

# Diagnostic Imaging Pathways - Chest X-Ray (Pre-Operative)

## Population Covered By The Guidance

This pathway provides guidance on the appropriate use of preoperative chest radiographs in adult patients.

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## Quick User Guide

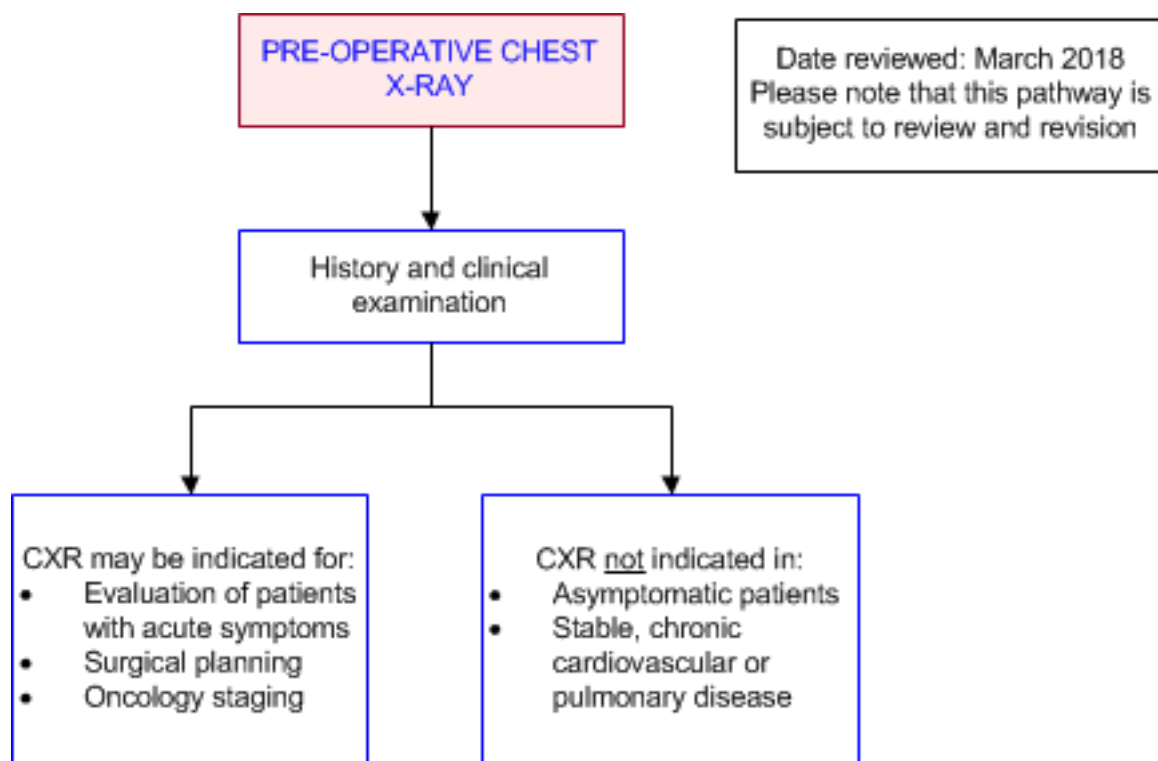
Move the mouse cursor over the **PINK** text boxes inside the flow chart to bring up a pop up box with salient points.

Clicking on the **PINK** text box will bring up the full text.

The relative radiation level (RRL) of each imaging investigation is displayed in the pop up box.

SYMBOL	RRL	EFFECTIVE DOSE RANGE
	None	0
	Minimal	< 1 millisieverts
	Low	1-5 mSv
	Medium	5-10 mSv
	High	>10 mSv

## Pathway Diagram



## Image Gallery

*Note: Images coming soon.*

## Teaching Points

### Take Home Point

- Routine CXR is not indicated in the pre-anaesthetic assessment of asymptomatic patients [1-6](#)
- Preoperative CXR for anaesthetic evaluation should be based on history and clinical examination, and should be reserved for patients with symptoms of acute illness requiring investigation [1, 2](#)
- CXR may be indicated for surgical planning or oncology staging in some cases [1-4](#)

### About Preoperative Chest Radiography (CXR)

- History and examination have been shown to predict most clinically significant abnormalities that would be detected on CXR [7](#)
- Disadvantages of extensive routine preoperative testing include [8](#)
  - patient discomfort
  - unnecessary waiting times for some procedures
  - unnecessary direct costs and potential for unnecessary subsequent tests related to false-positive abnormal findings
- In asymptomatic patients, the yield of CXR is low [9](#) and abnormal findings rarely change management [7, 10-13](#)
- Even in older patients, most detected abnormalities reflect chronic disorders and do not impact on anaesthetic management or perioperative outcome [3](#)

- Routine CXR is a poor predictor of post-operative pulmonary complications [1, 3, 14](#)
- A randomized, single-blind, prospective, controlled pilot study showed that there was no increase in the perioperative adverse events as a result of no preoperative testing [15](#)

## References

Date of literature search: March 2018

References are graded from Level I to V according to the Oxford Centre for Evidence-Based Medicine, Levels of Evidence. [Download the document](#)

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**ambulatory surgery.** Anesth Analg. 2009;108(2):467-75. (Level II evidence). [View the reference](#)

## Information for Consumers

Information from this website	Information from the Royal Australian and New Zealand College of Radiologists' website
<p><a href="#">Consent to Procedure or Treatment</a></p> <p><a href="#">Radiation Risks of X-rays and Scans</a></p> <p><a href="#">Chest Radiograph (X-ray)</a></p>	<p><a href="#">Plain Radiography/X-rays</a></p> <p><a href="#">Radiation Risk of Medical Imaging During Pregnancy</a></p> <p><a href="#">Radiation Risk of Medical Imaging for Adults and Children</a></p>

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