SECTION vs. PLANE

SECTION: a cut

PLANE: “when the section is made through the body wall or through an organ, it is made along an imaginary surface or line called a plane.”

SECTION vs. PLANE

PLANE:

SAGITTAL PLANE
- divides the body into right and left parts

MIDSAGITTAL (MEDIAN) PLANE
- divides the body into EQUAL right & left parts

PARASAGITTAL PLANE
- divides the body into UNEQUAL right & left parts

CORONAL (FRONTAL) PLANE
- a longitudinal plane that divides the body (or an organ) into anterior and posterior parts

transverse plane
- divides “the body into superior & inferior parts”

pig kidney
- cross section of spinal cord
CROSS SECTIONS

“When organs are sectioned along the transverse plane, the sections are commonly called cross sections.”

... a cross section of a kiwi fruit!

A = frontal (coronal)
B = sagittal
C = transverse

CRANIAL CAVITY

The cavity “in which the brain is enclosed within the rigid skull”

VERTEBRAL (SPINAL) CAVITY

the cavity the spinal cord is in

DORSAL CAVITY

includes the cranial & spinal cavities
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**Pop Quiz!**
The _?_ cavity & the _?_ cavity combine to form the dorsal cavity.

**Answer**
cranial & spinal
dorsal cranial spinal dorsal

**ABDOMINAL CAVITY**
"the area that houses the stomach, intestines, liver, and [some] other organs"

**PELVIC CAVITY**
"the region that is partially enclosed by the bony pelvis and contains the reproductive organs, [urinary] bladder and rectum"

**ABDOMINOPELVIC CAVITY**
"the cavity inferior to the diaphragm"

Name the cavity that these organs are in.

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**Abdominal Cavity** (also correct: abdominopelvic cavity or ventral cavity)

- Liver
- Gallbladder
- Stomach
- Large intestine
- Small intestine

**Thoracic Cavity**
the cavity above the diaphragm

- Thoracic cavity
  - (of fetal pig)
- Diaphragm

**Ventral Cavity**
made up of the thoracic, abdominal & pelvic cavities

**Anatomical Right** = to SUBJECT’ S right
**Anatomical Left** = to SUBJECT’ S left

**Quadrants**
“A scheme, used by most physicians and nurses, divides the abdominal surface (and the abdominopelvic cavity deep to it) into four approximately equal regions called quadrants.”

- Right upper quadrant
- Left upper quadrant
- Right lower quadrant
- Left lower quadrant

**Pop Quiz!**
Name the superior-most cavity in the ventral cavity

answer on next page
Abdominopelvic Region: divided into 9 portions using 4 planes (2 parasagittal; 2 transverse)

UMBILICAL REGION
“the centermost region, which includes the umbilicus”

EPIGASTRIC REGION
“immediately superior to the umbilical region; overlies most of the stomach”

HYPOGASTRIC (PUBIC) REGION
“immediately inferior to the umbilical region; encompasses the pubic area”

Name the region indicated.

Answer on next page
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EPIGASTRIC

ILIAC REGIONS
“lateral to the hypogastric region and overlying the superior parts of the hip bones”

hypogastric region

superior parts of the hip bones

right iliac region

left iliac region

LUMBAR REGIONS
“between the ribs and the flaring portions of the hip bones; lateral to the umbilical region”

between the ribs

flaring portions of the hip bones

right lumbar region

left lumbar region

HYPOCHONDRIAC REGIONS
“flanking the epigastric region laterally and overlying the lower ribs”

flanking the epigastric region

laterally and overlying the lower ribs

right hypochondriac region

left hypochondriac region

Pop Quiz!
Name the region indicated. Don’t forget to say right or left!

answer on next page

Answer:

RIGHT LUMBAR
Serous Membrane (Serosa)

covers walls of ventral body cavity and organs within this cavity

Parietal Serosa “the part of the membrane lining the cavity walls”

Visceral Serosa “covering the external surface of the organs within the [ventral] cavity”

PERICARDIUM

Serous Membrane that encloses the heart

PLEURA

Serous Membrane that encloses the lungs

PERITONEUM

“the serosa lining the abdominal cavity and covering its organs”

Imagine that you punch your fist into a blown up balloon.

Outer balloon wall (comparable to parietal serosa)

Air (comparable to serous fluid)

Inner balloon wall (comparable to visceral serosa)
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**Pop Quiz!**

Name the specific membrane indicated. (The answer has 2 words in it.)

*answer on next page*

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**Parietal Pericardium**

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**Answer:**

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**Other body cavities**

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**Oral Cavity**

“commonly called the mouth, contains the tongue & teeth”; also called the buccal cavity

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**NASAL CAVITY**

“located within and posterior to the nose”

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** Orbital Cavity**

“house the eyes and presents them in an anterior position”

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MIDDLE EAR
“lies just medial to the ear drum... is carved into the bony skull... contain tiny bones that transmit sound”

SYNOVIAL CAVITIES
“joint cavities... enclosed within fibrous capsules that surround the freely movable joints of the body”

Pop Quiz!
Name the cavity the little red heart is in.

ORAL OR BUCCAL CAVITY

Review
Name the cavity that is colored a reddish-brown in this picture.

Page 9
This is a _?_ section of the brain. (Hint: the part of the brain that is cut off would be sticking out of the screen toward you.)

posterior  anterior

infrared

This is a sagittal section.

Name the cavity.

cat  neck  diaghragm

The thoracic cavity is the region indicated.

Name the region indicated.
Name the plane indicated in red.

Name the cavity indicated by the green smiley face.

The _?_ pericardium directly touches the heart surface.
visceral

Name the quadrant indicated by the green star.

left lower quadrant

Name the cavity at the indicated joint.

synovial cavity

end of Part 3 of Language of Anatomy