The Language of Anatomy

Surface Anatomy
1. Match each of the following descriptions with a key term, and record the term in front of the description.

Key: \( \text{brachial} \quad \text{carpal} \quad \text{deltoid} \quad \text{patellar} \quad \text{scapular} \)

1. cheek \( \quad \text{buccal} \)
2. referring to the fingers \( \quad \text{digital} \)
3. shoulder blade region \( \quad \text{scapular} \)
4. wrist area \( \quad \text{carpal} \)
5. anterior aspect of knee \( \quad \text{patellar} \)
6. referring to the arm \( \quad \text{brachial} \)
7. curve of shoulder \( \quad \text{deltoid} \)
8. referring to the neck \( \quad \text{cervical} \)

Body Orientation, Direction, Planes, and Sections
2. Several incomplete statements are listed below. Correctly complete each statement by choosing the appropriate anatomical term from the key. Record the key terms on the correspondingly numbered blanks below.

Key: \( \text{anterior} \quad \text{distal} \quad \text{inferior} \quad \text{lateral} \quad \text{proximal} \quad \text{superior} \quad \text{transverse} \)

In the anatomical position, the umbilicus and knees are on the \( \_1 \) body surface; the calves and shoulder blades are on the \( \_2 \) body surface; and the soles of the feet are the most \( \_3 \) part of the body. The ears are \( \_4 \) and \( \_4 \) to the shoulders and \( \_5 \) to the nose. The breastbone is \( \_6 \) to the vertebral column (spine) and \( \_7 \) to the shoulders. The elbow is \( \_8 \) to the shoulder but \( \_9 \) to the fingers. The thoracic cavity is \( \_10 \) to the abdominopelvic cavity and \( \_11 \) to the spinal cavity. In humans, the ventral surface can also be called the \( \_12 \) surface; however, in quadruped animals, the ventral surface is the \( \_13 \) surface.

If an incision cuts the brain into superior and inferior parts, the section is a \( \_14 \) section; but if the brain is cut so that anterior and posterior portions result, the section is a \( \_15 \) section. You are told to cut a dissection animal along two planes so that the lungs are observable in both sections. The two sections that meet this requirement are the \( \_16 \) and \( \_17 \) sections.

1. \( \text{anterior} \)
2. \( \text{posterior} \)
3. \( \text{inferior} \)
4. \( \text{superior} \)
5. \( \text{medial} \)
6. \( \text{anterior} \)
7. \( \text{medial} \)
8. \( \text{distal} / \text{inferior} \)
9. \( \text{proximal} / \text{superior} \)
10. \( \text{superior} \)
11. \( \text{anterior} \)
12. \( \text{anterior} \)
13. \( \text{inferior} \)
14. \( \text{transverse} \)
15. \( \text{frontal} \)
16. \( \text{transverse} \)
17. \( \text{frontal} \)

3. A nurse informs you that she is about to give you a shot in the lateral femoral region. What portion of your body should you uncover?

\( \text{Your thigh} \)
4. Correctly identify each of the body planes by inserting the appropriate term for each on the answer line below the drawing.

1. sagittal
2. frontal
3. transverse

**Body Cavities**

5. Which body cavity would have to be opened for the following types of surgery? Insert the key term(s) in the same-numbered blank. More than one choice may apply.

<table>
<thead>
<tr>
<th>Key:</th>
<th>abdominopelvic</th>
<th>dorsal</th>
<th>thoracic</th>
</tr>
</thead>
<tbody>
<tr>
<td>cranial</td>
<td>spinal</td>
<td>ventral</td>
<td></td>
</tr>
</tbody>
</table>

1. surgery to remove a cancerous lung lobe
   - thoracic

2. removal of an ovary
   - abdominopelvic

3. surgery to remove a ruptured disk
   - spinal

4. appendectomy
   - abdominopelvic

5. removal of the gallbladder
   - abdominopelvic

6. Correctly identify each of the described areas of the abdominal surface by inserting the appropriate term in the answer blank preceding the description.

- R+L hypochondriac
- umbilical
- hypogastric (pelvic is ok)
- epigastric

1. overlies the lateral aspects of the lower ribs

2. surrounds the "belly button"

3. encompasses the pubic area

4. medial region overlying the stomach

7. What are the bony landmarks of the abdominopelvic cavity? ribs, hips, sternum

8. Which body cavity affords the least protection to its internal structures? abdominal cavity
Organ Systems Overview

1. Using the key choices, indicate the body systems that match the following descriptions. Then, circle the organ systems (in the key) that are present in all subdivisions of the ventral body cavity.

<table>
<thead>
<tr>
<th>Key: cardiovascular</th>
<th>integumentary</th>
<th>nervous</th>
<th>skeletal</th>
<th>urinary</th>
</tr>
</thead>
<tbody>
<tr>
<td>digestive</td>
<td>lymphatic</td>
<td>reproductive</td>
<td>respiritory</td>
<td></td>
</tr>
<tr>
<td>endocrine</td>
<td>muscular</td>
<td>nervous</td>
<td>skeletal</td>
<td>urinary</td>
</tr>
</tbody>
</table>

   1. rids the body of nitrogen-containing wastes
   2. is affected by removal of the adrenal gland
   3. acts and supports body organs; provides a framework for muscular action
   4. includes arteries and veins
   5. composed of "ductless glands" that secrete hormones
   6. external body covering
   7. houses cells involved in body immunity
   8. breaks down ingested food into its absorbable units
   9. loads oxygen into the blood
   10. uses blood as a transport vehicle
   11. generates body heat and provides for locomotion of the body as a whole
   12. regulates water and acid-base balance of the blood and endocrine
   13. necessary for childbearing
   14. is damaged when you fall and scrape your knee

2. Using the above key, choose the organ system to which each of the following sets of organs or body structures belongs:

   - lymphatic: 1. lymph nodes, spleen, lymphatic vessels
   - skeletal: 2. bones, cartilages, ligaments
   - endocrine: 3. thyroid, thymus, pituitary
   - respiratory: 4. trachea, bronchi, alveoli
   - reproductive: 5. uterus, ovaries, vagina
   - cardiovascular: 6. arteries, veins, heart
3. Using the key below, place the following organs in their proper body cavity:

Key: abdominopelvic cranial spinal thoracic

1. stomach  6. urinary bladder
2. esophagus  7. heart
3. large intestine  8. trachea
4. liver  9. brain
5. spinal cord  10. rectum

4. Using the organs listed in item 3 above, record, by number, which would be found in the following abdominal regions:

3. hypogastric region
4. epigastric region
2. right lumbar region
3. umbilical region
1. left hypochondriac region

5. The five levels of organization of a living body, beginning with the cell, are: cell, tissue, organ, organ system, and organism.

6. Define organ: a structure composed of 2 or more tissue types that performs a specific function for the body.

7. Using the terms provided, correctly identify all of the body organs provided with leader lines in the drawings below. Then name the organ systems by entering the name of each on the answer blank below each drawing.

Key: blood vessels heart nerves spinal cord urethra brain kidney sensory organ

1. nervous  2. cardiovascular  3. urinary
Body Planes

(A) represents median or midsagittal Plane  
(Shade light blue)

(B) represents sagittal

(C) represents frontal Plane  
(Shade light yellow)

(D) represents transverse Plane 
(Shade light green)

Anatomical Directions

1) Represents - Superior  
(Shade red)

2) Represents - Inferior  
(Shade blue)

3) Represents - anterior  
(Shade green)

4) Represents - posterior  
(Shade yellow)

5) Represents - medial  
(Shade orange)

6) Represents - lateral  
(Shade brown)

7) Represents - proximal  
(Shade purple)

8) Represents - distal  
(Shade striped purple)
FIGURE 2.5 Human torso model.