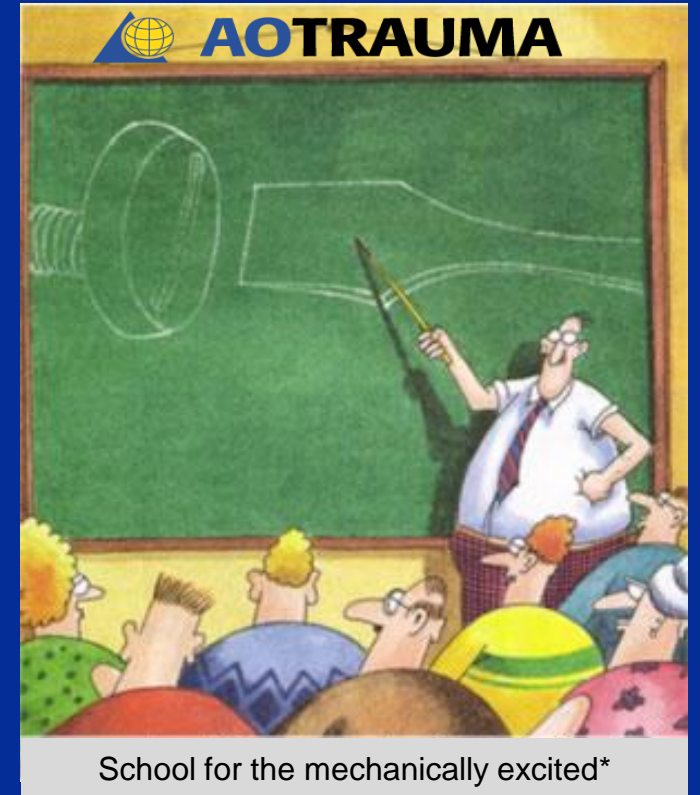


Distal femoral fractures



Anders Jordy
Kolding Sygehus

AOTrauma - Advanced Principles of Fracture Management
April 25-28, Fredericia, DK


Distal femurfraktur – hvorfor?

Sjælden fraktur:

- 474 af 53700 indrapporterede frakturer i DFDB 2016 \approx 0,9% af indberettede frakturer
- Incidens på 8,7/100.000
- 3-6 % af femurfrakturerne
- 0,4% af alle frakturer hos voksne.

Original Paper | [Published: 07 November 2017](#)

Population-based epidemiology and incidence of distal femur fractures

[Rasmus Elsoe](#) , [Adriano Axel Ceccotti](#) & [Peter Larsen](#)

[International Orthopaedics](#) **42**, 191–196 (2018) | [Cite this article](#)

Distal femurfraktur – hvorfor?

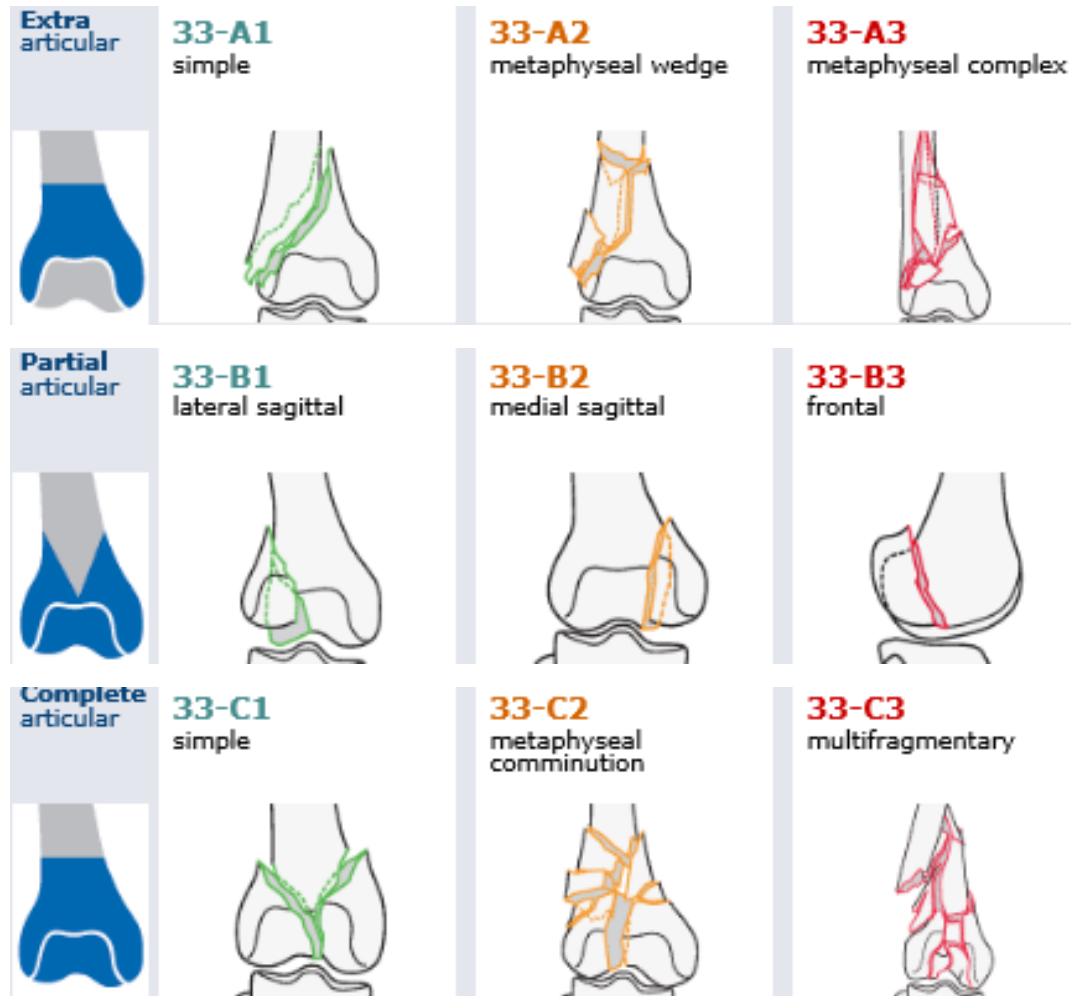
- Kolding har vi et optageområde på 300.000 -> 26,1 distal femurfraktur pr. år.
- Vi har 5,5 overlæge i traumatologi og 2-3 ivrige afdelingslæger.
- Det giver omkring 3-4 distale femurfrakturer pr speciallæge pr år!

Det er svært at blive god

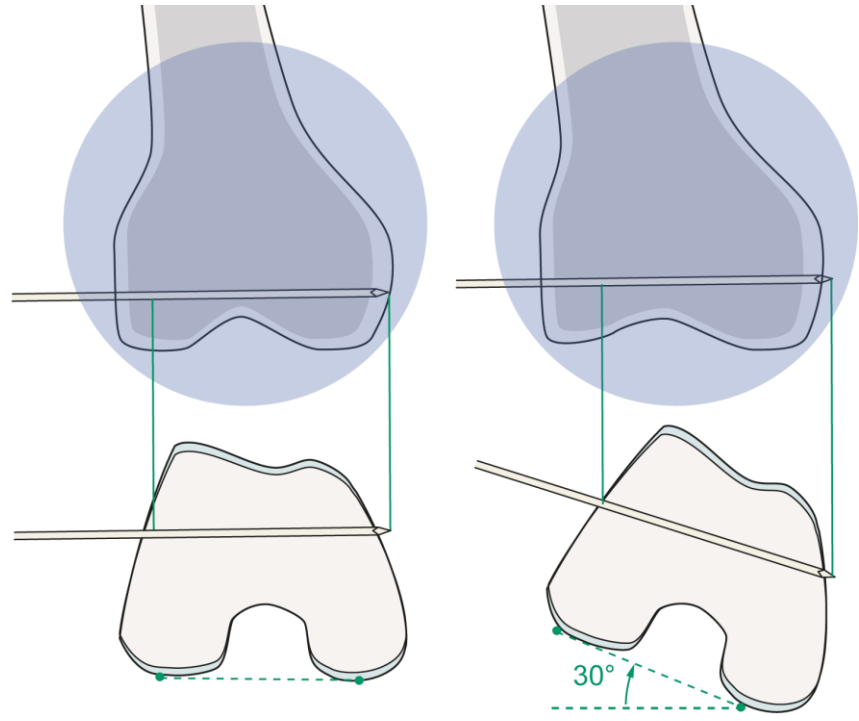
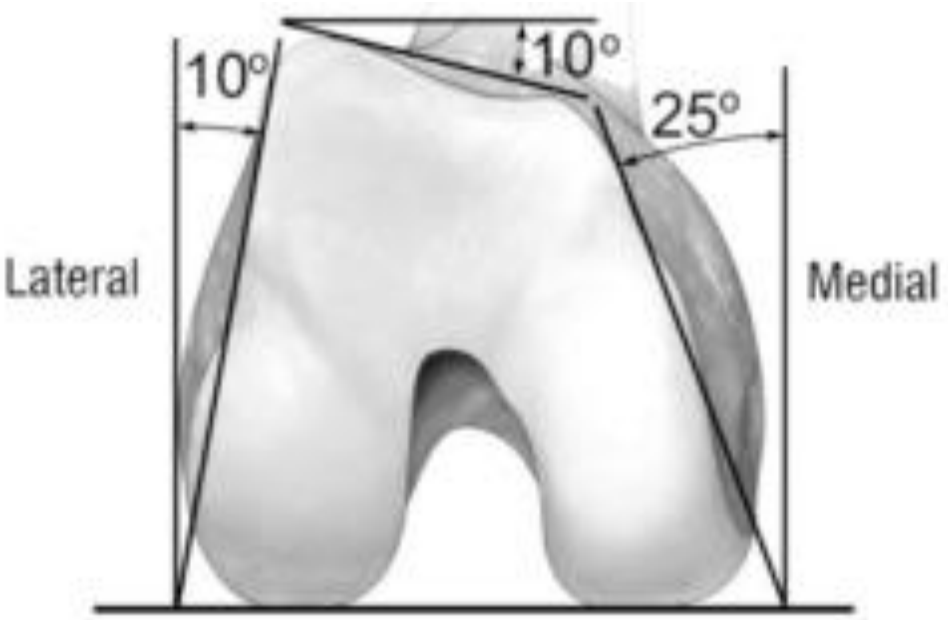
Learning objectives

- Describe the surgical anatomy of the distal femur and its influence on implant use
- Explain indirect reduction maneuvers
- Compare indications and techniques for plating and nailing
- Outline the management of complicating factors (osteoporosis, severe comminution, periprosthetic fractures)
- Evaluate key outcome publications

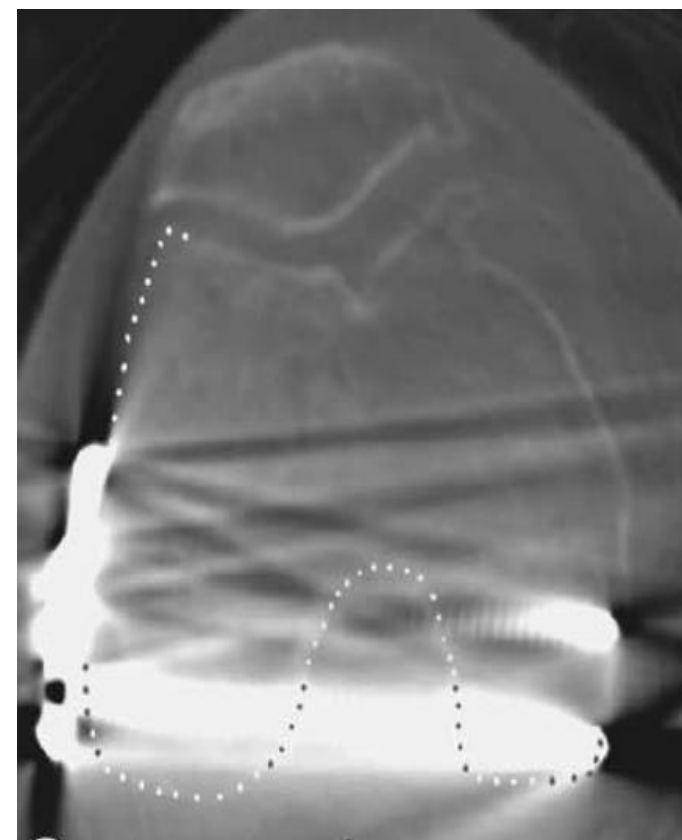
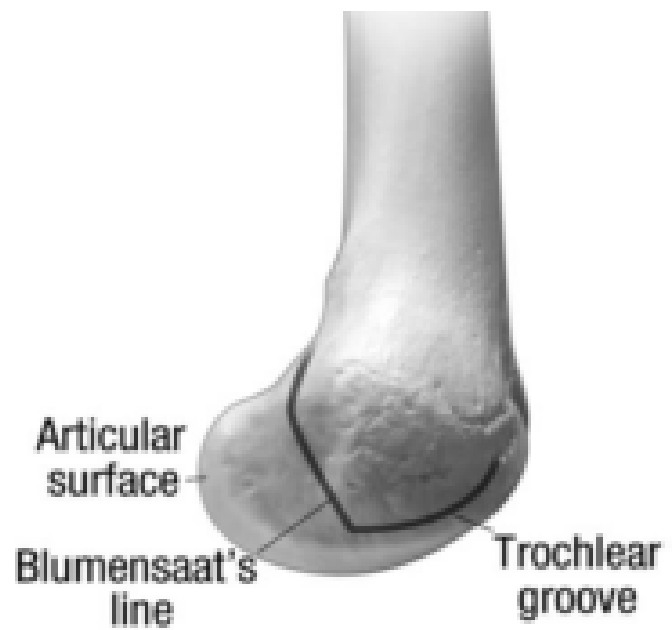
Distale femurfrakturer - klassifikation



Anatomi



Anatomi



Hoffa – AO 33B3

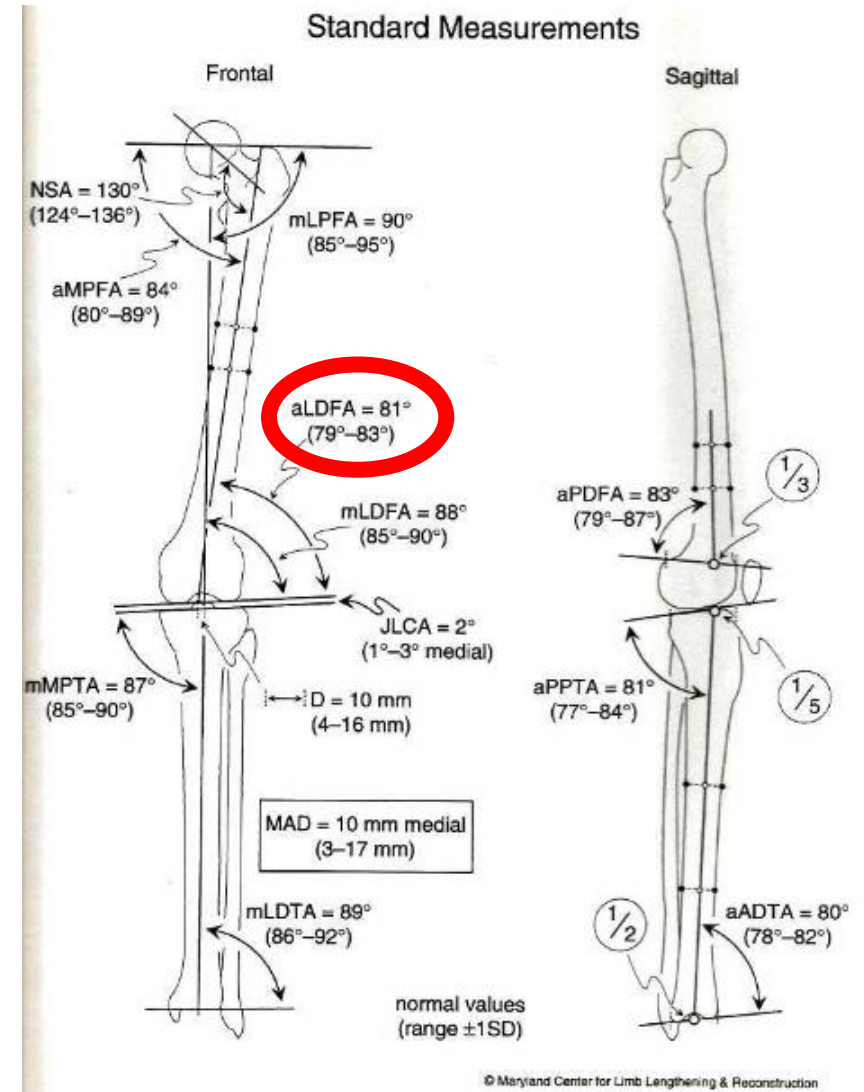
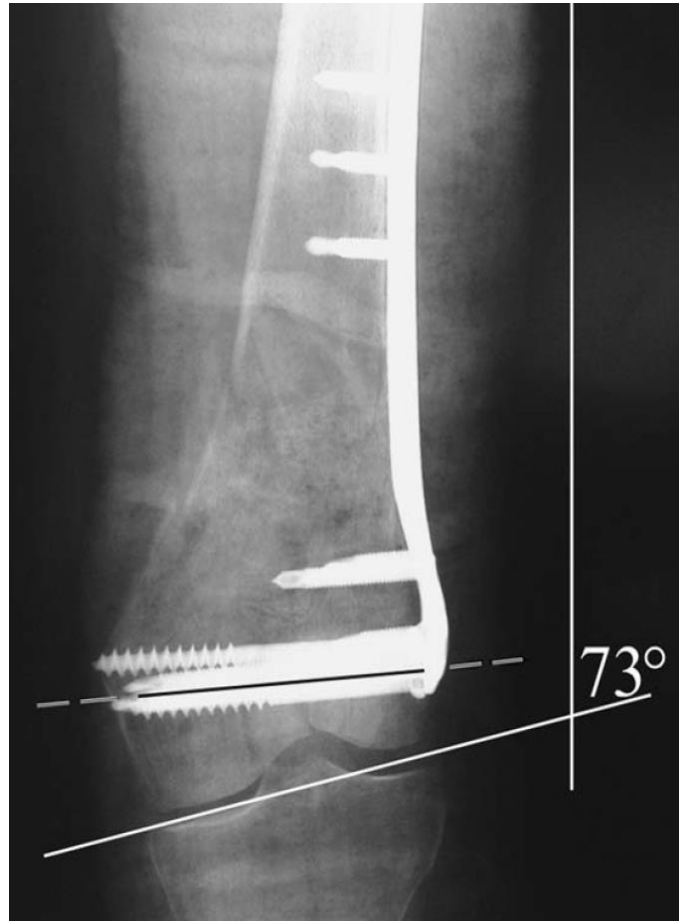
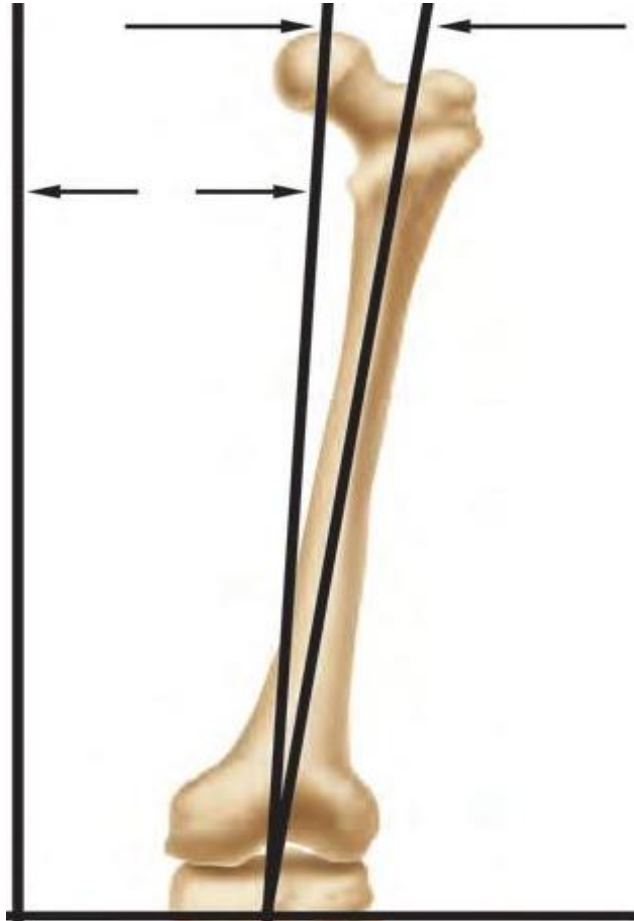
33-B3
frontal



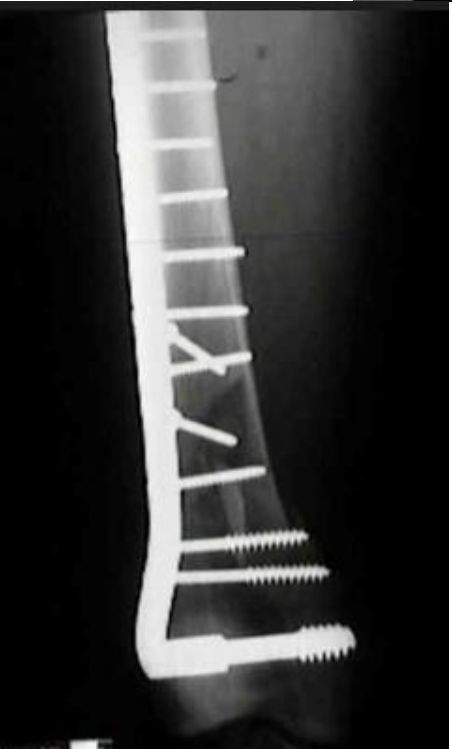
Hoffa:

- 38% højenergi
- 44% over >60 årige

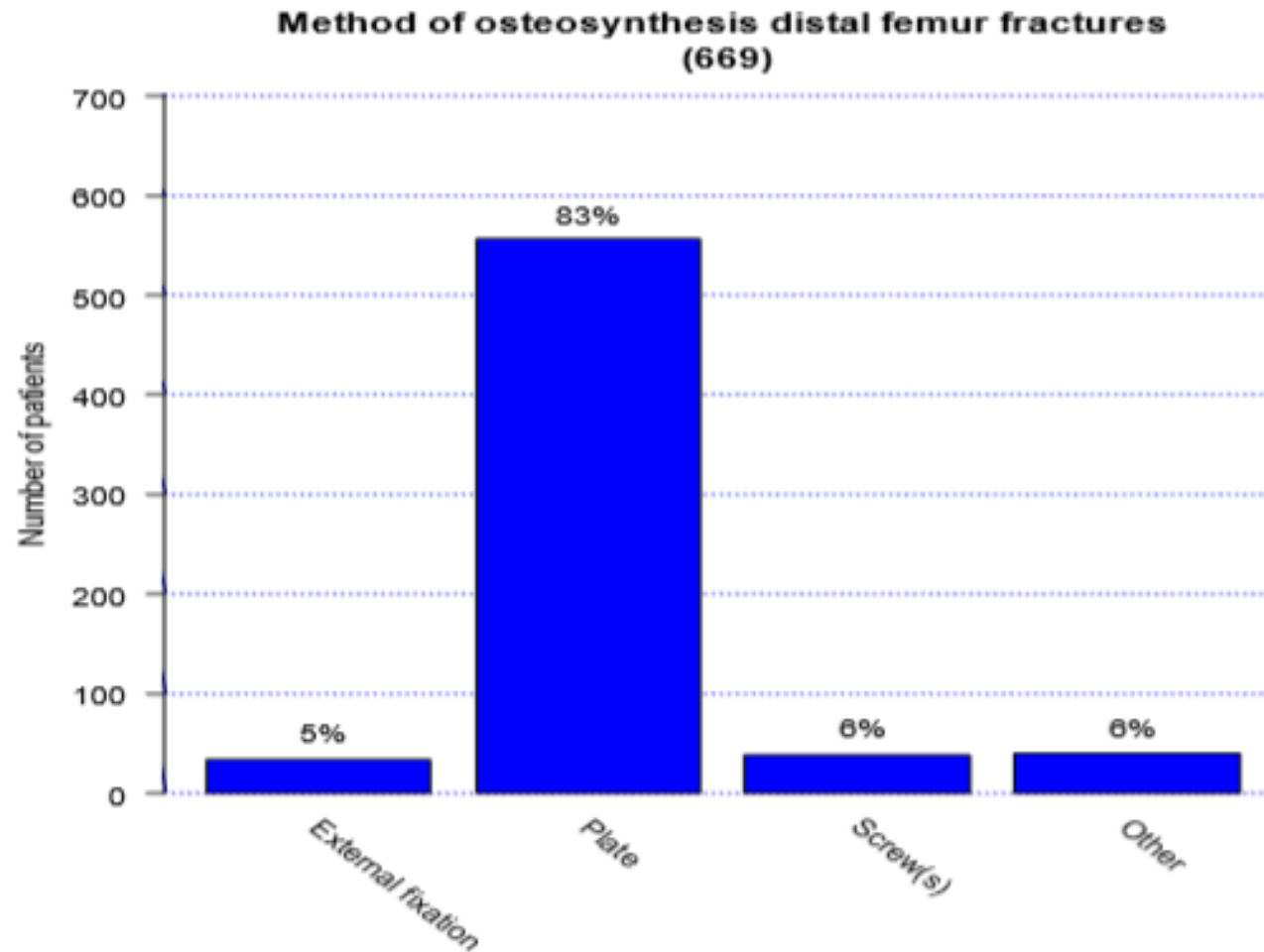
Anatomi



Hvilket implantat??



Definitiv behandling



”Simple” frakturer AO 33X1

- Simple skrå og tværfrakturer
- Kan behandles med absolut stabilitet
- Kræver interfragmentær kompression
- Lagskruer/kabler mv.
- Heler uden callus

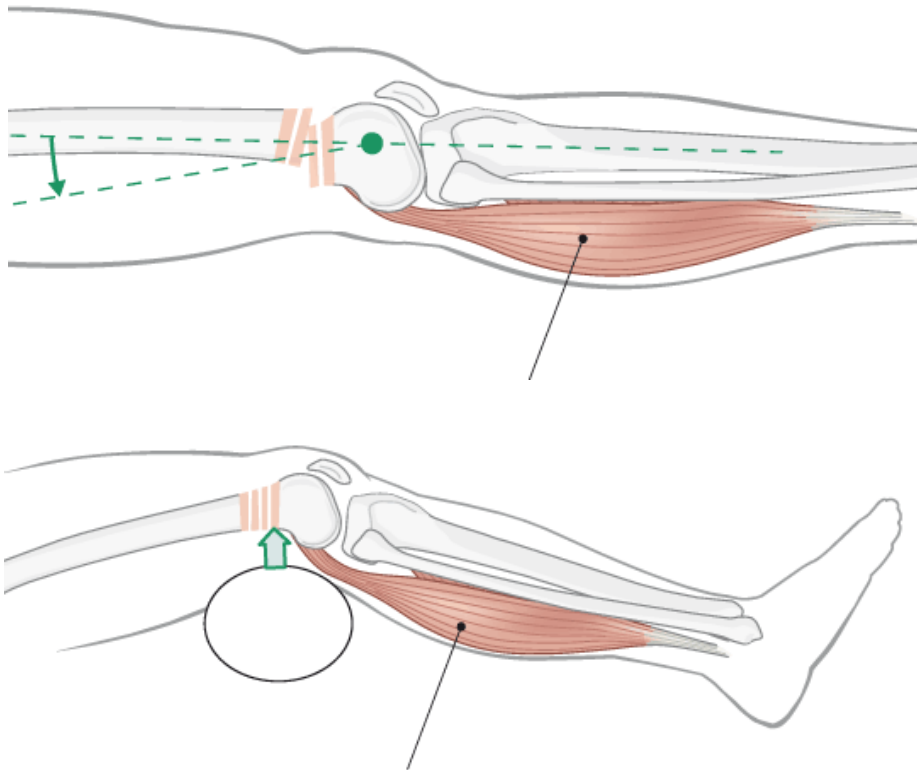


Komminutte frakturer AO33X2/3

- Komminutte fx
- Kan behandles med relativ stabilitet
- Kræver bridging og mikrobevægelser i skinnen
- Kun positionsskruer
- Ingen lag skruer
- Heler m callus



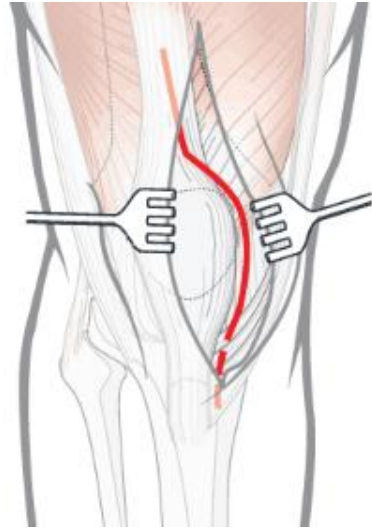
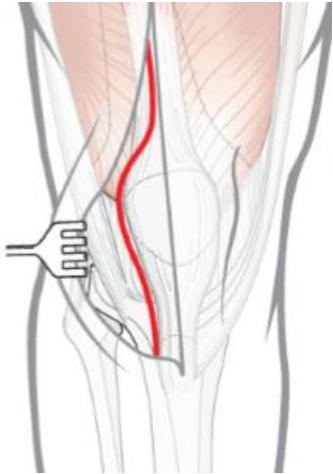
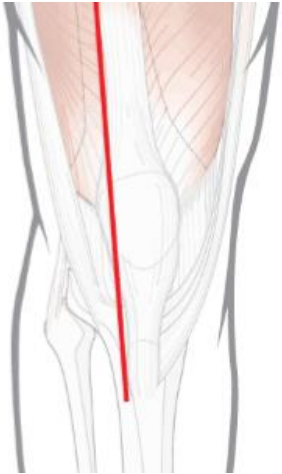
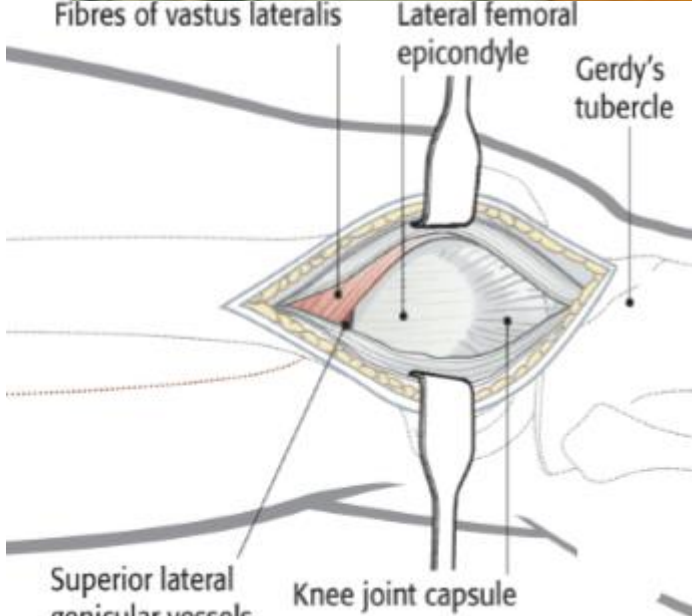
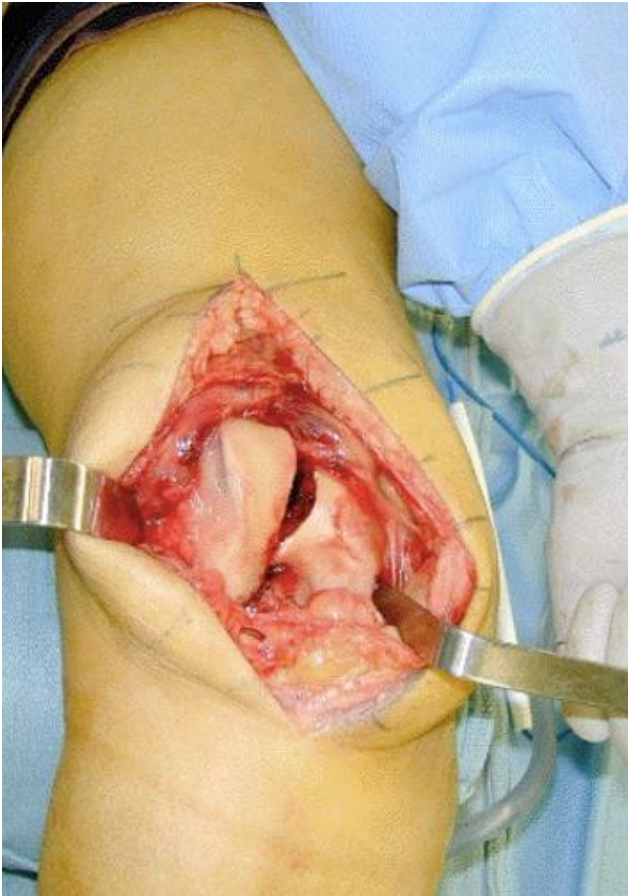
Lejring



Fleksion i knæ hindrer
recurvatum



Adgange



Mediale søjle

Instabilitet i mediale søjle fører til kollaps eller non-union.

Stabilisér mediale søjle med positionsskruer, eller kabler

Sæt evt. en lille skinne



Hvad med retrograd marvsøm?

Locked Plate

A&C fractures
Periprosthetic
Soft tissue friendly
Load bearing

NAIL

A FRACTURES
«SIMPLE» C FRACTURES
SOME PERIPROSTHETIC
SOFT TISSUE FRIENDLY
LOAD SHARING

COMPARABLE CLINICAL RESULTS
INDICATION FOR PLATE MORE VERSATILE



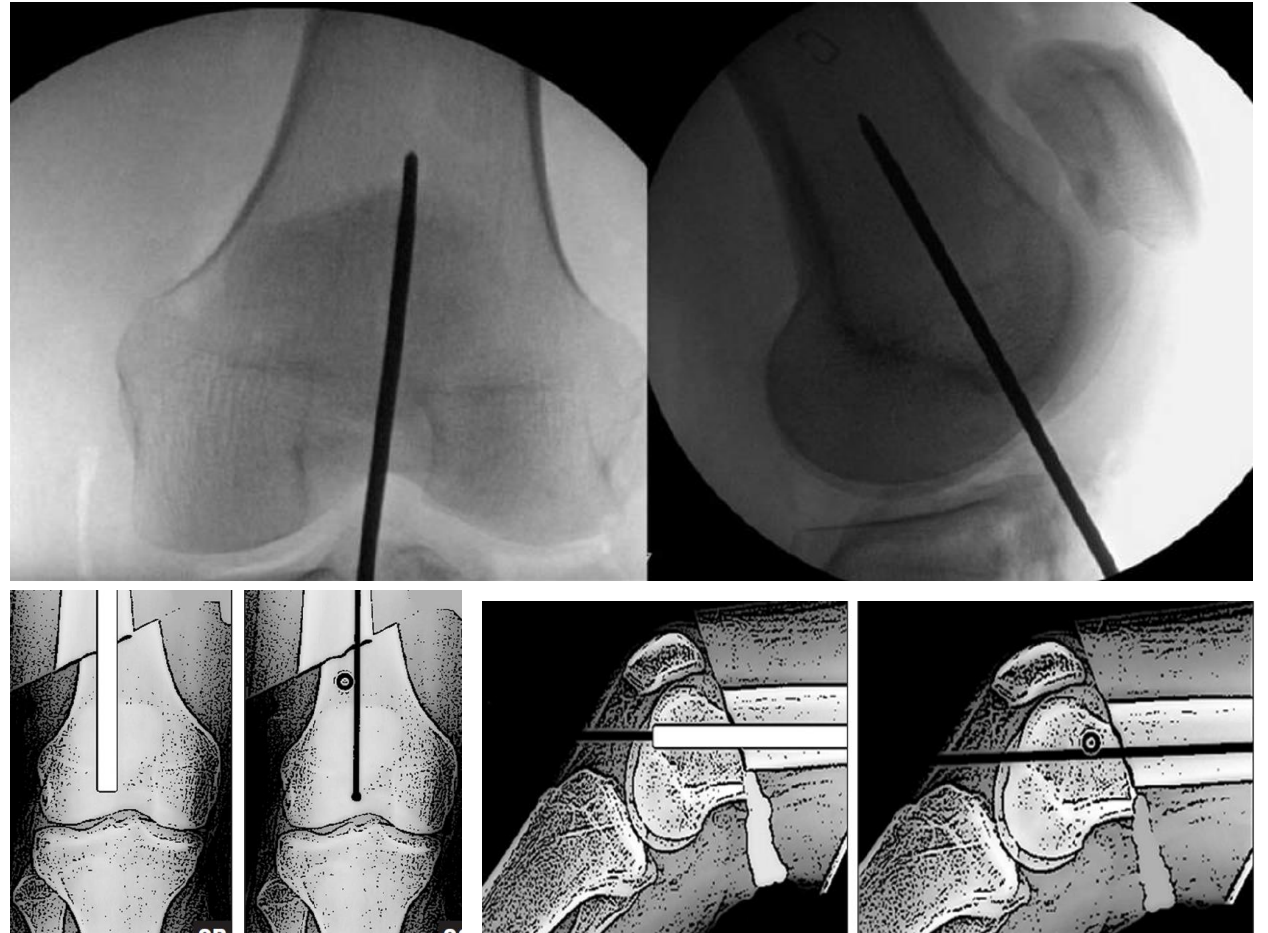
IM nailing – tips and tricks

Reduce articular fracture first

Carefully planned placement of screws

Correct entry point

Blocking screws



RIMN vs lateral låseskinne

Mange historiske implantater (1 RCT, kons vs DCS)

1 prospektivt studie (39pt) og mange retro + case series (1614pt)

<u>Implant/Technique</u>	<u>rIMN</u>	<u>(LISS)</u>
Total no. of series	15	8
Total N	472	327
Average follow-up‡	23 m (n = 472)	16 m (n = 327)
Outcome parameter		
Nonunions	5.3%	5.5%
Fixation failure	3.2%	4.9%
Deep infection	0.4%	2.1%
Secondary surgical	24.2%	16.2%

Ingen
forskkel

RIMN vs lateral låseskinne

Eneste prospektive studie!!

39 ptt

- 20 LISS vs 19 RIMN

Nonunion

- LISS vs RIMN: 2/20 vs 1/19

Infektion

- LISS vs RIMN: 0/20 vs 1/19

Malunion (1 år, CT, > 5 varus, 15 udadrotation)

- LISS vs RIMN: 3/20 vs 2/19

Ingen forskel

Brug det implantat, du er god til og kender (OBS 3-4 cases pr år)

Take-home messages

- Sjælden fraktur - Vanskelig at behandle
- Risiko for få cases pr. kirurg, derfor skal der mindst være to erfarne kirurger pr case.
- Distale femurs anatomi giver specielle udfordringer ved skinneostesyntese
- Skinner kan appliceres både MIPO og med åben teknik.
- Skinner og retrograd marvsøm er ligeværdige, men skinnerne har større anvendelse