



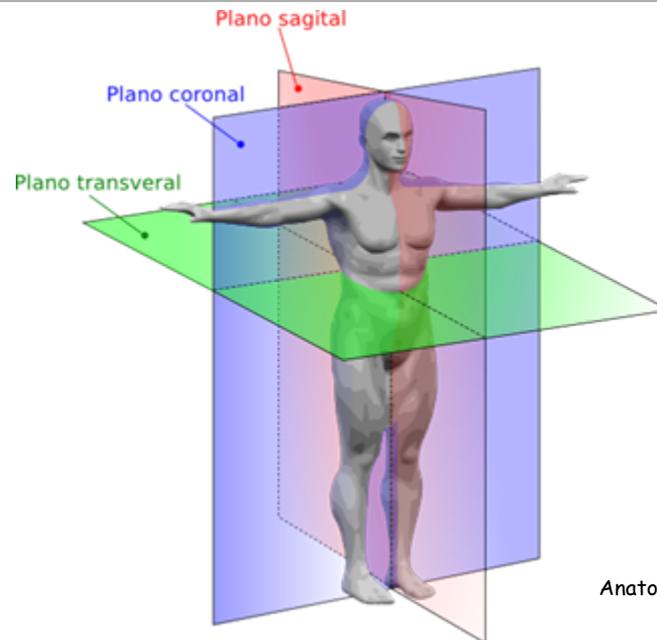
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- The SPO Virtual Classrooms offer many educational resources. These can include: lecture PowerPoints, practice test questions, review questions, video tutorials, sample assignments and course syllabi.
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- Images used on this resource and on the SPO website are, wherever possible, credited and linked to their source. Any words underlined and appearing in blue are links that can be clicked on for more information.
- Several helpful links to fun and interactive learning tools are included on the Smart Links slide, near the end of the PowerPoint
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Introduction to Anatomy and Physiology Lecture Series

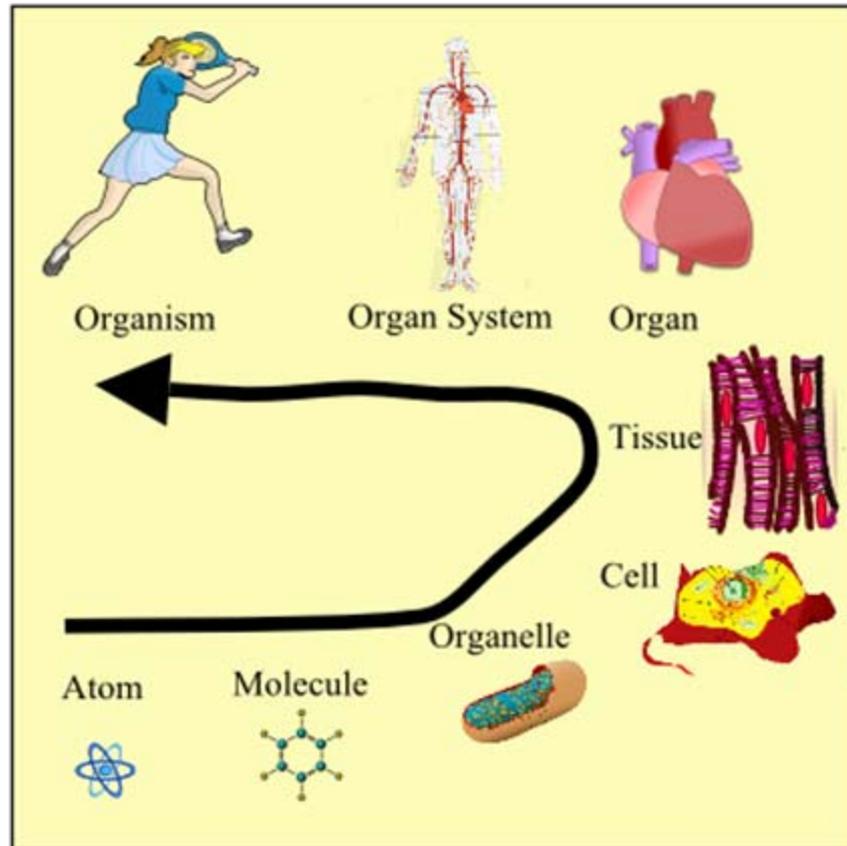


Anatomical Planes Twins.. [Wikioedia](#).

How do we visualize
the inside of the
body?

Anatomical Planes

How is the Human Body Organized? A Review



Levels of Organization

Organism- **human**

Organ system- **cardiovascular**

Organ- **heart**

Tissue- **atrium muscle**

Cell- **cardiac muscle cell**

Organelle- **mitochondria**

Molecule- **glucose**

Atom- **carbon**

Gross Anatomy vs. Microscopic Anatomy



Image: Skeleton,
[wikimedia](#)

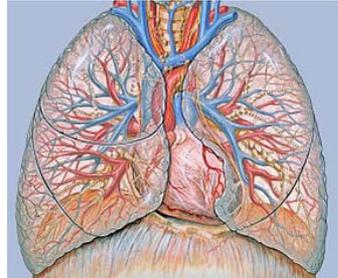


Image: Lung anatomy,
Patrick J. Lynch [wikimedia](#)

- Gross Anatomy is the study of **Large Structures** in a body
- In Gross anatomy you study structures that are visible to the unaided eye.



Image: Red Blood Cells,
[wikimedia](#)

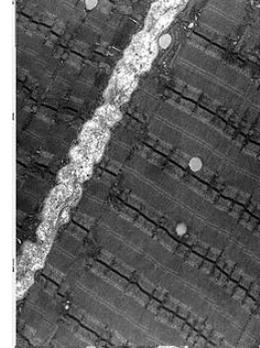


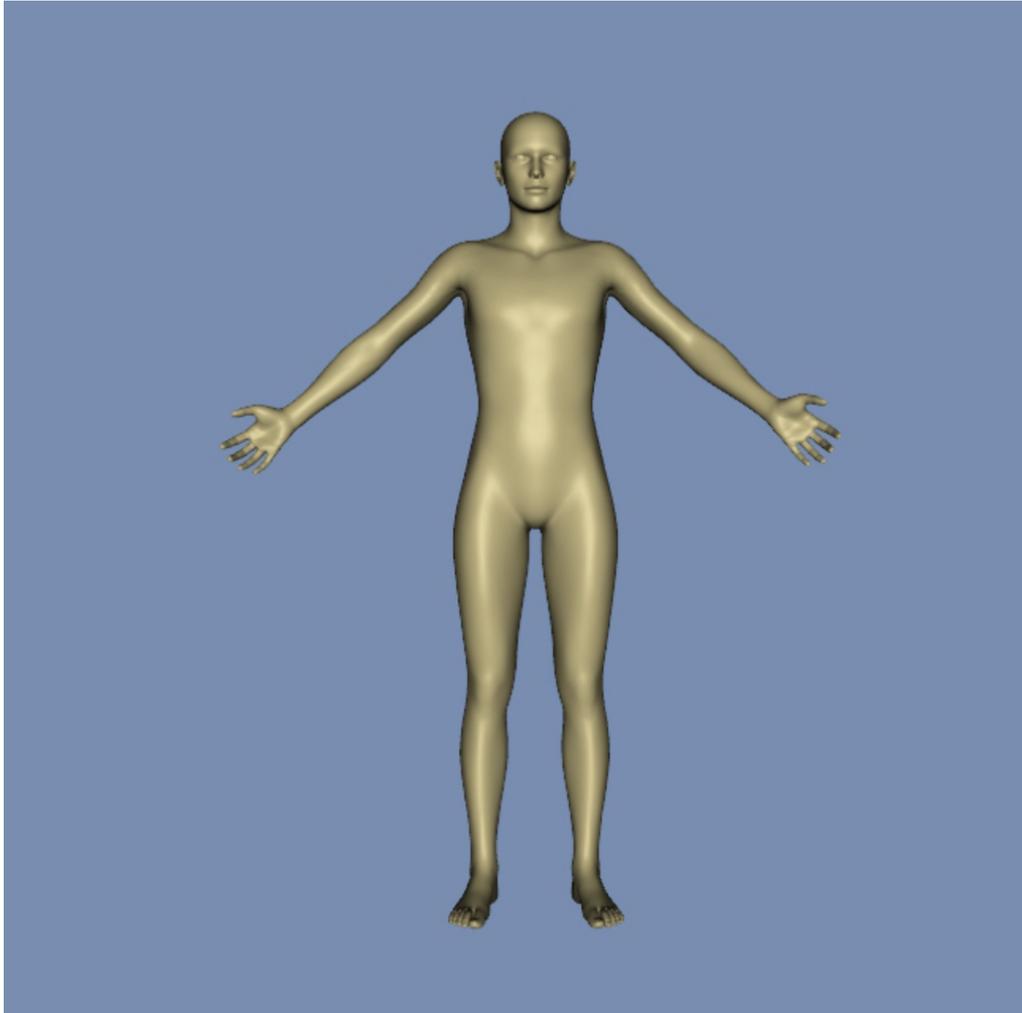
Image: muscle tissue, Louisa Howard, [wikimedia](#)

- Microscopic Anatomy is the study of structures that can be seen only with a magnifying device.
- Studying cells is called **cytology** and **histology** is the study of tissues.

Which levels of organization are studied during gross anatomy?

This lecture will focus on **Gross Anatomy**

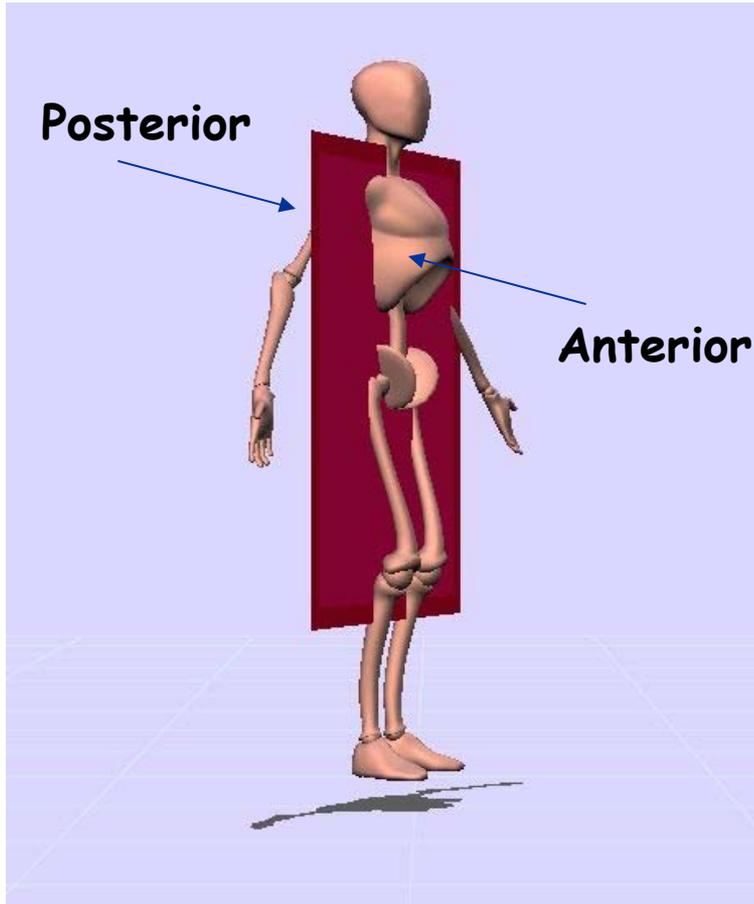
Anatomical Position



Notice that the **feet** are aligned with the **hips**.

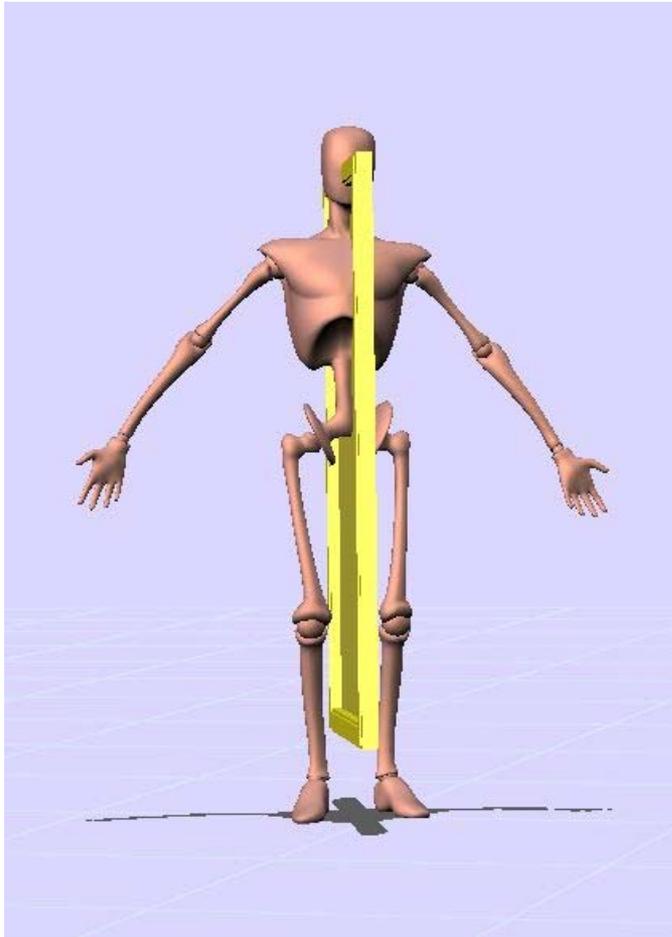
Arms are lifted away from the hips with **palms forward** and **thumbs up**.

Frontal Plane



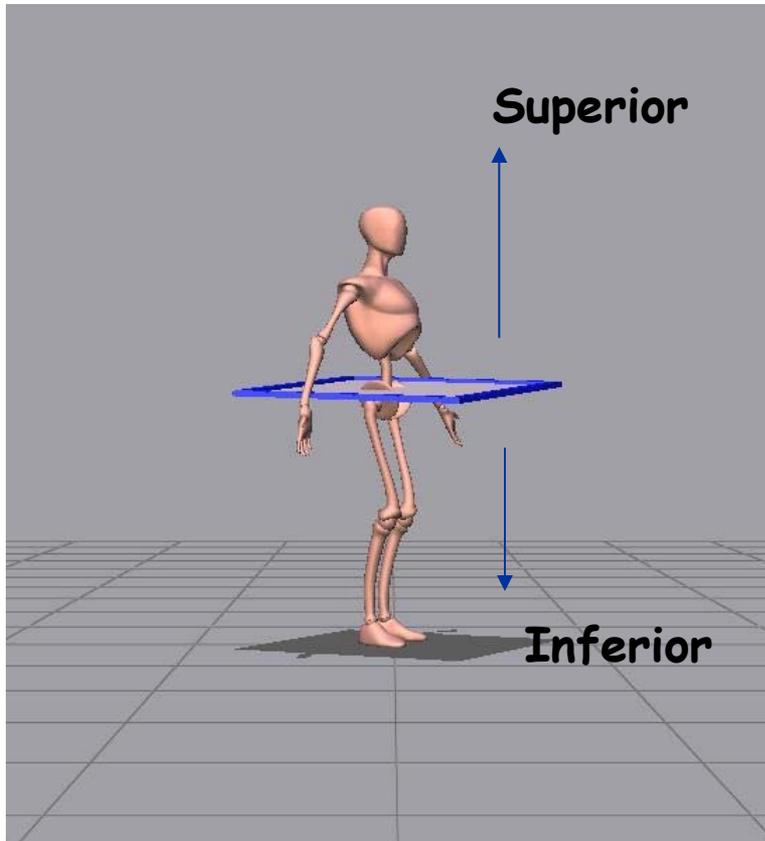
- This plane divides the body into two pieces, the front and back sides or the **anterior** and the **posterior** sides.
- This can also be called the **coronal plane**

Sagittal plane



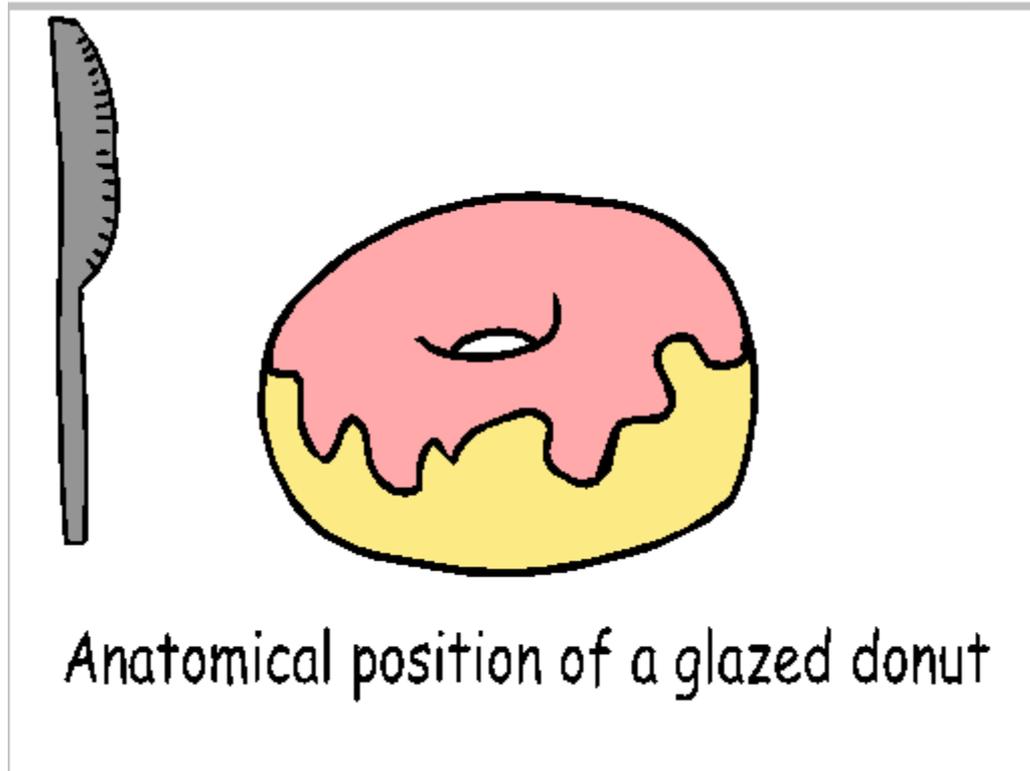
- The sagittal plane divides the body into right and left sides. If the plane is in the center of the body it is called the **Mid-sagittal plane**.
- Sagittal planes away from center are called **parasagittal**

Transverse Plane

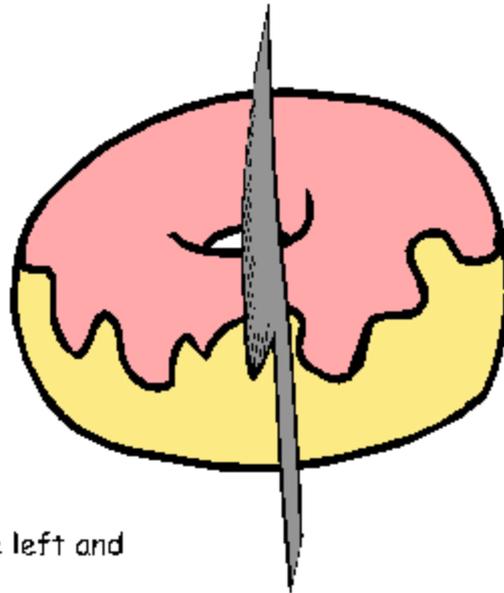


- This is also called a **cross-section**
- It divides the body into upper and lower sections or **superior** and **inferior** sections

Dissection of a donut



Which plane is being cut?

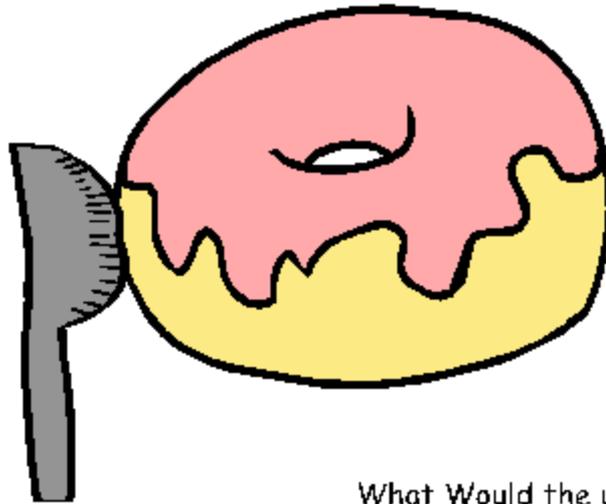


Sagittal

What Would the left and right sides of the donut look like?

Anatomical Planes

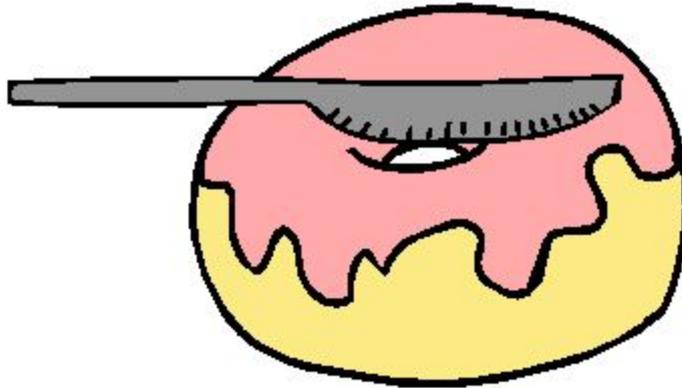
Which plane is being cut?



Transverse

What Would the upper and lower halves of the of the donut look like?

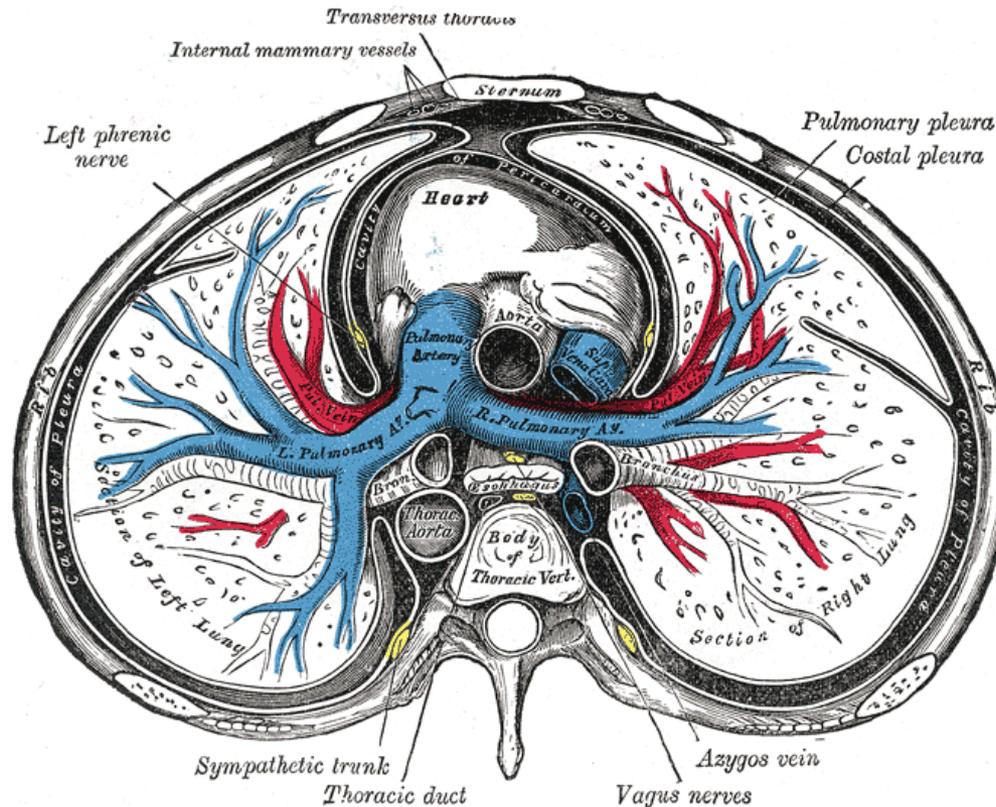
Which plane is being cut?



Frontal

What Would the front and back sides of the donut look like?

Which plane was used for this diagram?



Transverse

Which plane was used for this MRI?



Mid-sagittal



Smart Links

These links can help you review or learn more about this topic

- Animated quiz on the body planes

http://www.wiley.com/college/apcentral/anatomydrill/t01/at0107_1.htm

- Animated slides on body planes and abdominal regions

<http://www.wisc-online.com/objects/ViewObject.aspx?ID=AP15605>

- Video animations on anatomical planes, directions, and regions

<http://www.youtube.com/watch?v=vhBRo1cMocA&feature=related>

(You must be in PPT slideshow view to click on links.)