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BASIC PRINCIPLES OF CHEST X-RAY INTERPRETATION

Dr. Richard Wasley

Department of Radiology

Saddleback Memorial Medical Center

OVERVIEW

Anatomy

Central Lines and Tubes

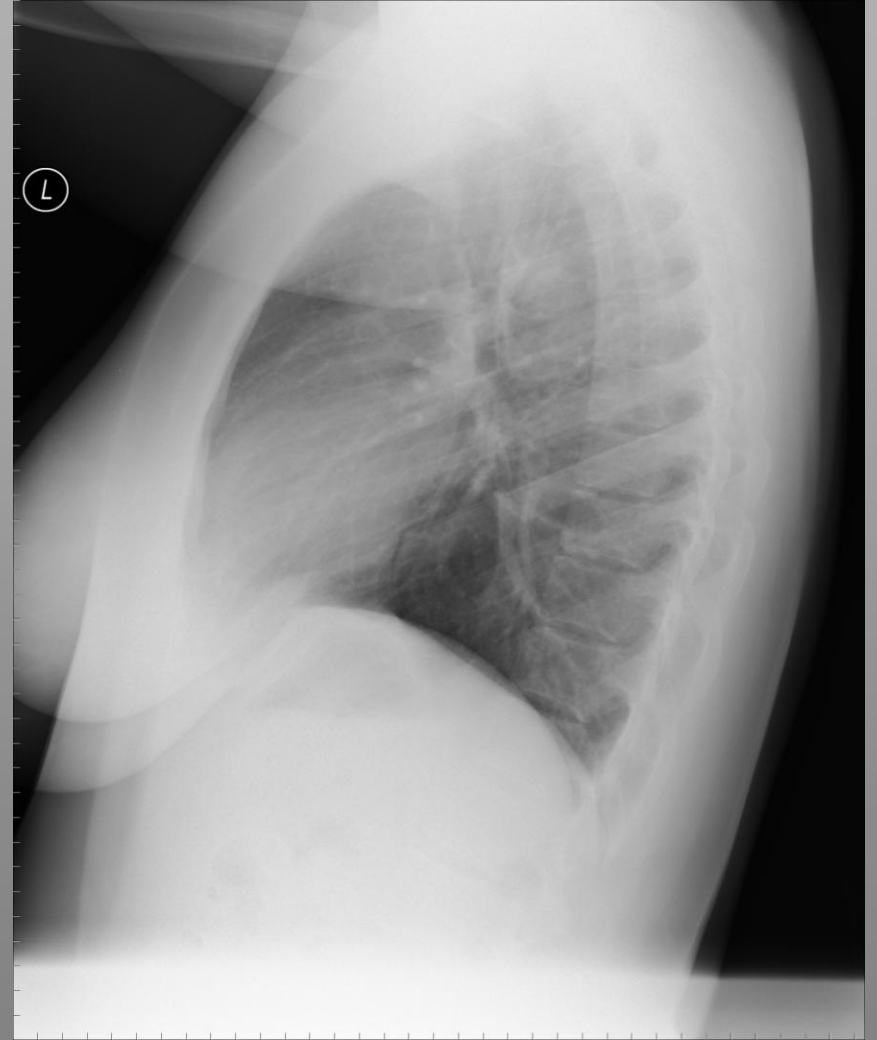
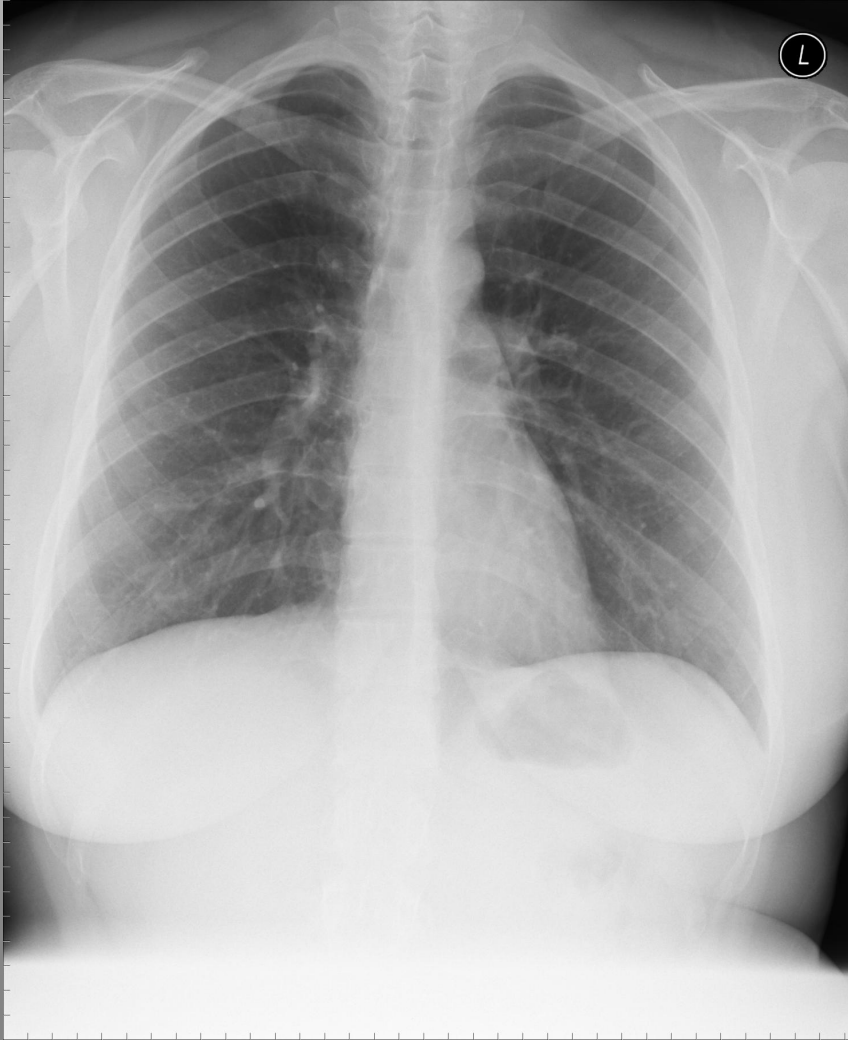
recognition of complications

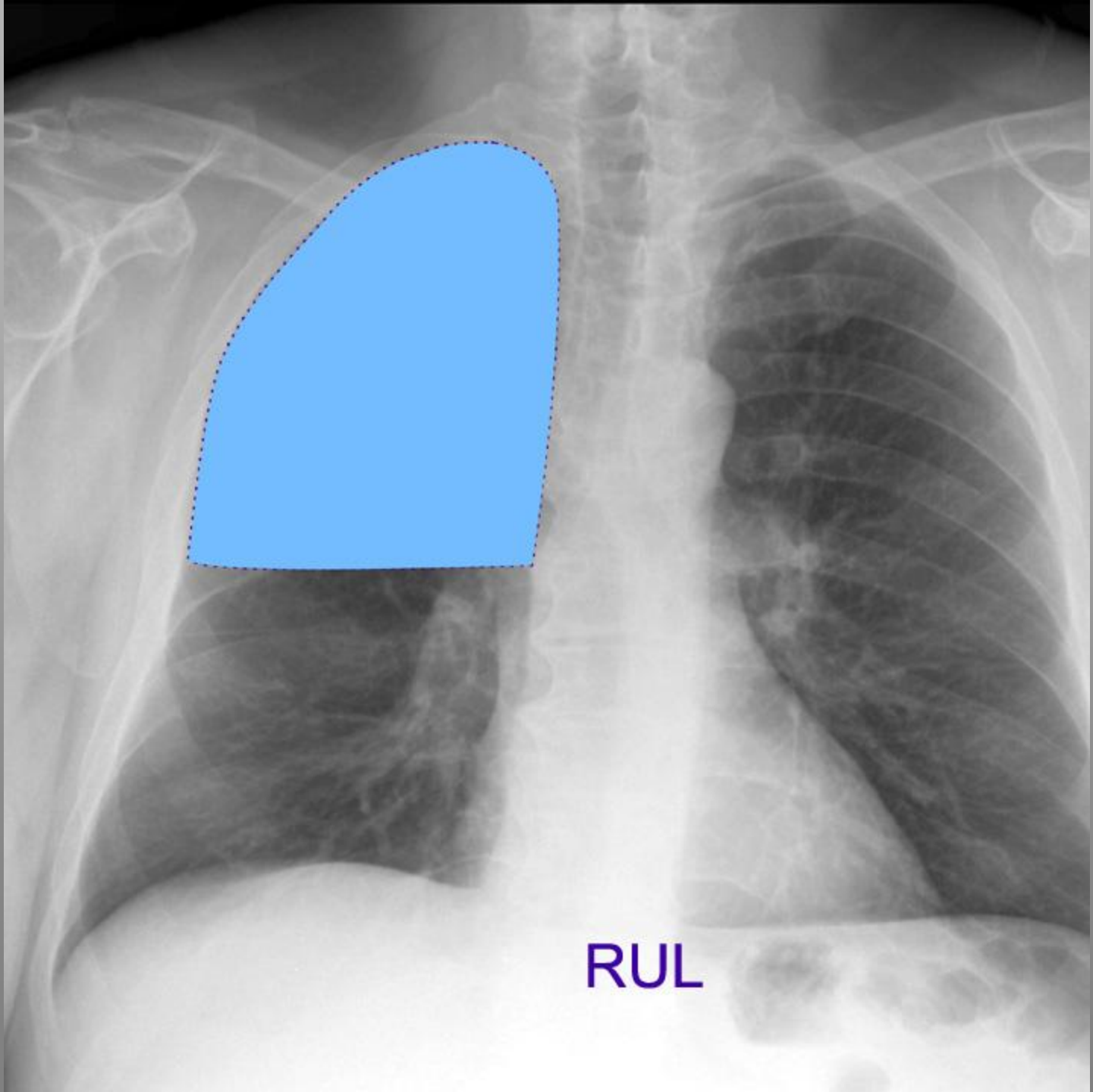
appropriate position

Lung disease and pathology

Unknowns

ANATOMY





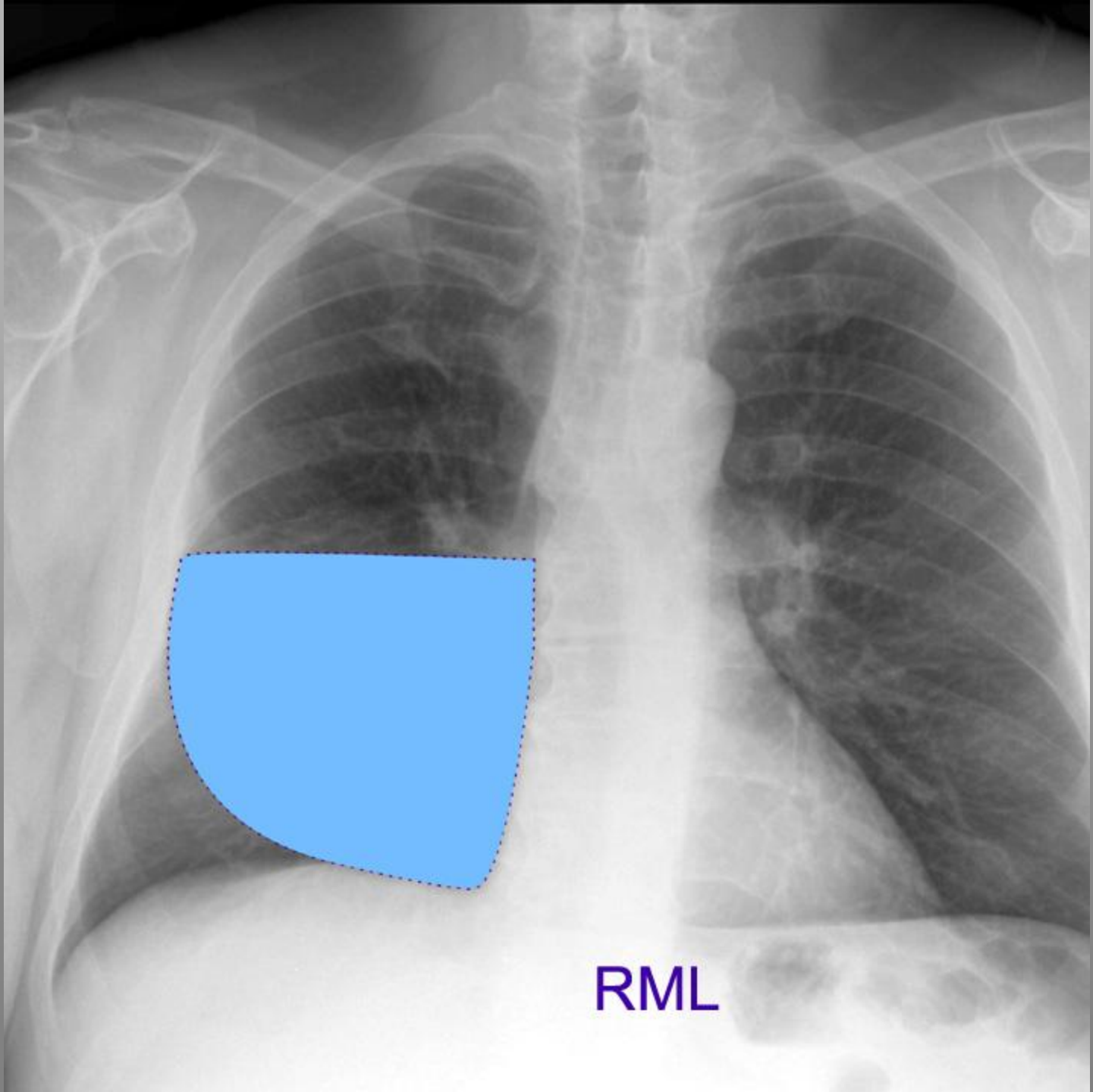
RUL

Se.2
Ima

L



RUL

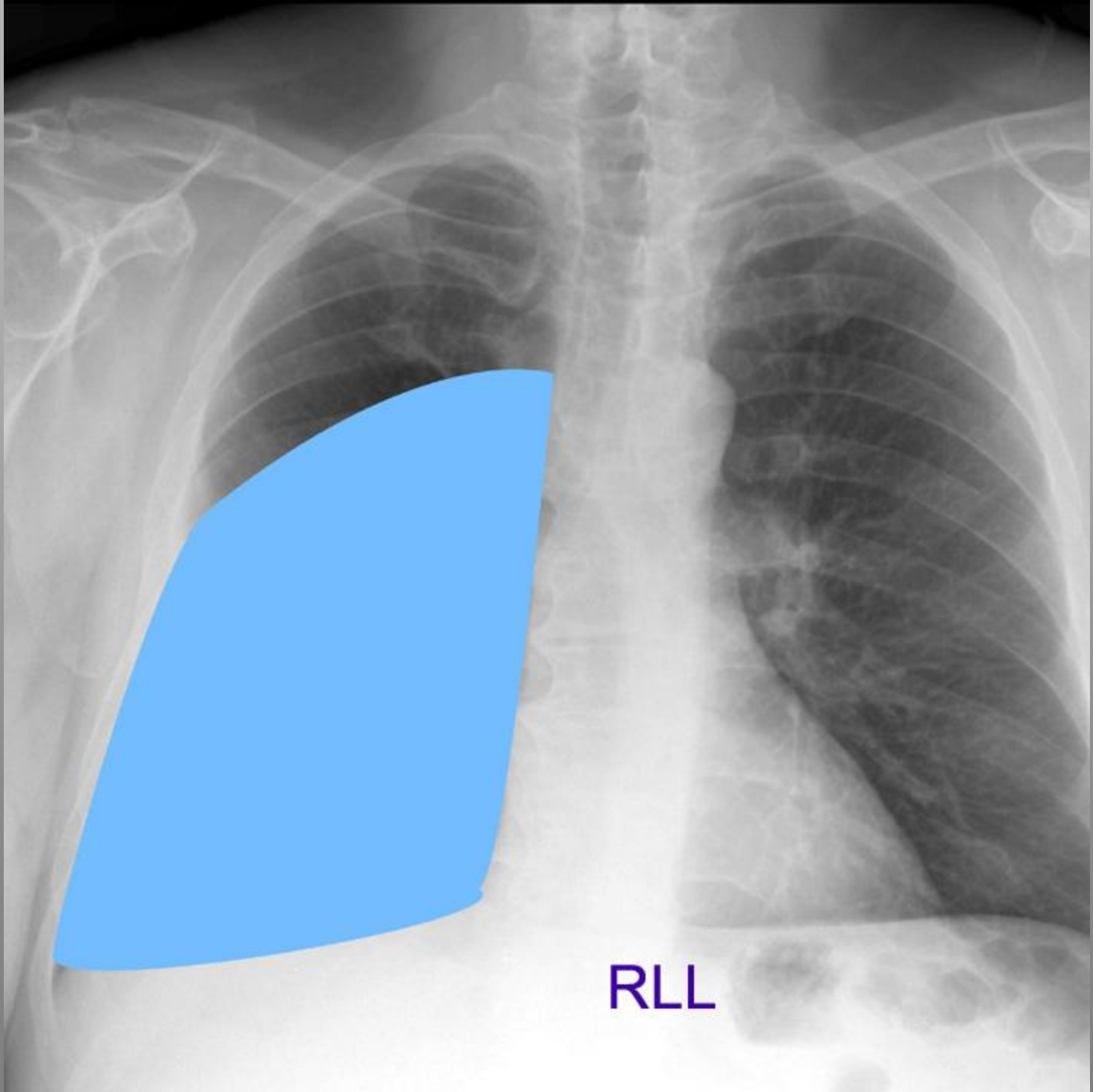


RML

Se.2
Ima

L

RML

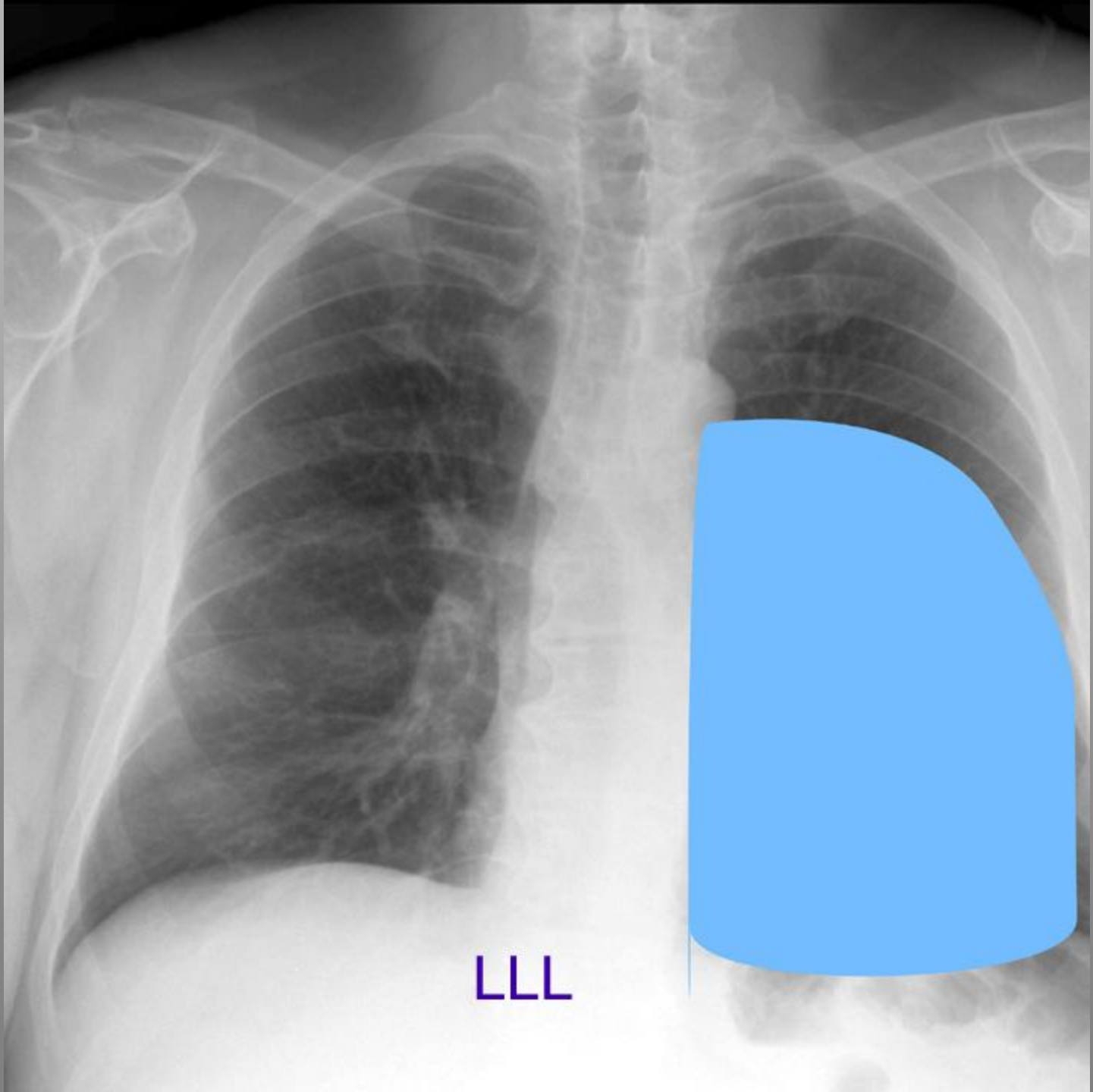


RLL

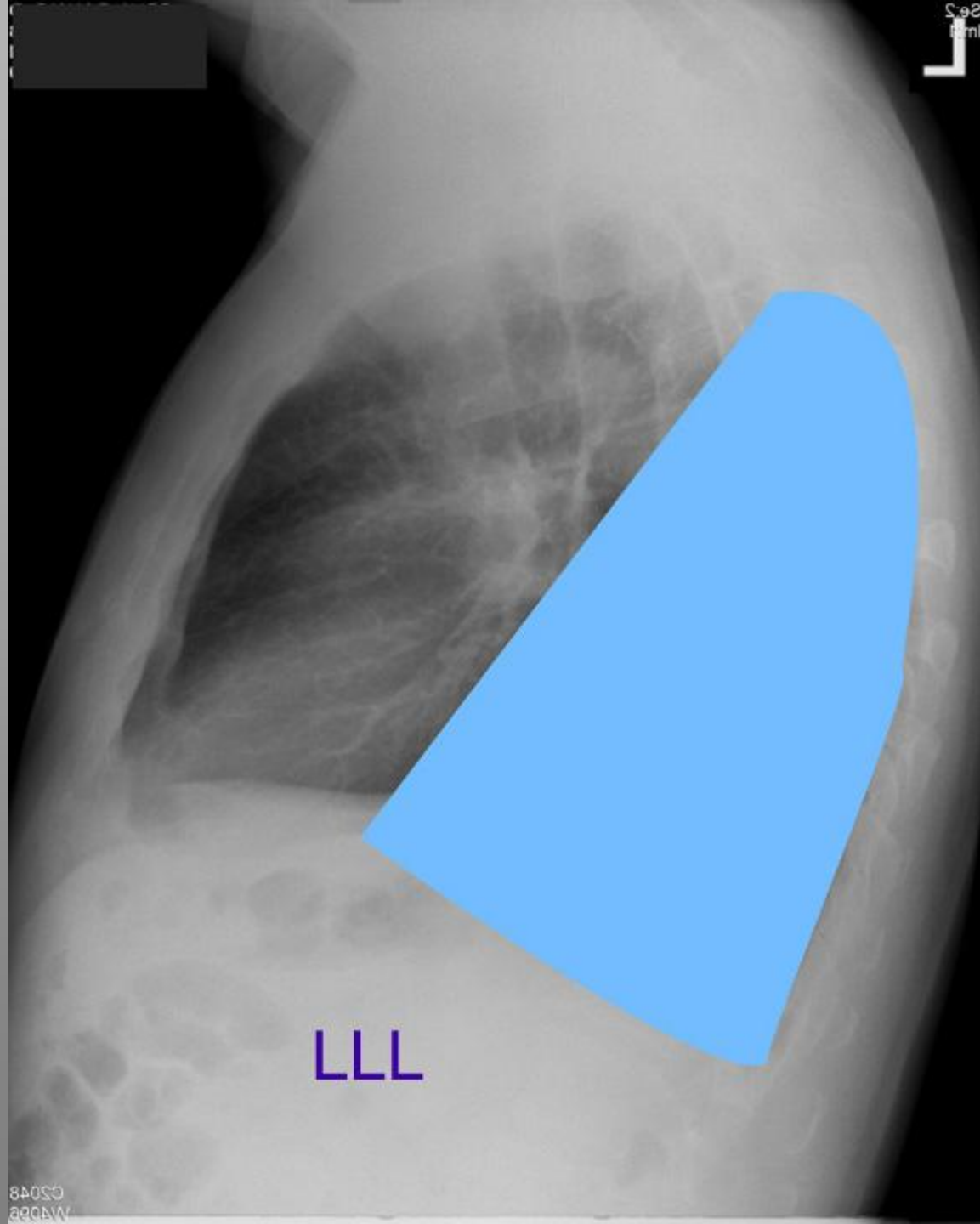
Se.2
Ima

L

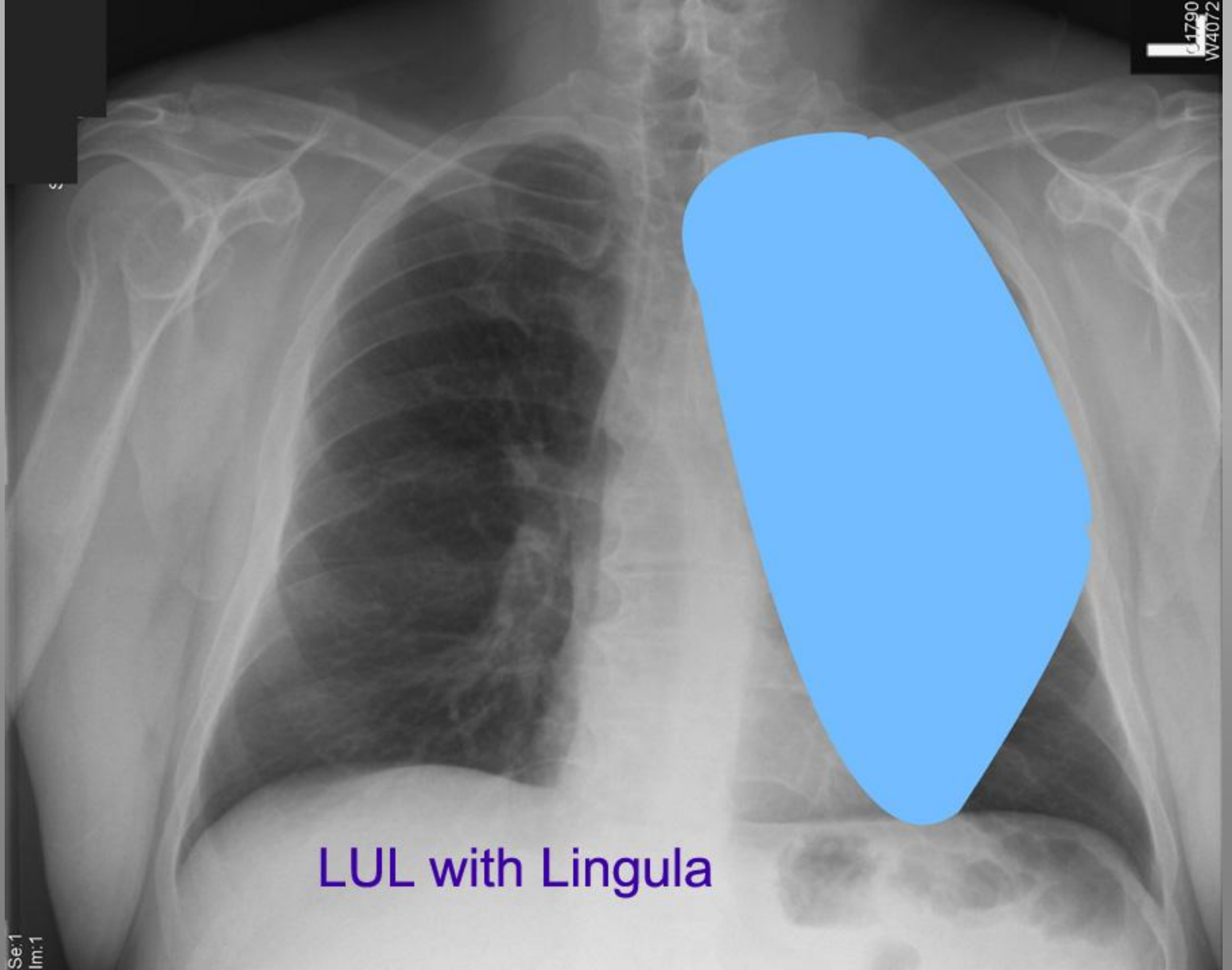
RLL



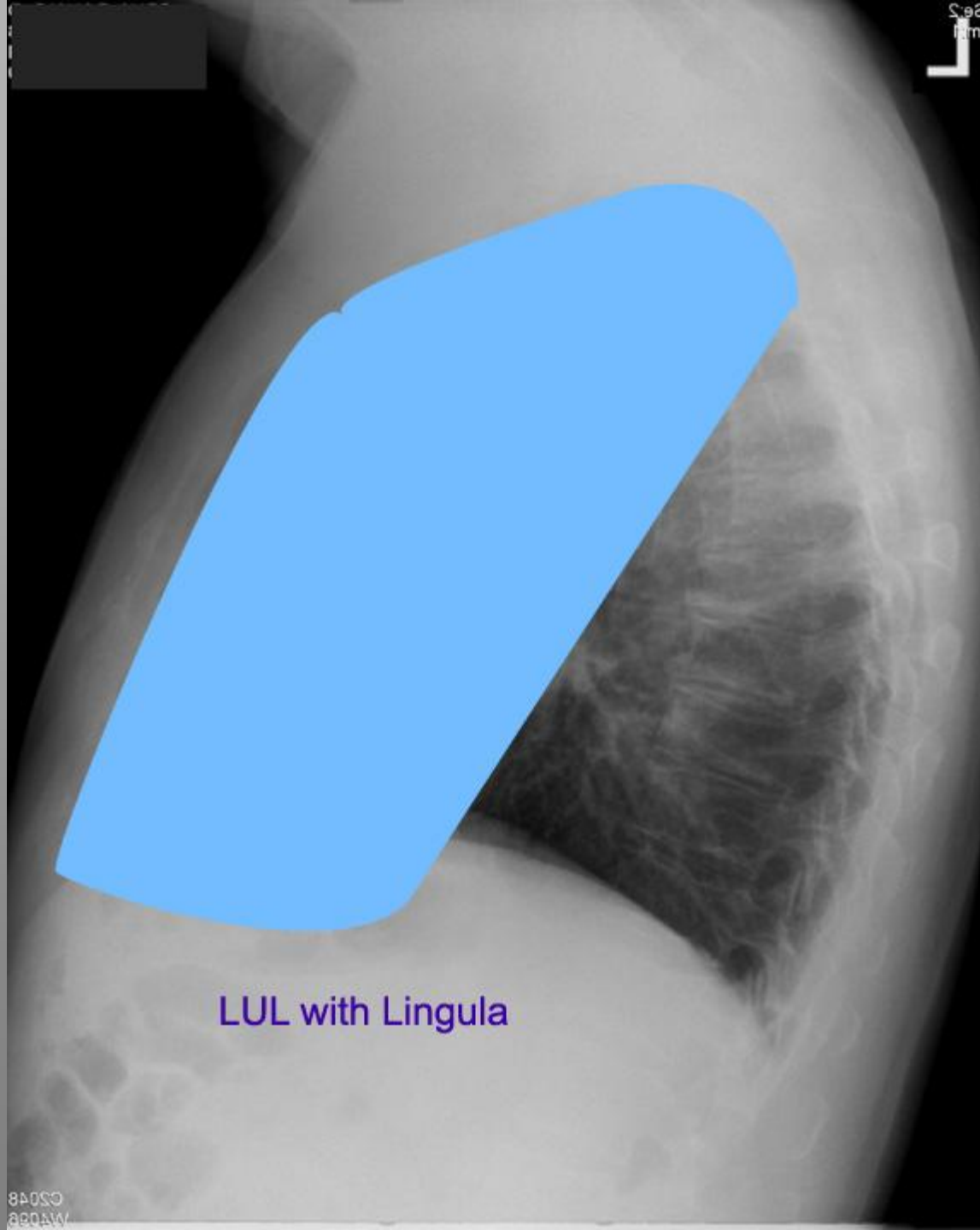
LLL



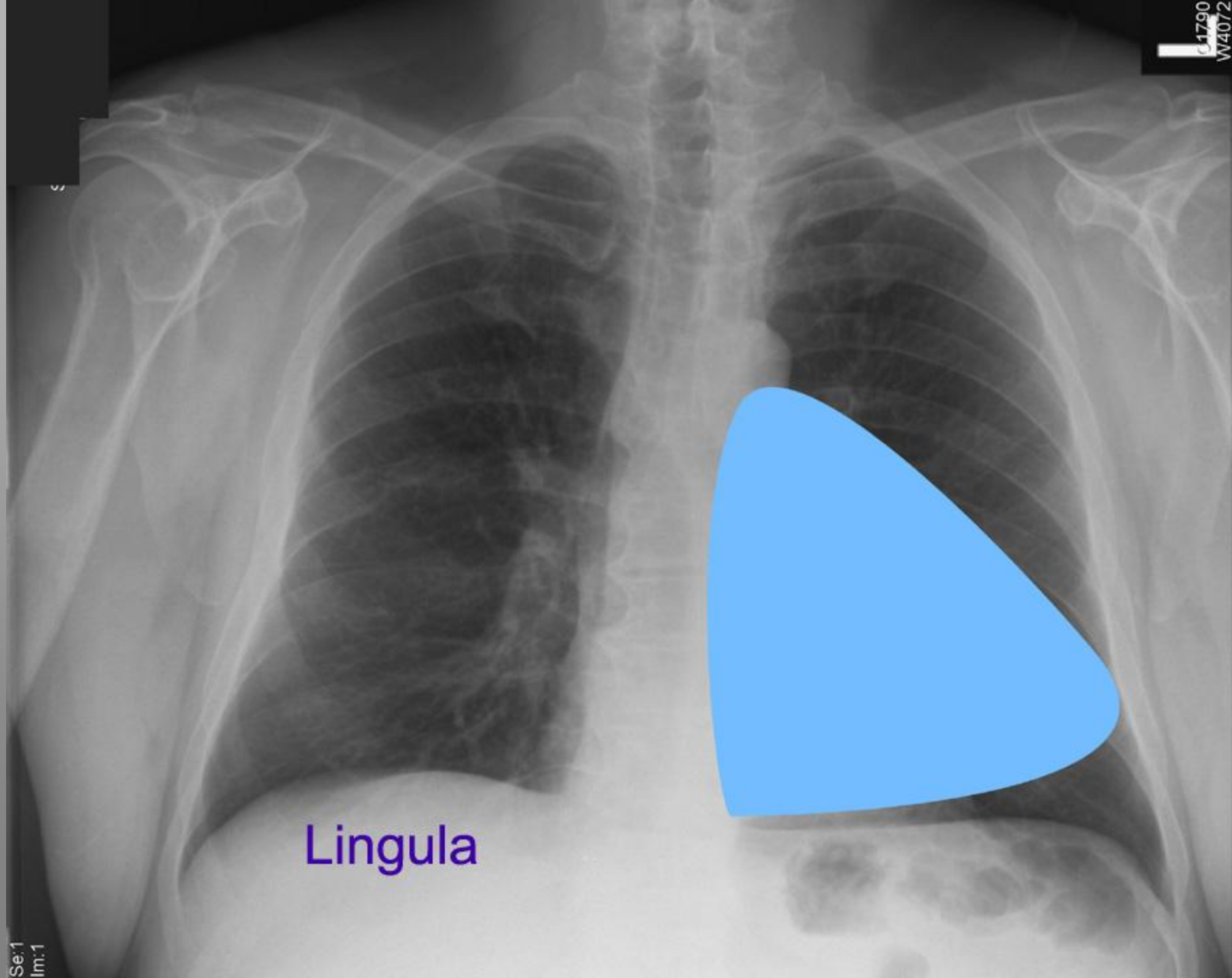
LLL



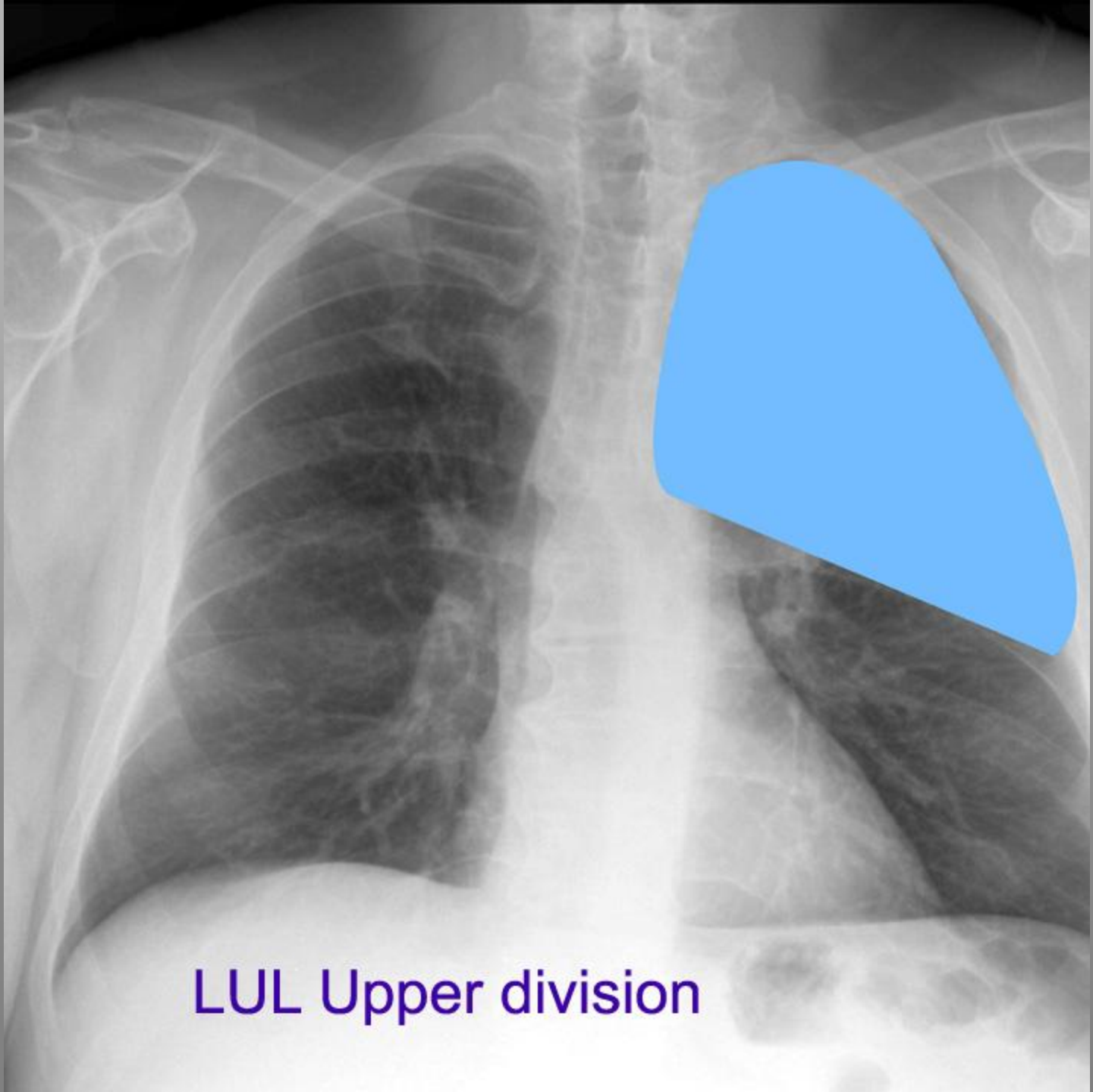
LUL with Lingula



LUL with Lingula

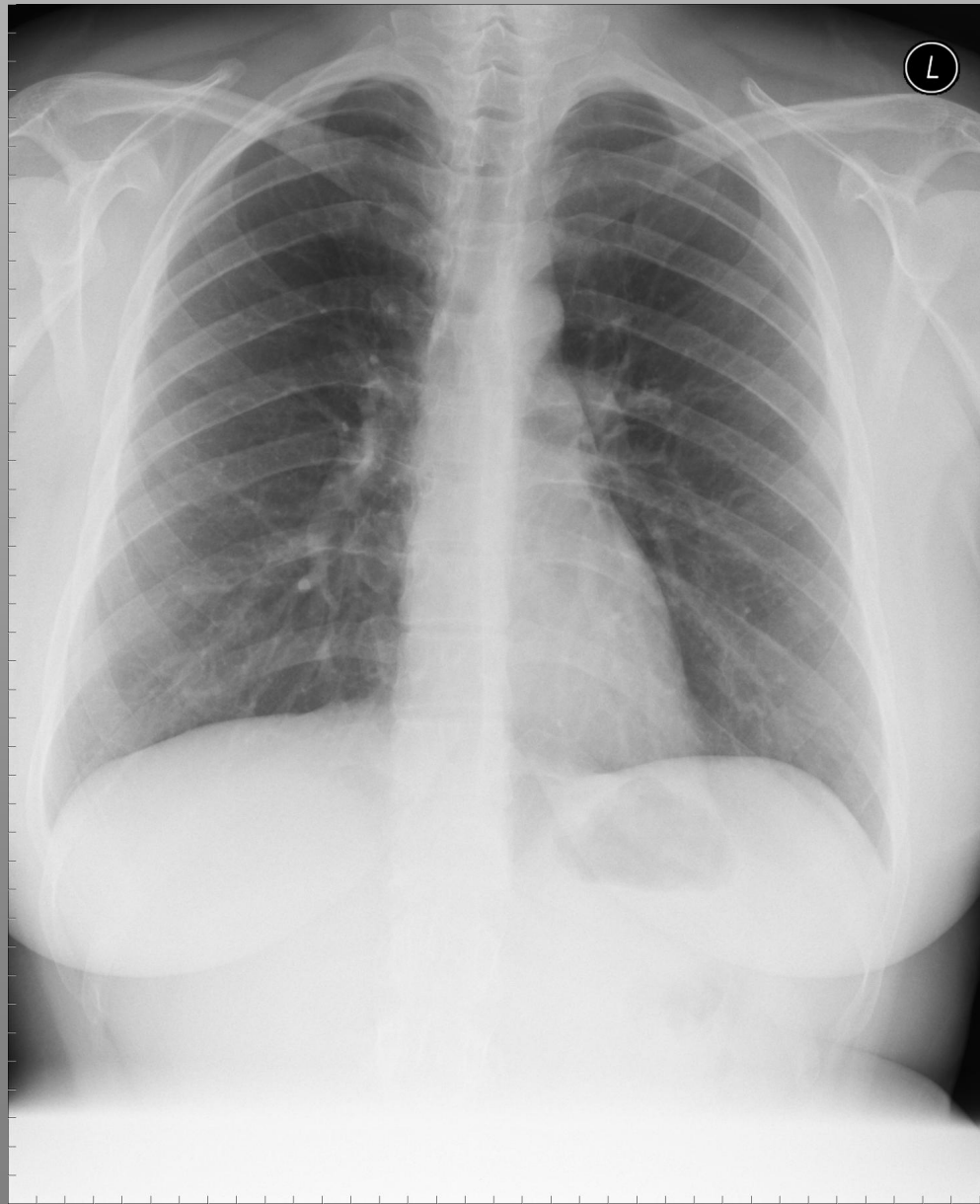


Lingula

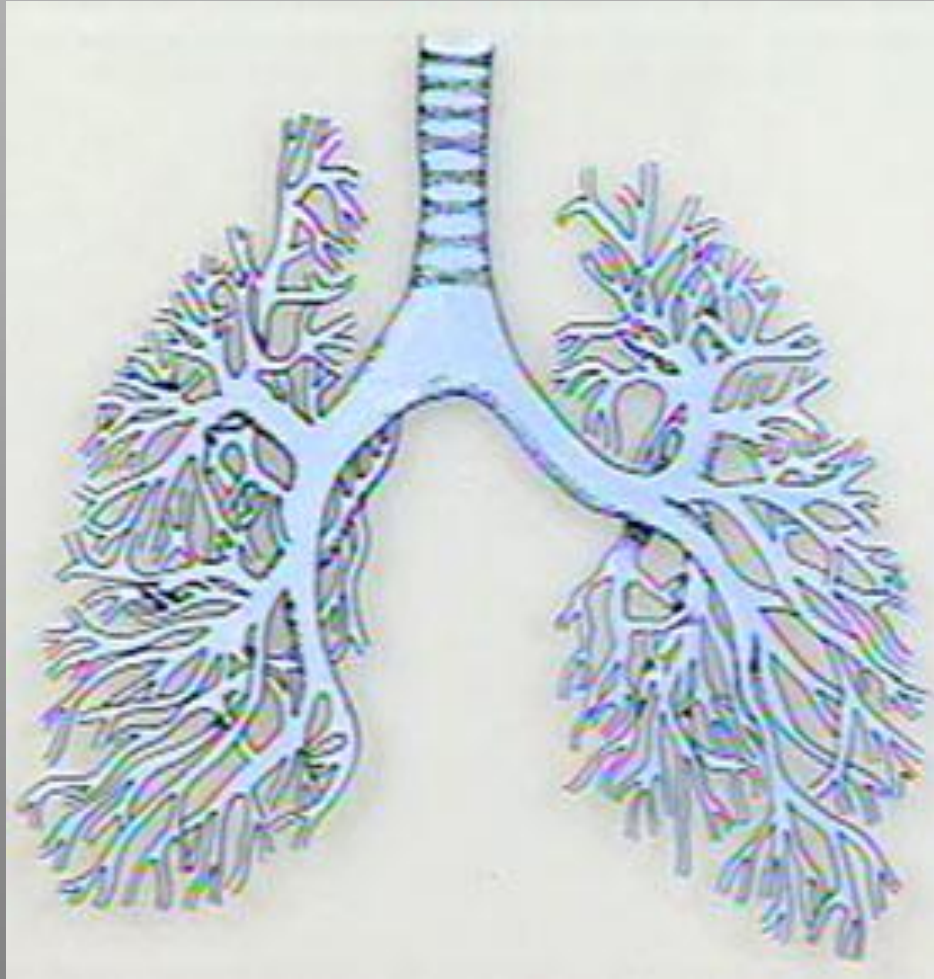


LUL Upper division

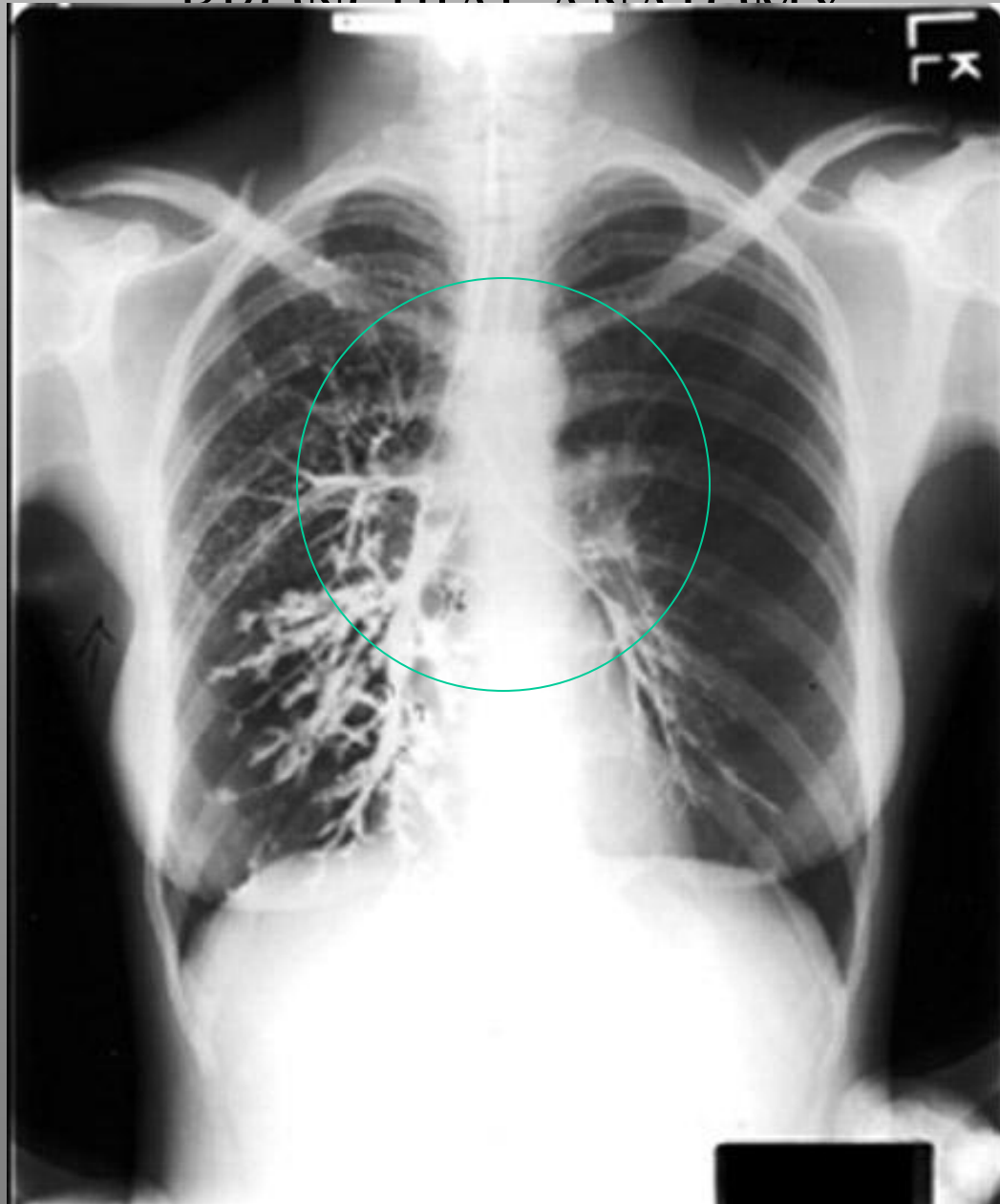
BRONCHIAL ANATOMY

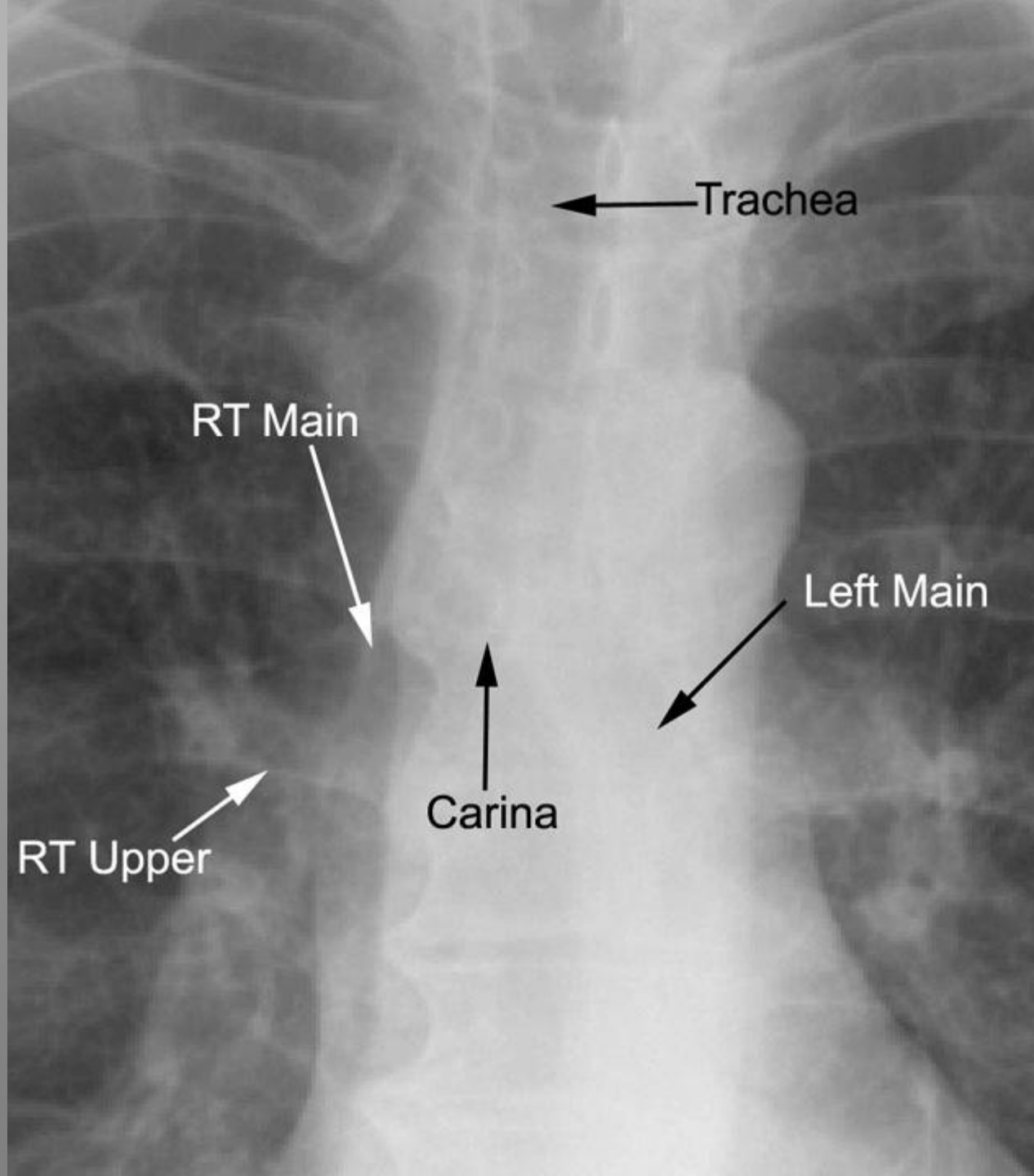


BRONCHIAL ANATOMY



BRONCHIAL ANATOMY



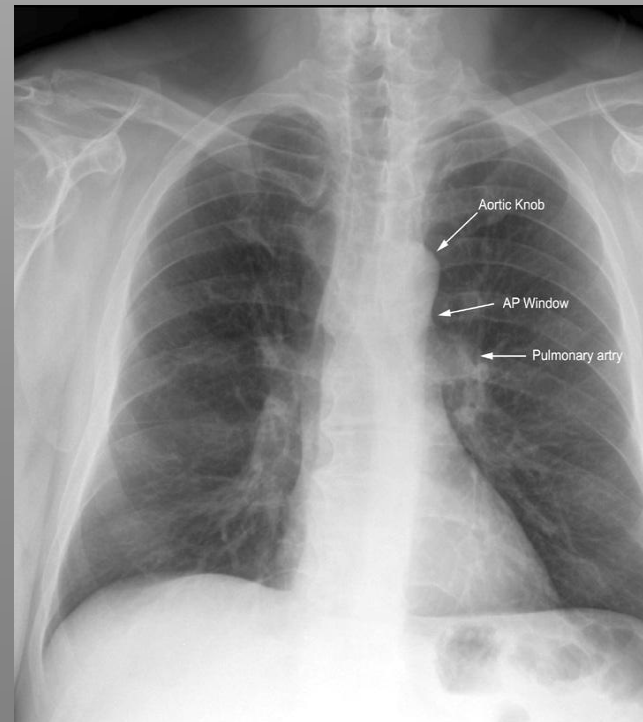
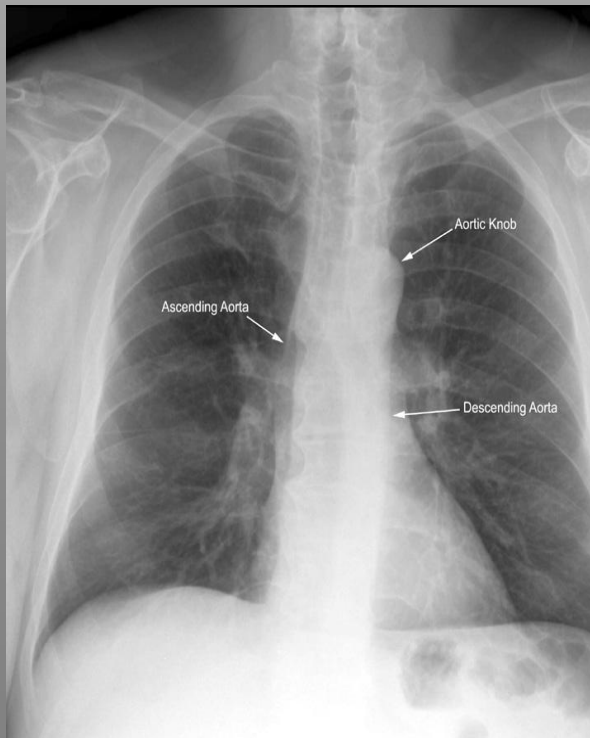


ANATOMY -MEDIASTINUM

Individual structures are not individually discernable on CXR –
all are soft tissue density

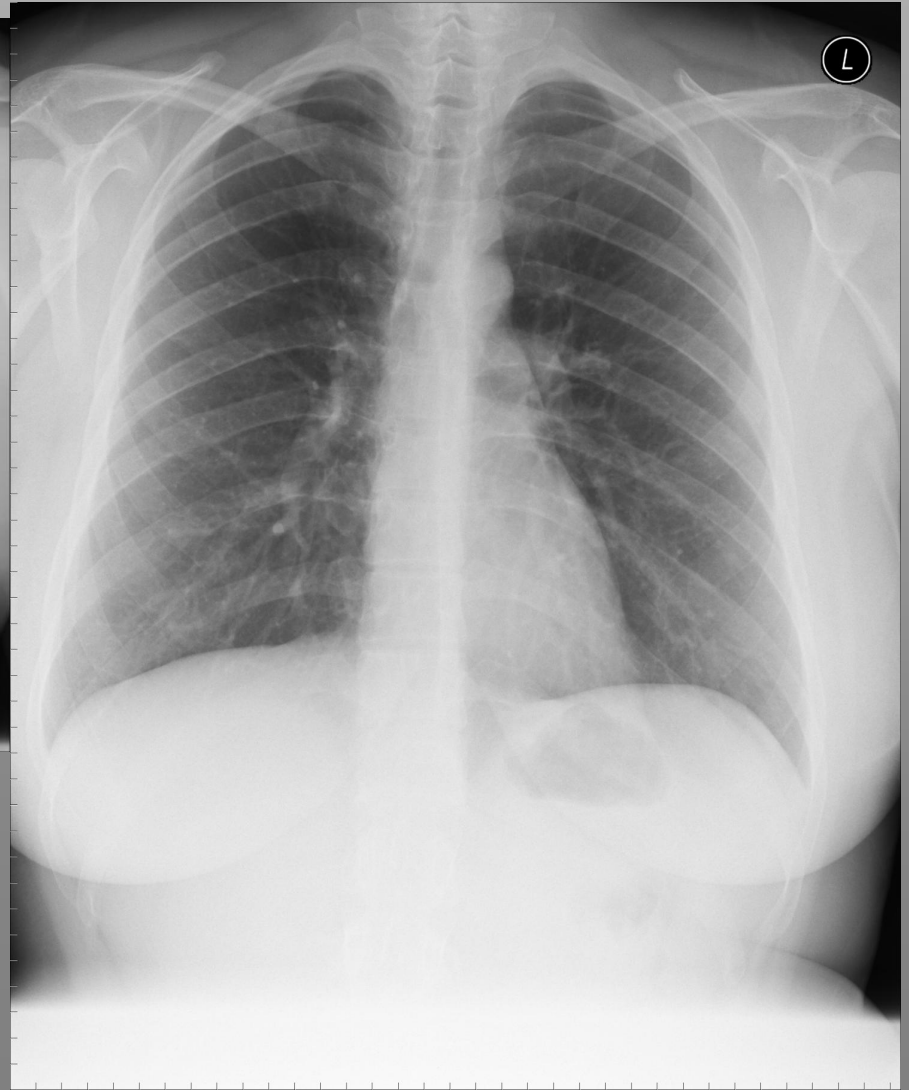
Only recognized by their outline and silhouette with lung

If normal outline is obscured or prominent, may be abnormal

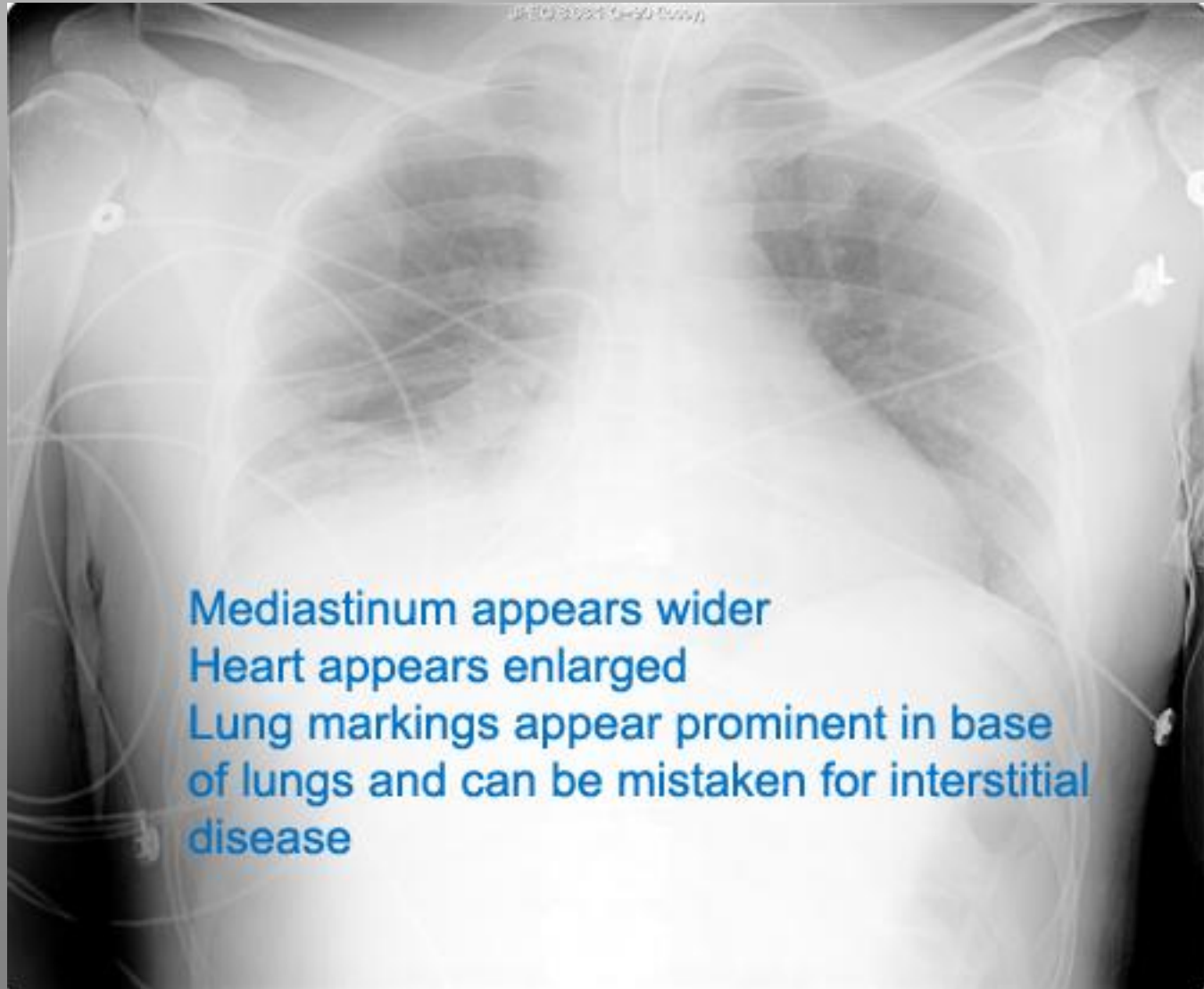


MEDIASTINUM

Dynamic structure changing with respiration



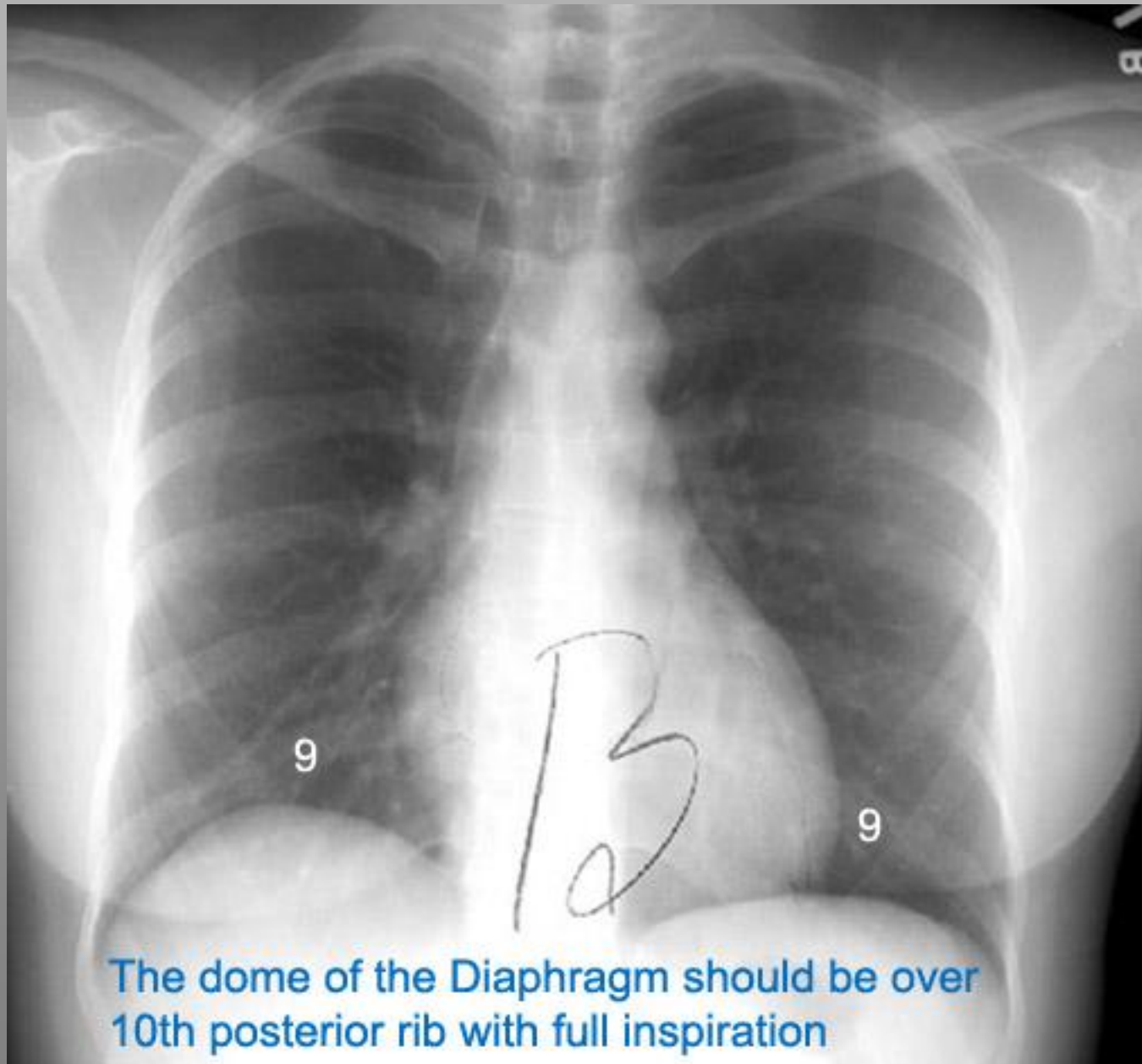
Mediastinum – expiratory film

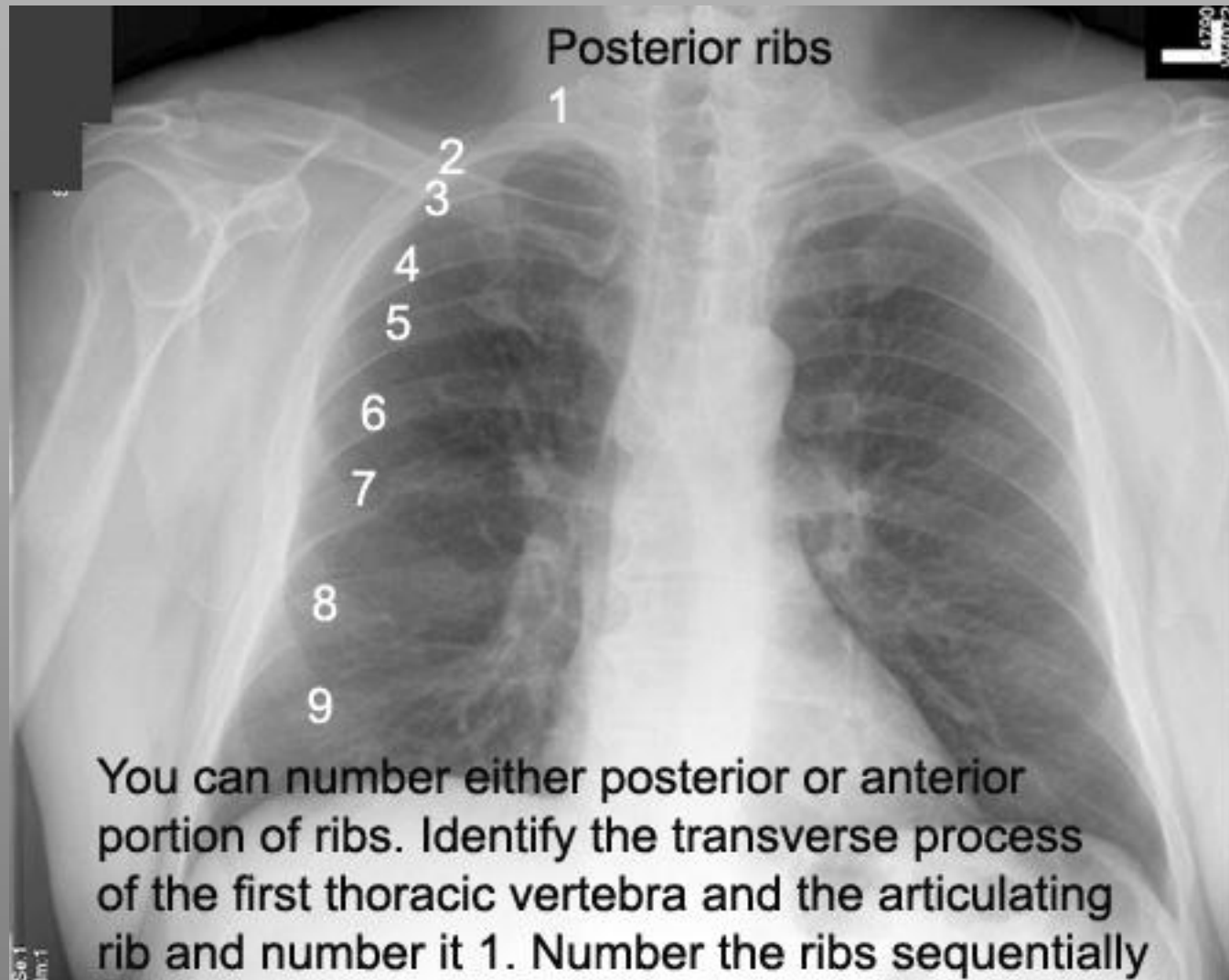


MEDIASTINUM – SPECIFICS

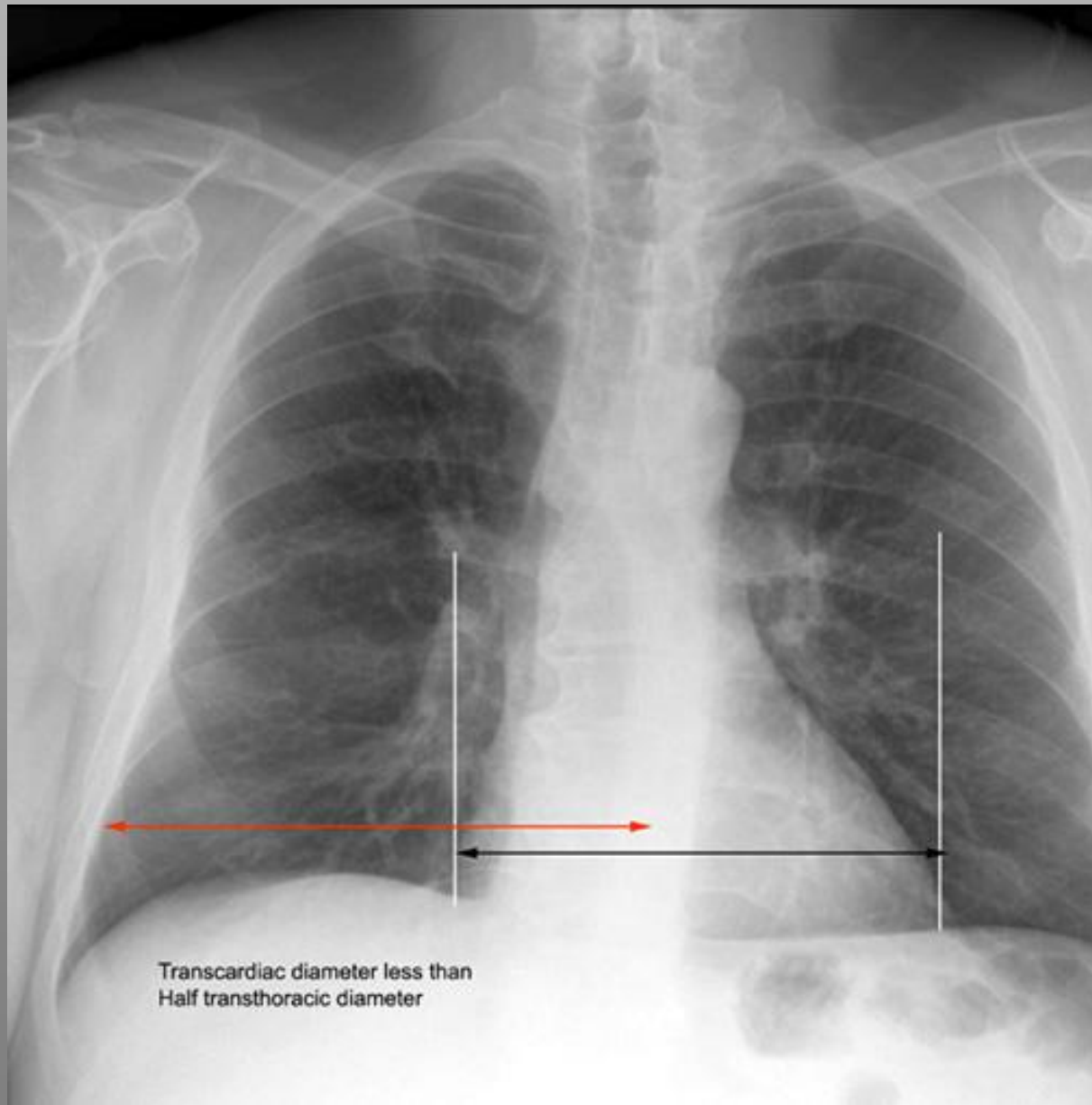
When is the heart enlarged?

First need to talk about how to assess a chest x-ray for adequate inspiration





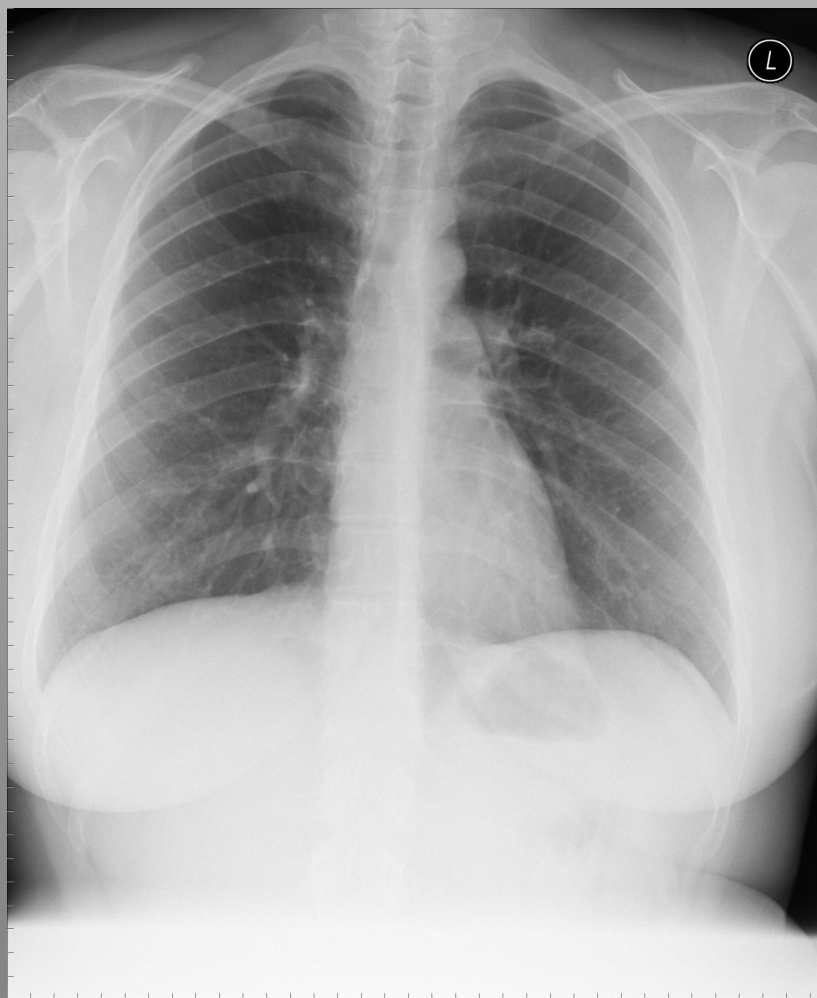
Normal Heart Size



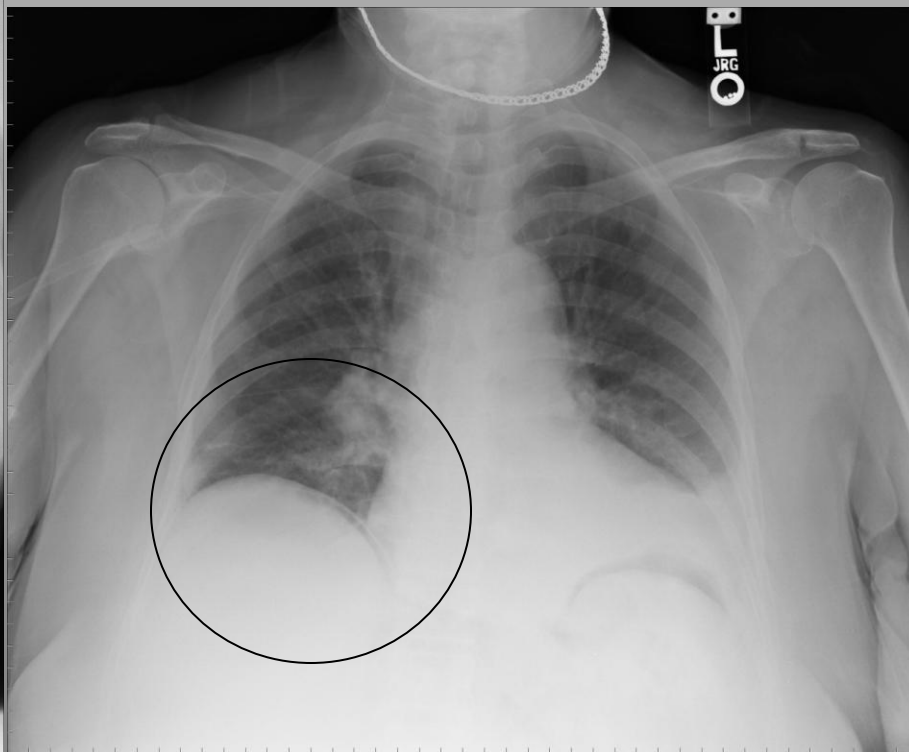
ANATOMY

After looking at the lungs, mediastinum
and bones . . .

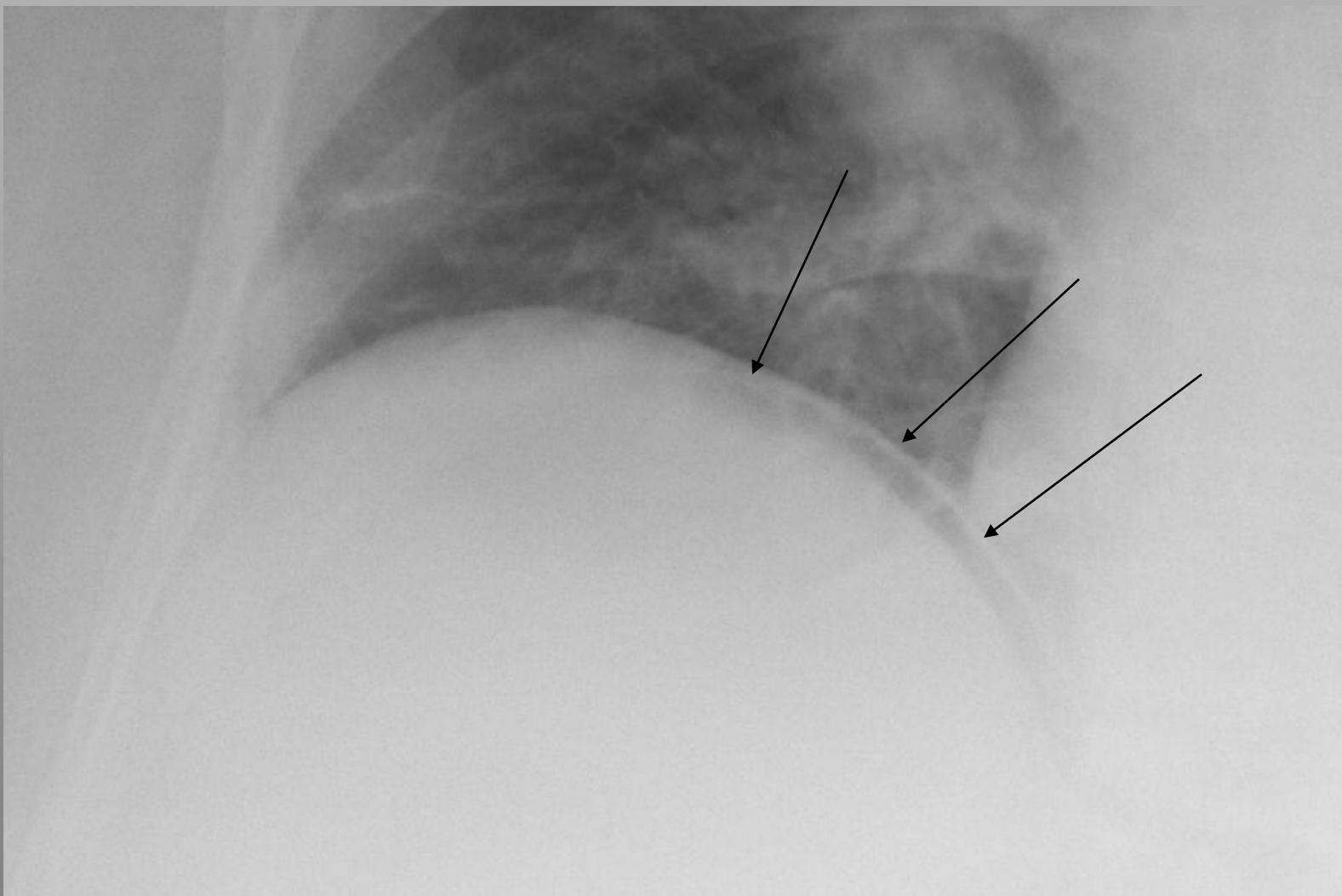
“Look at everything else”



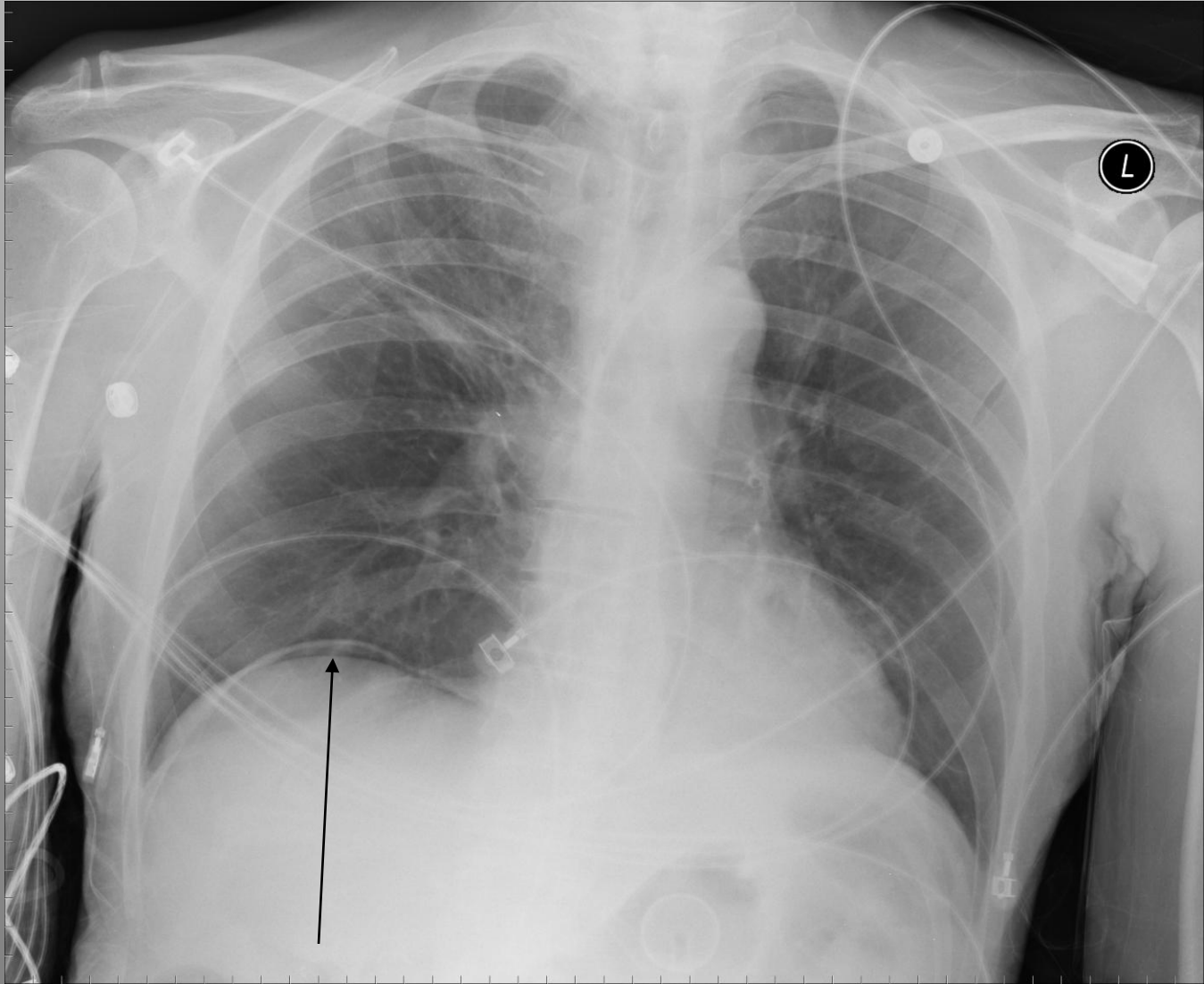
Normal diaphragm



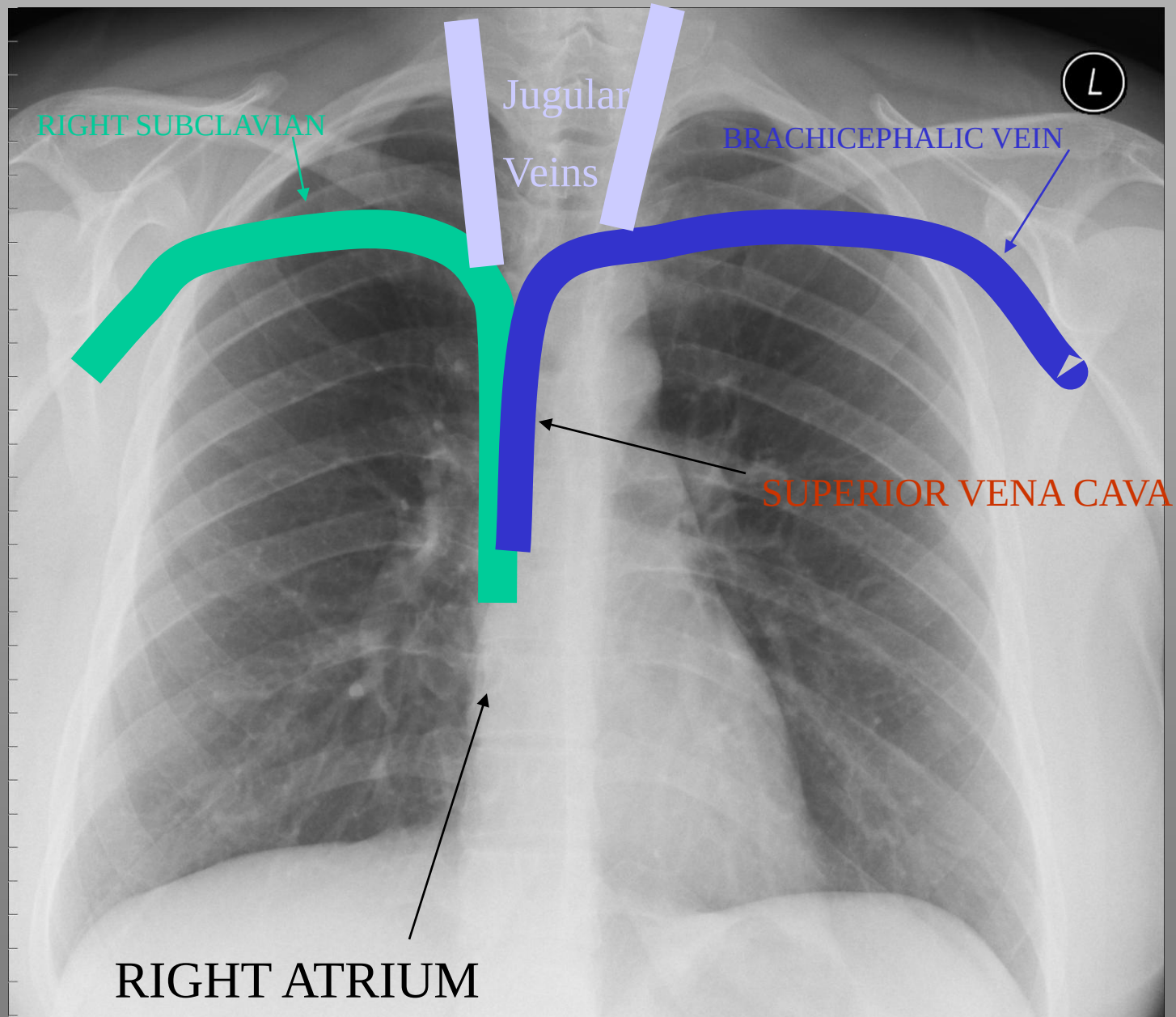
Free intra-peritoneal air

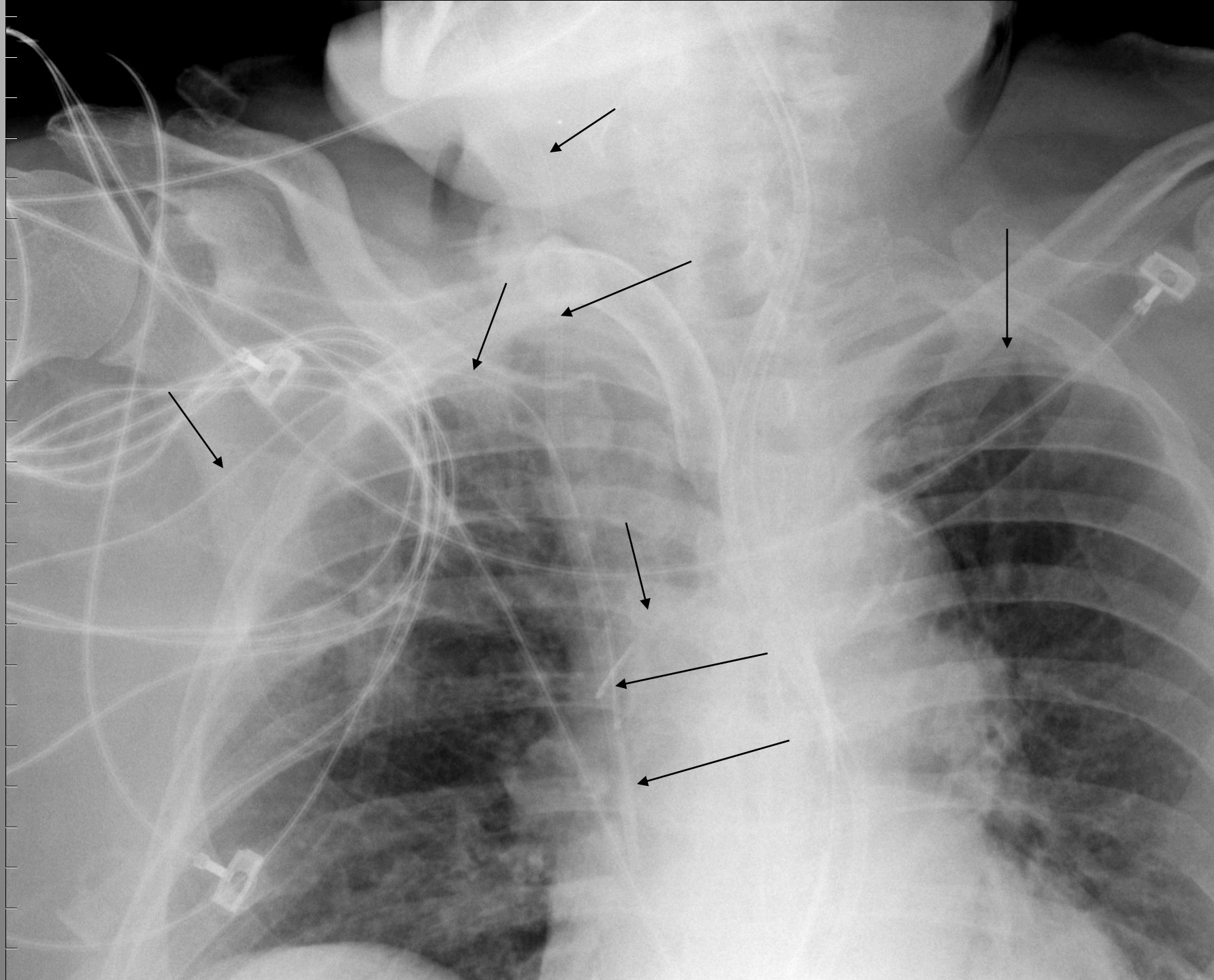


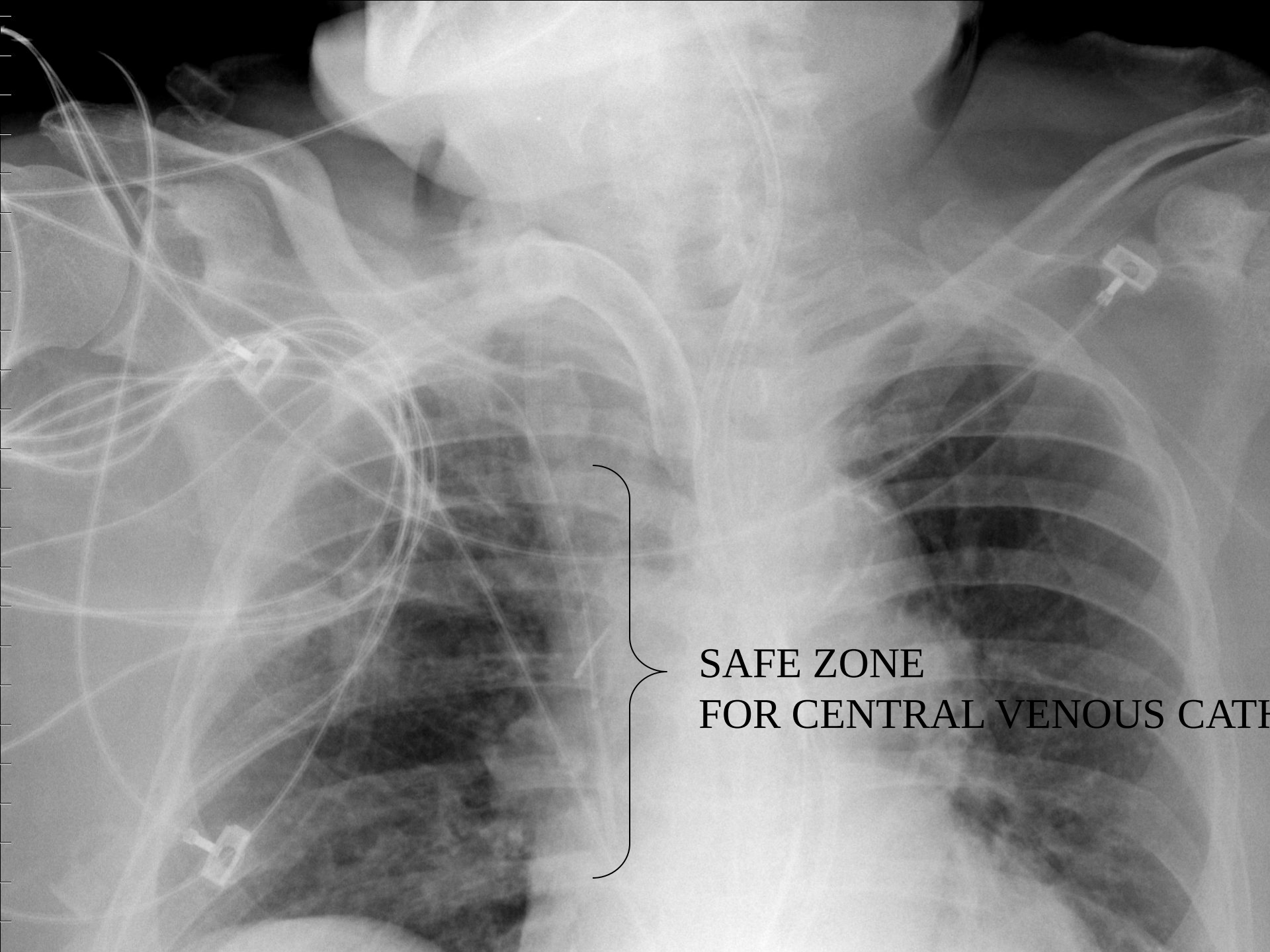
Free Air



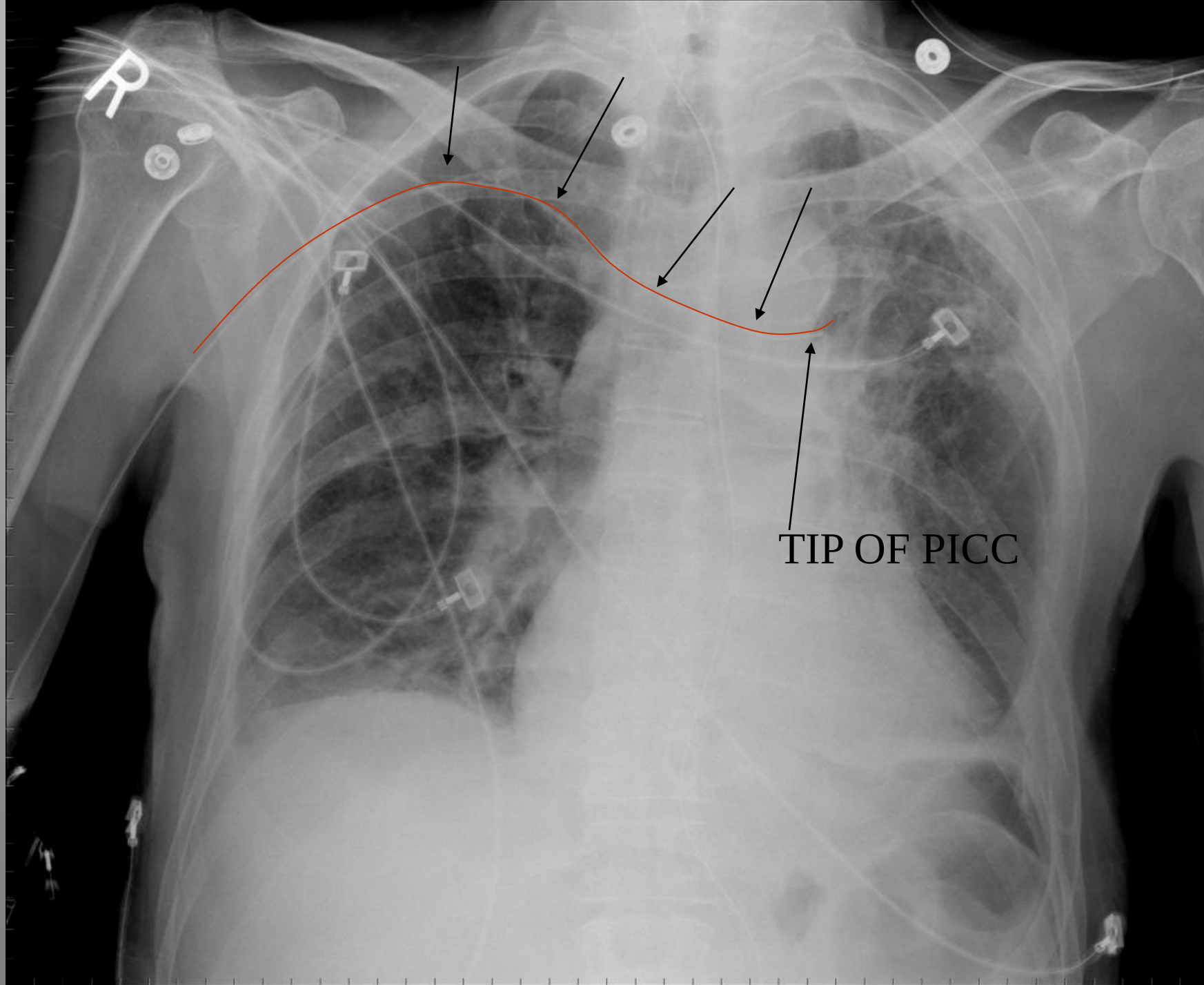
LINES AND TUBES





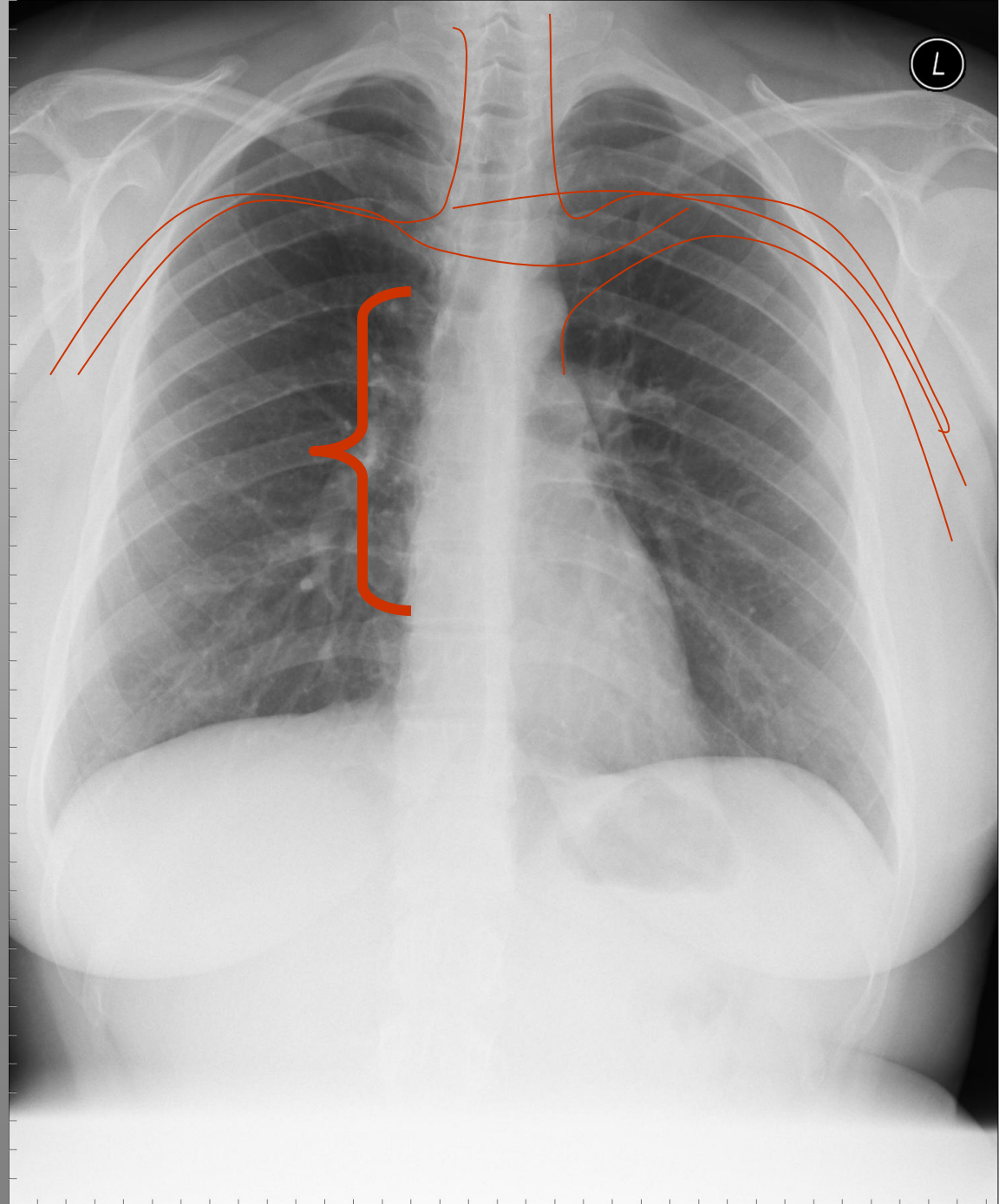


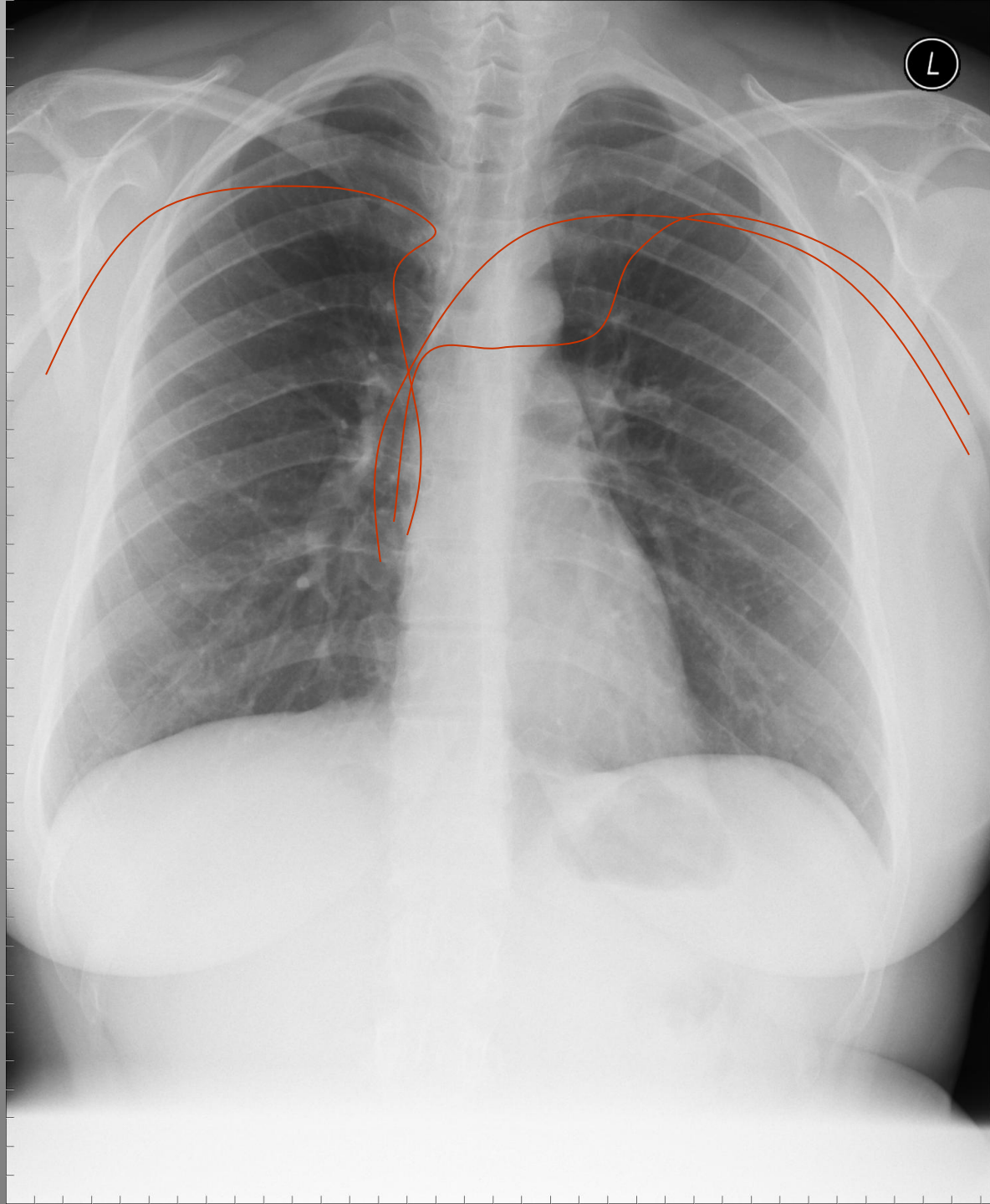
SAFE ZONE
FOR CENTRAL VENOUS CATH



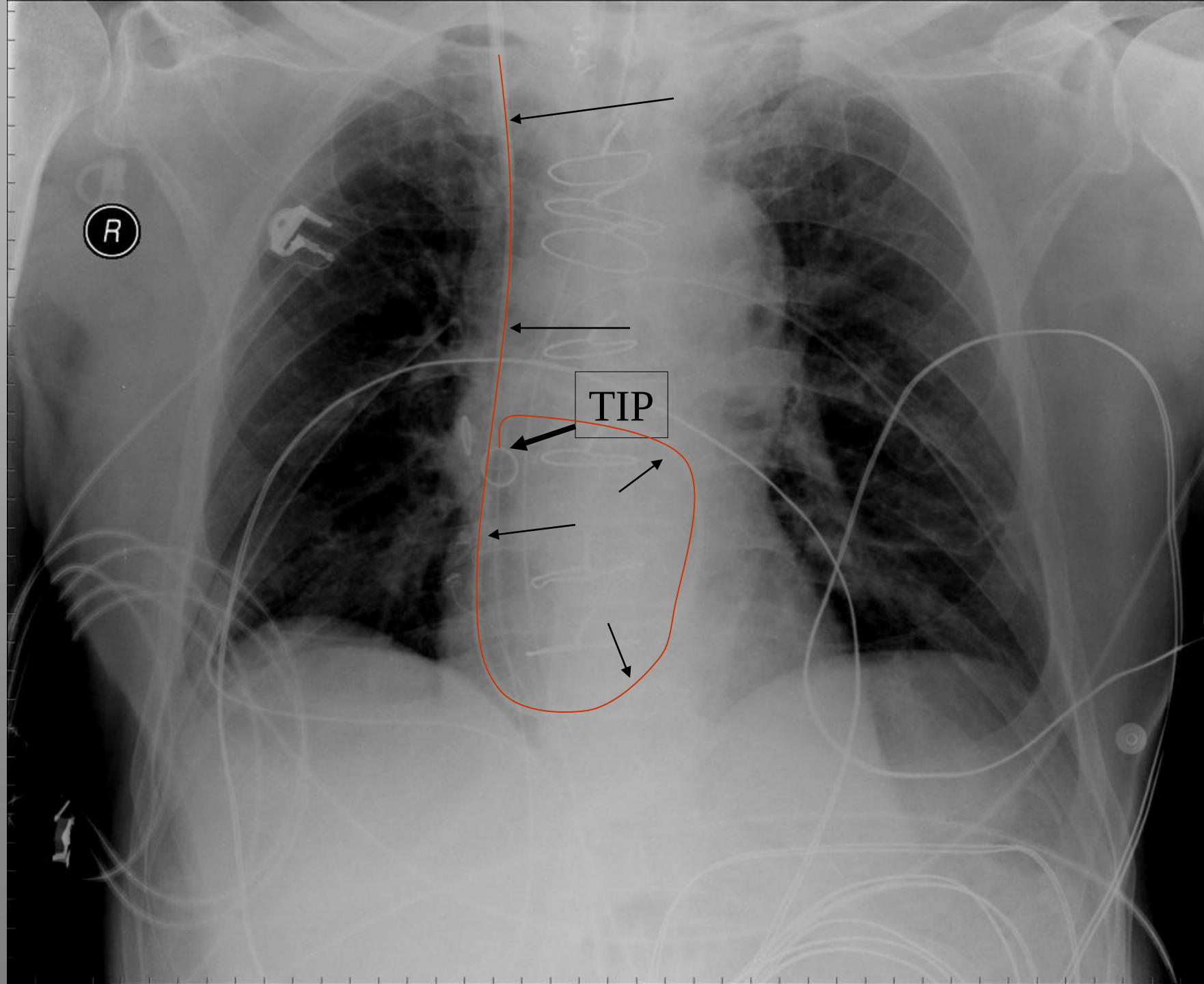
TIP OF PICC

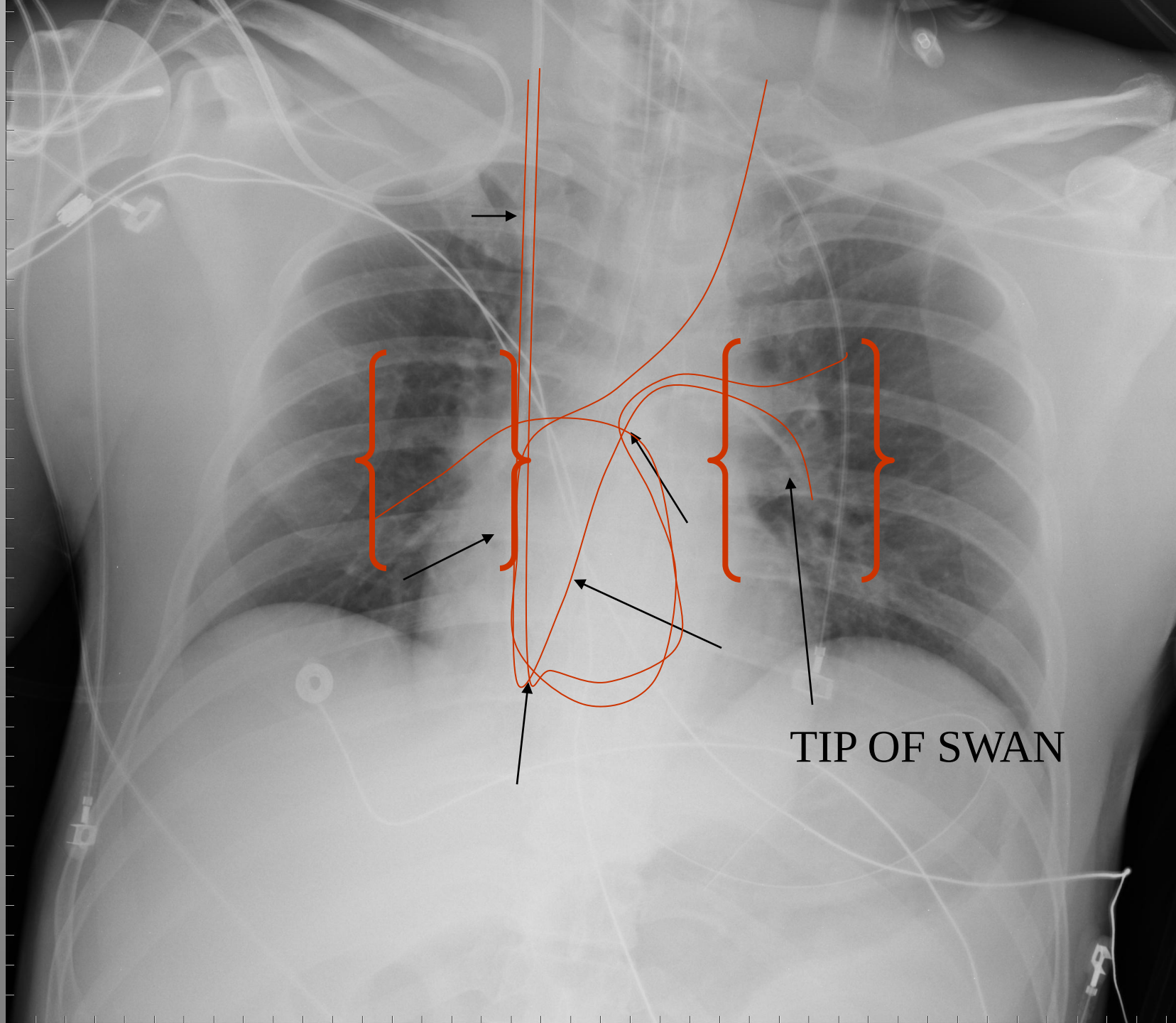
PICC NEEDS
TO BE
REPOSITIONED





GOOD
POSITION
OF PICC'S





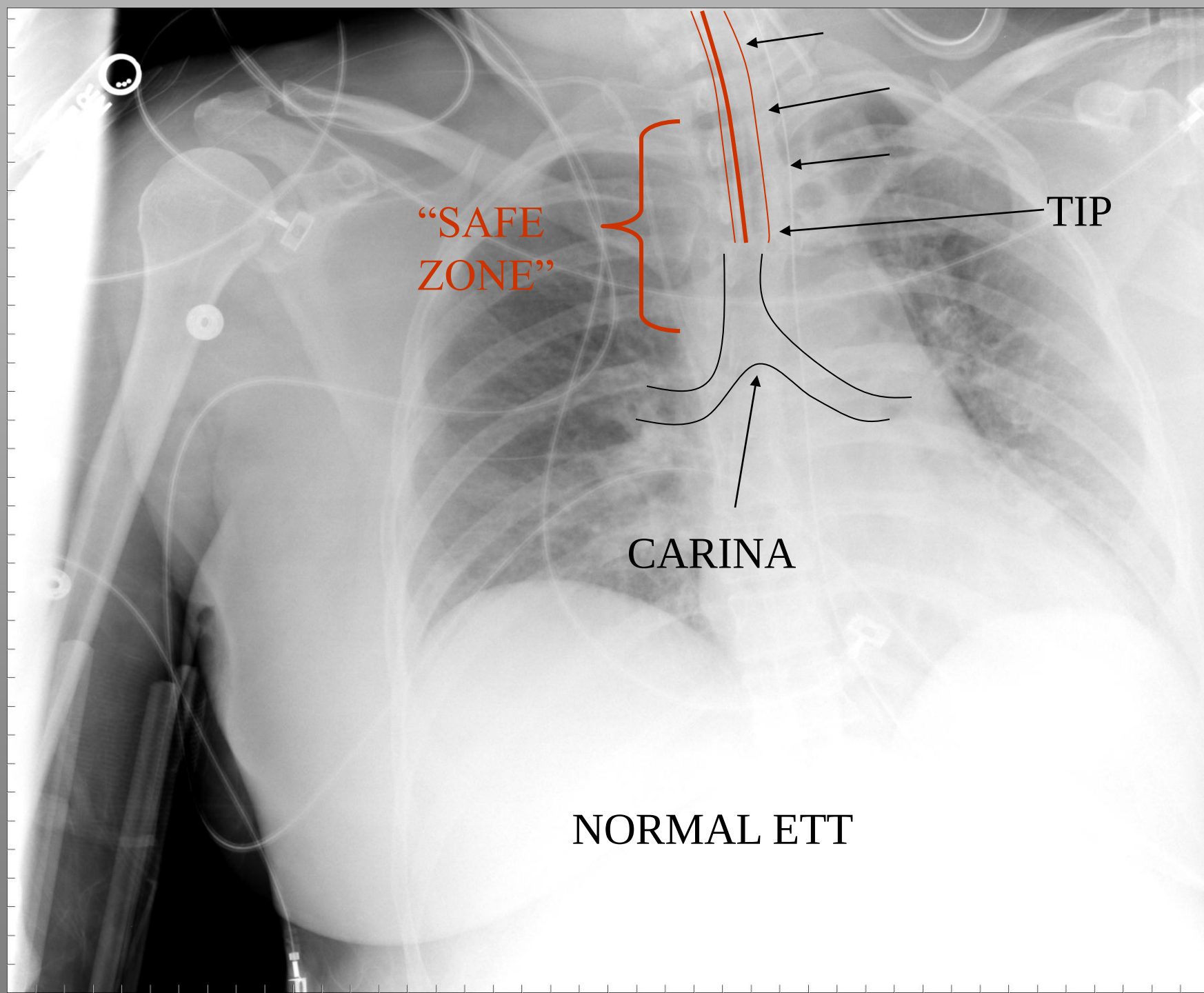
TIP OF SWAN

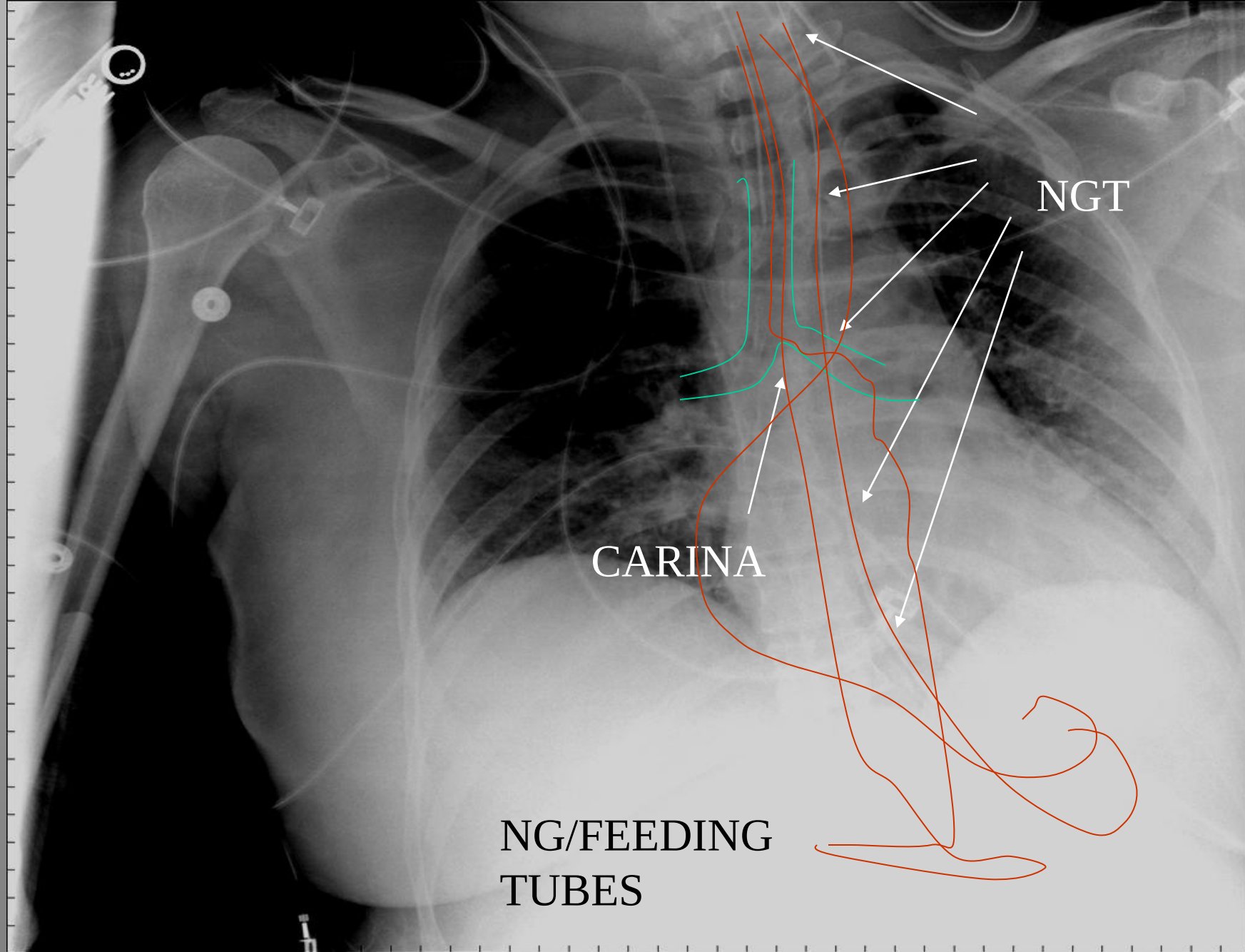
“SAFE
ZONE”

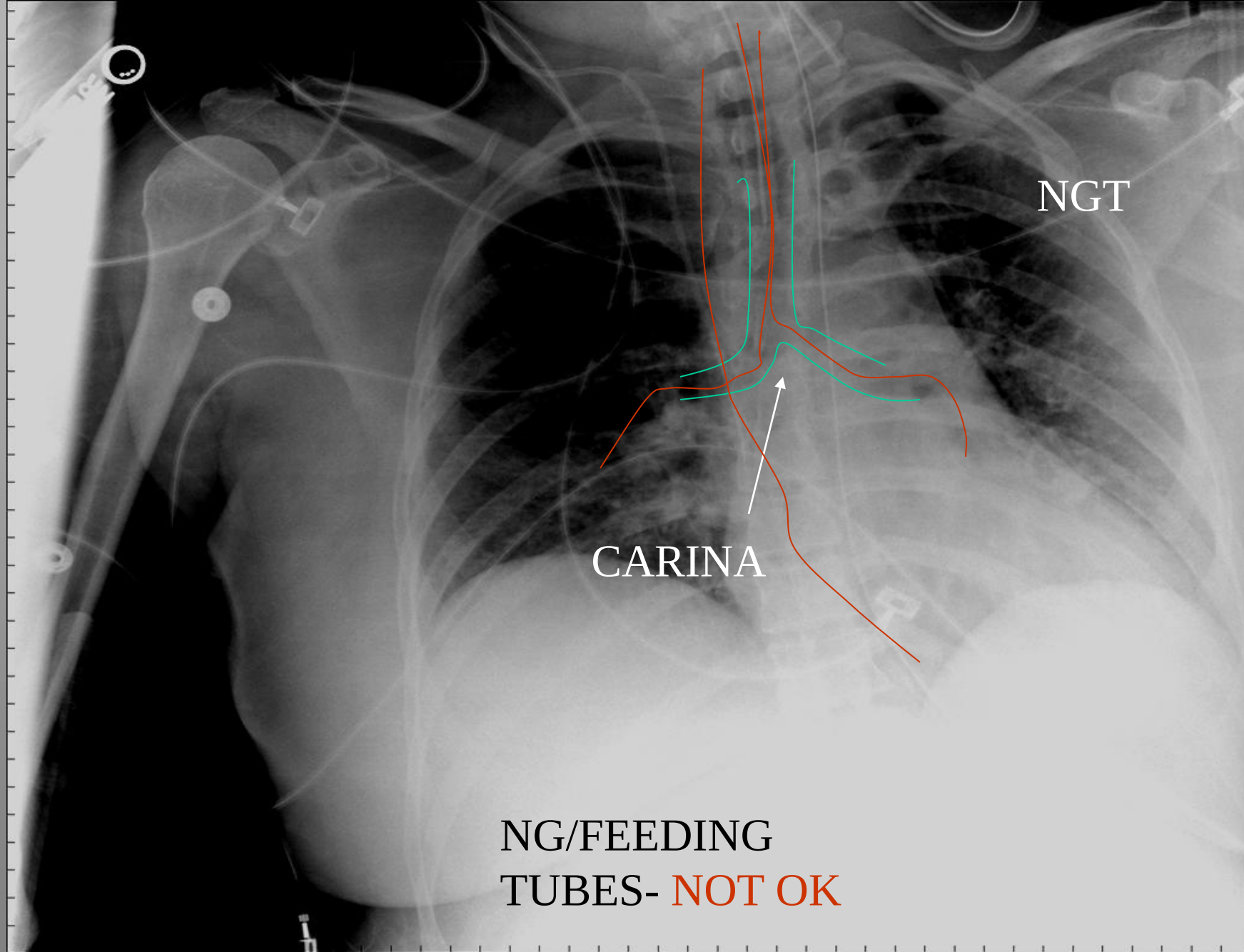
TIP

CARINA

NORMAL ETT



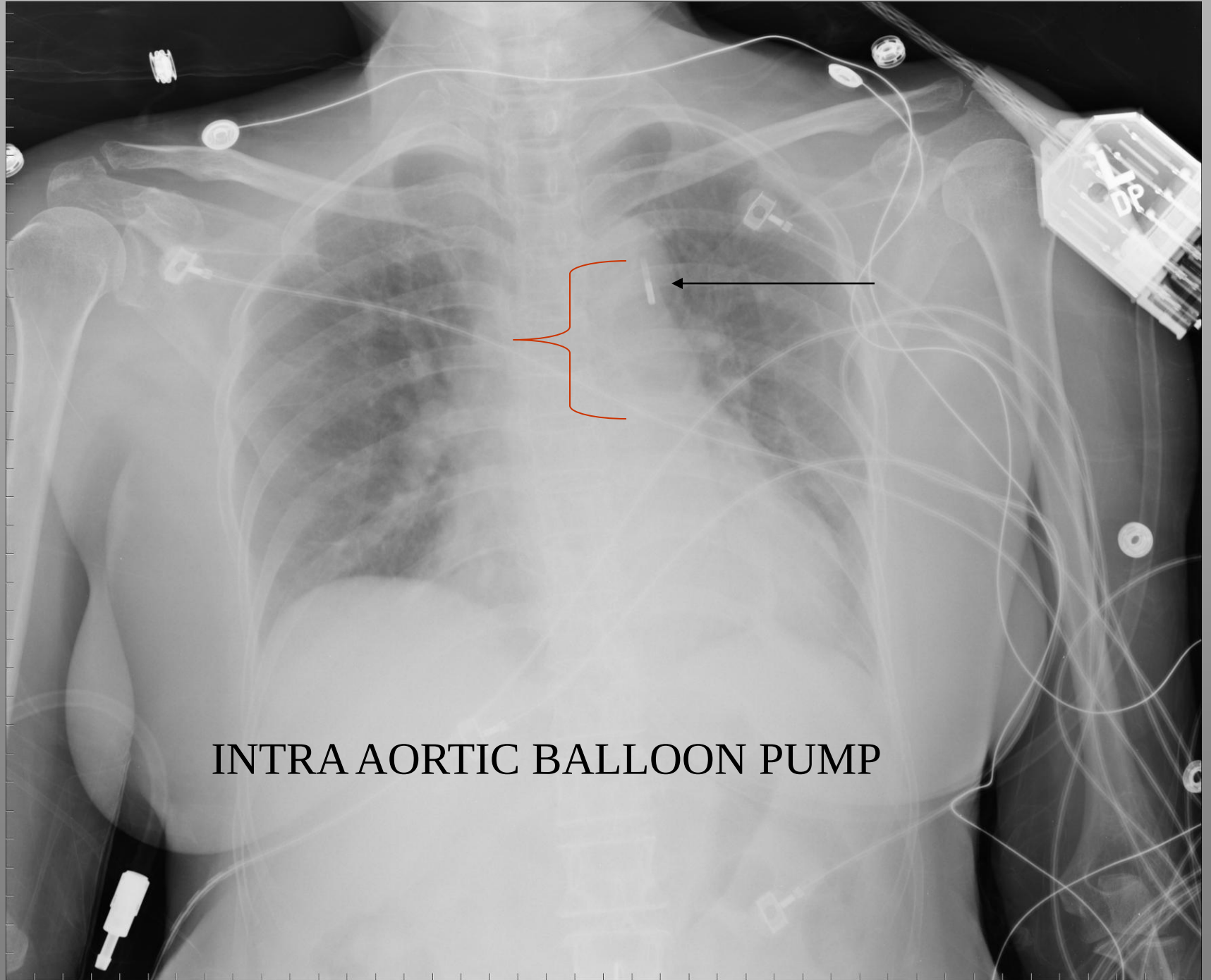




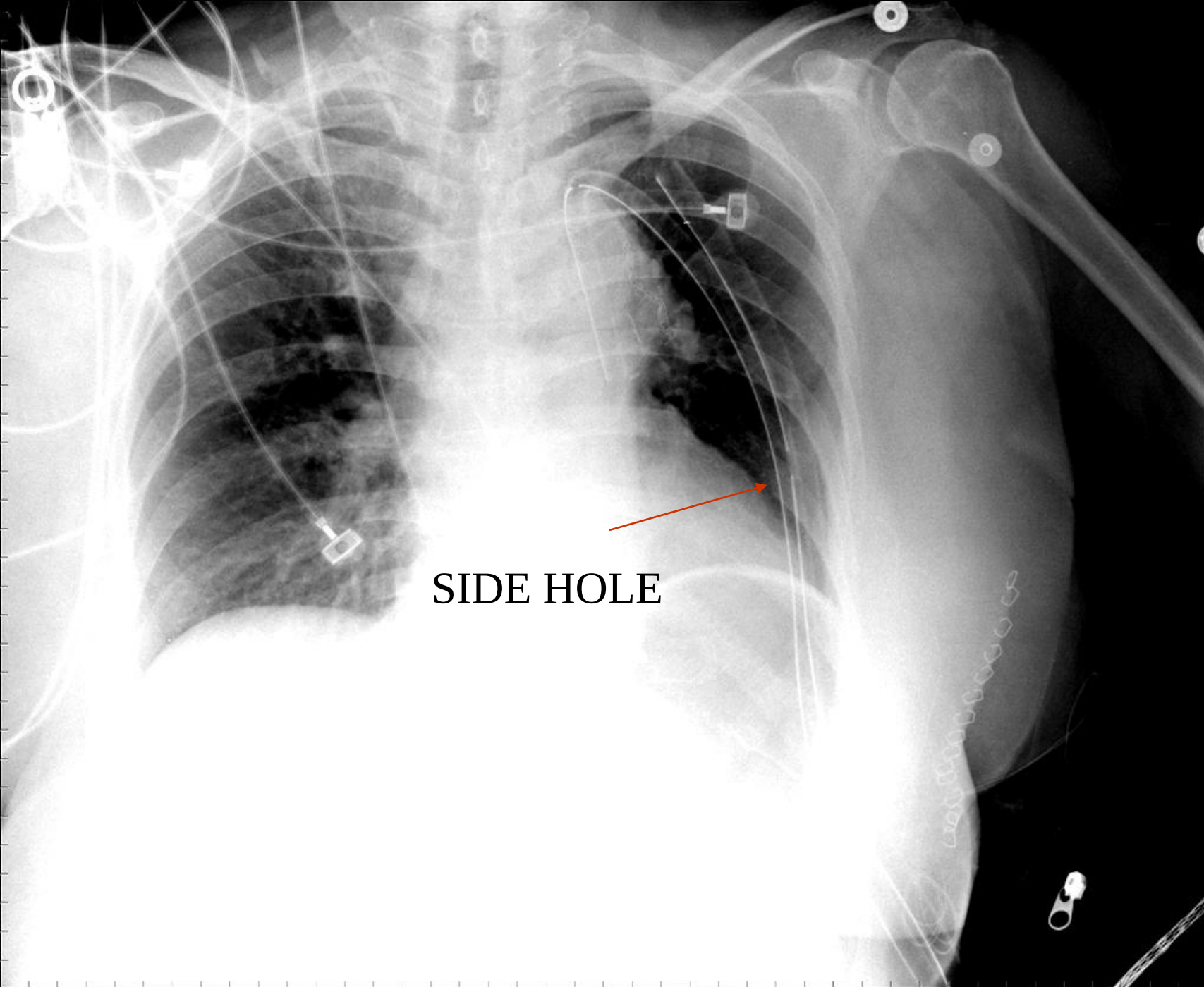
NGT

CARINA

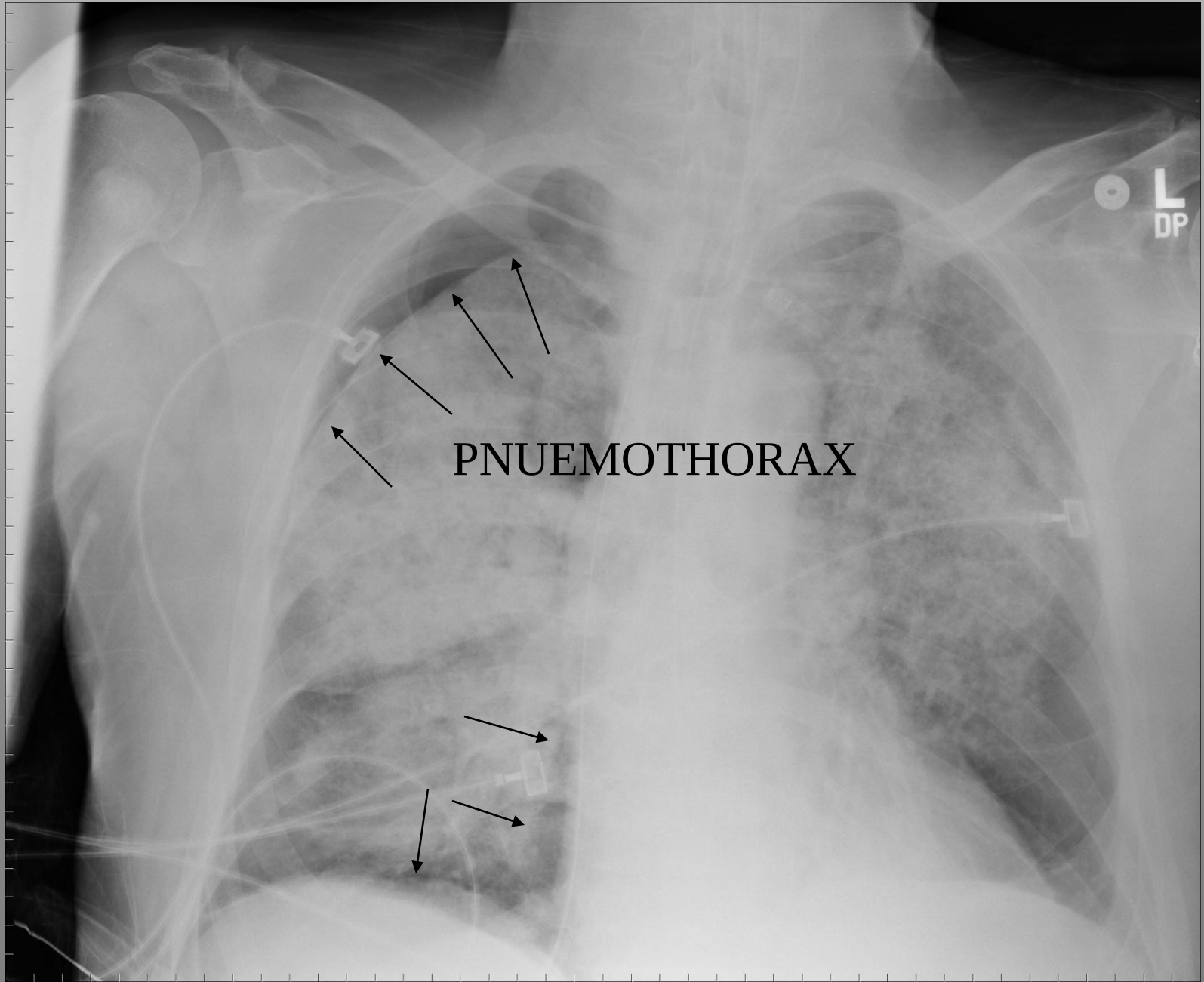
NG/FEEDING
TUBES- NOT OK

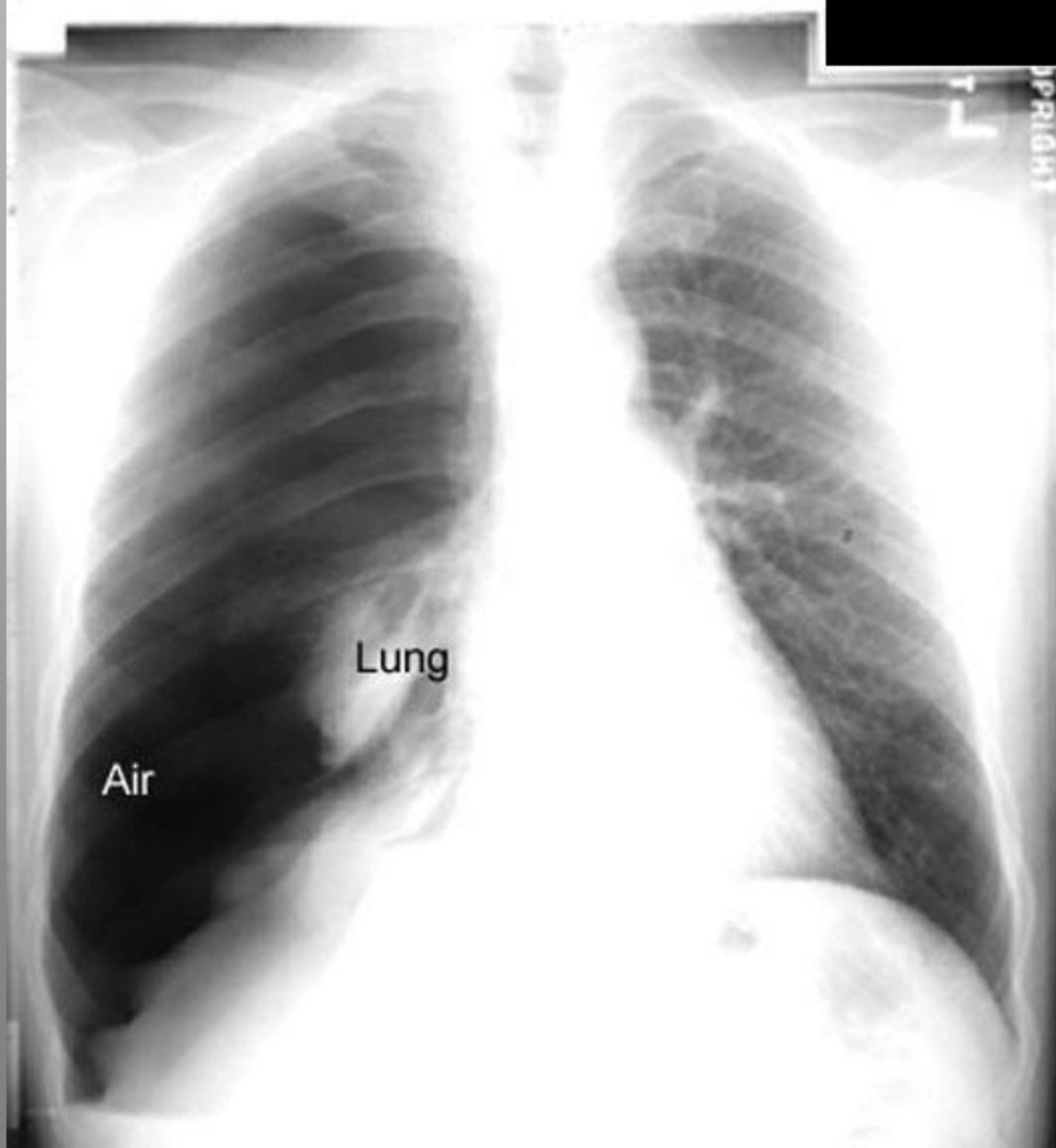


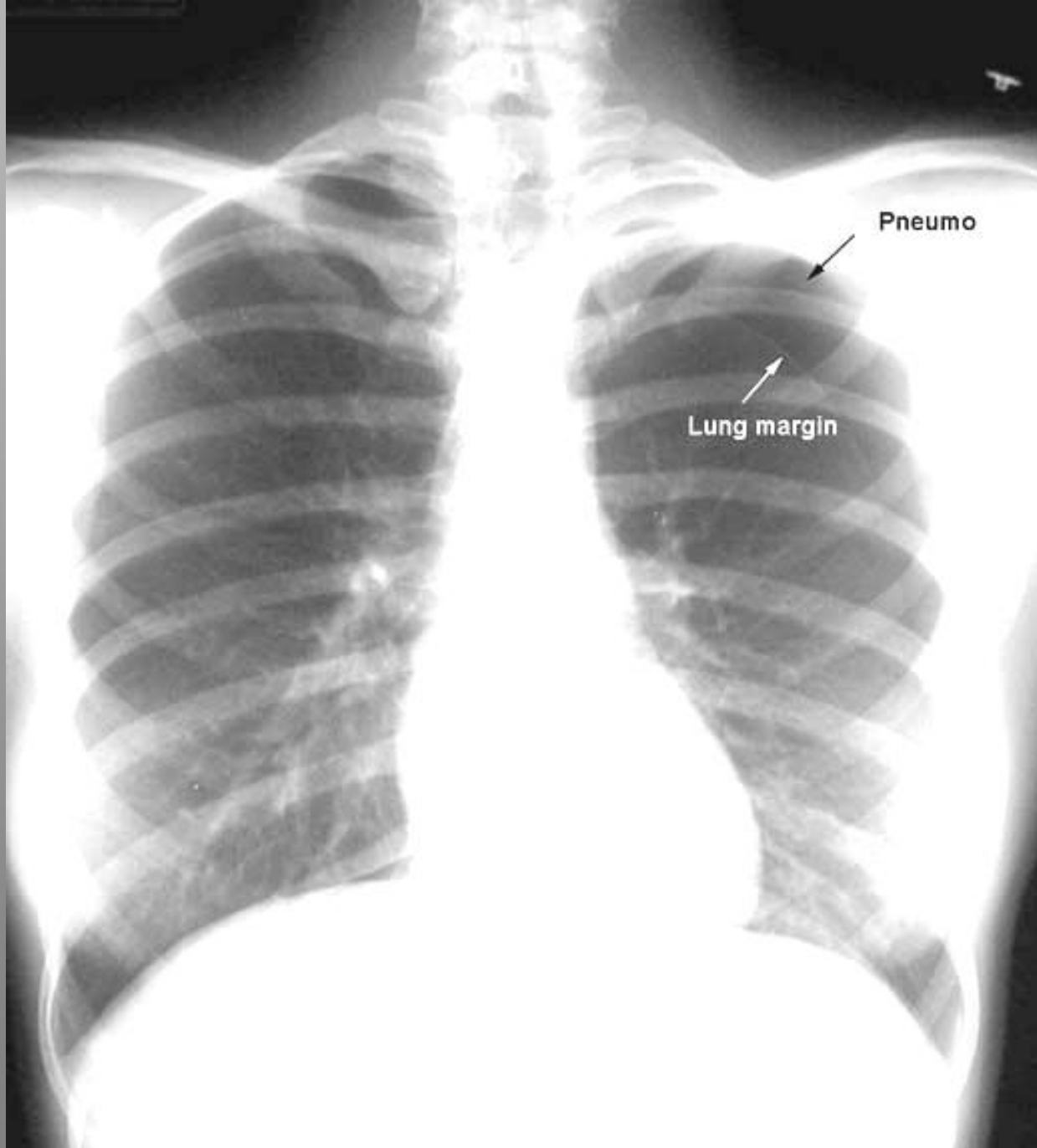
INTRA AORTIC BALLOON PUMP

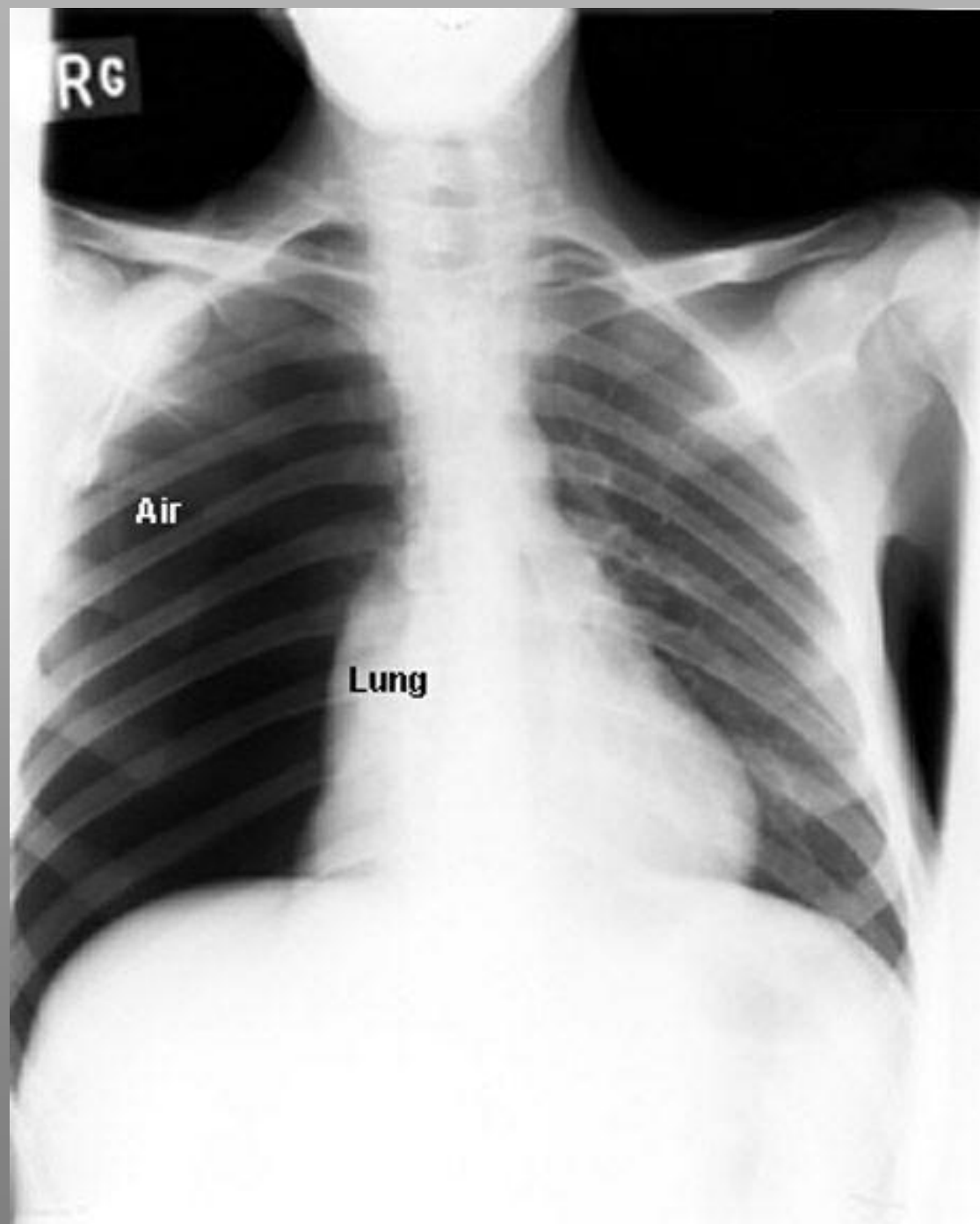


COMPLICATIONS

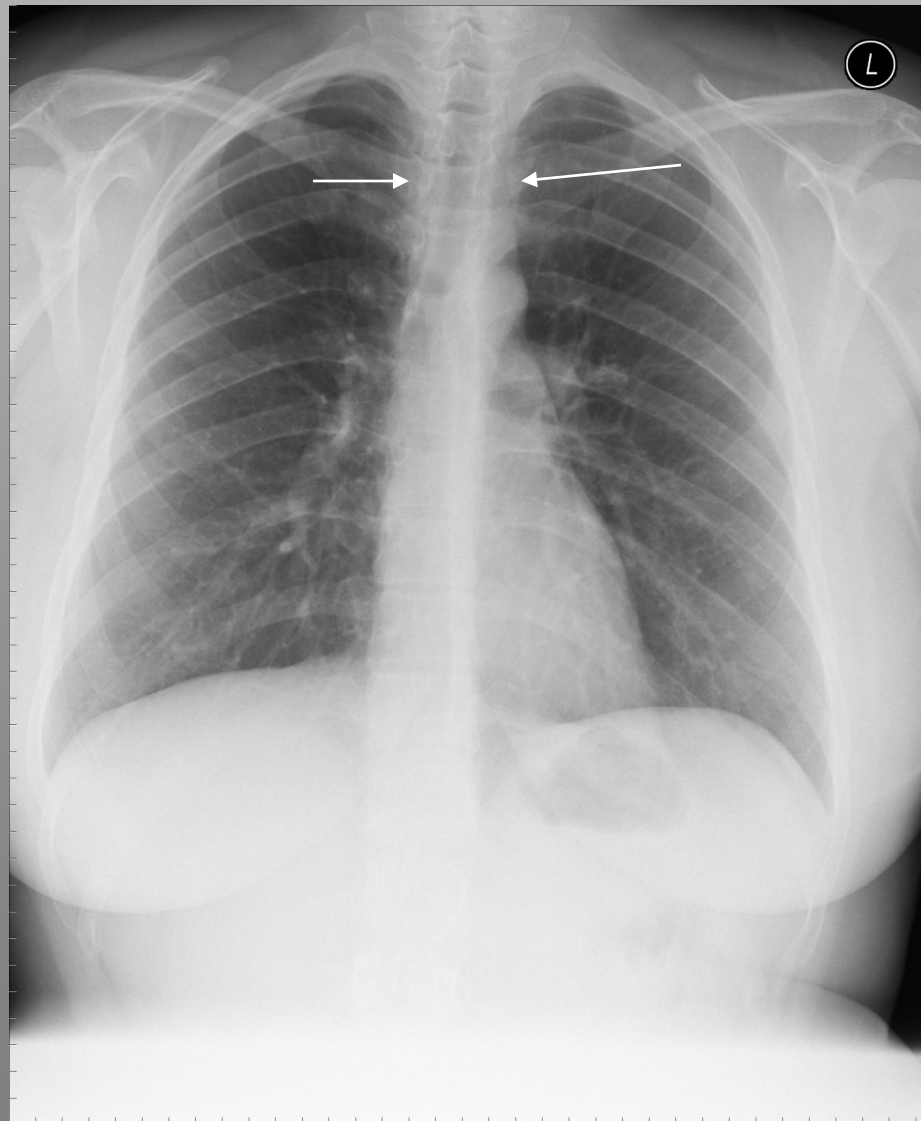




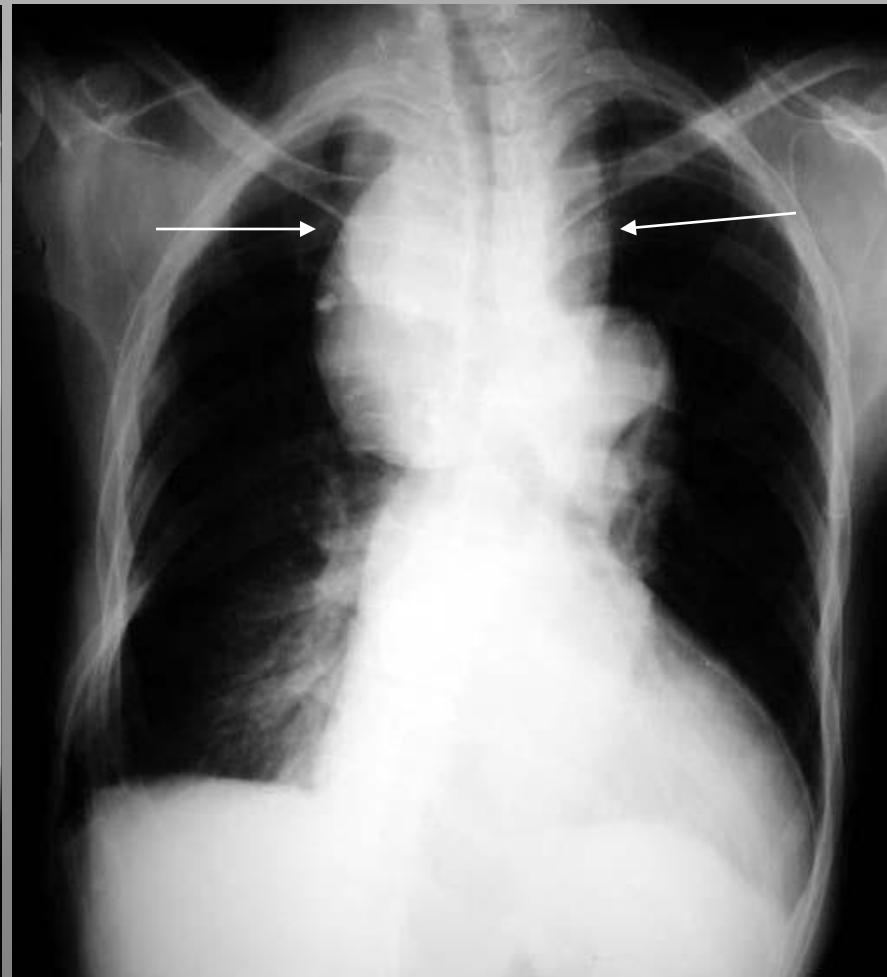




NORMAL SUPERIOR
MEDIASTINUM



POSSIBLE HEMATOMA



POSSIBLE HEMOTHORAX



DISEASES OF THE CHEST

EFFUSION

“WHITE LUNG”

NO VOLUME LOSS

OBSCURED HEART
AND DIAPHRAGM

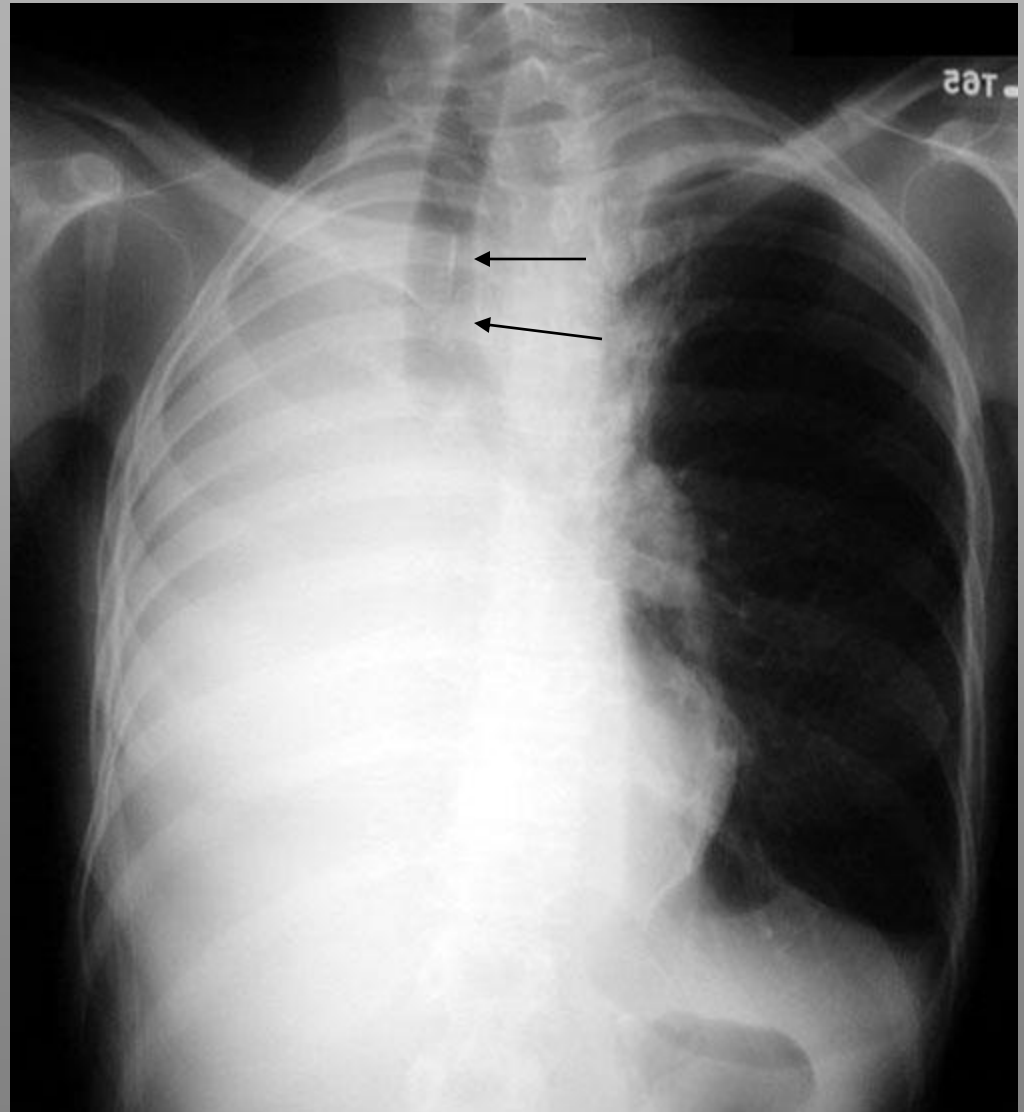


ATALECTASIS

“WHITE LUNG”

OBSCURES

LOSS OF VOLUME

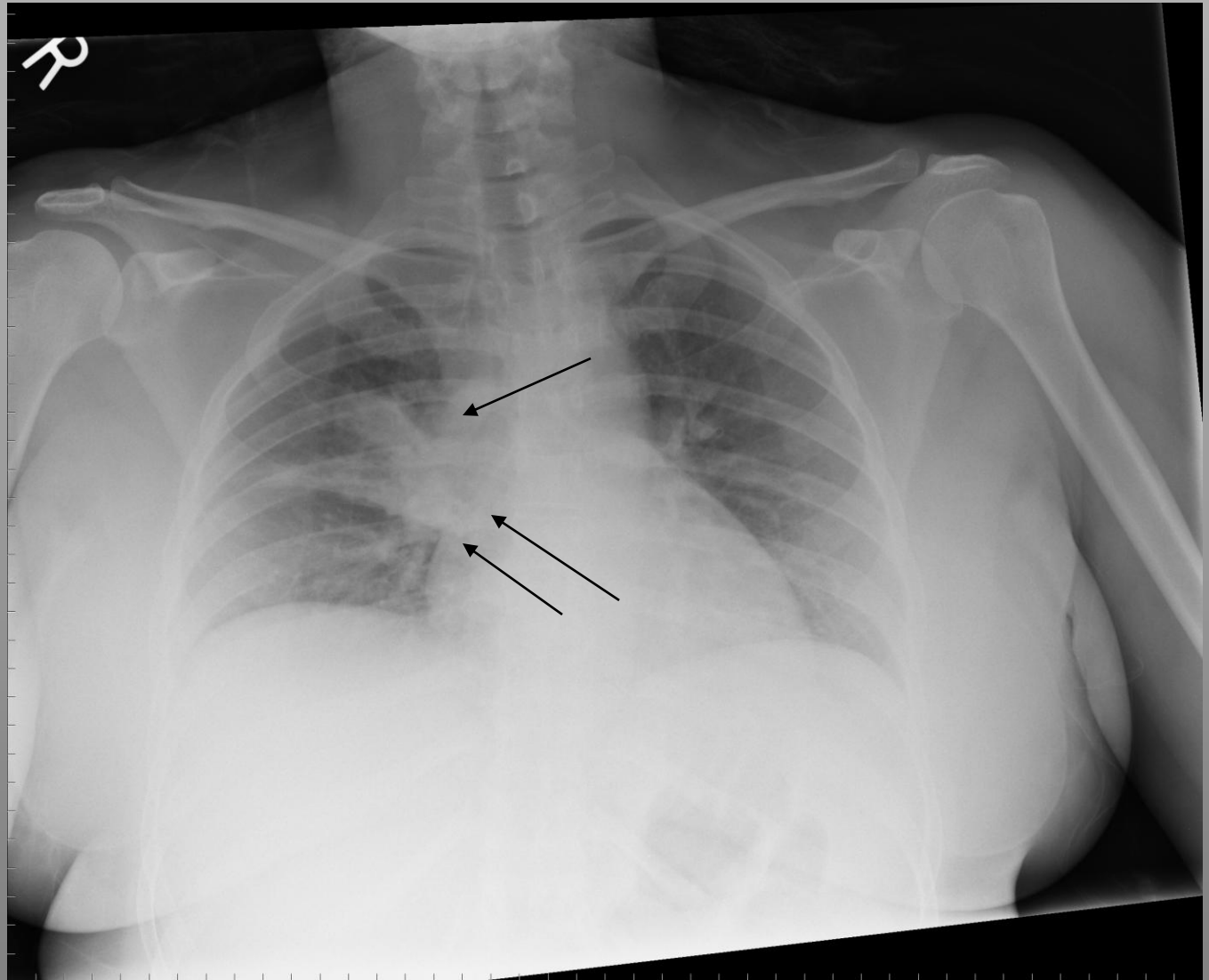


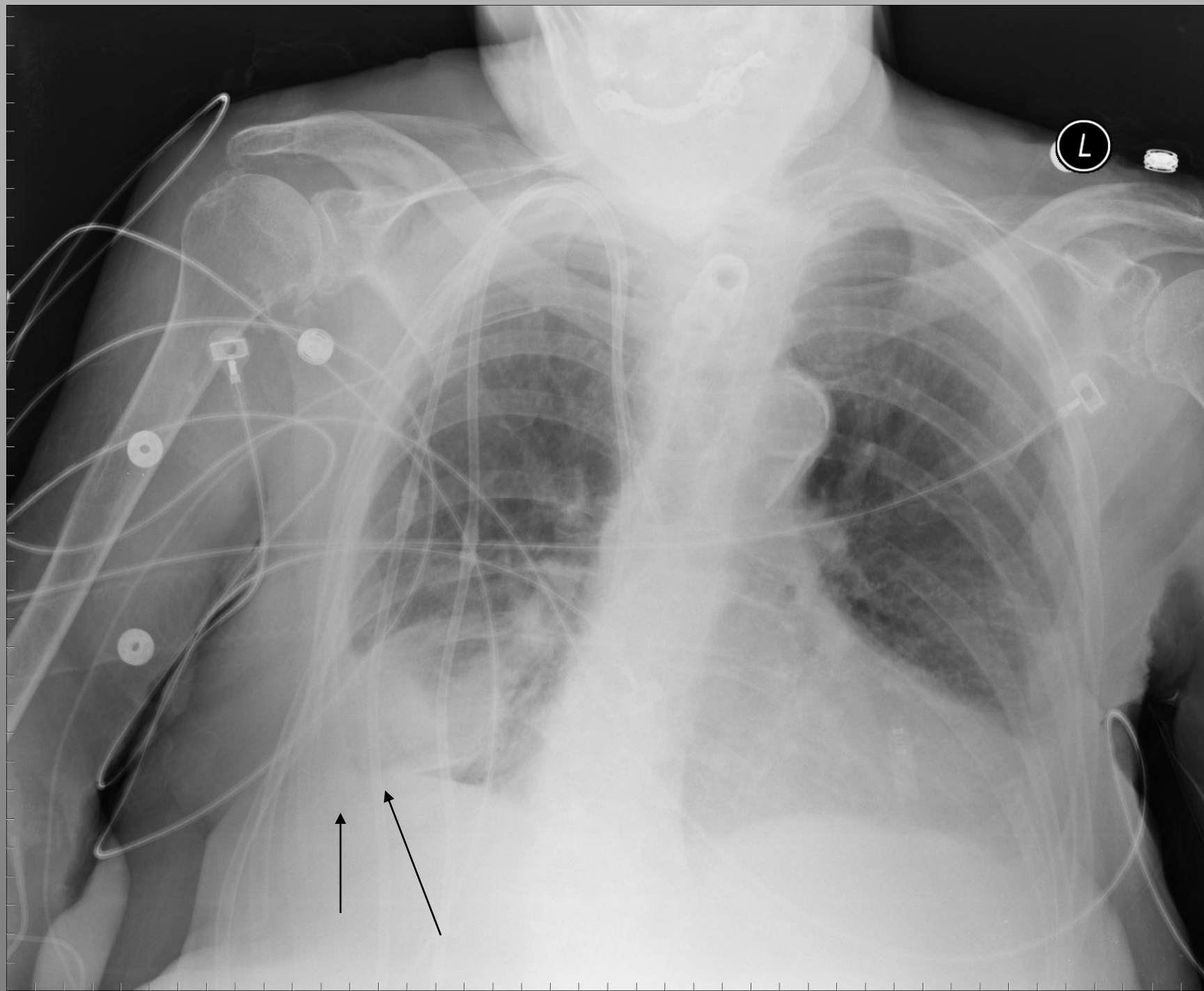
INFILTRATE

OBSCURES

BORDERS

FOCAL





CARDIOMEGALY

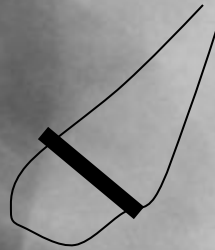


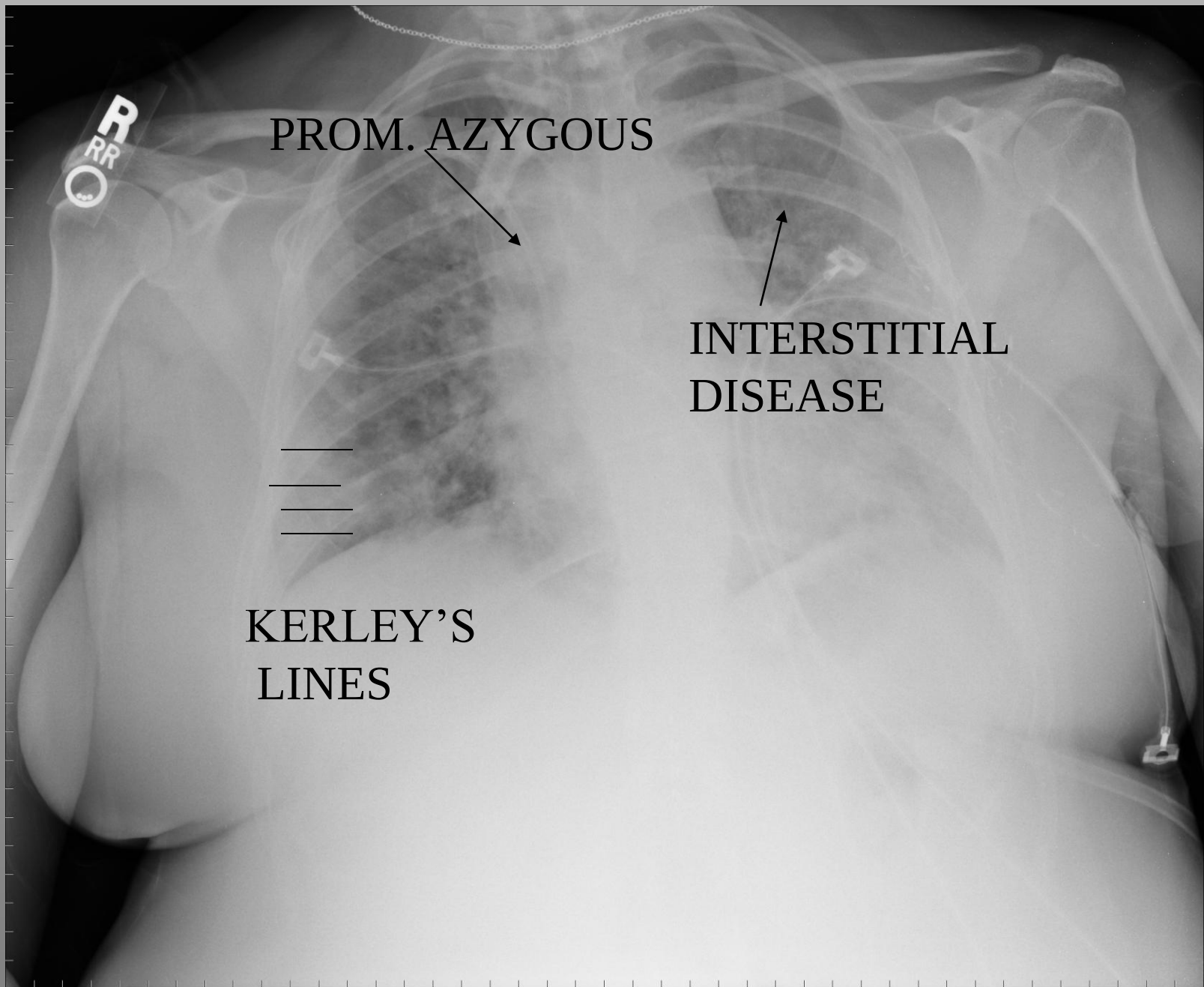
AZYGOUS
VEIN

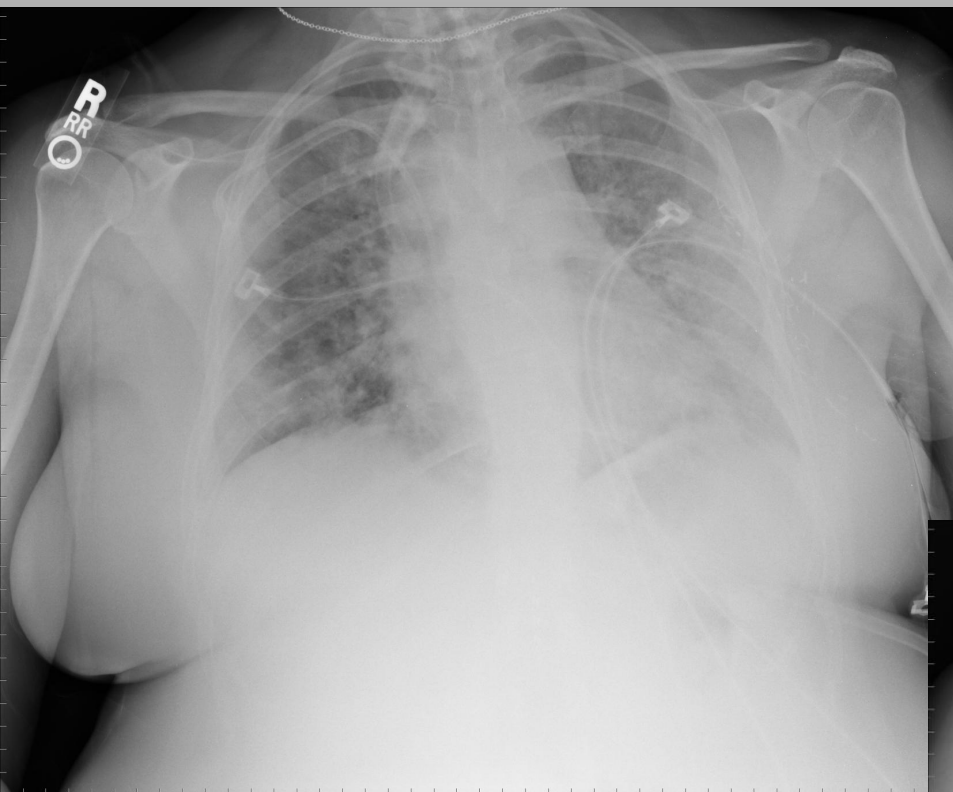


Transcardiac diameter less than
Half transthoracic diameter

PROMINENT AZYGOUIS VEIN

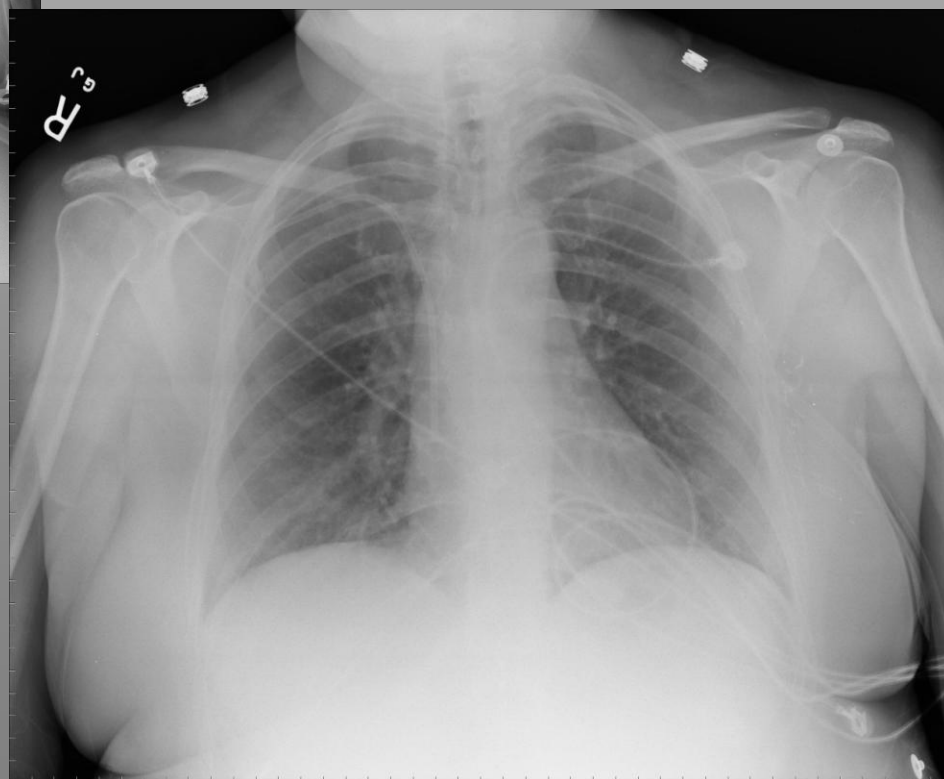






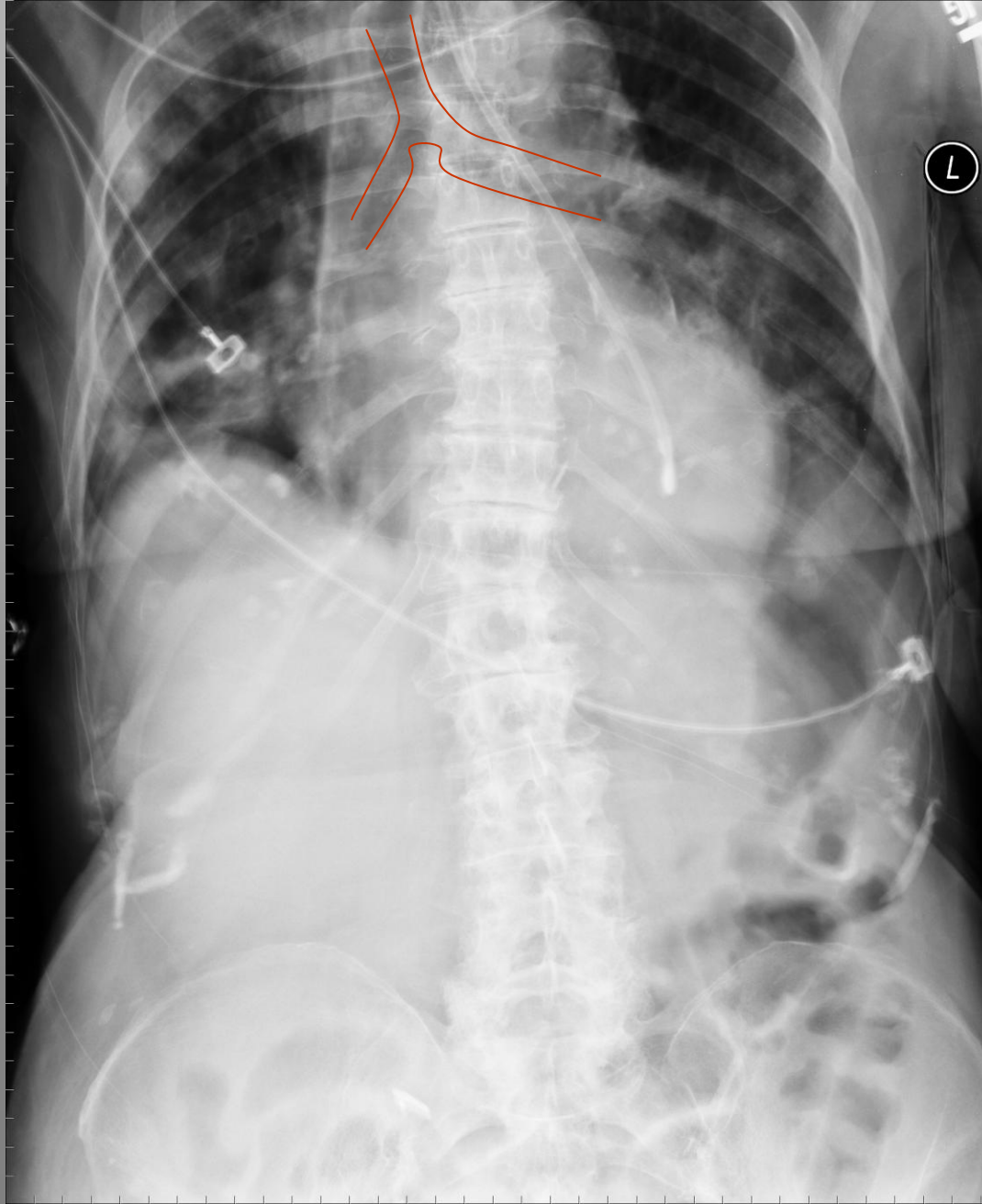
EDEMA

RESOLVES

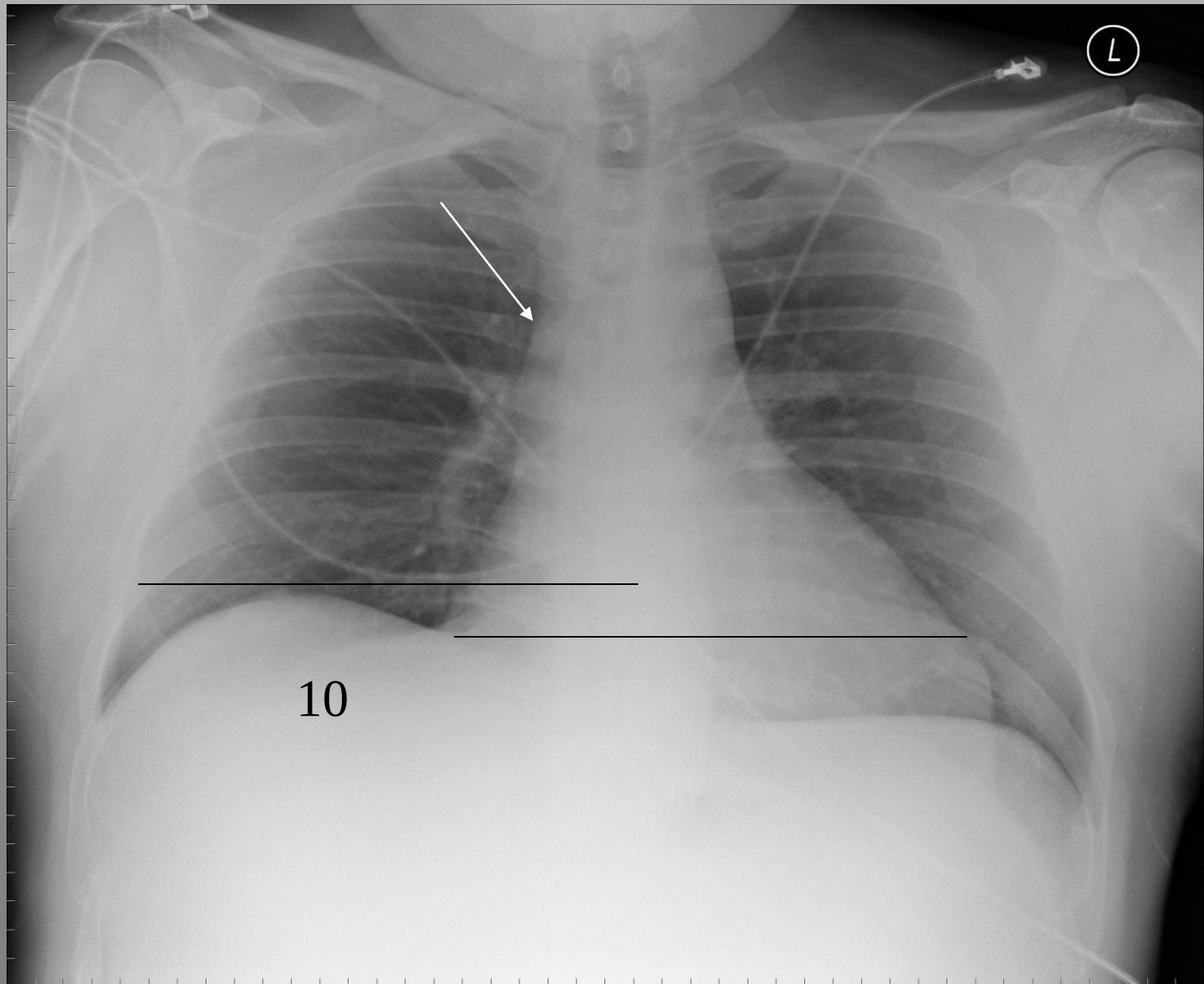


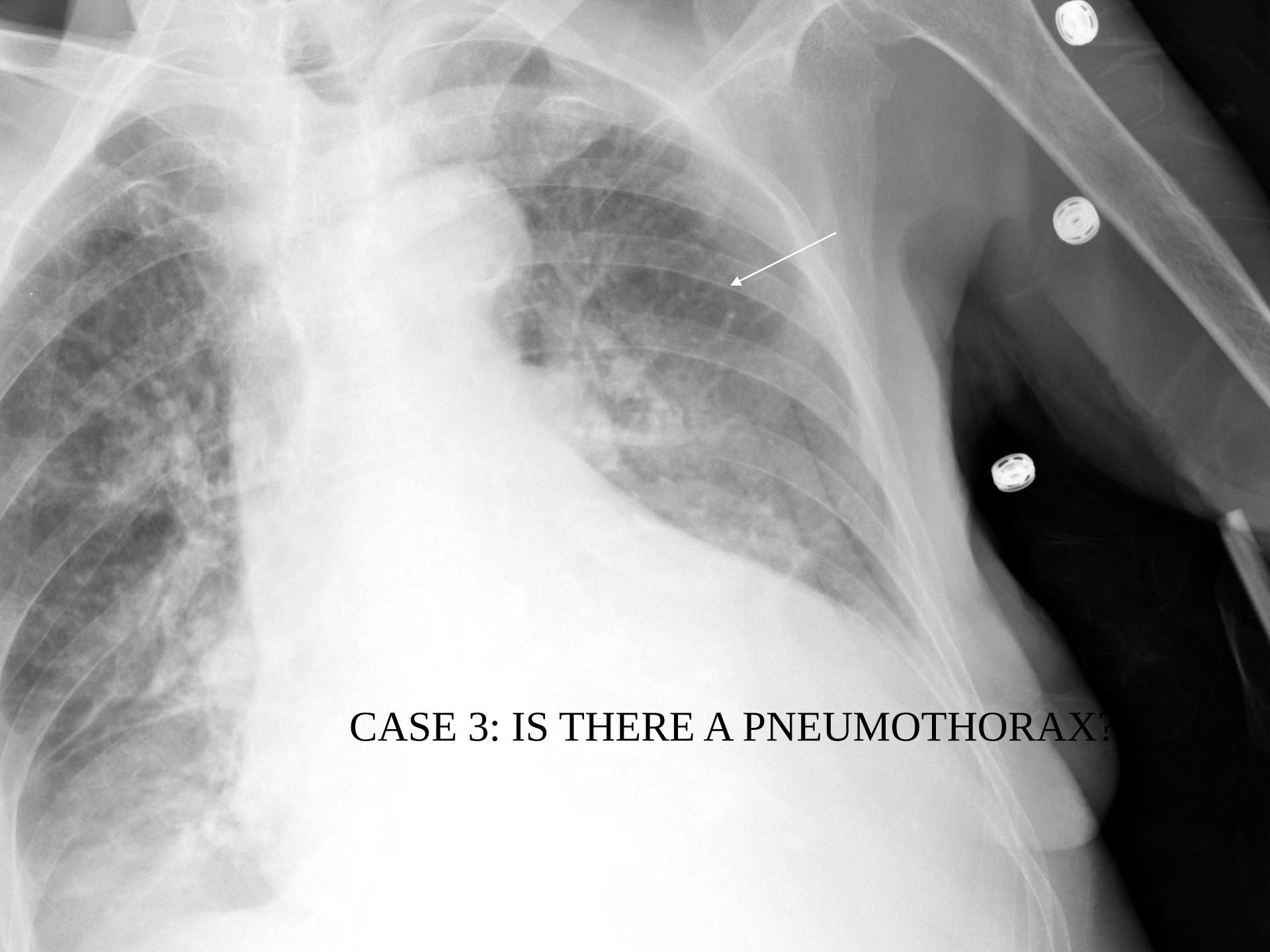
UNKNOWN

CASE 1: WHERE IS THE NGT?



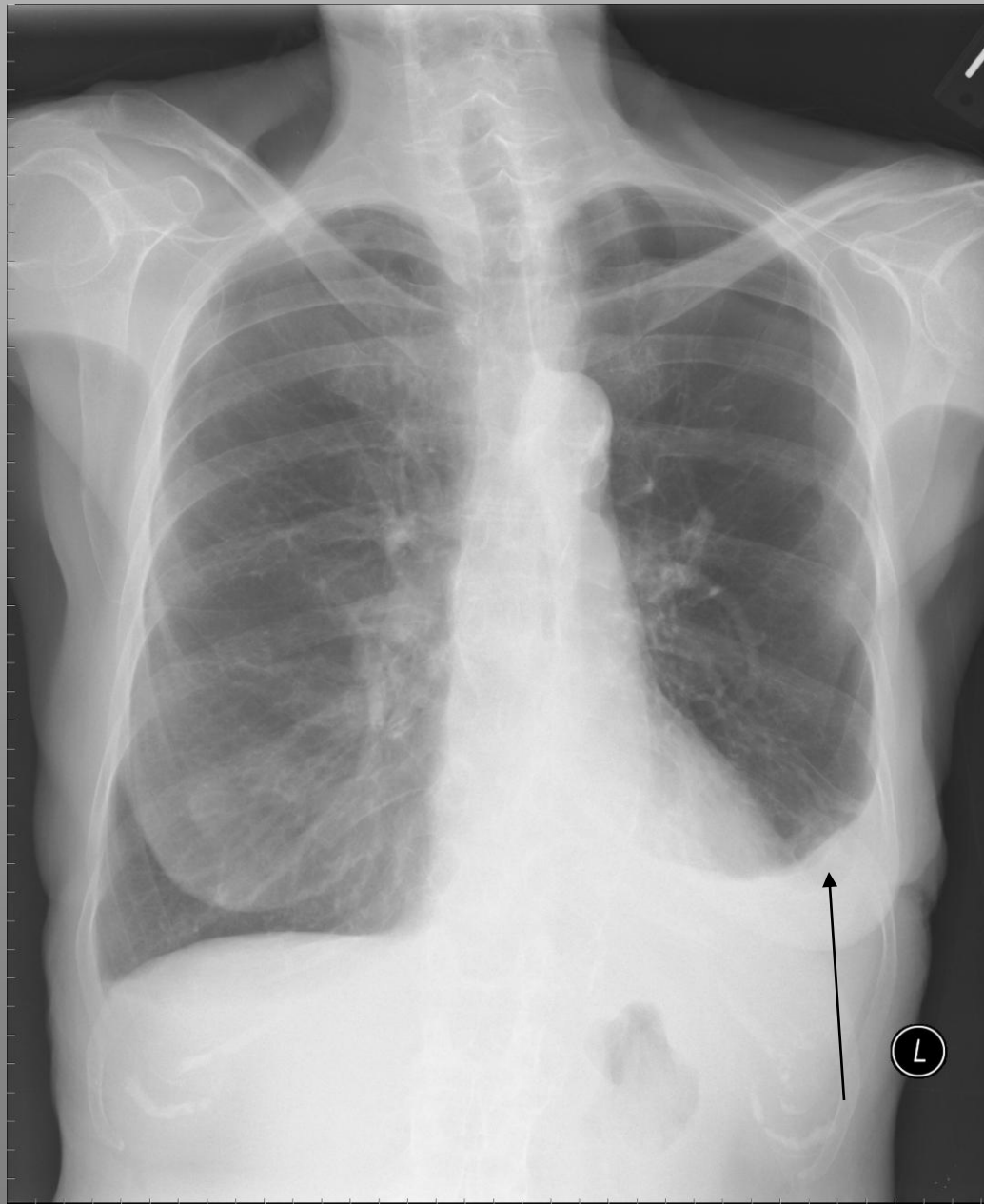
CASE2: IS THE HEART ENLARGED?



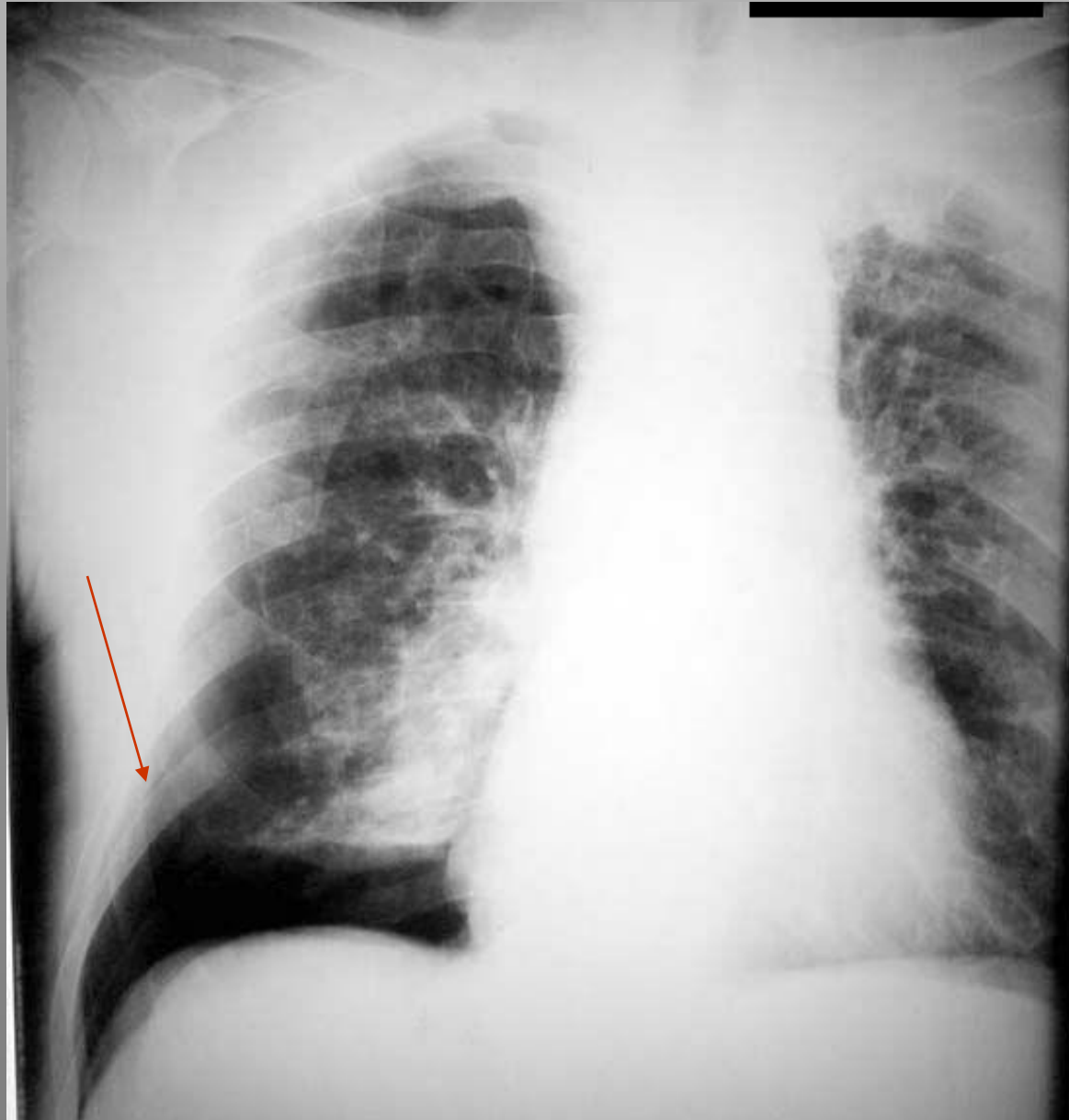


CASE 3: IS THERE A PNEUMOTHORAX?

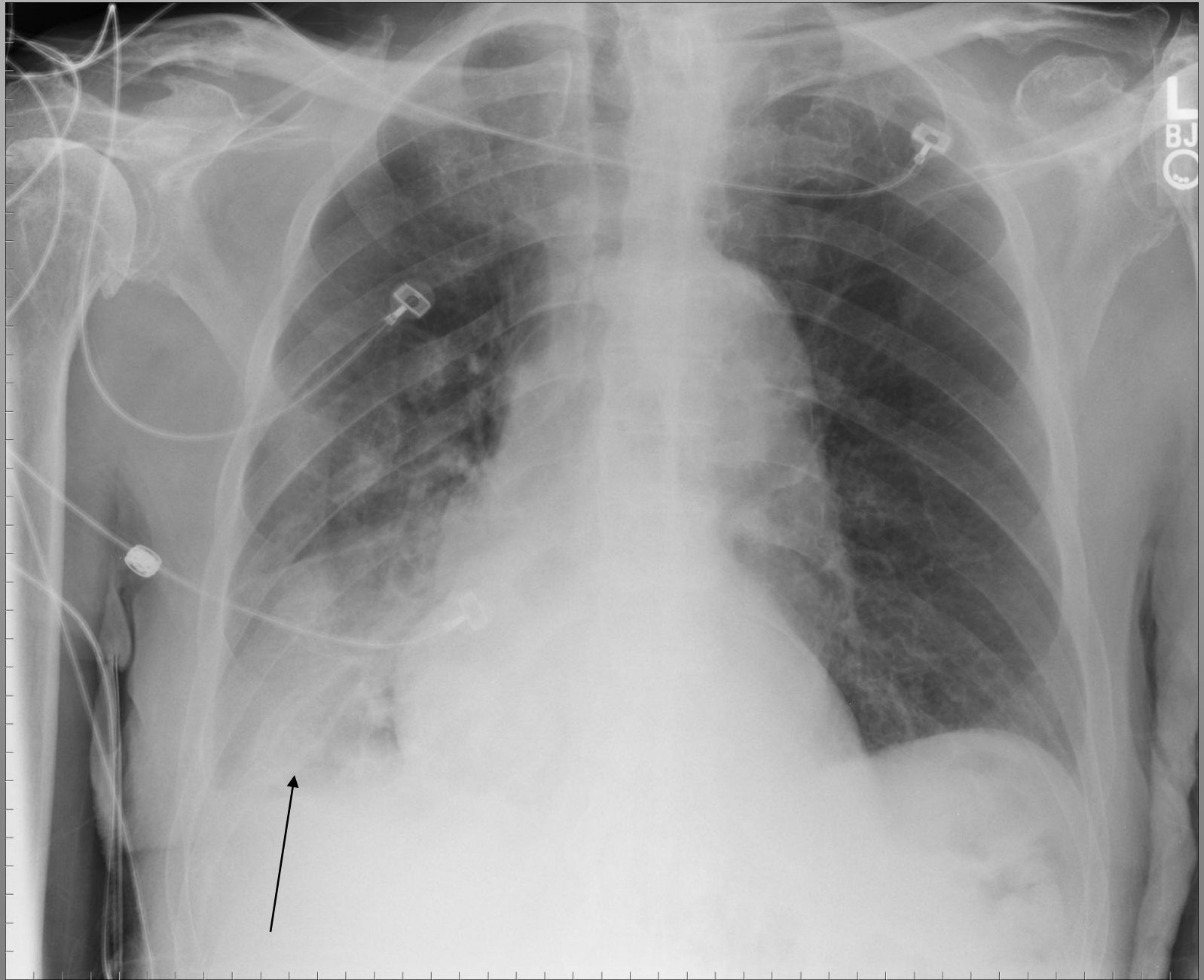
CASE 4: INFILTRATE OR EFFUSION?



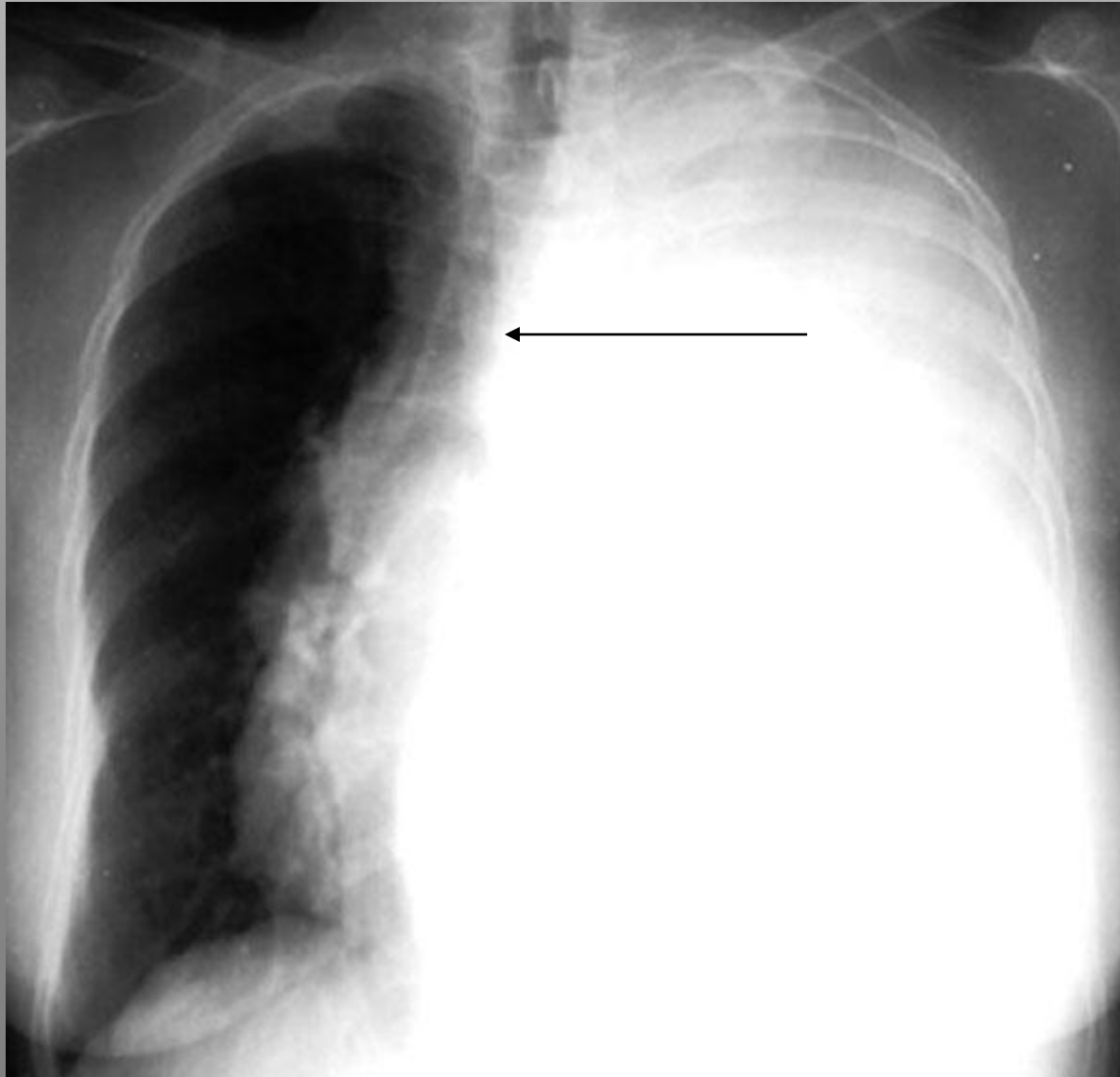
CASE 5: WHAT IS THIS?



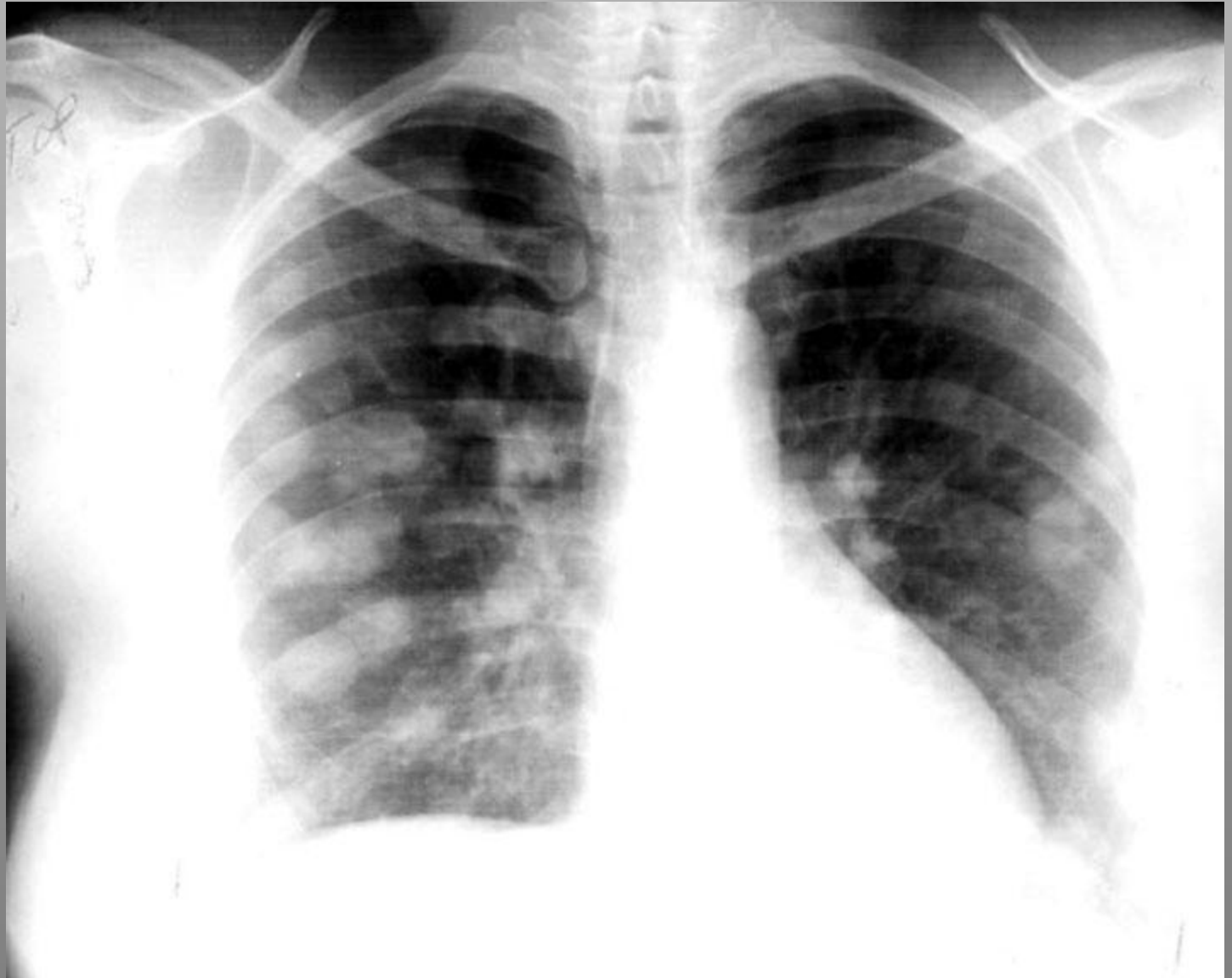
CASE 6: INFILTRATE, ATALECTASIS, OR EFFUSION?



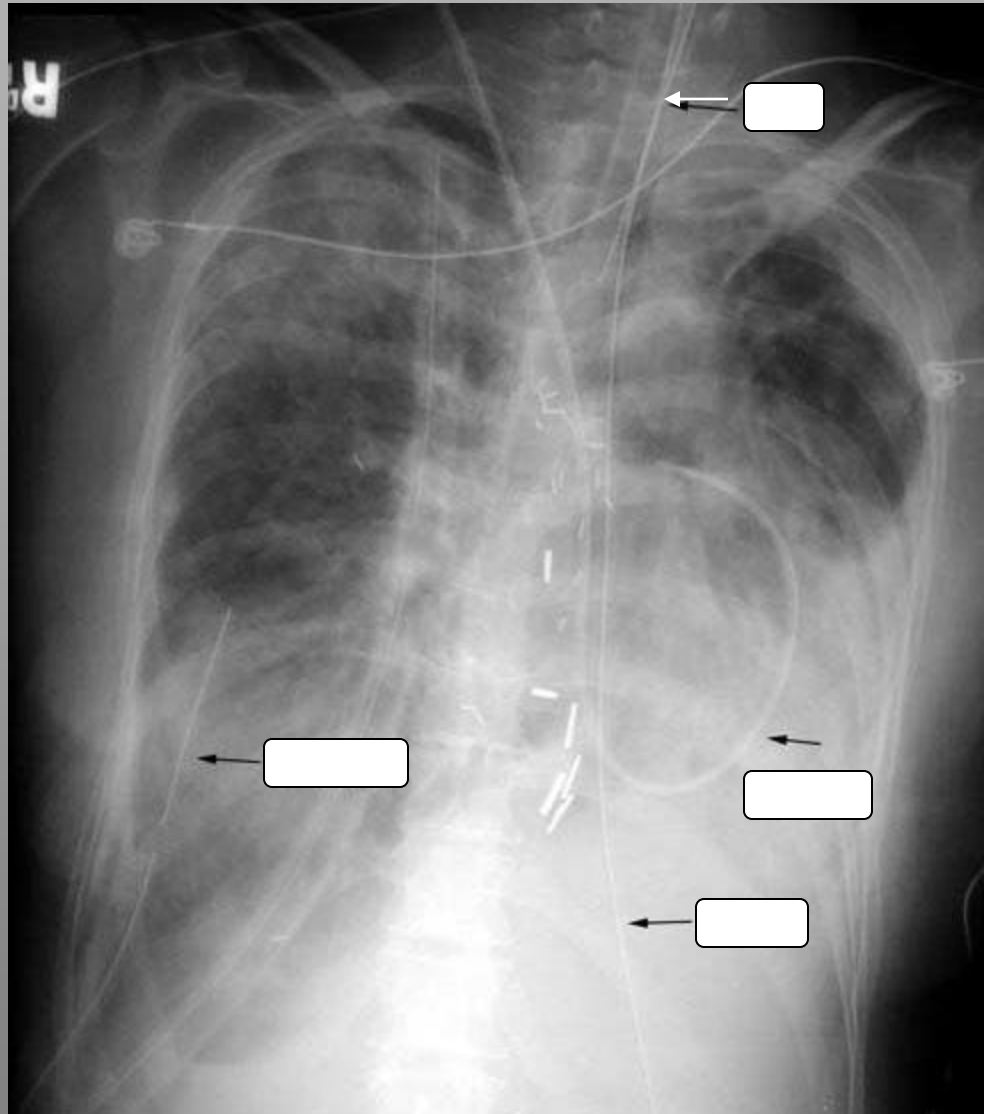
CASE 7: EFFUSION OR ATALECTASIS?



CASE 8: ? INFILTRATES?



CASE 9: NAME THE LINES



CASE 10: EXTRA CREDIT: WHAT IS THIS?

