

Marcello Cherchi's notes for Gross Anatomy

Significant structures and landmarks at various vertebral levels and rib levels

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(Please let me know of any errors!)

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References:

CL = CLEMENTE, Carmine, *Anatomy: A Regional Atlas of the Human Body*, 4th ed. Baltimore: Williams & Wilkins, 1997.

MA = MOORE, Keith L. and Anne M. R. AGUR, *Essential Clinical Anatomy*. Baltimore: Williams & Wilkins, 1995.

NE = NETTER, Frank H., *Atlas of Human Anatomy*, 2nd ed. East Hanover, New Jersey: Novartis, 1998.

Also see:

The M1 home page for anatomy: http://www2.uic.edu/stud_orgs/prof/M1/

When a structure occupies several levels, it is only listed under the most superior and most inferior levels.

In the following table, "X.5" indicates the level of the intervertebral disc between vertebra number X and the subjacent vertebra.

Levels	Landmarks and structures
Tv 1	Sternoclavicular joint
Tv 2	Superior angle of the scapula (MA 286).
Tv 3	Base of spine of scapula (MA 286).
Tv 4	
Tv 4.5	<ul style="list-style-type: none">• Sternal angle (of Louis) (MA 54).• Division between the superior and inferior mediastinum (MA 68).• Arch of the aorta lies above this level, ascending and descending aorta lie below this level.• Trachea bifurcates into primary bronchi.
Tv 5	Body of sternum from Tv5-Tv9.
Tv 6	
Tv 7	Inferior angle of the scapula (MA 286).
Tv 8	<ul style="list-style-type: none">• Accessory hemiazygos v. (if present) traverses vertebral column (according to Dr. Lieska).• Caval hiatus in diaphragm.

Tv 9	<ul style="list-style-type: none"> • Xyphisternal junction. • Hemiazygos v. (if present) traverses vertebral column (according to Dr. Lieska). • Body of sternum from Tv5-Tv9.
Tv 10	Esophageal hiatus in diaphragm.
Tv 11	
Tv 12	<ul style="list-style-type: none"> • Aortic hiatus in diaphragm. • Celiac trunk branches off abdominal aorta. • Kidneys span from Tv12 to Lv3.
Lv 1	<ul style="list-style-type: none"> • Transpyloric plane (MA 116; CL 3) passes through the pylorus of the stomach. It is about halfway between the suprasternal notch and the superior border of the pubic symphysis. It is also about halfway between the xyphoid process and the umbilicus. • Superior mesenteric a. branches off abdominal aorta. • First and fourth parts of duodenum (NE 251). • Right crus of diaphragm attaches to Lv1-Lv3. Left crus of diaphragm attaches to Lv1-Lv2. • Hilum of left kidney (MA 125).
Lv 2	Second part of duodenum.
Lv 3	<ul style="list-style-type: none"> • Inferior mesenteric a. branches off abdominal aorta. • Kidneys span from Tv12 to Lv3. • Third part of duodenum.
Lv 3.5	Umbilicus
Lv 4	Abdominal aorta branches into common iliac aa.
Lv 4.5	Common iliac vv. join and form the inferior vena cava.
Lv 5	
Sv 1	
Sv 2	
Sv 3	Transition between colon and rectum.
Sv 4	
Sv 5	

In the following table, “X.5” indicates the intercostal space between rib number X and the subjacent rib.

Rib	Landmarks and structures
1	
1.5	
2	Sternal angle (of Louis)
2.5	
3	Pulmonary valve at left sternochondral joint.
3.5	Aortic valve at left part of sternum.
4	Mitral valve at left sternochondral joint.
4.5	Tricuspid valve behind midline of sternum.
5	
5.5	
6	Inferior border of lung at midclavicular line.
6.5	
7	
7.5	
8	Inferior border of pleura at midclavicular line. Inferior border of lung at midaxillary line.
8.5	
9	
9.5	
10	Inferior border of pleura at midaxillary line. Inferior border of lung at midscapular line.
10.5	
11	Left kidney extends superiorly above the 11th rib. Right kidney is a bit lower (due to the liver) and extends superiorly up to the 11th rib (CL 229; NE 312).
11.5	
12	Inferior border of pleura at midscapular line.
12.5	