



**AOSPINE**

# Spinal Cerrahide Komplikasyonlar Sempozyumu

26-29 Eylül 2018  
Titanic Deluxe Hotel / BODRUM

Biyomekanik Açıdan  
Komplikasyon ve Revizyon

Dr.Hakan BOZKUŞ

# Biyomekanik Komplikasyon Olasılığı

- Yalnızca cerrahi dekompresyon
  - Ligaman, kapsül
  - Faset, lamina, omur cismi
  - Adale
- İmplant materyeli
  - Malzeme özelliği
  - Uygulanma şekli
  - Kemik/implant ilişkisi
- Hastaya ait
  - Osteoporoz
  - Kemik füzyon
  - Obezite, Nikotin
  - Ergonomik/ Kinematik koşullar



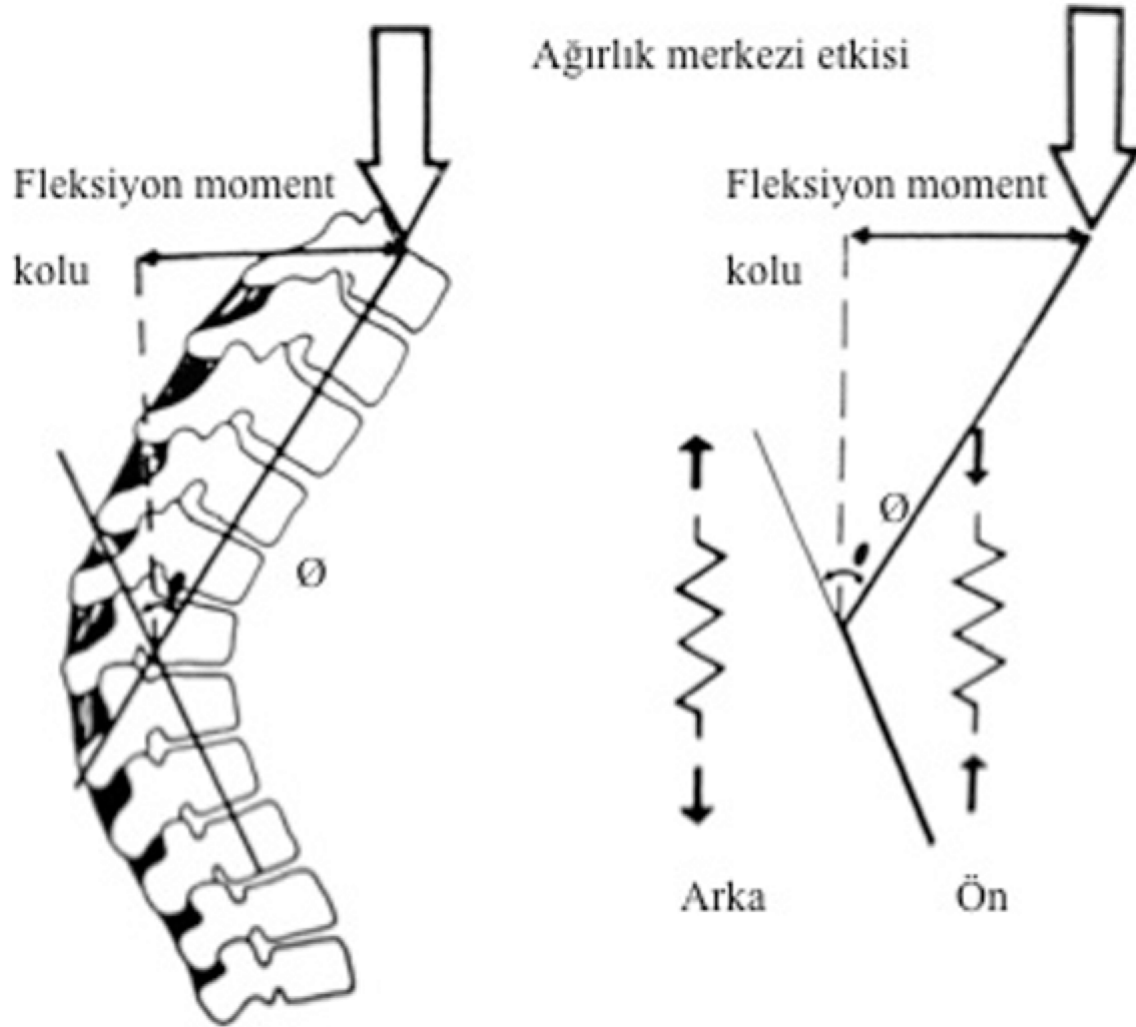
# T3-4-5 Laminektomi

## Fizyolojik Torakal Kifoz Artışı !



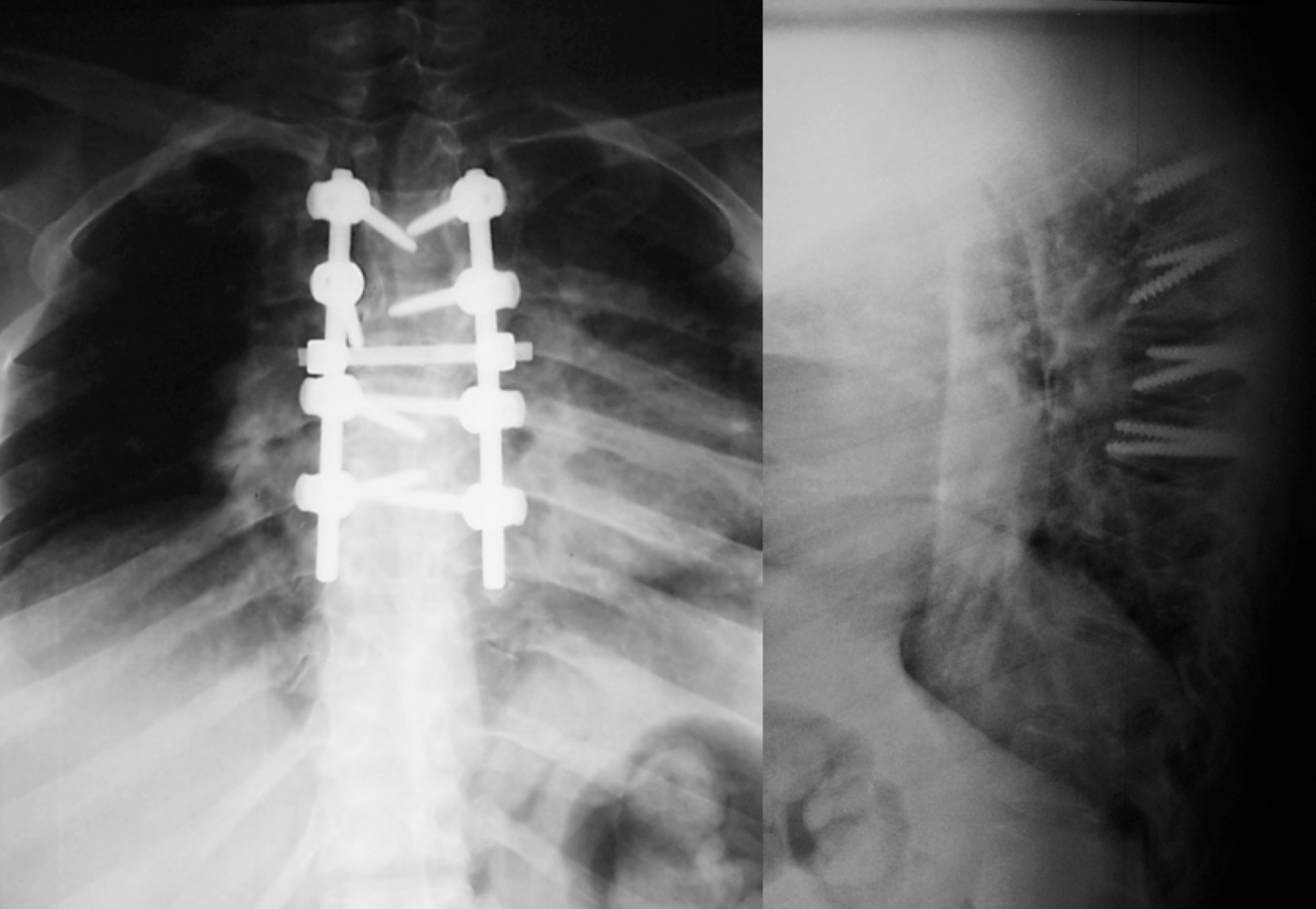
Dr.A ŞENEL Arşivinden

# Posterior Gerilme Bandı Kaybı





# Revizyon



Dr.A ŞENEL Arşivinden

# Biomechanical Evaluation of Lumbar Spinal Stability After Graded Facetectomies

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JOANNE DURANCEAU, MS,† THOMAS OXLAND, MSc,† and JOSEPH J. CRISCO, PhD†

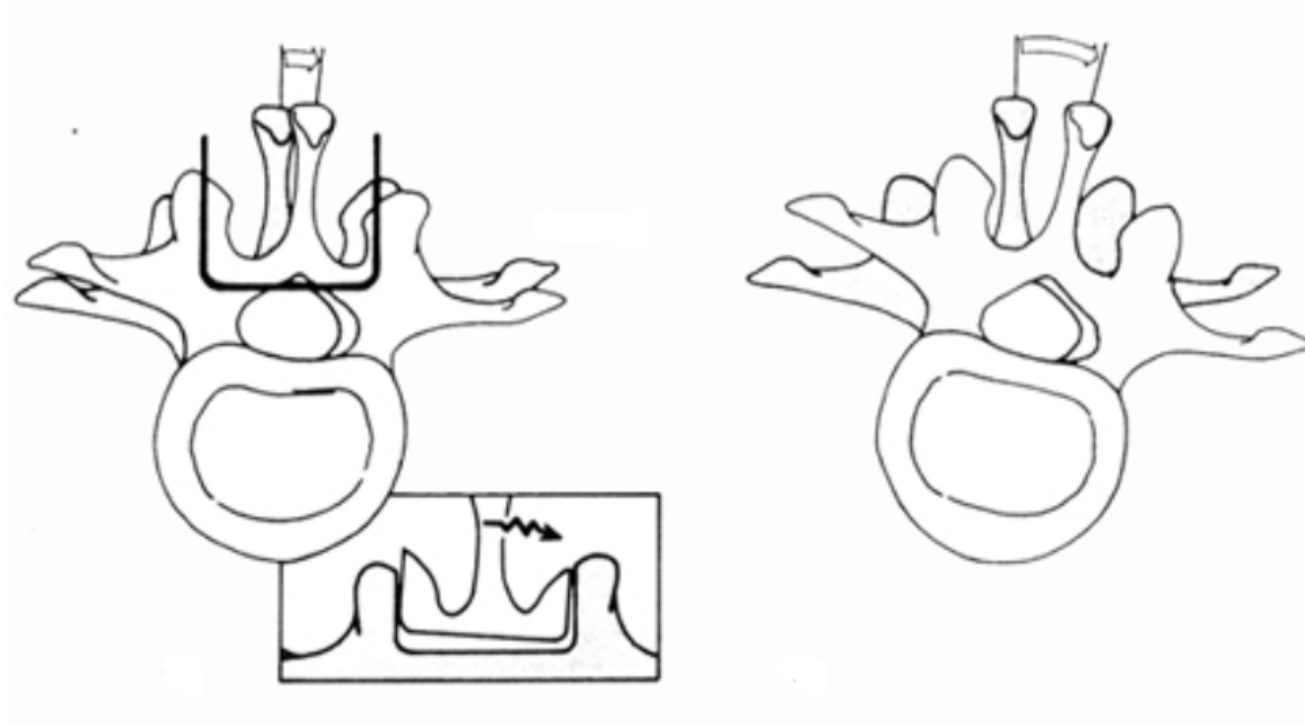
Spine; 15 (11), 1990

- ROM (hareket aralığı)
  - tek taraflı medial fasetektomi ----- fleksiyon artıyor
  - tek taraflı total fasetektomi -----fleksiyon ve aksiyal rotasyon artıyor

MEDIAL FASETEKTOMİ = STABİL,  
TOTAL FASETEKTOMİ = İNSTABİL



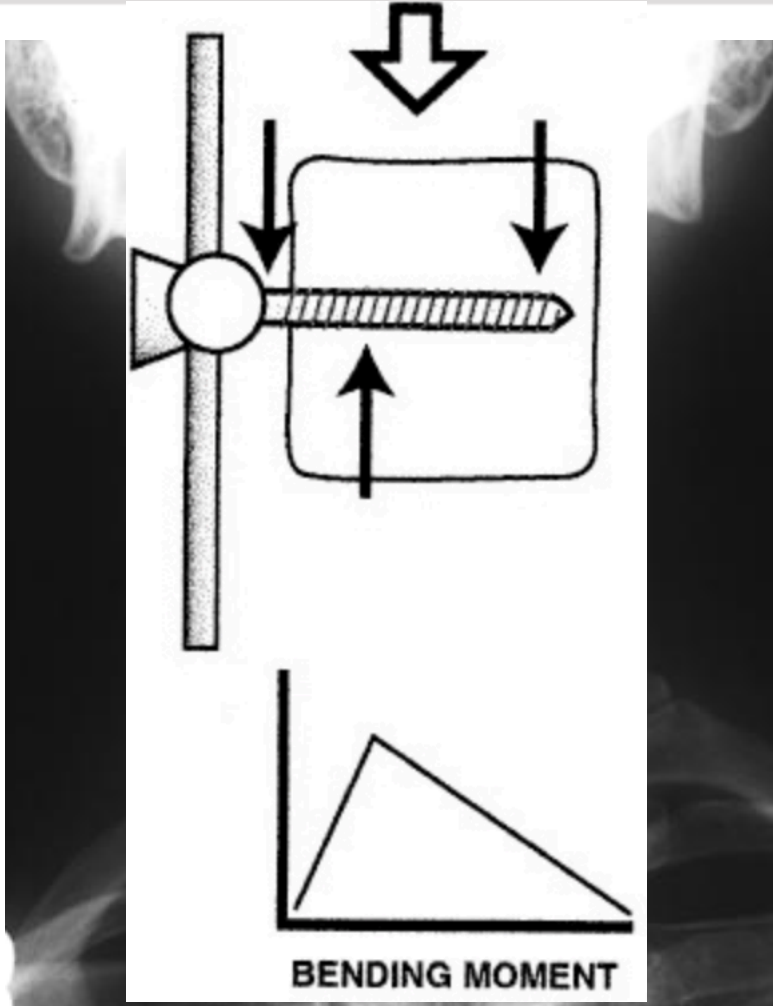
# Lomber Faset Rezeksiyonu



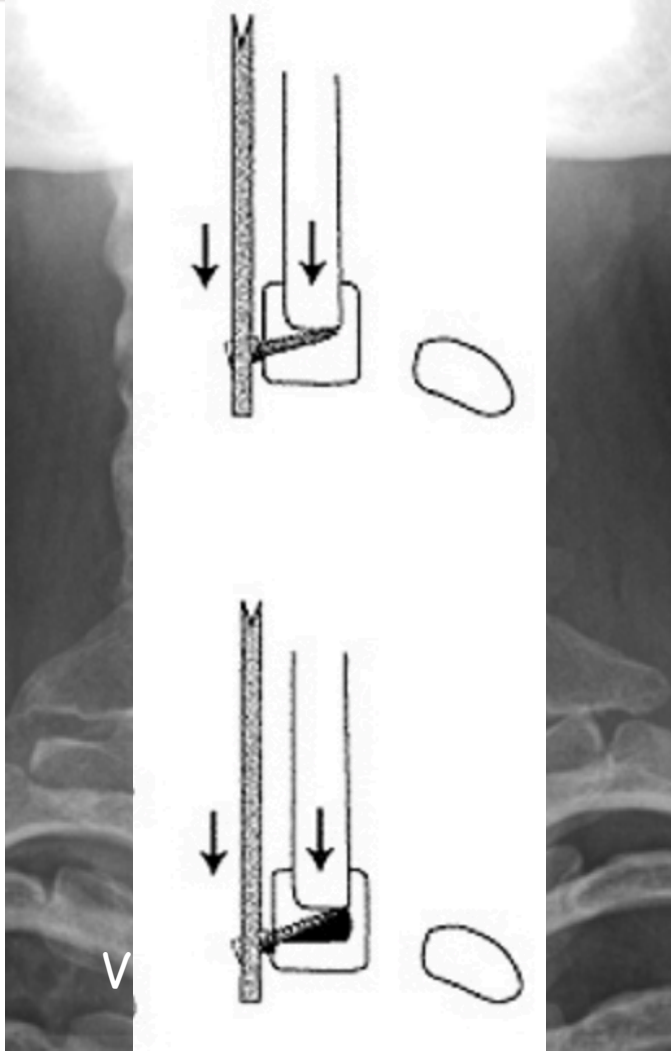
- Sagittal plandaki faset rezeksiyonu öne translasyona ve aksiyal rotasyona izin verir.



# Yetersiz kemikleşme, implant yetersizliği

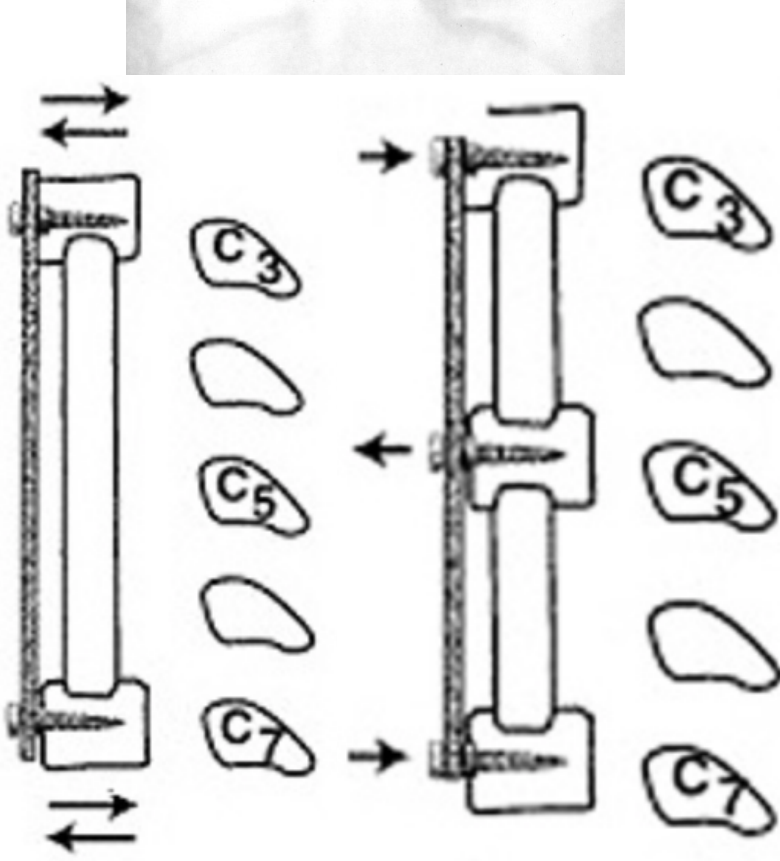


# Normalden uzun plak, yanlış vida yönü !





# Uzun Plak, Yetersiz Fiksasyon

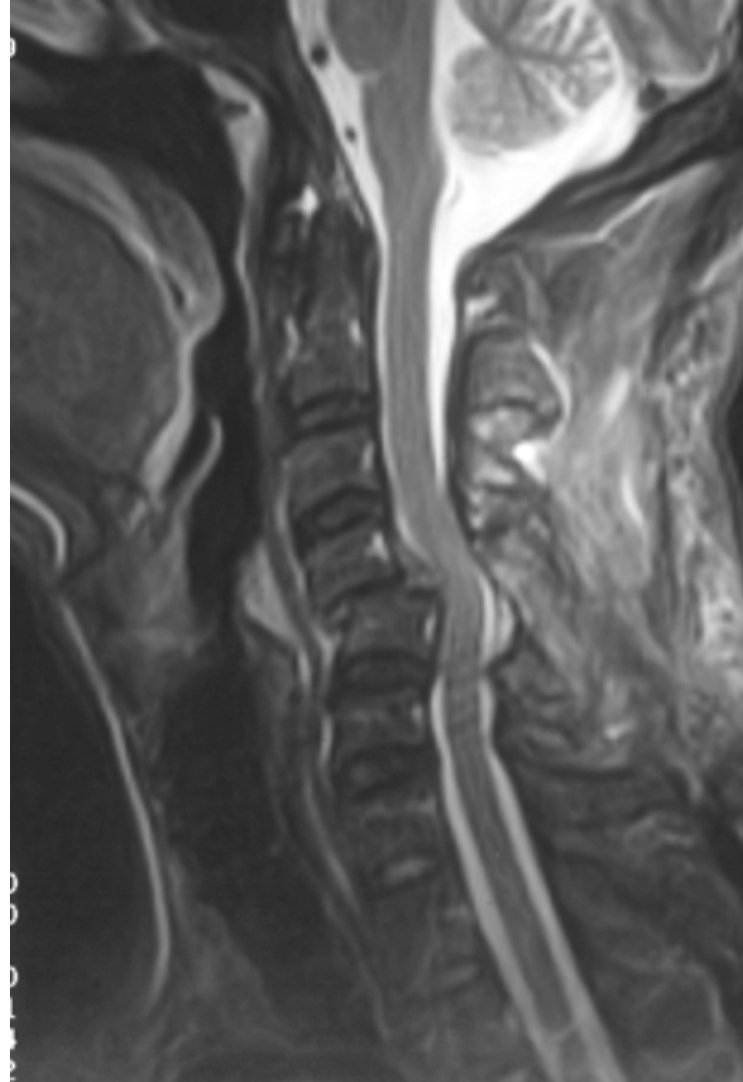
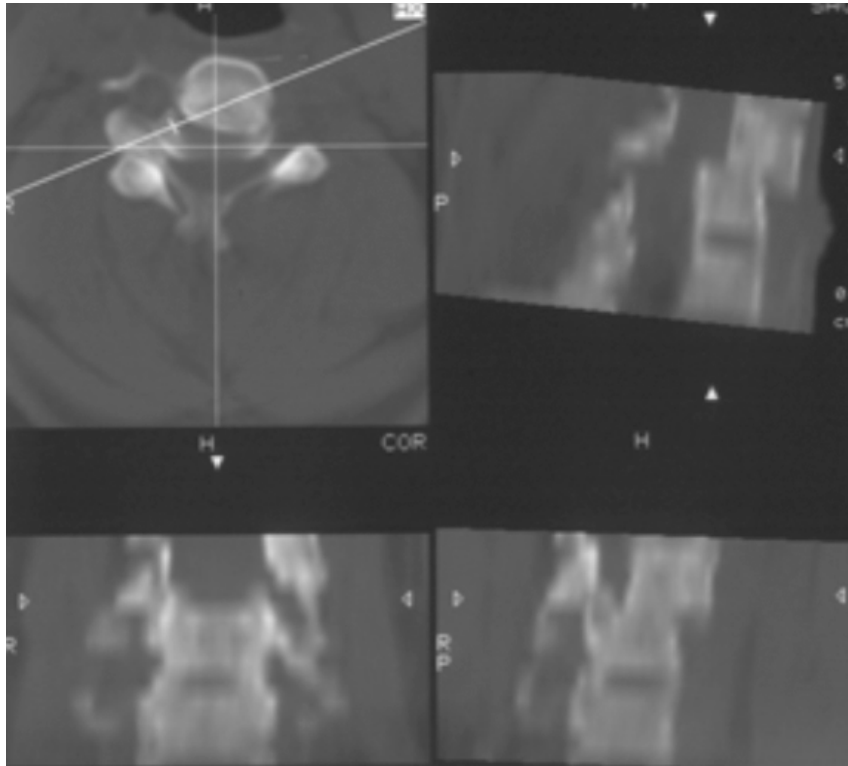


Tek vıda



# Fraktür/Dislokasyon, Yaklaşım ?

## 3 Kolon Hasarı



# Lateral Mass/Plak



# Tek Kolon Stabilizasyon !



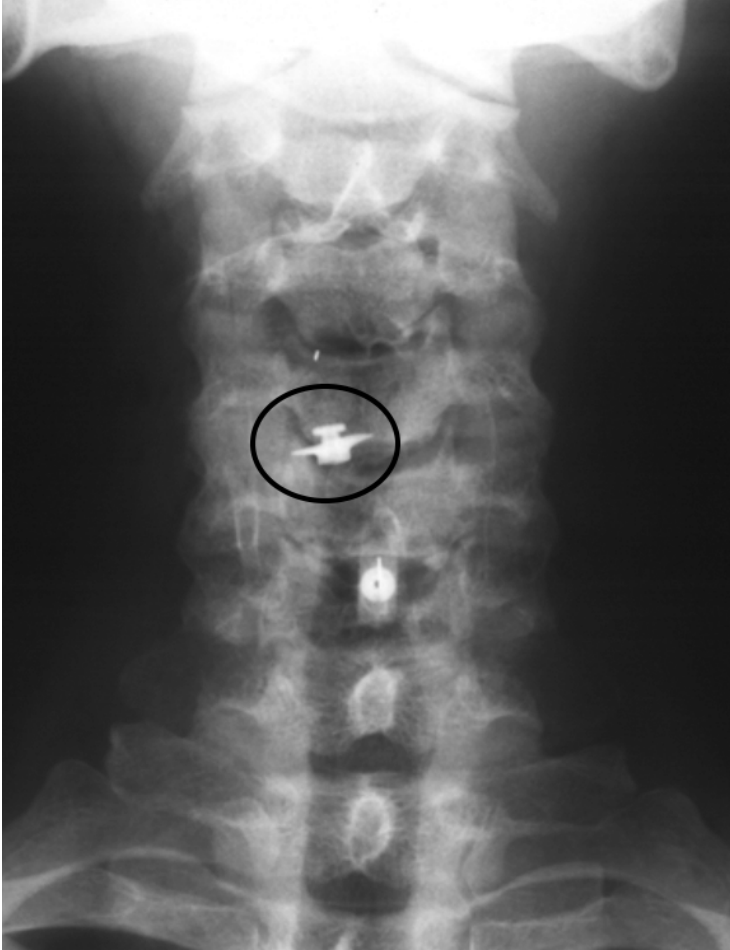
# Revizyon Cerrahisi

## 3 Kolon Desteđi





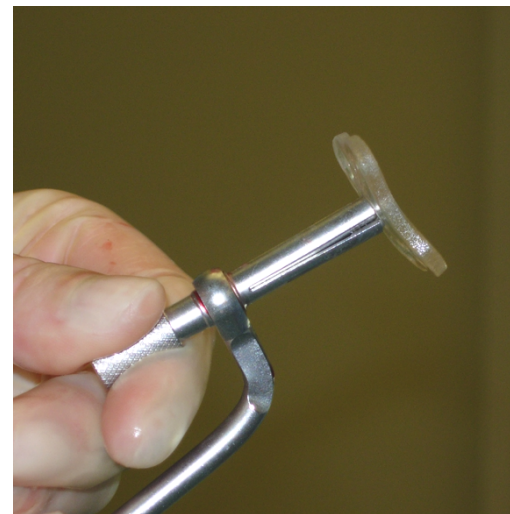
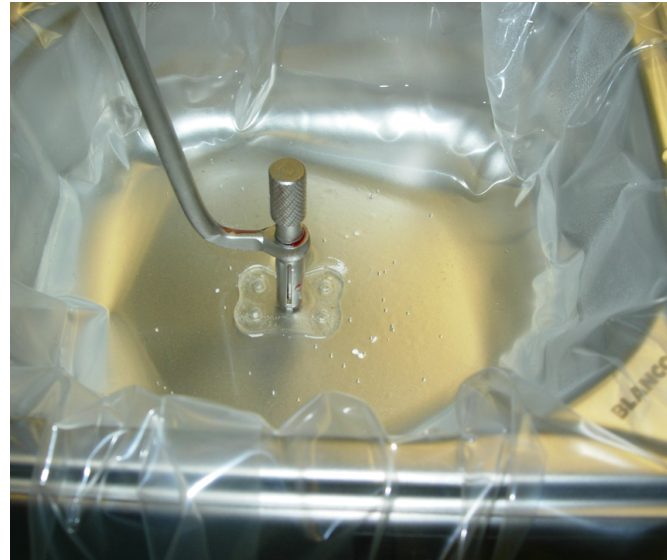
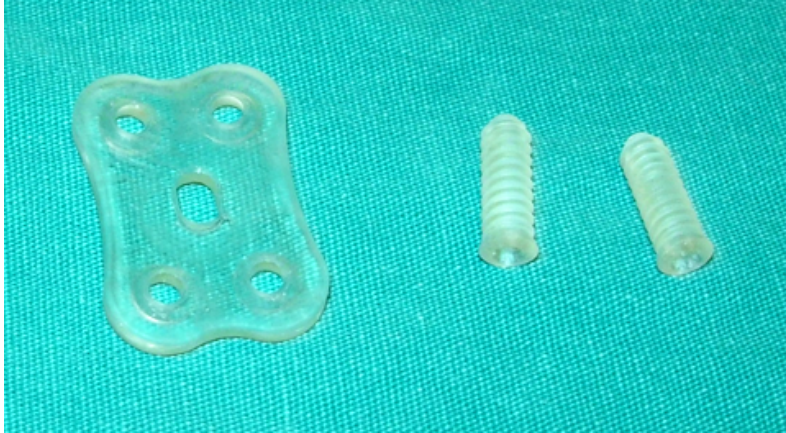
# Kafes Yerdeđiřtirmesi



# Yeniliklere Açık Olmalıyız ?



# Absorbe Olabilen Servikal Plak



# Absorbe Olabilen Servikal Plak

J Neurosurg Spine 3:465–470, 2005

Biomechanical analysis of a newly designed bioabsorbable anterior cervical plate

Invited submission from the Joint Section Meeting on Disorders of the Spine and Peripheral Nerves, March 2005

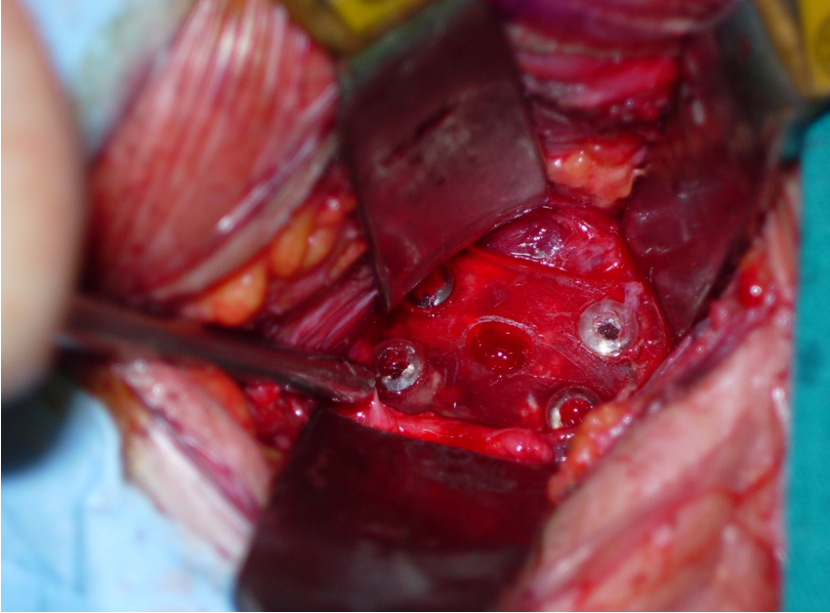
**CHRISTOPHER P. AMES, M.D., FRANK L. ACOSTA JR., M.D., ROBERT H. CHAMBERLAIN, M.S., ADOLFO ESPINOZA LARIOS, M.D., AND NEIL R. CRAWFORD, PH.D.**

*Department of Neurological Surgery, University of California, San Francisco, California; and Spinal Biomechanics Research Laboratory, Barrow Neurological Institute, Phoenix, Arizona*





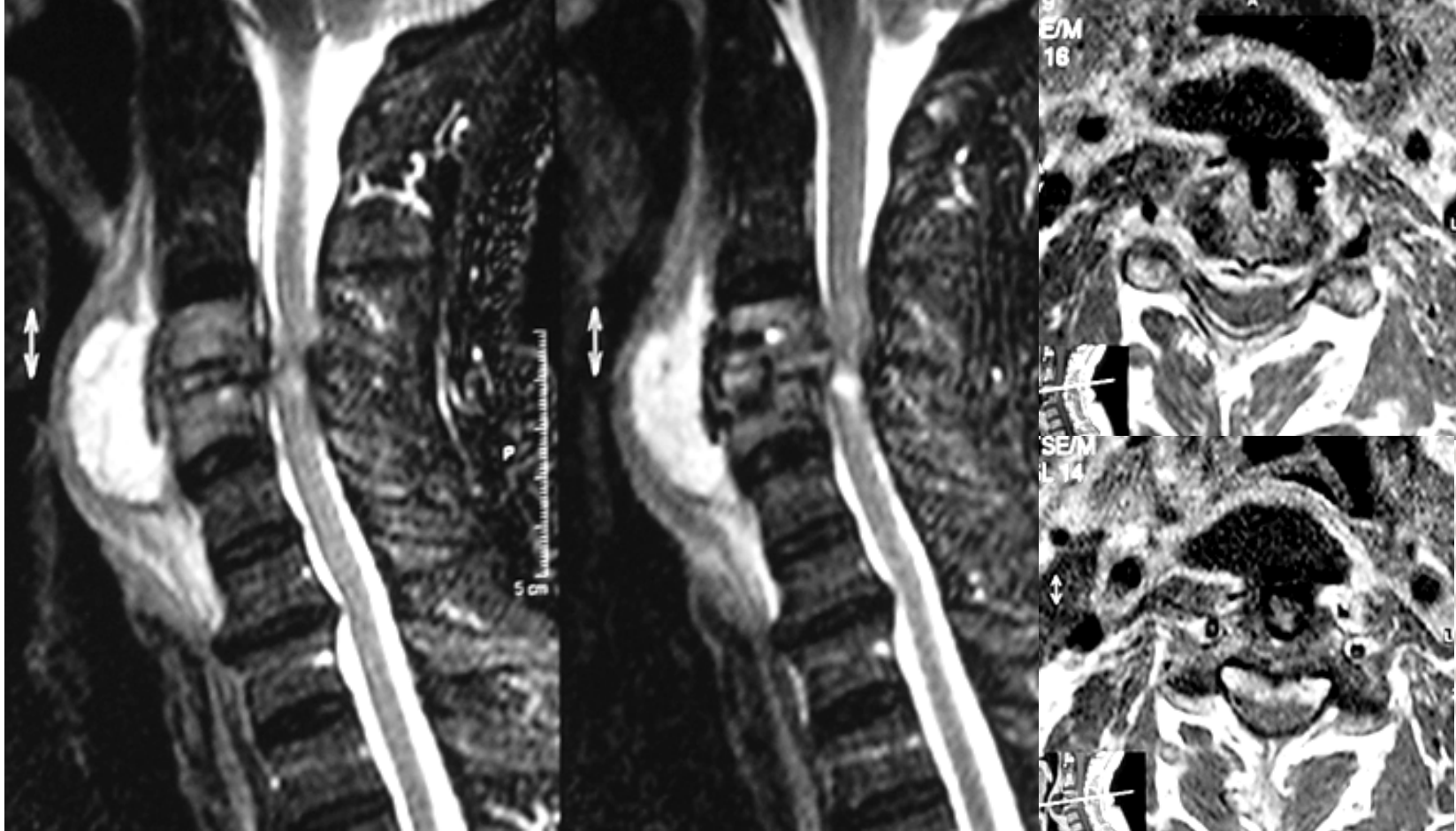
# Perop./ Postop. 1.gün



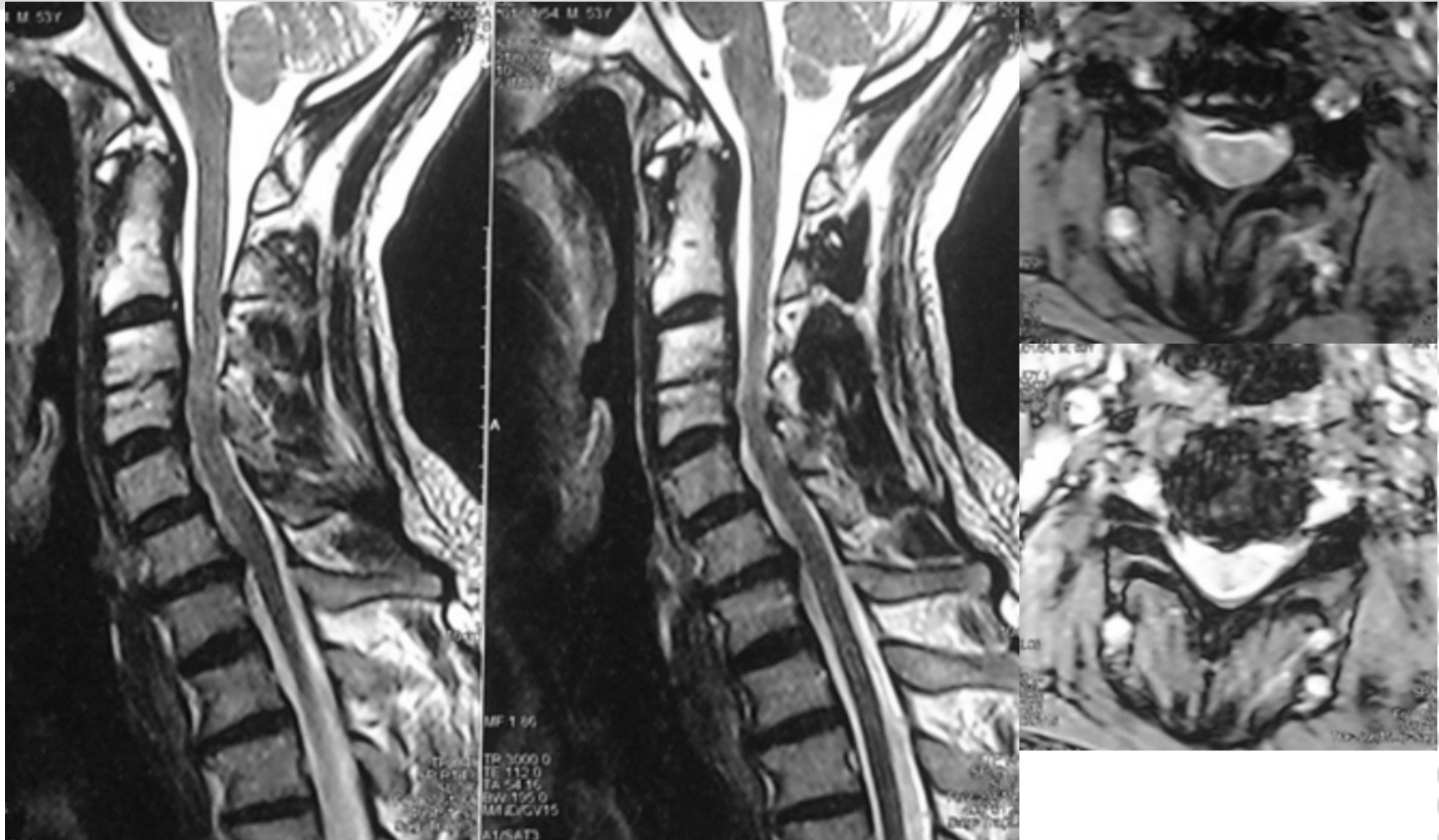


# Postop. 1.hafta

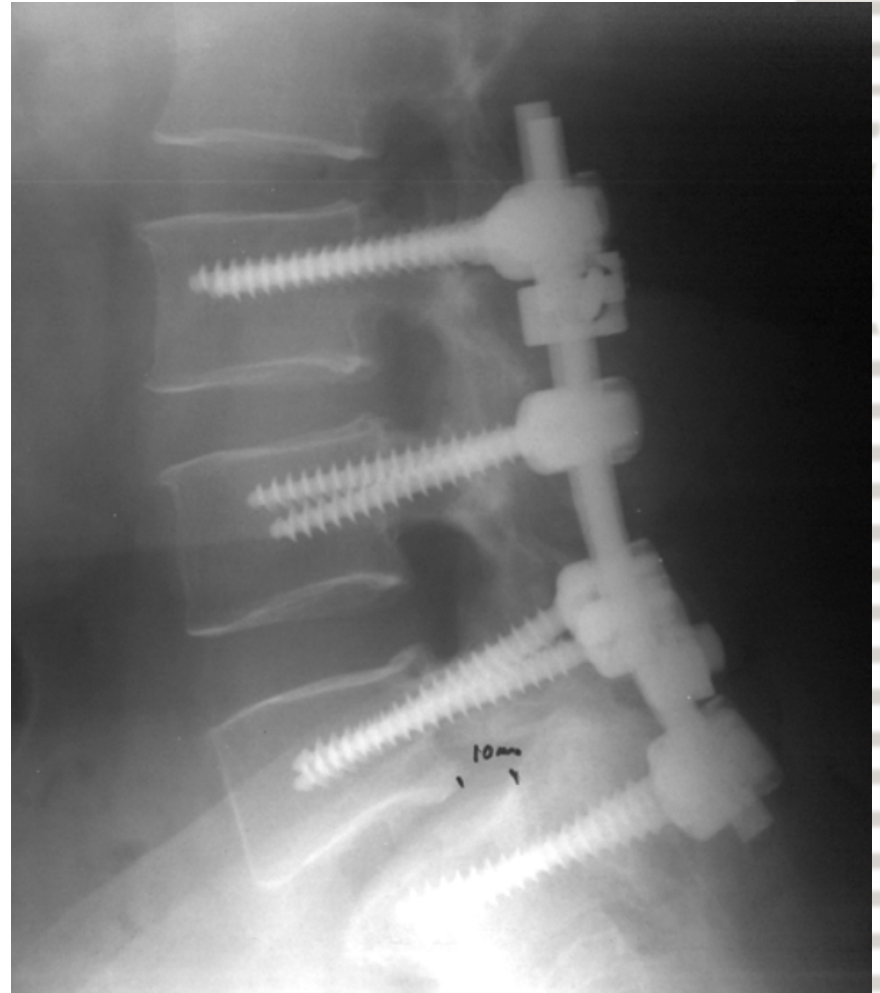
KÜLTÜR NEGATIF, AŞIRI İMMUN REAKSIYON ?



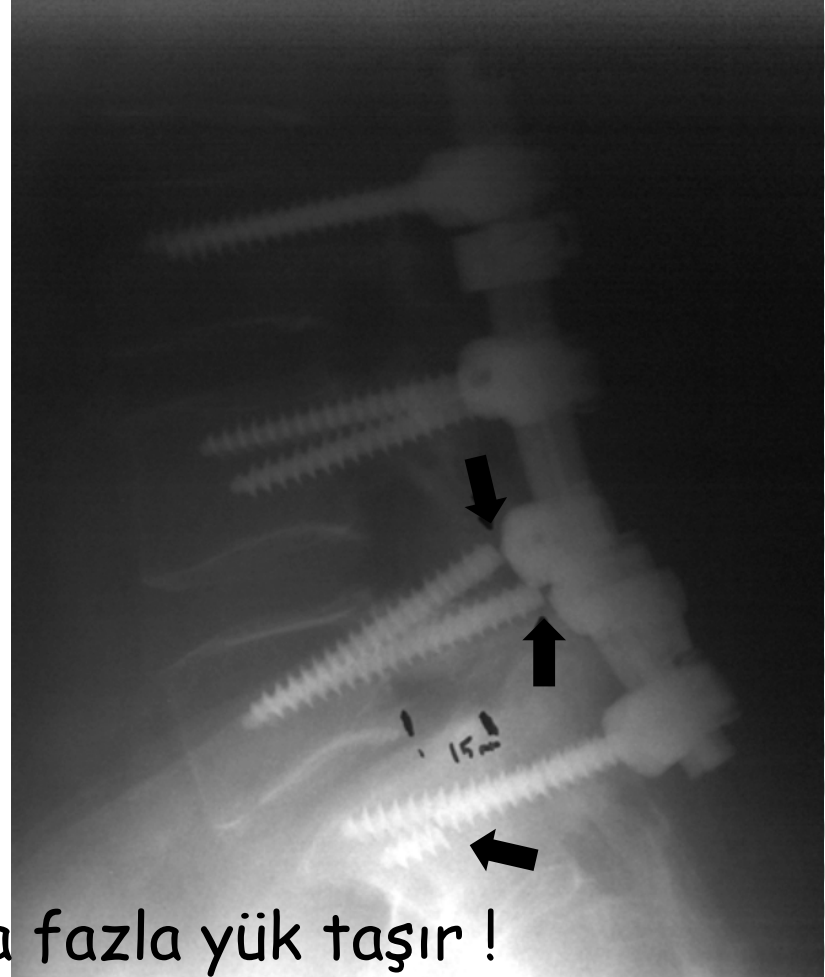
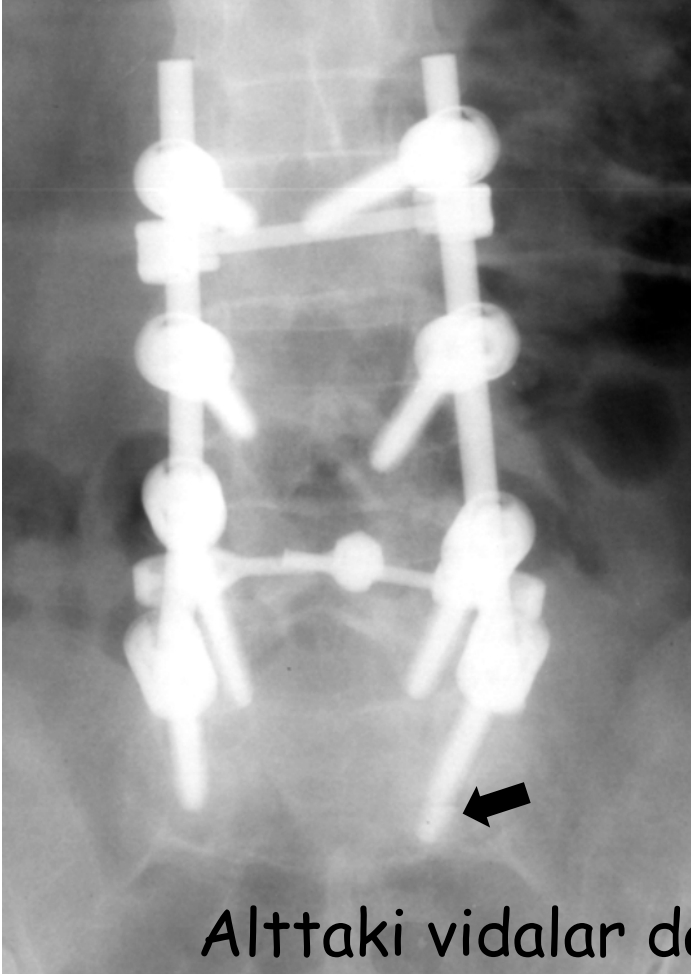
## 2.Postop. 3.ay Kontrol



# Lumbosakral Stabilizasyon, Grade I Listezis

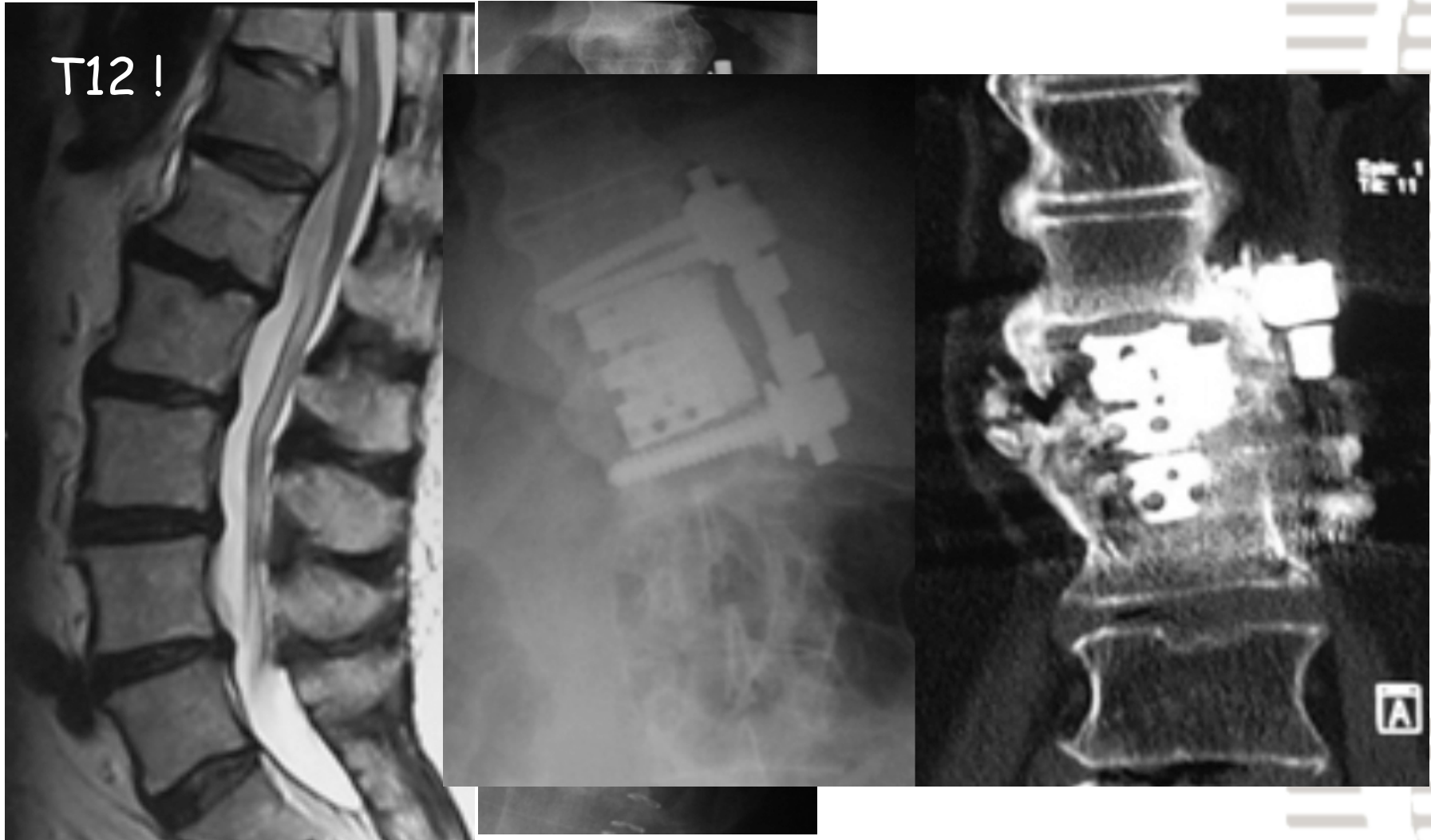


# Yetersiz Füzyon, Junction !



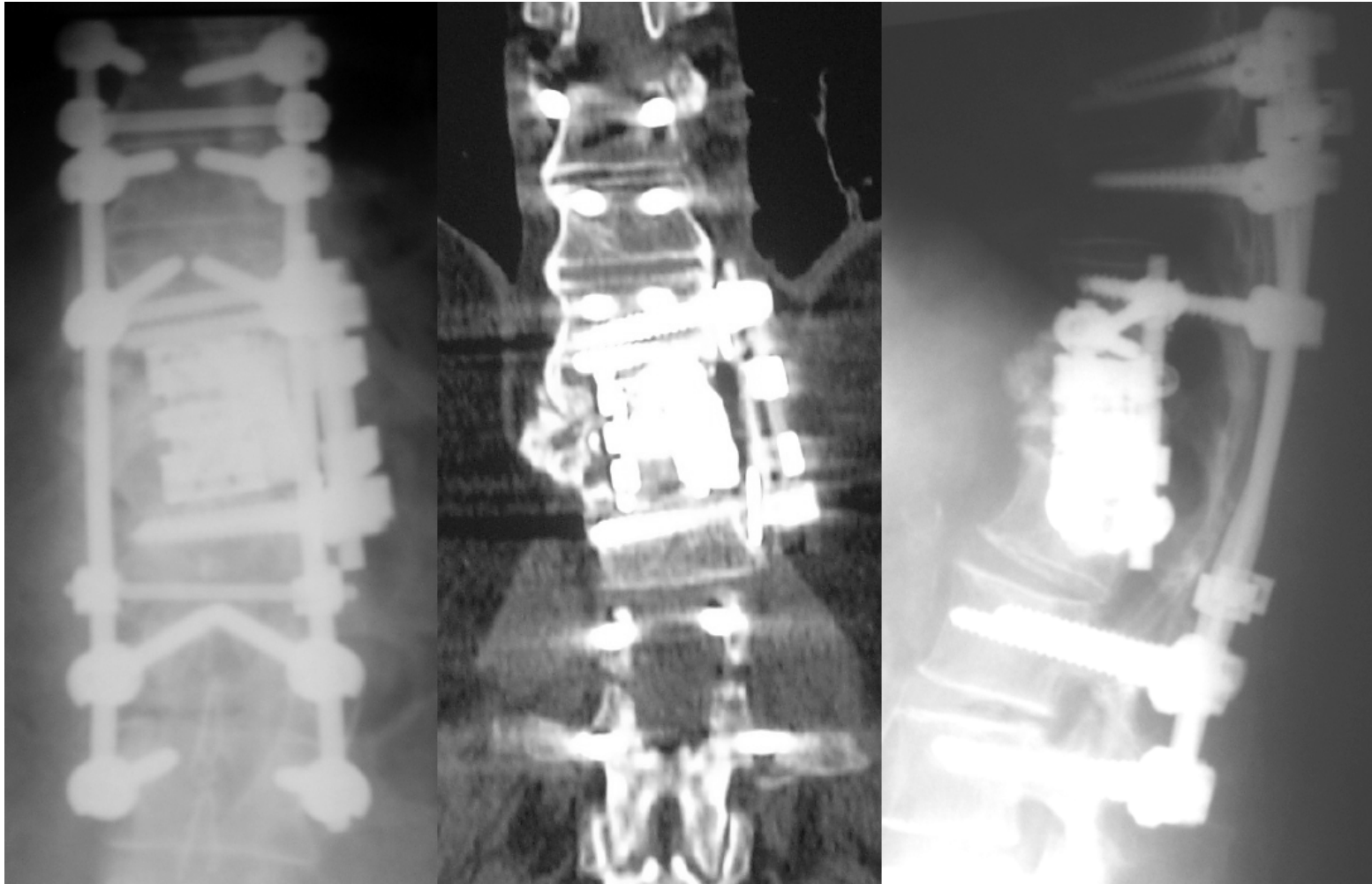


# Bileşke, Osteoporoz !

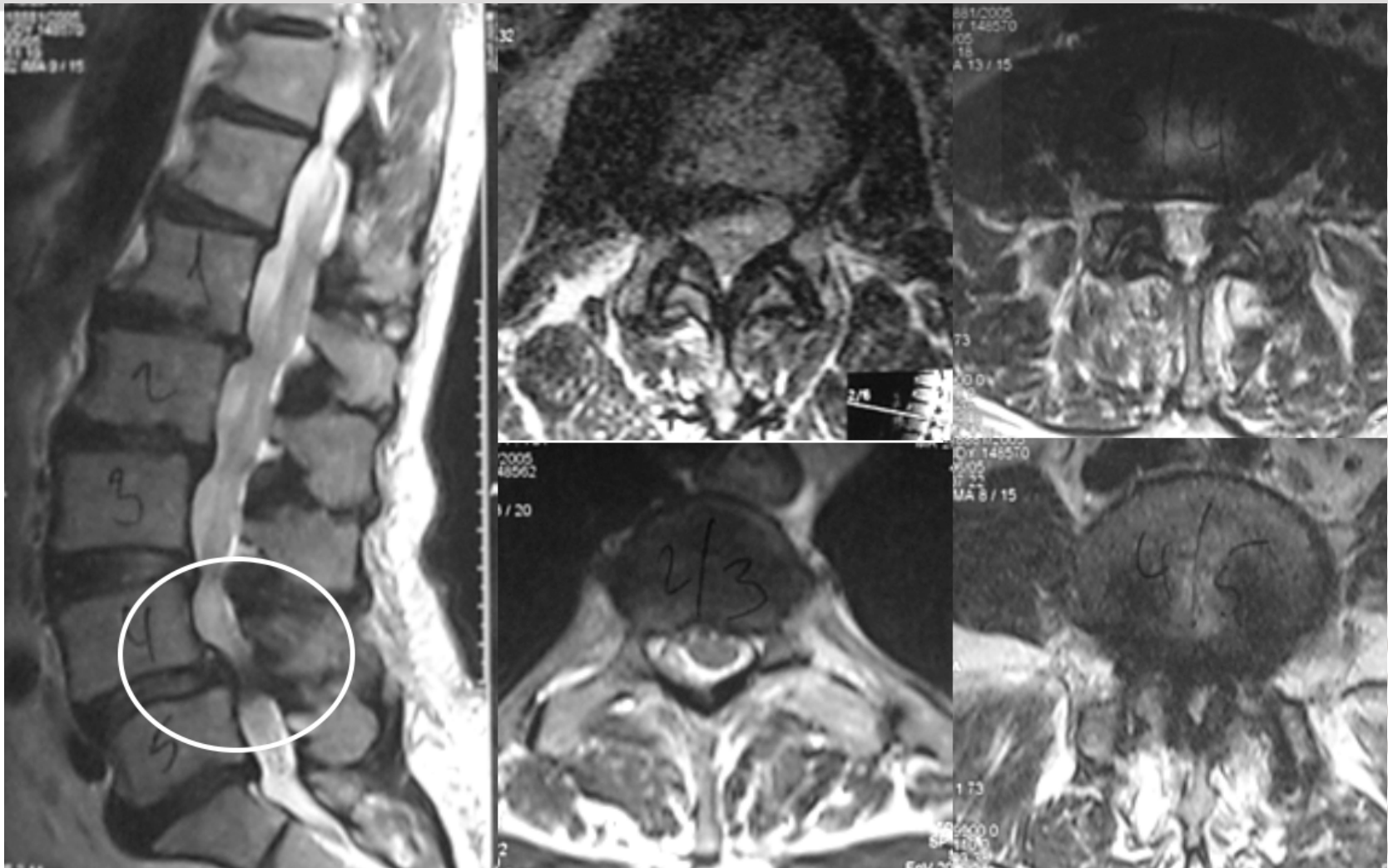




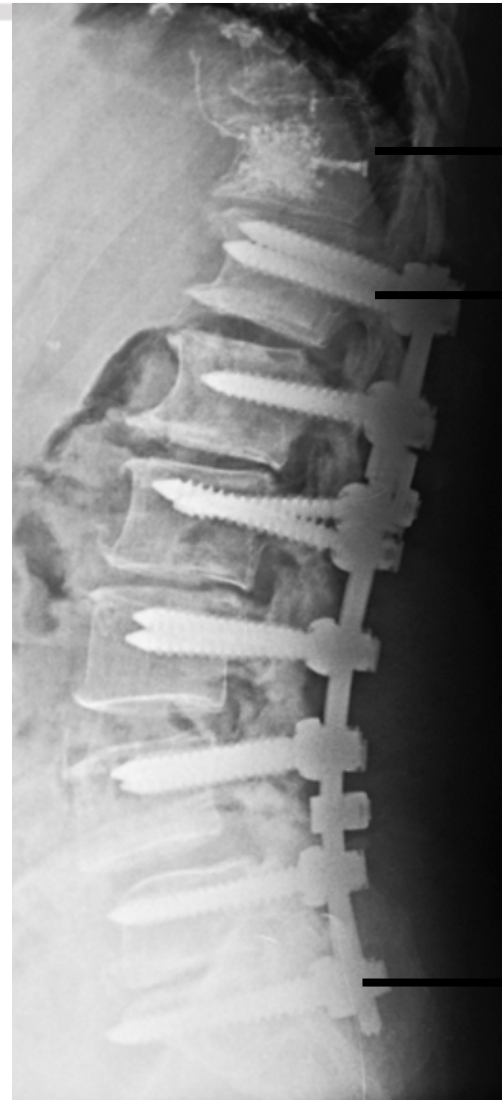
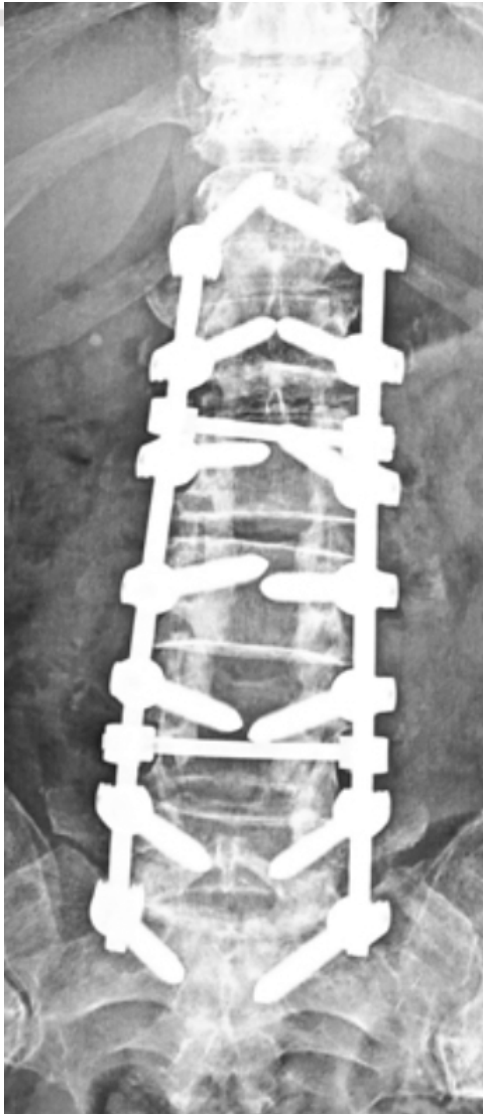
# Posterior Destek, 360°



# L4-5 Dar Kanal, listezis



# Düz Bel ?



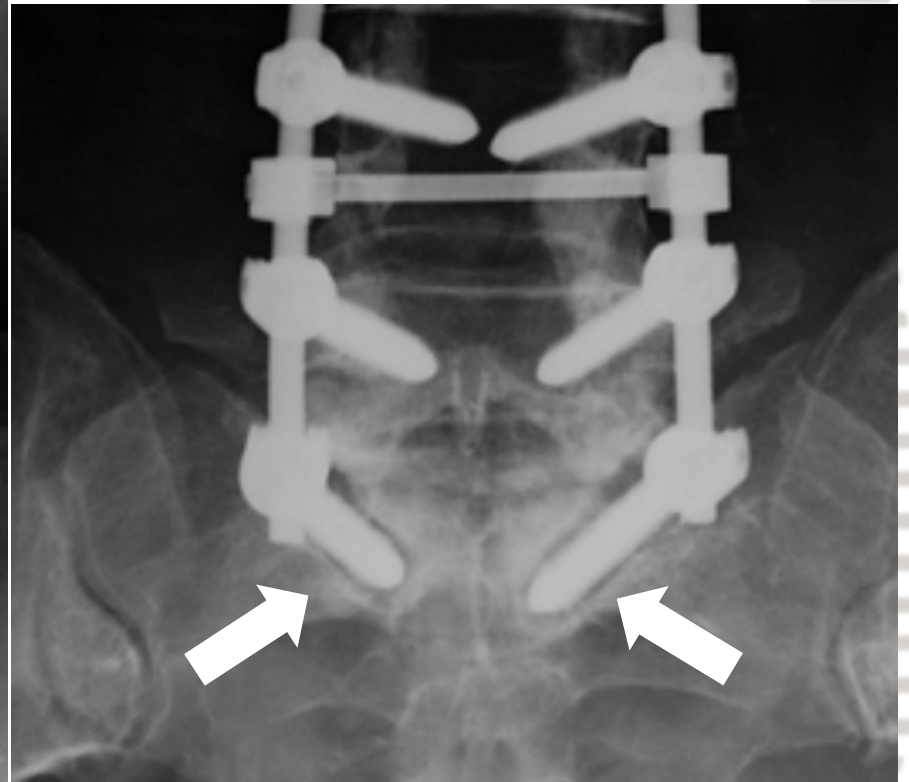
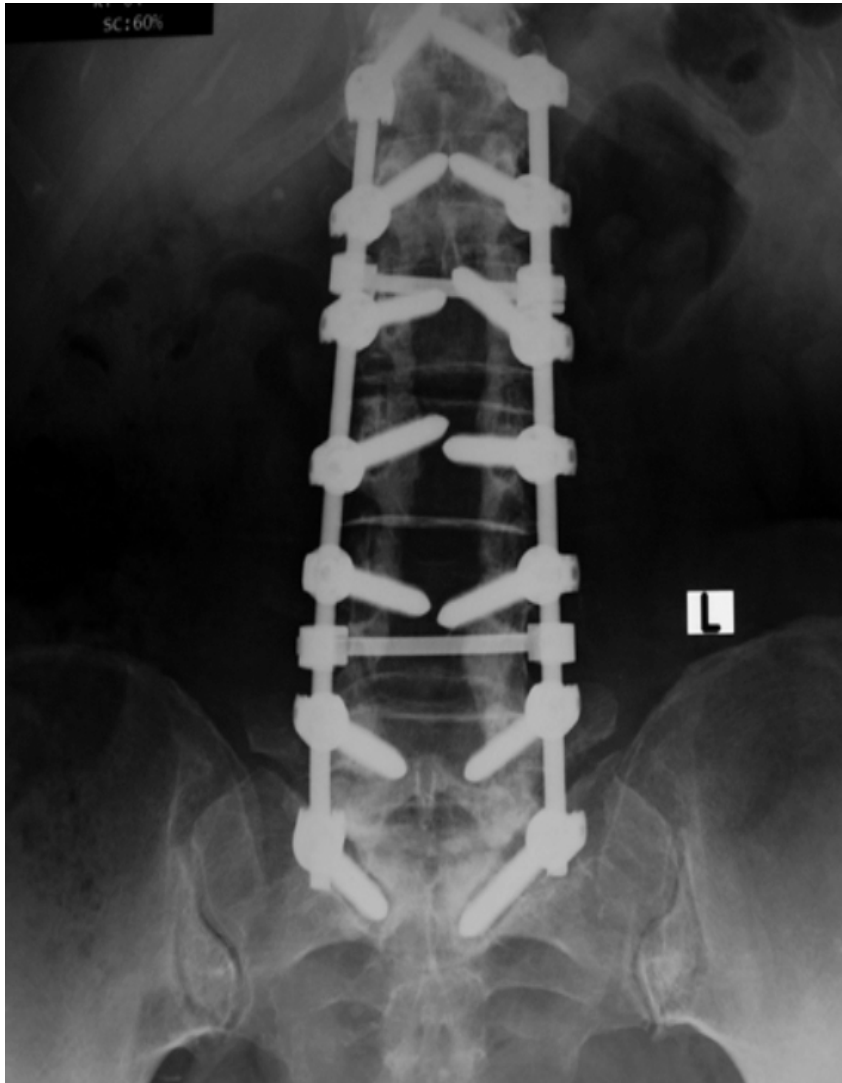
Vertebroplasti

T12

S1



# Postop, 6.ay/ Vida Gevşemesi



# Cerrah Açısından Uygun Biyomekanik Yaklaşım

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- Rotasyonun anlık eksenini
- Hareket aralığı
- Koşu segment etkilenme olasılığı
- Bileşke bölgeleri





# Teşekkür Ederim

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Konuşmanın slaytları

[www.hakanbozkus.com.tr](http://www.hakanbozkus.com.tr)

alınabilir

