

Understanding Human  
Anatomy and Physiology  
Sections 1.1 - 1.3  
The Human Body  
Anatomical Terms  
Body Cavities and Membranes

# 1.1 The Human Body

Anatomy & Physiology - The study of the human body



Anatomy is concerned with the structure or part.



Naming and identifying each part of the body is anatomy.

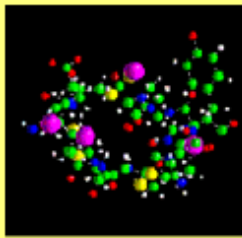
Physiology is concerned with the function of the part.



Knowing that something is a heart is anatomy. Knowing how it gets blood to the body is physiology.

# Organization of Body Parts

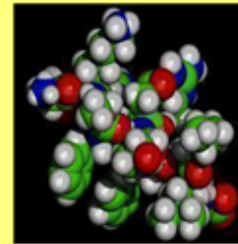
Use the notecards on your table or just copy into your notebooks to put the following in order of least complex to most complex.



macromolecule



organelle



molecule



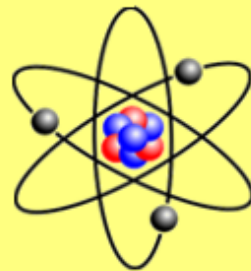
organ system



cell



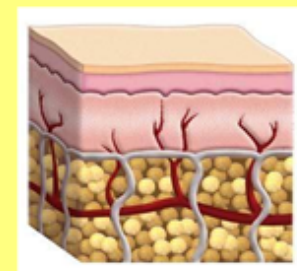
organ



atoms



organism



tissue



All substances including body parts are composed of chemicals made up of subatomic particles called atoms.

Atoms join to form molecules.

Molecules form to make macromolecules.

Macromolecules compose the cellular organelles.

Organelles are found in cells which are the basic units of living things.

Tissues are composed of similar types of cells and performs a specific function.

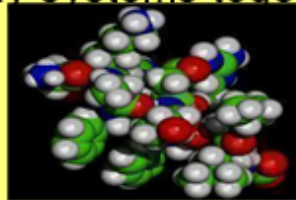
An organ is composed of several types of tissues.

The tissues perform a particular function in an organ system.

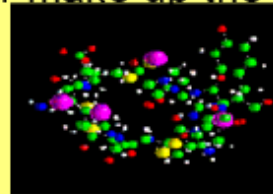
All of the body systems together make up the organism.



atoms



molecule



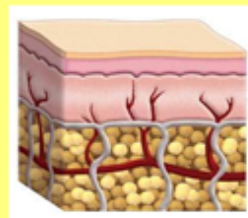
macromolecule



organelle



cell



tissue



organ

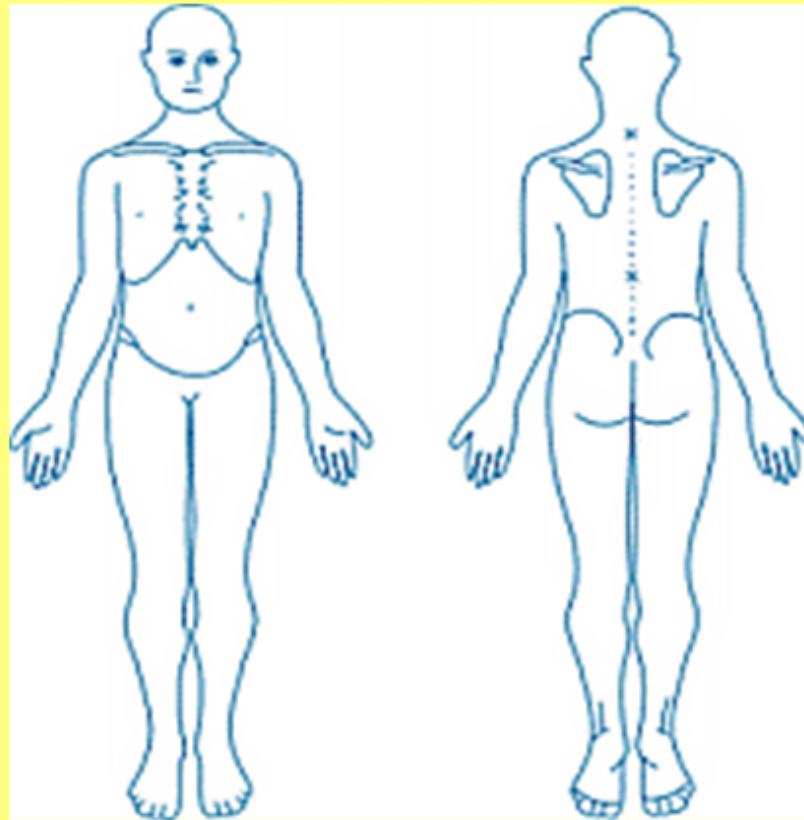


organ system



organism

Anatomical Position: standing erect, face forward, arms at the sides and palms and toes directed forward

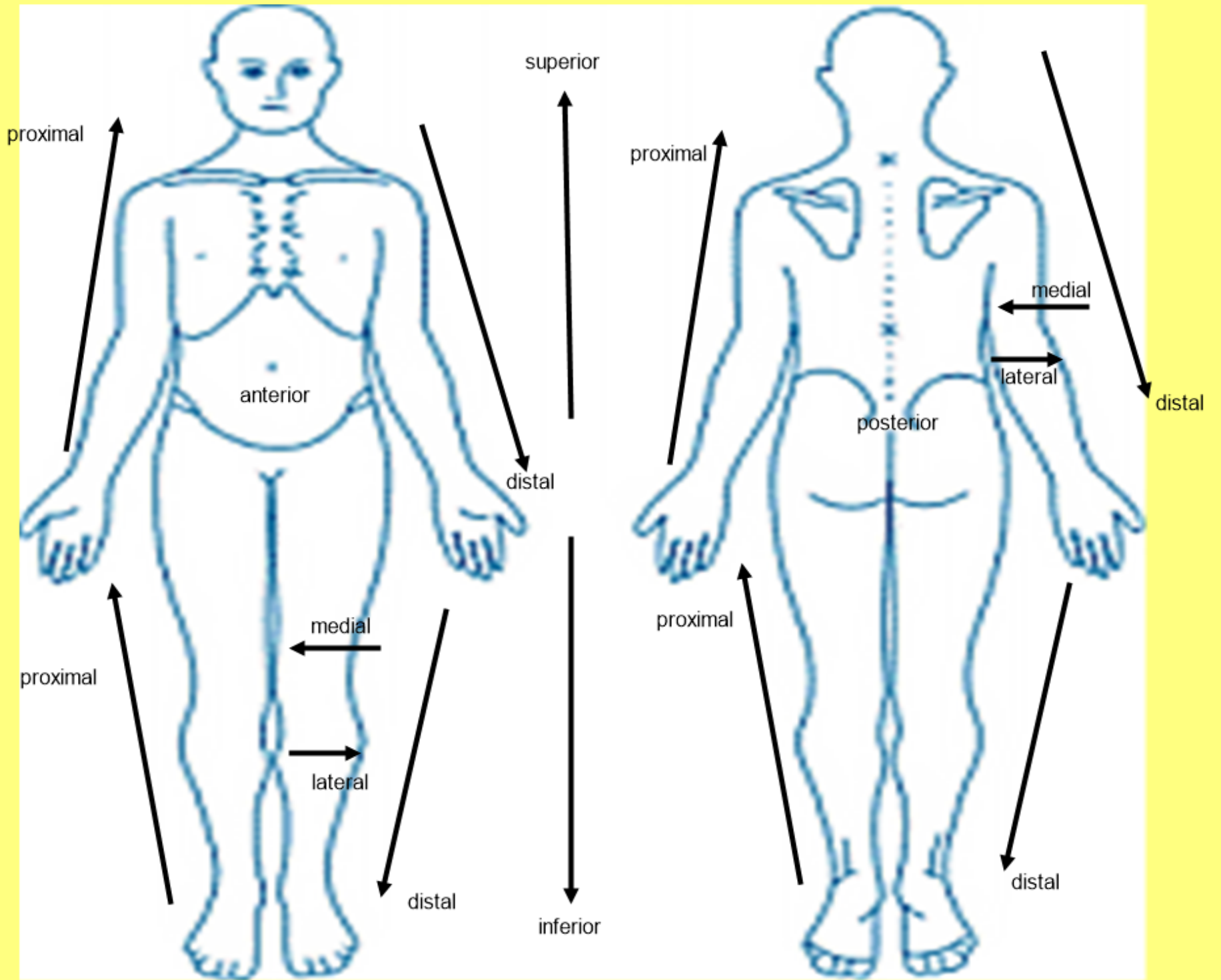


Stand in Anatomical Position: it is important to use anatomical position so that everyone has in mind the same position of the body and the same reference points.

# Label the following directional terms on your "anatomy buddy". Use arrows where needed.

1. Anterior (ventral) - a body part is located toward the front
  2. Posterior (dorsal) - a body part is located toward the back
  3. Superior - a body part is located above another part or toward the head
  4. Inferior - a body part is below another part or toward the feet
  5. Medial - a body part is nearer than another part to an imaginary midline of the body
  6. Lateral - a body part is farther away from the midline
  7. Distal - a body part is farther from the point of attachment or farther from the trunk or torso
  8. Proximal - a body part is closer to the point of attachment or closer to the trunk
- Superficial - a body part is located near the surface (Discuss; don't mark)
- Deep - a body part is located away from the surface (Discuss; don't mark)

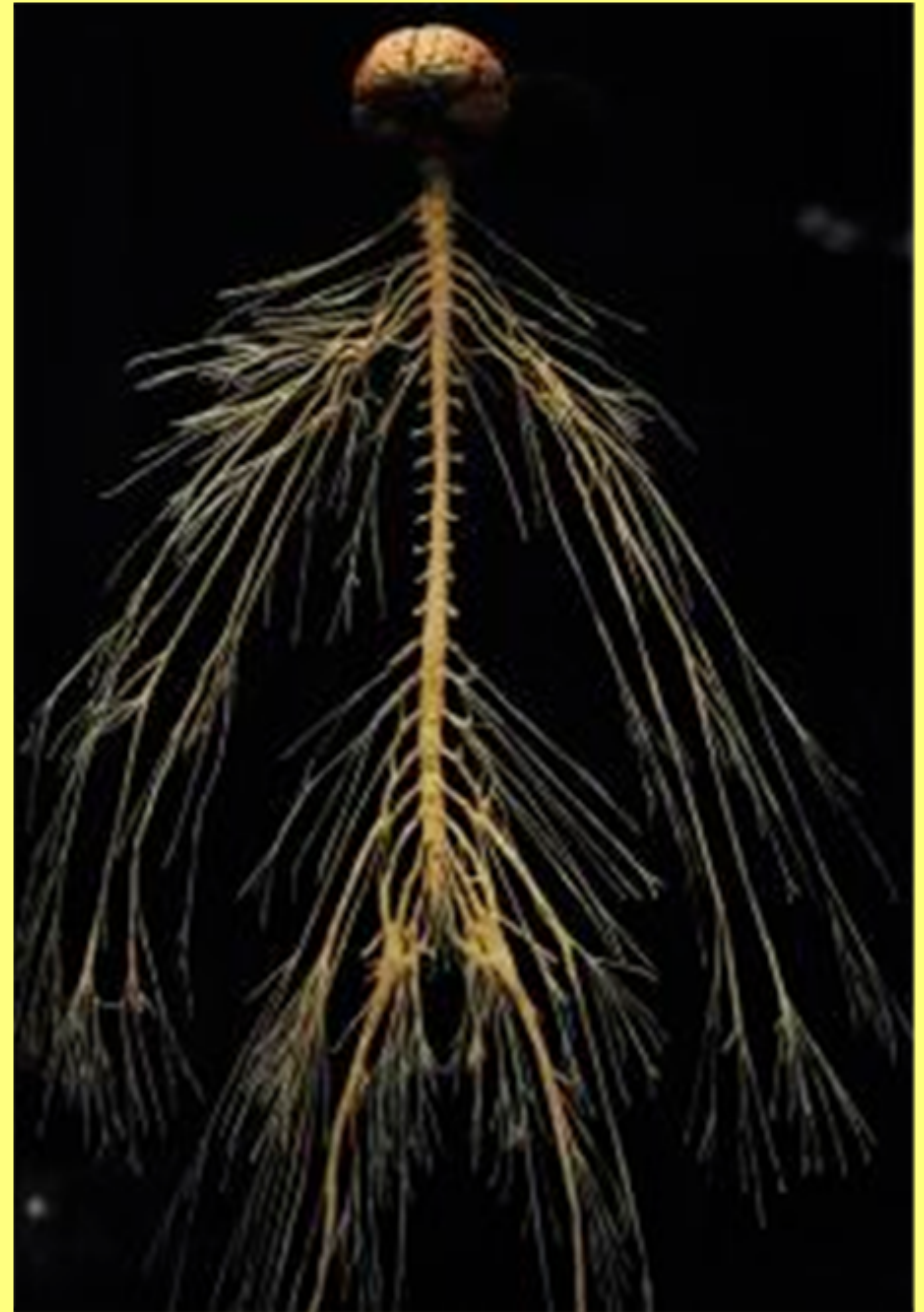




# More Directional Terms...

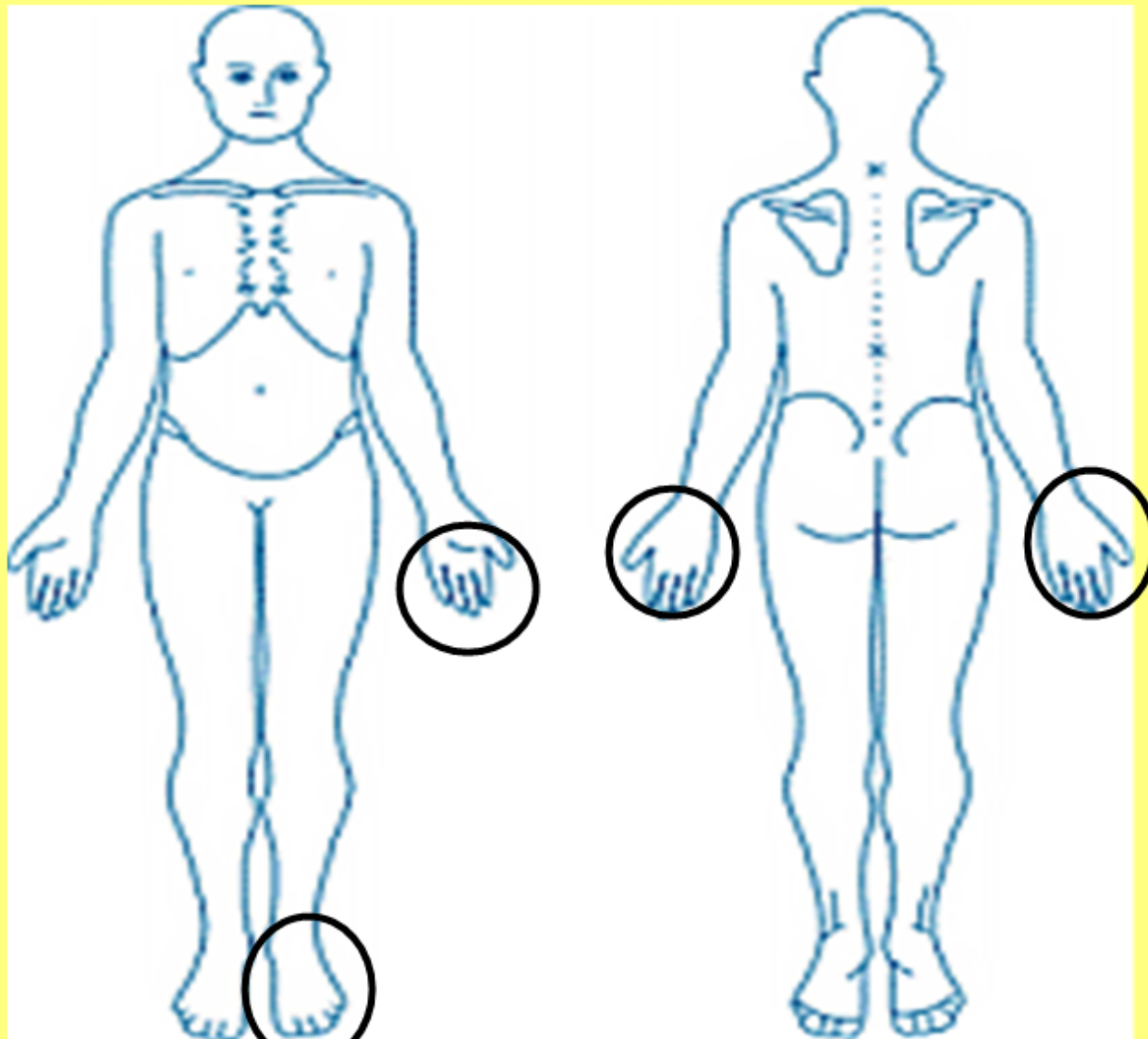
Central - a body part is situated at the center of the body or organ (ex. Central Nervous System)

Peripheral - a body part is situated away from the center of the body or organ (Peripheral Nervous System)



Ipsilateral - a body part is on the same side of the body as another part

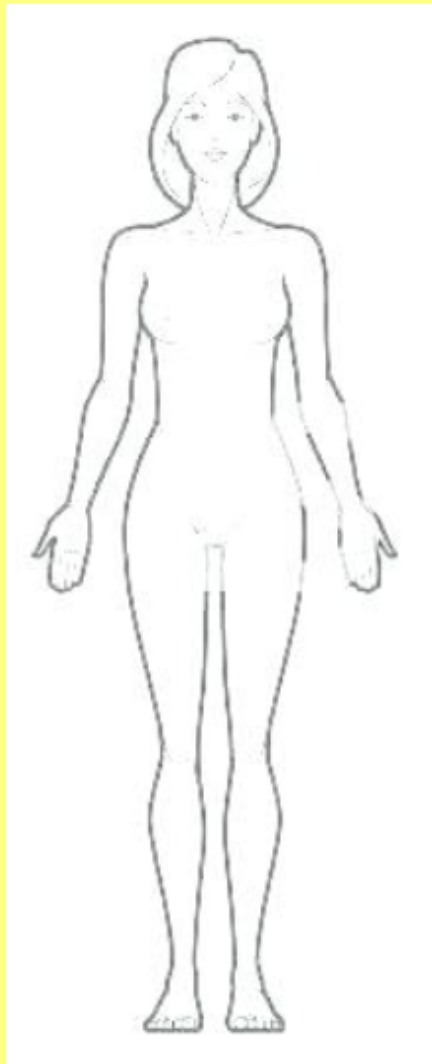
Contralateral - a body part is on the opposite side of the body from another body part



ipsilateral

contralateral

Activity: Use the terminology on page 4, figure 1.3 in your textbook to label the pictures provided.



Ophthalmic  
Otic  
Nasal  
Oral  
Cervical  
Deltoid  
Axillary  
Mammary  
Brachial  
Antecubital  
Abdominal  
Antebrachial  
Carpal  
Palmar  
Digital  
Genital  
Patellar  
Cruial  
Tarsal  
Sacral  
Gluteal  
Perineal  
Popliteal

Cephalic  
Frontal  
Orbital  
Buccal  
Mental  
Sternal  
Pectoral  
Umbilical  
Inguinal  
Coxal  
Calcaneal  
Pedal  
Occipital  
Deltoid  
Plantar  
Vertebral  
Brachial  
Dorsum  
Cubital  
Lumbar  
Femoral  
Sural

