

SNS COLLEGE OF ALLIED HEALTH SCIENCE

Affiliated to The Tamil Nadu Dr. M.G.R Medical University, Chennai

DEPARTMENT OF RADIOGRAPHY AND IMAGING TECHNOLOGY

COURSE NAME : HUMAN ANATOMY AND PHYSIOLOGY RELEVANT TO RADIOLOGY

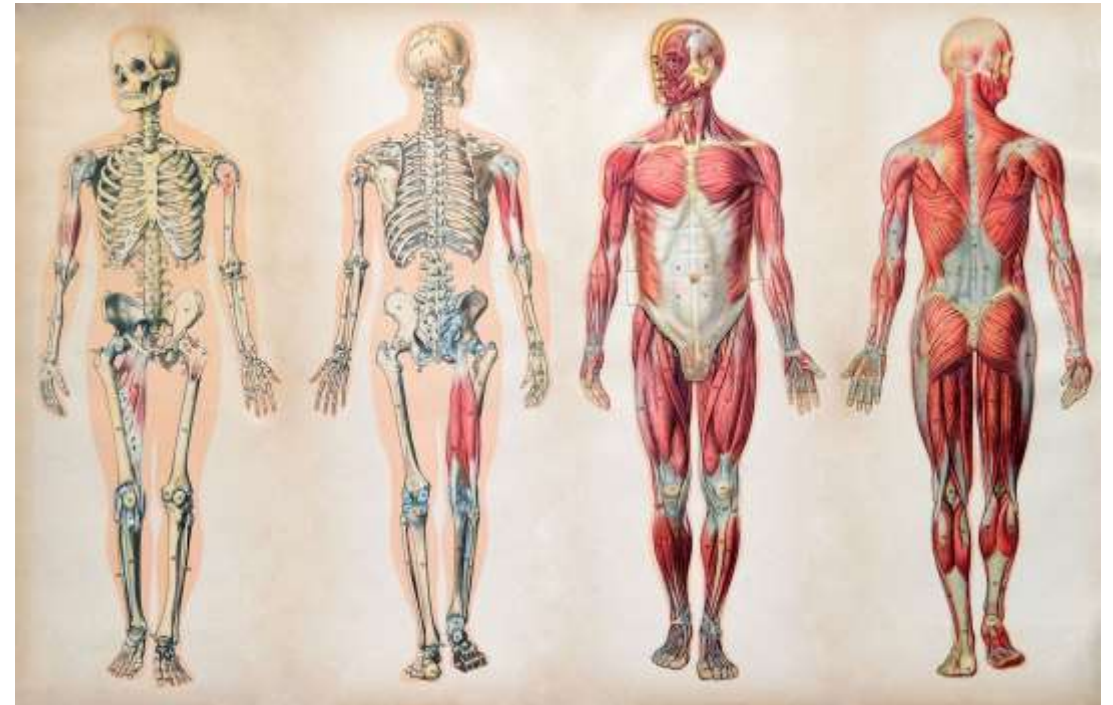
UNIT : GENERAL STRUCTURE OF HUMAN BODY

TOPIC : ANATOMICAL TERMINOLGY,PLANES OF SECTION

FACULTY NAME : MRS.G.HELANA JOY

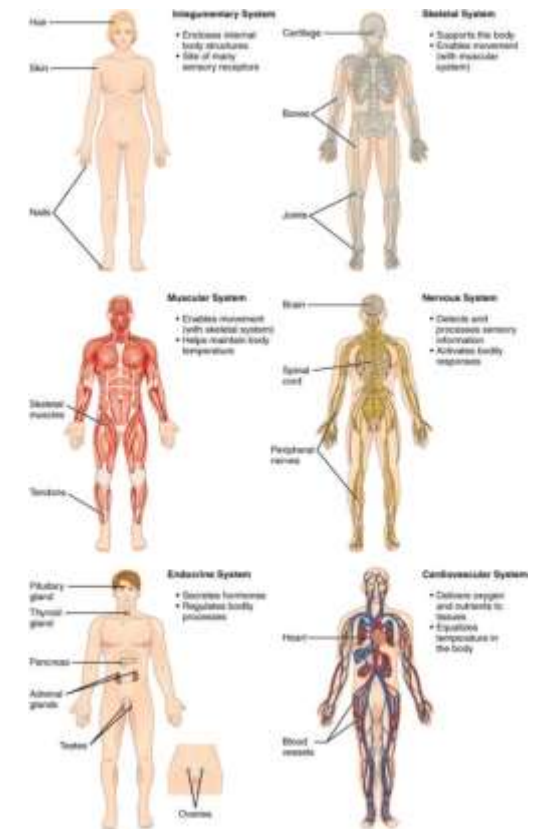
INTRODUCTION TO ANATOMY (Define)

- Anatomy is the identification and description of the structures of living things.
- It is a branch of biology and medicine.



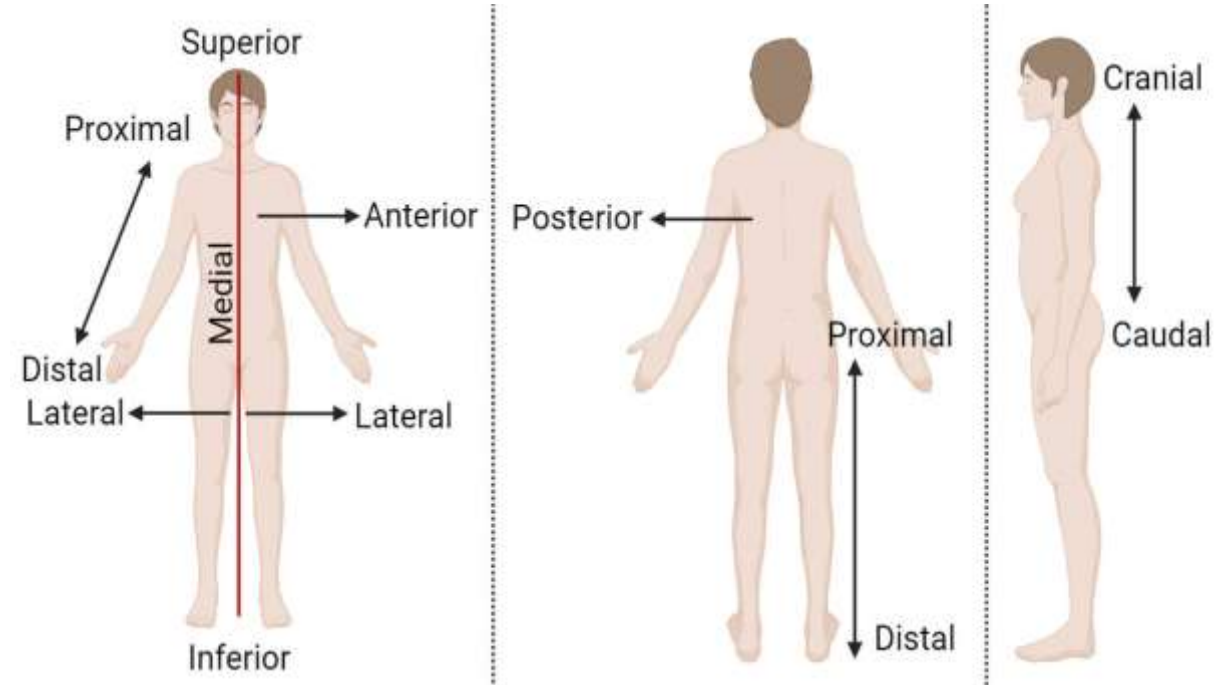
GROSS ANATOMY

- In medicine, gross, macro, or topographical anatomy refers to the study of the biological structures that the eye can see.
- The study of gross anatomy may involve dissection or noninvasive methods.
- The aim is to collect data about the larger structures of organs and organ systems



ANATOMICAL DIRECTIONS

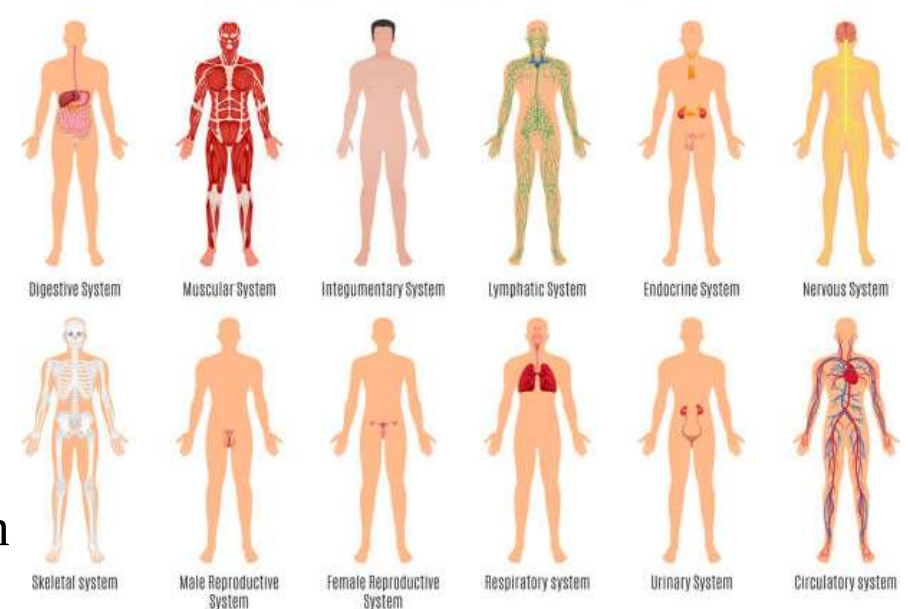
- Anterior (Ventral): Front of the body.
- Posterior (Dorsal): Back of the body.
- Superior: Upper part or above.
- Inferior: Lower part or below.
- Medial: Closer to the midline.
- Lateral: Away from the midline.
- Proximal: Closer to the point of attachment.
- Distal: Farther from the point of attachment.



HUMAN ORGAN SYSTEMS

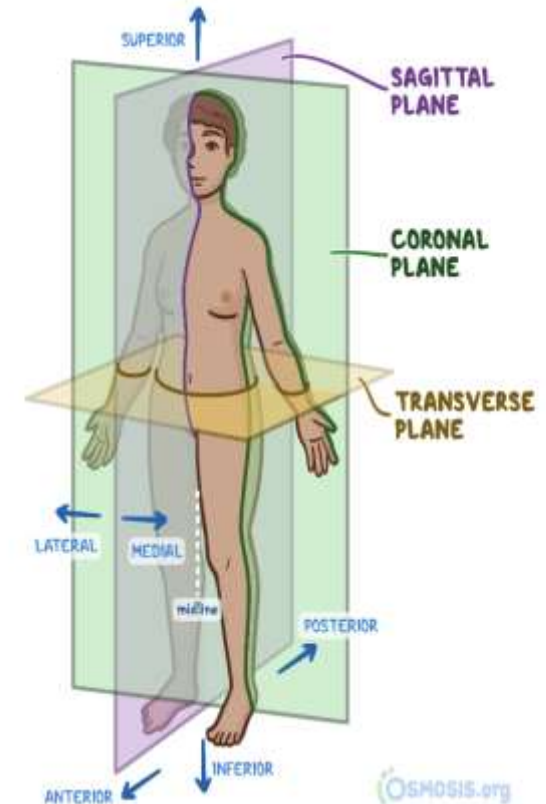
There are 11 organ systems in the human body:

- The Skeletal System
- The Muscular System
- The Lymphatic System
- The Respiratory System
- The Digestive System
- The Nervous System, including
- The Central And Autonomic Systems
- The Endocrine System, which Regulates Hormone Production
- The Cardiovascular System, including The Heart The Urinary System
- The Reproductive System
- The Integumentary system, Which Includes The Skin, Hair, And Nails, Among Other Areas



PLANES OF THE BODY

- The anatomical planes used to describe the location of structures in human anatomy.
- They are applied to the human body in the anatomical position.
- The three most commonly used planes: **sagittal, coronal and transverse.**



SAGITTAL PLANE

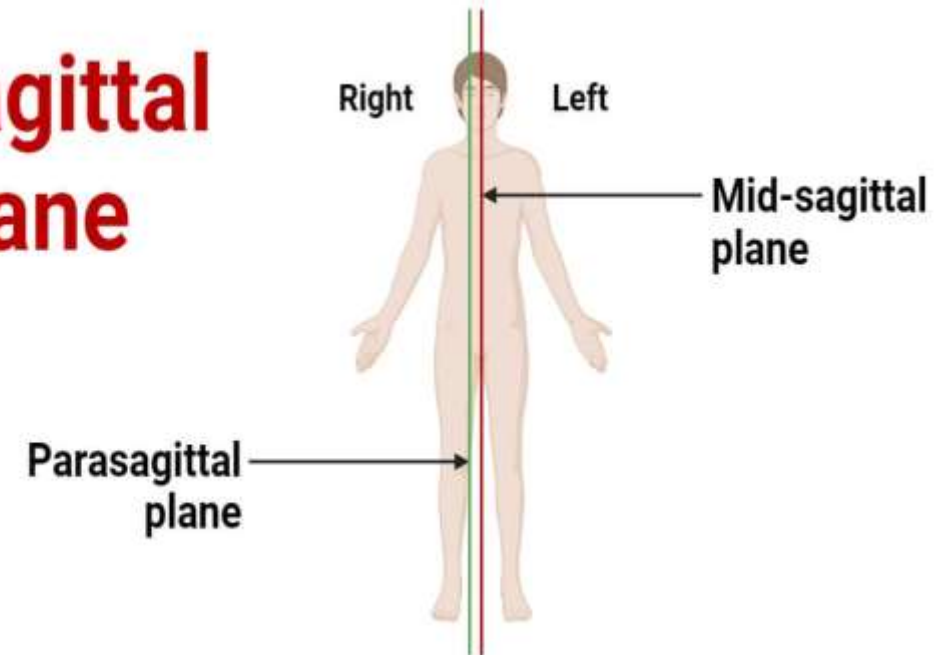
- Divides the body into **left and right** parts.
- Runs vertically, parallel to the midline.

Types:

- **Midsagittal (Median) Plane:** Divides the body into equal left and right halves.
- **Parasagittal Plane:** Divides the body into unequal left and right parts.

Example movements: Flexion and extension (e.g., bending and straightening the elbow).

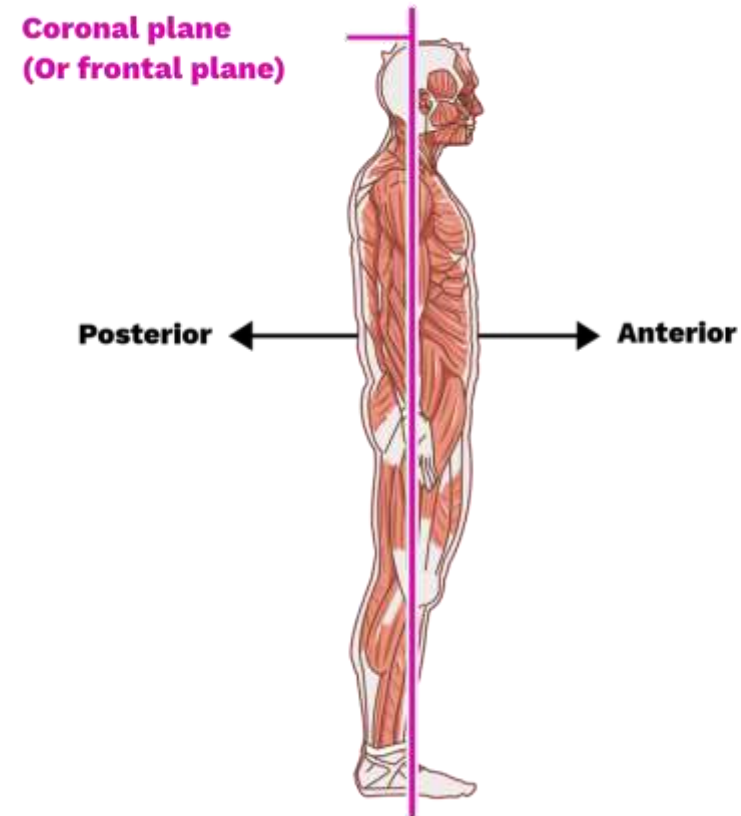
Sagittal Plane



FRONTAL (CORONAL) PLANE

- Divides the body into **anterior (front)** and **posterior (back)** parts.
- Runs vertically, perpendicular to the sagittal plane.

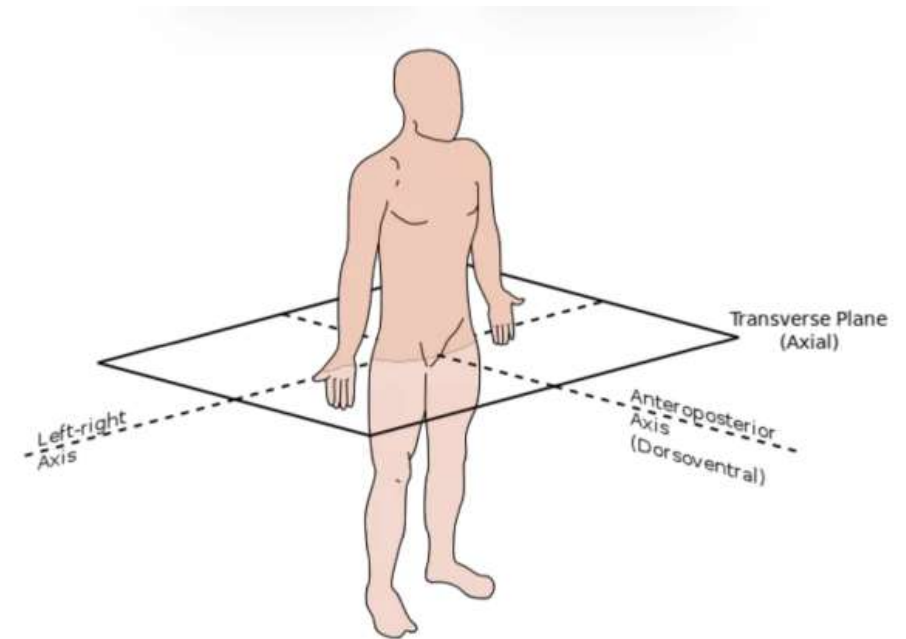
Example movements: Abduction and adduction (e.g., raising arms sideways).



TRANSVERSE (HORIZONTAL) PLANE

- Divides the body into **superior (upper) and inferior (lower)** parts.
- Runs horizontally, perpendicular to the long axis of the body.

Example movements: Rotation (e.g., turning the head).



MAJOR BODY CAVITIES

Dorsal Cavity (Back of the body):

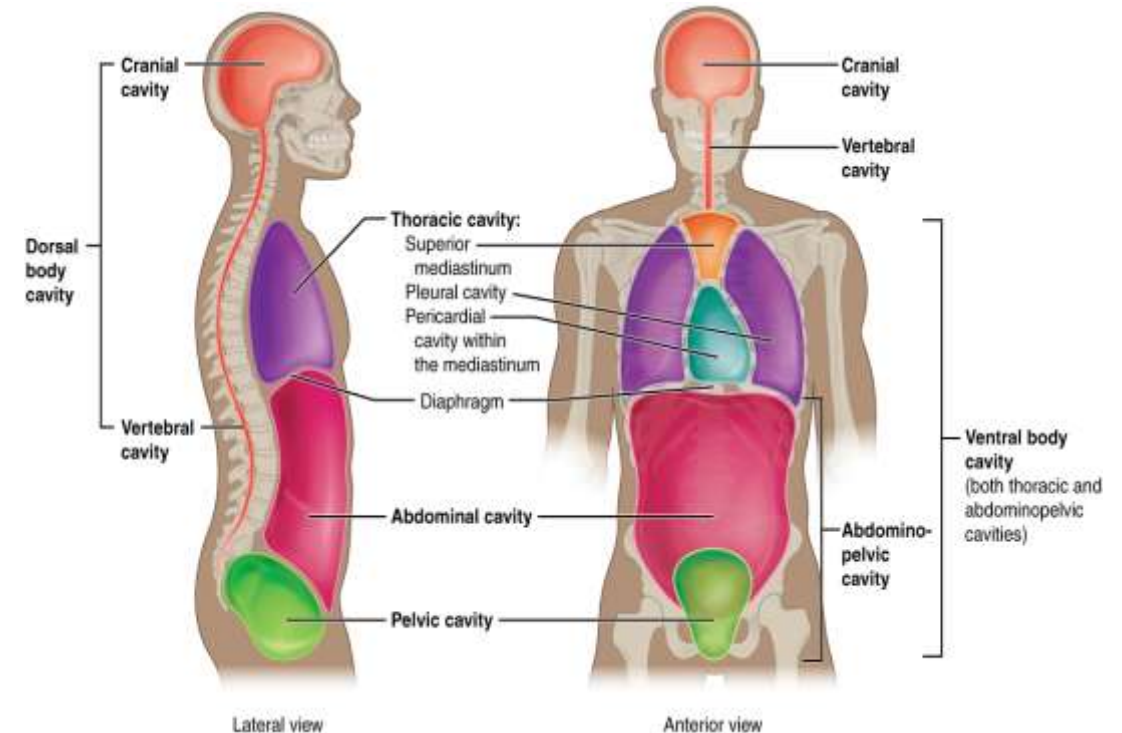
- *Cranial Cavity* (Brain)
- *Vertebral Cavity* (Spinal Cord)

Ventral Cavity (Front of the body, larger):

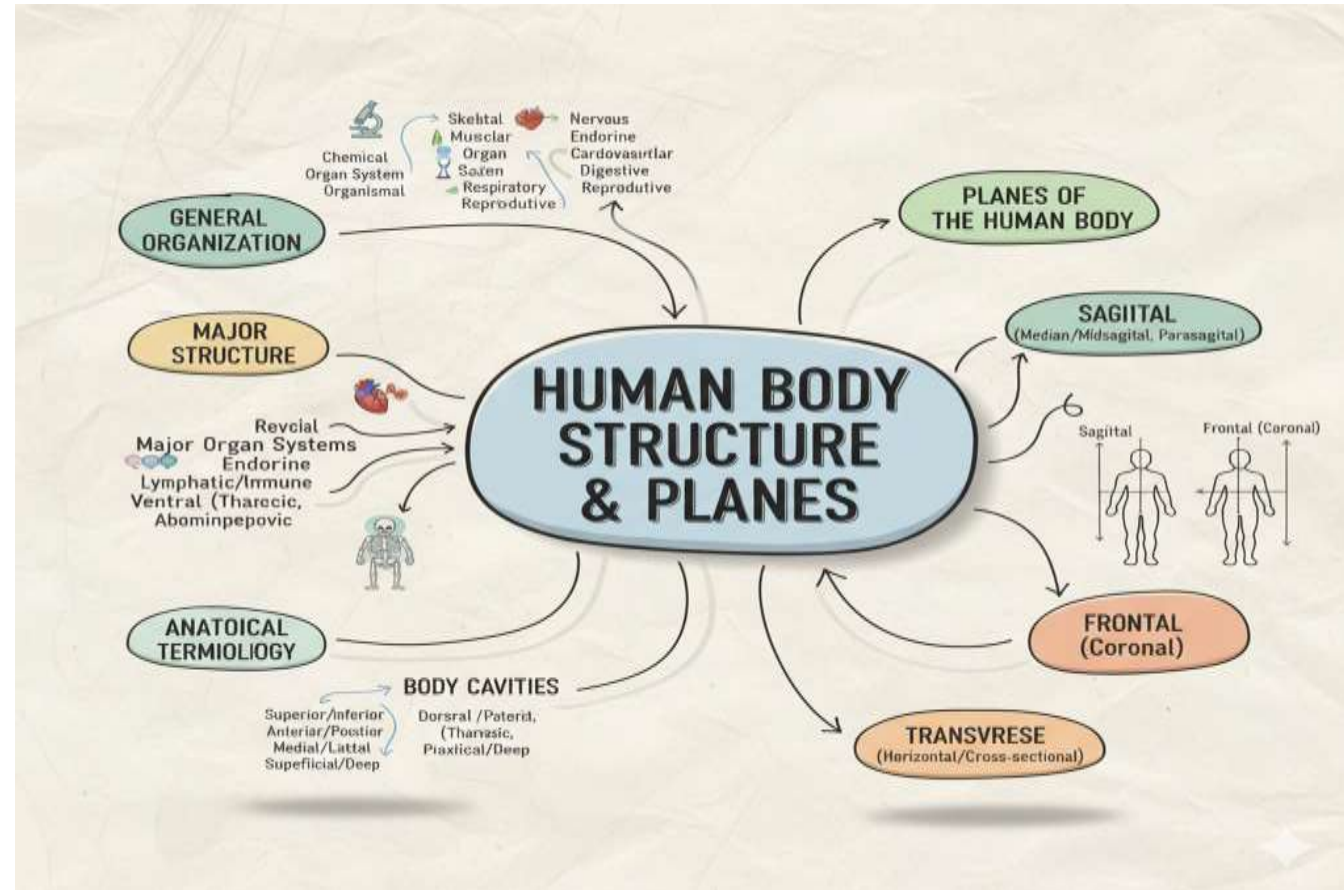
- *Thoracic Cavity* (Above the diaphragm) Contains Lungs (Pleural cavities) and Heart (Pericardial cavity).

Abdominopelvic Cavity (Below the diaphragm):

- *Abdominal Cavity* (Stomach, Intestines, Liver, etc.)
- *Pelvic Cavity* (Bladder, Reproductive Organs, Rectum)



SUMMARY



References

- Anatomy and Physiology 2e by OpenStax (2022): Discusses planes in Chapter 1, with illustrations of sagittal, coronal, and transverse planes.
- <https://openstax.org/books/anatomy-and-physiology-2e/pages/1-6-anatomical-terminology>
- <https://university.pressbooks.pub/test456/chapter/mapping-the-body/>