

## Head and Neck Pathology Grossing Guidelines

### Do not cut any HN specimens unless you are fully oriented anatomically

- Orient by anatomic structures (oral tongue, junction of buccal/gingival mucosa, alveolar ridge, angle of jaw, hard palate, etc.)
- For mandibulectomies/maxillectomies, please ask for help if unsure
- Ink resection margins
- Describe all abnormalities: size (*staging cutoffs: 2 cm, 4 cm*), location, extent, depth (*staging cutoffs: 0.5 cm, 1 cm*), distance to margins
- Sample all margins (if grossly close, e.g. 1 cm, submit perpendicular section; otherwise submit a shave of the margin closest to tumor)
- Sample tumor:
  - Show relationship to peripheral/deep margins
  - Show maximum depth of invasion
- Specimens containing mandible or maxilla:
  - Bone margins
  - Sections of bone adjacent to tumor or gross involvement of bone
- Diagrams and gross photos are appreciated

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**Specimen Type:** TOTAL LARYNGECTOMY

**Procedure:**

1. Orient specimen and determine structures present
  - If radical neck dissection present, remove from larynx and process as described in the manual
  - Note presence or absence of thyroid and hyoid bone
  - Identify tracheostomy site if present
2. Ink entire soft tissue margin
  - Black- right and Blue- left
3. Remove inferior tracheal ring, unless lesion is close and a perpendicular section would be more appropriate
4. Open along the posterior midline (splitting cricoid cartilage) and prop open and pin on corkboard to fix overnight
5. Take gross photographs and draw diagrams
6. Describe size/presences of lesion/ulcerations and structures they involve:
  - a. Indicate location of lesion
    - supraglottic**: (extends from the tip of epiglottis to the apex of ventricle and includes the epiglottis, aryepiglottic folds, arytenoids, false vocal cords, and the ventricle)
    - glottic**: (extends from the ventricle to 0.5-1.0 cm below the true vocal cord and includes the anterior and posterior commissures)
    - subglottic**: (extends from 1.0 cm below the true vocal cord to inferior rim of the cricoid cartilage)
    - transglottic**
      - \* note if lesion crosses the midline
  - b. Indicate extent of lesion: document if lesion involves base of tongue, epiglottis, piriform sinus, aryepiglottic folds, arytenoid mucosa, anterior and posterior midlines, hyoid bone, thyroid, cartilage (thyroid and/or cricoid), strap muscles, and involvement of any additional tissue/organs present
7. Describe remainder of specimen and additional structures
8. Section along anterior midline and photograph cut surface
9. Describe maximum thickness and distance to all margins

**Gross Template:**

**MModal Command:** "INSERT LARYNGECTOMY"

It consists of a total laryngectomy measuring [\*\*\*] cm (superior-inferior) x [\*\*\*] cm (right-left) x [\*\*\*] cm (anterior-posterior). The hyoid bone measures [*measure in three dimensions*\*\*\*] cm. [*Describe and measure skin on anterior surface and presence of tracheostomy site, describe thyroid if present or any additional adherent tissue-delete from dictation*\*\*\*]

The specimen is opened along the posterior midline to reveal a [*supra-, sub-, trans- glottic*\*\*\*] [*describe nature of lesion-exophytic, ulcerated, etc.*\*\*\*] lesion. The lesion is located on the [*right/left and crosses/does not cross*\*\*\*] the midline. The lesion [*involves/does not involve*\*\*\*] the true vocal cords. The

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lesion involves [*describe extent-piriform sinus, aryepiglottic folds, cricoid/thyroid cartilage, bone, thyroid, strap muscles, anterior and posterior commissure, tracheal rings, etc\*\*\**]. The lesion [*extends/does not extend to involve the attached soft tissue if yes give location left vs right\*\*\**].

The remaining mucosa is [*tan, smooth, unremarkable\*\*\**]. [*Describe number/size of lymph nodes identified\*\*\**]. All identified lymph nodes are submitted in their entirety. [*The lesion is entirely/partially submitted and representative sections of the remaining specimen are submitted\*\*\**]. Gross photographs are taken.

### **INK KEY:**

Black    Right  
Blue     Left

[*insert cassette summary. Be very specific in the cassette summary, including stating if section contains thyroid versus cricoid cartilage because this will look the same on the slide\*\*\**]

### **Cassette Submission:** 20-25 cassettes

- Shave inferior tracheal ring (margin)
- Closest mucosal and soft tissue margins
- Anterior and posterior commissure
- Epiglottis
- Right and left piriform sinuses and aryepiglottic folds
- Right and left true/false cords to include ventricle and anterior commissure
- Right and left arytenoids
- Hyoid, closest to tumor
- Base of tongue
- **If lesion grossly identified:**
  - include deepest invasion into cartilage and/or soft tissue
    - \*submit some of the lesion without bone/cartilage to better appreciate histology without decalcification
  - relationship to inked soft tissue margins
  - lesion in relation to piriform sinus (if applicable)
- **If no lesion grossly identified** (patient may have had radiotherapy)
  - block out ulcerated area and entirely submit
- Thyroid- one representative cassette, if uninvolved (serially section to check for incidental lesions)
- Anterior skin to include tracheostomy, if present

### **Specimen Type:** HEMILARYNGECTOMY

Hemilaryngectomy will have either the left or the right set of mucosal margins, plus the medial mucosal margins where the larynx was divided in two—these margins are adjacent to the half of the larynx that is still in the patient.

### **Procedure:**

1. Pin and fix the specimen for at least 2-4 hours, or overnight.
  - a. Specimen will consist of true and false cord and underlying cartilage

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2. Submit the mucosal margins, as for a total laryngectomy and the medial margin.
3. Section vertically at 2-3 mm intervals to include true and false cord and underlying cartilage.
4. If the thyroid cartilage is calcified, blocks may need decalcification, in which case one cassette may be submitted after dissecting the laryngeal soft tissue and tumor from the cartilage in order to optimize the morphology of the tumor.
5. Submit each level in separate cassettes, entirely and sequentially

### **Gross Template:**

#### **MModal Command: "INSERT HEMILARYNGECTOMY"**

It consists of a [*right/left*\*\*\*] hemilaryngectomy measuring [\*\*\*] cm (superior-inferior) x [\*\*\*] cm (right-left) x [\*\*\*] cm (anterior-posterior).

The mucosa is remarkable for a [*supra-, sub-, trans- glottic*\*\*\*] [*describe nature of lesion-exophytic, ulcerated, etc.*\*\*\*] lesion. The lesion [*involves/does not involve*\*\*\*] the true vocal cords. The lesion involves [*describe extent-piriform sinus, aryepiglottic folds, cricoid/thyroid cartilage, bone, thyroid, strap muscles, anterior and posterior commissure, tracheal rings, etc*\*\*\*]. The lesion [*extends/does not extend to involve the attached soft tissue*\*\*\*].

The remaining mucosa is [*tan, smooth, unremarkable*\*\*\*]. [*Describe number/size of lymph nodes identified*\*\*\*]. All identified lymph nodes are submitted in their entirety. [*The lesion is entirely/partially submitted and representative sections of the remaining specimen are submitted*\*\*\*]. Gross photographs are taken.

#### **[INK KEY:**

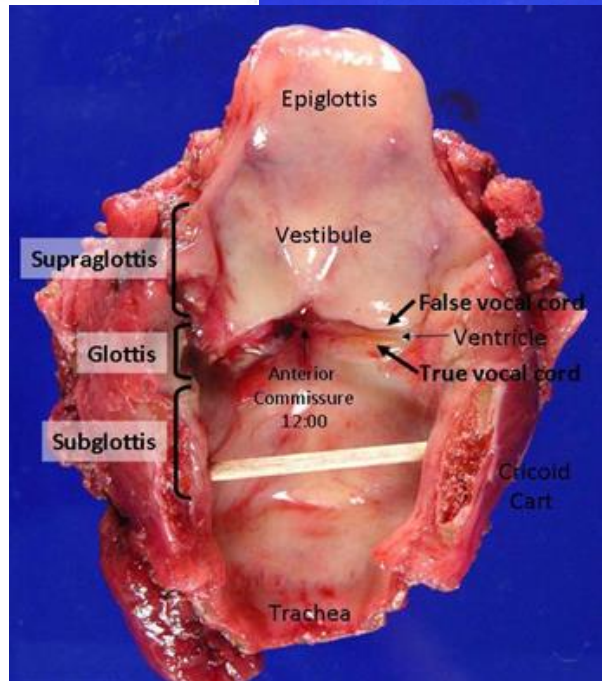
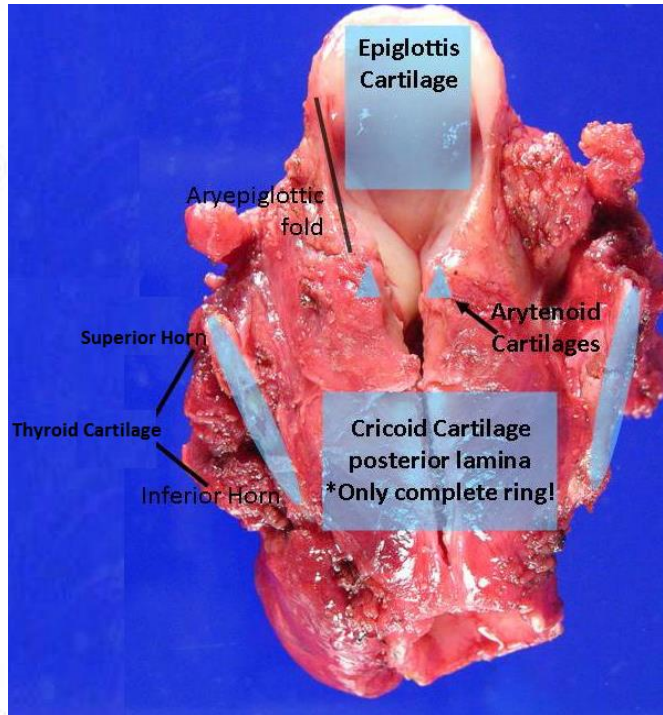
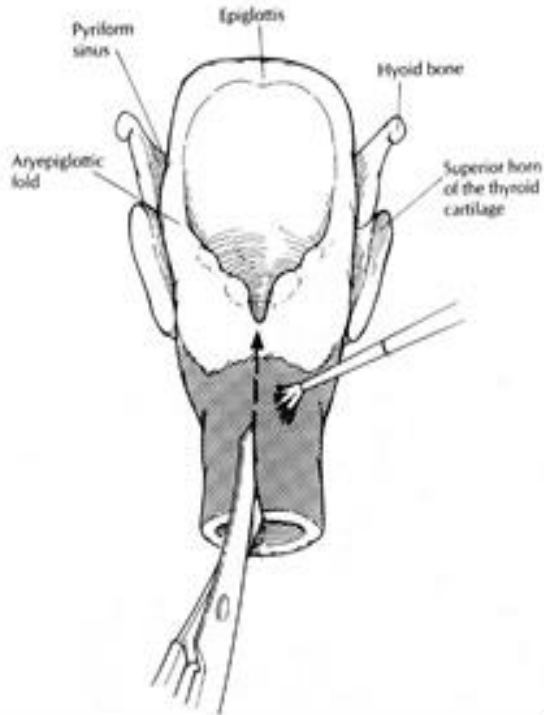
Black    Right  
Blue    Left\*\*\*]

[*insert cassette summary. Be very specific in the cassette summary, including stating if section contains thyroid versus cricoid cartilage because this will look the same on the slide*\*\*\*]

#### **Cassette Submission:** 10-15 cassettes

- Submit each slice in separate cassette sequentially, to allow for proper localization of the tumor

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