

Degenerative rygsygdomme

Afdelingslæge, klinisk lektor

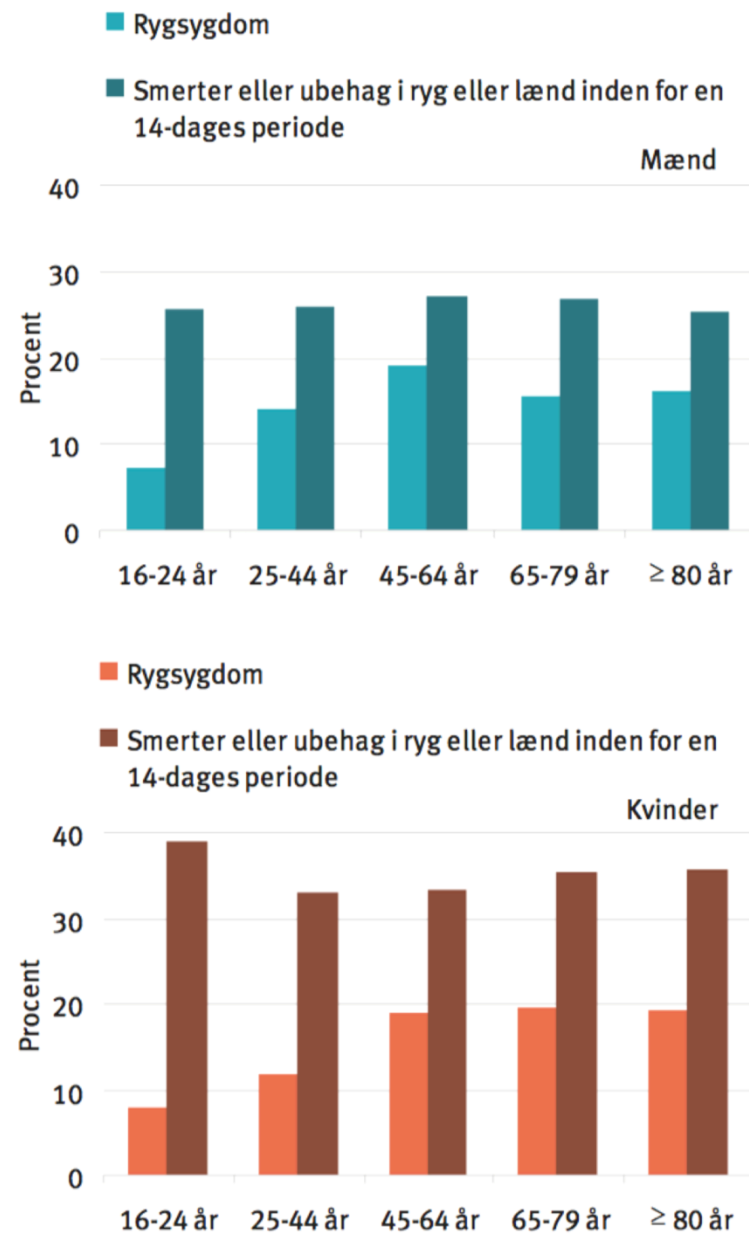
Videncenter for Reumatologi og Rygsygdomme

Jørgen Degn



Symptomer
fra ryggen

Figur 7.3. Forekomst (%) af lænderygssmerter blandt mænd og kvinder i forskellige aldersgrupper. 2005.



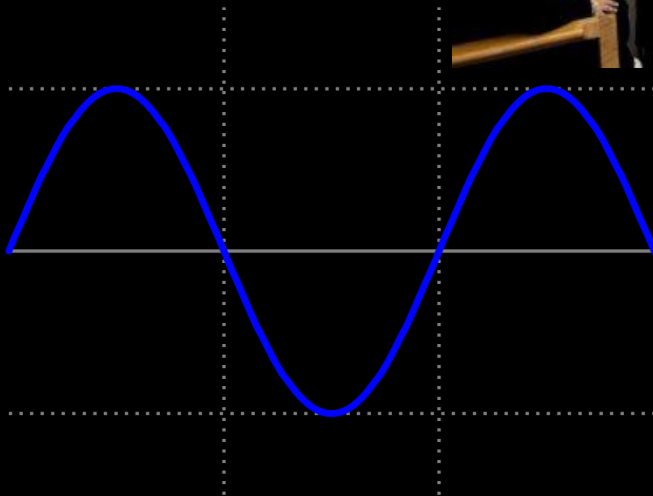
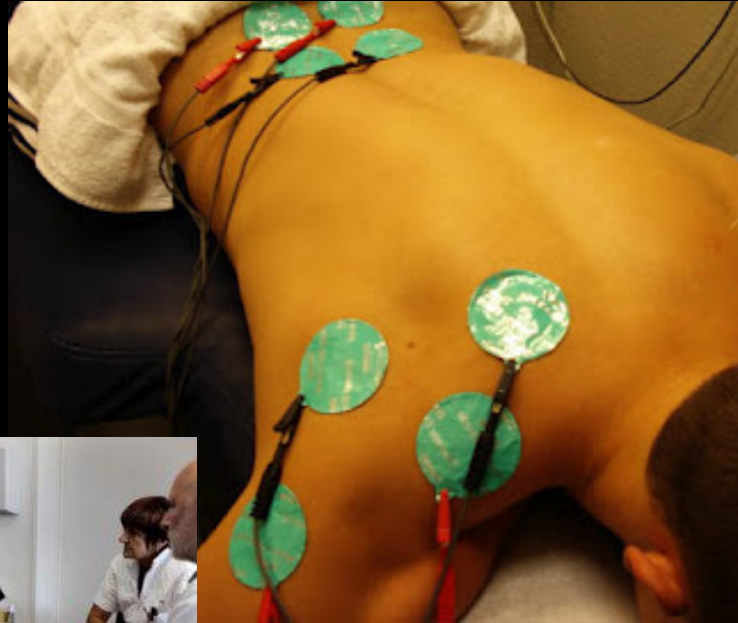
Kilde: Sundheds- og syglighedsundersøgelsen 2005.

Den kliniske diagnose & smertegeneratoren

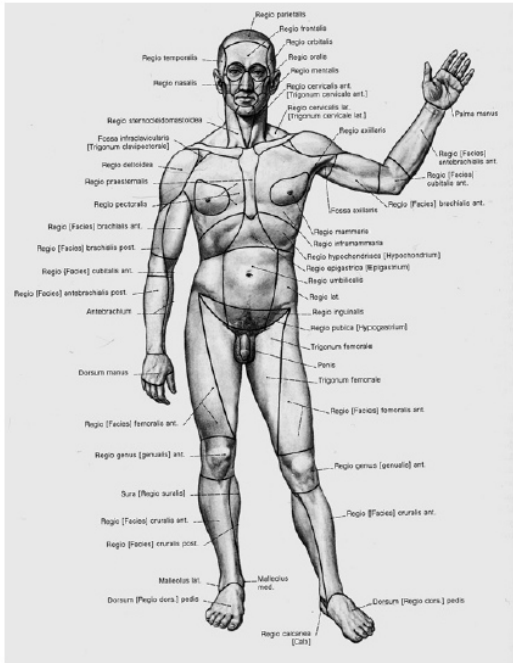
- Smerte i huden
- Muskelsmerter (myoser)
- Diskogene smerter (DDD)
- HIZ-læsion
- Neuropatiske smerter
- Nerverodssmerter (radikulopati)
- Facetledssmerter (ægte led med smertefibre)
- Hvirvelbrud (fraktur)
- Meddelt smerte fra andet organ
- Instabilitet (spondylolistese)
- Infektion (spondylodiskitis)
- Skvatryg (Kissing spine, Basstrup)
- SI-led
- Hoftartrose
- Tumor
- Scheuermann
- Axial artrit
- Simvastatin



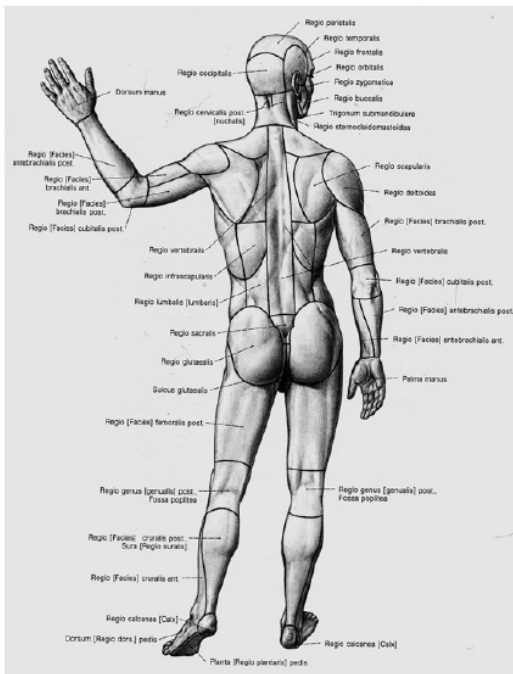
Smertekarakter



Smertediagrammet



SMERTE (rød, x)
MYREKRYB (grøn, Δ)
FØLELSESLØSHED (blå, o)
NEDSAT BEVÆGELIGHED (□)



Styrke (VAS) Varighed Karakter Dermatom

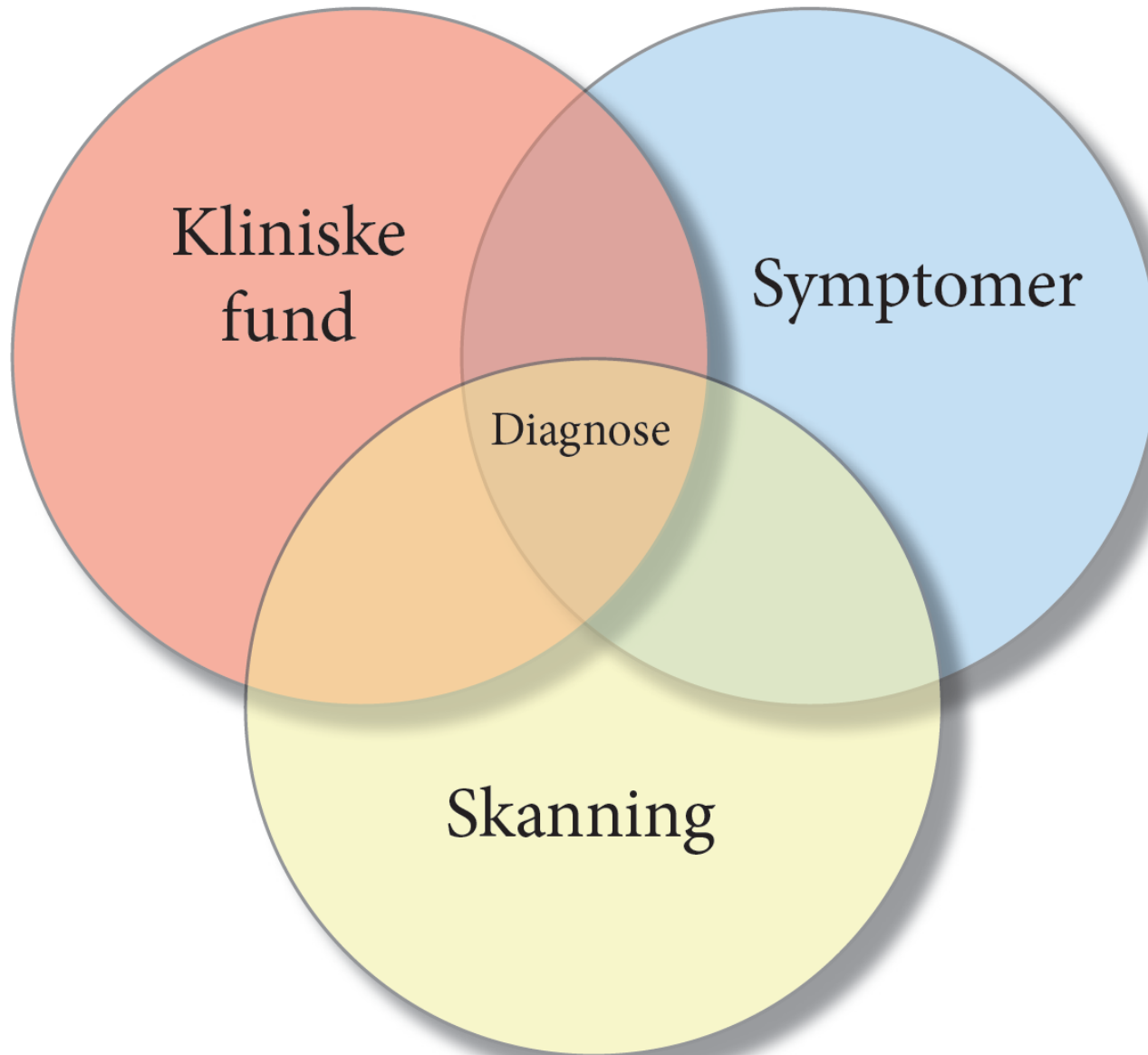
Smertetærskel Triggerpunkter

Klinisk diagnose?

Hvor sidder læsionen i nervesystemet?

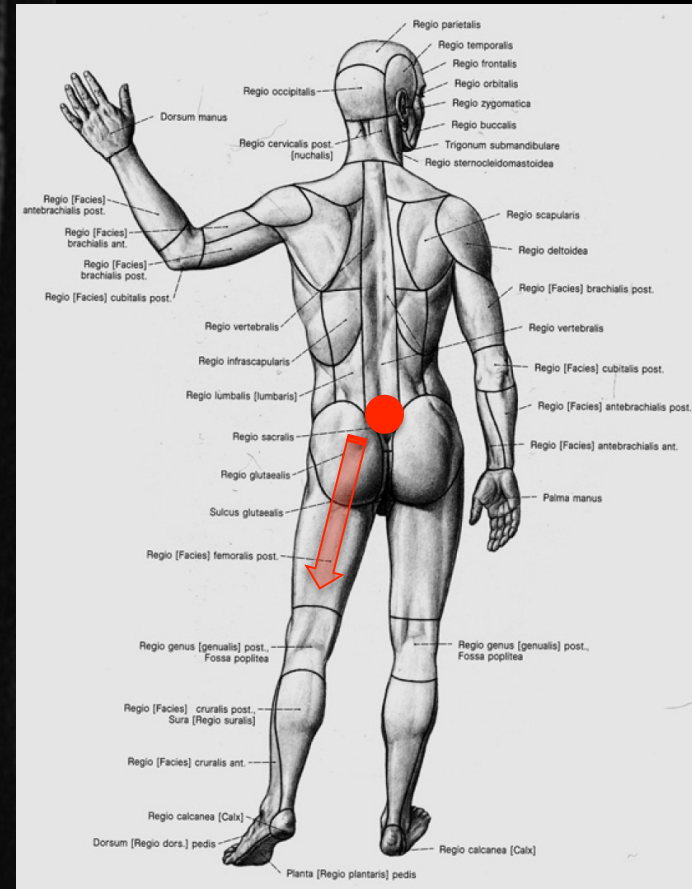
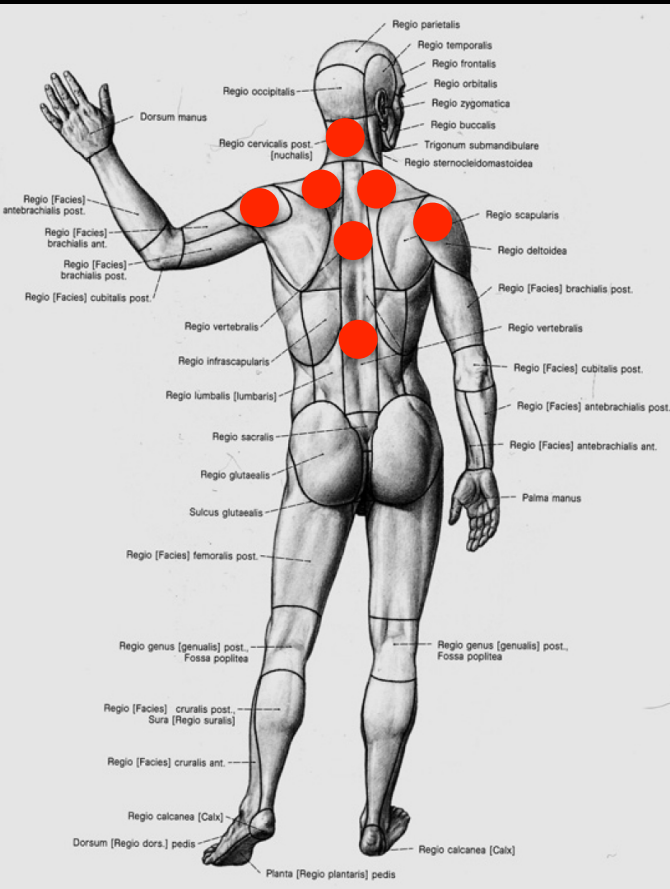
- Størhjernen, lillehjernen, kranienerver
- Cervikale rygmarg eller nerverod
- Thorakale rygmarg eller nerverod
- Lumbale nerverødder
- Sacrale nerverødder
- Perifere nerver
- Højre / venstre side





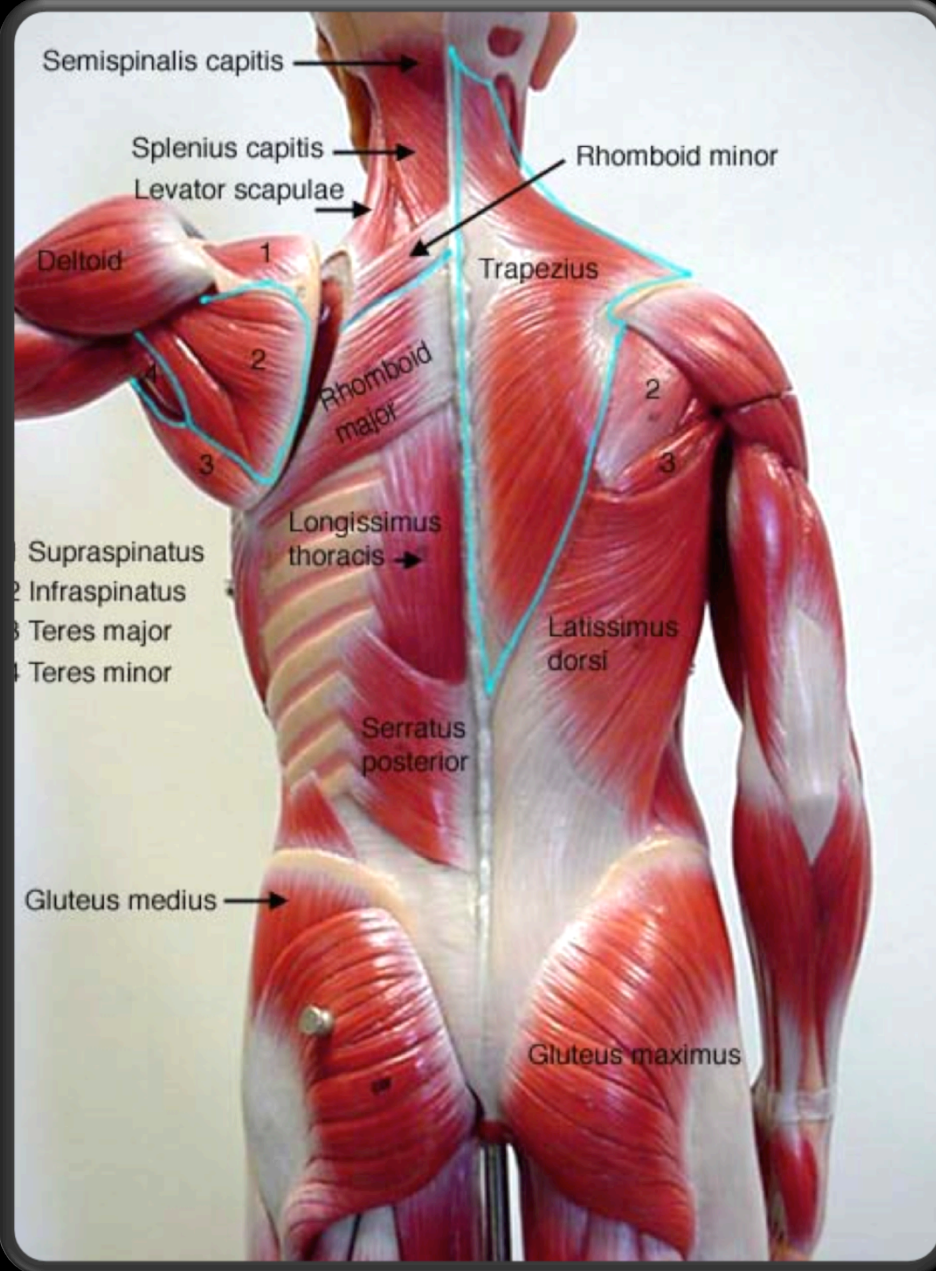
Hvilken smertegenerator?

Diskus? Facetledsartrose? Rodtryk? Myoser? Gigt?

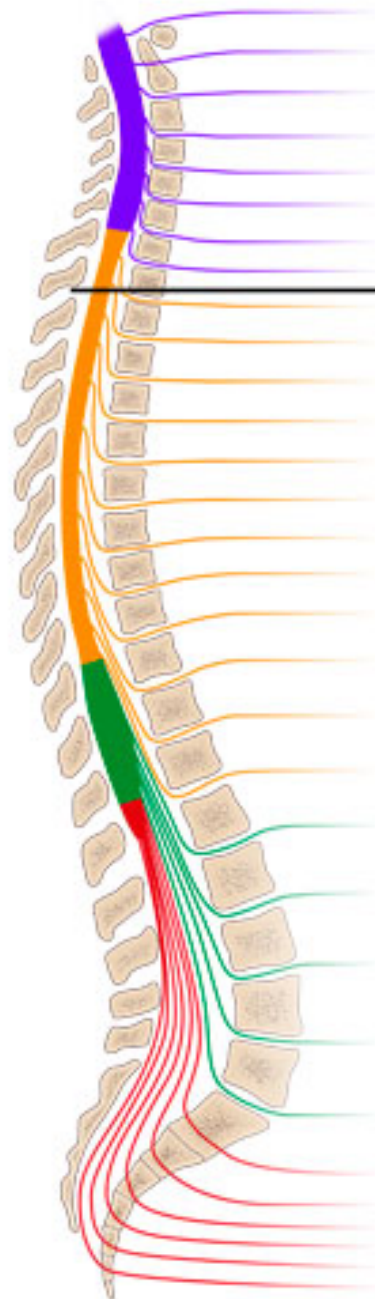


Anatomi





Acute Spinal Cord Injury

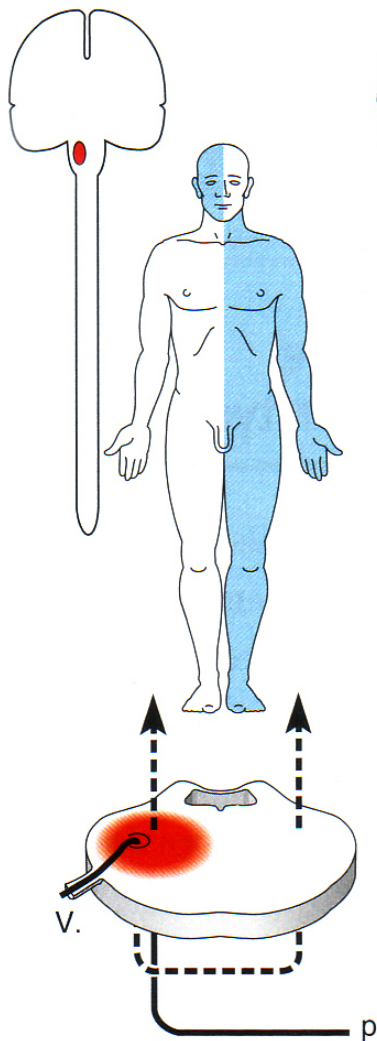


Quadriplegia
(loss of movement
and sensation
in all four limbs)



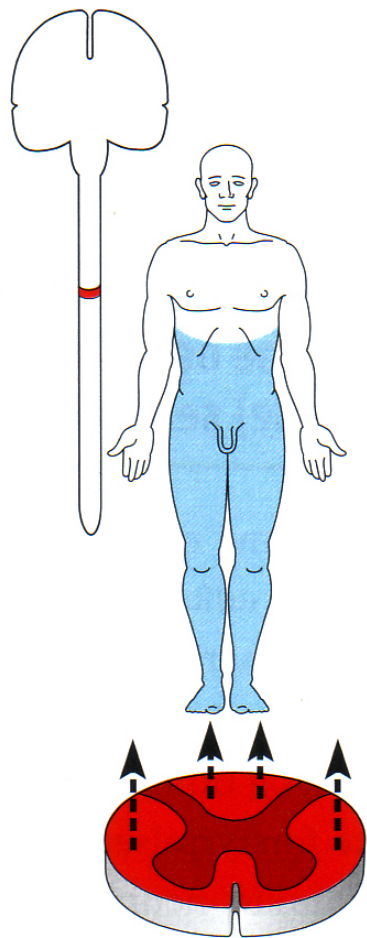
Paraplegia
(loss of movement
and sensation
in the lower half
of the body)





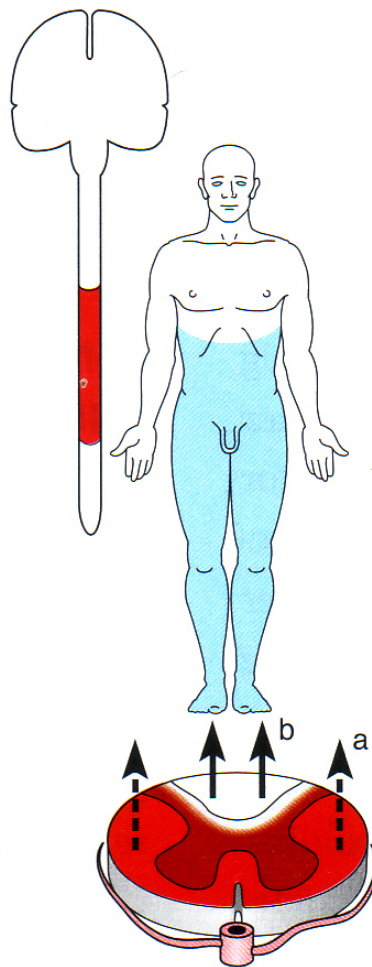
Hjernestammelæsion (halvsidig)

(fx infarkt)
Tab af smerte- og
temperatursans sam-
sidigt i ansigtet
(n. trigeminus, V.) og
modsidigt på krop
og ekstremiteter (p).



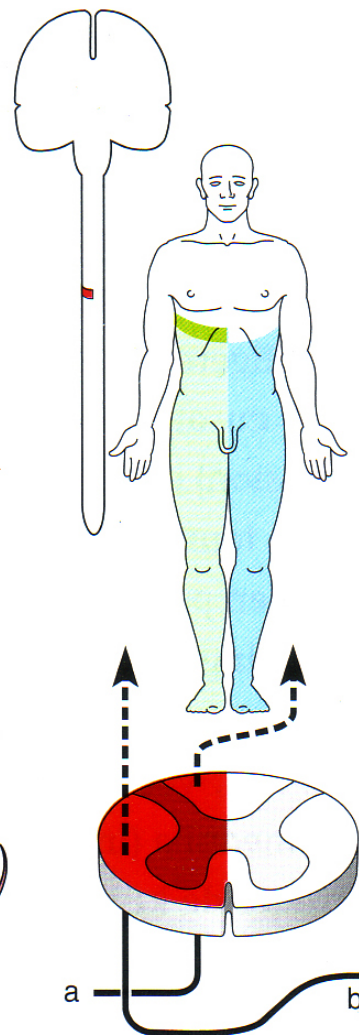
Medullært tværnsnitssyndrom

(fx kolumna-metastase)
Tab af alle senso-
riske modaliteter
distalt for det på-
gældende medul-
lære segment.
(+ paraparesis inf.)

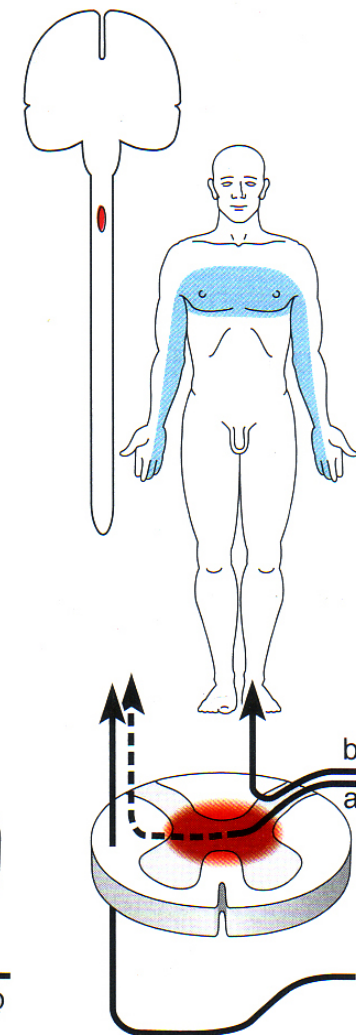


Spinalis anticus syndrom

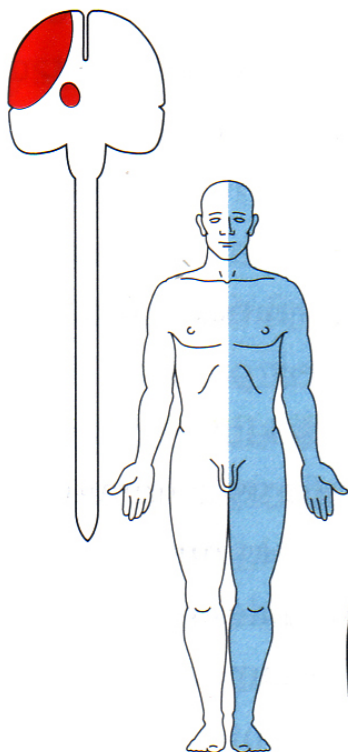
(fx trombose i
a. spinalis ant.)
Tab af smerte- og
temperatursans (a),
men bevaret stillings-
og vibrationssans (b).
(+ paraparesis inf.)



**Brown-Séquard
syndrom** (Halvsidigt
medullært tværnsnitssyndrom)
Samsidigt tab af
stillings- og vibrations-
sans (a), modsidigt tab
af smerte og tempera-
tursans (b).
(Samsidigt benparese)

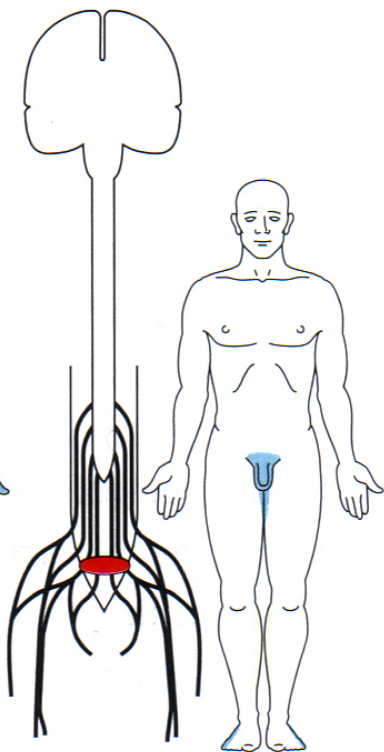


**Central medullær læsion
(cervicalt)** (fx kontusion)
Kyras-formet dissocieret
sensibilitets udfald sva-
rende til flere dermatomer
med tab af smerte og
temperatursans (a), men
bevaret berørings- og
proprioceptiv sans (b).
(Armparese)



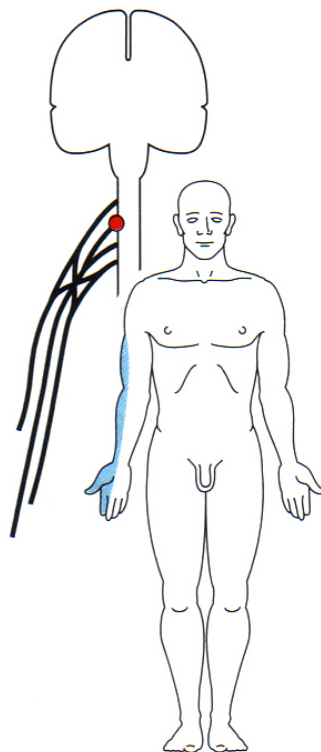
Sensorisk cortex eller thalamus

(fx apopleksi) Modsidigt hemiformt føletab. For sensorisk cortex desuden astereognose og sensorisk inattention.



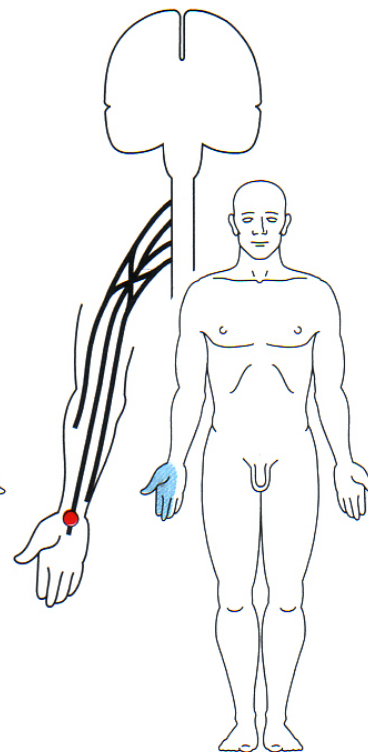
Cauda equina syndrom

(fx sakrale nerverødder S1-S5 ved stor L5 prolaps) Sensorisk tab i ridebukseområdet og S1-dermatomer.



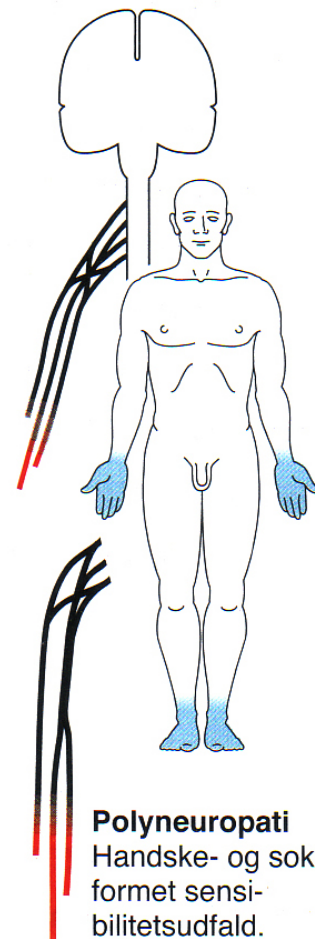
Radikulopati

(fx 6. cervikale nerverod (ved cervical diskusprolaps C5/6)) Sensibilitetstab i det pågældende dermatom.



Mononeuropati

(fx n. medianus ved carpaltunnelsyndrom) Sensibilitetstab sv.t. den pågældende perifere nerve distalt for læsionsstedet.

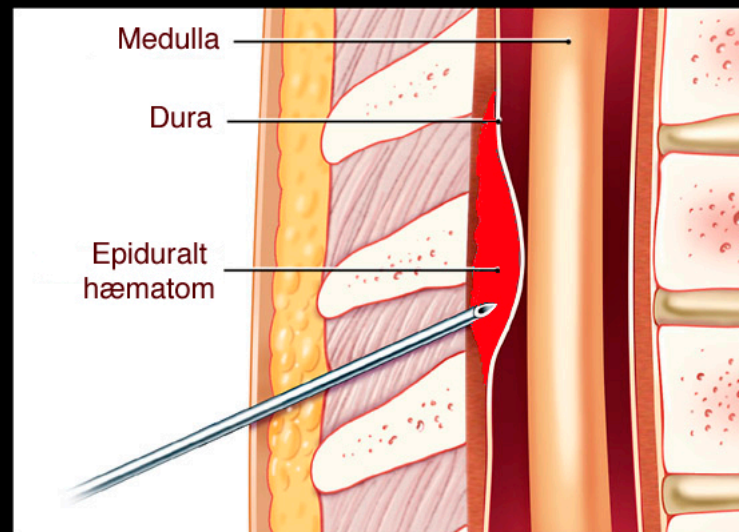
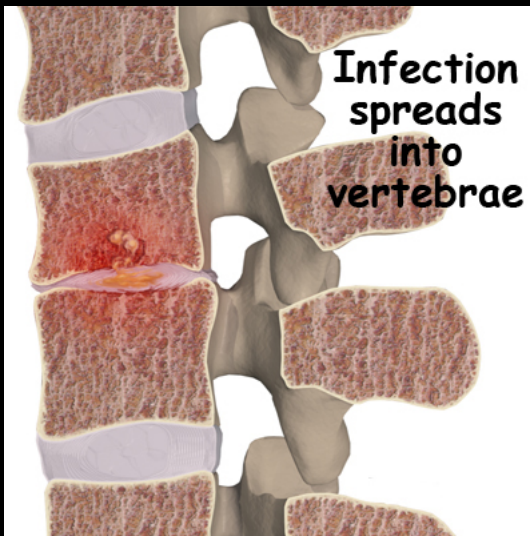
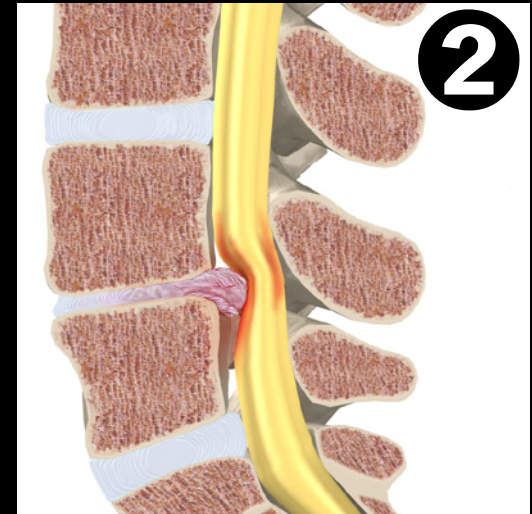
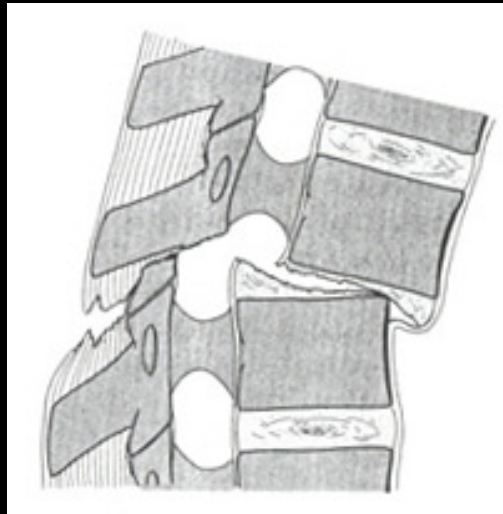
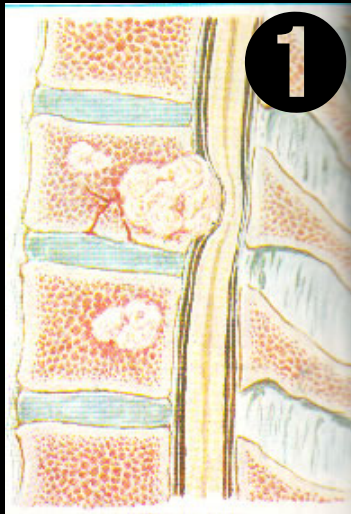


Polyneuropati

Handske- og sokformet sensibilitetsudfald.

Årsagsforhold

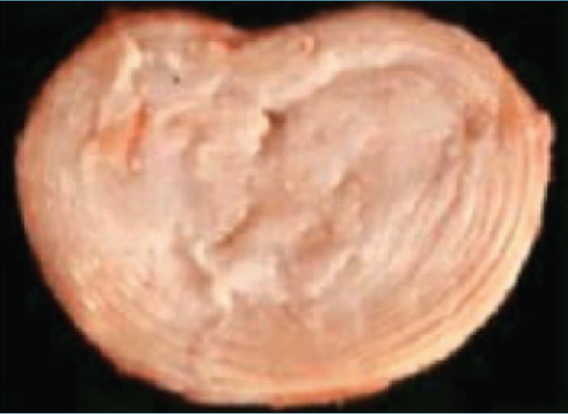
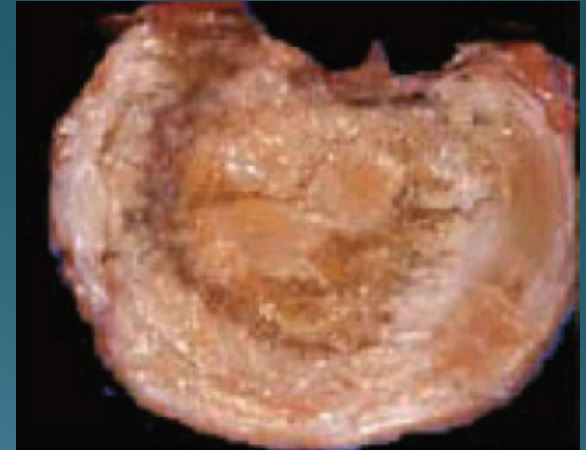
Årsager til nervepåvirkning



Årsag til diskusdegeneration? ("slidgigt" i ryggen)



Årsager til diskusdegeneration



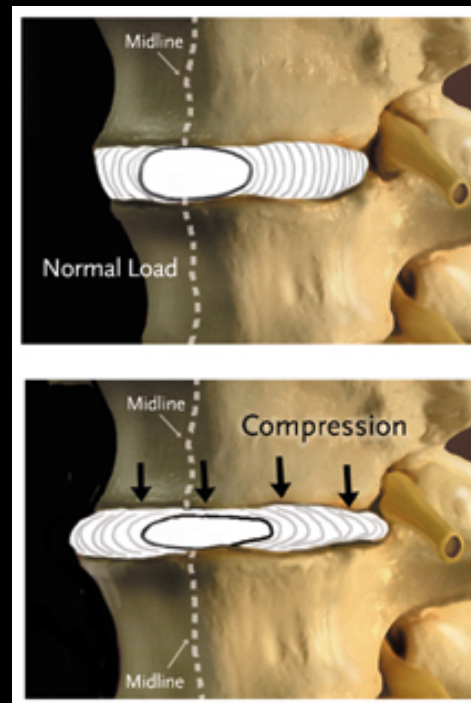
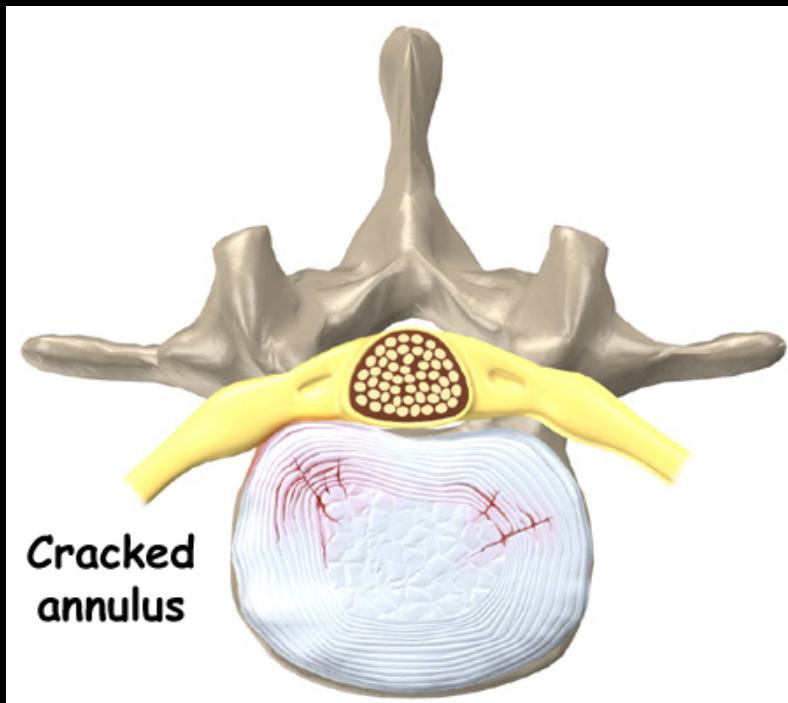
Multifaktoriel kumulativ model

- Familiær disposition & genetik: ca. 60%
- Rygning: ca. 15%
- Overvægt
- Mandligt køn
- Aldring
- Mekanisk stress: <10%

POLYMORFIER
Kollagen type 9, 11
Vit-D receptor
MMP-3
TNF- α

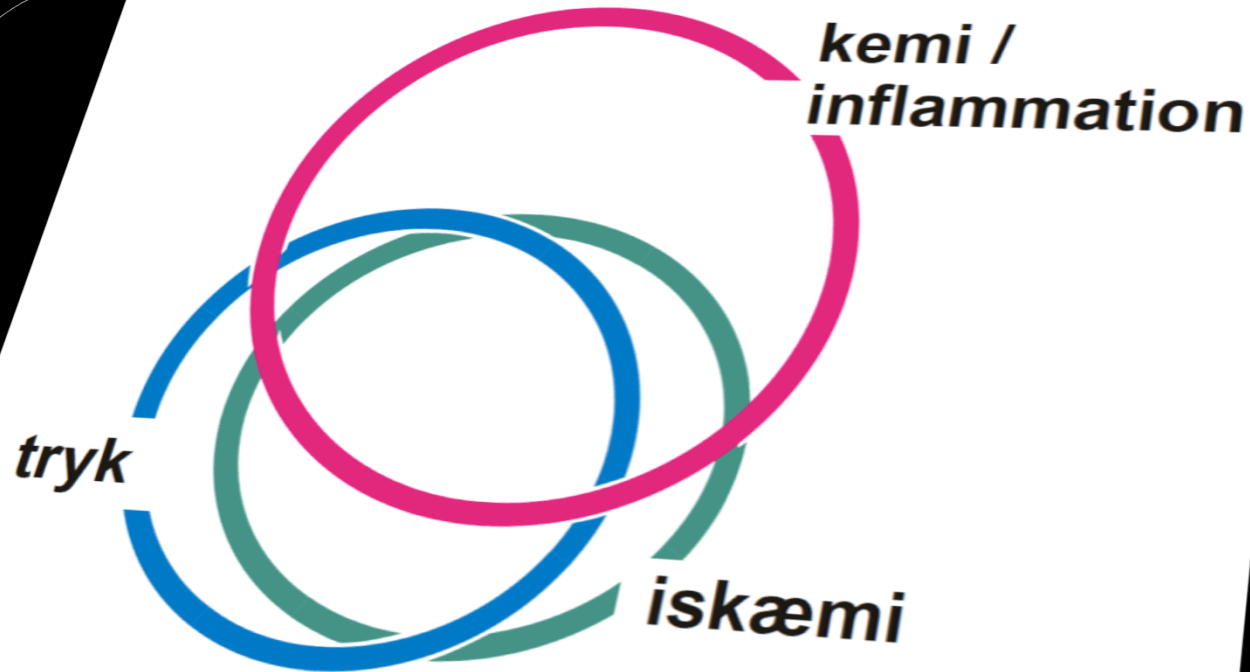
Diskusdegeneration

Degeneration af annulus fibrosus med udvikling af sprækker, inflammation, nedsat vandindhold, afladning og smerte



Rodpåvirkning ved discusprolaps

Sensibilisering



**Discus-
degeneration,
lændesmerter
og stivgørende
operation**



MR-skanning

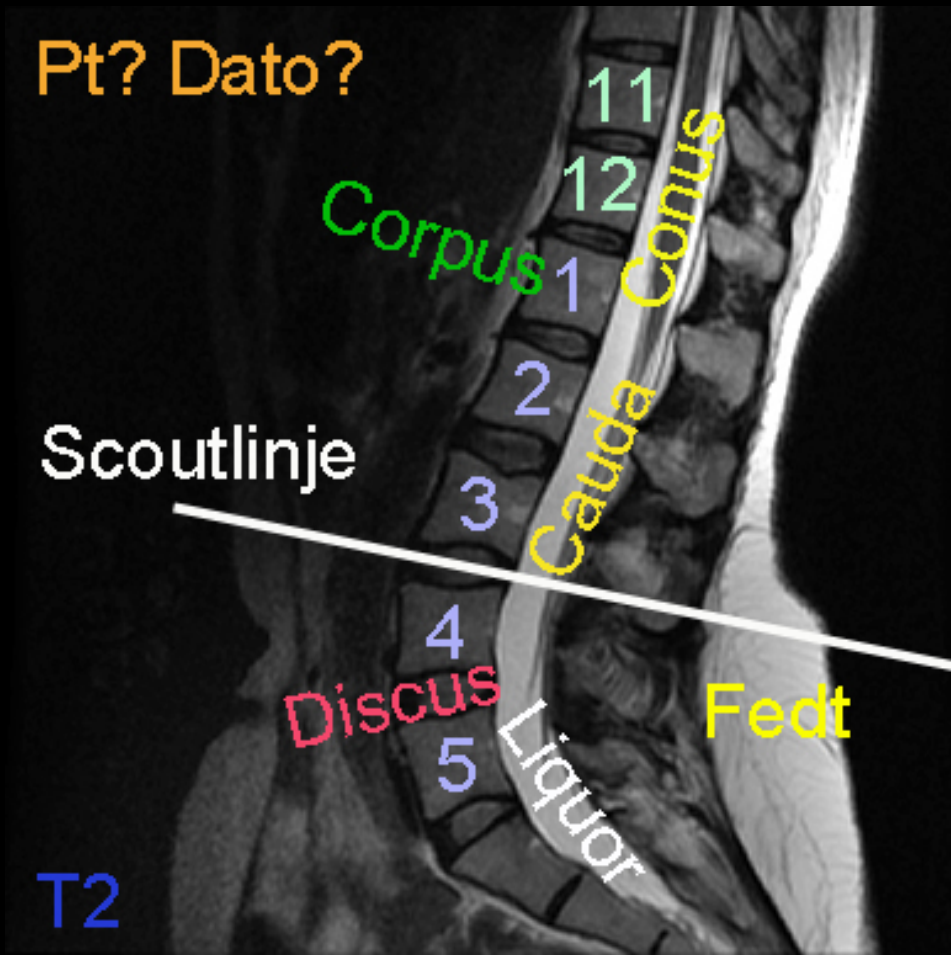
MR-skanning (Sag T2)



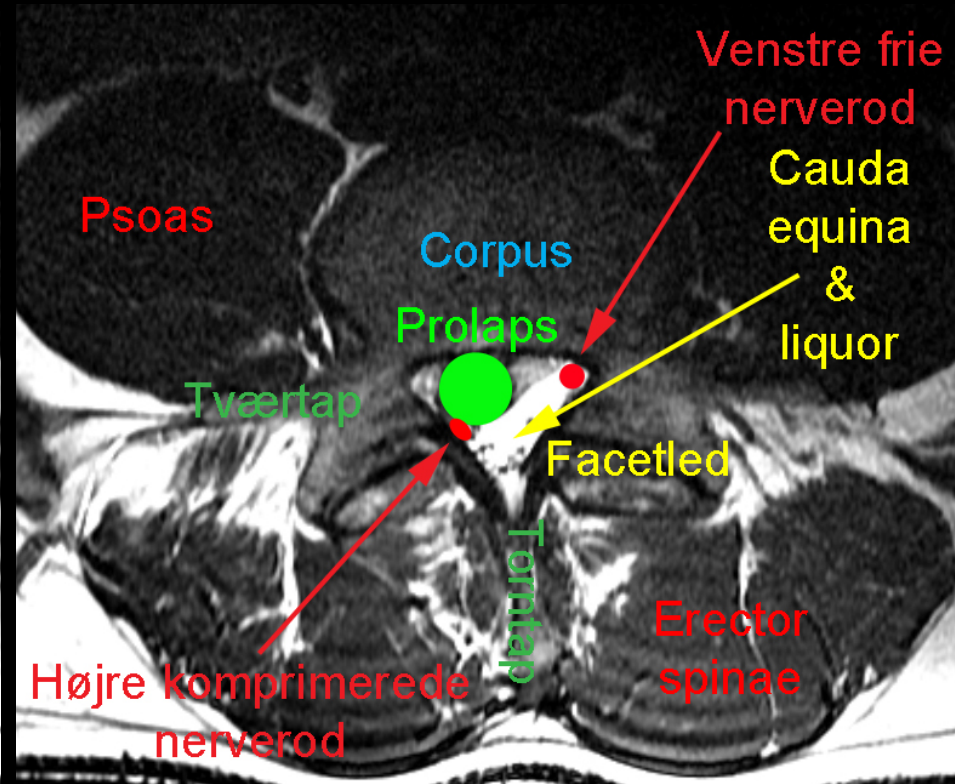
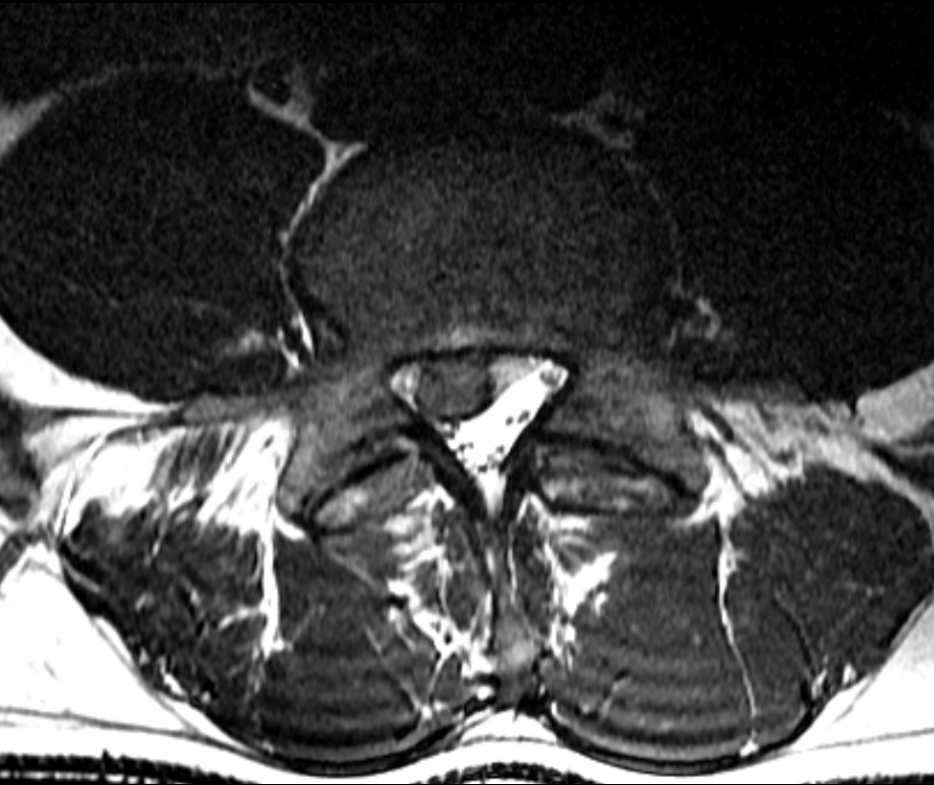
Pt? Dato?

Scoutlinje

T2



MR-skanning (Hor T2)



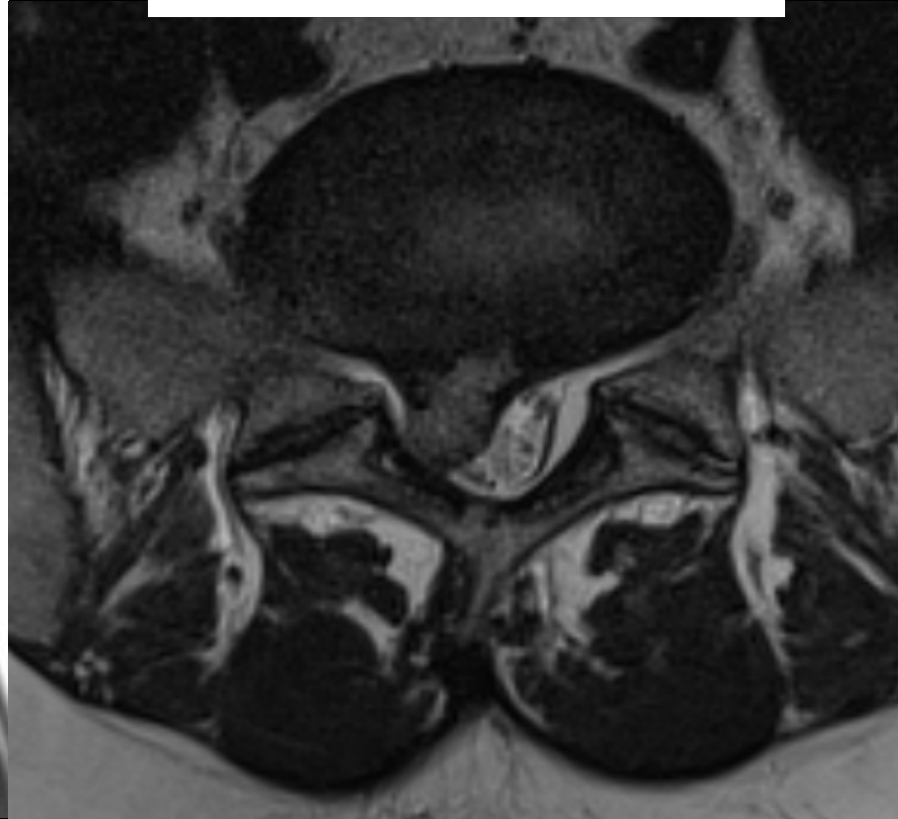
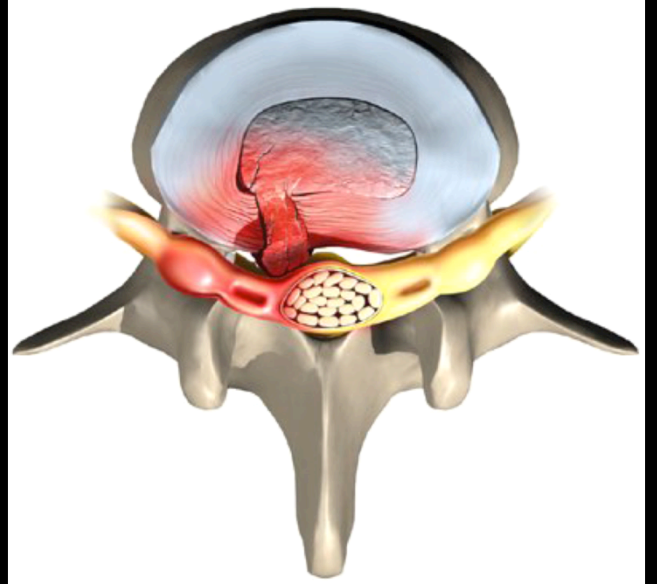
Modic forandringer

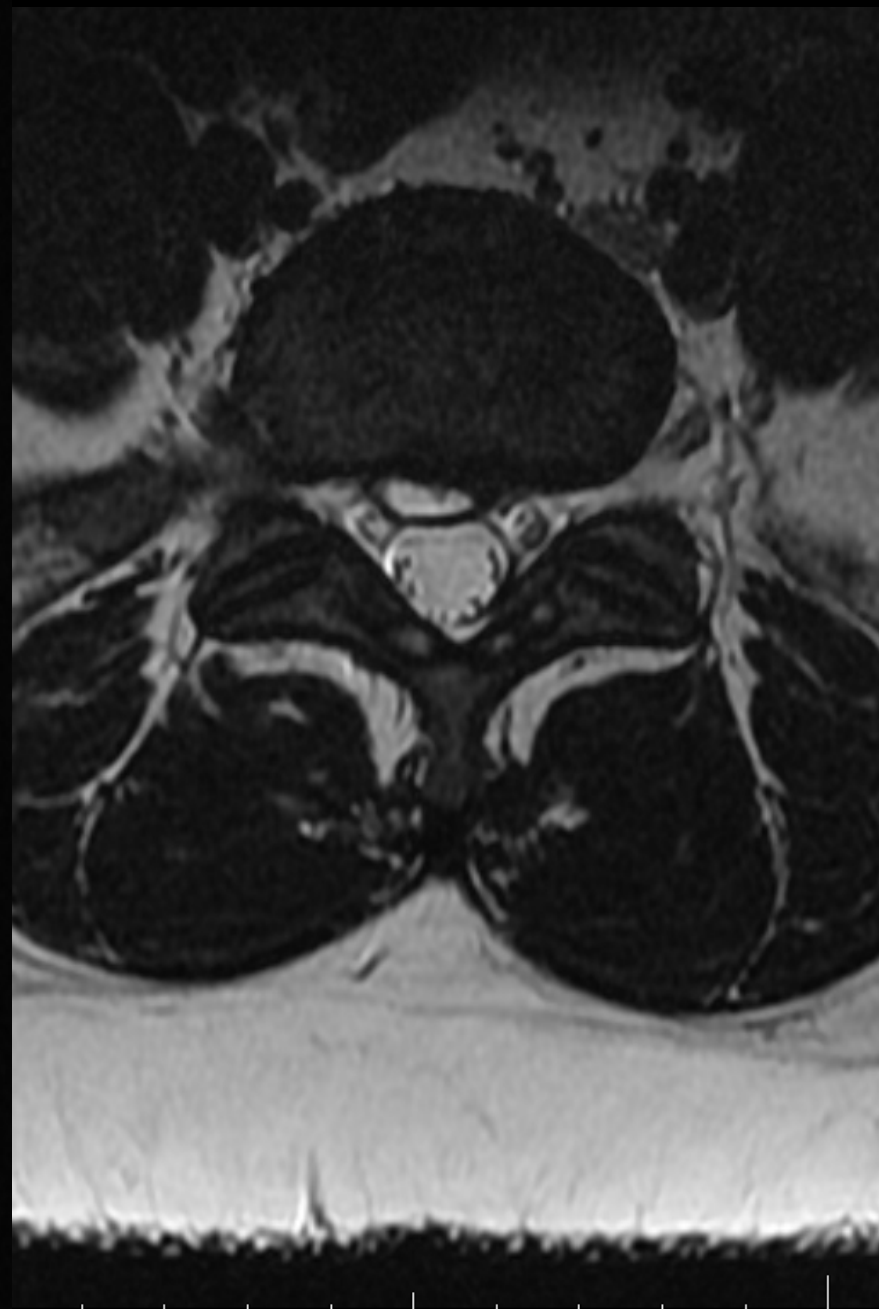
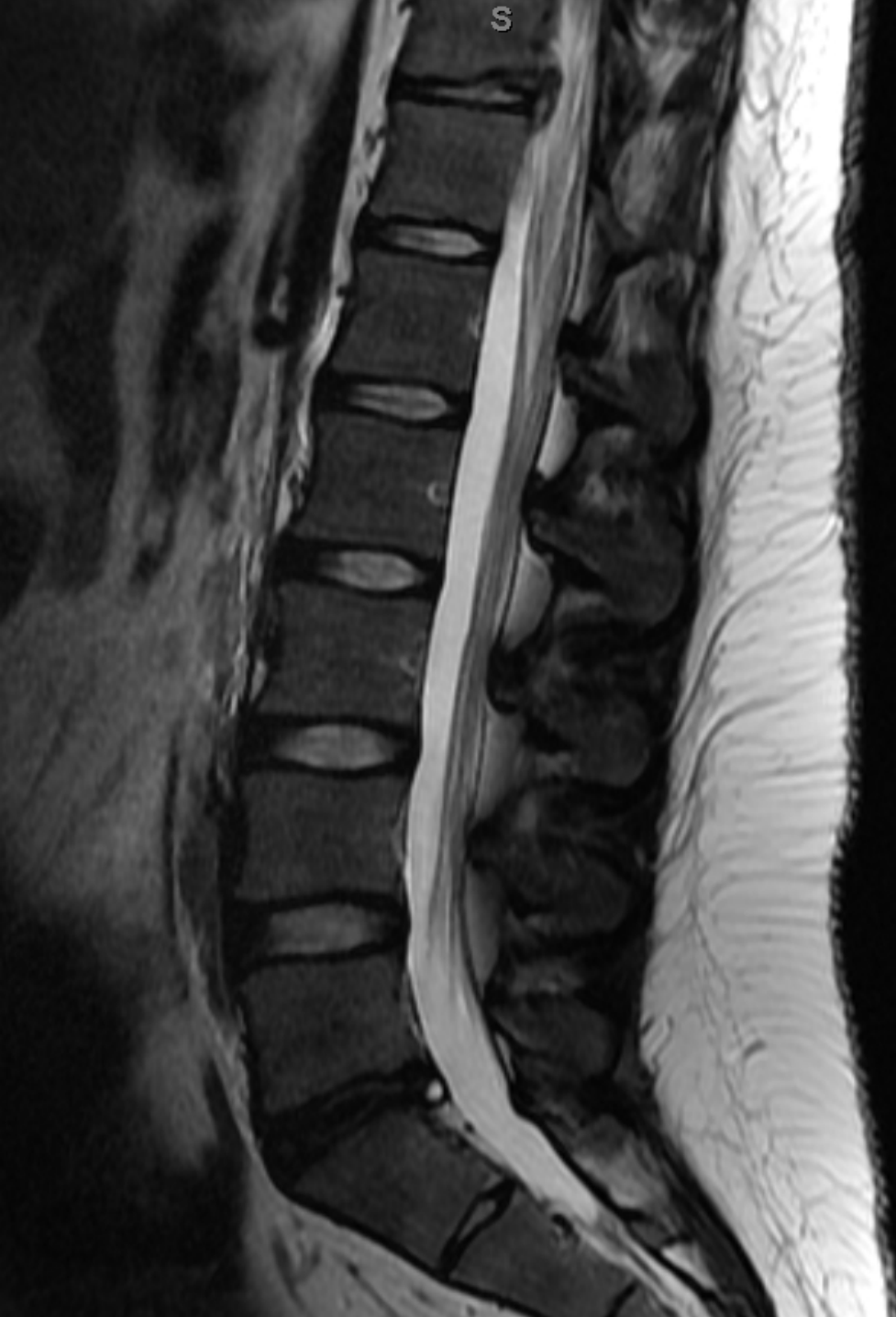
Type 1 (L4/L5)

Associeret med prolaps og lændesmerter

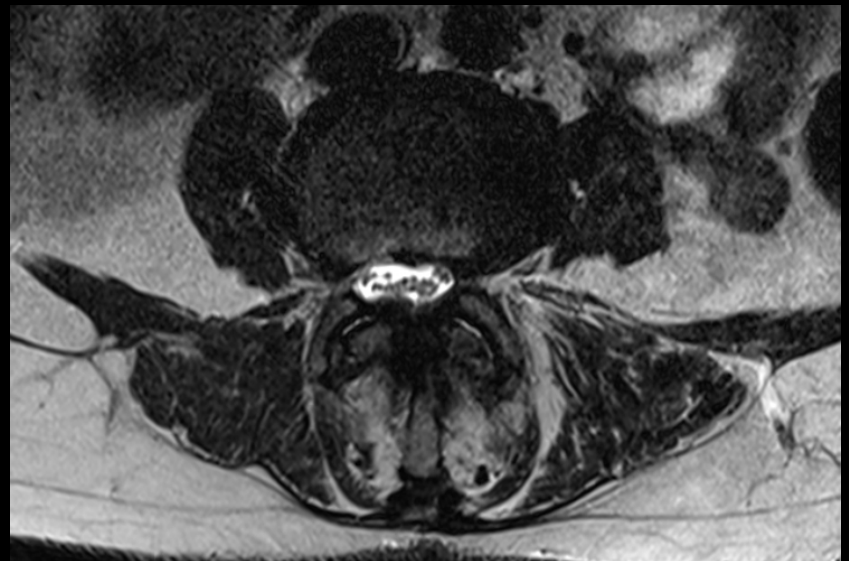
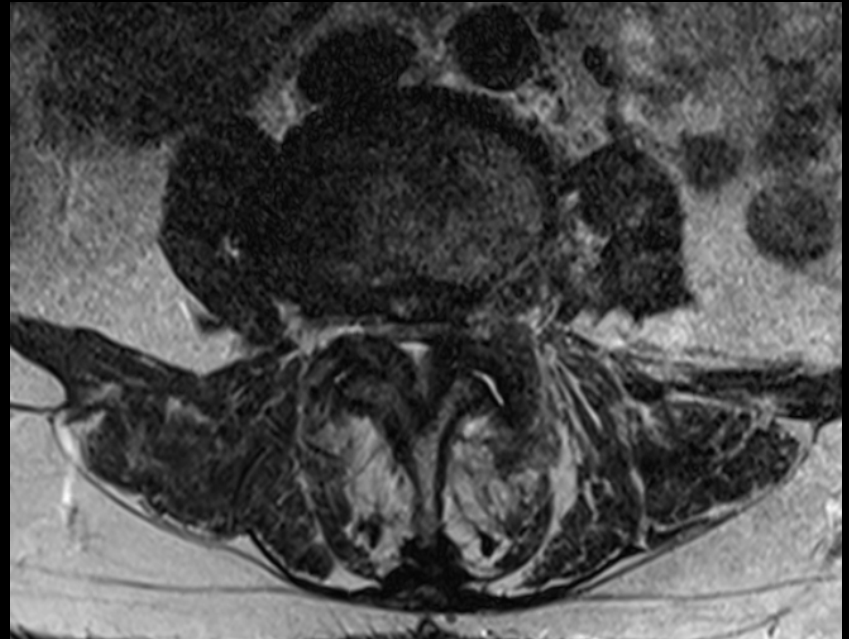
Type 2 (L5/S1)





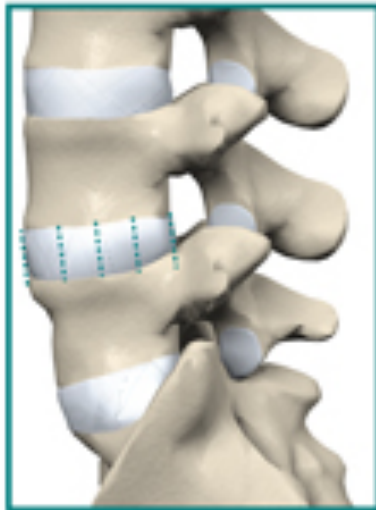


MR





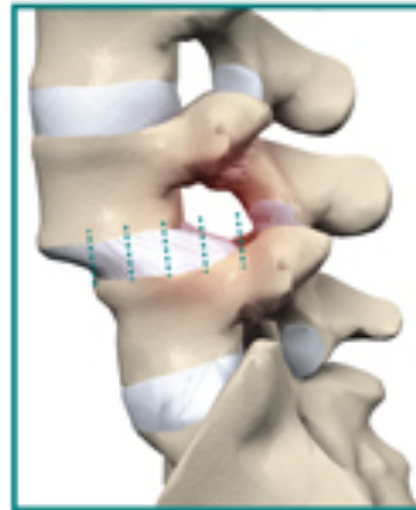
Grades of spondylolisthesis



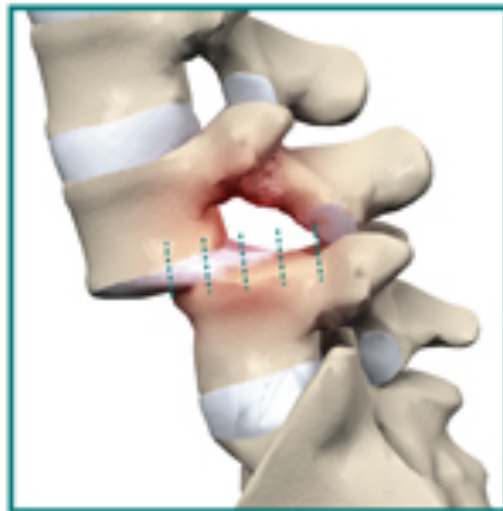
**Normal
spine**



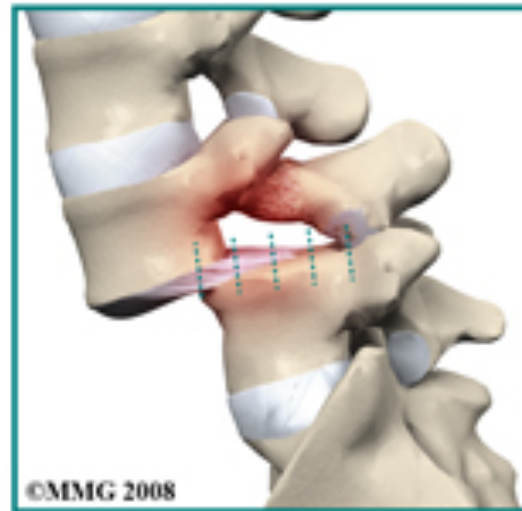
**Grade 1
<25% slippage**



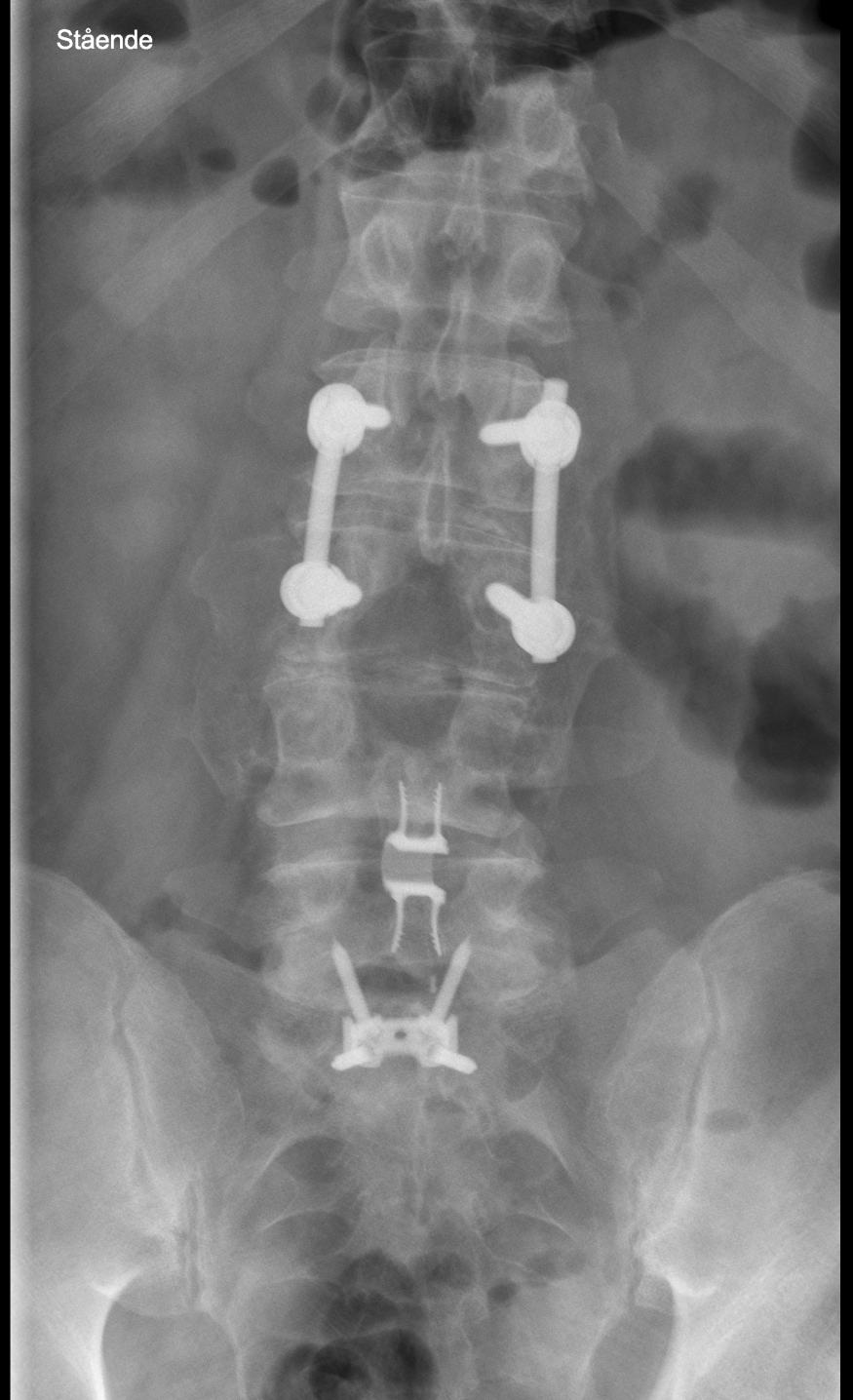
**Grade 2
25-50% slippage**



**Grade 3
50-75% slippage**



**Grade 4
>75% slippage**







Ekspositioner





Tabel 7.2. Risikofaktorer for forekomst og kronicitet af lænderygmerter.

	Forekomst	Kronicitet
<i>Individuelle faktorer</i>	- Alder - Fysisk form - Arvelighed - Nedsat udholdenhed af rygmuskulatur - Rygning - Dårligt helbred - Lavt uddannelsesniveau - Lav socialgruppe	- Overvægt - Kraftig smerte og funktionsnedsættelse - Ischias smerter - Langvarig sygdomsmedling
<i>Psykosociale faktorer</i>	- Stress - Bekymring - Dårlig kognitiv funktion - Lav jobtilfredshed	- Depression - Somatisering - Aggraverende (overdreven) sygdomsadfærd
<i>Arbejdsrelaterede faktorer</i>	- Dårligt arbejdsmiljø - Mange belastende vrid - Mange gentagne bevægelser - Mange helkropsvibrationer	- Arbejdsskadesag, erstatningssag eller pensionssag under behandling - Tungt arbejde / mange løft ved tilbagevenden til arbejde

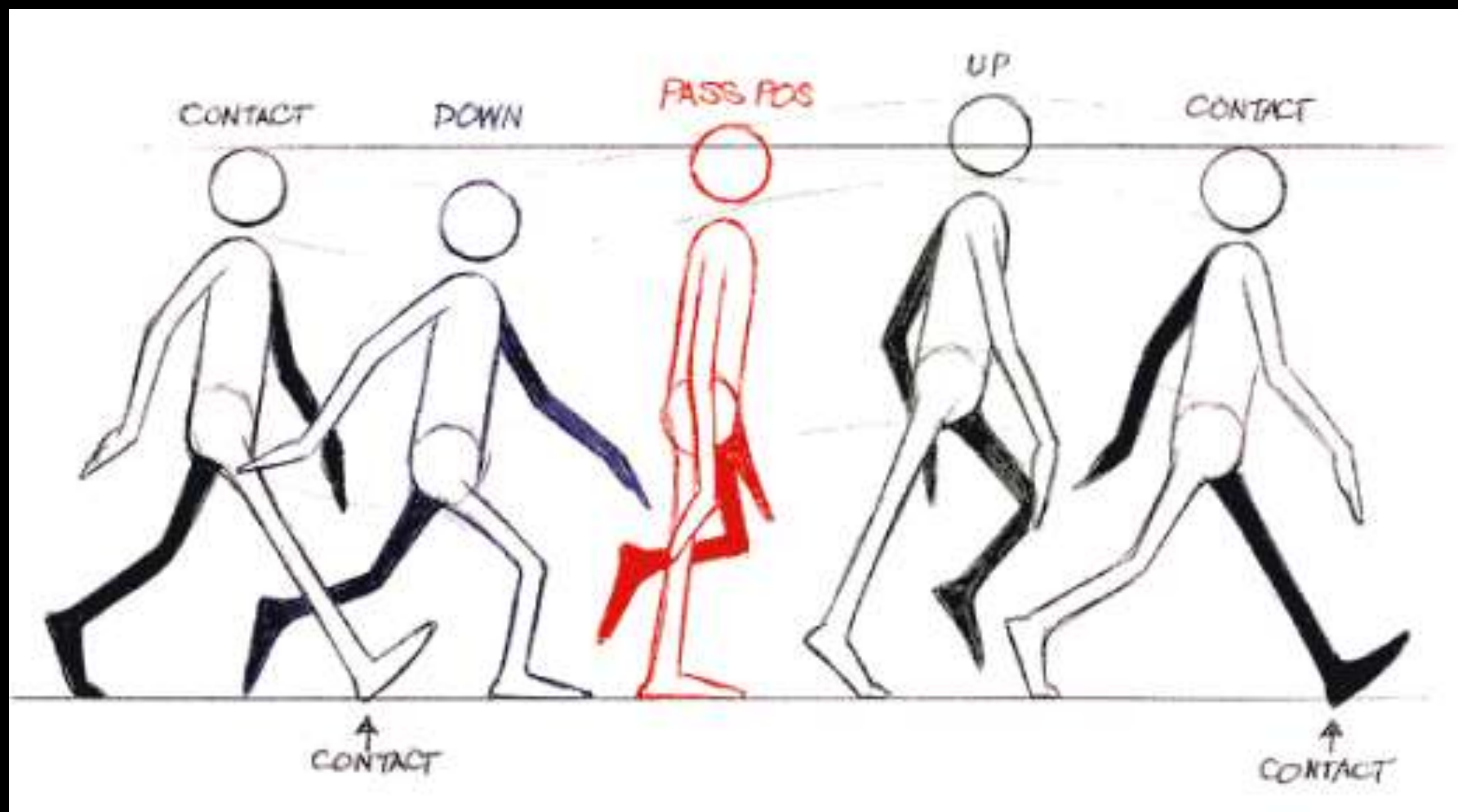
Tabel 7.3. Køns- og alderskorrigeret forekomst (odds-ratio) af forskellige mål for lænderygsmarter i forskellige socioøkonomiske grupper.

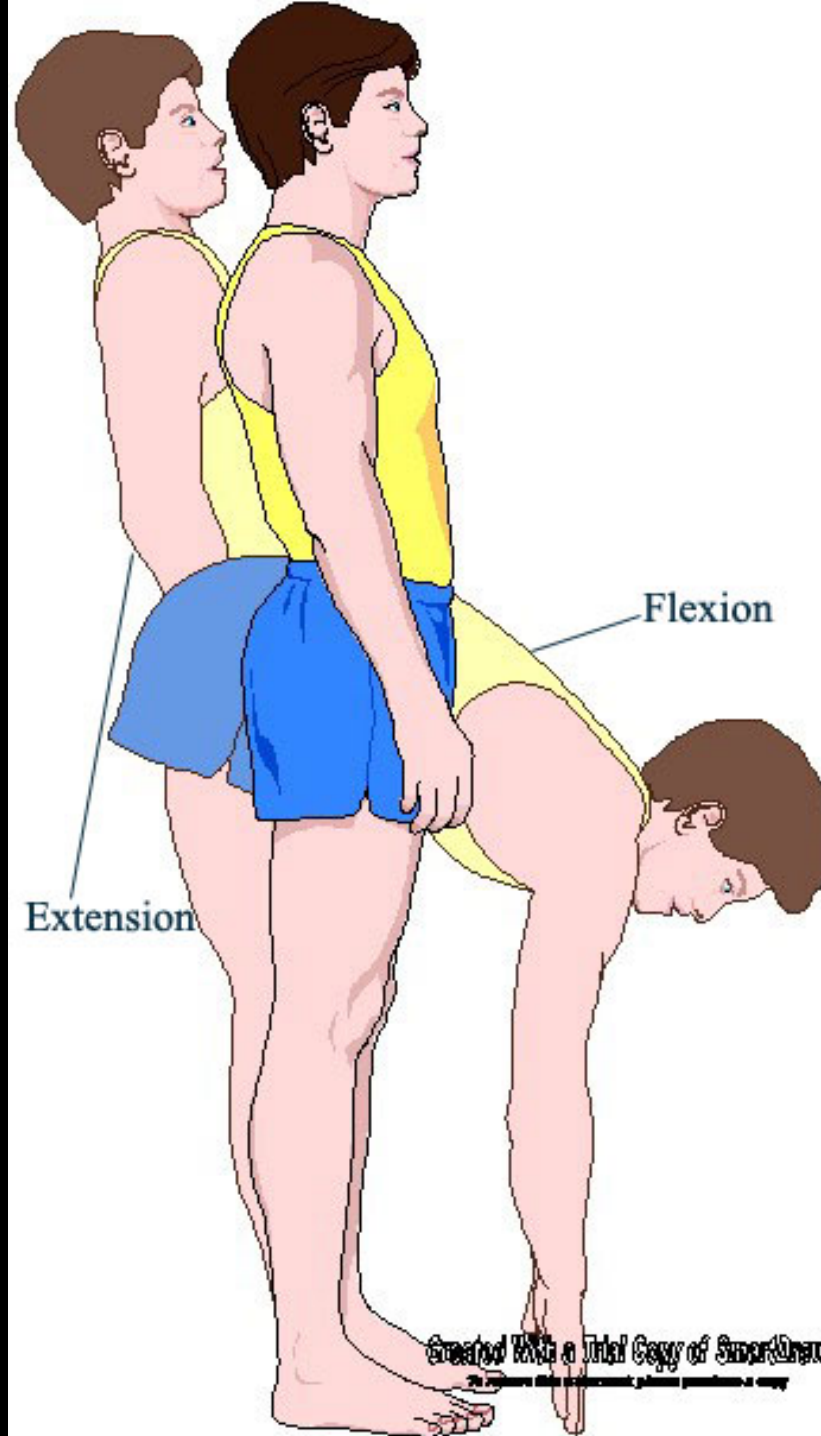
	Har rygsygdom nu	Smerter eller ubehag inden for en 14- dages periode
Selvstændig med ansatte	0,76	1,25*
Selvstændig uden ansatte	0,91	0,79
Topleder	0,76	0,77*
Lønmodtager højeste niveau	0,63*	0,73*
Lønmodtager mellemniveau	0,74*	0,87*
Lønmodtager grundniveau	1,00	1,00
Anden lønmodtager	1,01	1,12
Arbejdsløs	1,10	1,25*

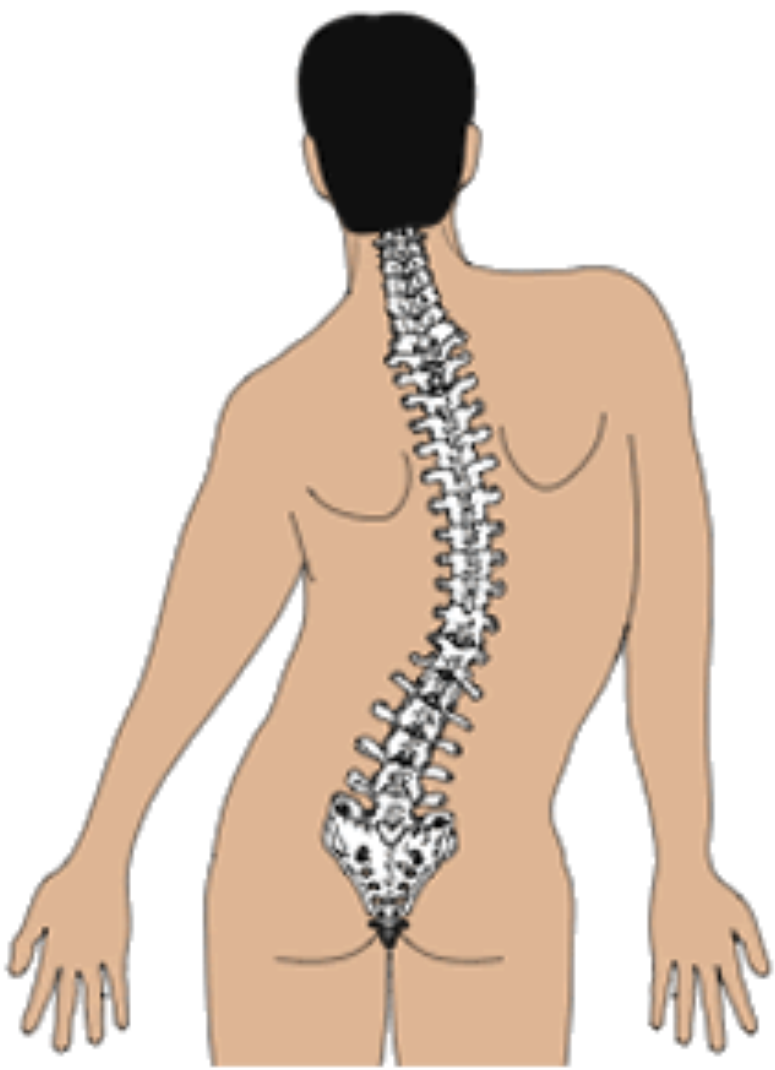
* markerer signifikant forskel i forhold til referencegruppen af lønmodtagere på grundniveau.

Kilde: Sundheds- og sygelighedsundersøgelsen 2005.

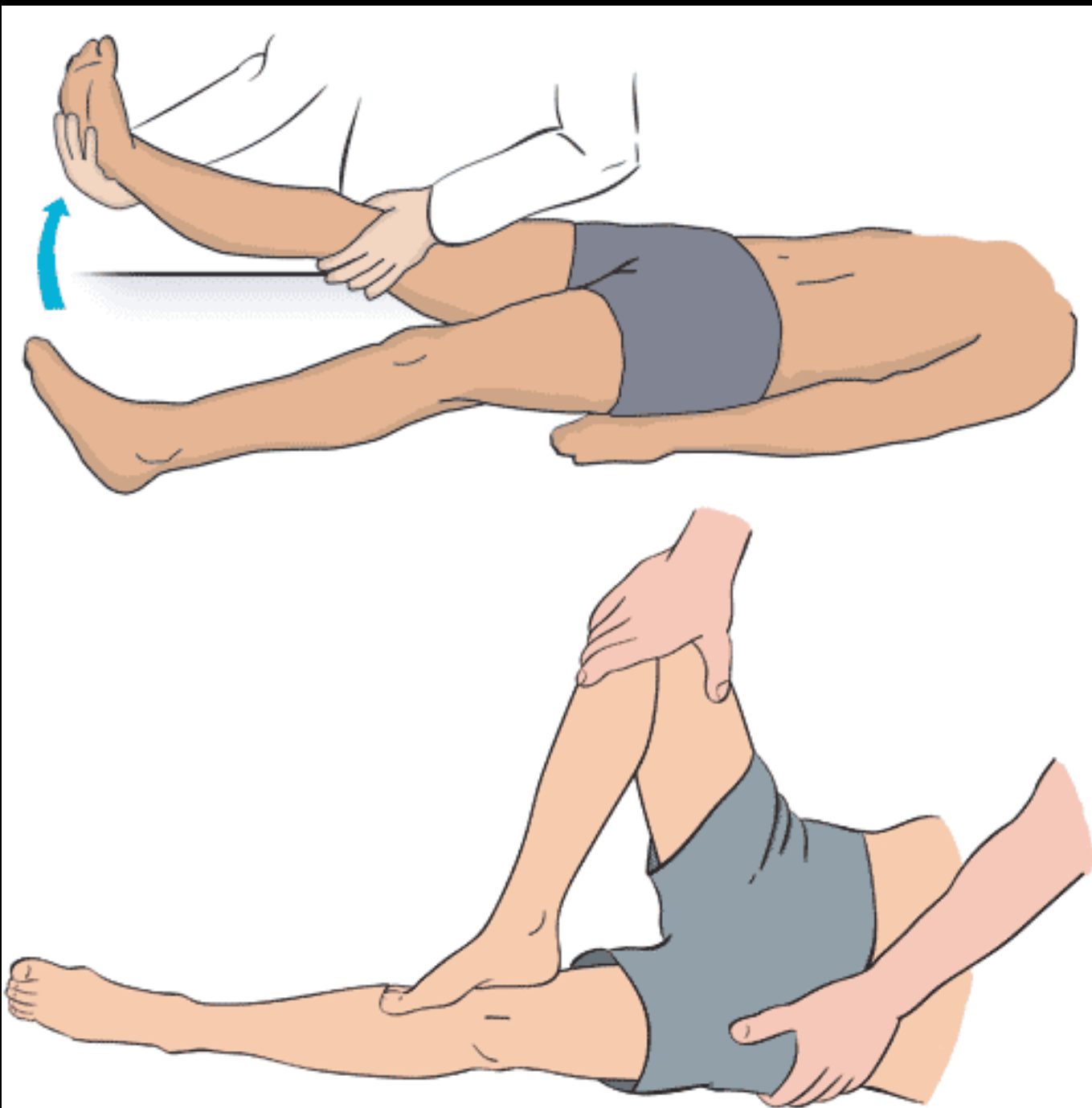
Rygundersøgelsen



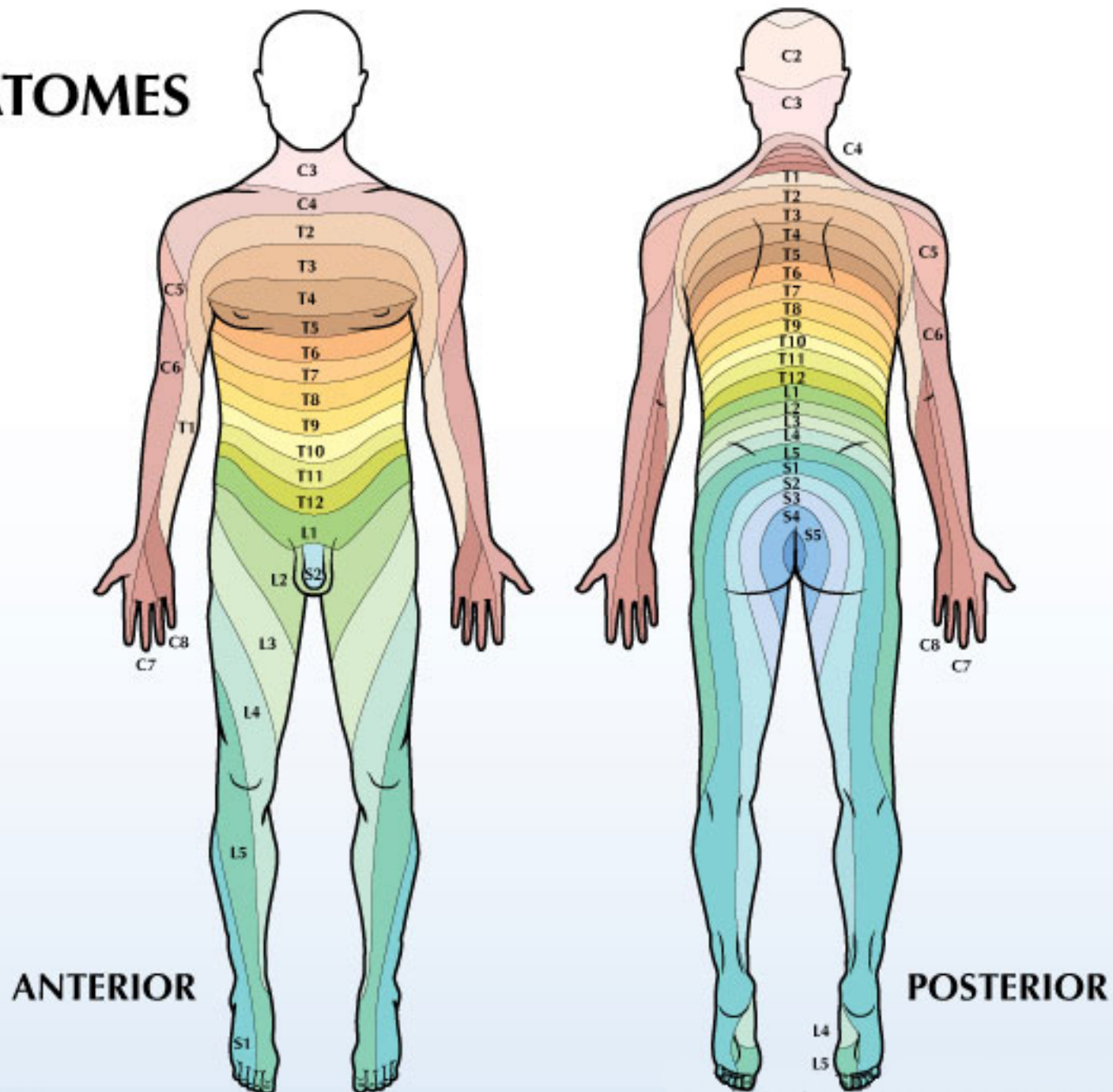


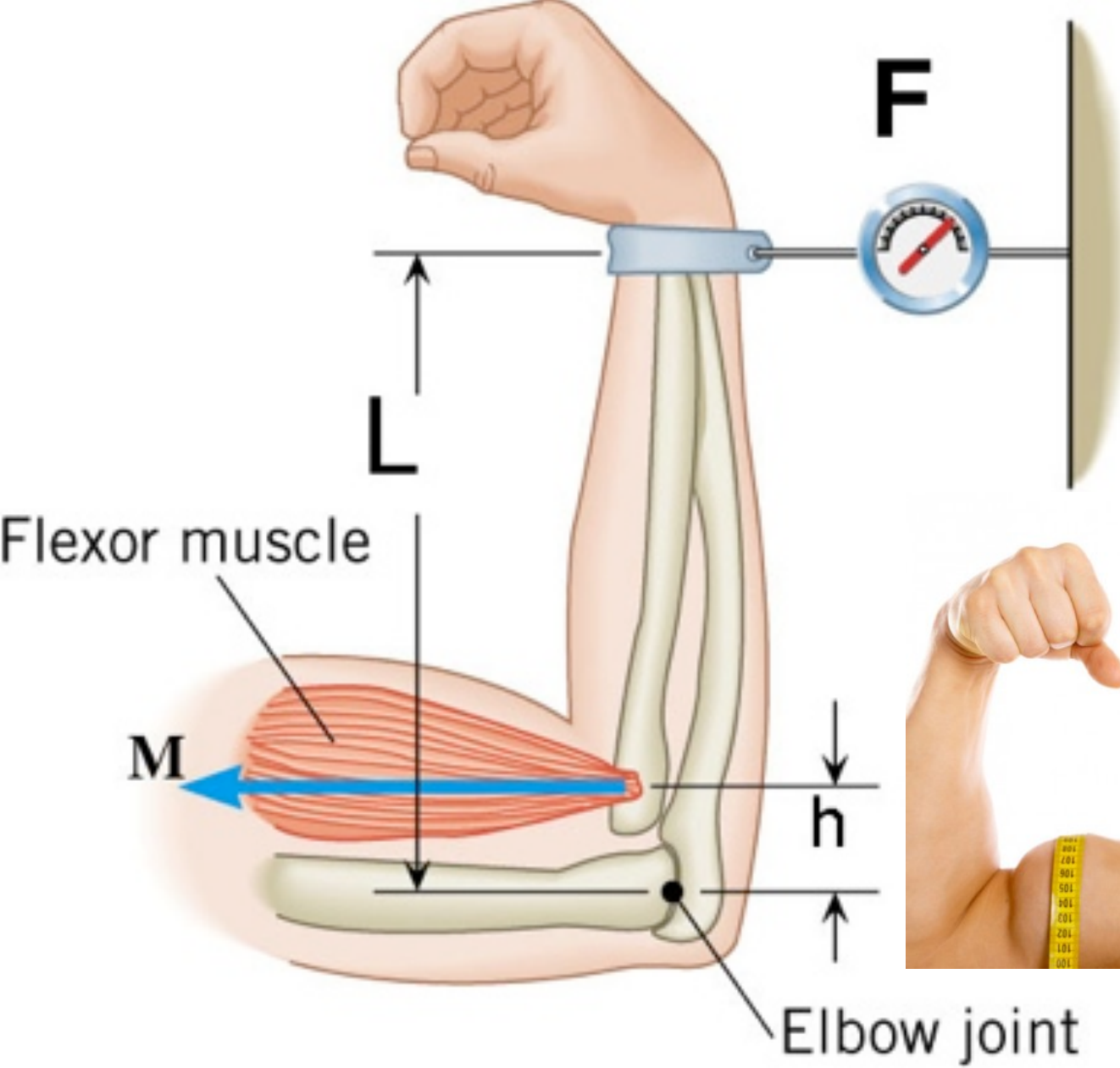


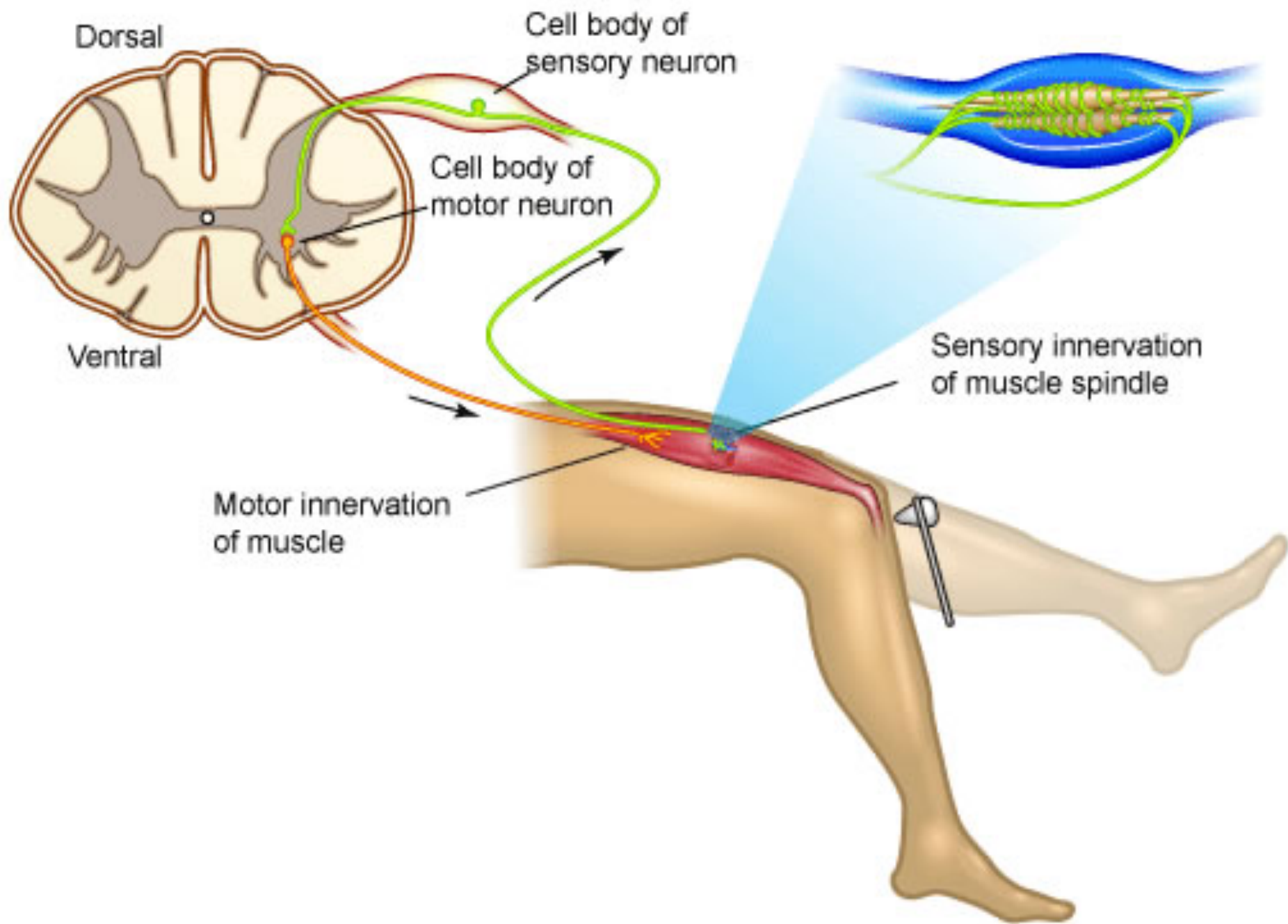




DERMATOMES





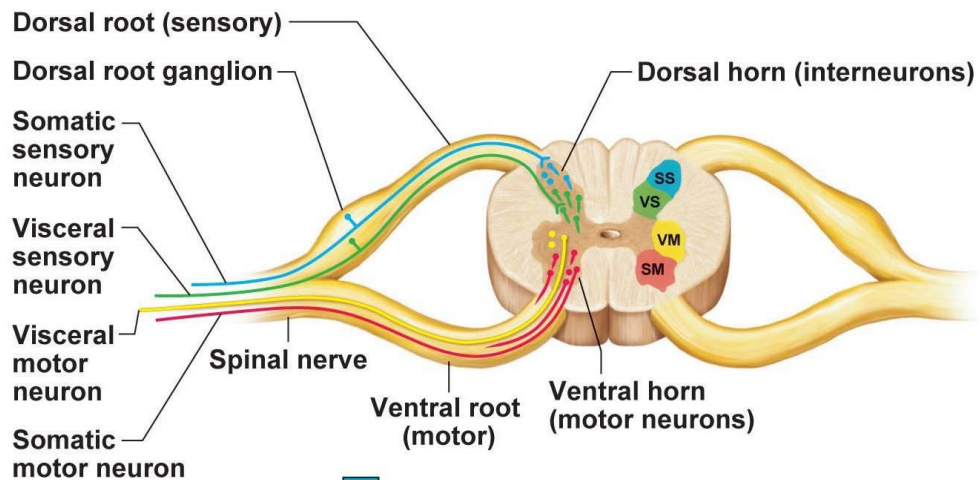
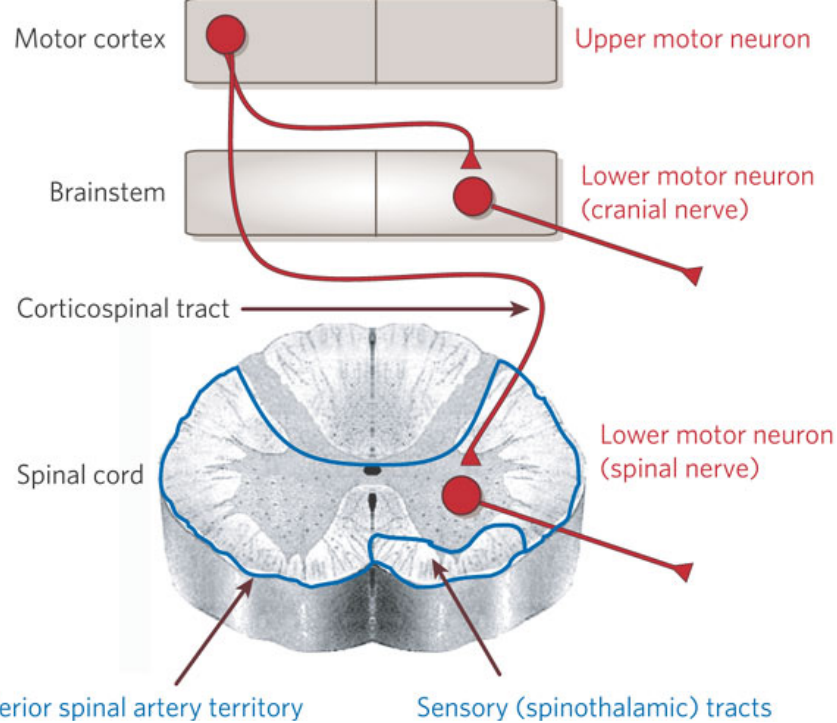


1. neuronstegn?



**Lesion of
upper or lower
motor neurons?**

*Enjoy your life
2011*



- SS** Interneurons receiving input from somatic sensory neurons
- VS** Interneurons receiving input from visceral sensory neurons
- VM** Visceral motor (autonomic) neurons
- SM** Somatic motor neurons

Supranukleær læsion

Upper Motor Neuron syndrome, CNS,
"Pyramidebanelæsion", "1. neurons påvirkning",

- Hyperrefleksi
- Fodklonus
- Spastisk tonusøgning
- Babinskis tåfænomen
- Hoffman's refleks
- Sensibilitetsgrænse
- Para/tetraparese
- Blæreparalyse
- Evt. let atrofi

Eksempler: Cervikal eller thorakal myelopati. Akut medullært tværsnitssyndrom, evt. af inkomplet type: Brown-Séquard, centralt, anteriort, posteriot.

OBS: tidsfaktor for udvikling af de klassiske supranukleære tegn: Spinalt shock initialt med slap parese, manglende senereflekser og atonisk blæreparalyse.

Ankel-klonus

Babinski



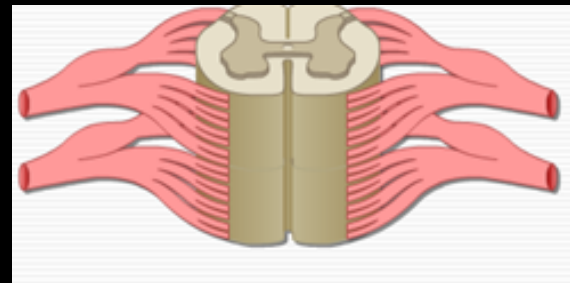
Hoffman's
reflex



Infra/nukleær læsion

Lower Motor Neuron syndrome, PNS,
Perifer nervepåvirkning, "2. neurons påvirkning"

- Hyporefleksi
- Slap parese
- Svær muskelatrofi
- Fascikulationer
- Dermatomaafgrænsning

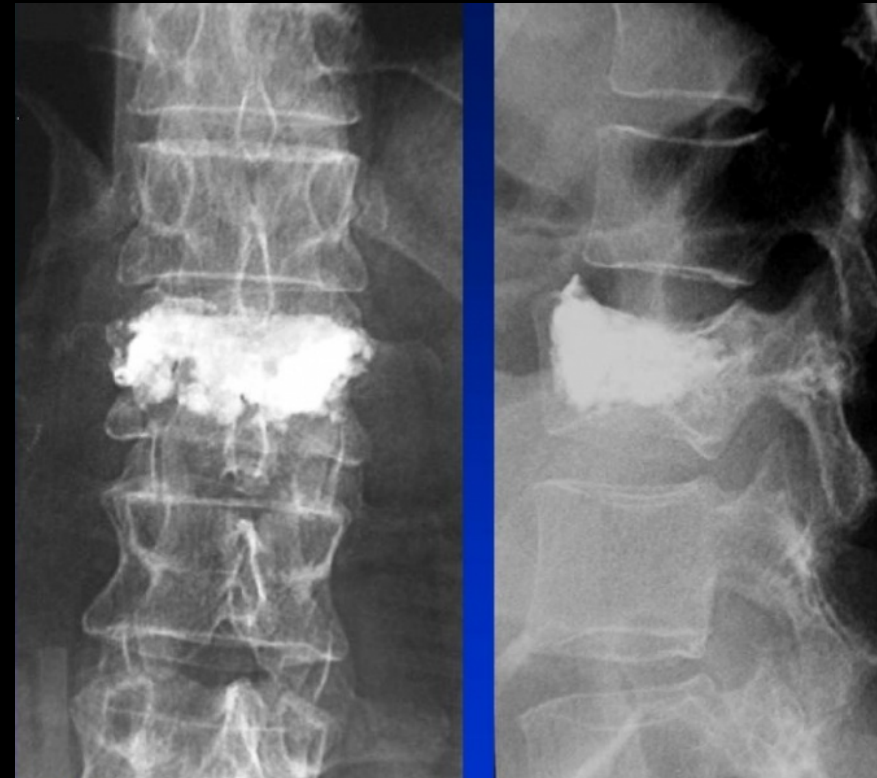
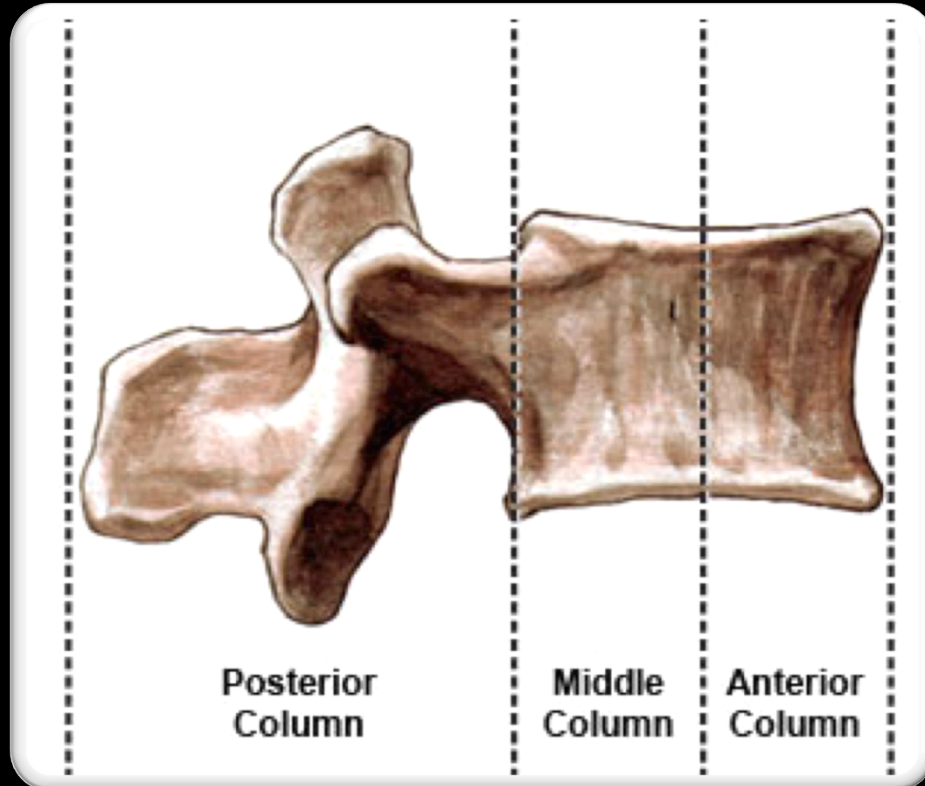


Eksempler: Neurogen claudicatio med påvirkning af de lumbosacrale nerverødder ved central lumbal spinalkanalstenose - giver bensmerter ved gang. **Cauda equina syndromet** med sfinkterpåvirkning herunder urinretention. Monoradikulopati ved prolaps eller rodkanalstenose, giver smerteudbredning i relevante dermatom. Evt. svær, progredierende parese (kraft grad 0-3) ved **rodinkarceration**



Spørgsmål?

Hvirvelbrud (fraktur)

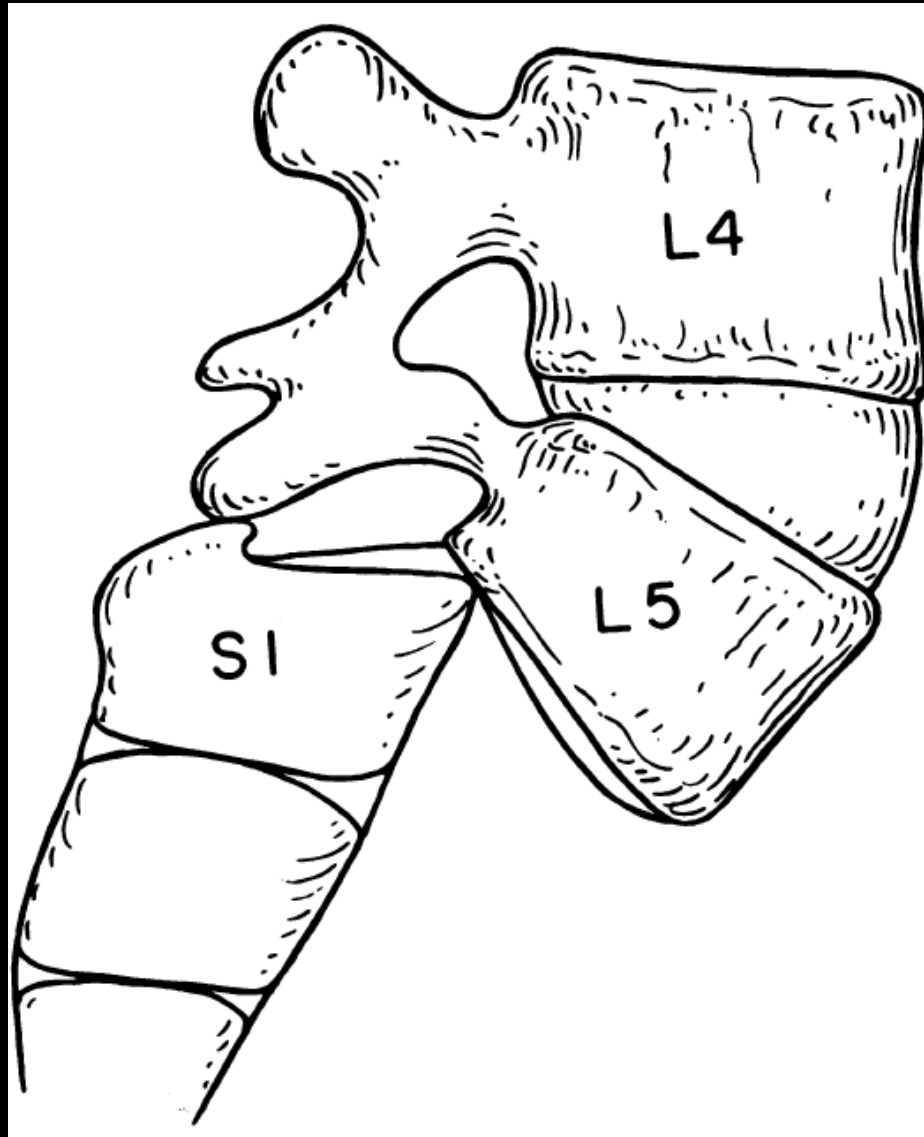


Medfødte
ryglidelser

Skoliose



Medfødt spondylolistese



Scheuermann



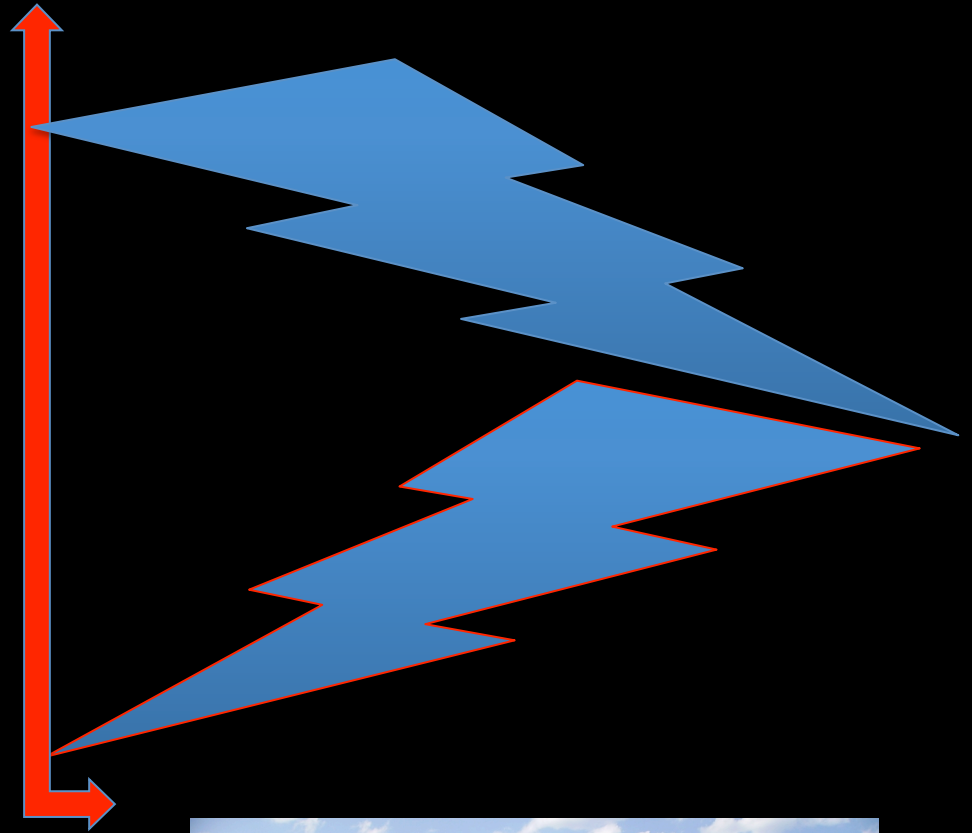
- >3 kileformede nabohvirvler
- Udvikles i puberteten
- Opheler i 10-18 års alderen
- Hos 5% af voksne

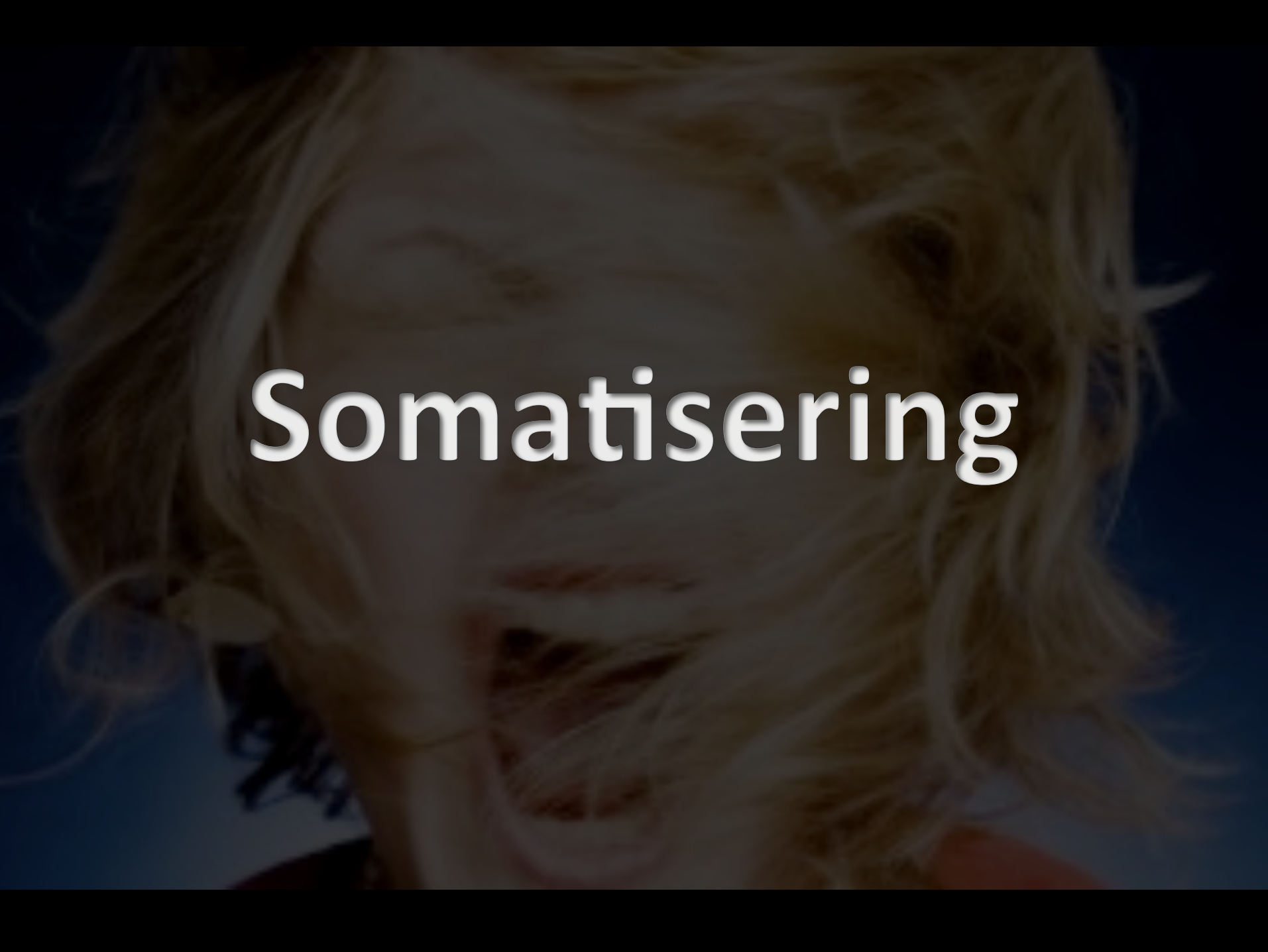
Forstuvet
nakke

Forudbestående – Straks- & Brosymptomer – MÉN



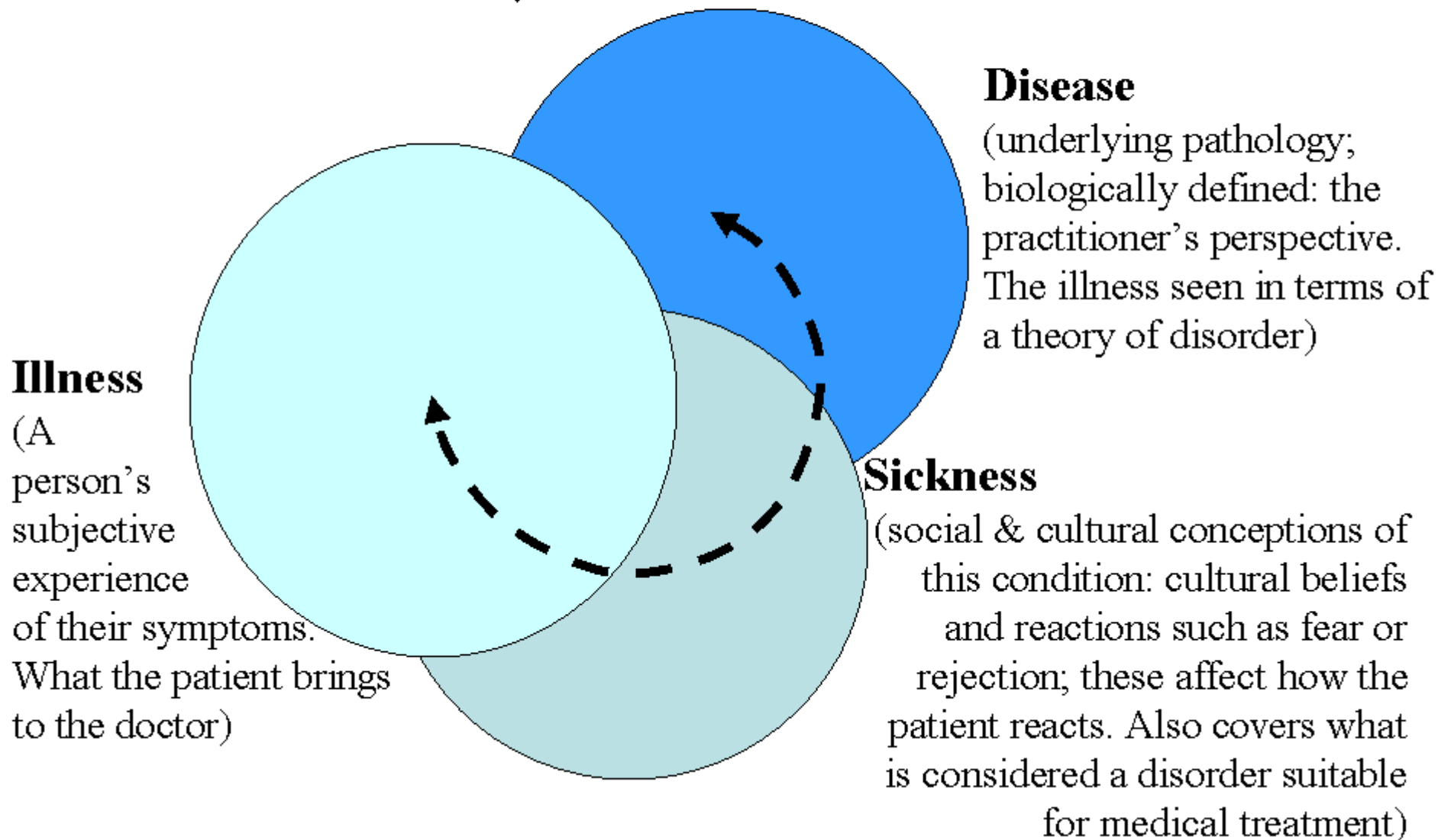
Whiplash



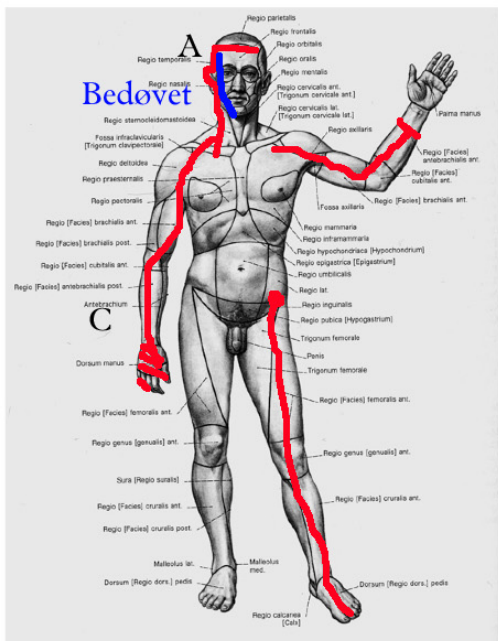


Somatisering

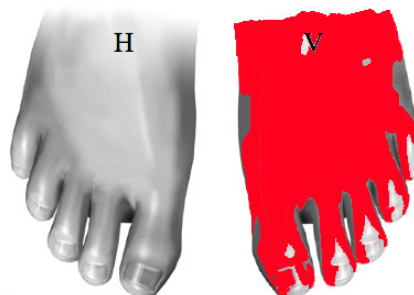
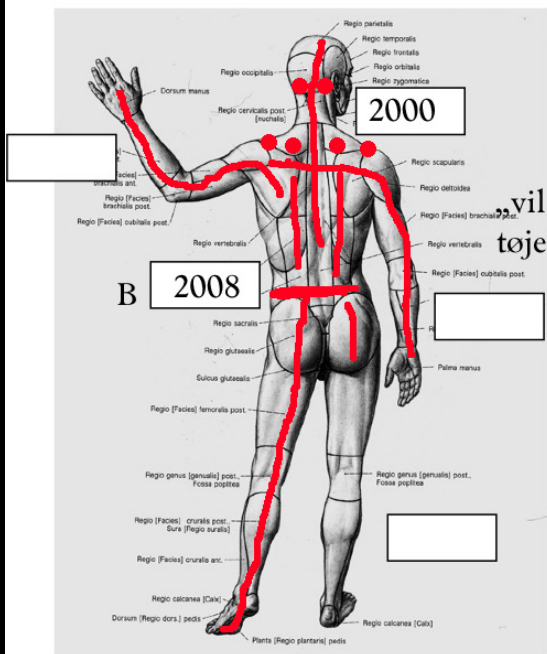
Three Perspectives: Disease, Sickness & Illness



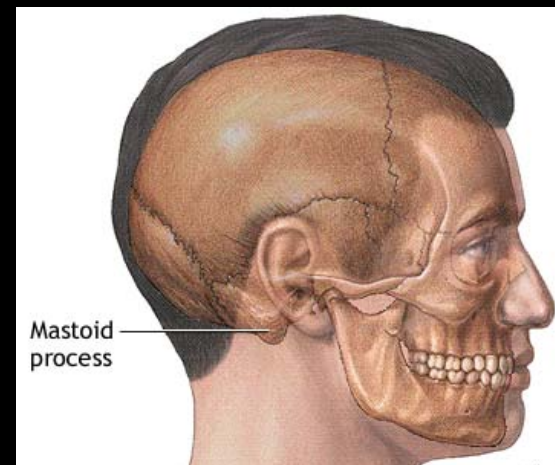
Smertediagrammet



SMERTE (rød, x)
MYREKRYB (grøn, Δ)
FØLELSESLØSHED (blå, o)
NEDSAT BEVÆGELIGHED (□)



Anfaldsvise smerter



Tabel 7.4. Risikofaktorer for skulder-nakke smerter.

<i>Individuelle faktorer</i>	- Køn og alder - Overvægt - Arvelighed - Rygning - Komorbiditet
<i>Psykosociale faktorer</i>	- Høje krav - Lav jobkontrol - Lav indflydelse - Manglende social støtte - Lav jobtilfredshed - Ængstelse - Bekymring - Depressivitet - Stress
<i>Arbejdsrelaterede faktorer</i>	- Arbejdsstilling (løftede arme) - Gentagne bevægelser - Tungt arbejde - Kombination af tungt arbejde og gentagne bevægelser - Kombination af gentagne bevægelser og kulde - Vibrationer

Kilde: Walker-Bone et al, Semin Arthritis Rheum, 2003. National Research Council IoM, 2001. Natvig and Picavet, Best Pract Res Clin Rheumatol, 2002.

Tabell 1 Eksempler på tilstander som ofte helt eller delvis betegnes som «funksjonelle somatiske lidelser»

Betegnelsen	Hovedsymptomer som presenteres når pasienten søker lege	Sekundærlinjetjeneste som pasienten vanligvis først henvises til
Irritabel tarm-syndrom Ikke-ulcusdyspepsi Matvareintoleranse Kronisk tretthetssyndrom	Magesmerter, løs mage eller forstoppelse, oppblåsthet, kvalme	Gastroenterologi
Utbrenthet Fibromyalgi	Utmattelse ved den minste fysiske eller psykiske anstrengelse Tap av energi og kreativitet; lei, dysforisk Smerter og ømhet i muskler, tretthet, konsentrasjonsproblemer	Polysymptomatologi Infeksjonsmedisin Generell indremedisin Revmatologi
Somatoform smertelidelse	Kroniske smerter som ikke lar seg forklare ut fra biologiske funn	Anestesiologi
Nakkesleng	Smerter i nakke; konsentrasjons- og hukommelsessvikt	Nevrologi (Nevrokirurgi, Revmatologi, Ortopedi)
Vertigo Afoni Kroniske underlivssmerter Ikke-kardiale brystmerter Multippel kjemisk hypersensitivitet Hyperventilasjonssyndrom	Svimmelhet uten sikre funn Kan ikke snakke Smerter i underliv/bekken; smerter ved samleie Smerter og trykk/ømhet i brystkassen; pustebesvær Overfølsomhet for matvarer, stoffer i omgivelsene	Øre-Nese-Hals Nevrologi Gynekologi Kardiologi Allergologi
Funksjonelle kjeveplager Amalgamsyke Hypokondri	Rask overflatisk pust; tungpusten; trykk for brystet; parestesier Smerter i kjeve Diverse generelle plager	Lungemedisin Odontologi
Dissosiativ motorisk eller sensorisk lidelse («konversjonslidelse»)	Sykdomsangst; oftest kreft eller annen dødelig sykdom (eks. HIV, amyotrofisk lateralsklerose) Bortfall av sensoriske (f.eks. tap av hudfølelse) eller motoriske (f.eks. lammelser) funksjoner uten nevrologiske funn eller pseudoepilepsi	Indremedisin Nevrologi Psykiatri Nevrologi

BEVIDST ELLER UBEVIDST PRÆSENTATION

- Overdriver sygehistorien (inkl. smerterne)
- Symptomfiksering
- Atypisk symptombeskrivelse
- Overdriver medicinforbruget
- Overdriver udfald – kan ofte afledes
- Underdriver funktionsniveauet

TABLE 1. The 8 Nonorganic Somatic Signs¹³

Test Categories	Nonorganic Somatic Signs
Tenderness	1. Superficial
	The skin is tender to light pinch over a wide lumbar area. A localized band in a posterior primary ramus distribution may be caused by nerve irritation and should be discounted.
	2. Deep
	Tenderness is felt over a wide area. It is not localized to 1 structure, and it often extends to the thoracic spine, sacrum, or pelvis.
Simulation tests	3. Axial loading
	Low back pain is reported on vertical loading over the standing participant's skull by the examiner's hands. Neck pain is common and should be discounted.
	4. Rotation
	Back pain is reported when the shoulders and pelvis are passively rotated in the same plane as the participant stands relaxed with the feet together. In the presence of root irritation, leg pain may be produced and should be discounted.
Distraction test	5. Straight leg raising
	Straight leg raising is the most useful distraction test. The participant whose back pain has a nonorganic component shows marked improvement in straight leg raising on distraction as compared with formal testing.
Regional disturbances	6. Sensory
	Sensory disturbances include diminished sensation to light touch, pinprick, and sometimes other modalities fitting a "stocking" rather than a dermatomal pattern.
	7. Weakness
	Weakness is demonstrated on formal testing by a partial cogwheel "giving way" of many muscle groups that cannot be explained on a localized neurological basis.
Overreaction	8. Overreaction during examination may take the form of disproportionate verbalization, facial expressions, muscle tension and tremor, collapsing, or sweating. Judgments should, however, be made with caution, minimizing the examiner's own emotional reaction; there are considerable cultural variations, and it is very easy to introduce observer bias or to provoke this type of response unconsciously.

A category is positive if at least 1 nonorganic somatic sign in that category is positive. Three positive categories are required indicating that a patient with low back pain does not have a straightforward physical problem.

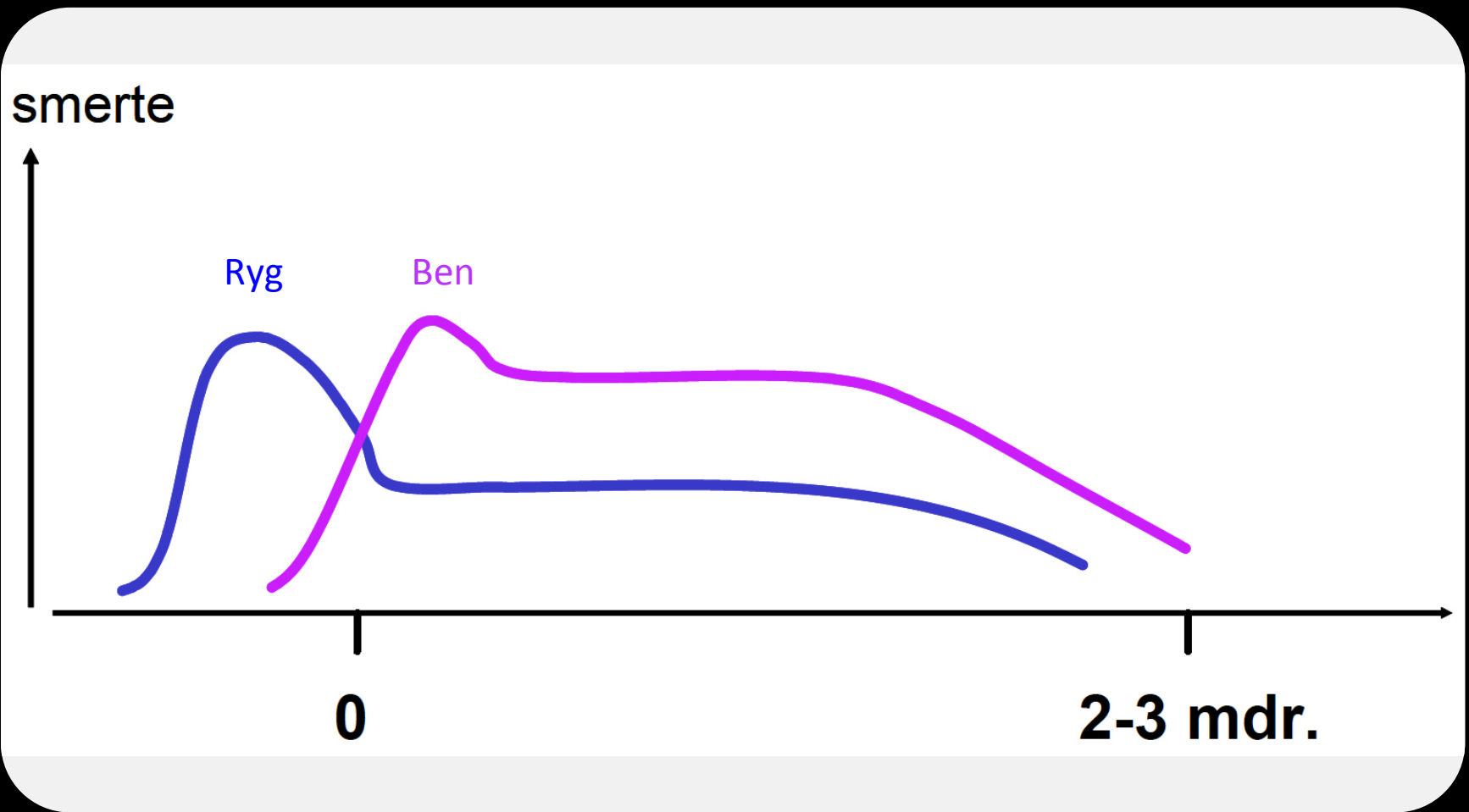
Handling



FORVENTNING

Tiden?
Glødejernet?
Sygemelding?
Pension?

Naturforløbet ved discusprolaps







Red flags

Tværsnits-
syndrom

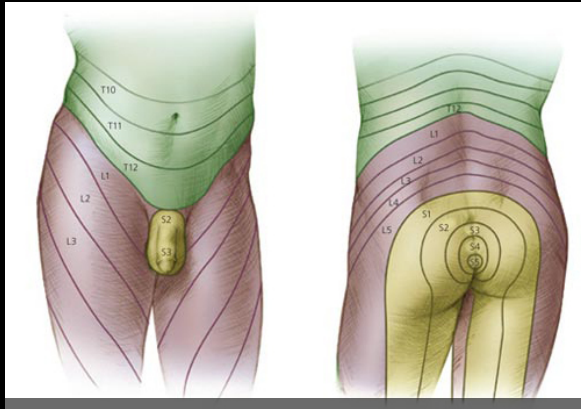
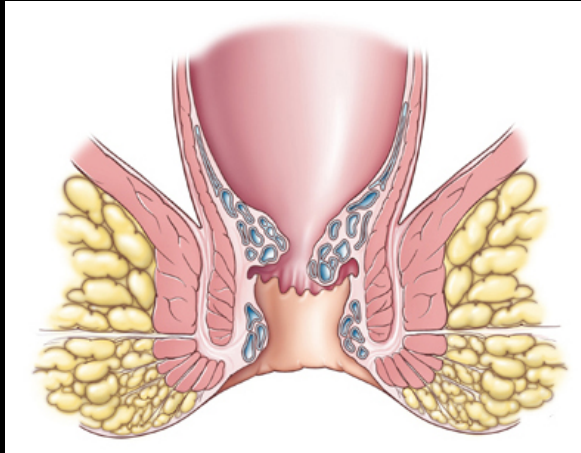
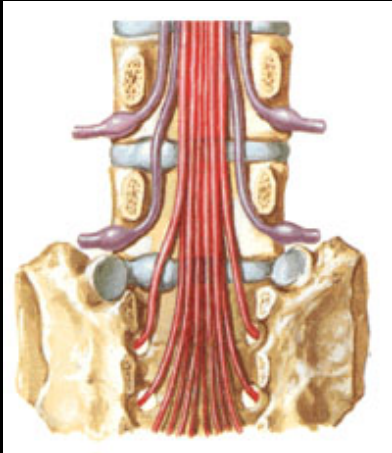
Cauda
equina
syndrom

Prog.
svær
parese

Intraktable
smerter

CAUDA EQUINA SYNDROMET

Heldigvis utroligt sjældent men alvorligt – giver sfinkterpåvirkning med urinretention (ophævet fornemmelse af blærefyldning, evt. overløbsinkontinens) – slap sfinkter - nedsat perianal sensibilitet – bilat. symp. Akut behandling: Faste, blæreskanning (efter vandladning!), KAD, akut MR eller CT, evt. kontakt til rygkirurg mhp. akut operation (inden 6-24-48 timer)



Klinisk diagnose



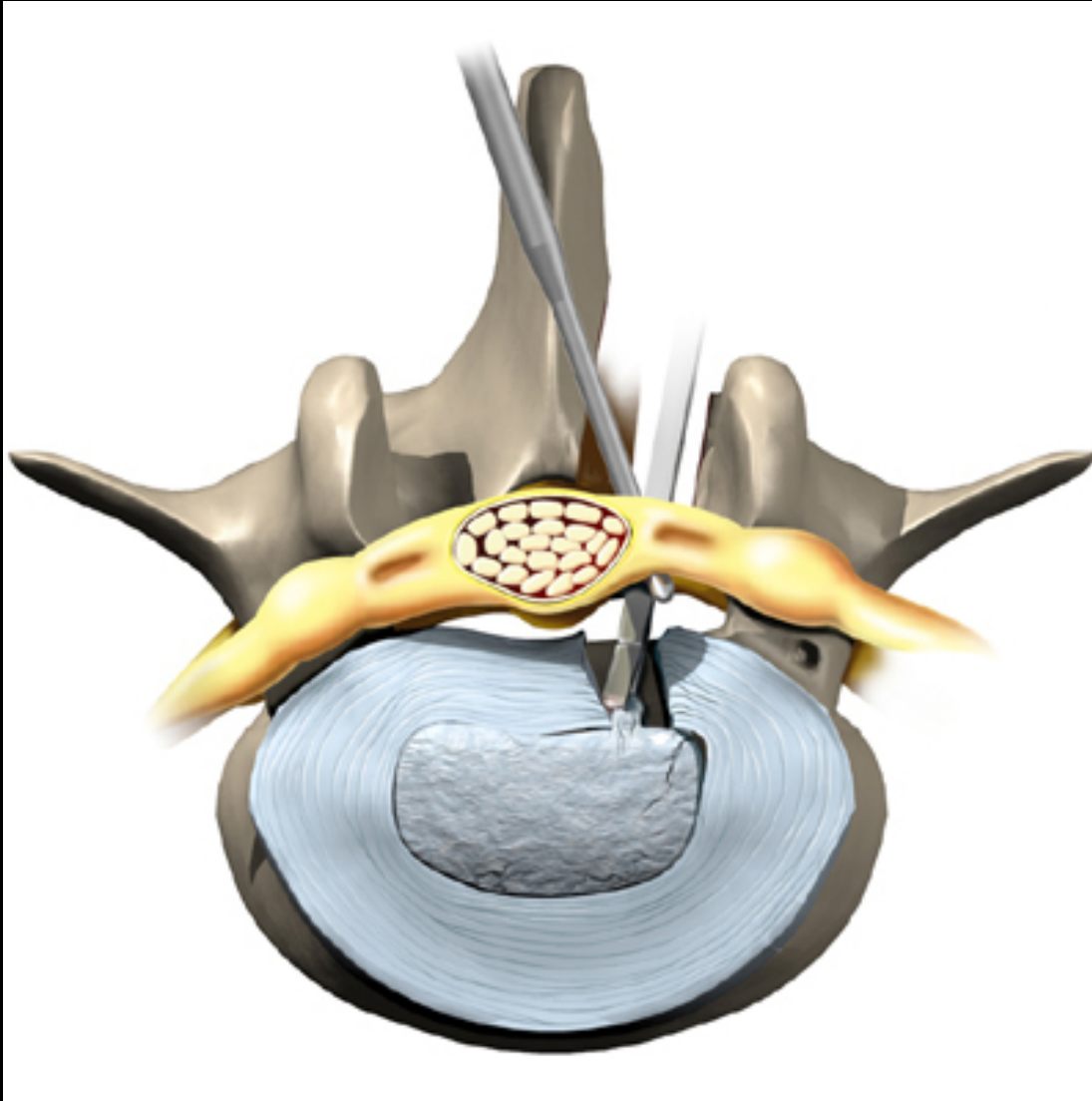
Ingen UR: risikoen for CES er 1/1.000 !!!

Andre årsager til UR:
Smerter, morfika, BPH

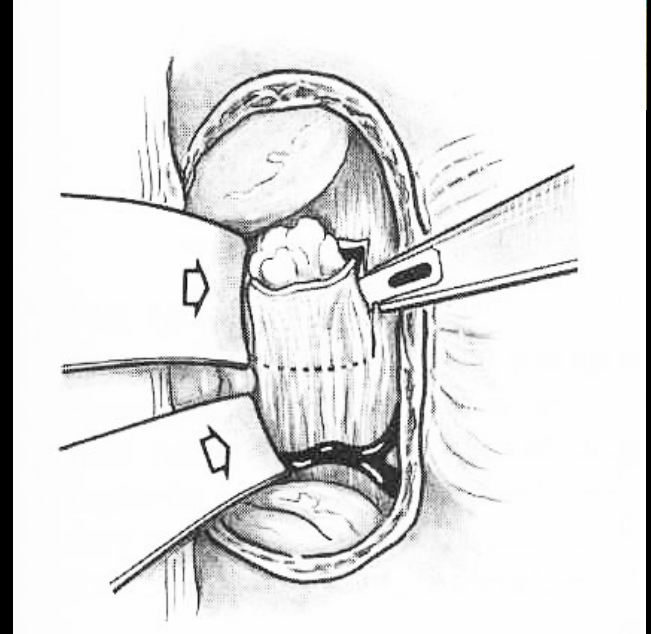
RYGKIRURGI

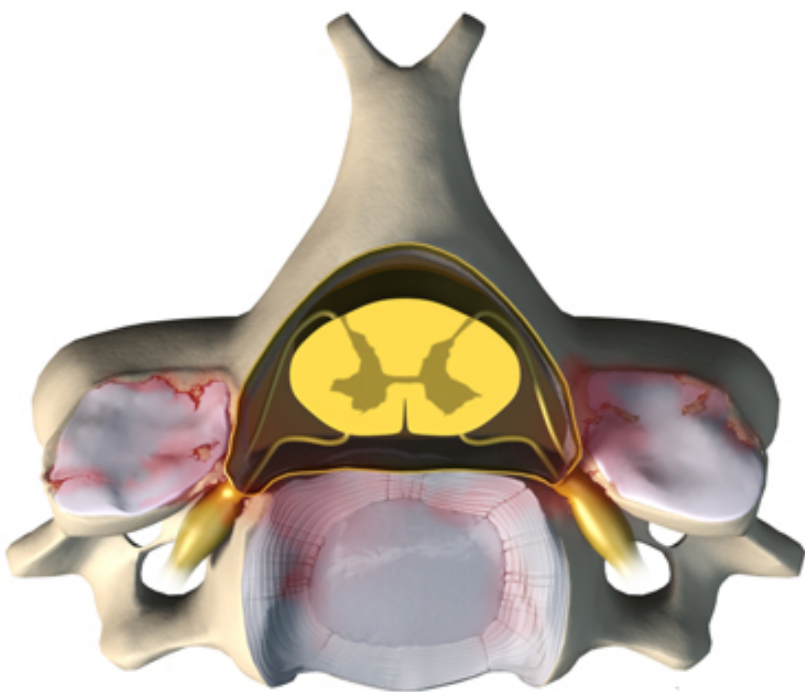
- Dekompression (frilægning)
- Spondylodese (stivgøring)
- Korrektion (opretning)

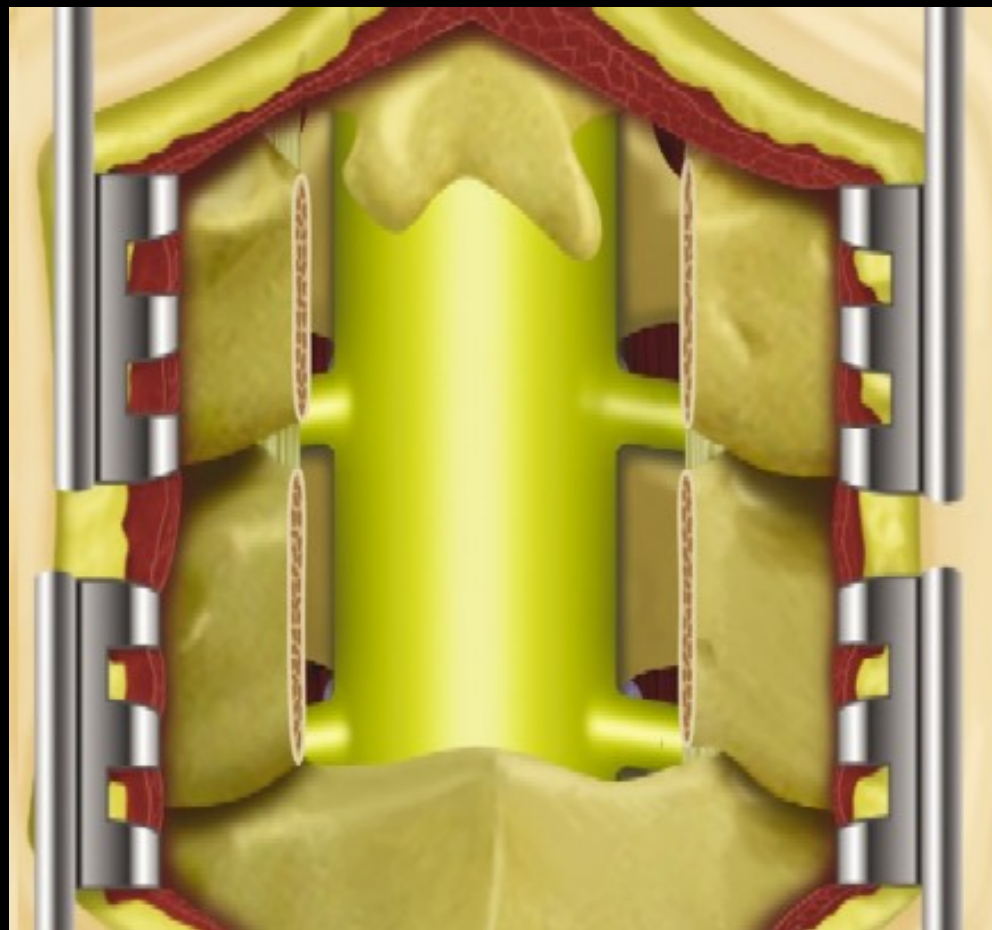
Partiel hemilaminektomi



- Klassisk diskektomi
- Mikroskop v/ recidiv
- Evt. dese

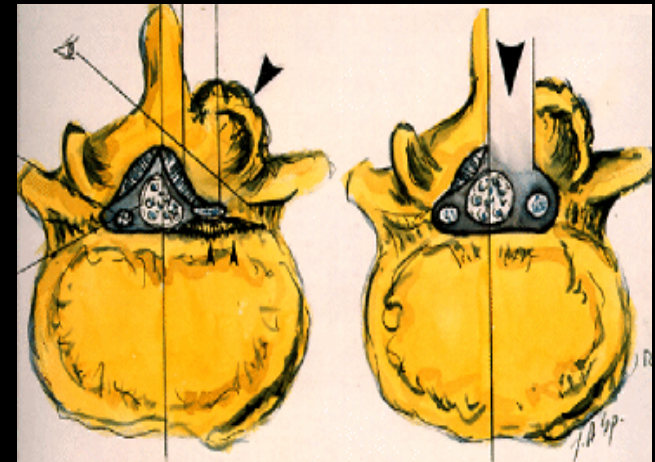
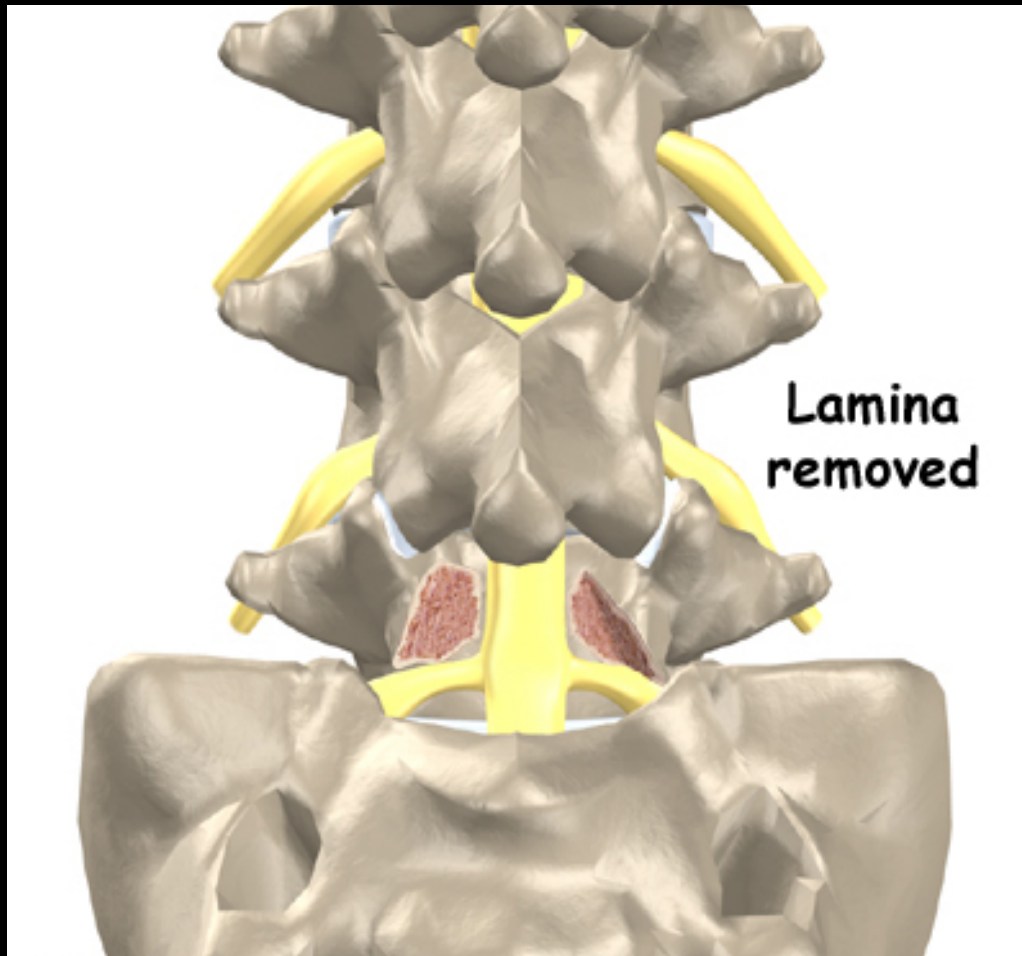




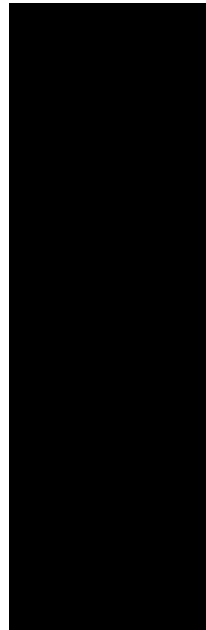
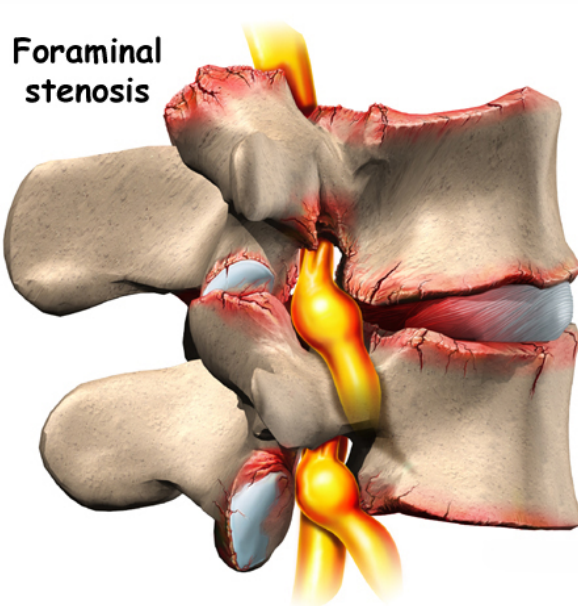
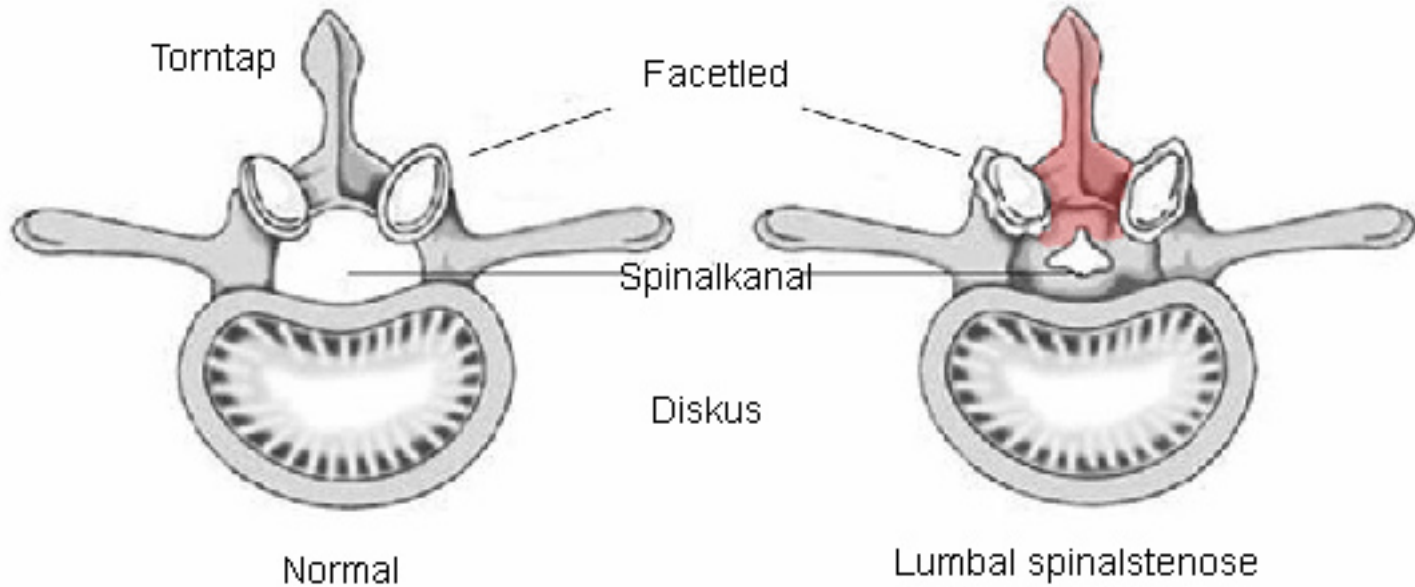


Laminektomi eller rodfrilægning

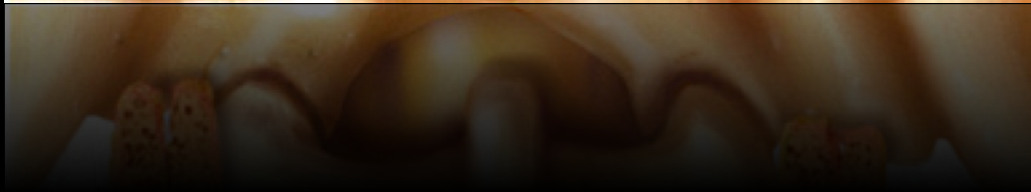
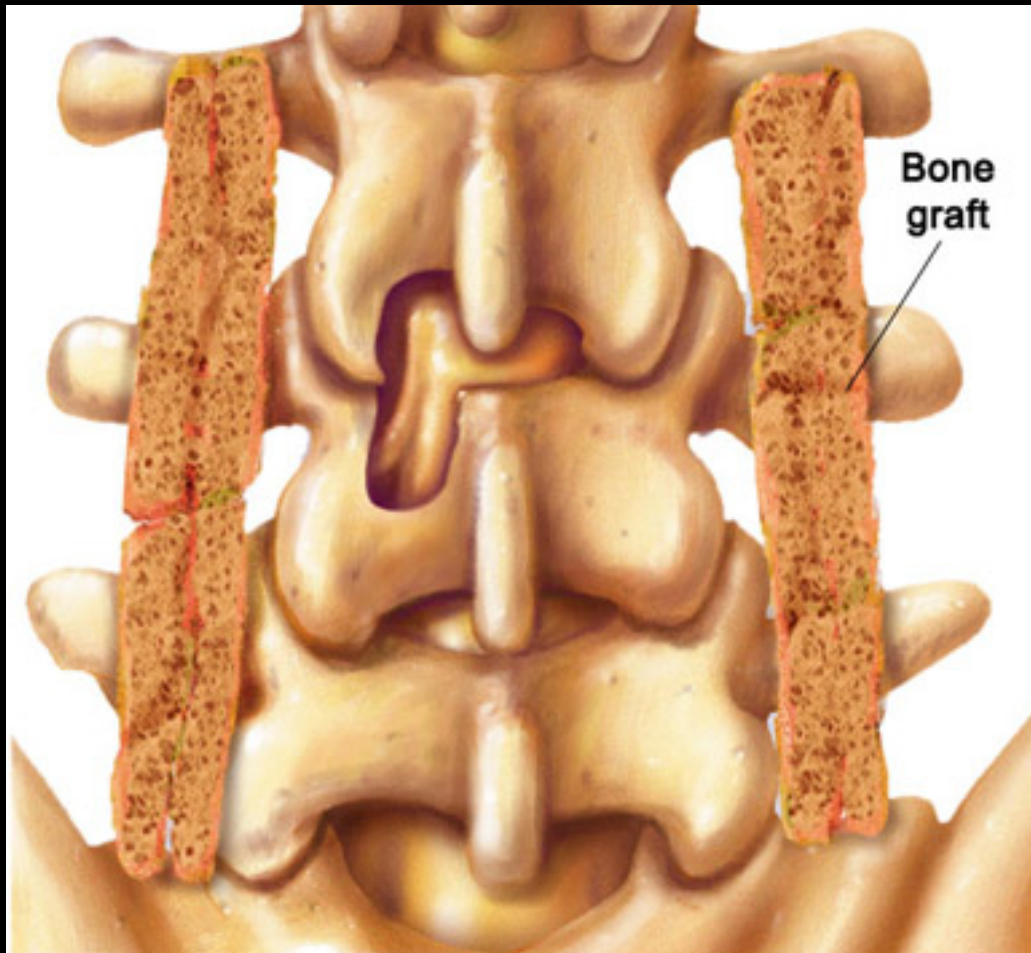
Facetleddet bevares – 4% udvikler instabilitet



Central eller foraminær type



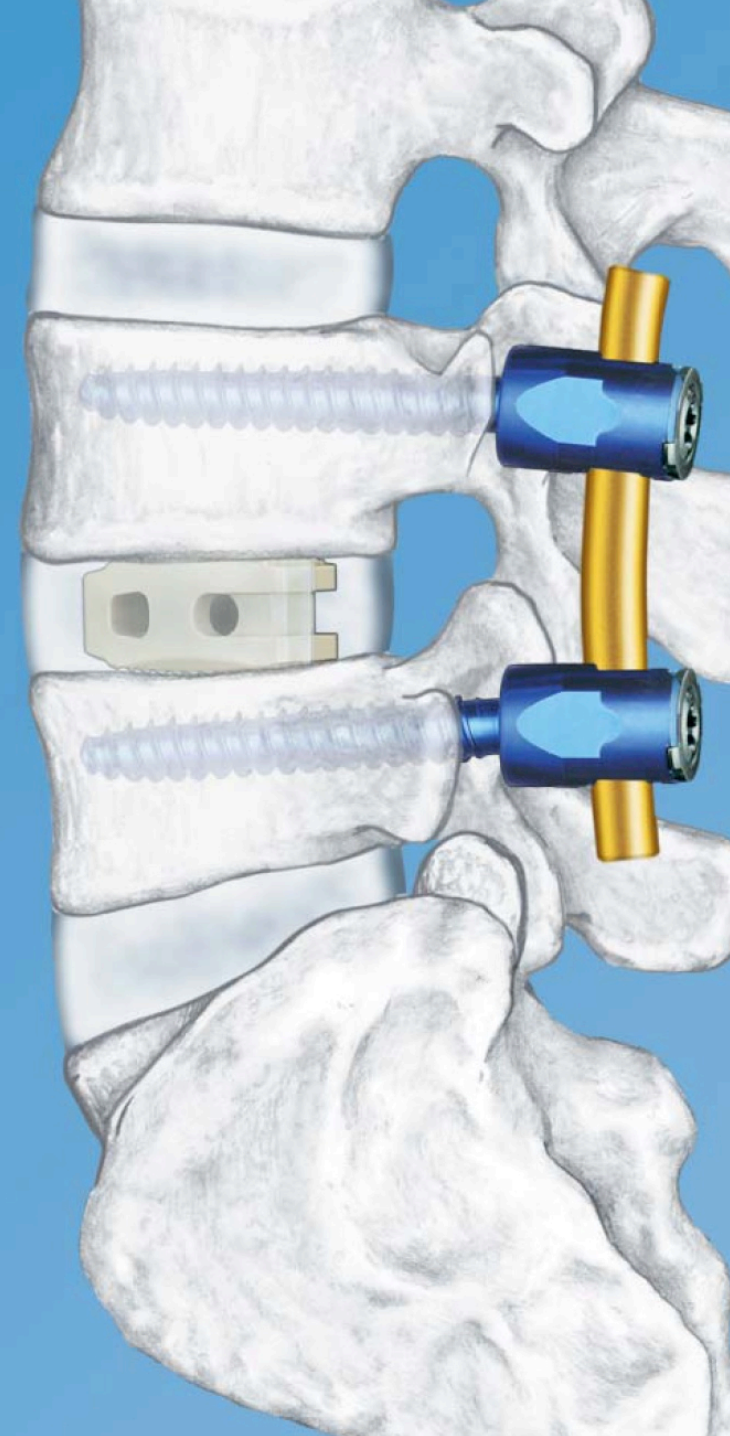
Ikke-instrumenteret dese

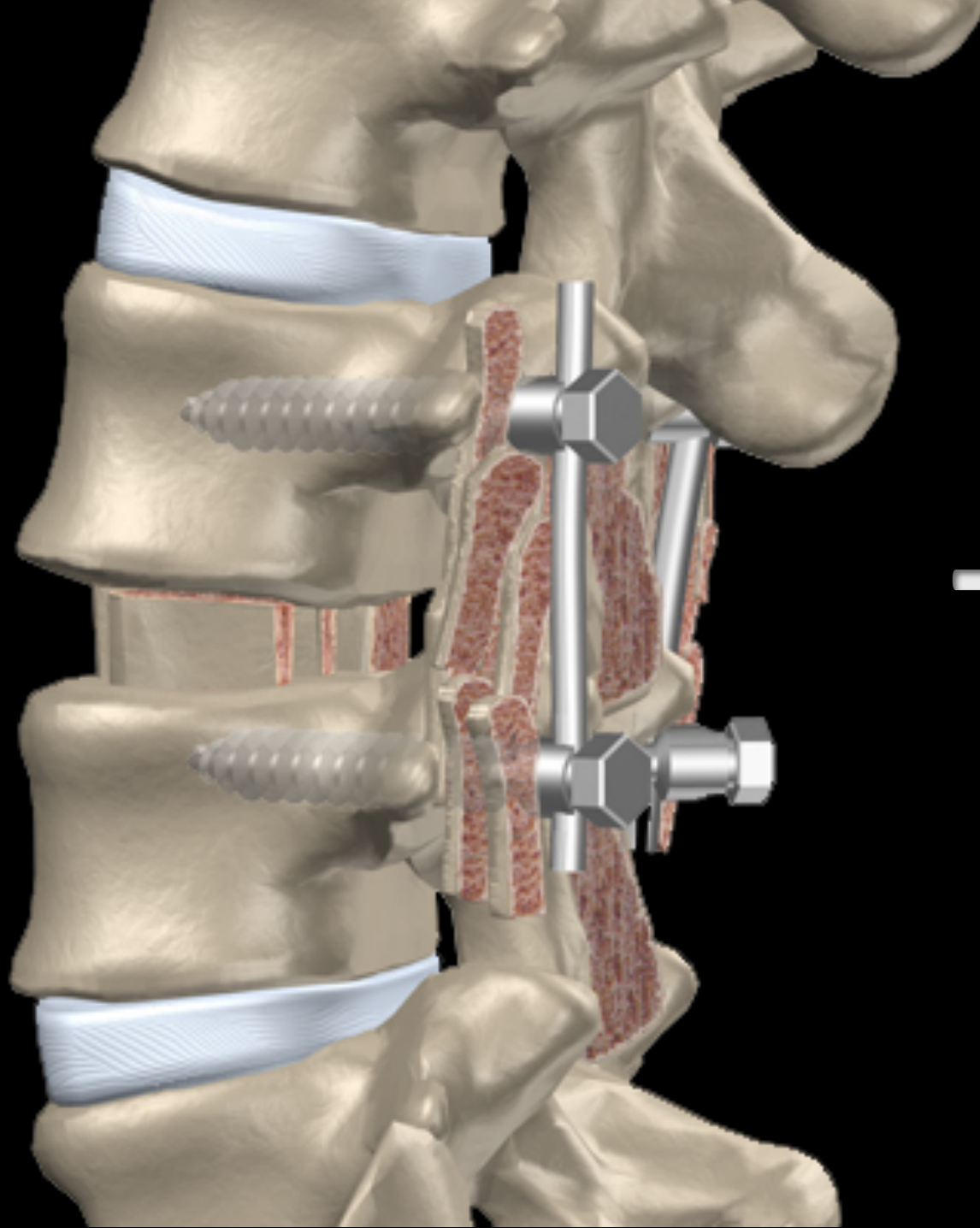


L4/L5-Dese

Transforaminal Lumbar Interbody Fusion

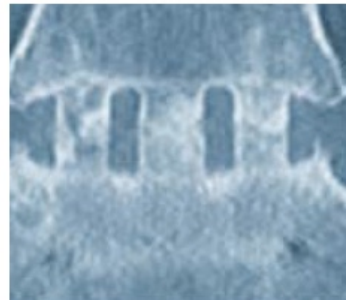
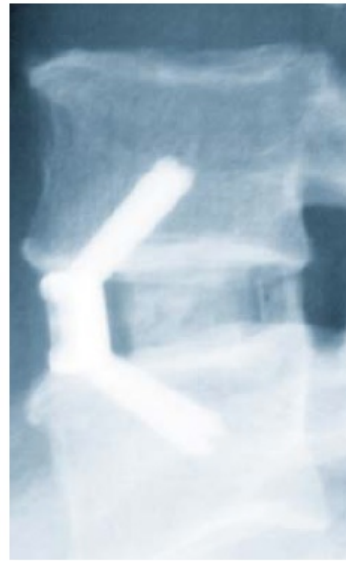
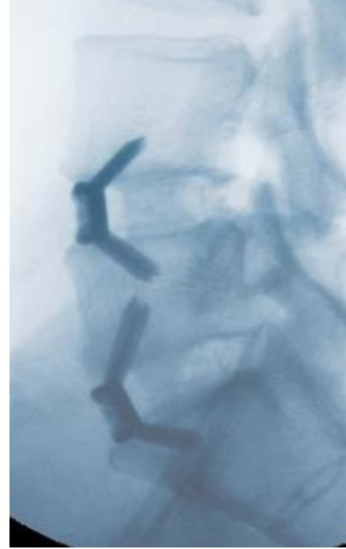
- Pedikelskruer
- Stave
- Diskectomi
- TLIF-Spacer (Opal)
- Knoglestykker evt. transplantat

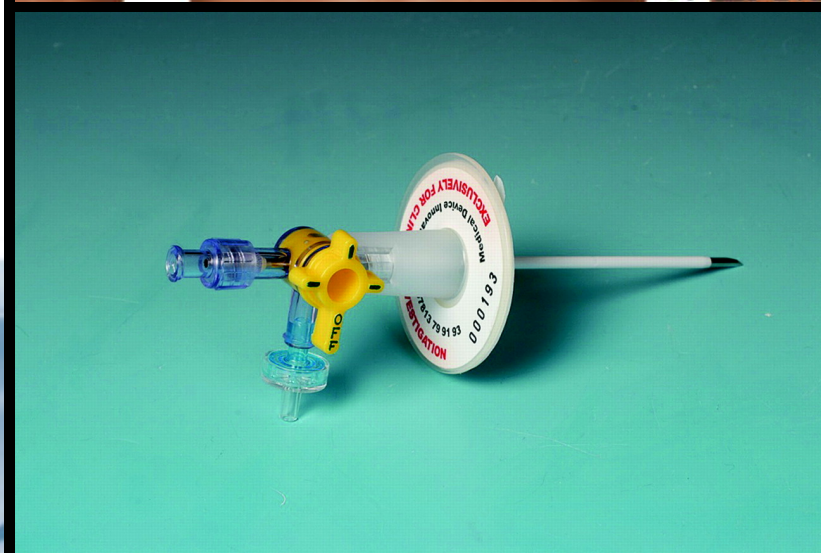
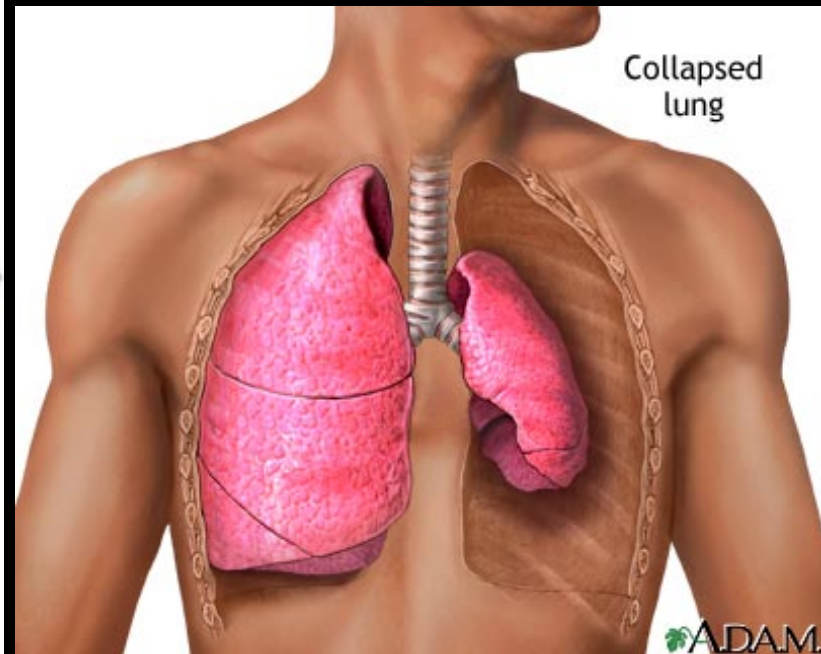
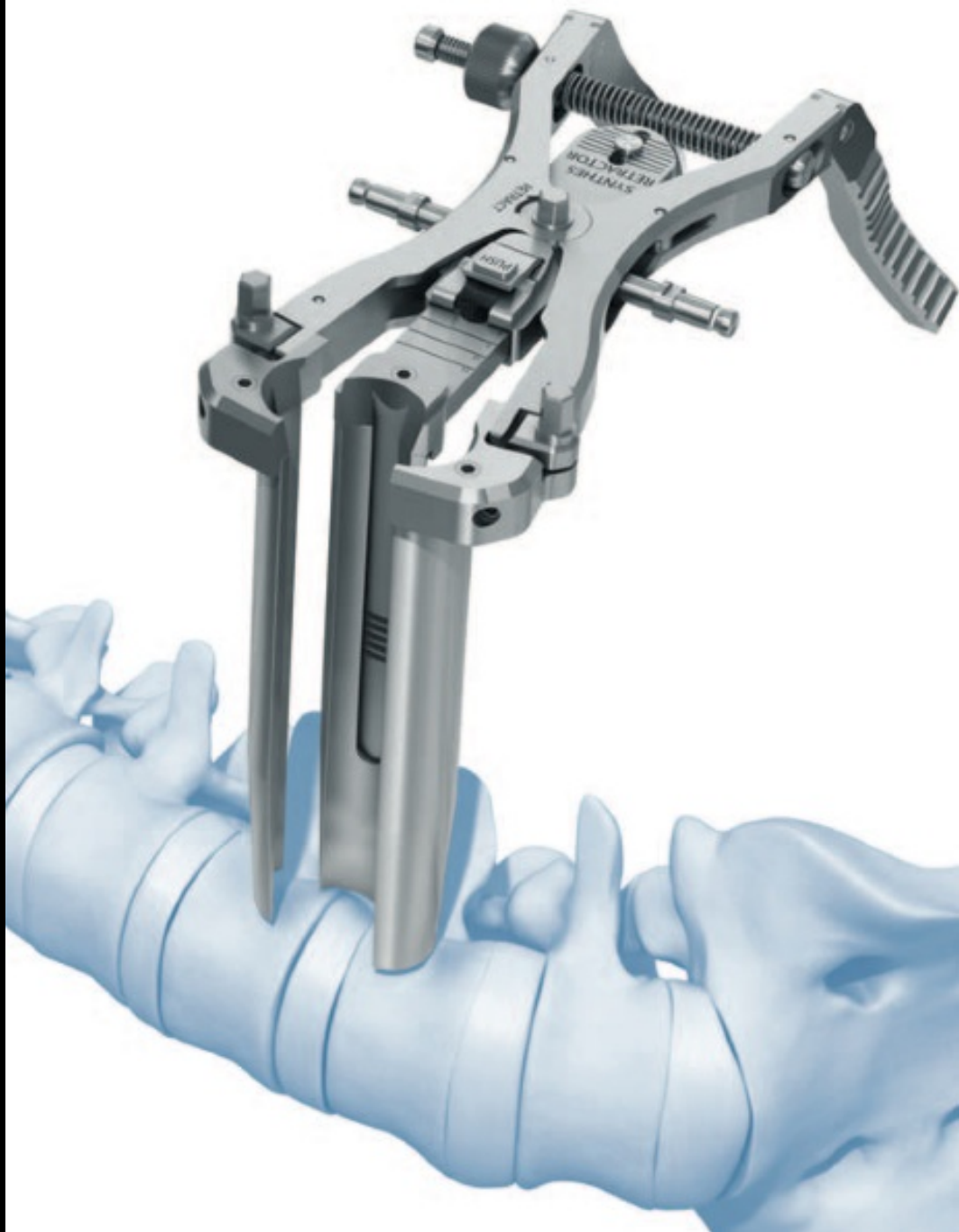




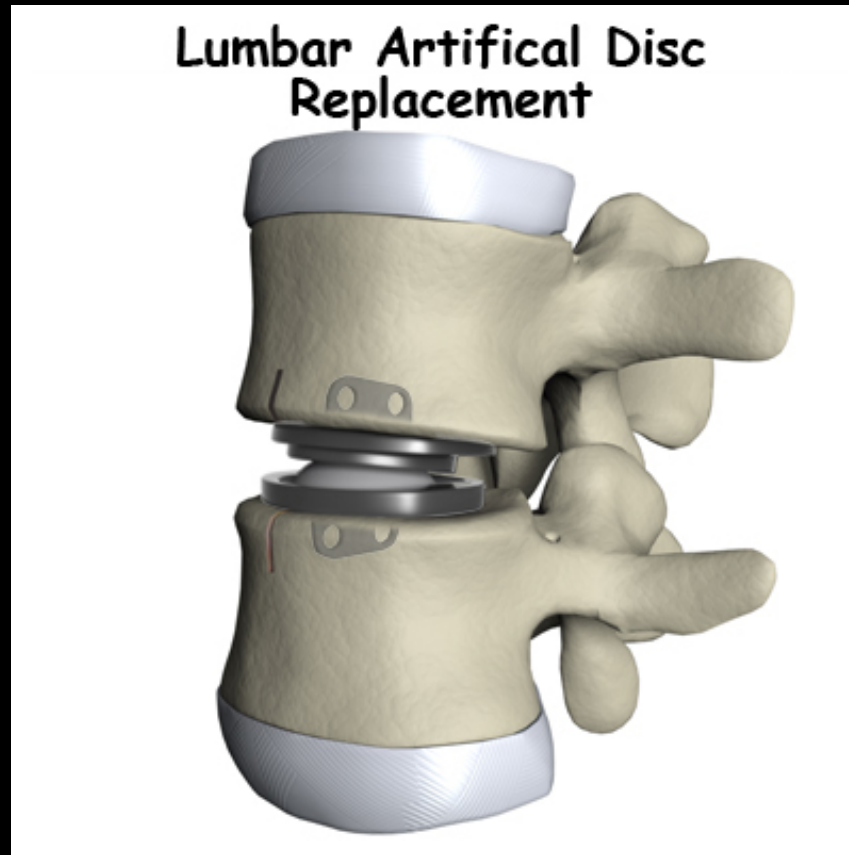
TLIF

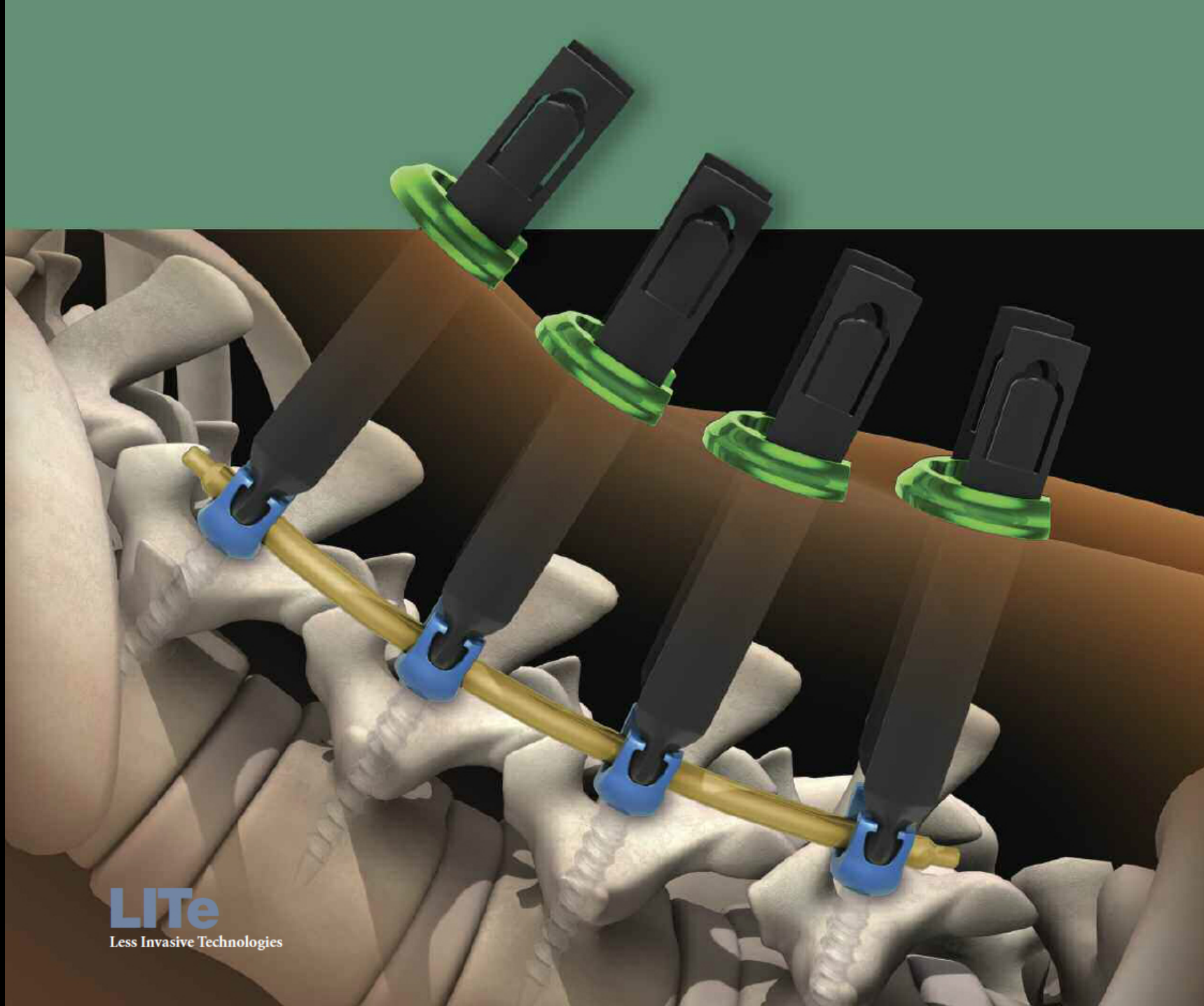
ALIF

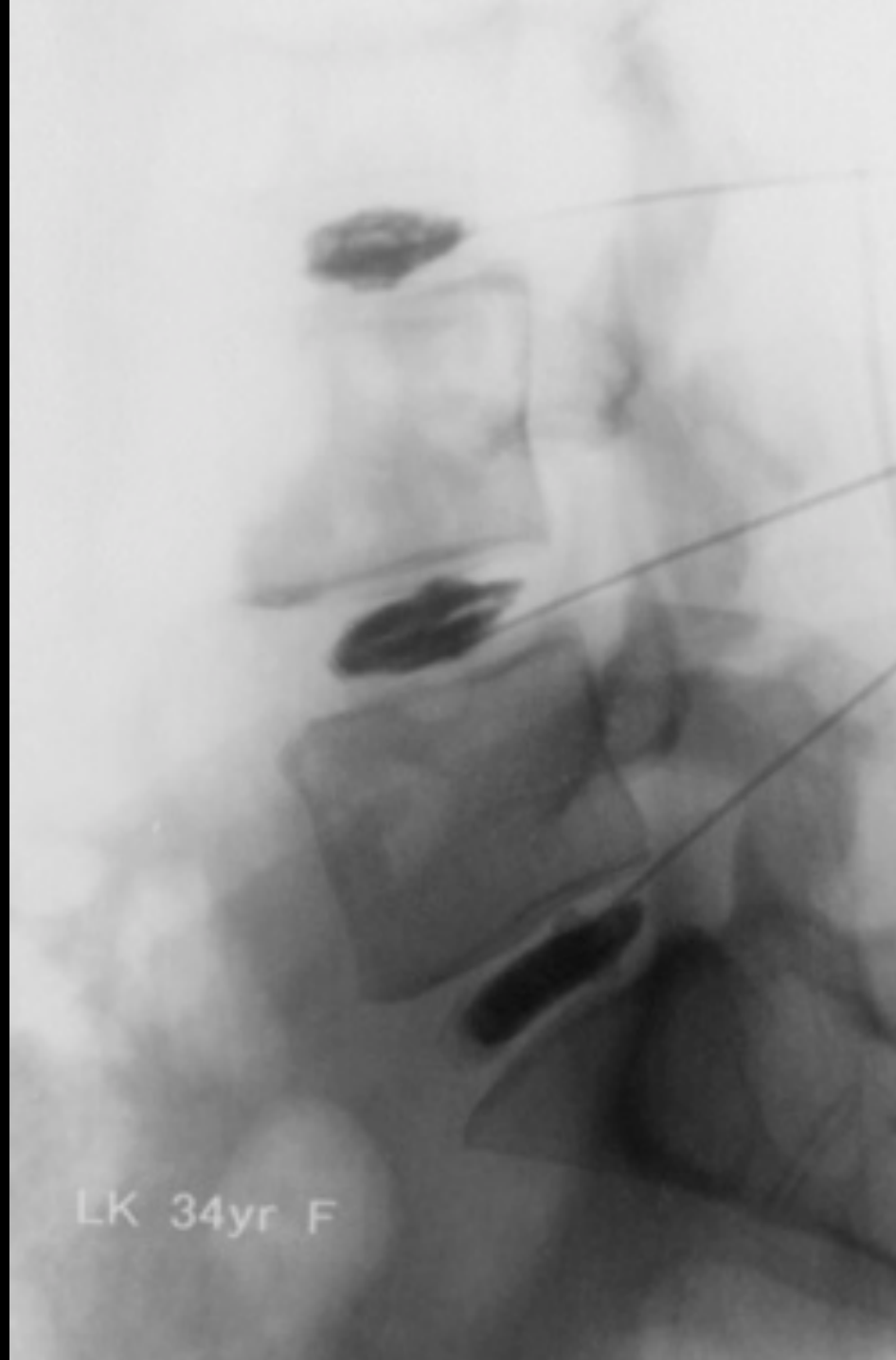




Diskusprothese

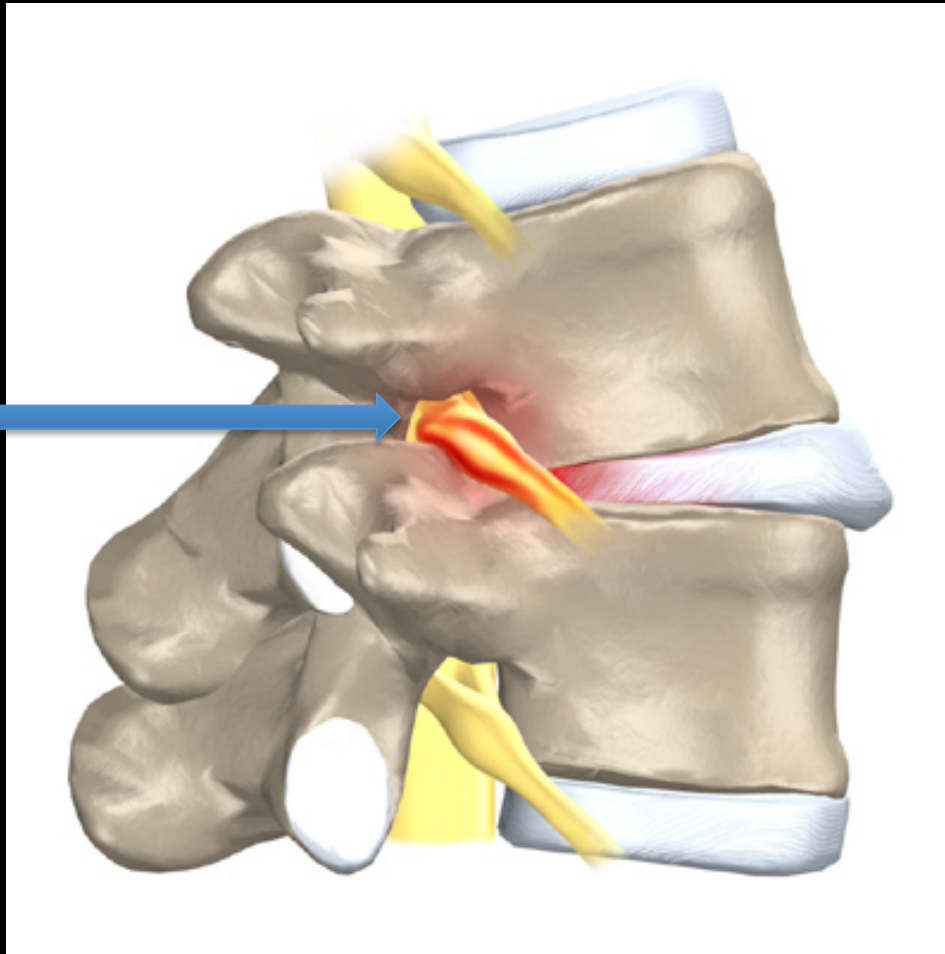






LK 34yr F

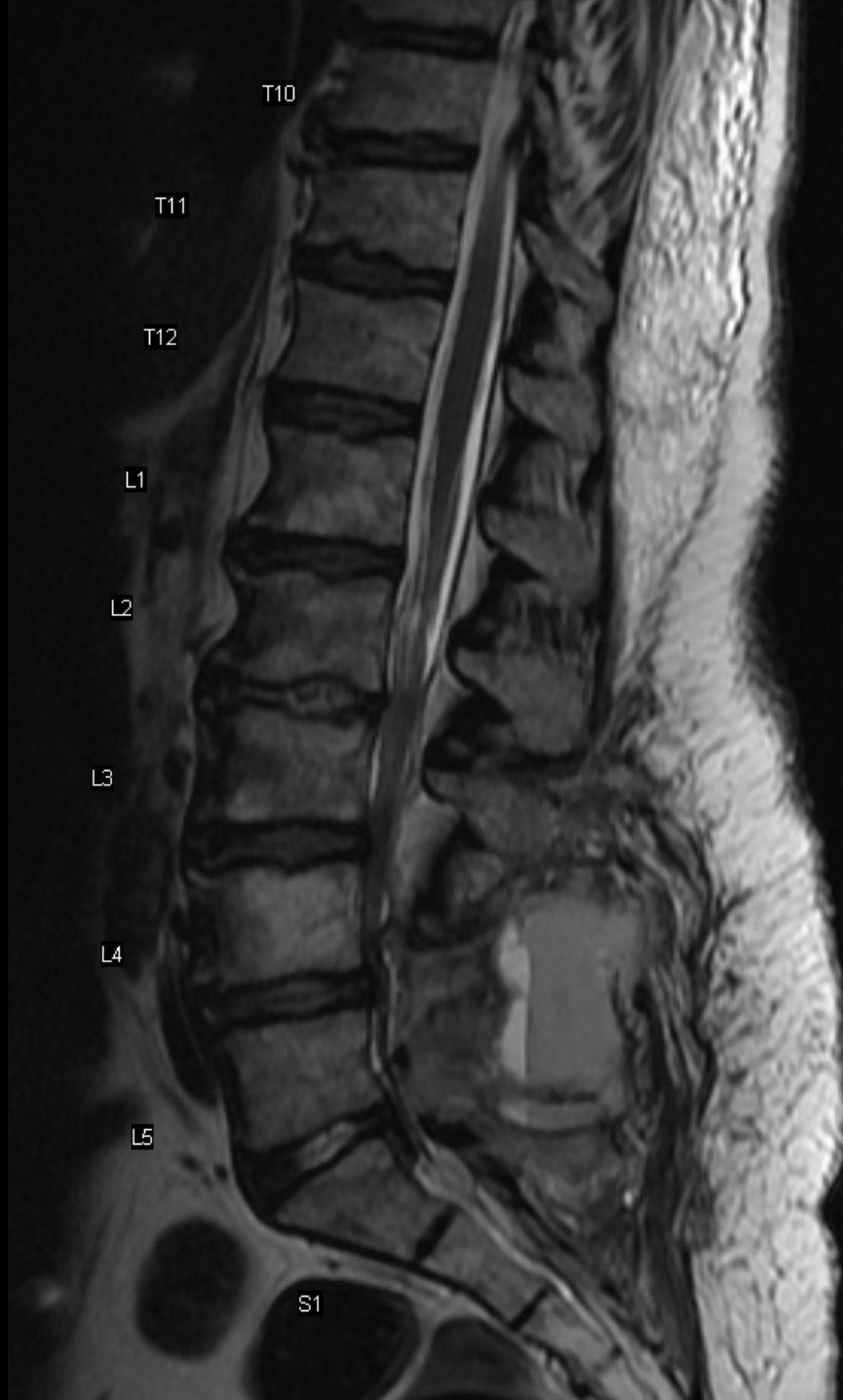
Blokade af nerverod eller facetled



Komplikationen

Postoperativ fase

- Karskade: hæmatom
- Smertebehandling
- Nerveskade
- Duralæsion

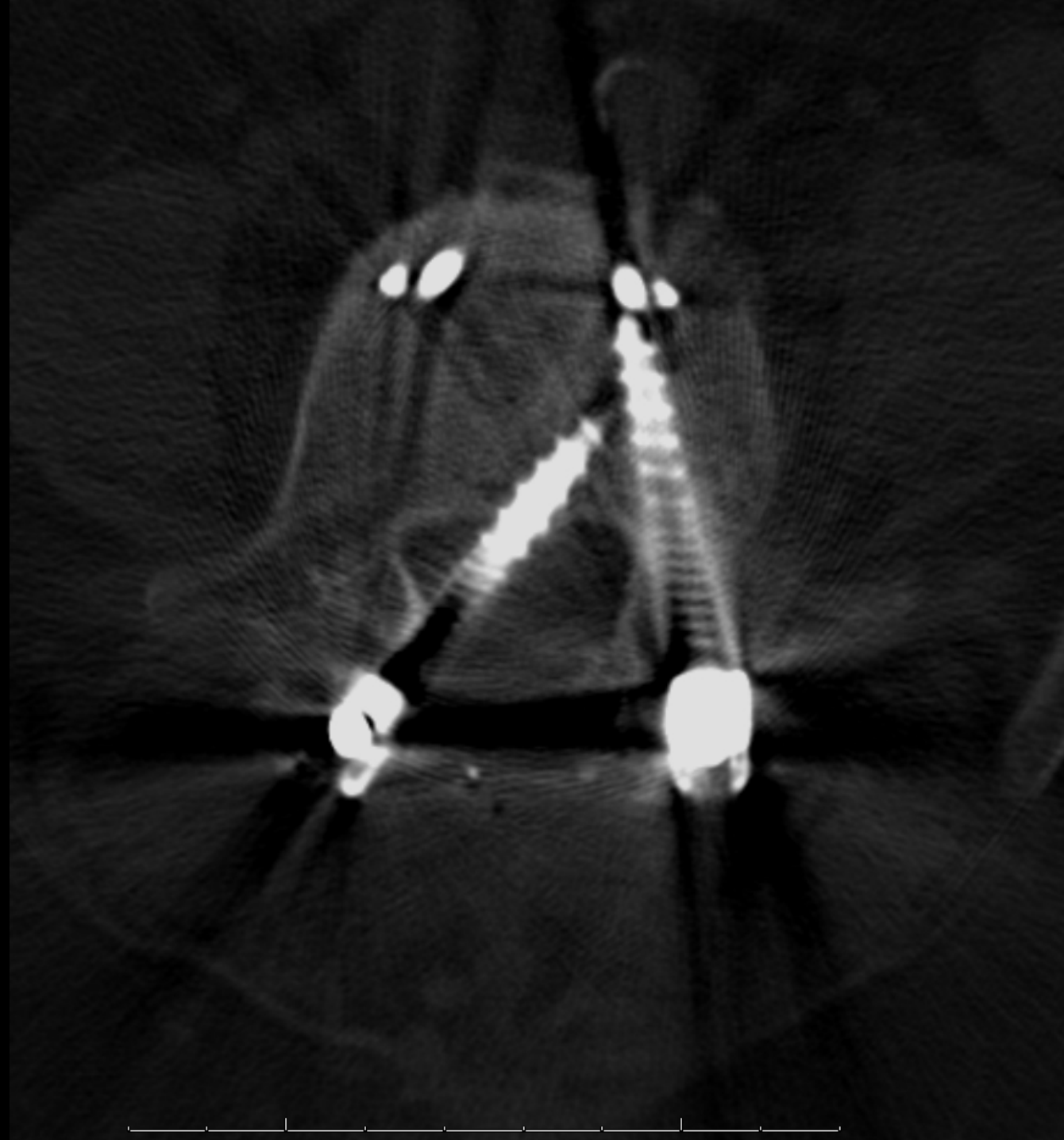


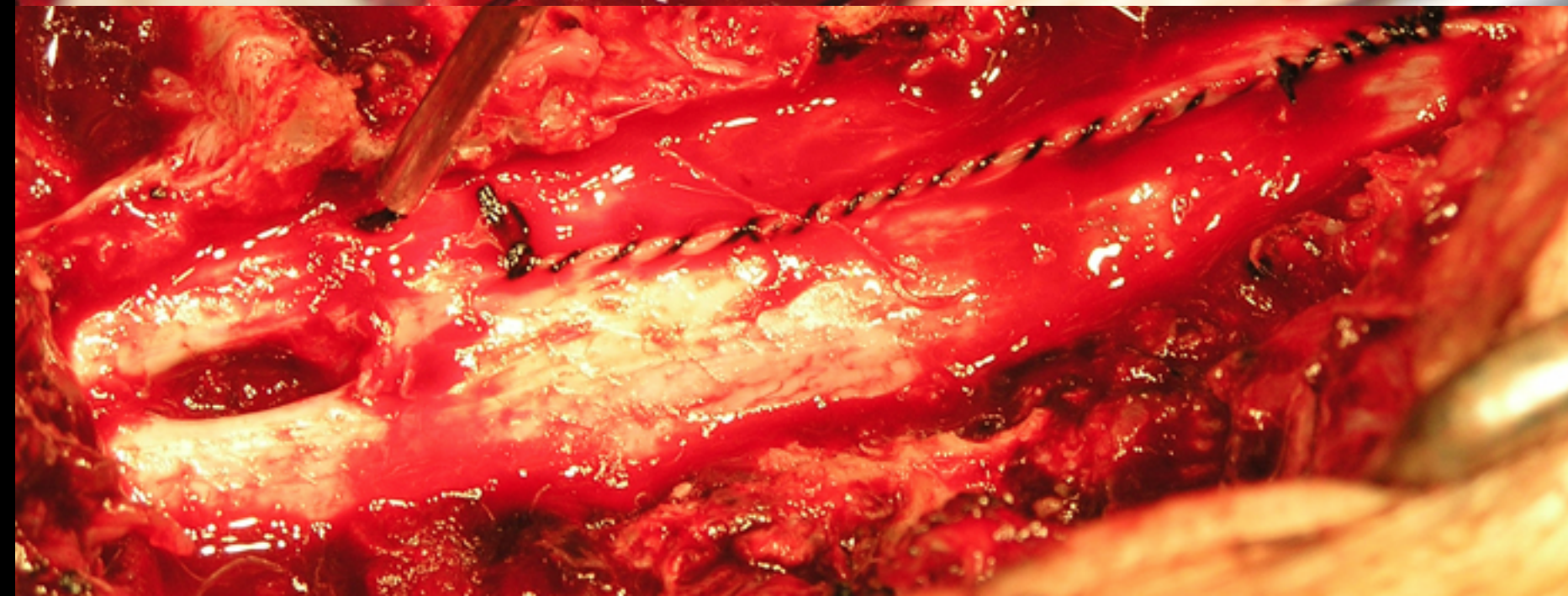
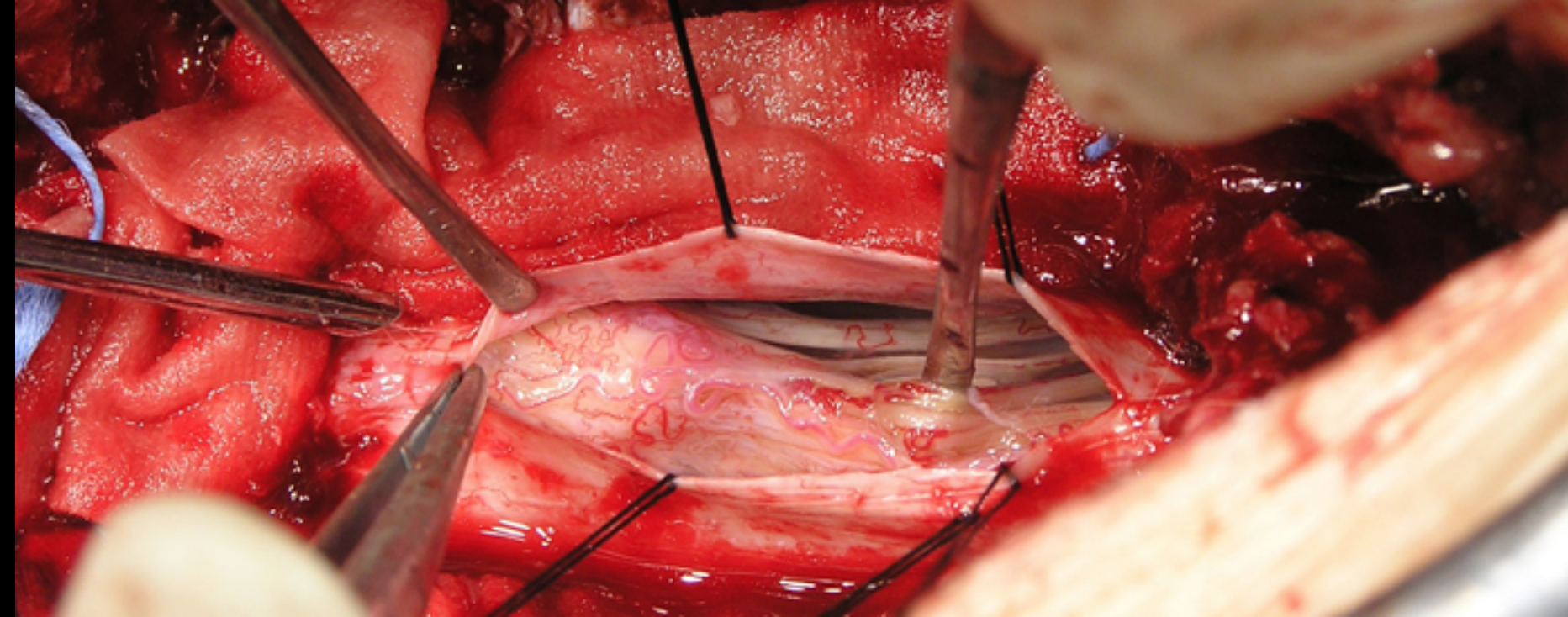
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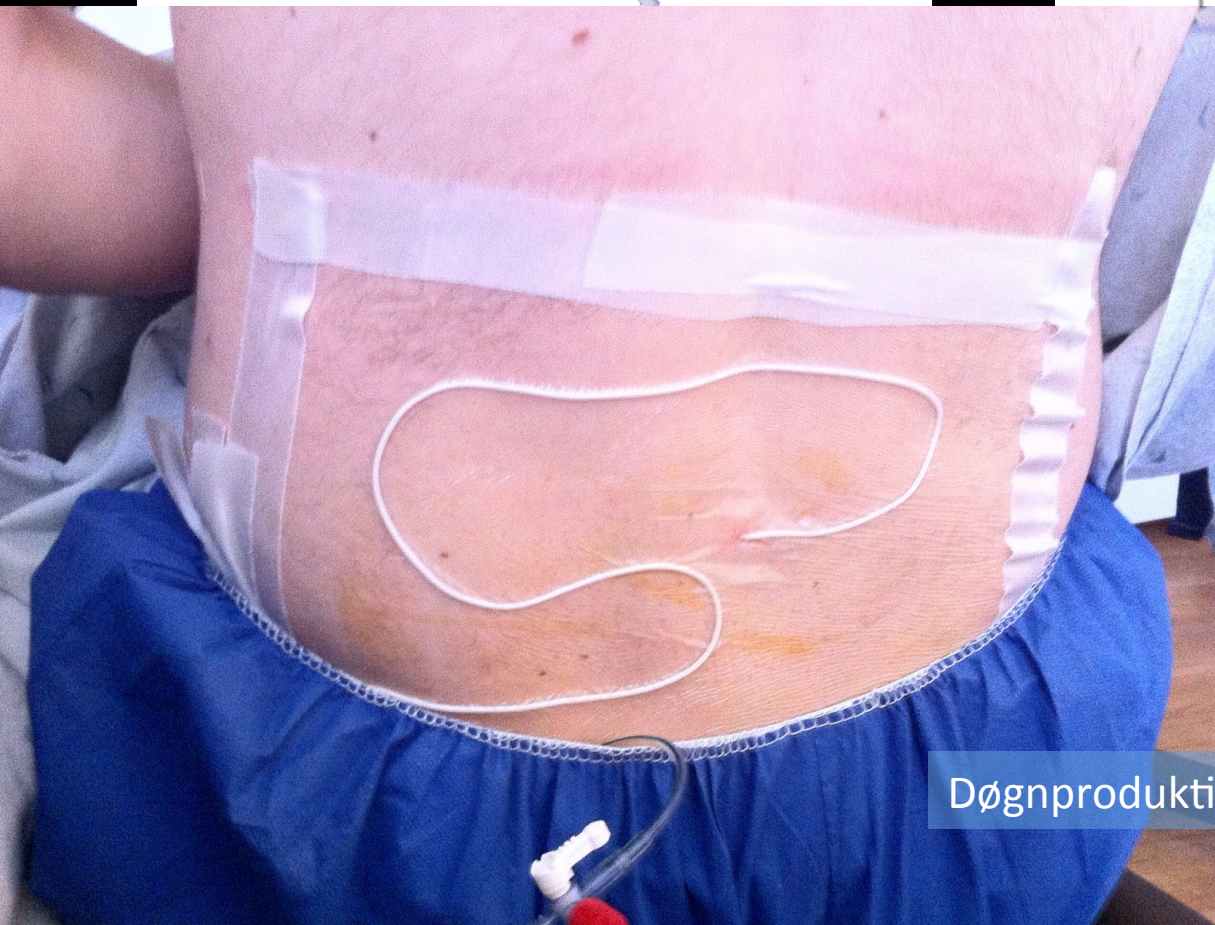
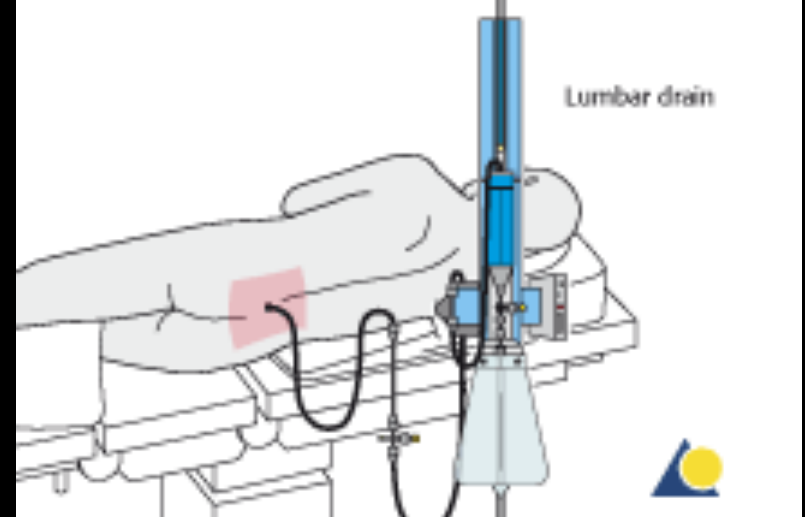
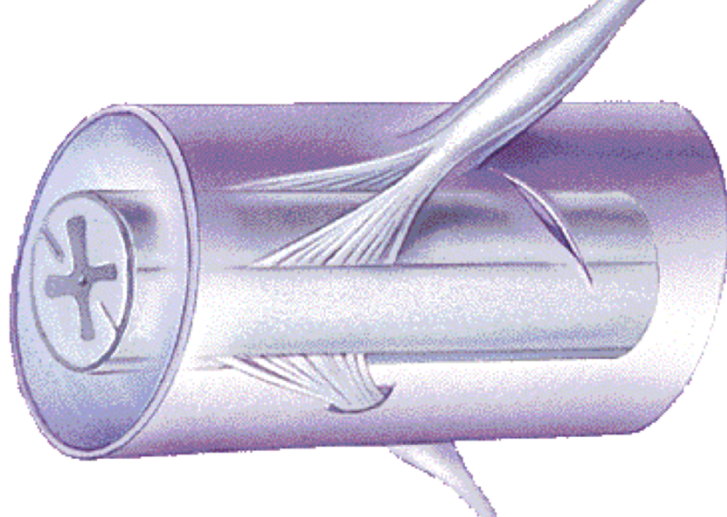
SE1
TR 500
TE 15
Thk 4.0
TA 1.51

B

SE1
TR 500
TE 15
Thk 4.0
TA 1.51







Døgproduktion: 500 ml



Spørgsmål?