

# Portable Chest X-rays

By: Martin Vanegas PA-S1



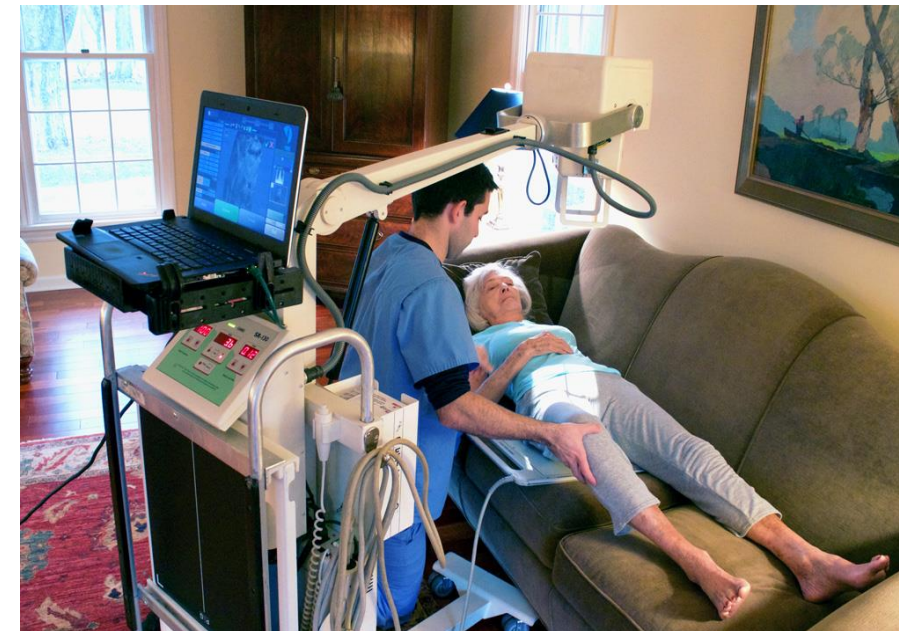
# What are they?

- **Portable and versatile**
- Various models (SOLTUS 500)  
Scotland county hospital
- **Indicated for critical patients that are unable to stand or move**
- User friendly and generally safe
- Increases the quality of care that we can provide for patients



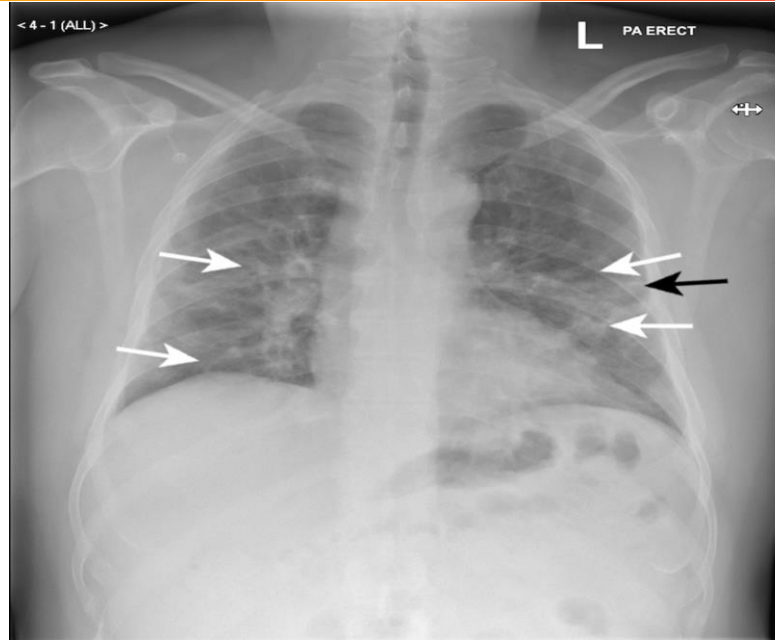
# Where are they used?

- **Emergency rooms**
- **Surgical floor**
- **ICU units**
- Military (mobile medical units)
- Nursing homes
- Veterinary Medicine

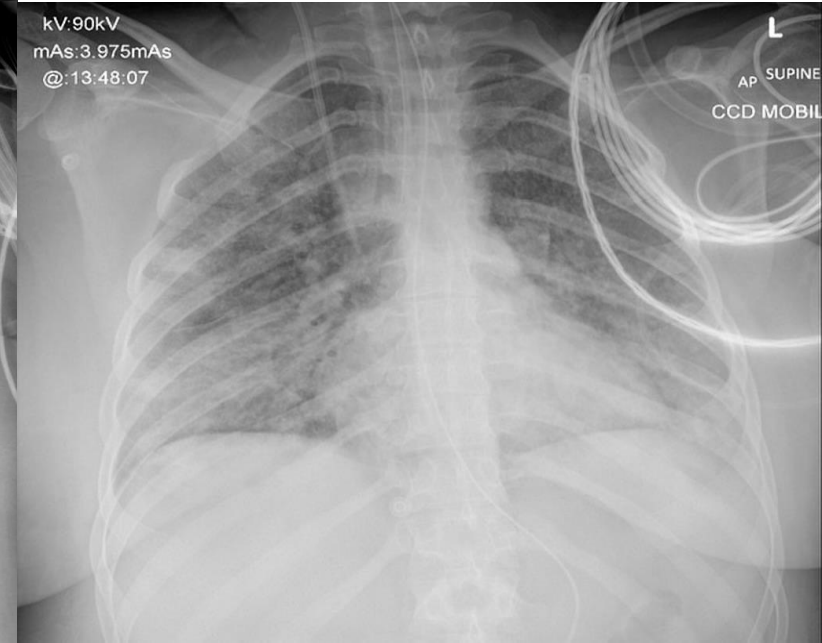
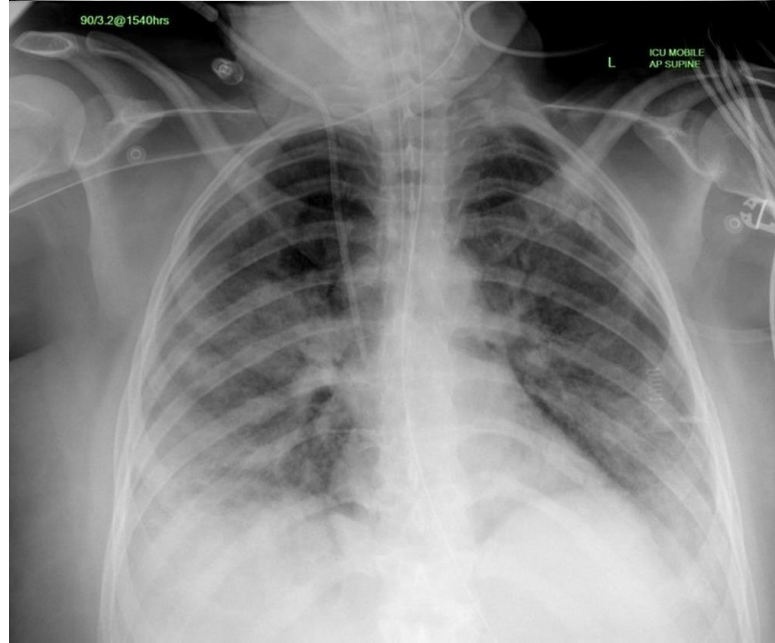
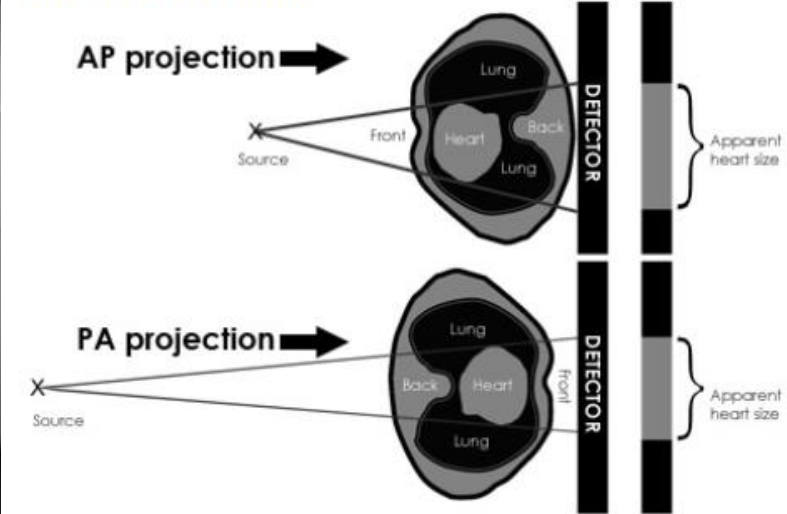


# What type of view do you get?

- PA vs AP view
- **Portable X-rays yield AP views**
- PA is preferred but not always accessible
- **AP view may sometimes be the only choice**
- Shorter tube-detector distances can cause differences in AP view
- Enlarges shadow of heart and mediastinum is common in AP view
- COVID-19 examples



## AP v PA projection

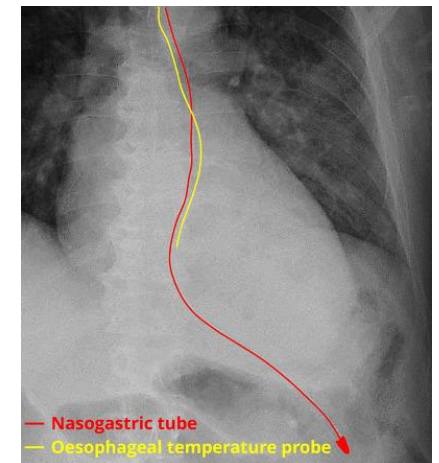
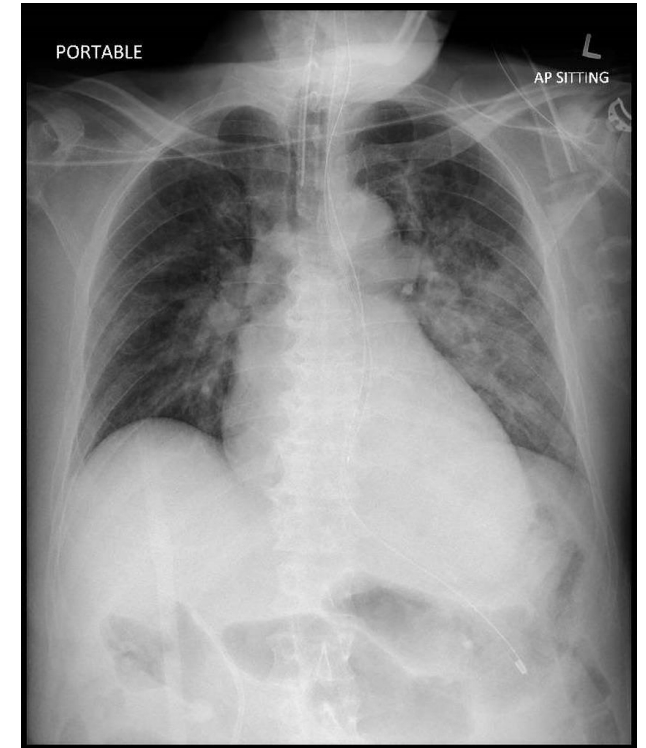
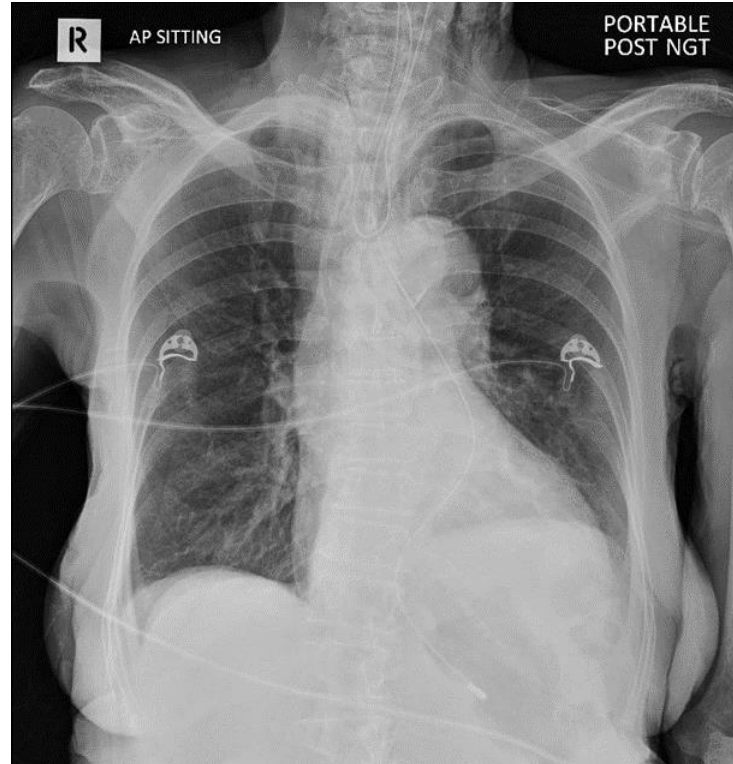


# What can they confirm?

- Can aid in correct placement of a new medical device and any associated complications

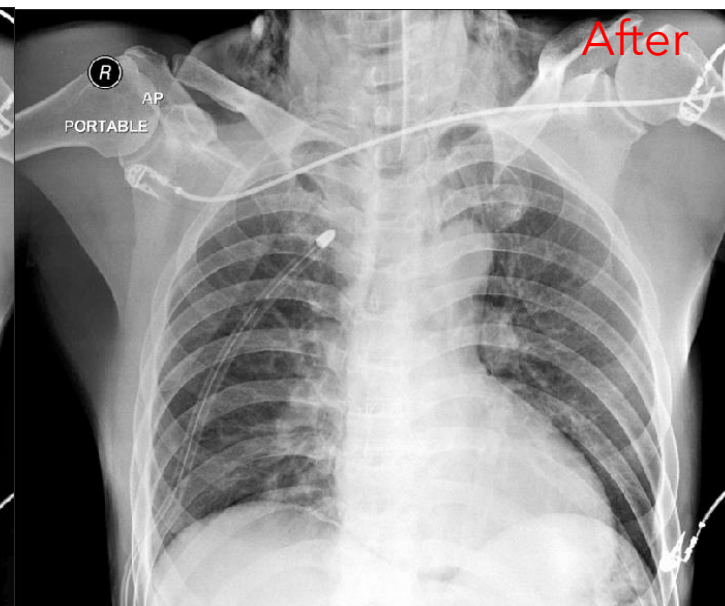
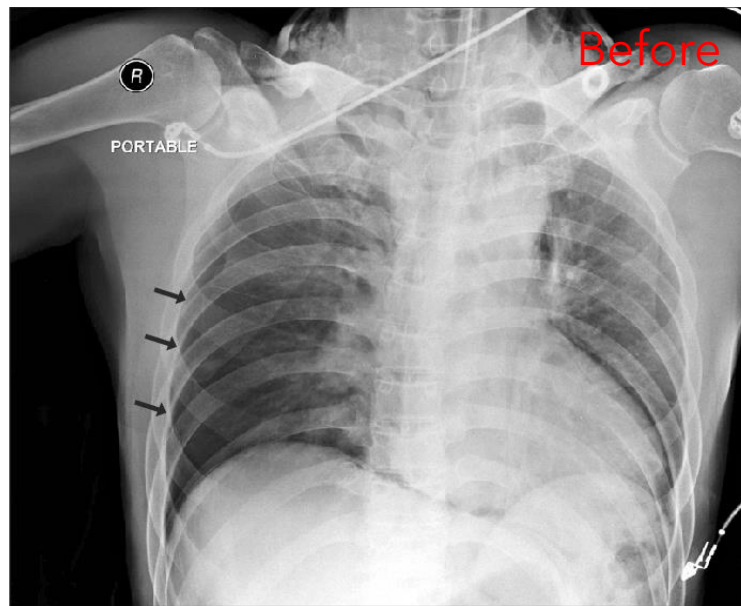
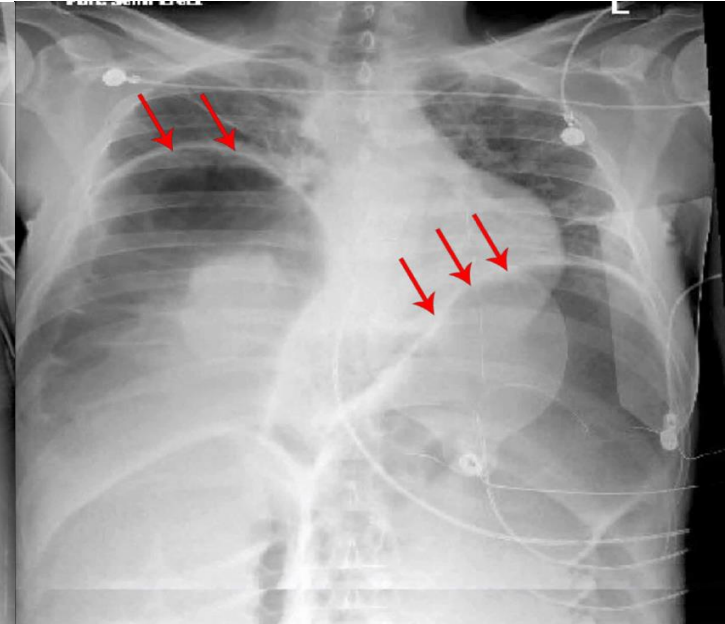
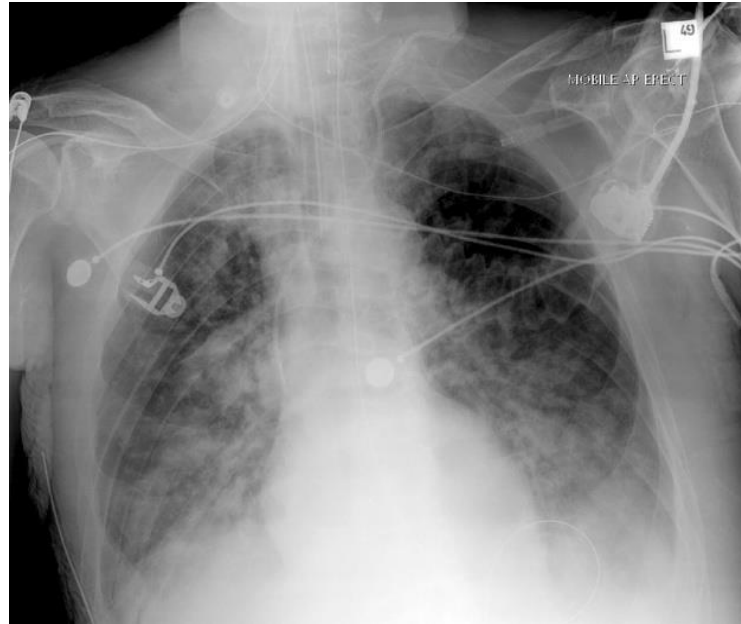
## Some examples

- Nasogastric tube
- Endotracheal tube
- Oesophageal temperature probe
- central line placement



# What complications can they confirm?

- Some major complications that can be seen on portable chest x-rays include
- **ARDS** (above right side)
- **Pneumoperitoneum** (above left side)
- **Rare instance of an iatrogenic Pneumothorax caused from inginal hernia repair** (below)



# Work Cited

1. Murphy, A. (2022, June 30). Portable radiography: Radiology reference article. Radiopaedia Blog RSS. Retrieved <https://radiopaedia.org/articles/portable-radiography?lang=us>
2. Hyeyoung, K. (2010, May 1). Pneumothorax during laparoscopic totally extraperitoneal inguinal ... Pneumothorax during laparoscopic totally extraperitoneal inguinal hernia repair -A case report-. [https://www.researchgate.net/publication/44657756\\_Pneumothorax\\_during\\_laparoscopic\\_totally\\_extraperitoneal\\_inguinal\\_hernia\\_repair\\_-A\\_case\\_report-](https://www.researchgate.net/publication/44657756_Pneumothorax_during_laparoscopic_totally_extraperitoneal_inguinal_hernia_repair_-A_case_report-)
3. Brady, Z. (2020, July 13). Technique, radiation safety and image quality for chest X-ray imaging through glass and in mobile settings during the COVID-19 pandemic - physical and engineering sciences in medicine. SpringerLink. Retrieved November 27, 2022, from <https://link.springer.com/article/10.1007/s13246-020-00899-8>
4. Canon Medical Launches Mobile Digital X-ray system. Imaging Technology News. (2021, October 2). Retrieved November 27, 2022, from <https://www.itnonline.com/content/canon-medical-launches-mobile-digital-x-ray-system>
5. Jensen, L. (n.d.).(2015, April 07) Reducing errors in portable chest radiography. Retrieved November 27, 2022, from <https://www.appliedradiology.com/Communities/Artificial-Intelligence/reducing-errors-in-portable-chest-radiography>
6. Brandon, A. (2022, October 19). *Scotland County Hospital installs new portable X-ray machines*. <https://www.wgem.com>. Retrieved December 2, 2022, from <https://www.wgem.com/2022/10/19/scotland-county-hospital-installs-new-portable-x-ray-machines/>