• Anatomy  =  structure

• Physiology  =  function

• structure aids function

• Pathology  =  disease  =  bad A&P
why study anatomy?

• because you have to
• learn the language of health care
• recognize disease
• goals of treatment
• this is the story of you
types of anatomical study

• gross anatomy
  – systemic anatomy by organ system

• microscopic anatomy
  – histology study of tissues

• developmental anatomy = embryology

• functional anatomy structure aids function
Levels of Organization

- chemical
- cellular = unit of life
- tissue group of similar cells
- organ different tissues
- organ system
- organism

1. Chemical level: Atoms combine to form molecules.
2. Cellular level: Cells are made up of molecules.
3. Tissue level: Tissues consist of similar types of cells.
4. Organ level: Organs are made up of different types of tissues.
5. Organ system level: Organ systems consist of different organs that work together closely.
6. Organismal level: The human organism is made up of many organ systems.
Organ Systems

- Integumentary
- Skeletal
- Muscular
- Nervous
- Endocrine
- Cardiovascular
- Lymphatic; Immune
- Respiratory
- Digestive
- Urinary
- Reproductive

fig 1.2  p4-5
The body works by functions, not by organ systems

- movement
- nutrition
- elimination
- regulation
- reproduction
Anatomical position
cervical

thoracic
<table>
<thead>
<tr>
<th>Body Areas – Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td>• cardiac</td>
</tr>
<tr>
<td>• pulmonary</td>
</tr>
<tr>
<td>• cutaneous</td>
</tr>
<tr>
<td>• gastric</td>
</tr>
<tr>
<td>• hepatic</td>
</tr>
<tr>
<td>• renal</td>
</tr>
<tr>
<td>• abdominal</td>
</tr>
</tbody>
</table>
above, below

- superior: above, higher
- inferior: below, lower
- cephalic: toward the head
- caudal: toward the tail
- anterior: toward the front
- posterior: toward the back
- ventral: toward the front
- dorsal: toward the back
in, out

- internal  inside
- external  outside
- superficial  close to surface
- deep  away from surface
• proximal  closer to attachment
• distal      farther from attachment
• medial     toward the midline
• lateral    away from the midline
a couple more

• parietal  
• visceral

each the wall
near the organs
main body cavities

- dorsal cavity
  - cranial cavity
  - vertebral cavity

- ventral cavity
main body cavities

- ventral cavity
  - thoracic cavity
    - pleural cavity
    - pericardial cavity
  - abdominal cavity
    - pelvic cavity

- lung
- heart
- digestive organs
- urinary bladder
- reproductive organs
views

- planes / cuts
  - frontal (coronal)
  - sagittal
  - transverse

- sections
  - Cross section across width of tissue
  - Longitudinal across length of tissue
abdominal areas

- abdominal quadrants 4
- abdominal regions 9
abdominal quadrants
abdominal regions

see pg 15