

September 13, 2023 - Dr. Doroudi (majid.doroudi@ubc.ca)

Objectives:

- Direction of lymphatic drainage from the breast
- Innervation of the breast by the anterior and lateral branches of spinal nerves
- Blood supply of the breast by branches of the axillary artery and anterior perforating branches of the internal thoracic artery

Be able to identify:

The breast

Areola

Nipple

Pectoralis major muscle

Pectoralis minor muscle

Serratus anterior muscle

Subclavius muscle

Watch this dissection guide showing dissection of the pectoral region:

Watch this dissection guide showing how to remove the chest wall:

View *Slide 1.7* in this module:

View *Slide 1.11* in this module:

Test your knowledge on these interactive photographs:

Sagittal View of Breast

Muscles of Anterior Thoracic Wall

Dissection of Pectoral Muscles

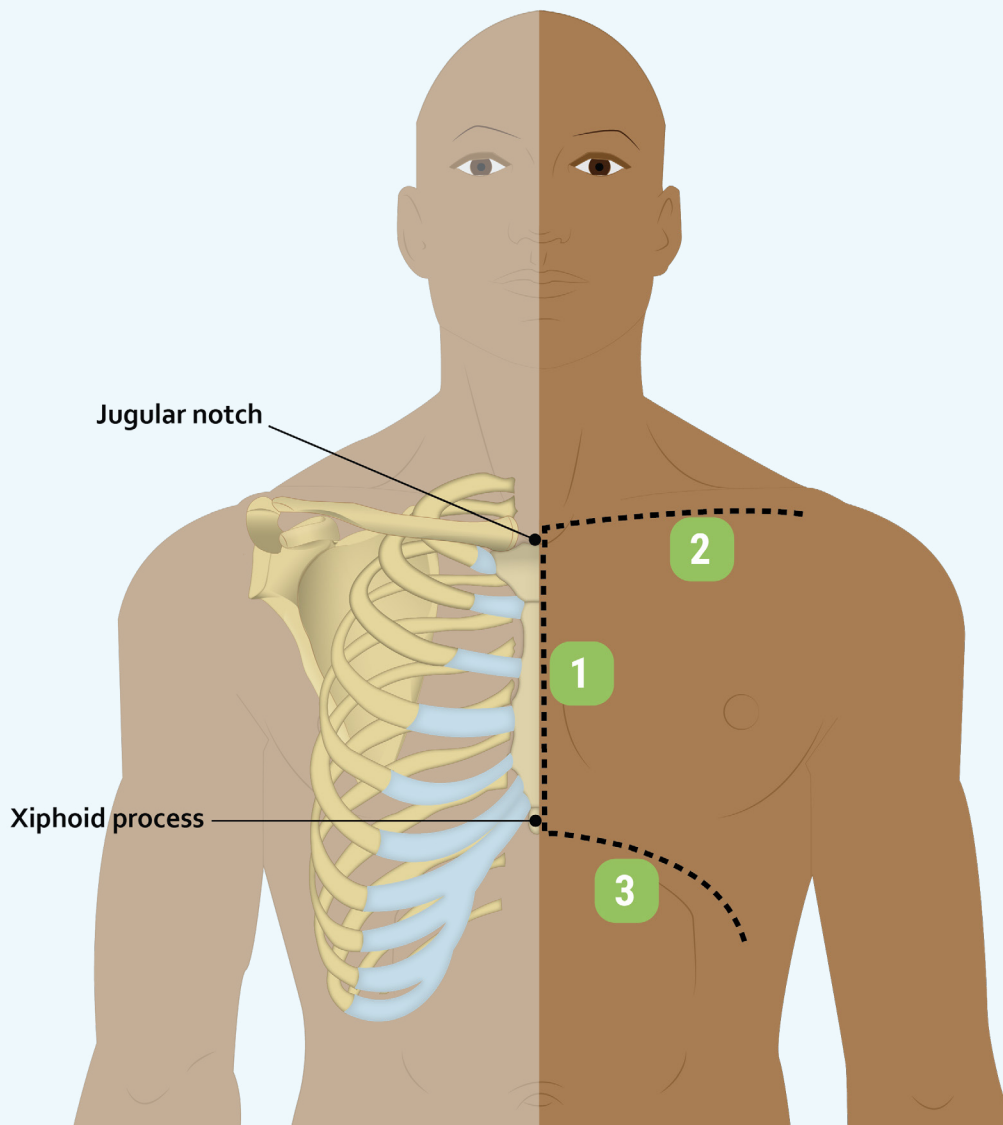
Dissection of Pectoral Muscles (lateral view)

LAB 3 DISSECTOR

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1. On the sternum, palpate the xiphoid process and the jugular notch of the manubrium:
 - Make a shallow incision at the midline connecting the two
2. At the jugular notch, continue incisions laterally along the length of each clavicle.
3. Palpate costal margins:
 - Starting at the xiphoid process continue incisions laterally along and 1in above each costal margin

Note: Incisions above costal margins preserve integrity of the abdominal cavity.



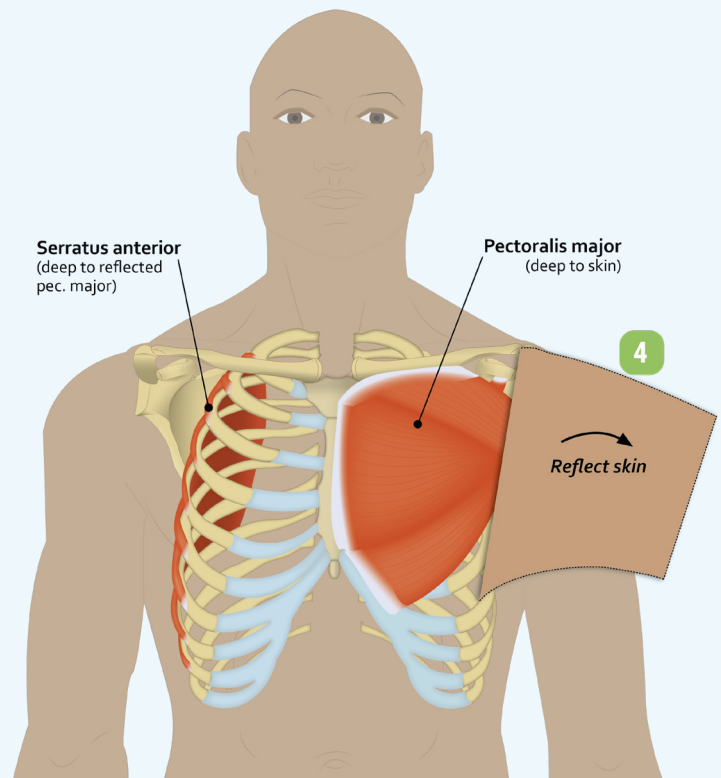
Dissection of the pectoral region (steps 1 to 3)

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4. Reflect skin and breast tissue laterally:

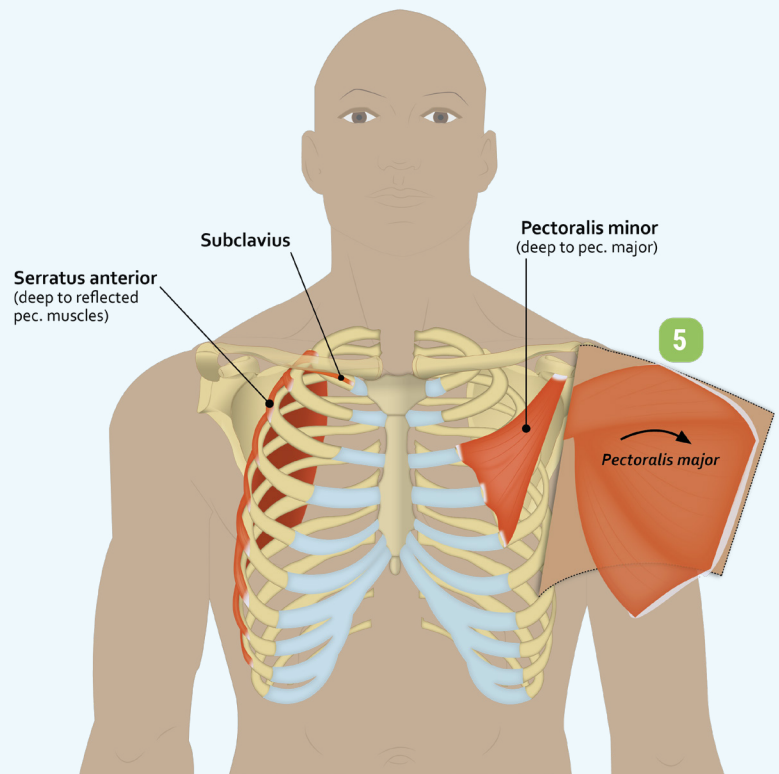
- In the female, examine breast tissue and try to identify ducts. This might be difficult, as most cadavers are post-menopausal.



Dissection of the pectoral region (step 4)

5. Identify the pectoralis major muscle:

- Using scissors, cut along its origins on the sternum and clavicle
- Using your fingers or the blunt edge of the forceps, gently separate the muscle from the chest wall
- Expose, identify and preserve the subclavius, pectoralis minor and serratus anterior muscles



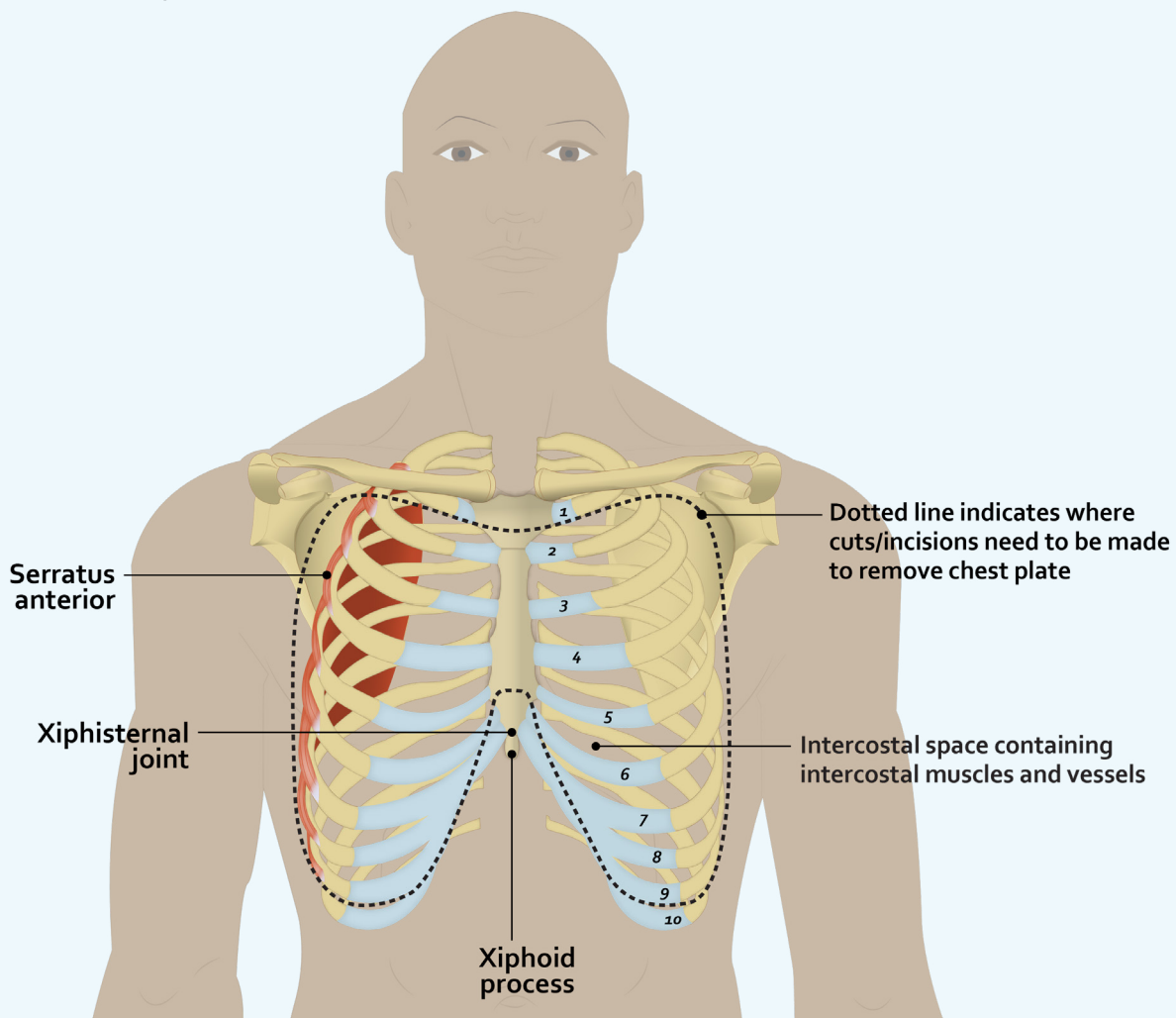
Dissection of the pectoral region (step 5)

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Removal of Chest Wall

1. Identify the clavicles, manubrium, sternal angle and 2nd ribs (see figure below for details).
2. Saw through the manubrium horizontally about 2.5cm (1in) above the attachment of the second rib. **Do NOT saw too deeply!**
3. With a vertical incision through serratus anterior, detach this muscle from the chest wall and reflect the edges superiorly and inferiorly.
4. Using scalpel, incise the first intercostal spaces on both sides.
5. Using bone crushers, cut rib 2 as far laterally as possible. Then cut ribs 3 - 8/9 by incising inferiorly and as far laterally as possible. **Caution: cut ribs are extremely sharp!**
6. Cut along (~2.5cm or 1in above) the costal margins to the xiphisternum. This can usually be done with scissors. **Do not cut too deeply!**
7. Remove the chest plate.



Removal of the chest wall