

# ANATOMIC PLANES & SECTIONS

## SAGITTAL<sub>A</sub>

The sagittal plane is a longitudinal plane dividing the head and torso into left and right parts.

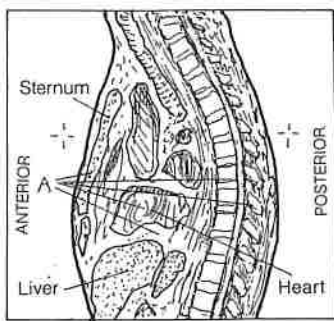
## FRONTAL<sub>C</sub>

The coronal or frontal plane is a longitudinal plane dividing the body (head, torso, limbs) or its parts into front and back halves or parts.

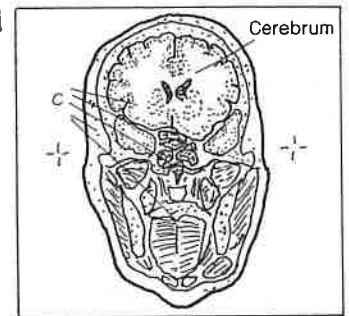
## TRANSVERSE<sub>D</sub>

The transverse plane divides the body into upper and lower halves or parts (cross sections). It is perpendicular to the longitudinal planes. Transverse planes may be horizontal planes of the upright body. Transverse planes are called "axial" or "transaxial" sections/slices by radiologists.

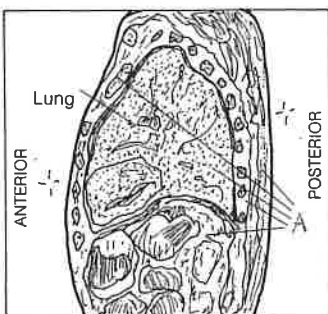
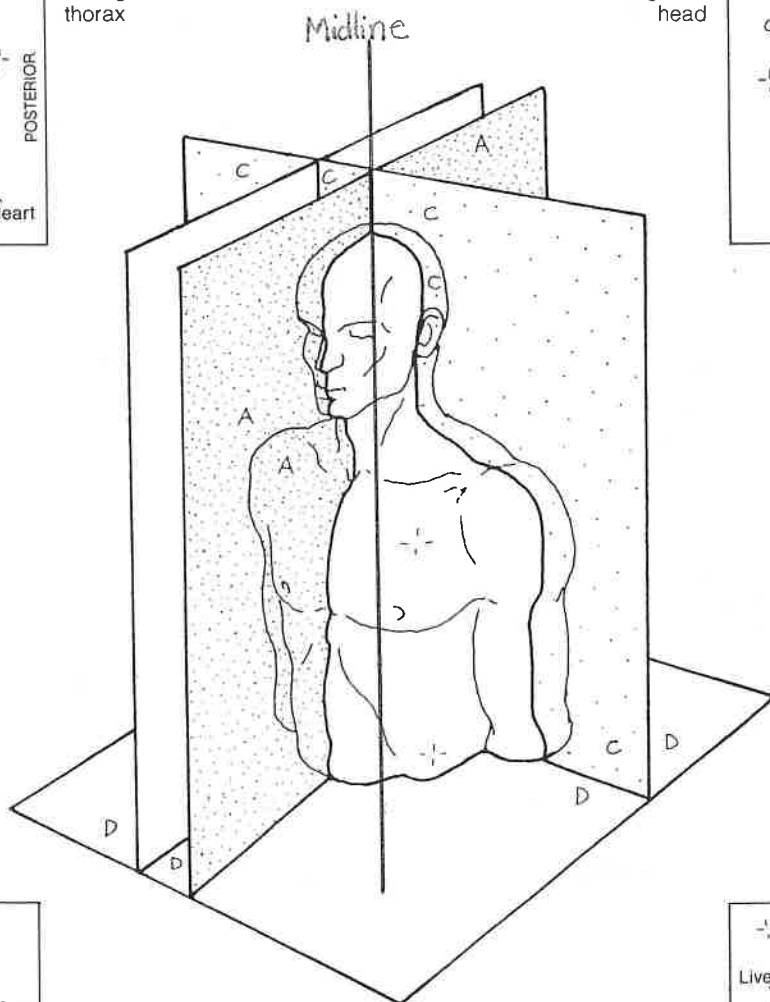
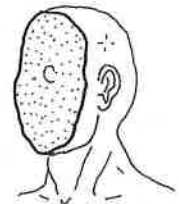
Study of the human body requires visualization of internal regions and parts. Dissection (dis, apart; sect-, cut) is the term given to preparing the body for internal inspection. One method of dissection permits consistent visual orientation by cutting the body into parts, called "sections," along the lines of reference, called "planes." The viewing and study of internal human structure in these planes is possible through medical imaging, such as computerized tomography (CT) and magnetic resonance imaging (MRI).



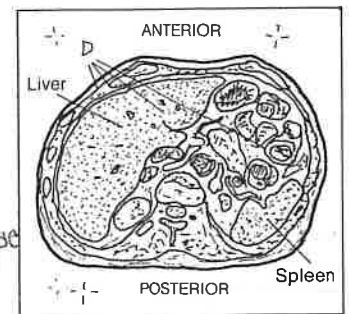
Sagittal section through the thorax



Frontal section through the head



Sagittal section through the abdomen



Transverse section through the abdomen

# ORIENTATION TO THE BODY

## TERMS OF POSITION & DIRECTION

**CN:** Color the arrows and titles, but not the illustrations.

Terms of position and direction describe the relationship of one organ to another, usually along one of the three body planes illustrated in the previous plate. To avoid confusion, these terms are related to the standard anatomical position: body standing erect, limbs extended, palms of the hands forward.

### CEPHALIC, CRANIAL, SUPERIOR, ROSTRAL <sup>A</sup>

These terms refer to a structure being closer to the head or higher than another structure of the body. These terms are not used with respect to the limbs.

### ANTERIOR, VENTRAL <sup>B</sup>

These terms refer to a structure being more in front than another structure in the body. The term "anterior" is preferred.

### POSTERIOR, DORSAL <sup>C</sup>

These terms refer to a structure being more in back than another structure in the body. The term "posterior" is preferred.

### MEDIAL <sup>D</sup>

This term refers to a structure that is closer to the median plane than another structure in the body. "Medial" is not synonymous with "median."

### LATERAL <sup>E</sup>

This term refers to a structure that is further away from the median plane than another structure in the body.

### PROXIMAL <sup>F</sup>

Employed only with reference to the limbs, this term refers to a structure being closer to the median plane or root of the limb than another structure in the limb.

### DISTAL <sup>G</sup>

Employed only with reference to the limbs, this term refers to a structure being further away from the median plane or the root of the limb than another structure in the limb.

### CAUDAL, INFERIOR <sup>H</sup>

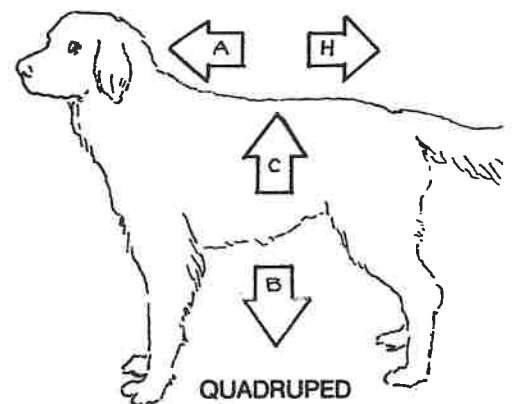
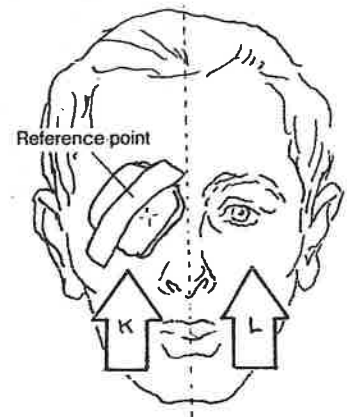
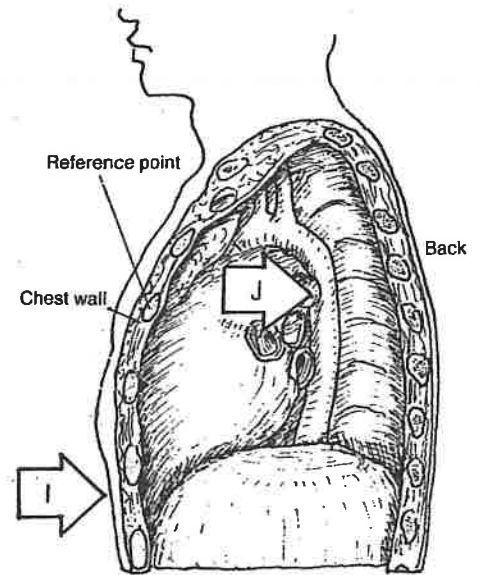
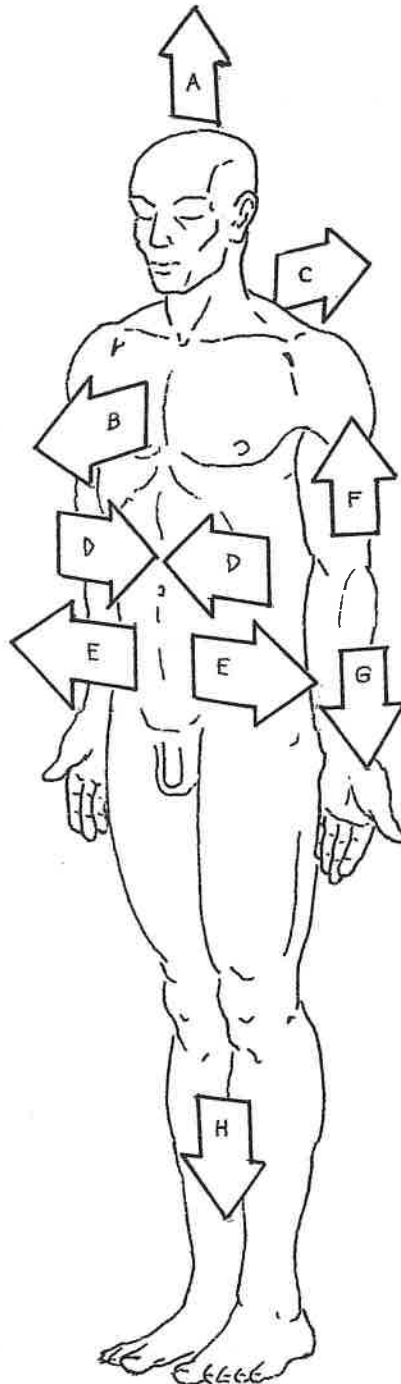
These terms refer to a structure being closer to the feet or the lower part of the body than another structure in the body. These terms are not used with respect to the limbs.

### SUPERFICIAL <sup>I</sup> DEEP <sup>J</sup>

The term "superficial" is synonymous with external, the term "deep" with internal. Related to the reference point on the chest wall, a structure closer to the surface of the body is superficial; a structure further away from the surface is deep.

### IPSILATERAL <sup>K</sup> CONTRALATERAL <sup>L</sup>

The term "ipsilateral" means "on the same side" (in this case, as the reference point); "contralateral" means "on the opposite side" (of the reference point).



The quadruped presents four points of direction: head end (cranial), tail end (caudal), belly side (ventral), back side (dorsal). In the biped (e.g., human), the ventral side is also anterior, the dorsal side is also posterior, the cranial end is also superior, and the caudal end is inferior.