

Pilon Fxs: Initial Mgmt & Timing

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Outline

- Initial Mgmt
 - Suggestions for External Fixation
 - Thoughts on Fibula ORIF
 - Open Fxs: Should I fix some of this now?
- Timing

External Fixation

- | Goals:
 - Gross restoration of LAR
 - Stay out of the zone of injury and planned ORIF
 - Soft Tissue Rest

LAR: Beware the Ornamental Ex-Fix



LAR



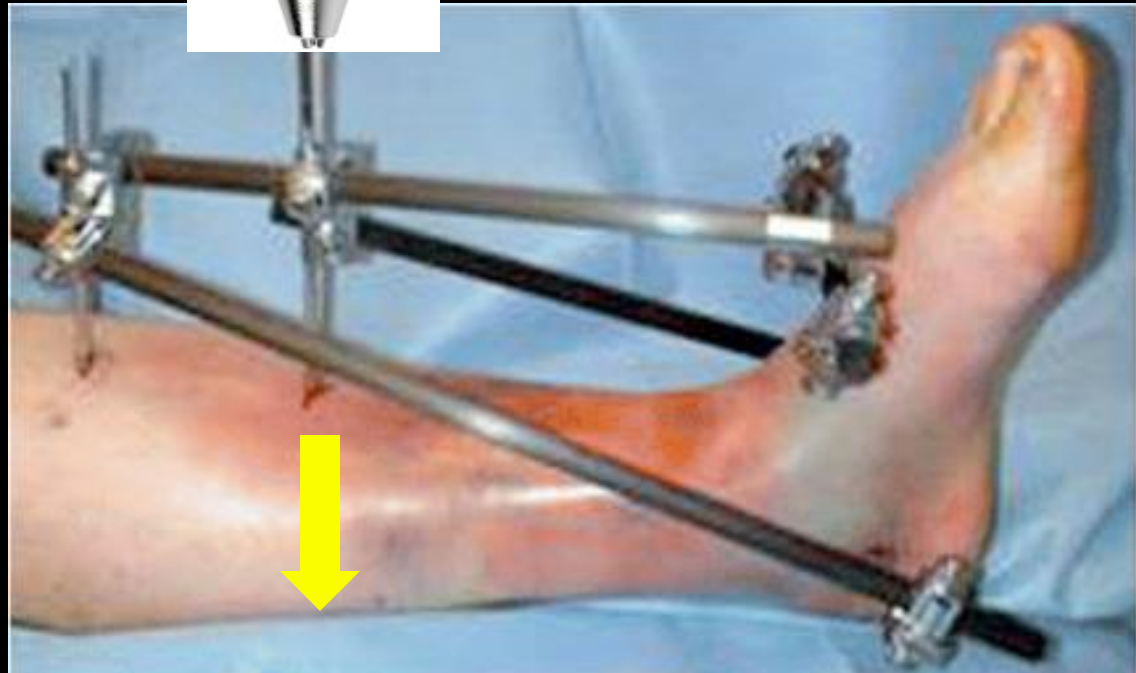
Translating shaft over talus

E

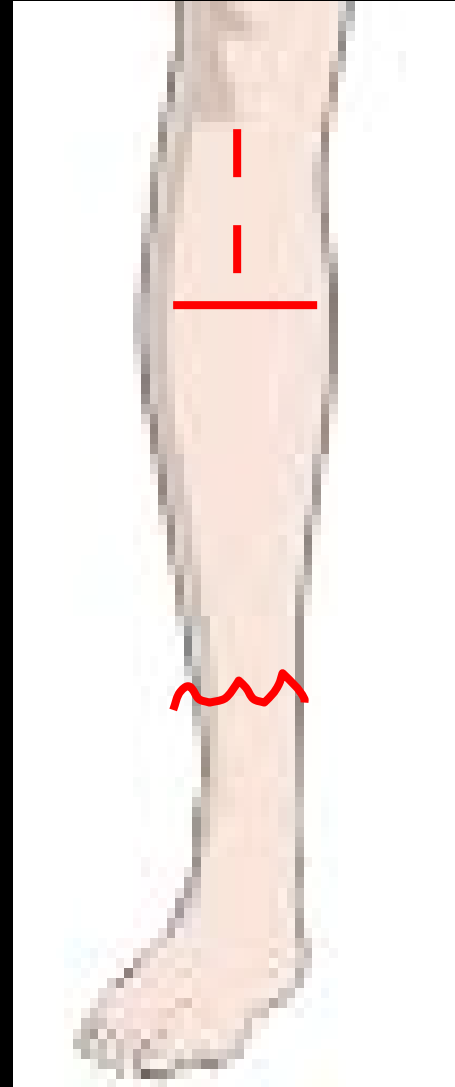


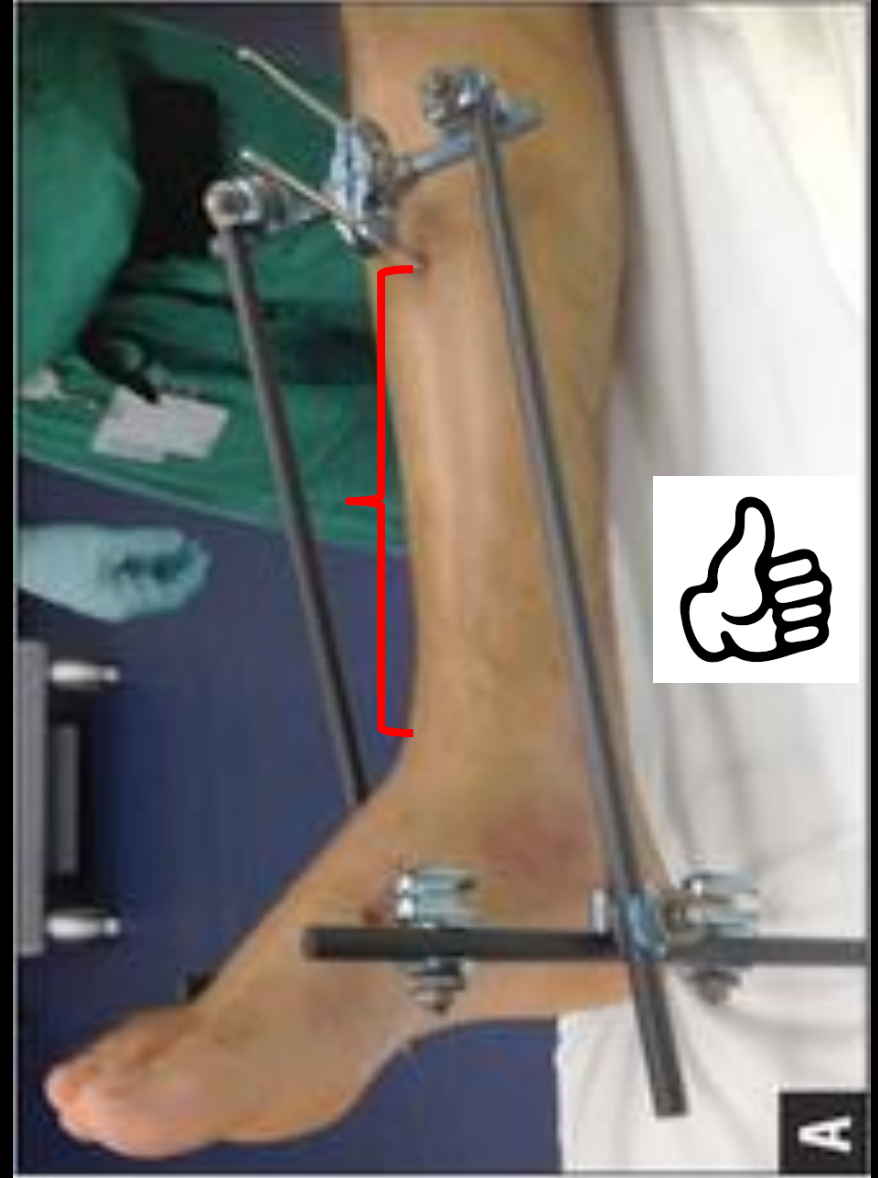
F





Stay out of future ORIF



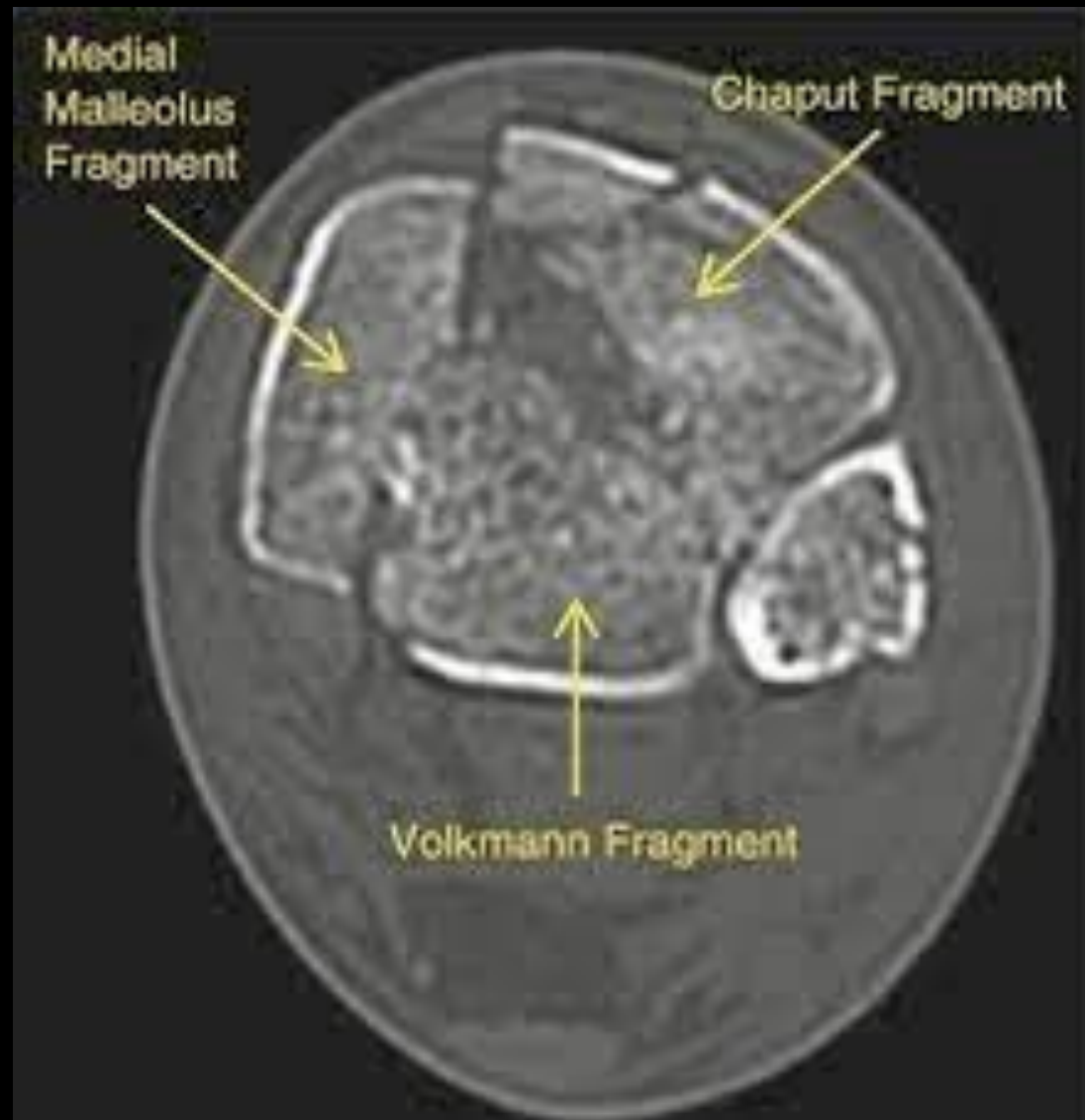


Soft tissue rest

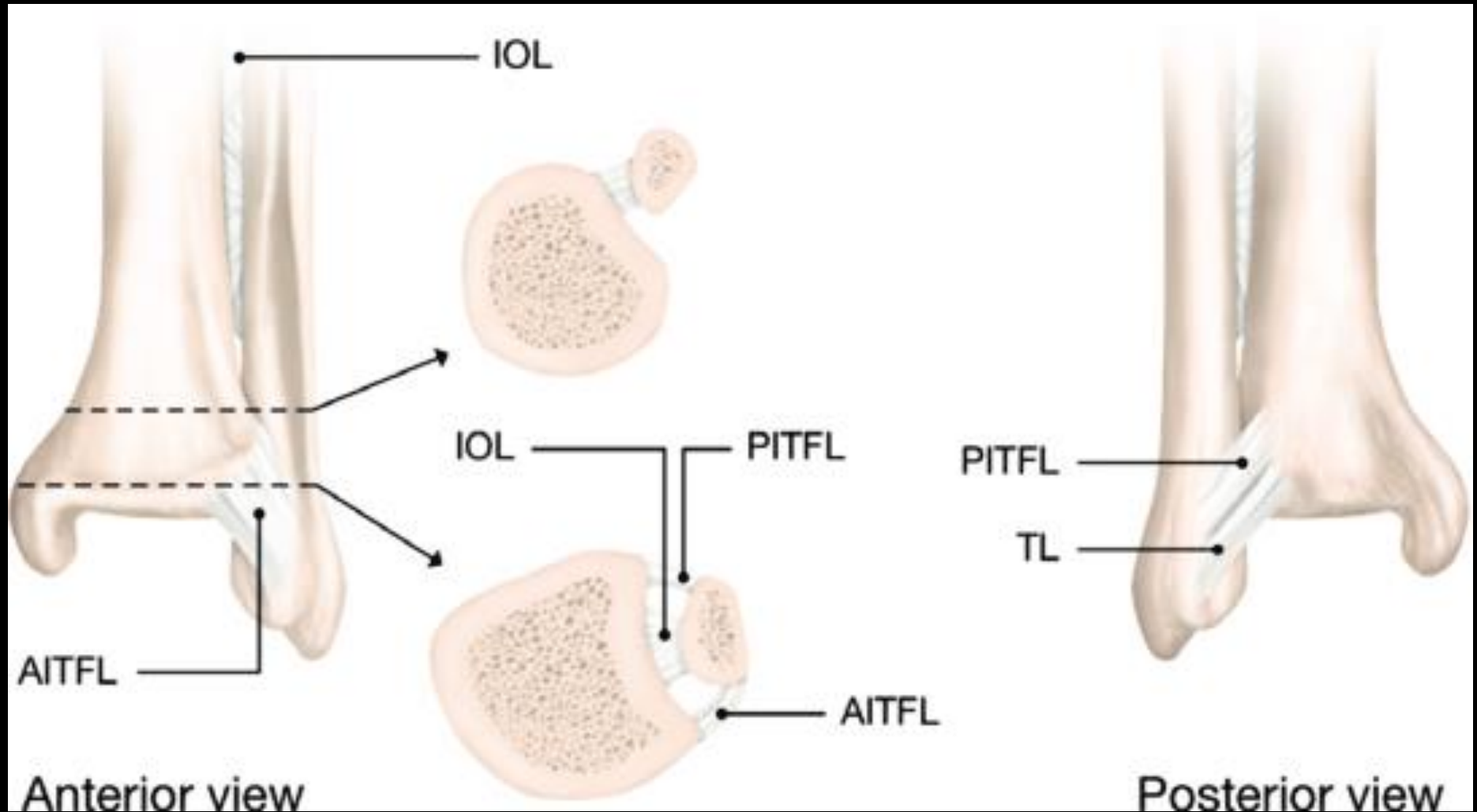




Fibula ORIF



Fibula ORIF





Acute Fibula ORIF

□ Pros

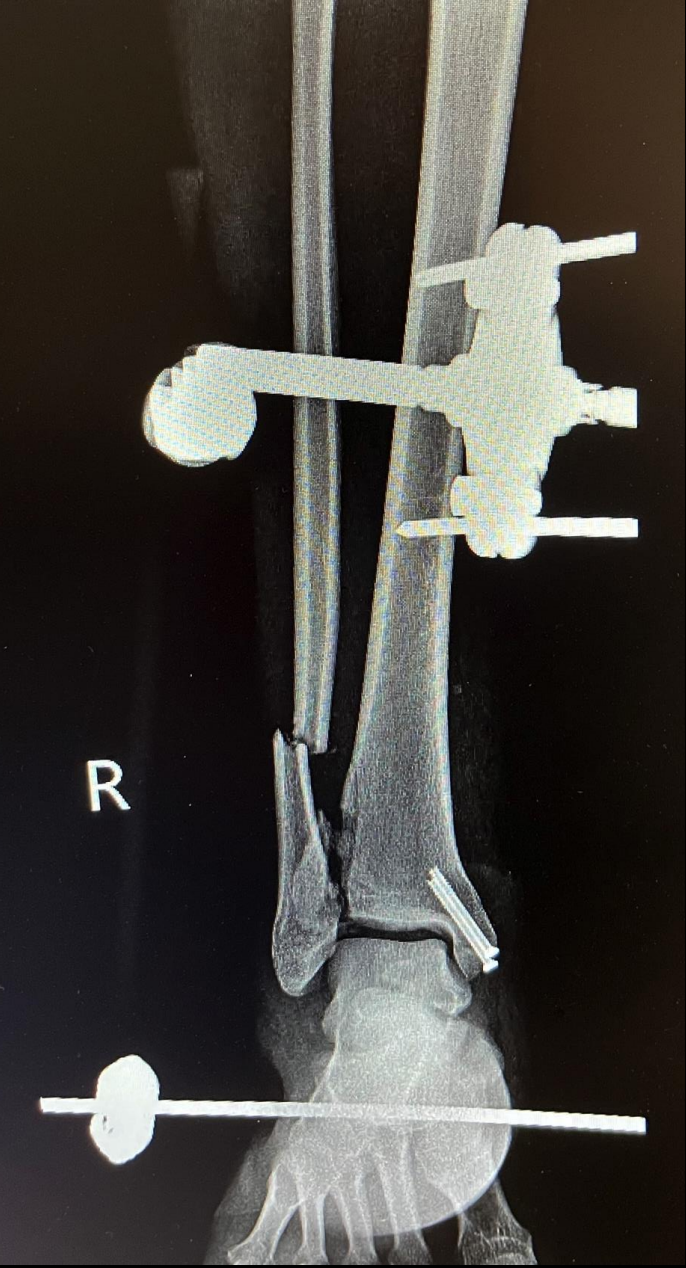
- Largely restores LAR
- Less surgery to do later

□ Cons

- Placing an incision prior to definitive pre-op planning
 - Might have to go back through it
 - Might reduce viable skin bridges for future approaches
- Fibula mal-reduction may prevent successful plafond ORIF later

Open Fx: Should I fix some of this now?









Timing - 1999

A Staged Protocol for Soft Tissue Management in the Treatment of Complex Pilon Fractures

**Sirkin Michael; Sanders, Roy;
DiPasquale, Thomas; Herscovici, Dolfi Jr.**

Journal of Orthopaedic TraumaJournal of
Orthopaedic Trauma. 13:p 78-84, February 1999.

Timing - 1999

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- Retrospective Case Review
- N = 56
 - 34 closed fx
 - 22 open fx
- Treatment:
 - Acute fibula ORIF and ex-fix
 - Delayed plafond ORIF

Timing - 1999

	Superficial wound (No surgery)	Deep infection (Surgical I&D)
Closed	17%	3%
Open	9%	9%

Timing - 2010

The Results of Early Primary Open Reduction and Internal Fixation for Treatment of OTA 43.C-Type Tibial Pilon Fractures: A Cohort Study

*Tim O. White, MD, FRCS Ed (Tr&Orth), Pierre Guy, MD, MBA, FRCSC,
Cameron J. Cooke, MD, FRACS, Stephen A. Kennedy, MD, Kurt P. Droll, MD, FRCSC,
Piotr A. Blachut, MD, FRCSC, and Peter J. O'Brien, MD, FRCSC*

J Orthop Trauma • Volume 24, Number 12, December 2010

Timing -2010

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□ Retrospective Case Review

□ N = 95

- 20% exclusion rate due to swelling
- 74 closed fx
- 21 open fx

□ Treatment:

- Acute fibula and plafond ORIF

Timing - 2010

	Superficial wound (no surgery)	Deep infection (Surgical I&D)
Closed	No mention	3% (Same as Staged Protocol)
Open	No mention	19% (2x Staged Protocol)

Timing 2021

Judicious Use of Early Fixation of Closed, Complete Articular Pilon Fractures Is Not Associated With an Increased Risk of Deep Infection or Wound Complications

Jeffrey J. Olson, MD,^{a,b} Krishna Anand,^c Arvind von Keudell, MD,^{a,d} John G. Esposito, MD,^{a,e} Edward K. Rodriguez, MD, PhD,^{a,c} R. Malcolm Smith, MD,^{a,e} and Michael J. Weaver, MD^{a,d}

J Orthop Trauma • Volume 35, Number 6, June 2021

Timing -2021

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Retrospective Cohort Study

N = 401


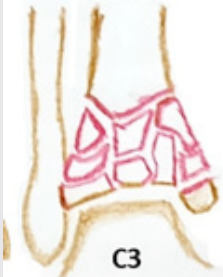
– 99 Acute ORIF



– 302 Staged Protocol



Timing - 2021

			Superficial wound (no surgery)	Deep infection (Surgical I&D)
			No mention	12%
			No mention	18%
				P = 0.24

Predictors of infection: high energy, male, smoking, increased age

Timing

- Pick your battles...



Summary

- External Fixation
 - LAR
 - Avoid zone of future ORIF
 - It's the soft tissues!
- Acute Fibula ORIF if:
 - Simple pattern
 - Future skin bridges kept in mind
- Open Fxs:
 - Acute ORIF of some fragments you may not get a chance to see again later
- Timing
 - Default to staged, but some 43C1 can be managed acutely



Thank You