

SI A&P - Full Discipline Demo - Fetal Pig

Anatomical Orientations

Final Report - Answer Guide

Institution	Science Interactive University
Session	SI A&P - Full Discipline Demo - Fetal Pig
Course	SI A&P - Full Discipline Demo - Fetal Pig
Instructor	Sales SI Demo

Test Your Knowledge

Classify each statement as true or false.

⚡ Anatomical position is the standard reference for all anatomical directions, descriptions, and locations.	
⚡ Anatomical position assumes a body orientation of sitting down with legs crossed.	
⚡ In anatomical position, the upper limbs are held out slightly to each side with palms facing forward.	
⚡ Thumbs point upwards when in anatomical position.	
True	False
1	2

Correct answers:

1

Anatomical position is the standard reference for all anatomical directions, descriptions, and locations.

In anatomical position, the upper limbs are held out slightly to each side with palms facing forward.

2

Anatomical position assumes a body orientation of sitting down with legs crossed.

Thumbs point upwards when in anatomical position.

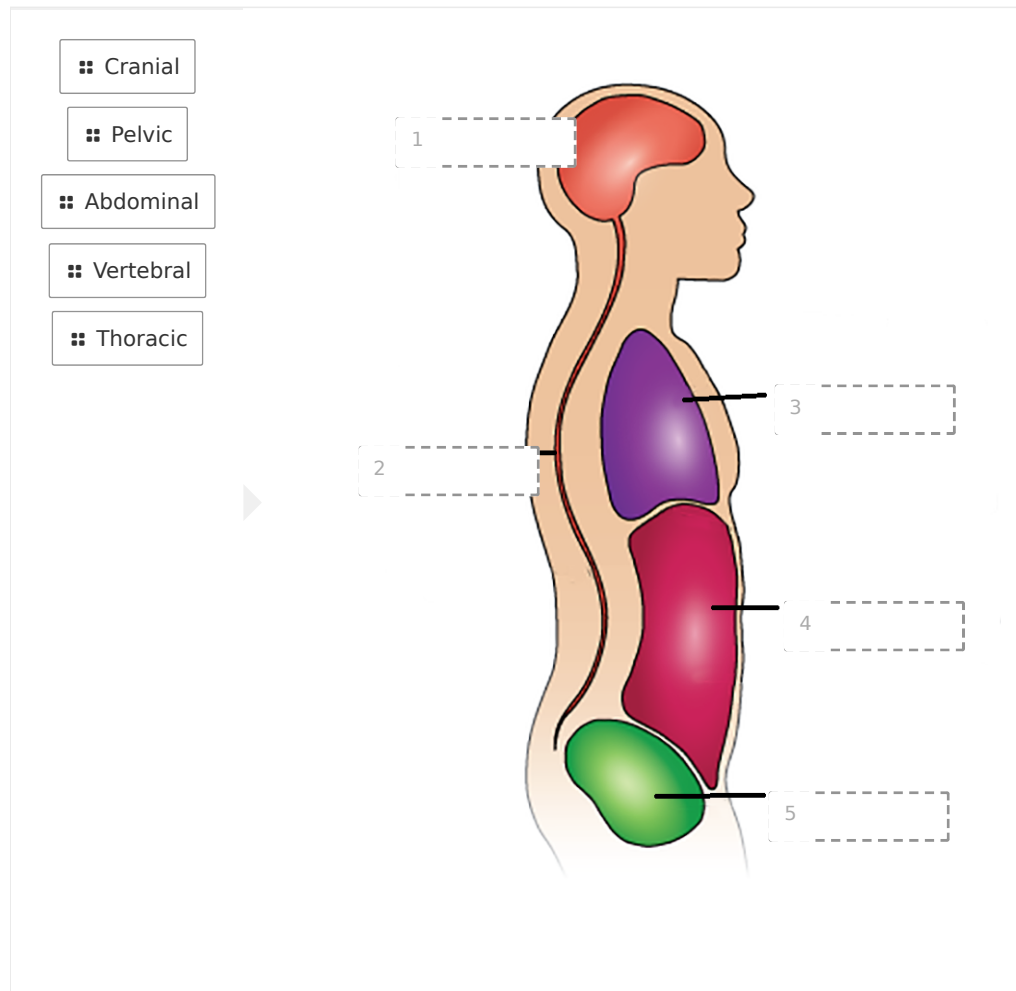
Match each term with the best description.

⌘ Sagittal	Toward the back	1
⌘ Dorsal	Toward the midline of the body	2
⌘ Transverse	Plane dividing the right and left halves of the body	3
⌘ Ventral	Toward the front	4
⌘ Medial	Plane dividing the upper and lower halves of the body	5
⌘ Lateral	Away from the midline of the body	6

Correct answers:

- 1 Dorsal 2 Medial 3 Sagittal 4 Ventral 5 Transverse
6 Lateral

Label the body cavities.



Correct answers:

1 Cranial 2 Vertebral 3 Thoracic 4 Abdominal 5 Pelvic

Exploration

When describing a body, all directional terms used assume that the body is in anatomical position regardless of the actual position of the body.

☒ True

☐ False



Anatomical terms can be used to refer to a body in any position.

- ☐ True
 - ☒ False
- ✓

The _____ plane divides the body into dorsal and ventral portions.

- ☐ coronal
 - ☒ transverse
 - ☐ sagittal
 - ☐ lateral
- ✓

The ____ cavity can be further divided into the cranial cavity and the vertebral cavity.

- ☐ dorsal body
 - ☒ ventral body
 - ☐ thoracic
 - ☐ abdominopelvic
- ✓

Exercise 1

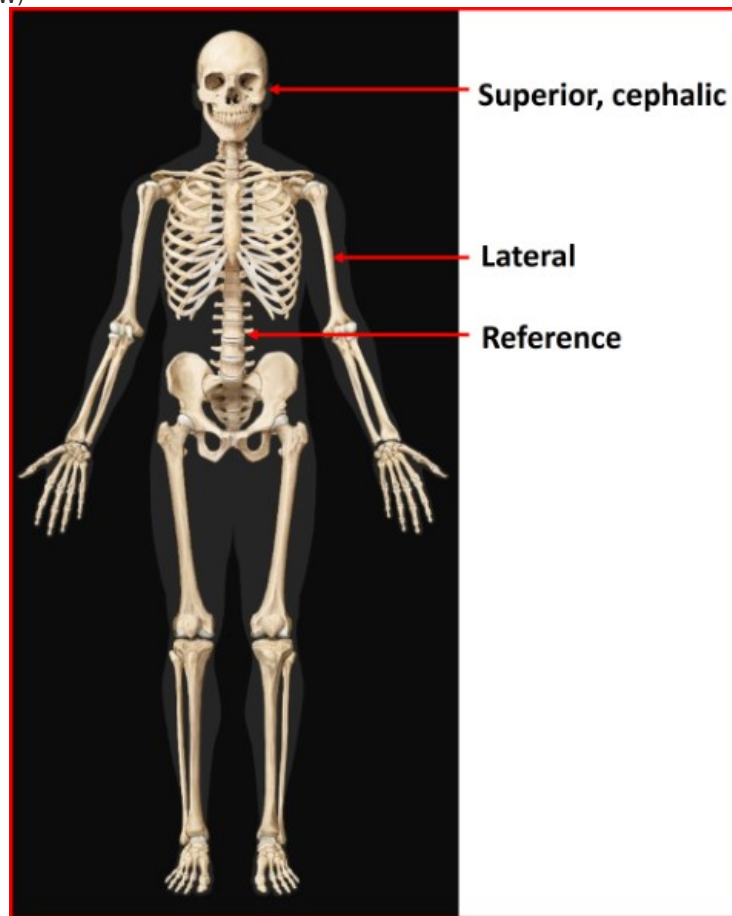
Describe the overall position of the virtual model that was used in this exercise.

The virtual model represented anatomical position, the standard reference for all anatomical directions, descriptions, and locations. The virtual model is standing upright with feet shoulder width apart, flat on the ground, and parallel with toes pointing forward. The upper limbs are held out slightly to each side with palms facing forward and thumbs pointing outwards.

How would have the results recorded in Photo 1 and Data Table 1 have differed if a lateral view of the virtual model was used for this exercise?

Using a lateral view of the virtual model would not have changed the results recorded in Photo 1 and Data Table 1 because all directional terms used to describe a body assume that the body is in anatomical position regardless of the actual position of the body.

Photo 1: Skeletal System Structure Position
(SAMPLE ANSWER BELOW)



Data Table 1: Respiratory System Structure Position
(SAMPLE ANSWER BELOW)

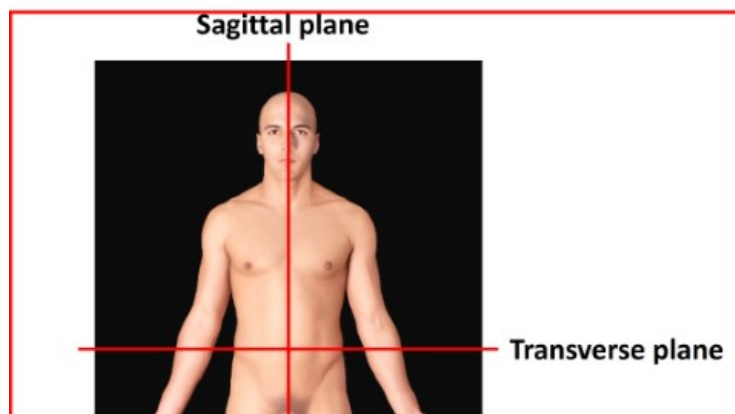
Structure	Relative position to trachea
Larynx	Superior, cephalic
Right lung	Lateral
Left lung	Lateral
Diaphragm	Inferior, caudal

Exercise 2

Which body plane line should be used to isolate the structures of the respiratory system that were viewed in Exercise 1? Explain your answer by referencing the body plane lines displayed in Photos 2 and 3.

The transverse body plane line displayed in Photo 2 should be used to isolate the structures of the respiratory system because the transverse line divides the body into upper and lower halves and because the respiratory structures reside in the upper half of the body.

Photo 2: Sagittal and Transverse Body Planes
(SAMPLE ANSWER BELOW)



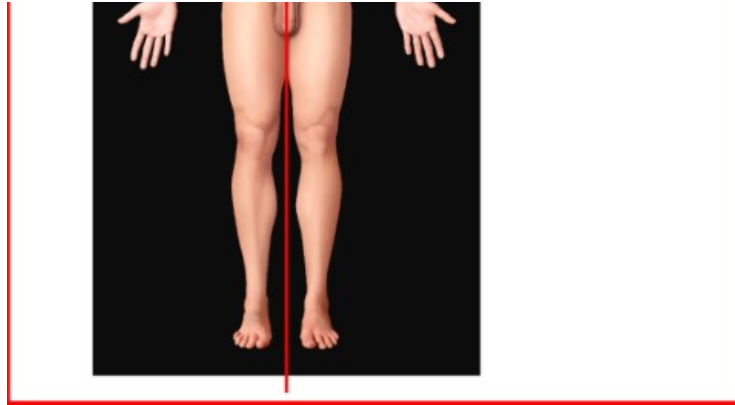
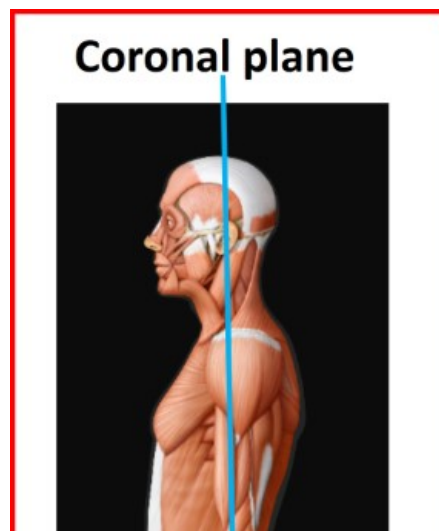
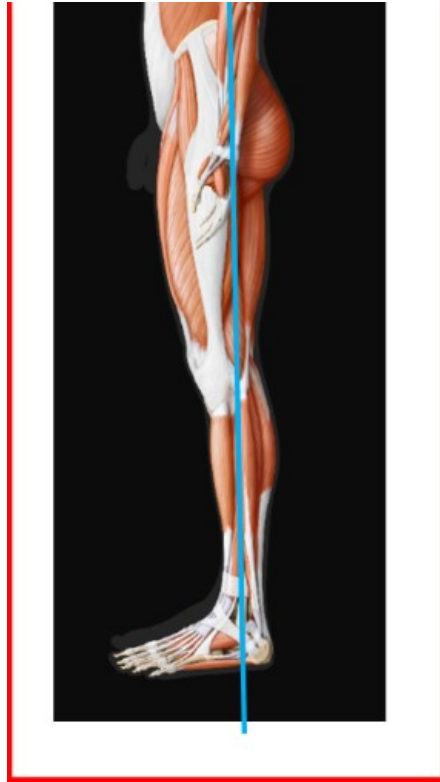


Photo 3: Coronal Muscular Model Plane
(SAMPLE ANSWER BELOW)





Data Table 2: Muscle Positions
(SAMPLE ANSWER BELOW)

Muscle	Relative position to coronal plane line
Greater pectoral	ventral
Latissimus dorsi	dorsal
Vastus lateralis	ventral

Exercise 3

Describe the boundaries of and structures contained within the thoracic cavity.

Photo 4: Thoracic Cavity
(SAMPLE ANSWER BELOW)

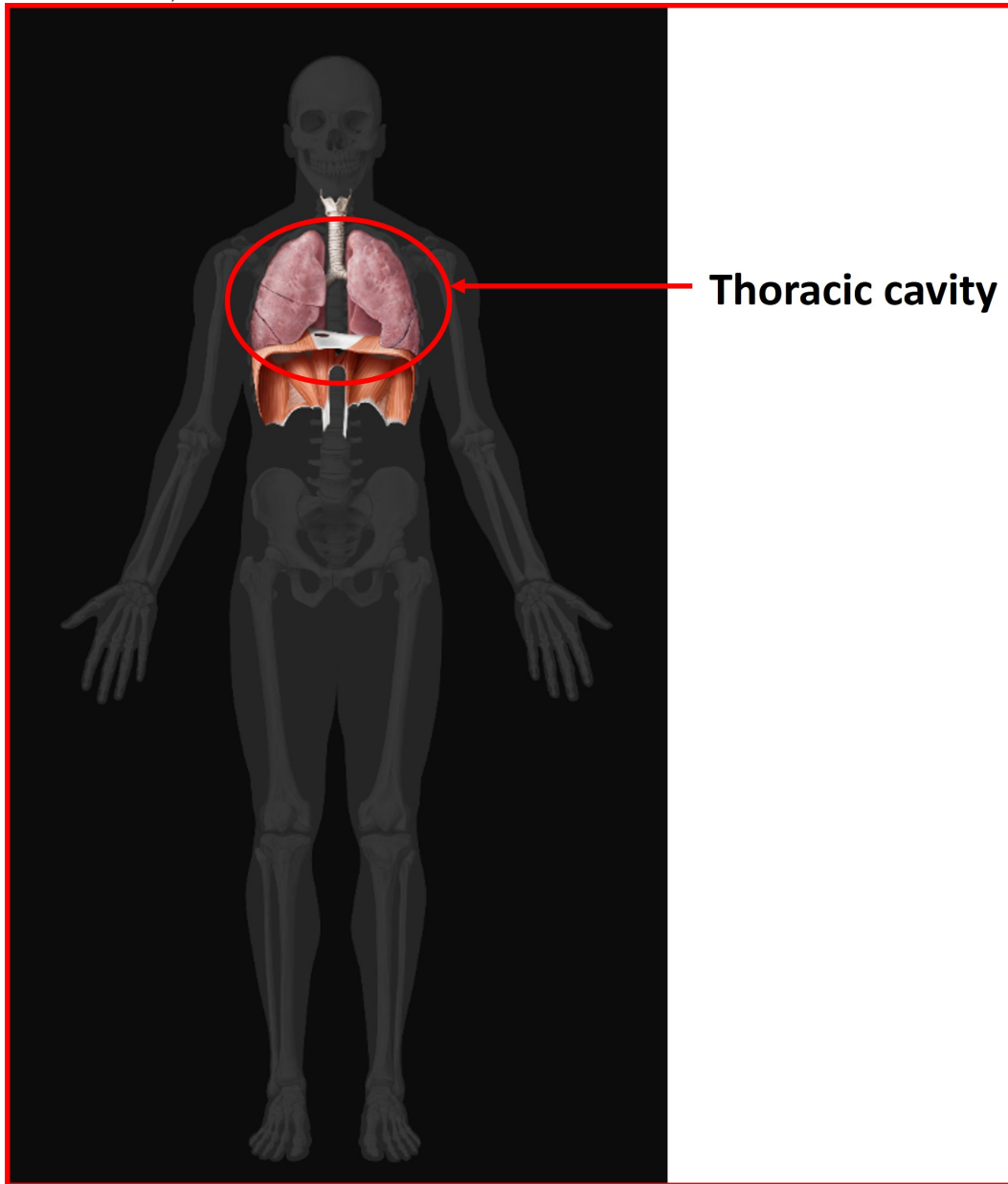
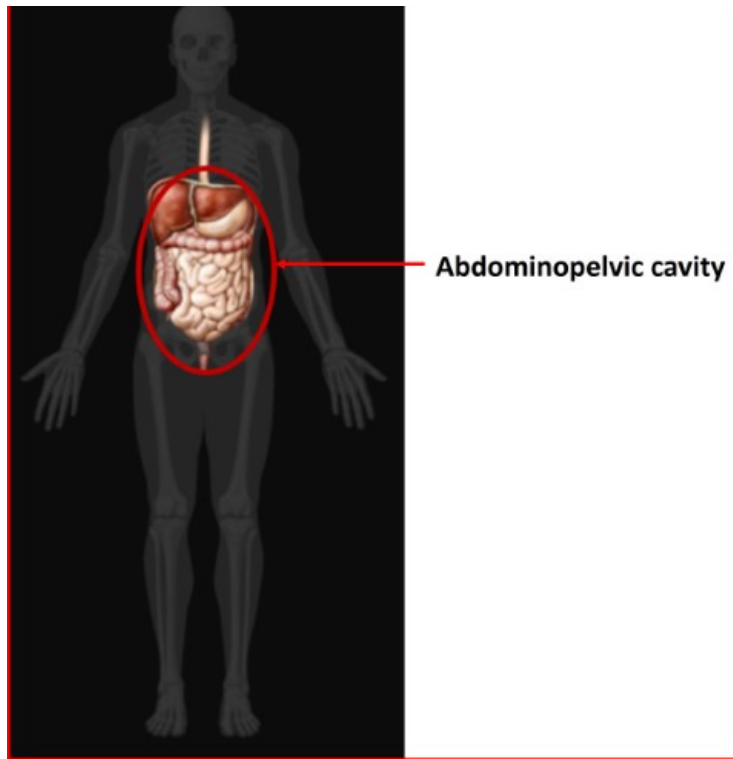


Photo 5: Abdominopelvic Cavity
(SAMPLE ANSWER BELOW)





Competency Review

The palms face ____ when in anatomical position.

- ☐ upwards
- ☒ forwards
- ☐ backwards
- ☐ downwards

____ means closer to the point of attachment to the body.

- ☐ Contralateral
- ☐ Distal
- ☒ Proximal
- ☐ Interior

The ____ plane divides the body into right and left sides.

- ☒ sagittal
- ☐ transverse
- ☐ coronal
- ☐ dorsal

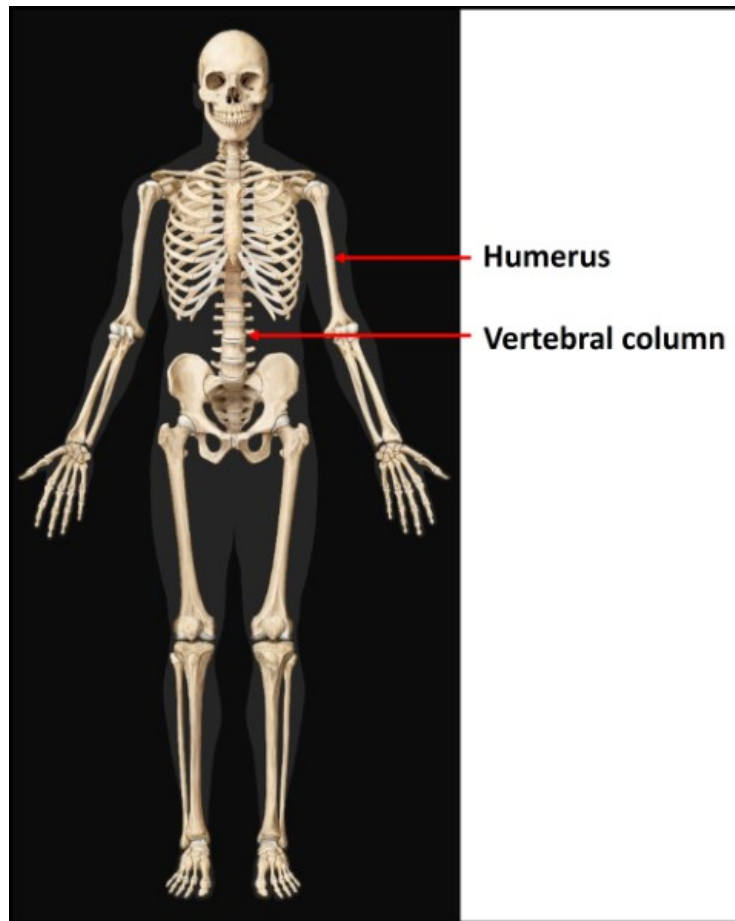
The ____ cavity houses the brain.

- ☐ pelvic
- ☐ vertebral
- ☐ pleural
- ☒ cranial

The ventral cavity includes the thoracic and abdominopelvic cavities.

- ☒ True
- ☐ False

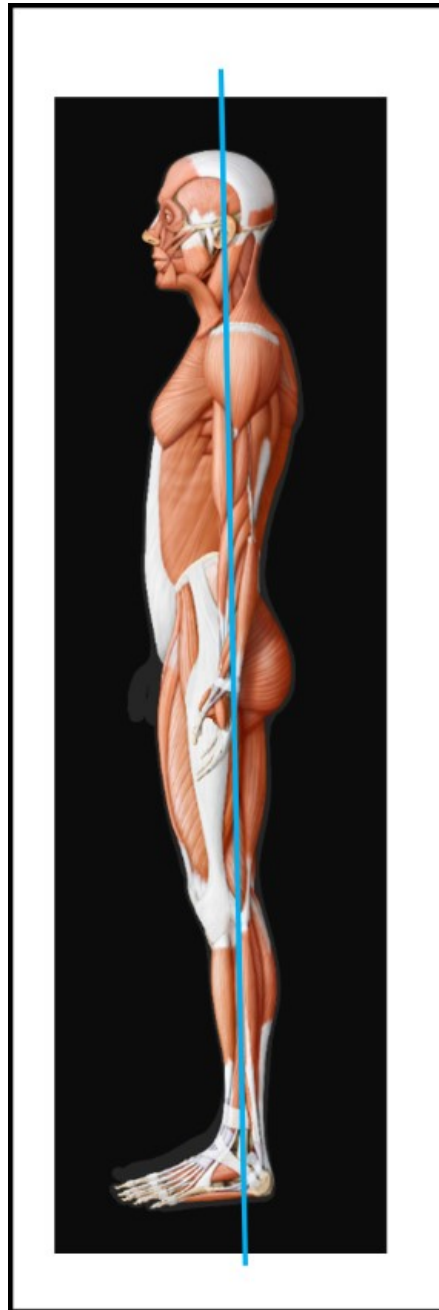
The humerus is ____ to the vertebral column in the image of the Virtual Model below.



- ☐ superior
- ☒ lateral
- ☐ cephalic
- ☐ inferior



The ____ plane is depicted in the blue line in the image of the Virtual Model below.



- ☐ transverse
- ☐ sagittal
- ☒ coronal
- ☐ distal



The thoracic cavity contains the ____.

- ☐ heart
- ☐ lungs
- ☐ trachea
- ☒ All of the above



Extension Questions

A medical resident performing a shift in the ER is provided with a report of an inbound trauma patient with a right lung residing in the abdominopelvic cavity. Apply your knowledge of body cavities and anatomical terminology to describe the movement of the lung during the accident. (SAMPLE ANSWER BELOW)

The lung has migrated caudally from the thoracic cavity (specifically the pleural cavity) where it normally resides through the diaphragm and into the abdominopelvic cavity.