

CASE

You are the resident in the ICU amidst the COVID-19 pandemic and have been tasked with reviewing the position of all the 'lines & tubes' on the admitted patients.

What 'lines & tubes' can be identified on the CXR?

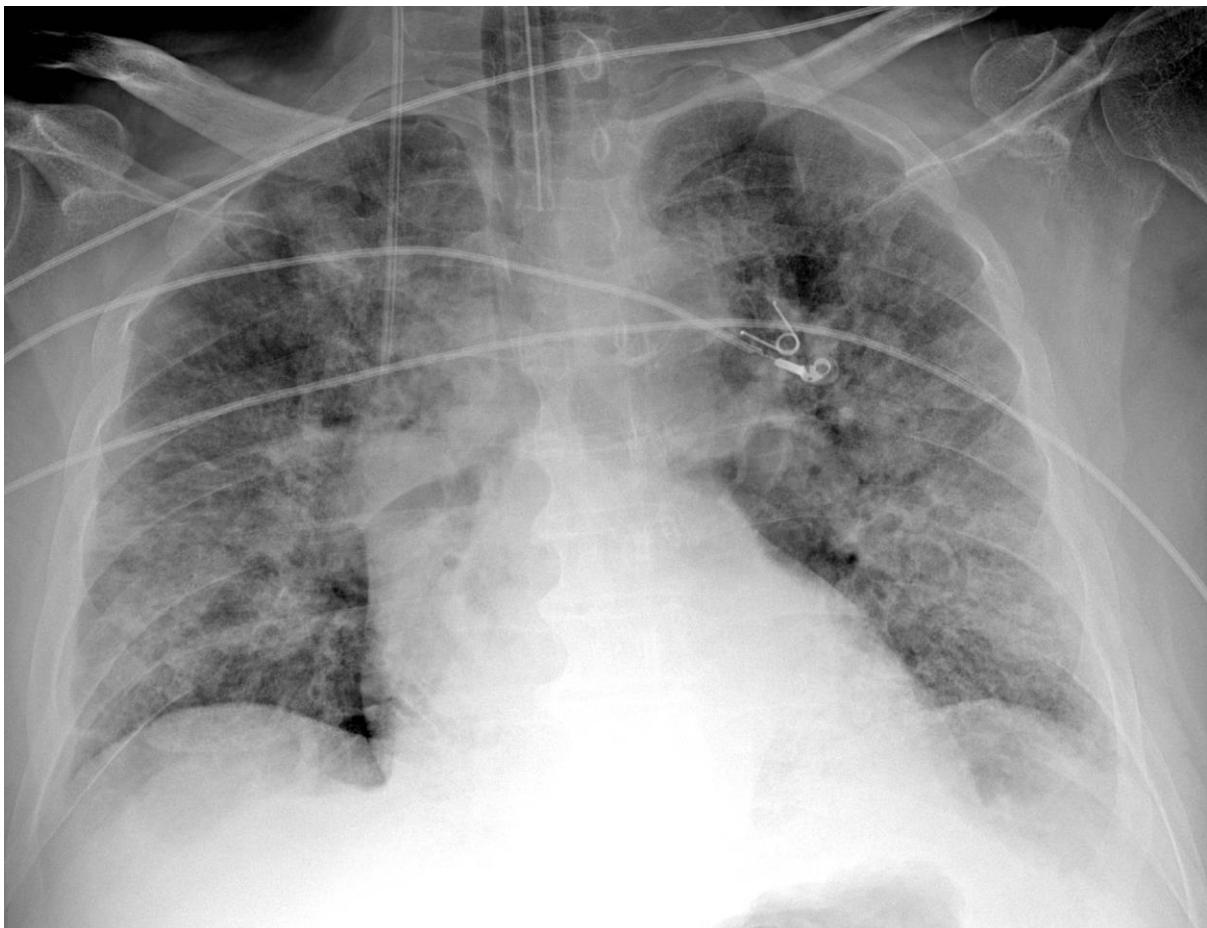
Assess their positions – are they appropriately positioned? Where should they be positioned?

How do you assess the position of the following 'lines & tubes'?

- Nasogastric tube (NGT)?
- Endotracheal tube (ETT)?
- Central venous line/catheter (CVL/CVC)?
- Intercostal catheter/tube (ICC, chest tube)?
- Cardiac conduction devices (pacemakers, implantable cardioverter defibrillators)?
- Pericardial drains?
- Intra-aortic balloon pump (IABP)?

IMAGES

ANTERO-POSTERIOR CHEST X-RAY



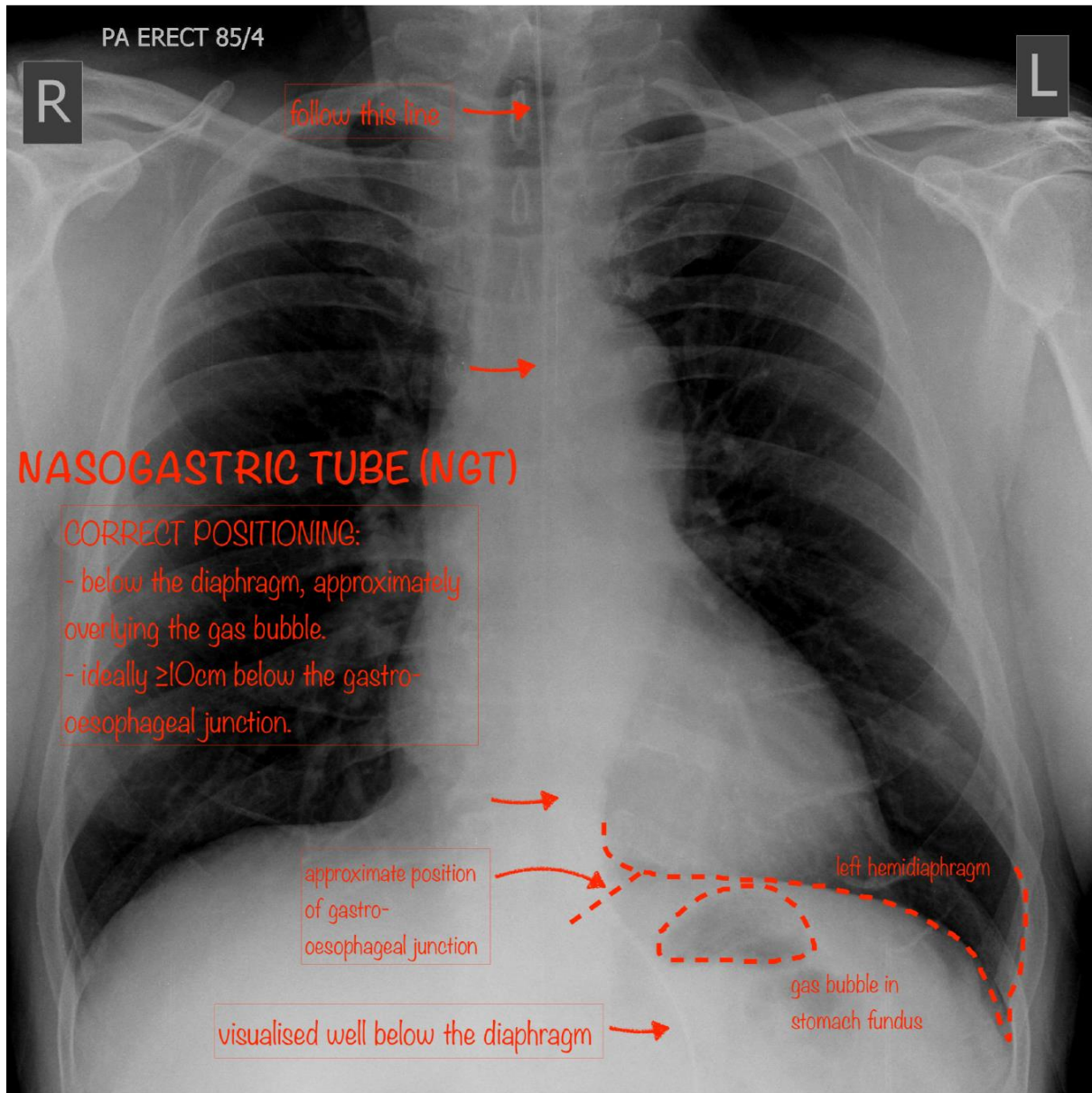
Case courtesy of Dr Fabio Macori

Radiopaedia.org <https://radiopaedia.org/>

From the case <https://radiopaedia.org/cases/74867> rID: 74867

ANNOTATED IMAGES – LINES & TUBES

NASOGASTRIC TUBE (NGT)

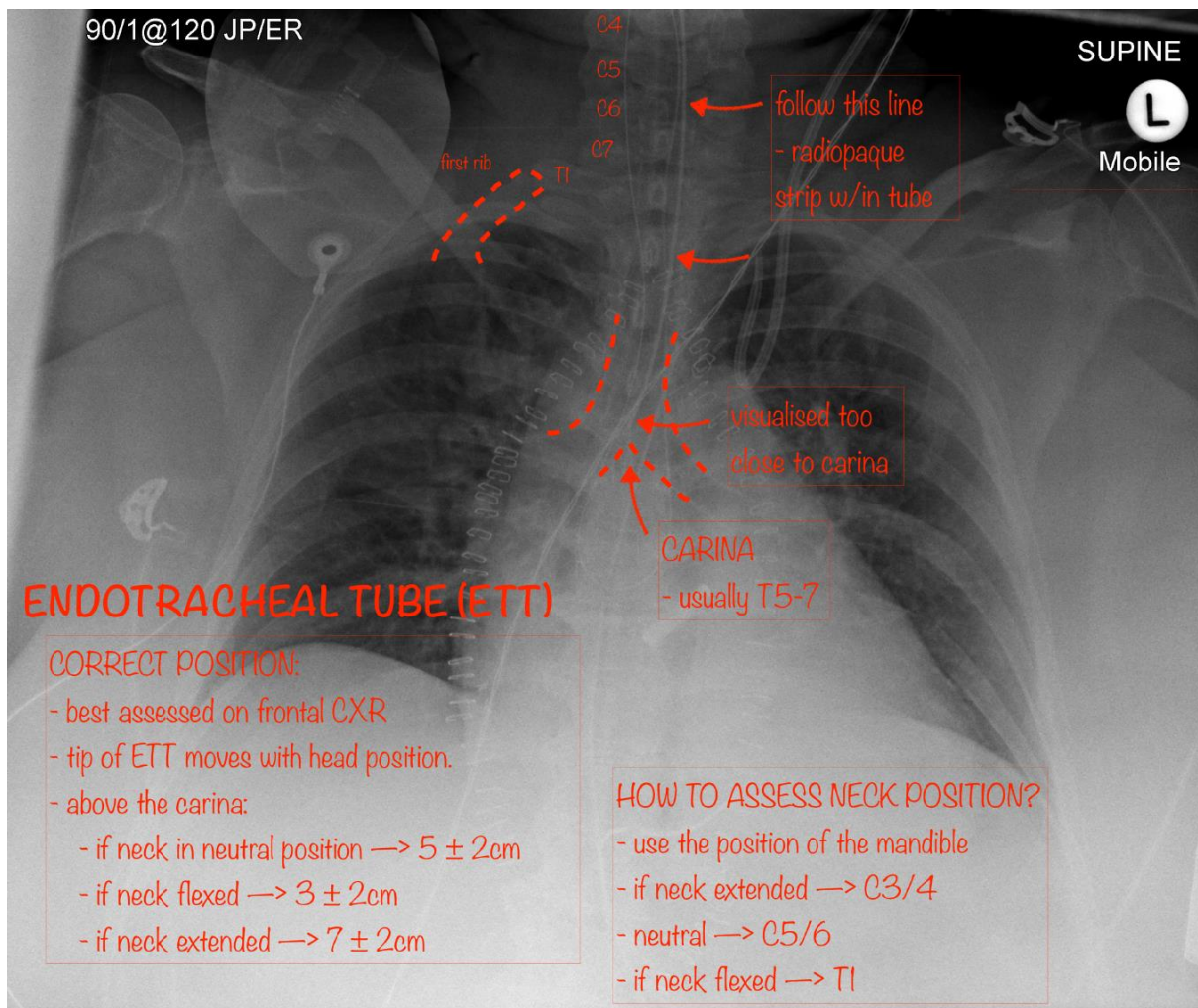


Case courtesy of Dr Jeremy Jones

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ENDOTRACHEAL TUBE (ETT)



On this CXR, the mandible is not visualised, however, the 4th cervical vertebrae is. This suggests that the mandible is out of view, perhaps at C3 or higher, indicating that the neck is in the extended position. Optimal positioning of an ETT with a neck in this position would be 7 ± 2 cm from the carina. On this CXR, the tip of the ETT is visualised approximately 1cm from the carina (this would be too close even if the neck was in the flexed position).

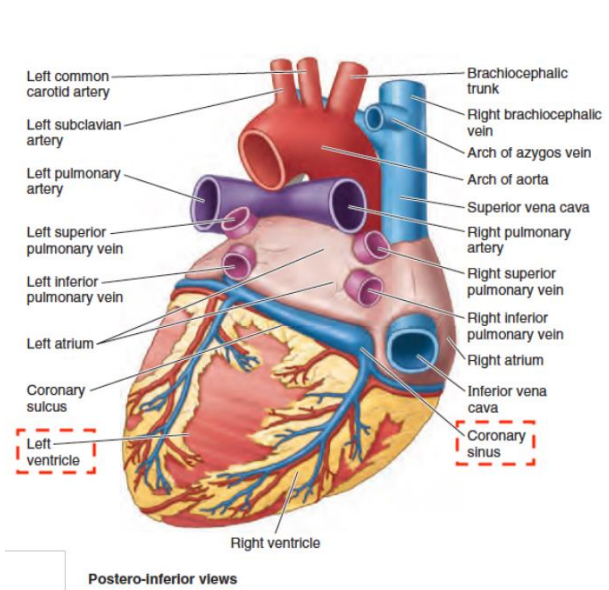
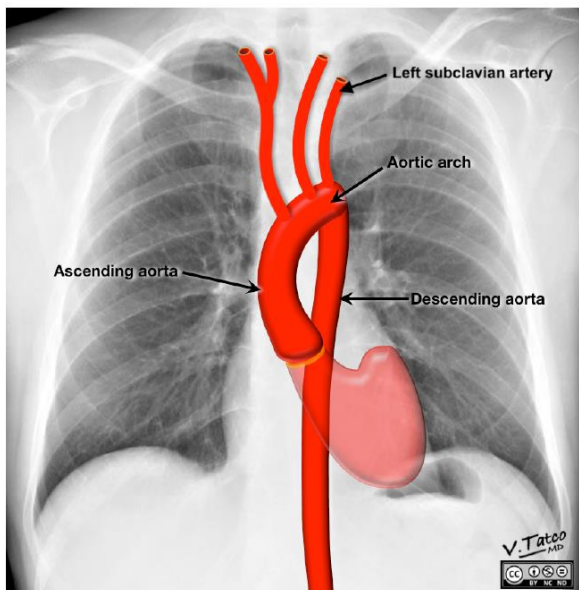
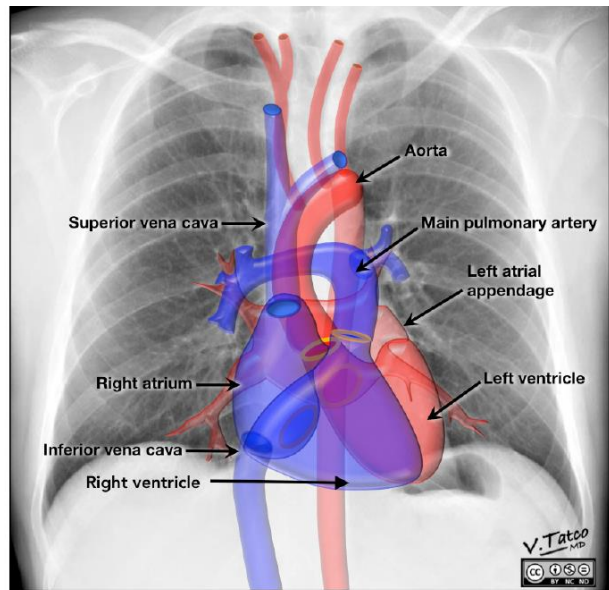
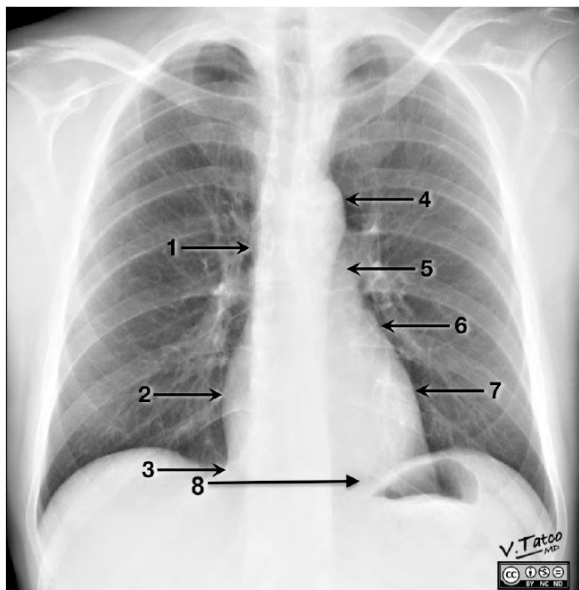
Case courtesy of Dr Matthew Lukies

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From the case <https://radiopaedia.org/cases/43299> rID: 43299

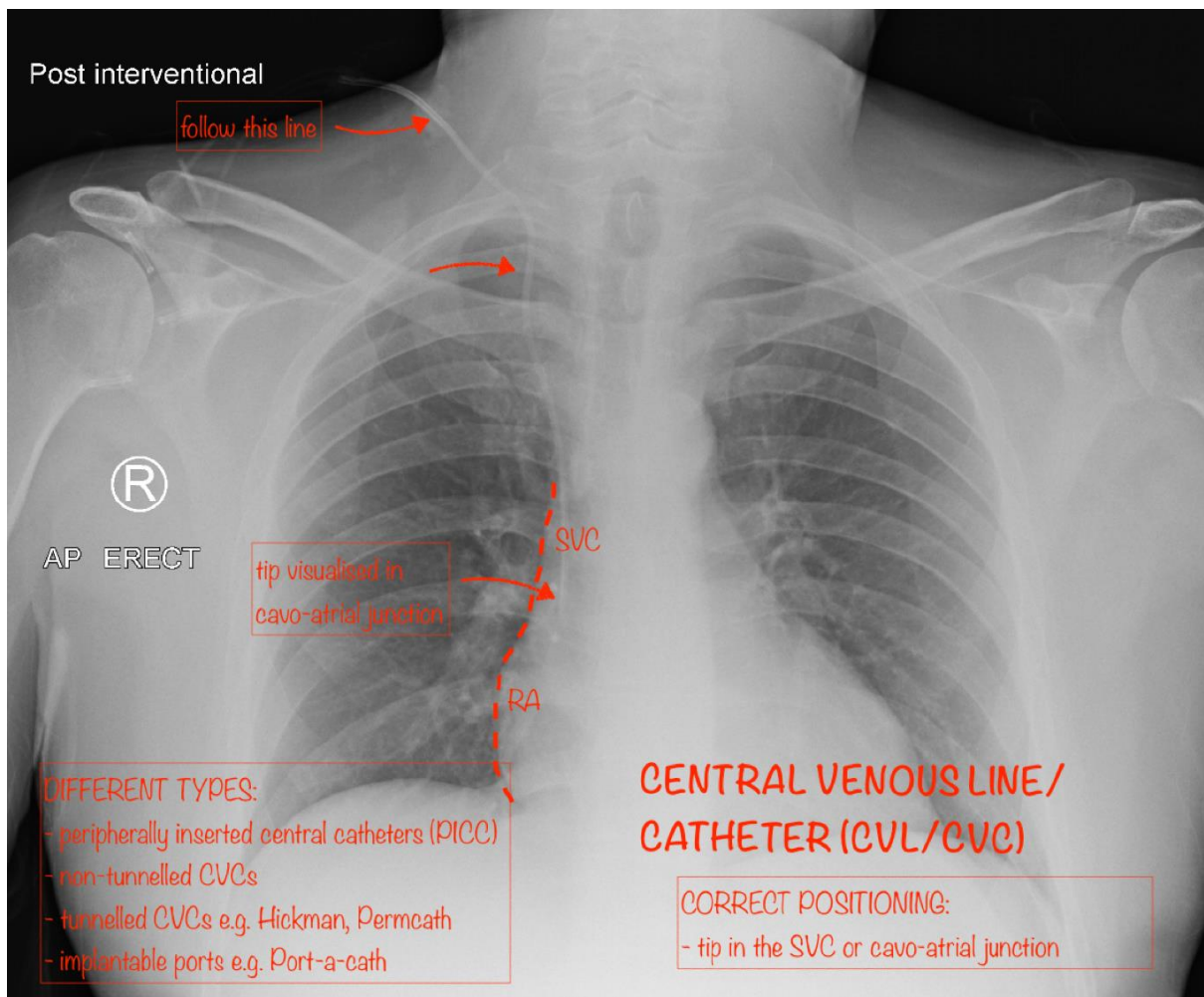
REVIEW OF CARDIAC & GREAT VESSEL ANATOMY ON CXR

Necessary knowledge for assessment of central lines, cardiac conduction devices, pericardial drains & intraaortic balloon pumps.



Case courtesy of Dr Vincent Tatco
 Radiopaedia.org <https://radiopaedia.org/>
 From the case <https://radiopaedia.org/cases/46331> rID: 46331
 Image courtesy of Moore's Clinically Oriented Anatomy 7th Edition

CENTRAL VENOUS LINE/CATHETER (CVL/CVC)

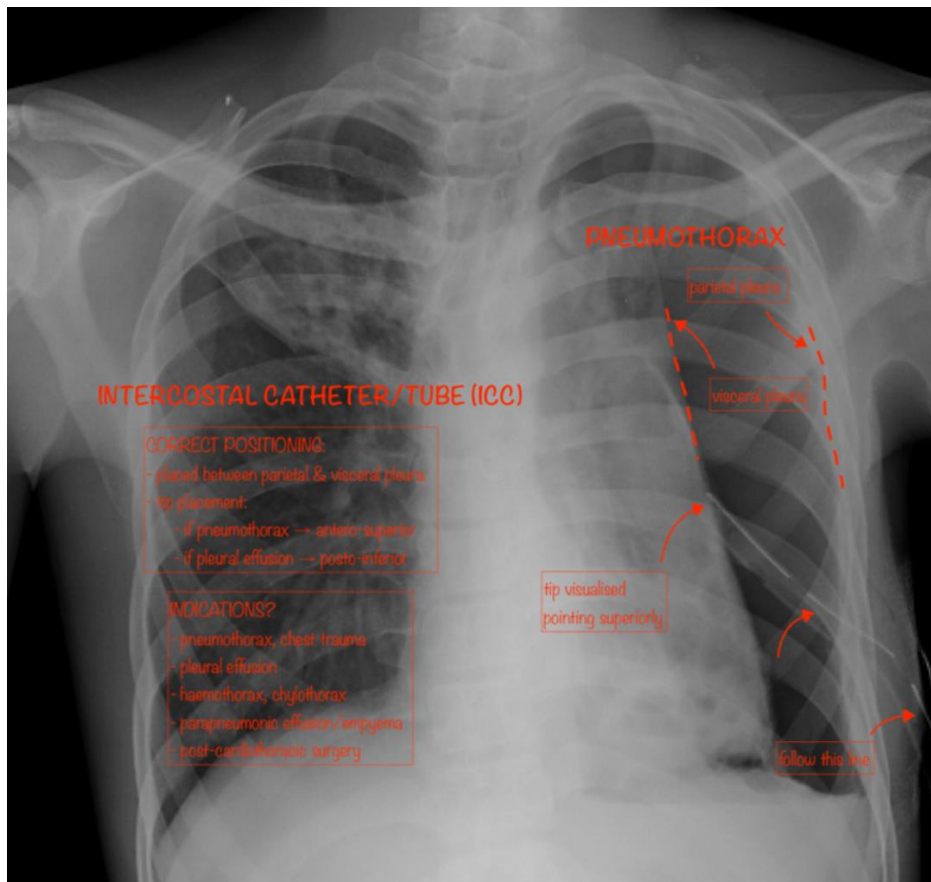


Case courtesy of Dr Henry Knipe

Radiopaedia.org <https://radiopaedia.org/>

From the case <https://radiopaedia.org/cases/29901> rID: 29901

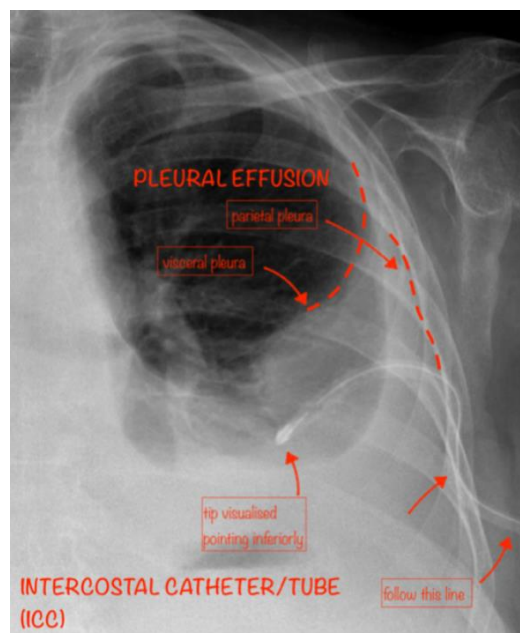
INTERCOSTAL TUBE/CATHETER (ICC, CHEST TUBE)



Case courtesy of Dr Aditya Shetty

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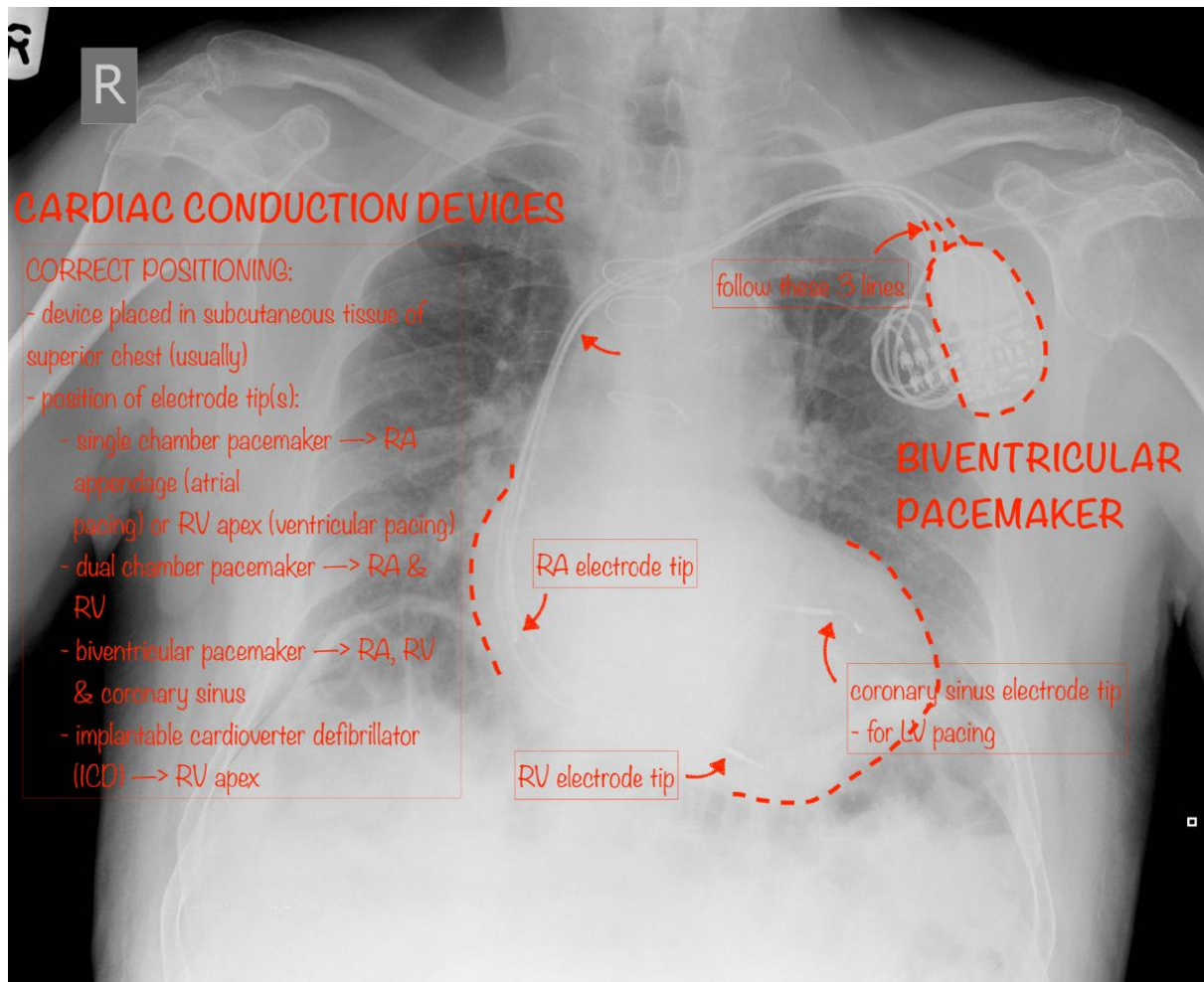
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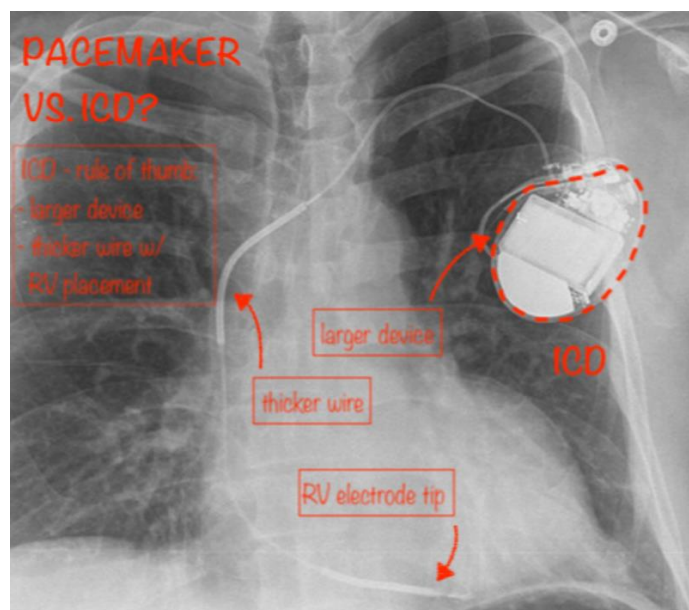
Case courtesy of Radiology Masterclass

https://www.radiologymasterclass.co.uk/tutorials/chest/chest_tubes/chest_xray_chest_drain

PACEMAKERS

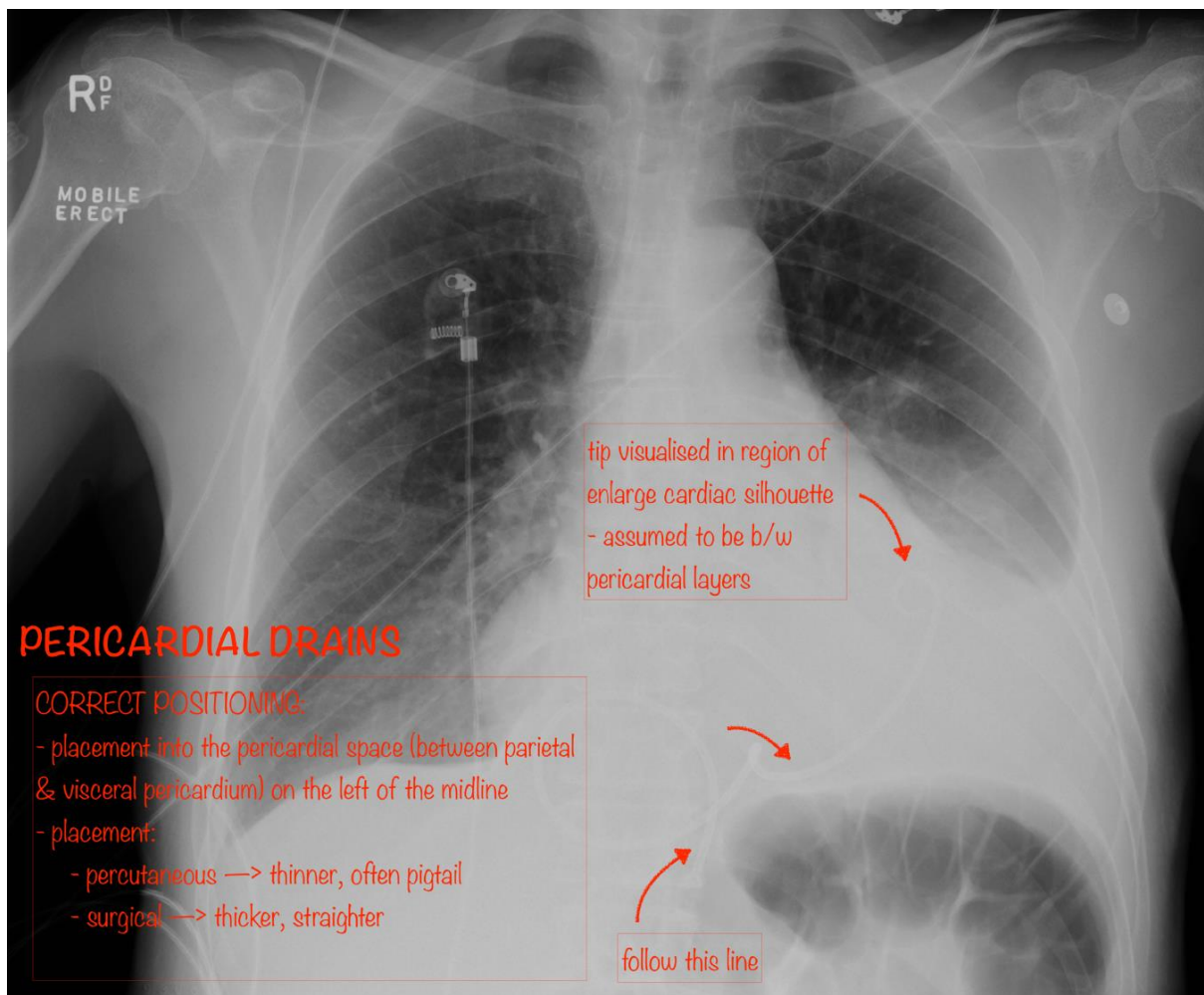


Case courtesy of Dr Jeremy Jones
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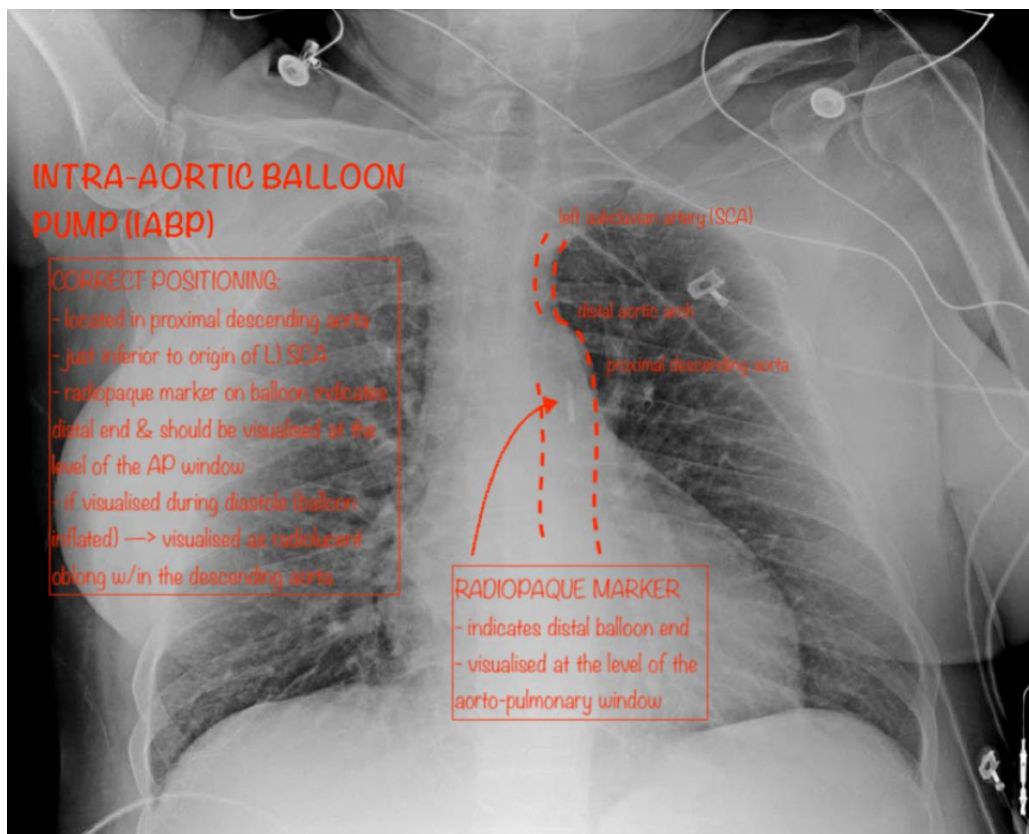
Case courtesy of RSNA – Radiography of Cardiac Conduction Devices: A Comprehensive Review
<https://pubs.rsna.org/doi/full/10.1148/rg.316115529>

PERICARDIAL DRAINS



Case courtesy of Assoc Prof Craig Hacking
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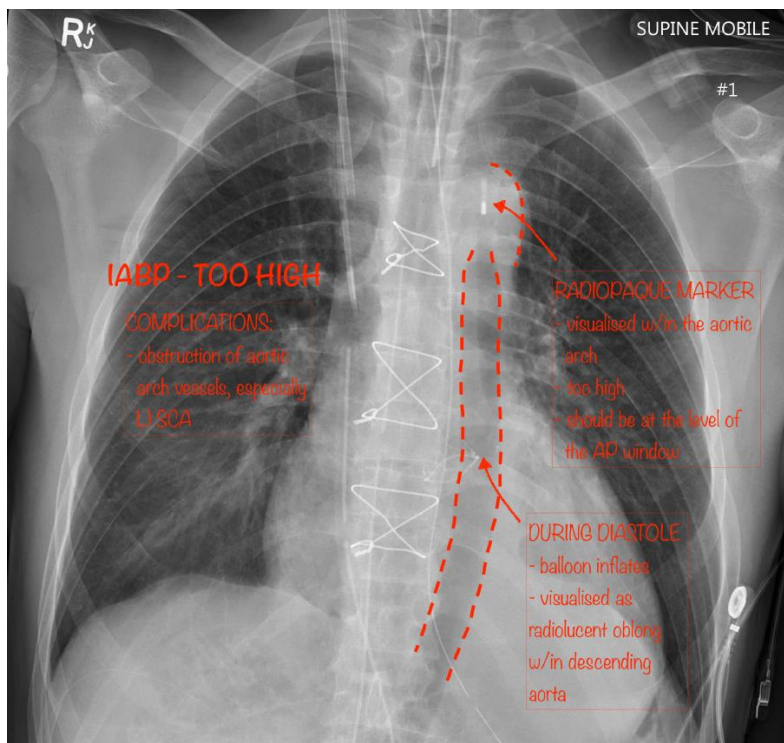
INTRA-AORTIC BALLOON PUMP (IABP)



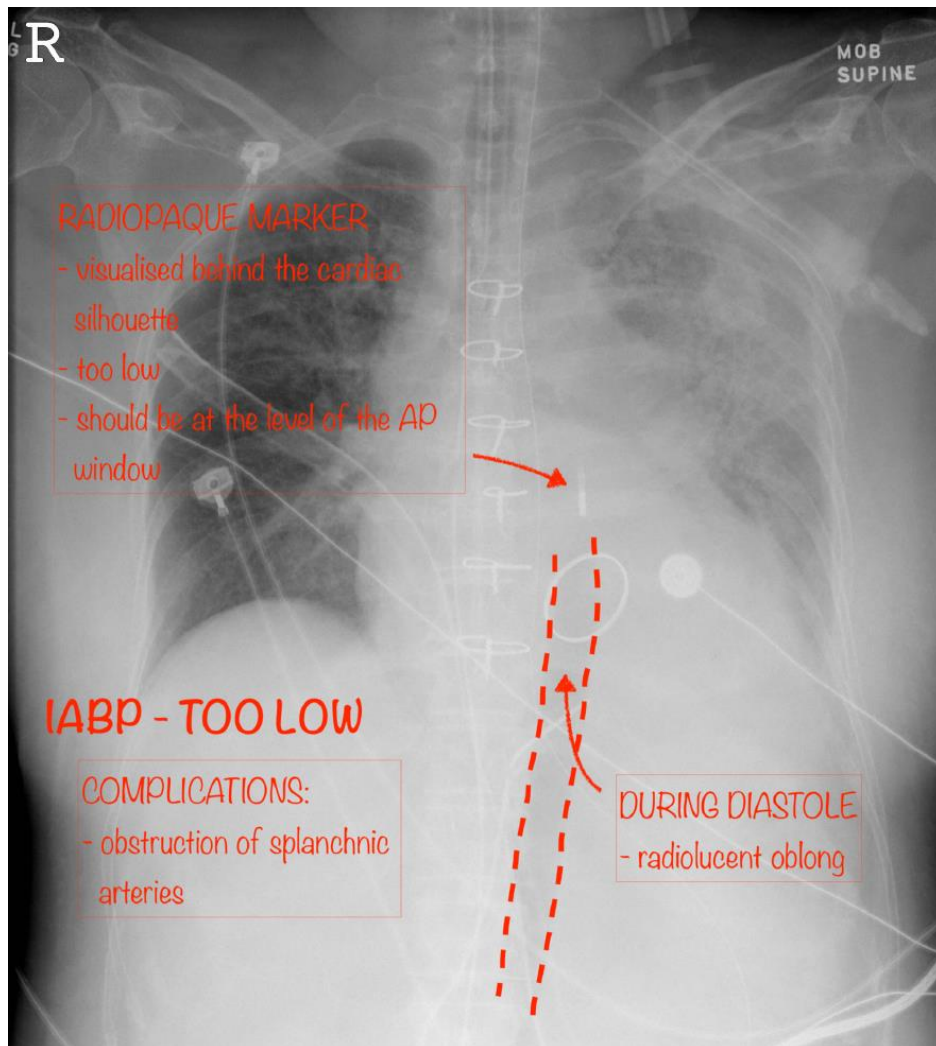
Case courtesy of Radswiki

Radiopaedia.org <https://radiopaedia.org/>

From the case <https://radiopaedia.org/cases/11531> rID: 11531



Case courtesy of Assoc Prof Craig Hacking
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Case courtesy of Assoc Prof Craig Hacking
Radiopaedia.org <https://radiopaedia.org/>
From the case <https://radiopaedia.org/cases/66473> rID: 66473

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