

CURRICULUM VITAE

NAME

Robert W. Gaines, Jr., M.D.

Columbia Orthopaedic Group

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PERSONAL DATA

Date of Birth: February 23, 1942

Place of Birth: Dayton, Ohio

Address: 3101 Woodkirk Lane
Columbia, Missouri 65203

Married: Patricia Todd -August 25, 1965

Children: Robert Todd (09/08/68)
Russell William (07/26/70)

EDUCATIONAL BACKGROUND

High School:

Oakwood High School, Dayton, Ohio

Undergraduate:

1960-1963 University of Cincinnati (No degree)

Medical School:

1963-1967 Duke University (M.D.)

Postgraduate:

1967-1969 Internship and Junior Asst. Res. in Surgery, Duke University

1969-1973 Orthopaedic Residency, Duke University

SPECIAL TRAINING

1966 Cerebral Palsy Medical Student Fellowship

1967 Two months Orthopaedics during Internship

1968 Two months Orthopaedics during Junior Assistant Residency in Surgery

July 1970 - December 1970 - Six months full time in Department of Anatomy, teaching Gross Anatomy
to Medical Students and Orthopaedic Residents

July 1971 - June 1972 - Twelve months at North Carolina Orthopaedic Hospital, Gastonia, North Carolina

July 1972 - June 1973 - Chief Residency, Orthopaedic Surgery

MILITARY SERVICE

July 1974 - June 1976

Assistant Chief, Department of Orthopaedic Surgery, Walter Reed Army Medical Center, Washington, D.C.

ACADEMIC APPOINTMENTS

July 1973 - June 1974

Assistant Professor of Orthopaedic Surgery, Duke University; Attending Staff at Durham VA Hospital; Orthopaedic Consultant at Cabarrus Memorial Hospital, Concord, North Carolina.

Assistant Director of Greensboro Crippled Children's Clinic, Greensboro, North Carolina.

July 1976 - June 1978

Orthopaedic Surgeon with Fischer & Leatherman, P.S.C., involved with Dr. Ken Leatherman in treatment of severe spinal deformities at the Kosair Scoliosis and Spine Treatment Center. Clinical Assistant Professor of Orthopaedic Surgery, University of Louisville School of Medicine, Louisville, Kentucky.

July 1978 - August 1984

Assistant Professor, Director of Pediatric Orthopaedics and Spine Surgery, University of Missouri School of Medicine.

September 1984 - August 1989

Associate Professor, Director of Pediatric Orthopaedics and Spine Surgery, University of Missouri School of Medicine.

September 1989 – October 2000

Professor of Orthopaedic Surgery, Director of Pediatric Orthopaedics and Spine Surgery, University of Missouri School of Medicine.

July 1984 – Present

Director of Spinal Reconstruction Fellowship Program, Division of Orthopaedic Surgery, University of Missouri School of Medicine.

October 2000 – Present

Private Practice – Columbia Orthopaedic Group
Director, Spine Reconstruction Fellowship Program, COG/MU

SCHOLARLY OR ACADEMIC AWARDS AND HONORS

University of Cincinnati 1960-1963
President, Junior Class
Phi Eta Sigma
Omicron Delta Kappa

Duke University School of Medicine 1963-1967
Alpha Omega Alpha (top 10% of senior class—academically)
Mosby Award (Top five seniors)

Richmond Award - Annual Award by American Academy of Cerebral Palsy, for best resident's paper at the Annual Meeting, 1972

North American Traveling Fellowship -- Six weeks tour of Central U.S. and Canada, sponsored by American Orthopaedic Association (the Hall of Fame of Orthopaedic Surgery), April and May 1973--- (the highest award a graduating resident in Orthopaedic Surgery can obtain in the United States).

United States Army Military Service - Army Commendation Medal

Outstanding CME Educator 1983-84 - University of Missouri School of Medicine, Columbia

Royal Thai Orthopaedic Association - Honored foreign member – 1999.

President, Missouri Easter Seal Society, 1983-85 and named Honorary Board Member, September 1985

Piedmont Orthopaedic Association, 2002 – Best paper –“Dual rod bone-on-bone short segment instrumentation for Adolescent Idiopathic Scoliosis.”

Russell A. Hibbs Society – Organizer for International Spinal Deformity Subspecialty Society composed of international traveling fellows, 1999 – present.

Gold Medal from Sytenko Institute for Spine and Joint Pathology, Kharkov, Ukraine, 5/08

Distinguished Alumnus, Oakwood High School, Dayton (Oakwood), Ohio, 10/2012

OPERATIVE PROCEDURES DEVELOPED FOR SPINAL RECONSTRUCTION:

- 1) Reconstruction for Spondyloptosis by the “Gaines Procedure” (resection of L5 and replacement of L4 onto the S1 vertebra)
- 2) Short segment reconstruction of adolescent idiopathic scoliosis by the “short segment bone-on-bone” technique
- 3) Short segment reconstruction for Scheurmann’s kyphosis”
- 4) Anterior vertebrectomy for short segment reconstruction for L1 burst fractures---
- 5) Use of the Kaneda Device for the short segment reconstruction of burst fractures of thoracolumbar junction

RESIDENTS AND FELLOWS IN SPINAL SURGERY EDUCATED DURING MY CAREER:

Orthopaedic Residents doing Spinal Surgery:

Dr. Dennis Abernathie – Columbia, Missouri
Dr. Greg Munson - Orlando, Florida
Dr. Jan Hentsdorf - Fremont, California
Dr. Jeff Parker – Columbia, Missouri
Dr. Eldin Karaikovic – Chicago, Illinois
Dr. John Miles – Columbia, Missouri
Dr. Jeff Baron – Tucson, Arizona
Dr. Tim Burd – Omaha, Nebraska

Fellows doing spinal surgery:

Dr. Tom Walsh – Columbus, Ohio
Dr. Ritsu Shiba---Tokyo, Japan
Dr. Eldin Karaikovic – Chicago, Illinois
Dr. Michael Viau – Mansfield, Ohio
Dr. William Bacon – Provo, Utah
Dr. Surin Thanapipatsiri, Bangkok, Thailand
Dr. Sakarin Wonglertsiri – Bangkok, Thailand
Dr. Sombat Kunakornsawat – Bangkok, Thailand
Dr. Michael Nikolakis---Vienna, Austria
Dr. Wicharn Yingsakmongkol – Bangkok, Thailand
Dr. Chatupon Chotigavanichaya – Bangkok, Thailand
Dr. Hans Moller – Stockholm, Sweden
Dr. Wolfram Brodner – Vienna, Austria
Dr. Wai Mun Yue – Singapore
Dr. Hassan Dashti-Rahmatabadi – Manchester, England
Dr. Lee Haw Chou – Singapore
Dr. Takashi Kusakabe - Sendai, Japan
Dr. Rajat Verma – Manchester, England
Dr. Julian Romagnoli – Buenos Aires, Argentina
Dr. Jwalant S. Mehta – Bristol, England
Dr. Keyi Yu—Beijing, China

PUBLIC AND COMMUNITY SERVICE ACTIVITIES

Medical Advisory Committee -- Missouri Crippled Children's Service

Enhanced Crippled Children's and Scoliosis services at UMMC

Established three monthly satellite clinics for diagnosis and referral of patients to UMMC in: Rolla, 1978, Hannibal, 1979, and Sedalia 1982

Participated in establishing state-wide scoliosis screening in Missouri Public Schools -regional educational programs in Macon, Columbia, and Hannibal

Provided city - wide school nurse training for scoliosis screening, 1978 – 2003.

Community Service – Medical Advisory Committee, Columbia Public Schools, 1980 – present

SCHOLARLY SOCIETIES

Scoliosis Research Society
American College of Surgeons
North American Spine Society
American Orthopaedic Association
American Academy of Orthopaedic Surgeons
American Medical Association
Mid-America Orthopaedic Association
Missouri Orthopaedic Association
Boone County Medical Society

OFFICES HELD

Program Chairman	- Mid-Central Orthopaedic Society 1984
Program Chairman	- Mid-America Orthopaedic Association 1988
Executive Committee	- American Orthopaedic Association 1989
Treasurer	- Mid-America Orthopaedic Association 1989 - 1990
Board of Directors	- Mid-America Orthopaedic Association 1987 – 1993
Board of Directors	- American Orthopaedic Association 1998-1999
Program Chairman	- North American Spine Society 1991
Program Chairman	- Scoliosis Research Society 1991
Board of Directors	- Scoliosis Research Society 1990 - 1991
Membership Chairman-	North American Spine Society 1992
Board of Directors	- North American Spine Society 1992 - 1996
Council on Education	- North American Spine Society 1992

COMMITTEE ASSIGNMENTS

Scoliosis Research Society -- 1990-93 -- Prevalence and Natural History Committee
North American Spine Society – 1992-94 -- Awards and Honors Committee and Finance & Allocations Committee
The American Orthopaedic Association -- 1992-94 -- AOA-Zimmer Annual Travel Awards Competition for Orthopaedic Residents and Fellows
The American Academy of Orthopaedic Surgeons-- 1992- 1996-- Subcommittee on Spine Surgeons
Scoliosis Research Society – 1999 -2003 -- Education Committee, Web Site Committee
Columbia Regional Hospital – 2003-2011 – Infection Control Committee
Scoliosis Research Society - Worldwide Meeting Committee – 2006 - 2008

LICENSURE

1967 - North Carolina

1976 - Kentucky

1978 - Missouri

BOARD CERTIFICATION

1974 American Board of Orthopaedic Surgery

1993 Re-certified - American Board of Orthopaedic Surgery

2003 Permanent, Lifetime Recertification---American Board of Orthopaedic Surgery

HOSPITAL AFFILIATIONS

University of Missouri Hospital and Clinics 1978 to Present

Columbia Regional Hospital 2000 to Present

Boone Hospital 2000 to Present

RESEARCH SUPPORT

"Experimental Evaluation of Spinal Fracture Stabilization Systems", funded by the Orthopaedic Research & Education Foundation for \$17,068. Investigators: Robert W. Gaines, Jr., M.D., William L. Carson, Ph.D., Donald J. Pak, M.S., & William G. Humphreys, M.D. 01/01/84 - 12/31/84.

"Experimental Evaluation of Spinal Stabilization Systems: Comparison of Luque Rectangles and the Kaneda Device", funded by the Orthopaedic Research and Education Foundation for \$10,000. Investigators: C. Craig Satterlee, M.D., Robert W. Gaines, M.D., William L. Carson, Ph.D., Collin Glascock, M.S., and Gordon Groh, M.D. 07/01/85 - 06/30/86.

"Experimental Evaluation of Spinal Fracture Stabilization Systems: Comparison of Transpedicular Screws with Plates and the Kaneda Device with a Transverse Fixator", funded by the Orthopaedic Research and Education Foundation for \$13,374. Investigators: Gordon I. Groh, M.D., Robert W. Gaines, M.D., William L. Carson, Ph.D., Mark Hartley, M.D., and Marcia Arendt, M.S. 07/01/86 - 12/31/86.

"Use of Mersilene Tapes as a Substitute for Wire in Segmental Spinal Instrumentation", research funding from Ethicon, Inc. for \$2,500. Investigators: Robert W. Gaines, M.D., Dennis L. Abernathie, M.D., and Leon Grobler, M.D. 01/01/86 -12/30/86.

"AcroMed Rod/Clamp (ARC) and the AcroMed PDC (PDC) Spine Stabilization Instruments Testing". Contract Grant with AcroMed Corporation for \$5,000. Investigators: William Carson, Ph.D. and Robert W. Gaines, M.D. 06/01/86 - 10/01/86.

"Luque Plate Transpedicular Screw (LPTS) Stabilization Instrument Testing". Contract Grant for \$2,500 with Danek Medical Inc. Investigators: William L. Carson, Ph.D. and Robert W. Gaines, M.D. 06/01/86 - 09/01/86.

"Experimental and Analytical Evaluation of Forces, Moments and Stresses that Occur within Pedicle Screw and Plate (Rod) Spine Fixation Systems when Subjected to Six Different Physiological Loading Conditions and for Different Pedicle Screw Angles, with and without Cross-Bridging, and Different Lamina Pedicle Screw Contact Configurations", funded by the AcroMed Corporation for \$45,737. Investigators: William L. Carson, Ph.D., Robert W. Gaines, M.D., Rodger C. Duffield, Ph.D., and Marcia Arendt, M.S. 05/15/87 - 01/30/88.

"Computer Modeling of the Articulated Human Body for Patient Evaluation and Treatment in Rehabilitation Medicine and Post-Operative Orthopaedics", funded by the Weldon Spring Endowment Fund for \$16,499. Investigators: Xavier J. R. Avula, Ph.D., Robert W. Gaines, M.D. and Paul Kaplan, M.D. 09/01/89 - 08/31/90.

"Monitoring of Somatosensory and Motor Evoked Potentials After Spinal Cord Stimulation", funded by North American Spine Society for \$25,000. Investigators: Siavash S. Haghighi D.V.M., Ph.D., John J. Oro, M.D., Robert W. Gaines, M.D., and Donald H. York, Ph.D. 07/01/92 - 06/30/93.

"Ultrasound of the Hip in Down's Syndrome", funded by University of Missouri Research Council for \$4,050. Investigators: Robert W. Gaines, M.D., Eldin E. Karaikovic, M.D., Judith Miles, M.D., Elizabeth Otto, M.S. 12/30/93 - 12/30/99.

"Morphologic Characteristics of Human Cervical Pedicles", funded by the University of Missouri Research Council for \$3,037. Robert W. Gaines, M.D., Eldin E. Karaikovic, M.D. 05/12/95 - 12/30/99.

PRINCIPAL INVESTIGATOR

FDA Supervised Research Study

FDA "Continued Access Study" Clinical use of the Link SBIII Charite Artificial Disc Prosthesis — January 2003.

Editorial Boards—

Current Orthopaedics----1984 to present

Spine---Reviewer ---1984 – present

SPINE DEFORMITY----2012-present---Associate Editor

BIBLIOGRAPHY

PUBLISHED ARTICLES

Goldner, J.L., and **Gaines, R.W.** "Adult and Juvenile Hallux Valgus: Analysis and Treatment". Orthopaedic Clinics of North America, 6(4):863-887, 1976.

Gaines, R.W., McKinley, L.M., and Leatherman, K.D. "Scoliosis Must be Diagnosed Early." Kentucky Medical Association Journal, 75:231-234, 1977.

McKinley, L.M., **Gaines, R.W.**, Leatherman, K.D. "Adult Scoliosis; Recognition and Treatment." Kentucky Medical Association Journal, 75:235-238, 1977.

McKinley, L.M., Connor, S., **Gaines, R.W.**, and Leatherman, K.D. "Occurrence of Cold Agglutinins in Congenital Scoliosis." Spine, 3(2): 157-159, 1978.

Gaines, R.W. "Scoliosis and Kyphosis: Review and Current Concepts." Missouri Medicine, 77(3):124-134, 1980.

Gaines, R.W., and Leatherman, K.D. "Benefits of Harrington Compression System in Lumbar and Thoracolumbar Scoliosis in Adolescents and Adults." Spine, 6(5): 483-488, 1981.

Gaines, R.W., and McKinley, L.M. "Effect of the Harrington Compression System on the Correction of the Rib Hump in Spinal Instrumentation for Idiopathic Scoliosis." Spine, 6(5): 489-493, 1981.

Ibarra-Isunza, G.C., **Gaines, R.W.** and Leatherman, K.D. "A New Orthosis For Immediate Post-Operative Bracing in Idiopathic Scoliosis." Spine, 6(8): 915-918, 1983.

Watts, C. and **Gaines, R.W.** "Chemonucleolysis. The Treatment of Lumbar Intervertebral Disc Disease by the Intradiscal Injection of Chymopapain." Missouri Medicine, 80(12):735-737 and 742, 1983.

Gaines, R.W. and Ford, T.B. "A Systematic Approach to the Amount of Achilles Tendon Lengthening in Cerebral Palsy." Journal of Pediatric Orthopedics, 4:448-451, 1984.

Gaines, R.W. and Humphreys, W.G. "A Plea for Judgement in Management of Thoracolumbar Fractures and Fracture Dislocations." Clinical Orthopaedics and Related Research, 189:36-42, 1984.

Gaines, R.W., Breedlove, R.F., and Munson, G. "Stabilization of Thoracic and Thoracolumbar Fracture Dislocations with Harrington Rods and Sublaminar Wires." Clinical Orthopaedics and Related Research, 189: 195-203, 1984.

Munson, G., Satterlee, C., Hammond, S., Betten, R., and **Gaines, R.** -- (Major Contributor). "Experimental Evaluation of Harrington Rod Fixation Supplemented with Sublaminar Wires in Stabilizing Thoracolumbar Fracture Dislocations." Clinical Orthopaedics and Related Research, 189: 97-102, 1984.

Gaines, R., York, D.H., and Watts, C. "Identification of Spinal Cord Pathways Responsible for the Peroneal Evoked Response in the Dog." Spine, 9(8): 810-814, 1984.

Gaines, R.W. and Nichols, W.K. "Treatment of Spondyloptosis by Two Stage L5 Vertebrectomy and Reduction of L4 onto S1." Spine, 10(7): 680-686, 1985.

Haibach, H., Farrell, C. and **Gaines, R.W.** "Osteoid osteoma of the spine: Surgically Correctable Cause of Painful Scoliosis." Canadian Medical Journal, 135: 895-899, 1986.

Gaines, R.W. and Abernathie, Dennis L. "Mersilene Tapes as a Substitute for Wire in Segmental Spinal Instrumentation for Children." Spine, 11(9): 907-913, 1986.

Farrell, C., Haibach, H., **Gaines, R.W.** "Desmoplastic Fibroma of Bone." Missouri Medicine, 83(10): 681-683, 1986.

Gaines, R.W. and Frederick, K. J. "Congenital Dislocation of the Hip - Its Detection and Management." Missouri Medicine, 84(3): 146-153, 1987.

Henstorf, J.E., **Gaines, R.W.**, and Steffee, A.D. "Transpedicular Fixation of Spinal Disorders with Steffee Plates." Surgical Rounds for Orthopaedics, 1(3): 35-43, 1987.

Cope, R., Salmon, A., and **Gaines, R.** "Association of a Thoracic Distraction Fracture and an Unusual Avulsion Fracture." Spine, 12(9): 943-945, 1987.

Olson, S.A. and **Gaines, R.W.** "Removal of Sublaminar Wires Following Posterior Spinal Fusion with Supplemented Harrington Distraction Rods." The Journal of Bone and Joint Surgery, 69(A): 1419-1423, 1987.

York, D.H., Chabot, R.J., **Gaines, R.W.** -- (Major Contributor). "Response Variability of Somatosensory Evoked Potentials During Scoliosis Surgery." Spine, 12(9): 864-876, 1987.

Gaines, R.W. & Humphreys, W.G. "Thoraco-lumbar Spinal Injuries: Role of Operative Treatment." Current Orthopaedics, 2(4): 231-235, 1988.

Gaines, R.W. "Congenital Spinal Deformities." Current Orthopaedics, 3(2): 86-90, 1989.

Cope, R., Kilcoyne, R.F., and **Gaines, R.W.** "The Thoracolumbar Burst Fracture with Intact Posterior Elements. Implications for Neurologic Deficit and Stability". Neuro-Orthopaedics, 7(2): 83-87, 1989.

Oro, J., Watts, C., and **Gaines, R.** "Vertebral Body Impactor for Posterior Lateral Decompression of Thoracic and Lumbar Fractures." J. Neurosurg, 70:285-286, 1989.

Cope, R., Henstorf, J.E., **Gaines, R.W.** "A New Interpeduncular Screw Fixation System: Biomechanics, Radiologic Appearances and Complications of the Steffee Spine-plate Implant." Ann Chir, 44: 677-72, 1990.

Carson, W.L., Duffield, R.C., Arendt, M., Ridgely, B.J., and **Gaines, R.W.** "Internal Forces and Moments in Transpedicular Spine Instrumentation: The Effect of Pedicle Screw Angle and Transfixation - The 4R-4Bar Linkage Concept." Spine, 15(9): 893-901, 1990.

Jeffries, J.T. and **Gaines, R.W.** "Pediatric Knee Pyarthrosis Presenting as a Calf Abscess". Missouri Medicine, 88(9): 640-641, 1991.

Gaines, Robert W., Jr., Carson, William L., Satterlee, C. Craig, and Groh, Gordon I. "Experimental Evaluation of Seven Different Spinal Fracture Internal Fixation Devices Using Non-Failure Stability Testing -- The Load-Sharing and Unstable-Mechanism Concepts." Spine, 16(8): 902-909, 1991.

Olson, Steven A., Lepkowski, Hemlata, and **Gaines, Robert W., Jr.** "Magnetic Resonance Imaging Evaluation of the Spinal Canal Following Arthrodesis and Removal of Sublaminar Wires." Spine, 16(8S):339-342, 1991.

Olson, Steven A. and **Gaines, Robert W., Jr.** "Clear Fluid from a Spinal Fracture-Dislocation Does Not Always Mean Dural Tear: A Case Report." Spine, 16(12): 1378-1379, 1991.

Buebendorf, Norman D., Concannon, Matthew J., **Gaines, Robert W.**, and Puckett, Charles L. "Skin Expansion as Preparation for an Opening Wedge Osteotomy of the Mid-Foot in Arthrogryposis." Missouri Medicine, 89(9):671-674, 1992.

Haghighi, Siavash S., York, Donald H., Ebeling, John, Gumerlock, Mary, Oro, John, and **Gaines, Robert**. "Dissociation of Somatosensory and Motor Evoked Potentials in a Patient with an Intramedullary Spinal Tumor" Missouri Medicine : 790-794, November 1992.

Su, Chain F., Haghighi, Siavash S., Oro, John J., and **Gaines, Robert W.** "Backfiring" in Spinal Cord Monitoring; Spine: 17(5); 504-508,1992.

Concannon , M.J., Croll, G.H., Boschert, M.T., **Gaines, R.W.** and Puckett, C.L.. "Free Fibular Transfer in a Growing Individual (Long Term Results). Microsurgery, 14(9):624-627, 1993.

Holt, Benjamin T., McCormack, Thomas, **Gaines, Robert W., Jr.** "Short Segment Fusion -Anterior or Posterior Approach -- The Load-Sharing Classification of Spinal Fractures"; Spine: State of the Art Reviews: 7(2); 189-197, May 1993.

Haghighi, S.S., York, D.H., **Gaines, R.W.**, Oro, J.J.. "Monitoring of Motor Tracts with Spinal Cord Stimulation". Spine 19:1518-1524, 1994.

Lehmer, S.M., Steffee, A.D., **Gaines, R.W.** "Treatment of L5-S1 Spondyloptosis by Staged L5 Resection with Reduction and Fusion of L4 Onto S1". Spine Vol. 19, Number 17, 1916-1925, 1994.

McCormack, T., Karaikovic, E., **Gaines, R.W.** "The Load Sharing Classification of Spine Fractures". Spine Vol.19,Number 15: 1741-1744, 1994.

Galate, J.F., Blue, M.J., **Gaines, R.W.**, "Osteochondroma of the Scapula". Missouri Medicine, 92(2): 95-97, February 1995.

Parker J.W., **Gaines R.W.**, "Long-Term Intravenous Therapy With Use Of Peripherally Inserted Silicone Elastomer Catheters In Orthopaedic Patients". Journal of Bone and Joint Surgery: 77-A,4, 572-577, April/May 1995.

Karaikovic E.E., Daubs M.D., Madsen R.W., **Gaines R.W.**, "Morphologic Characteristics of Human Cervical Pedicles". Spine, Vol.22 No. 5, p.493-500, March 1997.

Parker J.W., Lane J.R., Karaikovic E.E., **Gaines R.W.**, "Successful Short-Segment Instrumentation and Fusion for Thoracolumbar Spine Fractures". Spine, Vol. 25 No. 9, pp1157-1169, 2000.

Gaines, R.W., "The Use of Pedicle-Screw Internal Fixation for the Operative Treatment of Spinal Disorders". The Journal of Bone and Joint Surgery, p1458-1476, Vol.82-A No.10, October 2000.

Lowry, K.J., Tobias, J.D., Kittle, D., Burd, T. and **Gaines, R.W.**, "Postoperative Pain Control Using Epidural Catheters After Anterior Spinal Fusion for Adolescent Scoliosis". Spine, 26; 1290-1293, 2001.

Tobias J.D., **Gaines R.W.**, Lowry K.L., "A Dual Epidural Catheter Technique to Provide Analgesia Following Posterior Spinal Fusion for Scoliosis in Children and Adolescents". Paediatric Anesthesia, 11:199-203, 2001.

Lowry K.J., **Gaines R.W.**, Tobias J.D., "Postoperative Pain Control Using Epidural Catheters Following Short Segment Posterior Spinal Fusion". American Journal of Pain Management, Vol.11 #2, 54-59, April 2001.

Gaines, R.W., Yingsakmongkol, W., Chotigavanichaya, C., Karaikovic, E., "Flatback Deformity – Diagnosis and Treatment". Missouri Medicine, Journal of the Missouri State Medical Association, p137-140, March 2002.

Gaines, R.W. "Anterior Dual Rod Instrumentation and Fusion for Scoliosis – A New Technique For Surgical Treatment of Single Curve Scoliosis". Backtalk, The Scoliosis Association, Inc., A National Information and Support Network; Vol.25, #1, March/April 2002.

Yingsakmongkol, W., Karaikovic, E., **Gaines, R.W.** "The Accuracy of Pedicle Screw Placement in the Thoracic Spine Using the -- Funnel Technique: Part 1. A Cadaveric Study". Journal of Spinal Disorders & Techniques: 15(6): 445-449, 2002.

Viau, M., Tarbox, B., Wonglertsiri, S., Karaikovic, E., Yingsakmongkol, W., **Gaines, R.W.**, "Thoracic Pedicle Screw Instrumentation Using the -- Funnel Technique: Part 2. Clinical Experience". Journal of Spinal Disorders & Techniques: 15(6): 450-453, 2002.

Karaikovic, E., Yingsakmongkol, W., Griffiths, H., **Gaines, R.W.**, "Possible Complications of Anterior Perforation of the Vertebral Body Using Cervical Pedicle Screws" *Journal of Spinal Disorders & Techniques*: Vol.15 No. 1. pp.75-78, 2002.

Brodner, W., Yue, W.M., Moller, H., Hendricks, K., Burd, T., **Gaines, R.W.**, "Short Segment Bone-on-Bone Instrumentation for Single Curve Idiopathic Scoliosis", *Spine*: Vol 28; Number 205;pps224-s233, 2003.

Yue, W.M., Brodner, W., **Gaines, R.W.**, "Abnormal Spinal Anatomy in 27 Cases of Surgically Corrected Spondyloptosis", *Spine* : Vol30; Number 65; ppss22-s26, 2005

Gaines, R.W., "L5 Vertebrectomy for the Surgical Treatment of Spondyloptosis – 30 Cases in 25 years", *Spine*; Vol 30; number 65; pps s66-s70, 2005.

Kusakabe, T, Mehta, J. and Gaines, R.W., "6 year mean Follow-Up of the first 45 Consecutive cases of "short segment bone-on-bone" reconstruction of single curve adolescent idiopathic scoliosis, *SPINE*, Volume 38, p 1-8, July, 2011.

CHAPTERS IN BOOKS

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VanderLaan, V. and **Gaines, R.W.**: "The Spine and Golf." In *The Spine in Sports*. Hanley & Belfus, Inc., Philadelphia, p. 207-217, 1990.

Gaines, Robert W. Jr., and Nichols, W. Kirt: "Treatment of Lumbosacral Spondyloptosis by Spondylectomy and Reduction", In *The Textbook of Spinal Surgery*. J. B. Lippincott Company, Philadelphia, p. 593-603, 1991.

Pool, Henry A. and **Gaines, Robert W., Jr.**: "Biomechanics of Transpedicular Screw Spinal Implant Systems", In *SPINE: State of the Art Reviews*. Hanley & Belfus, Inc., Philadelphia. Vol.6, No.1, p.27-43, 1992.

Gaines, R.W. and Humphreys, W.G: "Spondylolisthesis". In *Operative Orthopaedics*. J.B. Lippincott Company, Philadelphia, p. 2005-2016, 1988. Second Edition 1993.

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Gaines, Robert W., Jr.: "Idiopathic Scoliosis", in *Spine Care: Operative Treatment* Mosby Publishing, St. Louis, chapter 110, 1995.

Gaines, Robert W., Jr.: “Surgical Treatment of Idiopathic Scoliosis”, in Spine Care: Operative Treatment. Mosby Publishing, St. Louis, chapter 111, 1995.

Gaines, Robert W., Jr.: “The L5 Vertebrectomy Approach for the Treatment of Spondyloptosis”, in Lumbosaral and Spinopelvic Fixation, Lippincott-Raven Publishers, Chapter 46, 1996.

Gaines, Robert W., Jr.: “The L5 Vertebrectomy Approach for the Treatment of Spondyloptosis”, in The Textbook of Spinal Surgery. Lippincott-Raven Publishing, Philadelphia, chapter 77, 1997.

Karaikovic, E.E., Kaneda, K., Akbarnia, B.A., **Gaines, R.W.:** “Kaneda Instrumentation for Spinal Fractures”, in The Textbook of Spinal Surgery. Lippincott-Raven Publishing, Philadelphia, Chapter 101, 1997.

Karaikovic, E.E., **Gaines, R.W.:** “Load-Sharing Classification: Preventing Implant Failure Following Surgical Treatment”, in Revision Spine Surgery. Mosby Publishing, Philadelphia, Chapter 25, 1998.

Karaikovic, EE, **Gaines, RW:** “Load-Sharing Classification System” in Spine Surgery Surgical Techniques and Medical Treatment. Quality Medical Publishing, St. Louis, Missouri; Chapter 5, pp:111-123, 1999.

Miles, JD, **Gaines, RW:** “Spondylolisthesis” in Chapman’s Orthopaedic Surgery, Third Edition, Lippincott Williams & Wilkins, Philadelphia, PA; Chapter 162, pp:4143-4159, 2001.

Gaines, R.W.: “Treatment of Spondyloptosis by L5 Vertebrectomy With Reduction of L4 onto S1 – A 20-year Review” in Severe Spondylolisthesis, Harms, J., Editor; Springer Publishing, Chapter 12, pp.137 – 154, 2002.

Gaines, R.W. : “International Evaluation of Dual Rod Instrumentation For Spinal Deformity – 314 Cases From 7 Centers” Modern Anterior Spine Surgery, L. Lenke, Editor

Gaines, R.W., Mehta, J., Romagnoli, J.: “Short Segment Bone-on-Bone Correction of Mild - Moderate Adolescent Idiopathic Scoliosis,” new/3rd edition of Textbook of Spinal Surgery , submitted and accepted. Publication date 6/2012.

Gaines, R.W., Romagnoli, J. : “L5 Vertebrectomy with Reduction of L4 onto S1 for Treatment of Spondyloptosis – 40 Cases in 30 Years” new/3rd edition of Textbook of Spinal Surgery, submitted and accepted. Publication date, 6/2012.

Gaines, R.W., Mehta, J.: “Short Segment Anterior Instrumentation and Fusion for Scheuermann’s Kyphosis – 13year Review “ new/3rd edition of Textbook of Spinal Surgery, Publication date, 6/2012.

BOOK REVIEWS

Annals of Surgery, "Surgery of the Spine", Rathke & Schlegel. Lippincott Published October 1980.

Letters to Editor: **Spine** - April 1, 2001; 26,840-844,"Load-Sharing Spine Fracture Classification".

EXHIBITS

"Use of Ultraviolet Light in Orthopaedic Operating Suites", American Academy of Orthopaedic Surgeons Meeting, January 1975.

"Identification and Orthotic Treatment of Idiopathic Scoliosis", Louisville, Kentucky Medical Association, September 1977.

"New Developments in Scoliosis Bracing - Conservative and Post-operative Care", American Academy of Orthopaedic Surgeons, Dallas, January 1978.

"Levator Scapulae Transfer for Shoulder Disability Following 11th Nerve Transection", American Academy of Orthopaedic Surgeons, San Francisco, February 1979.

"A New Orthosis for Post-operative Scoliosis Bracing", American Academy of Orthopaedic Surgeons, Las Vegas, February 1981.

"Experimental and Clinical Benefits of Supplementing Harrington Distraction Rods with Sublaminar Wires in the Management of Thoracolumbar Fracture Dislocations", American Spinal Injury Association Meeting, New York City, April 1982; Scoliosis Research Society, Denver, September 1982.

"Use of Mersilene Tapes as a Substitute for Wire in Segmental Spinal Instrumentation for Children", Scoliosis Research Society, Coronado, California, September 1985.

"Comparison of Harrington Rods Alone, Harrington Rods with Edwards Sleeves, and Harrington Rods with Sublaminar Wires - Experimental Investigation in a Calf Spine Model", Orthopaedic Research Society 32nd Annual Meeting, New Orleans, Louisiana, February 1986. (Poster Presentation)

"Biomechanics of Thoracic and Thoracolumbar Fractures - A Comprehensive Re-evaluation", American Academy of Orthopaedic Surgeons Fifty-Third Annual Meeting, New Orleans, Louisiana, February 1986.

"Management of Spinal Fractures and Fracture/Dislocations with Steffee Plates", North American Spine Society Meeting, Banff, AB, Canada, June 1987.

"Comparing Mersilene Tape (M.T.) and Stainless Steel Wire (S.S.W.) During Segmental Spinal Instrumentation - Evaluation of the Macroscopical and Microscopical Tissue Response in the Baboon

(Papio Ursinus)", Scoliosis Research Society 22nd Annual Meeting, Vancouver, BC, Canada, September 1987.

"Vertebral Body Impactor for Posterior Lateral Decompression of Thoracolumbar Fracture," AANS/CNS Joint Section on Spinal Cord Disorders Meeting, Oro, J.J., Watts, C., Gaines, R., Phoenix, Arizona, February 1988.

"A Classification to Predict Screw Breakage when using Short Segment Instrumentation", AAOS Meeting, San Francisco, California, February 16, 1993.

"Technique for Discectomy and Epidural Catheter Placement with the Kaneda Anterior Scoliosis System": 35th Annual Scoliosis Research Society Meeting, Cairns, Australia, October 2000.

"Short Segment Bone-on-Bone Surgical Treatment of Adolescent Idiopathic Scoliosis using KASS" – Scoliosis Research Society – Seattle, Washington - September 2002.

"Short Segment Bone-on-Bone Instrumentation for Single Curve Idiopathic Scoliosis" Poster presented at the International Meeting on Advanced Spine Techniques – Bermuda, July 2004.

"Local Bone in Surgical Management of Difficult Spinal Reconstruction", AAOS , San Francisco, California, 2004.

PAPERS PRESENTED

"Analysis of Hallux Valgus Deformity and Osteotomy of Proximal Phalanx of Great Toe", Orthopaedic Section, Southern Medical Association, November 1972.

"Long Term Results of Upper Extremity Surgery in Cerebral Palsy", American Academy of Cerebral Palsy Meeting, December 1972.

"Etiology, Pathological Anatomy and Classification of Hammer Toes", American Academy of Orthopaedic Surgeons Meeting, January 1974.

"Conservative Treatment of Club Foot", Howard University Symposium on Pediatric Orthopaedics, June 1975.

"Management of Upper Extremity and Cerebral Palsy", Howard University Symposium on Pediatric Orthopaedics, June 1976.

"Use of the Low Profile Scoliosis Orthosis for the Management of Decompensated Primary Lumbar Idiopathic Scoliosis", Society of Military Orthopaedic Surgeons Meeting, November 1976.

"Osteotomy of the Greater Trochanter in THR, Yes or No?", Society of Military Orthopaedic Surgeons Meeting, November 1976.

"The Debit Side of Porous Coated Implants - A Report of Two Failures", Society of Military Orthopaedic Surgeons Meeting, November 1976.

"Hypotensive Anesthesia for Scoliosis Surgery", Piedmont Orthopaedic Society, May 1977.

"Effect of Harrington Compression System on the Rib Hump in Spinal Instrumentation for Idiopathic Scoliosis", Scoliosis Research Society Meeting, Hong Kong, October 1977.

"Use of the Compression System in Lumbar and Thoracolumbar Scoliosis", Orthopaedic Section, Southern Medical Association, Atlanta, November 1978.

"Benefits of the Harrington Compression System in Lumbar and Thoracolumbar Idiopathic Scoliosis in Adolescents and Adults", Southern Medical Association Meeting-Orthopaedic Section, November 1978.

"Spine in Sports", Second Annual Missouri Sports Medicine Symposium, August 1979.

"Trends in Post-Operative Immobilization for Scoliosis", American Academy of Orthopaedic Surgeons Advanced Course on Scoliosis, Sea Island, December 1979.

"A New Orthosis for Immediate Post-Operative Bracing in Idiopathic Scoliosis", American Academy of Orthopaedic Surgeons, Las Vegas, February 1982.

"New Orthosis for Post-Operative Bracing for Idiopathic Scoliosis", Pediatric Orthopaedic Study Group, San Diego, April 1982.

"Effects of Harrington Instrumentation with Sublaminar Wiring in the Rehabilitation Process of Patients with Traumatic Thoracolumbar Fracture-Dislocation and Spinal Cord Injury", American Spinal Injury Association Meeting, New York City, April 1982.

"Experimental and Clinical Benefits of Supplementing Harrington Distraction Rods with Sublaminar Wires for Thoracolumbar Fractures", Resident Award, Mid-Central States Orthopaedic Society, Jackson Hole, Wyoming, June 1982.

"Treatment of Spondyloptosis by Two Stage L5 Vertebrectomy and Reduction of L4 onto S1", Piedmont Orthopaedic Society, Denver, May 1982; Second Annual Kosair-Children's Spine Symposium, Louisville, Kentucky, 1982; First Annual Combined Meeting of the Pediatric Orthopedic Society and the Pediatric Orthopedic Study Group, Charlottesville, Virginia, May 1983.

"Experimental Evaluation of Harrington Rod Fixation Supplemented with Sublaminar Wires in Stabilizing Thoracolumbar Fracture Dislocations", American Spinal Injury Association Meeting, New York City, April 1982; Seventeenth Annual Meeting of the Scoliosis Research Society, Denver, September 1982; Annual Meeting of the Piedmont Orthopaedic Society, Sea Island, May 1983.

"Identification of Spinal Cord Pathways Responsible for the Peroneal Evoked Response in the Dog", Second International Symposium on Clinical Use of Evoked Potentials, Cleveland, October 1982; Third Annual Kosair-Children's Spine Symposium, Louisville, December 1983.

"Review of Treatment of Spondyloptosis," Piedmont Orthopaedic Society, Kiawah Island, May 1984.

"Spinal Stabilization: Principles and Practice - Insuring Quality", American Spinal Injury Association. Atlanta, Georgia, April 1985

"Use of Mersilene Tapes as a Substitute for Wire in Segmental Spinal Instrumentation for Children," Kosair Scoliosis Meeting, Louisville, Kentucky, September 1984; Segmental Spinal Instrumentation Study Group Meeting, Dallas, Texas, April 1985; Twentieth Annual Meeting of the Scoliosis Research Society, Coronado, California, September 1985.

"Two-stage Vertebrectomy of L5 and Reduction of L4 on the Sacrum for Spondyloptosis", Russell Hibbs Society, Kiawah Island, South Carolina, May 1986.

"Improving Quality of Spinal Internal Fixation - Evolution Toward 'Ideal Immobilization' - A Biomechanical Study", Combined Meeting of the Scoliosis Research Society and the British Scoliosis Society, Hamilton, Bermuda, September 1986.

"Transpedicular Fixation of Spinal Disorders with Steffee Plates", Missouri State Orthopaedic Association, Lake Ozarks, Missouri, June 1987.

"The Use of Steffee Plates in Degenerative Problems" and "Steffee Plates in Fractures", Seventh Annual Kenton D. Leatherman Spine Symposium. Louisville, Kentucky, November 1987

"Experimental Stabilization Evaluation of Seven Different Spinal Fracture Internal Fixation Devices under Non-Failure Laboratory Testing," and "Experimental and Finite Element Analysis of the Internal Forces and Moments in Posterior Spine Stabilization Instrumentation -- The Effect of the Pedicle Screw Angle, Transfixation, and Type of Implant-Vertebra Attachment" NASS - ASTM Workshop on Spinal Instrumentation, Kansas City, Missouri, May 1989.

"Internal Forces and Moments in Transpedicular Spine Instrumentation -- The Effect of Pedicle Screw Angle and Transfixation -- The 4R-4bar Linkage Concept," Scoliosis Research Society, Amsterdam, The Netherlands, September 1989.

"Treatment of Spondyloptosis by Two Stage L5 Vertebrectomy and Reduction of L4 Onto S1", Scoliosis Research Society 25th Annual Meeting, Minneapolis, Minnesota, September 1991.

"Instrumentation Anteriorly and Posteriorly for Idiopathic Scoliosis", Fifth Annual Snowbird With The Spine Center, University of South Florida, Snowbird, Utah, January 1993.

"The Load-Sharing Classification", The 28th Annual Scoliosis Research Society Meeting, Dublin, Ireland, September 1993.

"Successful Short Segment Instrumentation for Spinal Fractures - Over Two Year Follow-Up", 67th Annual Meeting of the Japanese Orthopaedic Association, Sendai, Japan, May 1994.

"Short Segment Instrumentation and Fusion for Thoracolumbar Spine Fracture", Scientific Program - 1996 Russell Hibbs Society Meeting, March 1996.

Anterior Fixation for Trauma/Tumor and Scoliosis with the Kaneda Device: and The Low and High-Grade Spondylolisthesis Reduction and Stabilization with VSP. Both talks presented at the International Meeting on Advanced Spine Techniques in Bermuda, July 10-13, 1997. Sponsored by Scoliosis Research Society and Medical Education Resources, Inc.

"Successful Short Segment Instrumentation and Fusion for Thoracolumbar Spine Fracture - A Consecutive 4 ½ Year Series" 1st East European Spinal Trauma Meeting in Czech Republic, October 3-5, 1997.

"L5 Vertebrectomy for Spondylolisthesis", The Load Sharing Classification" and "Short Segment Instrumentation for Spinal Fractures": Big Time Spine at LAX Meeting January 9, 1999.

"Short Segment Anterior Surgical Approaches for Idiopathic Scoliosis", the 12th International Spine Meeting in Cleveland, Ohio, February 1999.

"Kaneda Anterior Scoliosis System (KASS)", IMAST Meeting; Scoliosis Research Society, Sorrento, Italy. May 1999.

"L-5 Vertebrectomy for Spondyloptosis" Big Time Spine at Ocean Reef, Florida, November 17, 1999.

"Use of the Funnel Technique for Thoracic Pedicle Fixation", "The Use of Local Bone for Pedicle Screw Based Surgical Repair of Degenerative Spinal Disorders", and Spondyloptosis Correction by L5 Vertebrectomy with the Reduction of L4 onto S! - A Twenty year Review of 26 Cases": Down Under with Big Time Spine Meeting in Coolumb, Australia May 25, 1999.

"Short Segment Bone-on-Bone for Idiopathic Scoliosis", Missouri State Ortho. Association, Branson, Missouri --- June 2000.

"Epidural Catheters for Pain Relief from Anterior Approach", 11th Isola Group Meeting, Minneapolis, Minnesota, August 2000.

"Dual rod short segment instrumentation for Scoliosis and Kyphosis", Scoliosis Research Society, Australia – October 2000.

"Isola for ORIF of spinal fractures and fracture/dislocations above T9" Isola Meeting, Phoenix, Arizona – January 2001.

"Use of iliac screws for management of adult spinal deformity" – 13th Isola Study Group – Washington D.C. – August 2001.

“Short segment surgery for spinal deformity” – Piedmont Orthopaedic Society – Bermuda – May 2002.

VISITING SCHOLAR

Invited Lectures or Visiting Professorships

"The Current State of Anesthesia and Blood Replacement in Scoliosis Surgery," AAOS Advanced Course on Scoliosis, Sea Island, December 1979

Duke University, Spinal Cord Monitoring, April 1980

University of Oklahoma, Spine Surgery, Cerebral Palsy and Hand Surgery, April 1980

Orthopaedic Association, Corpus Christi, Texas, November 1980

Carrick Arthritis Symposium, Springfield, Missouri, September 1981

St. Louis Shriners' Hospital, St. Louis, Missouri, A Day in Scoliosis, April 1982

"New Advances in Scoliosis Management", Missouri Medical Association, Orthopaedic Section, April 1982

Cardinal Glennon Hospital for Crippled Children, St. Louis, Missouri, Scoliosis Symposium, October 1982

Fitzsimons Army Medical Center, Aurora, Colorado, 12th Annual Symposium of Children's Orthopedics, January 1984

"Chemonucleolysis . . . a Therapeutic Choice," University of South Florida, Department of Orthopaedic Surgery, Tampa, Florida, January 1984

"Thoracic and Thoracolumbar Spine Fractures - Updated 1984", University of South Florida, Tampa, Florida, March 1984

South African Orthopaedic Association, Featured speaker for Scoliosis Update Program, Pretoria, South Africa, May 1984

University of Missouri - Kansas City School of Medicine, Kansas City, Missouri, September 1984

"Reduction Versus Fusion in Situ for Severe Spondylolisthesis"; University of Miami's Sixth Annual Post Graduate Course on Advances in Spinal Surgery. Bal Harbour, Florida, November 1984

"Nonsurgical Management of Disorders of the Lumbar Spine", American College of Surgeons 70th Annual Clinical Congress. San Francisco, California, October 1984

"Cord Monitoring; Unstable Fracture-Dislocation T10-L1; Harrington in Adolescent Idiopathic Scoliosis and Surgery of Spondyloptosis." Debate: "Harrington Rod Instrumentation vs. Luque", R.W. Gaines, M.D. vs. E.R. Luque, M.D., Spinal Deformities Seminar. Bal Harbour, Florida, November 1985

"Congenital Scoliosis", Pediatric Extremity and Spinal Deformities: Principles and New Trends Symposium. St. Louis, Missouri, April 1986

"Comparative Biomechanics of Implants Used for Thoracolumbar Fixation" and "Use of the Steffee Plates for Thoracolumbar Injuries", Problem Fractures Course. Louisville, Kentucky, October 1986

"Comparison of Posterior Fixation Devices for Thoracolumbar Fractures", Cleveland Research Institute. Cleveland, Ohio, October 1986

"Surgical Treatment of Thoracolumbar Fracture-Dislocations with Steffee Plates", Sixth Annual Kenton D. Leatherman Spine Symposium. Louisville, Kentucky, November 1986

"Metastatic Involvement of the Spine: Where We are and Where We Need to Be", St. John's Regional Health Center. Springfield, Missouri, November 1986

"Biomechanics and Pathophysiology of the Lumbar Spine", "Spinal Cord Monitoring, Fusion Techniques of Scoliosis" and "Unstable Thoracolumbar Spine and Operative Indications", Surgery of the Spine: State of the Art Symposium, St. Louis University Medical Center. St. Louis, Missouri, April 1987

Thomas Jefferson University, "Basic science and clinical use of pedicle screws" Philadelphia, Pennsylvania, May 1987

"Biomechanics and Pathophysiology of the Lumbar Spine" and "Biomechanics of Spinal Implants", Luque Peduncular Fixation Course. Indianapolis, Indiana, June 1987

"Biomechanics of Spinal Fixation Devices" and "Use of Steffee Plates", Fracture Seminar. Portland, Oregon, September 1987

"Congenital Scoliosis: Assessment and Treatment", "Spinal Cord Monitoring", and "Mersilene Sublaminar Tapes", Spinal Update Symposium. Oswestry, England, September 1987

"Biomechanics VSP Plates and Transpedicular Screws" and "Treatment of Spondyloptosis by Two Stage L5 Vertebrectomy and Reduction of L4 on to S1", The Unstable Spine Seminar/Workshop. Amsterdam, Holland, October 1987

"Steffee Spinal Pedicular Screws Workshop". Hull, England, March 1988

"Brace Treatment of Thoracolumbar Fractures" and "Instrumentation Techniques in Thoracolumbar Fractures", Orlando Spine Trauma Symposium. Orlando, Florida, June 1988

"Current State of the Art of Scoliosis - 1988, State of the Art in Spondylolisthesis - Low Grade to High Grade - 1988, "and "Treatment of Spinal Fractures with Steffee Plates", The Gay Reese Lectureship, Columbus, Ohio, November 1988

"Treatment of Acute Fractures of the Thoracolumbar and Lumbar Spine with Steffee Plates" and "Treatment of Spondylolisthesis - State of the Art 1988", Columbia Orthopaedic Days, Columbia, South Carolina, November 1988

"Two-Stage Spondylectomy for Spondyloptosis", 8th Annual Lee T. Ford Cervical, Thoracic, and Lumbar Spine Symposium, St. Louis, Missouri, December 1988

"Spinal Instrumentation: Biomechanics", Spine Plate Workshop: Theory and Application of Spinal Instrumentation using Plates and Screws", San Antonio, Texas, April 1989

"Spinal Biomechanics - Load-sharing as a Fundamental" and "Orthopaedic Management of Cerebral Palsy Patients", University of Louisville, Department of Orthopaedics Seminar, Louisville, Kentucky, May 1989

"Scoliosis Screening", First Annual Statewide School Nurse Conference, Columbia, Missouri, July 1989

"Mersilene Tapes for Scoliosis", Seventeenth Nicholas Giannestras Scoliosis Symposium, KAT Hospital, Athens, Greece, December 1989

"Biomechanics of Internal Spinal Fixation", Interurban Neurosurgical Society 1990 Annual Meeting, Chicago, Illinois, March 1990

"Fractures of the Low Lumbar Spine" (Invited Moderator); "Steffee Pedicle Fixation System: Degenerative Spondylolisthesis Reduction" (Invited Course Director); Fracture Table (Invited Participant), Scoliosis Research Society and North American Spine Society Advanced Pedicle Fixation of the Lumbar Spine Symposium, Dallas, Texas, March 1990

"Techniques of Fusion of the Lumbar Spine (including anterior instrumentation)", Arthrodesis and Instrumentation of the Cervical and Lumbar Spine Symposium, London, England, September 1990

"The Place of Spinal Fusion with Stabilization in the Treatment of Serious Spinal Disorders" and "Spinal Stenosis -- Diagnosis and Treatment", Carrick Symposium, Springfield, Missouri, September 1990

"Clinical Perspectives on Fractures", Newer Techniques of Spinal Instrumentation VSP Plates and Screws, Kaneda, and Isola Advanced Spinal Surgery Seminar, Baltimore, Maryland, October 1990

"Biomechanics of Instrumentation for Spine Fracture (Posterior vs. Anterior)" and "Technique of Kaneda Instrumentation", Spinal Trauma Seminar: A Day with Professor Kaneda, San Diego, California, April 1991

"Fractures of the Low Lumbar Spine: How Successfully Does the System Reduce and Maintain Reduction of the Fracture? What are the Results and Complications? (Moderator) and "Treatment of Degenerative Spondylolisthesis: Is Fusion Necessary? Is Instrumentation Necessary? When is Reduction Indicated?" (Panel Participant), Scoliosis Research Society and North American Spine Society Combined Meeting, Phoenix, Arizona, May 1991

"Spinal Column and Cord Consideration: Biomechanics" Surgical Stabilization of Spinal Fractures State-of-the-Art Workshop, St. Louis, Missouri, May 1991

"KANEDA: Application and Complications" and "Fractures", Segmental Spinal Instrumentation Course, Tucson, Arizona, November 1991

"Pedicule Screws for Spinal Reconstruction", "L5 resection for Spondyloptosis", Department of Orthopaedic Surgery, Siriraj Hospital, Mahidol University, Bangkok, Thailand, November 1991

"Spine Trauma", "The Degenerative Spine", and "Scoliosis", First Annual Spine Symposium, Nashville, Tennessee, March 1992

"Biomechanical Considerations", and Spondyloptosis", Lumbar Spine Segmental Internal Fixation Course, San Antonio, Texas, April 1992

"Fractures of the Low Lumbar Spine" (Panel moderator), and "When and How Should You Use Pedicle Screws in Your Practice?" (Panel moderator), Pedicle Fixation of the Lumbar Spine Course, Phoenix, Arizona, April 1992

"Treatment of Degenerative Spinal Conditions with VSP Plates and Autograft" and Treatment of Spine Fractures with Short Segment Instrumentation by Anterior or Posterior Approach - Loading Sharing Classification of Spinal Fractures", Third Annual Colorado Spine Symposium, Denver, Colorado, November 13, 1992.

"Anterior Spinal Surgical Techniques", Spine Symposium, Iowa City, Iowa, December 11, 1992.

"Anterior Approach Decompression, Fusion and Instrumentation: Results of Treatment", A Comprehensive Approach to Spinal Surgery Symposium, Arizona Health Sciences Center, March 16, 1993.

"Anterior Approach Decompression, Fusion and Instrumentation: Results of Treatment", A Comprehensive Approach to Spinal Surgery, Abu Dhabi, United Arab Emirates, April 20, 1993.

"A Classification to Predict Screw Breakage when using Short Segment Instrumentation with Pedicle Screws -- The Load-Sharing Classification of Spinal Fractures", (Panel Moderator), Pedicle Fixation of the Lumbar Spine Meeting, sponsored by The Scoliosis Research Society and North American Spine Society, Orlando, Florida, May 13, 1993.

"The Treatment of Spondyloptosis by Two Stage L5 Vertebrectomy and Reduction of L4 onto S1", The Sixth Snowbird Spine Symposium, Snowbird, Utah, January 13, 1994.

"Surgical Treatment of Scoliosis", "Spondyloptosis", Walter Reed Hospital, Bethesda, Maryland, April 28, 1994.

"L5 Vertebrectomy", Duke University ; 1995 Ruderman Lectureship, April 30, 1995.

"Spondylolisthesis/Spondyloptosis", The Third Annual Spine Symposium, Sponsored by the University of Mississippi, August 10-13, 1995.

"The Management of Isthmic and Degenerative Spondylolysis and Spondylolisthesis"; Case Western Reserve University , November 17 - 19, 1995.

"Acute Thoracolumbar Fractures", Anterior Column Support of the Thoracolumbar Spine Symposium, New York City, New York, December 7-9, 1995.

"Short Segment Instrumentation and Fusion for Thoracolumbar Spine Fracture" at the 37th Annual Scientific Meeting in Chulalongkorn University Hospital, Bangkok, Thailand, March 1996.

"Load-Sharing Classification", Walter Reed Hospital, Bethesda, Maryland, May 1996.

"Spine Fracture Classifications", 2nd European Symposium on Spinal Fractures and Tumors in Madrid, Spain, October, 1996.

"Short Segment Stabilization of Spinal Fractures", 19th Singapore Orthopaedic Association Meeting in Singapore, November 1996.

"Spondylolisthesis" SOCON User Meeting in Tuttlingen, Germany, January 16, 1997.

"Short Segment Instrumentation" Japanese Orthopaedics Associations Meeting in Tokyo, Japan (via AcroLink) April 1997.

"Anterior Decompression and Stabilization for Lumbar Burst Fractures", Controversies in the Management of Pediatric and Adult Trauma, Deformity and Spondylolisthesis Meeting sponsored by GICD in St. Louis, Missouri, May 1997.

Spondyloptosis "The Gaines Procedure", Clinical Perspectives in Spine sponsored by the University of Arizona Health Science Center, Tucson, Arizona (Via AcroLink) May 1997.

"Short Segment Instrumentation for Spinal Fractures and Fracture Dislocations: A Consecutive 4 ½ Year Series", 3rd Annual Advanced Kaneda Course, New Orleans, March 1998.

"Advances in Spinal Cord Surgery", 10th Annual Meeting – American Society of Neurophysiological Monitoring, Denver, Colorado, April 1999.

“KASS for Idiopathic Scoliosis”. The Big Time Spine at Ocean Reef, Florida November 17, 1999.

“Short segment instrumentation”, “Dual rod short segment anterior instrumentation”, Fusion and instrumentation in spondylolisthesis: When and how”, Disturbance of spinal rhythm in the diagnosis of lumbar spinal instability”, “Funnel technique for pedicle screw insertion”
the 4th Combined Meeting of WPOA and The 21st Annual Meeting of the Royal College of Orthopaedic Surgeons of Thailand and the Thai Orthopaedic Association; October 1999, Bangkok, Thailand.

“Anterior Dual Rod Instrumentation for Scoliosis – American Experience”; San Francisco, California, January 2000.

“Treatment of Spondyloptosis”, Chiba University, Department of Orthopaedic Surgery, School of Medicine, Chiba, Japan, April, 2000.

“Short Segment Treatment of Spinal Fractures and Fracture/Dislocations”, Hokkaido University School of Medicine, Sapporo, Japan, April 2000.

“Anterior Spinal Instrumentation for Adolescent Idiopathic Scoliosis”, “High-grade Spondylolisthesis – Bone-on-Bone”, 3rd Annual Spine Symposium, Newport Beach, California, April 2000.

“Treatment of High-Grade Spondylolisthesis in Adult & Pediatric Orthopaedics”, Colorado Springs, Colorado, June 2000.

“Short segment instrumentation for the treatment of spinal fractures and fracture dislocations: A consecutive 4 ½ year review” Austrian Spinal Society, Vienna, Austria November 2000.

“Bone-on-Bone reconstruction for Scoliosis”, Debate: “Reduction is essential for high-grade spondylolisthesis” – 8th International Isola Meeting - Rome, Italy – February 2001.

“Reduction is essential for high-grade spondylolisthesis” – invited debate – FOSA Meeting – San Francisco, California – March 2001.

“Short segment instrumentation for Idiopathic Scoliosis and Kyphosis”, Instructional course lecture – “Diagnosis and treatment for Spondylolisthesis”, “Management of Scoliosis and stenosis combined” - IMAST Meeting – Bahamas – July 2001.

“Funnel technique for pedicle screw application” “KASS for scoliosis” “Short segment bone-on-bone” – 57th Annual Orthopaedic Congress – Athens, Greece – September 2001.

“Short segment for idiopathic scoliosis and Scheuermann’s kyphosis with dual rod instrumentation” – Scoliosis Research Society - Cleveland, Ohio - September 2001.

“Short segment fusions for scoliosis and kyphosis” – “Spondyloptosis resections” – Bone-on-bone reconstruction for spinal diseases” – Spinal Education Summit – Palm Springs, California – November 2001.

“Short segment instrumentation/fusion for TL trauma” “High-grade spondylolisthesis:staged reconstruction” “Short segment bone-on-bone surgery for deformity with dual rod implants” – Spine 2002: Palm Springs Update Conference – Cedar Sinai Medical Center – Palm Springs, California – March 2002.

“Short segment surgery for scoliosis” Spinal Reconstruction Program, Nottingham, England – April 2002.

“Short segment bone-on-bone surgical treatment of adolescent idiopathic scoliosis using KASS” “Short segment dual screw/rod anterior fusion – A new operative approach for Scheuermann’s kyphosis” “Results of surgical treatment for thoracic spine fractures above T9 by posterior Isola spinal instrumentation and fusion” – IMAST Meeting – Montreux, Switzerland – May 2002.

“Short segment bone-on-bone surgery for spinal deformity with dual rod instrumentation” – International Research Society of Spinal Deformities Meeting -- Athens, Greece – May 2002.

“Update on FDA trial of Link SB Charite III Intervertebral Disc Prosthesis” Link Spine Group Meeting – Orlando, Florida - September 2002.

“Clinical evaluation of the scoliosis patient” Scoliosis Research Society , Seattle, Washington – February 2003.

“High Grade Spondylolisthesis: Staged Reconstruction” Second Annual Symposium on Current Concepts in Spinal Disorders, LaQuinta, California – February 28th , 2003.

“Etiology and treatment of spondyloptosis” FOSA Meeting, Scoliosis Research Society section, New Orleans, February 2003.

“Bone fusion without bone graft: Anterior and posterior approach” 15th Annual Texas Spine Society Meeting. Austin, Texas, April 2003.

“Clinical evaluation and treatment of the scoliosis patient” Family Practice Symposium, University of Missouri , May 2003.

“Funnel Technique” of insertion of thoracic pedicle screws. Spine 2003 Meeting, Fountain Valley Regional Hospital and Medical Center, Newport Beach, California; May 2003.

“Short segment bone-on-bone surgery for spinal deformity with dual rod Instrumentation” 10th International Meeting on Advanced Spine Techniques; Rome, Italy, July 2003.

“The Pediatric Spine” and “Scoliosis” DuPont Hospital for Children, Wilmington, Delaware, February 2004.

“Short segment bone-on-bone instrumentation for single curve Idiopathic Scoliosis” Federation of Spine Associations Meeting, San Francisco, California, March 2004.

“Short segment bone-on-bone surgical reconstruction with dual rod implants for idiopathic scoliosis” Latin American Forum, Spinal Surgery Program, Miami, Florida, June 6, 2004.

“Short segment fusion for spinal deformity” Grand Rounds at Northwestern University Feinberg School of Medicine, Chicago, Illinois, September 2004.

“Short segment bone-on-bone instrumentation” The Combined Congress of Spine & Pediatric, Orthopaedic Sections, APOA, November 2005, Taipei, Taiwan.

Pediatric Spine Forum: Advanced Techniques in Complex Pediatric Spine Surgery, Synthes Spine, Salt Lake City, Utah, February 2008.

“Pediatric deformity- anterior treatment” IMAST Pre-Course Program, Shenzhen, China, July 2008.

“Results after Short Segment Bone-on-Bone Instrumentation for Single Curve Adolescent Idiopathic Scoliosis after Mean Follow-up of 6 years,” Scoliosis Research Society, Hong Kong, July 2008

“Short segment bone-on-bone surgical reconstruction with dual rod implants for idiopathic scoliosis” SRS-AIIS Meeting, September 2008, New Delhi, India

AAOS Federation of Spine Associations Meeting, “Short segment anterior cages and implants for treatment of Scheurmann’s Kyphosis”, February 2009, Las Vegas.

“Short segment bone-on-bone reconstruction of mild-moderate adolescent idiopathic scoliosis”; “short anterior reconstruction of Scheurmann’s kyphosis with interbody cages”; SRS Regional Course, Cairo, Egypt, 12/09.

“Short segment bone-on-bone reconstruction of mild-moderate adolescent idiopathic scoliosis”; short segment anterior-only correction of mild-moderate Scheurmann’s kyphosis with interbody cages; treatment of spondyloptosis by the Gaines Procedure; Load-Sharing Classification of spinal fractures; and L1 vertebrectomy for severe burst fractures;---use of vertebrectomy and anterior short segment reconstruction;----Peking Union Medical Center---Beijing, China, 10/10

“Keynote Speaker”, “7th Advanced Deformity Symposium—(focussed on High Grade Spondylolisthesis and Spondyloptosis)”, 5/18-19,2011, Stockholm, Sweden, sponsored by DePuy Spine.

Invited Speaker, “Spondyloptosis Symposium”, Pediatric Orthopaedic Society of North America, Toronto, Canada, April, 2013

Invited Lecturer, “Surgical Management of Spondyloptosis with the L5 Vertebrectomy Approach” Balgrist Orthopaedic Hospital, Zurich, Switzerland, June, 2013

Keynote Speaker, “Short-segment bone-on-bone reconstruction for single-curve adolescent idiopathic scoliosis”, K2 company scoliosis symposium, Washington, DC, January, 2014

COURSE CHAIRMAN AND CO-CHAIRMAN

“Issues of Biologic Fixation in Primary and Revision Arthroplasty”, Overland Park, Kansas, September 1986

"Symposium on Pedicle Fixation of the Spine", Missouri State Orthopaedic Association 1989 Annual Meeting, Lake Ozarks, Missouri, June 1989

"Anterior Reconstruction of the Thoracolumbar Spine", Cleveland, Ohio, April 1996.

"Anterior Reconstruction of the Thoracolumbar Spine Using Kaneda SR", New Orleans, Louisiana, March 1998.

"Spinal Reconstruction – A comprehensive Review", Cairo, Egypt – 2nd Annual Middle East Spine Symposium, September 1999.

"Dual rod anterior instrumentation for spinal deformity" KASS Meeting – Oswestry, England – November 2000.

"Short segment bone-on-bone treatment for idiopathic scoliosis – update" Norwich, England – April 2002.

L5 Vertebrectomy for spondyloptosis with reduction of L4 onto S1. ISMISS/SICOT 6th International Symposium. Host, Dr. Andre Mezentzev, Kharkov, Ukraine May 2008

INVITED OPERATING SURGEON

University of Miami, "L5 Vertebrectomy for Spondyloptosis". Miami, Florida, July 1983

"L5 resection for spondyloptosis" Pretoria, South Africa, Dr. L. Grobler, May 1984.

University of Nebraska, "L5 resection for spondyloptosis", Omaha, Nebraska, June 1986

City Park Hospital, Princess Alice Hospital, and Tygerberg Hospital, Cape Town, South Africa; King George Hospital, Durban, South Africa; National Hospital, Bloemfontein, South Africa; J. G. Strydom Hospital and Milpark Hospital, Johannesburg, South Africa, August 1989

Lackland Air Force Base, Department of the Air Force, "L5 resection for spondyloptosis" San Antonio, Texas, March 1996

"Anterior scoliosis correction" Chulalongkorn University, Department of Orthopaedic Surgery, Bangkok, Thailand, March 1996

"Kaneda Instrumentation" Grand Rapids, Michigan, February 19, 1997.

"L5 resection for spondyloptosis" San Diego Center for Spinal Disorders, San Diego, California, February 1997.

"Bone-on-bone short segment correction for scoliosis correction" Hokkaido University School of Medicine, Department of Orthopaedic Surgery, Kuniyoshi Abumi, MD, April 2000.

“L5 Vertebrectomy for Spondyloptosis” with Dr. Chris Hamill - Buffalo General Hospital, Buffalo, New York; July 2000.

“Dual rod bone-on-bone reconstruction for idiopathic scoliosis” Dr. Kendig - The University of Mississippi Medical Center, Jackson, Mississippi; July 2000.

“Dual rod anterior instrumentation for spinal deformity” – South Hampton Regional Hospital – South Hampton, England: November 2000.

“Short Segment Dual Rod Instrumentation for Scoliosis” Royal Manchester Infirmary, Manchester, England – March 2001.

“L5 vertebrectomy for spondyloptosis, ” Shriners Hospital, host Dr. Randall Betz, – Philadelphia, Pennsylvania - April 2001.

“Short segment scoliosis reconstruction for 13 year boy with 55° thoracic scoliosis” - Vienna, Austria - Dr. Michael Nicolakis – January 2002.

“Short Segment Scoliosis Surgery with Dual Rod Implants” - Munich, Germany -- January 2002.

St. James Teaching Hospital – Leeds, England – “Short Segment Surgery for Scoliosis” – April 2002.

Royal Manchester Infirmary, Manchester, England---“Short Segment Surgery for Correction of Adolescent Idiopathic Scoliosis, host, Dr. Jonathan Spillsbury, April, 2002.

DuPont Hospital for Children – “Spondyloptosis resection for a 12 year old girl, ” Host Dr. Suken Shah - Wilmington, Delaware – February 2004.

APOA Open Surgery Course – Coimbatore, India – Ganga Hospital – “Short Segment Bone-on-Bone Correction of Single Curve Adolescent Idiopathic Scoliosis, and Posterolateral Stabilization and Biopsy of Spinal Hemangioma”, host/course director, Dr. Rajasekaran, March 2007

Two cases of severe spondyloptosis – host, Dr. Daniel Zarzycki, Zakopane, Poland, May 2007.

Correction of spondyloptosis - host Dr. Acke Ohlin, Malmo, Sweden, May 2007

Short segment bone-on-bone reconstruction for thoracolumbar adolescent idiopathic scoliosis, All-India Institute for Medical Sciences, host, Dr. Arvind Jayaswal, New Delhi, India, 9/12/08

PRESIDENTIAL GUEST SPEAKER

"The Scoliosis Patient, The Scoliosis Surgeon, and 'High Tech' Medical Care", Japanese Scoliosis Association 21st Annual Meeting, Niigata City, Japan, April 1987

"Current Management of Scoliosis -- State of the Art, Current Treatment of Spondylolisthesis, and Treatment of Spinal Fractures and Fracture/Dislocations with Steffee Plates", Indian Congress on Trauma, Joint Replacement and Spinal Surgery. Madras, India, January 1988

"Treatment of Spinal Fractures with Steffee Plates" and "Spondylolisthesis", South African Orthopaedic Association Meeting, Pretoria, South Africa, September 1989

"Two Stage L5 Vertebrectomy with Reduction of L4 onto the Sacrum for Spondyloptosis", and "Short Segment Instrumentation in the Treatment of Spinal Fractures with Anterior or Posterior Approach", The Hong Kong Orthopaedic Association Eleventh Annual Congress, Hong Kong, November 1991

"Short Segment Fusion for Spinal Fractures - Anterior or Posterior Approach", "Scoliosis Update 1991", and "Two Stage L5 Vertebrectomy with Reduction of L4 onto the Sacrum for Spondyloptosis", 11th Congress of the ASEAN Orthopaedic Association & 22nd Annual Meeting of the Malaysian Orthopaedic Association, Kuala Lumpur, Malaysia, November 1991,

"Biomechanics of the spine and spinal implants" -- 67th JOA Meeting, Sendai, Japan, 1994.

"Short Segment Instrumentation and Fusion for Thoracolumbar Spine Fractures -- A Consecutive 4½ Year Series", "The Load-Sharing Classification of Spine Fractures"; International Meeting on Advanced Spine Techniques, Munich, Germany, July 1, 1994.

"Load Sharing Classification of Spinal Fractures", "Failed Back Surgery", "Modular Application of Isola Implants for Degenerative Spinal Indications", "Treatment of Spondyloptosis". The Spine Society of Australia, Broome, West Australia, September 16-24, 1995.

"Degenerative Lumbar Spine Disorders", "Treatment of Spinal Deformities in Children and Adults" and "Treatment of Spinal Fractures". The Combined Meeting of ASEAN Orthopaedic Association and the Thai Orthopaedic Association, Cha-Am Beach, Thailand, October 24, 1995.

"Short Segment Instrumentation for Treatment of Fractures and Fracture Dislocations Using The Load Sharing Classification" The Third Combined Meeting of Spinal and Pediatric Sections of W.P.O.A. in Kochi, Japan, November 1996.

"The Load Sharing Classification of Spine Fractures" and "Short Segment Instrumentation" Louisiana Orthopaedic Association Scientific Program in New Orleans, Louisiana, November 1996.

"L5 Vertebrectomy for spondyloptosis" - 70th JOA Meeting in Sapporo, Japan, April 1997.

"L5 Resection Treatment of Spondyloptosis – a 20 year Review". The German Spine Research Society, Host and President, Dr. Juergen Harms, May 7, 1999.

"Short Segment Bone-on-Bone for Idiopathic Scoliosis" 73rd JOA Annual Meeting, Sapporo, Japan, April 2000.

“Short segment bone-on-bone fusion with dual rod instrumentation for single curve scoliosis” – 74th JOA Meeting, Chiba, Japan, April 2001.

“KASS for scoliosis and high-grade spondylolisthesis” A Live Surgical Demonstration - 10th APOA Meeting - Kuala Lumpur, Malaysia – August 2001.

“Short segment bone-on-bone instrumentation for single curve idiopathic scoliosis”, Laura B. Flawn, M.D. Lectureship at the University of Texas Health Science Center at San Antonio, Texas, May 2004.

National Lectureship in Spinal Reconstructive Surgery, University of Virginia, Charlottesville, Va., July, 10th, 2004

“Short Segment Reconstruction of Symptomatic Scheurmann’s Kyphosis”, The Japanese Spine Research Society, Sendai, Japan. June 10, 2005.

“First International Congress Regarding “Controversies and Progress in Spinal Reconstruction”, “Short Segment Scoliosis Correction for Adolescent Idiopathic Scoliosis; Management of Very Difficult Spondylolisthesis and Spondyloptosis”, Zakopane, Poland, October 2006.

Anterior short segment reconstruction for symptomatic Scheurmann’s Kyphosis, AAOS meeting, Las Vegas, Nevada, Feb, 25th, 2009.

“Bone-on-bone” for AIS---Short Segment Anterior Reconstruction for Moderate Scheurmann’s Kyphosis, Spondyloptosis, Dx and operative Rx---Degenerative scoliosis in adults--- International Masterclass in Spinal Reconstruction, Royal College of Surgeons of England, London, England, May 26-28, 2009.

Bone-on-bone for AIS---Short segment reconstruction for spinal fractures---Surgical Rx of High Grade Spondylolisthesis and Spondyloptosis---AMCICO meeting, Monterrey, Mexico, 9/09

Bone-on-bone for AIS---Short segment correction of Scheurmann’s Kyphosis, 12th Phillip Zorab Symposium, March, 2011, London, England.

Keynote Speaker, Annual meeting of Spine Society of Colombia, Bogata, Columbia, July, 2012.

INVITED PRESIDENTIAL GUEST SPEAKER AND SURGEON

Asia-Pacific Orthopaedic Association “Open Surgery Course”. Coimbatore, India, May 2007, Presentations: Ptosis – Diagnosis and Treatment.. Scoliosis – Bone-on-Bone. Kyphosis – Bone on Cage. Spine Fractures – Anterior and Posterior. Degenerative Scoliosis with/without stenosis.

Surgery Cases: 1) Short Segment Bone-on-Bone for thoracic scoliosis. 2) L1 Vertebrectomy for hemangioma.

Colombian Orthopaedic and Traumatology Society Meeting, February 2008. Melgar, Colombia. Presentations: Scoliosis, Kyphosis, Spine Fractures, High Grade Spondylolisthesis, Ptois by vertebrectomy.. Appointed Corresponding Member of Spine Society of Colombia.

Surgery Cases in Bogota, Colombia: 1) Short Segment Bone-on-Bone for six year old with thoracic scoliosis. 2) Short Segment Bone-on-Bone with Cage for Scheurmann's Kyphosis.

Chinese Scoliosis Society, Nanjing, China, 6/09 1) Short segment bone-on-bone for single curve mild-moderate adolescent idiopathic scoliosis; 2) Short segment anterior-only correction of Scheurmann's kyphosis with interbody cages; 3) Correction of spondyloptosis by the Gaines Procedure;

Chinese Scoliosis Society/Scoliosis Research Society Combined Meeting Faculty, Chengdu, China, 10/10, Short segment "bone-on-cage" correction of mild-moderate Scheurmann's Kyphosis, . L5 vertebrectomy for correction of severe spondyloptosis;

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