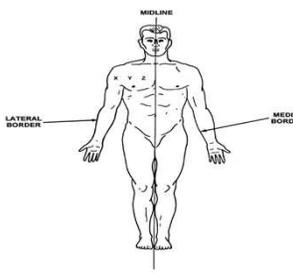


1

ANATOMICAL POSITION

- Body erect
- Legs are straight
 - Toes facing forward
- Arms at the sides
 - Palms facing forward
 - Thumbs laterally



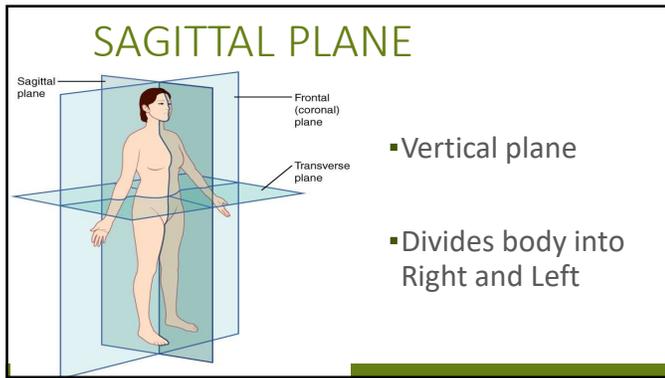
X is lateral to Y and Z; Y is medial to X and lateral to Z.
In the example shown, the body is in the normal anatomical position.

2

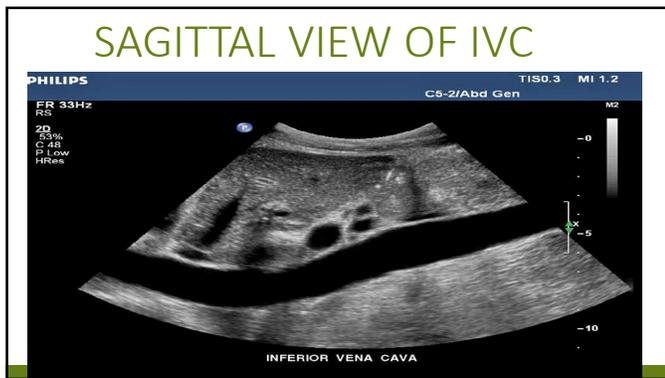
BODY PLANES

- Imaginary lines drawn through the body to separate the body into sections
 - Used as reference points
 - Vertically and horizontally divisions

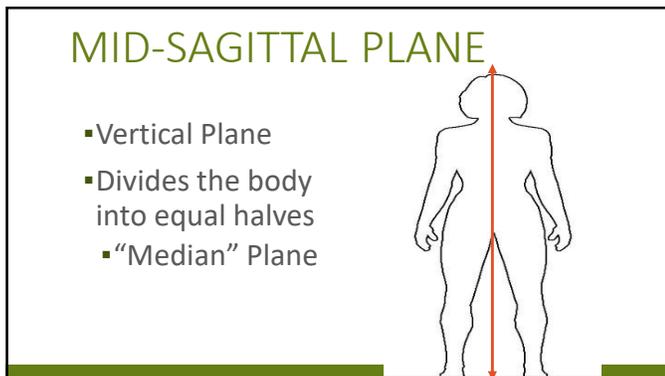
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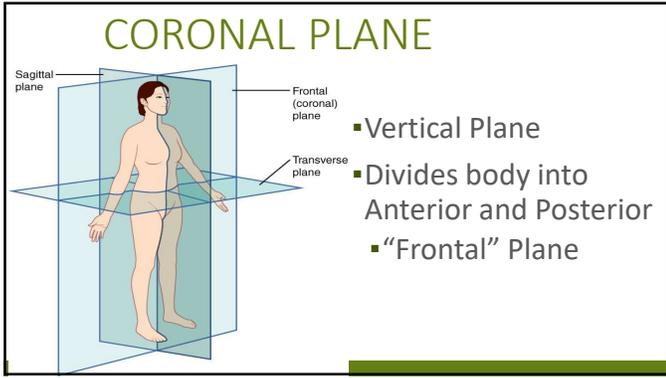
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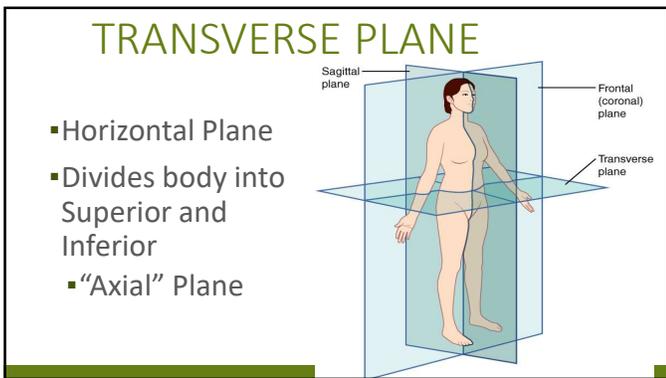
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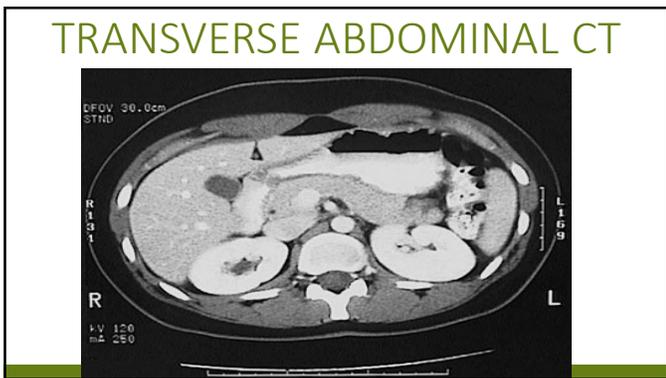
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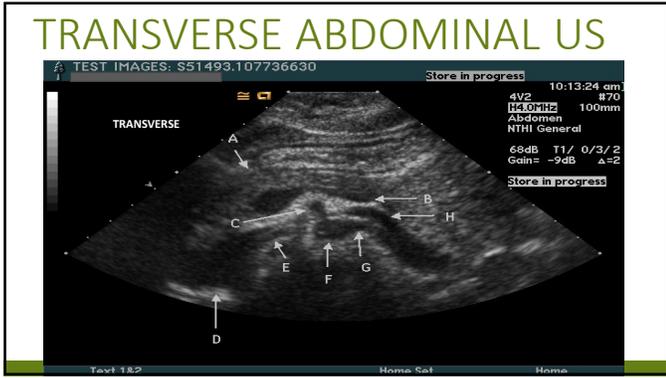
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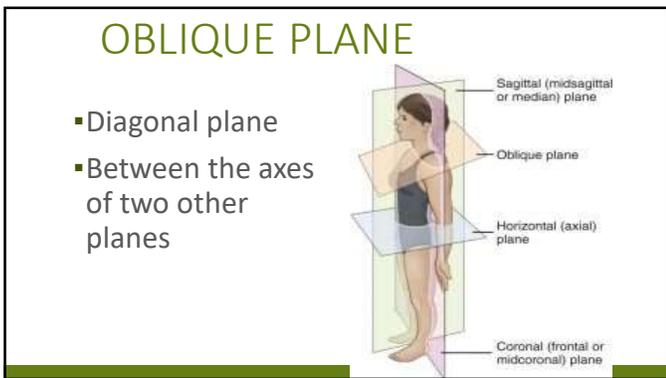
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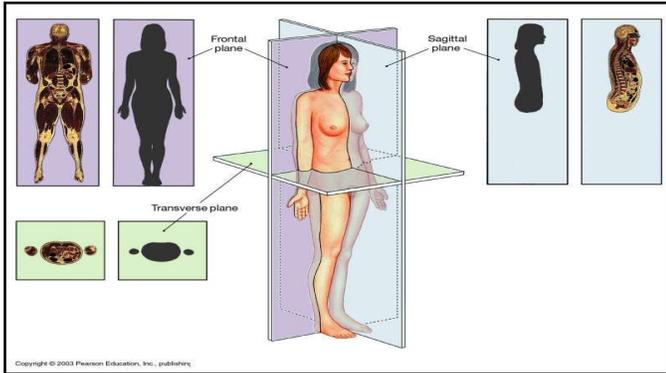
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10



11



12

WHY WE TAKE MORE THAN ONE VIEW!!

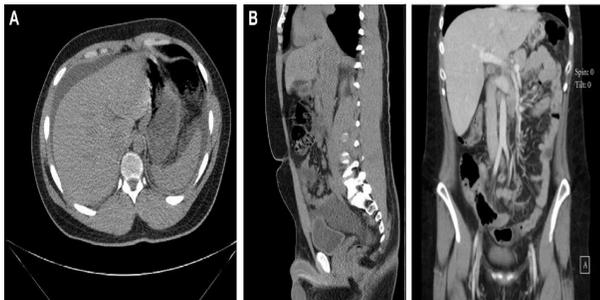


13

WHY WE TAKE MORE THAN ONE VIEW!!



14



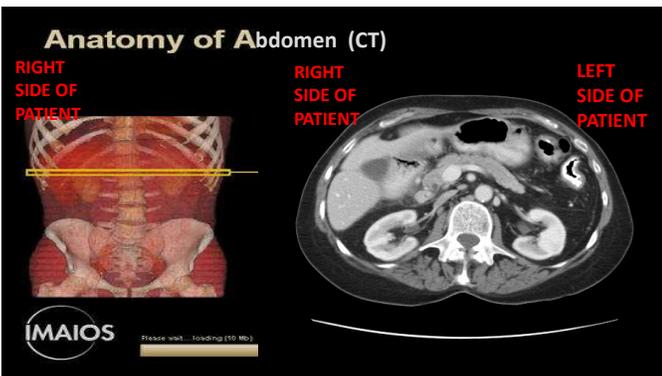
15



16

- Medical Images of Sectional Anatomy
- Right side of image corresponds to viewer's left side

17



18



19

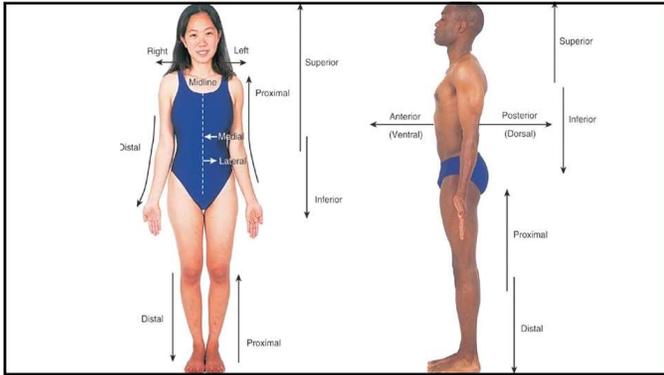
DIRECTIONAL TERMINOLOGY

- Superior – above
- Inferior – below
- Anterior (ventral) – towards the front
- Posterior (dorsal) – toward the back

20

- Medial – towards mid-sagittal plane
- Lateral – away from mid-sagittal
- Proximal – towards a source
- Distal – away from a source

21



22

- Superficial – near the body surface
- Deep – further into the body
- Cephalic – towards the head
- Caudal – towards the feet

23

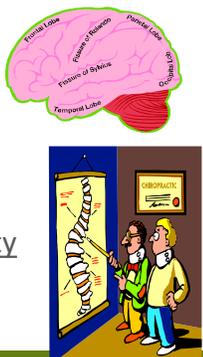
- Ipsilateral – one the same side
- Contralateral – on the opposite side
- Palmar – front of hand (palm)
- Dorsum
 - Posterior aspect of hand
 - Anterior aspect of foot
- Plantar – sole of foot

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BODY CAVITIES

1. Dorsal Body Cavity

- Posterior
 - Cranial cavity
 - Vertebral or spinal cavity



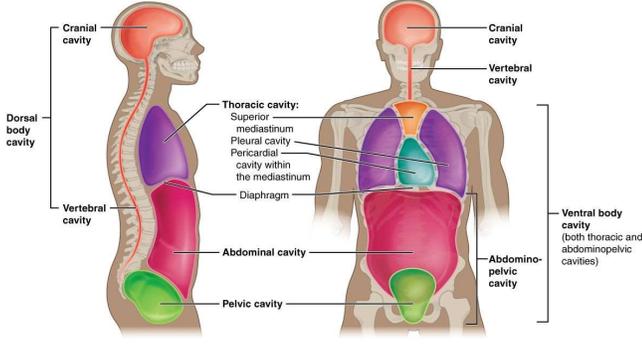
25

BODY CAVITIES

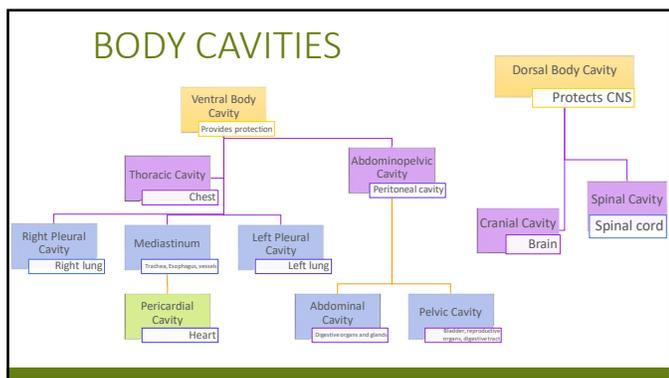
2. Ventral Body Cavity

- Largest
 - Thoracic
 - Pleural Cavities
 - Mediastinum
 - Abdominopelvic Cavity
 - Abdominal Cavity
 - Pelvic Cavity

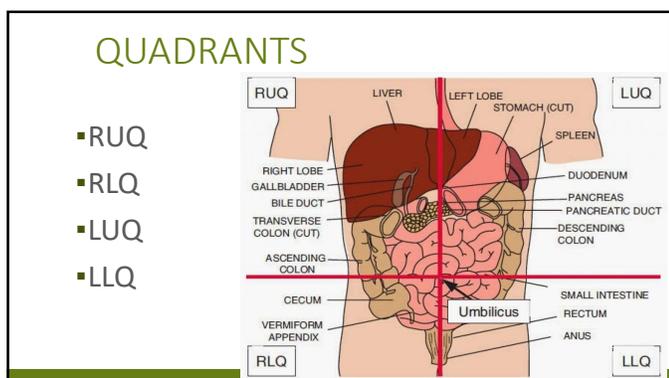
26



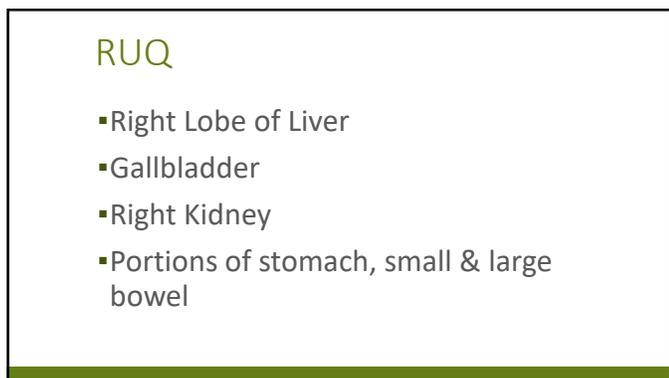
27



28



29



30

RLQ

- Right Ovary
- Right Ureter
- Right Spermatic Cord
- Portions of small & large bowel

31

LUQ

- Left Lobe of Liver
- Left Kidney
- Spleen
- Tail of Pancreas
- Stomach
- Portions of small & large bowel

32

LLQ

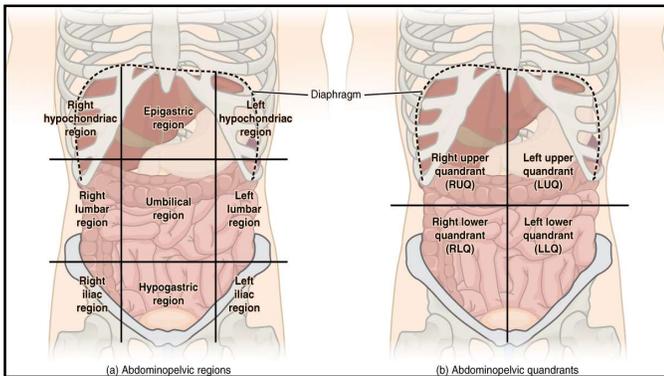
- Left Ovary
- Left Ureter
- Left Spermatic Cord
- Portions of small & large bowel

33

REGIONS

- Right Hypochondrium
- Right Lateral
- Right Inguinal
- Epigastrum
- Umbilical
- Hypogastrum
- Left Hypochondrium
- Left Lateral
- Left Inguinal

34



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GRAY SCALE

- Each digital image is divided into pixels
- Each pixel is assigned a shade of gray
 - CT
 - MRI
 - Ultrasound

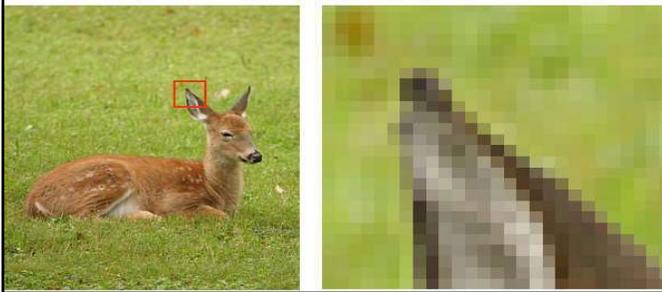
36

PIXEL

- From the term picture element
- Smallest part of digital image
- Picture divided into grid (checkerboard)
 - Each individual box is a pixel

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PIXEL



38

CT

- Grayscale reported as Hounsfield unit (HU)
- Water is used as a reference tissue
 - Denser than water
 - Lighter shades of gray to white
 - Less dense than water
 - Darker shades of gray to black

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MRI

- Gray scale can vary greatly because of inherent tissue properties
- Can appear different with each patient
- Can appear different with each series of images

40

ULTRASOUND

- Grayscale displays multiple levels of "BRIGHTNESS"



41

BRIGHTNESS

- Represents the strength of the detected ECHO
 - Stronger
 - Lighter shades of gray to white
 - Weaker
 - Darker shades of gray to black

42



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