How to read x-rays
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Presenter’s name Arial 24 pt
Presenter’s title Arial 20 pt
Meeting Arial 24 pt
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Learning outcomes

At the end of this lecture you will be able to:

- Read x-rays systematically
- Describe fracture patterns
- Interpret healing of fractures

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Radiation not absorbed by the patient is scattered. This scattered radiation can affect the team and surgeon.

In this example, the x-ray tube is emitting photons, which are either reflected or absorbed by the patient. Just a fraction of the x-rays pass through the patient to the image intensifier.

For every thousand photons reaching the patient, 100–200 photons are scattered. Just 20 reach the image detector. The rest are absorbed by the patient. This is the radiation dose.
X-ray projection depends on the thickness of the tissue that is to be penetrated. When there is no tissue to penetrate, the color of the picture will be black. The greater the depth, the lighter the grey.

- Air is projected as black
- Soft tissues are grey
- Fluids are a lighter grey
- Bone is an even lighter grey
- Metal is projected as white