

## 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:**

Labeled with the patient's name (last name, first name), medical record number (#), designated "\*\*\*\*", and received [*fresh/in formalin*] is a total laryngectomy measuring \*\*\* cm (superior-inferior) x \*\*\* cm (right-left) x \*\*\* cm (anterior-posterior). The hyoid bone measures \*\*\* x \*\*\* x \*\*\* cm. The thyroid is \*\*\* x \*\*\* x \*\*\* cm. [*Describe skin on anterior surface and presence of tracheostomy site*].

The specimen is opened along the posterior midline to reveal a [*supra-, sub-, trans-glottic*] lesion [*describe nature of lesion-exophytic, ulcerated, etc.*] located on the [*indicate laterality-right, left, both, midline*] measuring \*\*\* x \*\*\* cm. The lesion

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[crosses/does not cross] the midline. The lesion involves/does not involve the vocal cords. The lesion involves [*describe extent-piriform sinus, aryepiglottic folds, cartilage, bone, thyroid, strap muscles, anterior and posterior commissure, tracheal rings, etc.*]. The lesion involves/does not involve the outer cortex thyroid cartilage or tissue beyond larynx.

The remaining mucosa is [*tan, smooth, unremarkable*]. [*Describe number/size of lymph nodes identified*]. Representative sections are submitted [*describe cassette submission*].

Ink Key:

Black- right

Blue- left

### **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.

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- a. Specimen will consist of true and false cord and underlying cartilage
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

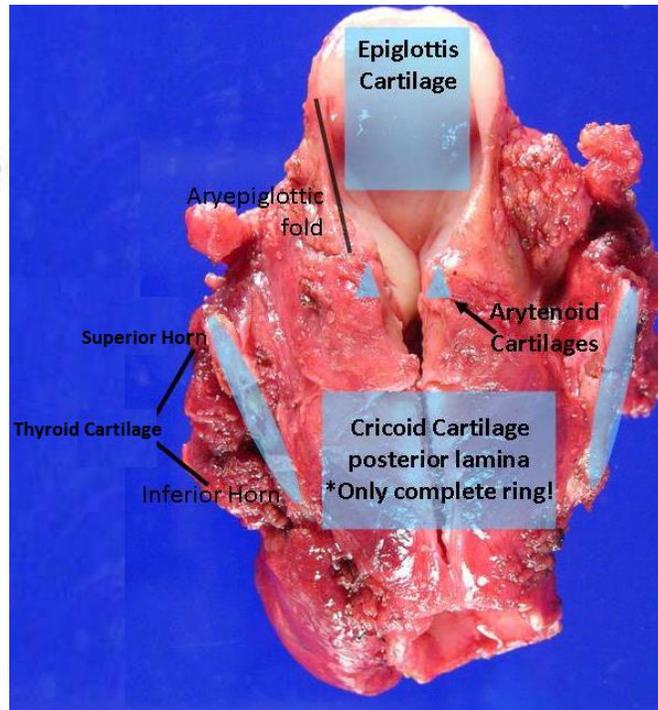
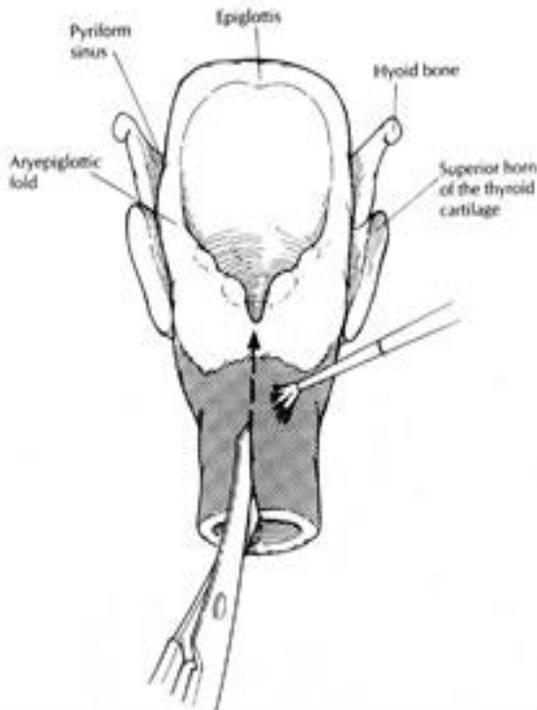
### Gross Template:

Labeled with the patient's name (last name, first name), medical record number (#), designated "\*\*\*\*", and received [*fresh/in formalin*] is a [*right/left*] hemilaryngectomy measuring \*\*\* cm (superior-inferior) x \*\*\* cm (right-left) x \*\*\* cm (anterior-posterior).

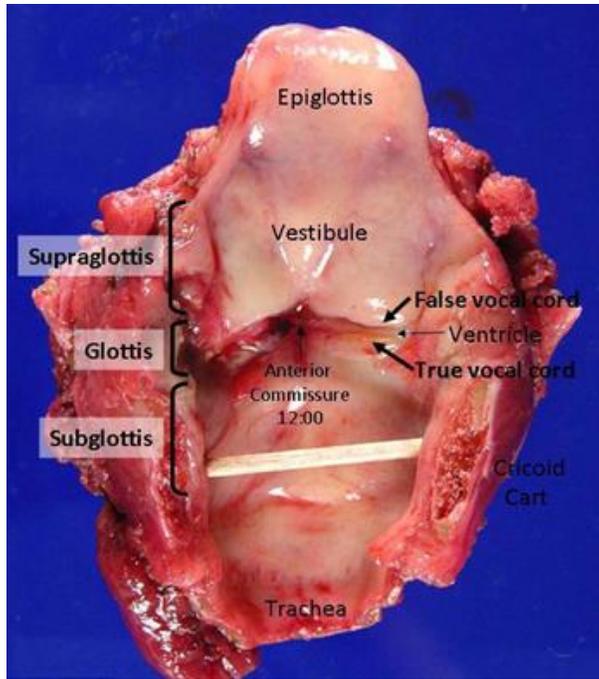
The laryngeal mucosa is remarkable for [*describe any lesions including color, size, location, and extent of anatomical landmarks*]. The remaining mucosa is [*tan, smooth, unremarkable*]. The specimen is entirely submitted [*describe cassette submission*].

### Cassette Submission: 10-15 cassettes

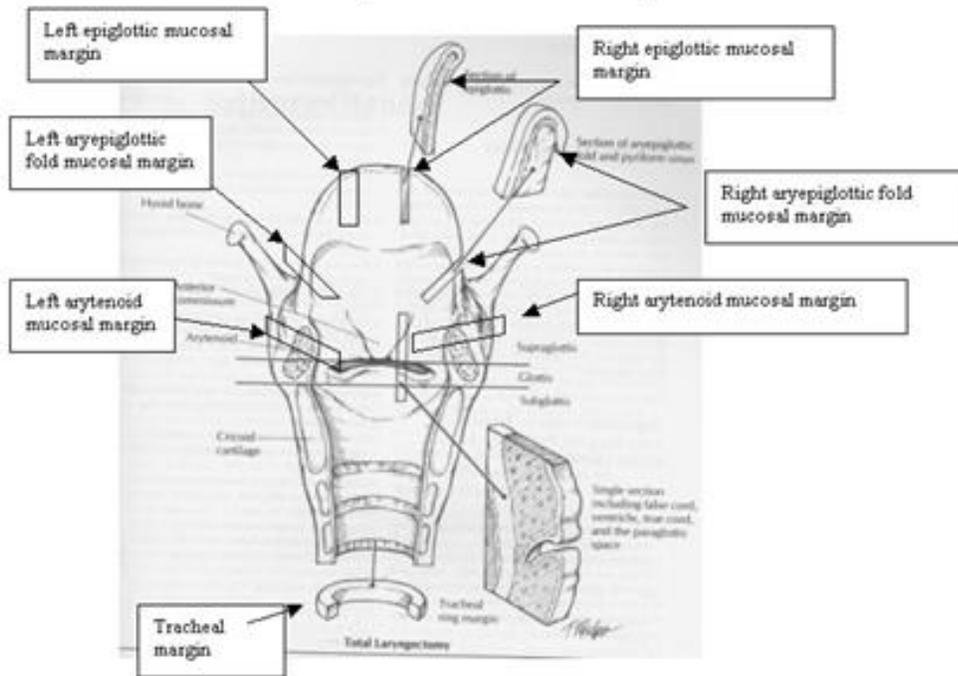
- Submit each slice in separate cassette sequentially, to allow for proper localization of the tumor



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TOTAL LARYNX



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