Pilon fractures & staged reconstruction

Restore alignment while giving the injured soft tissues time to recover.

SURGICAL DECISIONS / ADULT TRAUMA

High-energy pilon fractures often need staged treatment; the soft-tissue condition helps determine when definitive fixation is safe.

01 Assess the whole injury

Check skin, open wounds, swelling, circulation and nerve function. Search for associated injuries after high-energy trauma. A deformed joint or threatened skin needs prompt specialist assessment and appropriate reduction and stabilisation.

02 Protect length & alignment

Temporary ankle-spanning fixation may be appropriate when severe swelling or tissue injury prevents safe definitive reconstruction. Plan pin positions around future approaches. Maintain alignment while monitoring the skin, swelling and limb status.

03 Plan with imaging

Radiographs establish the injury; CT defines the articular fragments and helps surgical planning. Agree definitive treatment after considering fracture pattern, soft tissues, patient health and function. Avoid choosing a date solely by the calendar.

04 Explain the recovery

Give explicit weight-bearing and motion instructions, wound advice and follow-up. Recovery can be prolonged. Discuss stiffness, infection, nonunion and post-traumatic arthritis, together with the rehabilitation needed to regain useful function.

WATCH POINT Staging does not mean delaying urgent treatment of open wounds, threatened skin or compromised perfusion. These problems need their own immediate plan.

DISCUSS WITH THE TEAM

What clinical evidence will show that this patient is ready for definitive reconstruction?

READ THE SOURCES

[1] AO Surgery Reference: high-energy distal tibial fractures, staged reconstruction.
[2] AAOS OrthoInfo: Pilon Fractures of the Ankle; patient education.

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