

## Appendix I

### Staging of Head and Neck Cancers

For most head and neck cancers, the description of the tumour (T) is specific to the site, but the N (node) and M (metastases) are the same. The exceptions are nasopharynx, mucosal melanoma and skin cancers of the head and neck (face, lip and ear) where the N & M staging is also unique to the site.

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#### Oral Cavity, Lip, Oropharynx, Hypopharynx

##### **Primary Tumour (T)**

TX	Primary tumour cannot be assessed
T0	No evidence of primary tumour
Tis	Carcinoma in situ
T1	Tumour 2 cm or less in greatest dimension
T2	Tumour more than 2 cm but not more than 4 cm in greatest dimension
T3	Tumour more than 4 cm in greatest dimension

<b>Lip</b>	
T4	Tumour invades through cortical bone, inferior alveolar nerve, floor of mouth, or skin of face, i.e., chin or nose
<b>Oral Cavity</b>	
T4a	Tumour invades adjacent structures (e.g., through cortical bone, into deep [extrinsic] muscle of tongue [genioglossus, hyoglossus, palatoglossus, and styloglossus], maxillary sinus, skin of face)
T4b	Tumour invades masticator space, pterygoid plates, or skull base and/or encases internal carotid artery
Note: Superficial erosion alone of bone/tooth socket by gingival primary is not sufficient to classify a tumour as T4.	
<b>Oropharynx</b>	
T4a	Tumour invades the larynx, deep/extrinsic muscle of tongue, medial pterygoid, hard palate, or mandible
T4b	Tumour invades lateral pterygoid muscle, pterygoid plates, lateral nasopharynx, or skull base or encases carotid artery

<b>Hypopharynx</b>	
T1	Tumour limited to one subsite of hypopharynx and 2cm or less in greatest dimension
T2	Tumour invades more than one subsite of hypopharynx or an adjacent site, or measures more than 2cm but not more than 4cm in greatest diameter without fixation of hemilarynx
T3	Tumour more than 4cm in greatest dimension or with fixation of hemilarynx
T4a	Tumour invades thyroid/cricoid cartilage, hyoid bone, thyroid gland, esophagus, or central compartment soft tissue*
T4b	Tumour invades prevertebral fascia, encases carotid artery, or involves mediastinal structures
*Note: Central compartment soft tissue includes prelaryngeal strap muscles and subcutaneous fat.	

## Larynx

### Primary Tumour (T)

TX	Primary tumour cannot be assessed
T0	No evidence of primary tumour
Tis	Carcinoma in situ
<b>Supraglottis</b>	
T1	Tumour limited to one subsite of supraglottis with normal vocal cord mobility
T2	Tumour invades mucosa of more than one adjacent subsite of 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	Tumour limited to 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	Tumour 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	Tumour invades prevertebral space, encases carotid artery, or invades mediastinal structures

<b>Glottis</b>	
T1	Tumour limited to the vocal cord(s) (may involve anterior or posterior commissure) with normal mobility
T1a	Tumour limited to one vocal cord
T1b	Tumour involves both vocal cords
T2	Tumour extends to supraglottis and/or subglottis, and/or with impaired vocal cord mobility
T3	Tumour limited to the larynx with vocal cord fixation and/or invades paraglottic space, and/or minor thyroid cartilage erosion (e.g., inner cortex)
T4a	Tumour 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	Tumour invades prevertebral space, encases carotid artery, or invades mediastinal structures
<b>Subglottis</b>	
T1	Tumour limited to the subglottis
T2	Tumour extends to vocal cord(s) with normal or impaired mobility
T3	Tumour limited to larynx with vocal cord fixation
T4a	Tumour 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	Tumour invades prevertebral space, encases carotid artery, or invades mediastinal structures

## Nasal Cavity and Paranasal Sinuses

### Primary Tumour (T)

TX	Primary tumour cannot be assessed
T0	No evidence of primary tumour
Tis	Carcinoma in situ
<b>Maxillary Sinus</b>	
T1	Tumour limited to maxillary sinus mucosa with no erosion or destruction of bone
T2	Tumour causing bone erosion or destruction including extension into the hard palate and/or middle nasal meatus, except extension to posterior wall of maxillary sinus and pterygoid plates
T3	Tumour invades any of the following: bone of the posterior wall of maxillary sinus, subcutaneous tissues, floor or medial wall of orbit, pterygoid fossa, ethmoid sinuses
T4a	Tumour invades anterior orbital contents, skin of cheek, pterygoid plates, infratemporal fossa, cribriform plate, sphenoid or frontal sinuses
T4b	Tumour invades any of the following: orbital apex, dura, brain, middle cranial fossa, cranial nerves other than maxillary division of trigeminal nerve (V <sub>2</sub> ), nasopharynx, or clivus
<b>Nasal Cavity and Ethmoid Sinus</b>	
T1	Tumour restricted to any one subsite, with or without bony invasion
T2	Tumour invading two subsites in a single region or extending to involve an adjacent region within the nasoethmoidal complex, with or without bony invasion
T3	Tumour extends to invade the medial wall or floor of the orbit, maxillary sinus, palate, or cribriform plate

T4a	Tumour 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	Tumour invades any of the following: orbital apex, dura, brain, middle cranial fossa, cranial nerves other than (V <sub>2</sub> ), nasopharynx, or clivus

## Major Salivary Glands

### Primary Tumour (T)

TX	Primary tumour cannot be assessed
T0	No evidence of primary tumour
T1	Tumour 2 cm or less in greatest dimension without extraparenchymal extension*
T2	Tumour more than 2 cm but not more than 4 cm in greatest dimension without extraparenchymal extension*
T3	Tumour more than 4 cm and/or tumour having extraparenchymal extension*
T4a	Tumour invades skin, mandible, ear canal, and/or facial nerve
T4b	Tumour invades skull base and/or pterygoid plates and/or encases carotid artery

\*Note: Extraparenchymal extension is clinical or macroscopic evidence of invasion of soft tissues. Microscopic evidence alone does not constitute extraparenchymal extension for classification purposes.

**Regional Lymph Nodes (N)**

For all sites except nasopharynx, mucosal melanoma and skin cancers of the head and neck (face, lip and ear).

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Metastasis in a single ipsilateral lymph node, 3 cm. or less in greatest dimension
N2	Metastasis in a single ipsilateral lymph node, more than 3 cm but not more than 6 cm in greatest dimension; or in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension; or in bilateral or contralateral lymph nodes, none more than 6 cm in greatest dimension
N2a	Metastasis in single ipsilateral lymph node more than 3 cm but not more than 6 cm in greatest dimension
N2b	Metastasis in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension
N2c	Metastasis in bilateral or contralateral lymph nodes, none more than 6 cm. in greatest dimension
N3	Metastasis in a lymph node more than 6 cm in greatest dimension

**Distant Metastasis (M)**

For all sites except nasopharynx, mucosal melanoma and skin cancers of the head and neck (face, lip and ear).

MX	Distant metastasis cannot be assessed
M0	No distant metastasis
M1	Distant metastasis

**STAGE GROUPING**

For all sites except nasopharynx, mucosal melanoma and skin cancers of the head and neck (face, lip and ear).

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	Any T	N3	M0
	T4b	Any N	M0
Stage IVC	Any T	Any N	M 1

## Nasopharynx TNM Staging Classification

### Primary Tumour (T)

TX	Primary tumour cannot be assessed
T0	No evidence of primary tumour
Tis	Carcinoma in situ
T1	Tumour confined to the nasopharynx
T2	Tumour extends to soft tissues
T2a	Tumour extends to the oropharynx and/or nasal cavity without parapharyngeal extension*
T2b	Any tumour with parapharyngeal extension*
T3	Tumour involves bony structures and/or paranasal sinuses
T4	Tumour with intracranial extension and/or involvement of cranial nerves, infratemporal fossa, hypopharynx, orbit, or masticator space
*Note: Parapharyngeal extension denotes posterolateral infiltration of tumour beyond the pharyngobasilar fascia	

### Regional Lymph Nodes (N)

The distribution and the prognostic impact of regional lymph node spread from nasopharynx cancer, particularly of the undifferentiated type, are different from those of other head and neck mucosal cancers and justify the use of a different N classification scheme.

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Unilateral metastasis in lymph node(s), 6 cm or less in greatest dimension, above the supraclavicular fossa*
N2	Bilateral metastasis in lymph node(s), 6 cm or less in greatest dimension, above the supraclavicular fossa*
N3	Metastasis in a lymph node(s)* >6 cm. and/or to supraclavicular fossa
N3a	Greater than 6 cm in dimension
N3b	Extension to the supraclavicular fossa**

\*Note. Midline nodes are considered ipsilateral nodes.

\*\*Supraclavicular zone or fossa is relevant to the staging of nasopharyngeal carcinoma and is the triangular region originally described by Ho. It is defined by three points: (1) the superior margin of the sternal end of the clavicle, (2) the superior margin of the lateral end of the clavicle, (3) the point where the neck meets the shoulder ... Note that this would include caudal portions of Levels IV and V. All cases with lymph nodes (whole or part) in the fossa are considered N3b.

**Distant Metastasis (M)**

MX	Distant metastasis cannot be assessed
M0	No distant metastasis
M1	Distant metastasis

**STAGE GROUPING:**

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

**Melanoma****Primary Tumour (T)**

TX	Primary tumour cannot be assessed (e.g., shave biopsy or regressed melanoma)
T0	No evidence of primary tumour
Tis	Melanoma in situ
T1	Melanoma < 1.0 mm in thickness with or without ulceration
T1a	Melanoma < 1.0 mm in thickness and level II or III, no ulceration
T1b	Melanoma < 1.0 mm in thickness and level IV or V or with ulceration
T2	Melanoma 1.01-2 mm in thickness with or without ulceration
T2a	Melanoma 1.01-2.00 mm in thickness, no ulceration
T2b	Melanoma 1.01-2.00 mm in thickness, with ulceration
T3	Melanoma 2.01-4 mm in thickness with or without ulceration
T3a	Melanoma 2.01-4.0 mm in thickness, no ulceration
T3b	Melanoma 2.01-4.0 mm in thickness, with ulceration
T4	Melanoma greater than 4.0 mm in thickness with or without ulceration
T4a	Melanoma > 4.0 mm in thickness, no ulceration
T4b	Melanoma > 4.0 mm in thickness, with ulceration

**Regional Lymph Nodes (N)**

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Metastasis in one lymph node
N1a	Clinically occult (microscopic) metastasis
N1b	Clinically apparent (macroscopic) metastasis
N2	Metastasis in two to three regional nodes or intralymphatic regional metastasis without nodal metastases
N2a	Clinically occult (microscopic) metastasis
N2b	Clinically apparent (macroscopic) metastasis
N2c	Satellite or in-transit metastasis <i>without</i> nodal metastasis
N3	Metastasis in four or more regional nodes, or matted metastatic nodes, or in-transit metastasis or satellite(s) <i>with</i> metastasis in regional node(s)

**Distant Metastasis (M)**

MX	Distant metastasis cannot be assessed
M0	No distant metastasis
M1	Distant metastasis
M1a	Metastasis to skin, subcutaneous tissues or distant lymph nodes
M1b	Metastasis to lung
M1c	Metastasis to all other visceral sites or distant metastasis at any site associated with an elevated serum lactic dehydrogenase (LDH)

**Clinical Stage Grouping**

Stage 0	Tis	N0	M0
Stage 1A	T1a	N0	M0
Stage 1B	T1b	N0	M0
	T2a	N0	M0
Stage IIA	T2b	N0	M0
	T3a	N0	M0
Stage IIB	T3b	N0	M0
	T4a	N0	M0
Stage IIC	T4b	N0	M0
Stage III	Any T	N1	M0
	Any T	N2	M0
	Any T	N3	M0
Stage IV	Any T	Any N	M1

## Carcinoma of the Skin of the Head and Neck

### Primary Tumour (T)

Tx	Primary tumour cannot be assessed
T0	No evidence of primary tumour
Tis	Carcinoma in situ
T1	Tumour 2 cm or less in greatest dimension
T2	Tumour more than 2 cm but not more than 5 cm in greatest dimension
T3	Tumour more than 5 cm in greatest dimension
T4	Tumour invades deep extradermal structures (i.e. cartilage, skeletal muscle or bone)

### Regional Lymph Nodes (N)

Nx	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Regional lymph node metastasis

### Distant Metastasis (M)

Mx	Distant metastasis cannot be assessed
M0	No distant metastasis
M1	Distant metastasis

### Primary of Unknown Origin

In the case of a primary of unknown origin, staging can only be based on clinical suspicion of the primary origin (e.g., T0 N1 M0)

#### **Primary Tumour (T)**

TX Primary tumour cannot be assessed

T0 No evidence of primary tumour