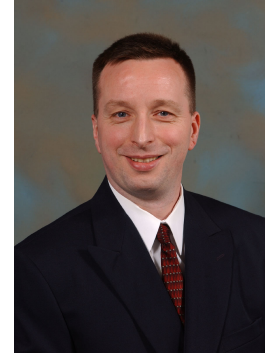


BIOGRAPHICAL SKETCH

Kai-Uwe Lewandrowski, MD



NAME	POSITION TITLE
Kai-Uwe Lewandrowski	Staff Surgeon, Owner, Center for Advanced Spine Care

EDUCATION/TRAINING/POSITIONS

	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		1997-03	Orthopaedic Surgery
Fellow in Spinal Surgery, Cleveland Clinic Foundation		2003-04	Neurological / Orthopaedic Spinal Surgery
Staff Surgeon, Spine Center, Tucson Orthopaedic Institute, Tucson, Arizona		2004-06	Orthopaedic Spine Surgery
Staff Surgeon, Owner, Center for Advanced Spine Care		2006-present	Orthopaedic Spine Surgery
Clinical Assistant Professor in Orthopaedic Surgery, University of Arizona		2006-present	Orthopaedic Spine Surgery
Division Chair Orthopaedic Surgery, St. Mary's Hospital, Tucson Arizona		2014-18	Orthopaedic Spine Surgery
Surgical Institute of Tucson, Chair Medical Executive Committee		2014-2021	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 –
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
- 07/16/2016 Inducted **Corresponding Foreign Member** of the Brazilian Military Medical Academy
- 04/01/2015 **Founding and construction** of a self-financed stand-alone 10,000 square feet **ambulatory surgery center – The Surgical Institute of Tucson** – with two class C operating rooms and state-of-the-art image-guided outpatient

spine care program with emphasis on endoscopy and other MIS techniques. Successfully Medicare and AAASF certified in 2018. Successfully managed and built as a vertically integrated ASC multispecialty platform for six orthopaedic spine surgeons, and pain specialists. Successfully sold to Banner Health in October 2021 with set up of collaborative private and academic futures emphasizing outpatient spine care in the Southern Arizona healthcare market.

- 05/18/2017 Appointed **Visiting Professor**, Department of Neurosurgery, UniRio, Universidade do Estado Rio de Janeiro, Brazil
- 2/12/2019 Appointed **Visiting Professor**, Department of Orthopaedic Surgery, Universidad Colsanitas, Bogota, Colombia
- 09/01/2020 Appointed **Editorial Board Member SpineLine**
- 11/03/2020 Appointed **Associate Professor**, Department of Orthopaedic Surgery, Universidad Colsanitas, Bogota, Colombia
- 11/2019 **Deputy Editor** for International Journal of Spine Surgery
- 06/18/2020 **Academic Editor** BioMed Research International
- 08/12/2020 Awarded **doctor honoris causa** (Dr. h.c.) Department of Neurosurgery, UniRio, Universidade do Estado Rio de Janeiro, Brazil
- 05/10/2021 Appointed **Editor Spine Section Archives in Neurosurgery**
- 10/2020 **Associate Editor** for International Journal of Spine Surgery
- 11/2020 **Editor-in-Chief** Journal of Spine
- 10/2022 Voted Foreign Corresponding Member Colombian National Academy of Medicine
- 10/2022 Appointed Full Professor Department of Orthopaedics, Fundación Universitaria Sanitas, Bogotá, D.C.,

BOARD STATUS:

The American Board of Orthopaedic Surgery, 2009, recertified 2018
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 & LEADERSHIP POSITIONS:

American Academy of Orthopaedic Surgeons (AAOS)
Orthopaedic Research Society (ORS)
North American Spine Society (NASS)
International Society for the Advancement of Spine Surgery (ISASS)
Vice President Sociedad Interamericana de Cirugía de Columna Mínimamente Invasiva (SICCOMI)
International Intradiscal Therapy Society (IITS)
World Congress Minimally Invasive Spine Surgery and Techniques (WCMISST)
Brazilian Military Medical Academy
Associate Editor International Journal of Spine Surgery

International Associate Editor Columna
Academic Editor BioMed Research International
Editor Spine Section Archives in Neurosurgery
Editorial Board Member SpineLine
Professor Titular, Department of Orthopaedic Surgery, Universidad
Colsanitas, Bogota, Colombia
Visiting Professor, Department of Orthopaedic Surgery, UniRio,
Universidade do Estado Rio de Janeiro, Brazil

AWARDS:

1. **Young Investigators Award of the European Society for Surgical Research.** Osteoinduction in cortical bone grafts by controlled demineralization and laser-perforation. Lewandrowski KU, Tomford WW, Mankin HJ, Schollmeier G, Ekkernkamp A, Muhr G. Southampton, UK, March 31 - April 3, 1996.
2. **Osteotech/OREF Award for Excellence in Bone Allograft Research.** Modification of Cortical Bone Allografts by Partial Demineralization and Laser-Perforation to Enhance Incorporation. A Histologic, Biomechanical, and Immunological Study. Lewandrowski, KU, Schollmeier, G, Ekkernkamp A, Uthoff HK, Mankin HJ, Tomford WW. AAOS Anaheim, 1999.
3. **Titulo de Membro Correspondente Internacional da Academia Brasileira de Medicina Militar**, pela distinção e pelos bons serviços prestados.
4. **75th Anniversary Service Medal of the Brazilian Military Medical Academy**, pela distinção e pelos bons serviços prestados.
5. **Orden al merito SILACO en el grado de Caballero - Order of merit “Knight” of SILACO** (Sociedad Iberolatinoamericana de Columna), Santiago de Chile, November 9, 2017.
6. **doctor honoris causa** (Dr. h.c.) Department of Neurosurgery, UniRio, Universidade do Estado Rio de Janeiro, Brazil
7. **Foreign Corresponding Member of the National Academy of Medicine of Colombia** (Academia de Medicina de Colombia). Approved during administrative session of the academy on July 28, 2022.

HONORS/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, |

LANGUAGES: English, German, Spanish, Portuguese, Italian, Russian, Polish

VOLUNTEERING: Visiting professor Centro de Coluna e Dor do Hospital Gaffrée e Guinle (HUGG) and coordinator of Professional Master in Science of Videoendoscopic Spinal Surgery at Universidade Federal do Estado do Rio de Janeiro – UNIRIO incepted November 2015.

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 Neurocirurgia, Hospital C. A. Esculapio, Calle Rondon Nr 9549 Valencia, Venezuela, volunteer work on reconstructive spinal cancer surgery, July 20-24, 2008

Visiting Professor, volunteer work establishing videoendoscopic surgery program at Hospital TijuTrauma, Hospital Badim, and Centro Cirúrgico at Barra Dor Hospital, Rio De Janeiro, Brazil, July 15-21, 2016.

INTERESTS: Music, Piano, Foreign Languages, Travel, Cooking, Sailing, Writing, Bee Keeping

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, Uhthoff 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 anulus 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):115-24.
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.
61. **"Outside-in" technique, clinical results, and indications with transforaminal lumbar endoscopic surgery: a retrospective study on 220 patients on applied radiographic classification of foraminal spinal stenosis.** Lewandrowski KU. *Int J Spine Surg*. 2014 Dec 1;8.
62. **Intradiscal Expandable Balloon Distraction During Transforaminal Decompression for Lumbar Foraminal and Lateral Recess Stenosis.** Lewandrowski KU, Ostergren M, de Carvalho PST. *Surg Innov*. 2018 Apr;25(2):165-173.
63. **Surgical Technique of Endoscopic Transforaminal Decompression and Fusion with a Threaded Expandable Interbody Fusion Cage and A Report of 24 Cases.** Lewandrowski KU. *J Spine* 2018, 7:2.
64. **Endoscopic Transforaminal and Lateral Recess Decompression After Previous Spinal Surgery.** Lewandrowski KU. *International Journal of Spine Surgery*. Vol. 12, No. 2, 2018, pp. 1–14. 8
65. **Readmissions After Outpatient Transforaminal Decompression For Lumbar Foraminal And Lateral Recess Stenosis,** Lewandrowski KU. *International Journal of Spine Surgery*, Vol. 12, No. 3, 2018, pp. 1–10.
66. **Incidence, Cost, and Management of Complications after Transforaminal Endoscopic Decompression Surgery for Lumbar Foraminal and Lateral Recess Stenosis: A Value Proposition for Outpatient Ambulatory Surgery,** Lewandrowski KU. *Int J Spine Surg*. February 2019, 13 (1) 53-67; DOI: <https://doi.org/10.14444/6008>.
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 143. **Comparison of Transforaminal Lumbar Interbody Fusion in the Ambulatory Surgery Center and Traditional Hospital Settings, Part 2: Assessment of Surgical Safety in Medicare Beneficiaries.** Schlesinger, Scott M., Dominic Maggio, Morgan P. Lorio, Kai-Uwe Lewandrowski, and Jon E. Block. *Journal of Personalized Medicine* 13, no. 3 (2023): 566. <https://www.mdpi.com/2075-4426/13/3/566>.
 144. **Durotomy- and Irrigation-Related Serious Adverse Events During Spinal Endoscopy: Illustrative Case Series and International Surgeon Survey.** Vargas, R. A. A., V. Hagel, Z. Xifeng, H. Yang, J. F. Ramírez León, M. Lorio, A. E. Telfeian, P. Houle, R. Gardocki, Á Dowling, P. S. Teixeira de Carvalho, A. Yeung, M. Knight, S. Hellinger, and K. U. Lewandrowski. *Int J Spine Surg* 17, no. 3 (Jun 2023): 387-98. <https://dx.doi.org/10.14444/8454>.
 145. **Clinical Consequences of Incidental Durotomy During Full-Endoscopic Lumbar Decompression Surgery in Relation to Intraoperative Epidural Pressure Measurements.** Vargas, Roth A. A., Marco Moscatelli, Marcos Vaz de Lima, Jorge Felipe Ramírez León, Morgan P. Lorio, Rossano Kepler Alvim Fiorelli, Albert E. Telfeian, John Fiallos, Ernest Braxton, Michael Song, and Kai-Uwe Lewandrowski. *Journal of Personalized Medicine* 13, no. 3 (2023): 381. <https://www.mdpi.com/2075-4426/13/3/381>.
 146. **Endoscopic Posterior Cervical Decompression for Ossified Posterior Longitudinal Ligament: A Technical Note.** Xifeng, Z., J. Zhang, Y. Yan, R. Bu, H. Fan, V. Hagel, A. E. Telfeian, J. F. Ramírez León, M. P. Lorio, and K. U. Lewandrowski. *Int J Spine Surg* (May 25 2023). <https://dx.doi.org/10.14444/8453>.

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, Honnulu, Hawaii, June 5-7, 2008.**
14. **Clinical Results of Endoscopic Transforaminal Decompression: First World Congress of Minimally Invasive Spinal Surgery and Techniques, Honnulu, 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 WCMISST Congress Praia do Forte, Salvador Brazil, August 18, 2012.
19. **Debator Round Table Discussion.** III WCMISST 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, 2014, Istanbul, Turkey.
26. **Techniques and Indication of Endoscopic Posterior Cervical Foraminotomy.** World Congress of WFMISS April 8 – 12, 2014, Istanbul, Turkey.
27. **Complications of Lumbar Endoscopic Microdiscectomy Surgery.** World Congress of WFMISS April 8 – 12, 2014, Istanbul, Turkey.
28. **Endoscopically Assisted Interbody Fusion Techniques.** World Congress of WFMISS April 8 – 12, 2014, Istanbul, Turkey.
29. **State of the Art of Videoendoscopy of the Spine (Cirurgia videoendoscópica da coluna vertebral. Estado da Arte).** Visiting Professor in the - UNIRIO - Universidade Federal de Extato Rio de Janeiro - Masters Program in Videoendoscopy. VI SEMINÁRIO INTERNACIONAL DE CIRURGIA VIDEOENDOSCÓPICA. Programa de Pós-graduação em Medicina - Mestrado Profissional em Técnicas Videoendoscópicas. Programa de Pós-graduação em Neurologia - Mestrado e Doutorado em Neurologia. Anfiteatro Geral do HUGG 05 de Julho de 2014, Rio de Janeiro, Brazil.
30. **Endoscopically Assisted Interbody Fusion Techniques.** 57° Congresso De Neurocirurgia, November 5-8, 2014, Puerto Varas, Chile.
31. **Endoscopically Assisted Lumbar Rhizotomy In The Treatment of Axial Back Pain.** 57° Congresso De Neurocirurgia, November 5-8, 2014, Puerto Varas, Chile.
32. **Minimally Invasive Stand-Alone Anterior Lumbar Interbody Fusion Technique.** 57° Congresso De Neurocirurgia, November 5-8, 2014, Puerto Varas, Chile.
33. **State of The Art of Lumbar Endoscopy.** Minimally Invasive Surgery Section. North American Spine Society. November 10, 2014, San Francisco.
34. **Outcomes and Complications with MIS Microdiscectomy.** Invited Guest Speaker, XII SIMINCO São Paulo, August, 28, 2015.
35. **Cervical Percutaneous Endoscopic Rhizotomy: Technique and Scientific Evidence.** Invited Guest Speaker, XII SIMINCO São Paulo, August, 28, 2015.
36. **Minimally Invasive Stand-Alone Anterior Lumbar Interbody Fusion: A Retrospective Review of 100 Patients.** Invited Guest Speaker, XII SIMINCO São Paulo, August, 28, 2015.
37. **What To Do With The Chronic Pain Patient Following Successful Lumbar Fusion. Diagnostic Work Up, Management, and Indications for Follow Up Surgeries.** Invited Guest Speaker, XII SIMINCO São Paulo, August, 28, 2015.
38. **Techniques and Indications for Endoscopic Lumbar Microdiscectomy and Lateral Recess Decompression.** IV Brain & Spine Symposium, September 17-20, 2015, Miami Beach.
39. **Endoscopically Assisted Interbody Fusion Techniques.** IV Brain & Spine Symposium, September 17-20, 2015, Miami Beach.
40. **Techniques and Indications for Endoscopic Posterior Cervical Foraminotomy.** IV Brain & Spine Symposium, September 17-20, 2015, Miami Beach.
41. **Complications of Lumbar Endoscopic Microdiscectomy Surgery.** IV Brain & Spine Symposium, September 17-20, 2015, Miami Beach.

42. **Techniques and Indication of Endoscopic Posterior Cervical Foraminotomy.** VII World Congress of Neuroendoscopy of the International Federation of Neuroendoscopy IFNE, November 1-4, 2015, Puerto Vallarta, Mexico.
43. **Complications of Lumbar Endoscopic Microdiscectomy Surgery.** VII World Congress of Neuroendoscopy of the International Federation of Neuroendoscopy IFNE, November 1-4, 2015, Puerto Vallarta, Mexico.
44. **Dynamic Stabilization.** 5th World Congress of Minimally Invasive Spine Surgery & Techniques the 15th Annual Meeting of Korean Minimally Invasive Spine Surgery Society the 5th Asian Congress of MISS (WCMISS 2016) held in Jeju Island, Korea from June 1st to 4th, 2016.
45. **Minimally Lumbar Interbody Fusion; Endoscopic vs Tubular.** 5th World Congress of Minimally Invasive Spine Surgery & Techniques the 15th Annual Meeting of Korean Minimally Invasive Spine Surgery Society the 5th Asian Congress of MISS (WCMISS 2016) held in Jeju Island, Korea from June 1st to 4th, 2016.
46. **Indicações, Técnicas E Resultados Das Vias Transforaminal E Lateral.** 1st International Symposium of Videoendoscopic Spinal Surgery. Hospital Naval Marcillo Dias. Rio de Janeiro, 16th Julho de 2016.
47. **Artrodese Lombar Por Via Endoscópica.** 1st International Symposium of Videoendoscopic Spinal Surgery. Hospital Naval Marcillo Dias. Rio de Janeiro, 16th Julho de 2016.
48. **Utilidade Da Divisão Do Multifidus Nas Abordagens Posterior E Transforaminal Para A Fusão Intervertebral.** 1st International Symposium of Videoendoscopic Spinal Surgery. Hospital Naval Marcillo Dias. Rio de Janeiro, 16th Julho de 2016.
49. **Indicações E Técnicas De OLIF Assistida Endoscopicamente.** 1st International Symposium of Videoendoscopic Spinal Surgery. Hospital Naval Marcillo Dias. Rio de Janeiro, 16th Julho de 2016.
50. **Hérnias Extrusas e Sequestros Disciais com Radiculopatia.** 1st International Symposium of Videoendoscopic Spinal Surgery. Hospital Naval Marcillo Dias. Rio de Janeiro, 16th Julho de 2016.
51. **Foraminoplastia Lombar Endoscópica - Indicações e Técnicas.** 1st International Symposium of Videoendoscopic Spinal Surgery. Hospital Naval Marcillo Dias. Rio de Janeiro, 16th Julho de 2016.
52. **Artrodese Lombar Por Via Endoscópica.** 1st International Symposium of Videoendoscopic Spinal Surgery. Hospital Naval Marcillo Dias. Rio de Janeiro, 16th Julho de 2016.
53. **Applied Micro-Anatomy of the Lumbar Lateral Recess and Neuroforamen.** Symposium Técnicas Modernas e Avanços da Cirurgia da Coluna Vertebral. 25 e 26 de November 2016. Hotel JP, Rodovia Anhanguera km 306.5, Ribeirão Preto – SP, Brazil.
54. **Interlaminar, and Full-Endoscopic Lumbar Decompression.** Symposium Técnicas Modernas e Avanços da Cirurgia da Coluna Vertebral. 25 e 26 de November 2016. Hotel JP, Rodovia Anhanguera km 306.5, Ribeirão Preto – SP, Brazil.
55. **Cost-Effectiveness of Spinal Endoscopy in Comparison to Open Lumbar Laminectomy.** Symposium Técnicas Modernas e Avanços da Cirurgia da Coluna Vertebral. 25 e 26 de November 2016. Hotel JP, Rodovia Anhanguera km 306.5, Ribeirão Preto – SP, Brazil.
56. **Indications, Techniques, and Clinical Outcomes with Cervical Rhizotomy and Laminectomy.** Symposium Técnicas Modernas e Avanços da Cirurgia da Coluna Vertebral.

- 25 e 26 de November 2016. Hotel JP, Rodovia Anhanguera km 306.5, Ribeirão Preto – SP, Brazil.
57. **Role of Transforaminal Decompression in Revision of Failed Complex Thoracolumbar Fusions.** Symposium Técnicas Modernas e Avanços da Cirurgia da Coluna Vertebral. 25 e 26 de November 2016. Hotel JP, Rodovia Anhanguera km 306.5, Ribeirão Preto – SP, Brazil.
 58. **Standalone endoscopic lumbar interbody fusion for grade one spondylolisthesis with associated foraminal and lateral recess.** XVIII Congresso Nacional de Asociación Mexicana de Cirujanos de Collumna (AMCICO) September 14th, 2017, Accapulco, Mexico
 59. **Advanced endoscopic lumbar Foraminoplasty techniques. Clinical outcomes with SAP resection.** XVIII Congresso Nacional de Asociación Mexicana de Cirujanos de Collumna (AMCICO) September 14th, 2017, Accapulco, Mexico
 60. **Indication for Lumbar Endoscopy. Who is a Good Surgical Candidate.** VII Congreso Sociedad Interamericana de Cirugia de Columna Minimamente Invasiva (SICCOMI), 9 – 11 November 2017, Santiago de Chile, Chile.
 61. **Complications of Endoscopic Lumbar Surgery.** VII Congreso Sociedad Interamericana de Cirugia de Columna Minimamente Invasiva (SICCOMI), 9 – 11 Novembre 2017, Santiago de Chile, Chile.
 62. **Stand Alone Endoscopic Interbody Fusion for Grade I Spondylolisthesis.** VII Congreso Sociedad Interamericana de Cirugia de Columna Minimamente Invasiva (SICCOMI), 9 – 11 November 2017, Santiago de Chile, Chile.
 63. **Advanced Endoscopic Lumbar Foraminoplasty Techniques.** VII Congreso Sociedad Interamericana de Cirugia de Columna Minimamente Invasiva (SICCOMI), 9 – 11 Novembre 2017, Santiago de Chile, Chile.
 64. **Indications and Fusion Techniques Oblique Lumbar Intervertebral assisted with Endoscopy.** 1st Annual Meeting of the International Society of Endoscopic Spine Surgery (ISESS), November 30 to December 3, 2017, Guangzhou Shi, Guangdong Sheng, China.
 65. **Percutaneous Endoscopic Transforaminal and Lateral Recess Decompression After Previous Spinal Surgery.** 1st Annual Meeting of the International Society of Endoscopic Spine Surgery (ISESS), November 30 to December 3, 2017, Guangzhou Shi, Guangdong Sheng, China.
 66. **Readmission after Endoscopic Transforaminal Surgery.** Academic Exchange in Guangdong General Hospital, December 1st, 2017, Guangzhou Shi, Guangdong Sheng, China.
 67. **Indications and Fusion Techniques: Oblique Lumbar Intervertebral Assisted with Endoscopy.** World Spine 8 Meeting, April 13-18 2018, Porto, Portugal.
 68. **Complications of Lumbar Spinal Endoscopy.** World Spine 8 Meeting, April 13-18 2018, Porto, Portugal.
 69. **Best Candidates for Lumbar Spinal Endoscopy.** 15 Curso Taller de Técnicas Avanzadas en Cirugía Endoscópica de Columna Lumbar. CLEMI Bogota Columbia, July 27-28, 2018.
 70. **Indications and Fusion Techniques: Oblique Lumbar Intervertebral Assisted with Endoscopy.** 15 Curso Taller de Técnicas Avanzadas en Cirugía Endoscópica de Columna Lumbar. CLEMI Bogota Columbia, July 27-28, 2018.
 71. **Complications of Lumbar Spinal Endoscopy.** 15 Curso Taller de Técnicas Avanzadas en Cirugía Endoscópica de Columna Lumbar. CLEMI Bogota Columbia, July 27-28, 2018.
 72. **Endoscopic Lumbar Interbody Fusion.** eNeurospine Endoscopic Spine Surgery Symposium, 34th Annual Meeting North American Spine Society, September 24-28, Chicago IL.
 73. **How to Manage Postoperative Problems after Lumbar Endoscopy.** Summer Meeting North American Spine Society, August 1- 4, 2019, Waikiki Beach Marriott Resort and Spa, Honolulu, HI.

74. **Preoperative Planning in Lumbar Spinal Endoscopy.** Summer Meeting North American Spine Society, August 1- 4, 2019 Waikiki Beach Marriott Resort and Spa, Honolulu, HI.
75. **Transforaminal Lumbar Endoscopic Decompression.** Instructional hands-on cadaver course 34th Annual Meeting North American Spine Society, September 24-28, 2019, Chicago IL.
76. **Transforming Your Practice with Minimally Invasive Spine Care Using Evidence-Based Validation.** Symposium Annual Meeting of the North American Spine Society, October 6-8, 2020. Moderators: Kai-Uwe Lewandrowski, MD and Anthony T. Yeung, MD.
77. **Introduction and Welcome: Mainstreaming, Implementation, Indications and Training Standards for MIS Spine Care.** Symposium Annual Meeting of the North American Spine Society, October 6-8, 2020. Kai-Uwe Lewandrowski, MD.
78. **Evidence-Based Validation and Implementation of Clinical Protocols Employing Prognosticators of Successful Outcomes with Novel MIS Techniques.** Symposium Annual Meeting of the North American Spine Society, October 6-8, 2020. Kai-Uwe Lewandrowski, MD.
79. **Closing Summary and Post-symposium Survey Demonstration.** Symposium Annual Meeting of the North American Spine Society, October 6-8, 2020. Kai-Uwe Lewandrowski, MD
80. **Symposium on Spinal Endoscopy. Supporting transitioning endoscopic spine surgery into your practice with clinical evidence. How to most effectively track your outcomes.** International Society for the Advancement of Spinal Surgery. Annual Conference, May 13 - Saturday, May 15, **2021** in Miami, FL at the Loews Miami Beach Hotel.
81. **Artificial Intelligence Application in Preoperative Lumbar MRI Analysis For Endoscopic Decompression Surgery.** Society For Brain Mapping & Therapeutics. Los Angeles Convention Center, March 10th to Sunday March 13th, 2022.
82. **MIS Difficulties, Challenges, and the learning Curve of Avoiding Complications with Endoscopic Spine Surgery.** Congreso de la Sociedad de Neurocirurgia de Occidente 2022, Puerto Vallarta, July 13, 2022.

POSTER PRESENTATIONS:

1. **T-cell activation following large bone allograft transplantation.** Lewandrowski KU, Tomford WW, Springfield D, Mankin HJ. 113th Congress of the German Society for Surgery, Berlin, Germany, April 9-13, 1996.
2. **Age-related collagen shift in the human intervertebral disc.** Schollmeier G, Lahr-Eigen R, Uthoff HK, Lewandrowski KU, Ekkernkamp A, Muhr G. XXXI Congress of the European Society for Surgical Research, Southampton, UK, March 31 - April 3, 1996.
3. **Modification of Cortical Bone Allografts by Partial Demineralization and Laser-Perforation.** Transactions of the Orthopaedic Research Society, 44, New Orleans.
4. **Osteoconductivity And Biocompatibility 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. Orthopaedic Research Society, Anaheim, 1999.
5. **Osteointegration and Dimensional Stability of Poly(Lactide-Co-Glycolide) Implants.** Kai-Uwe Lewandrowski, Joseph D. Gresser, Donald L. Wise, Roslyn L. White, and Debra J. Trantolo, Orthopaedic Research Society, Anaheim, 1999.
6. **Seeding of Cortical Bone Allografts Coated by Biodegradable Porous Foam Scaffolds.** Kai-Uwe Lewandrowski, Mario V. Cattaneo, Henning Madry, Shrikar P. Bondre, Enzo M.

- Caruso, Donald L. Wise, Gilda Barabino, William W. Tomford, Debra J. Trantolo. Orthopaedic Research Society, Orlando, Florida, 2000.
7. **Developing Porosity of Biodegradable Bone Graft Substitutes.** Kai-Uwe Lewandrowski, Joseph D. Gresser, Donald L. Wise, Debra J. Trantolo. Orthopaedic Research Society, Orlando, Florida, 2000.
 8. **Improved Osteoconduction of Cortical Bone Grafts by Biodegradable Foam Coating.** Kai-Uwe Lewandrowski, Shrikar P. Bondre, Joseph D. Gresser, Donald L. Wise, William W. Tomford, Debra J. Trantolo. Orthopaedic Research Society, Orlando, Florida, 2000.
 9. **Occult Oondoint fractures in Rheumatoids.** Lewandrowski KU, Baron JM, Curtin SL. Western Orthopaedic Association, July, Hawai, 2005.
 10. **Vertebral Osteolysis after Posterior Interbody Lumbar Fusion with Recombinant Human BMP-2.** Kai-Uwe Lewandrowski, MD, Christopher J Nanson, MD, Roberto D Calderon, MD, Poster Presentation Number: P352, 2007 Annual Meeting, American Academy of Orthopaedic Surgeons, February 12 – 16, 2007, San Diego

BOOK CHAPTERS

1. **Processing Of Cortical Allografts By Partial Demineralization And Laser Perforation To Enhance Incorporation: A Histologic, Biomechanical, And Immunological Study** Kai-Uwe Lewandrowski, Georg Schollmeier, Axel Ekkernkamp, Henry J. Mankin, Hans K. Uthhoff, William W. Tomford. In Altobelli, Lewandrowski, Trantolo, Yasemski, Wise, Wnek. Biomaterials in Human Applications, Humana Press, In Press, 1999.
2. **Coating Of Cortical Allografts with a Bioresorbable Polymer Foam for Surface Modification by Periosteal Cell Seeding.** Kai-Uwe Lewandrowski, Maurice V. Cattaneo, Joseph D. Gresser, Debra J. Trantolo, Lawrence Bonassar, Donald L. Wise, and William W. Tomford. In Altobelli, Lewandrowski, Trantolo, Yasemski, Wise, Wnek. Biomaterials in Human Applications, Humana Press, In Press, 1999.
3. **Buffered Biodegradable Internal Fixation Devices.** Trantolo DJ, Lewandrowski KU, Gresser JD, Wise DL. In Biomaterials and Bioengineering Handbook, Marcel Dekker, March 2000, New York.
4. **Biocompatibility of Self-Reinforced Poly(lactide-co-glycolide) implants.** Trantolo DJ, Lewandrowski KU, Gresser JD, Bozic KJ, Wise DL. In Biomaterials and Bioengineering Handbook, Marcel Dekker, March 2000, New York.
5. **Coating of Cortical Allografts with a Bioresorbable Polymer Foam for Surface Modification by Periosteal Cell Seeding.** Lewandrowski KU, Cattaneo MV, Gresser JD, Trantolo DJ, Wise DL, Tomford WW. In Biomaterials and Bioengineering Handbook, Marcel Dekker, March 2000, New York.
6. **Engineering of Biodegradable Grafts for Craniofacial Reconstruction.** Gresser JD, Lewandrowski KU, Trantolo JD, Wise DL. In Biomaterials and Bioengineering Handbook, Marcel Dekker, March 2000, New York.
7. **Processing of Cortical Allografts by Partial Demineralization and Laser Perforation to Enhance Incorporation.** K. U. Lewandrowski, H. K Uhtoff and W. Tomford. In Biodegradable Tissue-Equivalents - Basic Science, Engineering, And Clinical Applications, Marcel Dekker, 2001, New York.
8. **Soluble Calcium Salts in Bioresorbable Bone Grafts.** J D. Gresser, K U. Lewandrowski, D. J Trantolo, D. L. Wise and Y Y Hsu, In Biodegradable Tissue-Equivalents - Basic Science, Engineering, And Clinical Applications, Marcel Dekker, 2001, New York.

9. **Development of a Bioresorbable Interbody Fusion Device** K. U. Lewandrowski, J D. Gresser, D. Trantolo and D. L. Wise, In *Biodegradable Tissue-Equivalents - Basic Science, Engineering, And Clinical Applications*, Marcel Dekker, 2001, New York.
10. **Osteointegration and Dimensional Stability of Poly(Lactide-Co-Glycolide) Implants Reinforced with Poly(Propylene Glycol-Co-Fumaric Acid).** J D. Gresser, K. U Lewandrowski, D. J Trantolo and D. L. Wise, In *Biodegradable Tissue-Equivalents - Basic Science, Engineering, And Clinical Applications*, Marcel Dekker, 2001, New York.
11. **Osteoconductivity of an Injectable and Bioresorbable Poly(Propylene Glycolic Co-Fumaric Acid) Bone Cement.** D. J Trantolo, K U Lewandrowski, J D. Gresser and D. L. Wise, In *Biodegradable Tissue-Equivalents - Basic Science, Engineering, And Clinical Applications*, Marcel Dekker, 2001, New York.
12. **Clinical And Biomechanical Design Considerations For Engineered Cortical Bone Allografts.** K.U. Lewandrowski, F. J. Hornicek, F.X. Pedlow, M.C. Gebhardt, H.J. Mankin, W.W. Tomford, In *Biodegradable Tissue-Equivalents - Basic Science, Engineering, And Clinical Applications*, Marcel Dekker, 2001, New York.
13. **Thoracolumbar Fractures: Evaluation, Classification, and Treatment.** K.U. Lewandrowski, R.F. McLain. In *The Adult & Pediatric Spine. 3rd Edition*, 817-843, Lippincott Williams & Wilkins, 2003, Philadelphia.
14. **Cancer of the Spine. How big is the problem.** K.U. Lewandrowski, G.R. Bell, R.F. McLain. *Cancer in the Spine. Comprehensive Care.* Edited by R.F. McLain, M Markman, R.M. Bukowski, R. Macklis, E.C. Benzel, K.U. Lewandrowski. Humana Press, Totowa, NJ, January 2006.
15. **Bracing for patients with Spinal Tumors.** K.U. Lewandrowski, R.F. McLain, E.C. Benzel. *Cancer in the Spine. Comprehensive Care.* Edited by R.F. McLain, M Markman, R.M. Bukowski, R. Macklis, E.C. Benzel, K.U. Lewandrowski. Humana Press, Totowa, NJ, January 2006.
16. **Laboratory Studies and Diagnostic Work-up of Bony Lesions in the Spine.** K.U. Lewandrowski, R.F. McLain, H.J. Mankin. *Cancer in the Spine. Comprehensive Care.* Edited by R.F. McLain, M Markman, R.M. Bukowski, R. Macklis, E.C. Benzel, K.U. Lewandrowski. Humana Press, Totowa, NJ January 2006
17. **Surveillance and Screening during Disease-free Survival.** K.U. Lewandrowski, R.F. McLain, H.J. Mankin. *Cancer in the Spine. Comprehensive Care.* Edited by R.F. McLain, M Markman, R.M. Bukowski, R. Macklis, E.C. Benzel, K.U. Lewandrowski. Humana Press, Totowa, NJ, January 2006.
18. **The Pathophysiology of Spinal Metastases.** Daisuke Togawa, K.U. Lewandrowski.. *Cancer in the Spine. Comprehensive Care.* Edited by R.F. McLain, M Markman, R.M. Bukowski, R. Macklis, E.C. Benzel, K.U. Lewandrowski. Humana Press, Totowa, NJ, January 2006.
19. **Common Misperceptions and Fears of Spinal Fusion Surgery.** Lewandrowski KU. *Minimally Invasive Spinal Fusion Techniques.* Summit Communications, Armonk NY pp. 1 – 6, 2008.
20. **Lumbar Interbody Fusion: Techniques and Indications Adopted for Minimally Invasive Surgery.** McLain RF, Lewandrowski KU. *Minimally Invasive Spinal Fusion Techniques.* Summit Communications, Armonk NY pp. 137 – 160, 2008.
21. **Complications with Recombinant Human Bone Morphogenetic Protein 2 after Transforaminal Lumbar Interbody Fusion.** Nanson C, Calderon R, Lewandrowski KU. *Minimally Invasive Spinal Fusion Techniques.* Summit Communications, Armonk NY pp. 173 – 187, 2008.

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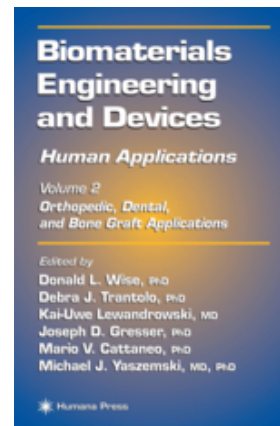
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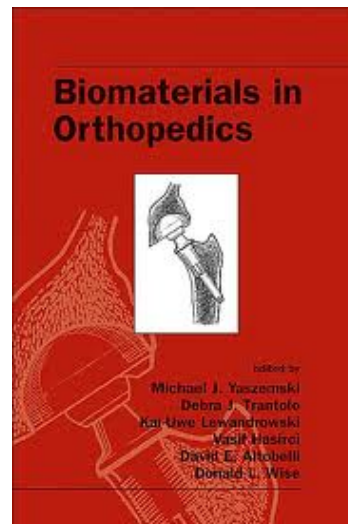


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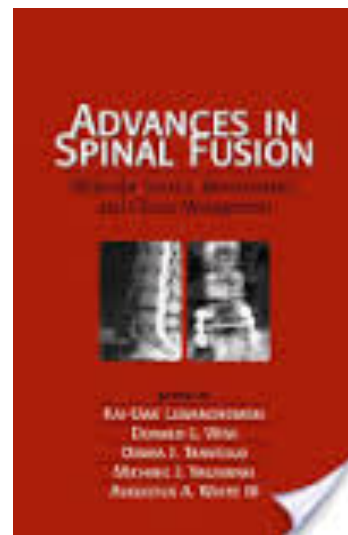


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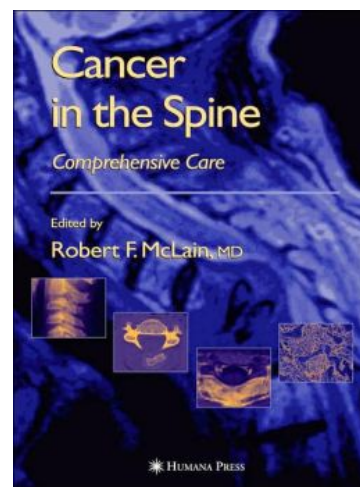


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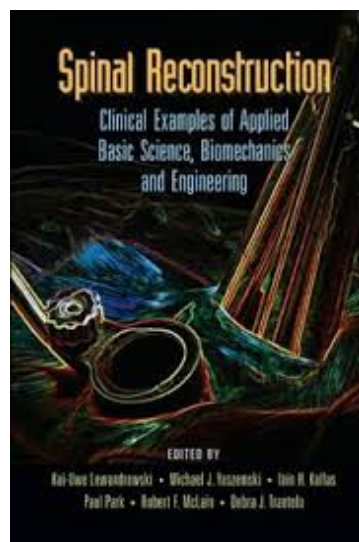
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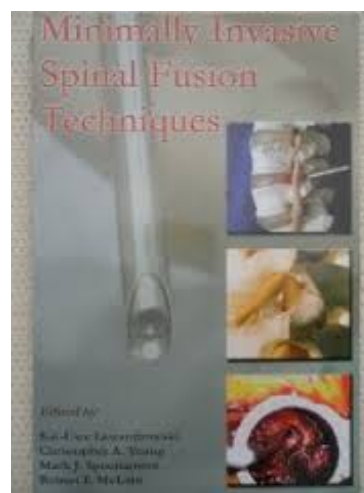
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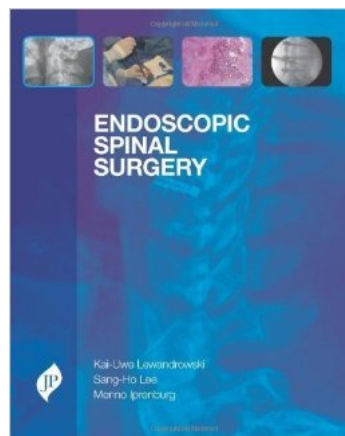
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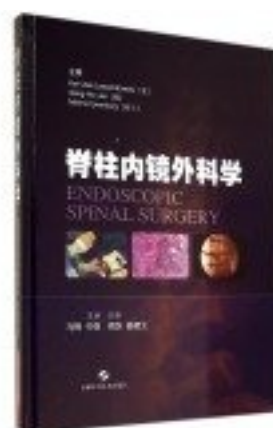
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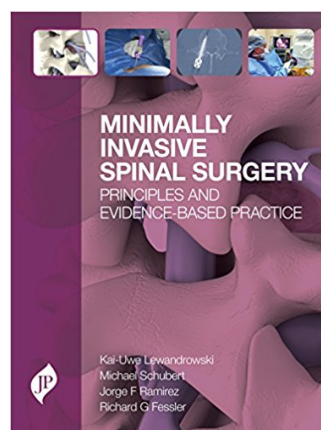
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Staged Endoscopic Management of Painful Spine Conditions

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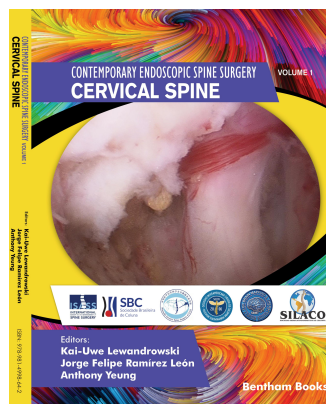
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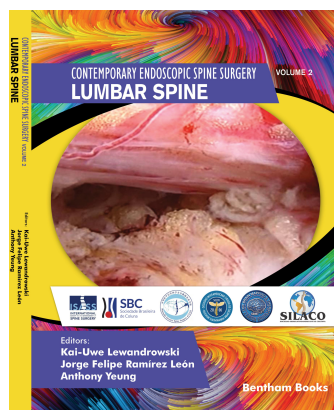
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The Path to Personalized Pain Management

<https://www.mdpi.com/si/142921>:

Guest Editors:

Dr. Kai-Uwe Lewandrowski
Center for Advanced Spinal Surgery of Southern
Arizona, Tucson, AZ, USA

Dr. Anthony T Yeung
Desert Institute for Spine Care, Phoenix, AZ, USA

Dr. Xifeng Zhang
Department of Orthopedics, First Medical Center,
PLA General Hospital, Beijing 100853, China

Dr. Ivo Abraham
R. Ken Coit College of Pharmacy, The University of
Arizona, Tucson, AZ, USA

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Guest Editor

Center for Advanced Spinal Surgery of Southern Arizona, Tucson, AZ, USA
Interests: spinal surgery; spinal disorders; thoracic and lumbar spine
Special Issues, Collections and Topics in MDPI journals



Dr. Anthony T Yeung [E-Mail](#) [Website](#)
Guest Editor

Desert Institute for Spine Care, Phoenix, AZ, USA
Interests: orthopedics; spine; surgery; pain



Dr. Xifeng Zhang [E-Mail](#) [Website](#)
Guest Editor

Department of Orthopedics, First Medical Center, PLA General Hospital, Beijing 100853, China
Interests: orthopaedic; spine minimally invasive; pain



Dr. Ivo Abraham [E-Mail](#) [Website](#)
Guest Editor

R. Ken Coit College of Pharmacy, The University of Arizona, Tucson, AZ, USA
Interests: clinical outcomes; effectiveness research; drug-centric; treatment regimens; patient treatment center; pharmacovigilance

PATENTS & TRADEMARKS

Inventor & Co-Inventor Kai-Uwe Lewandrowski, MD

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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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