

Arthroscopie van bovenste lidmaat: Therapeutische mogelijkheden

Dr. Ruben Jacobs
H.Hartziekenhuis Lier

Symposium
12 juni 2010

Schouderarthroscopie

Dr. Ruben JACOBS

H.-Hartziekenhuis LIER

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h.-hartziekenhuis





Anatomie

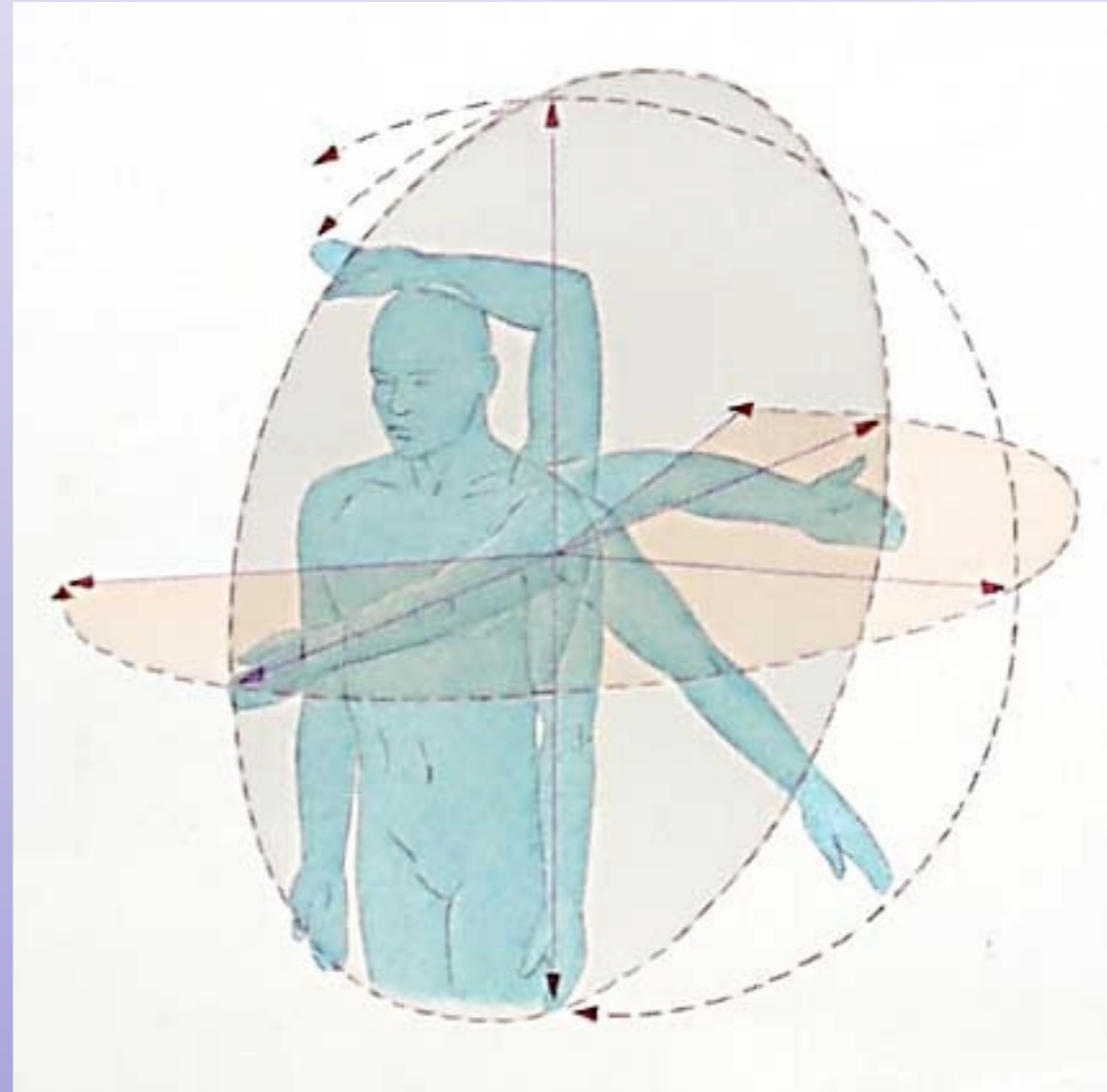


Klinisch onderzoek

- Beweging (ROM)
- kracht rotator cuff
- impingement testen
- Drukpijn
 - AC
 - Biceps
- Specifieke testen
 - palm-up
 - cross over
 - sulcus sign
 - apprehensie
 - relocatie

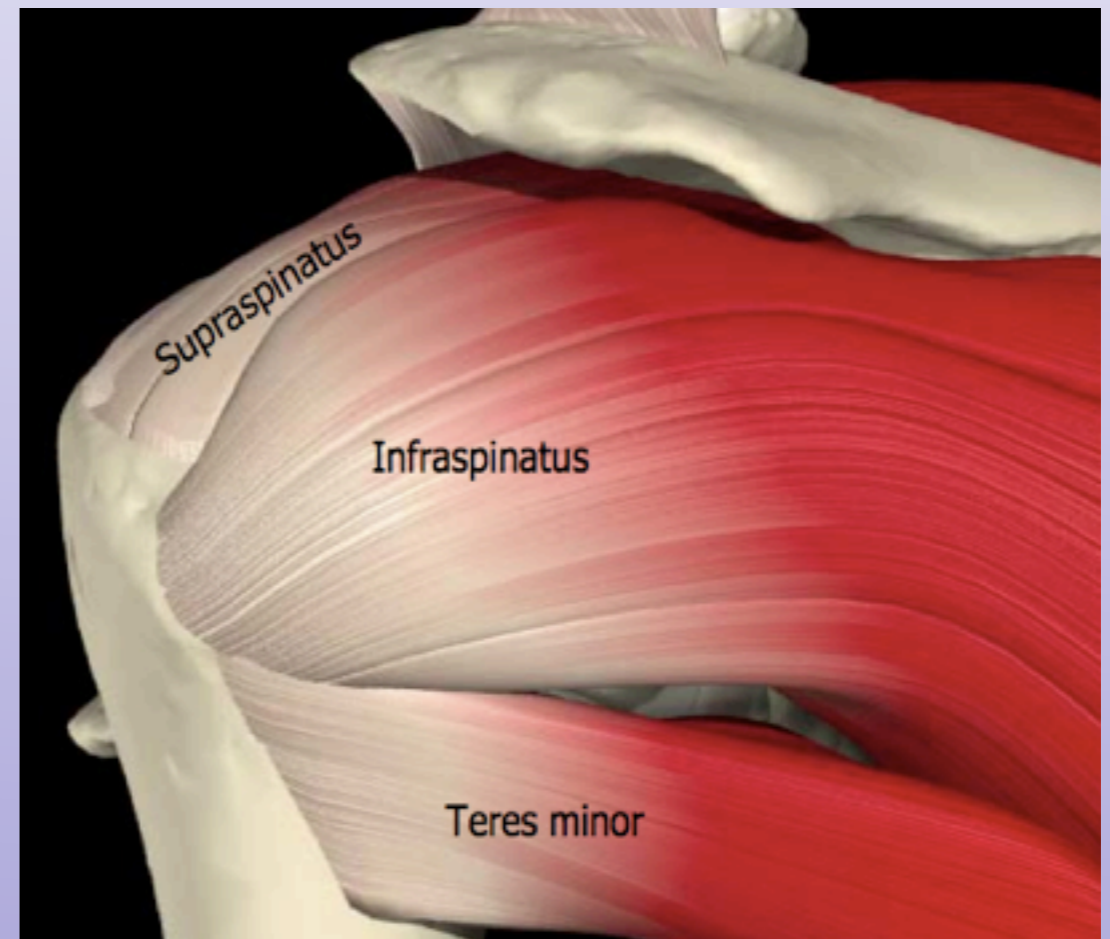
Range Of Motion

- abductie
- elevatie
- Externe Rotatie
- Interne rotatie



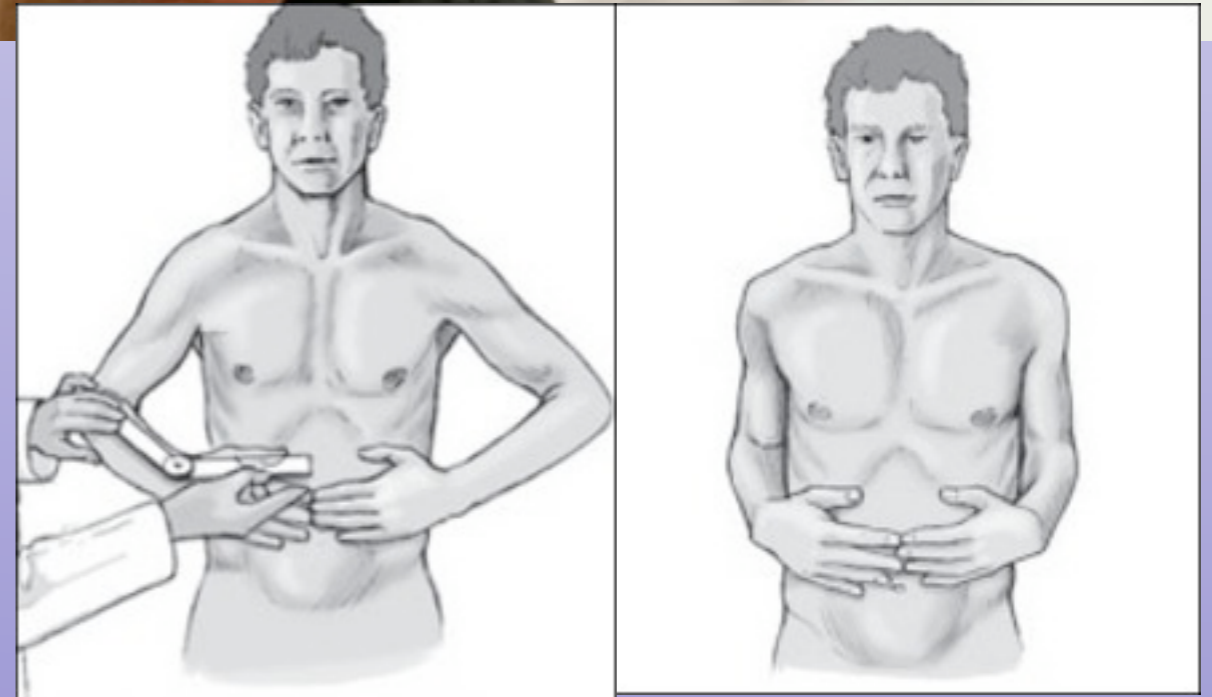
Kracht rotator cuff

- subscapularis
- Supraspinatus
- Infraspinatus, teres minor



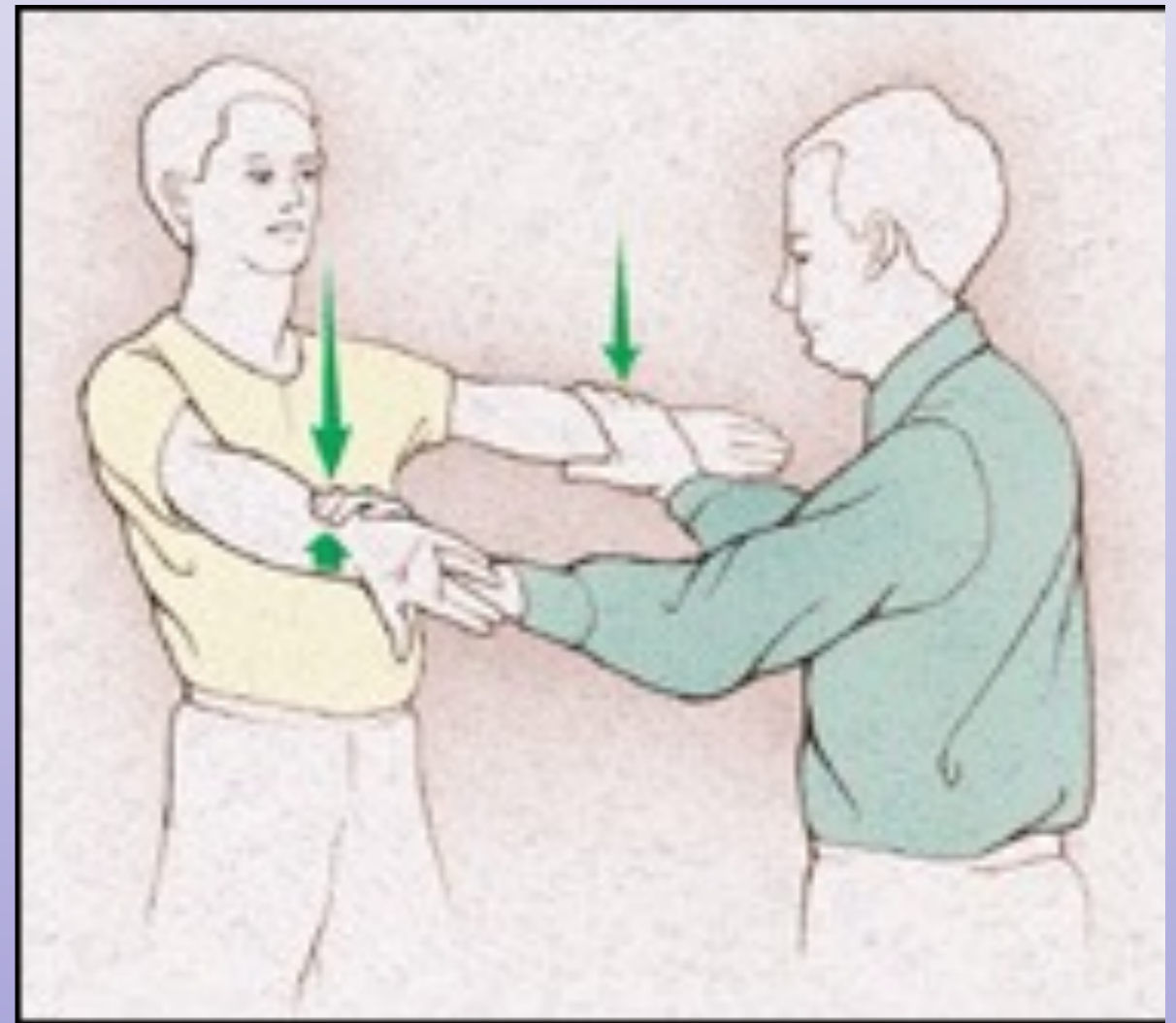
Kracht rotator cuff

- **Subscapularis:**
 - anterieur; interne rotatie
- **Test:**
 - Lift-off test (Gerber)
 - Press Belly test



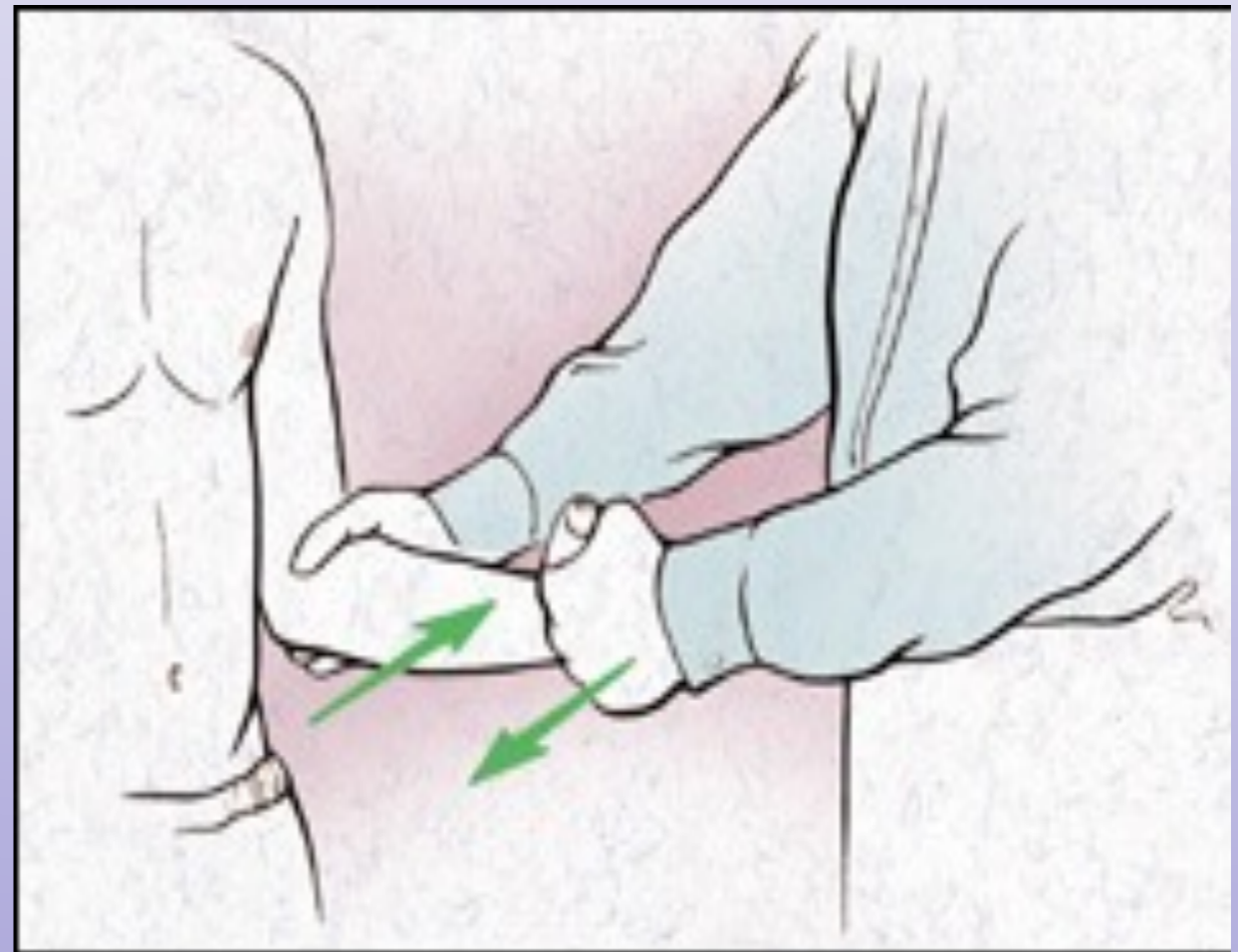
Kracht rotator cuff

- Supraspinatus:
 - abductie
- Test:
 - Jobe; “empty cann”



Kracht rotator cuff

- **Infraspinatus en teres minor:**
 - **exorotatie**
- **Test:**
 - **Exorotatie tegen weerstand**

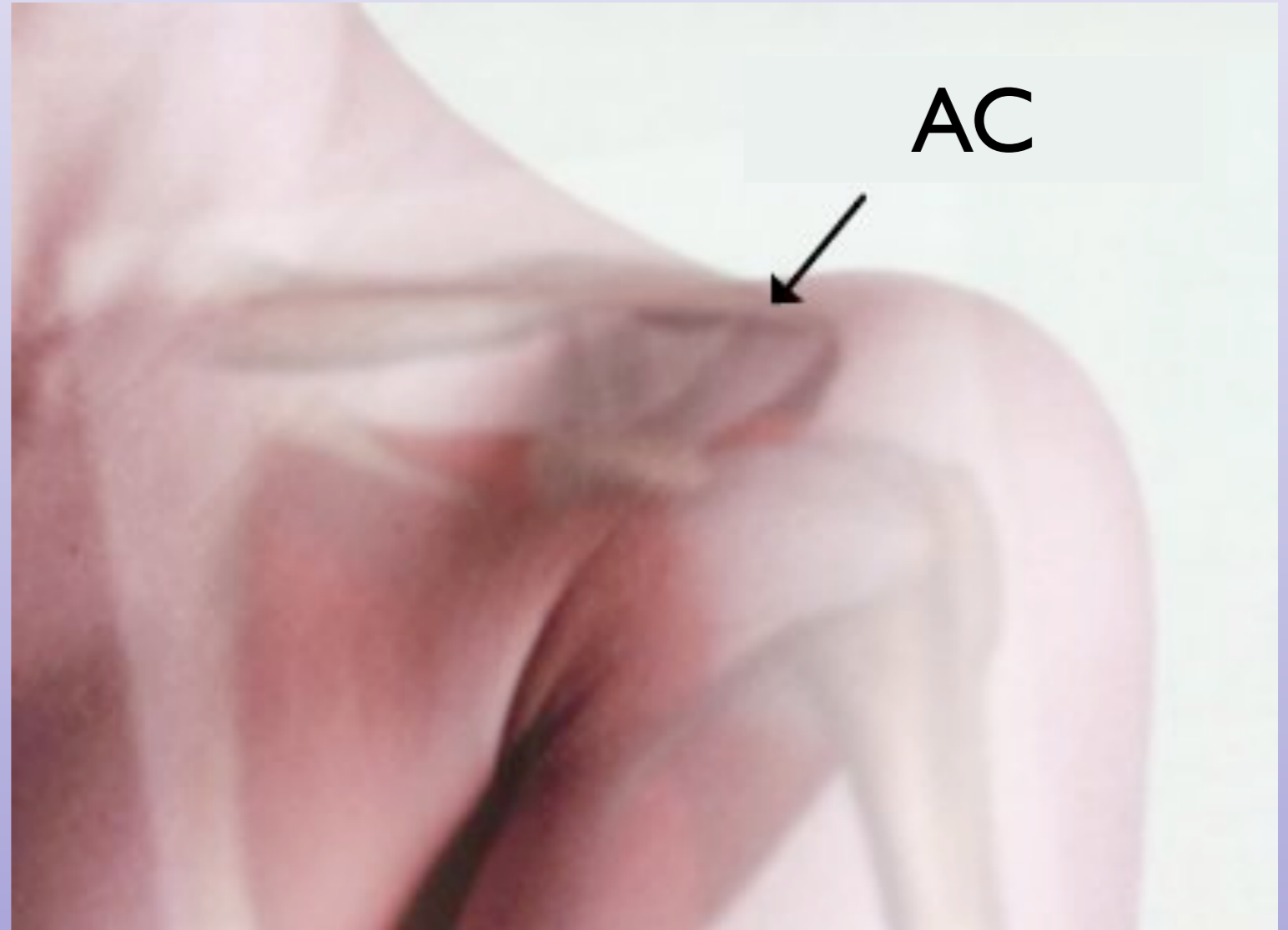
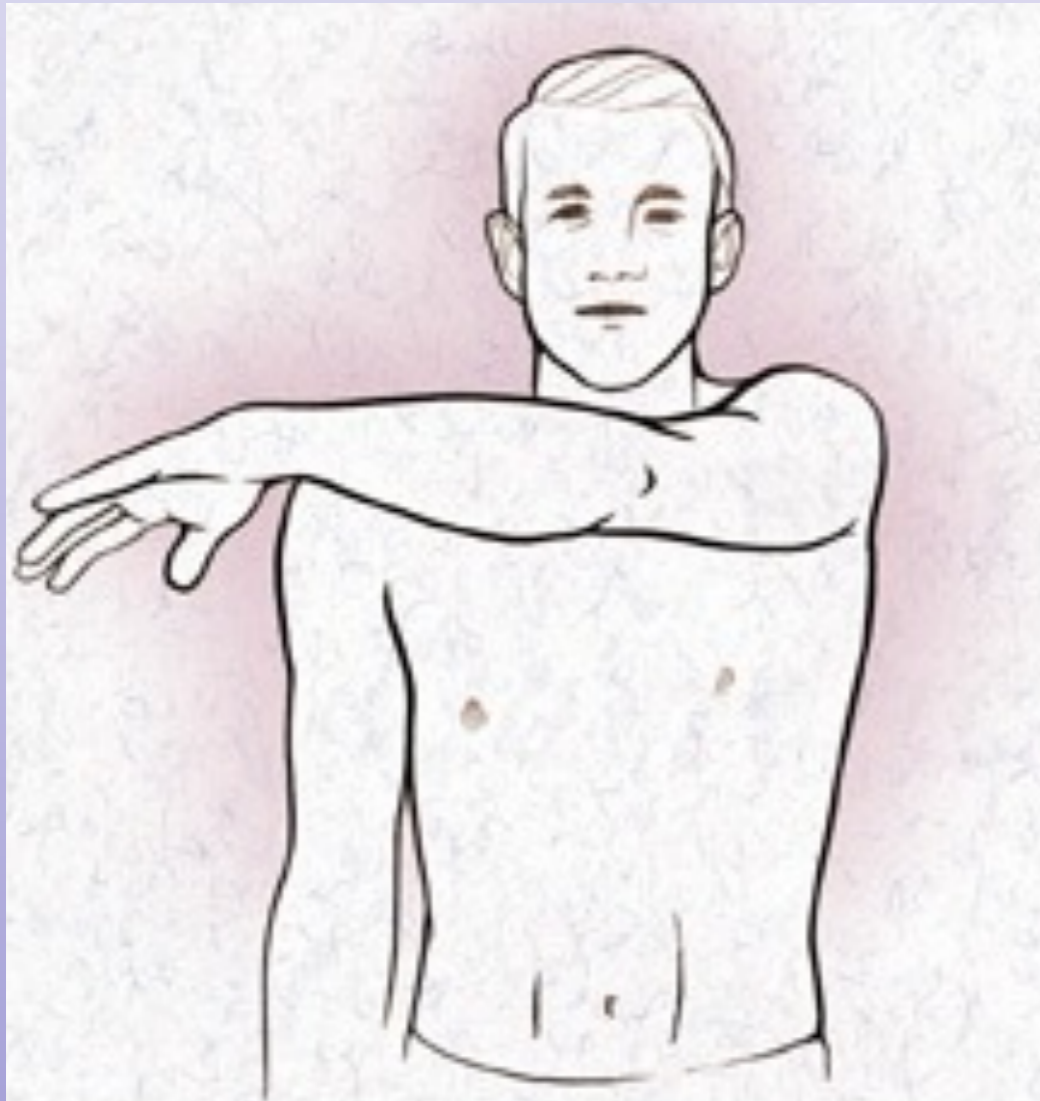


Impingement

- Neer
- Hawkins



AC gewricht

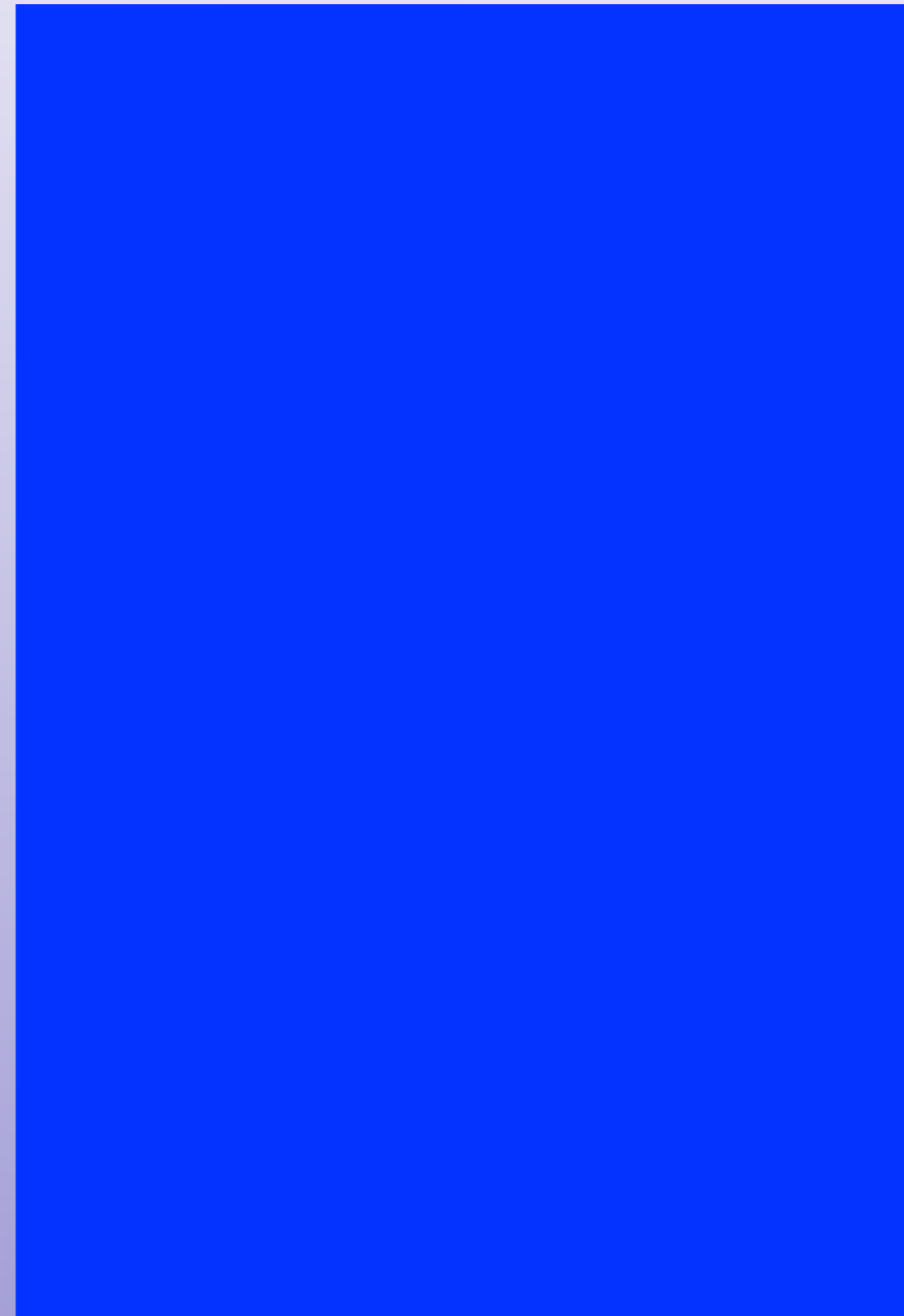


Biceps

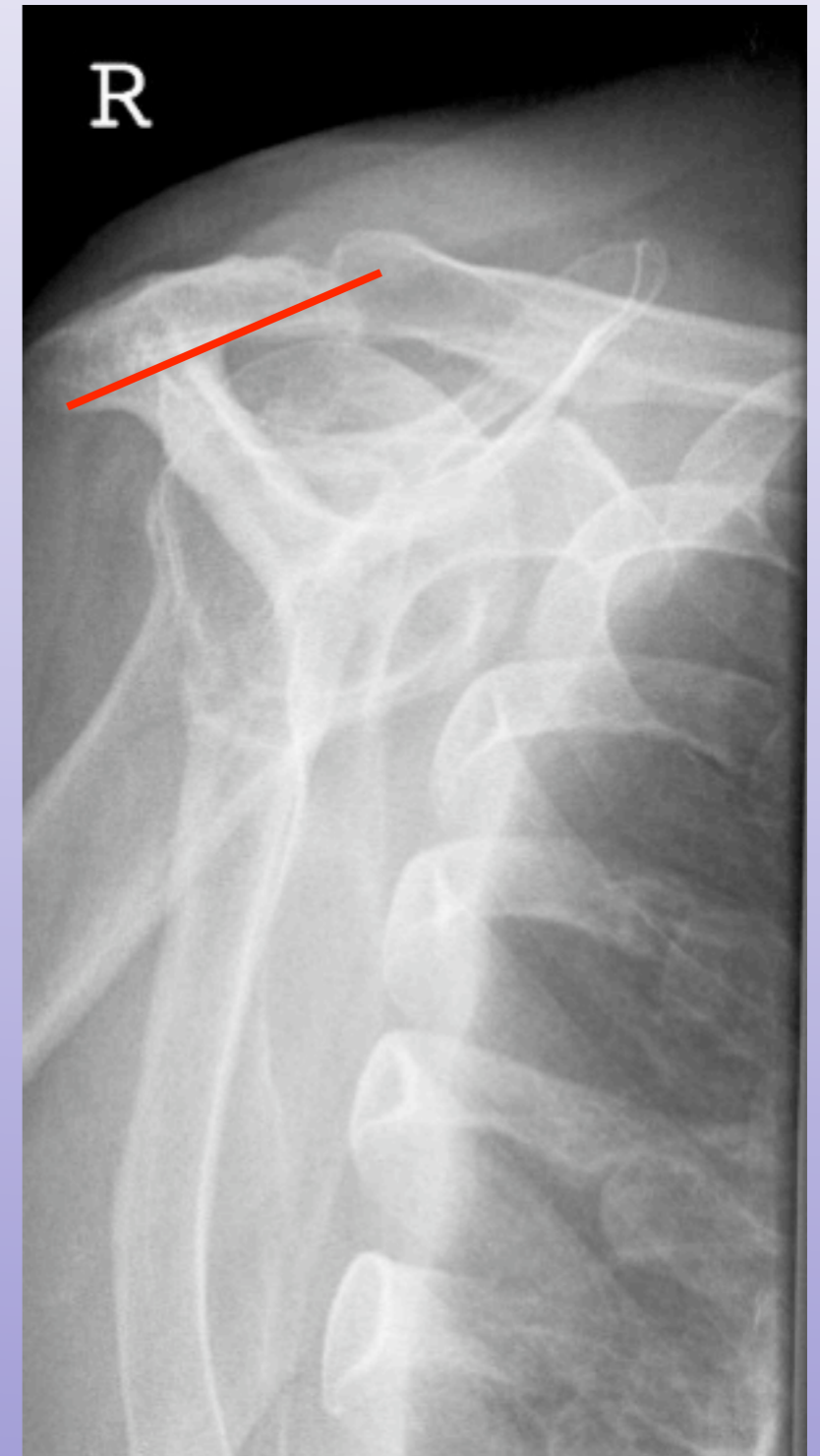
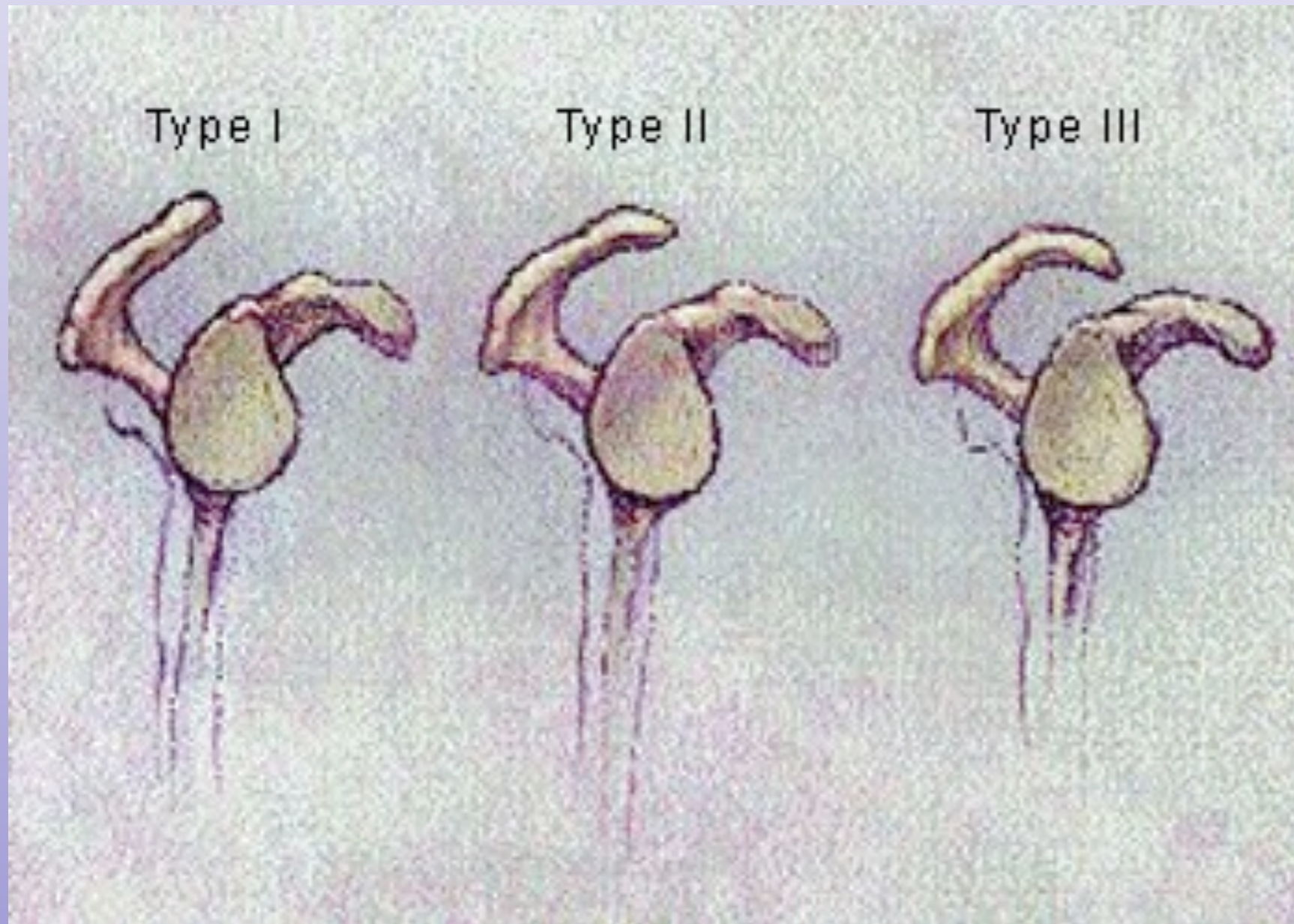


Technisch onderzoek

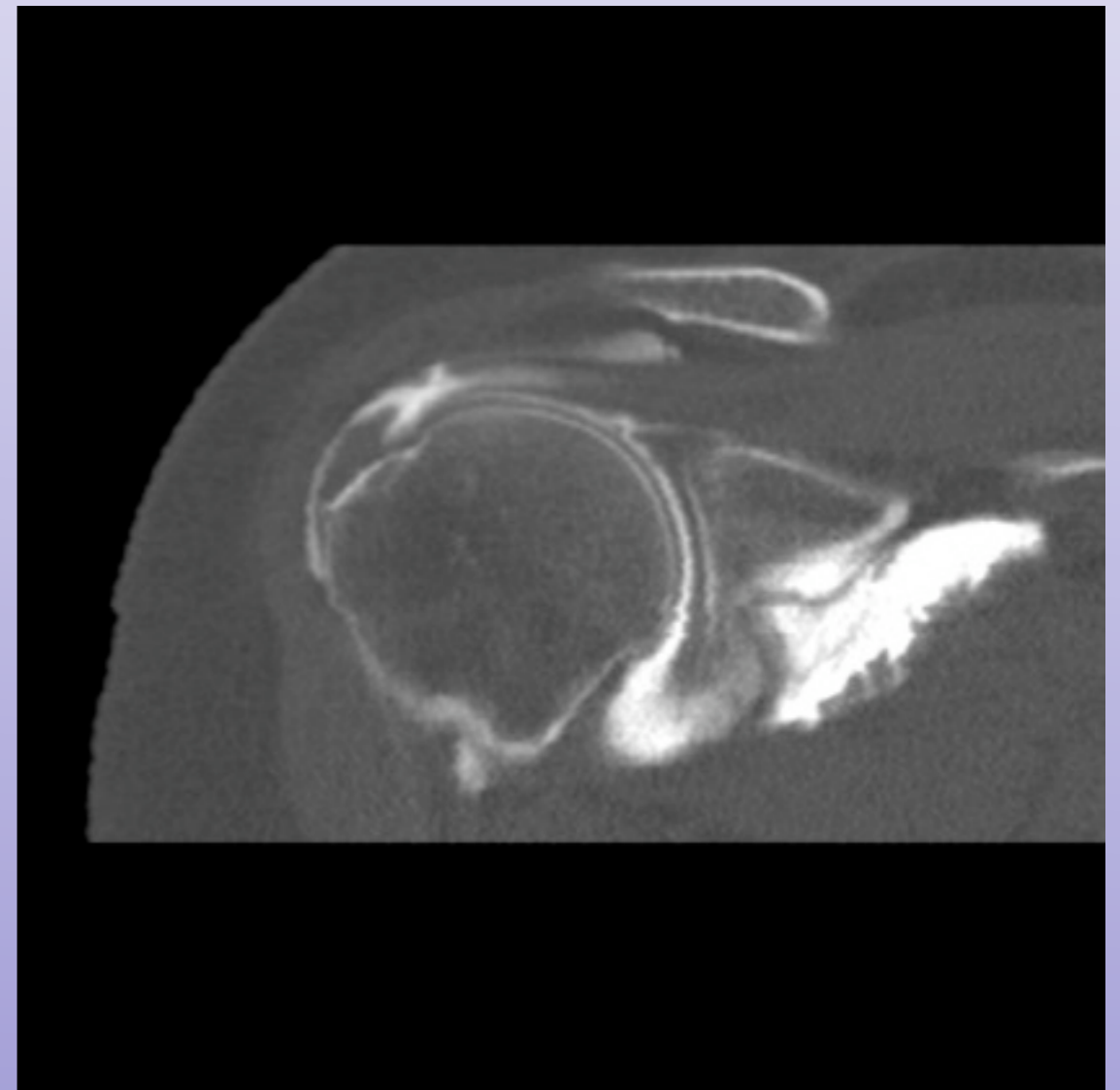
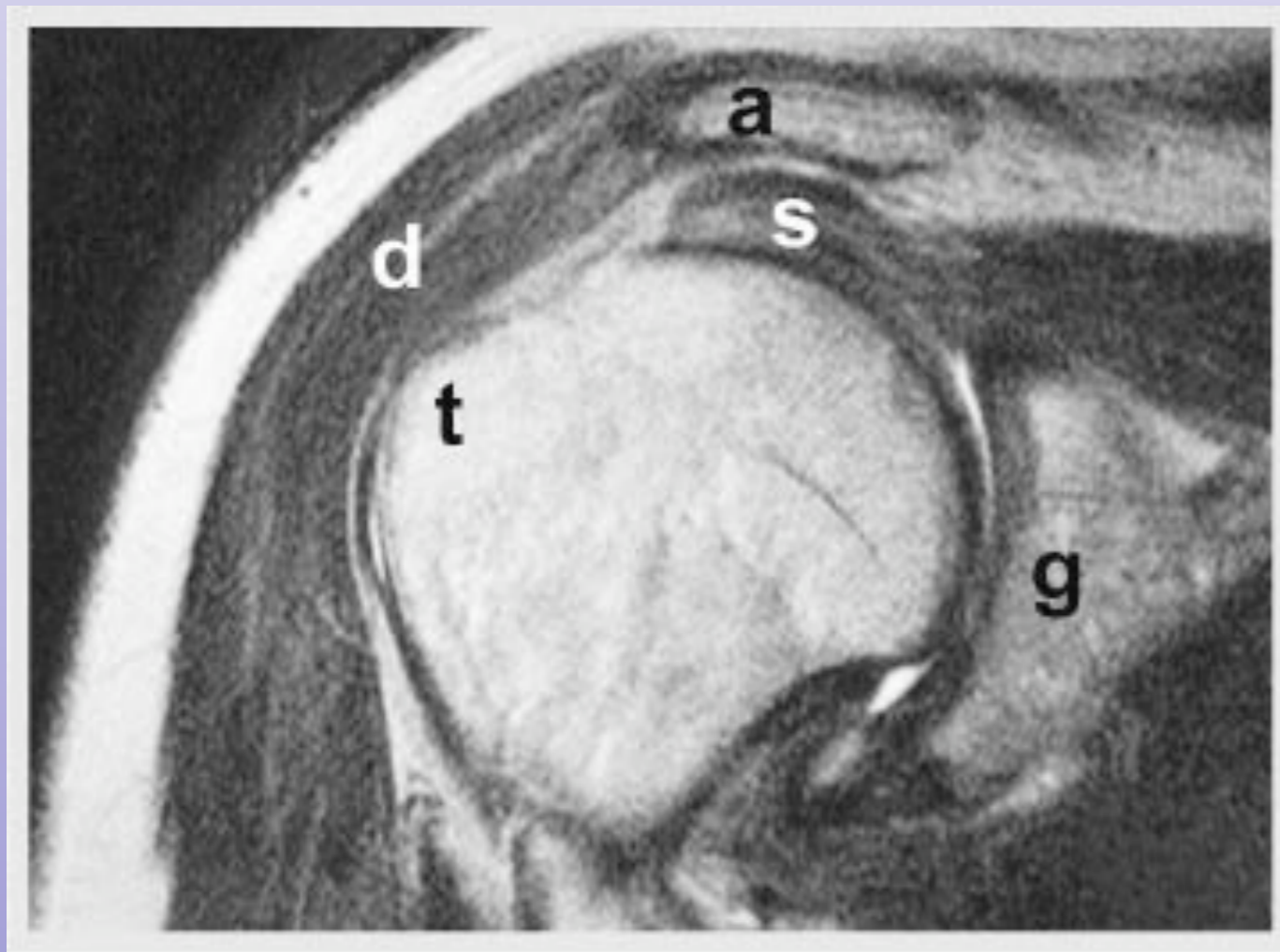
- Rx (= basisonderzoek):
 - type acromion
 - fractuur, luxatie,...
 - AVN, arthrose,..
- Echo:
 - evaluatie van cuff, bursa, biceps



RX, schouder type (Bigliani)

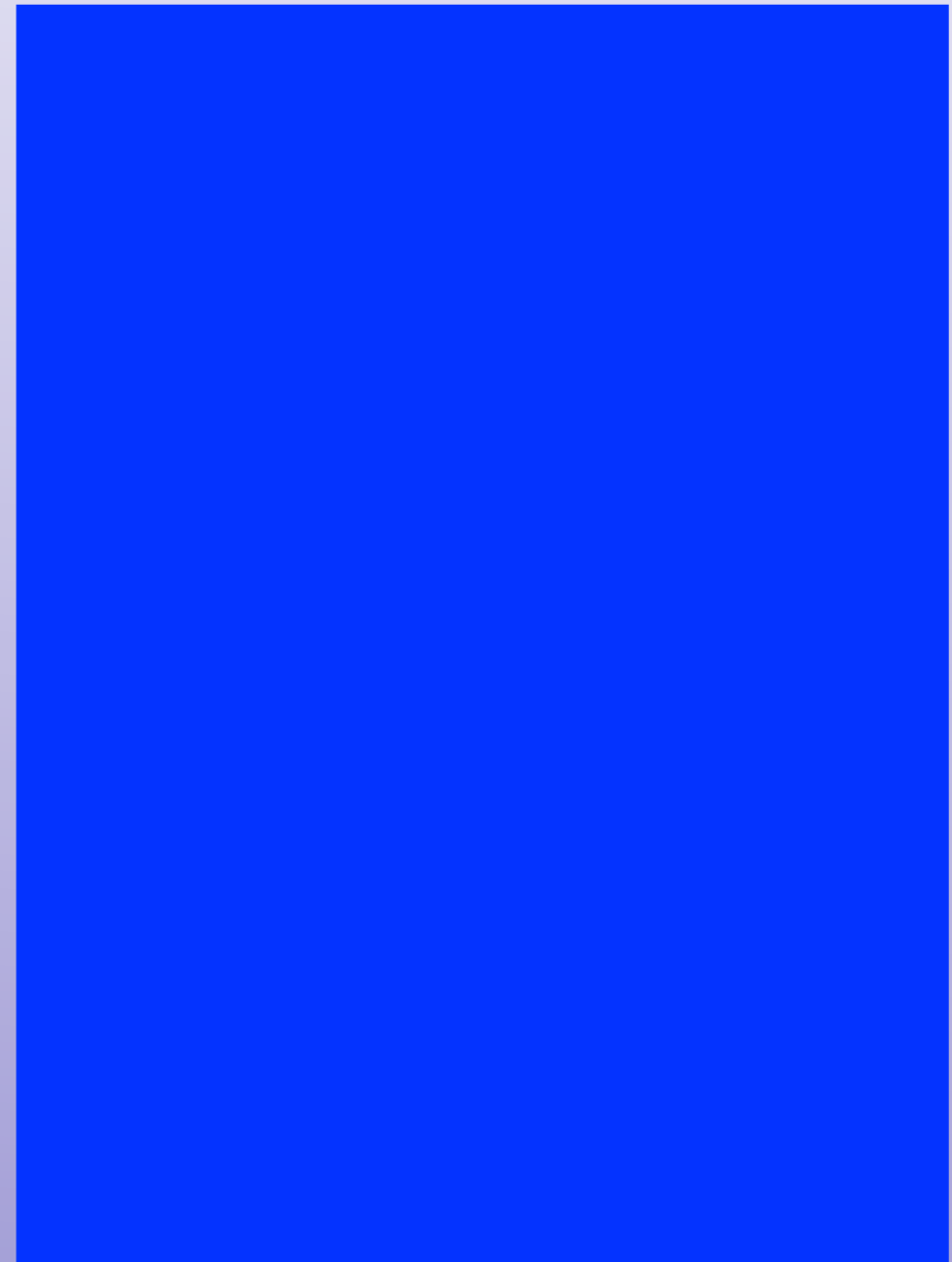


Best arthroNMR, eventueel arthroCT



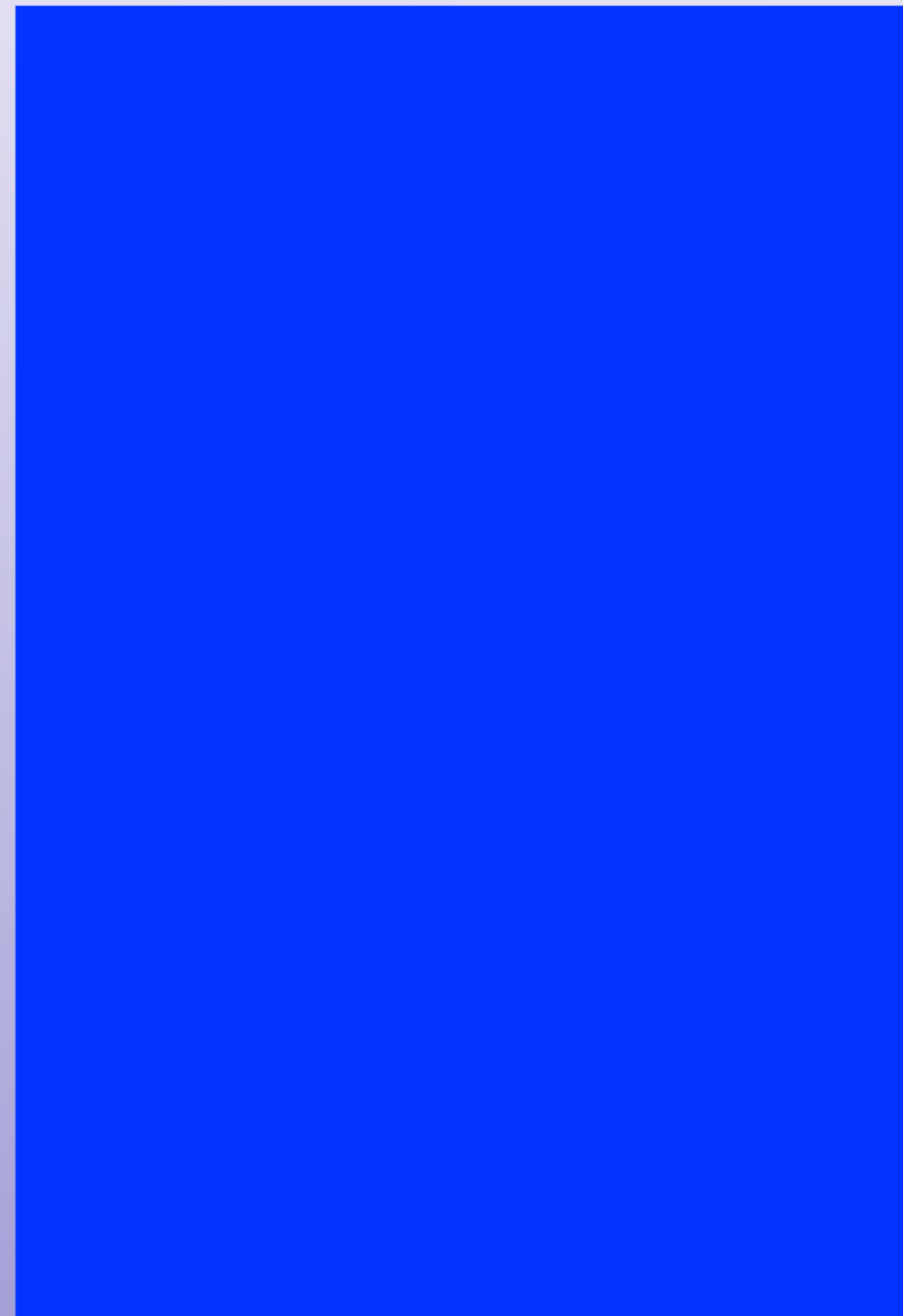
Conservatieve behandeling

- Infiltratie (SA, AC of IA)
- kiné
- NSAID
- relatieve rust



Indicaties arthroscopie

- Impingement, na falen conservatieve therapie
- AC-resectie
- Calcificatie
- Arthrolyse
- Rotator cuff scheur (<70j)
- Instabiliteit (Bankart)
- SLAP-letsel
- ...



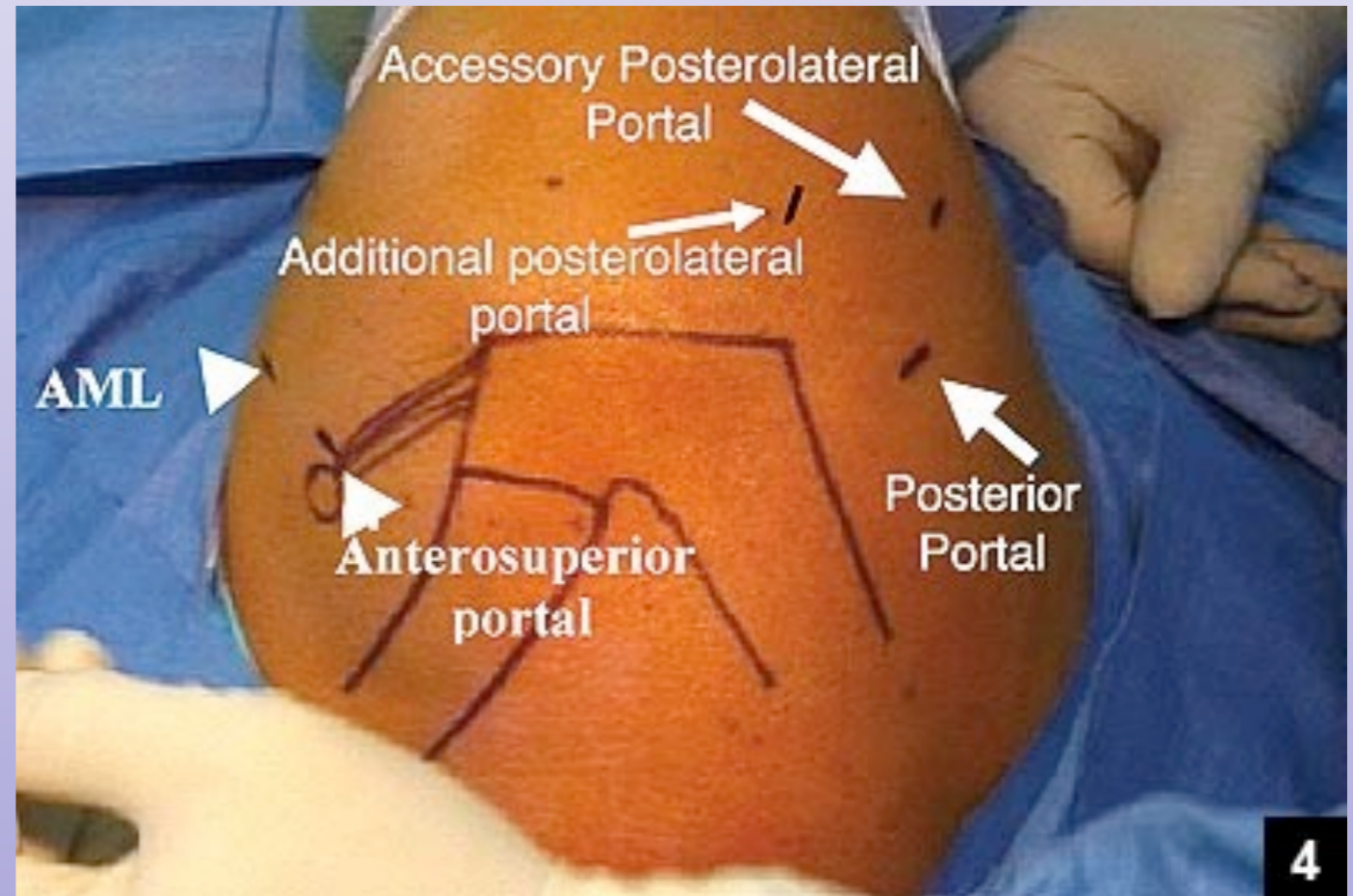
Arthroscopie



Installatie in laterale decubitus

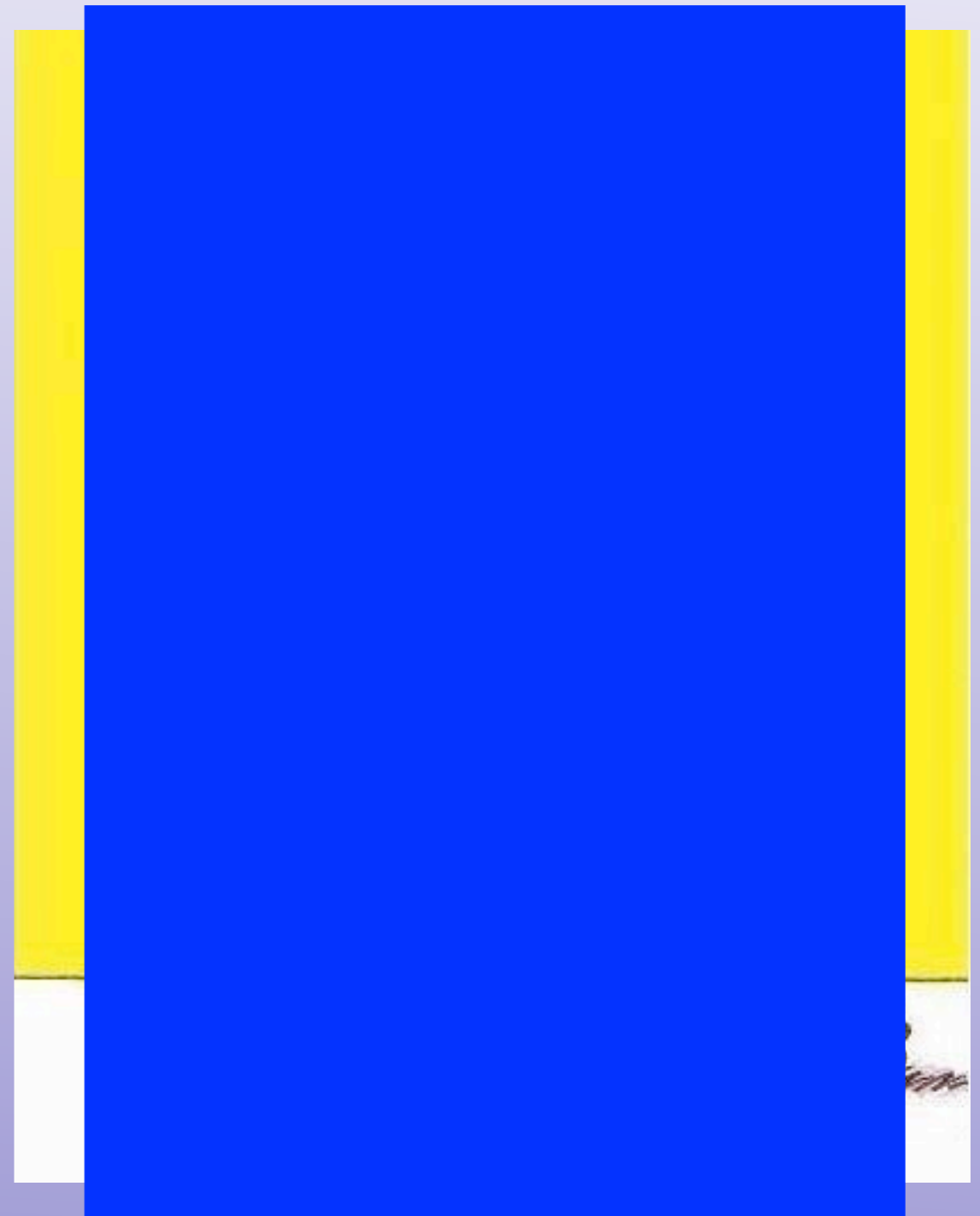
Incisies

- Portals
 - Posterieur
 - Anterosuperieur
 - Lateraal
 - Anterolateraal
 - ...



2 compartimenten

- Intra-Articulair:
 - glenoid, humeruskop
 - labrum → Bankart, SLAP
 - Biceps, articulaire cuff
- SubAcromiaal:
 - bursoscopie
 - bursale zijde cuff,



Subacromiaal (bursoscopie)

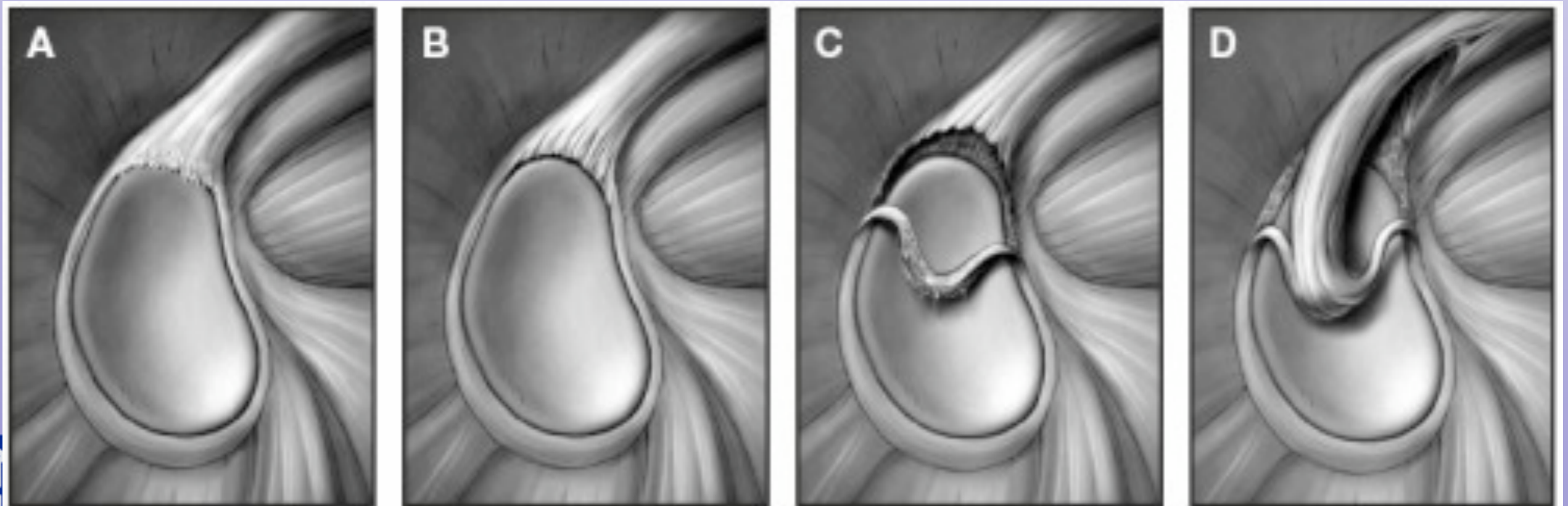


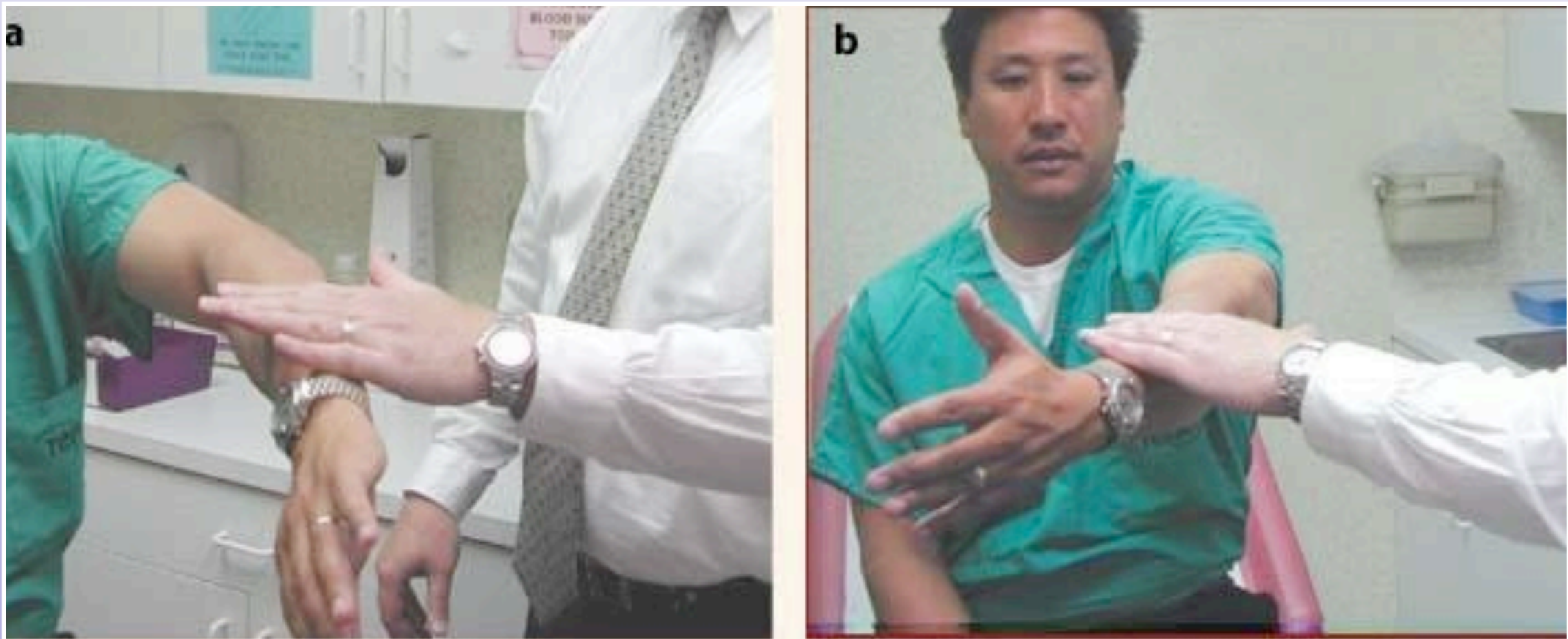
Intra-Articulair



SLAP-letsel

- Loslating van **S**uperieur **L**abrum **A**nterieur tot **P**osterieur
- Klinisch moeilijke diagnose
- arthroNMR





O'Briantest

Resultaten SLAP

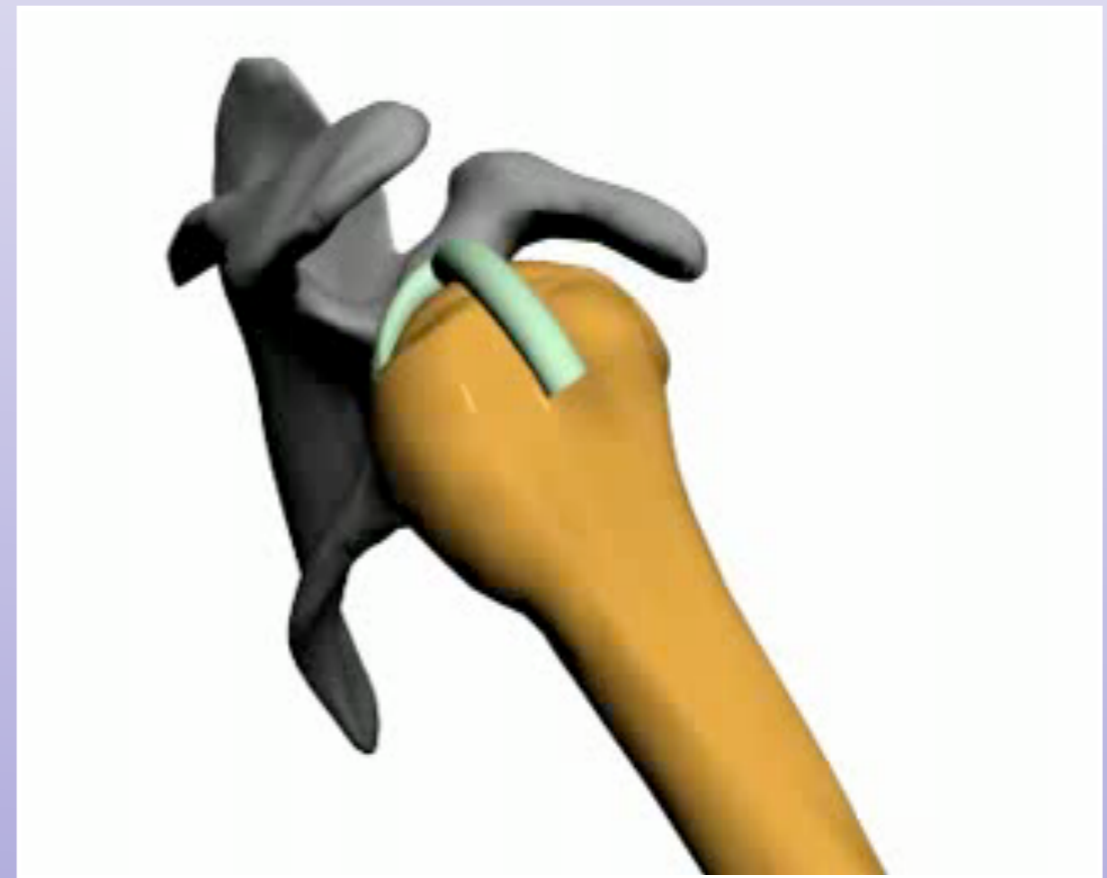
- Goede resultaten
- onvoorspelbare resultaten bij overhead sports*



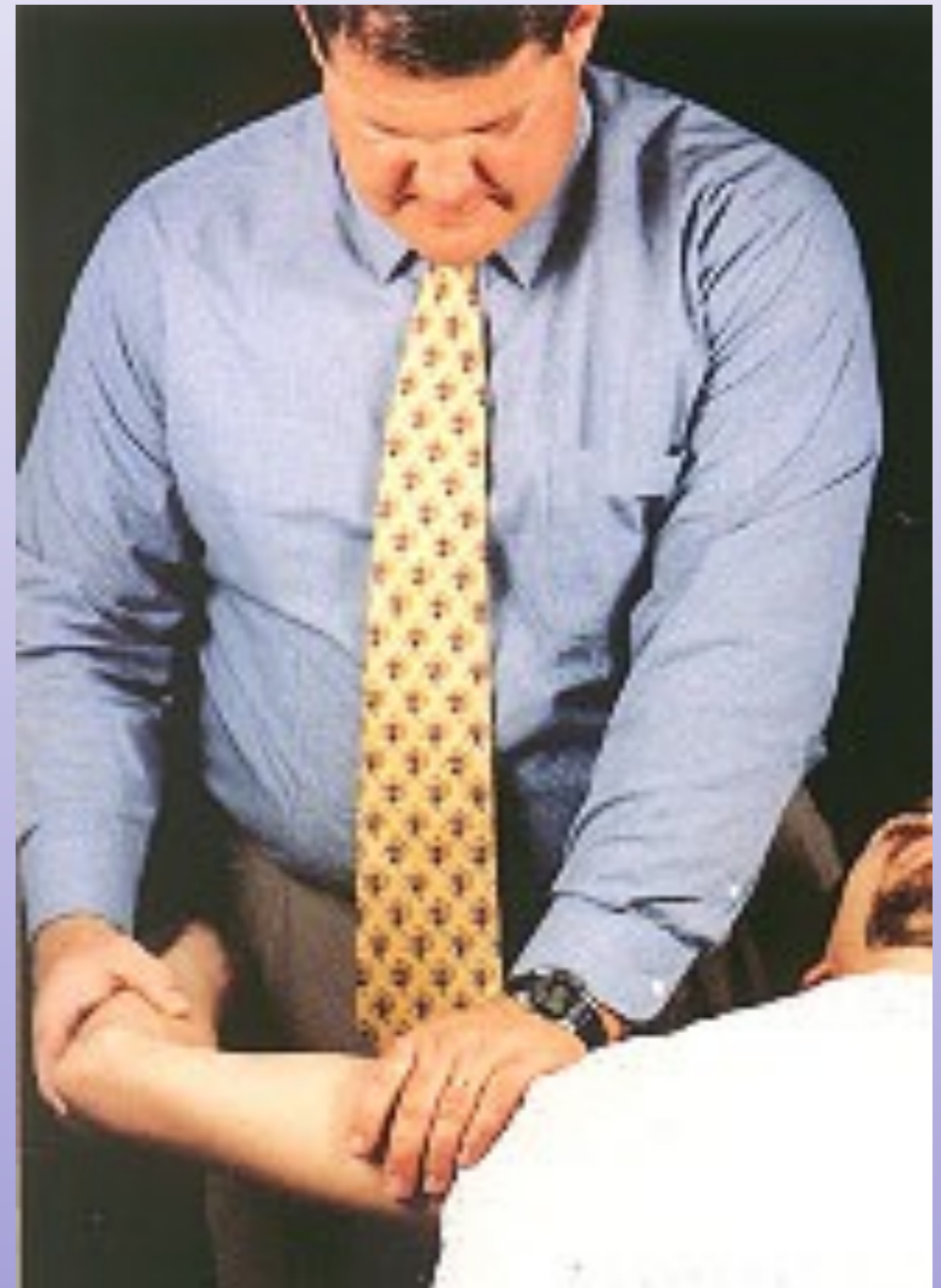
*Arthroscopy. 2010 Apr;26(4):537-45

Bankart letsel

- Na luxatie
- operatieve R/ bij jonge patiënten en/of recidiverend karakter
- preop arthroCT of arthroNMR
- NIET bij beenderig defect



Instabiliteit

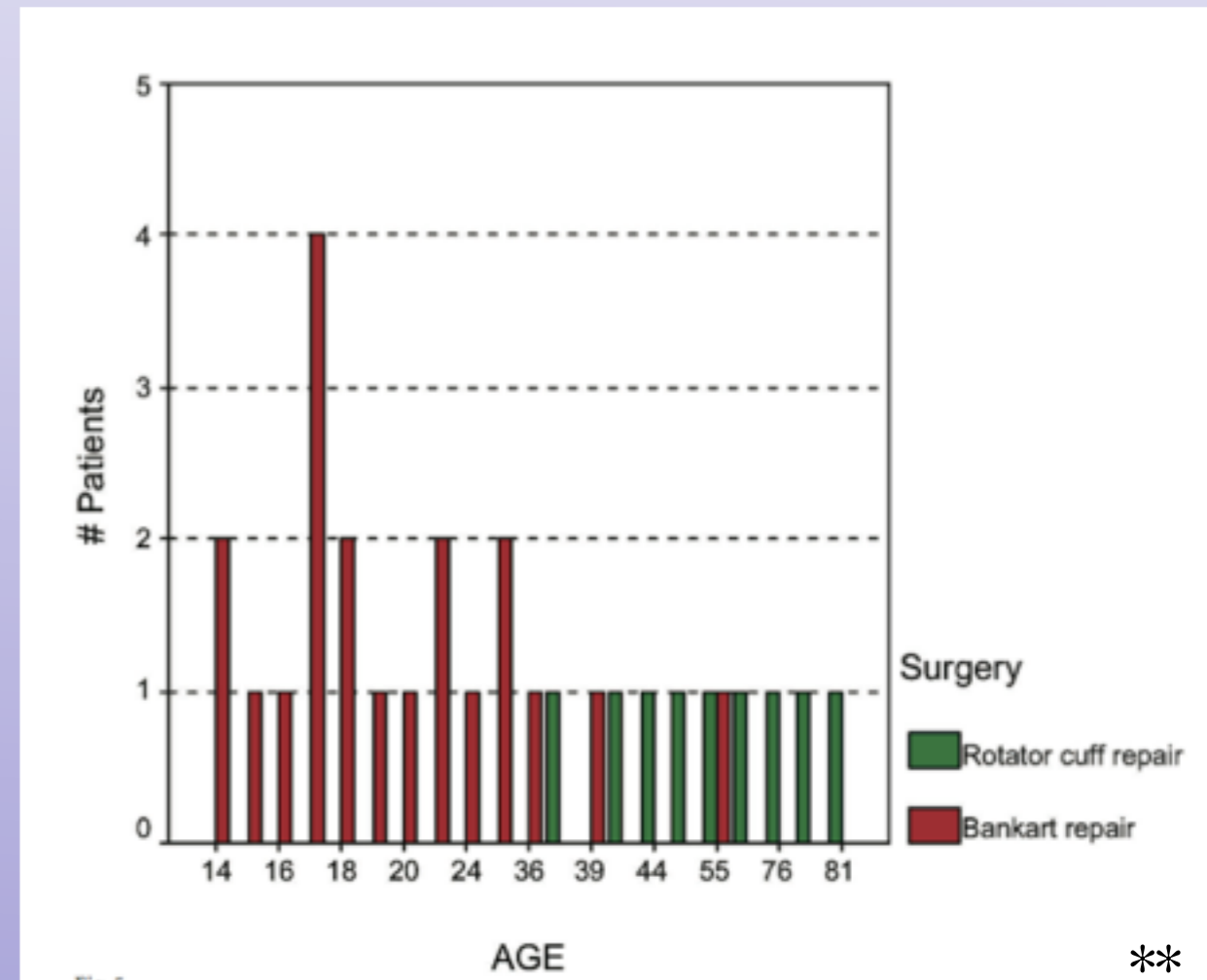


Revalidatie

- Passief en actief mobiliseren
- eerste 6 weken externe rotatie vermijden $>20^\circ$
- nadien progressief opdrijven ROM en tonificatie

Resultaten

- 80-90% terugkeren naar vroeger sportniveau*
- Open versus arthroscopische: geen significante korte termijn verschillen*
- Bankart repair bij jonge, cuff repair bij oudere patiënten

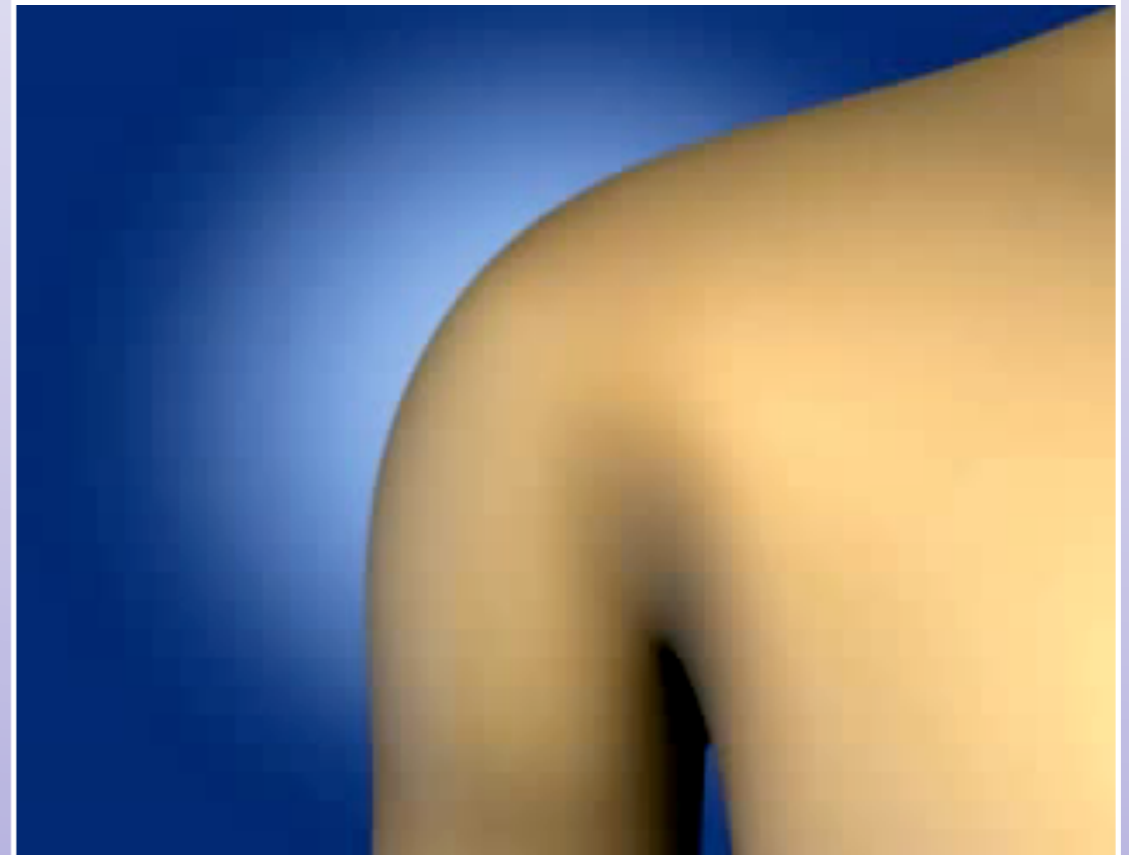


*Cochrane Database Syst Rev. 2009 Oct 7;(4):CD005077. Review.

**J Bone Joint Surg Am. 2007 Aug;89(8):1665-74.

Rotator cuff scheur

- Traumatisch versus Degeneratieve scheur
- Rx en Echo
- partiele versus full thickness scheur
- evt arthroNMR of arthroCT



Kliniek rotator cuff scheur

- **ALGEMEEN**

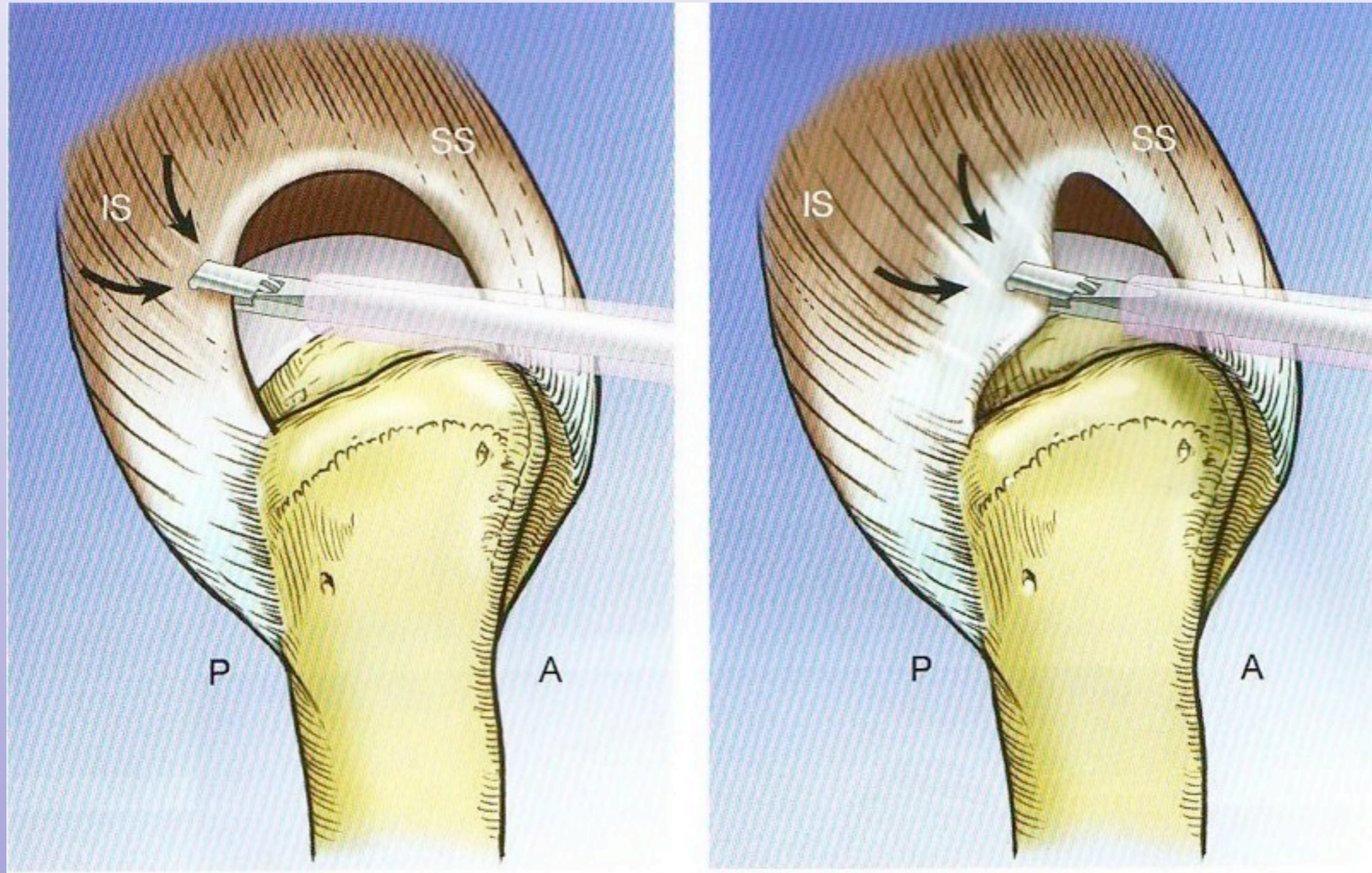
 Normale passieve beweging

 Beperkte actieve beweging

 Pijnlijke activatie

 Krachtsvermindering

Cuff scheur



Cuff repair



Revalidatie

- Onmiddellijk passief mobiliseren
- Cuff repair:
 - 4 à 6 weken draagdoek (meestal geen abductiekussen)
 - Na 6w actieve oefeningen
 - Na 3m tonificatie oefeningen

Resultaten cuff repair

Open repair results:

Author	Satisfied Patients	Range of Motion Improved	Strength Improved
Ellman ¹⁸	98 percent	Yes	Yes
Hawkins et al. ¹⁷	94 percent	Yes	Yes
Cofield ¹⁹	77 percent	Yes	Yes

Mini-open repair results:

Author	Satisfied Patients	Range of Motion Improved	Strength Improved
Lewy et al. ²⁰	96 percent	Yes	Yes
Paulos et al. ²¹	94 percent	Yes	Yes
Blevins et al. ²²	89 percent	Yes	Yes

All-arthroscopic repair results:

Author	Satisfied Patients	Range of Motion Improved	Strength Improved
Tauro ²³	92 percent	Yes	Yes
Gartsman ²⁴	90 percent	Yes	Yes
Wilson ²⁵	88 percent	Yes	Yes

The above studies represent on a few of many papers on this topic. A large review of all published material relating to outcomes from rotator cuff repair surgery was presented in 2003³⁰. This paper demonstrated:

Conclusie

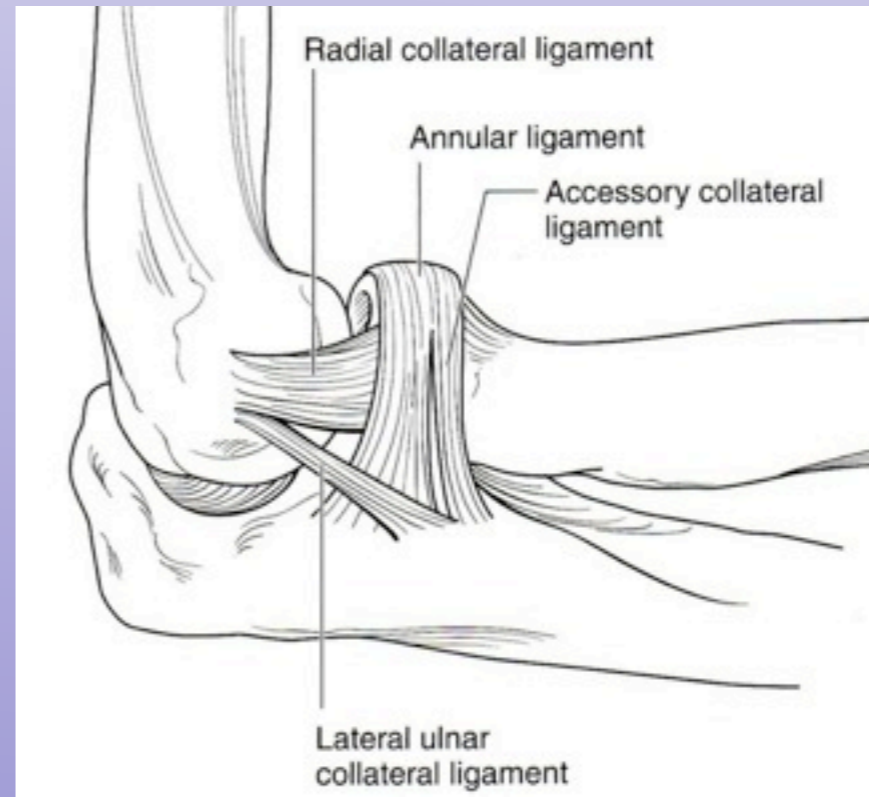
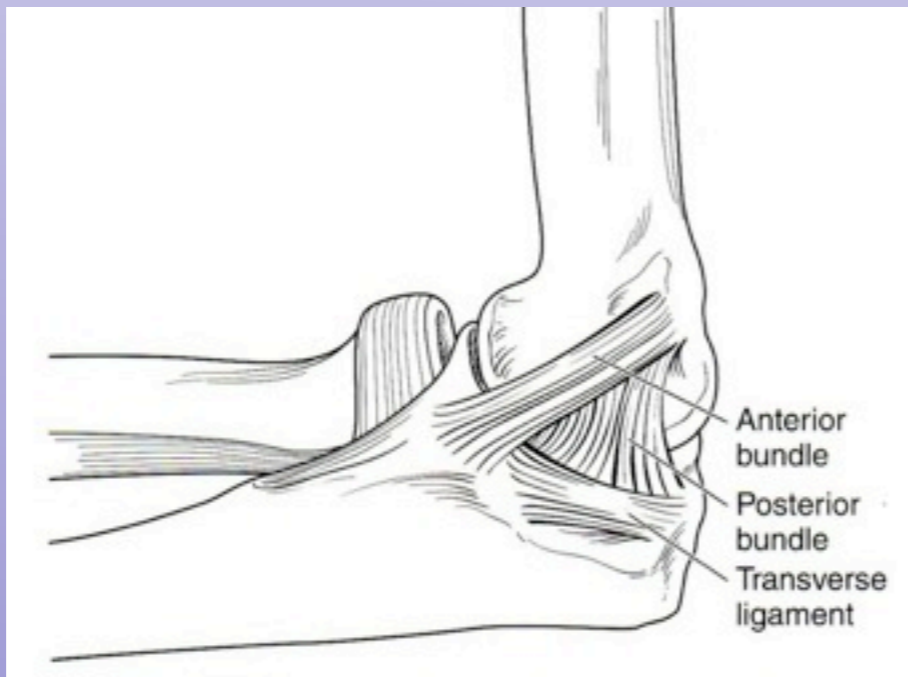
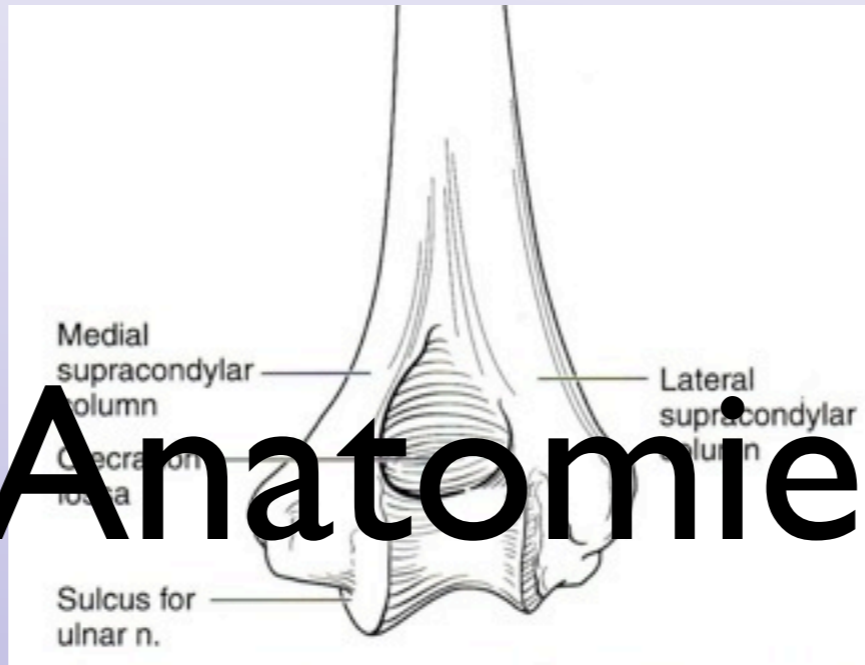
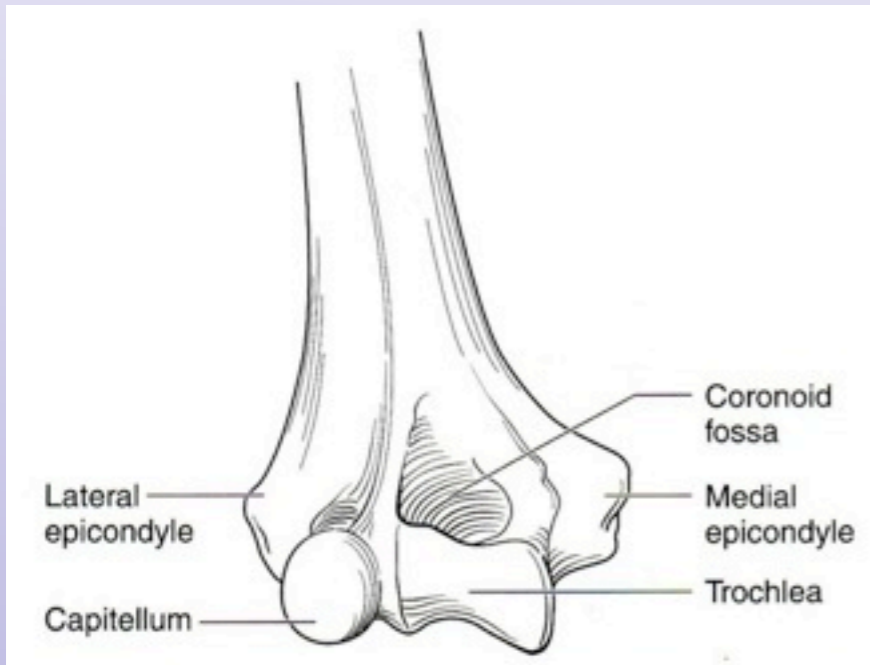
Schouderarthroscopie

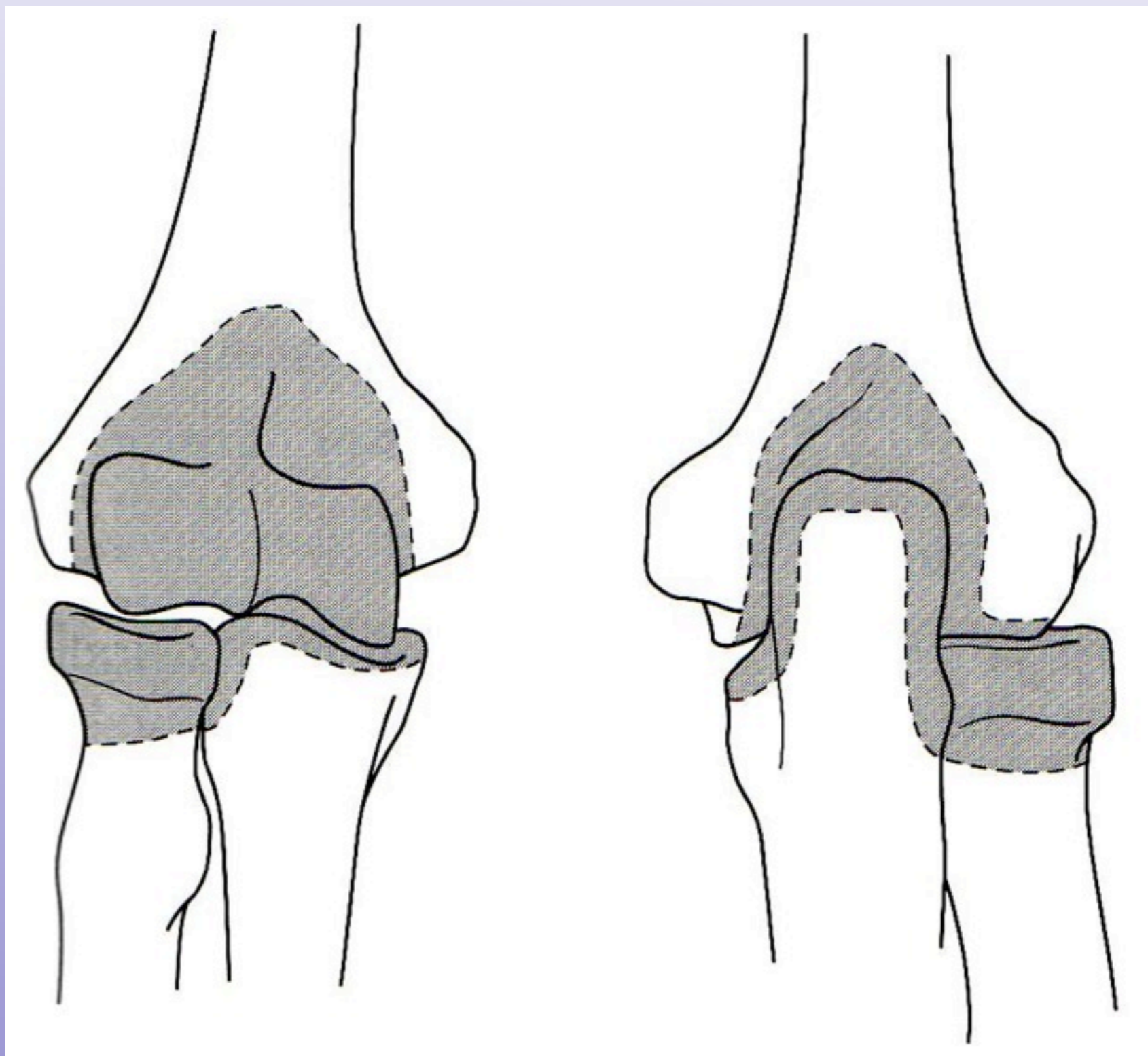
- Meeste schouderpathologie kan arthroscopisch behandeld worden
- Revalidatie minstens even belangrijk als de chirurgie
- Resultaten cuff repair arthroscopisch = open
- Geringe morbiditeit

Elleboogarthroscopie

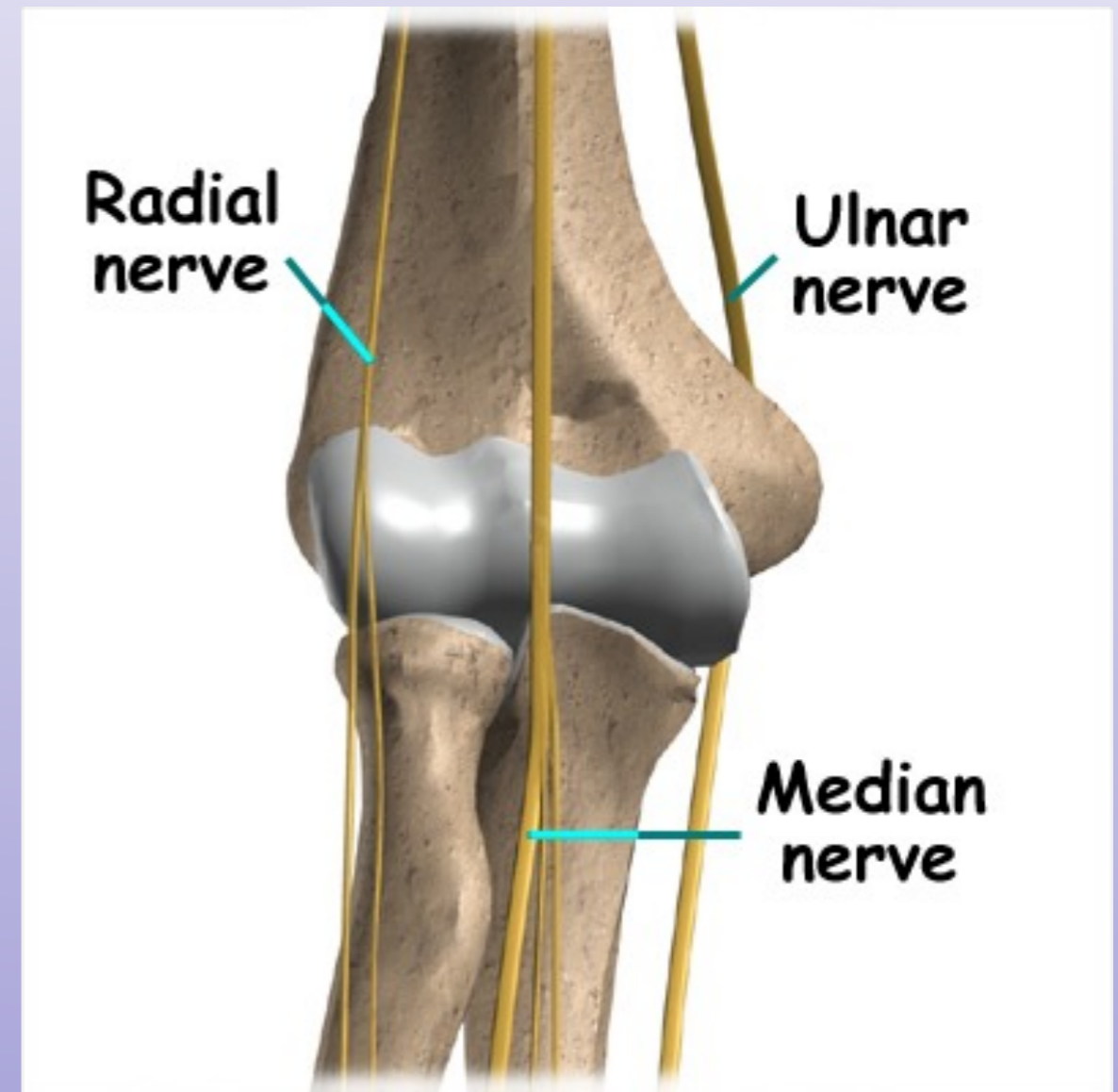
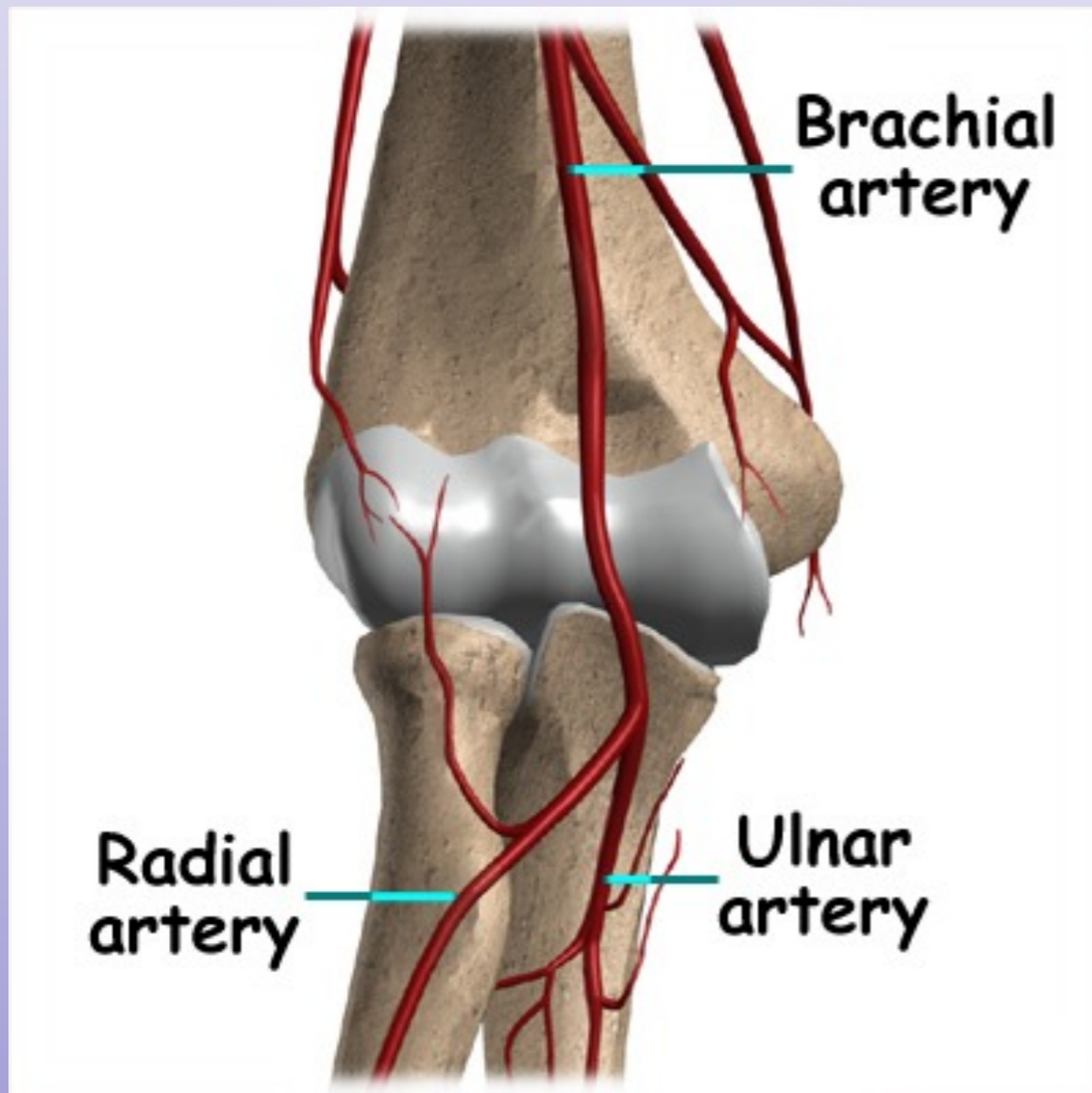
- Anatomie
- Setup en installatie
- Indicaties

Anatomie

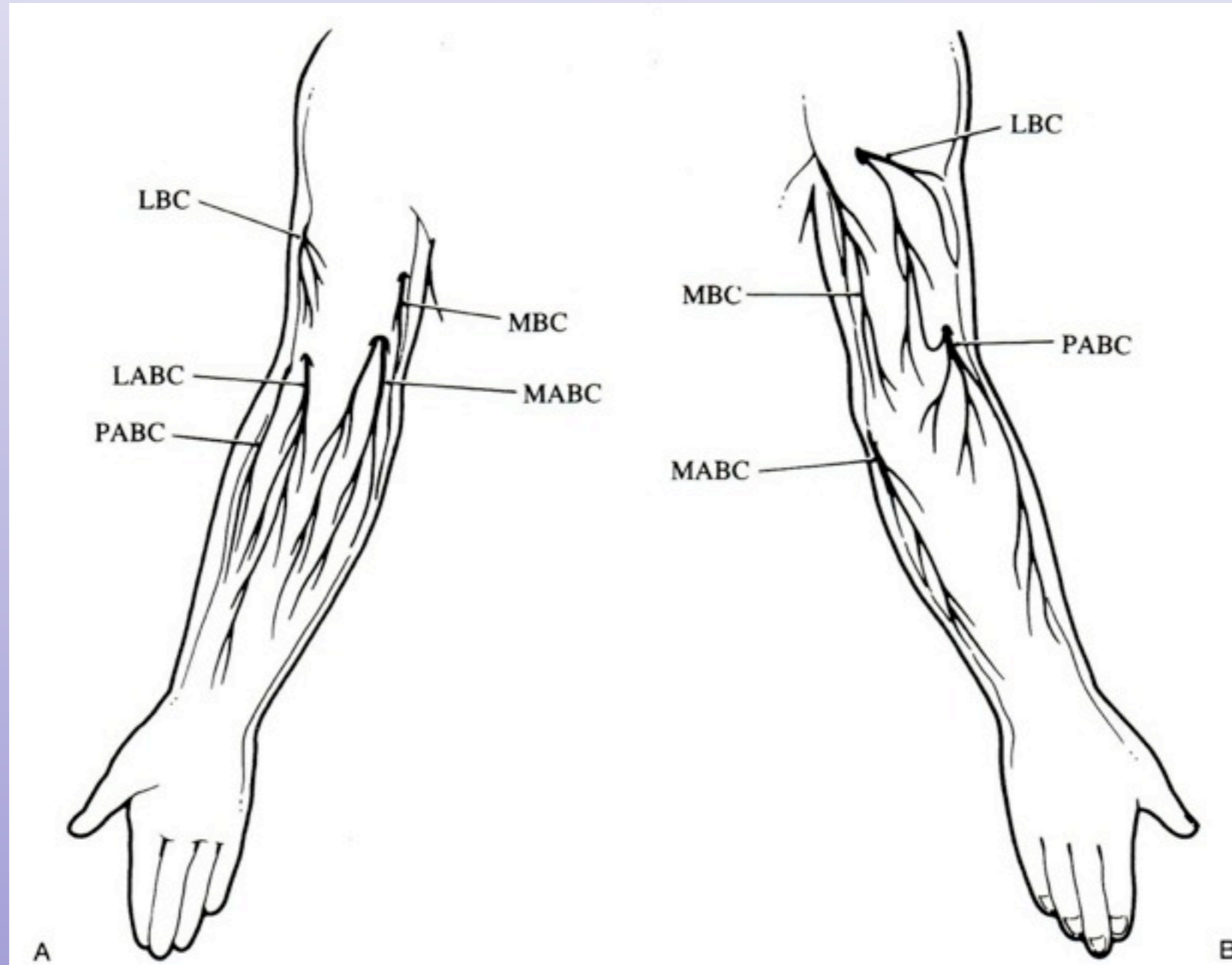




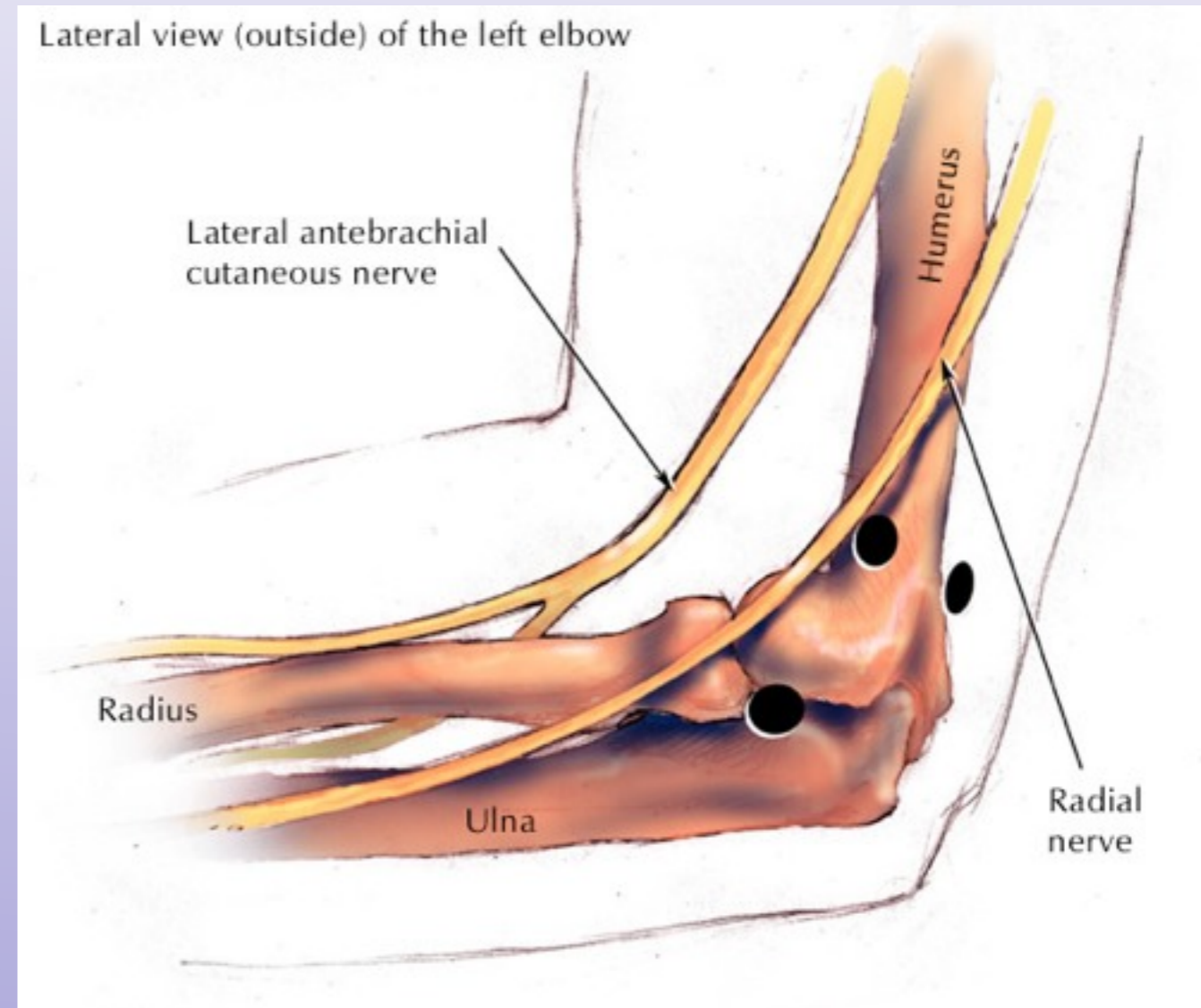
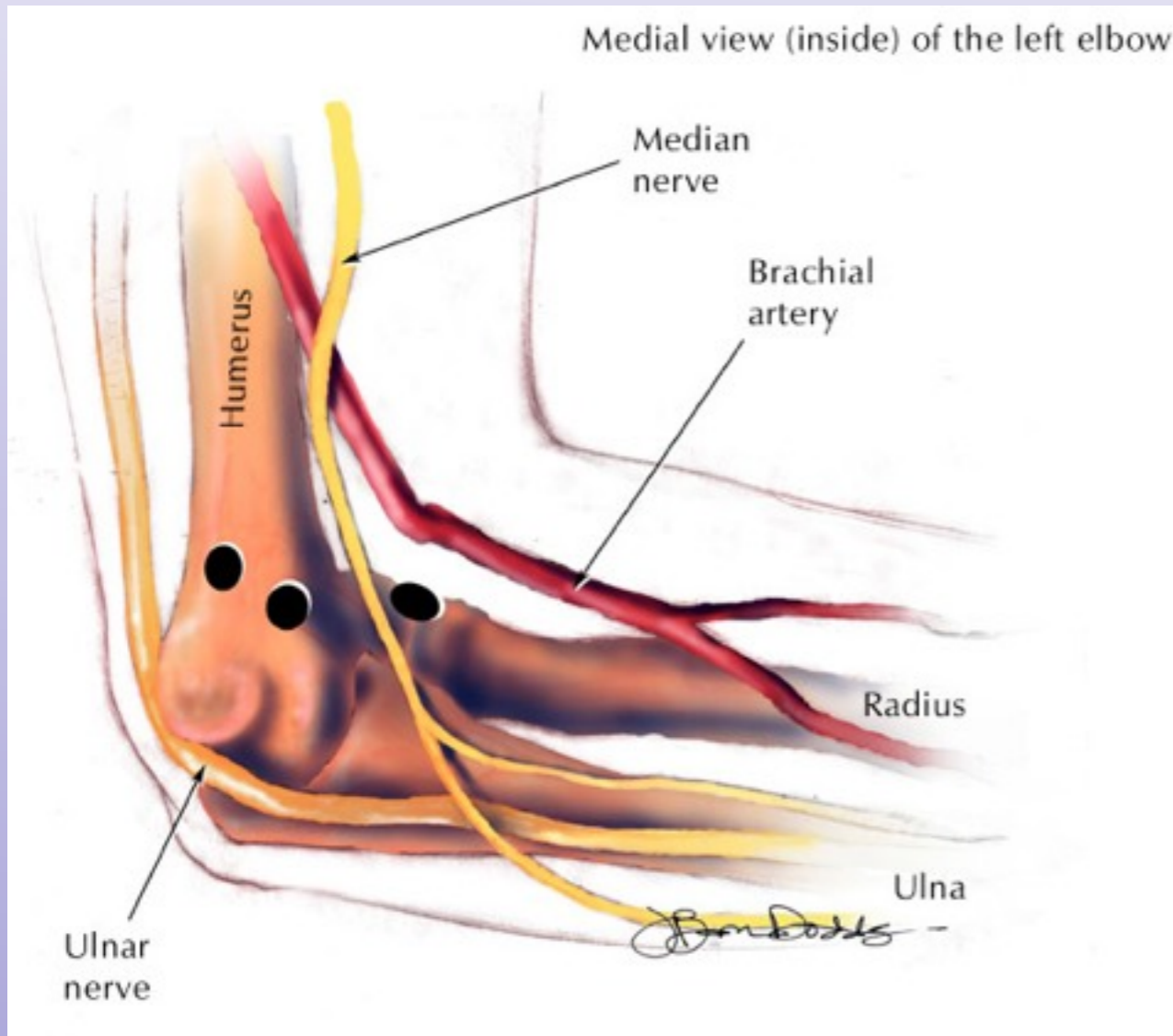
Anatomie



Anatomie

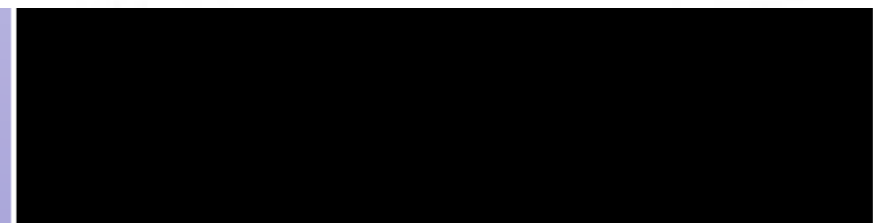
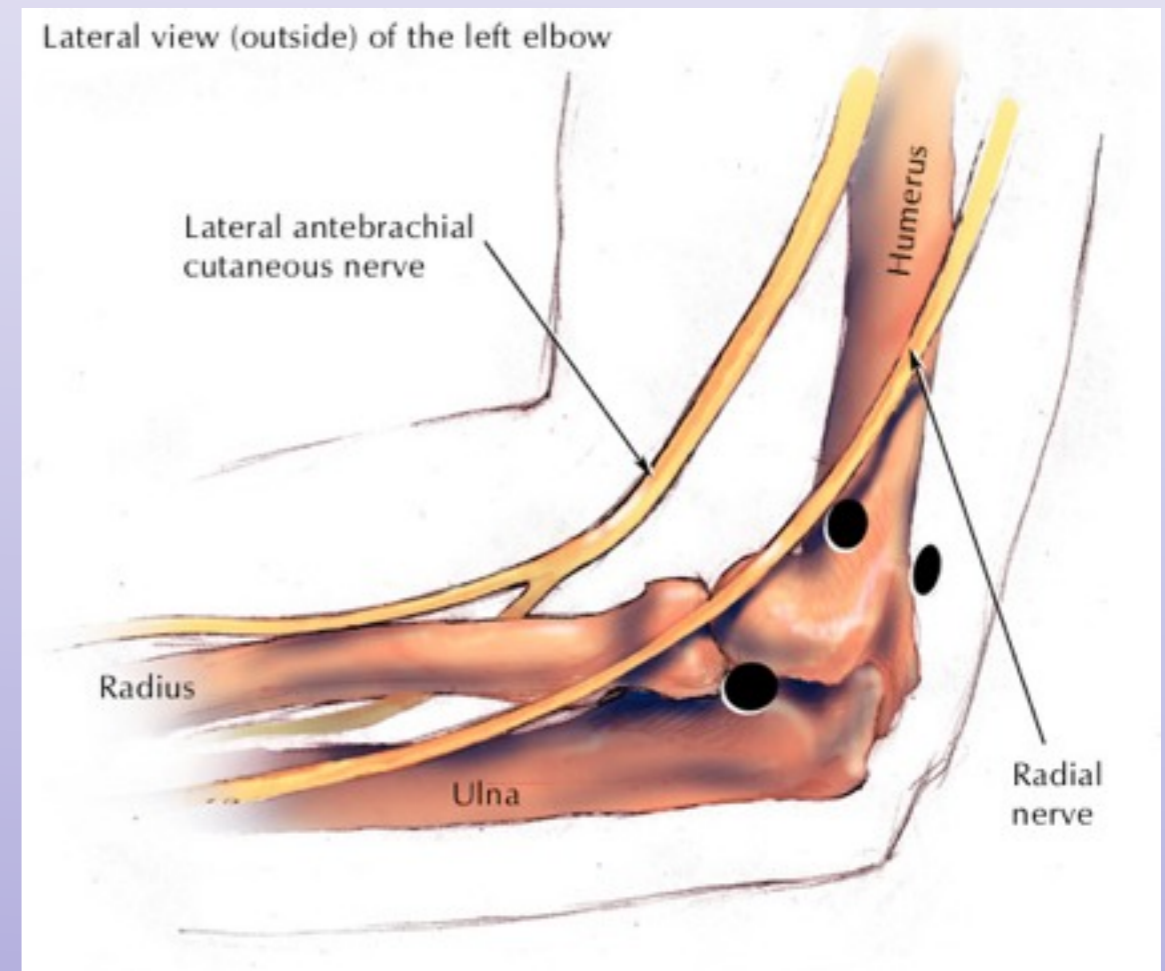


Anatomie



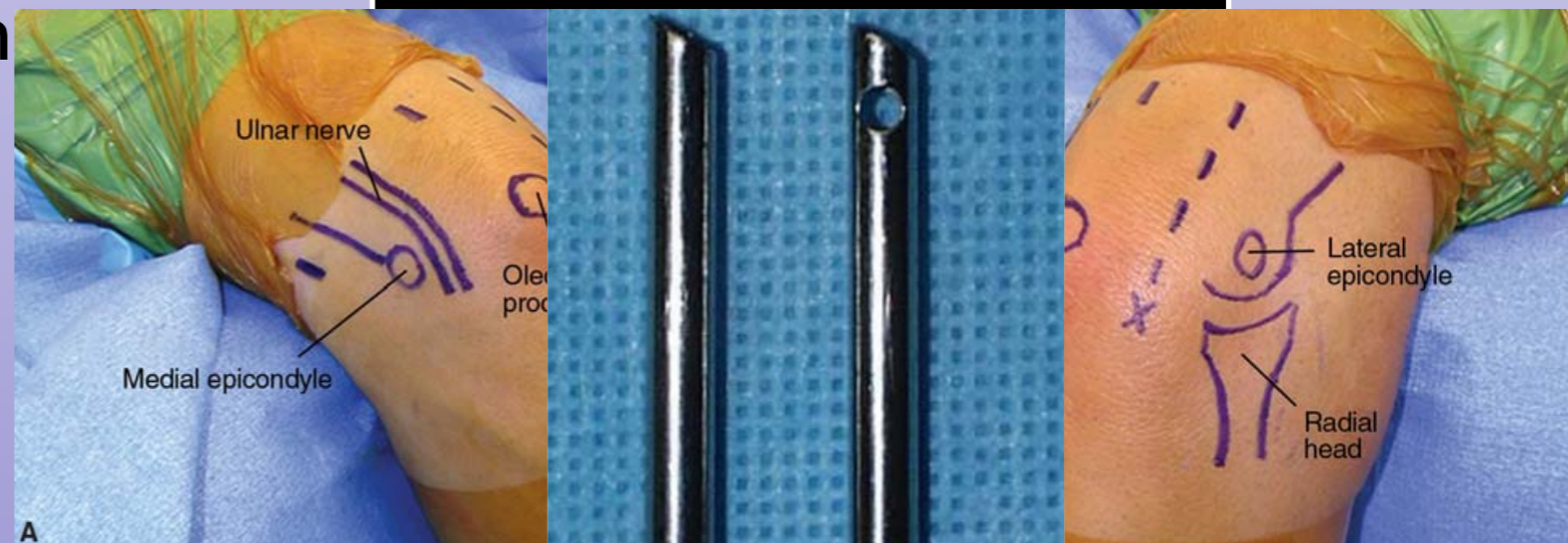
Complicaties

- neurovasculair
- n. ulnaris 3 tot 4mm van anteromediale portal
- n. radialis 4 tot 7mm van anterolaterale portal
- gewrichtsverstijving



Setup arthroscopie

- Algemene anesthesie
- zijlig, arm in U-steun
- garot
- aftekenen structuren
- instrumenten



Indicaties arthroscopie

- Gewrichtsmuizen, elleboogarthrose
- OsteoChondritis Dissecans (OCD)
- Arthrolyse
- Intra-articulaire pathologie (plica)
- Diagnostisch
- Fractuur (capitellum, coronoid,...)
- (tenniselleboog)

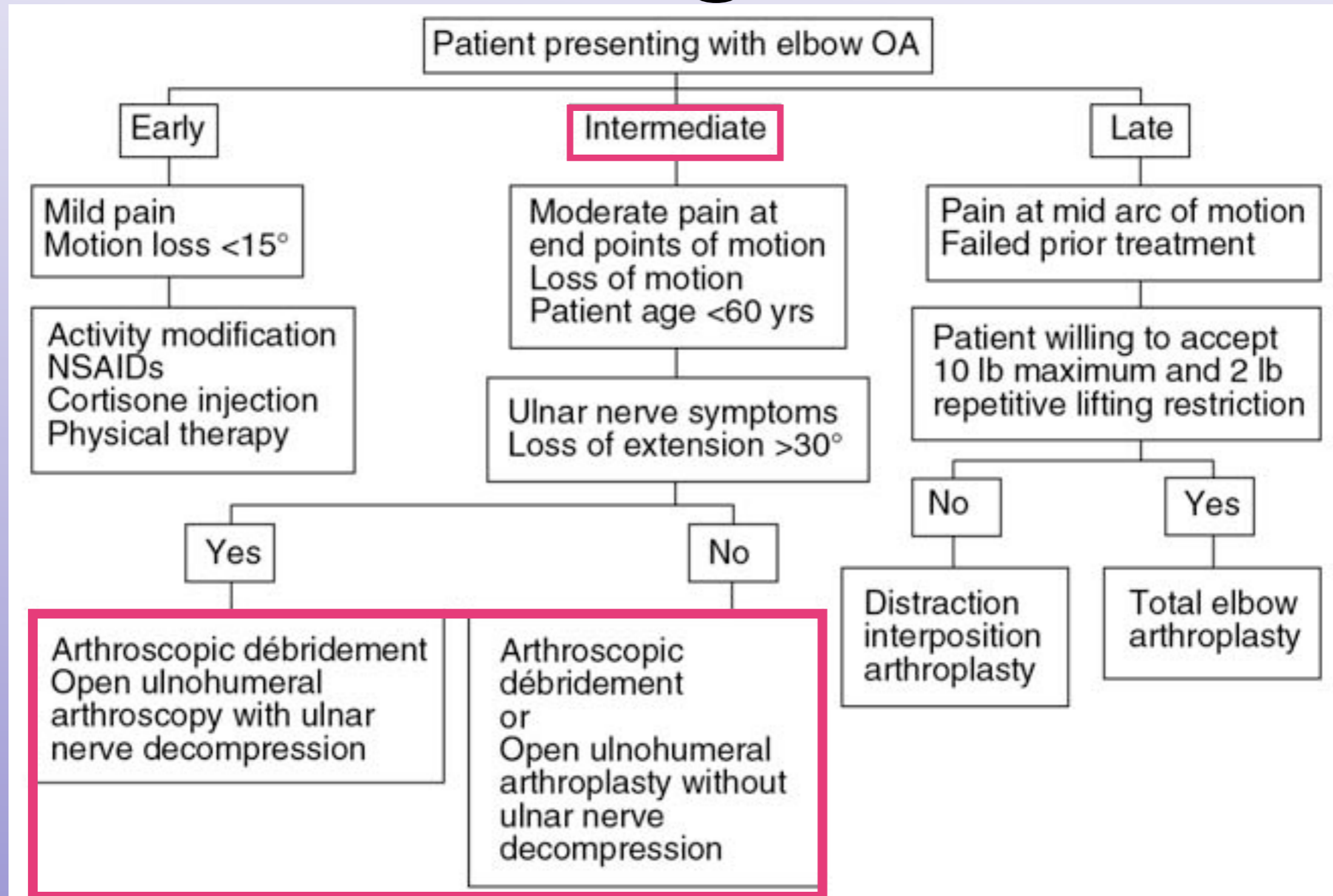
Gewrichtsmuizen

- Kraakbeenletsels en osteofyten tgv arthrose, “throwing athlete”, OCD
- Symptomen: bewegingsbeperking, crepitus, blokkage, pijn bij terminale flexie en extensie
- diagnose: Rx, arthroCT, (NMR)

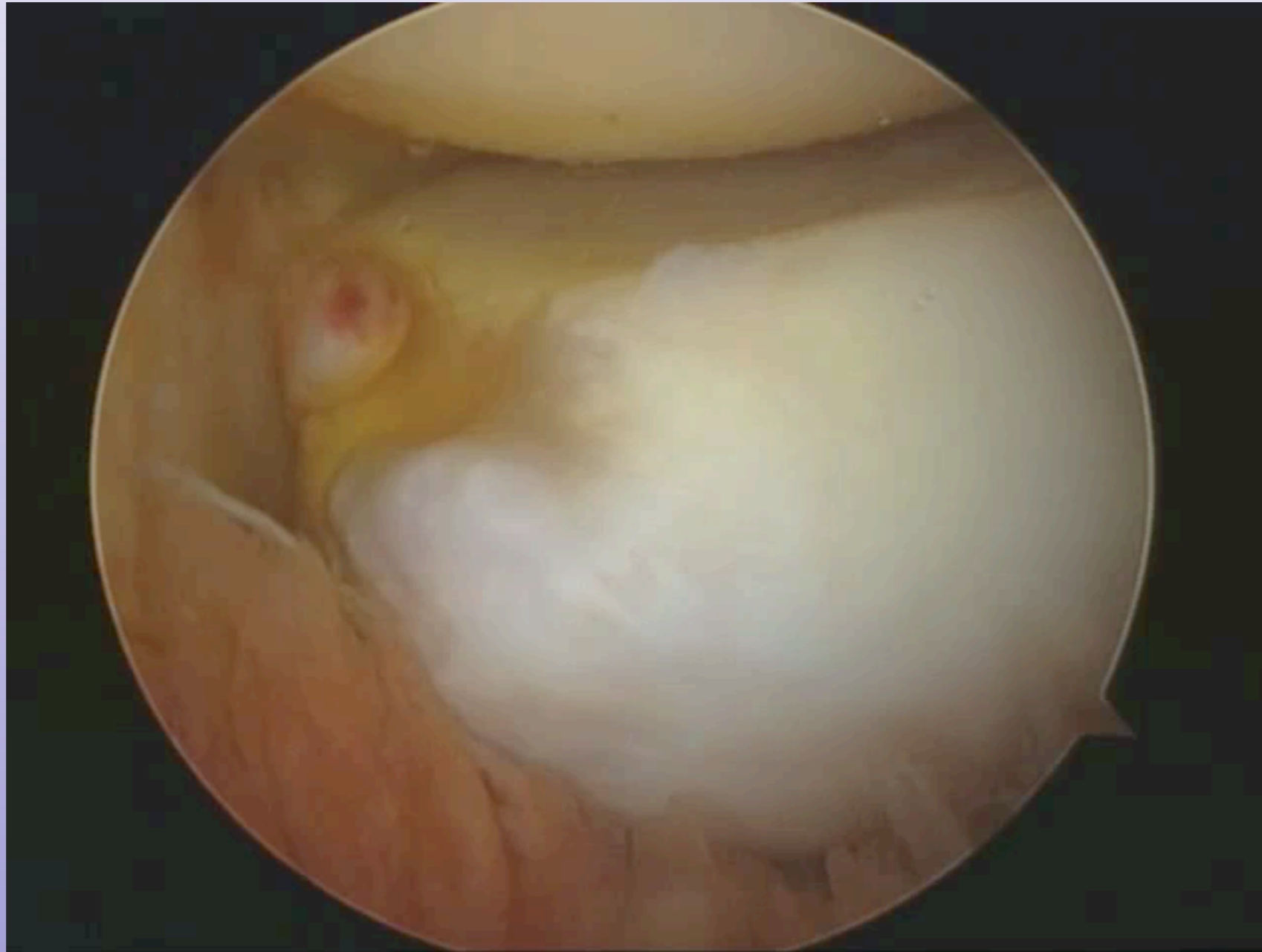
Rx gewrichtsmuizen



Behandeling arthrose



Loose body



Postoperatief beleid

- Mobiliseren (actief en passief) binnen de pijngrenzen tot FROM of ROM bekomen peroperatief
- Tonificatie opdrijven als de ROM goed is

Resultaten

- resultaten: zeer goed*
 - 80**-90*% goed
 - ROM: -10° tot 130°
 - FU: 3, 4j
- complicaties:
 - postop verstijving
 - neurovasculair



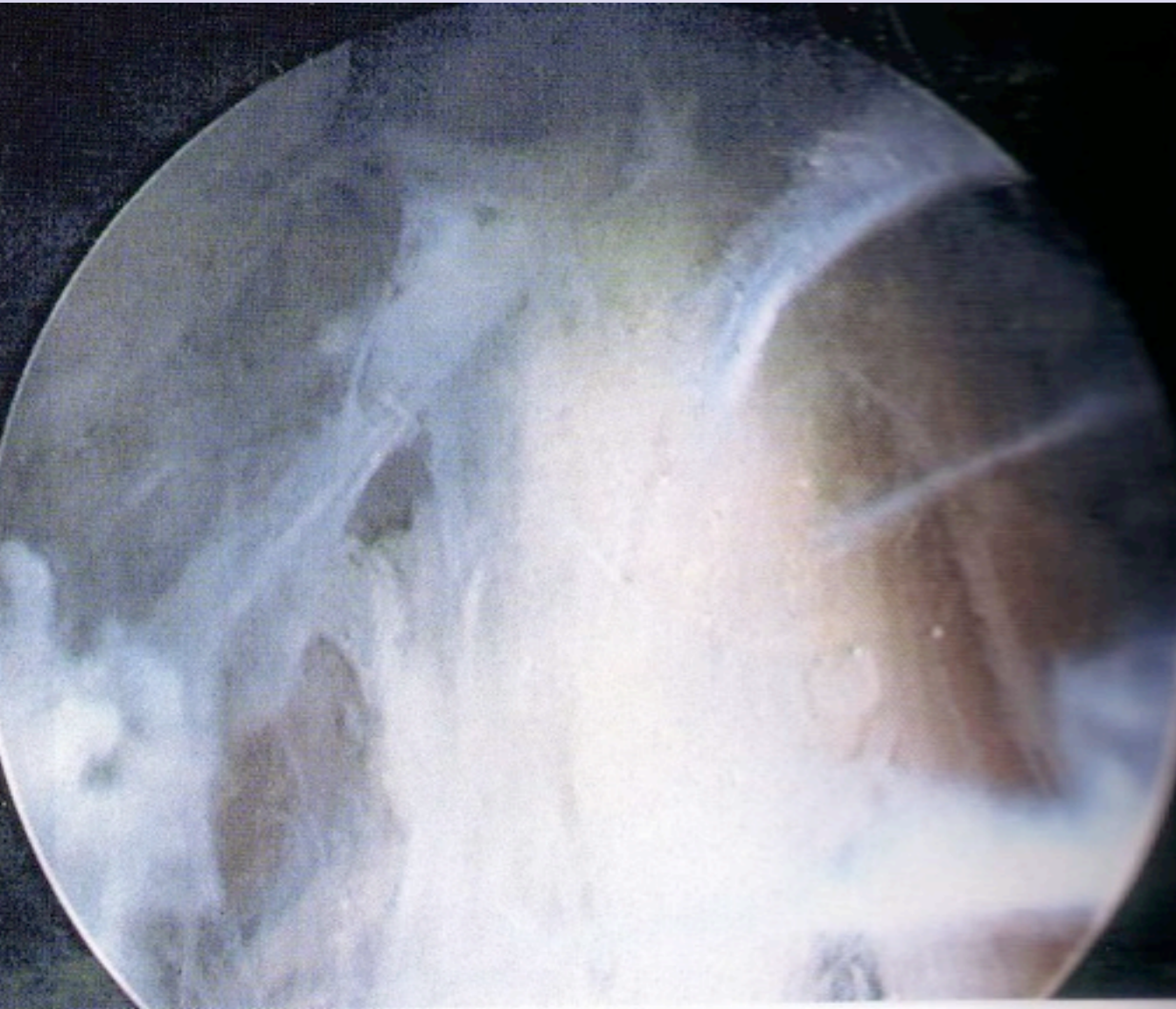
Arthrolyse

- Arthrofibrose: posttraumatisch, postoperatief
- Symptomen: weinig pijn, forse bewegingsbeperking
- Behandeling conservatief 6m tot 1j:
 - mobiliseren (binnen pijngrenzen)
 - stretchen
 - veersplint

Arthroscopische arthrolyse

- Risicovol door verstoorde anatomie en fibreus kapsel
- vaak ook nog open procedure nodig (zeker bij HO rond vitale structuren)
- revalidatie = “key to succes”

Arthrolyse



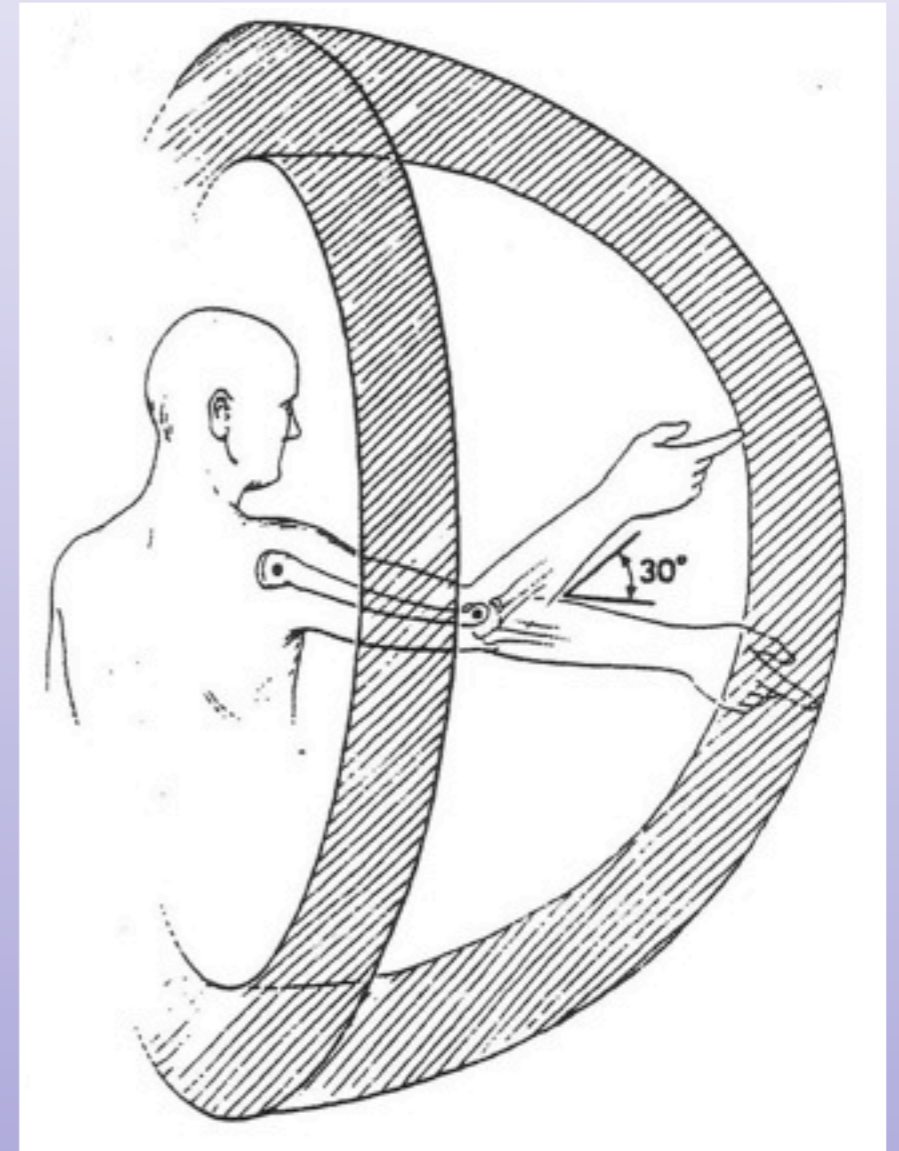
Postoperatief beleid

- MOBILISEREN!!!
 - plexuspomp
 - kinetec
 - eerst 3 dagen continu
 - nadien 18u per dag
 - afbouwen volgens schema over 2 maanden



Resultaten

- zeer goed: 80-90% betere ROM, binnen functionele ROM*
- Revalidatie uiterst belangrijk
- resultaten blijvend



Morrey BF: Joint Replacement Arthroplasty.
New York, NY , Churchill Livingstone

Tenniselleboog release

Open

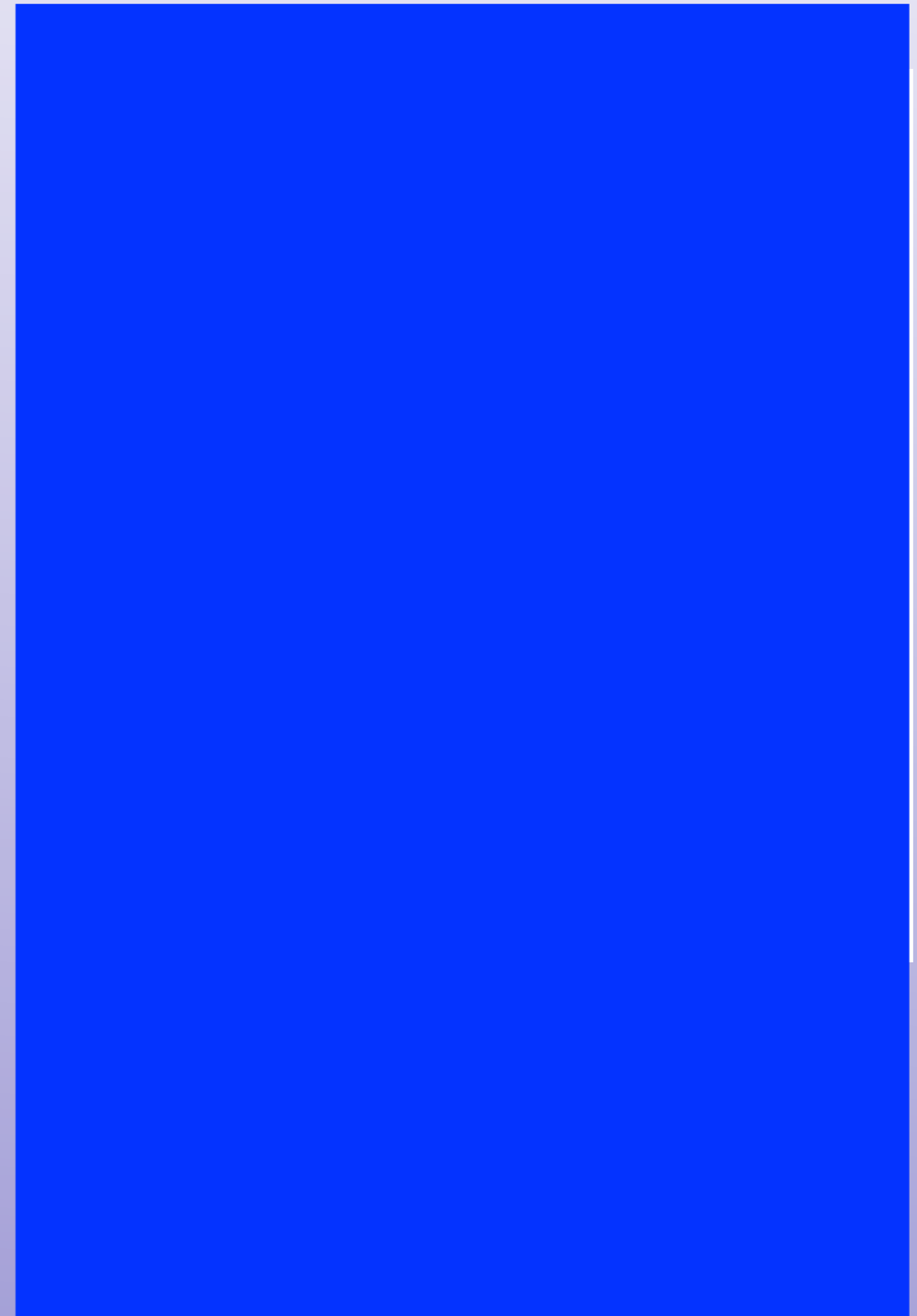
- IVR
- ambulantly
- weinig risico's
- resultaat 70-80%

Arthroscopisch

- AA
- daghospitaal
- potentiële risico's
- resultaat 70-80%

Besluit

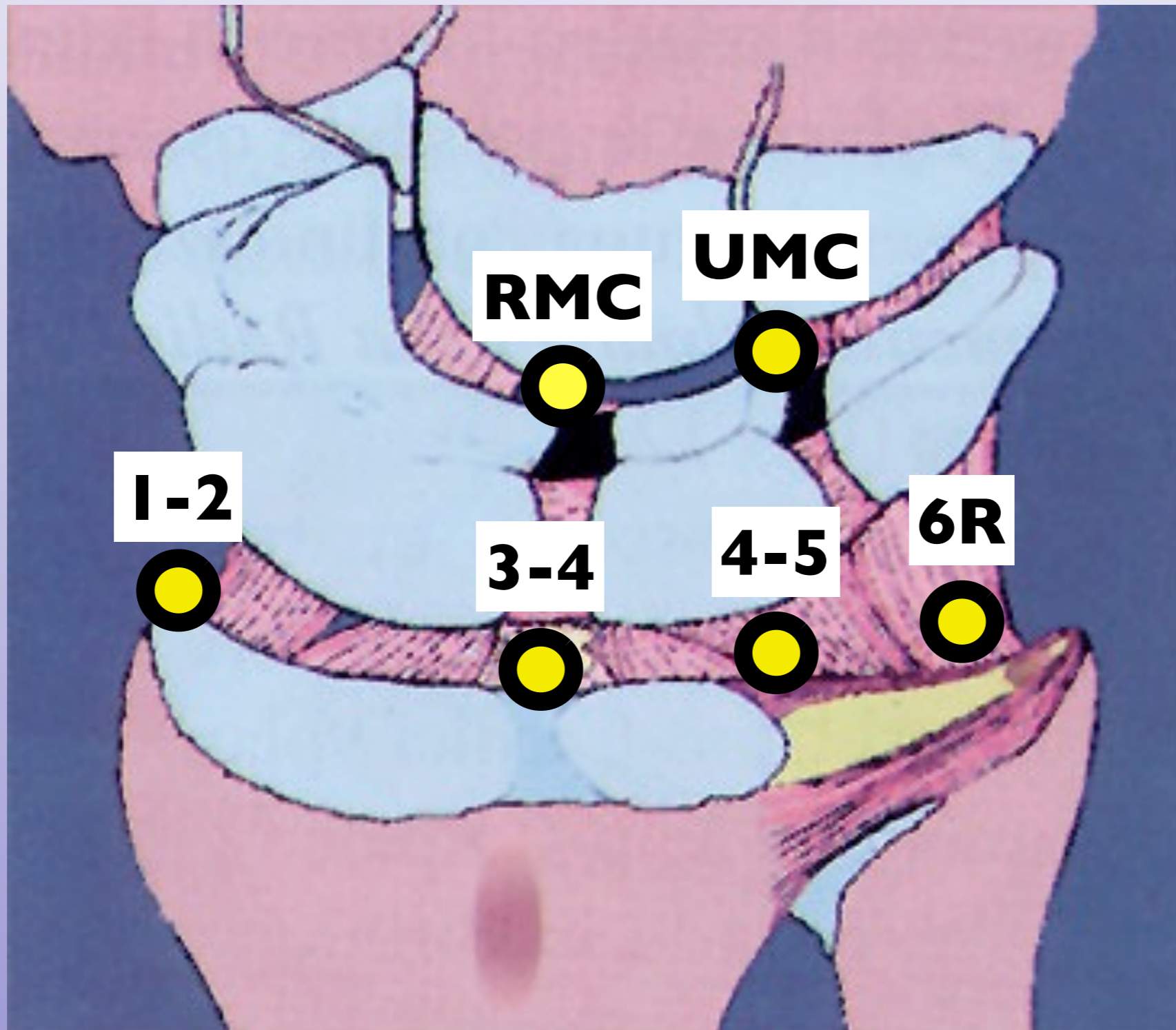
- arthroscopie van de elleboog geeft goede resultaten
- risico's
- postop revalidatie **ZEER** belangrijk



Polsarthroscopie: van diagnose tot behandeling

Dr. Ruben JACOBS
Orthopedie H.-Hartziekenhuis LIER

Anatomie en portals



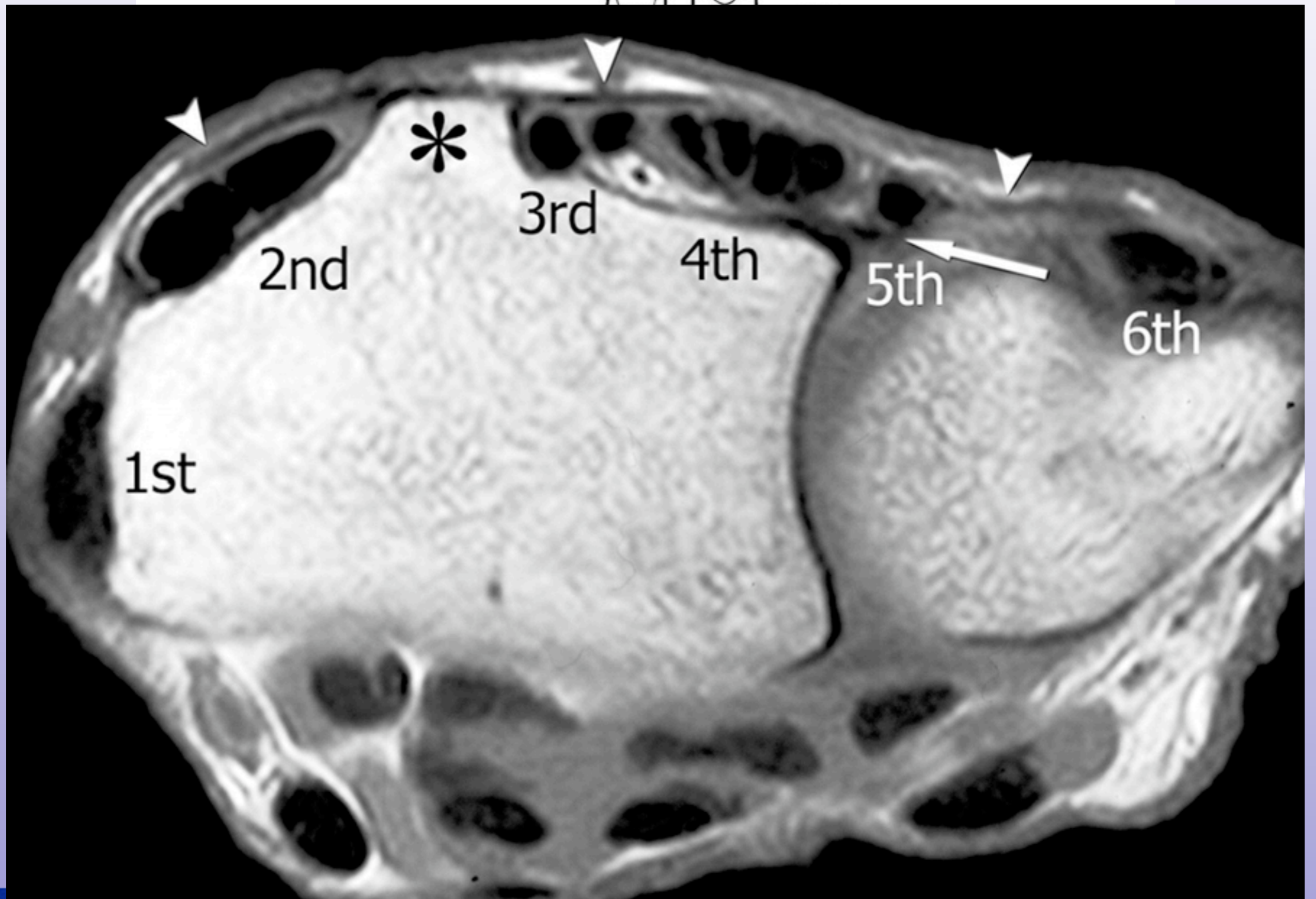
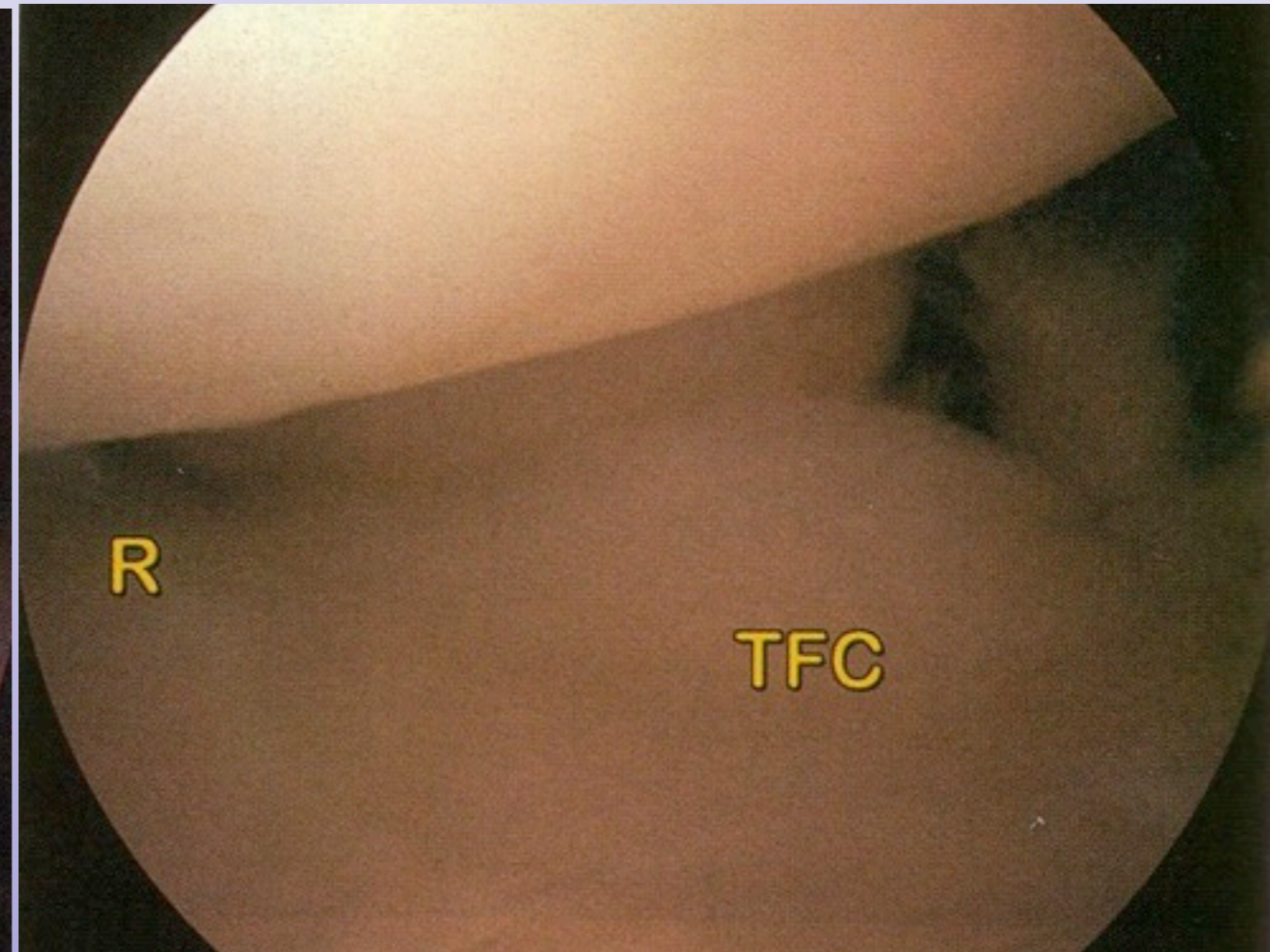
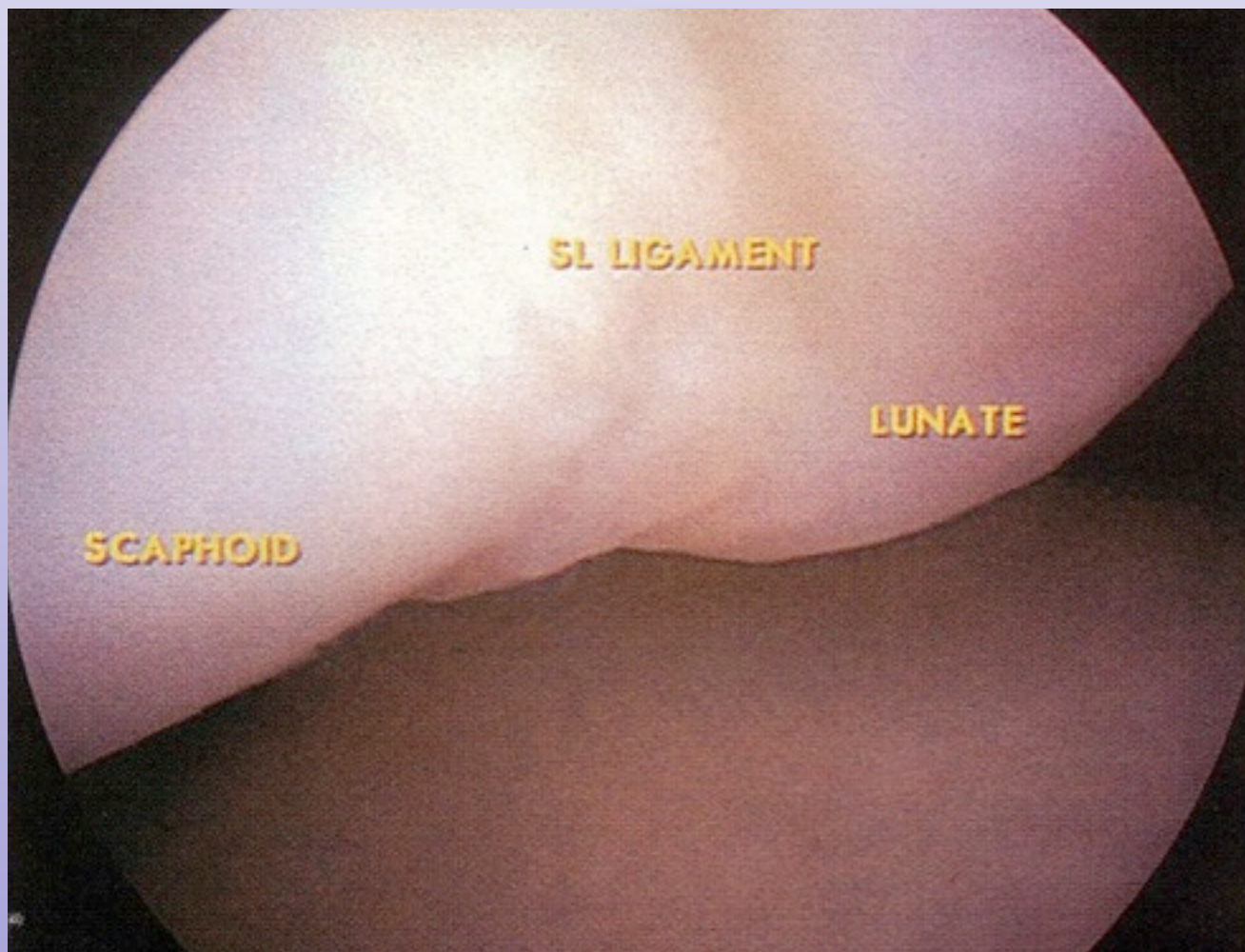
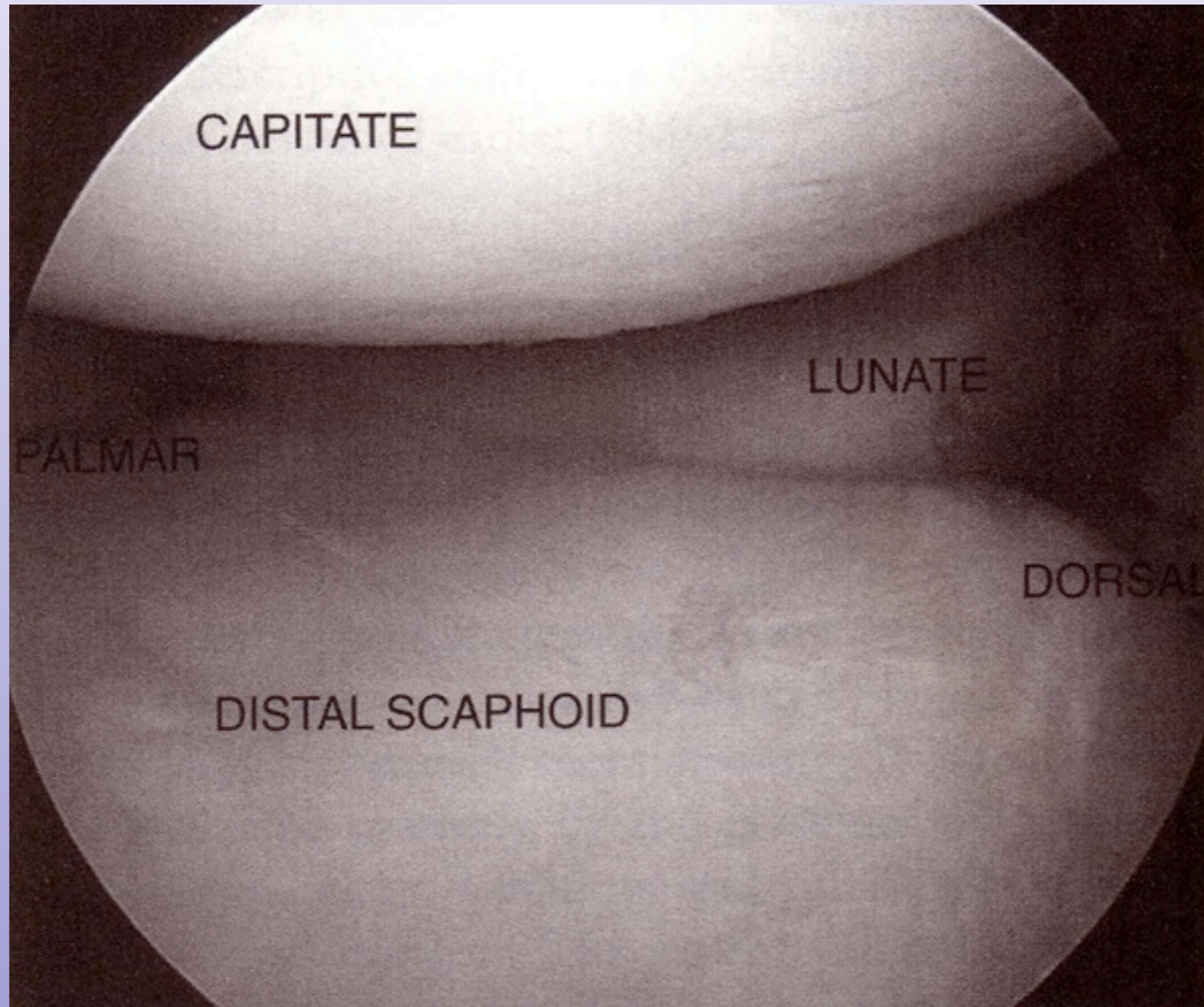


FIGURE 7. The portal anatomy of the wrist.

Radiocarpaal

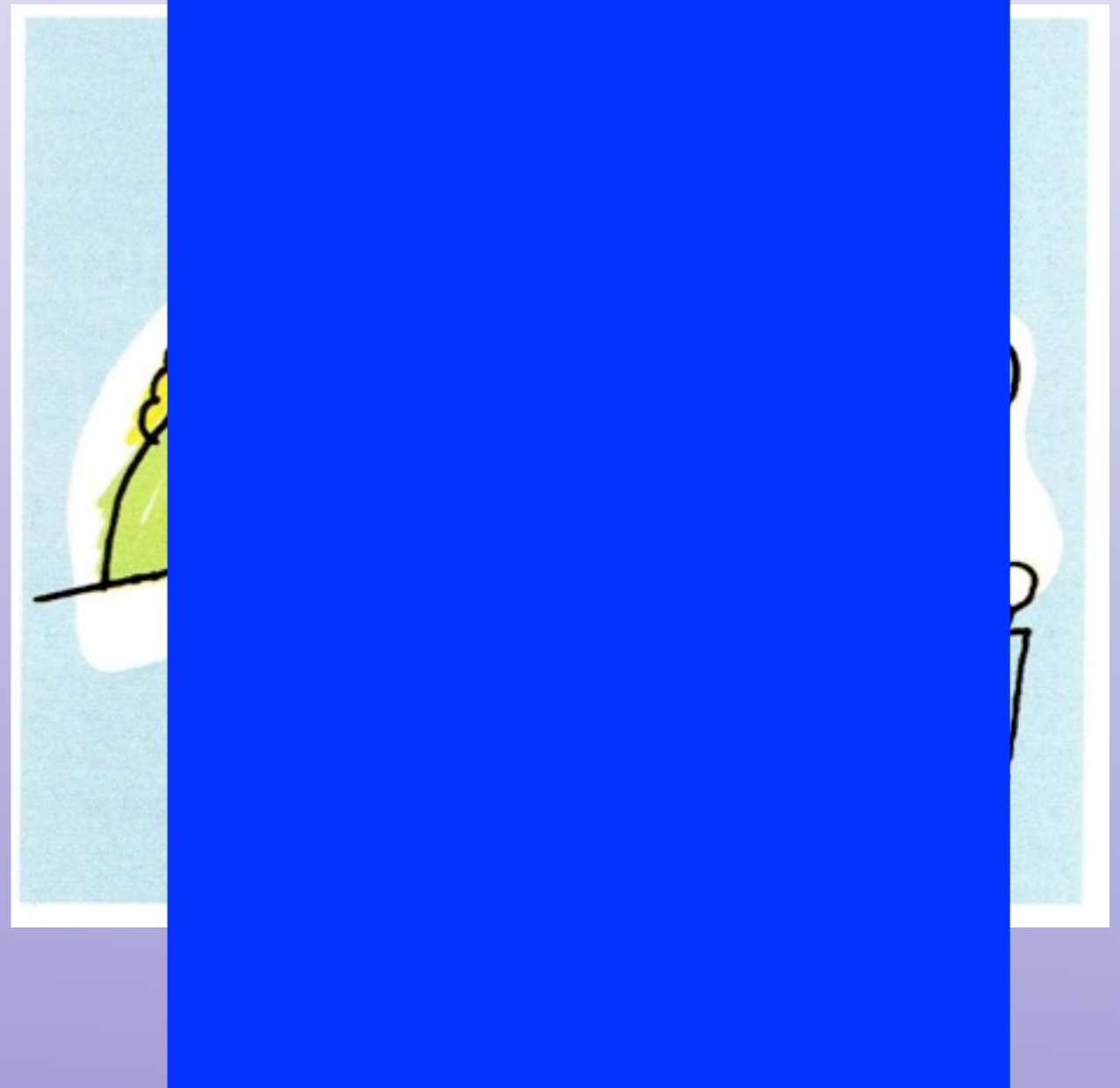


Midcarpaal



Algemeen

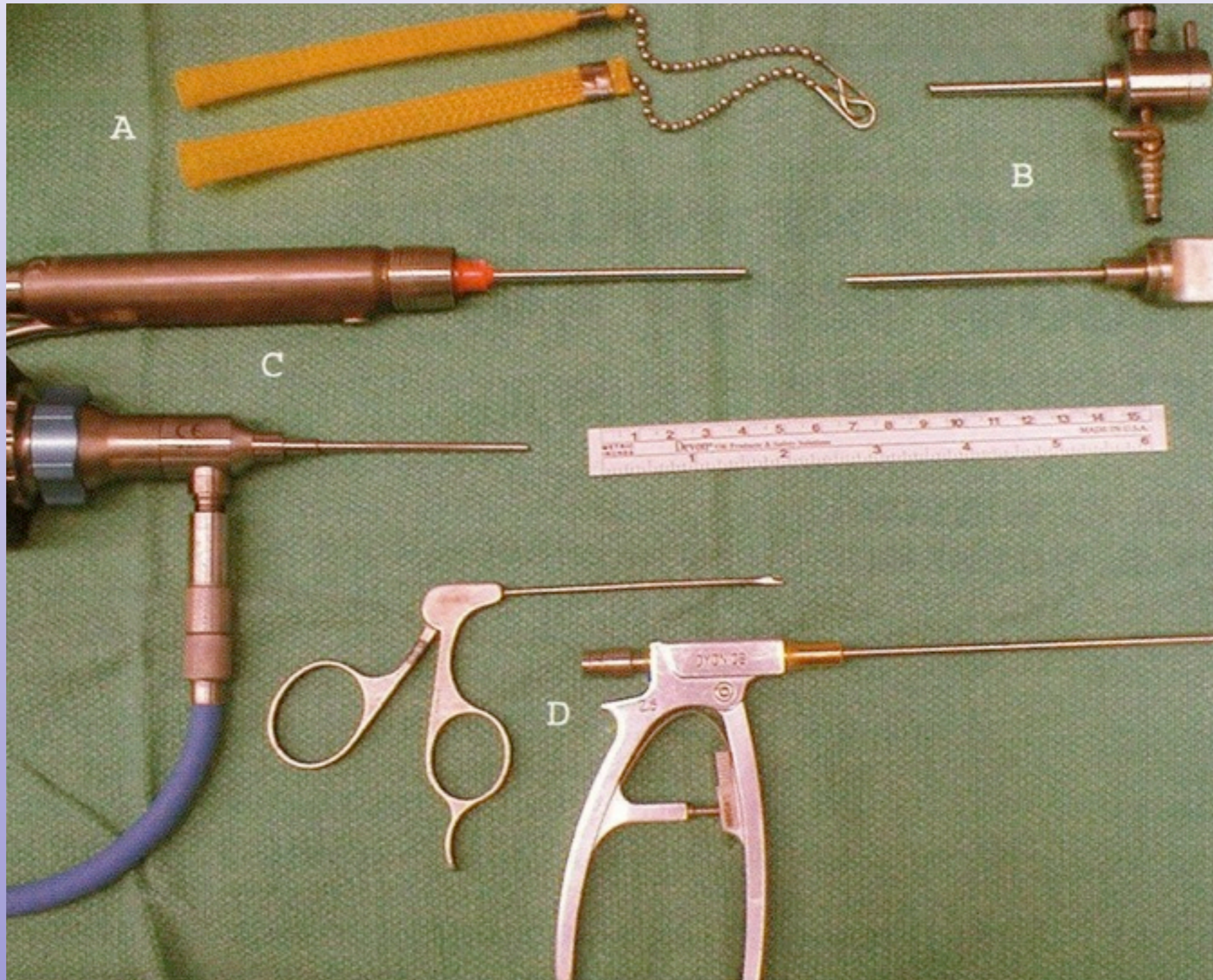
- Daghospitaal of ambulant
- algemene anesthesie of IVR of axillair block
- 2.7mm scoop



Installatie



Instrumenten



Enkele indicaties

- Diagnostisch
- Trauma: scapholunair letsel, polsfractuur
- TFCC debridement, hechting
- Dorsale polscyste, synovectomie
- Styloïdectomie, Wafer
- ...

Diagnostisch

- Aanslepende polspijn, ondanks conservatieve therapie
- Klinisch en technisch onderzoek inconclusief of negatief
- Bepalen van ernst van letsel (Scapholunair,...)

Scapholunair letsel

Table 14-3. ARTHROSCOPIC CLASSIFICATION OF CARPAL INTEROSSEOUS LIGAMENT TEARS

Grade Description	
I	Attenuation/hemorrhage of interosseous ligament as seen from the radiocarpal joint. There is no incongruity of carpal alignment in the midcarpal space.
II	Attenuation/hemorrhage of interosseous ligament as seen from the radiocarpal joint. Incongruity/stepoff as seen from midcarpal space. A slight gap (less than the width of a probe) between carpals may be present.
III	Incongruity/stepoff of carpal alignment is seen in both the radiocarpal and midcarpal space. The probe may be passed through the gap between carpals.
IV	Incongruity/stepoff of carpal alignment is seen in both the radiocarpal and midcarpal space. Gross instability with manipulation is noted. A 2.7-mm arthroscope may be passed through the gap between the carpals.

Data from Geissler WB, Freeland AE, Savoie FH, et al: Intracarpal soft tissue lesions associated with an intra-articular fracture of the distal end of the radius. J Bone Joint Surg Am 78:357-365, 1996.

Scapholunair letsel

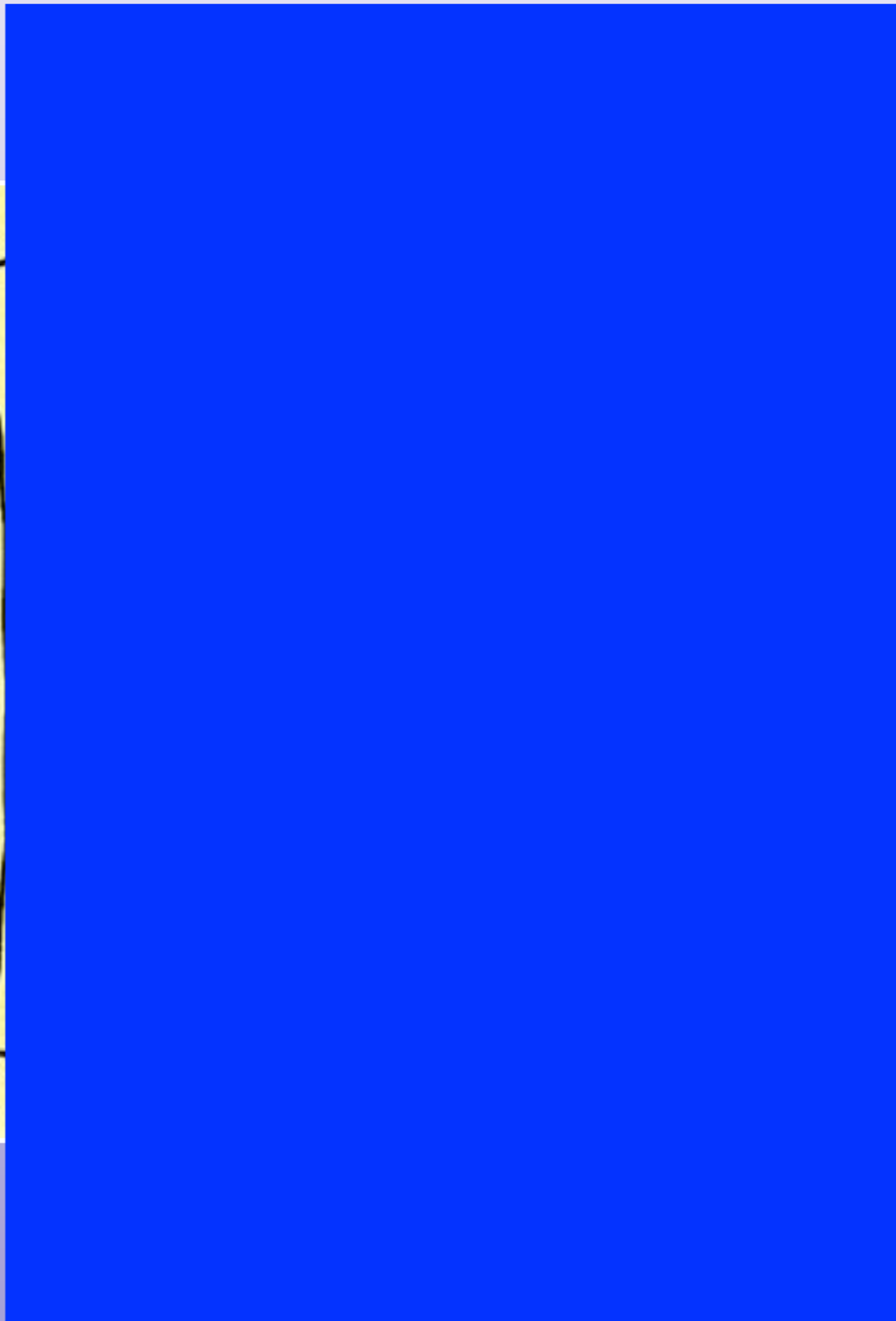


SL pinning



Scapholunaire letsels

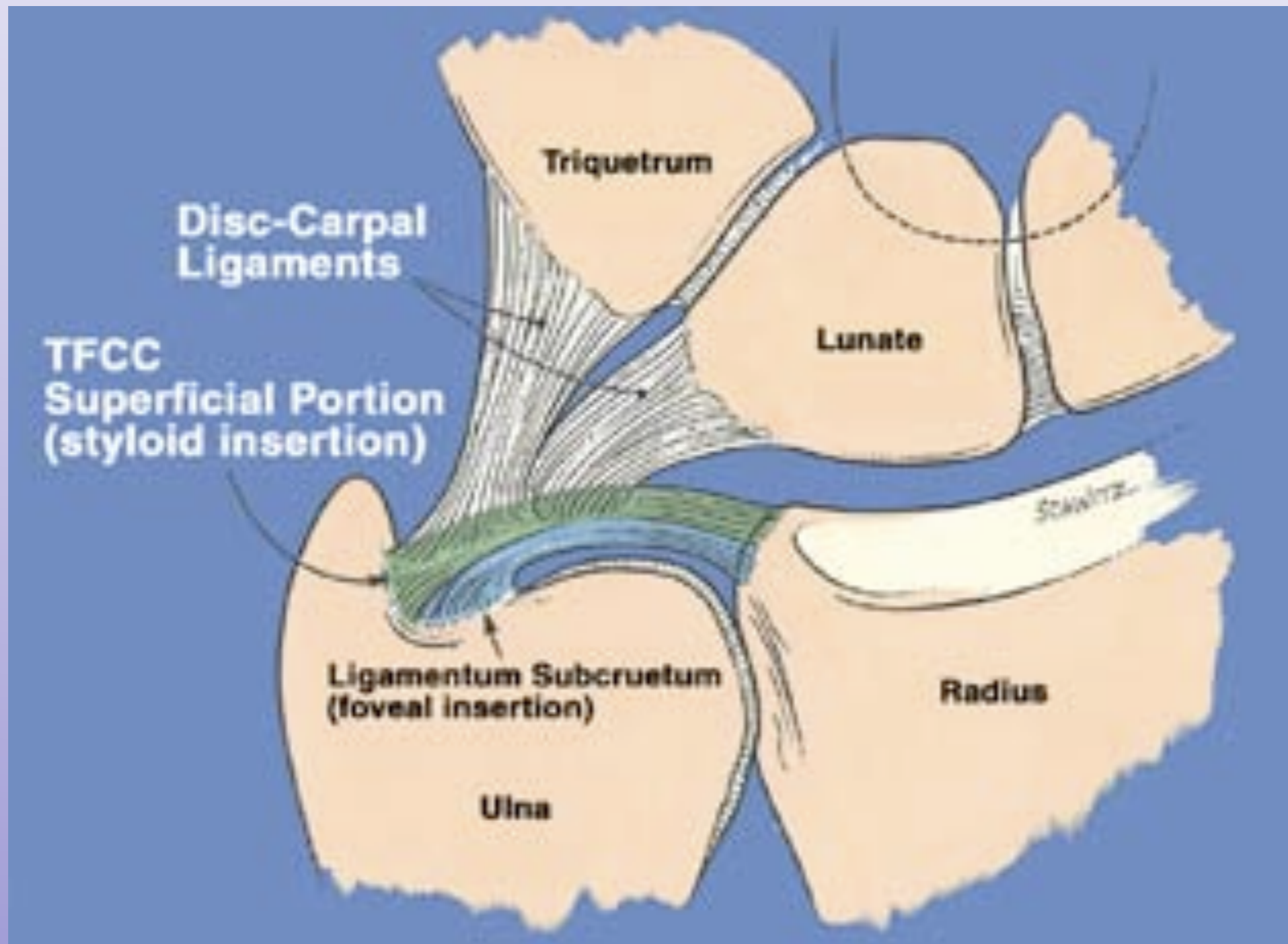
- vaak laattijdige diagnose
- moeilijke behandeling, met zelden 100% bevredigend resultaat
- vaak later SLAC-wrist



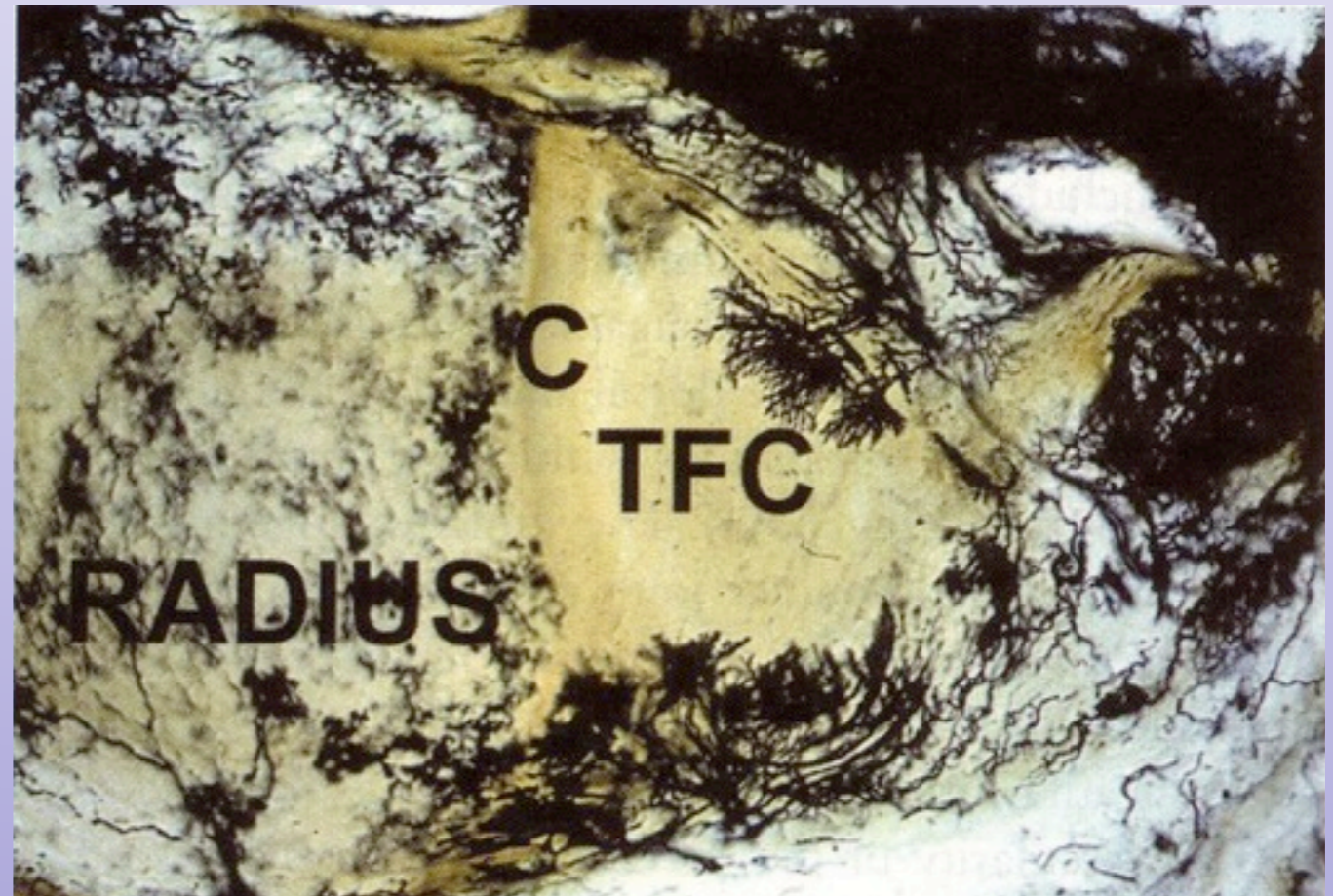
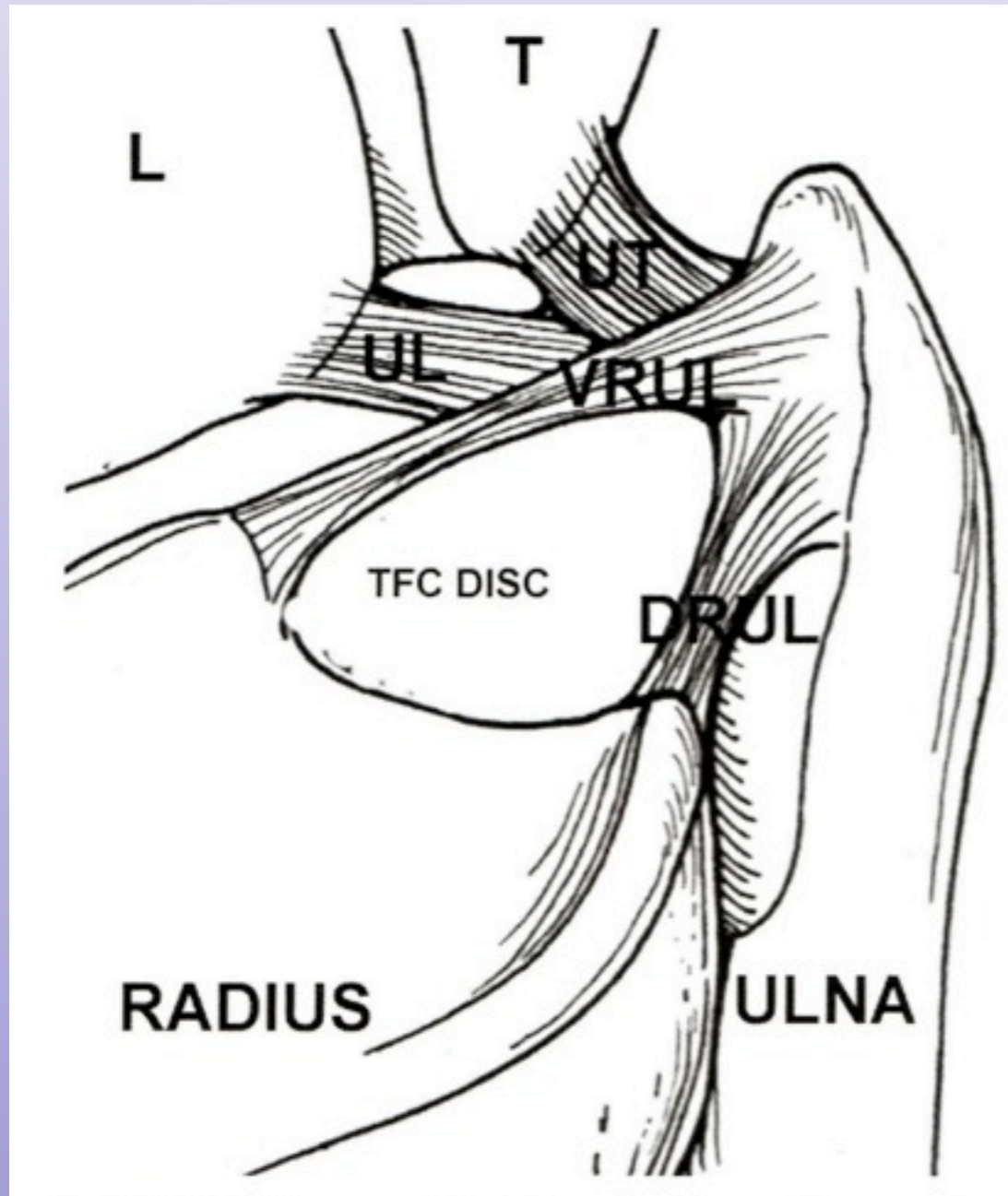
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- Dorsale polscyste, synovectomie
- Styloïdectomie, Wafer

TFCC lesions

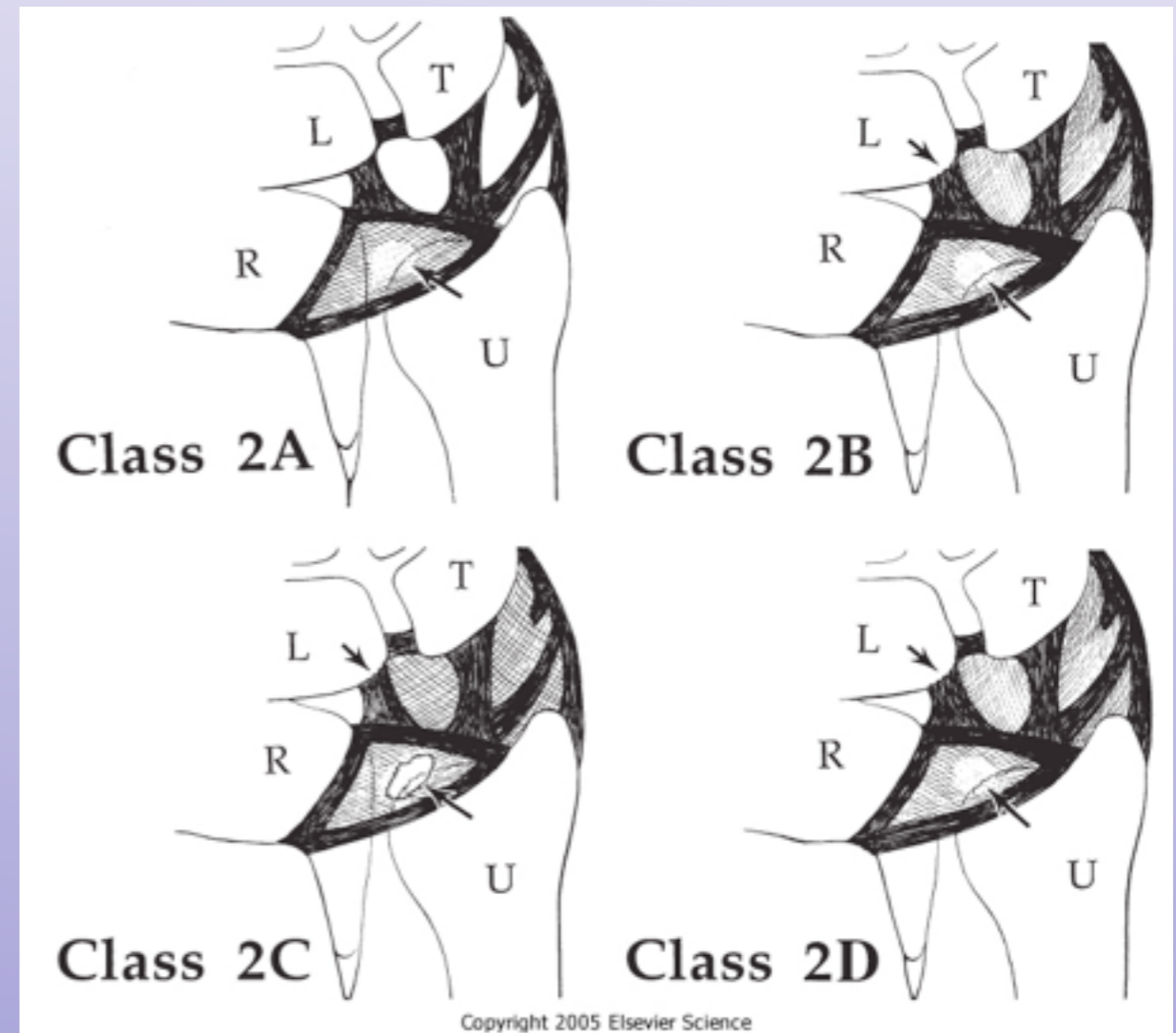


TFCC



TFCC letsel

- Pronatie, (hyper)extensie tegen weerstand
- Torsietrauma
- Degeneratief

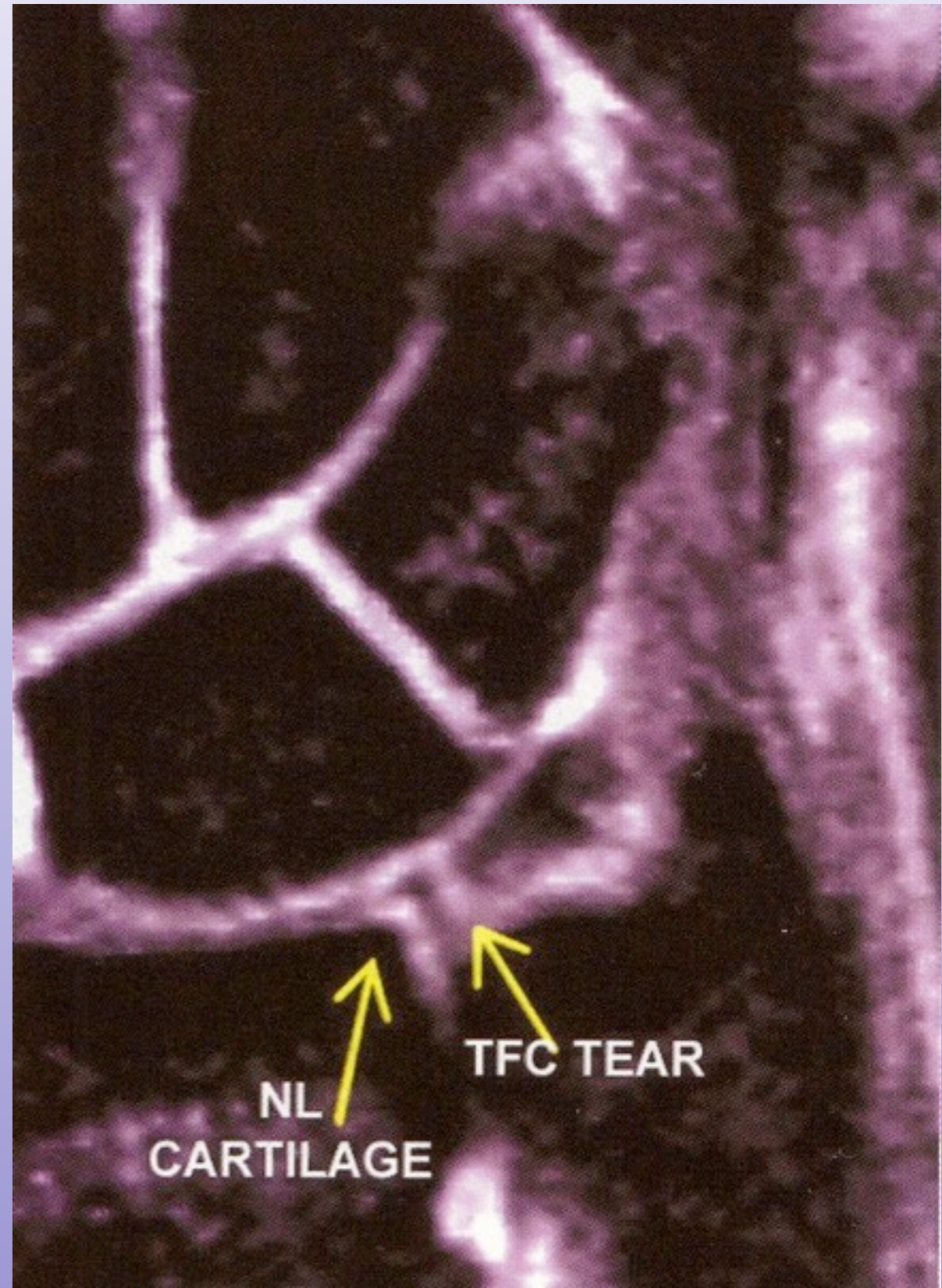
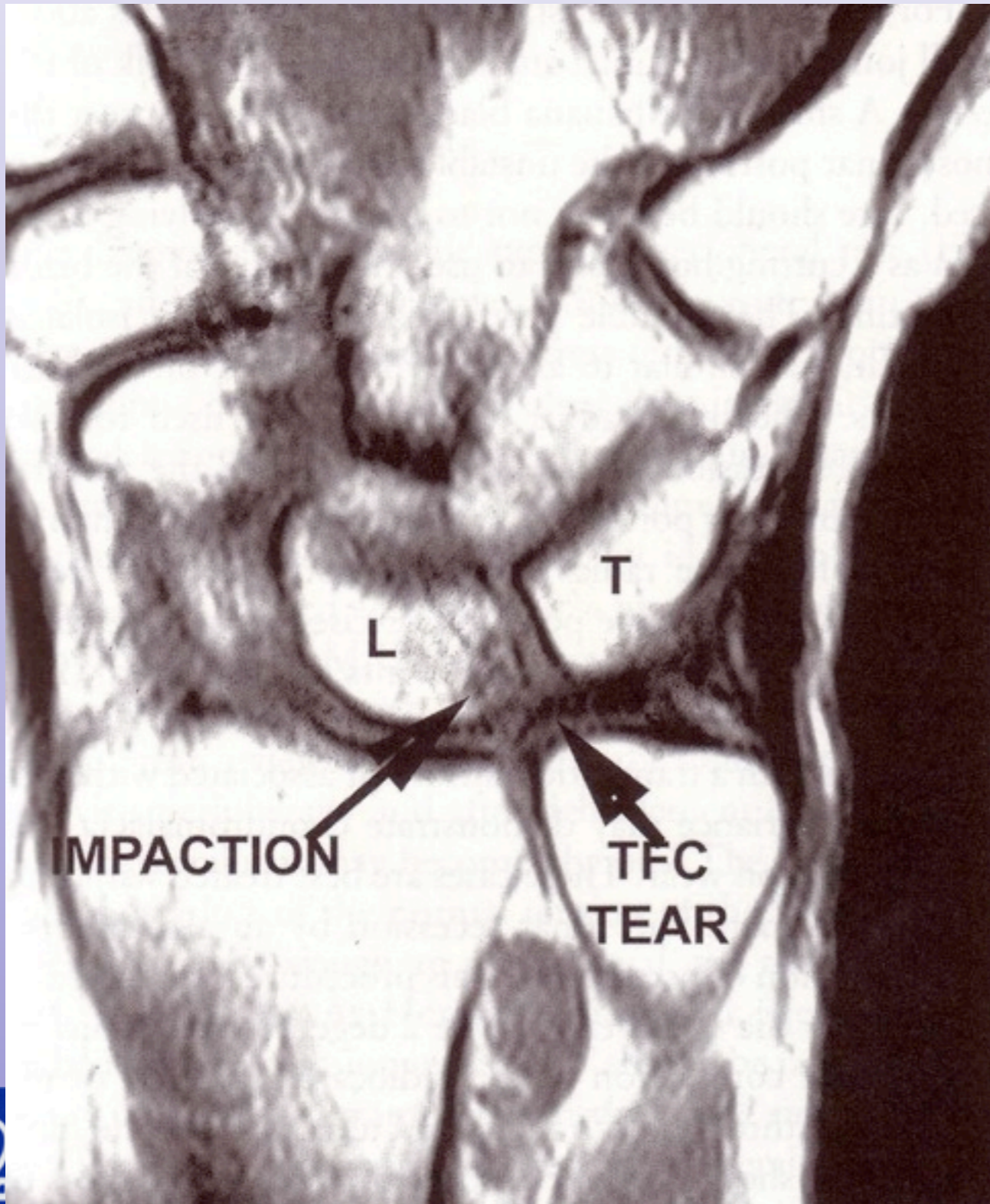


Kliniek TFCC

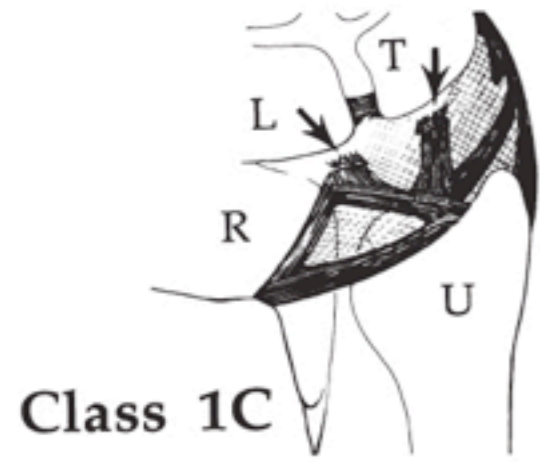
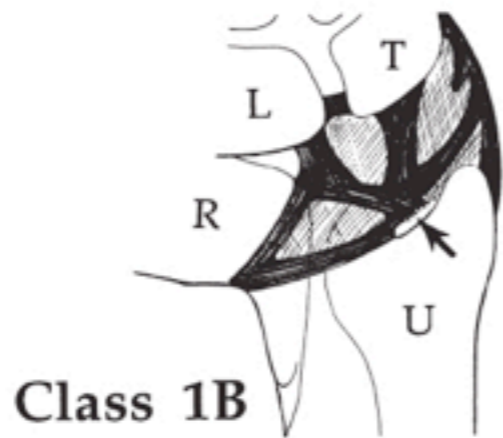
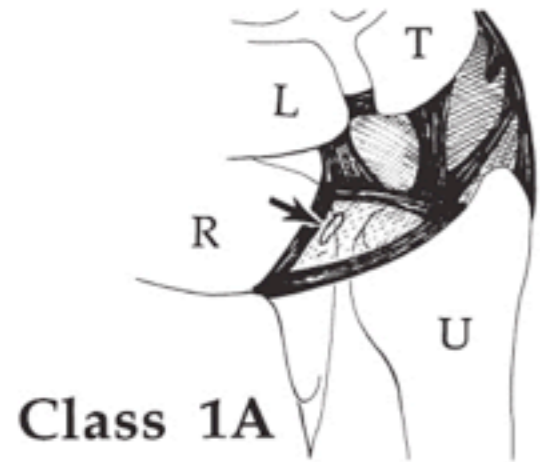
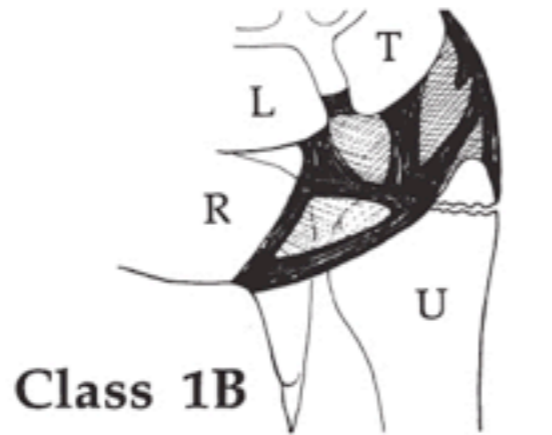
- Ulnaire polspijn
- Pijn bij draai-en wringbewegingen
- Drukpijn TFCC
- Whipple test
- TFCC test



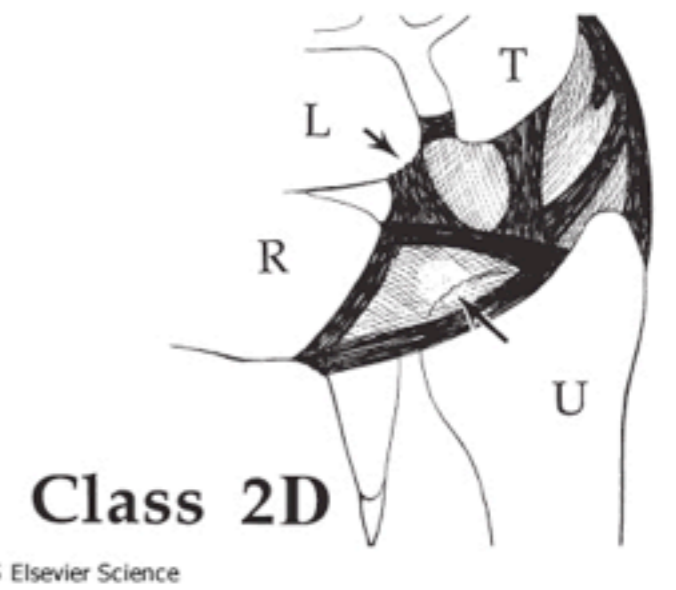
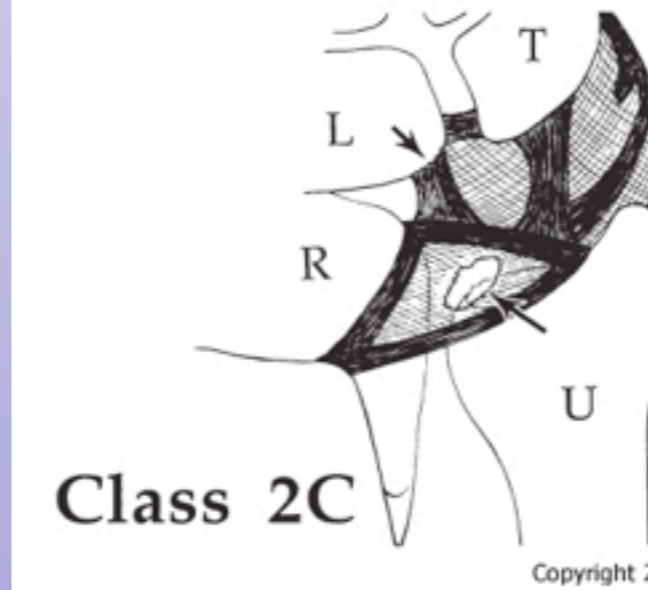
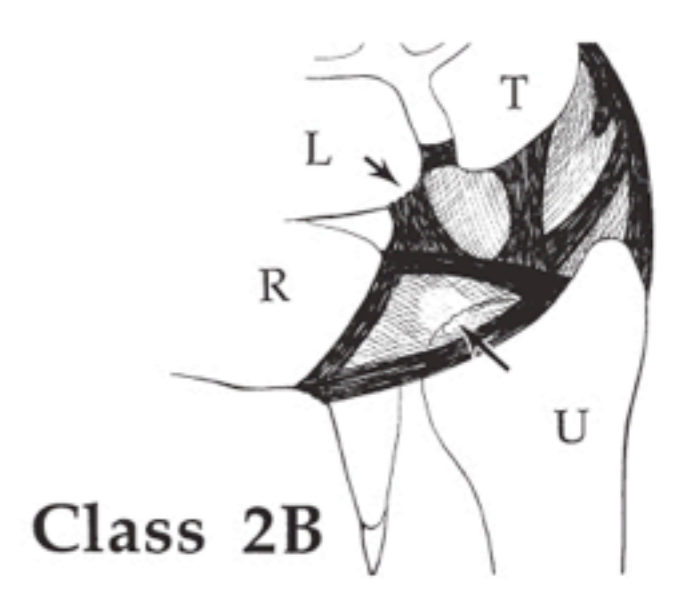
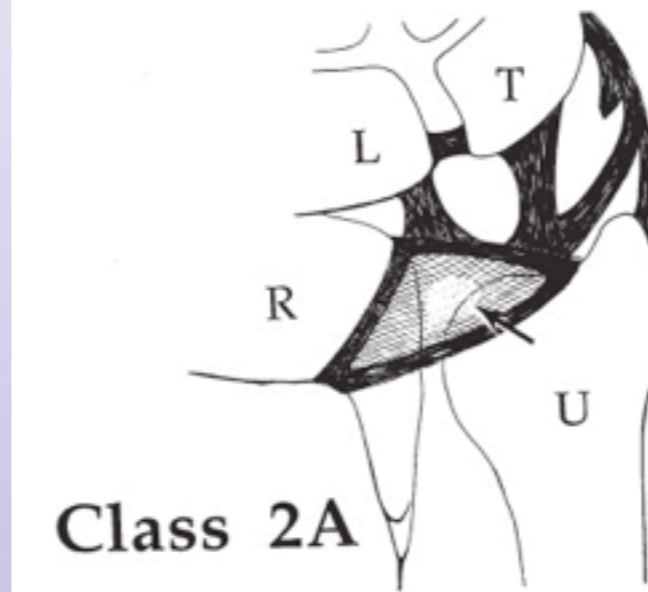
NMR



Classificatie TFCC#



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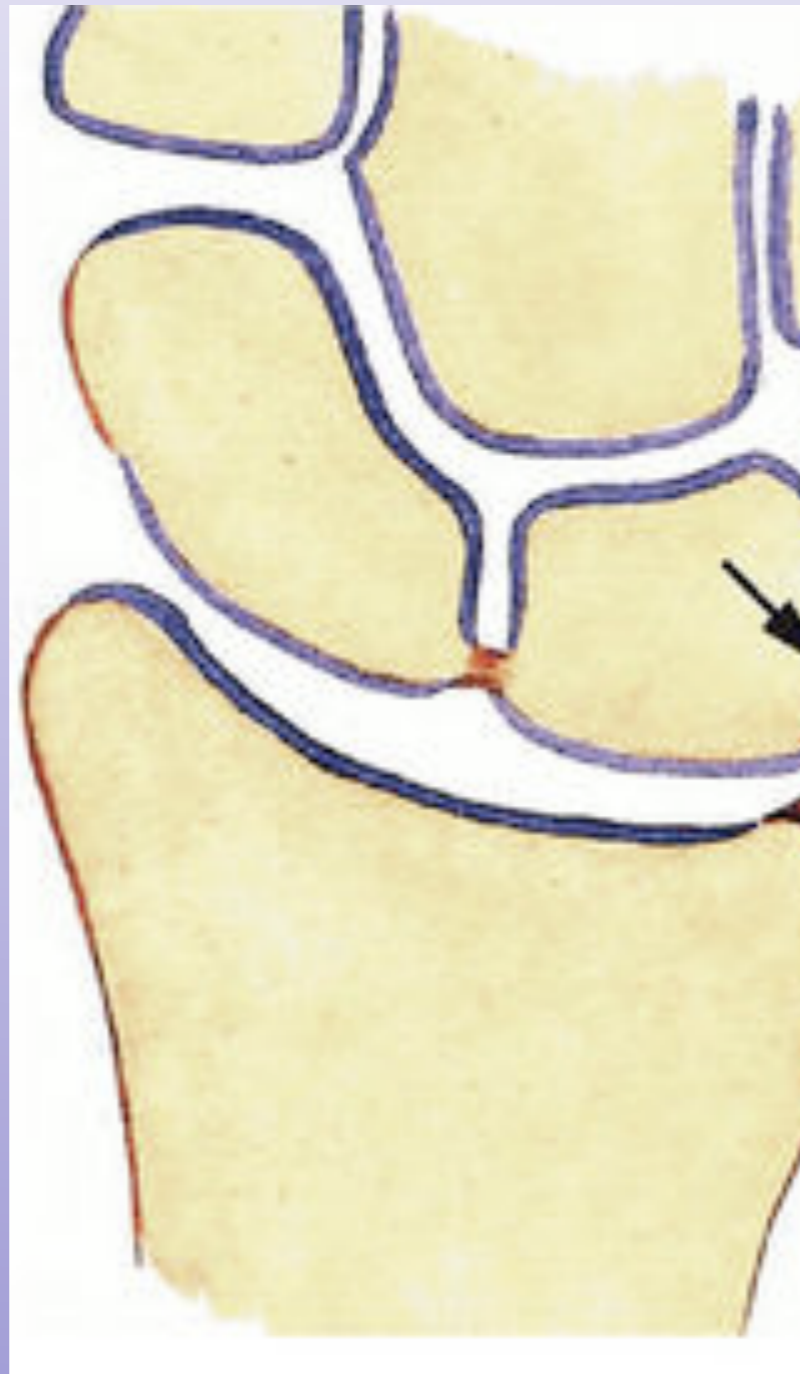
Ulnar impaction



TFCC repair



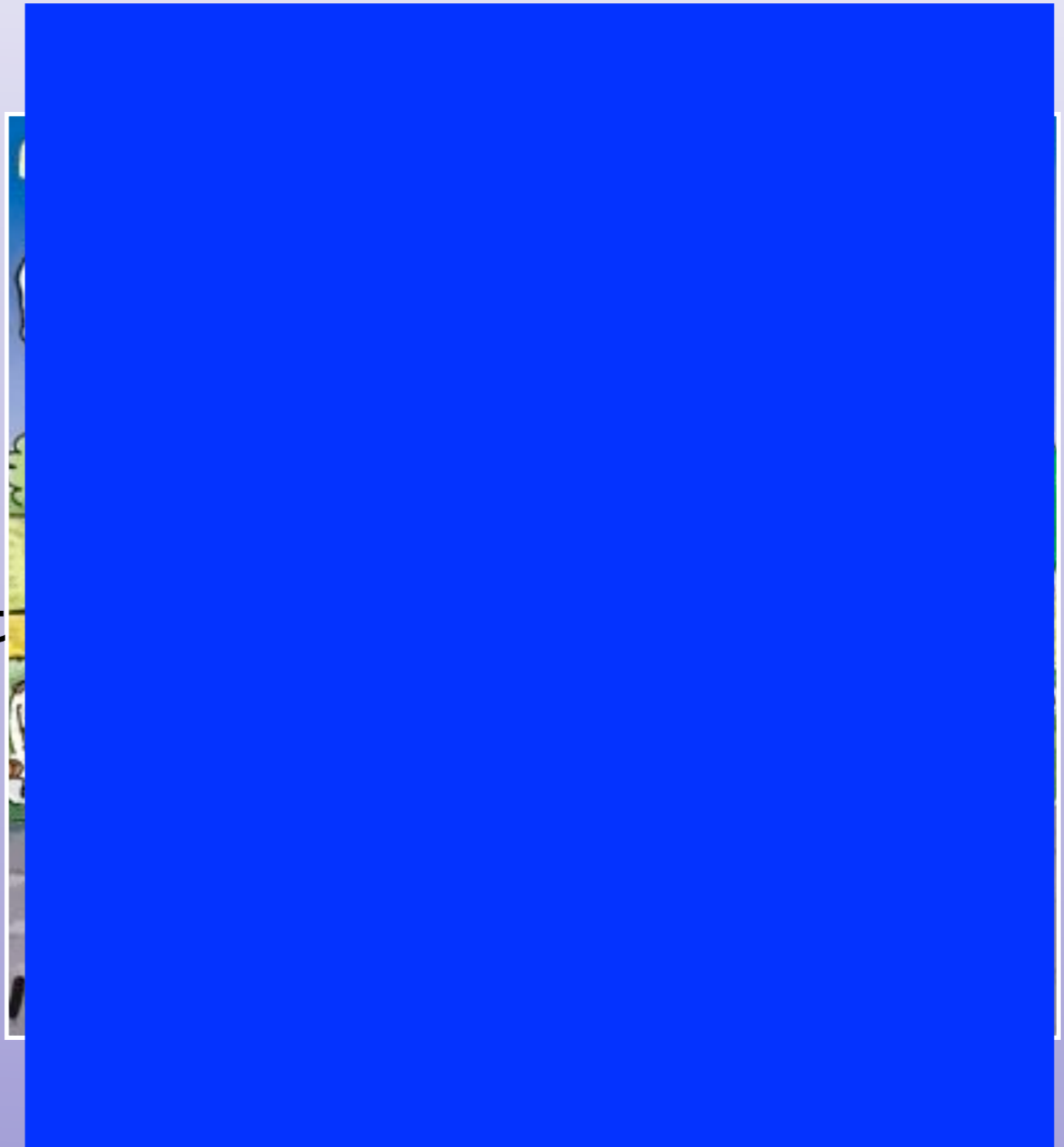
Ulnar impaction



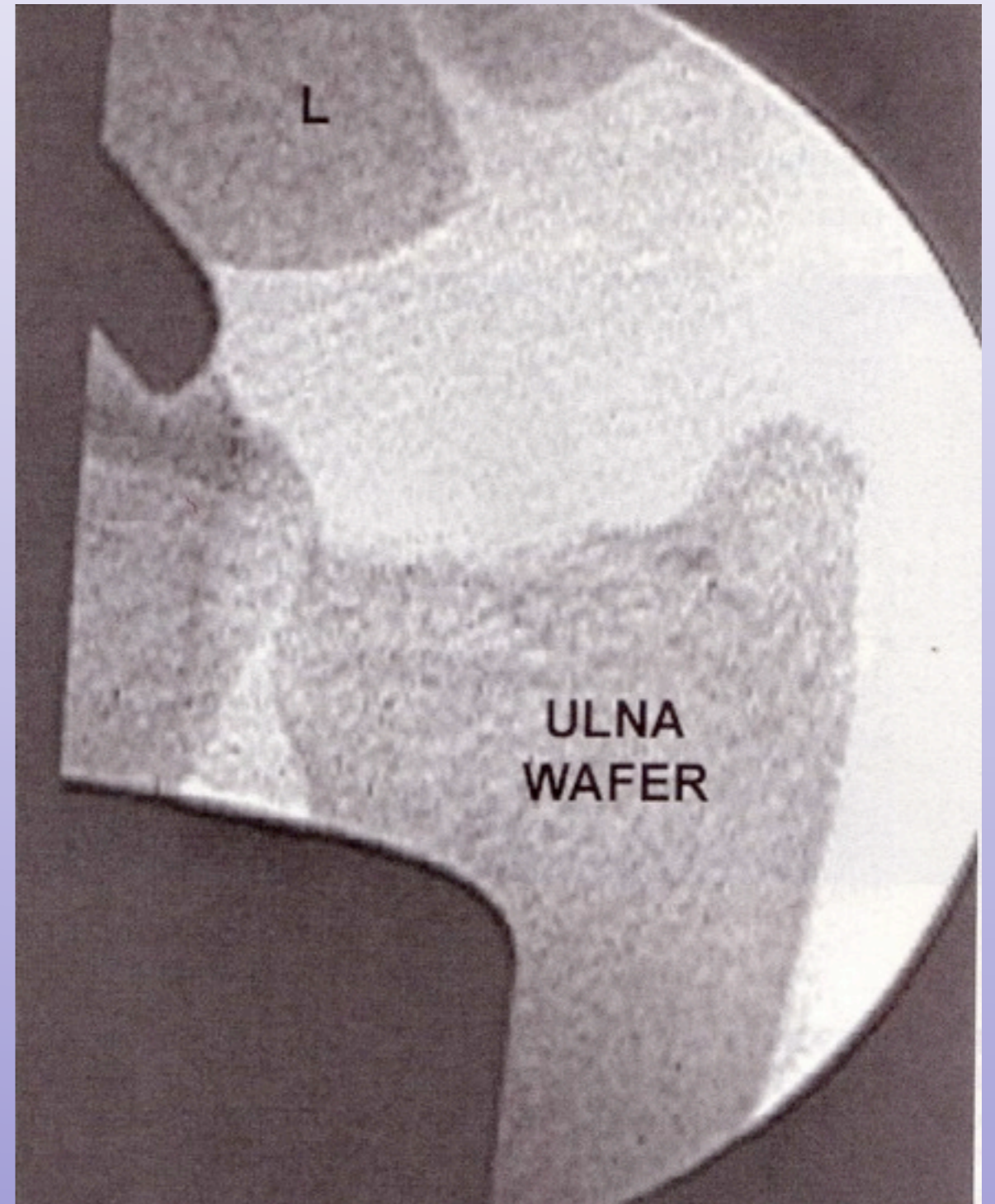
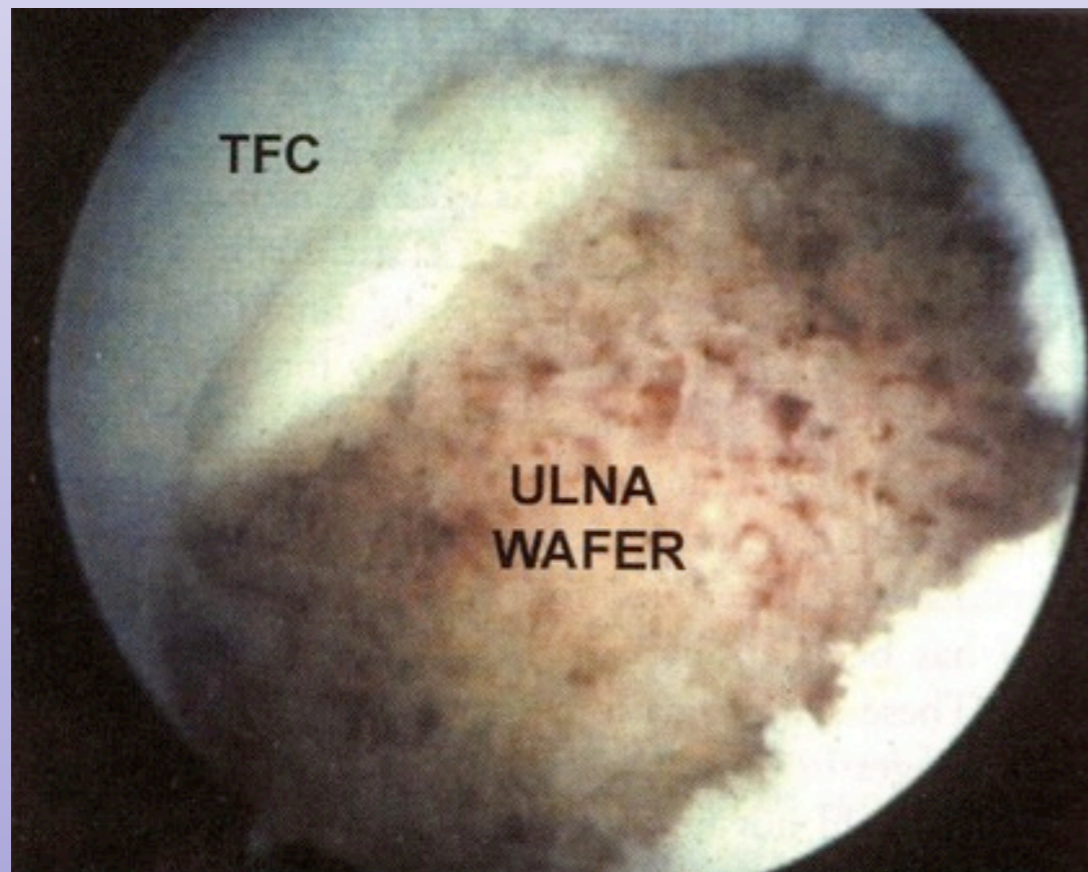
Ulnar impaction

BEHANDELING:

1. Conservatief
2. Arthroskopie, debridement
3. Ulna verkorting of arthroscopische Wafer



Ulnar Impaction: Wafer



TFCC letsel

- Traumatische scheuren:
 - 6 weken Munster-cast na hechting
 - 70-80% succes*
- Degeneratieve scheuren:
 - debridement vaak zeer dankbaar
 - soms ulnaverkorting of Wafer nodig

Enkele indicaties

- Diagnostisch
- Trauma: scapholunair letsel, polsfractuur
- TFCC debridement, hechting
- Dorsale polscyste, synovectomie
- Styloïdectomie

Dorsale cyste

- Klinisch vaak duidelijk
- Rx en Echo nodig (cyste radiocarpaal of midcarpaal)
- Alleen ECHT hinderlijke cyste(s)
- Geen last, Geen operatie!!



Debridement tot op extensoren

UMC portal

Postoperatief

- steristrips op de wonden
- 2 weken gips
- nadien progressief mobiliseren, evt brace af te bouwen
- Herstel 6 weken
- Resultaat vergelijkbaar met open resectie*

*J Hand Surg Am. 2009 Mar;34(3):395-400

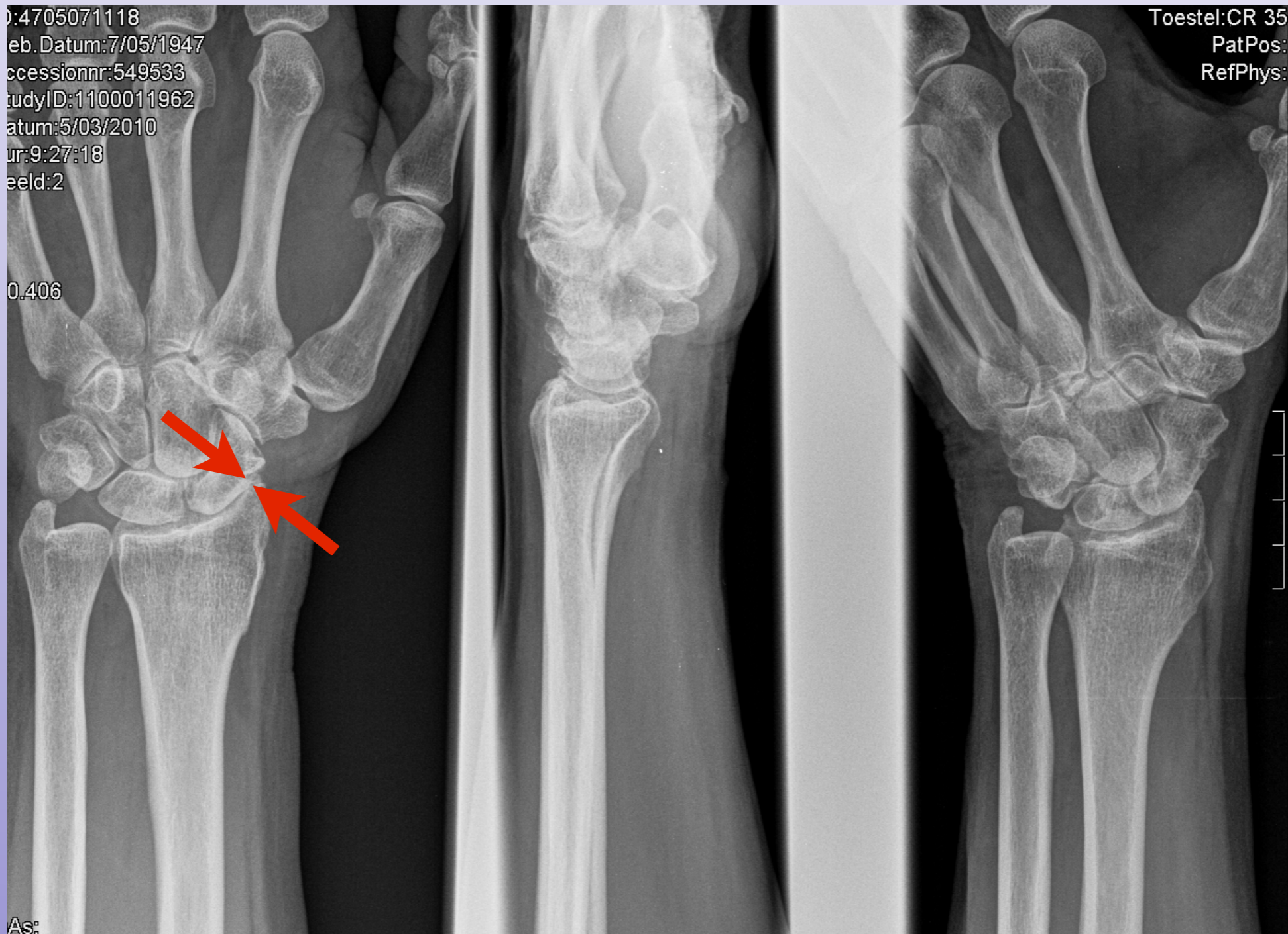
Enkele indicaties

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Arthrose

- ScaphoLunar Advanced Collaps (SLAC)
- Scaphoid Nonunion Advanced Collaps (SNAC)
- Posttraumatisch
- (RA)

SLAC-wrist





Besluit

polsarthroscopie

- Van diagnostische naar therapeutische arthroscopie
- Preop diagnose en technische onderzoeken
- Van algemene naar locoregionale anesthesie

Bedankt !!



www.associatie-orthopedie-lier.be

