SportEST

IDA-TALLINNA KESKHAIGLA

estonia.ee

Lülisammas ja kirurgia – punased lipud,

tänapäevased ravivõimalused ja soovitused

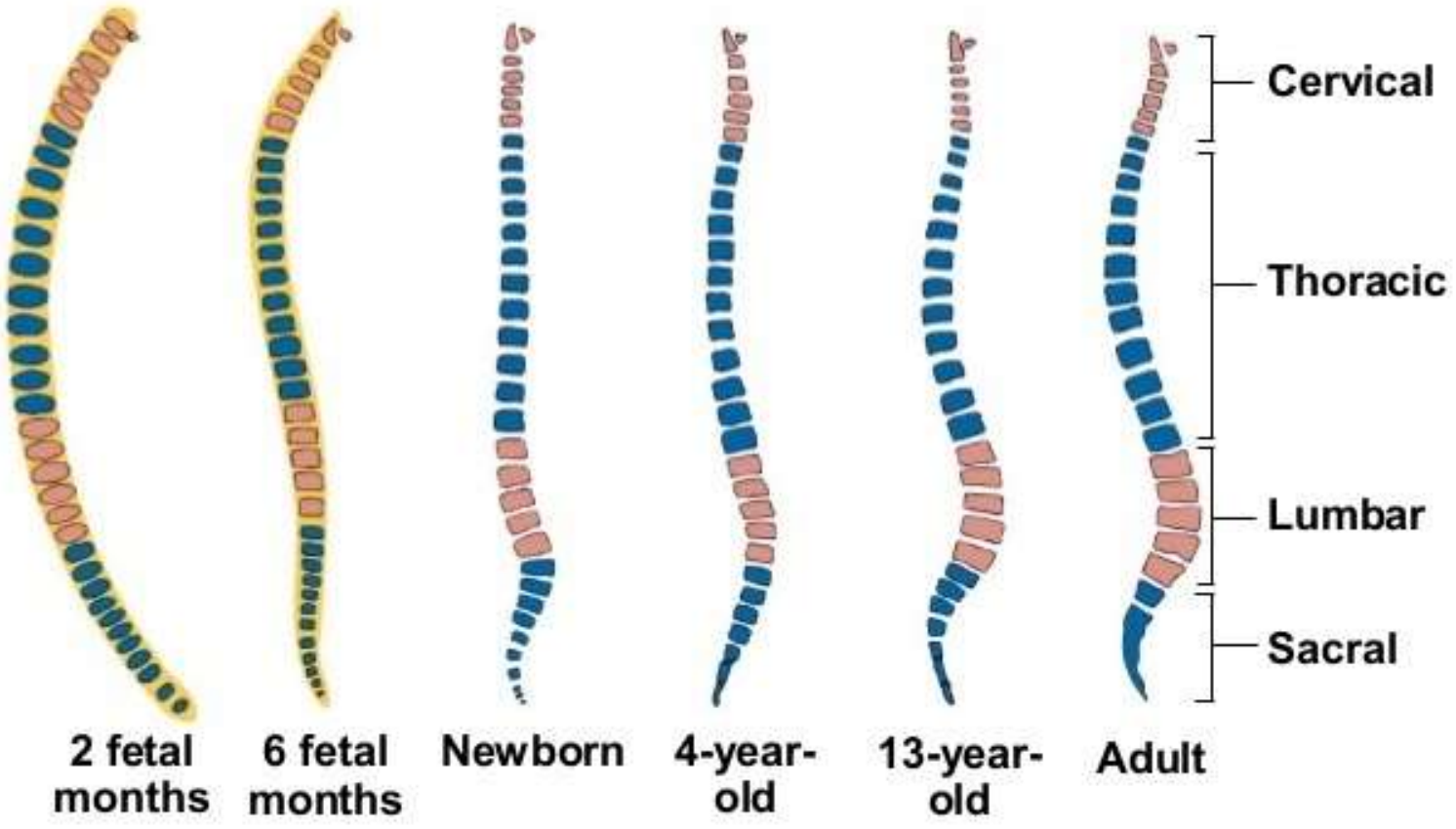
Taavi Toomela
Lülisambakirurgia keskus
6.4.2018

Euroopa Liit
Euroopa
Regionaalarengu Fond

Eesti
tuleviku heaks

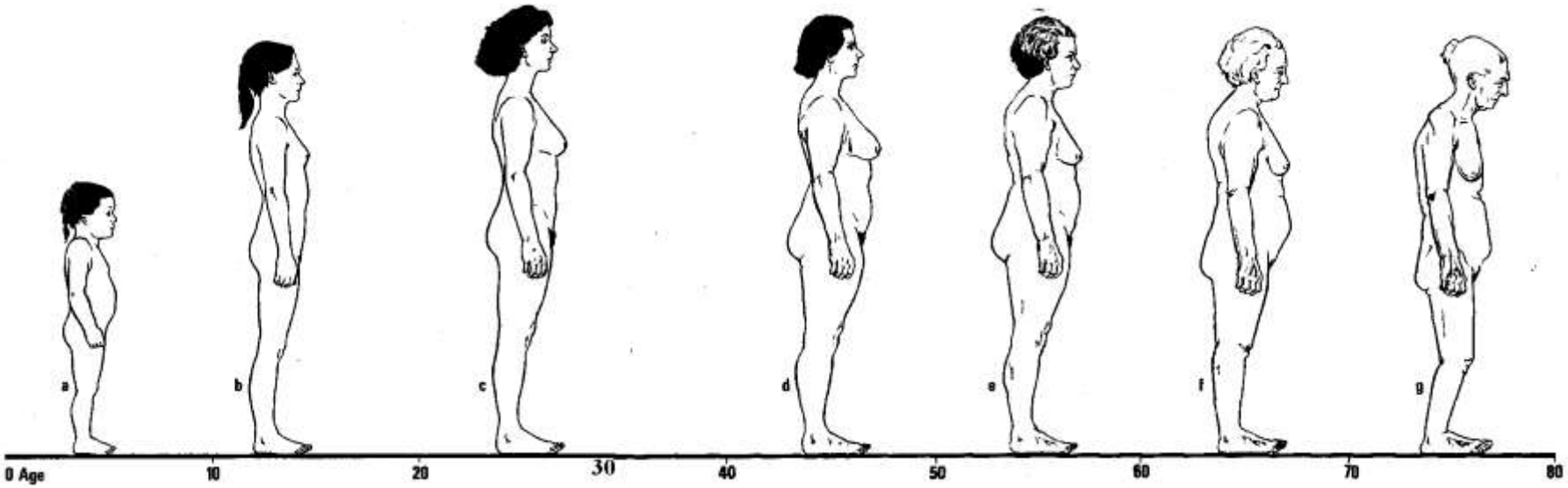
Homo sapiens sapiens

Lülisammas



d The development of spinal curves

Arenemine või vananemine



Ravi vastavalt vanusele

Traumad

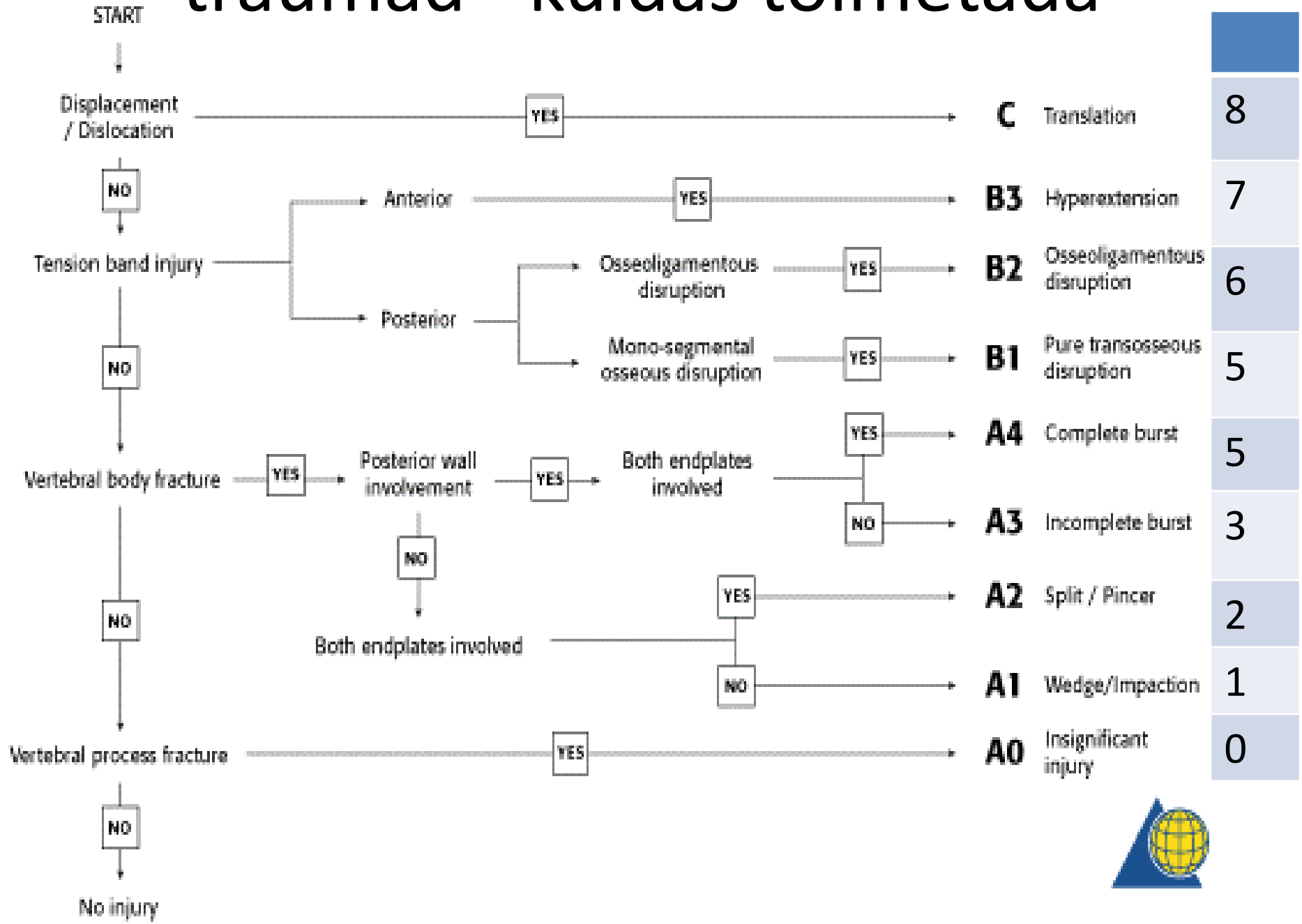
Põletikud

Kasvajad

Jalgade nõrkus ja lahkliha tuimus

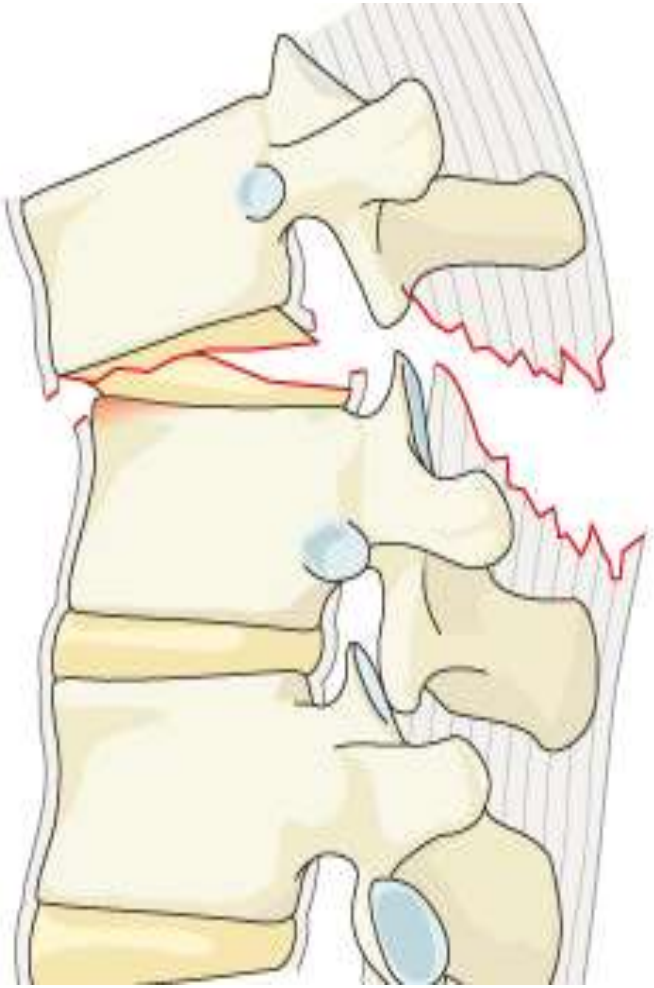
Luuhõrenemine

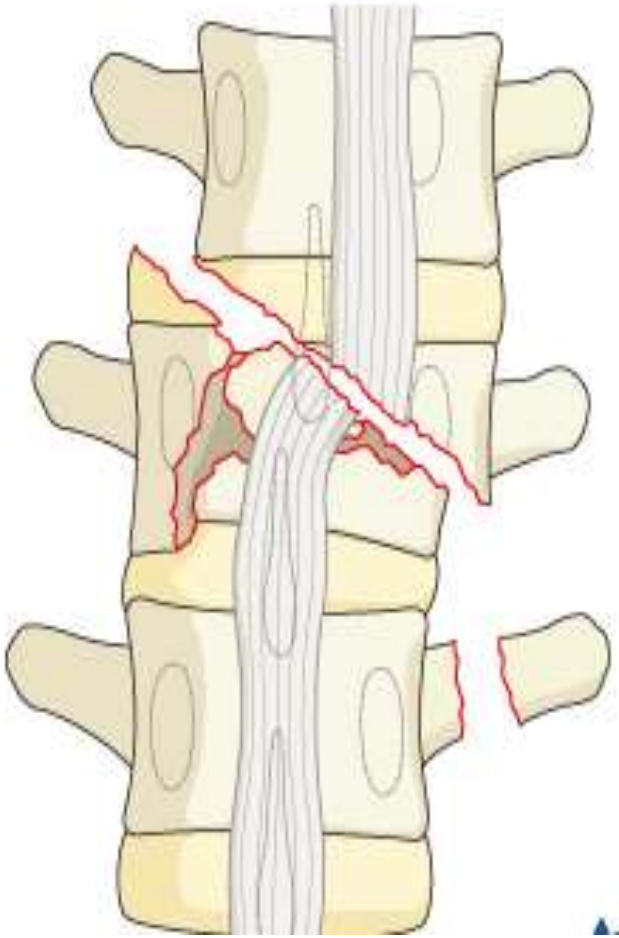
traumad - kuidas toimetada



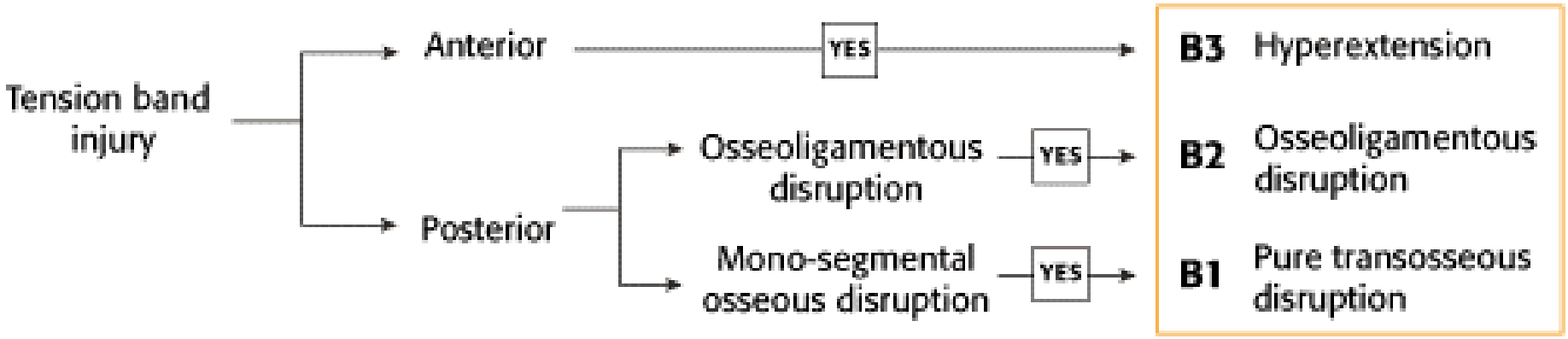
Tüüp AOSpine	Neuroloogiline defitsiit	Raskus aste, punktid
N0	puudub	0
N1	esines ajutine, möödunud	1
N2	radikulaarne	2
N3	osaline seljaaju või cauda eguina kahjustus	4
N4	täielik seljaaju kahjustus	4
Nx	teadmata(narkoos, pea trauma)	3

C tüüpi vigastused

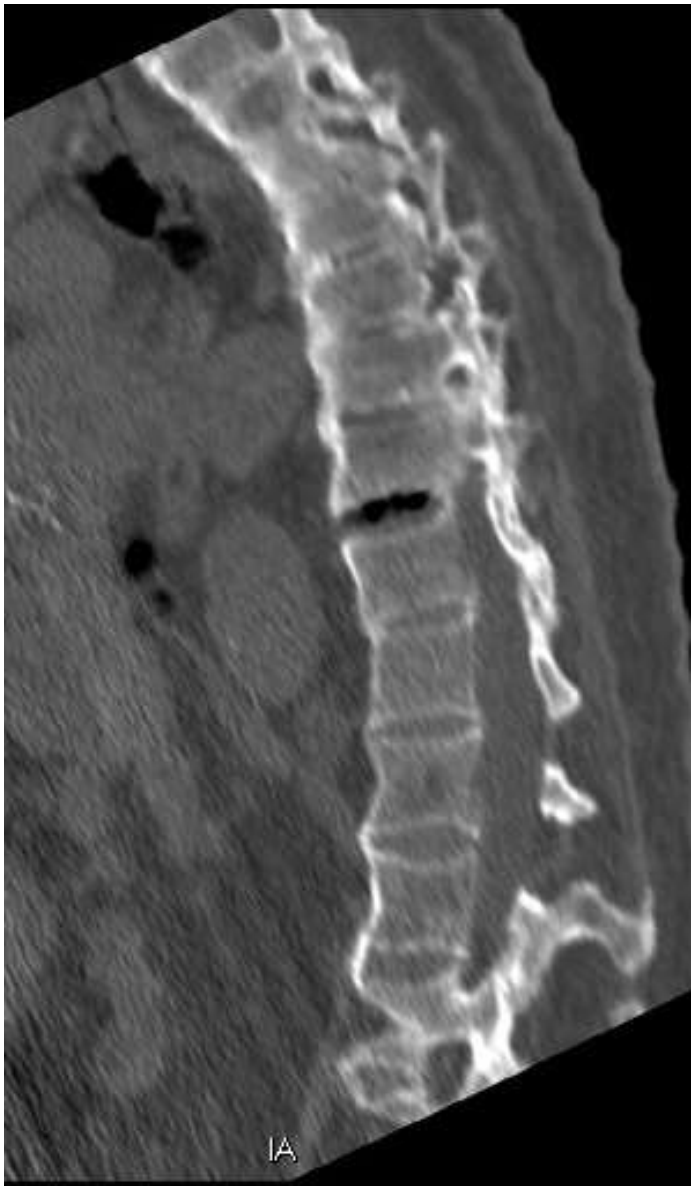




B-tüüpi vigastused



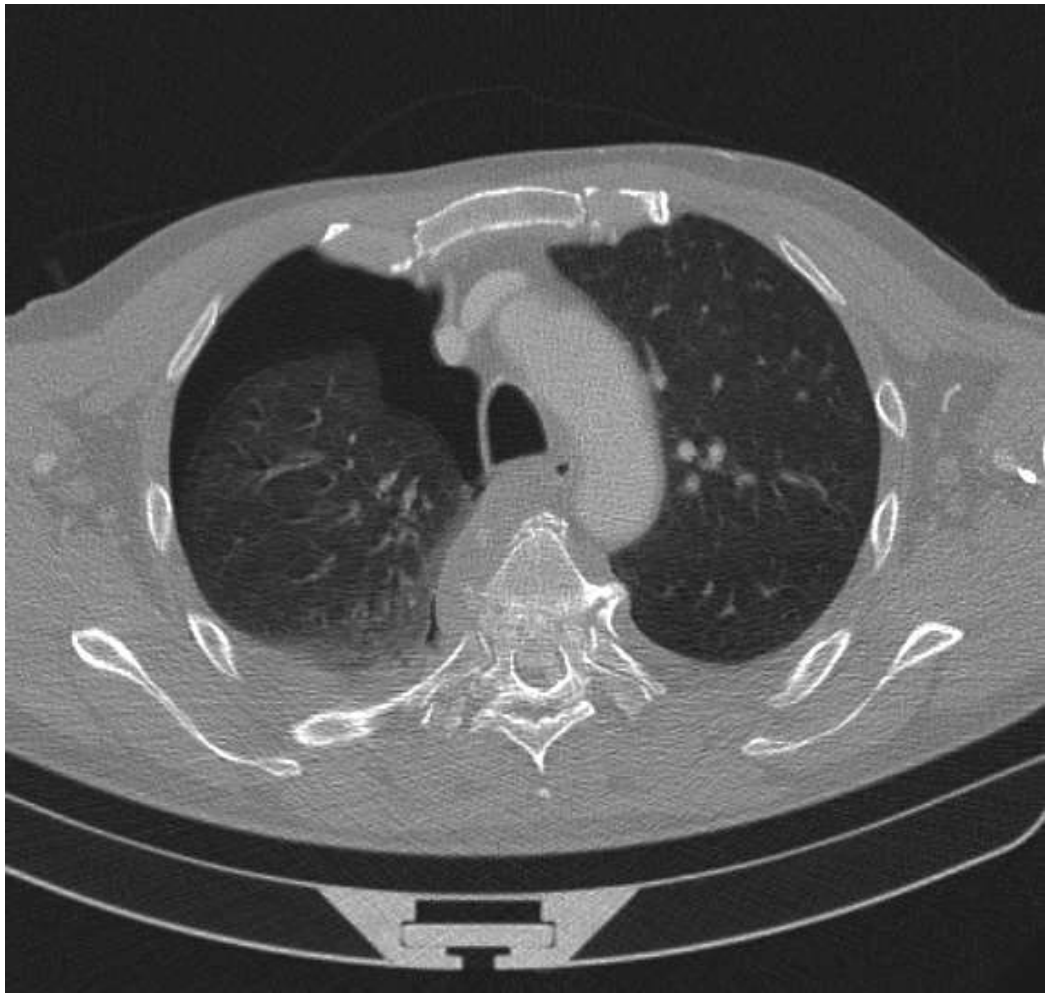
Ülesirutus – anküloseeriv spondüliit



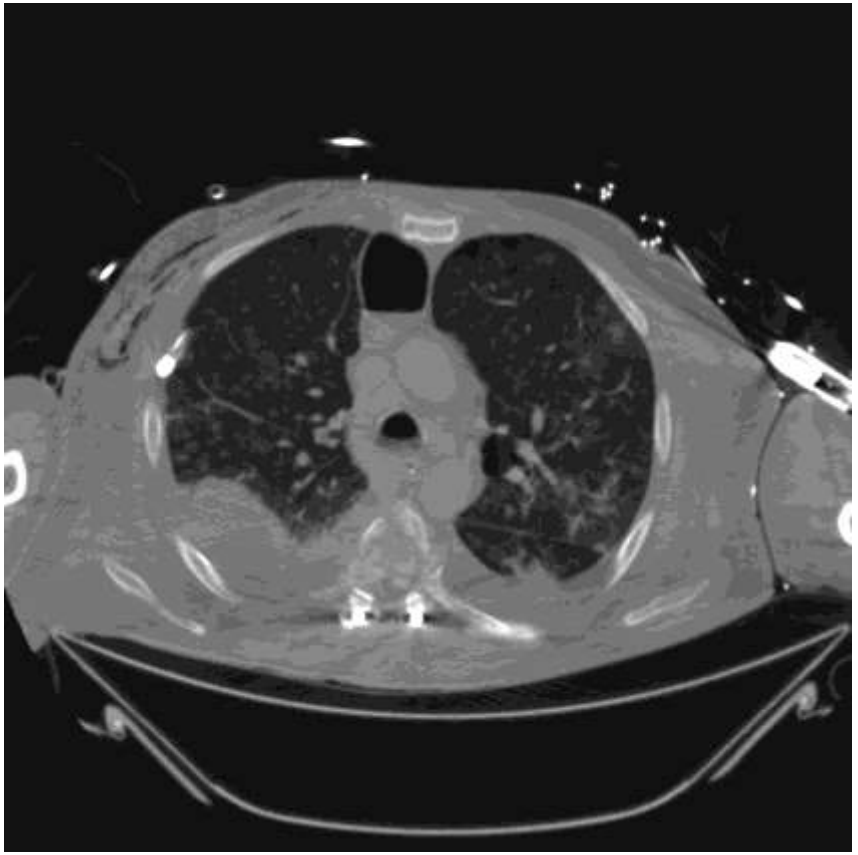
luulisligamentaarsed vigastused

painutus/ ülesirutus

ebastabiilne rindkere vigastus

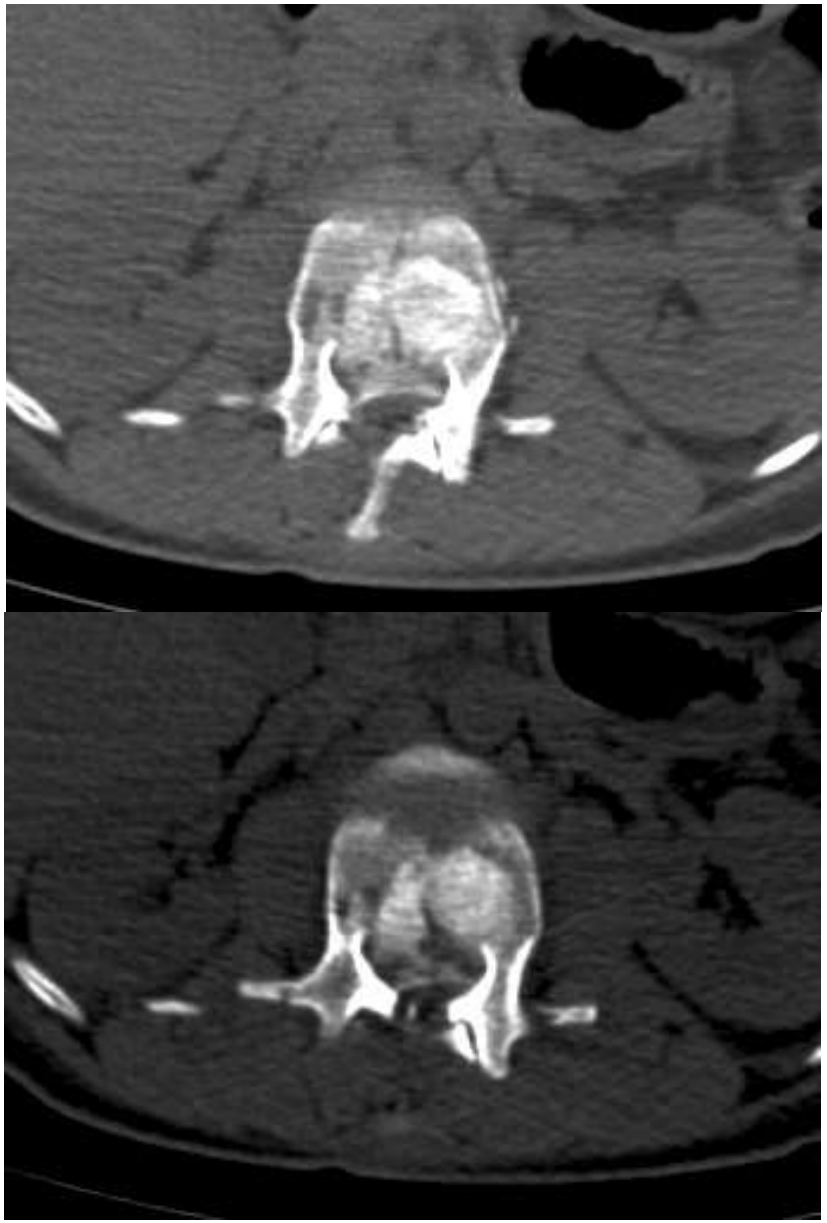


perkutaanne kirurgia annab võimaluse ellu jääda

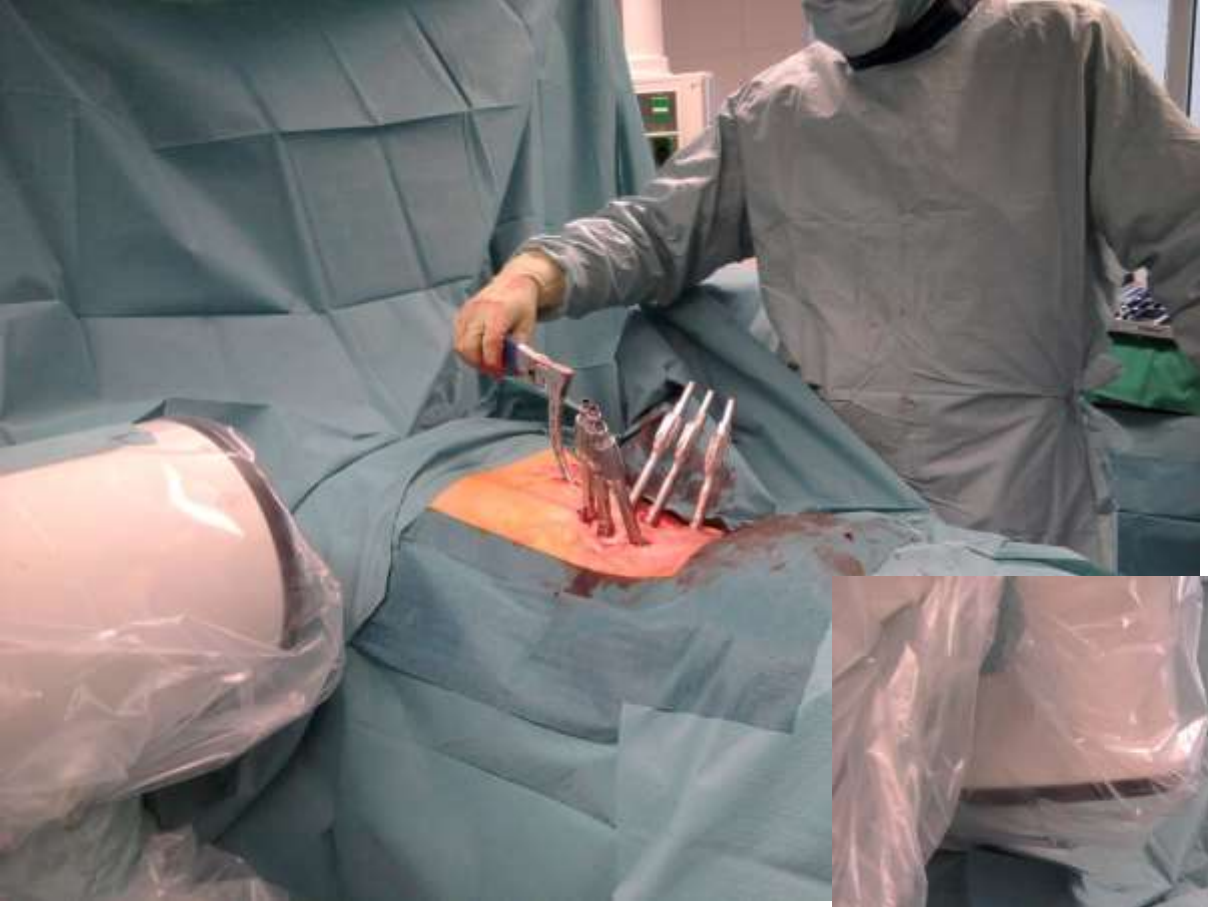


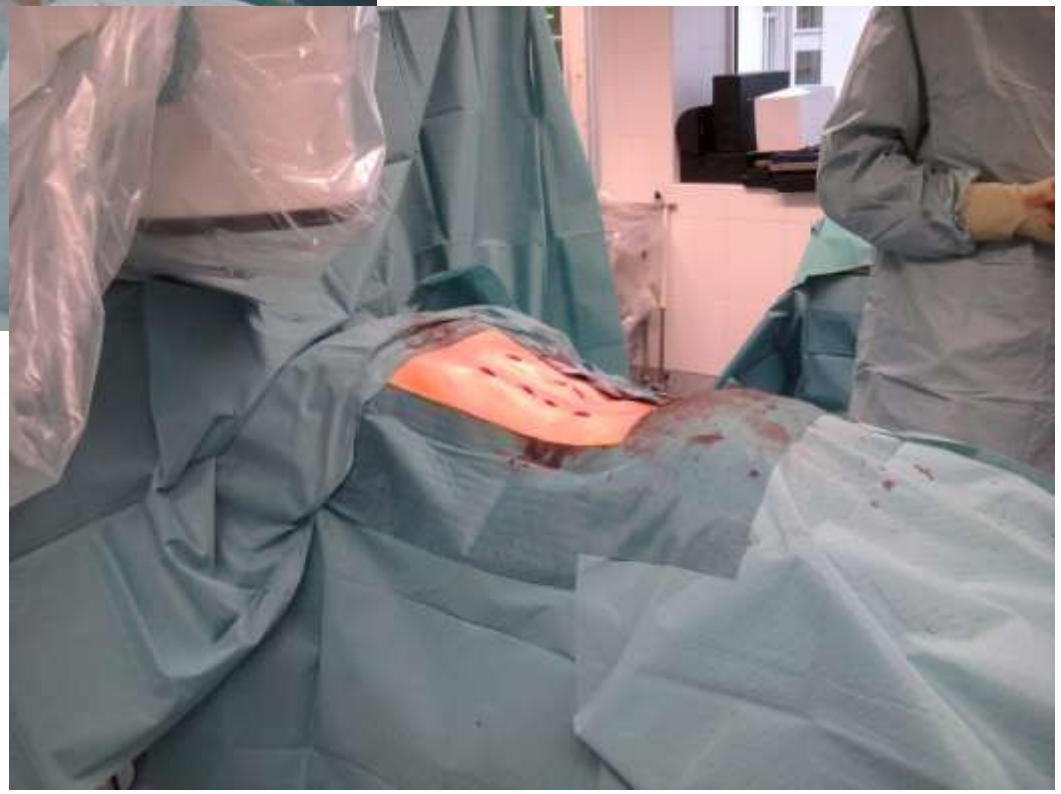
5. postop. päev

L1 murd - MIS



Perkutaanne fiksatsioon



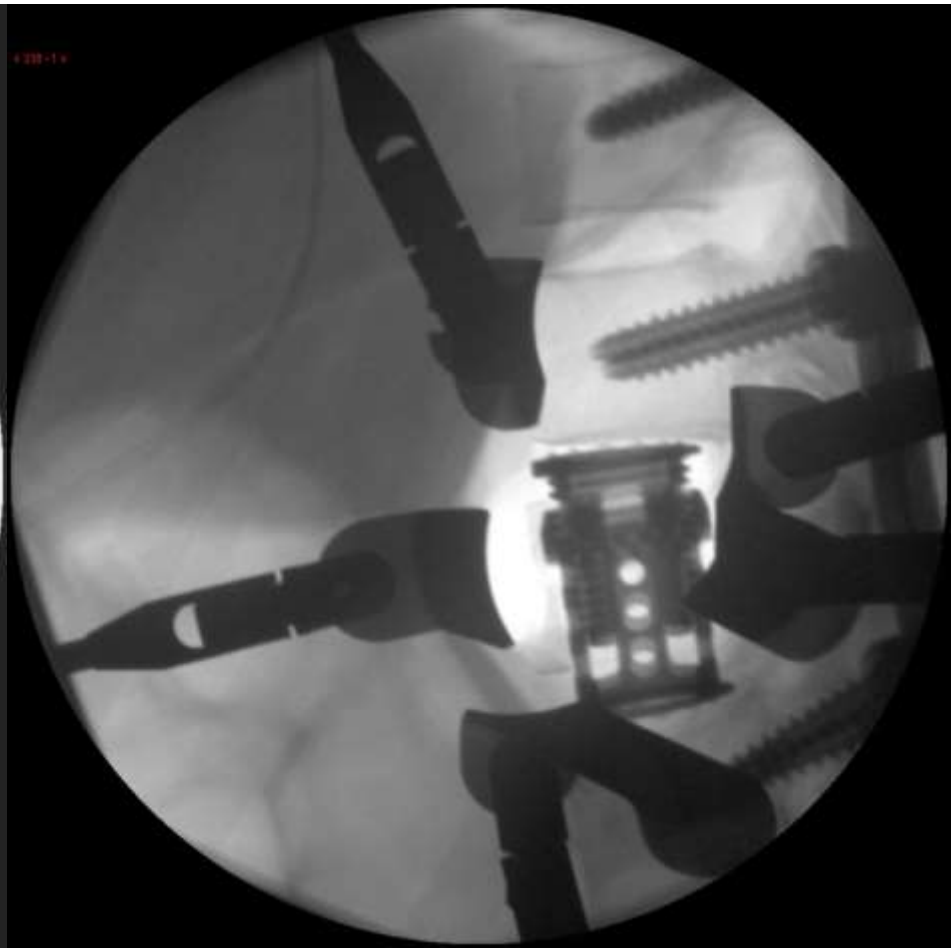


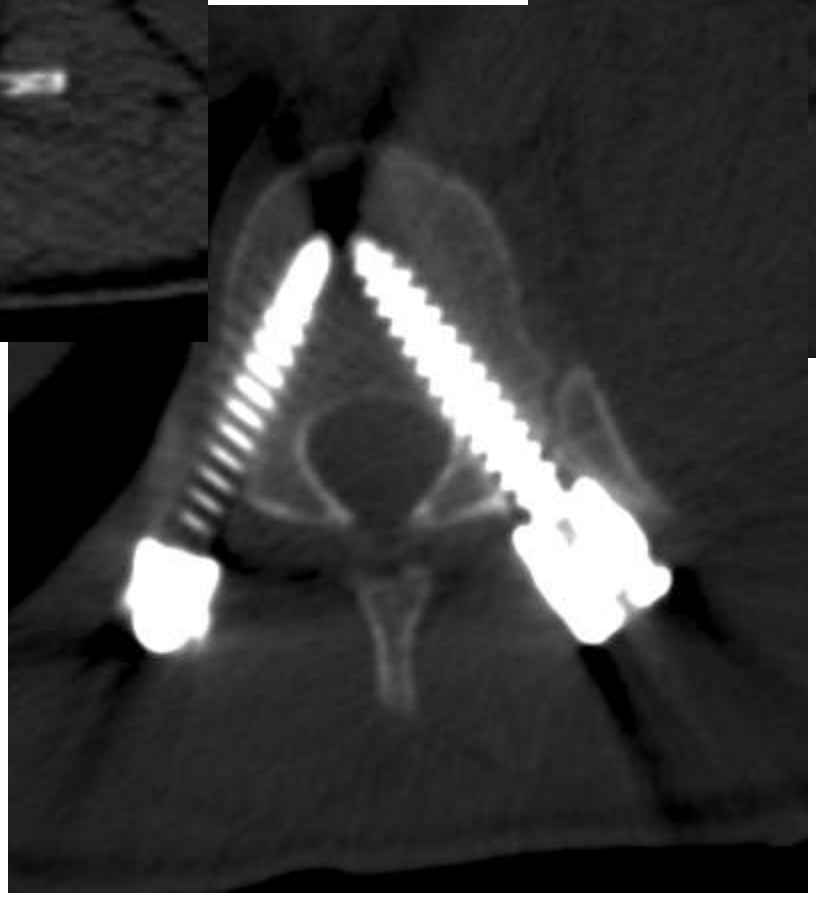
Preop

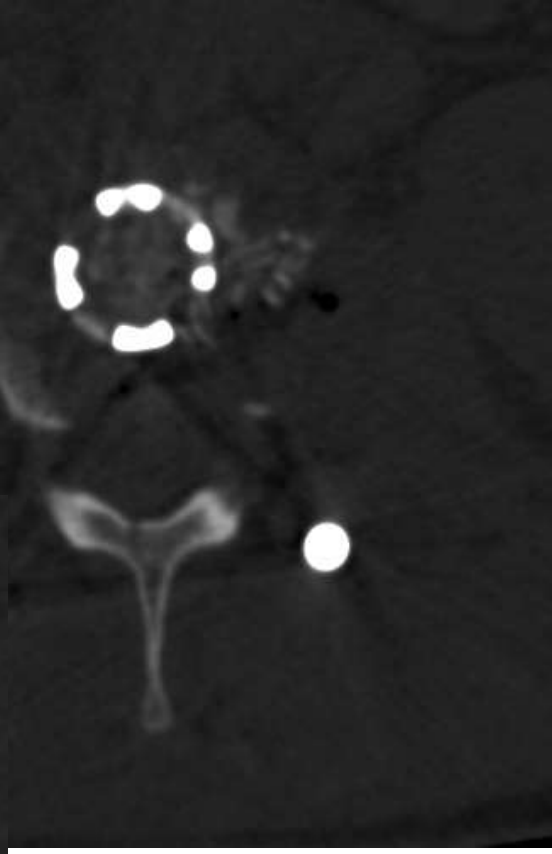
Postop

Tagumine

Eesmine



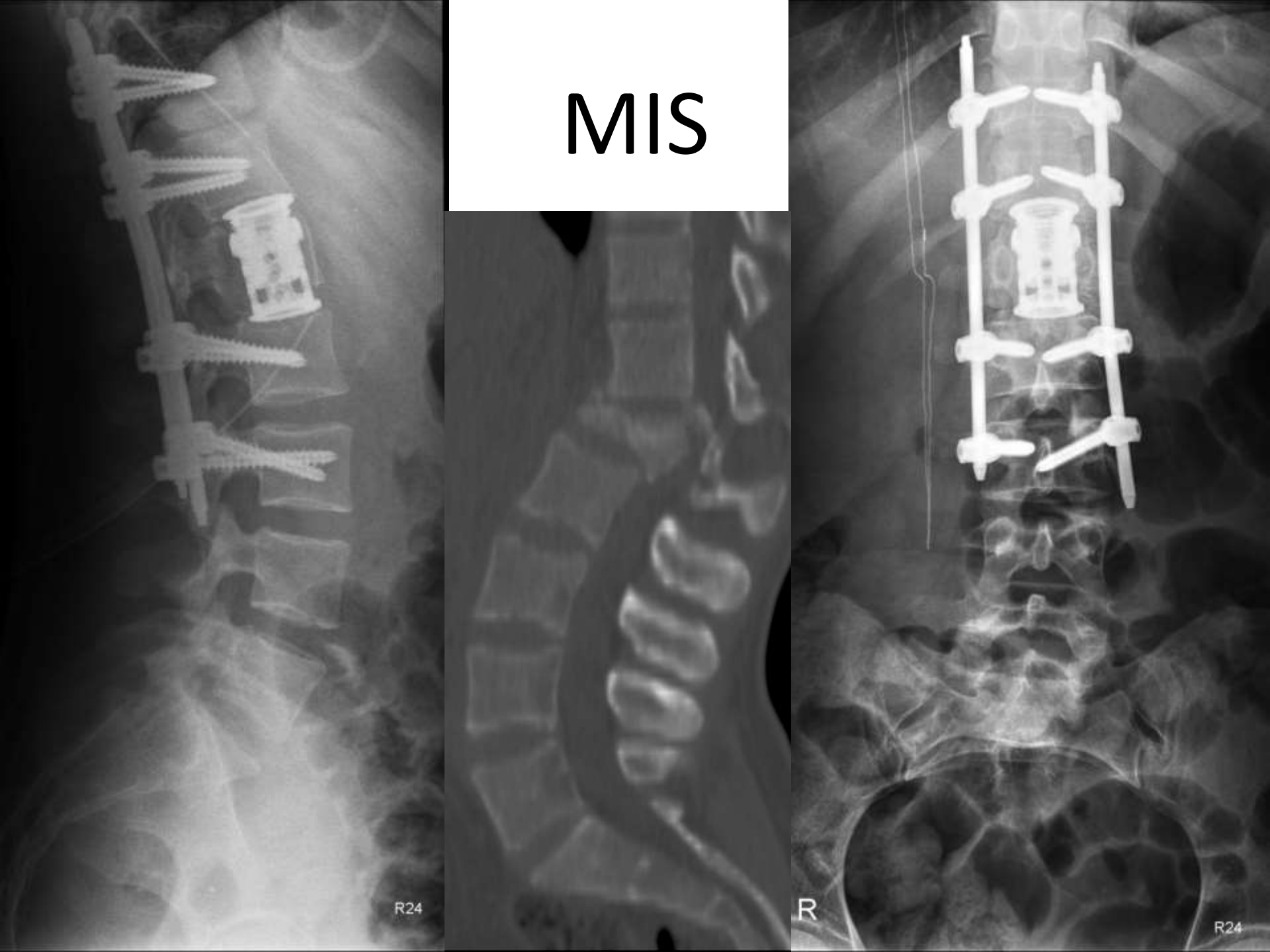




Preop
CT

Postop
CT

MIS




F

soovitused

anküloseerunud lülisammas

ärge unustage vigastuste kompleksust-
luulisligamentaarne vigastus

paranenud murd piiranguteta

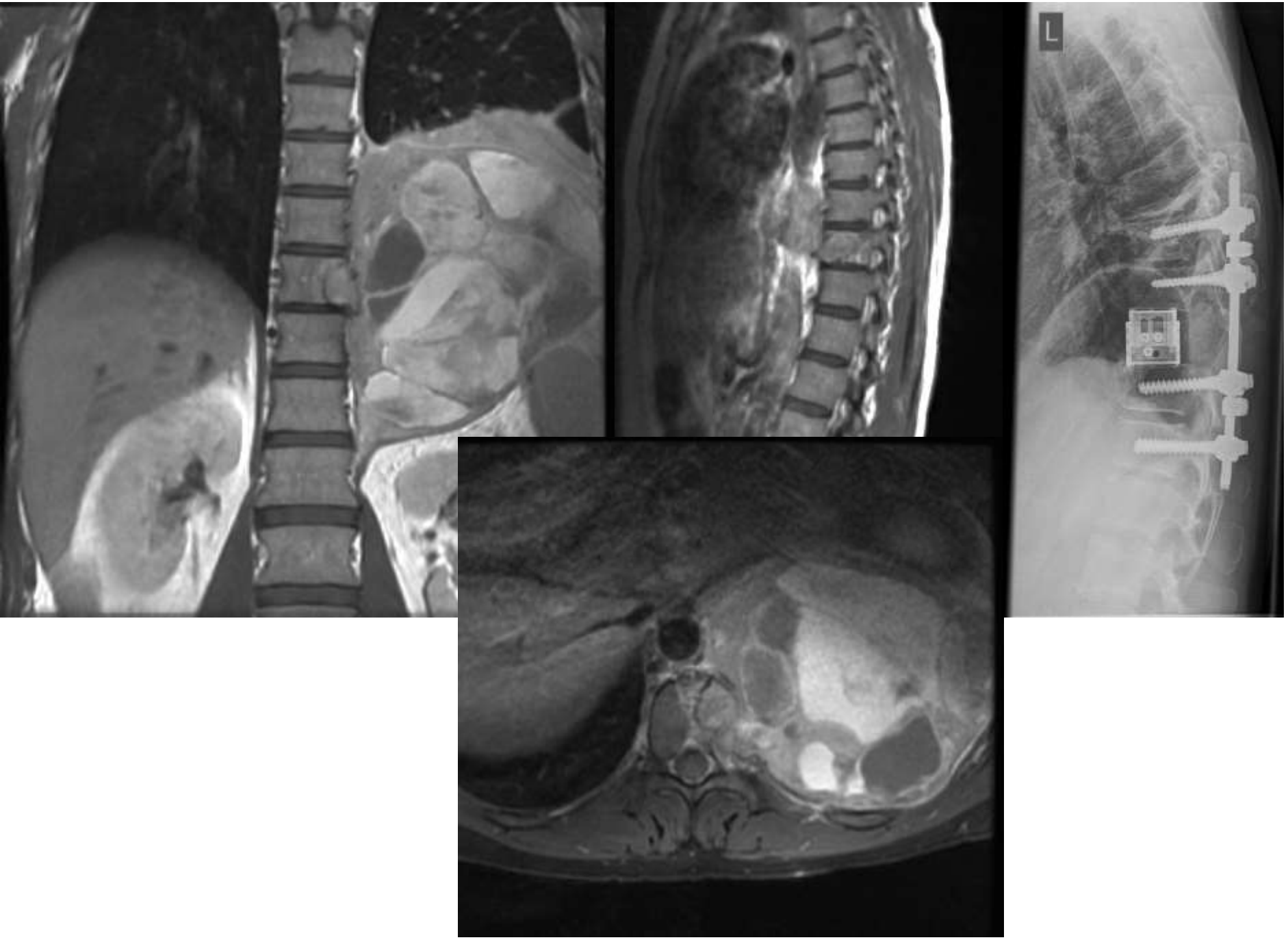
lülisamba kasvajad ja metastaasid

kasvaja tüüp

organismi haaratus

protsessi ulatus

tundlikkus onkospetsiifilisele ravile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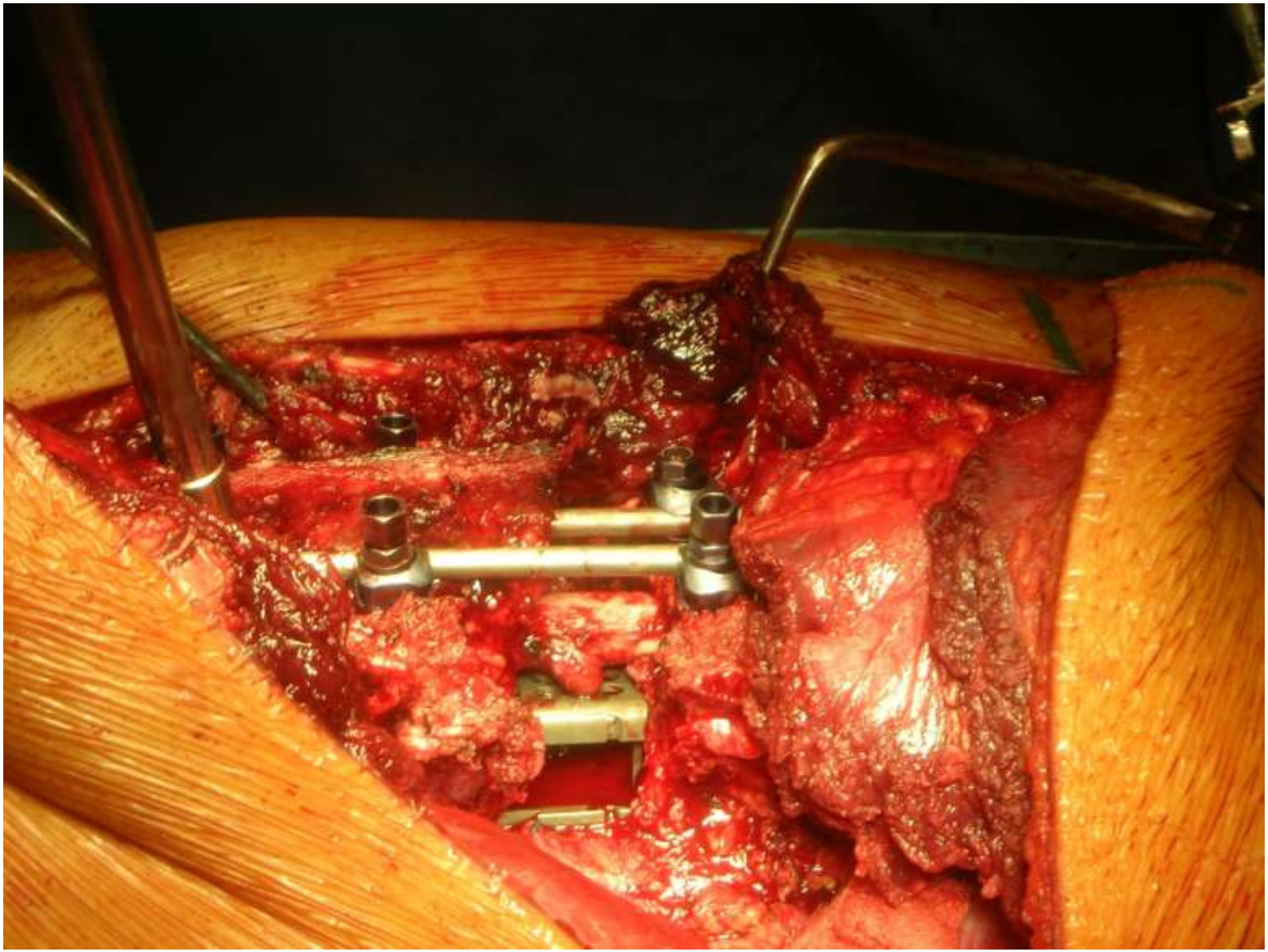
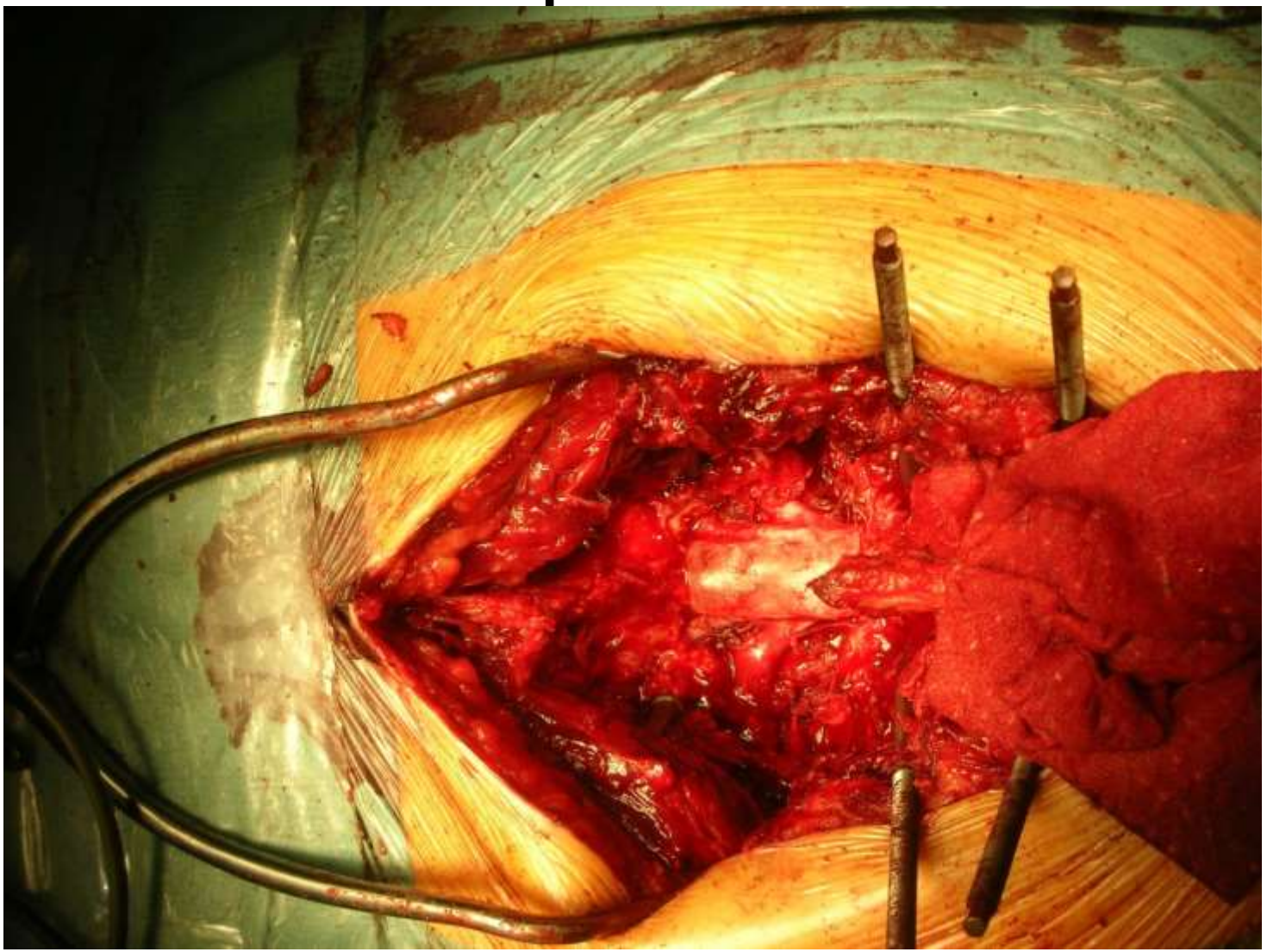
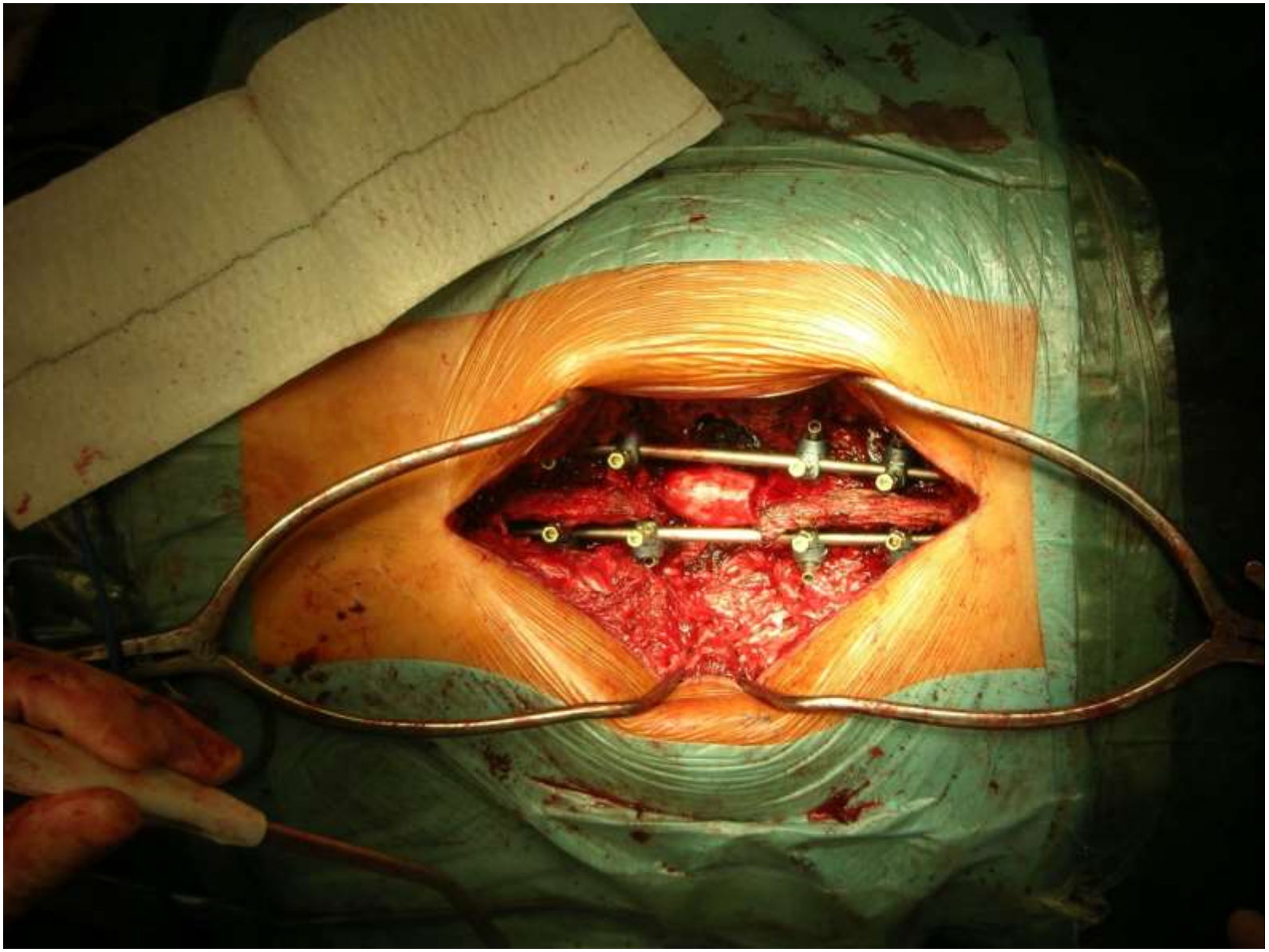
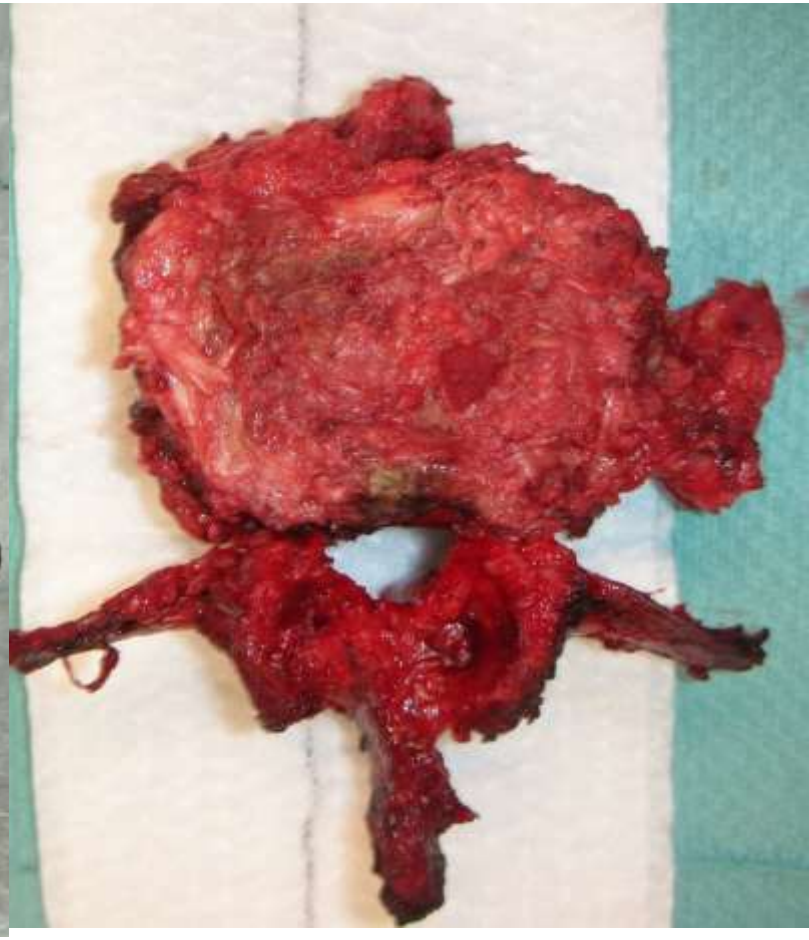


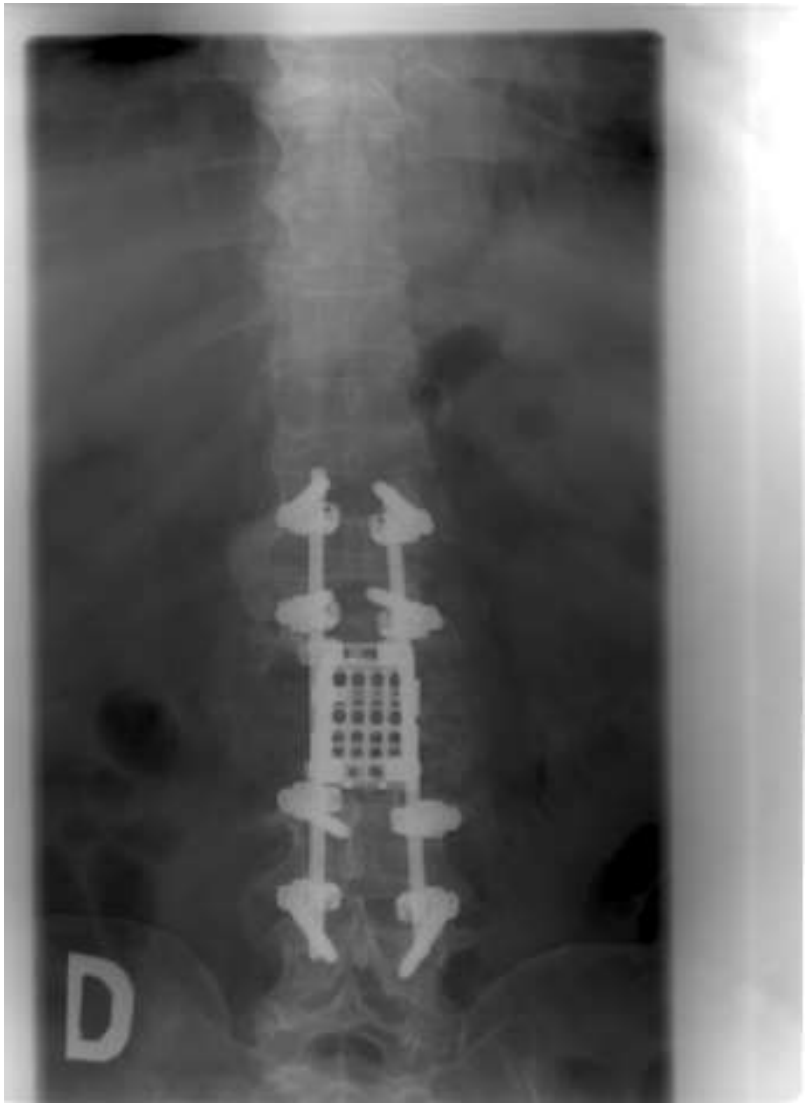
L5 en bloc spondülektoomia





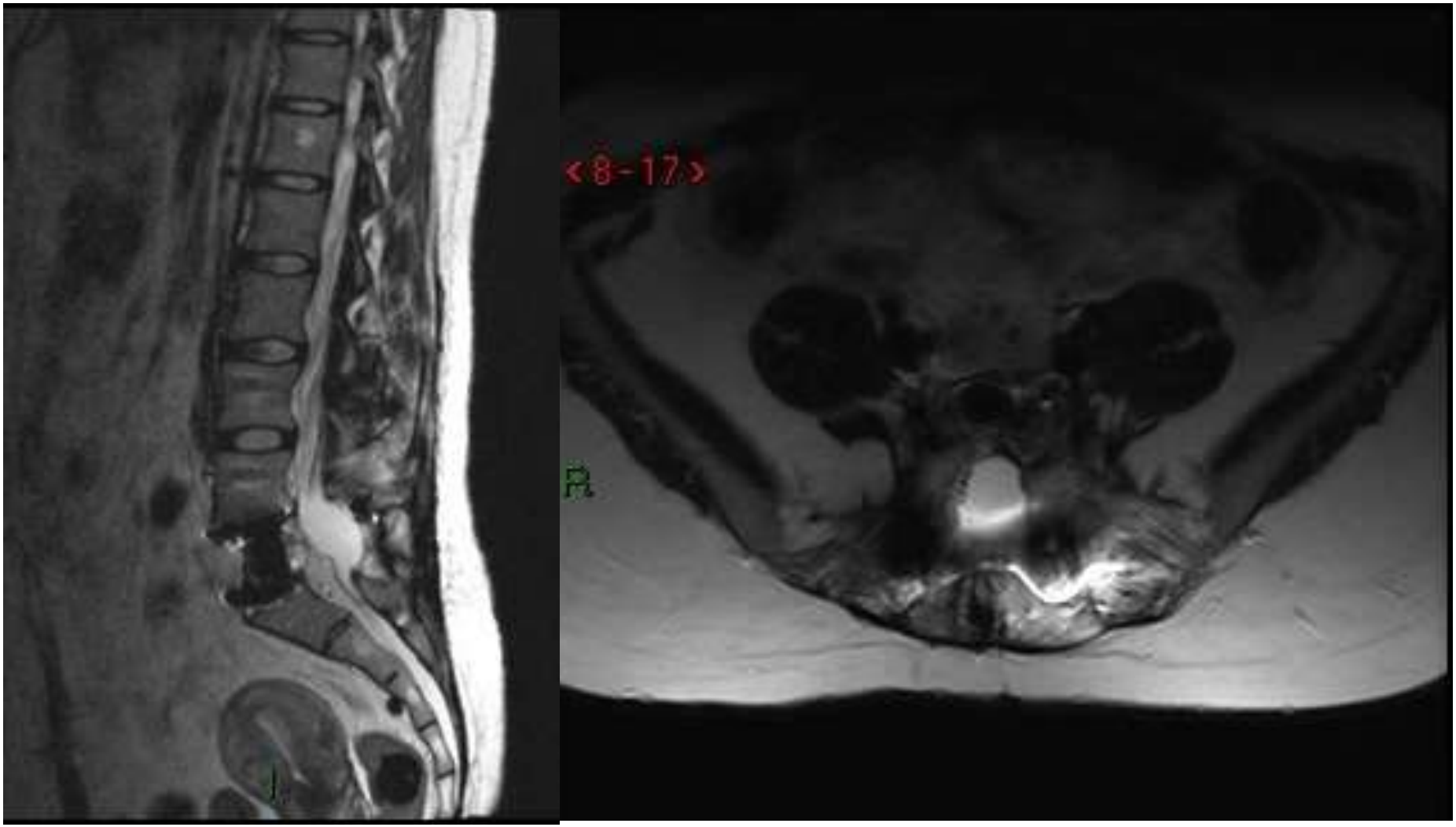


L2 en bloc spondülektoomia, kolangiokartsinoom, 2006 Dets, ITK


D

Hiidrakuline tuumor

Hiidrakuline tuumor 10. aasta kontroll



Metastaasid lülisambas

skeletisüsteemis lülisammas 1. kohal

pahaloomuline kasvaja anamneesis

valu iseloom väga erinev

Kirurgiline ravi lülisamba metastaaside korral

Seljaaju ja närvijuurte dekomprimeerimine - kasvaja osaline või täielik eemaldamine

Stabiilne lülisammas - lülisamba instrumenteerimine, lülikeha asendamine

Elukvaliteedi parandamine

Millal kahtlustada ebastabiilsust

Classification System for Spinal Instability in Neoplastic Disease – SINS

Metastaasi lokalisatsioon

Mehaaniline valu

Sklerootiline, lüütiline metastaas

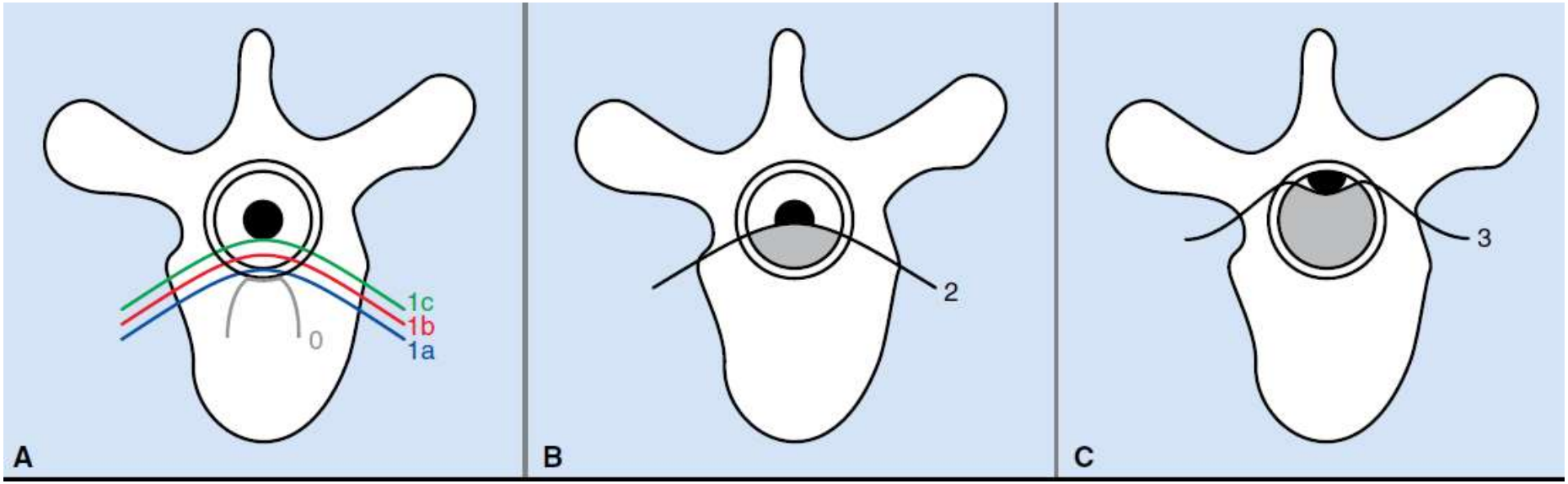
Deformatsioon, luksatsioon, nihe

Lülikeha haaratus ja kollabeerumine

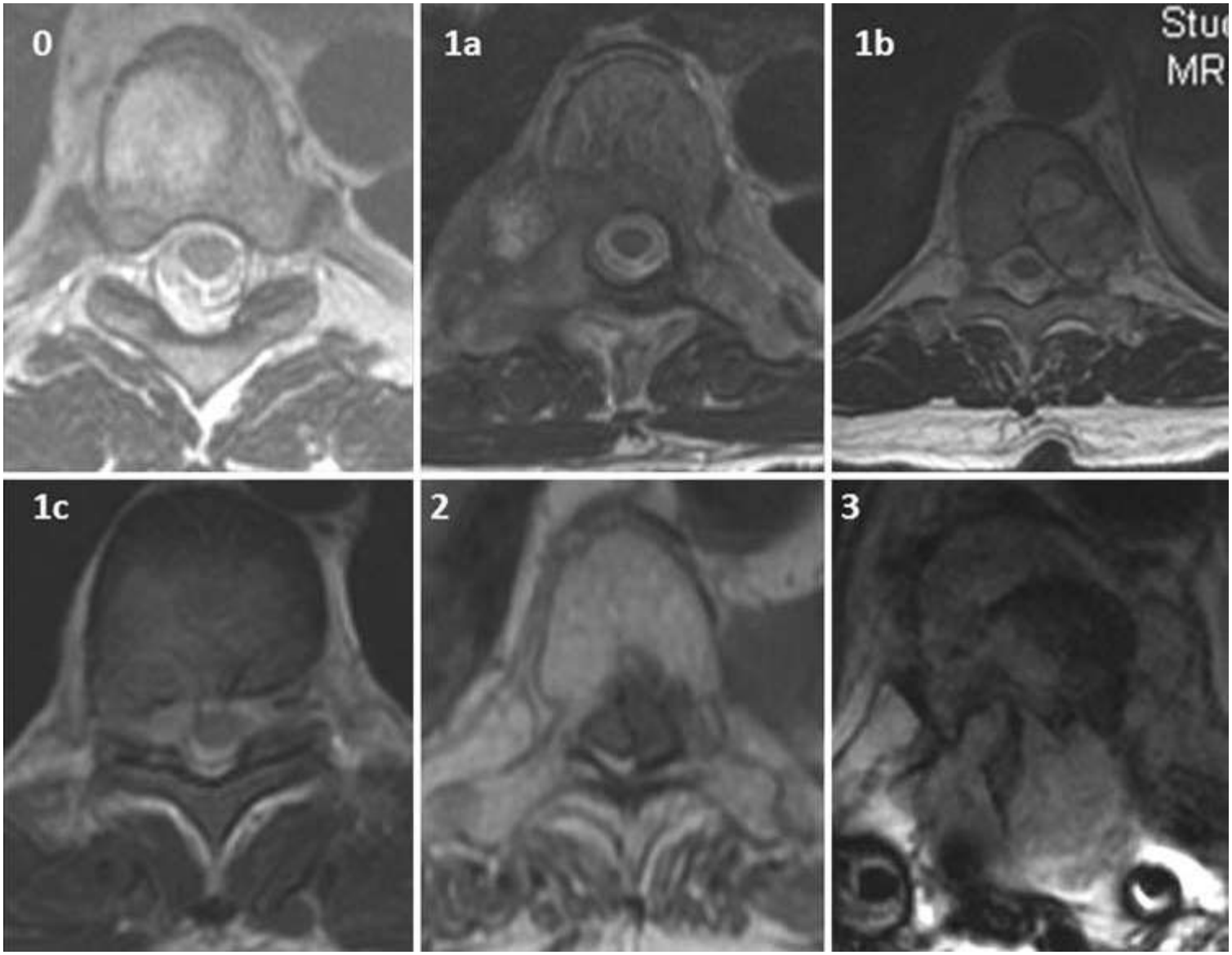
Tagumiste elementide haaratus

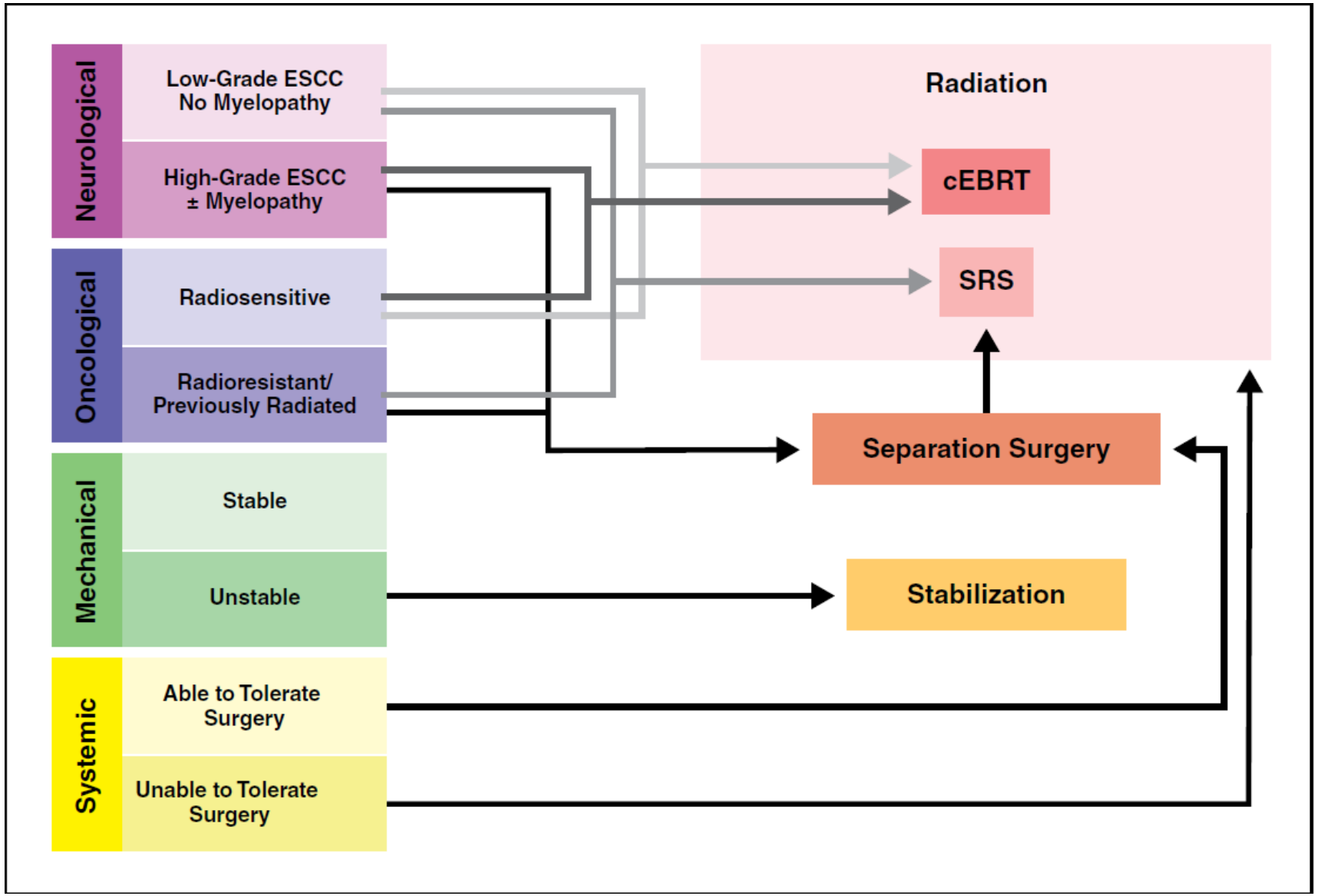
An Evidence-Based Approach and Expert Consensus from the Spine Oncology Study Group Charles G. Fisher, MD, MHSc, FRCSC,* et al ,SPINE Volume 35, Number 22, pp E1221–E1229 ©2010

Seljaaju kompressioon



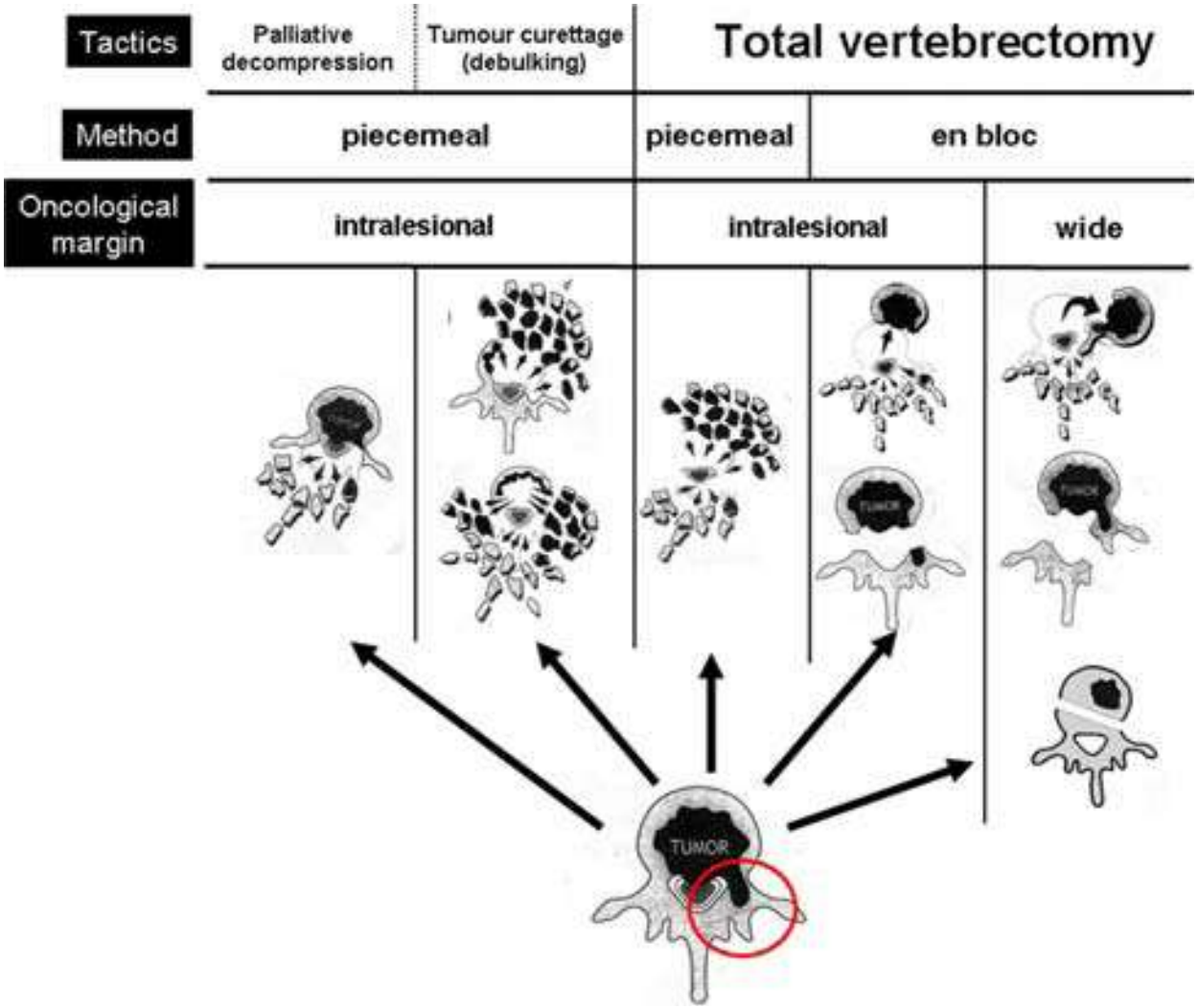
Hugh D. Moulding, J Neurosurg Spine 13:87–93, 2010


0
1a
1b
1c
2
3



M.Bilsky 2014 MSKCC

Kirurgiliste meetodite valik



Review of metastatic spine tumour classification and indications for surgery:
the consensus statement of the Global Spine Tumour Study Group,Choi Crockard,Bunger,T omita et al.Eur Spine J (2010) 19:215–222

lülisamba metastaaside kirurgiline ravi

eraldav(seljaaju) kirurgia

miniinvasiivne kirurgia

kiiritusravi

kasvajad

primaarsed pigem kuratiivne

metastaasid pigem palliatiivne

alati vajalik onkospetsiifiline ravi

öine valu

põletik

palavik

põetud infektsioon

krambid seljas

seljaoperatsioon

põletikud - spondülodistsiit

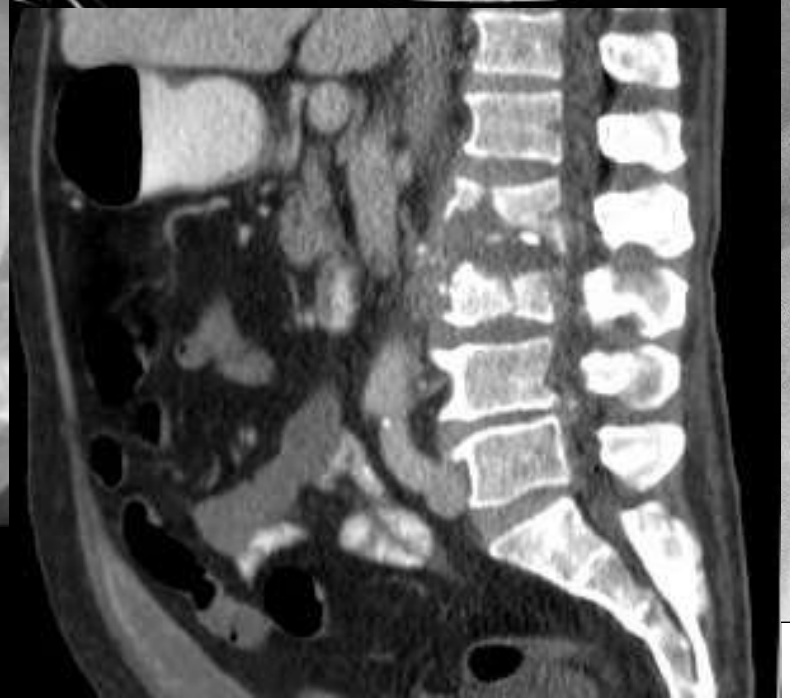
haigustekitaja isoleerimine (verekülv/biopsia)

antibakteriaalne ravi – vastavalt külvile

põletikukolde debridement

vältida halvatust ja lülisamba kõveruste teket


Lossy

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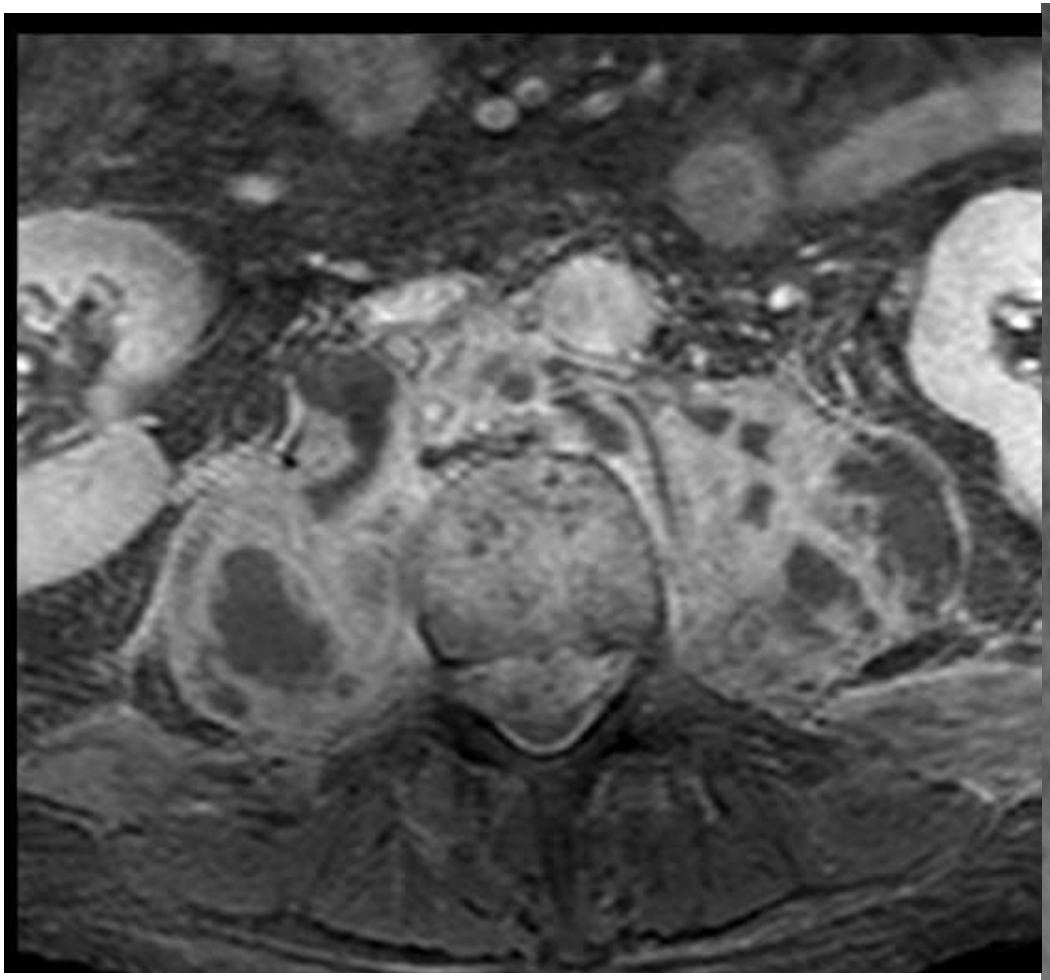


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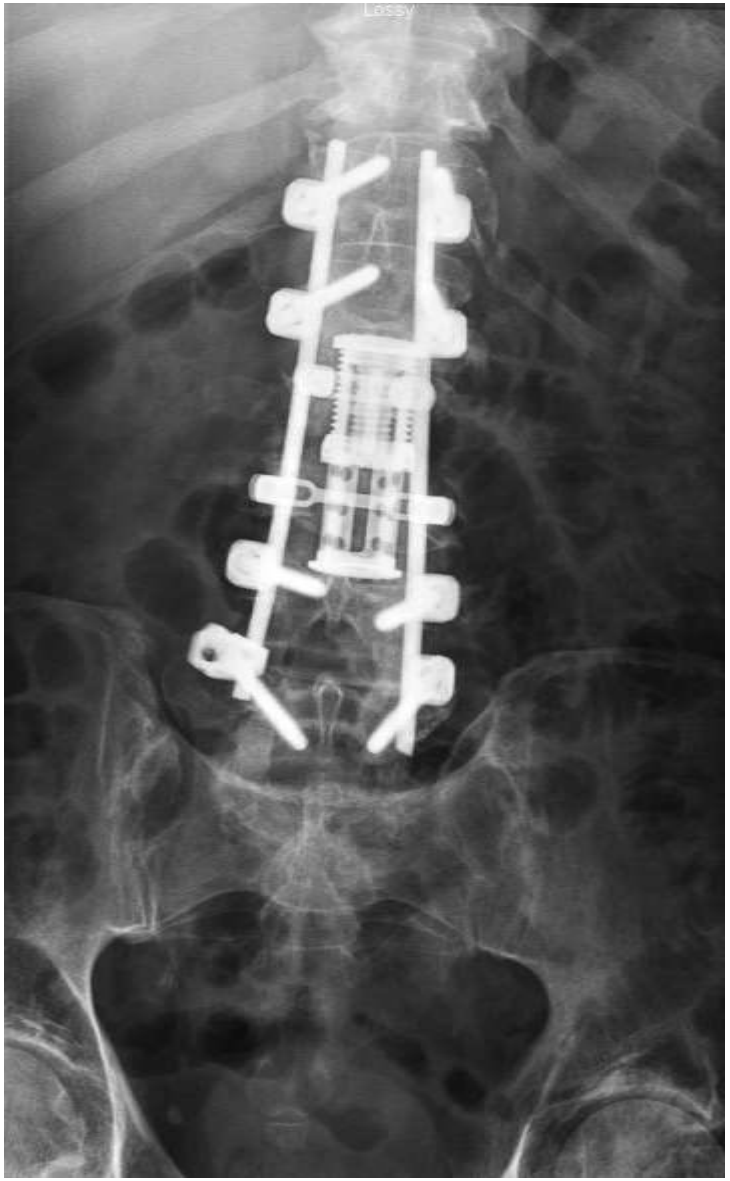
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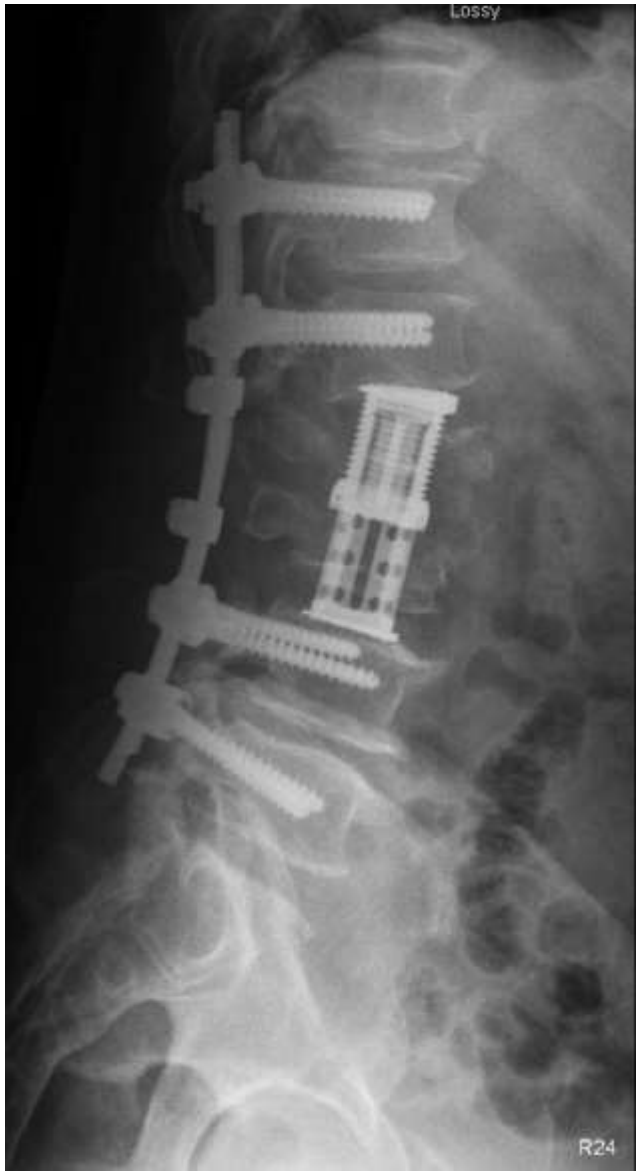
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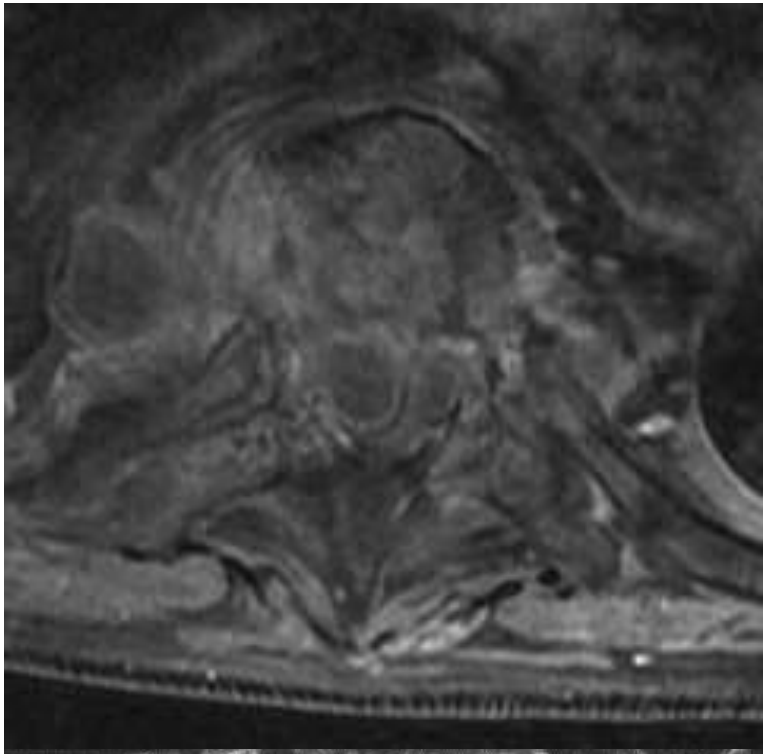
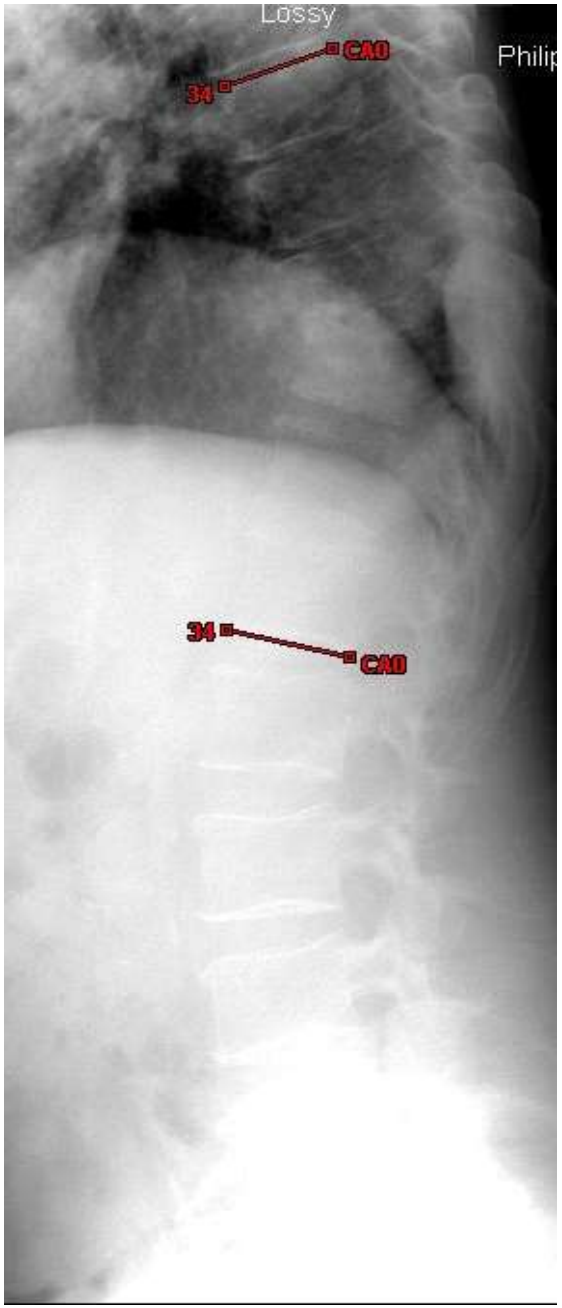
R24


Seistes
R40


Seistes
R40

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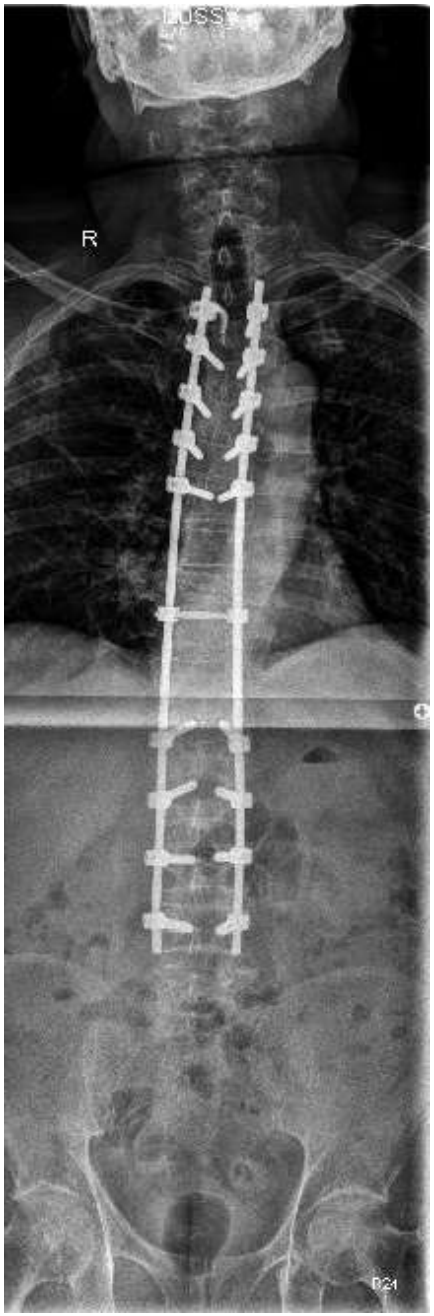

R


656.2mm

põletikud

krambid seljas

anamneesis urotrakti või kopsupõletik, seljaoperatsioon

antibakteriaalne ravi

Alaselg

Lülivaheketta väljasopistus

Spondülolüüs

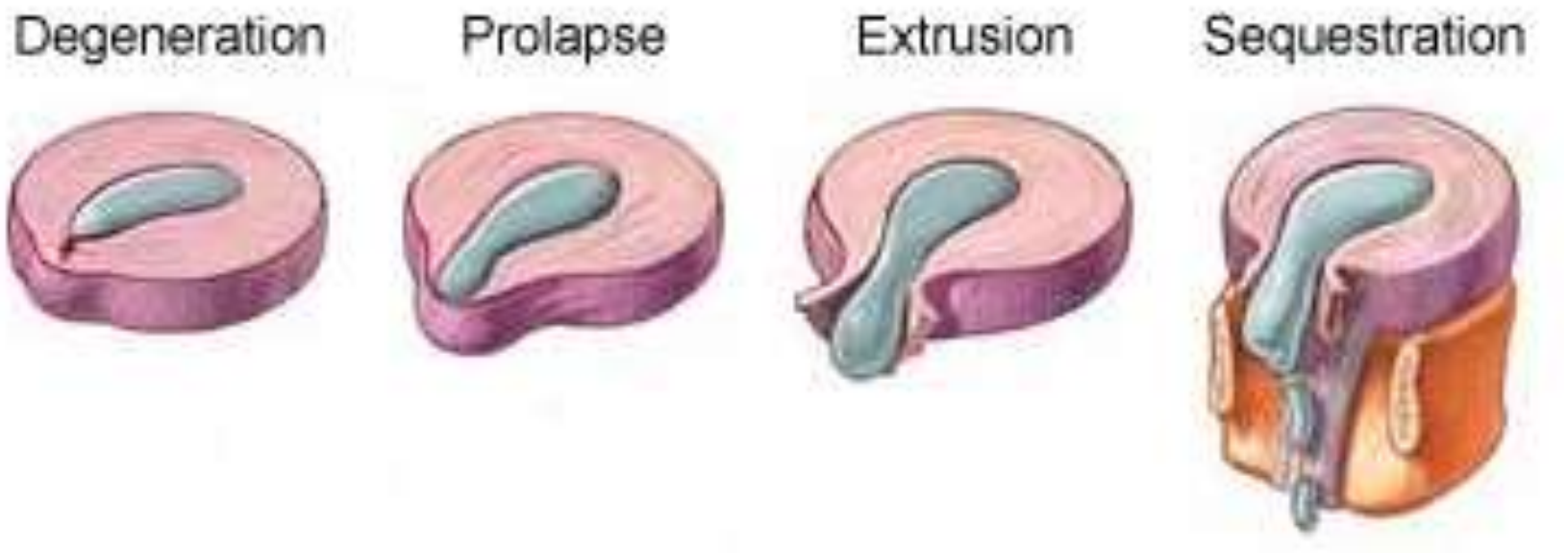
Spondülolistees

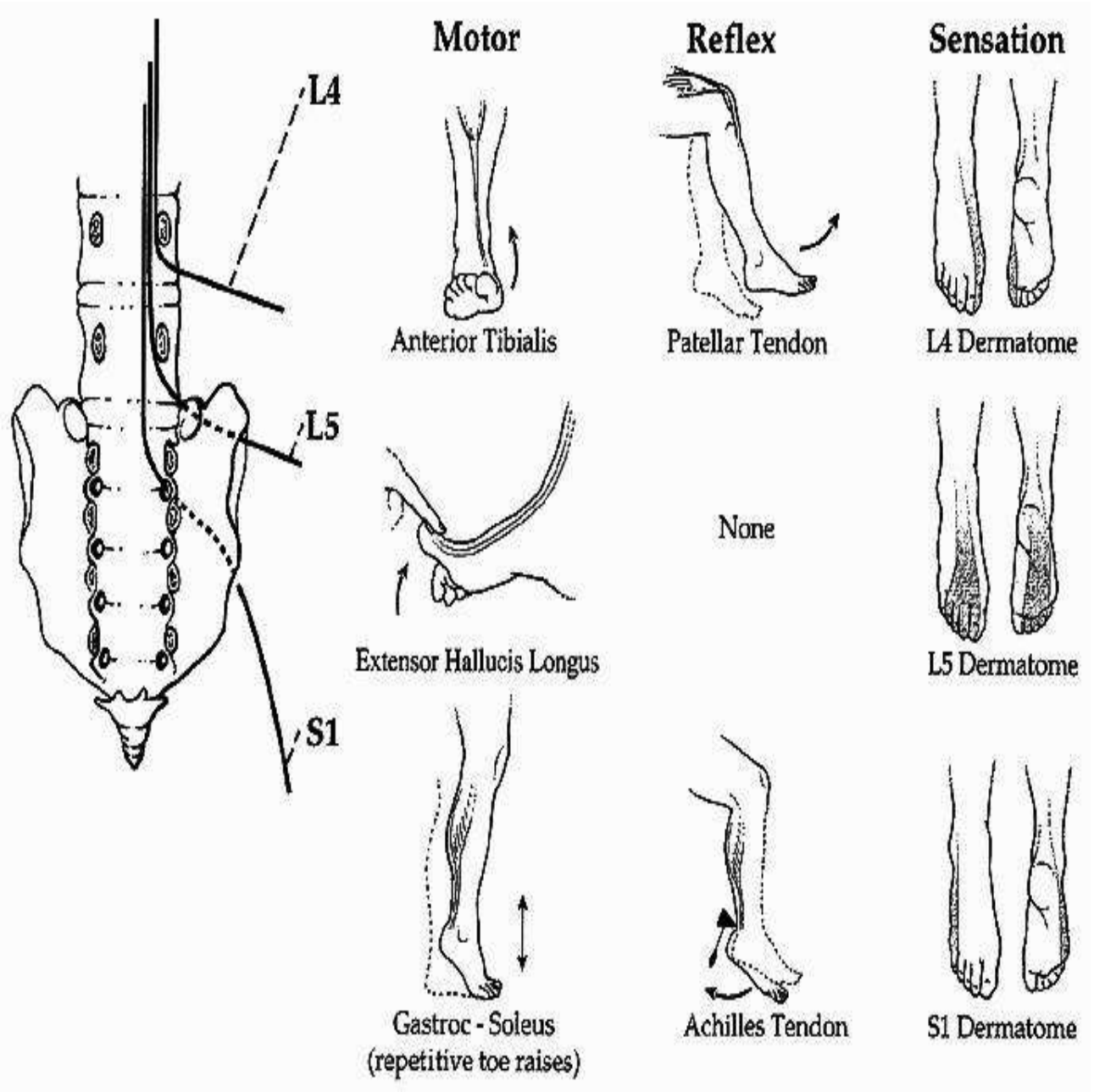
Lülivaheketta väljasopistus

Tavaliselt tekib äkki, suure koormuse tõstmisel, rotatsioonil või painutusel

Võib tekkida ka ülekoormusest korduvatest mikrovigastustest, algab seljavaludega, algus aeglasem, lisandub jalga kiirguv valu

Lülivaheketta väljasopistus




Motor
Reflex
Sensation
L4
L5
S1
Anterior Tibialis
Patellar Tendon
L4 Dermatome
Extensor Hallucis Longus
None
L5 Dermatome
Gastroc - Soleus
(repetitive toe raises)
Achilles Tendon
S1 Dermatome

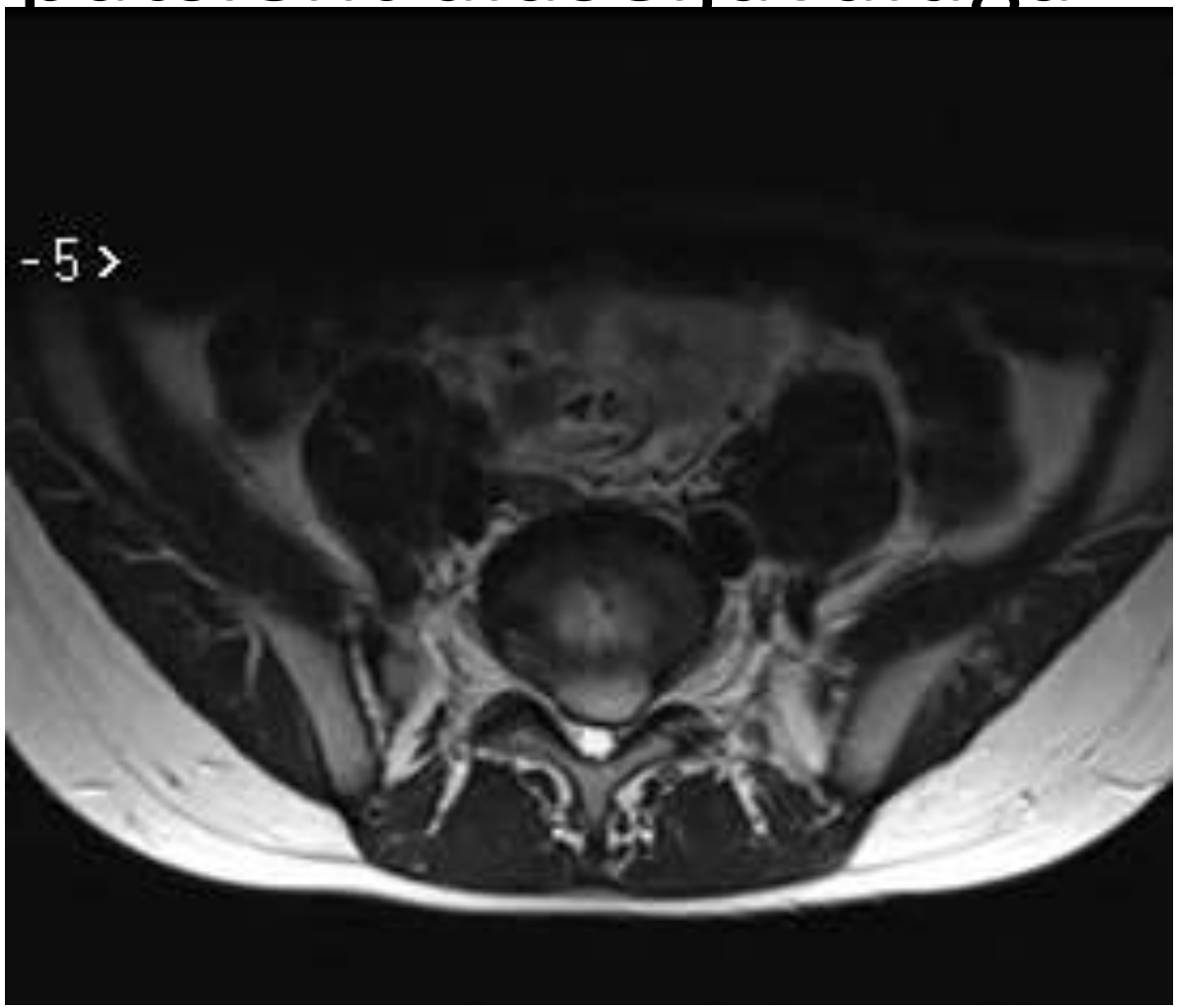
lülivaheketta väljasopistus noorukitel

radikuliidi kliinik harvem

disk koostis viskoosem, sideaparaat elastsem, harvem annab sekvestreid

võib piirduda vaid kerge skolioosiga Rö-l ja ühepoolse hamstringite pingega

12-aastane patsient alaseljavaluga



16-aastane patsient alaseljavaluga

16-aastane alaseljavaluga patsient

mõtle noorukitel

hamstringite pinge ja äkki tekkinud kõverus

klassikaline radikuliidi kliinik puudub

Lülivaheketta väljasopistus

iseparanev haigus, healoomuline 85 %

konservatiivse ravi efekt teada, kuid võib võtta
3 kuud ja 15 % vajab siiski operatsiooni

kirurgia näidustatud kohe - cauda equina kompressioon ja süvenev neuroloogiline defitsiit

Konservatiivne ravi

rahu, valuravi, füsioteraapia

uuringuid ei ole vaja enna 4-6 nädalat

4-6 nädalaga paraneb 75 % patsientidest

uurida neid, kes ei parane

Lülivaheketta väljasopistus/ kirurgia

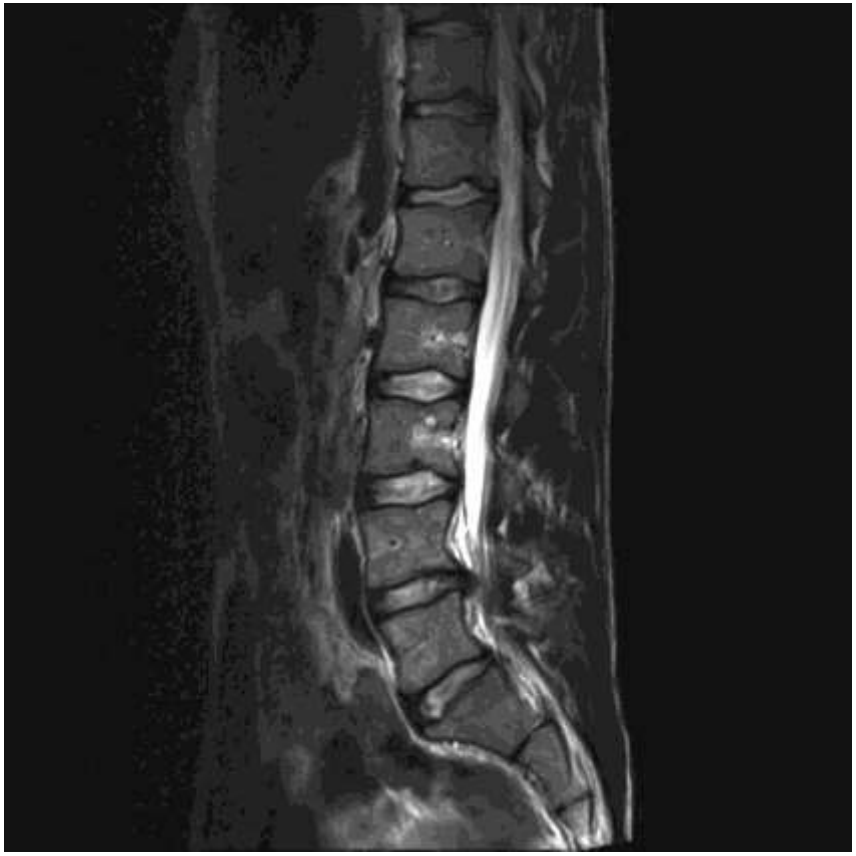
kirurgia pehmeid kudesid vähe traumeeriv

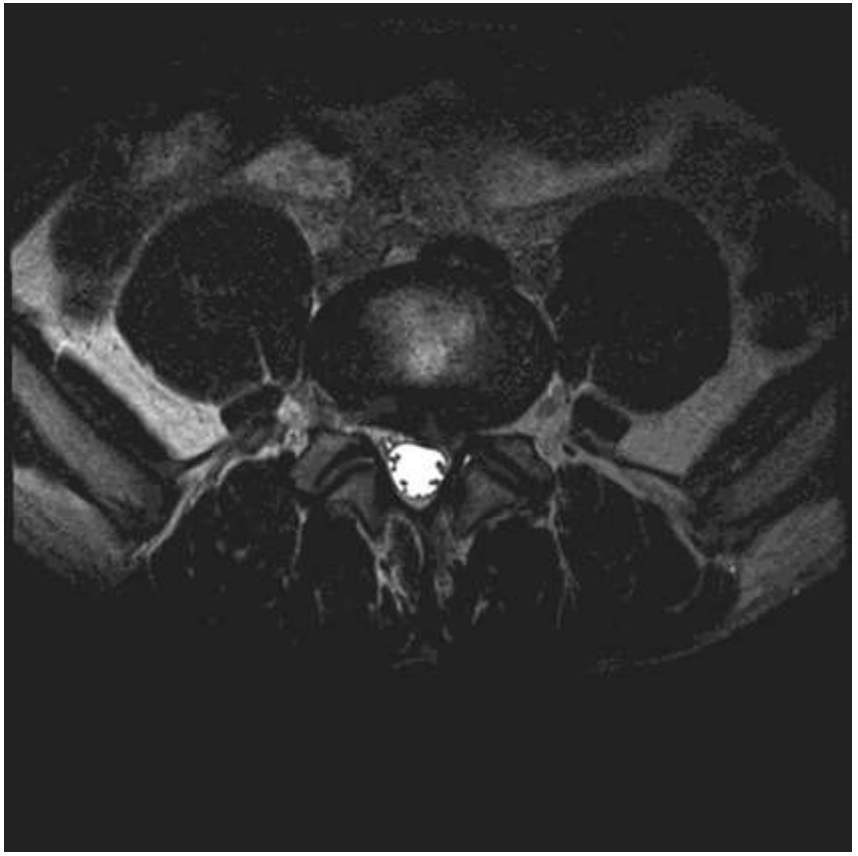
päevakirurgia

taastusravi vajalik pareesiga haigel

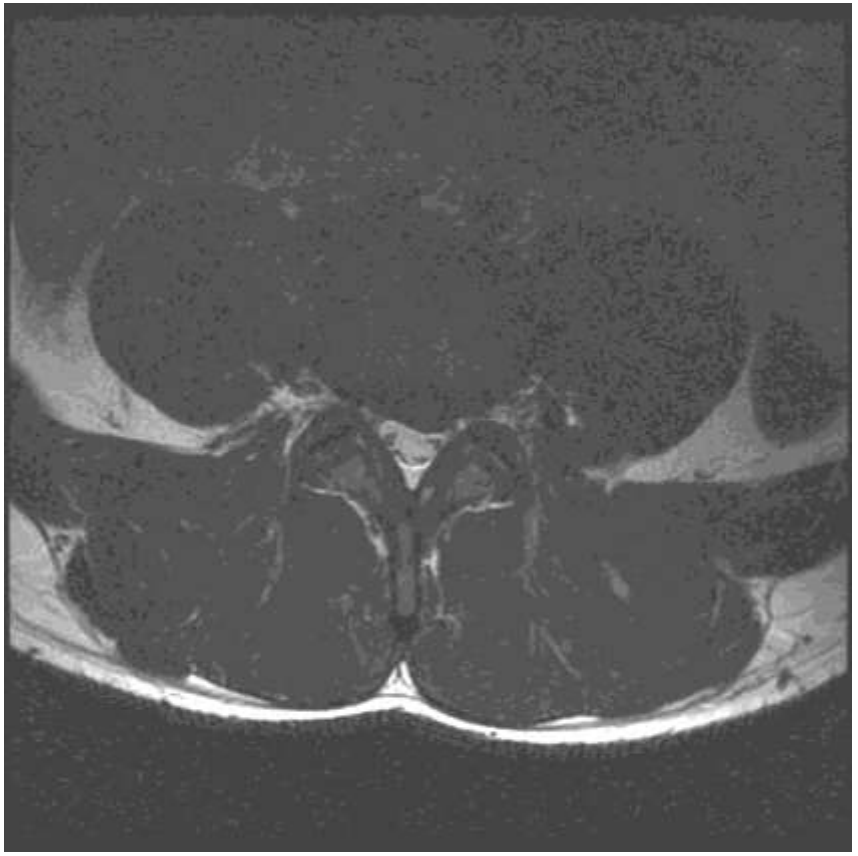
füüsiline koormus 6-12 nädal

alustas treeninguid 4. nädalal



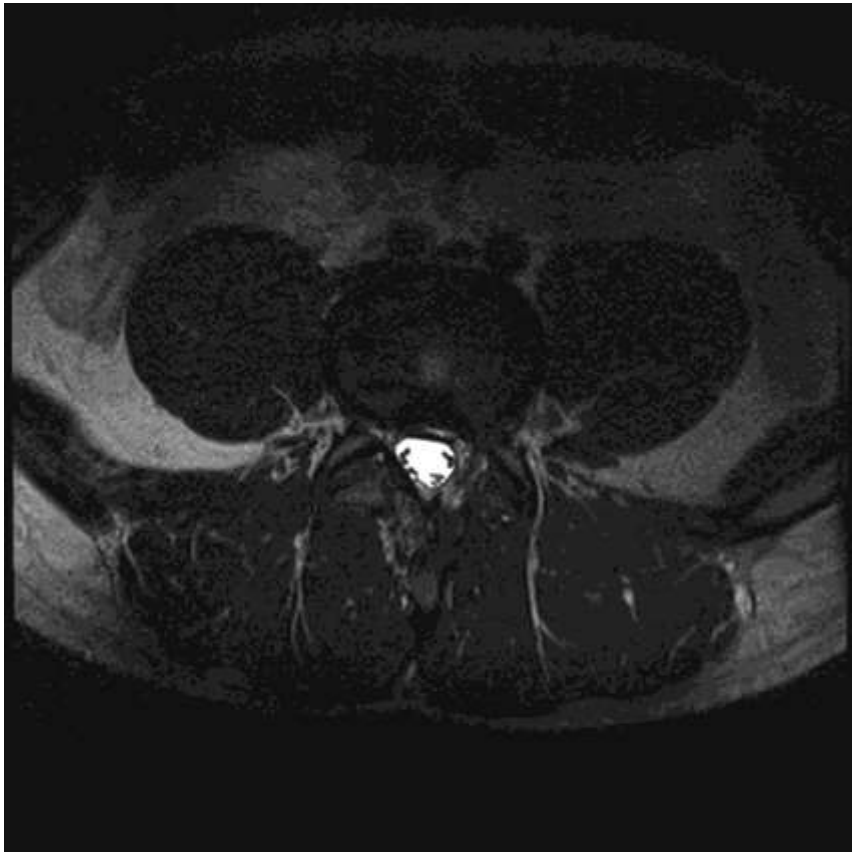


alustas treeninguid 4. nädalal,



uus väljasopistus esimestel treeningutel

mrt 3 kuu pärast



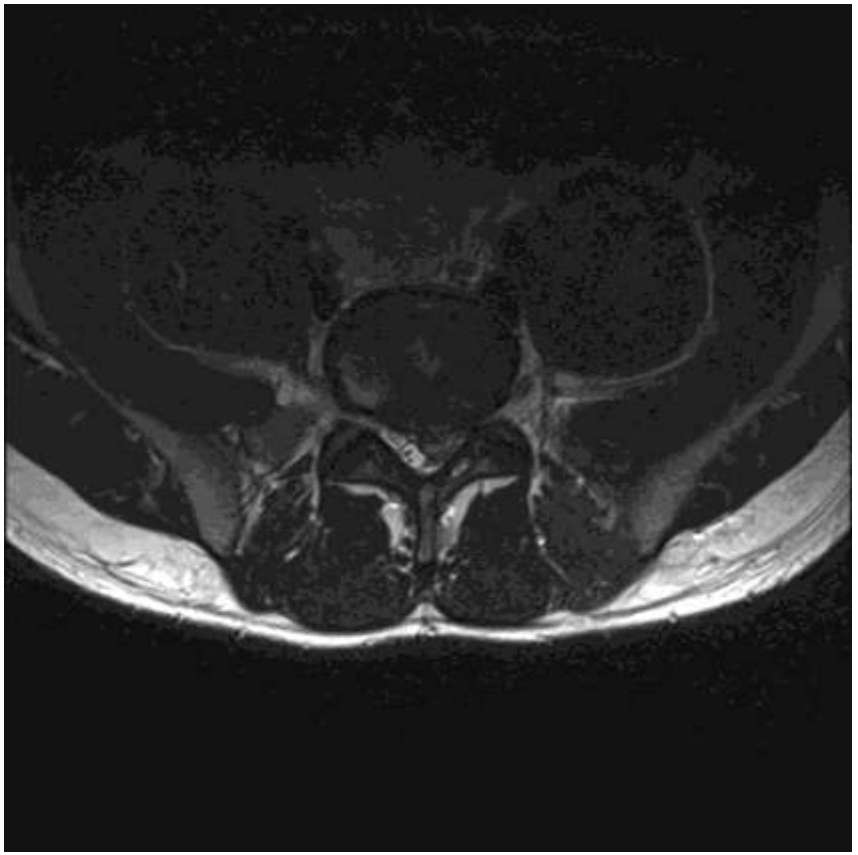
Tuimus jalgadel ja lahkliha piirkonnas, häired põie ja soole tühjendamisel

cauda equina sündroom(Eesti Arst 2018)

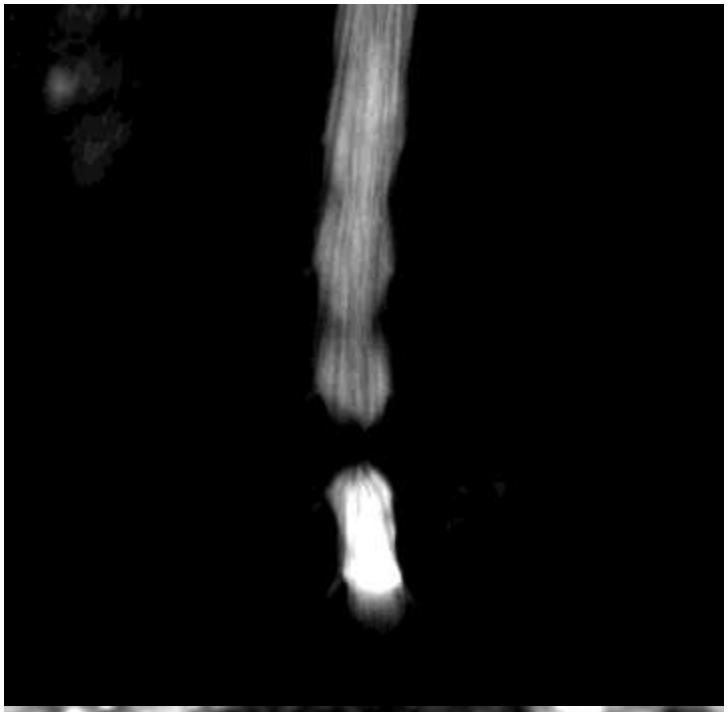
seljaaju või cauda equina sümptomaatiline kompressioon – süvenev halvatus

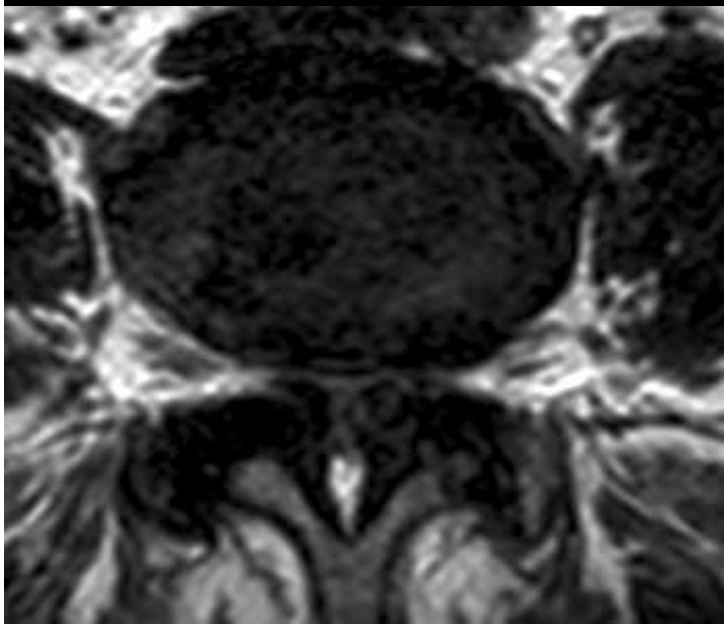
aega 24 h

suur lülivaheketta väljasopistus

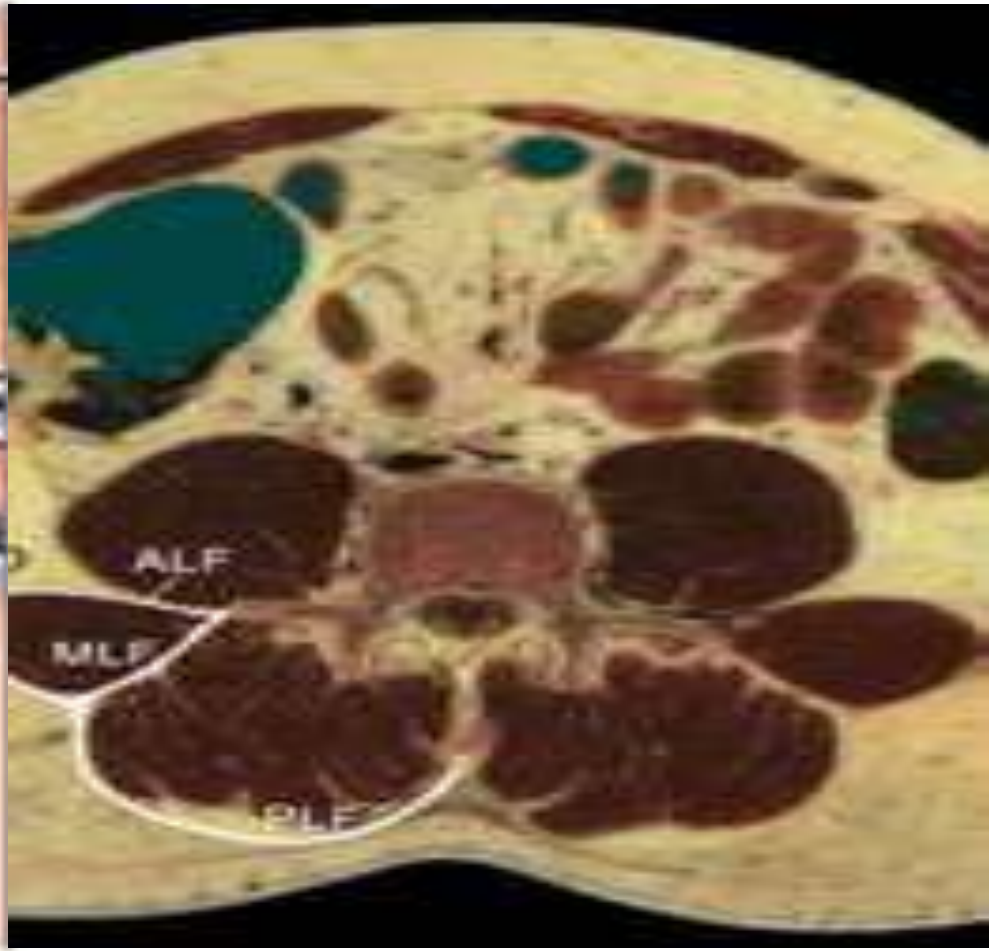


SPINAAL STENOOS

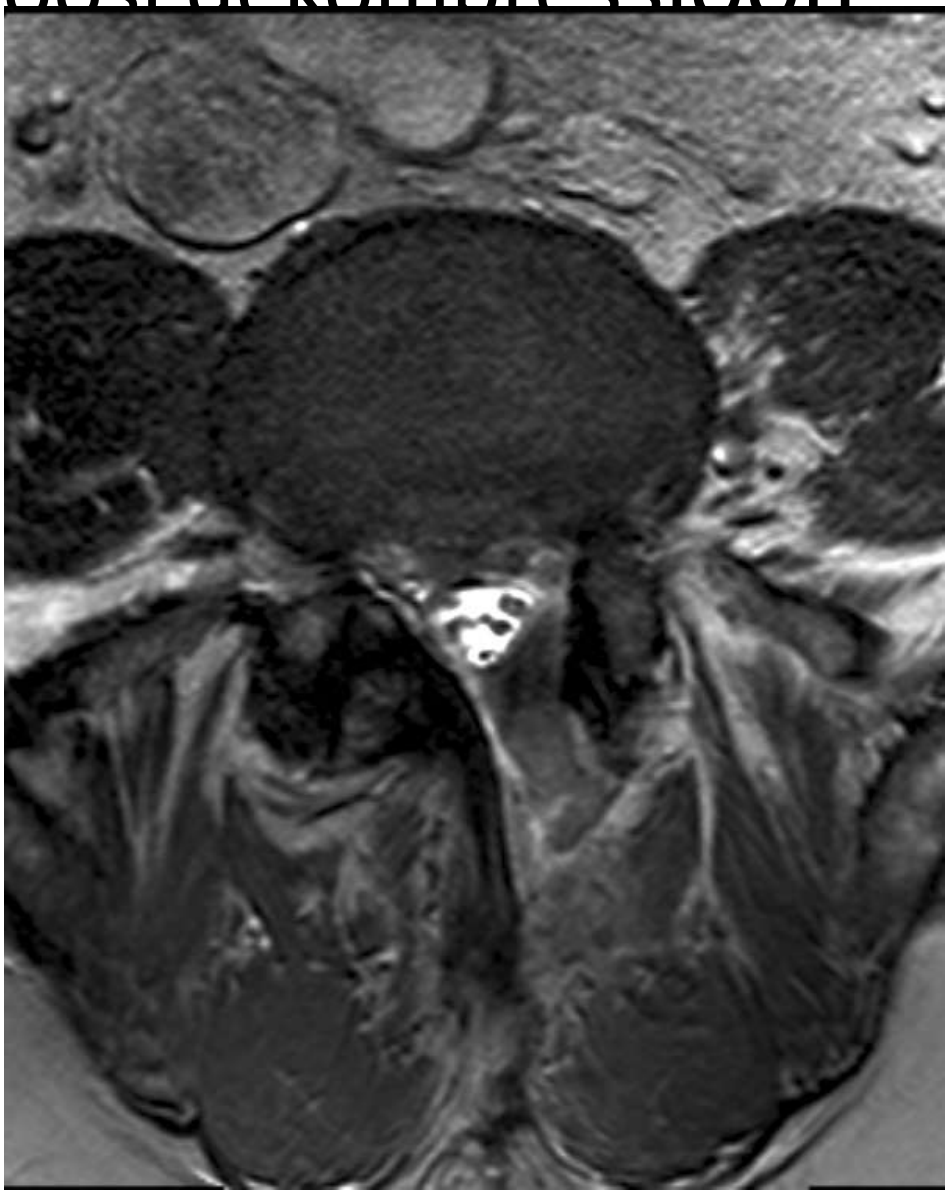




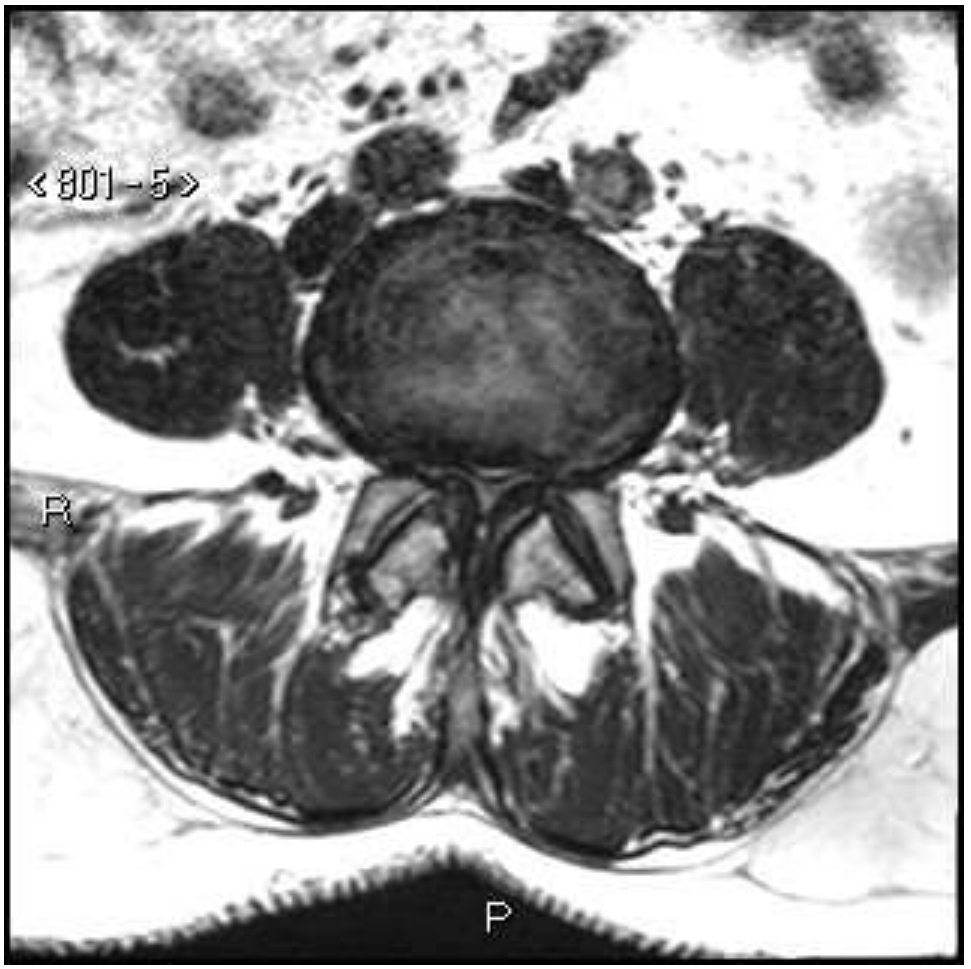
Dekomprimeeriv kirurgia



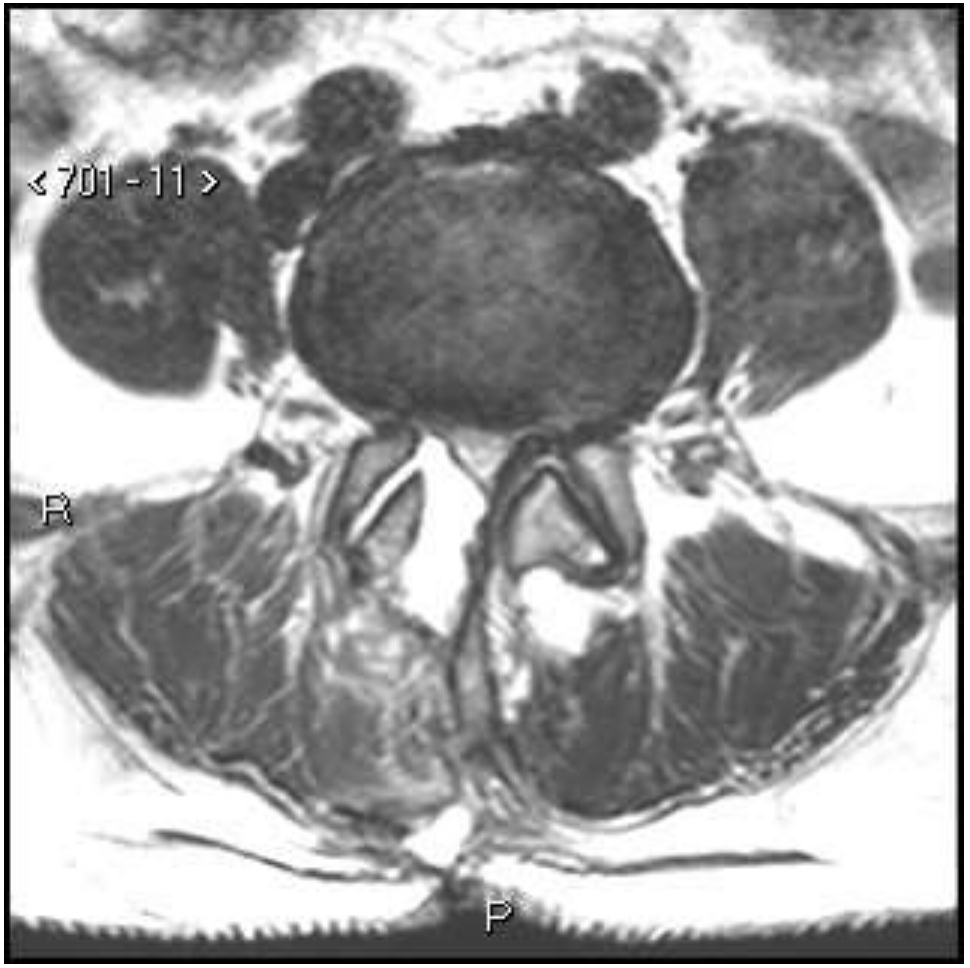
LISS unilateraalne stenoosi dekompressioon



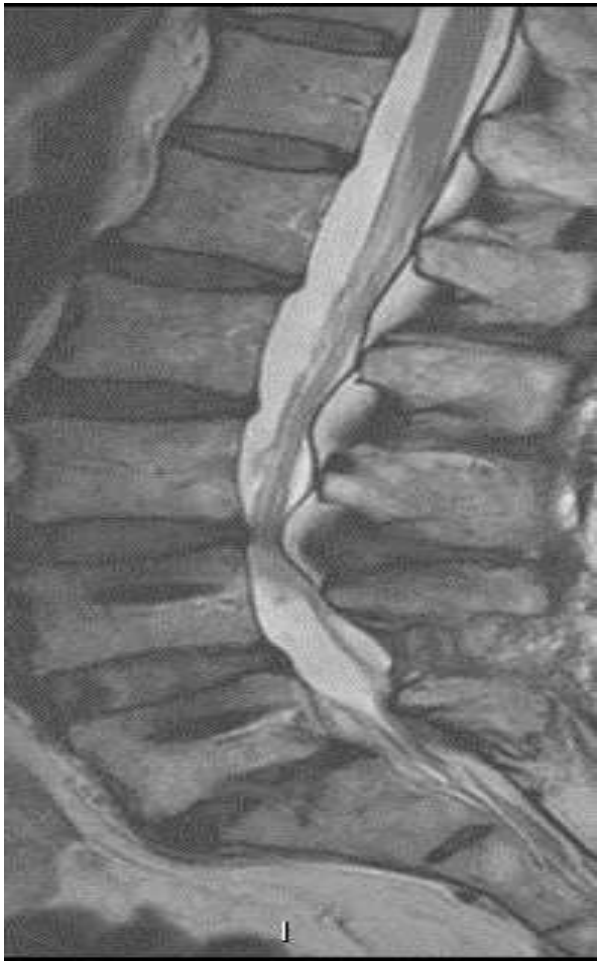
operatsiooni tüsistus



cauda equina sündroom



2 aastat postop.



Tuimus jalgadel ja lahkliha piirkonnas, häired põie ja soole tühjendamisel

cauda equina sündroom

saata EMO-sse

aega 24 h

spondülolüüs

Lülisamba tagumiste luuliste elementide stressmurd

Alates pediiklist kuni liigesteni välja

Alaseljavalu 10-16 aastasel inimesel, ära oota vaid kahtlusta spondülolüüsi

Spondülolüüs

Mrt

Röntgen

Kompuutertomograafia

Luude stsintigraafia koos SPECT Ct-ga

Collier BD, Johnson RP, Carrera GF, Meyer GA, Schwab JP, Flatley TJ: Painful spondylolysis or spondylolisthesis studied by radiography and single-photon emission computed tomography. *Radiology 154:* 207–211**,** 1985

spondülolüüs

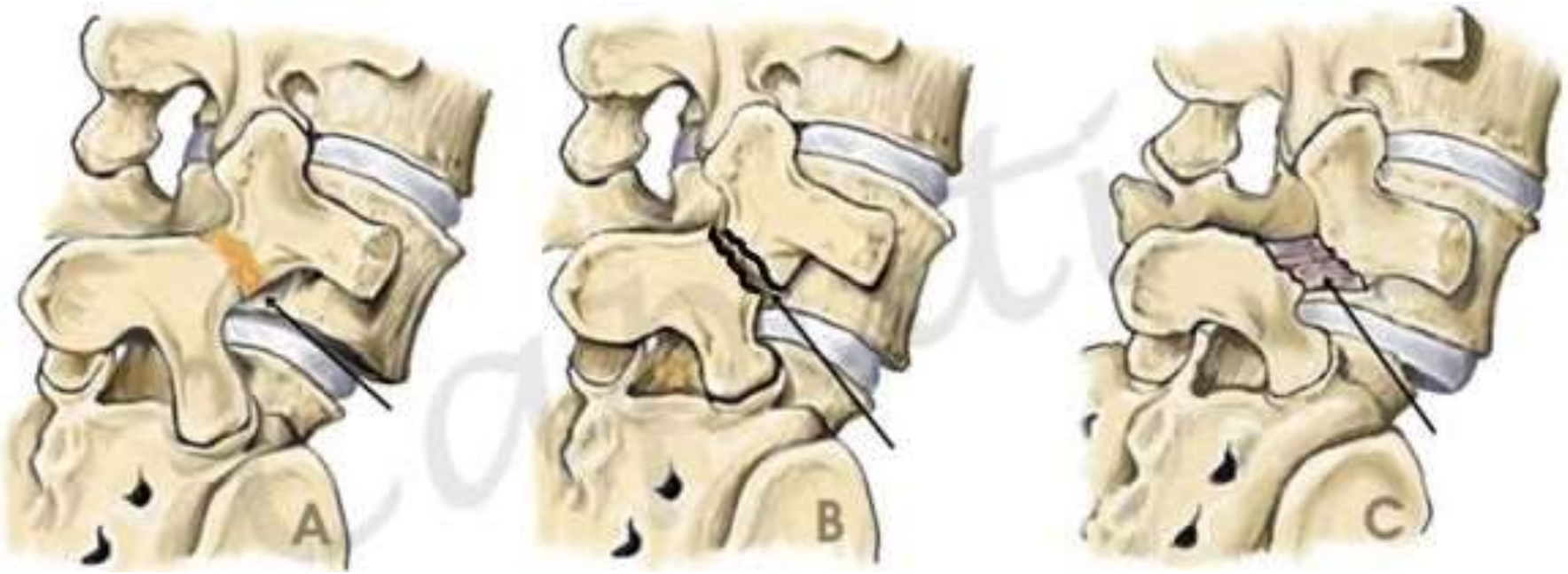
luuturse (MRT)

juuksekarvmurd (CT)

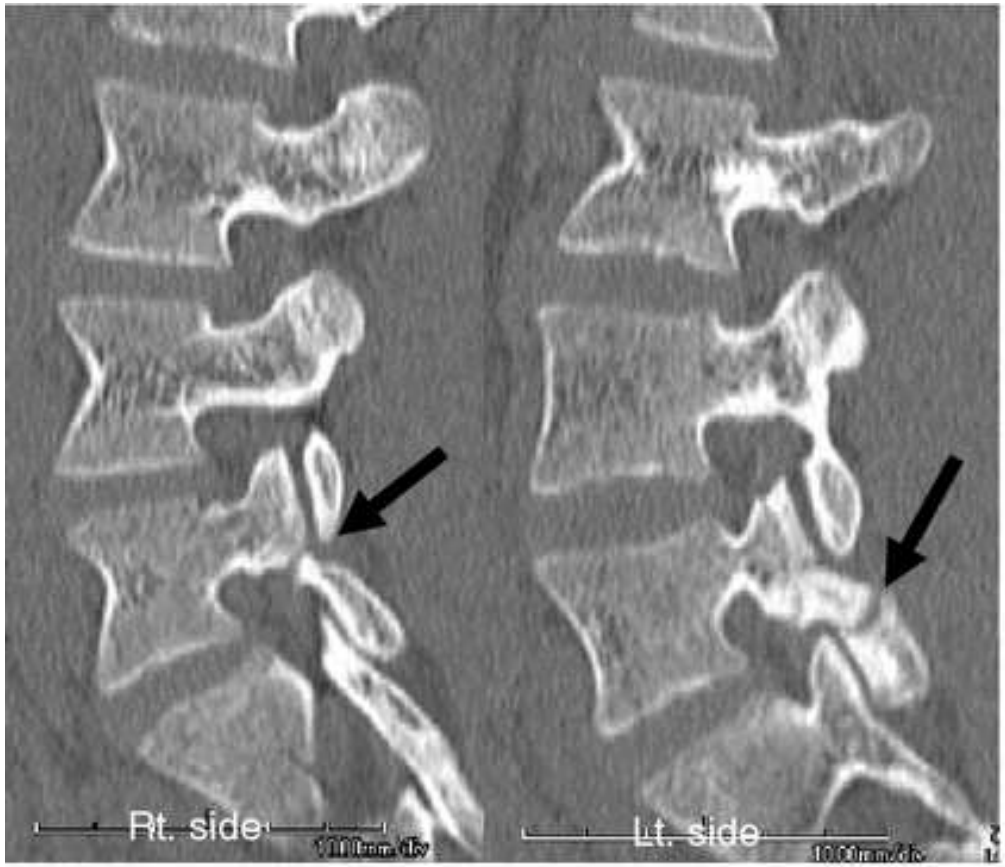
murrujoone vahel distants (CT)

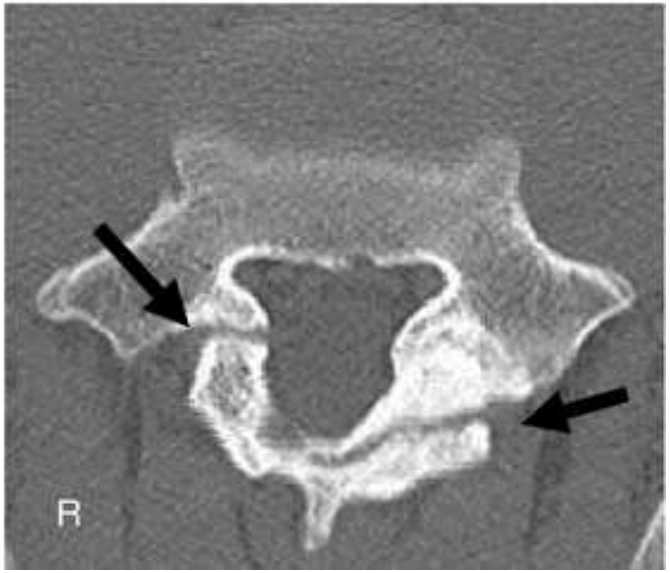
ebaliiges (CT)

spondülolüüs



Spondülolüüs





Stressmurru konservatiivne ravi

Väga varane paranemine 100 %, 2,5 kuuga

Varane – 93,8 % , 2,6 kuuga

Süvenev – 80 % , 3,6 kuuga

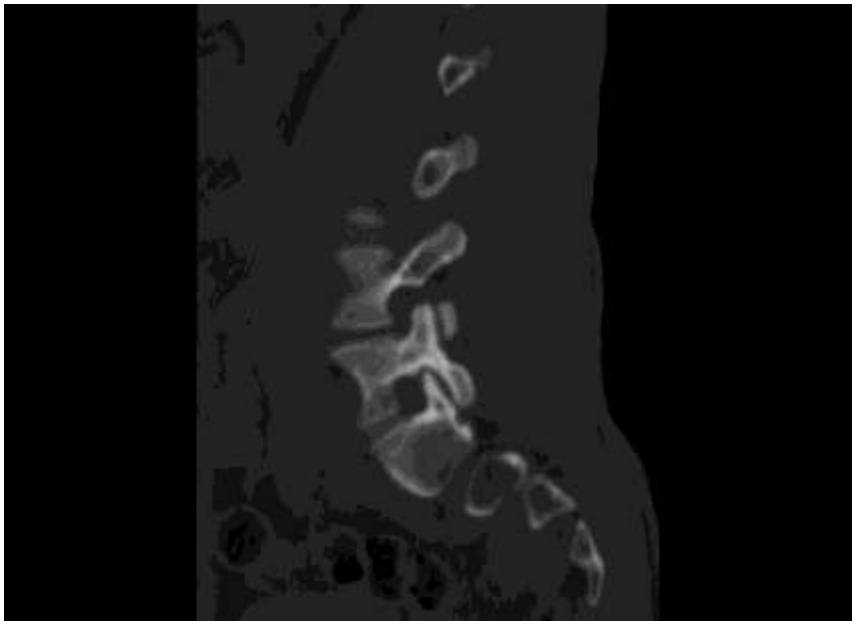
Ebaliiges – 0% paranemine konservatiivse raviga

Kordumine 26,1 %

Sakai, Spine `17

ühepoolne spondülolüüs

Aasta hiljem uus terav valu teisel pool



Kirurgiline ravi

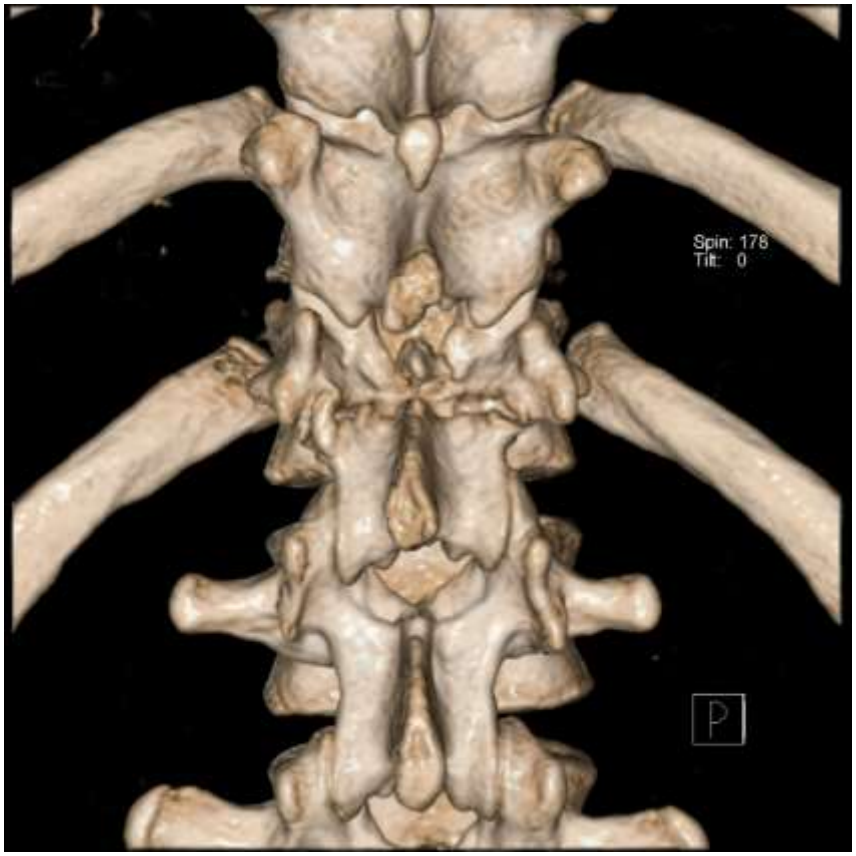
Scott Wiring

Pedicle Screw-Hook

Buck Screw

U rod technique

T12 spondülolüüs



9 kuud postop.

vigastuse progresseerumine

spondülolüüsi tulemusel tekib ebaliiges

nihkumine - spondülolistees

lüütiline listees

lüütiline spondülolistees paranemata spondülolüüs

Enim 5. nimmelüli

Noorsportlastel

korduv ülesirutus ja aksiaalne koormus

Cyron BM, Hutton WC: The fatigue strength of the lumbar neural arch in spondylolysis. *J Bone Joint Surg Br 60:* 234–238, 1978

30-ndates meespatsient
5.nimmelüli nihkumine

70-ndates meespatsient

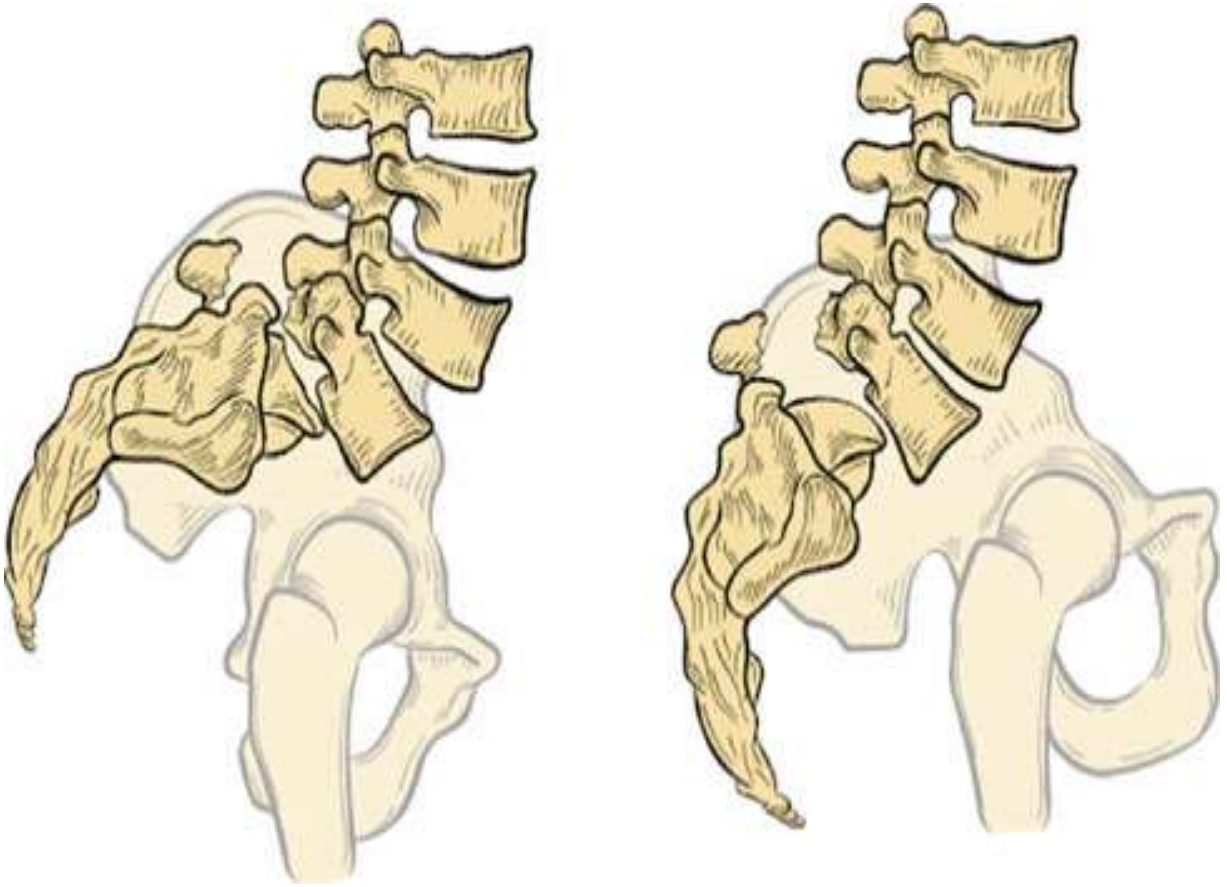
spondülolistees

Konservatiivne ravi ei aita

Kirurgiline ravi

Lüüsikoha (armkoe) eemaldamine
Närvielementide vabastamine ja luustamine

Labelle(2011) L5S1 spondülolisteesi klassifikatsioon



Spino-pelvic sagittal balance of spondylolisthesis:a review and classification

Hubert Labelle · Jean-Marc Mac-Thiong · Pierre Roussouly Eur Spine J (2011) 20 (Suppl 5):S641–S646

Küfoos ja lordoos

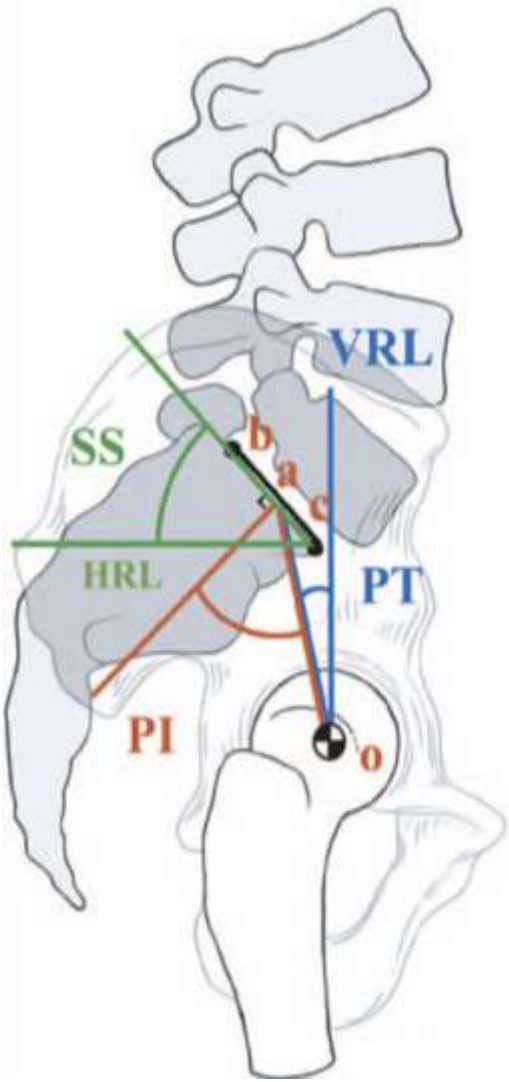
individuaalsed parameetrid

norm kui selline puudub

sõltuvad vaagna parameetritest

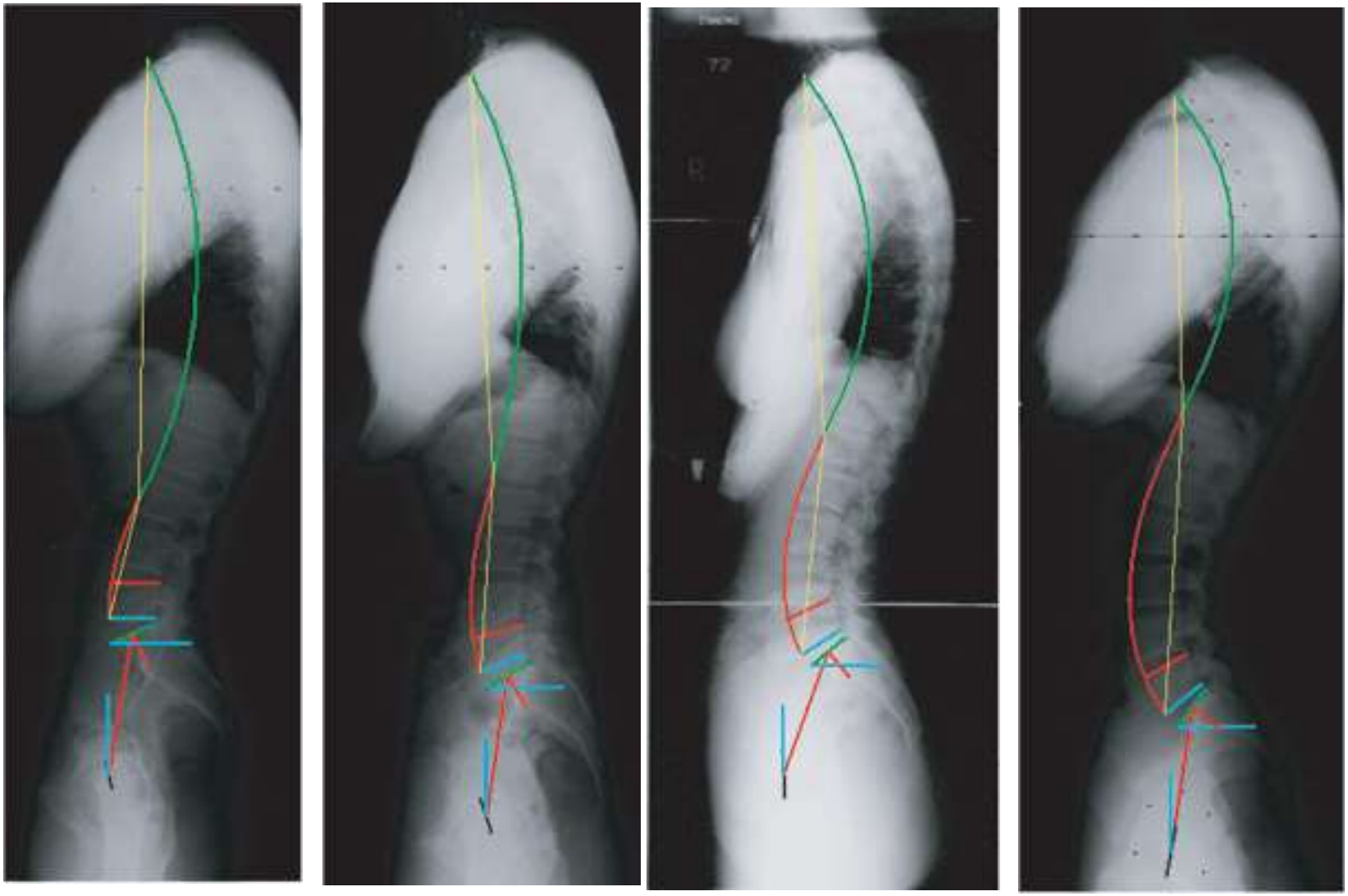
PI = SS + PT

LL= PI

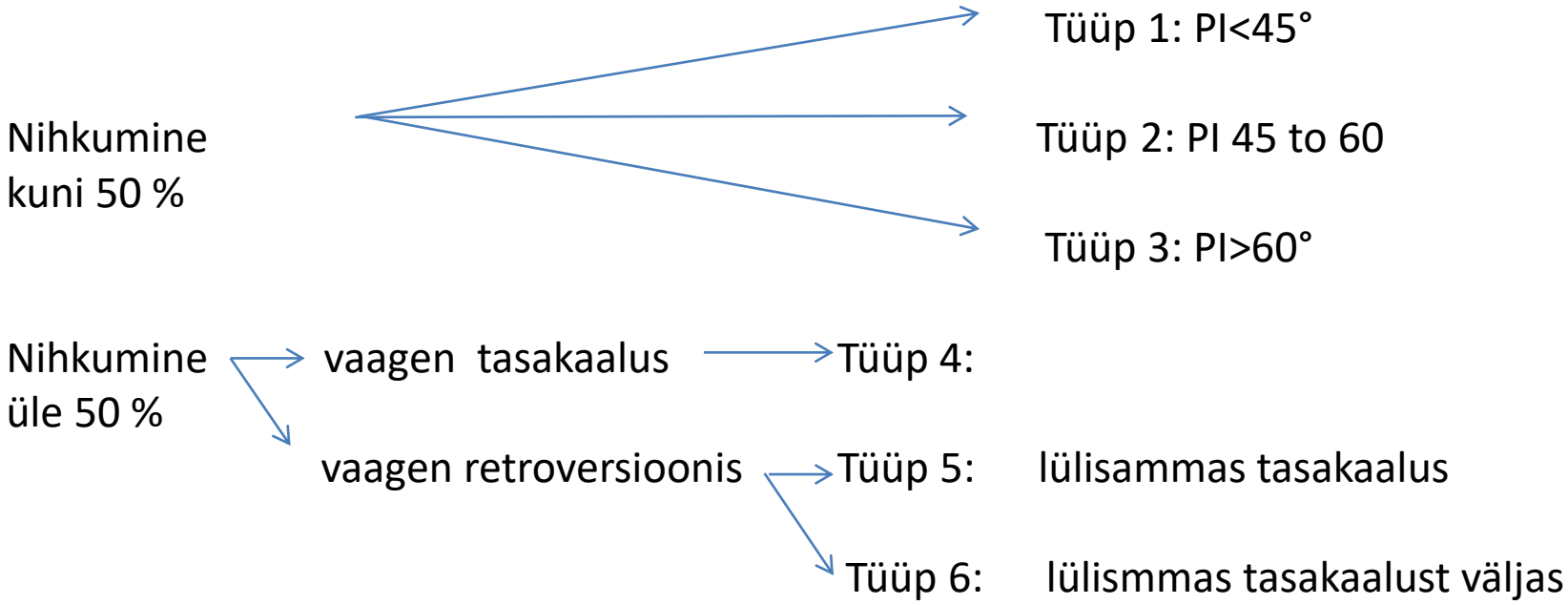


Morphologic parameters of sacropelvic anatomy affecting spinal pathology
Jean-Marc Mac-Thiong and Hubert Labelle

Erinevad lordoosi tüübid

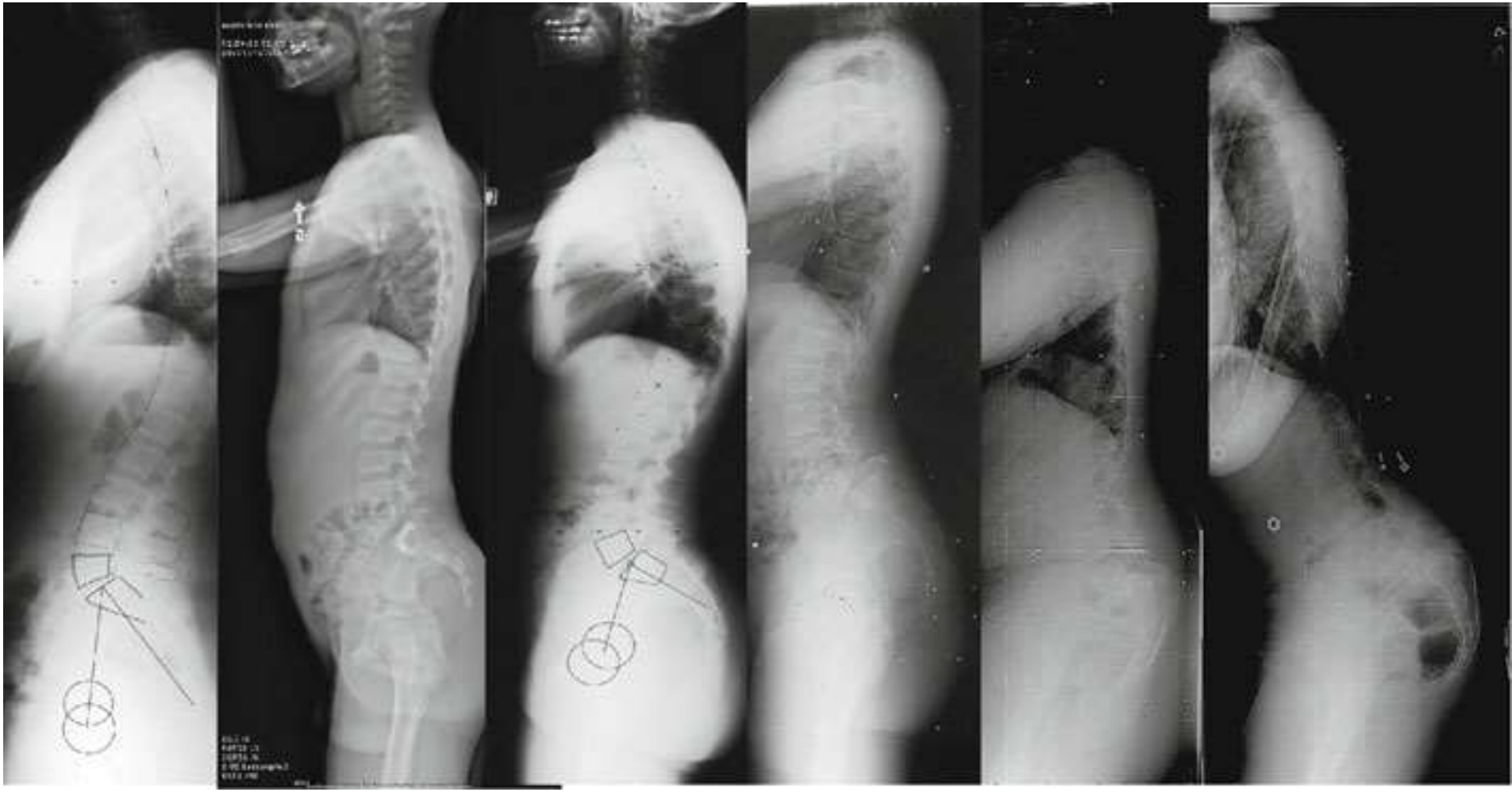


L5S1 spondülolisteesi klassifikatsioon Labelle(2011)



Spino-pelvic sagittal balance of spondylolisthesis:a review and classification
Hubert Labelle • Jean-Marc Mac-Thiong • Pierre Roussouly Eur Spine J (2011) 20 (Suppl 5):S641–S646

L5 listeesi 6 tüüpi



16 aastane, L5 lüütiline listees


Lossy
DEX
SEISTES


R
SEISTES R23

MIS- fusion

Instrumenteeritud fusiooni postop.

2,5 kuud kontroll

piiranguid ei ole

aktiivne taastamine peale paranemist

lõplik luustumine 1 aasta

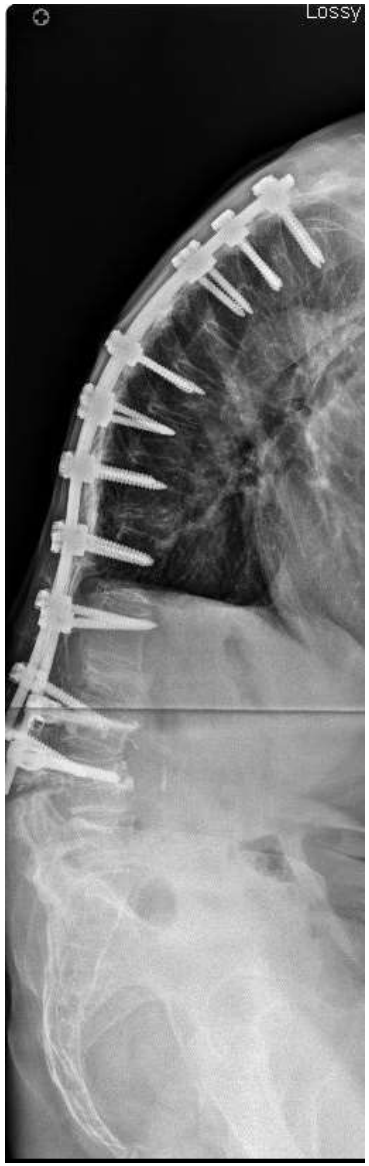
Spondülolüüs ja - listees

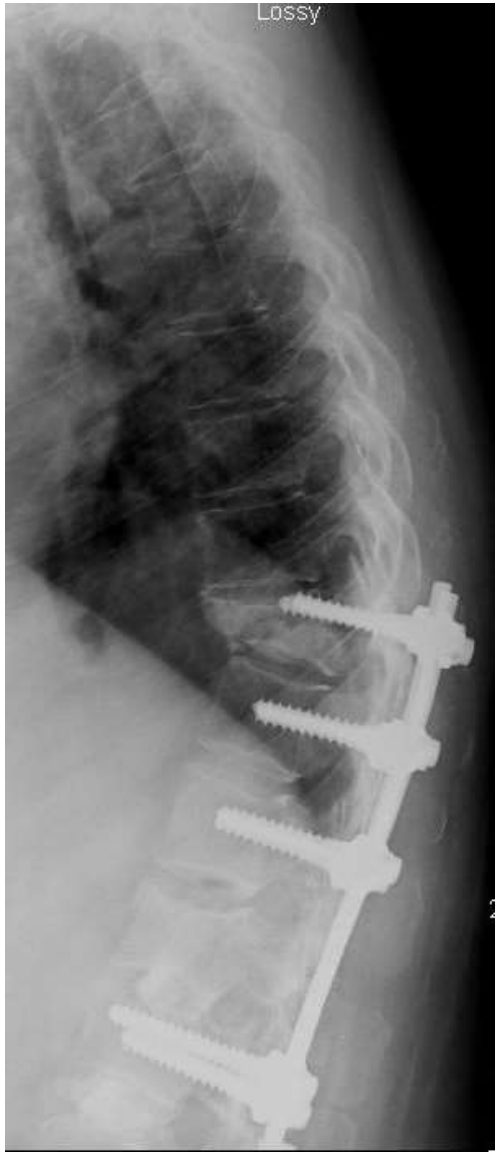
noorukitel püsiv alaseljavalu ohumärk

Pigem konservatiivne ravi

Kirurgiline ravi 85 % edukas

Vaagna ja lülisamba tasakaal





osteoprootilise murru eripära

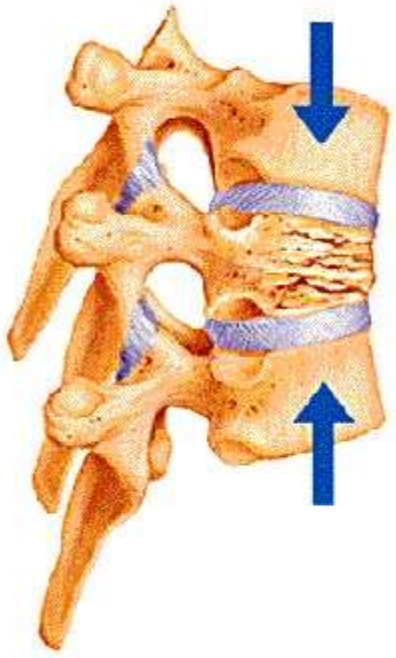
Luukvalitteet

Stabiilne murd

Trauma puudub

Vanemad inimesed

Kroonilised haigused



Valu

Enamasti konservatiivsele ravile allub

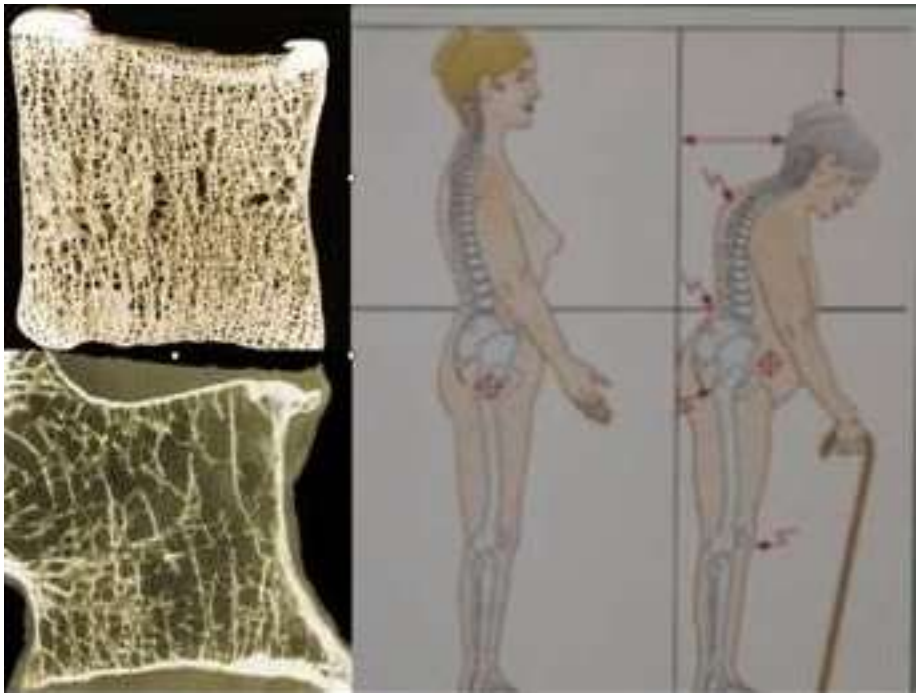
- medikamendid
- korsetid
- tugiraamid, kargud rulaatorid, jne
- nõustamine

Kirurgilised võimalused - valu leevendamiseks

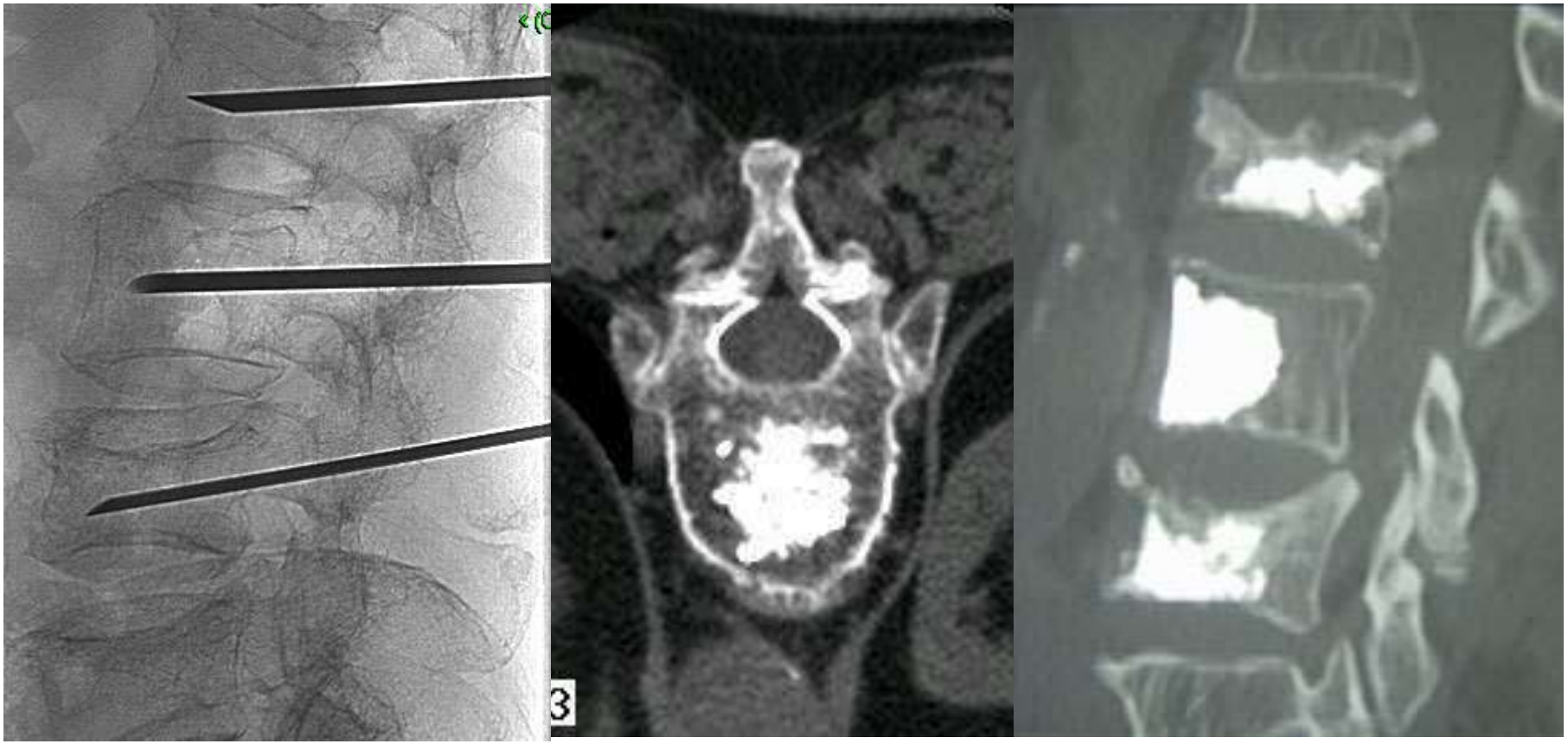
Vertebroplastika

Küfoplastika

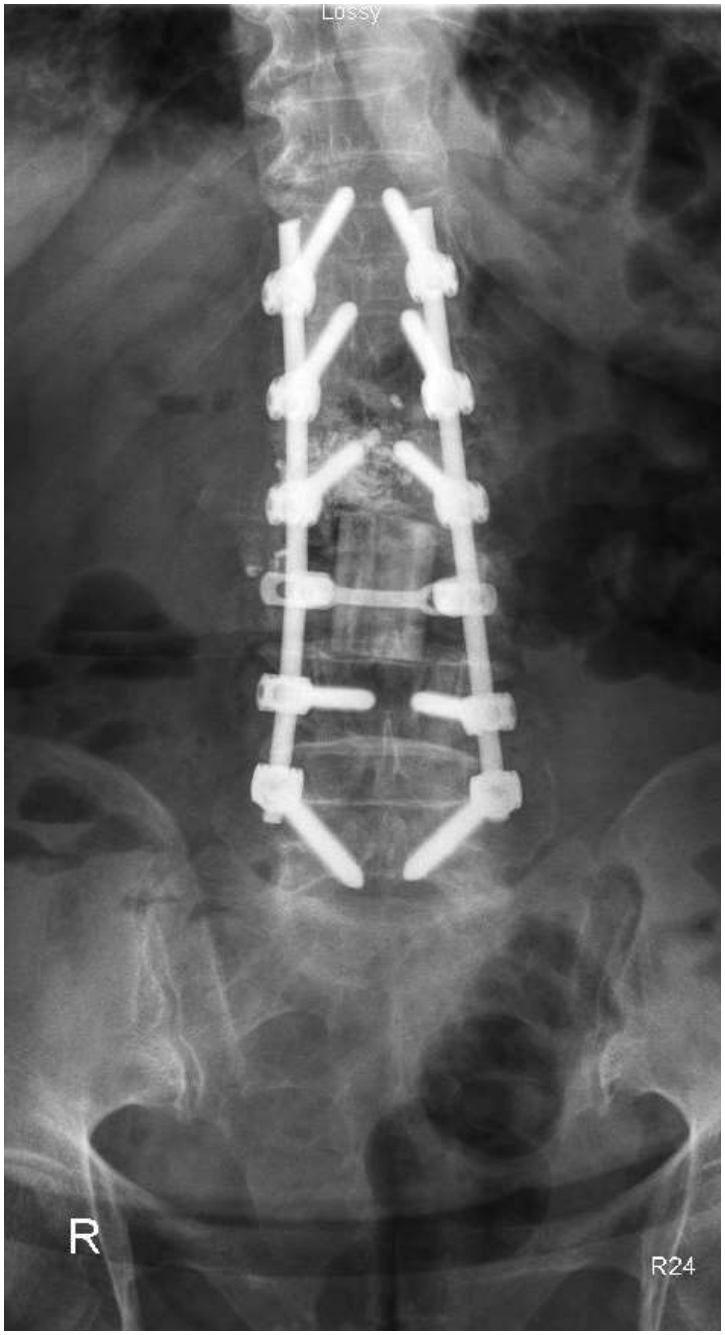
MRT

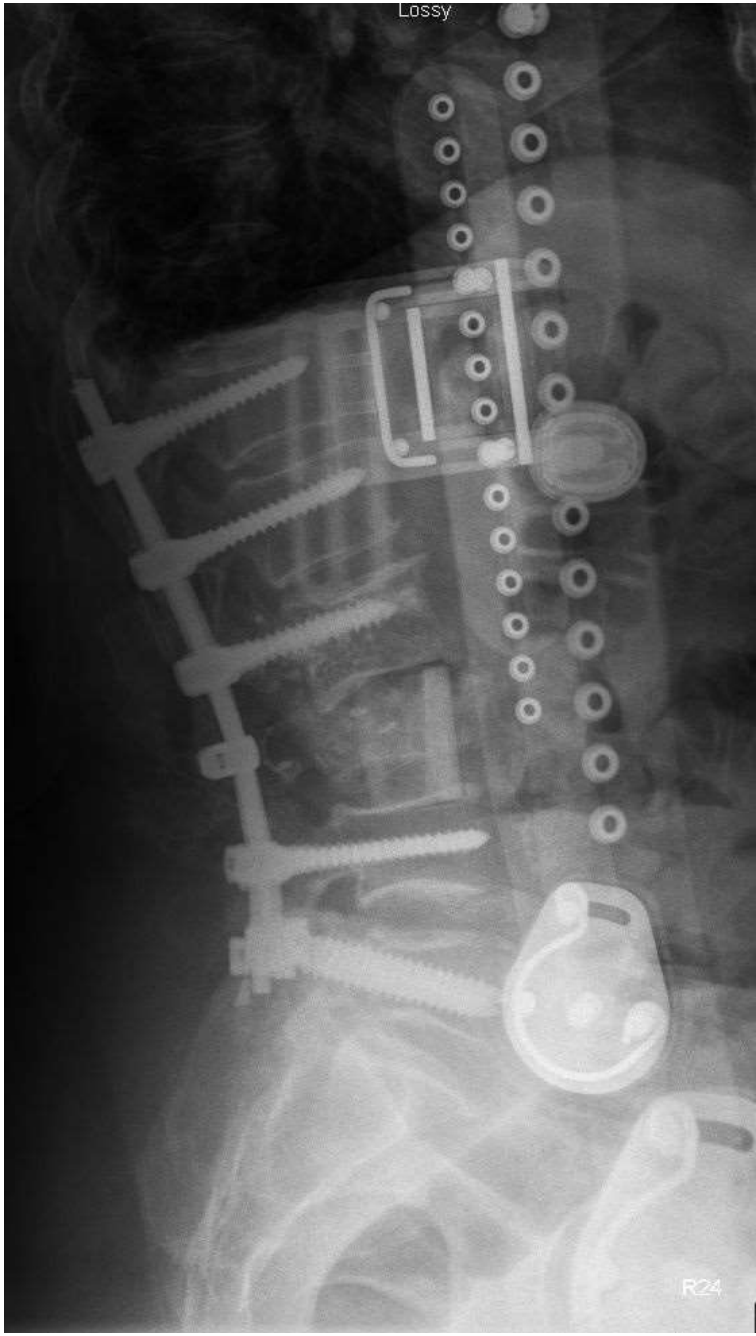


Vertebroplastika

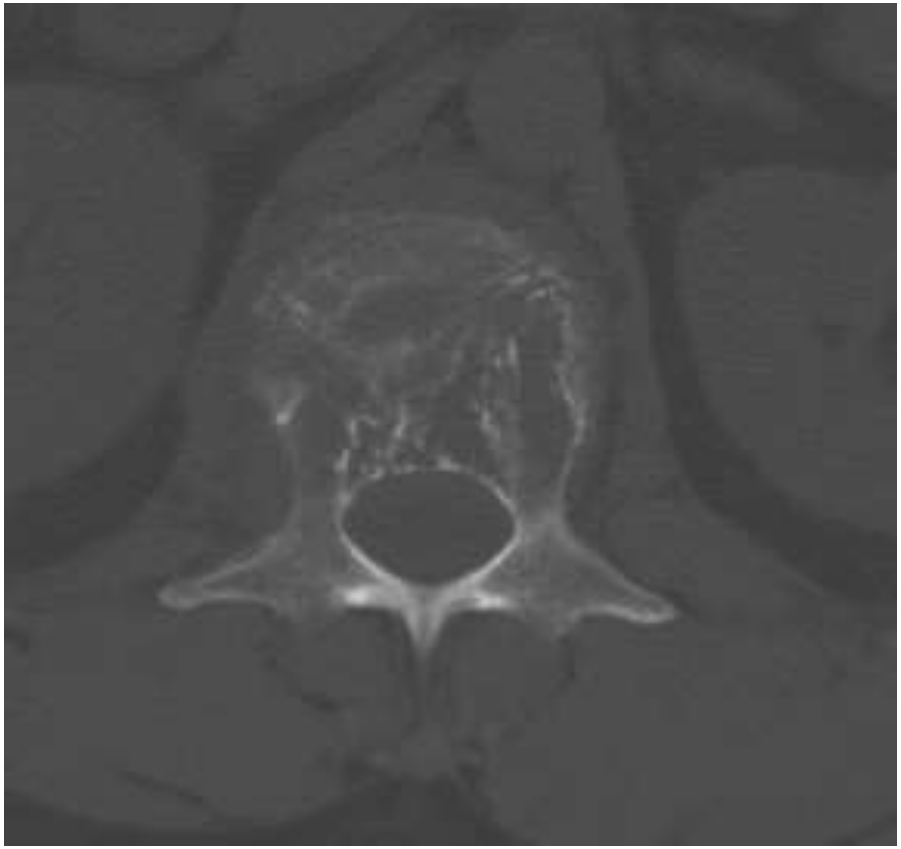


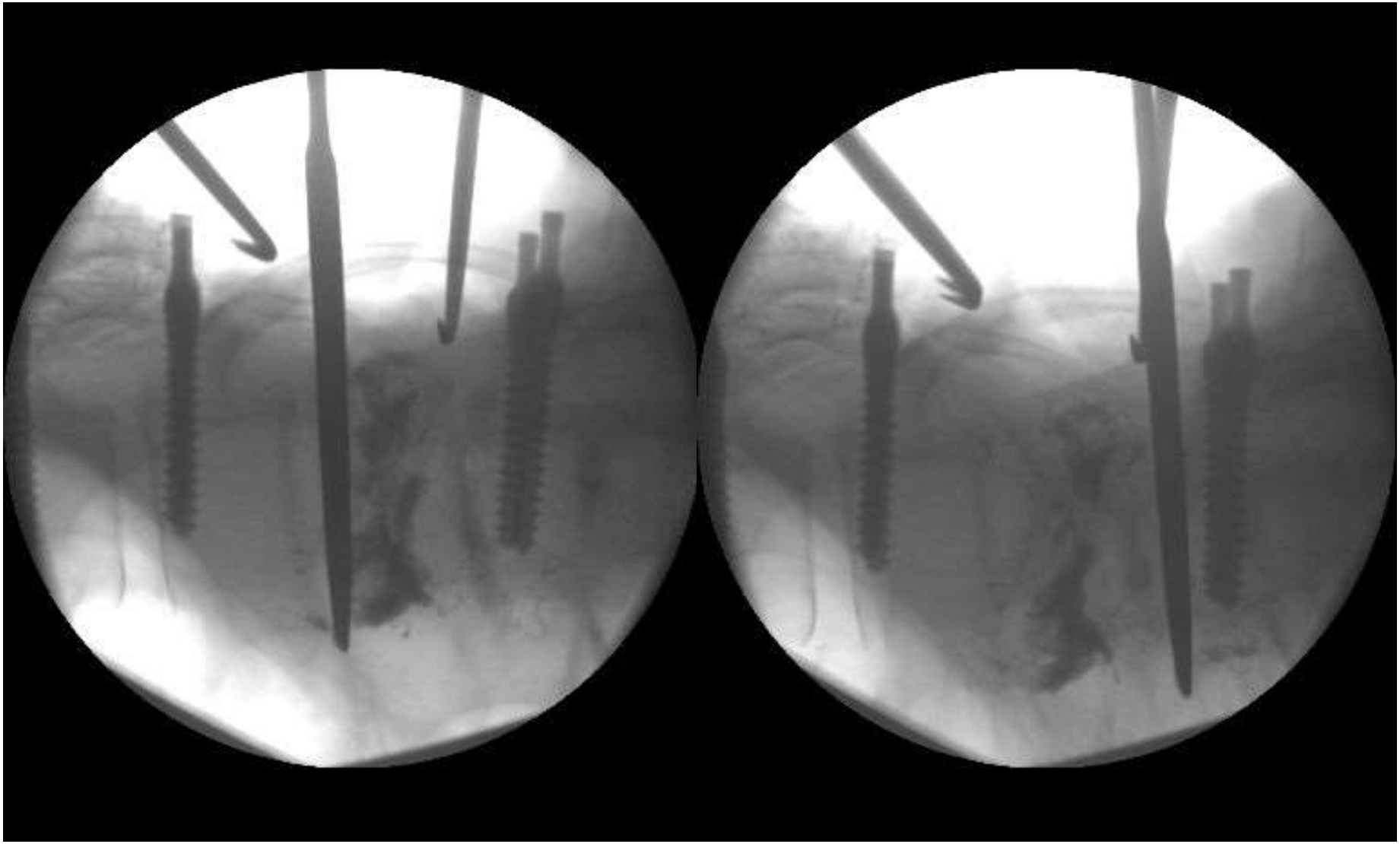
Tsement võib lõhkuda terveid lülisid

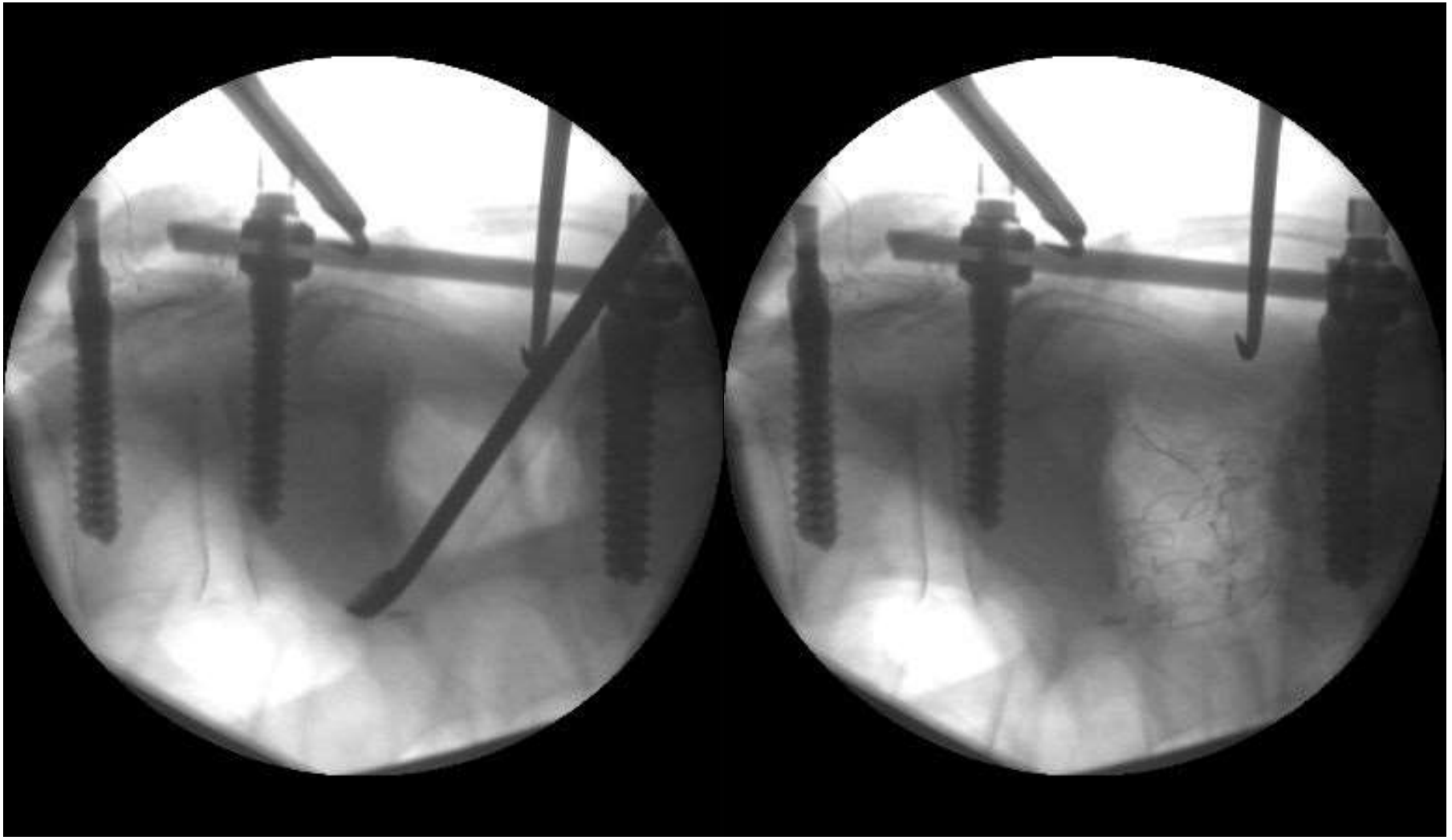

Lossy
R
R24

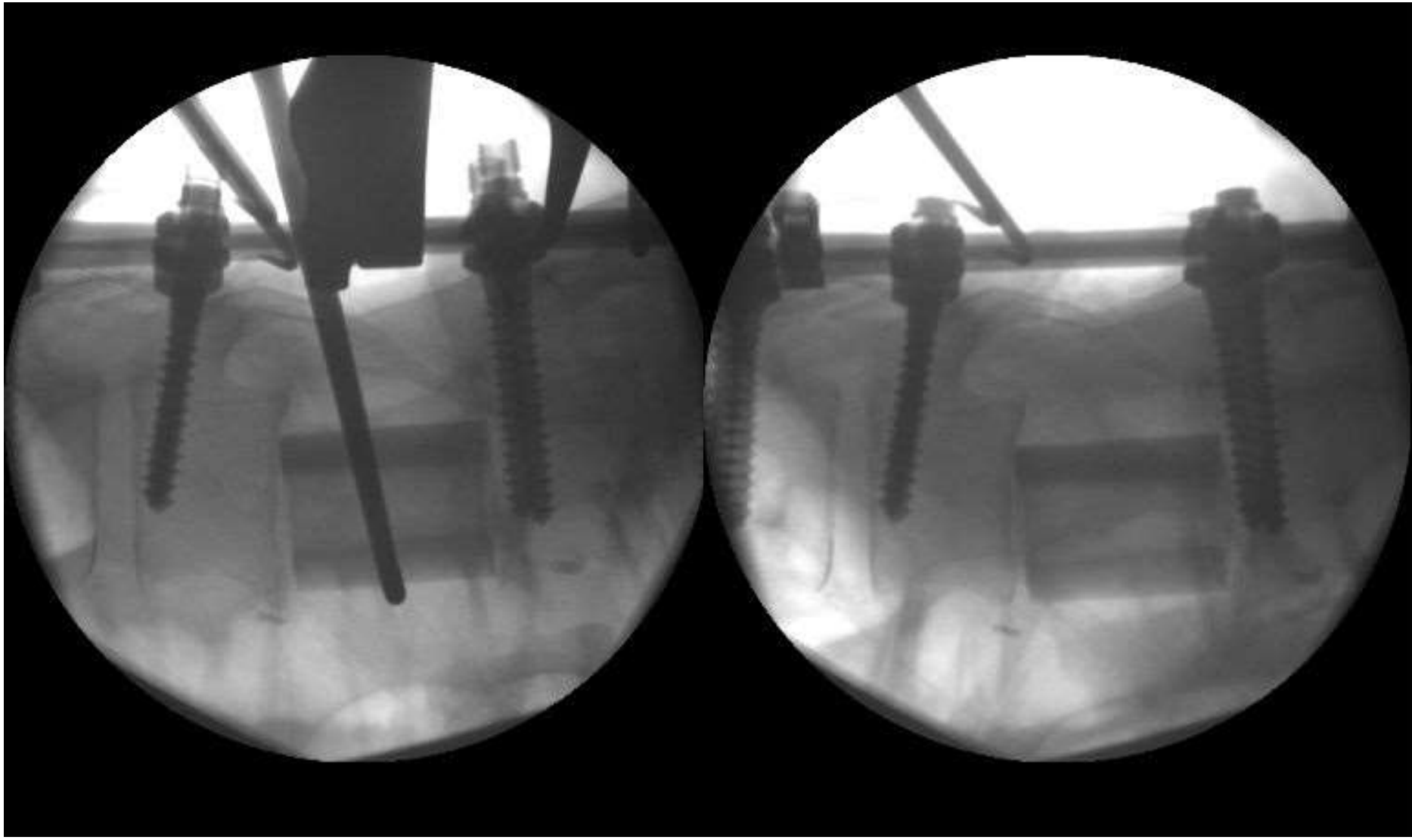

Lossy
R24

kokkuvõte









Lülisamba resektsioon ja asendamine

8 päeva peale spondülektoomiat

täna me

SportEST

estonia.ee