



IV COMINCO

Brazilian Congress of Minimally Invasive
Spine Surgery and Techniques



July 31 - August 02, 2014
WTC - São Paulo - Brazil



Short CV

Kai-Uwe Lewandrowski, MD

- Dr. Lewandrowski was born and raised in Berlin Germany.
- He received his medical degree from Humboldt University in Berlin Germany in 1994.
- His internships were completed at Ruhr University in Germany, Boston University, and his residency was completed in the Harvard Combined Orthopaedic Residency Program at Mass General Hospital, Brigham & Womens, and Beth Israel Hospital in Boston, Massachusetts
- He completed a spine fellowship at Cleveland Clinic Foundation in Cleveland, Ohio.
- He currently is in private practice at the Center For Advanced Spinal Care of Southern Arizona in Tucson.
- He is a Clinical Assistant Professor at the University of Arizona in Tucson
- He has authored 60 papers, 30 book chapters, 10 posters presentations and edited 11 text books. He hold 6 patents. He has had numerous national and international speaking engagements.
- In his practice in Tucson, he focuses on minimally invasive spinal surgery to improve clinical outcomes while minimizing the impact of spinal surgery.
- In his spare time, Dr. Lewandrowski loves to travel, he speaks 6 languages, and has multiple hobbies including piano, cooking, and sailing.



BIOGRAPHICAL SKETCH

| NAME | POSITION TITLE |
|----------------------|--|
| Kai-Uwe Lewandrowski | Staff Surgeon, Center for Advanced Spinal Surgery, 4787 Camp Lowell, Tucson, Arizona, 85712 |

| EDUCATION/TRAINING | | | |
|--|--------|-------------|---|
| | DEGREE | YEAR(s) | FIELD OF STUDY |
| Humboldt-Univ. Medical School, Berlin, Germany | M.D. | 1987-92 | Medicine |
| Research Fellow, MGH, Boston MA | | 1992-94 | Orthopaedic Surgery |
| Surgical Resident, Ruhr-Univ., Bergmannsheil, Germany | | 1995-96 | General Surgery, Traumatology |
| Surgical Resident, Boston University, Boston MA | | 1996-97 | General Surgery |
| Research Fellow | | 1997-99 | Orthopaedic Surgery |
| Resident in Orthopaedic Surgery, Harvard Combined Orthopaedic Program | | 1999 – 2003 | Orthopaedic Surgery |
| Fellow in Spinal Surgery, Cleveland Clinic Foundation | | 2003 – 2004 | Neurological / Orthopaedic Spinal Surgery |
| Staff Surgeon, Spine Center, Tucson Orthopaedic Institute, Tucson, Arizona | | 2004 - 2006 | Orthopaedic Spine Surgery |
| Staff Surgeon, Center for Advanced Spinal Surgery Clinical Assistant Professor in Orthopaedic Surgery, University of Arizona | | 2006 | Orthopaedic Spine Surgery |

PROFESSIONAL EXPERIENCE

- 6/1992 **Dissertation:** “Concomitant meniscus and articular cartilage lesions in the femoro-tibial joint” (german), Humboldt University, Charité Medical School, 1992
- 9/1992 - 12/1994 **Research Fellow**, Orthopaedic Surgery, Massachusetts General Hospital, Boston, MA
(„Kinetics of Demineralization of Human Cortical Bone“; „Orthotopic Allograft Rat Diaphyseal Transplantation“; „Immune Response to large frozen bone allografts in humans“;
„Electron Microscopic Studies on the Process of Cortical Bone Demineralization“)
- 1/1993 - 12/1994 **Associate Research Fellow**, Wellman Laboratories of Photomedicine, Massachusetts General Hospital, Boston, MA („Osteoinduction in Cortical Bone Allografts by Er:YAG Laser-Holes“;
„Improved Plating in Maxillofacial Surgery by Use of an Er:YAG Laser“)
- 3-4/1993 **Visiting Research Fellow**, Bone & Joint Research Laboratory, Ottawa General Hospital, University of Ottawa („Flexural Rigidity of Partially Demineralized Diaphyseal Bone Grafts“)
- 6/1994 **Visiting Research Fellow**, Abteilung für Biomechanik, University of Ulm, Germany
(„Mechanical Test Methods for Long Bones“)
- 10/1994 **Visiting Research Fellow**, Orthopaedic Research Laboratory, Case-Western University, Cleveland, OH („Allograft Bone Transplantation in a Canine Animal Model“)
- 3/1995 - 6/1996 **Surgical Intern**, Ruhr-University, Bergmannsheil Trauma Center, Bochum, Germany
(„Acceleration of Bone Allograft Incorporation. A Histological, Biomechanical, and Immunological Study in Sheep“)
- 4/1995 - 5/1996 **Collaboration with AO Research Institute**, ARI, Davos, Switzerland
(„Techniques of International Fixation for Transplantation of Long Bones in Sheep“)
- 5/1995 - 3/1997 **Collaboration** with Immunology Dep. University of Essen, Germany,
(„Tissue Typing and Crossmatching of Recipients of Bone Allografts. An Experimental Study in Sheep“)



- 6/1995 - 4/1996 **Collaboration** with Biophysics Institute, University of Münster, Germany
(„Er:YAG Laser Drilling of Cortical Bone Allograft“)
- 8/1996 - 4/97 **Orthopaedic Research Fellow**, Orthopaedic Surgery, MGH, Harvard Medical School
(„Stimulators of Bone Resorption in Cortical Bone Allografts“)
- 6/1997 **Resident, Department of Surgery**, Boston Medical Center, Boston, MA
- 7/1998 – 6/1999 **Research Fellow**, Orthopaedic Surgery, Massachusetts General Hospital, Boston , MA
Clinical study on the use of perforated and demineralized cortical bone allografts
- 6/1999 –07//2003 **Resident**, Orthopaedic Surgery, Massachusetts General Hospital, Boston , MA
Harvard Combined Orthopaedic Residency Program
- 08/01/2003 –
07/31/2004 Fellow in Spinal Surgery at Cleveland Clinic Foundation, Combined Neurosurgical/ Orthopaedic Fellowship
- 08/01/2005 –
01/30/2006 Staff surgeon, Tucson Orthopaedic Institute, Tucson, Arizona
- 01/31/2006 – Staff surgeon, Center for Advanced Spinal Surgery, Tucson, Arizona
- 01/31/2006 – Clinical Assistant Professor in Orthopaedic Surgery, University of Arizona, Tucson, Arizona
- 12/05/2013 – Director for Clinical Education International Intradiscal Therapy Society (IITS)
- 12/08/2013 – Coordinator Clinical Education America Norte, Sociedad Interamericana de Cirugía de Columna Mínimamente Invasiva (SICCOMI)

BOARD STATUS:

The American Board of Orthopaedic Surgery, 2009
The American Board of Spinal Surgery, 2009

LICENSURE:

State of Ohio
State of Arizona
State of New Mexico
Licensed to Practice Medicine in Germany (*Approbation als Arzt*)

MEMBERSHIP:

American Academy of Orthopaedic Surgeons (AAOS)
Orthopaedic Research Society (ORS)
North American Spine Society (NASS)
Sociedad Interamericana de Cirugía de Columna Mínimamente Invasiva (SICCOMI)
International Intradiscal Therapy Society (IITS)
World Congress Minimally Invasive Spine Surgery and Techniques (WCMISST)

LANGUAGES:

English, German, Spanish, Portugese, Russian, Polish

VOLUNTEER WORK:

Hospital das Clínicas de Ribeirão Preto, Riberao Preto, SP Brazil, August 18 – 28, 2013, visiting professor, volunteer work on Pediatric Scoliosis and Deformity Service with Prof. Helton Delfino

Volunteer Enducational Course Faculty for Comitê de Cirurgia Minimamente Invasiva de Coluna, Brazil, Praia de Forte, Salvador, Bahia, Brazil, August 18, 2012

Visiting Professor with Prof. Anthony Daher, Departamento de Neurocirugía, Hospital C. A. Esculapio, Calle Rondon Nr 9549 Valencia, volunteer work on reconstructive spinal cancer surgery, July 20-24, 2008

INTERESTS:

Music, Piano, Foreign Languages, Travel, Cooking, Sailing, Writing

HONORS/AWARDS/GRANTS:

- 9/1992 - 4/1993 Fellowship, Rotary Foundation
- 7/1993 - 1/1994 Fellowship MGH Laser Center, Grant from the Department of Energy (DE-FG02-91 ER61228)
- 4/1995 Young Investigators Award of the European Surgical Research Society
- 3/1995 - 4/1995 Small grant „Mechanical Evaluation of Healing in Cortical Bone Allografts“, from the German-Canadian Science & Technology Foundation, Ministry of Foreign Affairs & International Trade, PI Lewandrowski
- 4/1996 Grant “Allogeneic Bone Transplantation” from the Hauptverband der gewerblichen Berufsgenossenschaften (German Foundation), PI Lewandrowski



- 6/1997 Milheim Foundation: - „Limb Salvage in the Treatment of Bone Tumors“, PI Lewandrowski,
9/1997 - NIH/NIAMS Grant AR45062 „Improvement of Incorporation of Bone Allografts“,
PI Lewandrowski,
1/1999 Osteotech/OREF Award for Excellence in Bone Allograft Research

FULL PAPERS:

1. **Arthroscopic treatment of knee injuries.** Schollmeier G, Lewandrowski KU, Mueller J. Heilberufe 45, No 5, 222-25, 1993.
2. **Immune response in recipients of large frozen bone allografts and their effect on clinical results.** Tomford WW, Springfield D, Lewandrowski KU, Chung HW, Mankin HJ, Fuller TC, Transactions of the Orthop Res Society, 40, 122, 1994.
3. **Regional cerebral function determined by FDG-PET in healthy volunteers: Normal patterns and changes with age.** Loessner A, Alavi A, Lewandrowski KU, Souder E, Gur RE. Journal of Nuclear Medicine, Vol 36, No 7:1141-49, 1995.
4. **Flexural rigidity in partially demineralized diaphyseal bone grafts.** Lewandrowski KU, Tomford WW, Yeadon A, Deutsch TF, Mankin HJ, Uthoff HK. Clinical Orthopaedics 317:254-62, 1995.
5. **Enhancement of incorporation of partially demineralized and laser-perforated cortical bone grafts.** Lewandrowski KU, Tomford WW, Schomacker KT, Deutsch TF, Mankin HJ. Transactions of the Orthopaedic Research Society, 41:84-14, 1995.
6. **Classification of articular cartilage lesions of the knee at arthroscopy.** Lewandrowski KU, Ekkernkamp A, David A, Muhr G, Schollmeier G. The American Journal for Knee Surgery, Summer, Vol 9, No. 3:121-28, 1996.
7. **Kinetics of cortical bone demineralization: Controlled demineralization - a new method for modifying cortical bone allografts.** Lewandrowski KU, Venugopalan V, Tomford WW, Schomacker KT, Mankin HJ, Deutsch TF. J Biomedical Materials & Research, Vol. 31:365-72, 1996.
8. **Use of the Er:YAG Laser for improved plating in maxillofacial Surgery: Comparison of Bone Healing in Laser and Drill Osteotomies.** Lewandrowski KU, Lorente C, Schomacker KT, Flotte TJ, Wilkes JW, Deutsch TF. Lasers in Surgery and Medicine 19:40-45, 1996.
9. **Repopulation of laser-perforated chondroepiphyseal matrix with xenogenic chondrocytes: An experimental model.** Caruso E, Lewandrowski KU, Ohlendorf C, Tomford WW, Zaleske DJ. Journal of Orthopaedic Research, 14:102-107, 1996.
10. **MHC-Restriction of cytotoxic antibodies to bone allografts.** Lewandrowski KU, Tomford WW, Springfield D, Mankin HJ. [German] Langenbecks Arch Chir Suppl. I:117-22, 1996.
11. **Interlocking strength in hydroxyapatite - and titanium-coated implants under weight bearing conditions: A biomechanical and histologic study.** David A, Lewandrowski KU, Eitenmuller J, Muhr G, Pommer A, Bar F, Ostermann PAW. Orthopaedics International Edition, Vol 4, No 3:2-9, 1996
12. **Surgical Correction of Talipes Equinovarus Following Foot and Leg Compartment Syndrome.** David A, Lewandrowski KU, Josten C, Ekkernkamp A, Clasbrummel B, Muhr G. Foot & Ankle, 21:1-6, 1996.
13. **Current concepts review. Immune response to bone allografts and their biological consequences.** [Spanish] Lewandrowski KU, Gonzalez S. Inflamacion, 7:275-84, 1996.
14. **The dynamic hip screw with support plate--a reliable osteosynthesis for highly unstable "reverse" trochanteric fractures? .** (German). David A, Hüfner P, Lewandrowski KU, Pommer A, Muhr G. Der Chirurg, 67, No. 11, 1166-73, 1996.
15. **Beschleunigung der Inkorporation allogener Knochentransplantate durch partielle Demineralisierung und Laser-Perforation.** (German) Accelerated incorporation of allogeneic bone transplants following partial demineralization and laser-perforation. Lewandrowski KU, Tomford WW, Ekkernkamp A, Muhr G. Hefte zu "Der Unfallchirurg" 1996;257:269-270.
16. **T-Zell Aktivierung nach allogener Knochentransplantation.** (German) T-cell activation following bone allografting. Lewandrowski KU, Ekkernkamp A, Tomford WW, Muhr G. Langenbecks Archiv für Chirurgie Suppl II 1996; 1248
17. **Concomitant meniscus and articular cartilage lesions in the femoro-tibial joint.** Lewandrowski KU, Ekkernkamp A, David A, Muhr G, Schollmeier G. The American Journal of Sports Medicine, 25(4):486-94, 1997
18. **Modification of cortical bone allografts by partial demineralization and laser-perforation to enhance incorporation.** Lewandrowski KU, Tomford WW, Schomacker KT, Deutsch TF, Mankin HJ. Journal of Orthop Research, 15(5):748-56, 1997.
19. **Electron microscopic study of the reaction front in acid demineralization of cortical bone.** Lewandrowski KU, Tomford WW, Michaud NA, Flotte TJ, Venugopalan V, Schomacker KT, Mankin HJ, Deutsch TF. Calcified Tissue International. 61(4):294-7, 1997.
20. **Mechanical properties of laser-perforated and partially demineralized diaphyseal bone grafts.** Lewandrowski KU, Tomford WW, Uthoff HK. Clinical Orthopaedics, 353:238-246, 1998.
21. **Mechanical evaluation of incorporation of laser-perforated and partially demineralized cortical bone allografts.** Lewandrowski KU, Schollmeier G, Ekkernkamp A, Tomford WW, Uthoff HK, Clin Orthop. 1998 Aug;(353):238-46.
22. **Effect of a poly(propylene fumarate) Foaming cement on Healing of Bone Defects** Kai-Uwe Lewandrowski, Maurice V. Cattaneo, Joseph D. Gresser, Donald L. Wise, Roslyn L. White, Lawrence Bonassar, Debra J. Trantolo, Tissue Eng. 1999;5(4):305-316.



23. **Role of bone bark during growth in width of tubular bones. A study in human fetuses.** Schollmeier G, Uthoff HK, Lewandrowski KU, Fukuhara K. Clin Orthop. 1999 Oct;(367):291-9.
24. **Augmentation of osteoinduction with a biodegradable poly(propylene glycol-co-fumaric acid) bone graft extender. A histologic and histomorphometric study in rats.** Lewandrowski KU, Bondre S, Gresser JD, Silva AE, Wise DL, Trantolo D. J Biomed Mater Eng. 1999;9(5-6):325-34.
25. **Improved osteoconduction of cortical bone grafts by biodegradable foam coating.** Lewandrowski KU, Bondre SP, Gresser JD, Wise DL, Tomford WW, Trantolo DJ. Biomed Mater Eng. 1999;9(5-6):265-75.
26. **Effect of a poly(propylene fumarate) foaming cement on the healing of bone defects.** Lewandrowski KU, Cattaneo MV, Gresser JD, Wise DL, White RL, Bonassar L, Trantolo DJ. Tissue Eng. 1999 Aug;5(4):305-16.
27. **Osteoconductivity of an injectable and bioresorbable Poly(propylene glycol-co-fumaric acid) bone cement.** Kai-Uwe Lewandrowski, Joseph D. Gresser, Donald L. Wise, Roslyn L. White, and Debra J. Trantolo, Biomaterials. 2000 Feb;21(3):293-8.
28. **Developing Porosity Of Poly(Propylene Glycol-Co-Fumaric Acid) Bone Graft Substitutes And The Effect On Osteointegration: A Preliminary Study in Rats.** Kai-Uwe Lewandrowski, Joseph D. Gresser, Donald L. Wise, and Debra J. Trantolo, J Biomater Sci Polym Ed. 2000;11(8):879-89.
29. **Bioresorbable bone graft substitutes of different osteoconductivities: a histologic evaluation of osteointegration of poly(propylene glycol-co-fumaric acid)-based cement implants in rats.** Lewandrowski KU, Gresser JD, Wise DL, Trantolo DJ. Biomaterials. 2000 Apr;21(8):757-64.
30. **Osteoconductivity of an injectable and bioresorbable poly(propylene glycol-co-fumaric acid) bone cement.** Lewandrowski KU, Gresser JD, Wise DL, White RL, Trantolo DJ. Biomaterials. 2000 Feb;21(3):293-8.
31. **Observations on fiber-forming collagens in the annulus fibrosus.** Schollmeier G, Lahr-Eigen R, Lewandrowski KU. Spine 2000 Nov 1;25(21):2736-41.
32. **Experimental anterior spine fusion using bovine bone morphogenetic protein: a study in rabbits.** Muschik M, Schlenzka D, Ritsila V, Tennstedt C, Lewandrowski KU. J Orthop Sci 2000;5(2):165-70.
33. **High strength bioresorbable bone plates: preparation, mechanical properties and in vitro analysis.** Hasirci V, Lewandrowski KU, Bondre SP, Gresser JD, Trantolo DJ, Wise DL. Biomed Mater Eng 2000;10(1):19-29.
34. **Advances in the biology of spinal fusion: Growth factors and gene therapy.** K.U Lewandrowski, R. Ozuna, F.X. Pedlow, A.C. Hecht. Current Opinion in Orthopaedics. Volume 11, No. 3, pp. 167-75, June 2000.
35. **Biodegradable foam coating of cortical allografts.** Bondre S, Lewandrowski KU, Hasirci V, Cattaneo MV, Gresser JD, Wise DL, Tomford WW, Trantolo DJ. Tissue Eng 2000 Jun;6(3):217-27.
36. **Tissue responses to molecularly reinforced polylactide-co-glycolide implants.** Lewandrowski KU, Gresser JD, Wise DL, Trantolo DJ, Hasirci V. J Biomater Sci Polym Ed 2000;11(4):401-14.
37. **Versatility of biodegradable biopolymers: degradability and an in vivo application.** Hasirci V, Lewandrowski K, Gresser JD, Wise DL, Trantolo DJ. J Biotechnol 2001 Mar 30;86(2):135-50.
38. **Incorporation of perforated and demineralized cortical bone allografts Part I: Radiographic and histologic evaluation.** Journal of Bio-Medical Materials and Engineering. Volume 11, Number 3, July 2001.
39. **Incorporation of perforated and demineralized cortical bone allografts Part II: A mechanical evaluation.** Journal of Bio-Medical Materials and Engineering. Volume 11, Number 3, July 2001.
40. **Mechanical comparison of biodegradable intervertebral lumbar cages.** C. Khodadadyan-Klostermann, F. Kandziora, K. J. Schnake, K. U. Lewandrowski, D. Wise, A. Weiler and N. P. Haas, Chirurg 72, 1431-1438 (2001).
41. **Vertical rib expansion for thoracic insufficiency syndrome — Indications and technique.** K.U. Lewandrowski, R.M. Campbell, Jr., J.B. Emans. The Orthopaedic Journal at Harvard Medical School. Volume 3, July 2001, pp. 65-73.
42. **Porous Poly(propylene Fumarate) Foam Coating of Orthotopic Cortical Bone Grafts for Improved Osteoconduction.** K. U. Lewandrowski, S. Bondre, D. D. Hile, B. M. Thompson, D. L. Wise, W. W. Tomford and D. J. Trantolo, Tissue Eng 8, 1017-1027 (2002).
43. **Composite poly(lactide)/hydroxylapatite screws for fixation of osteochondral osteotomies. A morphometric, histologic and radiographic study in sheep.** K. U. Lewandrowski, S. P. Bondre, M. Shea, C. M. Untch, W. C. Hayes, D. D. Hile, D. L. Wise and D. J. Trantolo, J Biomater Sci Polym Ed 13, 1241-1258 (2002).
44. **Healing of osteochondral osteotomies after fixation with a hydroxyapatite-buffered polylactide. A histomorphometric and radiographic study in rabbits.** K. U. Lewandrowski, S. P. Bondre, D. L. Wise and D. J. Trantolo, Biomed Mater Eng 12, 259-270 (2002).
45. **Biomechanical analysis of biodegradable interbody fusion cages augmented With poly(propylene glycol-co-fumaric acid).** F. Kandziora, R. Pflugmacher, R. Kleemann, G. Duda, D. L. Wise, D. J. Trantolo and K. U. Lewandrowski, Spine 27, 1644-1651 (2002).
46. **Quantitative measures of osteoinductivity of a porous poly(propylene fumarate) bone graft extender.** K. U. Lewandrowski, D. D. Hile, B. M. Thompson, D. L. Wise, W. W. Tomford and D. J. Trantolo, Tissue Eng 9, 85-93 (2003).
47. **Composite resorbable polymer/hydroxylapatite composite screws for fixation of osteochondral osteotomies.** Lewandrowski KU, Bondre SP, Shea M, Untch CM, Hayes WC, Hile DD, Wise DL, Trantolo DJ. Biomed Mater Eng. 2002;12(4):423-38.
48. **Evaluation of a porous, biodegradable biopolymer scaffold for mandibular reconstruction.** Trantolo DJ, Sonis ST, Thompson BM, Wise DL, Lewandrowski KU, Hile DD. Int J Oral Maxillofac Implants. 2003 Mar-Apr;18(2):182-8.
49. **Enhanced bioactivity of a poly(propylene fumarate) bone graft substitute by augmentation with nano-hydroxyapatite.** Lewandrowski KU, Bondre SP, Wise DL, Trantolo DJ. Biomed Mater Eng. 2003;13(2):115-



50. **Diastematomyelia presenting as progressive weakness in an adult after spinal fusion for adolescent idiopathic scoliosis.** Lewandrowski KU, Rachlin JR, Glazer PA. Spine J. 2004 Jan-Feb;4(1):116-9.
51. **Anterior Spinal Arthrodesis With Structural Cortical Allografts and Instrumentation for Spine Tumor Surgery.** Lewandrowski, Kai-Uwe MD*; Hecht, Andrew C. MD*; DeLaney, Thomas F. MD†; Chapman, Peter A.†; Hornicek, Francis J. MD, PhD*; Pedlow, Frank. Spine 2004, 29(10), 1150-1158.
52. **A role for vertebral biopsy in selected patients with known malignancy. A report of three cases.** Lewandrowski KU, Togawa D, Bauer TW, McLain RF. J Bone Joint Surg Am. 2005 Jun;87(6):1348-53.
53. **Pin-site myiasis: a rare complication of halo orthosis.** Park P, Lodhia KR, Eden SV, Lewandrowski KU, McGillicuddy JE. Spinal Cord. 2005 Jun 21.
54. **A Poly(Propylene Glycol-co-Fumaric Acid) Based Bone Graft Extender for Lumbar Spinal Fusion: In vivo Assessment in a Rabbit Model.** Hile DD, Kandziora F, Lewandrowski KU, Doherty SA, Kowaleski MP, Trantolo DJ. Eur Spine J. 2006 Jun;15(6):936-43.
55. **Cord and cauda equina injury complicating elective orthopedic surgery.** Lewandrowski KU, McLain RF, Lieberman I, Orr D. Spine. 2006 Apr 20;31(9):1056-9.
56. **Atraumatic odontoid fractures in patients with rheumatoid arthritis.** Lewandrowski KU, Park PP, Baron JM, Curtin SL. Spine J. 2006 Sep-Oct;6(5):529-33.
57. **Three-level bilateral pediculolysis following osteoporotic lumbar compression fracture.** Smith JL, Goorman SD, Baron JM, Curtin SL, Lewandrowski KU. Spine J. 2006 Sep-Oct;6(5):539-43. Epub 2006 Jul 24.
58. **Vertebral osteolysis after posterior interbody lumbar fusion with recombinant human bone morphogenetic protein 2: a report of five cases.** Lewandrowski KU, Nanson C, Calderon R. Spine J. 2007 Sep-Oct;7(5):609-14.
59. **Microdiscectomy Spinal Anesthesia Offers Optimal Results in General Patient Population.** McLain RF, Tetzlaff JE, Bell GR, Lewandrowski KU, Yoon HJ, Rana M. J Surgical Orthopaedic Advances, 2007, 16(1); 5-11.
60. **Brachial neuritis: an under-recognized cause of upper extremity paresis after cervical decompression surgery.** Park P, Lewandrowski KU, Ramnath S, Benzel EC. Spine. 2007 Oct 15;32(22):E640-4.

PRESENTED PAPERS/SPEAKING ENGAGEMENTS:

1. **Accelerated Incorporation of cortical bone allografts following partial demineralization and laser-perforation.** Lewandrowski KU, Tomford WW, Ekkernkamp A, Muhr G. 57th Annual Meeting of the German Society for Traumatology, Berlin, Germany, November 22-25, 1995.
2. **MHC-Restriction of cytotoxic antibodies to bone allografts.** Lewandrowski KU, Tomford WW, Springfield D, Mankin HJ. 113th Congress of the German Society for Surgery, Berlin, Germany, April 9-13, 1996.
3. **Enhancement of incorporation of partially demineralized and laser-perforated cortical bone grafts.** Lewandrowski KU, Tomford WW, Schomacker KT, Deutsch TF, Mankin HJ. Orthopaedic Research Society, Orlando, 1996.
4. **Osteoinduction in cortical bone grafts by controlled demineralization and laser-perforation.** Lewandrowski KU, Tomford WW, Mankin HJ, Schollmeier G, Ekkernkamp A, Muhr G. XXXI Congress of the European Society for Surgical Research, Southampton, UK, March 31 - April 3, 1996.
5. **Enhancement of incorporation of partially demineralized and laser-perforated cortical bone grafts.** Lewandrowski KU, Tomford WW, Schomacker KT, Deutsch TF, Mankin HJ. Transactions of the Orthopaedic Research Society, 41:84-14, 1995.
6. **Sacral Resection in the Treatment of Recurrent Colorectal Cancer.** Lewandrowski KU, McLain, RF. Mid-America Orthopaedic Association, 23rd Annual Meeting, April 20-24, 2005, Amelia Island Plantation, Amelia Island, Florida.
7. **Vertebral Osteolysis after Posterior Interbody Lumbar Fusion with Recombinant Human BMP-2.** Kai-Uwe Lewandrowski, MD, Christopher J Nanson, MD, Roberto D Calderon, MD, Podium No: 447, 2007 Annual Meeting, American Academy of Orthopaedic Surgeons, February 12 – 16, 2007, San Diego.
8. **Technical Caveats of Endoscopic Transforaminal Microdiscectomy.** Visiting Professor for Joint Grand Rounds Spine Center Cedars Sinai, Department of Orthopaedics and Neurosurgery, Los Angeles, September 25, 2007.
9. **Early Clinical Results Using a New Transforaminal Endoscopic Technique for the Treatment of Disc Herniations and Foraminal Stenosis.** Visiting Professor for Joint Grand Rounds Spine Center Cedars Sinai, Department of Orthopaedics and Neurosurgery, Los Angeles, September 26, 2007.
10. **Endoscopic Transforaminal Microdiscectomy.** Station Director for Physician Cadaver Training Course at the 2. Annual Meeting of the Society for Minimally Invasive Spinal Surgery, San Diego, November 15, 2007.
11. **Transforaminal Endoscopic Decompression of Foraminal Stenosis.** Invited Presentation at the 2. Deutscher Wirbelsäulenkongress, Mannheim, 13. December, 2007.
12. **Techniques and Indications of Endoscopic Transforaminal Decompression: Invited Presentation Annual Meeting Israeli Spine Society Meeting, Eilat, Israel April 7-8, 2008.**



13. **Techniques and Indications of Endoscopic Transforaminal Decompression:** First World Congress of Minimally Invasive Spinal Surgery and Techniques, Honolulu, Hawaii, June 5-7, 2008.
14. **Clinical Results of Endoscopic Transforaminal Decompression:** First World Congress of Minimally Invasive Spinal Surgery and Techniques, Honolulu, Hawaii, June 5-7, 2008.
15. **Outcomes with Transforaminal Lumbar Interbody Fusion.** Simpósio Internacional de Coluna (SINCOL / LASAS) 2011, Rio de Janeiro, August 1-3, 2011.
16. **Indications and Patient Selection For Lumbar Endoscopic Microdiscectomy and Stenosis Surgery.** Simpósio Internacional de Coluna (SINCOL / LASAS) 2011, Rio de Janeiro, August 1-3, 2011.
17. **Pitfalls, Tips and Tricks Endoscopic Lumbar Transforaminal Decompression.** Simpósio Internacional de Coluna (SINCOL / LASAS) 2011, Rio de Janeiro, August 1-3, 2011.
18. **Posterior Cervical Endoscopic Foraminotomy.** III WCMISSST Congress Praia do Forte, Salvador Brazil, August 18, 2012.
19. **Debator Round Table Discussion.** III WCMISSST Congress Praia do Forte, Salvador Brazil, August 18, 2012.
20. **Clasificación y Tratamiento Endoscopico de Estenose Lumbar.** III Simposio Cirurgia de Minima Agresion y Soluciones Biologicas En Columna y Rodilla. Centro Kennedy, Universidad de Chile, Santiago de Chile, August 28-30, 2013.
21. **Costo-Effectividad en la Cx de Fusión Lumbar.** III Simposio Cirurgia de Minima Agresion y Soluciones Biologicas En Columna y Rodilla. Centro Kennedy, Universidad de Chile, Santiago de Chile, August 28-30, 2013
22. **Complications of Endoscopic Transforaminal Microdiscectomy.** V SICCOMI Congress, Guanajuato Mexico, December 5-8, 2013.
23. **Indications and Techniques of Endoscopic Transforaminal Microdiscectomy.** V SICCOMI Congress, Guanajuato Mexico, December 5-8, 2013.
24. **Tricks and Pearls Oblique Lumbar Interbody Fusion.** V SICCOMI Congress, Guanajuato Mexico, December 5-8, 2013.
25. **Techniques and Indications for Endoscopic Lumbar Microdiscectomy and Lateral Recess Decompression.** World Congress of WFMISS April 8 – 12, Istanbul, Turkey.
26. **Techniques and Indication of Endoscopic Posterior Cervical Foraminotomy.** World Congress of WFMISS April 8 – 12, Istanbul, Turkey.
27. **Complications of Lumbar Endoscopic Microdiscectomy Surgery.** World Congress of WFMISS April 8 – 12, Istanbul, Turkey.
28. **Endoscopically Assisted Interbody Fusion Techniques.** World Congress of WFMISS April 8 – 12, Istanbul, Turkey.
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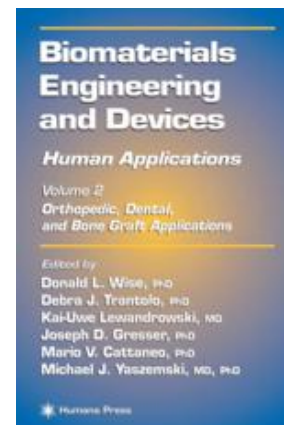


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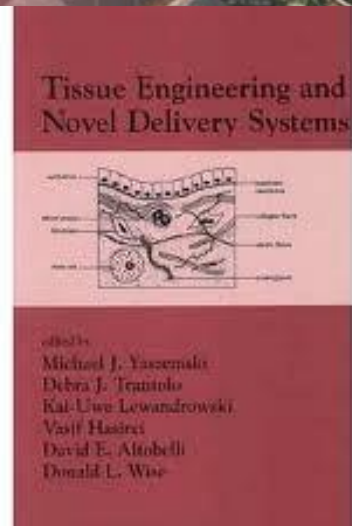
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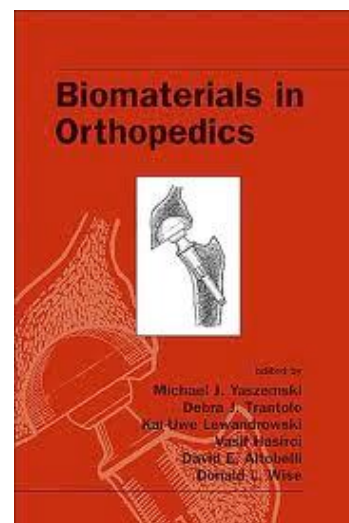
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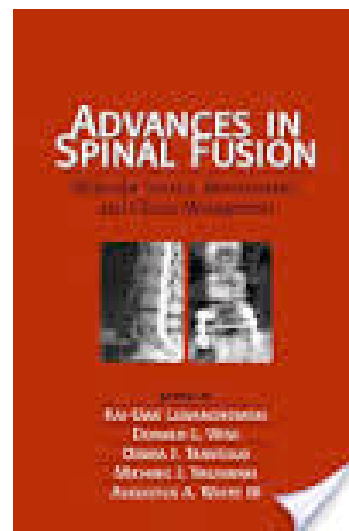
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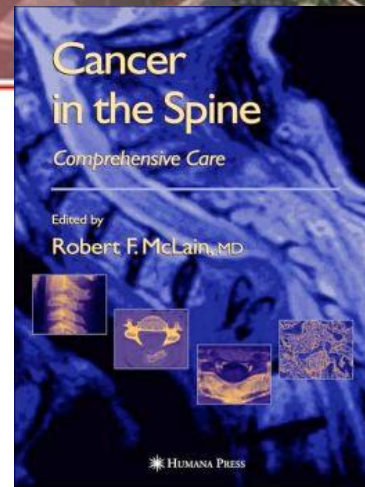
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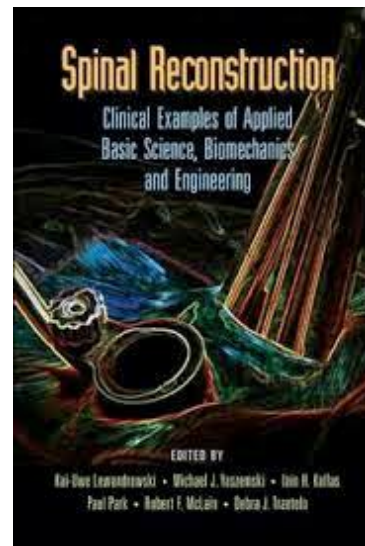
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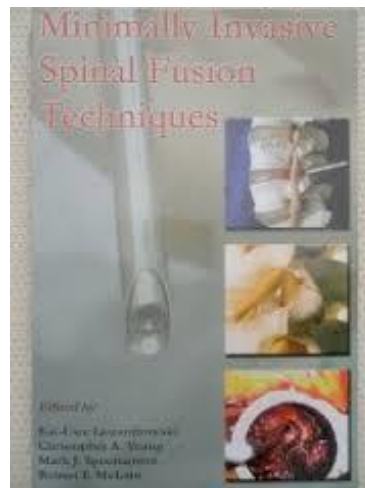
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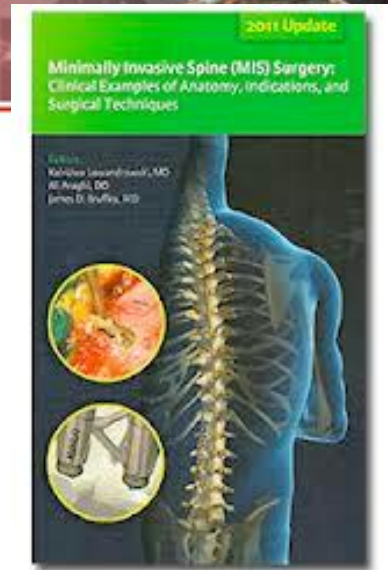
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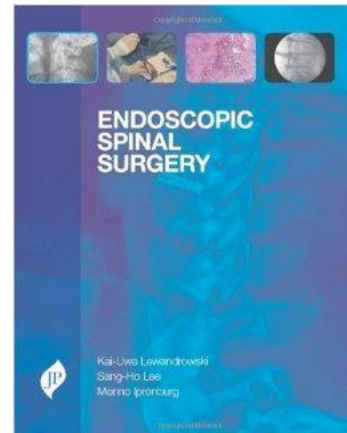
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PATENTS

Inventor & Co-Inventor Kai-Uwe Lewandrowski, MD

| | | |
|-----------------------|------------------|--|
| July 18, 2006 | 7,077,866 | Resorbable interbody spinal fusion devices. |
| May 31, 2005 | 6,899,107 | Osteoinduction of cortical bone allografts by coating with biopolymers seeded with recipient periosteal bone cells |
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