SCAPHOID FRACTURE

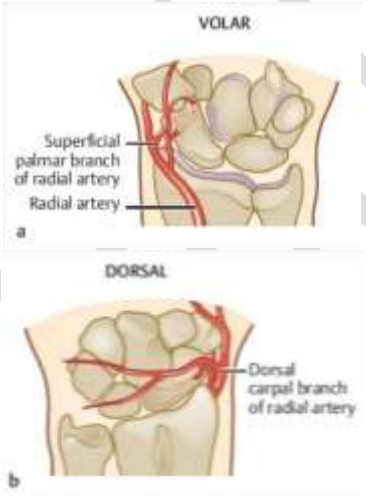
Scaphoid is a boat-shaped carpal bone situated on the radial side of the proximal carpal row of the wrist**.**

BLOOD SUPPLY

Dorsal carpal branch of Radial artery	Proximal pole (retrograde flow)	70-80% (major)
Superficial palmar branch of Radial artery	Distal pole and tubercle	20-30% (minor)

CLINICAL SIGNIFICANCE

The scaphoid has a predominantly **retrograde b**, entering mainly through the **distal p**art, which makes the **proximal pole poorly vascularized**. As a result, scaphoid fractures—especially **waist and proximal pole fractures**—have a **high risk of delayed union, non-union, and avascular necrosis (AVN)**. Proximal pole fractures carry the **worst prognosis** due to disruption of blood flow.



MECHANISM OF INJURY- FOOSH with wrist in dorsiflexion

CLINICAL FEATURES

- Pain in wrist after fall
- **Anatomical snuffbox tenderness** (very important)
- Pain on axial compression of thumb
- Reduced wrist movements

INVESTIGATIONS

Investigation	Role
X-ray wrist (PA, lateral, scaphoid view)	Initial screening; may be normal early
Repeat X-ray after 2 weeks	Shows fracture line due to resorption
MRI	Most sensitive for occult fracture

The **waist** is the **most common site** of scaphoid fracture and carries a **moderate risk of avascular necrosis**.

Relevance of X-ray After 2 Weeks

- Initial X-ray may be **normal** in early scaphoid fractures
- After **10–14 days**, **bone resorption** at fracture margins makes the fracture **clearly visible**

TREATMENT

Fracture type / Situation	Preferred treatment
Undisplaced fracture-distal/waist	Thumb-spica cast immobilization (4–6 weeks)
Displaced fracture (>1 mm)	Internal fixation with headless compression screw(Herbert screw)
Proximal pole fracture	Early internal fixation (high risk of AVN)
Delayed union	Internal fixation ± bone grafting

COMPLICATIONS

- Avascular necrosis (AVN)
- Delayed union
- Non-union
- Wrist osteoarthritis