A suspected pathological fracture

Recognise an underlying lesion before committing to definitive fixation.

SURGICAL DECISIONS / ADULT TRAUMA

An unusual fracture or bone lesion needs a diagnostic and multidisciplinary plan; the fracture pattern alone cannot establish the cause.

01 Recognise red flags

Ask about pain before the injury, night pain, minimal trauma, previous cancer and systemic symptoms. Review the radiograph for an underlying lesion. Benign conditions, infection, metastasis and primary bone tumours can overlap in appearance.

02 Define the diagnosis

Image the whole affected bone and arrange further imaging and laboratory tests through the agreed pathway. Staging may be needed. A known cancer history does not prove that every new bone lesion is a metastasis.

03 Coordinate before biopsy

Seek specialist advice when a primary bone tumour is possible; BOASt directs these biopsies to a bone sarcoma centre. Plan tissue diagnosis with the team that will provide definitive treatment. Avoid an unplanned biopsy or reconstruction.

04 Treat pain & function

Protect the limb, manage pain and agree safe mobilisation during investigation. Discuss reconstruction, oncology treatment, prognosis and patient goals together. In metastatic disease, plan a construct suited to expected needs.

WATCH POINT Do not label every low-energy fracture as osteoporosis. Unexplained preceding pain or a suspicious lesion should change the work-up.

DISCUSS WITH THE TEAM

Is the diagnosis secure enough to choose this implant, and has the definitive tumour team agreed the plan?

READ THE SOURCES

[1] BOASt: Management of Metastatic Bone Disease (June 2022).
[2] AAOS OrthoInfo: Bone Tumor, assessment and diagnostic testing.

Educational summary for clinicians. Apply local protocols and patient-specific judgement.