g., salivary glands and visual apparatus), due to current beam constraints.

Intensity-modulated radiation therapy (IMRT) allows for better sparing of such critical normal tissues by modulating the radiation beam in multiple small beamlets, while at the same time adequately covering the tumor volume. With the advent of IMRT, it is also very important for the clinician to be acutely aware of radiologic anatomy (levels of nodal disease, pathways of loco-regional spread of tumor, and delineation of postoperative tumor bed), while utilizing computed tomography, scan magnetic resonance imaging, and positron emission tomography scan for treatment planning.

Preoperative clinical and radiologic evaluation of disease is extremely important for postoperative radiotherapy planning, as tissue planes may be obscured after surgery. Such evaluation is also valuable in determining whether ipsilateral or bilateral neck disease needs to be addressed based on tumor location, extent, and size; ini-

tial nodal presentation; and likelihood of contralateral nodal involvement. Certain primary tumor sites have a high risk of retropharyngeal nodal involvement (nasopharynx, piriform sinus, and tongue base), and these nodal groups should be covered in RT target volumes for these tumors. Approximately 20% of anterior tongue and floor of mouth cancers may have skip nodal metastasis to Level IV nodal region, and should be included in RT volumes.

Important considerations in RT planning following surgical resection include a thorough evaluation of the surgical pathology report with respect to resection margins, extension to soft tissue/bone, and perineural or lympho-vascular invasion at the primary site and size; extra-capsular extension (ECE); and the number and level of nodal involvement. Postoperative patients with ECE are at high risk for loco-regional recurrence. Careful adjuvant treatment planning includes consideration of radiation dose (60–66 Gy), addition of concurrent chemotherapy (RTOG 95-01), extension of the RT clinical target volume to include overlying skin, and elective irradiation of contralateral neck nodes. The clinical target volume in radiation therapy of a clinically or pathologically involved neck typically extends up to the skull base to treat the highest neck nodes. In the contralateral elective neck irradiation, the highest treated nodes are jugulodigastric nodes.

Adjuvant RT should ideally begin within 4–6 weeks following primary surgical resection and neck dissection, unless postoperative complications significantly delay wound healing. Delaying adjuvant therapy has been shown to significantly decrease loco-regional control.

II. AMERICAN JOINT COMMITTEE ON CANCER (AJCC) TUMOR STAGING BY SITE

A. Oral Cavity

Definition: The anterior border is the junction of the skin and vermilion border of the lip. The posterior border is formed by the junction of the hard and soft palates superiorly, the circumvallate papillae inferiorly, and the anterior tonsillar pillars laterally. The various sites within the oral cavity include the lip, gingival, hard palate, buccal mucosa, floor of mouth, anterior 2/3 of tongue, and retromolar trigone.

TX	Primary tumor cannot be assessed.
T0	There is no evidence of primary tumor.
Tis	Carcinoma is *in situ*.
T1	Tumor is 2 cm or less in greatest dimension.
T2	Tumor is more than 2 cm but not greater than 4 cm in greatest dimension.
T3	Tumor is more than 4 cm in greatest dimension.
T4 (lip)	Tumor invades through cortical bone, inferior alveolar nerve, floor of mouth, or skin of face—i.e., chin or nose.
T4a (oral cavity)	Tumor invades adjacent structures (e.g., through cortical bone, into deep [extrinsic] muscle of tongue [genioglossus, hypoglossus, palataglossus, and styloglossus], maxillary sinus, skin of face).
T4b	Tumor invades masticator space, pterygoid plates, or skull base and/or encases the internal carotid artery.

Note: Superficial erosion alone of bone/tooth socket by gingival primary is not sufficient to classify as T4.

B. Oropharynx

Definition: The oropharynx includes the base of the tongue, the inferior surface of the soft palate and uvula, the anterior and posterior

tonsillar pillars, the glossotonsillar sulci, the pharyngeal tonsils, and the lateral and posterior pharyngeal walls.

T1 Tumor is 2 cm or less in greatest dimension.

T2 Tumor is more than 2 cm but not more than 4 cm in greatest dimension.

T3 Tumor is more than 4 cm in greatest dimension.

T4a Tumor invades the larynx, deep/extrinsic muscle of the tongue, medial pterygoid, hard palate, or mandible.

T4b Tumor invades the lateral pterygoid muscle, pterygoid plates, lateral nasopharynx, or skull base or encases the carotid artery.

C. Larynx

Site	*Subsite*
Supraglottis	Suprahyoid epiglottis Infrahyoid epiglottis Aryepiglottic folds (laryngeal aspect) Arytenoids Ventricular bands (false cords)
Glottis	True vocal cords, including anterior and posterior commisures, including the region 1 cm below the plane of the true vocal folds
Subglottis	Region extending from 1 cm below the true vocal folds to the cervical trachea

Primary Tumor (T)

TX Primary tumor cannot be assessed.

T0 There is no evidence of primary tumor.

Tis Carcinoma is *in situ*.

Supraglottis

T1 Tumor is limited to one subsite of the supraglottis, with normal vocal cord mobility.

T2 Tumor invades mucosa of more than one adjacent subsite of the supraglottis or glottis or region outside the supraglottis (e.g., mucosa of base of tongue, vallecula, medial wall of pyriform sinus), without fixation of the larynx.

T3 Tumor is limited to the larynx with vocal cord fixation and/or invades any of the following: postcricoid area, pre-epiglottic tissues, paraglottic space, and/or minor thyroid cartilage erosion (e.g., inner cortex).

T4a Tumor invades through the thyroid cartilage and/or invades tissues beyond the larynx (e.g., trachea, soft tissues of neck, including deep extrinsic muscle of the tongue, strap muscles, thyroid, or esophagus).

T4b Tumor invades prevertebral space, encases the carotid artery, or invades mediastinal structures.

Glottis

T1 Tumor is limited to the vocal cords(s) (may involve anterior or posterior commissure), with normal mobility.

T1a Tumor is limited to one vocal cord.

T1b Tumor involves both vocal cords.

T2 Tumor extends to the supraglottis and/or subglottis, and/or with impaired vocal cord mobility.

T3 Tumor is limited to the larynx with vocal cord fixation and/or invades paraglottic space, and or minor thyroid cartilage erosion (e.g., inner cortex).

T4a Tumor invades through the thyroid cartilage and/or invades tissues beyond the larynx (e.g., trachea, soft tissues of the neck, including deep extrinsic muscle of the tongue, strap muscles, thyroid, or esophagus).

T4b Tumor invades prevertebral space, encases the carotid artery, or invades mediastinal structures.

Subglottis

T1 Tumor is limited to the subglottis.

T2 Tumor extends to the vocal cord(s), with normal or impaired mobility.

T3 Tumor is limited to the larynx, with vocal cord fixation.

T4a Tumor invades cricoid or thyroid cartilage and/or invades tissues beyond the larynx (e.g., trachea, soft tissues of neck, including deep extrinsic muscles of the tongue, strap muscles, thyroid, or esophagus).

T4b Tumor invades prevertebral space, encases the carotid artery, or invades mediastinal structures.

D. Hypopharynx

Definition: The hypopharynx includes the pyriform sinuses, the lateral and posterior hypopharyngeal walls, and the postcricoid region.

T1 Tumor is limited to one subsite of the hypopharynx and 2 cm or less in greatest dimension.

T2 Tumor invades more than one subsite of the hypopharynx or an adjacent site, or measures more than 2 cm but not more than 4 cm in greatest dimension without fixation of the hemilarynx.

T3 Tumor is more than 4 cm in greatest dimension or with fixation of the hemilarynx.

T4a Tumor invades thyroid/cricoid cartilage, hyoid bone, thyroid gland, esophagus, or central compartment soft tissue.

T4b Tumor invades prevertebral fascia, encases the carotid artery, or involves mediastinal structures.

E. Nasal Cavity and Paranasal Sinuses

Definition: The paranasal sinuses include the ethmoid, maxillary, sphenoid, and frontal sinuses.

TX Primary tumor cannot be assessed.

T0 There is no evidence of primary tumor.

Tis Carcinoma is *in situ*.

Maxillary Sinus

Definition: The maxillary sinus is a pyramid-shaped cavity within the maxillary bone. The medial border is the lateral nasal wall. Superiorly, the sinus abuts the orbital floor and contains the infraorbital canal. The posterolateral wall is anterior to the infratemporal fossa and pterygopalatine fossa. The anterior wall is posterior to the facial skin and soft tissue. The floor of the maxillary antrum extends below the nasal cavity floor and is in close proximity to the hard palate and maxillary tooth roots.

T1 Tumor is limited to the maxillary sinus mucosa, with no erosion or destruction of bone.

T2 Tumor is causing bone erosion or destruction, including extension into the hard palate and/or middle nasal meatus, except extension to the posterior wall of the maxillary sinus and pterygoid plates.

T3 Tumor invades any of the following: bone of the posterior wall of the maxillary sinus, subcutaneous tissues, floor, or medial wall of the orbit, pterygoid fossa, or ethmoid sinuses.

T4a Tumor invades anterior orbital contents, skin of cheek, pterygoid plates, infratemporal fossa, cribriform plate, sphenoid or frontal sinuses.

T4b Tumor invades any of the following: orbital apex, dura, brain, middle cranial fossa, cranial nerves other than maxillary division of trigeminal nerve (V2), nasopharynx, or clivus.

Nasal Cavity and Ethmoid Sinus

Definition: The nasal cavity includes the nasal antrum and the olfactory region. The subsites within the nasal cavity include the septum; superior, middle, and inferior turbinates; and olfactory region of the cribriform plate. The ethmoid sinus is made up of several thin-walled air cells. Laterally, the ethmoid sinus is bound by a thin bone called the lamina papyracea, which separates it from the medial orbit. The posterior border of the ethmoid sinus is close to the optic canal. The anterosuperior border or roof of the ethmoid is formed by the fovea ethmoidalis, which separates it from the anterior cranial fossa. The perpendicular plate of the ethmoid bone separates the ethmoid cavity into left and right sides.

T1 Tumor is confined to the ethmoid sinus with or without bone erosion.

T2 Tumor invades two subsites in a single region or extends to involve an adjacent region within the nasoethmoidal complex, with or without bony invasion.

T3 Tumor extends to invade the medial wall or floor of the orbit, maxillary sinus, palate, or cribriform plate.

T4a Tumor invades any of the following: anterior orbital contents, skin of nose or cheek, minimal extension to anterior cranial fossa, pterygoid plates, sphenoid or frontal sinuses.

T4b Tumor invades any of the following: orbital apex, dura, brain, middle cranial fossa, cranial nerves other than (V2), nasopharynx, or clivus.

F. Salivary Glands

Definition: The salivary glands include the parotid, submandibular, sublingual, and minor salivary glands.

T1 Tumor is 2 cm or less without extraparenchymal extension.

T2 Tumor is greater than 2 cm but not more than 4 cm without extraparenchymal extension.

T3 Tumor is more than 4 cm and/or extraparenchymal extension.

T4a Tumor invades the skin, mandible, ear canal, and/or facial nerve.

T4b Tumor invades the skull base and/or pterygoid plates and/or encases the carotid artery.

G. Neck Staging Under the TNM Staging System for Head and Neck Tumors (excluding nasopharynx and thyroid)

NX Regional lymph nodes cannot be assessed.

N0 There is no regional nodes metastasis.

N1 Metastasis is in a single ipsilateral lymph node, 3 cm or less in greatest dimension.

N2 Metastasis is in a single ipsilateral lymph node, more than 3 cm but not more than 6 cm in greatest dimension; or metastasis is in multiple ipsilateral lymph nodes, none more that 6 cm in greatest dimension; or metastasis is in bilateral or contralateral lymph nodes, none greater than 6 cm in greatest dimension.

N2a Metastasis is in a single ipsilateral lymph node, more than 3 cm but not more than 6 cm in greatest dimension.

N2b Metastasis is in multiple ipsilateral lymph nodes, none more that 6 cm in greatest dimension.

N2c Metastasis is in bilateral or contralateral lymph nodes, none more than 6 cm in greatest dimension.

N3 Metastasis is in a lymph node more than 6 cm in greatest dimension.

U, L A designation of "U" or "L" may be given in addition to indicate the level of metastasis above the lower border of the cricoid cartilage (U) or below the lower border of the cricoid cartilage (L).

Distant Metastasis (M)

MX Distant metastasis cannot be assessed.

M0 There is no distant metastasis.

M1 There is distant metastasis.

H. TNM Staging for the Larynx, Oropharynx, Hypopharynx, Oral Cavity, Salivary Glands, and Paranasal Sinuses

Stage Grouping

Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T3	N0	M0
	T1	N1	M0
	T2	N1	M0
	T3	N1	M0
Stage IVA	T4a	N0	M0
	T4a	N1	M0
	T1	N2	M0
	T2	N2	M0
	T3	N2	M0
	T4a	N2	M0
Stage IVB	T4b	Any N	M0
	Any T	N3	M0
Stage IVC	Any T	Amy N	M1

Clinical Stage Grouping by T and N Status

	T1	*T2*	*T3*	*T4a*	*T4b*
N0	I	II	III	IVa	IVb
N1	III	III	III	IVa	IVb
N2	IVa	IVa	IVa	IVa	IVb
N3	IVb	IVb	IVb	IVb	IVb

III. AJCC TUMOR STAGING—NASOPHARYNX AND THYROID

A. Nasopharynx

Definition: The nasopharynx includes the vault, the lateral walls, the posterior walls, and the superior surface of the soft palate.

T1 Tumor is confined to the nasopharynx.

T2 Tumor extends to soft tissues.

T2a Tumor extends to the oropharynx and/or nasal cavity, without parapharyngeal extension.

T2b Tumor extends into the parapharyngeal space.

T3 Tumor involves bony structures and/or paranasal sinuses.

T4 Tumor has intracranial extension and/or involves cranial nerves, infratemporal fossa, hypopharynx, orbit, or masticator space.

Regional Lymph Nodes (different from other head and neck sites)

N0 There is no regional lymph node metastasis.

N1 Unilateral metastasis in lymph node(s) is 6 cm or less in greatest dimension, above the supraclavicular fossa.

N2 Bilateral metastasis in lymph nodes is 6 cm or less in greatest dimension, above the supraclavicular fossa.

N3 Metastasis in lymph node(s) is greater than 6 cm and/or to the supraclavicular fossa.

N3a Tumor is greater than 6 cm in dimension.

N3b Tumor extends to the supraclavicular fossa.

Stage Grouping (unique to site)

Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage IIA	T2a	N0	M0
Stage IIB	T1	N1	M0
	T2	N1	M0
	T2a	N1	M0
	T2b	N0	M0
	T2b	N1	M0
Stage III	T1	N2	M0
	T2a	N2	M0
	T2b	N2	M0
	T3	N0	M0
	T3	N1	M0
	T3	N2	M0
Stage IVA	T4	N0	M0
	T4	N1	M0
	T4	N2	M0
Stage IVB	Any T	N3	M0
Stage IVC	Any T	Any N	M1

B. Thyroid

Definition: The thyroid is composed of a right and left lobe, with an isthmus connecting the two lobes.

Primary Tumor (T)

TX Primary tumor cannot be assessed.

T0 There is no evidence of primary tumor.

T1 Tumor is 2 cm or less in greatest dimension and is limited to the thyroid.

T2 Tumor is more than 2 cm but not more than 4 cm in greatest dimension, and is limited to the thyroid.

T3 Tumor is more than 4 cm in greatest dimension, and is limited to the thyroid or any tumor with minimal extrathyroid extension (e.g., extension to sternothyroid muscle or perithyroid soft tissues).

T4a Tumor of any size extends beyond the thyroid capsule to invade subcutaneous soft tissues, larynx, trachea, esophagus, or recurrent laryngeal nerve.

T4b Tumor invades prevertebral fascia or encases the carotid artery or mediastinal vessels.

All anaplastic carcinomas are considered T4 tumors

T4a Intrathyroidal anaplastic carcinoma—surgically resectable.

T4b Extrathyroidal anaplastic carcinoma—surgically unresectable.

Regional Lymph Nodes (N)

Regional lymph nodes are the central compartment, lateral cervical, and upper mediastinal lymph nodes.

NX Regional lymph nodes cannot be assessed.

N0 There is no regional lymph node metastasis.

N1 There is regional lymph node metastasis.

N1a There is metastasis to Level VI (pretracheal, paratracheal, and prelaryngeal/Delphian lymph nodes).

N1b There is metastasis to unilateral, bilateral, or contralateral cervical or superior mediastinal lymph nodes.

Distant Metastasis (M)

MX Distant metastasis cannot be assessed.

M0 There is no distant metastasis.

M1 There is distant metastasis.

Stage Grouping

Separate stage groupings are recommended for papillary or follicular, medullary, and anaplastic (undifferentiated) carcinoma.

Papillary or Follicular
(Younger than 45 years)

Stage I	Any T	Any N	M0
Stage II	Any T	Any N	M1

Papillary or Follicular
(45 years and older)

Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T3	N0	M0
	T1	N1a	M0
	T2	N1a	M0
	T3	N1a	M0
Stage IVA	T4a	N0	M0
	T4a	N1a	M0
	T1	N1b	M0
	T2	N1b	M0
	T3	N1b	M0
	T4a	N1b	M0
Stage IVB	T4b	Any N	M0
	Any T	N3	M0
Stage IVC	Any T	Any N	M1

Medullary Carcinoma

Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T3	N0	M0
	T1	N1a	M0
	T2	N1a	M0
	T3	N1a	M0

Stage IVA	T4a	N0	M0
	T4a	N1a	M0
	T1	N1b	M0
	T2	N1b	M0
	T3	N1b	M0
	T4a	N1b	M0
Stage IVB	T4b	Any N	M0
	Any T	N3	M0
Stage IVC	Any T	Any N	M1

Anaplastic Carcinoma

(All anaplastic carcinomas are considered Stage IV)

Stage IVA	T4a	Any N	M0
Stage IVB	T4b	Any N	M0
Stage IVC	Any T	Any N	M1