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M E D I C I N E

Research Interests

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Associate Professor of Neurosurgery

Ali Bydon, M.D.

- *Associate Professor,* Department of Neurosurgery
- *Co-Director,* Neurosurgical Medical Student Education
- *Director,* Neurosurgical Undergraduate Education
- *Director,* Spinal Column Biomechanics and Surgical Outcomes Lab
- *Clinical Director,* JHBMC Spine Program





General Research Interests

- Spinal column biomechanics
- Spinal surgery outcomes
- Spinal tumors
- Spinal infections
- Socioeconomics of spinal surgery

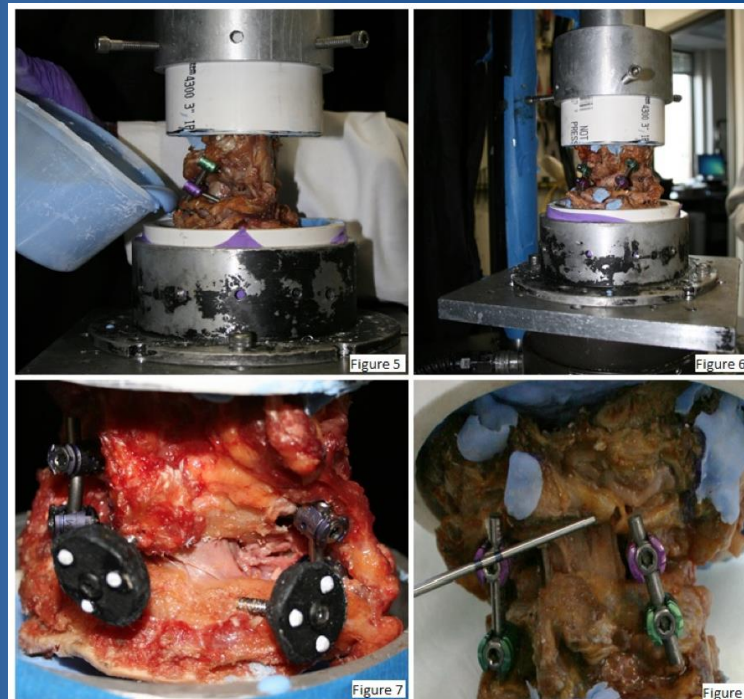
Spinal Column Biomechanics

- Accuracy of C2 pedicle screw placement using the freehand technique



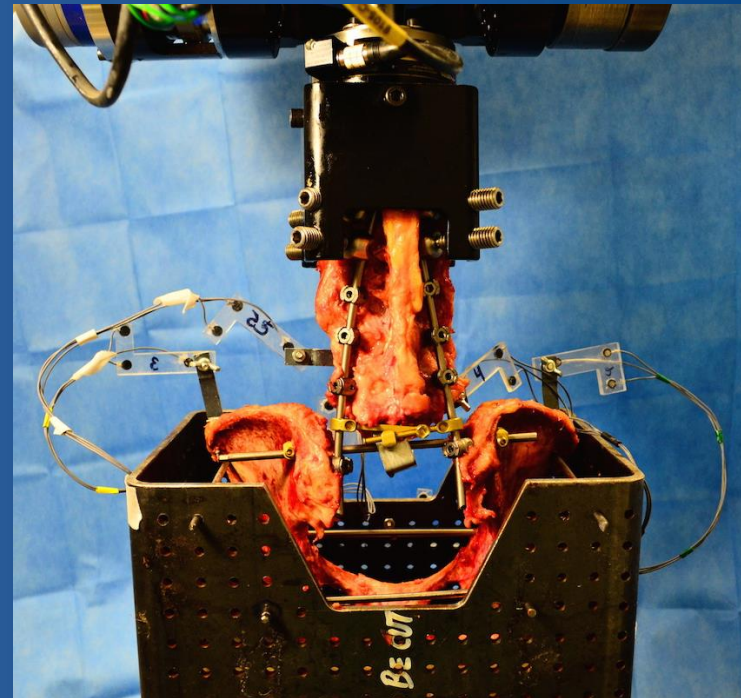
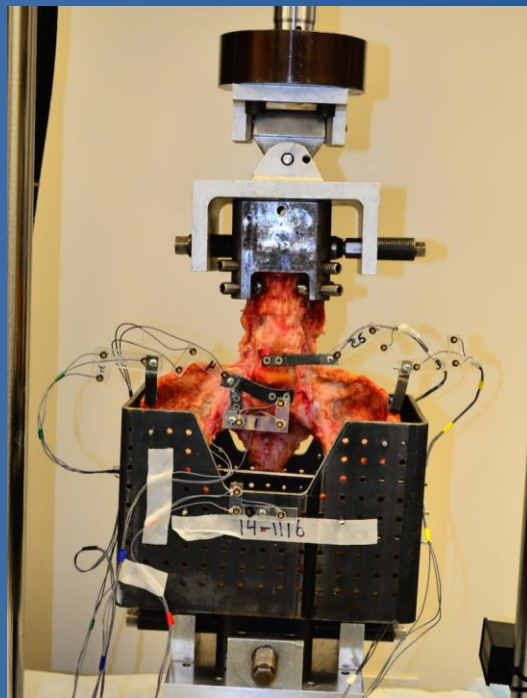
Spinal Column Biomechanics

- Biomechanical impact of C2 pedicle screw length in an atlantoaxial fusion construct



Spinal Column Biomechanics

- Biomechanical analysis of 3 reconstruction techniques following total sacrectomy – An in-vitro human cadaveric model





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Spinal Surgery Outcomes

RESEARCH—HUMAN—CLINICAL STUDIES

Adjacent Segment Disease After Anterior Cervical Discectomy and Fusion in a Large Series

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Mohamed Macki, BS*‡

Rafael De la Garza-Ramos, MD*‡

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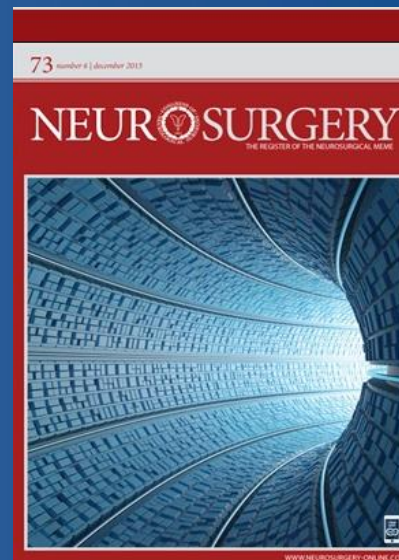
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Spinal Surgery Outcomes

Spine

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CERVICAL SPINE

Adjacent Segment Disease After Anterior Cervical Discectomy and Fusion

Clinical Outcomes After First Repeat Surgery Versus Second Repeat Surgery

Risheng Xu, AM,*†‡ Mohamad Bydon, MD,*† Mohamed Macki, BS,*† Rafael De la Garza-Ramos, MD,*† Daniel M. Sciubba, MD,*† Jean-Paul Wolinsky, MD,*† Timothy F. Witham, MD,*† Ziya L. Gokaslan, MD,*† and Ali Bydon, MD*†





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Spinal Surgery Outcomes

Adjacent segment disease after anterior cervical discectomy and fusion: Incidence and clinical outcomes of patients requiring anterior versus posterior repeat cervical fusion

Mohamad Bydon^{1,2}, Risheng Xu^{1,2,3}, Rafael De la Garza-Ramos^{1,2}, Mohamed Macki^{1,2}, Daniel M. Sciubba^{1,2}, Jean-Paul Wolinsky^{1,2}, Timothy F. Witham^{1,2}, Ziya L. Gokaslan^{1,2}, Ali Bydon^{1,2}

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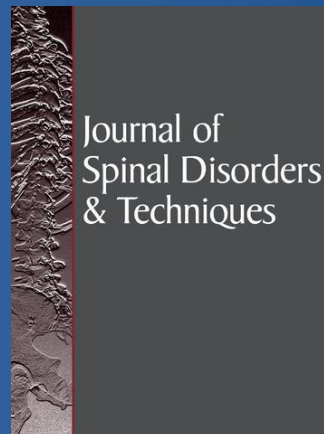
Spinal Surgery Outcomes

ORIGINAL ARTICLE

Lumbar Fusion Versus Nonoperative Management for Treatment of Discogenic Low Back Pain

A Systematic Review and Meta-analysis of Randomized Controlled Trials

Mohamad Bydon, MD,† Rafael De la Garza-Ramos, MD,*† Mohamed Macki, BS,*†
Abdul Baker, MD,*† Ziya L. Gokaslan, MD,*† and Ali Bydon, MD*†*





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Spinal Surgery Outcomes

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Adjacent-segment disease in 511 cases of posterolateral instrumented lumbar arthrodesis: floating fusion versus distal construct including the sacrum

Clinical article

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MOHAMED MACKI, B.S.,^{1,2} DANIEL M. SCIUBBA, M.D.,^{1,2} JEAN-PAUL WOLINSKY, M.D.,^{1,2}
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Spinal Surgery Outcomes

Contents lists available at [ScienceDirect](#)

Journal of Clinical Neuroscience

journal homepage: www.elsevier.com/locate/jocn



Clinical Study

Long-term outcomes after non-instrumented lumbar arthrodesis

David Santiago-Dieppa^{a,b}, Mohamad Bydon^{a,b}, Risheng Xu^{a,b,c}, Rafael De la Garza-Ramos^{a,b}, Roger Henry^b, Daniel M. Sciubba^{a,b}, Jean-Paul Wolinsky^{a,b}, Ali Bydon^{a,b}, Ziya L. Gokaslan^{a,b}, Timothy F. Witham^{a,b,*}

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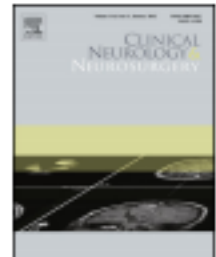
Spinal Surgery Outcomes

Clinical Neurology and Neurosurgery 120 (2014) 136–141

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Clinical Neurology and Neurosurgery

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Review

Spontaneous regression of sequestered lumbar disc herniations: Literature review

Mohamed Macki^{a,b}, Marta Hernandez-Hermann^{a,b}, Mohamad Bydon^{a,b},
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Spinal Tumor Surgery

Clinical Neurology and Neurosurgery 117 (2014) 71–79

Surgical outcomes of craniocervical junction meningiomas: A series of 22 consecutive patients



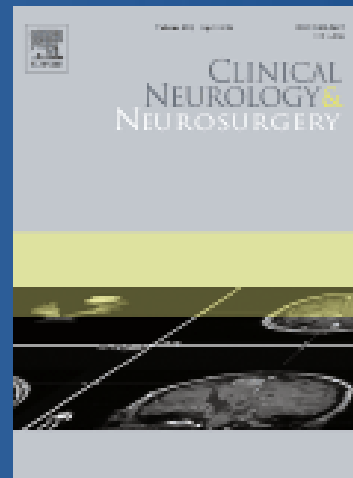
Mohamad Bydon^{a,b}, Ting Martin Ma^{a,b,d}, Risheng Xu^{a,b,c}, Jon Weingart^a,
Alessandro Olivi^a, Ziya L. Gokaslan^{a,b}, Rafael J. Tamargo^a, Henry Brem^a, Ali Bydon^{a,b,*}

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Spinal Tumor Surgery



The Spine Journal ■ (2013) ■

THE
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JOURNAL

Review Article

Multiple primary intramedullary ependymomas: a case report and review of the literature

Mohamad Bydon, MD^{a,b}, Dimitrios Mathios, MD^{a,b}, Javier J. Aguayo-Alvarez, BA^b,
Cherry Ho, MD, PhD^c, Ziya L. Gokaslan, MD^{a,b}, Ali Bydon, MD^{a,b,*}





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Spinal Infections

J Neurosurg Spine 20:45–52, 2014

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Journal of Neurosurgery



SPINE

Risk of infection following posterior instrumented lumbar fusion for degenerative spine disease in 817 consecutive cases

Clinical article

KAISORN L. CHAICHANA, M.D., MOHAMAD BYDON, M.D., DAVID R. SANTIAGO-DIEPPA, M.D., LEE HWANG, M.D., GREGORY McLOUGHLIN, M.D., DANIEL M. SCIUBBA, M.D., JEAN-PAUL WOLINSKY, M.D., ALI BYDON, M.D., ZIYA L. GOKASLAN, M.D., AND TIMOTHY WITHAM, M.D.

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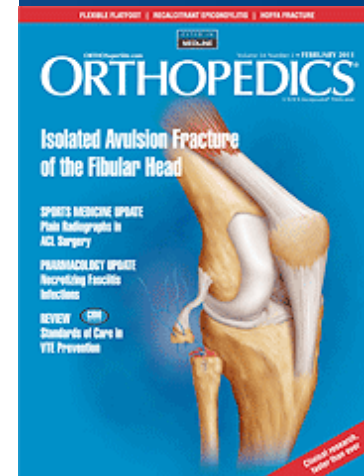
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Socioeconomic and others

■ guest editorial

Trends in Medicare Payments to Physicians and Implantable Medical Device Makers

Mohamad Bydon, MD; Rafael De la Garza-Ramos, MD; Nicholas B. Abt, BS; Ziya L. Gokaslan, MD; Ali Bydon, MD





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Socioeconomic and others

Original Research Paper

The cost-effectiveness of CT-guided sacroiliac joint injections: a measure of QALY gained

Mohamad Bydon, Mohamed Macki, Rafael De la Garza-Ramos, Mina Youssef, Ziya L. Gokaslan, Sherif Meleka, Ali Bydon

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Socioeconomic and others



J Neurosurg Spine 18:627–633, 2013
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Safety of spinal decompression using an ultrasonic bone curette compared with a high-speed drill: outcomes in 337 patients

Clinical article

*MOHAMAD BYDON, M.D.,^{1,2} RISHENG XU, M.A.,¹⁻³ KYRIAKOS PAPADEMETRIOU, M.D.,^{1,2} DANIEL M. SCIUBBA, M.D.,^{1,2} JEAN-PAUL WOLINSKY, M.D.,^{1,2} TIMOTHY F. WITHAM, M.D.,^{1,2} ZIYA L. GOKASLAN, M.D.,^{1,2} GEORGE JALLO, M.D.,^{1,2} AND ALI BYDON, M.D.^{1,2}

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Socioeconomic and others

Journal of Clinical Neuroscience xxx (2013) xxx–xxx



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journal homepage: www.elsevier.com/locate/jocn



Review

Post-surgical thoracic pseudomeningocele causing spinal cord compression

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