

X-Ray Interpretation Checklist

10 Steps Every MBBS Student Should Follow

Why Use a Checklist?

Many fractures are missed not because they are difficult to diagnose, but because the X-ray is reviewed in a hurried and unsystematic manner. A checklist reduces errors and builds confidence.

The Life in Orthopaedics 10-Step X-Ray System

Step 1: Confirm Patient Details

Always verify:

- Name

- Age
- Side (Right/Left)
- Date of imaging

Step 2: Check Image Quality

Ask:

- Is the entire bone visible?

- Is the image adequately exposed?
- Are required views available?

Step 3: Identify the Bone

Know exactly which bone and anatomical region you are evaluating.

Step 4: Follow the Cortex

Trace the cortex from one end to the other. Look for:

- Breaks

- Steps
- Irregularities

Step 5: Assess Alignment

Check:

- Joint congruity

- Angulation
- Translation
- Rotation

Step 6: Look for Fractures

Describe:

- Location

- Pattern
- Displacement
- Comminution

Step 7: Examine the Joint Above and Below

Never stop at the fracture. Always assess adjacent joints.

Step 8: Evaluate Soft Tissues

Look for:

- Swelling

- Fat pad signs
- Gas shadows
- Foreign bodies

Step 9: Search for Associated Injuries

Common examples:

- Galeazzi → DRUJ injury

- Monteggia → Radial head dislocation
- Lisfranc → Midfoot instability

Step 10: Ask Yourself One Final Question

"Have I looked at everything?" Most missed fractures occur because the observer stops searching too early.

Common X-Ray Traps

- Posterior shoulder dislocation
- Scaphoid fracture
- Lisfranc injury
- Segond fracture
- Occult neck of femur fracture

Rapid Interpretation Formula

Patient → Quality → Bone → Cortex → Alignment → Fracture → Joint → Soft Tissue → Associated Injury → Recheck

High-Yield Viva Questions

1. Why are two views mandatory?
2. Why examine joints above and below?
3. What are common missed injuries?
4. What soft tissue signs suggest occult injury?

Life in Orthopaedics Take Home Message

Good clinicians do not rely on memory. They rely on systems. A structured approach to every X-ray will prevent missed injuries and improve clinical decision-making.

Dr Arnav Kadian | Life in Orthopaedics | Where Healing Meets Movement