

The Avascular Carpus

Les Irwin
Hand Surgeon - Sunderland.

Avascular Necrosis of Lunate

?

Avascular Necrosis of Lunate

Kienbock's Disease

Avascular Necrosis of Scaphoid

?

Avascular Necrosis of Scaphoid

Preiser's Disease

Natural History

Relentlessly progressive,
but speed varies









Causes

- Arterial - Single or double supply
- Venous congestion
- Bony anatomy - Lunate or radius
- Trauma
- Others - Lupus, Sickle Cell, Cerebral Palsy

Lichtman's Radiographic Classification of Kienbock's Disease

- **stage 1:** normal except for the possibility of either a linear or a compression frx;
- **stage 2:** definite density changes apparent in the lunate;
- **stage 3a:** collapse of entire lunate without fixed scaphoid rotation;
- **stage 3b:** collapse of entire lunate with fixed scaphoid rotation;
 - significance of stage IIIb is that the load is significantly shifted over to the lunate, which will further hasten the collapse;
- **stage 4:** stage III with generalized degenerative changes in the carpus;







Treatment

• Decompression

- Revascularisation
- Joint levelling
- Partial (selected) fusion
- Proximal row carpectomy
- Wrist arthrodesis

Treatment

- Decompression

• **Revascularisation**

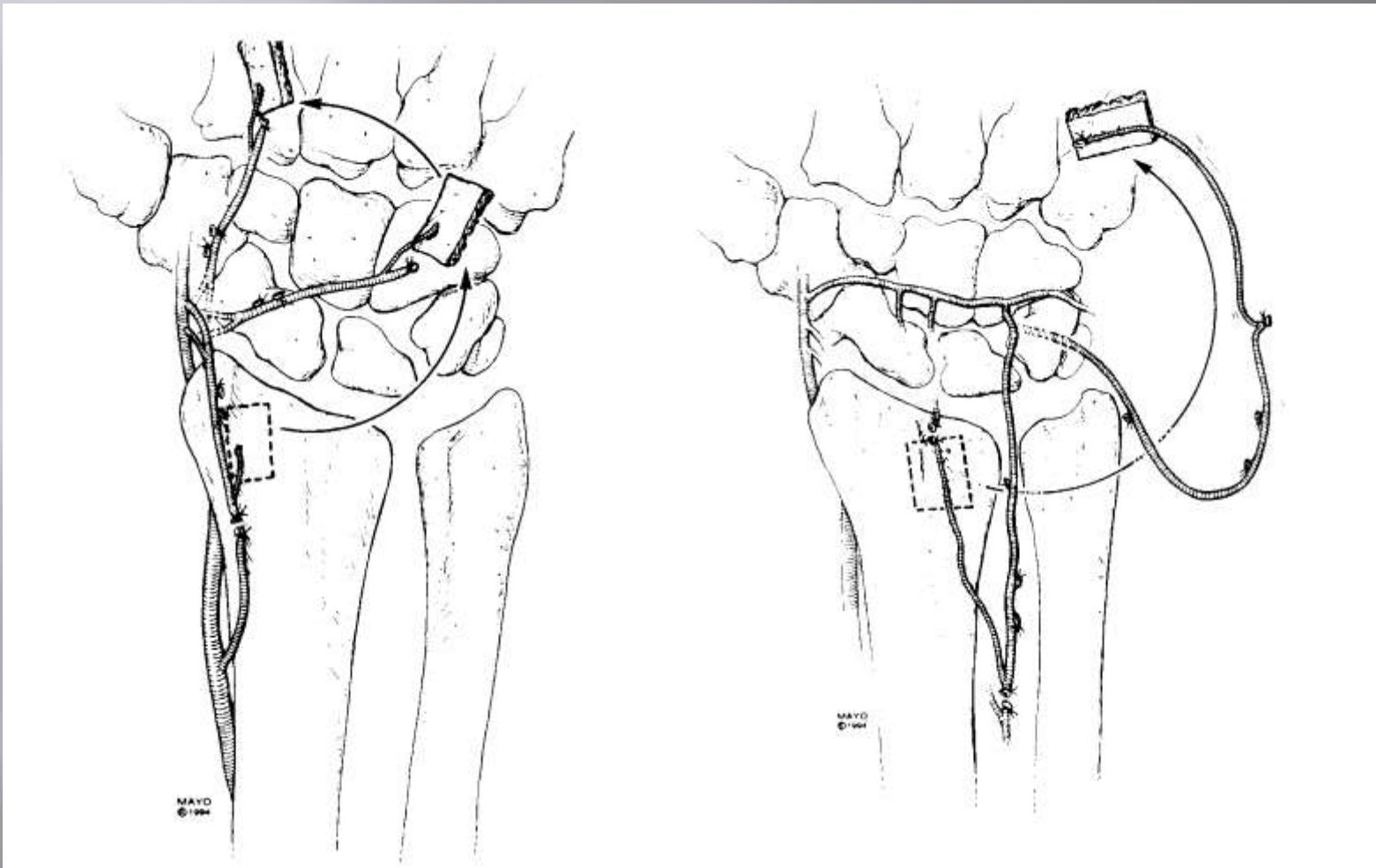
- Joint levelling

- Partial (selected) fusion

- Proximal row carpectomy

- Wrist arthrodesis

Vascularised Bone Transfer



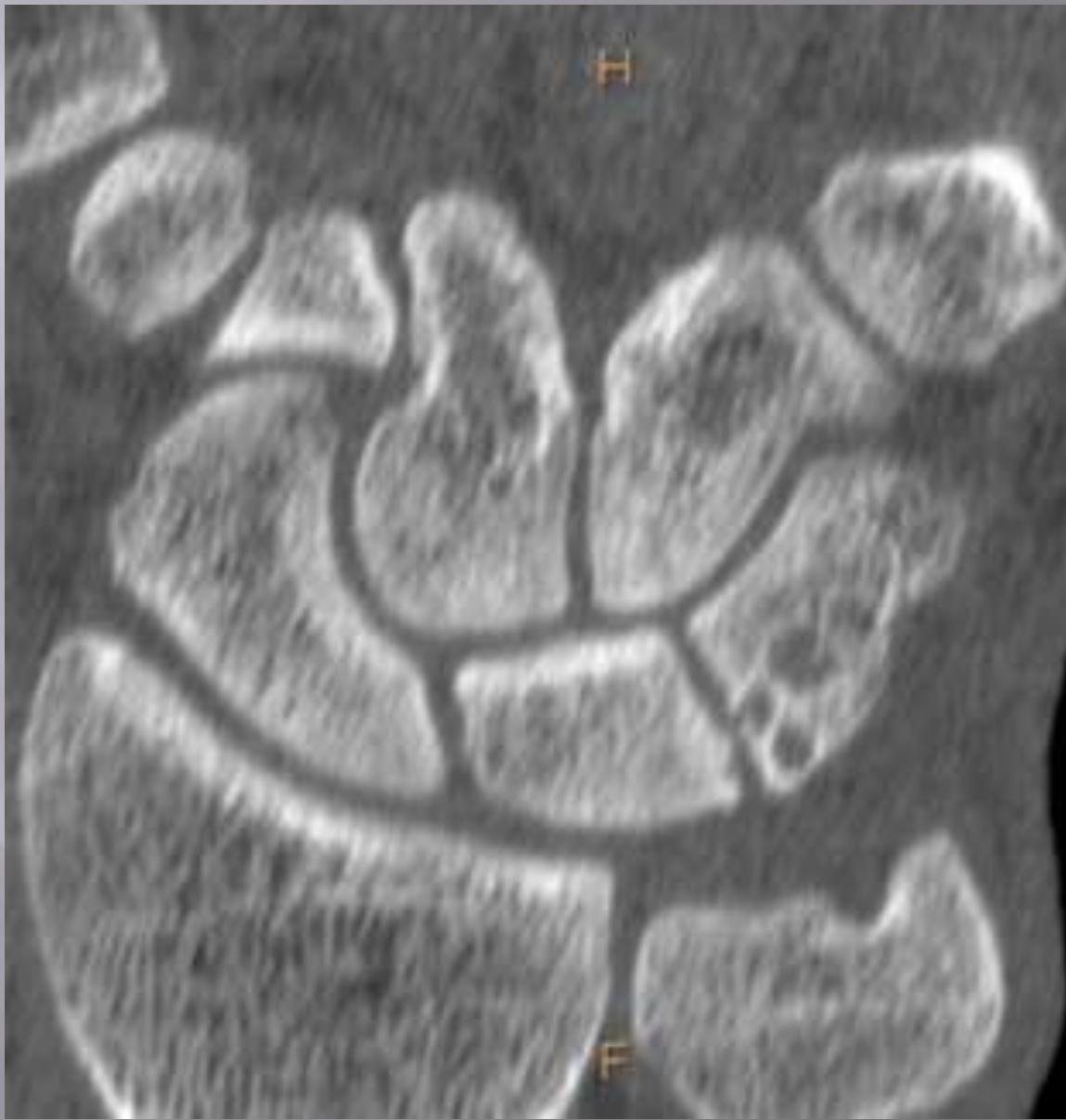
Vascularised Bone Transfer



Treatment

- Decompression
- Revascularisation
- **Joint levelling**
- Partial (selected) fusion
- Proximal row carpectomy
- Wrist arthrodesis



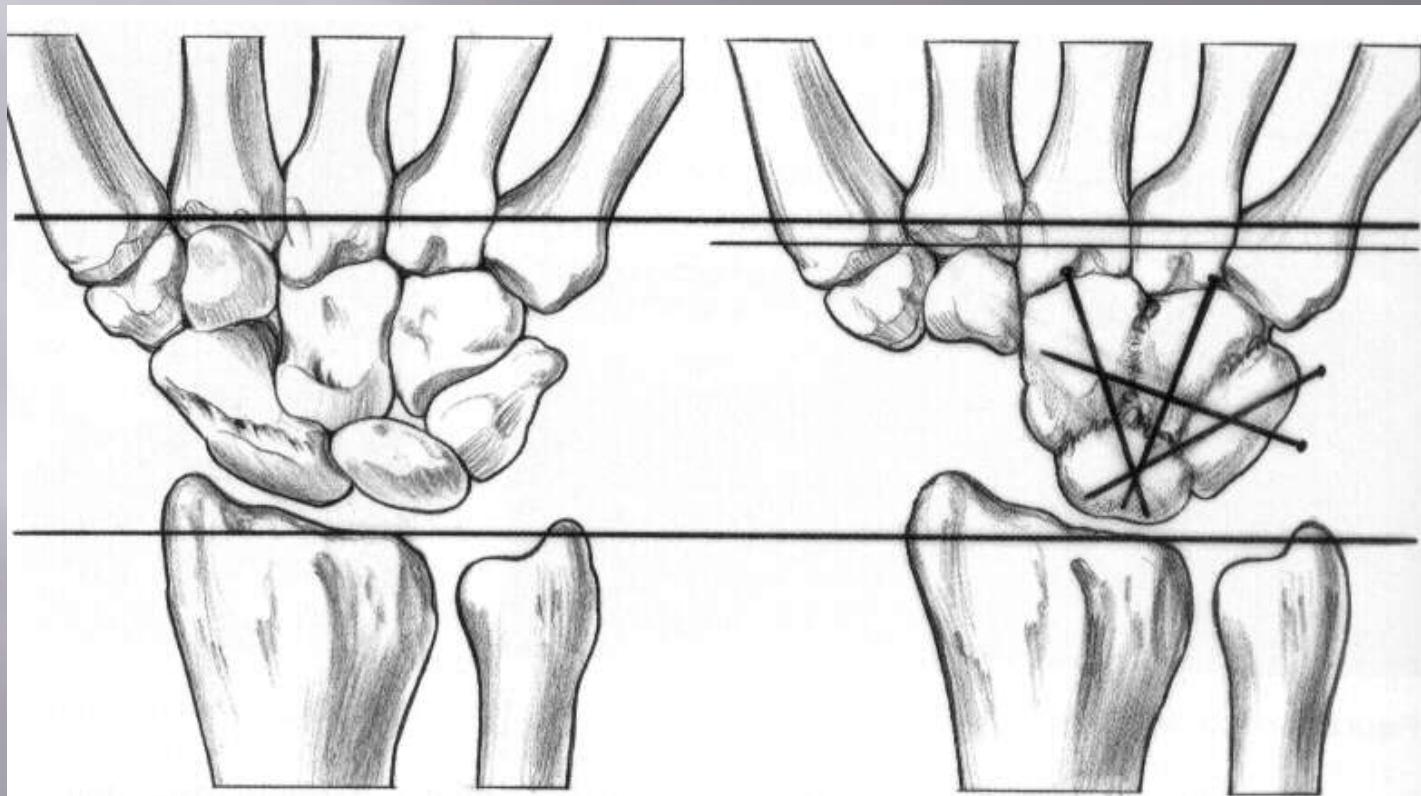




Treatment

- Decompression
- Revascularisation
- Joint levelling
- **Partial (selective) fusion**
- Proximal row carpectomy
- Wrist arthrodesis

Limited Fusions



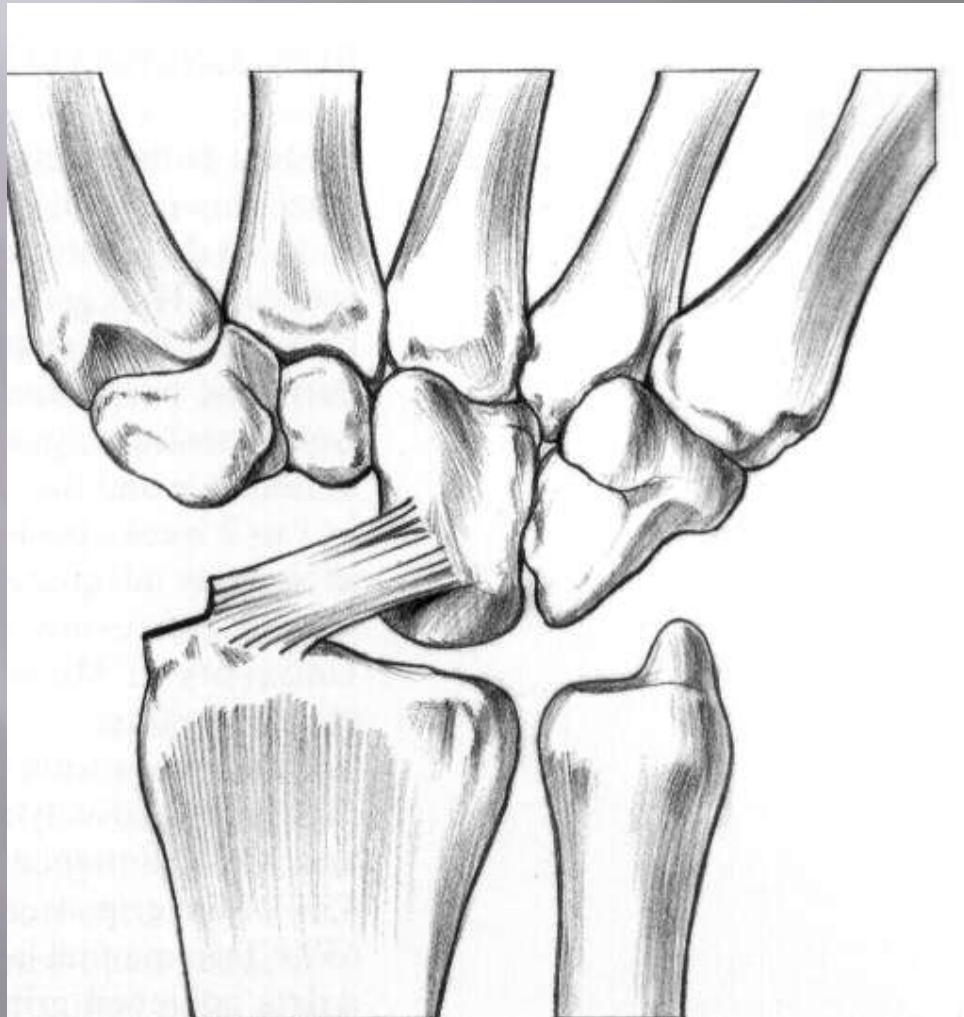
Limited Fusions



Treatment

- Decompression
- Revascularisation
- Joint levelling
- Partial (selected) fusion
- **Proximal row carpectomy**
- Wrist arthrodesis

Proximal Row Carpectomy



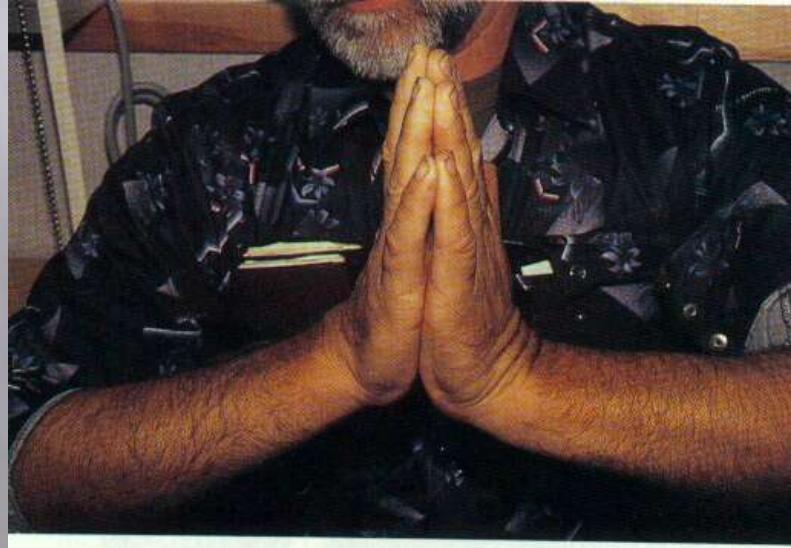
Proximal Row Carpectomy



Proximal Row Carpectomy



Proximal Row Carpectomy



Treatment

- Decompression
- Revascularisation
- Joint levelling
- Partial (selected) fusion
- Proximal row carpectomy
- **Wrist arthrodesis**

Thank You.