INTRODUCTION

ANATOMIC PLANES & SECTIONS

CN: (1) Color the four body planes and related sections of the body in very light colors. (2) Take care not to color in areas marked by "do not color" (--) symbols.

Study of the human body (anatomy) requires visualization of internal regions or parts. Dissection (dis, apart; sect., cut) is the name given to preparing the body for internal inspection. One method of dissection permits consistent visual orientation by cutting the body into parts or sections along fixed lines of reference called planes. Two of these planes are oriented along the long axis of the body or body part, one perpendicular to the other (longitudinal sections). The third plane is oriented perpendicular to or across the long axis of the body or body part (cross section). Such planes have application in medical imaging studies, such as computerized tomography (CT) and magnetic resonance imaging (MRI). Here the body interior is imaged as computerized "slices" of the body in sagittal, coronal and transverse planes.

MEDIAN

The midline, longitudinal plane dividing the head and torso into right/left halves. The presence of the vertebral column and spinal cord is characteristic of the median plane of the torso. The median plane is the middle sagittal plane.

SAGITTAL

The longitudinal plane dividing the body into left and right parts. It is parallel to the median plane and may be applied to the head, torso and limbs.

CORONAL, FRONTAL

The longitudinal plane dividing the body into equal or unequal front and back parts. In CT and MRI, the term "coronal" is used by radiologists.

CROSS, TRANSVERSE

The transverse plane dividing the body or body parts into upper and lower segments. This plane is a cross section perpendicular to the longitudinal planes. Transverse planes of the body, called axial or transaxial sections by radiologists, are commonly seen in CT and MRI studies of the body.
INTRODUCTION
TERMS OF POSITION & DIRECTION

CN: (1) Use bright or dark colors for emphasis.
(2) Color the arrows 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.

CRANIAL, SUPERIOR, ROSTRAL

These terms refer to a structure being closer to the head or higher than another structure of the body. See the quadruped in the right corner for a related application of the term "cranial."

ANTERIOR, VENTRAL

These terms refer to a structure being more in front than another structure in the body. The term "anterior" is preferred. See the quadruped for another application of the term "ventral."

POSTERIOR, DORSAL

These terms refer to a structure being more in back than another structure in the body. The term "posterior" is preferred. See the quadruped for another application of the term "dorsal."

MEDIAL

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

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

PROXIMAL

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

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

These terms refer to a structure being closer to the feet or the lower part of the body than another structure in the body. See the quadruped for a related application of the term "caudal."

SUPERFICIAL, DEEP

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

IPSILATERAL, CONTRALATERAL

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.