

L. Erik Westerlund, MD, FACS

- Education:** Georgetown University School of Medicine
Washington, DC
Doctor of Medicine, May 1995
- The University of Virginia
Charlottesville, Virginia
Bachelor of Arts, May 1990
Biological Sciences
- Georgetown Preparatory School
Rockville, Maryland
Summa cum laude, 1986
- University of Virginia Health Sciences Center
- Internship:** Department of General Surgery, Charlottesville, VA
June 1995–December 1996
- Post-Doctoral
Research Fellowship:** University of Virginia Orthopedic Research Laboratory
University of Virginia Health Sciences Center,
Department of Orthopedic Surgery,
•Orthopedic Research Lab,
•Fellowship in Applied Orthopedic Biomechanics
Charlottesville, VA, January 1997–June 1997
- Residency:** Orthopedic Surgery: University of Virginia Health Sciences
Center
Department of Orthopedic Surgery, Charlottesville, VA
Orthopedic Surgery, June 1997–June 2001
- Fellowship:** Thomas Jefferson University Medical Center and
The Rothman Institute, Division of Spine Surgery
Departments of Orthopedic Surgery and Neurosurgery,
Philadelphia, PA
Fellowship in Spine Surgery, August 2001–August 2002

Appointments / Affiliations:

Director and Surgeon, Integrated Ortho/Neuro Spine Surgery program, Sep 2010-Present
The St. Francis Spine & Neurosurgery Center, and
The St Francis Orthopedic Institute,
St. Francis Hospital, Columbus, GA.
St. Francis Hospital, Medical Executive Committee,
Member, 2012-2016.
Attending and Consulting Surgeon,
Orthopedic Spine Surgery,
St. Francis Hospital, Columbus, GA 2008-Present
Attending and Consulting Surgeon, Orthopedic Spine Surgery, The Scripps Health System 2002-2008;
Scripps Memorial Hospital - Encinitas,
Scripps Memorial Hospital - La Jolla,
August 2002-August 2009.
CORE Orthopedic Medical Center / SD Ortho Med Group,
Co-director, Division of Spine Surgery (2002-2008)
CFO, Feb 2006-Aug2008; Partner, 2003-Aug 2008.
Fellow, American Academy of Orthopedic Surgeons
2005-Present
The U.S. Spine Study Group, 2004 – Present.
AO/ASIF International Spine Faculty, 2002- Present.
Clinical Instructor, Division of Spine Surgery,
Thomas Jefferson University,
Philadelphia, PA, August 2001-August 2002
Gross Anatomy Laboratory Instructor
University of Virginia School of Medicine
Charlottesville, VA, 1998-2000
Gross Anatomy Prosection Team
Georgetown University School of Medicine,
Department of Anatomy
Washington, DC, 1994-1995

Societies:

North American Spine Society
American Academy of Orthopedic Surgeons
American Board of Orthopedic Surgery
American College of Surgeons, Fellow
Georgia Orthopedic Society
Southern Orthopedic Association

Accreditation / Licensure:

American Board of Orthopedic Surgery
Board Certified, September 2004.
Re-certification issued 2013. Active through 2024.
Commonwealth of Virginia, Board of Medicine, License
to practice Medicine and Surgery, 1997, (Inactive)
Pennsylvania, Medical Board of Pennsylvania,
Fellowship training license, Issued 05/29/2001 (Inactive)

State of California, Medical Board of California, License to practice Medicine and Surgery, 6/21/2002 to Present (Active)

State of Georgia, Georgia Composite Medical Board, Licensed physician, 2008-present (Active)

State of Alabama, Board of Medicine, 2008-present, (Active)

USMLE Boards Part I-06/1993; II-03/1995; III-12/1996.
DEA Registration, Issued 04/12/05 (Active)

Abridged Research Experience:

Clinical Investigator: Two-level Medtronic Prestige LP Cervical Disc Replacement Arthroplasty vs. Anterior Cervical Decompression and Fusion. Prospective, randomized multi-center FDA Investigation (IDE); enrollment completed 2007.

Clinical Investigator: A Multi-Center, randomized, Double-blind, Placebo-controlled, Parallel Design, 2-Arm Study to Investigate the Effect of Aprotinin on Transfusion Requirements in Patients Undergoing Elective Spinal Fusion Surgery. (FDA Phase III), 2006 - 2007.

Clinical Investigator: Single-level Prodisc-C Cervical Disc Replacement Arthroplasty vs. Anterior Cervical Decompression and Fusion. Prospective, randomized multi-center FDA investigation (IDE), 2004 – 2007.

Primary Investigator: HEALOS as Compared to Autograft in the Healing of Posterior Lumbar Fusion. A prospective, randomized multi-center clinical study – 2004 to 2006.

Primary Investigator: Cortoss Vertebroplasty as compared to standard PMMA Vertebroplasty for the Treatment of Osteoporotic Vertebral Compression Fracture.

- Clinical FDA pilot completed 2003;
- Pivotal prospective randomized multi-center FDA investigation, 2004 – 2007.

Clinical Investigator: Prodisc Lumbar Disc Replacement Arthroplasty vs. Fusion in the Treatment of Lumbar Degenerative Disc Disease. Prospective, randomized multi-center FDA trial, 2002- 2004.

Cellular Organization and Matrix Gene Expression in Soft Tissue Repair with Small Intestine Sub-mucosa Xenograft University of Virginia Orthopaedic Research Laboratory: Immunohistochemical, histologic, and histomorphometric study of the novel effects of small intestine sub mucosal graft upon tendon and connective tissue healing, repair, and regeneration, 1998-2001.

A Comparative Biomechanical Analysis of a new Intramedullary Device for the Percutaneous Fixation of Femoral Intertrochanteric Fractures and the Dynamic Hip Screw: University of Virginia Orthopaedic Research Laboratory: Designed, machined,

and biomechanically tested a novel condylocephalic femoral nail system. June 1995-December 1996. (Prototypes & IP rights acquired by Zimmer Orthopaedics 1997)

United States Indian Health Service – Division of Research and Development, Tucson, Arizona.

Site research team (Yakima, Washington). Findings published July 1992 as an internal IHS document.

The National Institutes of Health & Walter Reed Army Institute of Research – Division of Retrovirology, Washington, D.C.

Henry M Jackson Foundation Research Fellow and team investigator in a multi-center, phase II, HIV vaccination trial, August 1990-August 1991.

Publications:

Torstrick FB, Klosterhoff BS, Westerlund LE, Foley KT, Gochuico J, Lee CS, Gall K, Safranski DL. *Impaction durability of porous polyether-ether-ketone (PEEK) and titanium-coated interbody fusion devices*. *Spine J*. 2018 May; 18(5):857-865.

Bae H, Shen M, Maurer P, Peppelman W, Beutler W, Linovitz R, Westerlund E, Peppers T, Lieberman I, Kim C, Girardi F. *Clinical Experience using Cortoss for treating vertebral compression fractures with vertebroplasty and kyphoplasty: twenty-four month follow-up*. *Spine* (Phila Pa). 2010 Sep 15;35(20): E1030-6

Chhabra A, Westerlund LE, Kline AJ, McLaughlin R. *Management of proximal femoral shaft fractures in osteopetrosis: a case series using internal fixation*. *Orthopedics*. 2005 Jun; 28(6):587-92.

Kim DH, Westerlund LE, Vaccaro AR: *The Timing of Surgical Intervention in Patients with Traumatic Spinal Cord Injury*. *Semin Spine Surg*. June 2002.

Westerlund LE, Kim D, Hillibrand A: *Anterior versus posterior surgical options for the treatment of anterior cervical pseudarthrosis*. *Current Opinion in Orthopaedics*, 13 (3): 214-219, June 2002.

Silva MT, Kim DH, Haroun R, Westerlund LE, Vaccaro AR: *Pathogenesis of Myelopathy in patients with ossification of the posterior longitudinal ligament*. *Journal of Neurosurgery*, 96:168-172, 2002.

Haroun RI, Kim DH, Silva M, Westerlund LE, Vaccaro AR: *Anterior cervical plating enhances arthrodesis after discectomy and fusion with cortical allograft*. *Neurosurgery*, 50(supplement):229-236, 2002.

Kim DH, Westerlund LE, Vaccaro AR: *Intramedullary high signal intensity on T2-weighted MR images in cervical Spondylotic Myelopathy: prediction of prognosis with type of intensity*. *Radiology*, 221:789-794, 2001.

Kim DH, Westerlund LE, Vaccaro AR: *Posttraumatic therapeutic vaccination with modified myelin self-antigen prevents complete paralysis while avoiding*

autoimmune disease. The Journal of Clinical Investigation, 108:591-599, 2001.

Westerlund LE, Gill S, Jarosz T, Abel MF, Blanco J: *Posterior Only Unit Rod Instrumentation and Fusion for Neuromuscular Scoliosis*. Spine, 15; 26(18):1984-1989, September 2001.

Westerlund LE, Kim D, Vaccaro AR: *Internal Fixation for Cervical and Cervicothoracic Trauma*. Semin Spine Surg. Accepted December 2001.

Westerlund LE, Kim D, Vaccaro AR: *Subtotal Corpectomy versus Laminoplasty for Multilevel Cervical Spondylotic Myelopathy: a long-term follow-up study over 10 years*. Spine. 26:1443-1448, 2001.

Westerlund LE, Blanco JS, Chhabra A: *Posterior Spinal Instrumentation and Fusion of a Neuromuscular Scoliosis in a Patient with Autosomal Dominant Osteopetrosis*. Spine, 25(2):265-7, January 15, 2000.

Internet Publications:

Westerlund LE, Daffner S, Vaccaro AR: Management of Thoracolumbar Burst Fractures (Section Ed. Herkowitz H).

Orthopaedic Knowledge Online, The American Academy of Orthopaedic Surgeons. URL: www.aaos.org/oko, 2003.

Westerlund LE. Management Strategies in Low Back Pain. Stryker Hyper guide (Eds. D'Ambrosia, Albert T), URL: www.ortho.hyperguides.com February 2002.

Texts / Chapters:

Westerlund LE, Shah S, Albert TJ: Pediatric Kyphosis: Scheuermann's and Congenital Deformity. Rothman and Simeone -The Spine, (Eds. Herkowitz H, Garfin S, Eismont FJ, Bell G), Saunders-Elsevier Inc, 5th Edition, 2006.

Westerlund LE, Daffner S, Vaccaro AR, Stillerman C: Cervical Spine Trauma: Indications for Surgical Decompression and Stabilization in Spine Surgery: Techniques, Complication Avoidance, and Management, Editor, Benzel EC. Churchill Livingstone, 2nd Edition, 2005.

Westerlund LE, Chan DPK: Operative Management of Lumbar Stenosis. Spinal Deformities: The Fundamentals (First Edition). DeWald K (Ed.), 2002.

Westerlund LE: Associate editor & contributing author, Surgical Recall, 3rd Edition. Blackbourne L. Lippincott, Williams and Wilkins. Philadelphia, PA, 2001.

Presentations and Invited Lectures:

Cervical radiculopathy – Principles, Management, Controversies.
AOSpine North America. Faculty panel and podium presentation.
Controversies in Spine Surgery for Fellows & Practice Essentials. Las Vegas, NV.
November 3&4, 2017.

The Virtuous Cycle: Machine learning and the path to deep learning in least invasive spine surgery.
17th Annual TJU Spine Meeting. Newport, RI. July 14-15, 2017.

Big data and next frontiers in minimally invasive spinal deformity surgery.
New York Adult Deformity Meeting. New York, NY. December 15-17, 2016.

Anterior cervical decompression and fusion with porous PEEK interbody reconstruction.
North American Spine Society, Pre-meeting new technology symposium. Boston, MA.
October 26, 2016.

Visiting Professor, Department of Neurosurgery / Spinal Surgery
Anterior Lumbar Reconstruction Strategies and Techniques, other.
Clinica de Especialidades Las Americas and the
Hospital Departamental de Narino
Narino, Pasto, Columbia
Dec 7-14, 2013.

Anterior Cervical Spine Integrated Interbody Reconstruction. Evolution of strategies in junctional degeneration and beyond.
Fourth Annual Pittsburgh Spine Summit. Pittsburgh, PA. Sept 12-14, 2013.

Principles and Techniques in Anterior Cervical Integrated Interbody Reconstruction.
Spine Surgery Grand Rounds. The Hospital for Special Surgery. New York, NY. Jan 31, 2013.

1) Update: Osteobiologic strategies in modern spine and orthopaedic surgery. Westerlund E. 2) Engineered micro-particulate bioglass spheres for regulated ion delivery in vivo: An application in bone healing. Westerlund E, Borden M: Current Trends in Trauma and Orthopaedics. Present & Future, Russian Ministry of Health, RUPF School of Medicine, and APOSSM (Association of Orthopaedists and Traumatologists of the Russian Federation). Moscow, Russia, Nov 15-18, 2012.

Spinal instrumentation techniques and strategies in the patient with osteoporosis.
Westerlund E: Faculty panel & podium presenter. AO Symposium: The Aging Spine. St. Louis, MO., 17-18 April, 2010.

1) Cervical disc arthroplasty; 2) Extreme lateral interbody reconstruction techniques. AO Faculty panel and podium presentations, session moderator. Advanced Concepts in the Management of Spinal Disorders. Sun Valley, ID. 25-28Feb, 2010.

Course Chairman, Organizer, & Faculty Member. AO Spine/ASIF Principals and Treatment of Spinal Disorders. Miami, FL., Aug 6-9, 2009.

Advanced techniques in cervical spine surgery. Westerlund E. Faculty panel & presenter. 23rd Annual Meeting of the North American Spine Society: An introduction to Spine Care for Non-physician Providers. 14 Oct, 2008.

1) Evaluation and Management of Lumbar Degenerative Disc Disease. 2) Complex spinal procedures in the setting of osteoporosis. Faculty panel & podium presentations: Advanced Concepts in the Management of Spinal Disorders. Sun Valley, ID. Feb 21-24, 2008.

Course Chairman & Faculty member. AO Spine/ASIF Principals and Treatment of Spinal Disorders for Residents and Fellows. Houston, TX. January 10-13, 2008.

Motion preservation technology in spinal surgery. Session moderator and Presenting Faculty. AO Spine/ASIF Principals and Treatment of Spinal Disorders for Residents and Fellows. Las Vegas, NV. Nov 2007

A new classification for utilization of osteobiologics in contemporary spine surgery. 2007 Spinal Osteobiologics Symposium, Las Vegas, NV. June 23, 2007

Current Concepts in the Evaluation and Treatment of Thoracolumbar Trauma. Mammoth Hospital & Sierra Park Health System – Sierra Park Grand Rounds. Mammoth Lakes, CA. June 15, 2007.

1) Cervical disc arthroplasty: present and future. 2) Strategies in complex cervical reconstruction for cervical kyphosis. Session moderator and presenting faculty: AOSpine/ASIF Degenerative Spine Symposium. Coronado, California. June 2-3, 2007.

1) Thoracic, Lumbar and Lumbosacral Trauma and Fractures; 2) Cervical Trauma in Athletes. Session moderator and presenting faculty: AO Spine/ASIF Controversies in Spine Trauma Symposium. Naples, Florida. May 19-20, 2007

Complications of thoracolumbar spinal implants and instrumentation. Session moderator and presenting faculty: AO Spine/ASIF Challenges and Complications in Complex Spine Surgery. San Francisco, California. April 28-29, 2007.

Anterior cervical fusion with Trinity Allomatrix (with live surgical broadcast). Westerlund E, Peppers TA. Session Moderator - Orthopaedic Applications section. . 2nd Annual Stem Cell Summit, San Diego, California. February 12-13, 2007.

1) Surgical Management of Thoracolumbar Spinal Trauma. Podium speaker. 2) Bioskills instructor & moderator: Techniques in cervical instrumentation: occiput to T1. 19th Annual Whistler Contemporary Update on Disorders of the Spine.

Break-out sessions: Posterior Cervical Instrumentation. Whistler, BC. January 13-19, 2007.

Thoracic, Lumbar and Lumbosacral Trauma and Fractures. Session moderator and presenting faculty: AOSpine/ASIF Controversies in Spine Trauma Symposium. Hilton Head, South Carolina. June 3-4, 2006.

Clinical Experience Using a Novel Bio-Ceramic for Treating Compression Fractures in Vertebroplasty and Kyphoplasty; One Year Follow-up on the First 40 Patients. Westerlund E, Bae H, et al. American Society of Neuroradiology, Annual Meeting. May 1, 2006

Reviewing and Assessing Your Patients for Lumbar Disc Replacement Arthroplasty. Presenting Faculty: 1st Annual Spine Arthroplasty Summit. Salt Lake City, Utah. Feb 17-18, 2006.

Cervical Trauma – Pathomechanics and Injury Classification. Presenting Faculty: AO North America/ASIF Principles and Treatment of Spinal Disorders for Residents and Fellows. Philadelphia, Pennsylvania. Jan 13-15, 2006

Posterior Surgical Techniques for the Management of Cervical Spondylosis. Presenting Faculty: AO North America/ASIF Advanced Concepts in the Management of Spinal Disorders. Monterey, California. August 11-14, 2005.

Preliminary Clinical Experience Using a Novel Bio-composite for Treating Vertebral Compression Fractures in Vertebroplasty and Kyphoplasty; Report on the First 40 Patients. Bae H, Westerlund LE, et al. International Meeting on Advanced Spinal Techniques (IMAST). Alberta, Canada. July 9, 2005.

1) Penetrating Spinal Injuries, 2) Advances in Spinal Cord Regeneration. Presenting Faculty: AO North America/ASIF Controversies in Spine Trauma. Coronado, California. June 2005.

Lumbar Disc Replacement Arthroplasty. Faculty and Course Director; Johnson & Johnson Endo Institute, Center for Spine Arthroplasty. Cincinnati, Ohio. April 11-13, 2005.

Thoracic Pedicle Screw Instrumentation and Techniques. Presenting Course Faculty; DePuySpine Advanced Spine Trauma Symposium. Miami, Florida. March 17-19 2005.

Presenting Faculty. AO/ASIF Management of Spinal Disorders for Residents and Fellows. Las Vegas, Nevada. March 2005.

The End of Spine Fusion? Motion preservation techniques in spine surgery. Surgical Grand Rounds, Scripps Memorial Hospital–Encinitas. Encinitas, CA. November 2004.

Presenting Faculty. AO/ASIF Advanced Concepts in the Management of Spinal Disorders. Ponte Vedra, FL. September 2004

Restorative mobilization of advanced lumbar disc collapse in spine arthroplasty; A case series. Westerlund, E. Presenting Faculty. Synthes Spine – Anterior Lumbar Spinal Access Course. Denver, CO. August 2004.

Cortoss Bioglass Vertebroplasty: An Overview of the US Experience. Westerlund E, Bae H, et al. Bioceramics Investigators Forum. Amsterdam, Netherlands. February 2004.

Rural management of complex spinal injury within the San Diego Trauma System (a statistical analysis of our standard of excellence). Westerlund E, Dandan I. Scripps Memorial Hospital- La Jolla, Surgical Grand Rounds, La Jolla, CA, March 2004

Image Guided Spine Surgery, Thomas Jefferson University, Spine Surgery Grand Rounds, Philadelphia, PA, June 2002.

Current Concepts in Cervical Spine Trauma, Thomas Jefferson University, Orthopaedic Surgery Grand Rounds, Philadelphia, PA, November 2001.

An Introduction to Thoracoscopic Spine Surgery: Applications in thoracic spinal trauma. Thomas Jefferson University, Spine Surgery Grand Rounds, Philadelphia, PA, August 2001.

Management of Lumbar Spinal Stenosis with Laminotomy: Clinical and Radiographic Outcomes in Forty-one Patients; Westerlund LE, Yung HL, Chan DPK: Eastern Orthopaedics Association, Annual Meeting, Orlando, FL, October 2000.

The Compass Hinge Fixator and the Management of Type III Heterotopic Bone about the Elbow; Westerlund LE, Chhabra A, Degnan GG: Eastern Orthopaedics Association, Annual Meeting, Orlando, FL., October 2000.

Single-stage Posterior Unit Rod Correction for Neuromuscular Scoliosis: Clinical and Radiographic Outcomes. Westerlund LE, Gill S, Jarosz T, Blanco J, Abel MF: Scoliosis Research Society, Annual International Meeting, Brisbane, Australia, October 2000.

Plate Fixation versus Intramedullary Nailing for Closed Isolated Tibial Diaphyseal Fractures. Shen WJ, Milbrandt TA, Chhabra A, Westerlund LE, Wang GJ: American Academy of Orthopaedic Surgeons, Annual Meeting, Orlando, FL, March 2000.

Laminotomy with Foraminotomy for Degenerative Lumbar Spinal Stenosis. Westerlund LE, Yung HL, Chan DPK: American Orthopaedic Association (33rd annual Residents Conference), St. Louis, MO, February 2000.

The Compass Hinge Elbow Fixator: Use in Patients with Heterotopic Bone about the Elbow. Westerlund LE, Degnan GG: Orthopaedic Alumni Meeting, University of Virginia, Charlottesville, VA, October 1999.

Other Medical / Professional Affiliation:

Medical Director. U.S Army Ranger CrossFit Competition Athletic Team,

Columbus GA. 2010-2012

Medical Director, UMA Taekwondo, Olympic-rules competition teams,
San Diego, CA. 2005 to 2007

Event Medical Team and Board of Medical Directors: Quicksilver Game Pro Surf Tour,
San Diego, CA. 2005-2006.

Event Medical Team: Boost Mobile Pro of Surf Tour, Orange County, Lower Trestles,
CA. October 2004.

Event Medical Team: Swami's Surf Classic, Cardiff-by-the-Sea, CA. October 2004.

Summer X-Games, Spine Injury/ Medical Team, Philadelphia, PA, August 2001

Awards / Grants:

Physician Service Recognition Award, St. Francis Hospital Board of Directors,
Columbus, GA, Dec 2014

Dean Edwin W. Pullen Gross Anatomy Teaching Award, University of Virginia School of
Medicine, Charlottesville, VA, 1998-1999.

George M. Kober Scholar, Georgetown University School of Medicine, 1991–1995.