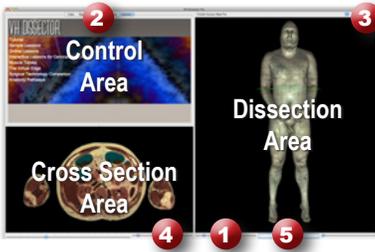


Introduction to the Head and Neck



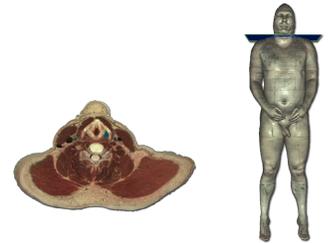
Learning Objective

After completing this exercise, you will be able to name major muscles of the head and neck as well as identify blood vessels and nerves

Use the reference on the left to locate controls and areas referred to in the text below.

1 Start by setting the cross section through the area we want to explore:

- Drag the reference plane in the dissection area by its green border to the middle of the neck (*the cross sections are numbered in the lower left corner, you should be close to 1250*)
- Explore the anatomy of the neck by moving your mouse over the cross section (*structures are identified in the upper right corner of the cross section area*)



2 Now skin the cadaver to reveal more anatomy:

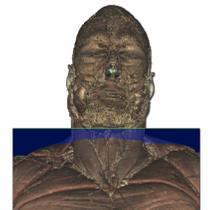
- Click on the skin in the dissection area to highlight it (*structures change colors when highlighted*)
- Click on the highlighted skin again to dissect it (*now you see the fat and other subcutaneous tissue*)
- Dissect the fat just like the skin

Click on a structure to highlight
Click again to dissect



3 Take a closer look by magnifying the neck in the dissection area:

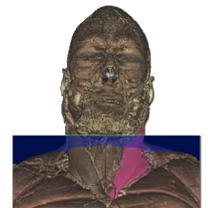
- Zoom in using the magnification slider **1**
- Drag the dissection with your mouse to reposition it
- Dissect the platysma by clicking twice on it
- Dissect the veins of the anterior and posterior head and neck to clean up the dissection



4 Identify the sternocleidomastoid muscle by highlighting it:

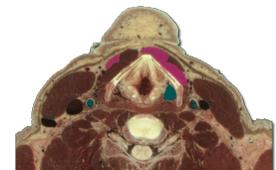
- Select the "Index" tab **2**
- Enter "sternocleidomastoid" into the search box
- Select the "Sternocleidomastoid - Left" from the list
- Click the "Add & Highlight" button (*the cross sections are in standard radiologic orientation so the left sternocleidomastoid muscle is highlighted on the right hand side*)

Locate specific structures
with the index



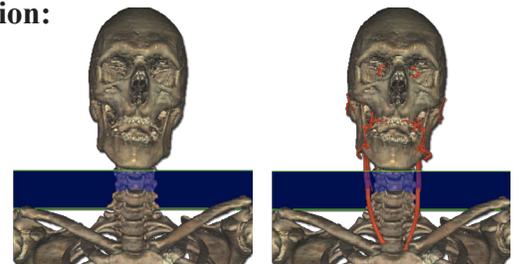
Name the three other muscles that form the superficial anterior neck:

1. _____ 2. _____
3. _____



5 Isolate the arteries that feed the brain by simplifying the dissection:

- Click the "Clear" button to clear the dissection area **3**
- Select the "Systems" tab **2**
- Select "Skeletal system" and click the "Add" button
- From the "Regions" tab **2**
- Expand the "Neck" using the icon to the left
- Expand "Arteries" section
- Select the "Common carotid artery" and click "Add & Highlight"



Add, remove and highlight groups of structures with systems, regions and tissues

6 Follow the common carotid artery as it branches:

- Locate the common carotid arteries in the cross section
(these are located just deep to the sternocleidomastoid muscles)
- Zoom in on the cross section by using the magnification slider **4** and dragging
- Follow the arteries by holding down the command (Mac) or ctrl (PC) key while pressing the up and down arrow keys to move 1 mm at a time through the cross sections

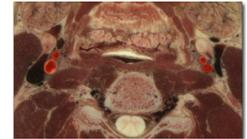


Move the cross section 1 mm at a time by holding the command (Mac) or ctrl (PC) key while pressing the up or down arrow keys

Name the two major branches of the Common carotid artery?

(Hint: follow the artery superiorly until it branches)

1. _____ 2. _____



7 Visualize a more advanced anatomical concept, the Muscles of Mastication:

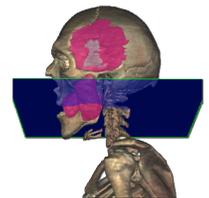
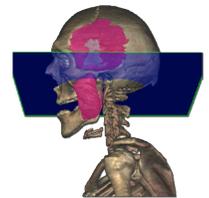
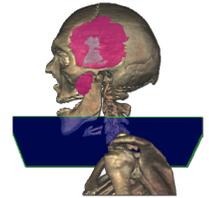
- Click the “Clear” button to clear the dissection **3**
- In the “Systems” tab, add the “skeletal system”
- Add and highlight the Temporalis muscle (hint: use the index tab)
- View the dissection from 270° using the rotation wheel **5** or the command (Mac) or ctrl (PC) key while pressing the left and right arrow keys to move 5° at a time

Rotate the dissection using the left or right arrow keys while holding the command (Mac) or ctrl (PC) key

- Set the cross section through the neck of the mandible (cross section 1150)
- Locate the masseter muscle in the cross section
- Hold down the shift key and click to add and highlight this muscle

Highlight multiple structures or un-highlight a single structure by holding the shift key when clicking

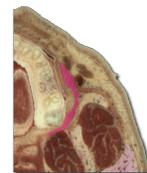
- Locate the Medial and Lateral pterygoid muscles in the cross section
- Again, hold shift, and click to add and highlight these structures
- Bring the cross section down to the middle of the mouth to find another muscle that aids chewing
- Locate the buccinator muscle in the cross section
- Add and highlight this muscle using the shift key as well



Which major structure passes through the Buccinator muscle?

(Hint: This structure originates from a prominent gland in the area)

1. _____



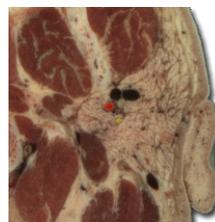
8 The Parotid gland:

- Locate the Parotid gland in the cross section and highlight it
- Notice the structures buried within the gland

What artery and nerve lie within the Parotid gland?

1. _____

2. _____



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