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Cardiorespiratory Anatomy

Dr Majid Homiedan

What determines BLACK ▫GREY▫ WHITE?

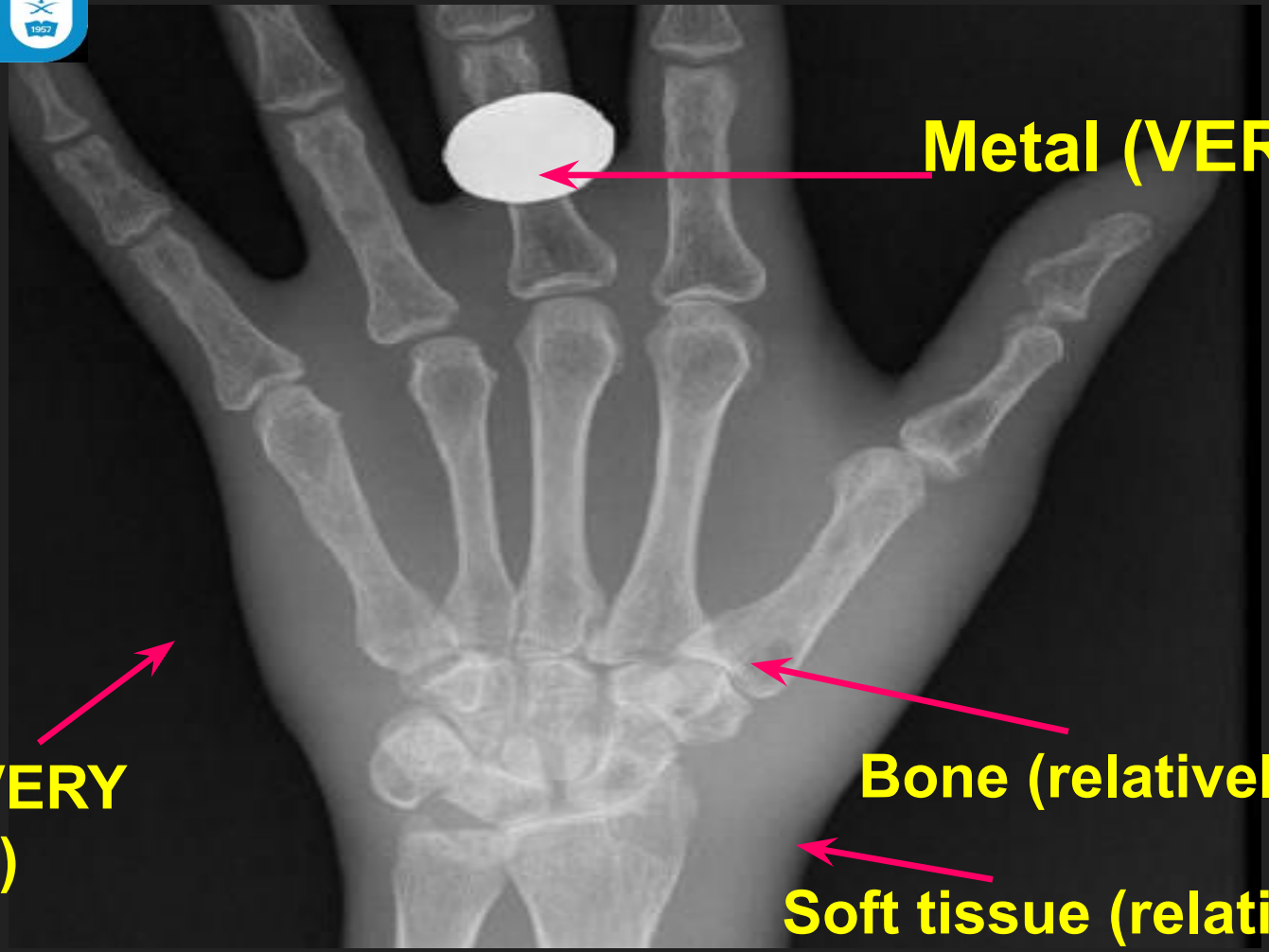
Atomic # n and path length

Lead Metals Bone Muscle Blood Liver Fat Air

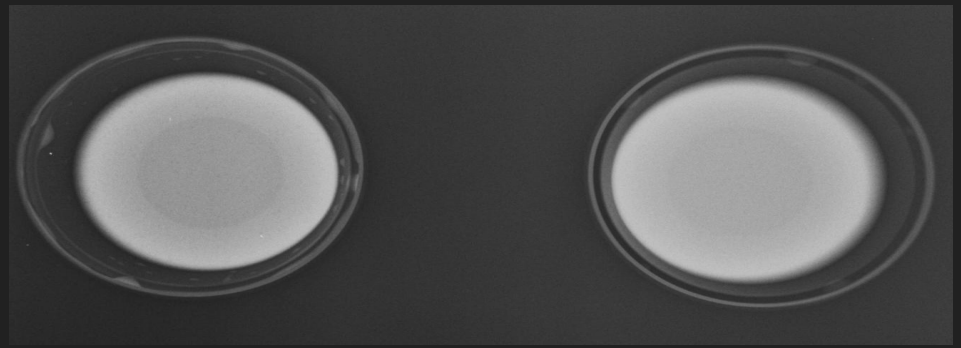
WHITE:
Radioopaque;
“More”
Like Meta

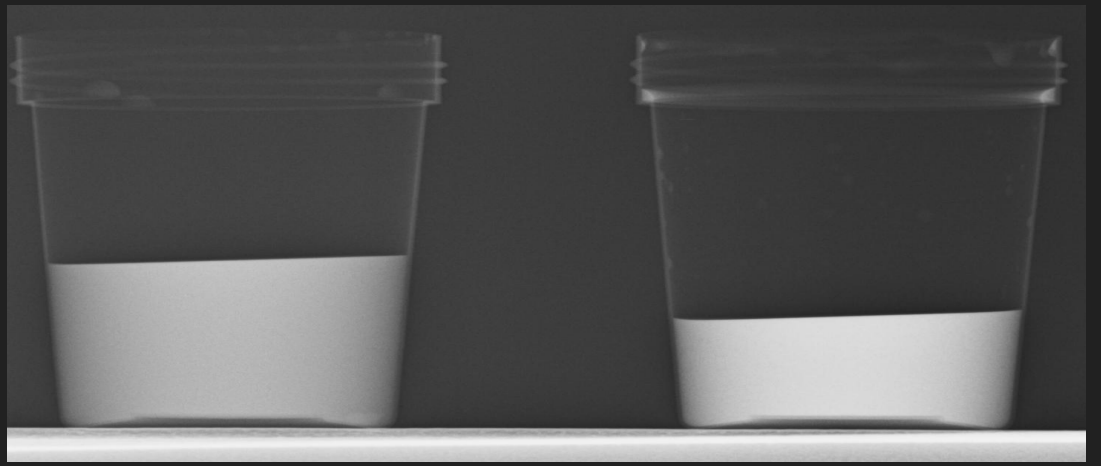
BLACK :
Radiolucent;
“Less”
Like Air

Schematic derived from Squires Fundamentals of Radiology- Sixth Edition

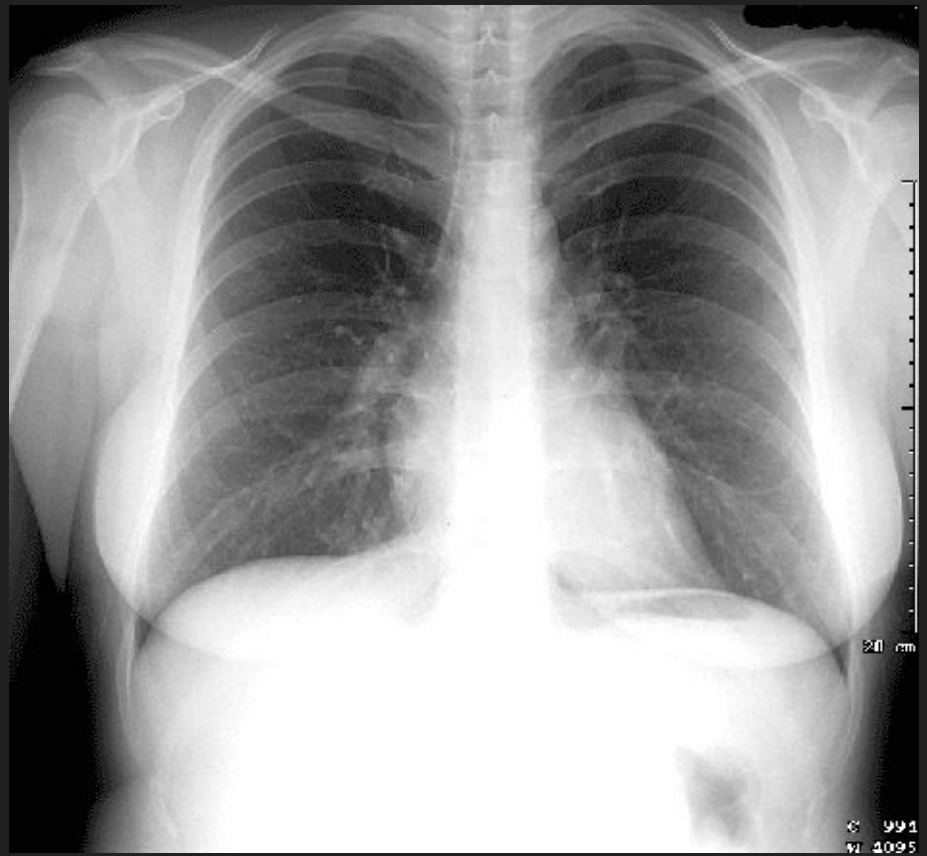

Metal (VERY white)
Air (VERY black)
Bone (relatively white)
Soft tissue (relatively gray)

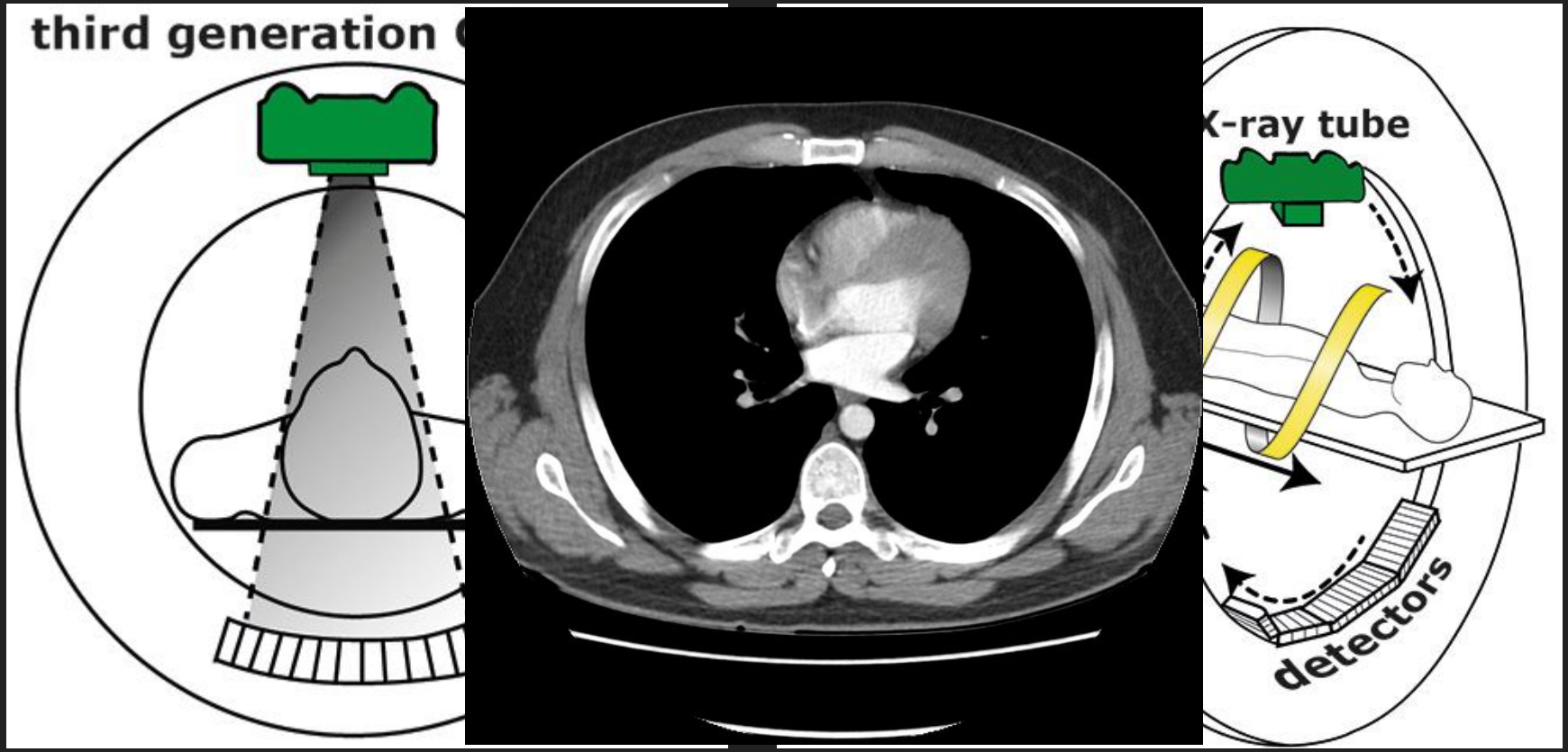
“ONE View is NO View”





Always read together




third generation
X-ray tube
detectors

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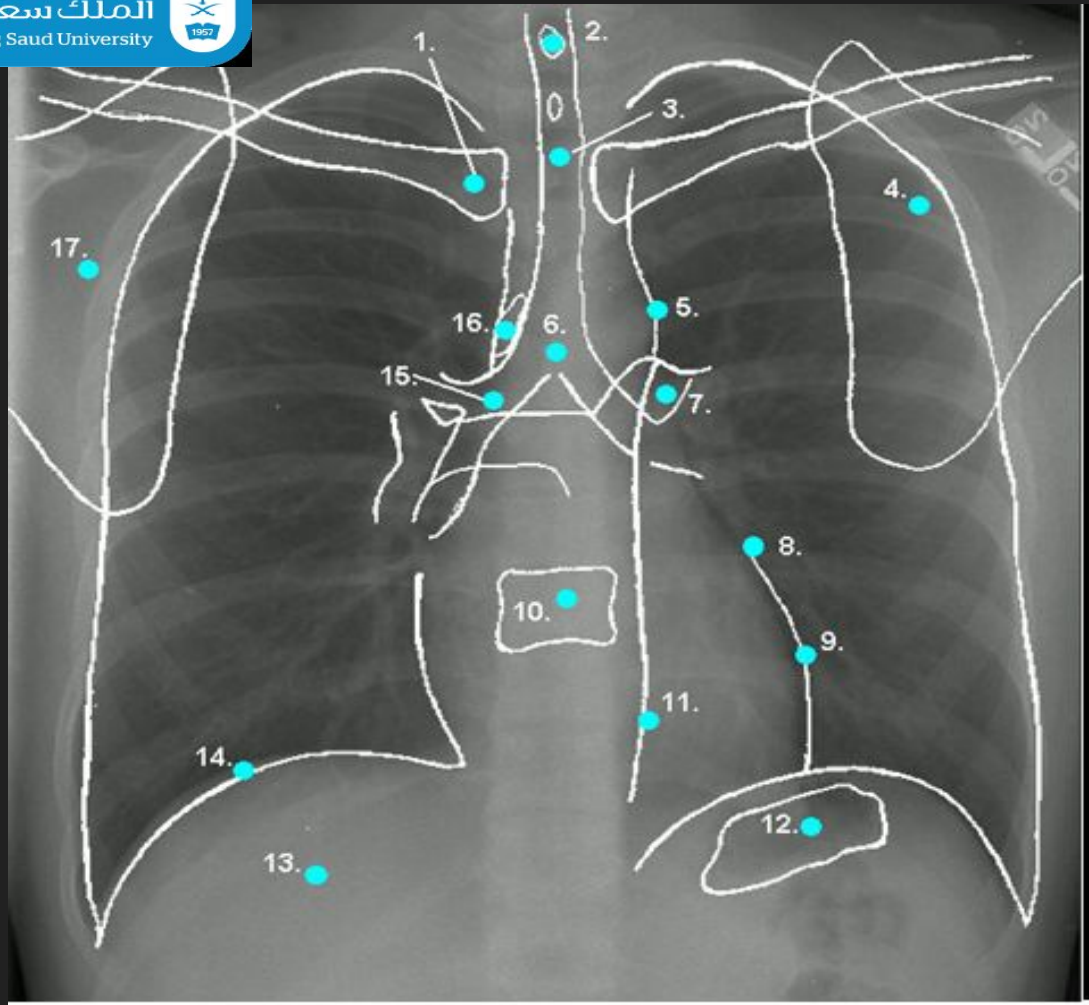
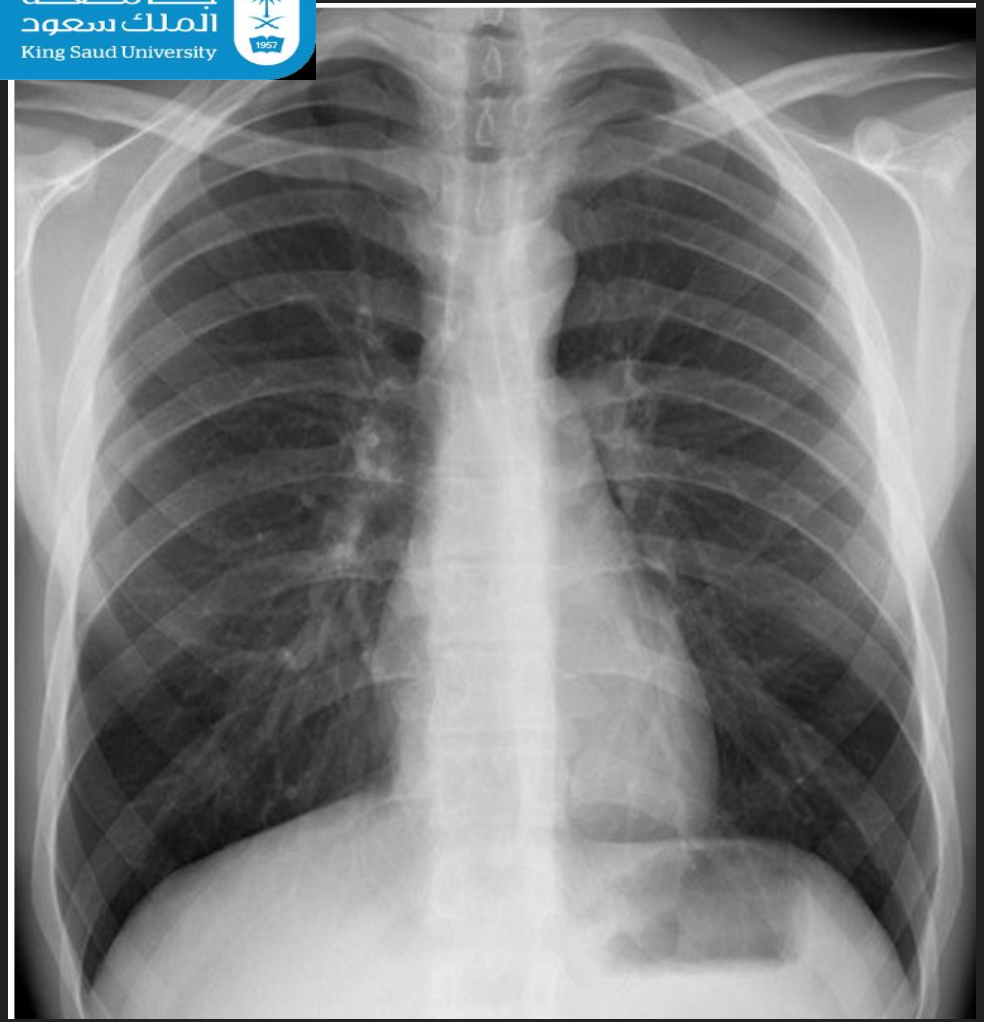
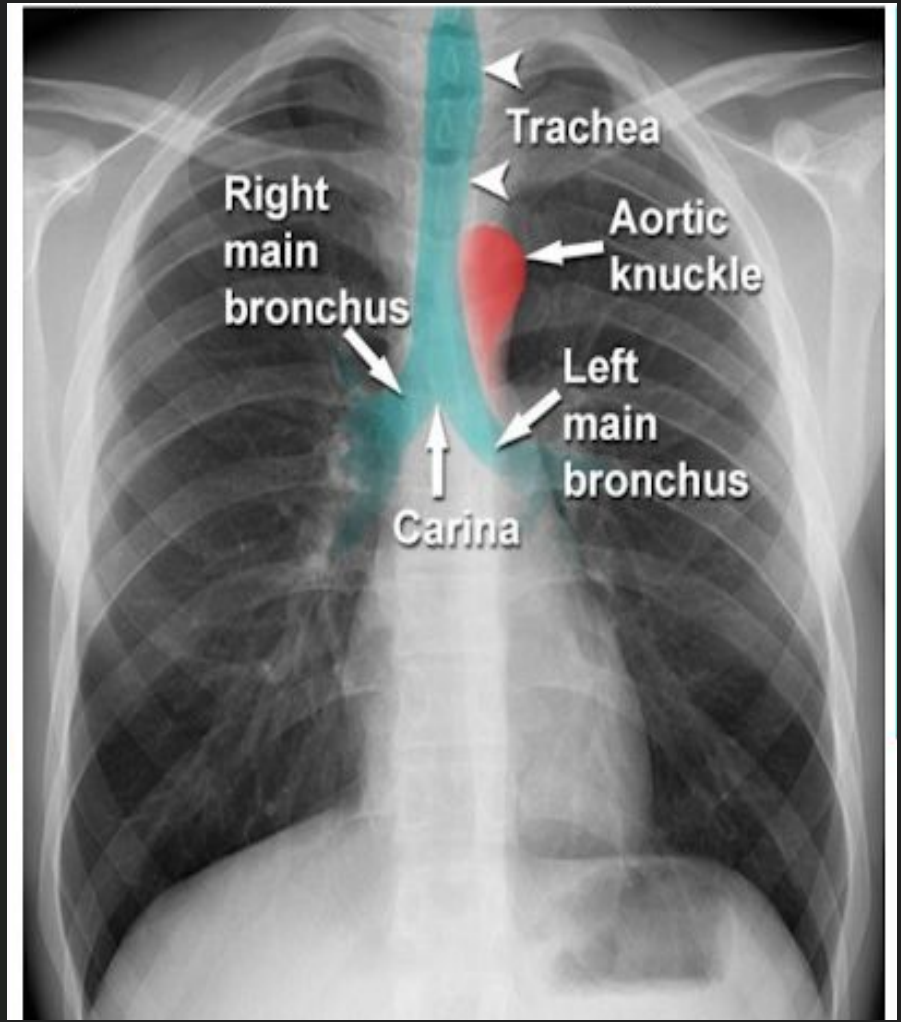
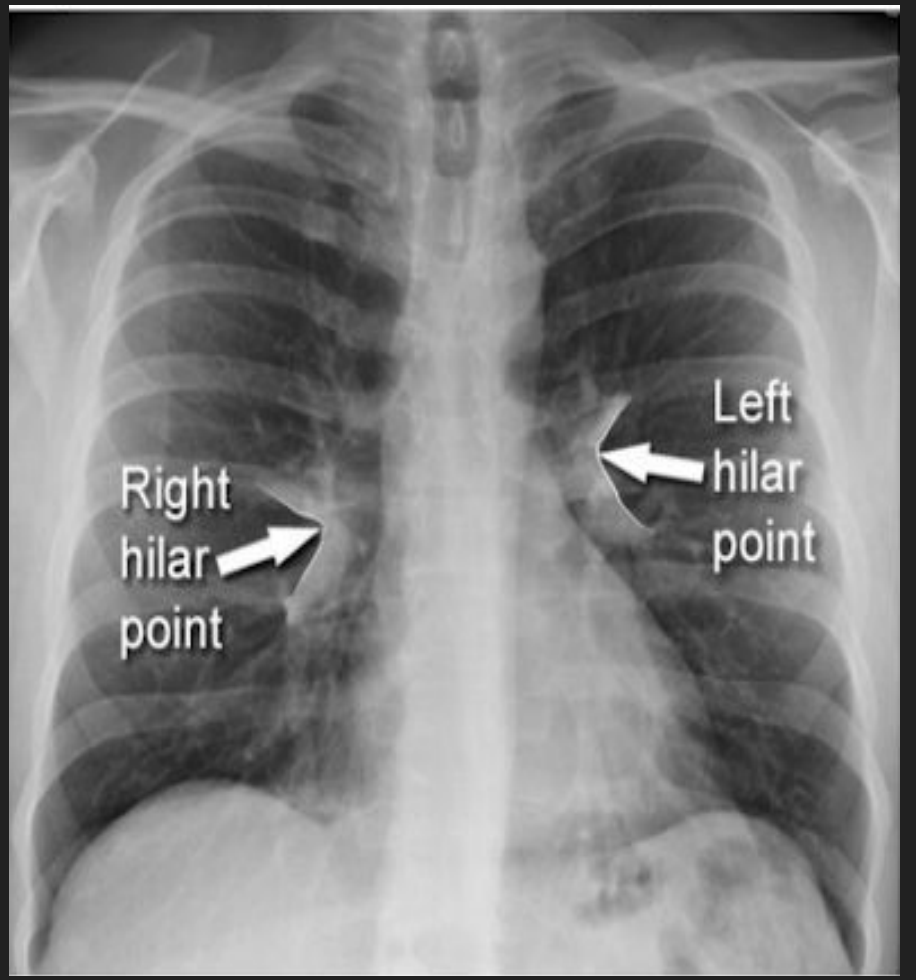
CT Chest anatomy

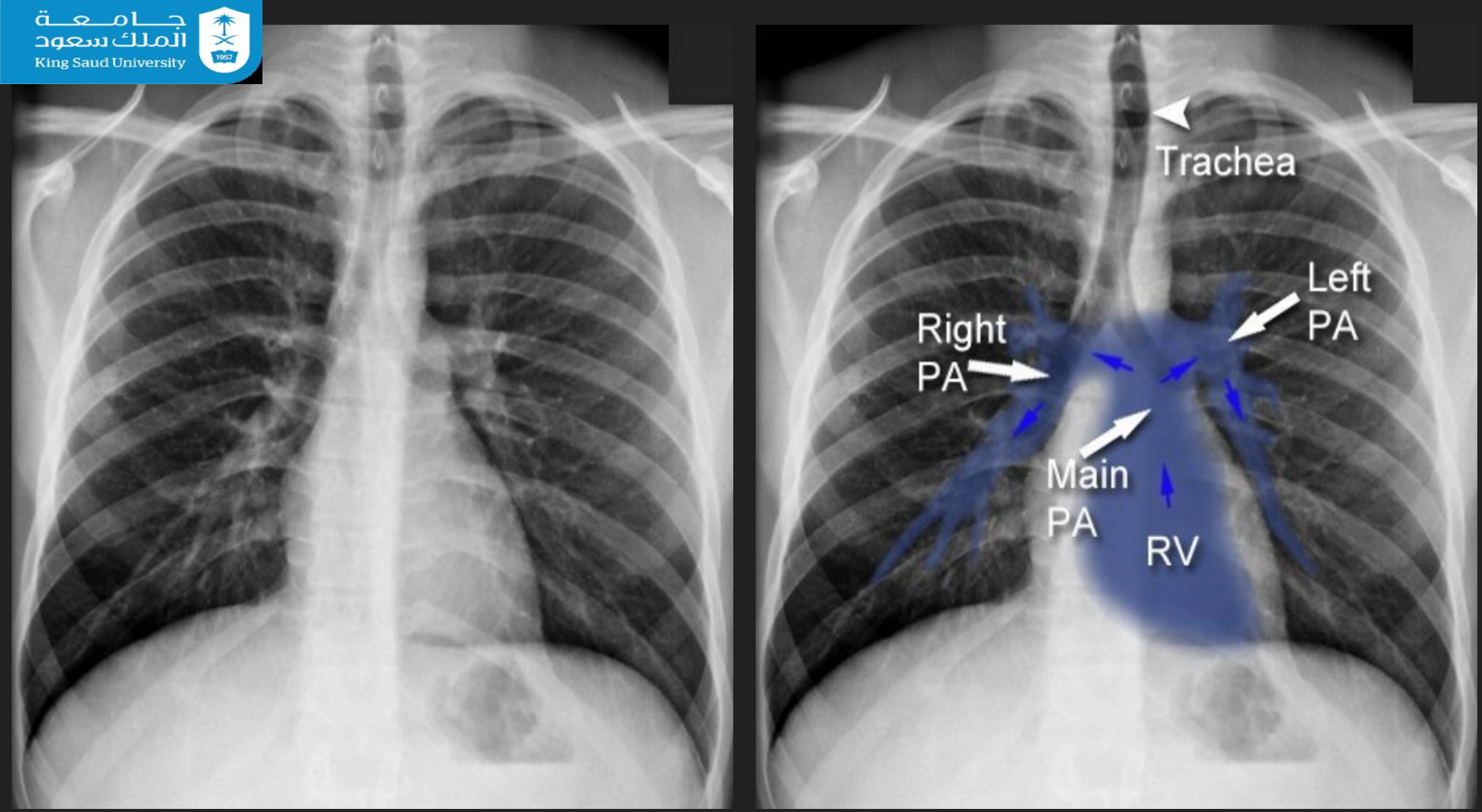


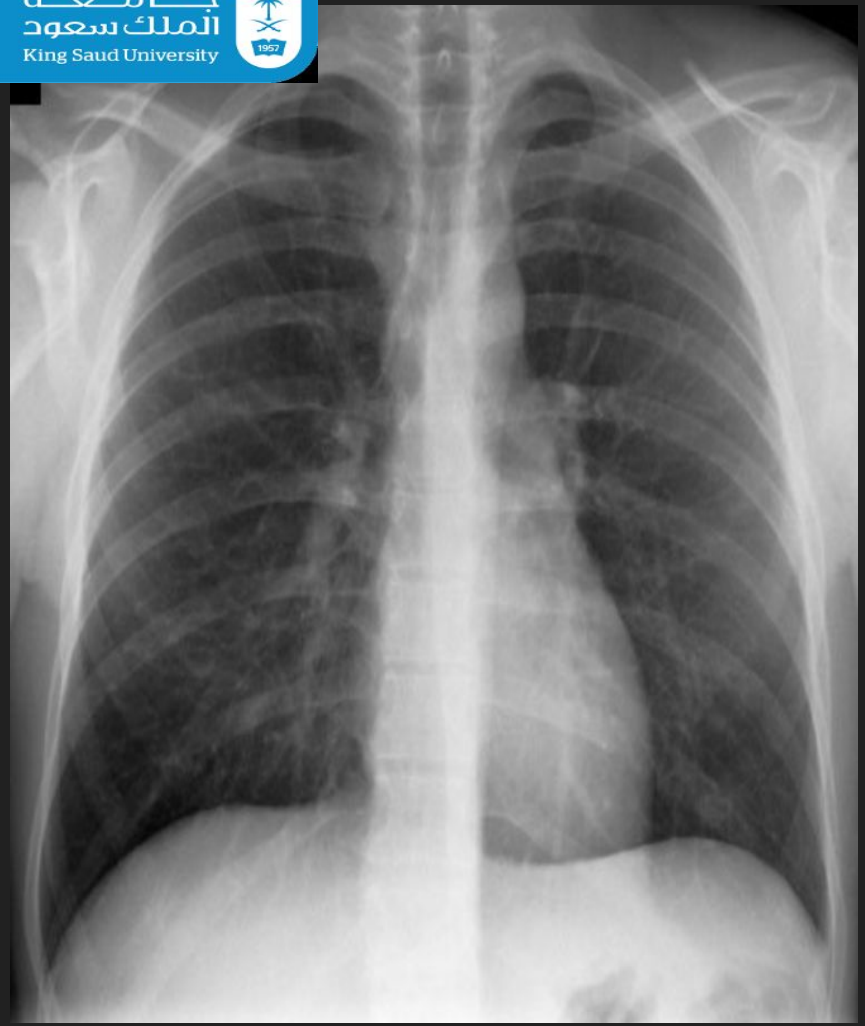
1- Clavicle
2- Spinous process
3- Trachea
4- Scapula
5- Aortic arch
6- Carina (bifurcation)
7- Pulmonary trunk
8- Lt. cardiac border (atria)
9- Lt. cardiac border (ventricle)
10- Vertebral body
11- Descending Aorta
12- Gastric fundus
13- Liver
14- Rt. Hemi-diaphragm
15- Rt. Main bronchus
16- Azygos vein
17- Scapula

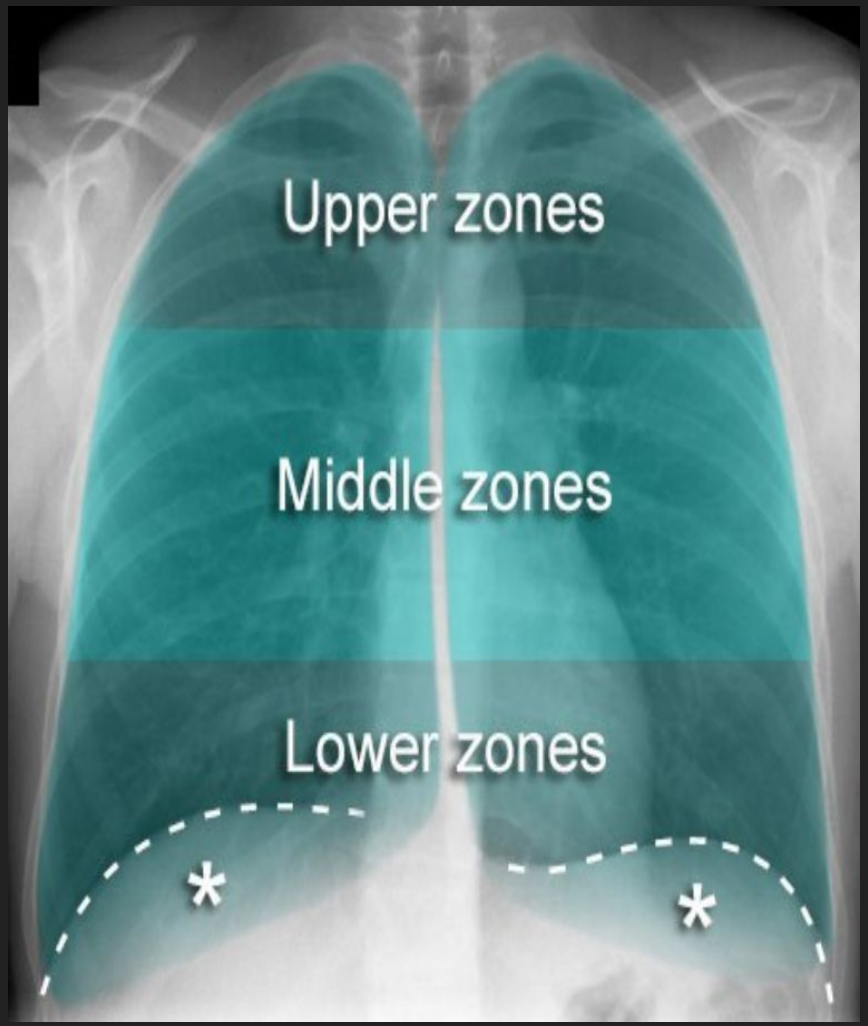


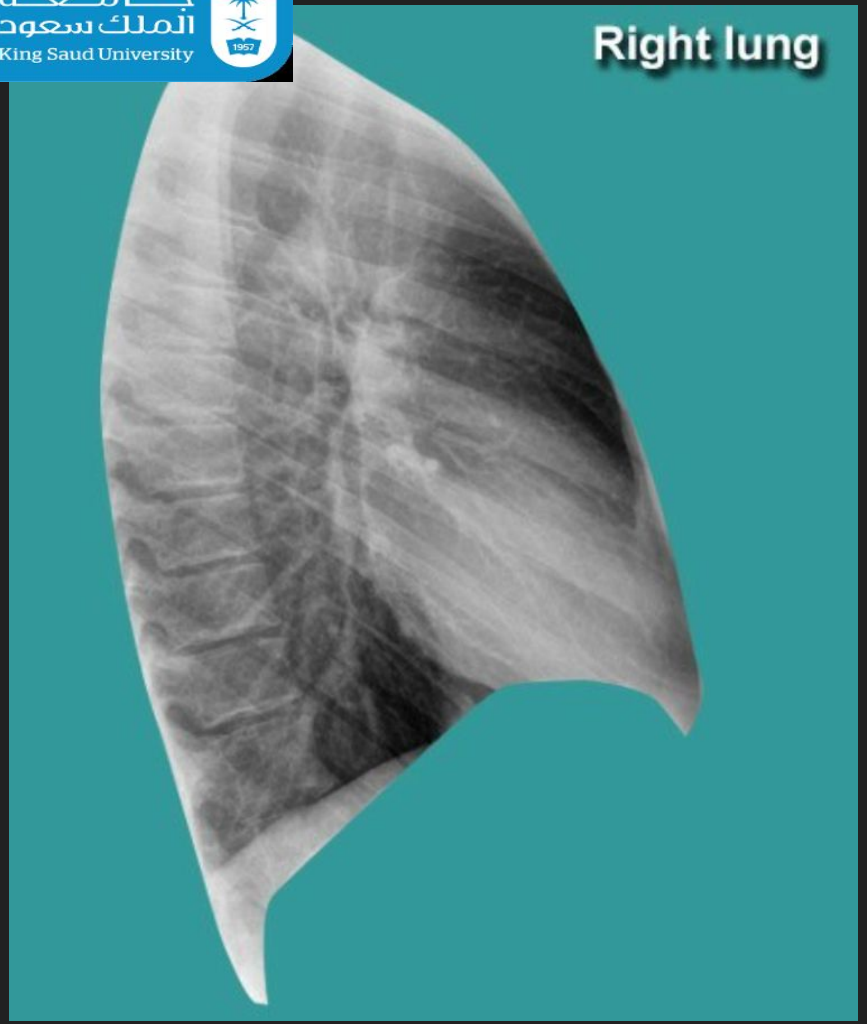


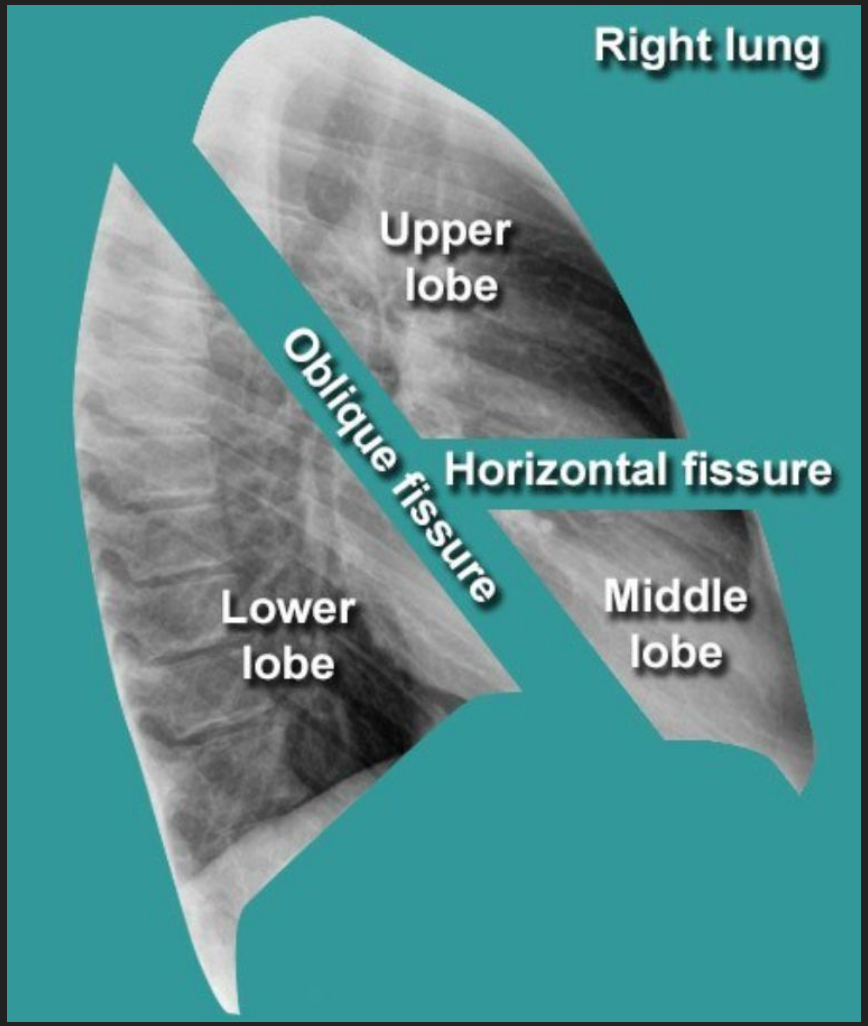


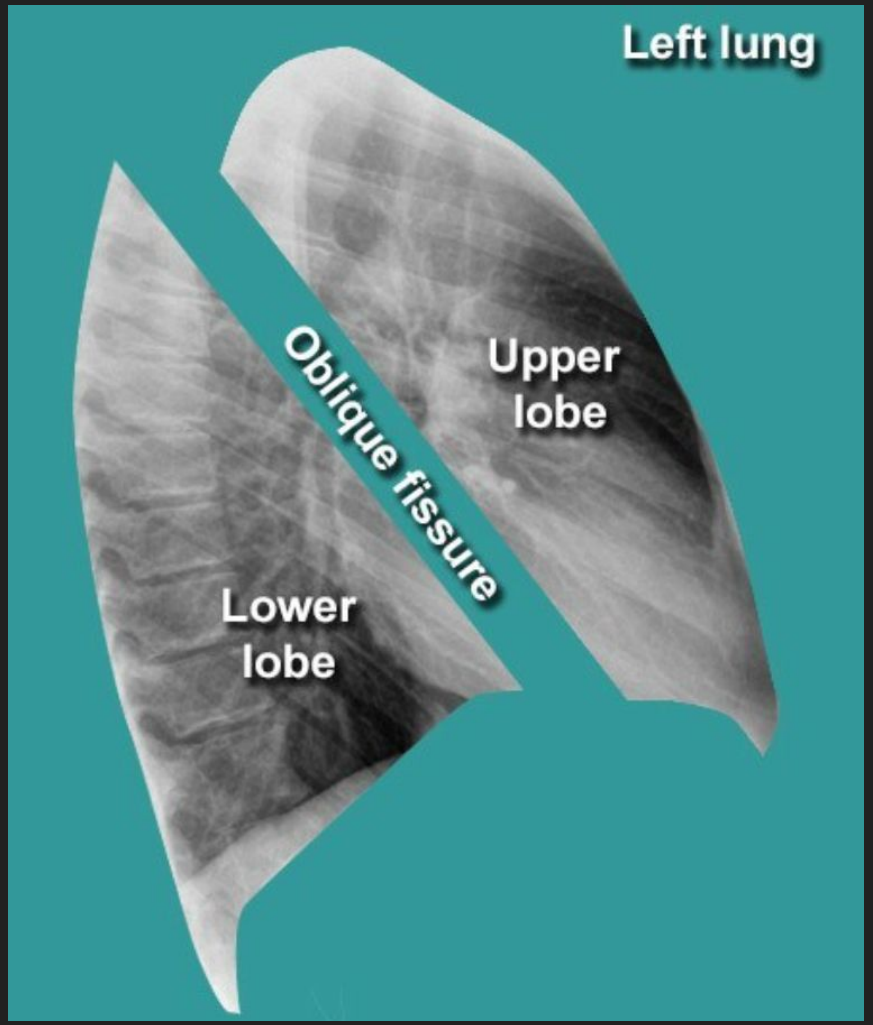

Trachea
Left
PA
Right
PA
Main
PA
RV

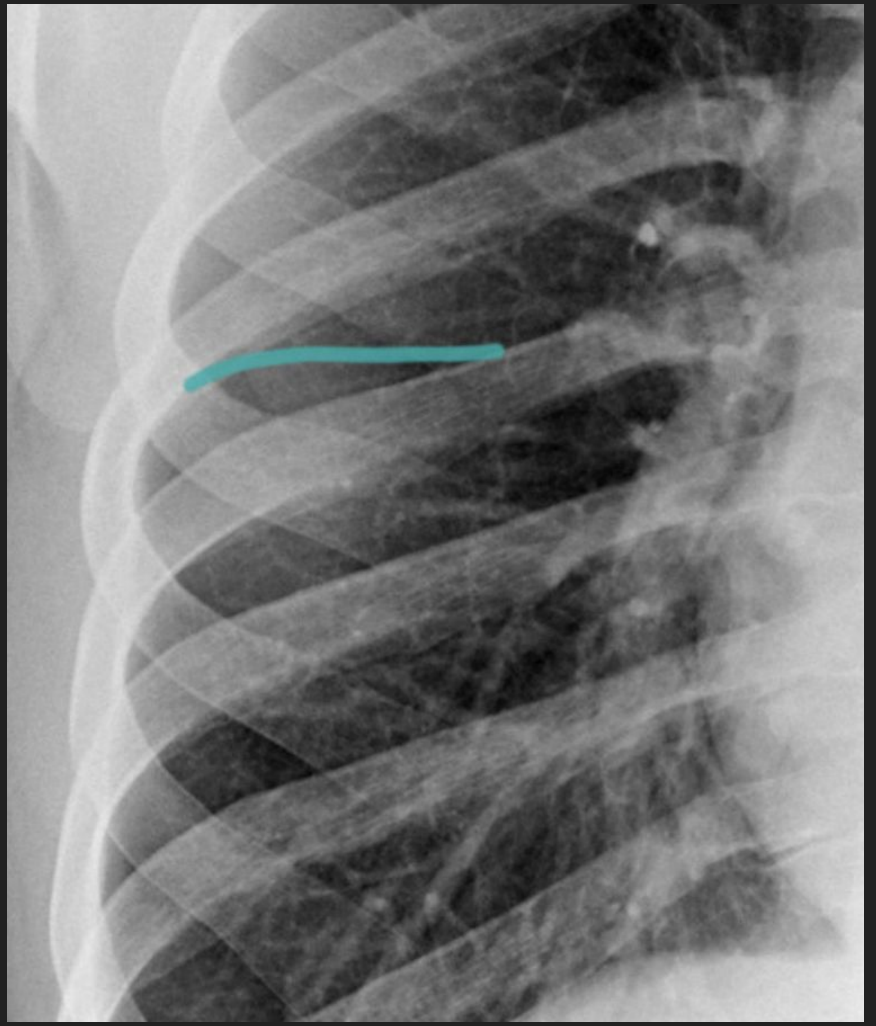


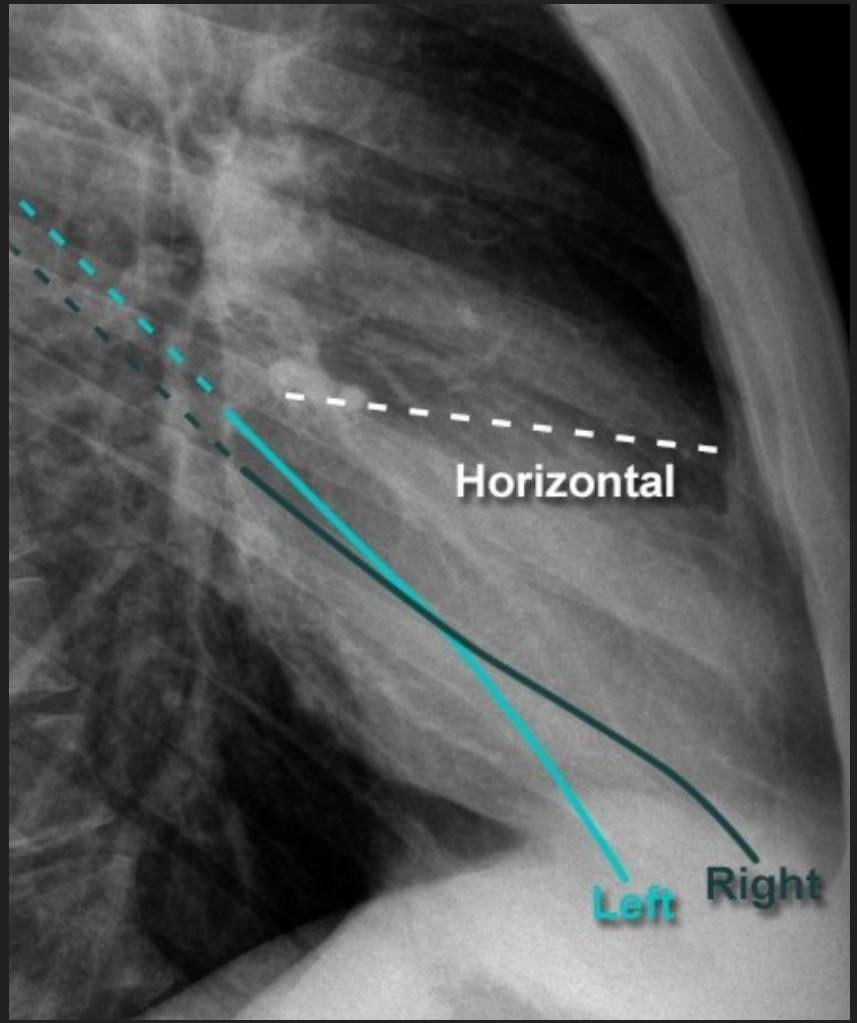


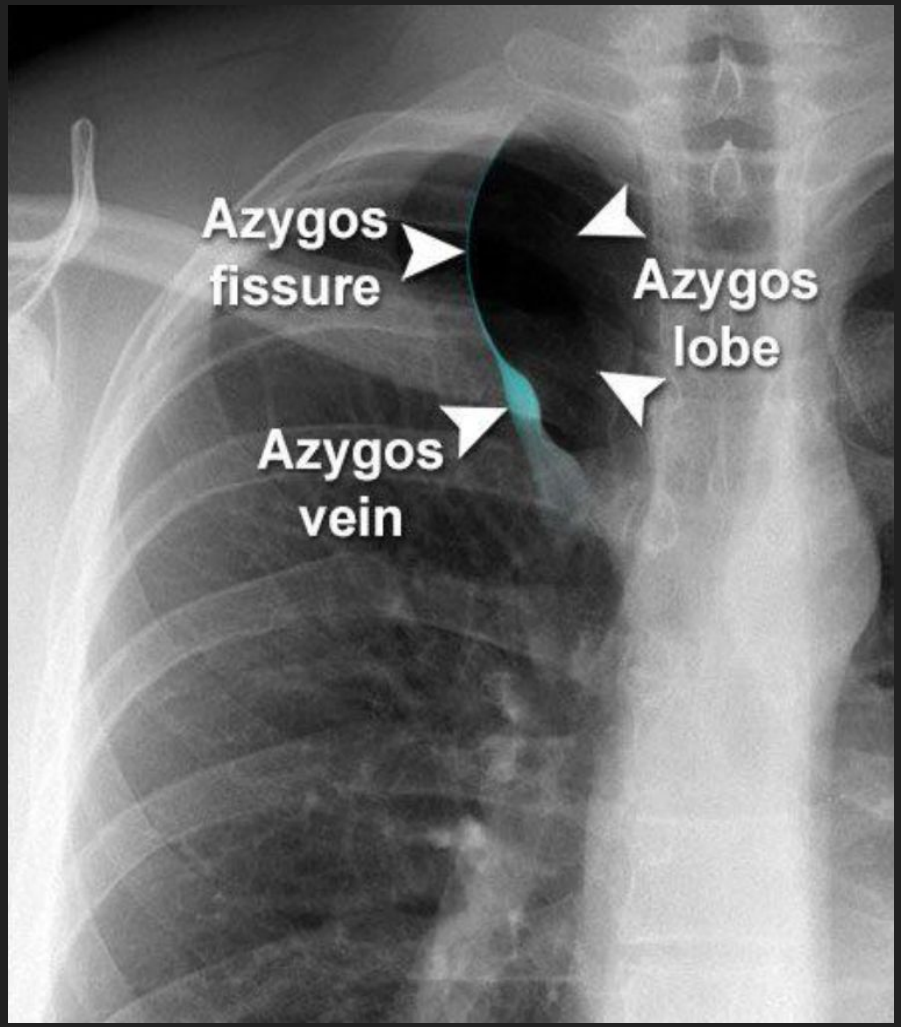


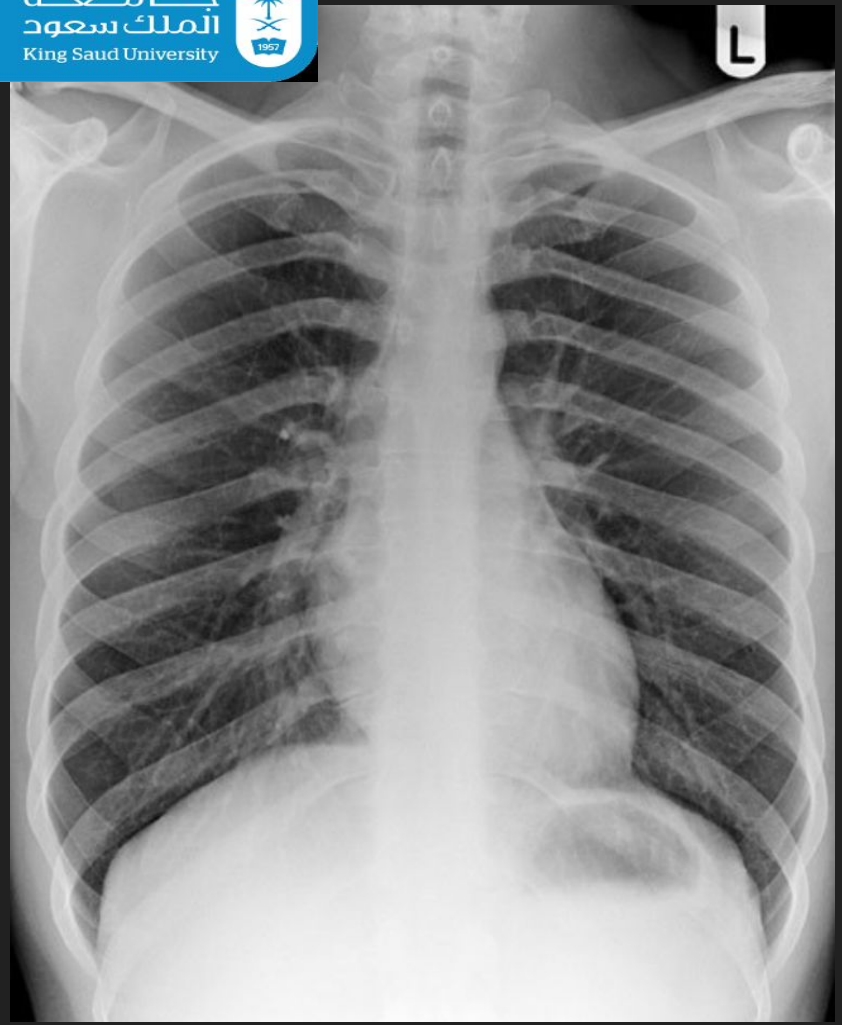


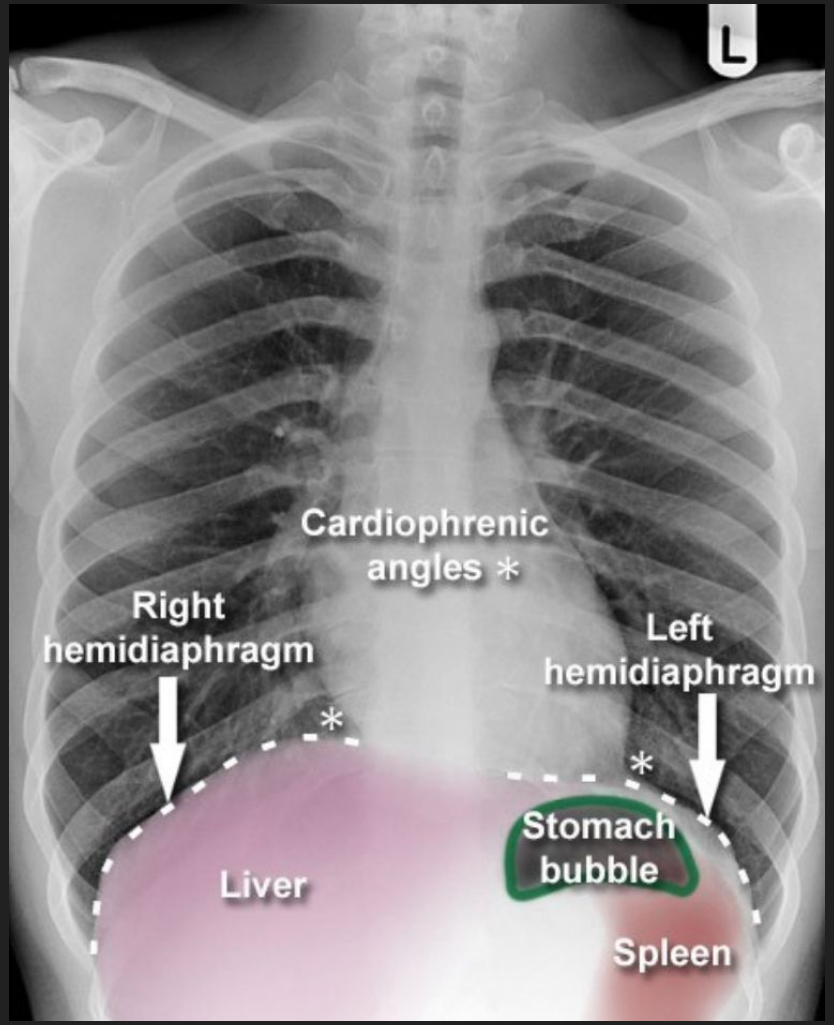


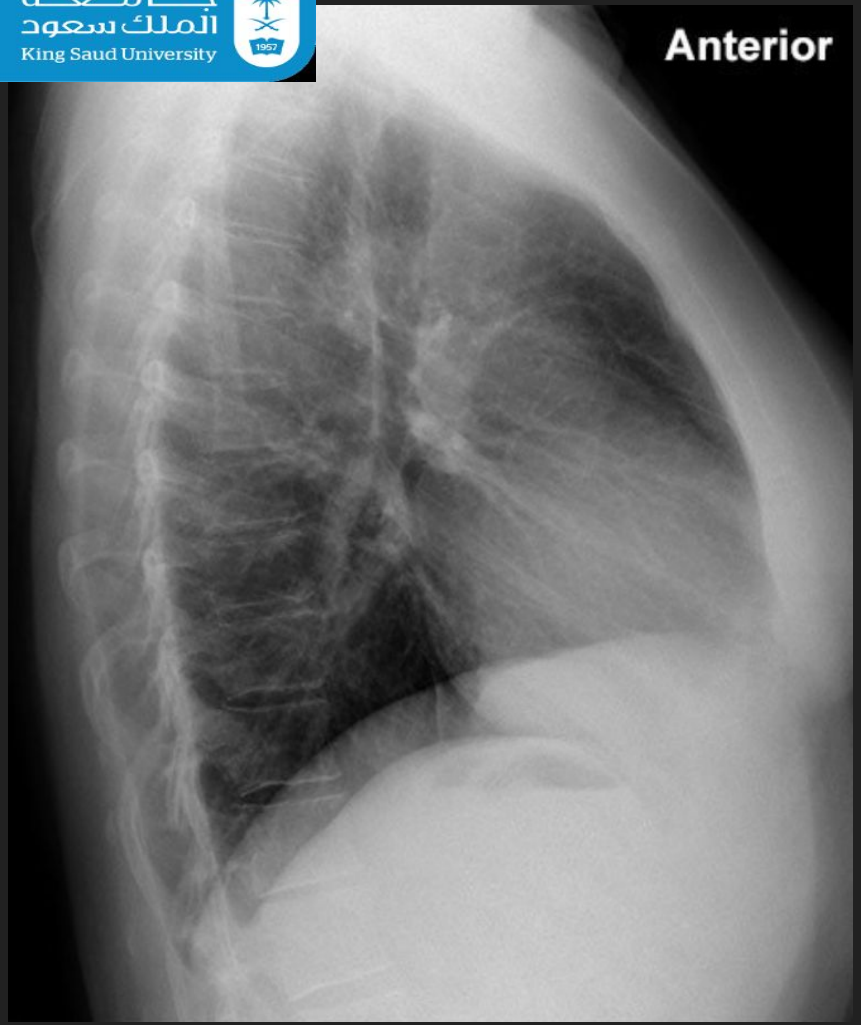


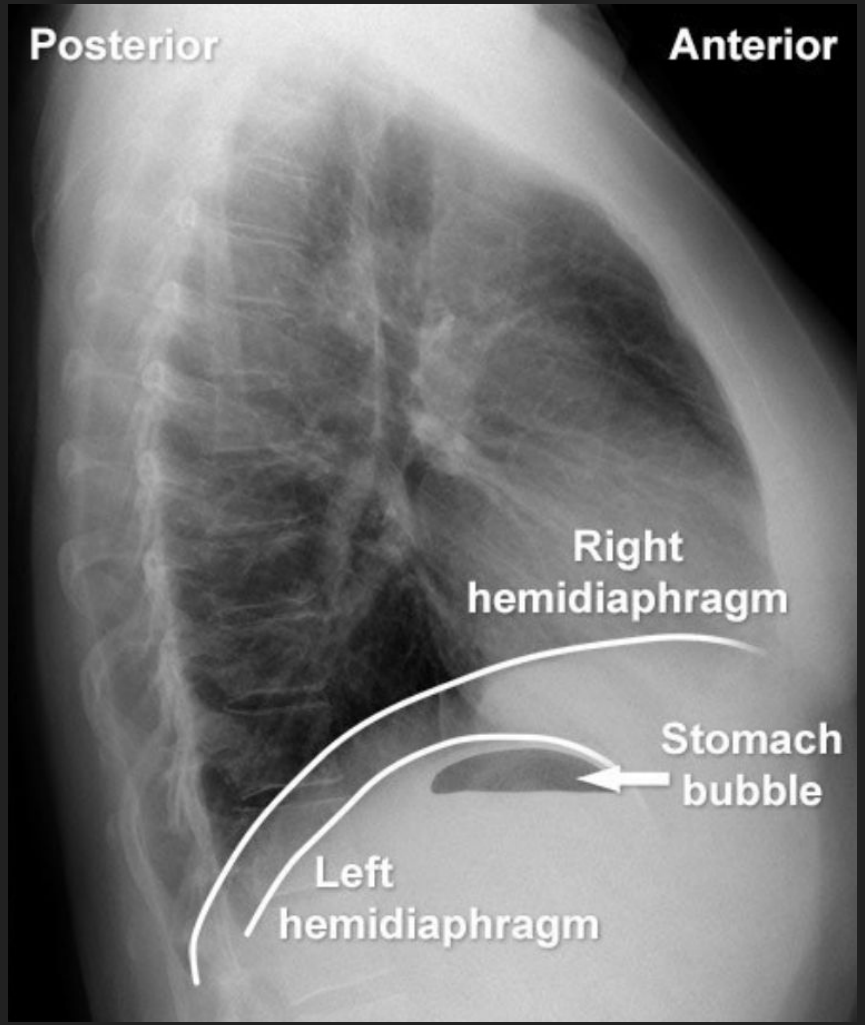

Horizontal
Left
Right

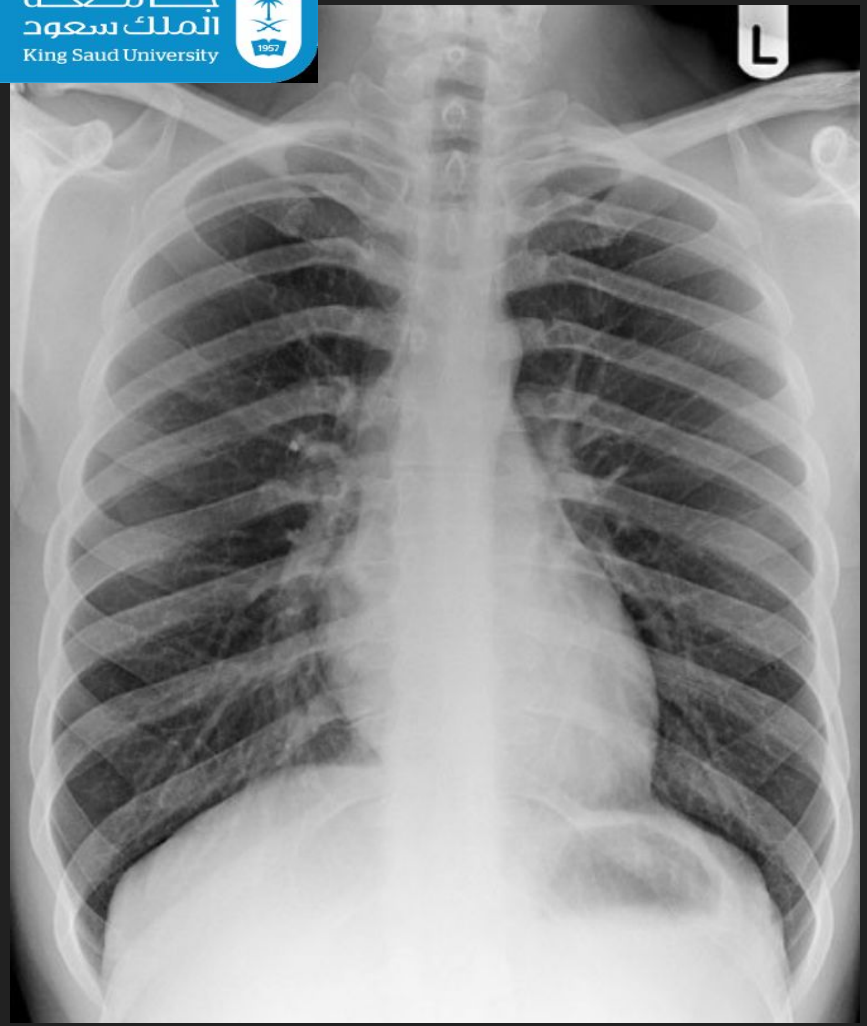


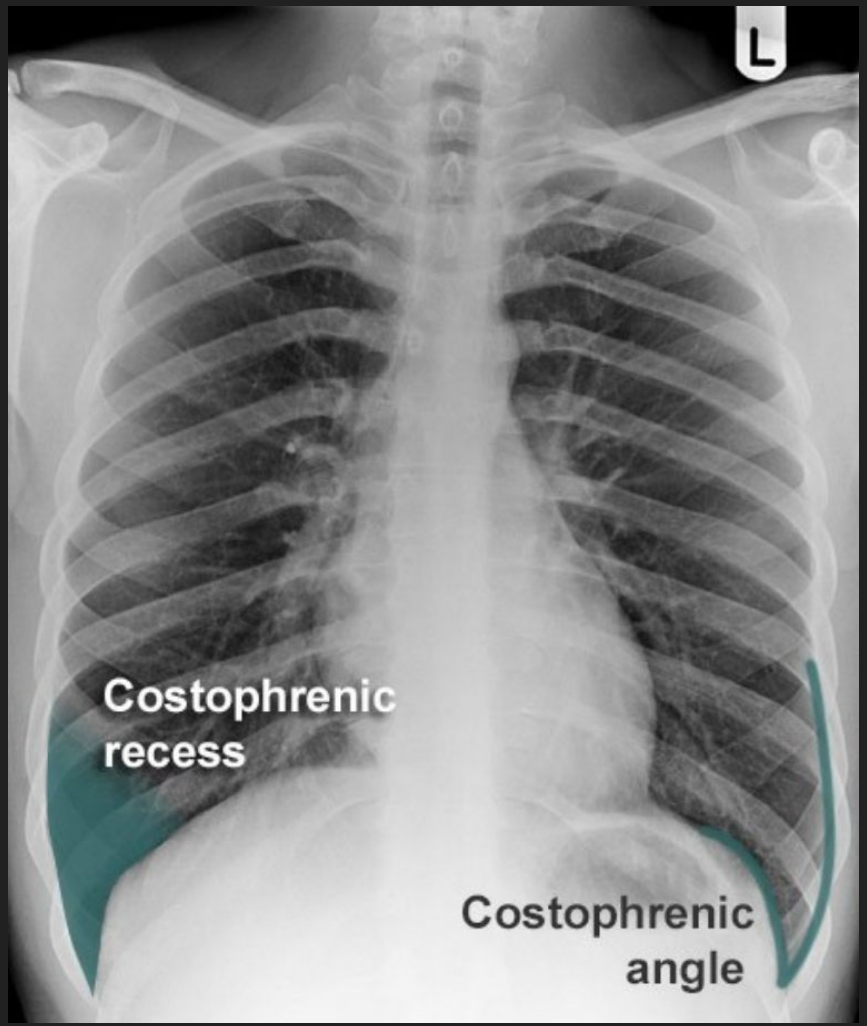


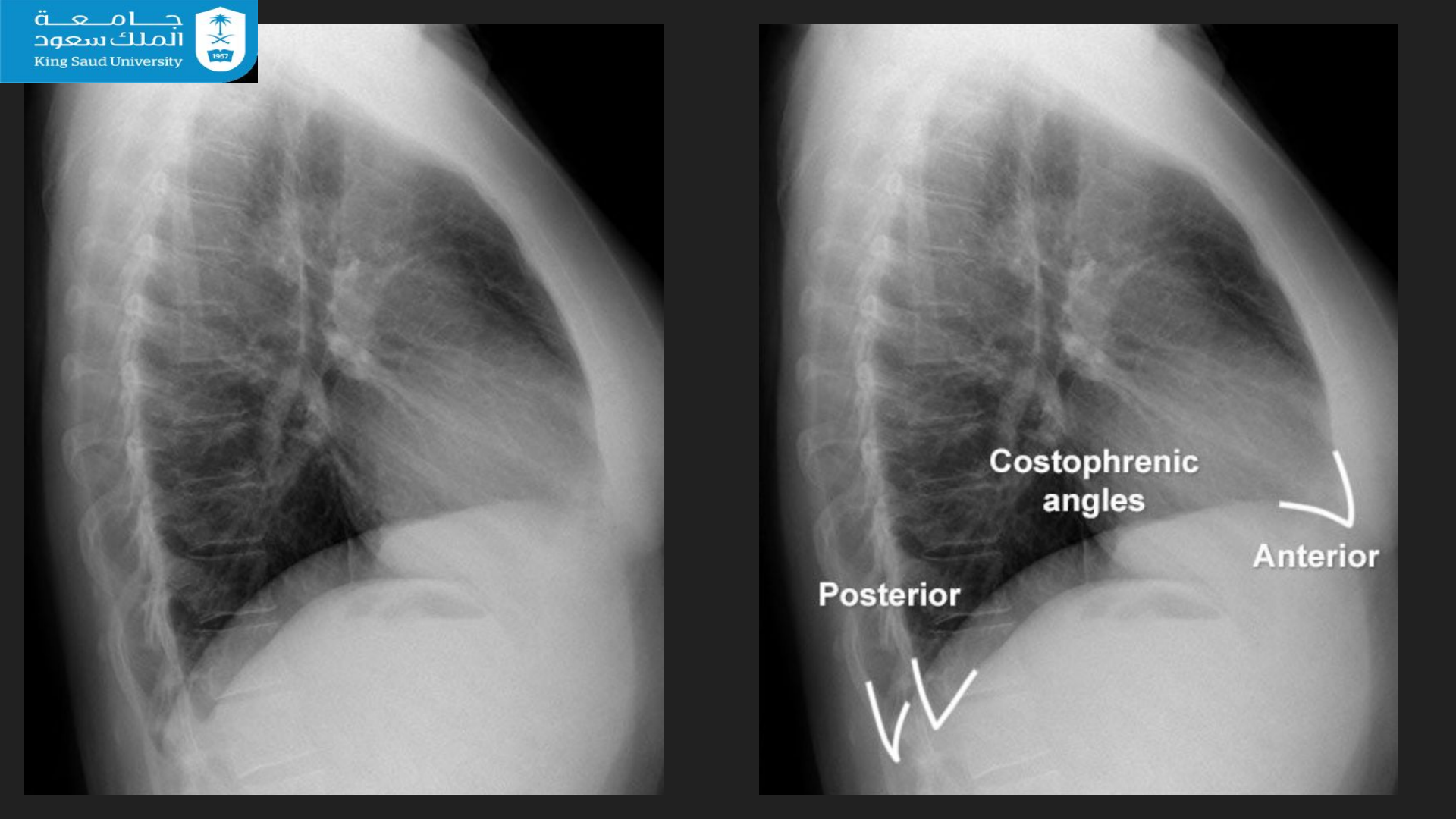


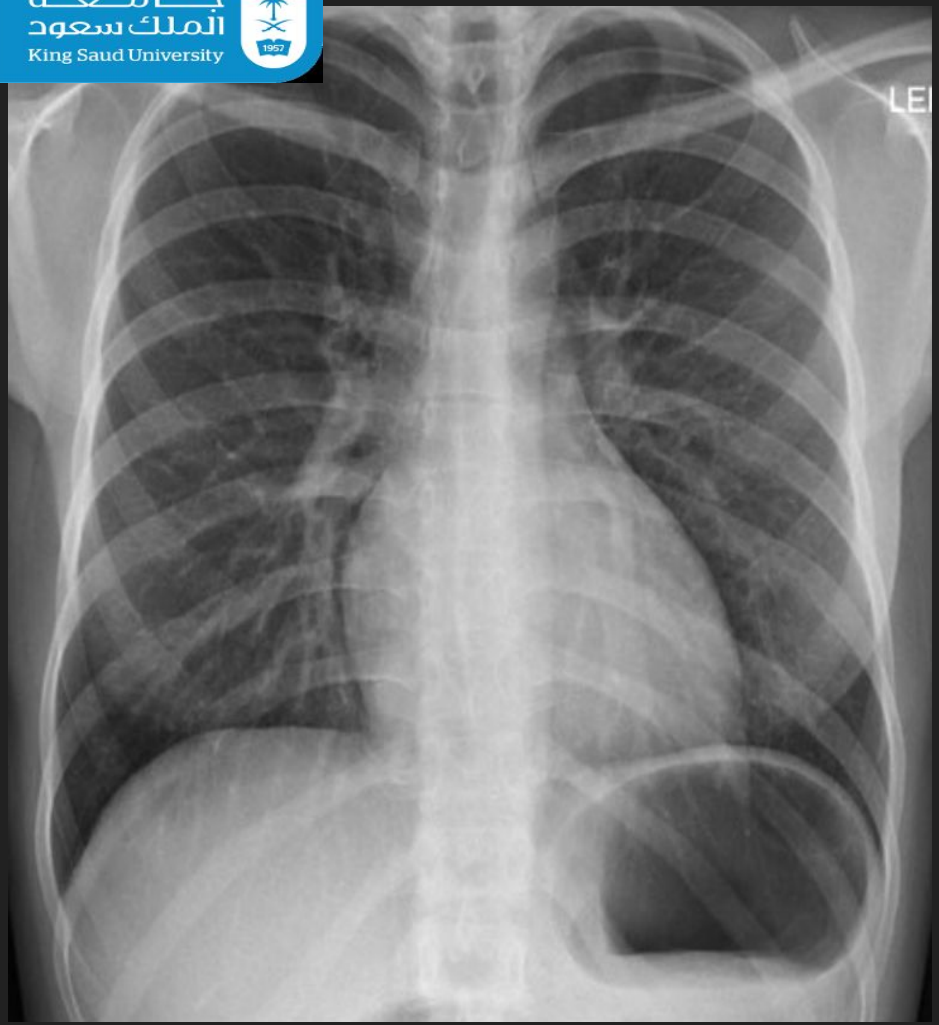


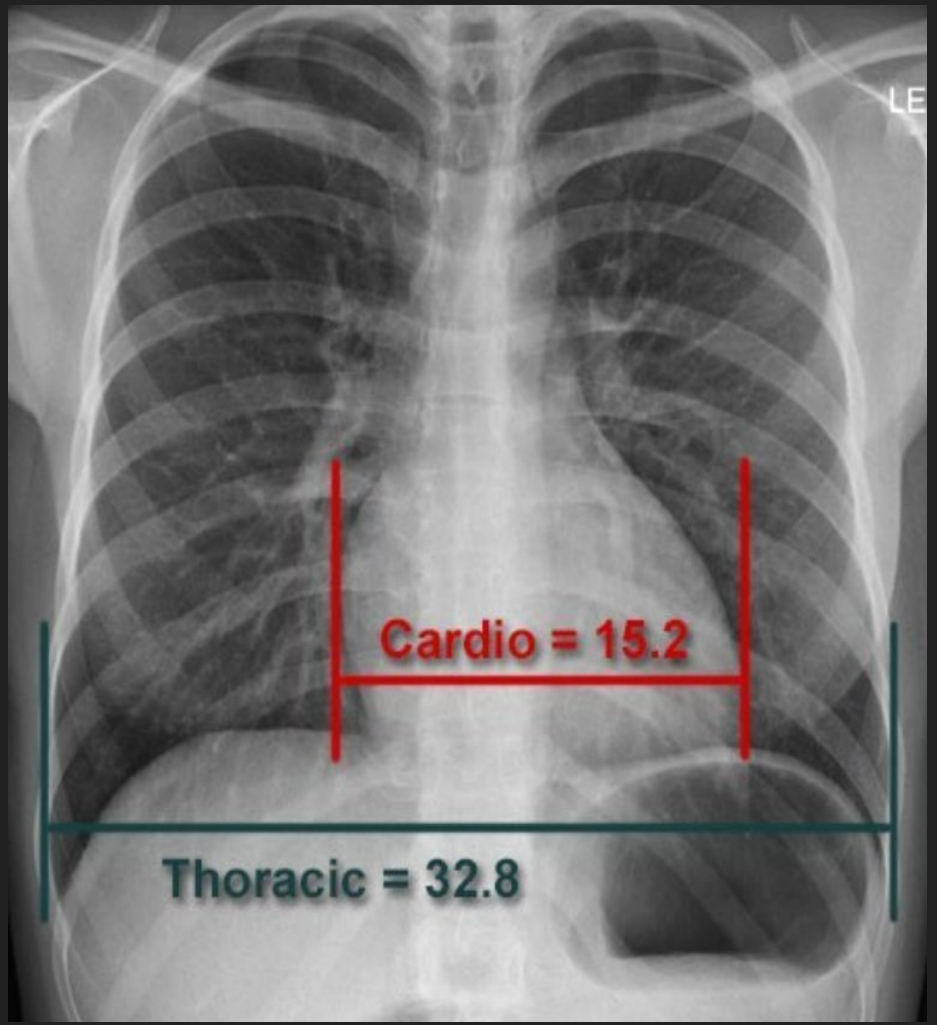


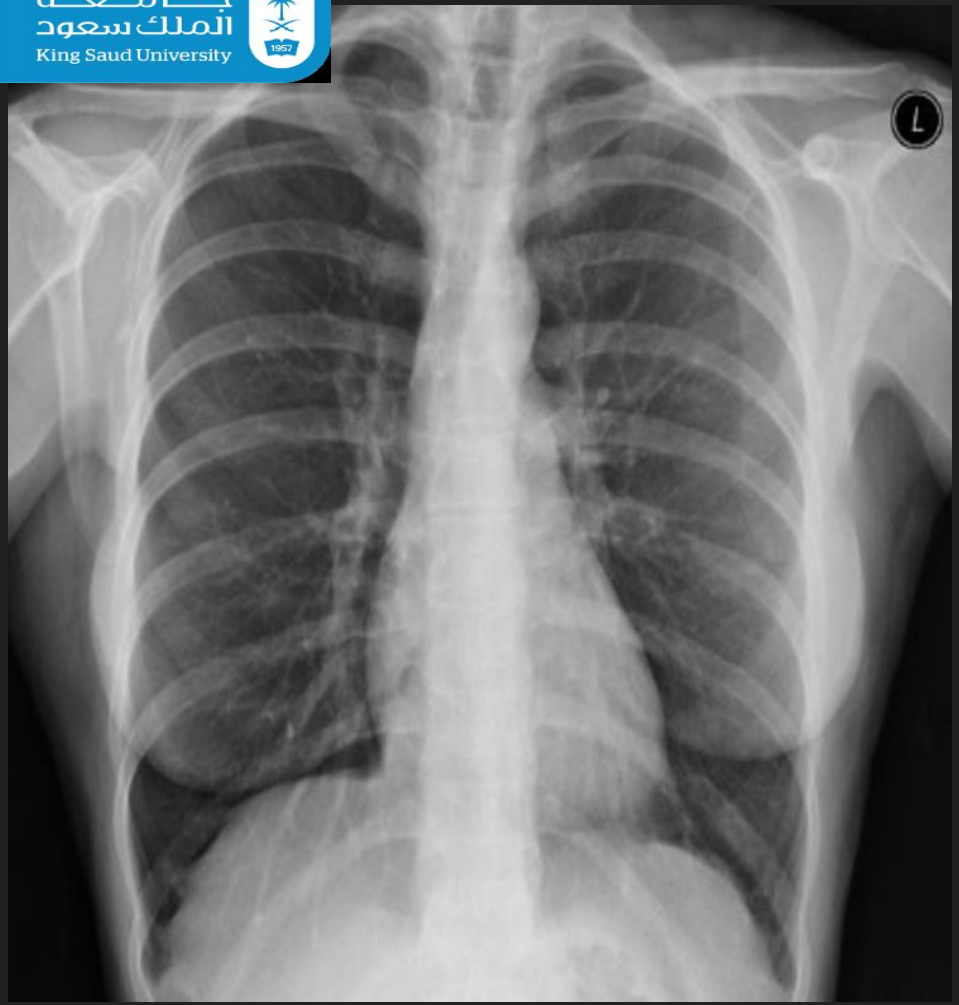

L

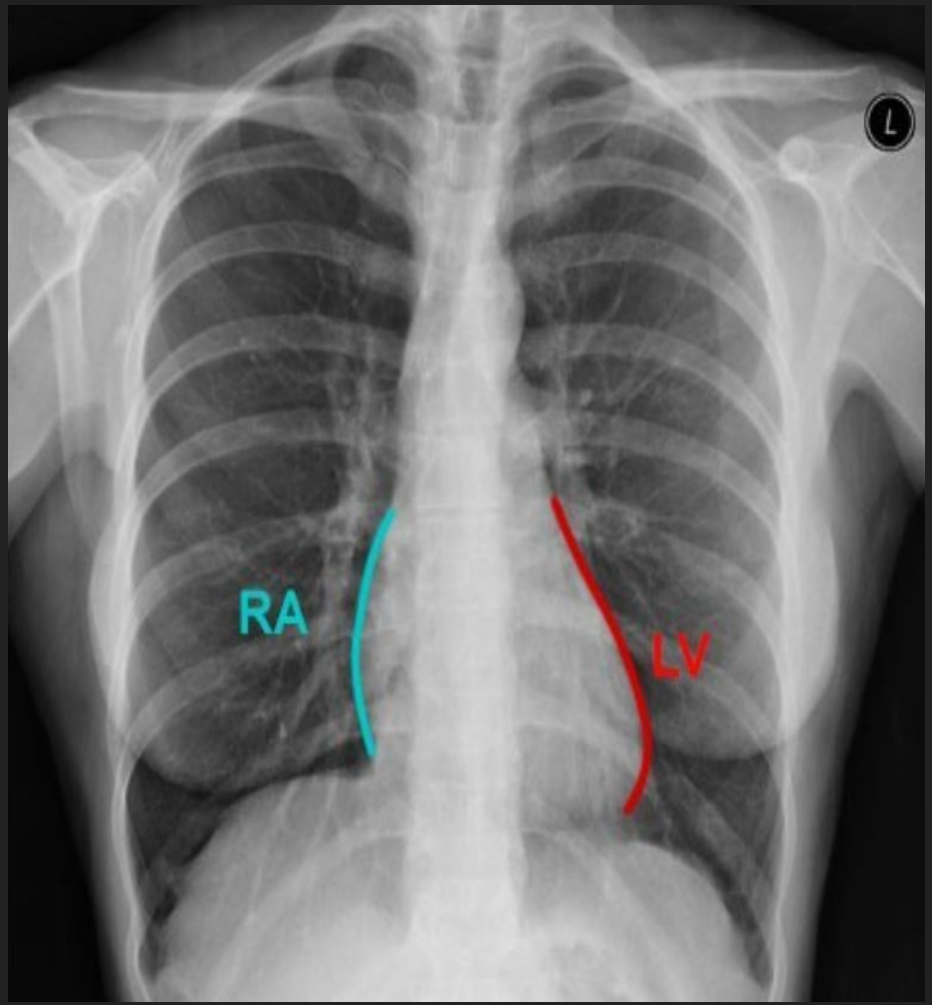

L
Costophrenic recess
Costophrenic angle

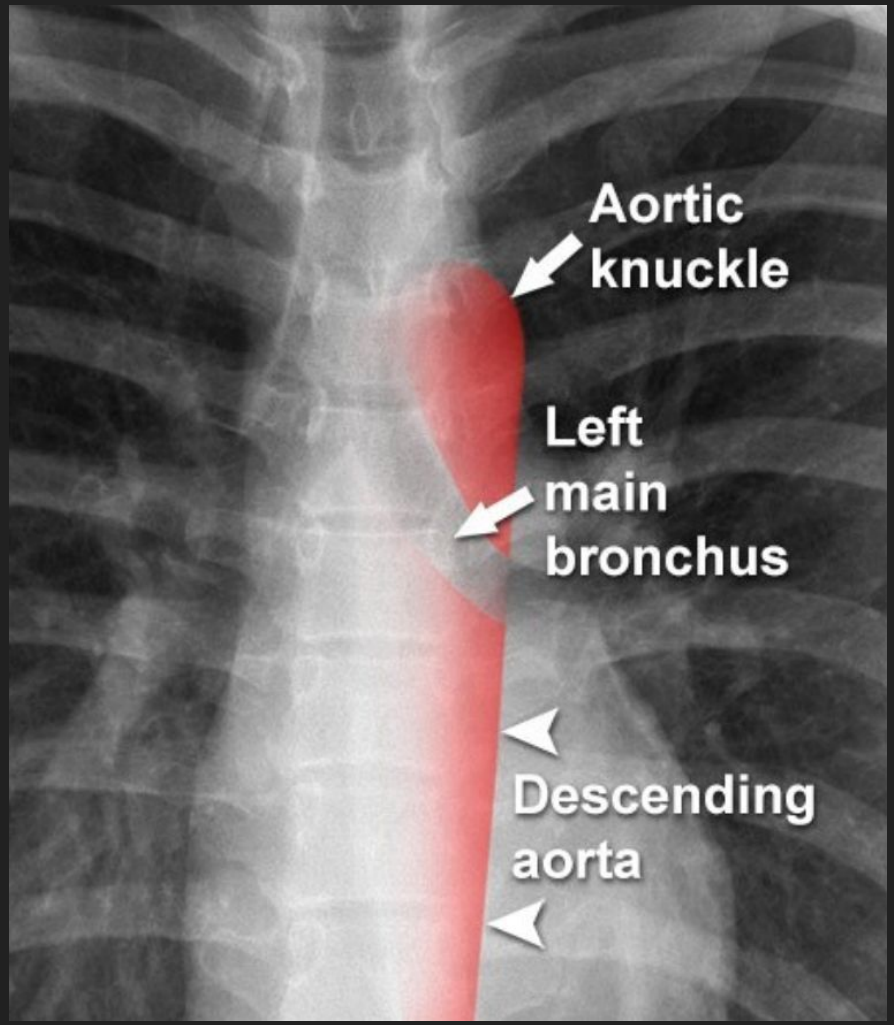

Costophrenic
angles
Anterior
Posterior

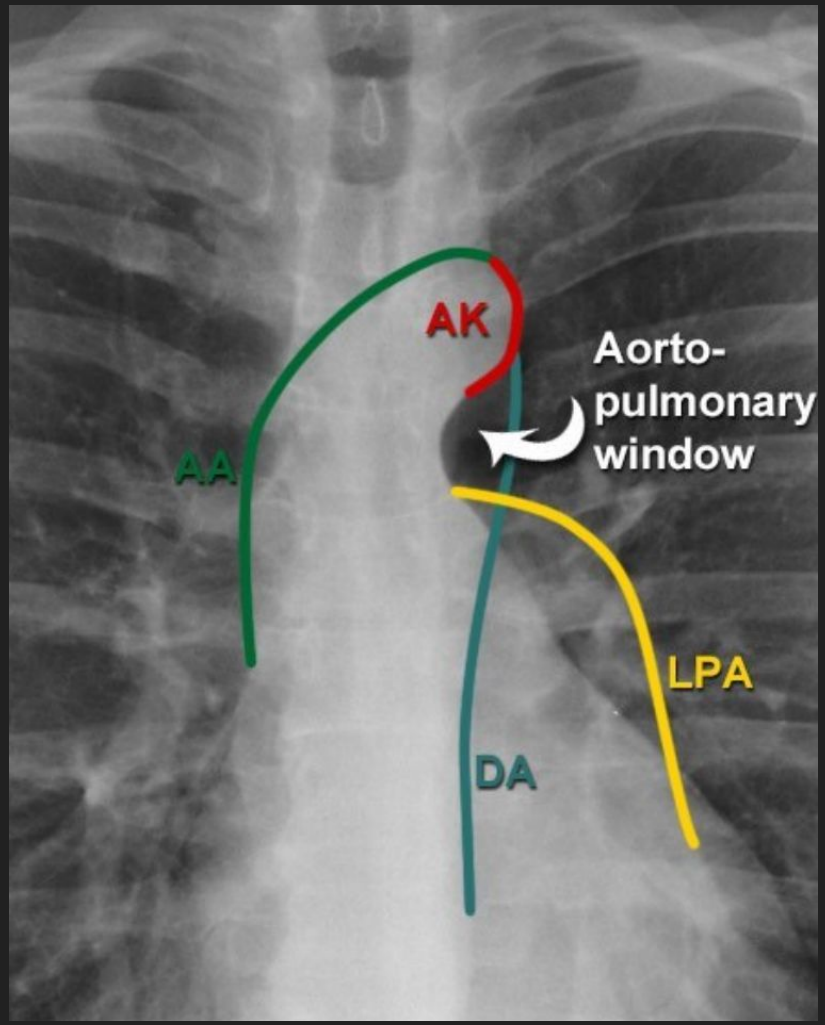


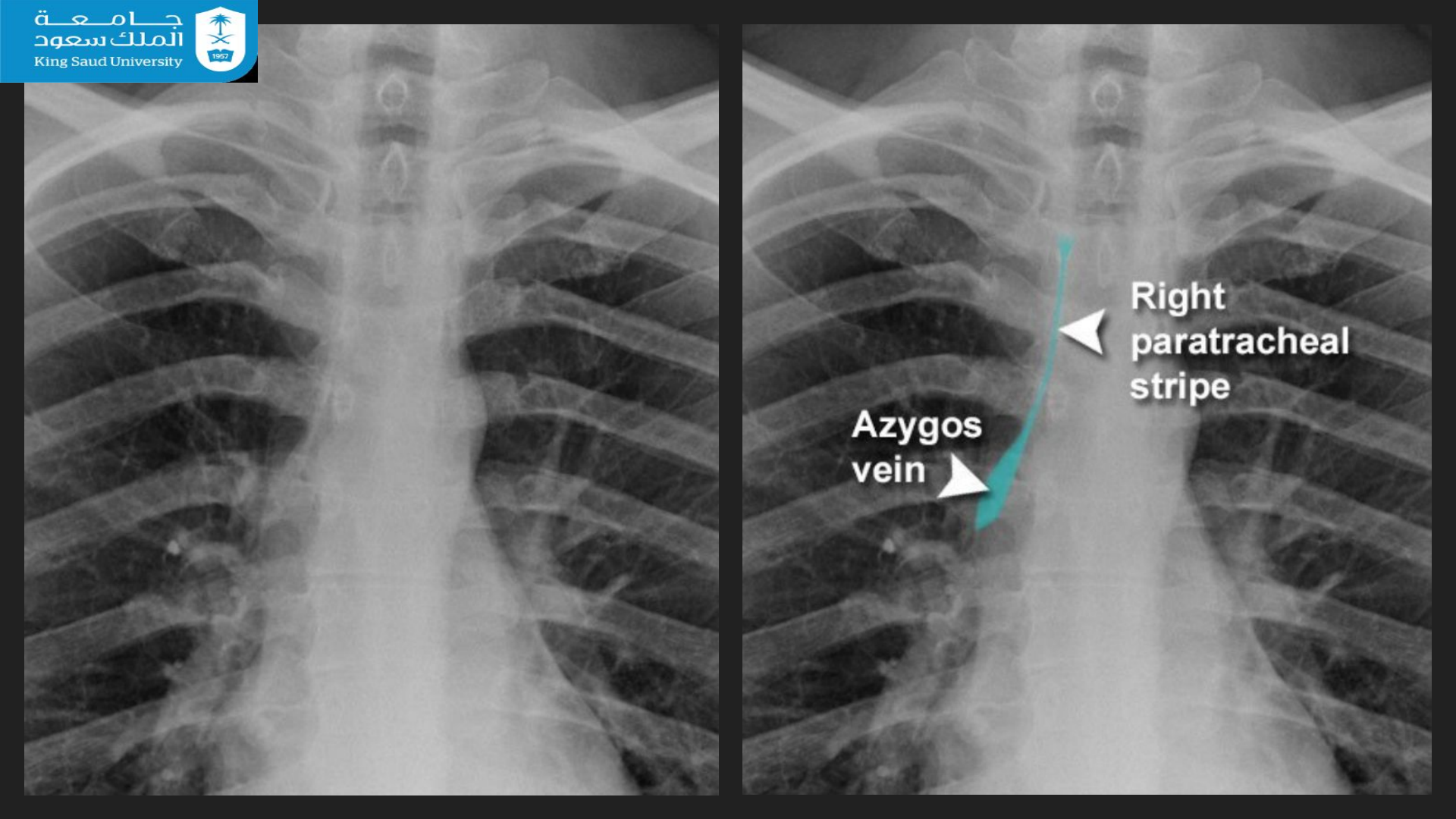


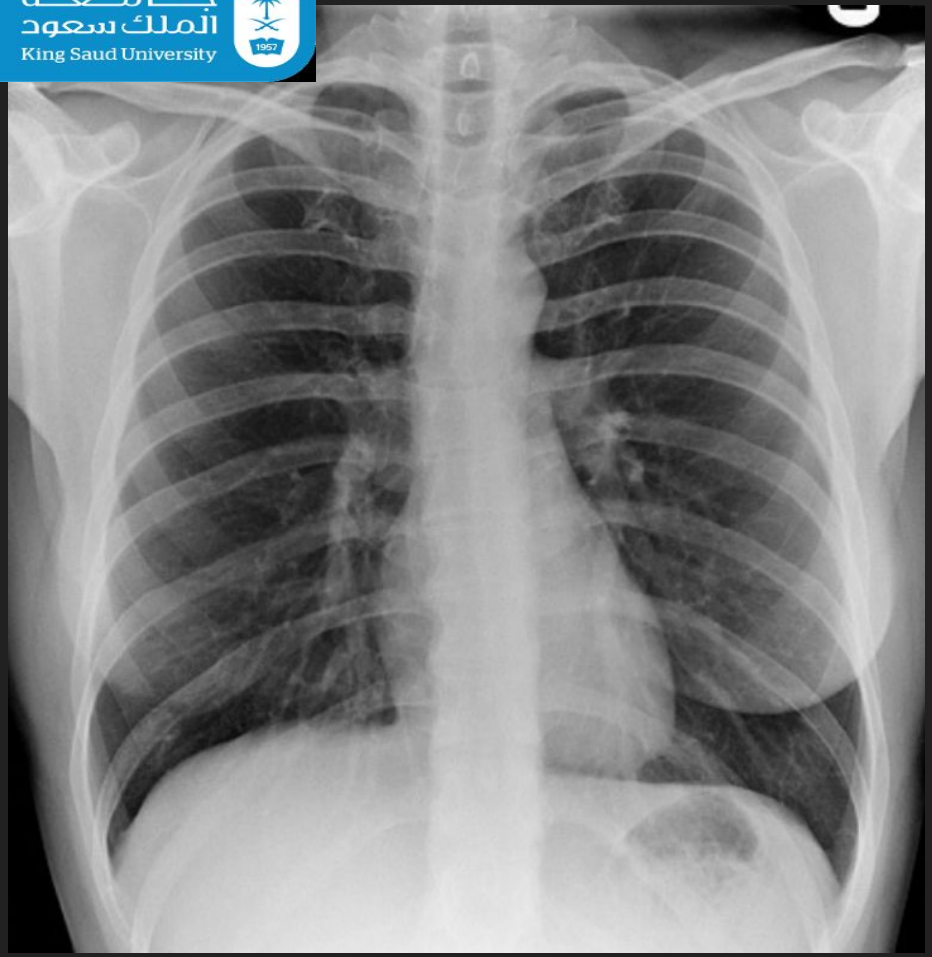


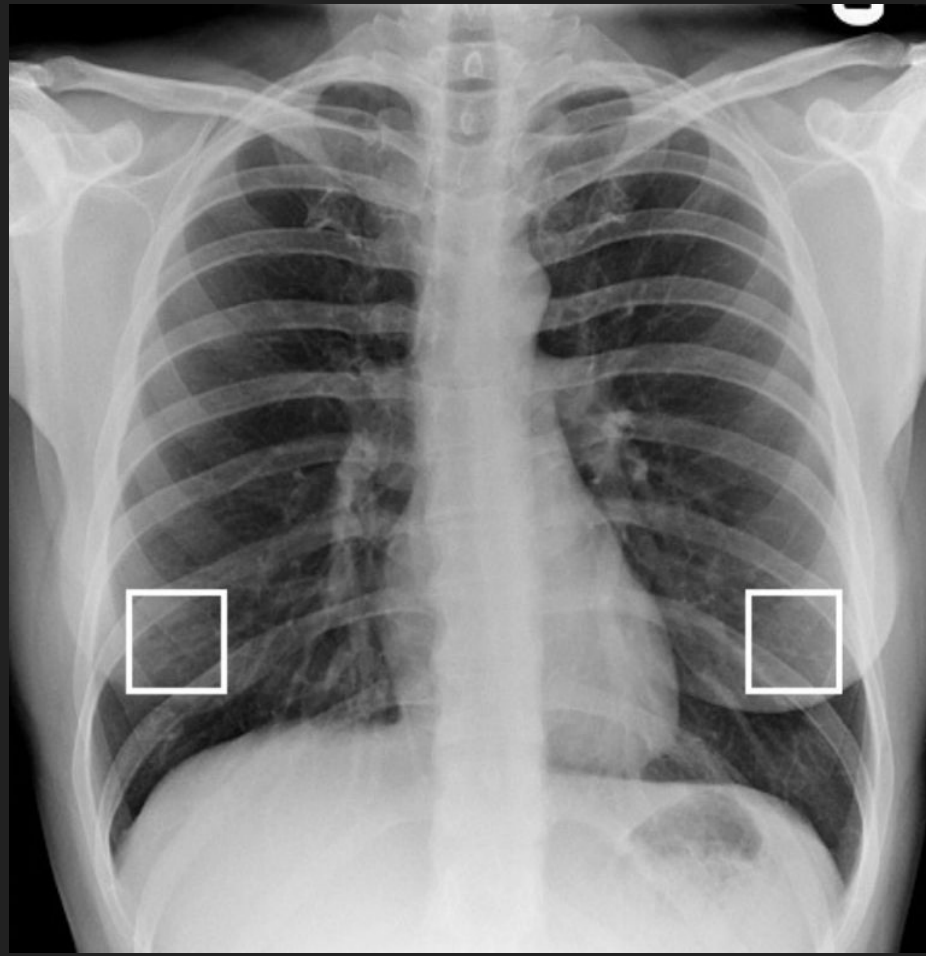


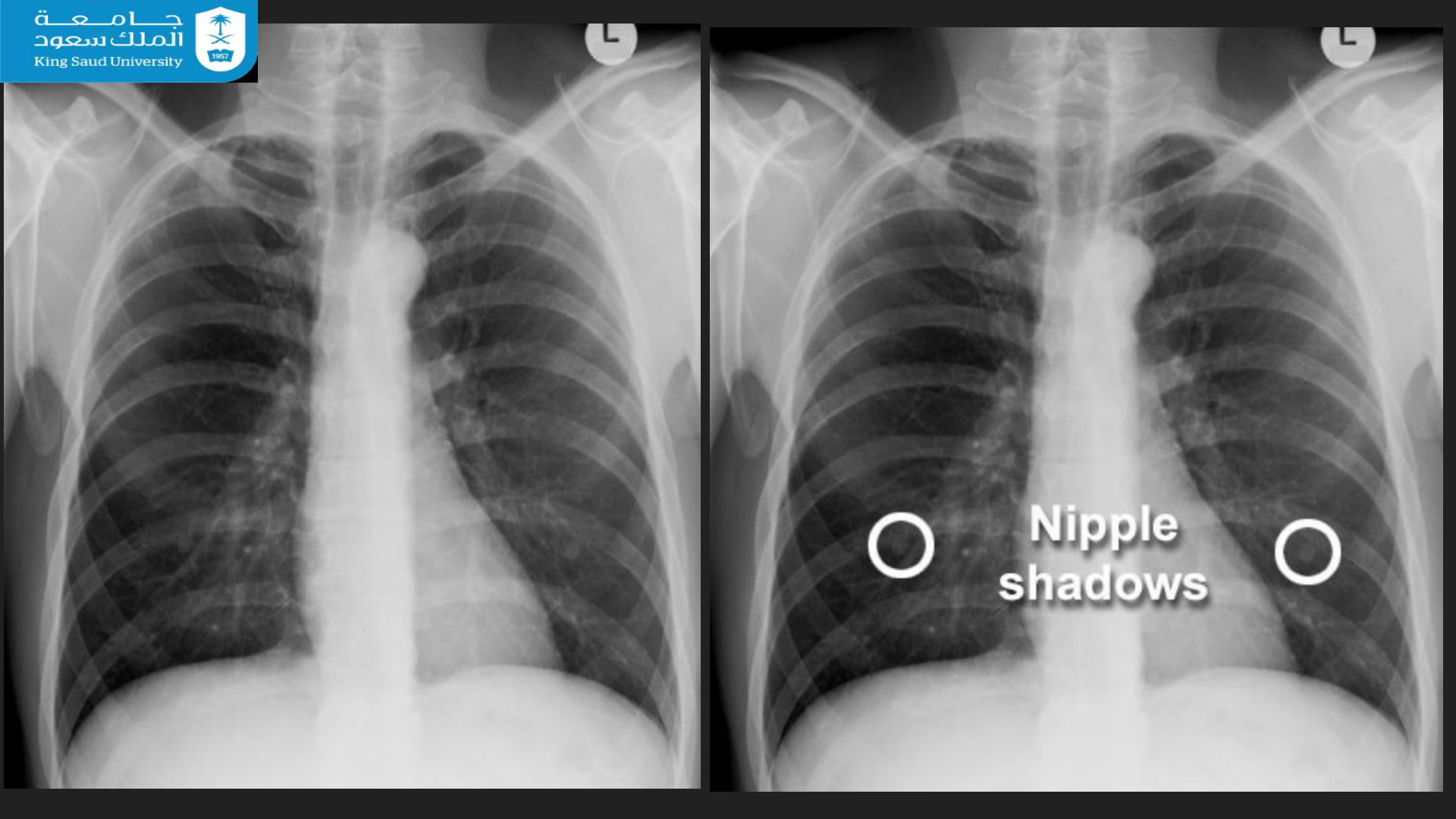


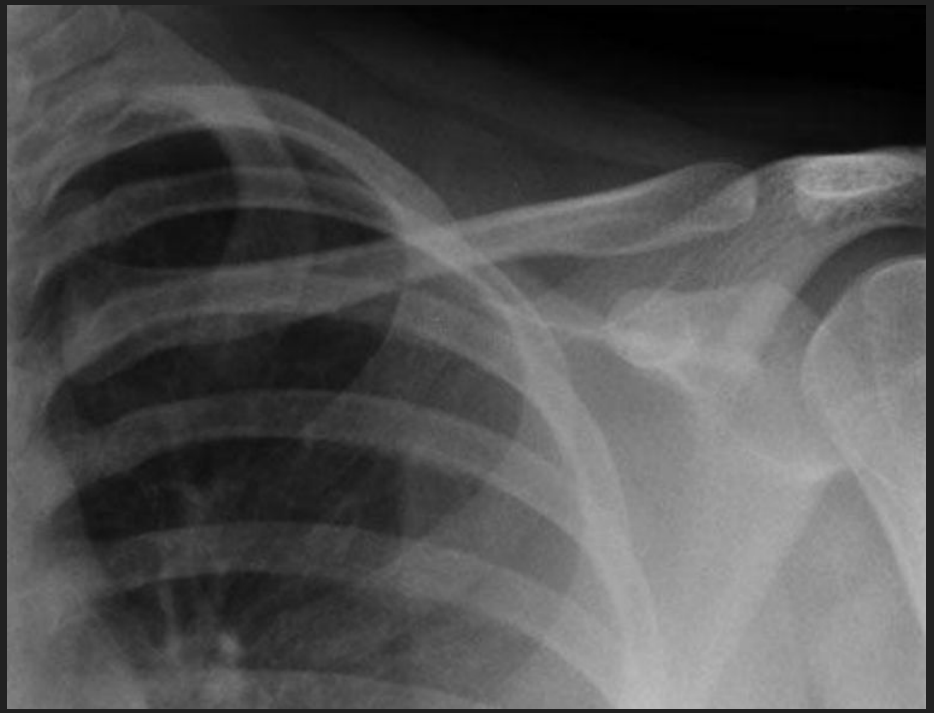


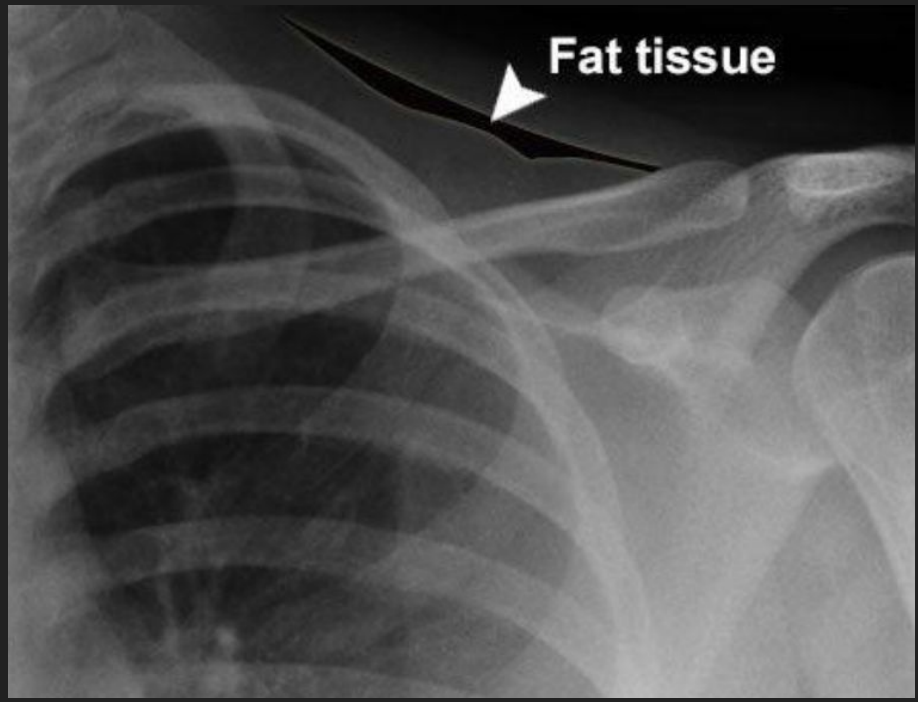

Right
paratracheal
stripe
Azygos
vein

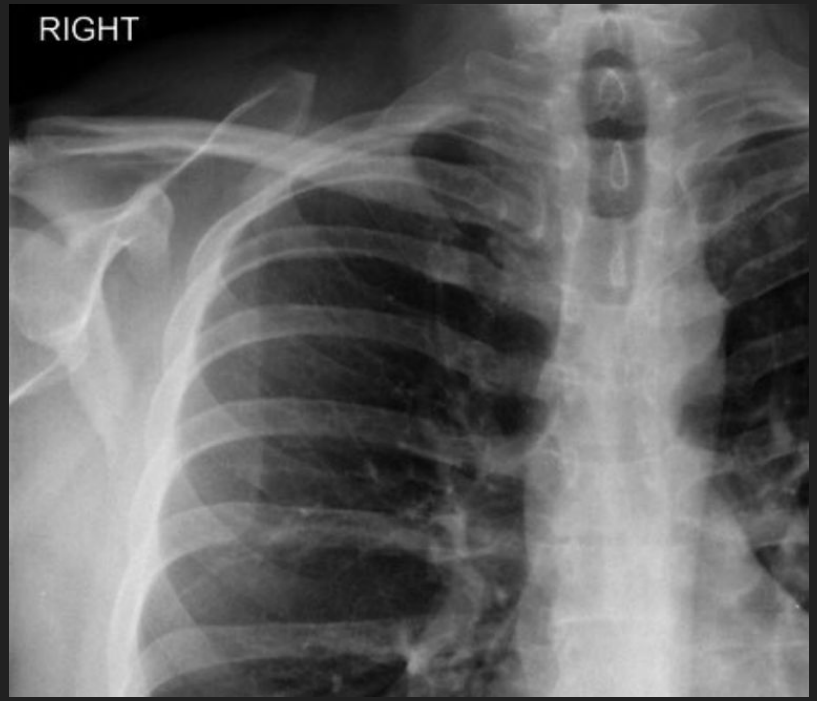


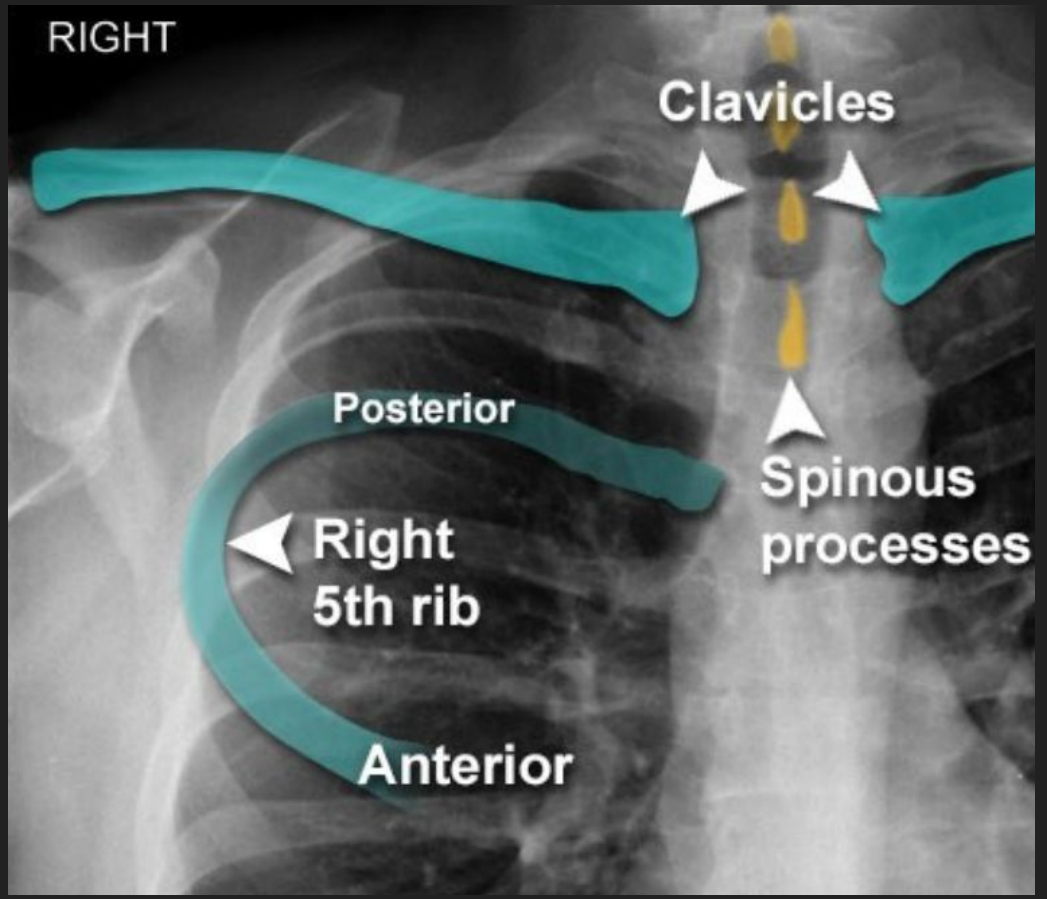


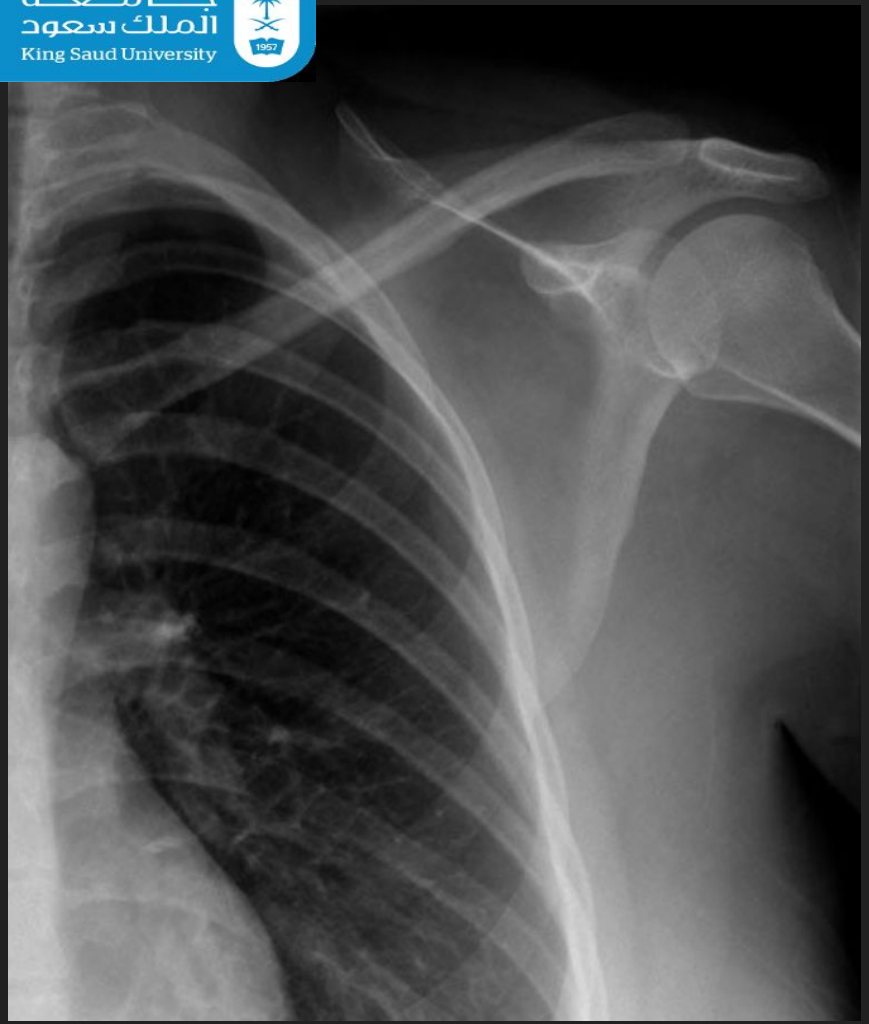


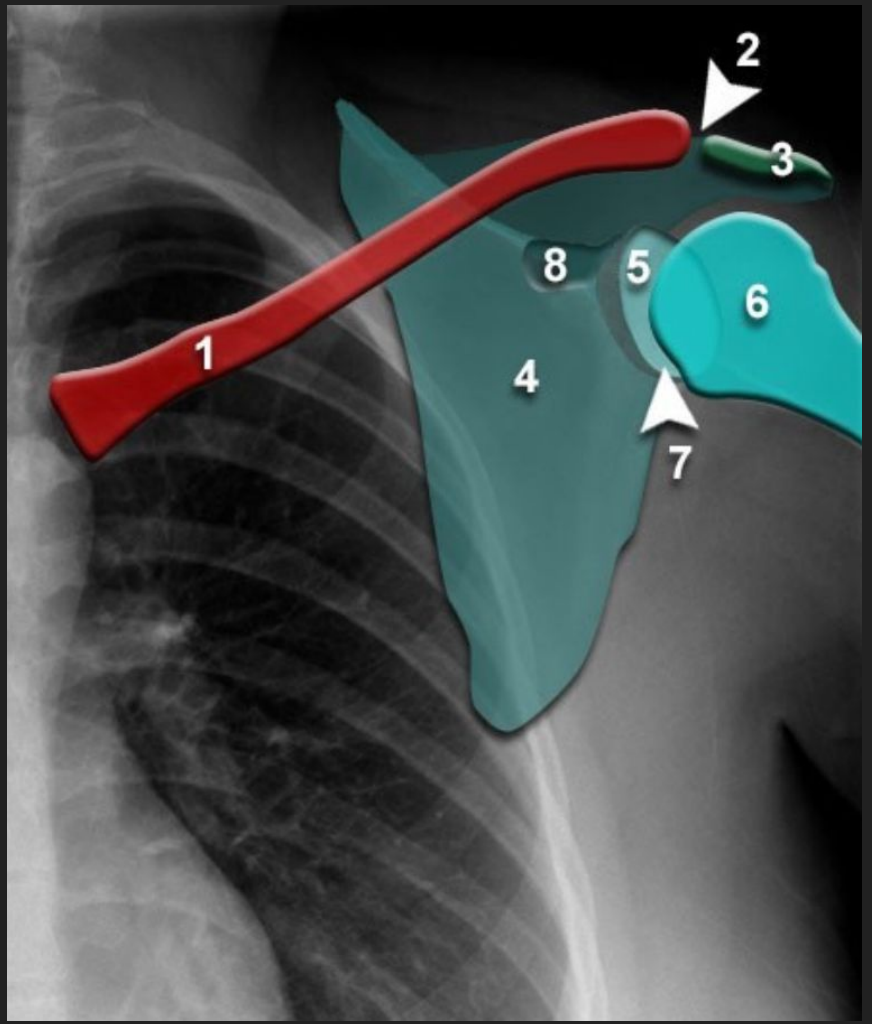


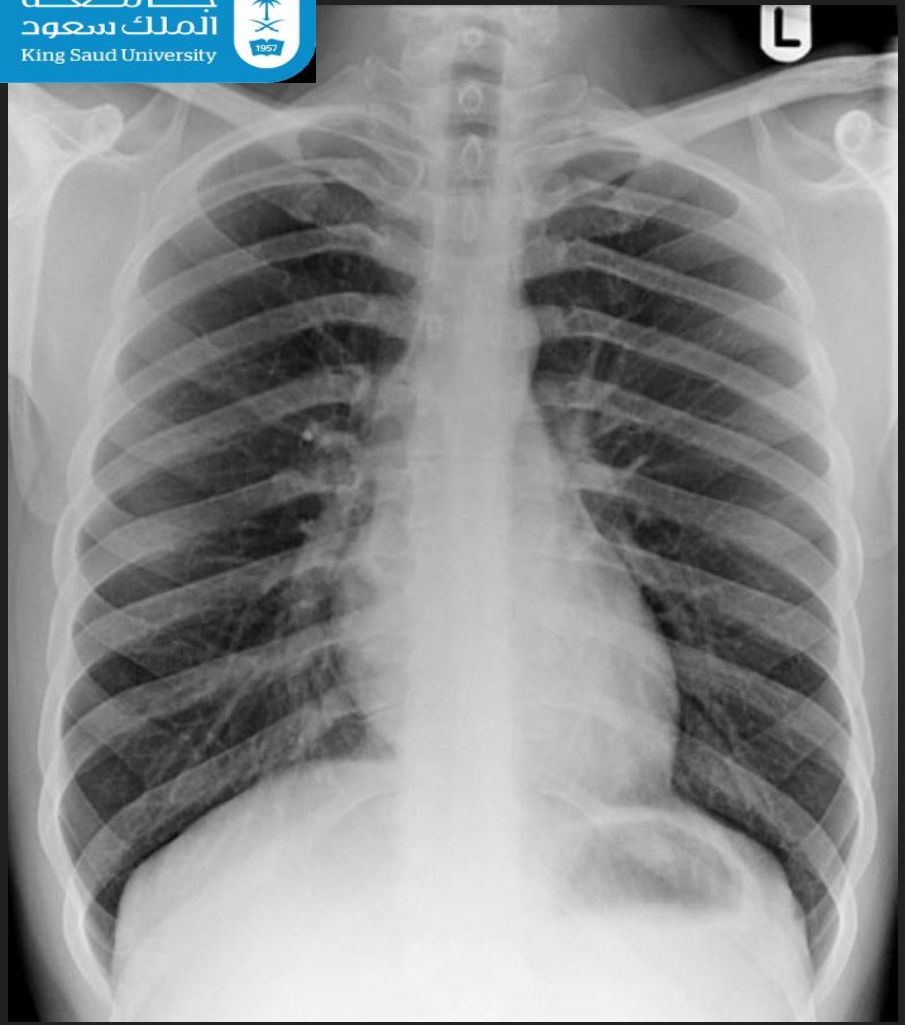


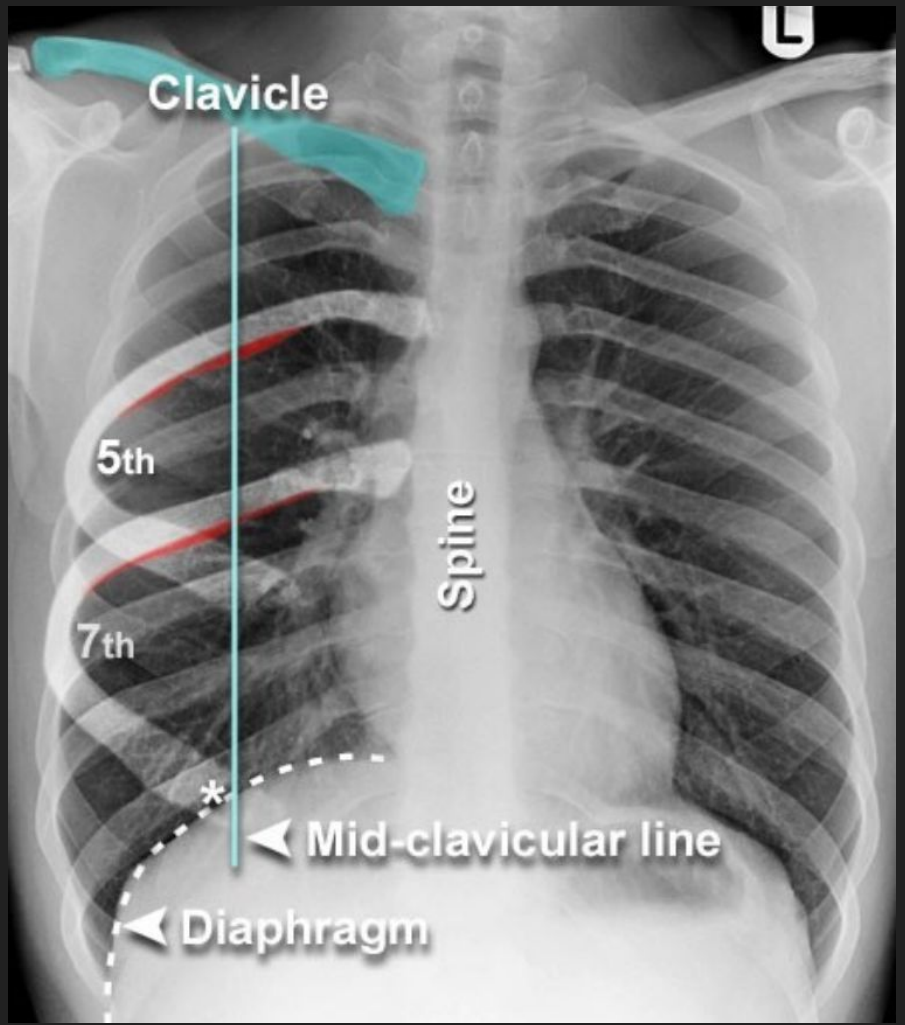


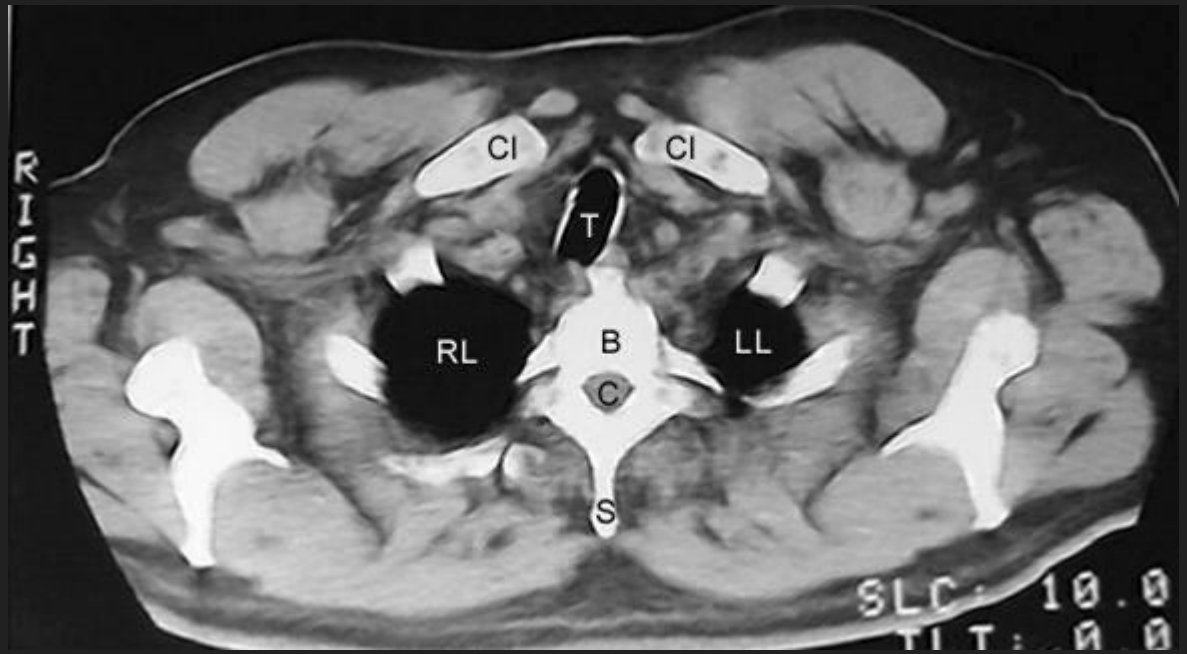




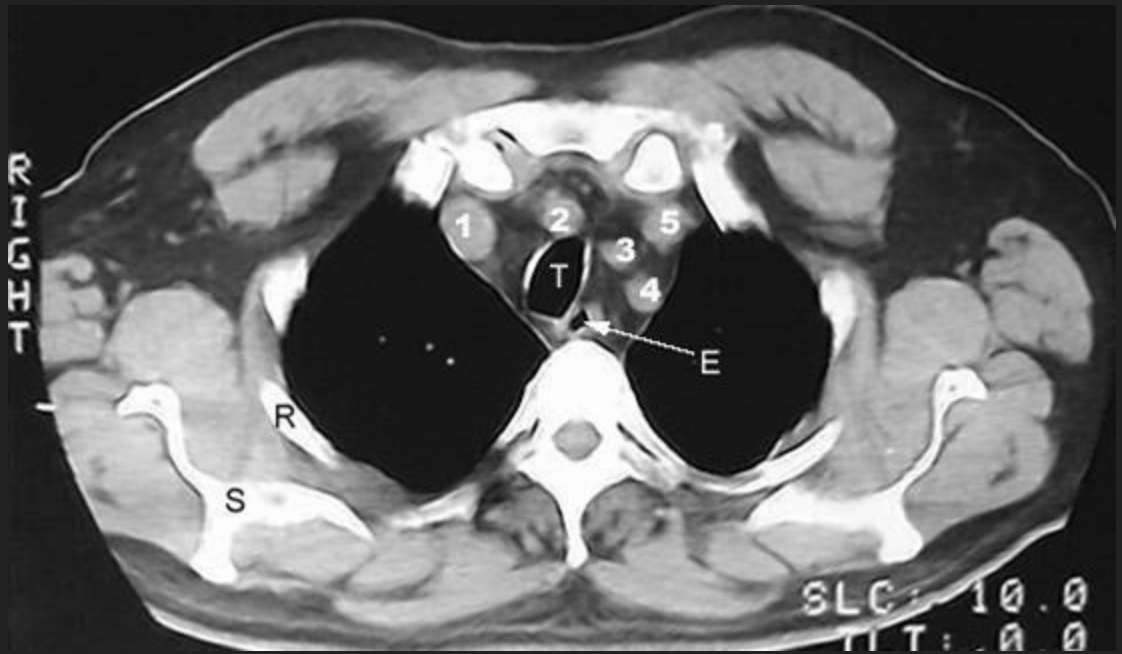




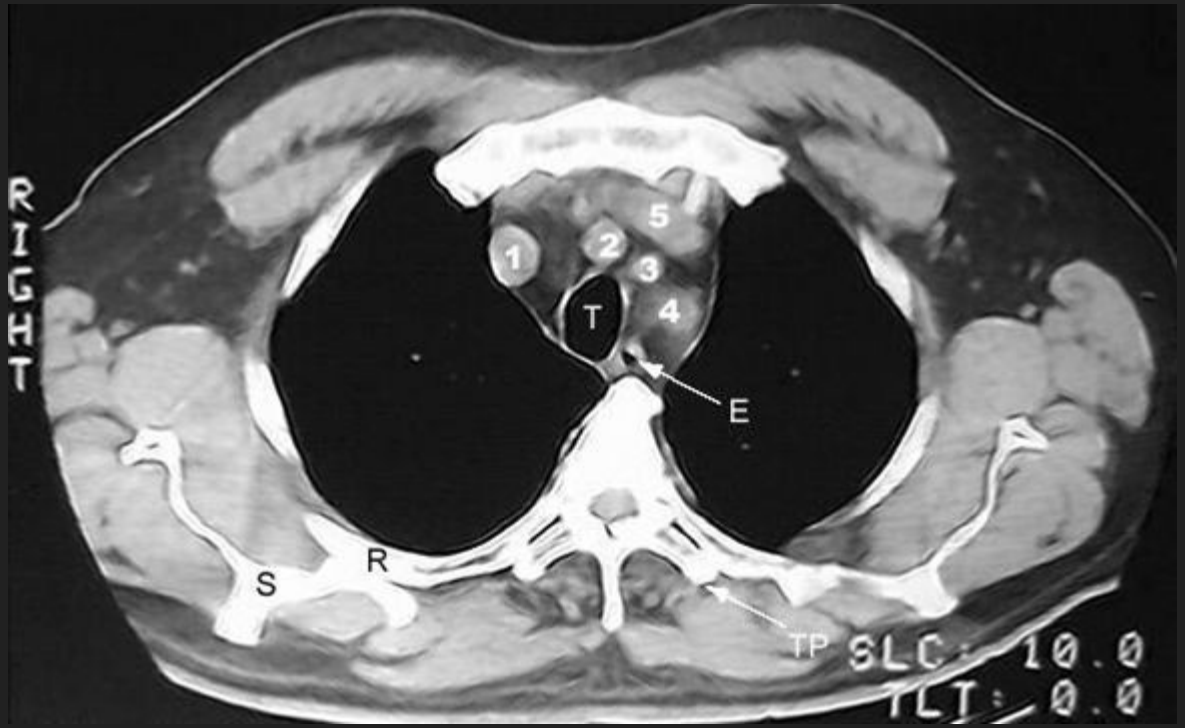




B BODY OF THORACIC VERTEBRA
C SPINAL CORD
CL CLAVICLES
LL APEX OF LEFT LUNG
RL APEX OF RIGHT LUNG
S SPINOUS PROCESS OF THE VERTEBRA
T TRACHEA

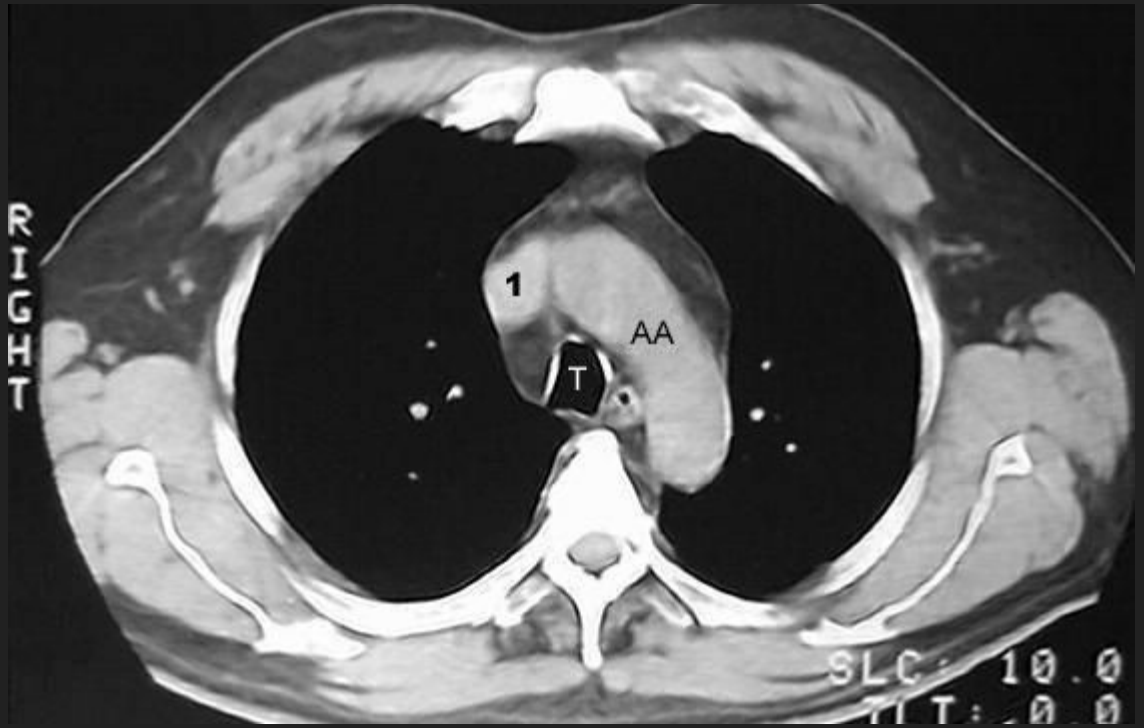


E ESOPHAGUS
R RIB
S SCAPULA
T TRACHEA
Right Brachiocephalic vein
Brachiocephalic artery
Left common carotid artery
Left subclavian artery
Right Brachiocephalic vein

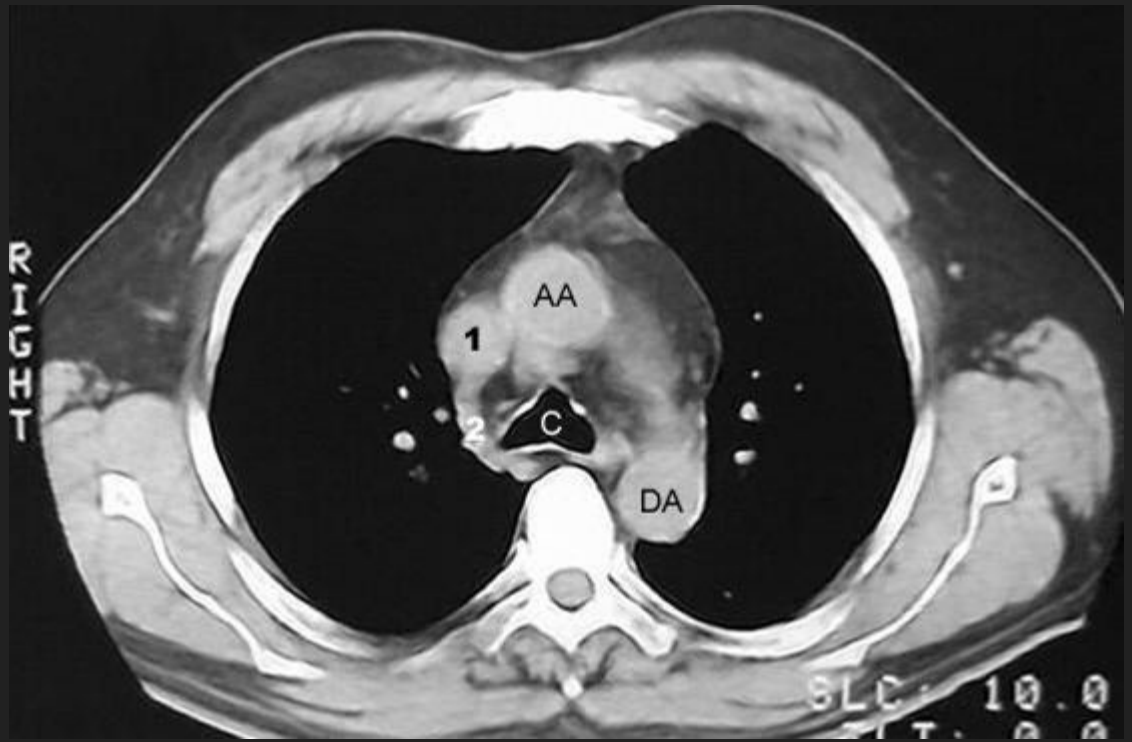


E ESOPHAGUS
R RIB
S SCAPULA
T TRACHEA
1 Right Brachiocephalic vein
2 Brachiocephalic artery
3 Left common carotid artery
4 Left subclavian artery
5 Right Brachiocephalic vein

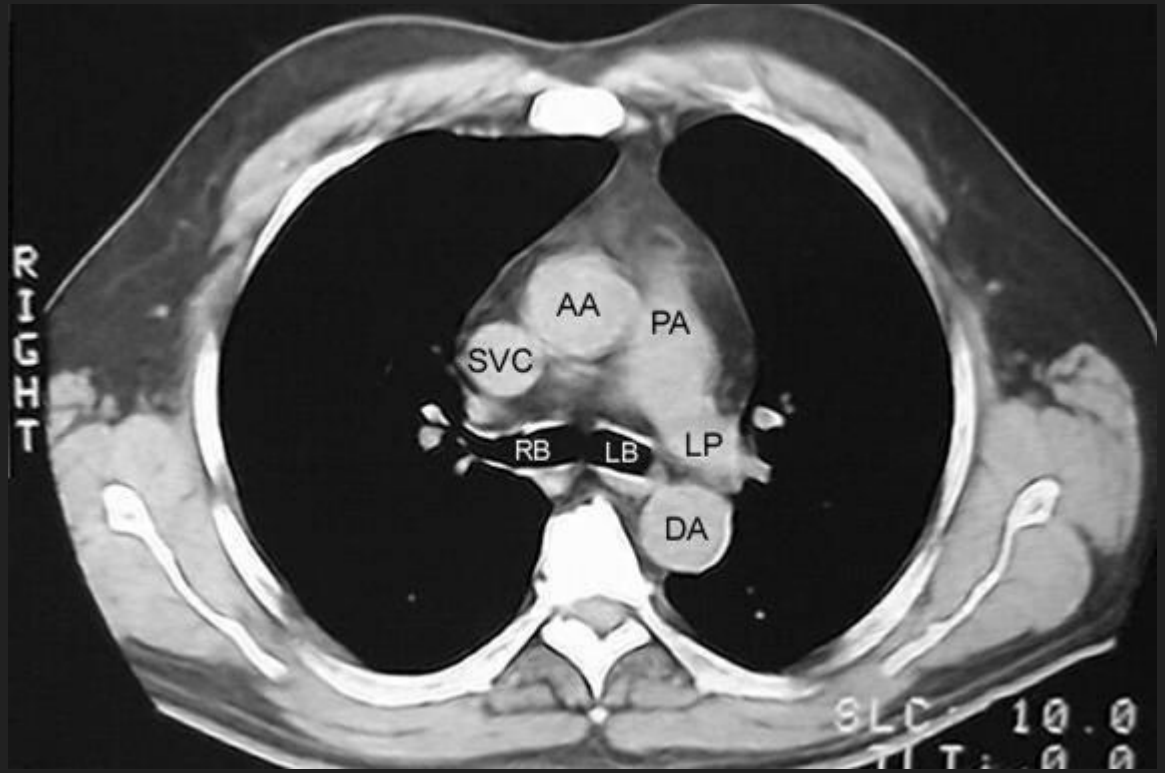
E ESOPHAGUS
T TRACHEA
1 Right Brachiocephalic vein
2 Left Brachiocephalic vein
3 Aortic arch



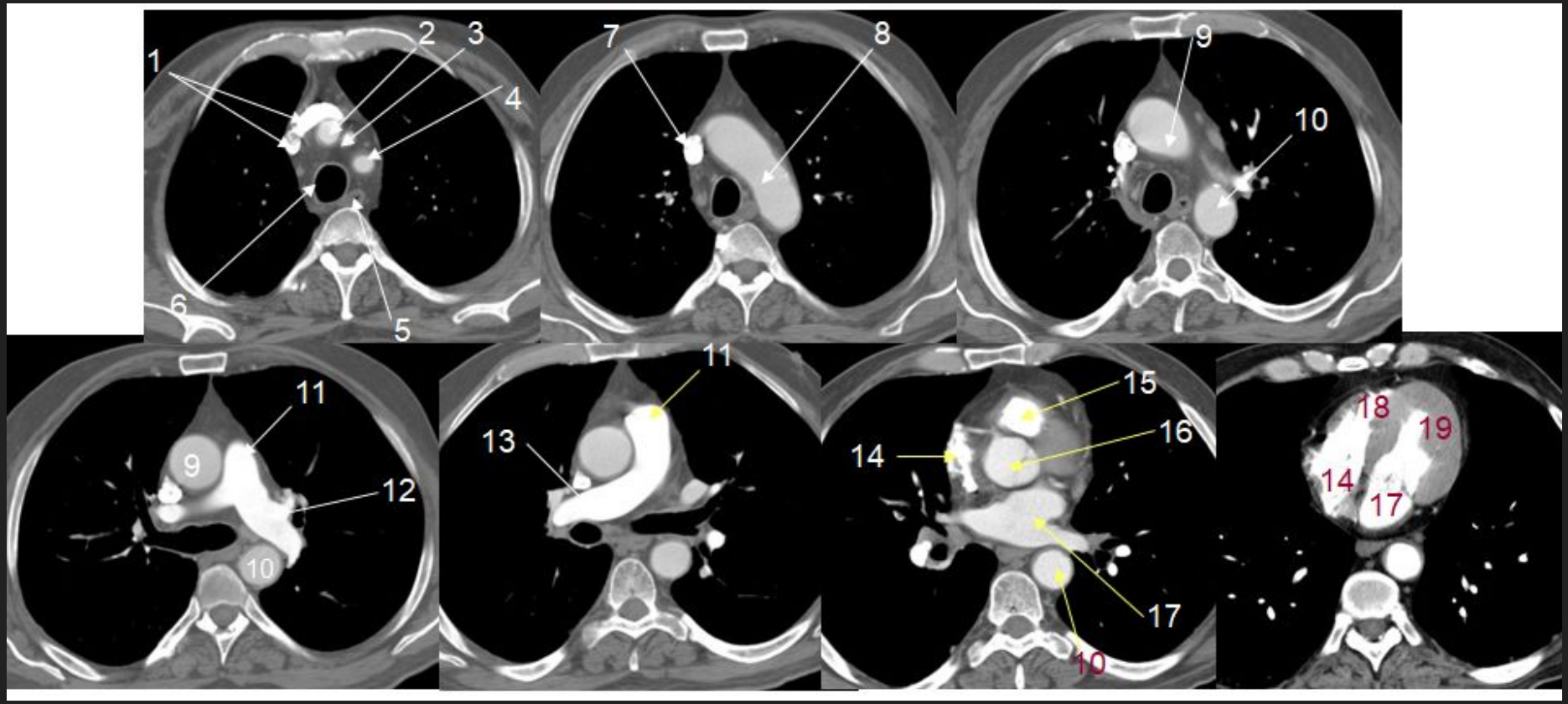
AA Aortic Arch
T TRACHEA
1 Superior vena cava



AA Ascending Aorta
DA Descending Aorta
1 Superior vena cava
2 Azygous Arch



AA Ascending Aorta
DA Descending Aorta
LB Left main bronchus
LP Left pulmonary artery
PA Pulmonary trunk
RB Right main bronchus
SVC Superior vena cava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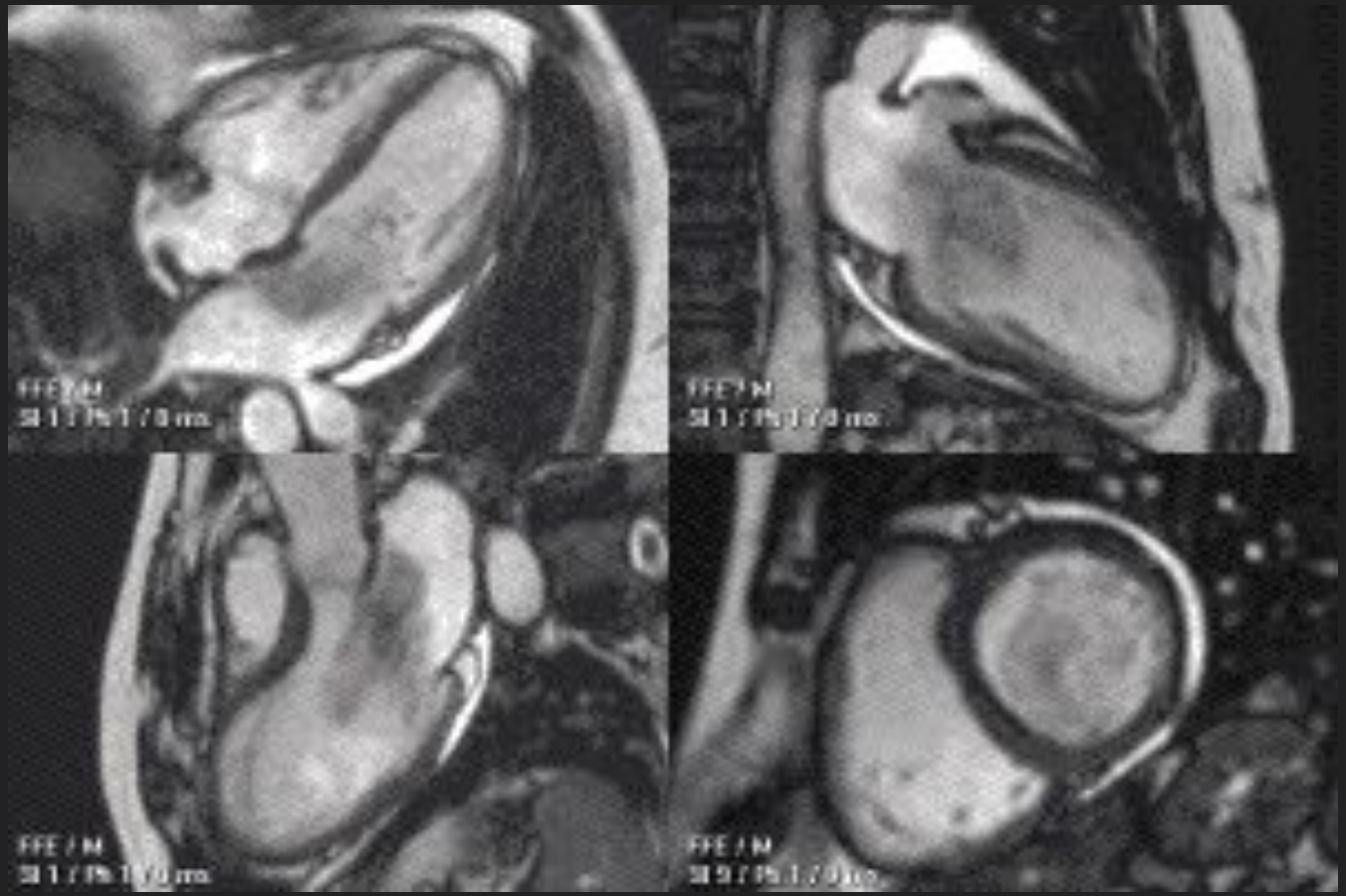

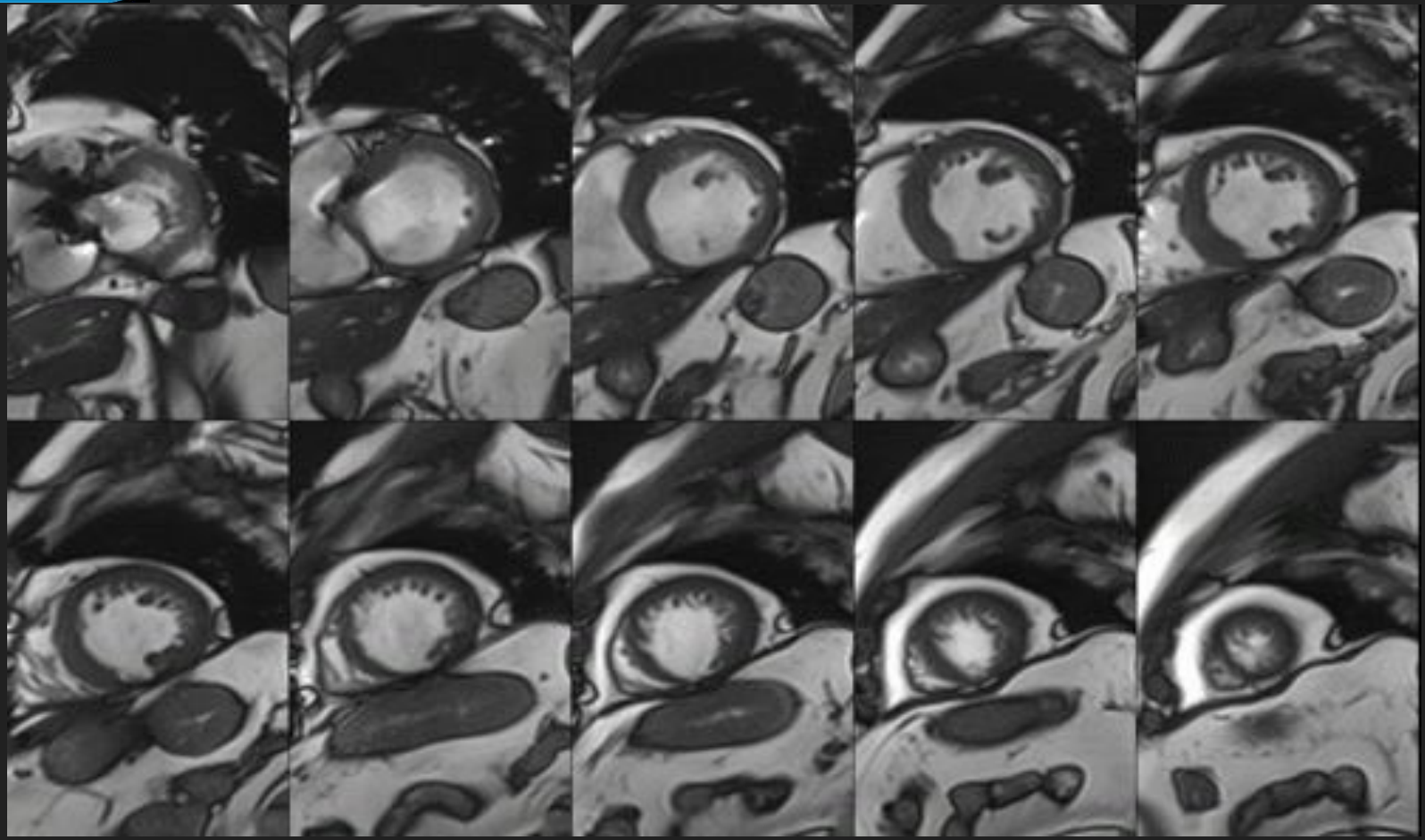

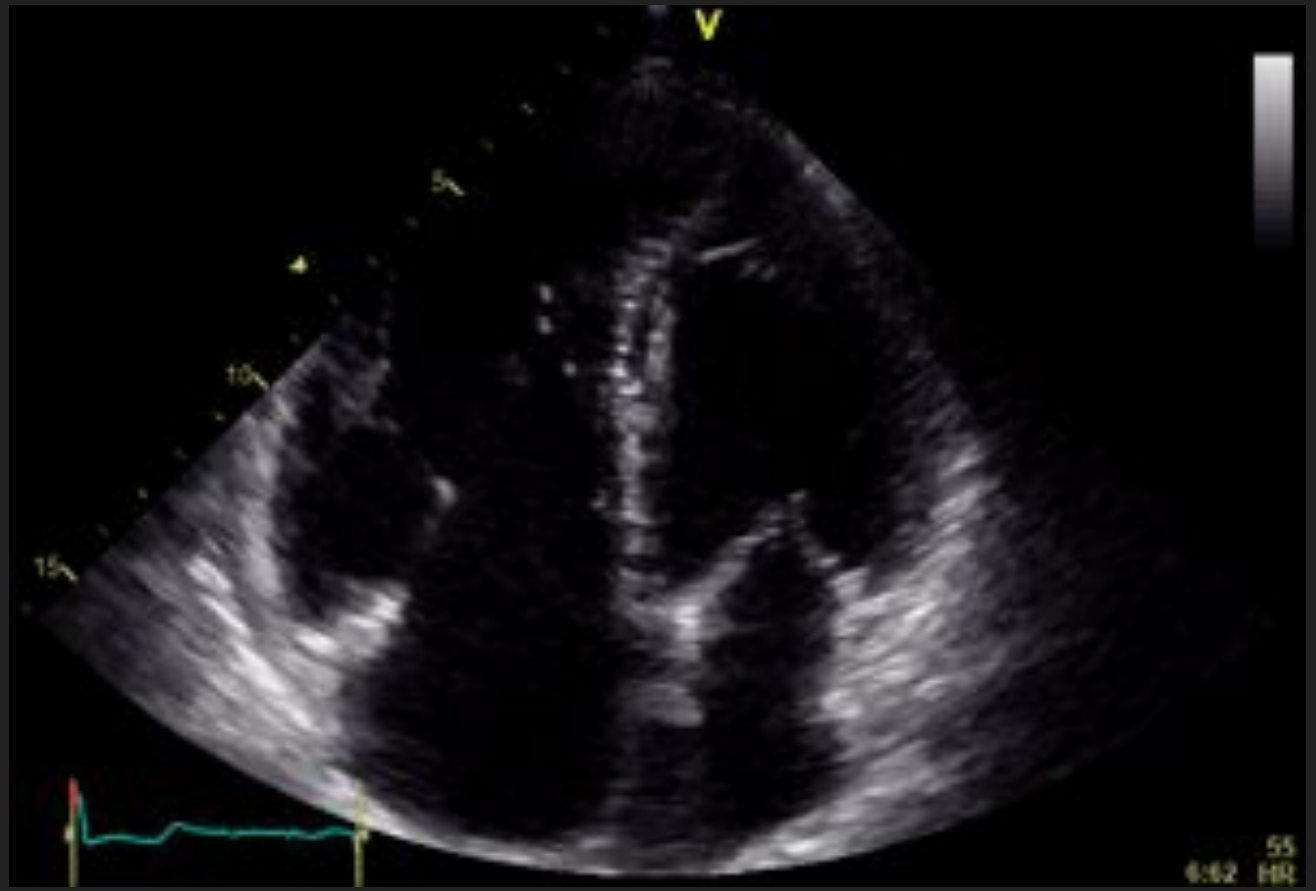

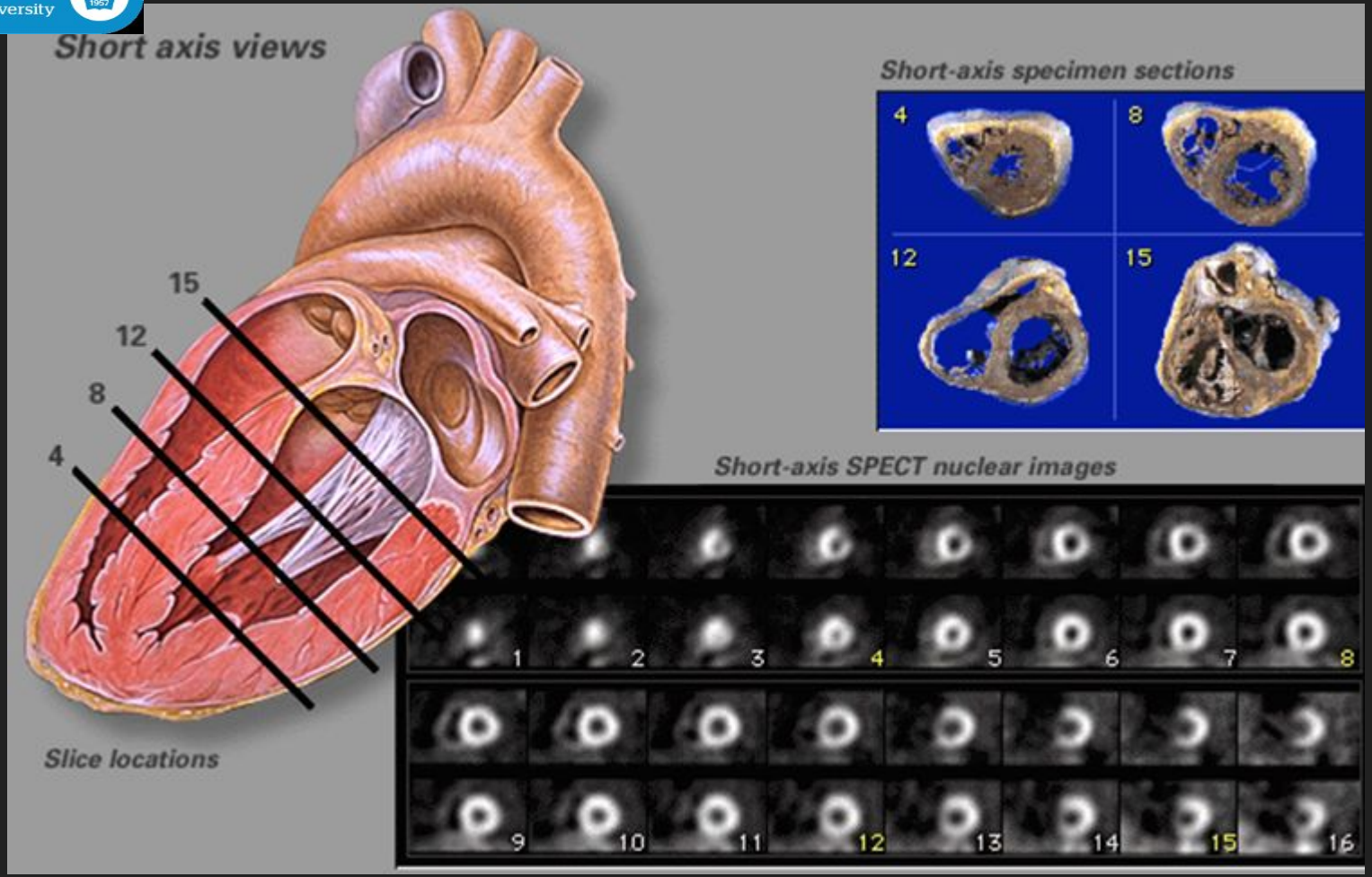

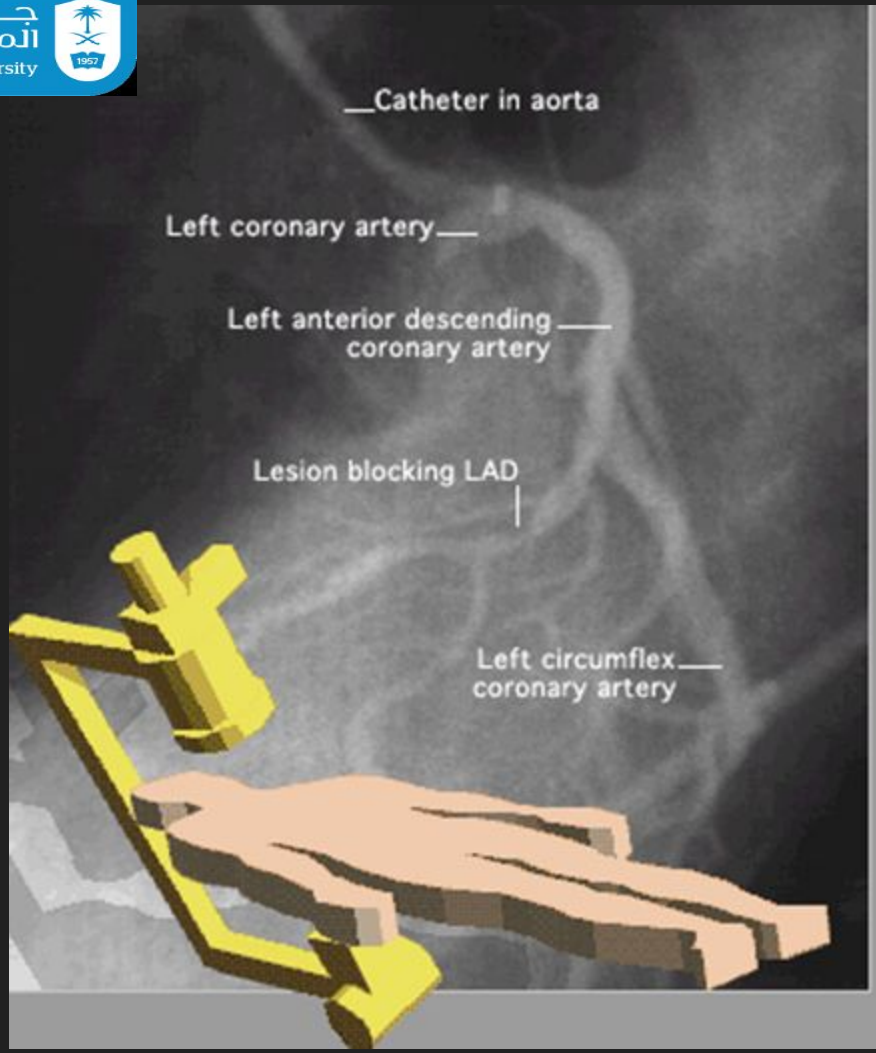

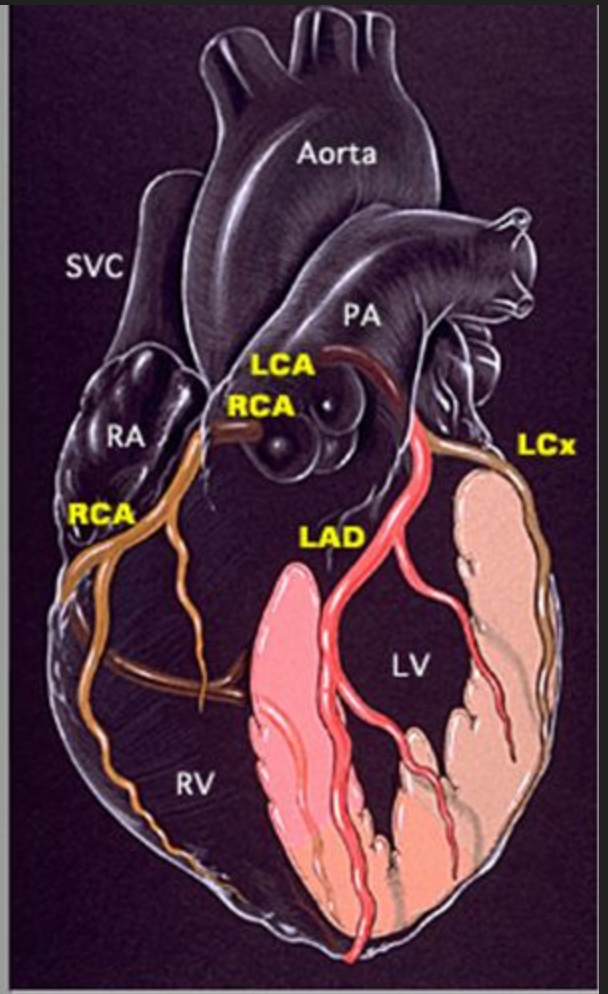

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Next lecture we will discuss how to interpret a Chest Xray and show few pathology cases

Thanks

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