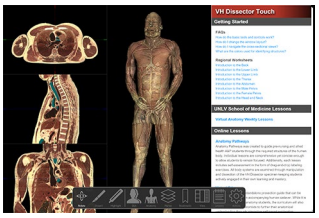
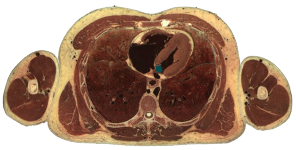
Introduction to the Thorax
for VH Dissector Table (Touch)

Learning Objective: After completing this exercise, you will be familiar with how to navigate the VH Dissector Table software. You will also be able to identify the major muscles of the Thorax as well as the major organs, blood vessels, and nerves



1 Start by setting the screen view to focus on the 3D and cross-sections

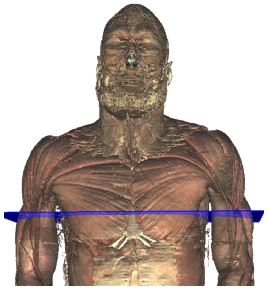
- Hide the lesson pane by tapping the "View" icon and tapping on the "Lessons" icon Then, tap the "View" icon
- Enlarge the transverse cross-section by double-tapping on it



2 Set the cross-section through the area of interest

- Add a transverse cross-section to the 3D model to track the cross-section relative to the 3D model
- Tap the "Cross Sections" icon and tap "Tranverse" and select the "Color" option
- Using 1 finger slide up and down over the transverse cross-section image to scroll through the slices, moving the cross-section to the middle of the chest
- Tap the "Highlight" icon to turn on the highlight tool
- Explore the anatomy of the thorax and identify structures by moving one finger over the transverse cross-section image *(structures are identified at the top of the cross-section area)*

Highlight structures or un-highlight a structure with the highlight tool



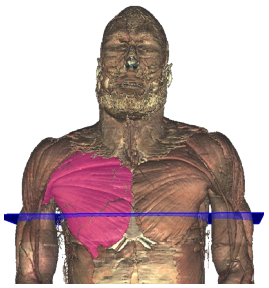
3 Take a closer look by centering the thorax in the 3D model pane

- Use 2 fingers to zoom in or out or translate the position of the 3D model in the pane

4 Identify the Pectoralis Major muscle by highlighting it

- Tap the "Anatomy" icon to open the Anatomy glossary window. Make sure you are under the index list and enter "Pectoralis" into the search box. *(all structures are listed alphabetically in the Index list)*
- Add and highlight the structure in both the cross-section and 3D model by tapping the "Highlight" icon to the left of "Pectoralis Major - Right" *(the cross-sections are in standard radiologic orientation so the right muscle is highlighted on the left side)*

Locate specific structures with the index list



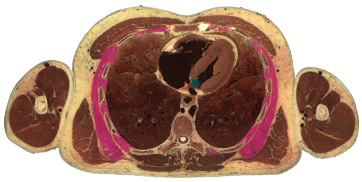
5 Adjust the Skin on the 3D model to see surface anatomy

- Tap the "Skin" icon to reveal the skin tool
- Slide the bar to the right or left to change the opacity of the skin
- Before moving on to the next step, remove the skin from the 3D model (slide the bar all the way to the left)

Name the four other muscles that form the thoracic wall:

1. _____ 3. _____

2. _____ 4. _____



6 Isolate the nerves that control the diaphragm by simplifying the 3D model

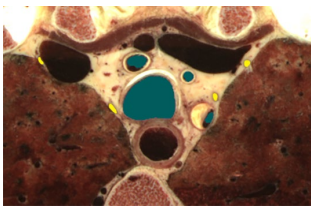
- Clear the 3D model by tapping the "Hide All" icon at the top of the Anatomy glossary
- Next, tap the "Systems" icon on the left side of the Anatomy glossary to open the Systems list *(structures are listed and organized by anatomical systems in the Systems list)*

Add, remove and highlight groups of structures with the Systems and Regions lists

6 cont.

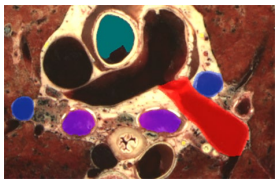
- Add the full skeletal system to the 3D model by tapping the "Visible" icon to the left of "Skeletal System" Tap the Anatomy icon to close the Anatomy window
- Dissect the bones of the sternum and costal cartilages using the "Dissect" tool
- Then, expand "Nervous System" > "Peripheral Nervous System" > "Spinal Nerves"
- Expand "Cervical Plexus - Left" and "Cervical Plexus - Right"
- Add and highlight left and right "Phrenic Nerve" using the "Highlight" icon

7 Follow the Phrenic and Vagus nerves as they travel around the heart



- Scroll through the transverse cross-section to view the first rib
- Find and highlight the "Vagus Nerve" *(hint: use the search box in the index list)*
- Locate the Phrenic and Vagus nerves in the cross-section
- Zoom in and center the cross-section to get a closer look at the nerves
- Follow the nerves inferiorly by scrolling through the cross-section with 3 fingers

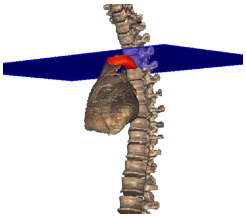
Fill in the blanks:

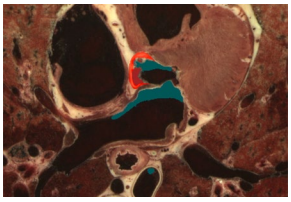


(Hint: The hilum of the lung consists of the Pulmonary artery and vein and the main bronchus)

1. The Phrenic nerve passes _____ *(direction)* to the hilum of the lung.
2. The Vagus nerve passes _____ *(direction)* to the hilum of the lung.

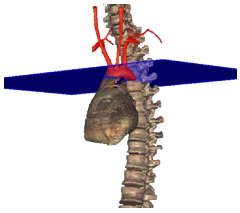
8 Visualize a more advanced anatomical concept, the Aortic Arch





- Clear the 3D model
- Make sure you are on the "Systems" list then tap "Collapse" in the top right corner of the Anatomy glossary.
- Then, expand "Skeletal System">"Axial Skeleton" and add "Vertebral Column"
- Next, expand "Cardiovascular System" and add "Heart"
- Tap the "Rotate" icon, then using 1 finger rotate the 3D model to a posterolateral view
- Scroll through the cross-section to view the aorta where it exits the heart
- Highlight the "Ascending Aorta"
- Scroll through the cross-section to follow the Ascending Aorta superiorly until it begins to arch
- Highlight the "Aortic Arch"

Name the three branches of the aortic arch?

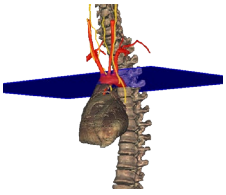


(Hint: follow the aorta superiorly until it branches)

1. _____ 2. _____

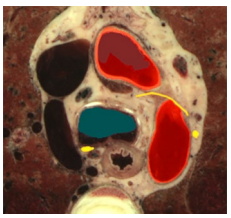
3. _____

9 The Vagus nerve revisited



- Open the Systems list and expand "Nervous System" > "Peripheral Nervous System" > "Cranial Nerves"
- Highlight the left and right "Vagus nerve [X]"
- Scroll through the cross-section, locate the Left Vagus nerve and follow it inferiorly as it passes the aortic arch

What branch of the Vagus nerve loops inferior to the aortic arch?



1. _____

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