ISASS12 Final Program

March 20 - 23, 2012
Barcelona, Spain

This activity is jointly sponsored by Medical Education Resources and ISASS
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*Disclosures are listed in the ISASS12 Abstract Book
ISASS Mission & Past Presidents

PAST PRESIDENTS

Thomas Errico, MD, USA
President 2010 - 2011

Chun-Kun Park, MD, PhD, Korea
President 2009 - 2010

Karin Büttner-Janz, MD, PhD, Germany
President 2008 - 2009

Hansen A. Yuan, MD, USA
President 2007 - 2008

Stephen Hochschuler, MD, USA
President 2006 - 2007
Founding Member

Thierry Marnay, MD, France
President 2005 - 2006
Founding Member

Rudolf Bertagnoli, MD, Germany
President 2004 - 2005
Founding Member

(the late)
Charles Ray, MD, USA
President 2001 - 2004
Founding Member

PAST BOARD MEMBERS

Gary L. Lowery, MD, PhD, USA
Founding Member

Michael Mayer, MD, Germany
Founding Member

Hallett Mathews, MD, USA

ISASS BOARD OF DIRECTORS

The Board of Directors provides leadership for ISASS by upholding ISASS’ vision, purpose and values; setting the broad policies, direction and priorities of the organization; ensuring that ISASS has highly effective leadership; providing fiduciary oversight; and maintaining the integrity of ISASS services and products developed for the benefit of ISASS members.

MISSION STATEMENT

ISASS is an international, scientific and educational society organized to discuss and assess existing strategies and innovative ideas in the clinical and basic sciences related to spine surgery to enhance patient care.

ADVOCACY

ISASS represents our members and their patients by advocating for public policies that provide spine patients with appropriate access to surgical spine experts and the latest, most innovative technologies and surgical procedures. We fight to ensure that the spine surgeon’s voice is heard in both the legislative and regulatory arenas, and that policies are truly evidence-based and focused on improved patient outcomes. Additionally, ISASS is actively involved in private sector advocacy to insure that commercial payers promulgate appropriate coverage and reimbursement policies specific to surgical spine care, and that protect patients access to needed spine surgeries.

(Back row from left to right):
Steven Garfin, MD; Gunnar Andersson, MD, PhD; Karin Büttner-Janz, MD, PhD; Thomas Errico, MD

(Front row from left to right):
Jean-Charles LeHuec, MD, PhD; Luiz Pimenta, MD, PhD; Chun-Kun Park, MD, PhD

Where the World Comes to Advance Spine Surgery
2011 - 2012 ISASS Board of Directors

Jean-Charles LeHuec, MD, PhD
President 2011 - 2012
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San Diego, CA USA

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Sao Paulo, Brazil

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Treasurer
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Chicago, IL USA

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Orthopedic Hospital Spiesing
Vienna, Austria

Hee Kit Wong, MD, PhD
Head, Department of Orthopaedic Surgery, NUS
Singapore

Thomas Errico, MD
Immediate Past President
NYU Hospital for Joint Diseases, Division of Spine Surgery, New York, NY USA

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l)
ISASS Membership

Taking Spine Surgery Into the Future

ISASS, the International Society for the Advancement of Spine Surgery is a global, scientific and educational society organized to provide an independent venue to discuss and address the issues involved with all aspects of basic and clinical science of spine surgery, motion preservation, stabilization, innovative technologies, MIS procedures, biologics and other fundamental topics to restore and improve motion and function of the spine and the patient. ISASS is a place for surgeons, scientists, inventors and others dedicated to progress in spine surgery.

The World’s Best Thinking About Spine

The field of spine surgery is evolving globally. With innovations originating in every continent, it’s imperative that those committed to advancing spine surgery have a platform for discussion and education that encompasses the international community. With members from around the globe and chapters in China, India, Korea, Latin America, the Middle East, Taiwan and Turkey, ISASS is the society for forward-thinking spine surgeons in tune with ideas, treatments, technologies, and scientific innovations from every corner of the world. You are invited to join ISASS to surround yourself with the world’s best thinking about spine surgery.

How Does Membership Help You Become a Better Spine Surgeon?

Becoming a member of ISASS gives you:

- Access to research, articles, and information from the global leaders in spine surgery
- CMEs offered through the annual conference and complimentary access to the online Interactive Education Program through MagnifiGroup
- Online access to up-to-the-minute news on spine surgery advancements, techniques and related products
- An email subscription to the ISASS Spinal News International newsletter
- A subscription to the International Journal of Spine Surgery
- Access to online presentations and discussion groups
- Access to ISASS papers, presentations, research and membership directory
- Listing in the “Find a Member” search on the ISASS website so that patients can find and contact you
- Discounted registration fees for all ISASS-sponsored programs including the Annual Conferences, and the Asia Pacific and Latin America chapter conferences
- CDs with information from previous meetings

Make Your Voice Heard

We exist not only to learn from each other, but also as the collective voice of the world’s spine surgeons. By advocating for spine surgeons and spine patients, we can help protect the rights of those in the field and promote sound public policy.

Becoming a part of ISASS gives you a stronger voice in the matters most important to your practice.

ISASS Membership Information

Advancements in spine surgery are happening everywhere. You’re invited to join us.

Membership is open to all spinal specialists, groups or organizations, including government and industry, whose common cause is the advancement of spine surgery.

Membership categories are as follows:

Regular Membership

- Surgeons

Affiliate Membership

- Industry

Other Membership

- Scientists
- Resident
- Fellow
- Nurse
- Physical Therapist
- Physician’s Assistant
- Retired

The Society has been duly constituted under law with officers, directors and committees as defined in its bylaws.
**APPLICATION FOR ISASS MEMBERSHIP**

**MEMBER INFORMATION** Please print clearly in BLOCK characters

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<th>Degree (MD, PhD):</th>
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**Specialty:**

**Do you have an administrative contact that will handle your membership? If yes, please enter the contact information:**

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<th>Admin Name:</th>
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Public information, will appear in the public member search on the www.isass.org website. Note that only basic contact information is provided to the public to promote your organization. To see the information provided to the public, please visit www.isass.org home page and do a search.

Please provide us with a 6 digit character password that you will use to access the ISASS members area. This password will also provide you with access to the International Journal of Spine Surgery (formerly the SAS Journal):

**MEMBERSHIP CATEGORIES (SELECT ONE FROM THE FOLLOWING)**

**SURGEON MEMBERSHIP & FEES**

- Surgeon: Those actively practicing spine surgery
  - One Year: $485
  - Two Year: $870 (save $100)
  - Five Year: $2,175 (save $250)
  - Lifetime Member: $3,450 (10 years)

**AFFILIATE MEMBERSHIP & FEES**

- Industry: Those actively involved in the spine surgery industry
  - One Year: $400
  - Two Year: $700 (save $100)
  - Five Year: $1,750 (save $250)
  - Lifetime Member: $2,600 (10 years)

**OTHER MEMBERSHIP CATEGORIES (SELECT ONE FROM THE FOLLOWING)**

- Scientist: Researchers in spine surgery
- Resident: Those in residency to become spine surgeons
- Fellow: Graduates of orthopaedic surgery residency training programs under the direction of a spinal surgeon
- Physician’s Assistant: Healthcare professionals licensed to practice medicine with supervision of a licensed physician
- Physical Therapist: Those working in rehabilitation techniques after spine surgery.
- Nurse: Nurses practicing in spine surgery
- Retired: Physicians no longer practicing medicine

**OTHER MEMBERSHIP FEES**

- One Year: $285
- Two Year: $470 (Savings of $100)
- Five Year: $1,175 (Savings of $250)

In submitting this application for membership, I agree to the bylaws and the rules and regulations of ISASS - The International Society for the Advancement of Spine Surgery.

Membership dues for all categories, including board, advisory panels, committees, corporations, affiliated societies and government entities are USD $485 for Surgeon and $400 for Industry memberships or $285 for Other memberships payable on an individual annual basis. Note all transactions will be charged a processing fee of $50 (fifty US dollars) Dues may be paid in local currency contingent upon the payment option selected.

**PAYMENT OPTIONS**

**CHECK, MONEY ORDER, BANK DRAFT** - Local currency equivalent equal to above total. Make payable to: ISASS. Mail with completed order form to: ISASS - The International Society for the Advancement of Spine Surgery, 2323 Cheshire Drive, Aurora, IL 60504 USA Fax to: ISASS Registrar - (717) 828-1012

**CREDIT CARD, DEBIT CARD** - Your signature below authorizes a charge for the total amount.

Cards Accepted: □ Visa □ MasterCard □ American Express

Signature: ____________________________ Exp Date: __________ Security Code: _______

**WIRE TRANSFER** - International: If paying by wire transfer, provide the following information to your sending financial institution: Bank Paribas Bordeaux: BNP PARIBAS - BORDEAUX C ROUGE; IBAN: FR76 3000 4003 2000 0104 9896 870, SWIFT (BIC): BNPAFRPPBOR; For credit to ISASS Account No. 3004 00320 00010498968 70 (in EUR). (Note: Monies will be charged in EUR; paying by wire transfer are responsible for all bank fees)

**QUESTIONS?** - Contact: Michele Boylstein, Member Services Manager for ISASS; call (630) 995-9994, x801; fax: 717 828-1012; email: michele@isass.org or visit the website at www.isass.org. ISASS, 2323 Cheshire Drive, Aurora, IL 60504 USA

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l)
ISASS began adding chapters in 2004 with the KOSAS-Korean Chapter. In 2007 we added the Chinese Chapter and in 2008 added the Middle East and India Chapters. ISASS added the Taiwan Chapter in 2009 and the Latin America Chapter in June 2010 when Latin America hosted their first Meeting in Los Cabos, Mexico. The Turkey Chapter was added in January 2011 and hosted their first meeting in November of that year.

The purpose of the ISASS chapters is to provide a local forum for personal and professional development, provide an opportunity to network with others in the local spine community, gather information on how others are handling spine issues, provide insights into various spine procedures and policies and build relationships and contacts with other spine professionals from your area.

Membership in an ISASS chapter means access to a local network of spine professionals in your community that can broaden your skills and make you more valuable to your organization. There are resources and services available through ISASS that local chapters can’t possibly duplicate, and there are resources and services available through your local chapter that ISASS can’t provide.

If you are a member of one of the ISASS Chinese, India, Korean, Middle East, Taiwan, Latin America and Turkey chapters, we encourage you to become a member of ISASS! Please contact your local chapter to get a special membership application for a reduced fee for the ISASS membership.

Membership in an ISASS chapter is separate and apart from membership in ISASS.

Maximize your opportunities by becoming a member of ISASS and your local chapter. It’s a winning combination!

Our ISASS Chapter Presidents are:

ISASS China Chapter          Dewei Zou, MD  
ISASS India Chapter         Sajan K. Hegde, MD  
ISASS Korea Chapter          Chong-Suh Lee, MD  
ISASS Latin America Chapter  Eduardo Barreto, MD  
ISASS Middle East Chapter    Mohamed Maziad, MD  
ISASS Taiwan Chapter         Cheng-Hsing Kao, MD  
ISASS Turkey Chapter         Fahir Ozer, MD
ISASS Committees
This section contains the names of those members serving on our committees
They are appointed by the Board of Directors

Committee terms will end in 2014

CME Committee
This committee shall be chaired by a selected member of the ISASS, appointed by the Board with assistance from selected consultants that specialize in the process of ensuring that all aspects of the ISASS CME program are developed appropriately. Conclusions and recommendations will be presented to the Board for review and actions to be taken. The Committee will discuss and provide interpretation of the ACCME guidelines regarding accreditation policies and decisions. It will concentrate on evaluating the effectiveness of the Society’s system of accreditation, including the accreditation requirements and its processes for funding and support. This committee also forwards actions regarding accreditation decisions to the full Board of Directors for ratification. The CME Committee will work in the development and adherence of all CME rules and regulations. They will review all ISASS sponsored programs to make sure that the ISASS provides continuing education programs on substantive, practice-related subjects. The CME Committee Chair and ISASS Administrative staff representative will work with the Program and Education Committee to ensure ACCME rules are followed and appropriate documentation is maintained.

Chairman:
Rolando Garcia, MD - USA
Robert Havey, BS - USA
Scott Leary, MD - USA
George Miz, MD - USA
Leonard Voronov, MD, PhD - USA
Heather Howard - ISASS

CME Provider:
Medical Education Resources - USA

Finance and Audit Committee
This Committee of the Board shall consist of the Treasurer as Chair, Second Vice President and the Executive Director in coordination with the Public Accountants serving the Society. This Committee shall formulate all investment policies of the Society, subject to the approval of the Board. The Committee will assess the financial condition of the society on a quarterly basis. The role of this Committee is to review proposed budgets and present recommendations and findings to the full Board of Directors for approval. They will track income and expenses and make recommendations as necessary. The group will advise the Board of Directors and provide guidance and direction to the Executive Director on all matters relating to financial management. This committee serves as the watchdog for the financial stability of the organization, reviewing banking and investment options and establishing procedures for investigating and making recommendations for large expenditures.

This Committee shall oversee the financial affairs, their management, supervision, and controls by the Society acting as a not-for-profit Corporation. This Committee shall meet at least annually as well as at the request of the Board to review the financial affairs of the Society and the Executive Director and Treasurer shall submit a report to the Board.

Treasurer:
Gunnar Andersson, MD - USA
Fepi Paramarti - ISASS
Kristy Radcliffe - ISASS

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l)
**ISASS Committees**

### Industry Relations Committee
This Committee shall consist of a chair (surgeon) and four to six additional members (industry), appointed by the President and approved by the Board for a two-year term. The Industry Relations Committee elects its own committee Vice Chair and its activities. All members may be reappointed. The ISASS Industry Relations Committee will offer Industry partners a forum to discuss issues that arise between industry and the ISASS. The Committee will look to solve those issues without having them escalate into conflicts. They will work with industry to form policies and offer a platform for creating a close collaboration between industry and the surgeons. They will pay close attention to industry involvement in ISASS activities, but will ensure that they will not dominate the educational programming or society agenda. They will try to create the best possible relationship to benefit both sides to create a harmonious cooperation. They will make sure that the co-existence between industry and the surgeon community is respectful, cooperative and beneficial for progress. The ISASS Industry Relations Committee shall make efforts to coordinate the involvement of members of spine-related Industries with the interests of the Society in furthering improved spine care for patients. This may include special focus meetings, approved by the Board. The Industry Relations Committee shall also:

1. Help solicit exhibitors for Annual Conference, Society publications and other media.
2. Recommend policies governing and concerning exhibitors.

**Chairman:**
Frank Phillips, MD - USA

Dom Coric, MD - USA
Charles Gilbride - Alphatec - USA
David Hovda - SpinalMotion - USA
Brent Melancon - Medtronic - USA
Pat Miles - Nuvasive - USA
Kim Norton - Synthes - USA
Hassan Serhan, PhD - DePuy - USA
Jim Youssef, MD – USA

David Porter – ISASS

### Exhibitor Advisory Work Group
The Exhibitor Advisory Work Group will consist of a cross section of exhibitors totaling 10 representatives and at least one ISASS representative. They will handling exhibit booth arrangements and suggest ways that ISASS is aimed at enhancing the exhibitor experience to determine best practices for each ISASS Annual Conference.

Erin Bicho - DePuy
Katie Daniel - Medtronic
Tanja Dold - Aesculap
Jill Helgerson - IMDS
Brad Larson - Zimmer Spine
James May - Centinel Spine
Kim Murray - Thompson Surgical
Patsy Peterson - LDR
Dora Sambdman - NuVasive
Annie Schussler - Buxton Biomedical
Theresa Simpson - K2M
Heather Howard - ISASS

### International Journal of Spine Surgery Committee
This Subcommittee shall be chaired by the International Journal of Spine Surgery Editor with support staff plus the Executive Director and staff. The Editor-In-Chief shall report pertinent status data to the Board at the Annual Conference and prepare a statement for the Member’s Business Meeting. The structural and functional details of this Committee shall be decided by the Editor with assistance from the Executive Director.

### Editorial Board
**Editor-in-Chief:**
Hansen Yuan, MD, PhD
SUNY Upstate/Syracuse

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Jack Zigler, MD, Texas Back Institute

**Special Deputy to the Editor-in-Chief:**
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Federico Girardi, MD, Hospital for Special Surgery
Vijay K. Goel, PhD, University of Toledo
Larry Khoo, MD, University of California, Los Angeles
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Mohamed Maziad, MD, Maziad Orthopedic & Spine Associates
Frank Phillips, MD, Rush University Medical Center
Luiz Pimenta, MD, University of California San Diego, Universidade Federal de São Paulo
John Regan, MD, FACS, D.I.S.C. - Sport and Spine Center
Alejandro Reyes-Sánchez, MD, National Orthopaedic Institute, Mexico
Harvinder Sandhu, MD, Hospital for Special Surgery
Matthew Scott-Young, MD, Pacific Private Clinic
Bjorn Stromqvist, MD, Lund University
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HuiLin Yang, MD, First Affiliated Hospital of Soochow University
Dewei Zou, MD, 306 Hospital of PLA

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Frank Chan, PhD, Medtronic
Boyle Cheng, PhD, Drexel
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Bambang Darwono, MD, PhD, Kelapa Gading Hospital
Reggie Davis, MD, Baltimore Spine Center

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Emad Elmethy, Tanta Faculty of Medicine
P. Richard Emmanuel, MD, Southern California Orthopedic & Musculoskeletal Association
Thomas Errico, MD, Spine Surgery Division, NYU Hospital for Joint Diseases
Antonio Paolo Fabrizi, MD, NYU Hospital for Joint Diseases
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Fang Huang, MD, Chinese PLA General Hospital
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Manabu Ito, MD, PhD, Hokkaido University School of Medicine
Tae-Ahn Jahng, MD, PhD, Seoul National University Hospital
Jee-Soo Jang, MD, Wooridul Spine Hospital
Patrick Johnson, MD, Cedars-Sinai Spine Center
Daniel Kim, MD, Eulji Medical University Hospital
Whoan Jeang Kim, MD, PhD, Stanford University Medical Center
Scott Kitchel, MD, Orthopedic Spine Associates
Peter Klara, MD, PhD, Advanced NeuroSpine Specialists
Martin Knight, MD, Spinal Foundation
Chong-suh Lee, Samsung Medical Center
Jung-Kil Lee, MD, Chonnam National University Hospital & Medical School
Sang-Ho Lee, MD, Wooridul Spine Hospital
Casey Lee, MD, Spine Care and Rehabilitation
Jean-Charles Le Huec, MD, PhD, Spinal Foundation
Isador Lieberman, MD, Cleveland Clinic
Bengt Lind, MD, Sahlgrenska University Hospital
Morgan Lorio, MD, NeuroSpine Solutions
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International Journal of Spine Surgery Peer Reviewers Cont’d

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Sung Choon Park, MD, PhD, Dept. of Neurosurgery, Myongji Hospital, Kwandong University College of Medicine  
Chun-Kun Park, MD, PhD, The Catholic University of Korea  
Avinash Patwardhan, PhD, Loyola University Medical Center  
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Gilles Perrin, MD, PhD, Hospital Neurologique P. Wertheimer, Groupement Hospitalier Est.  
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Jim Schwender, MD, Twin Cities Spine Center  
Jonathan Sembrano, MD, University of Minnesota Medical School  
Dilip K. Sengupta, MD, Dartmouth-Hitchcock Med Center  
Hassan Serhan, PhD, Depuy Acromed  
Khalid Sethi, MD, Lourdes Hospital  
Yong Shen, MD, 3rd Hospital of Hebei Medical University  
John Sherman, MD, Twin Cities Orthopedics  
Will Smith, MD, University Medical Center, Nevada School of Medicine, Las Vegas  
Joseph Stachniak, MD, Brain & Spine Center of Texas  
Thomas Stoll, MD, Department of Spinal Surgery, Bethesda Spital  
Jung-Keun Suh, MD, PhD, Dept. of Neurosurgery, Korea University School of Medicine  
Richard Tallarico, MD, Upstate Medical University (SUNY)  
Karen Talmadge, PhD, Kyphon  
Chengxuan Tang, MD, 3rd Affilitated Hospitalof Wenzhou Medical College  
Chong Tien Tan, MD, Island Spine and Scoliosis  
Tony Tannoury, MD, Boston Medical Center  
Vo Van Thanh, MD, PhD, Hospital for Trauma and Orthopaedics, Ho Chi Minh City  
Tadanori Tomita, MD, PhD, Children’s Memorial Hospital  
Anthony Tsantirizes, PhD, Synthes  
Alex Vaccaro, MD, Rothman Institute  
Visit Vamvanij, MD, Vice Chancellor Mahidol University  
Jeffrey Wang, MD, Vice Chancellor Mahidol University  
Michael Wang, MD, University of Miami  
Douglas Wardlaw, MD, Woodend Hospital  
William Watters, III, MD, Bone & Joint Clinic of Houston  
William Welch, MD, FACSF, The Pennsylvania Hospital, University of Penn  
F. Todd Wetzel, MD, Dept of Orthopaedics and Sports Medicine, Temple University School of Medicine  
Douglas Wong, MD, Panorama Orthopedics & Spine Center  
David Wong, MD, MSc, FRCS, Raffles Hospital  
Hua-Zi Xu, MD, 2nd Affilitated Hospitalof Wenzhou Medical College  
Tarik Yazar, MD, University of Ankara School Ibni Sina Hospital  
John Yeh, MD, FRCSF, The Royal London Hospital  
Chris Yeung, MD, Arizona Institute For Minimally Invasive Spine Care  
Tony Yeung, MD, Arizona Institute For Minimally Invasive Spine Care  
Ken Yonemura, MD, University of Utah School of Medicine  
Do-Heum Yoon, MD, PhD, Yonsei University College of Medicine  
Philip S. Yuan, MD, Memorial Orthopaedic Surgical Group  
Jim Yue, MD, Yale University School of Medicine  
Xue Li Zhang, MD, Tianjin Union Medical Centre  
Jack Zigler, MD, Texas Back Institute  
Michael Zindrick, MD, Hinsdale Orthopaedics  
James Zucherman, MD, St. Mary’s Spine Center


The goal of the International Journal of Spine Surgery is to promote and disseminate online the most up-to-date scientific and clinical research into innovations in motion preservation and new spinal surgery technology, including basic science, biologics, and tissue engineering.

The Journal is dedicated to educating spine surgeons worldwide by reporting on the scientific basis, indications, surgical techniques, complications, outcomes, and follow-up data for promising spinal procedures.

Moving forward, the International Journal of Spine Surgery is now on a continuous publishing schedule to ensure that as soon as new research is accepted, it is available to the Journal’s readership. Abandoning issues in favor of creating a new, faster flow of information is another way in which the Journal stays true to the Society’s emphasis on cutting-edge techniques and technologies.

The International Journal of Spine Surgery is committed to innovation in the field of medical publishing.

We look forward to acting as a powerful conduit to distribute your advances to a large, global audience who can make use of them to enrich their patients’ lives.

We look forward to acting as a powerful conduit to distribute your advances to a large, global audience who can make use of them to enrich their patients’ lives.
ISASS Committees

ISASS Coding and Reimbursement Task Force
The Coding & Reimbursement Task Force is charged with identifying spinal surgery-related coding and reimbursement issues that may adversely impact patient access to medically indicated spine surgeries; developing for the Board’s approval advocacy action plans on the society’s behalf to address those issues; and, assisting in the execution of those advocacy actions plans as appropriate and necessary.

Chairman:
Morgan P. Lorio, MD, FACS
Josh Auerbach, MD, New York, NY
Doug Beard, MD, Fort Collins, CO
Mauro Cataletto, MD, Minneola, NY
Terrence Julien, MD, Morgantown, WV
Scott Kitchel, MD, Eugene, OR
Richard Kube, MD, Peoria, IL
Isador Lieberman, MD, Plano, TX
Morgan Lorio, MD, Bristol, TN - Chair
Paul Park, MD, Ann Arbor, MI
Tony Schnuerer, PA, San Diego, CA
Paul Schwaegler, MD, Seattle, WI

Advisory Body:
Barbara Cataletto, MBA, Minneola, NY
Jolayne Fisher, Woodbury, MN
Kelli Hallias, Minnetonka MN
Tim Hunter, Washington, DC
Cindy Vandenhosch, Billings, MT
Jen Varela, San Diego, CA
David Porter - ISASS

IT Committee
This Committee shall have a Chair and Co-Chair plus a member of the ISASS Administrative team. The Committee shall operate the Society Website on the Internet and manage its layout and content. The members of this committee will work to enhance the ISASS website to ensure that current and relevant matters are addressed. The IT committee in conjunction with the designated member of the ISASS Administrative team will guide and direct the appointed webmaster to make necessary changes and upgrades to ensure member needs are met.

Chairman:
William Sears, MD - Australia
Manabu Ito, MD, PhD - Japan
Dilip Sengupta, MD, PhD - USA
Hyun Chul Shin, MD, PhD - South Korea
Michele Boylstein - ISASS

Membership Committee
The Membership Committee shall consist of a Chair and two other members of the Society appointed by the President. The chair and the two members of the Committee may succeed themselves in office for a further term of three years if elected by a simple majority of the Board. An ISASS Administrative staff member will also sit on this committee. The Membership Committee is responsible for increasing the number of members worldwide and to ensure members’ needs are met. This includes recommending ways for increasing the ISASS membership base, formulating coordinating and implementing plans for membership recruitment, ways to acknowledge and welcome new members and encourage their participation in ISASS Committees and ISASS sponsored activities. They will work with the designated member of the Executive Team of the ISASS in the development of a membership renewal program. This Committee will be charged with developing and maintaining a membership directory available online for the membership to access via the website. This Committee will also work to identify members and non-members’ needs and perceptions, analyzing them and making recommendations to the Board of Directors.

The ISASS Administrative staff member of the Membership Committee shall receive and review all applications for membership and forward applications to the Chair. The ISASS Administrative staff member shall advise the committee to consider and investigate any charge made against any member of the Society, acting under the provisions of these bylaws. The Membership Committee shall make recommendations to the Board, but is not empowered to take any action unless otherwise specifically authorized by the Board or as otherwise provided in these bylaws.

Chairman:
Jeff Goldstein, MD - USA
Michael Ahrens, MD - Germany
Ali Araghi, MD - USA
Svante Berg, MD - Sweden
Ashish Diwan, Prof. - Australia
Rick Guyer, MD - USA
Chun Kun Park, MD, PhD - South Korea
Choon Keun Park, MD, PhD - South Korea
Luiz Pimenta, MD, PhD - Brazil
Rick Sasso, MD - USA
Paul Slosar, MD - USA
Hee Kit Wong, Prof. - Singapore
Michele Boylstein - ISASS

Past Presidents Committee
This committee of the Board shall consist of the President, the two Vice Presidents, the Past Presidents and the Executive Director. It shall meet during the Annual Conference and at other times as needed, on a request by the President and the Board. The Executive Director will report its conclusions and recommendations to the Board. This Committee reviews the current state of the ISASS, determines whether the Society has met its goals and decides what changes to make within the society in light of the needs of its members and changes in the medical profession. In order to serve its purpose, the Committee develops a strategic plan to be reviewed annually which lays out the ISASS objective in areas such as governance and administration, membership, member services, public service and it determines what steps to take to fulfill those objectives.

Chairman:
Chun-Kun Park, MD, PhD - South Korea
Thomas Errico, MD - USA
Jean-Charles LeHuec, MD, PhD - France
Steve Garfin, MD - USA
Karim Büttner-Janz, MD, PhD - Germany
Hansen Yuan, MD - USA
Thierry Marnay, MD - France
Stephen Hochschuler, MD - USA
Rudolph Bertagnoli, MD - Germany
Kristy Radcliffe - ISASS
ISASS Committees

Nominating Committee
Chairman:
Chun-Kun Park, MD, PhD - South Korea
Thomas Errico, MD - USA
Jean-Charles LeHuec, MD, PhD - France
Steve Garfin, MD - USA

Publications Committee
The Publications Committee shall consist of a Chair and Co-Chair appointed by the President on recommendations by the Journal Editor and Executive Director. The design, text, layout and editing of the newsletter, hard copy and online books and instructional course material test books all fall under the realm of this committee. They will develop standards and guidelines to ensure all items published by the ISASS or with ISASS endorsement meet the requirements set up by the Committee. The committee will monitor and approve all such materials with that goal in mind. They will assist in the appointment of editors, associate editors and editorial boards as well as offer advice and content ideas.

Chairman:
James Yue, MD - USA
Neel Anand, MD - USA
Federico Girardi, MD - USA
Ulrich Hahnle, PhD - South Africa
Larry Khoo, MD - USA
Choll Kim, MD, PhD - USA
Martin Knight, MD, FRCS, MBBS - UK
Jean-Charles LeHuec, MD, PhD - France
Dilip Sengupta, MD - USA
Jonny Dover - ISASS

Public Policy Committee
This Committee of the Board shall consist of the selected members of the Society that will address the needs of the committee as appointed by the Board. They will address and review information to form policies related to the professional and legal image and functions of the Society. Issues for review shall be brought to the Board by any Board member and Executive Director. This Committee could deal with some of the issues coming from FDA approvals and the CMS. The Public Policy Review Committee would serve in an advisory capacity and provide guidance in identifying experts to speak at FDA, government or congressional briefings, assist in crafting public policy/position statements that reflect the concerns of ISASS, surgeons and the spine care industry.

Chairman:
Gunnar Andersson, MD, PhD - USA
Chris Bono, MD - USA
Isador Lieberman, MD - USA
Hal Mathews - USA
Vincent Traynelis, MD - USA
John Ratliff, MD - USA
David Porter - ISASS
Kristy Radcliffe - ISASS

Regional Chapter Committee
This Committee of ISASS shall have a Chair and Co-Chair appointed by the President of ISASS plus Directors or Presidents elected by the Regional Chapters. Regional Chapters (RC) of the International ISASS shall be in nations outside of North America and Europe, or in world regions with involvement of more than one country, or in big spine societies as long their active membership is more than 1,000 members. They may be formed and closely affiliated with the international ISASS, provided:

The purpose of this committee is to ensure that the Society enlists views from an international perspective, and to address pertinent international issues and make sure there is a collaborative exchange of information.

Chairman:
Eduardo Barreto, MD - LASAS Chapter
Sajan Hegde, MD - ISASS India Chapter
Cheng-Hsing Kao, MD - ISASS Taiwan Chapter
Chong-Suh Lee, MD - ISASS Korea Chapter
Mohamed Maziad, Prof. - ISASS Middle East Chapter
Fahir Ozer, MD - ISASS Turkey Chapter
Dewei Zou, MD - ISASS China Chapter
Michele Boylstein - ISASS

Research Committee
If a company, or agency, decides on a need for a specific, or general, research project for a specific device, product (biologic, implant, etc.), medication, etc. and would like the ISASS to sponsor, they would approach the Research Committee. In so doing, they would forward a written proposal to ISASS describing, in broad terms, their research needs, a limited/proposed study design (e.g. animal models, imaging studies, biologic assessment, etc.) that they feel would be necessary. They would also provide a rough overall (not specific) budget, based on their anticipation of costs.

The ISASS Research Committee would take this proposal and analyze it for scientific value (not assessing the device, implant, product, etc. itself, but only the scientific potential of the study, independent of the outcome). If appropriate they would then submit the request to the ISASS Board for review and vote for funding for the research.

Chairman:
Avinash Patwardhan, PhD - USA
Gunnar Andersson, MD - USA
Jacques Bouchard, MD - Canada
Ashish Diwan, MD - Australia
Lisa Ferrara, PhD - USA
Tae-Ahn Jahng, MD - South Korea
Sung-Jae Lee, PhD - South Korea
Melodie Metzger, MD - USA
William Sears, MD - Australia
Leonard Voronov, MD, PhD - USA
Kristy Radcliffe - ISASS
Flamenco dancing, the guitar, bullfighting, Don Quixote and the Mediterranean are just a few of the images that immediately come to mind when one thinks of Spain. Prepare to experience the variety, tradition and unparalleled culture of Barcelona during the ISASS 12th annual conference!

Barcelona is the most popular tourist destination in Spain, the second largest city after Madrid, and the 12th most-visited city in the world receiving over 5 million tourists every year!

In this cosmopolitan city, the restaurants and hotspots are always teeming with people. Avant-garde chefs whip up superlative dining experiences, and there are countless venues for live music and theatre.

From the marvels of Modernism and Picasso to the likes of Susana Solano, and the bizarre works of Antoni Gaudi, Barcelona has been breaking ground in art, architecture and style since the late 19th century. With its sandy beaches, beautiful mountains, one-of-a-kind amazing architectural accomplishments that can only be deemed as pure art and a history of matadors, Barcelona offers an endless yet diverse assortment of entertainment for all.

You may think Barcelona is only dedicated to having fun; however, in harmonization, the city boasts an industrious and energetic concentration of high-tech and biomedical commerce as well as being home to one of the Mediterranean’s busiest ports.

We welcome you to Barcelona and thank you for joining us to experience the ISASS 12th annual conference.
Dear Colleagues,

I would personally like to welcome you to the Annual Conference of the International Society for the Advancement of Spine Surgery in Barcelona, Spain from March 20-23, 2012.

**ISASS12 Highlights**
The ISASS12 program offers greater insights into the advancement of spine surgery than ever before. ISASS is not focusing only on motion preservation (as SAS in the past) but emphasizes: Cervical and Lumbar Therapies and Outcomes, MIS Techniques and Results, Biologics, Biomechanics and Innovative and Non-Conventional Care.

With over **370 abstracts presented** over a three day period, you will receive a tremendous review of knowledge to explore.

The core principals of ISASS12 curriculum centers around our four letter logo for the conference:

**C.U.R.E.**
- Care
- Utilization
- Research
- Education

The conference begins Tuesday evening with the opening reception. The educational sessions of the conference begin on Wednesday and end on Friday afternoon. Here are my choices for some of the most innovative and interesting parts of the conference:

**Symposia on:**
- Navigation and Robotics
- Biologics Past, Present and Future
- TDR Evidence-Based Medicine, and
- Difficult Spinal Presentations: Rheumatoid Arthritis and Infection

**Sessions on:**
- Sagittal Balance and Deformity
- Cervical Complications and Cervical Trauma, and
- Biology and Biomechanics in Spinal Disorders

We have added more Oral Poster presentations and Thursday night we bring back the World Café discussion format on three topics:

- Interspinous Process Devices
- Degenerative Spondylolisthesis, and
- Complications in Arthroplasty

Friday morning we offer a cadaver lab that provides hands-on training to young surgeons with the best spine specialists in the world. This is a unique opportunity.

Each night we offer an optional networking dinner with your peers to discuss and debate what has been learned and more. This is a casual dinner at one of the famous Barcelona eating establishments that will connect you with other attendees and perhaps engender lively debate while you enjoy all that Barcelona has to offer.

Barcelona, the famous harbour in Spain, has seen unbelievable expansion over the last thirty years. This Catalonian city has very attractive museums and the famous Gaudí architecture. The immense selection of activities is diverse enough to please any sort of personality and the entertainment and dining options have grown in variety and distinction. The weather in March will be quite nice and enjoyable.

Barcelona is the perfect place in Europe for ISASS12, the most innovative spine meeting!

Jean-Charles LeHuec, MD, PhD
ISASS President 2011 - 2012
ISASS12 Program Committee

**PRESIDENT**
Jean-Charles LeHuec, MD, PhD - France

**OVERALL PROGRAM CO-CHAIRS**
Carlos Villanueva, MD, PhD - Spain
James Yue, MD - USA

**BASIC SCIENCE CO-CHAIRS**
Lisa Ferrara, PhD
Leonard Voronov, MD, PhD - USA

**CLINICAL CHAIR**
Robert Gunzburg, MD, PhD - Belgium

**MIS CHAIR**
Richard Assaker, MD, PhD - France

**POSTER CHAIR**
Richard Kube, MD - USA

**Basic Science Reviewers:**
- Alan Crockard, MD - UK
- Donna D. Ohnmeiss, DrMed - USA
- George Miz, MD - USA
- Jacques Bouchard, MD - Canada
- Ken Yonemura, MD - USA
- Parmenion Tsitsopoulos, MD, PhD - Sweden
- Peter Robertson, MD, New Zealand
- Richard Hall, PhD - UK
- Avinash Patwardhan, PhD - USA
- Boyle Cheng, PhD - USA
- Neil Crawford, PhD - USA
- Paul Anderson, MD - USA
- Robert Havey, BS - USA
- Vijay Goel, PhD - USA
- William Sears, PhD - USA
- Peter McCombe, MD, Australia
- Dennis Diangelo, PhD - USA

**Clinical Reviewers:**
- Alejandro Reyes-Sanchez, MD - Mexico
- Hans Meisel, MD, PhD - Germany
- Isador Lieberman, MD - USA
- JJ Abitbol, MD - USA
- Manabu Ito, MD, PhD - Japan
- Matthew Scott-Young, MD - Australia
- Scott Leary, MD - USA
- Stefan Hellinger, MD - Germany
- Matthew Gornet, MD - USA
- John Ratliffe, MD - USA
- Frank Cammisa, MD - USA
- Paulo Ramos, MD - Brazil
- Daniel Riew, MD - USA
- Tony Castellvi, MD - USA
- Choll Kim, MD - USA
- Dom Coric, MD - USA
- Helton Defino, MD, PhD - Brazil
- Marco Brayda-Bruno, MD - Italy

**Posters:**
- Luiz Pimenta, MD, PhD - Brazil
- Pierce Nunley, MD - USA

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l)
Dear Colleagues,

From March 20-23, 2012, ISASS will be celebrating the 12th Anniversary of our Annual Scientific Meeting in Barcelona, Spain. This cosmopolitan city is the 12th most-visited city in the world.

It is an exciting time in the treatment of spinal disorders and this year’s meeting is certain to be a reflection of this excitement. The core principals of ISASS - C.U.R.E.: Care, Utilization, Research, and Education - will be emphasized during all planned sessions. This year we will introduce Instructional Course Symposia in which both presenters and participants will educate one another in a truly interactive learning environment. We will also have World Café sessions in which participants from around the globe will be able to sit and discuss treatment options and formulate their own consensus as to optimal treatment modalities.

The Barcelona meeting will be the most ambitious meeting yet in terms of faculty, topics, and, more importantly, in scientific quality. The program includes stimulating debates on the evidence for and against the use of biologics, fusion versus non fusion, the aging spine, and many others. Basic science, evidence based medicine, and medical economic topics will be highlighted daily. The second annual Hands-on Cadaveric Bioskills lab will also be held during the meeting emphasizing the surgical educational objectives of our society.

We have paid particular attention to make this meeting interesting and relevant, and we welcome you to beautiful Barcelona!

James Yue, MD
Carlos Villanueva, MD, PhD
INSIDE:

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Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l)
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<td>1:00pm</td>
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<td>Cadaver Lab</td>
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<td>9:00am - 10:30am</td>
<td>GENERAL SESSION</td>
<td>MIS</td>
<td>GENERAL SESSION</td>
<td>Cervical Therapies</td>
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<td>10:30am - 10:45am</td>
<td>ISASS Members Business Meeting</td>
<td>ISASS Members Business Meeting</td>
<td>Presidential Address &amp; Guest Speaker Jason Drew</td>
<td>Awards Ceremony/ Presidential Exchange</td>
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<tr>
<td>10:30am - 11:00am</td>
<td>Break on Exhibit Floor</td>
<td>ISASS Members Business Meeting</td>
<td>ISASS Members Business Meeting</td>
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<td>11:00am - 1:00pm</td>
<td>GENERAL SESSION</td>
<td>Lumbar Therapies</td>
<td>GENERAL SESSION</td>
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<td>1:00pm - 2:30pm</td>
<td>Industry Workshops</td>
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<td>Industry Workshops</td>
<td>Lunch on the Exhibit Floor</td>
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<td>2:30pm - 3:30pm</td>
<td>CONCURRENT SESSIONS</td>
<td>Sagittal Balance and Deformity</td>
<td>CONCURRENT SESSIONS</td>
<td>Innovative Technologies</td>
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<td>4:00pm - 6:00pm</td>
<td>ICS: Biologics - Past, Present &amp; Future</td>
<td>ICS: Biologics - Past, Present &amp; Future</td>
<td>ORAL POSTERS</td>
<td>Clinical Therapies Update</td>
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<td>Biology and Biomechanics of Spinal Disorders</td>
<td>Biology and Biomechanics of Spinal Disorders</td>
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<td>Outpatient Medical Economics</td>
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<td>5:00pm - 7:00pm</td>
<td>Opening Reception</td>
<td>Cervical Complications &amp; Cervical Trauma</td>
<td>WORLD CAFÉ</td>
<td>Interspinous Process Devices</td>
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<td>Networking Dinners/ Dine Around</td>
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<td>Degenerative Spondylolisthesis: To Fuse or not to Fuse</td>
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<td>GALA Reception</td>
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<td>Networking Dinners/ Dine Around</td>
<td>Complications Arthroplasty</td>
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EDUCATIONAL OBJECTIVES

Upon completion of the CME-accredited portions of this program, participants should be better able to:

- Identify and describe the results of new research in spinal surgery/surgical approach and clinical results for the management of conditions requiring treatment.

- Discuss practical clinical information aimed at improving diagnostic skills.

- Identify key aspects of the latest devices available for preserving the motion of the spine.

- Evaluate and determine a wider range of treatment and surgical options for patients with degenerative disc disease.

- Describe, compare and contrast innovative methods in both assessment and treatment options in spinal surgery.

MEETING PURPOSE

The purpose of the Twelveth Annual Conference is to provide continuing medical education for practicing neurosurgeons and orthopedic spine surgeons, residents in training, postgraduate fellows as well as allied health professionals including nurses and physician assistants.

This education will be provided in many forms:

- Lectures
- Symposia
- Panel discussions to provide in-depth coverage of selected topics
- Exhibits demonstrating the newest devices and technologies
- Industry Workshops
- Paper and Poster abstracts to provide the most current information regarding clinical and basic science advances in spine surgery

PHYSICIAN ACCREDITATION FOR GENERAL SESSIONS

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of Medical Education Resources (MER) and ISASS. MER is accredited by the ACCME to provide continuing medical education for physicians.

CREDIT DESIGNATION FOR GENERAL SESSIONS

Medical Education Resources designates this live activity for a maximum of 22 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

PHYSICIAN ACCREDITATION FOR GENERAL SESSIONS WITH CADAVER LAB

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of Medical Education Resources (MER) and ISASS. MER is accredited by the ACCME to provide continuing medical education for physicians.

CREDIT DESIGNATION FOR GENERAL SESSIONS WITH CADAVER LAB

Medical Education Resources designates this live activity for a maximum of 23.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

PHYSICIAN ASSISTANTS ACCREDITATION FOR GENERAL SESSION

AAPA accepts certificates of participation for educational activities certified for Category I credit from AOACCME, Prescribed credit from AAFP and AMA PRA Category 1 Credit™ from organizations accredited by ACCME or a recognized state medical society. Physician Assistants may receive a maximum of 22 hours of Category I credit for completing this program.

PHYSICIAN ASSISTANTS ACCREDITATION FOR GENERAL SESSIONS WITH CADAVER LAB

AAPA accepts certificates of participation for educational activities certified for Category I credit from AOACCME, Prescribed credit from AAFP and AMA PRA Category 1 Credit™ from organizations accredited by ACCME or a recognized state medical society. Physician Assistants may receive a maximum of 23.75 hours of Category I credit for completing this program.

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l) 22
NURSING ACCREDITATION FOR GENERAL SESSION
Medical Education Resources is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation.

This CE activity provides 22 contact hours of continuing nursing education.
Provider approved by the California Board of Registered Nursing, Provider Number 12299, for 22 contact hours.

NURSING ACCREDITATION FOR GENERAL SESSION WITH CADAVER LAB
Medical Education Resources is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation.

This CE activity provides 23.75 contact hours of continuing nursing education.
Provider approved by the California Board of Registered Nursing, Provider Number 12299, for 23.75 contact hours.

DISCLAIMER
The content and views presented in this educational activity are those of the authors and do not necessarily reflect those of Medical Education Resources and/or the ISASS. The authors have disclosed if there is any discussion of published and/or investigational uses of agents that are not indicated by the FDA in their presentations. The opinions expressed in this educational activity are those of the faculty and do not necessarily represent the views of Medical Education Resources and/or the ISASS.

Before prescribing any medicine, primary references and full prescribing information should be consulted. Any procedures, medications, or other courses of diagnosis or treatment discussed or suggested in this activity should not be used by clinicians without evaluation of their patient’s conditions and possible contraindications on dangers in use, review of any applicable manufacturer’s product information, and comparison with recommendations of other authorities. The information presented in this activity is not meant to serve as a guideline for patient management.

The ISASS disclaims any and all liability for injury or other damages resulting to any individuals attending a session for all claim, which may arise out of the use of techniques demonstrated therein by such individuals, whether these claims be asserted by a physician or any other person.

No reproductions of any kind, including audiotape and videotape or photo may be made of the presentations at the ISASS12 Symposium. The ISASS reserves all of its rights to such material, and commercial reproduction is specifically prohibited.

DISCLOSURE OF CONFLICTS OF INTEREST
Medical Education Resources insures balance, independence, objectivity, and scientific rigor in all our educational programs. In accordance with this policy, MER identifies conflicts of interest with its instructors, content managers, and other individuals who are in a position to control the content of an activity. Conflicts are resolved by MER to ensure that all scientific research referred to, reported, or used in a CME activity conforms to the generally accepted standards of experimental design, data collection, and analysis. MER is committed to providing its learners with high-quality CME activities that promote improvements or quality in health care and not the business interest of a commercial interest.

The society has identified the options to disclose as follows:

a. Grant/Research Support
b. Miscellaneous non-income support (i.e. equipment or services), commercially derived honoraria or other non-research related funding (i.e. paid travel).
c. Royalties
d. Stock Options
e. Consultant or Employee
f. Speaker’s Bureau
g. Nothing of value disclosed

All indication of the participant’s disclosure will appear after his or her names as does the commercial company institution that provided that support. A full complete listing is noted in the ISASS12 Abstract book.

The ISASS does not view the existence of these disclosed interests or commitments as necessarily implying bias or decreasing in the value of the author’s participation in the Symposium.

INSTRUCTIONS FOR OBTAINING CME CREDITS
To receive continuing education credits, you must submit an evaluation indicating the sessions that you attended. All attendees will be able to complete this evaluation through the PDA in the General Session room during the meeting. No paper evaluations will be distributed.

You will need your badge number in order to complete the evaluation form.

Please write your badge number here for future reference.

Badge number: ______________

Your badge number ______________

The evaluation form will be available online at: www.visiontree.com/ISASS and via a link on the ISASS website at www.isass.org AFTER the meeting. Please contact the ISASS Education Department at 630-995-9994 x807 should you have any questions. In order to process your certificate, please make sure you complete the evaluation prior to leaving the conference. The CME certificates of attendance will be mailed out within six weeks following the conference.
SPEAKER READY ROOM

It is REQUIRED that each speaker visit the Speaker Ready Room, (located on level 0 behind the auditorium, across from Registration) at least three (3) hours prior to the scheduled session start time to submit their presentation materials and convey last-minute requests.

Speaker Ready Room hours are:
Tuesday, March 20  8:00 a.m. - 7:00 p.m.
Wednesday, March 21  8:00 a.m. - 6:00 p.m.
Thursday, March 22  8:30 a.m. - 6:00 p.m.
Friday, March 23  8:30 a.m. - 2:00 p.m.

AWARDS PRESENTATIONS

The ISASS - The International Society for the Advancement of Spine Surgery’s Twelveth Annual Conference will offer five awards:

- The SAS Leon Wiltse Award for Best Overall Paper (sponsored by Dr. and Mrs. Hansen A. Yuan)
- Best Basic Science Paper
- Best Poster
- The Charles D. Ray Award Best Clinical Paper
- Kostuik Innovation Award (sponsored by Dr. Thomas Errico)

Awards will be presented on Friday morning, at 10:15 a.m. in the General Session room located in the Auditorium on Level 0. The purpose of these awards is to stimulate fundamental research in spine surgery and motion preservation technologies. Each award will consist of $2,000. It is an honor for the society to recognize and award these presenters for original, outstanding research in motion preservation and independence of thoughts, originality of approach, clarity and excellence of data presentation. Winners are selected from the Top 5 rated abstracts in each classification.

2011 ISASS Leon Wiltse Award for Best Overall Paper

“Long Term 2 to 4 year Clinical and Functional Outcomes of Minimally Invasive Surgery (MIS) for Adult Spinal Deformity”

N.Anand, S. Kahwaty, S. Daroudi, E. Baron

from left: Rolando Garcia, MD, 2011 Program Co-Chair, Neel Anand, MD and ISASS President, Jean-Charles Le Huec, MD, PhD

Meeting Information

ATTENDEE RESOURCES

ISASS HOUSING BUREAU AT REGISTRATION

Please visit the ISASS Housing Bureau desk in the registration area for information and to ask questions regarding housing.

LOST AND FOUND

Please return any found items to the registration desk on Level 0.

COFFEE BREAKS

The coffee breaks will take place in the Exhibit Hall area (lounge area) each morning and afternoon.

POSTER INFORMATION

The poster viewing hours are:
Tuesday, March 20  5:00 p.m. - 7:00 p.m.
Wednesday, March 21  9:00 a.m. - 6:00 p.m.
Thursday, March 22  9:00 a.m. - 6:00 p.m.
Friday, March 23  9:00 a.m. - 2:00 p.m.

Posters are designed to provide attendees with an in-depth learning experience. New investigations, new methods, and innovative research are featured in Poster Exhibits. Awards will be presented on Friday morning, March 23, 2012 from 10:15 a.m. - 10:30 p.m.

PLAN TO ATTEND ISASS2013 IN VANCOUVER

The ISASS13 Annual Conference will take place at the Vancouver Convention Centre, Vancouver, Canada, April 2-5, 2013.

Surrounded by water on three sides and nestled alongside the Coast Mountain Range, Vancouver is the largest city in the province of British Columbia with over half a million residents and one of the mildest climates in Canada.

Olympic City - The International Olympic Committee selected Vancouver as the Host City for the XXI Winter Games. Athletes and spectators from around the world gathered in Vancouver and the alpine resort of Whistler in 2010 to celebrate the Olympic and Paralympic Winter Games. Selected for its beauty, accessibility, unlimited services and activities, Vancouver looks forward to hosting the world!

Spectacular & Safe Setting - Majestic mountains, sparkling ocean, rainforests and beautiful foliage all four seasons make Vancouver one of the most beautiful cities in the world. Canada is known for our people’s friendly nature, and Vancouver’s citizens take great pride in our welcoming, clean, safe streets - day or night, all year round.

Exciting Activities - Catering to any interest throughout the year, you can enjoy world class shopping, gourmet meals, outstanding live entertainment, sporting events, theatre, outdoor adventure, spectacular sights and attractions - it’s all waiting for you in Vancouver.

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l) 24
GENERAL SESSIONS (PLENARY)

The general sessions of the scientific program will be held from Wednesday, March 21 through Friday, March 23, 2012 in the Auditorium on Level 0.

Come hear about new and innovative research, updated studies, and advances in spine surgery. Podium presentations will be followed by floor discussion. Attendees are encouraged to ask questions for a more interactive learning experience. The presentations are moderated by experienced members whose goal is to stimulate discussion. Refer to the Scientific Program Schedule, beginning on page 49 for session dates and times.

EXHIBIT HALL LOCATION AND HOURS

See the latest in products, services and technology from the ISASS12 Exhibitors. The exhibitions for the ISASS12 Annual Meeting are located in the Exhibit Hall, Level 0.

Hours of Operation:

- Tuesday, March 20  5:00 p.m. - 7:00 p.m.
- Wednesday, March 21  9:30 a.m. - 5:00 p.m.
- Thursday, March 22  9:30 a.m. - 5:00 p.m.
- Friday, March 23  9:30 a.m. - 2:00 p.m.

Please note: The Exhibit Hall will close briefly during the Presidential Speaker session on Thursday morning and the Awards Ceremony and Presidential Exchange on Friday morning. Announcements will be made prior to both events.

Absolutely no cameras are allowed in the Exhibit Hall. Violators will be removed from the premises and cameras will be confiscated.

EXHIBITS

The ISASS12 Annual Meeting Exhibits will provide you with the opportunity to explore the market place. Compare products first-hand and plan your purchases of products and services that will allow you to provide a higher level of care to your patients and effectively manage your practice.

The ISASS12 Exhibiting Companies will be displaying their products and services in the Exhibit Hall. To view the listing of companies that will be on display, go to page 34 of this Program Book.

CONCURRENT BREAKOUT SESSIONS

They will take place in the afternoons on Wednesday, Thursday and Friday. No tickets are needed! Just go to the session that most interests you!

MEMBERS’ BUSINESS MEETING

All ISASS Members are cordially invited to the Member’s Business Meeting on Wednesday, March 21, 2012 at 10:30 a.m. - 10:45 a.m. in the General Session room.

OPENING RECEPTION

All attendees, exhibitors and guests are invited to the Opening Reception in the Exhibit Hall on Tuesday, March 20, 2012 from 5:00 p.m. to 7:00 p.m.

REGISTRATION

All delegates must check-in at the Registration Desk located on Level 0. Badges are required and controlled for entrance to the General Sessions, Exhibit Hall, Breakout Sessions, Opening Ceremony and all social events.

Exhibitors must present a personalized business card for each person requiring a badge for their company.

REGISTRATION HOURS*

- Tuesday, March 20  8:00 a.m. - 7:00 p.m.
- Wednesday, March 21  8:00 a.m. - 6:00 p.m.
- Thursday, March 22  8:30 a.m. - 6:00 p.m.
- Friday, March 23  8:30 a.m. - 2:00 p.m.

*kindly note these registration hours are subject to change

BADGES

All congress badges will be marked to indicate the different categories of participation.

A $50.00 fee will be charged for lost badges and/or name changes on pre-registered badges and can be replaced at the registration desk.
ISASS12 At Your Fingertips

PDAS USED IN AUDIENCE INTERACTIVE SESSIONS

These sessions will engage the audience through interactive polls and question and answer periods.

PDAs are configured for the 2012 ISASS Annual Meeting sessions designated as interactive and will not function outside the classroom. Please do not remove these devices from the room.

If you are not familiar with PDA technology and need assistance, please contact a staff member for help.

All information submitted through the PDA is in real-time and the moderators will try to get through as many questions as possible.

All submissions are confidential and anonymous.

Interactive sessions are geared to be highly interactive and informative; contributions to the session are welcomed.

The evaluation form will be available online at: www.visiontree.com/sas and via a link on the ISASS web site at www.isass.org AFTER the meeting. Please contact ISASS Education Department at 630-995-9994 x807 should you have any questions.

In order to process your certificate, please make sure you complete the evaluation prior to leaving the conference. The CME certificates of attendance will be mailed out within six weeks following the conference.

HAVE YOU USED THE ISASS WEB APPLICATION YET?

You stay in touch with everything on your phone, so ISASS has made it easy for you to have us at your finger tips - the latest news, tools and other information you access via our web site.

ISASS12 brings the introduction of our new web application and mobile applications (select platforms) which can be used for all access to the latest, most up-to-date information about ISASS and the spine industry all year long.

The ISASS App is available to members, non-members and spine patients via web browser or free downloadable Apps.

We have also provided a link on the main ISASS website with a brief description of the App and links to the App Store, Android Marketplace, etc. as well as the address to use the App within your mobile web browser:

http://www.isass.org/h/app.html

The ISASS App include full ISASS12 program information, information on spine conditions for patients, a directory of member services, Find a Member ISASS member directory, information about ISASS and more!
Jason Drew is an international business leader, serial entrepreneur and former CEO of a JSE listed business he founded. Within the financial services sector he has held leadership roles in major multinationals from General Electric to BUPA and Egg Bank. Following two heart attacks he retired early and became an eco-entrepreneur, futurist, and author.

He chairs a number of organizations including www.AgriProtein.com, his latest green venture. Born in London, Jason lived and worked all over the world before moving to South Africa eight years ago.

His looks at business strategy in terms of the changing world defined by megatrends from the environment to technology and society from the viewpoint of a business leader and entrepreneur. He believes that whilst capitalism may have caused many of the issues we face - it may be the only tool we have that is strong enough to fix the problems.

His insights into the realities of our changing environment and the ‘business’ of fixing the issues are brilliant and astounding. Some the business solutions he has invested in from growing flies in South Africa to mosquitoes in the UK and urban wind farms in Europe are as remarkable as they are profitable. Jason is South Africa’s leading eco-capitalist and Leadership Magazine has said he is one of Africa’s most inspiring green leaders.
The Instructional Course Symposia

ISASS12 introduces our Instructional Course Symposia which provides the Presenters and Participants with the opportunity to educate one another in a truly interactive learning environment.

Participants will give brief presentations of their paper’s abstracts before joining a panel to discuss case studies with the audience.

Panel moderators will be able to ask the audience their opinions on the cases by means of using the VisionTree polling software to get an overall view of the room’s opinions; individual audience members can join the Q&A session by asking questions directly to the panel.

Make your voice heard and discuss your interpretations with some of the brightest minds in spine at these exciting courses!

**Wednesday, March 21, 2012**
2:30pm - 3:30pm
Room: F

**INSTRUCTIONAL COURSE SYMPOSIUM ON NAVIGATION AND ROBOTICS**
Moderators: Isador Lieberman, BSc, MD, MBA, FRCSC and Wei Tian, MD, PhD

**Wednesday, March 21, 2012**
4:00pm - 6:00pm
Room: Auditorium

**INSTRUCTIONAL COURSE SYMPOSIUM ON BIOLOGICS PAST, PRESENT AND FUTURE**
Moderators: Anthony Fabrizi, MD and Matthew Gornet, MD

**Thursday, March 22, 2012**
2:30pm - 3:30pm
Room: F

**INSTRUCTIONAL COURSE ON DIFFICULT SPINAL PRESENTATIONS: RHEUMATOID ARTHRITIS AND INFECTION**
Moderators: Hans Meisel, MD, PhD and Larry Khoo, MD

**Thursday, March 22, 2012**
2:30pm - 3:30pm
Room: J

**INSTRUCTIONAL COURSE SYMPOSIUM ON TDR EVIDENCE-BASED MEDICINE**
Moderators: Matthew Scott-Young, MD and Rudolf Bertagnoli, MD
The ISASS12 Cadaver Lab is being offered in conjunction with the ISASS12 conference.

The Cadaver Lab is an outstanding venue for surgeons in practice and fellows to experience and gain practical knowledge of the latest surgical technologies and techniques.

Well-known worldwide specialists will provide their expertise through didactic presentations and precisely selected clinical cases.

AGENDA:

THURSDAY, MARCH 22, 2012
4:30 PM

Welcome
Jean-Charles LeHuec, MD, PhD and James Yue, MD

4:30 pm - 4:50 pm
Anterior Access
Gary Fantini, MD

4:50 pm - 5:10 pm
Revision Anterior Access
Salvador Brau, MD

5:10 pm - 5:30 pm
Lateral Approach to Spine
Luiz Pimenta, MD, PhD

5:30 pm - 5:55 pm
MISS Approaches
Choll Kim, MD

5:55 pm - 6:10 pm
Endoscopic Entry Site Approaches
Anthony Yeung, MD

FRIDAY, MARCH 23, 2012
6:45 AM - 1:00PM

6:45am
Depart for Lab

7:10 am
Arrive at Lab, Breakfast and Change into Scrubs

8:00-9:45 am
XLIF

Stations 1A and 1B: Luiz Pimenta, MD, PhD
Stations 2A and 2B: Choll Kim, MD
Stations 3A and 3B: Larry Khoo, MD

10:00-11:15 am
MISS TLIF

Stations 1A and 1B: Choll Kim, MD
Stations 2A and 2B: Richard Kube, MD
Stations 3A and 3B: Larry Khoo, MD

11:15 am-12:15 pm
ALIF

Stations 1A and 1B: Salvador Brau, MD
Stations 2A and 2B: James Yue, MD
Stations 3A and 3B: Gary Fantini, MD

12:15 pm - 1:00 pm
GELSTIX PERCUTANEOUS DISC AUGMENTATION

Stations 1A and 1B: Anthony Yeung, MD
Stations 2A and 2B: Rudolf Morgentstern, MD PhD
Stations 3A and 3B: James Yue, MD
Harwant Singh, MD
The challenges of life in the 21st Century require us to find new ways to access the wisdom and intelligence inherent in groups both small and large. The need for collaboration, insight and coordinated action has never been greater. ISASS12 will continue and expand on past successes with featured events developed by leaders in the spine industry.

World Café Case Studies and New Device Demonstration Tables

At this year’s meeting, ISASS' innovative World Café program will be based around case studies on three topics:

- Interspinous Process Devices
- Degenerative Spondylolisthesis, and
- Complications in Arthroplasty

The World Café is an intensive round table discussion program that presents a series of challenging case studies and allows participants to confer on treatment options and protocols.

This year, device demonstration tables will be added to expand the World Café program content. A tabletop for each device company will be available for hands-on product display. Surgeons will visit each tabletop for a specific period of time and rotate to the following table. The devices will remain in the room for the World Café session while related cases are discussed.

Participants must select either Interspinous, Spondylolisthesis or Arthroplasty cases to review.

After rounds of discussion, the groups will gather to share and explore emerging outcomes, insights and new knowledge. By cross-pollinating ideas and sharing thoughts, collective discoveries and outcomes will be developed that will be meaningful to case outcomes.

INTERSPINOUS PROCESS DEVICES

Moderators:
Matthew Gornet, MD
Anand Agarwal, MD

DEGENERATIVE SPONDYLOLISTHESIS: TO FUSE OR NOT TO FUSE

Moderators:
Jean-Charles LeHuec, MD, PhD
Larry Khoo, MD

COMPLICATIONS IN ARTHROPLASTY

Moderator:
Scott Blumenthal, MD
SAVE THE DATE

International Society For The Advancement of Spine Surgery

ISASS13  April 2 – 5, 2013
13th Annual Conference

VANCOUVER, BC CANADA
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Tuesday, March 20 5:00 p.m. - 7:00 p.m.*
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Thursday, March 22 9:00 a.m. - 6:00 p.m.
Friday, March 23 9:30 a.m. - 2:00 p.m.

*OPENING RECEPTION
ISASS proudly recognizes our 2012 Partners for their outstanding year-round leadership in the advancement of spine surgery and to thank them for their support of our mission.

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Phone: 760-431-9286 FAX: 760-431-1624
www.alphatecspine.com

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www.cadwell.com

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505 Park Ave 14th floor
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Phone: 212-583-9700 FAX: 800-493-0966
www.centinelspine.com

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11025 Dover Street Suite 1600
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www.cerapedics.com

428
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69, RUE DE LA BELLE ÉTOILE
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Phone: +33 (0)1 48 63 88 63 FAX: +33 (0)1 48 63 88 99
www.ceraver.com

502
Cybertech Medical
1815 Wright Ave
La Verne, CA 91750 USA
Phone: 800-220-4224 FAX: 909-447-7059
www.cybertechmedical.com

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Globus Medical
2560 General Armistead Ave
Audubon, PA 19403 USA
Phone: 610-415-9000 FAX: 610-930-2042
www.globusmedical.com

100
Interventional Spine Inc
13700 Alton Parkway #160
Irvine, CA 92618 USA
Phone: 949-472-0006 FAX: 949-472-0016
www.i-spineinc.com

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Inomed Medizintechnik GmbH
Im Hausgrün 29
Emmendingen, Germany D-79312
Phone: +49 7641 9414-771 FAX: +49 7641 9414-94
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Woburn, MA 01801 USA
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www.intrinsic-therapeutics.com

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San Jose, CA 95128  
Phone: 408-207-0700 FAX: 408-587-8312  
www.si-bone.com

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1680 Bayport Avenue  
San Carlos, CA 94070  
Phone: 650-592-6300 FAX: 650-362-1846  
www.simpirica.com

208  
Spinal Kinetics  
595 N Pastoria Dr  
Sunnyvale, CA 94085  
Phone: 408-636-2500 FAX: 408-636-2599  
www.spinalkinetics.com

Exhibitor Directory

235  
OsteoMed  
3885 Arapaho  
Addison, TX 75001 USA  
Phone: 972-677-4748 FAX: 972-677-4731  
www.osteomedcorp.com

215  
Paradigm Spine  
505 Park Avenue 14th Floor  
New York, NY 10022 USA  
Phone: 212-583-9700 FAX: 212-826-9509  
www.paradigmspine.com

212  
Pioneer Surgical  
9600 Great Hills Trail Suite 160-E  
Austin, TX 78759 USA  
Phone: 512-372-4355 FAX: 512-340-1481  
www.pionersurgical.com

506  
Premia Spine  
Achi Dakar 31  
Herzeil, Israel 46702  
Phone: 9 72 54 462 6602 Fax: 9 72 59 835 7975  
www.premiaspine.com

102  
Replication Medical, Inc  
7 Clarke Dr  
Cranbury, NJ 08512 USA  
Phone: 609-860-0330 FAX 609-860-0343  
www.replicationmedical.com

218  
NuVasive  
7475 Lusk Blvd  
San Diego, CA 92121 USA  
Phone: 858-909-1800 FAX: 858-909-2000  
www.nuvasive.com

203  
Orthofix  
3451 Plano Parkway  
Lewisville, TX 75056 USA  
Phone: 214-937-2205 FAX: 214-937-2730  
www.orthofix.com

108  
Orthorebirth Co Ltd  
3-17-43 Chigasaki Higashi Tsuduki-ku  
Yokohama, Kanagawa, 2240033 Japan  
Phone: 81-45-5323650 FAX: 81-45-5323691  
www.orthorebirth.com

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www.nuvasive.com

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www.orthorebirth.com

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Spinal Motion
201 San Antonio Circle Suite 115
Mountain View, CA  94040
Phone: 650-947-3472  FAX 650-943-2458
www.spinalmotion.com

104
Spine Patient Society
758 S Warnock St
Philadelphia, PA  19147
Phone: 267-808-3189
www.SpinePatientSociety.org

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301 Howard Street Suite 970
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www.spineguard.com

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Oberdorf,  4436
Phone: +41619656899
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www.synthes.com

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Email: cwilson@trans1.com
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BALMA,  31130
Phone: 0033 561616140 FAX: 330-561-4895ext19
Email: p.deoliveira@vexim.fr
www.vexim.fr

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Zimmer Spine
23 Parvis des Chartrons
Bordeaux Cedex ,  33080
Phone: 33 5 56 00 18 20 FAX: +33 5 56 00 18 21
Email: sophie.farys@zimmer.com
www.zimmerspine.eu

35
Zyga Technology
700 10k Ave
Minneapolis, MN  55415
www.zygatech.com
The coflex™ device is for investigational use only and currently not available in the US. The DCI™ implant, the HPS system and the GSP™ implant are not available in the US. Please see DSS™ Stabilization System cleared Package Insert for US indications for use, warnings, precautions, and limitations.

Join Our Workshops

“New Ways in Spinal Stabilization and Adjacent Segment Protection”
on Wednesday, March 21, 2012
from 1:00pm to 2:30pm
in Room H2, Level -1

“Interlaminar Stabilization with the coflex™ Family of Implants – Rigid and Dynamic Solutions Following Direct Decompression”
on Thursday, March 22, 2012
from 1:00pm to 2:30pm
in Room H2, Level -1
The Synthes MATRIX Spine System is a universal set of instruments and implants that cover degenerative, deformity, MIS and Trauma indications. Pictured features: Unique Dual Core/Double Lead Screw Design, PrimeLock–Screwdriver–Screw Interlock, Modularity–Click-on and Preassembled Screws, Snap-on Swiveling Transverse Connector.

For further information please contact your local Synthes representative.

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MATRIX Spine System. The total solution for simple and complex spine pathology.

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Lunch Workshop
Wednesday, March 21
13:00-14:30

XLIF® for Anterior Column Realignment
Dr. Luiz Pimenta
Room H1

Lunch Workshop
Thursday, March 22
13:00-14:30

MAS® TLIF
Antoine Tohmeh, M.D.
Room H1

Visit us at ISASS | March 20-23
STAND #218

Corpectomy | Deformity | Spondylolisthesis | Degenerative Disc Disease | Adjacent Segment Disease

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Join us at ISASS, Booth #203
Industry Workshop on Thurs, March 22 at 1 - 2:30pm, Room Sala B
“Percutaneous Pedicle Screw Fixation Techniques”
NuTech Spine and Biologics

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Wednesday Industry Workshops
1:00pm - 2:30pm  *not CME accredited*

**GLOBUS MEDICAL**
Room: A
Emerging Technologies in the Treatment of Cervical Spine Disorders

**INTERVENTIONAL SPINE**
Room: E4, E5, E6
PerX360° System™ by Interventional Spine®
A Complete Percutaneous 360 Lumbar Fusion via Two 15mm Incisions
The presenters will be:
Dr. Rudolf Morgenstern from Barcelona, Spain
Dr. David Greenwald from St. Augustine, FL

**JOIMAX**
Room: E1 - E3
Transforaminal Endoscopic Surgery performed with TESSYS™ - thoracic & interlaminar:
advanced case presentations
Michael Schubert, PhD

Key Advantages of Lumbar Endoscopic Spine Surgery
Choll Kim, MD, PhD

**MEDTRONIC**
Room: H3
Sagittal Balance and Lordosis restoration in Degenerative Spine with CD HORIZON BalanC™
Jean-Charles Le Huec, MD, PhD

**NUVASIVE**
Room: H1
XLIF® for Anterior Column Realignment

**PARADIGM SPINE**
Room: H2, Level -1
New Ways in Spinal Stabilization and Adjacent Segment Protection

Adjacent Segment Disease – Myth or Fact?
Follow-up of 1,000 Posterior Lumbar Interbody Fusions and Early Experience with the New HPS Hybrid Performance System
William R. Sears, MB, BS, FRACS

Can a Functionally Dynamic Interlaminar Implant Protect the Adjacent Segments from Accelerated Degeneration?
Two-to-Four-Year Results from the Prospective, Randomized, Multi-Center FDA coflex™ Trial
Joshua Auerbach, MD

Kinematic Signature of the DCI™ Implant: Motion Analysis of a Functionally Dynamic Cervical Implant Utilizing a New Functional X-Ray Analysis Method
Frank Trautwein, MD

Biomechanical Investigation of the DCI™ Dynamic Cervical Implant in Comparison to Fusion and Total Disc Replacement
Dorothea Daentzer, MD

*The coflex™ device is for investigational use only and currently not available in the US.*
*The HPS system and the DCI™ implant are not available in the US.*
Thursday Industry Workshops
1:00pm - 2:30pm  *not CME accredited

B.BRAUN/AESCULAP
Room: H3, Level - 1
Treatment Cascade in Degenerative Spine
Chairmen: James J. Yue, MD / USA
Petr Suchomel, MD/ CZ

CENTINEL SPINE
Room: A
Anterior Lumbar Interbody Fusion - Indications and Results
Matthew Scott-Young, MD

STALIF MIDLINE® – One Surgeon’s Personal Experience
Said Elshihabi, MD

STALIF C® – Clinical Experience and Device Utility
Antonio Castellvi, MD

MEDTRONIC
Room: E4 - E6
CD Horizon® Solera™ Cortical Bone Screw: An Innovative Surgical Solution

NUVASIVE
Room: H1, Level -1
MAS® TLIF
Antoine Tohmeh, MD

ORTHOFIX
Room: B
Percutaneous Pedicle Screw Fixation Techniques

PARADIGM SPINE
Room: H2, Level -1
Interlaminar Stabilization with the coflex™ Family of Implants – Rigid and Dynamic Solutions Following Direct Decompression
Reginald Davis, MD

In-Vivo Load Analysis and Kinematic Signature of the coflex™ Implant: Motion Analysis in the “Topping-Off” Indication Utilizing a New Functional X-Ray Analysis Method
Frank Trautwein, MD

Modern Fusion Concepts and Philosophy of Interlaminar Stabilization
Christoph Siepe, MD

Clinical and Radiographic Evaluation of the coflex-F™ Interlaminar Stabilization System to Augment Lumbar Interbody Fusion
Joshua Auerbach, MD

The coflex™ device is for investigational use only and currently not available in the US.

SYNTHERES
Room: E1 -E3
Cervical Disc Arthroplasty - An Update 2012
Prof. Dr. Michael Mayer, Munich, Germany
11:00AM - 1:00PM  LUMBAR THERAPIES
Room: Auditorium
Moderators:
Robert Gunzburg, MD, PhD and Richard Guyer, MD

11:00am - 11:05am
507
Analyzing the Relationships between Pain, Patient Expectations, and Satisfaction Following Spine Surgery
D.D. Ohnmeiss¹, A.R. Block², R.D. Guyer², Y. Ben-Porath³, D. Burchett³
¹Texas Back Institute Research Foundation, Plano, TX, USA, ²Texas Back Institute, Plano, TX, USA, ³Kent State University, Kent, OH, USA

11:06am - 11:11am
505
Low-grade Spondylolisthesis Can Be Effectively Treated by Either Coflex® Interlaminar Stabilization or Laminctomy and Posterior Spinal Fusion: Two-year Clinical and Radiographic Results from the US IDE Trial
T.J. Errico¹, J.D. Auerbach², R.J. Davis³, H. Bae⁴
¹Department of Orthopaedic Surgery, Hospital for Joint Diseases-NYU, New York, NY, USA, ²Great Valley Medical Center, Department of Orthopaedics, Bronx, NY, USA, ³Greater Baltimore Neurosurgical Associates, Baltimore, MD, USA, ⁴The Spine Institute, Santa Monica, CA, USA

11:12am - 11:17am
499
Coflex® Interlaminar Stabilization Compared to Posterior Spinal Fusion for Spinal Stenosis and Spondylolisthesis: Two-year Results from the Prospective, Randomized, Multicenter Food and Drug Administration IDE Trial
R.J. Davis¹, T.J. Errico², H. Bae³, J.D. Auerbach⁴
¹Greater Baltimore Neurosurgical Associates, Towson, MD, USA, ²Hospital for Joint Diseases-NYU, New York, NY, USA, ³The Spine Institute, Santa Monica, CA, USA, ⁴Bronx-Lebanon Hospital Center, Department of Orthopaedics, Bronx, NY, USA

11:18am - 11:23am
112
Lumbar Spinal Stenosis: How Much Can You Decompress without Destabilizing the Spine?
A. Peters¹, C. Hoelscher¹, E. Edusel², W. Skalli², B. Moal², T. Errico¹
¹NYU Hospital for Joint Disease, Division of Spine Surgery, New York, NY, USA, ²Laboratoire de Biomecanique, Department of Biomechanics, Paris, France

11:24am - 11:29am
275
Low-grade Isthmic vs. Degenerative Spondylolisthesis: Complications and Outcomes Following Reduction and Posterior Instrumented Fusion with TLIF
M. Gebhardt¹, D.G. Crandall¹, J. Revella¹, J. Datta¹, D. Revella¹, M.S. Chang¹, T. Crowder¹, R. Mclemore¹
¹Sonoran Spine Center, Mesa, AZ, USA, ²Banner Orthopaedic Residency Program, Phoenix, AZ, USA

11:30am - 11:35am
84
Five Year Adjacent Level Degenerative Changes Comparing Lumbar Total Disc Replacement to Circumferential Fusion in Patients with Single-level Disease in a Prospective Randomized Cohort Analysis
J.E. Zigler¹, R. Delamarter¹, J. Glenn¹
¹Texas Back Institute, Plano, TX, USA, ²The Spine Institute at Saint John’s Health Center, Santa Monica, CA, USA, ³Core Orthopaedic Medical Center, Encinitas, CA, USA

11:36am - 11:41am
366
Adult Degenerative Scoliosis Treated by XLIF: Clinical Results of a 24-month Multi-center Prospective Study
F.M. Phillips¹, W.B. Rodgers², A. Tohmeh³, SOLAS Degenerative Study Group
¹Rush University Medical Center, Chicago, IL, USA, ²Spine Midwest, Jefferson City, MO, USA, ³Northwest Orthopaedic Specialists, Spokane, WA, USA

11:42am - 11:47am
29
Repair Surgery for Pars Defects in Symptomatic Lumbar Spondylolisthesis Using Two Different Surgical Methods; Pedicle Screw with Universal Hook System and Direct Pars Screw Fixation
K.-S. Ryu¹, M.-H. Shin¹, C.-K. Park¹
¹Seoul St. Mary’s Hospital, The Catholic University, Seoul, Korea, Republic of

11:48am - 11:53am
427
The ACADIA™ Facet Replacement System IDE Clinical Trial: One Year Outcomes
J.J. Regan¹, R.F. Dryer¹, T. Briggs¹, J. Youssef¹, M. Lorio¹, A.D. Taferna³, D. Dirisio¹, J. Myer¹, K. Baker¹
¹D.I.S.C Sports and Spine Center, Beverly Hills, CA, USA, ²Central Texas Spine Institute, LLP, Austin, TX, USA, ³Springfield Neurological & Spine Institute, LLC, Springfield, MO, USA, ⁴Durango Orthopedic Associates/Spine Colorado, Durango, CO, USA, ⁵Neuro-Spine Solutions, Bristol, TN, USA, ⁶Desert Orthopedic Center, Rancho Mirage, CA, USA, ⁷Albany Medical Center, Albany, NY, USA, ⁸Globus Medical, Inc., Audubon, PA, USA

11:54am - 12:04pm
DISCUSSION
Wednesday | March 21st

12:05pm - 12:10pm

471
Total Disc Replacement Compared to Lumbar Fusion: A Randomised Controlled Trial with Five-year Follow-up
C. Nyquist¹, S. Berg², H. Tropp¹
¹Linköping University, Faculty of Health Sciences, Department of Clinical and Experimental Medicine, Linköping, Sweden; ²Stockholm Spine Center, Stockholm, Sweden

12:11pm - 12:16pm

488
Midline Anterior Approach from the Right Side to the Lumbar Spine for Interbody Fusion and Total Disc Replacement. A New Mobilization Technique of the Vena Cava
G. Edgard-Rosa¹, G. Geneste¹, G. Negre², T. Marnay¹
¹Clinique du Parc, Centre de Chirurgie Vertébrale, Castelinau le Lez, France

12:17pm - 12:22pm

302
Clinical Results of Two-level Lumbar Disc Replacement vs. Combined Arthroplasty & Fusion (Hybrid Procedure) in 200 Patients with a Minimum of 4 Years Follow-up
M. Scott-Young¹, A. Kasis¹, C. Magno², D. Nielsen¹, E. Mitchell¹, N. Blanch¹
¹Gold Coast Spine, Gold Coast, QLD, Australia

12:23pm - 12:28pm

395
Five Year Follow-up with Comparison between Fusion and TDR for Chronic LBP - Swespine Data from One Clinic
S. Berg¹, H. Tropp²
¹Stockholm Spine Center, Upplands Väsby, Stockholm, Sweden; ²University Hospital, Othopedic Clinic, Linköping, Sweden

12:29pm - 12:34pm

516
Perioperative Outcomes, Complications, and Costs Associated with Lumbar Spinal Fusion in Older Patients with Spinal Stenosis and Spondylolisthesis: Analysis of the USA Medicare Claims Database
K.L. Öng¹, J.D. Auerbach², E. Lau³, J. Ochoa¹, J. Schmier², J.D. Zigler³
¹Exponent, Inc., Philadelphia, PA, USA; ²Brons-Lebanon Hospital Center, Albert Einstein College of Medicine, Department of Orthopaedics, Bronx, NY, USA; ³Exponent, Inc., Menlo Park, CA, USA

12:35pm - 12:40pm

82
Does 360° Lumbar Spinal Fusion Improve Long-term Clinical Outcomes after Failure of Conservative Treatment in Patients with Functionally Disabling Single Level Degenerative Lumbar Disc Disease? Results of 5 Year Postoperative Follow-up of 75 Patients
J.E. Zigler¹, R. Delamarter²
¹Texas Back Institute, Plano, TX, USA; ²Cedars Sinai Spine Center, Los Angeles, CA, USA

12:41pm - 12:46pm

309
Combined Arthroplasty and Anterior Lumbar Interbody Fusion (Hybrid Procedure) in 385 Patients with a Minimum of 2 Years Follow-up
A. Kasis¹, M. Scott-Young¹, C. Magno¹, D. Nielsen¹, E. Mitchell¹, N. Blanch¹
¹Gold Coast Spine, Gold Coast, QLD, Australia

12:47pm - 12:52pm

242
UK Experience with Total Facet Joint Replacement
J.C. Sutcliffe¹, H. Bhatti¹
¹London Spine Clinic, London, United Kingdom

12:53pm - 1:00pm

DISCUSSION

1:00pm - 2:30pm

INDUSTRY WORKSHOPS
Rooms: A, E1-E3, E4-E6, H1, H2 and H3

2:30pm - 3:30pm

SAGITTAL BALANCE AND DEFORMITY
Room: Auditorium
Moderators:
Jean-Charles LeHuec, MD, PhD and Felin Pelisse, MD

2:30pm - 2:35pm

423
Return to Sports after Surgery to Correct Adolescent Idiopathic Scoliosis
R.A. Lehman¹, D.G. Kang², L.G. Lenke³, D.J. Sucato³, A.J. Bevevino¹, Spinal Deformity Study Group
¹Walter Reed National Military Medical Center, Orthopaedic Surgery, Bethesda, MD, USA; ²Washington University School of Medicine, Orthopaedic Surgery, St. Louis, MO, USA; ³Texas Scottish Rite Hospital for Children, Orthopaedic Surgery, Dallas, TX, USA

2:36pm - 2:41pm

158
Congenital Stenosis and Symptomatic Adjacent Segment Disease
J. Belding¹, J.J. Eubanks¹, A. Rowan³, G. Moffitt², V. Cheruvu¹, J. Hohl², A. Hillbrand³, H. Bohlman², J. Kang²
¹University Hospitals Case Medical Center, Cleveland, OH, USA; ²Case Western Reserve University School of Medicine, Cleveland, OH, USA; ³Kent State University, Kent, OH, USA

2:42pm - 2:47pm

367
Can Different Surgical Strategies Result in Satisfactory Post-operative Sagittal Alignment?
V. Lafage¹, B. Blondel¹, F. Schwab², C. Ames³, R. Hostin³, R. Hart³, B. Akbarnia³, J. Smith³, C. Shaffrey³, K. Kebaish³, D. Burton³, S. Bess³, International Spine Study Group

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l) 52
2:48 pm - 2:53 pm
149
Improvement of Posterior Wedge Osteotomy Programation Using the 3D EOS Imaging System in Standing Position: Femur Angulation and Knee Flexion Are Important to Analyze. F.B.I. Technique
J. Rigal1, S. Aunoble1, P. Leijissen1, M. Duarte1, J.-C. Le Huec1
1University Victor Segalen Bordeaux 2, Bordeaux, France

2:54 pm - 3:00 pm
DISCUSSION

3:01 pm - 3:06 pm
415
The Biomechanical Consequences of Rod Reduction on Pedicle Screws: Should it Be Avoided?
H. Paik1, D.G. Kang1, R.A. Lehman1, A.E. Dmitriev1, R. Gaume1, D. Ambati1, A.J. Bevevino1
1Walter Reed National Military Medical Center, Orthopaedic Surgery, Washington, DC, USA

3:07 pm - 3:12 pm
363
Posterior Global Malalignment after Osteotomy for Sagittal Plane Deformity
B. Blondel1, F. Schwab1, B. Moal1, S. Bess1, C. Ames1, R. Hart1, J. Smith1, C. Shaffrey2, O. Boachie-Adjei1, V. Lafage1, International Spine Study Group
1New York University Hospital for Joint Diseases, Spine Division, New York, NY, USA, 2Baylor Scoliosis Center, Orthopedic Surgery, Plano, TX, USA

3:13 pm - 3:18 pm
165
Revision Surgery for Severe Kyphoscoliosis
Y. Hai1, Q. Su1, S. Lu1, J. Yang1, X. Meng1
1Chaoyang Hospital, Capital Medical University, Orthopedic Surgery, Beijing, China

3:19 pm - 3:24 pm
370
Coronal Cobb Angle Correction in the Setting of Adult Spinal Deformity: A Health Related Quality of Life Assessment on Two Year Outcomes
B. Moal1, F. Schwab1, J. Smith1, K. Braulwell1, B. Blondel1, S. Glassman1, J. Demakakos1, C. Shaffrey2, V. Lafage1
1New York University Hospital for Joint Diseases, Spine Division, New York, NY, USA, 2University of Virginia, Department of Neurological Surgery, Charlottesville, VA, USA, 3Washington University School of Medicine, Spine Department, Saint Louis, MO, USA, 4University of Louisville, Spine Institute for Special Surgery, Louisville, KY, USA

3:25 pm - 3:30 pm
DISCUSSION
4:00 PM - 6:00 PM
INSTRUCTIONAL COURSE SYMPOSIUM:
BIOLOGICS PAST PRESENT AND FUTURE
Room: Auditorium
Moderators:
Anthony Fabrizi, MD and Matthew Gornet, MD

Introduction:
Overview of Biologics for Spinal Surgery. Osteoinductive and Bone Graft Extenders; What are they? How do they work?
Christopher Bono, MD

4:00 PM - 4:05 PM
327
Differentiation of Mouse Induced Pluripotent Stem Cells into Nucleus pulposus like Cells in vitro
Z. Li1, K. Liu1, G. Feng2
1Nanchong Central Hospital, North Sichuan Medical College, Institute of Tissue Engineering and Stem Cells, Nanchong, China, 2Nanchong Central Hospital, North Sichuan Medical College, Department of Orthopaedic Surgery, Nanchong, China

4:06 PM - 4:11 PM
250
Biomechanical Investigation of a Cervical Dynamical Stabilization Device in Comparison to Fusion and TDR
D. Daentzer1, C. Hurschler2, M. Schwarze2, A. Packheiser1, S. Tak1, B. Richter1, B. Welke1
1Hannover Medical School, Department of Orthopaedic Surgery, Hannover, Germany, 2Hannover Medical School, Laboratory for Biomechanics and Biomaterials, Hannover, Germany

4:12 PM - 4:17 PM
254
Biomechanical Evaluation of a Polyaxial Interspinous Plating System as an Adjunct to Interbody Fusion
L.I. Voronov1, P.P. Tsitsopoulos1, R.M. Havey1, T. Polluri2, J. Zelenakova2, G. Carandang2, N. Kulkarni2, D. Schmierer2, M. Yap2, A.G. Patwardhan1
1Loyola University Chicago, Orthopaedic Surgery and Rehabilitation, Maywood, IL, USA, 2Edward Hines Jr. VA Hospital, Hines, IL, USA, 3OsteoMed, Addison, TX, USA

4:18 PM - 4:23 PM
250
Accuracy of a New Functional X-ray Analysis Method for the Spine
F.T. Trautwein1, F. Heuer1, M. Schulze2, M.J. Raschke2, T. Vordemvenne2
1ACES GmbH, Dept for Research & Development, Filderstadt, Germany, 2University of Muenster, Department of Trauma and Reconstructive Surgery, Muenster, Germany

4:24 PM - 4:29 PM
331
Preventing Hardware Failure in Pedicle Subtraction Osteotomy Constructs: Pilot Biomechanical Analyses of Rod Configurations
1Loma Linda University, Orthopaedic Surgery, Loma Linda, CA, USA, 2Arizona College of Osteopathic Medicine, Glendale, AZ, USA

Wednesday | March 21st

4:00 PM - 6:00 PM
BIOLOGY AND BIOMECHANICS OF SPINAL DISORDERS
Room: F
Moderators:
Boyle Cheng, PhD and Anand Agarwal, MD

4:00 PM - 4:05 PM
327
Differentiation of Mouse Induced Pluripotent Stem Cells into Nucleus pulposus like Cells in vitro
Z. Li1, K. Liu1, G. Feng2
1Nanchong Central Hospital, North Sichuan Medical College, Institute of Tissue Engineering and Stem Cells, Nanchong, China, 2Nanchong Central Hospital, North Sichuan Medical College, Department of Orthopaedic Surgery, Nanchong, China

4:06 PM - 4:11 PM
250
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1Hannover Medical School, Department of Orthopaedic Surgery, Hannover, Germany, 2Hannover Medical School, Laboratory for Biomechanics and Biomaterials, Hannover, Germany

4:12 PM - 4:17 PM
254
Biomechanical Evaluation of a Polyaxial Interspinous Plating System as an Adjunct to Interbody Fusion
L.I. Voronov1, P.P. Tsitsopoulos1, R.M. Havey1, T. Polluri2, J. Zelenakova2, G. Carandang2, N. Kulkarni2, D. Schmierer2, M. Yap2, A.G. Patwardhan1
1Loyola University Chicago, Orthopaedic Surgery and Rehabilitation, Maywood, IL, USA, 2Edward Hines Jr. VA Hospital, Hines, IL, USA, 3OsteoMed, Addison, TX, USA

4:18 PM - 4:23 PM
250
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F.T. Trautwein1, F. Heuer1, M. Schulze2, M.J. Raschke2, T. Vordemvenne2
1ACES GmbH, Dept for Research & Development, Filderstadt, Germany, 2University of Muenster, Department of Trauma and Reconstructive Surgery, Muenster, Germany

4:24 PM - 4:29 PM
331
Preventing Hardware Failure in Pedicle Subtraction Osteotomy Constructs: Pilot Biomechanical Analyses of Rod Configurations
1Loma Linda University, Orthopaedic Surgery, Loma Linda, CA, USA, 2Arizona College of Osteopathic Medicine, Glendale, AZ, USA
4:30pm - 4:35pm

213

A Posterior Dynamic Stabilization System Construct Allowing Rotation about a Spherical Seat under Biomechanical Testing

B.C. Cheng¹, D.J. Cook², D.M. Whiting²

¹Drexel University, Neurosurgery, Pittsburgh, PA, USA, ²Allegheny General Hospital, Neurosurgery, Pittsburgh, PA, USA

4:36pm - 4:41pm

424

Biomechanical Stability of Stand-alone Interbody Spacers with Integrated Screws for Multi-level Cervical Arthrodesis

R.A. Lehman¹, A.E. Dmitriev¹, M. Cardoso², H. Paik³, R. Gaume³, D.G. Kang⁴, A.J. Bevevino⁴

¹Walter Reed National Military Medical Center, Orthopaedic Surgery, Bethesda, MD, USA, ²Walter Reed National Military Medical Center, Neurosurgery, Bethesda, MD, USA

4:42pm - 4:57pm

DISCUSSION

4:58pm - 5:03pm

276

Biomechanical Evaluation of Nucleus Augmentation with an Injectable in situ Cured Hydrogel

D.J. Cook¹, A. Hanlon¹, D.M. Whiting¹, B.C. Cheng¹

¹Allegheny General Hospital, Neurosurgery, Pittsburgh, PA, USA, ²Drexel University, Neurosurgery, Pittsburgh, PA, USA

5:04pm - 5:09pm

238

Effects of Arterial N-acetylcysteine (NAC) on the Expression of Protein Chaperones PDI, ERP57, Heat Shock Protein 40, 60, 70, 90 kd, the Qualitative Presence of Intracellular Apoptosis Markers, and Lipid Peroxidation in Postischemic Reperfusion in Rat Spinal Cord

M.E. Berbeo¹, A.M. Rodriguez², Grupo de Neurociencias HUSI - PUJ

¹Hospital Universitario San Ignacio - Pontificia Universidad Javeriana, Neurociencias - Neurocirugia, Bogota, Colombia, ²Universidad El Bosque, Fac Medicina, Bogota, Colombia

5:10pm - 5:15pm

375

Neutral Zone Stability of Two Cervical Total Disc Designs in a Human Cadaveric Model

B.K.N. Nguyen¹, J.K. Taylor²

¹Dimicron Inc., Orem, UT, USA, ²Sacramento Veterans Administration Medical Center, Sacramento, CA, USA

5:16pm - 5:21pm

210

Fatigue Durability and Wear of a New Posterior Neutral Stabilization System in a Combined Loading Regime

J. Prevost¹, V. Singh¹, J. Coleman¹

¹Medtronic - Spinal and Biologics, Memphis, TN, USA

5:22pm - 5:27pm

119


C. Chaput¹, A.M. Muzumdar², D. Gloystein³, V. Zerris¹, P. Tortolani¹, M. Rahm¹, M. Moldavsky², S. Chinthakunta², S. Khalil³

¹Scott and White Hospital, Temple, TX, USA, ²Globus Medical Inc., Research, Audubon, PA, USA, ³Damall Army Hospital, Fort Hood, TX, USA, ⁴Union Memorial Hospital, Baltimore, MD, USA

5:28pm - 5:33pm

428

Comparative Study on Biomechanical Behavior of Two Different Cervical Total Disc Replacement Designs in Terms of Concavity and Constraints: ProDisc-C® vs. Prestige-C®

K.M. Park¹, S.H. Woo², D.H. Lim², K.Y. Lee², S.J. Lee¹

¹Inje University, Biomedical Engineering, Gimhae, Korea, Republic of, ²Sejong University, Mechanical Engineering, Seoul, Korea, Republic of

5:34pm - 5:39pm

47

New Radiculopathy after TLIF with BMP: Large Series Incidence, Natural History, and Comparison to Laminectomy

D. Crandall¹, E. Huish¹, J. Patterson², J. Revella¹, D. Revella¹, R. Mclemore²

¹Sonoran Spine Center, Mesa, AZ, USA, ²Banner Orthopaedic Residency Program, Phoenix, AZ, USA

5:40pm - 6:00pm

DISCUSSION

5:00pm - 6:00pm

Cervical Complications & Cervical Trauma

Room: J

Moderators:
Chun-Kun Park, MD, PhD and Scott Kitchel, MD

5:00pm - 5:05pm

193

Neck-shoulder Crossover: How Often Do Neck and Shoulder Pathology Masquerade as the Other?

J.N. Sembrano¹, O.C. Kanu¹, S.C. Yson¹, J.P. Braman¹, A.K. Harrison¹, D.W. Polly Jr.²

¹University of Minnesota, Orthopaedic Surgery, Minneapolis, MN, USA

5:06pm - 5:11pm

475

Pain from Donor Site after Anterior Cervical Fusion with Bone Graft. A Prospective Randomized Study with 12 Months of Follow up

M. Skeppholm¹,², C. Olerud³

¹Stockholm Spine Center, Stockholm, Sweden, ²Karolinska Institutet, Stockholm, Sweden, ³Uppsala University Hospital, Uppsala, Sweden
Myelomalacia as a Predictor of Disease Severity and Surgical Outcome in Cervical Spondylotic Myelopathy
M. Pumberger1, D.R. Lebl1, A.P. Hughes1, F. Taher1, F.P. Cammisa1, F.P. Girardi1
1Hospital for Special Surgery, Spinal Surgery, New York, NY, USA

Reliability of the Subaxial Cervical Spine Injury Classification System for Orthopedic Surgeons at Different Training Levels
A.J. Bevevino1, R.A. Lehman1, D.G. Kang1
1Walter Reed National Military Medical Center, Department of Orthopaedics, Bethesda, MD, USA

Percutaneous TLIF with an expandable titanium cage compared to a standard PEEK cage: a new transforaminal approach to achieve a less invasive intervertebral fusion
R. Morgenstern1
1Teknon Medical Center, Orthopaedic Spine Surgery, Barcelona, Spain

The Effect of Prophylactic Local Spinal Steroid Delivery in a Spinal Cord Injury Model
M. Quirno1, A. Yoo1, J.M. Cuellar1, K. Campbell1, C. Hoelscher1, P. Ricart-Hoffiz1, T. Andres1, T. Kirsch1, T. Errico1
1N.Y.U-Hospital for Joint Diseases, Orthopaedic Surgery, New York, NY, USA
8:45AM - 9:45AM
CLINICAL CERVICAL THERAPIES
Room: Auditorium
Moderators:
James Yue, MD and
Parmenion Tsitsopoulos, MD, PhD

9:15am - 9:20am
170
Five-year Clinical and Radiological Follow-up of the Heterotopic Ossification after Bryan Cervical Disc Arthroplasty
Z. Feifei1, S. Yu1
1Peking University 3rd Hospital, Orthopaedics, Beijing, China

9:21am - 9:26am
132
Comparison of Re-operations in Cervical Total Disc Replacement vs. Anterior Cervical Fusion: Results with Mean 48 Month Follow-up
S.L. Blumenthal1, R. Guyer1, D.D. Ohnmeiss2, J. Zigler1
1Texas Back Institute, Plano, TX, USA, 2Texas Back Institute Research Foundation, Plano, TX, USA

8:51am - 8:56am
405
SECURE®-C Cervical Artificial Disc: Outcomes from a Prospective, Randomized IDE Study at 24 Months and Beyond
W. Beutler1, W.C. Peppelman1, J.M. Marzluff1, C. Tomaras2, I. Volcan3, P. Asdourian4, J. Myer5, K. Baker6
1Pennsylvania Spine Institute, Harrisburg, PA, USA,
2Charleston Brain and Spine, Charleston, SC, USA,
3Peachtree Neurosurgery, Atlanta, GA, USA,
4West Augusta Spine Specialists, Augusta, GA, USA,
5Greater Chesapeake Orthopaedic Associates, Baltimore, MD, USA,
6Globus Medical, Inc., Audubon, PA, USA

8:57am - 9:02am
30
Comparison of Clinical and Radiological Changes between Total Disc Replacement and Anterior Cervical Fusion in Single Level Degenerative Cervical Disk Diseases: More than 5-year Follow-up
K.-S. Ryu1, M.-H. Shin1, C.-K. Park1
1Seoul St. Mary's Hospital, The Catholic University, Seoul, Korea, Republic of

9:03am - 9:08am
410
Treatment of Cervical Myeloradiculopathy with the PCM Total Disc Arthroplasty Compared to ACDF in a Prospective Randomized Clinical Trial
C.D. Chaput1, F.M. Phillips2, A. Cappuccino1, F.H. Geisler4, J.G. DeVine5, K. Gilder1, K.M. Howell1, P.C. McAfee6,
1Scott and White Hospital, Orthopaedic Surgery, Temple, TX, USA,
2Midwest Orthopedics at Rush University, Chicago, IL, USA,
3Buffalo Spine Surgery, Buffalo, NY, USA,
4Chicago Back Institute, Chicago, IL, USA,
5Dwight D. Eisenhower Army Medical Center, Fort Gordon, GA, USA,
6NuVasive, Inc., Biometrics, San Diego, CA, USA,

9:09am - 9:14am
221
7-year Reoperation Rates: Cervical Total Disc Replacement vs. Fusion: Results from the FDA Prospective, Randomized Clinical Trial
R.B. Delamatter1, J. Zigler2, D.B. Murray3, M.E. Janssens1, J.M. Spivak4
1Cedars-Sinai, Spine Center, Los Angeles, CA, USA,
2Texas Back Institute, Plano, TX, USA,
3OrthoCarolina Spine Center, Charlotte, NC, USA,
4Spine Education and Research Institute, Denver, CO, USA,
5NYU-Hospital for Joint Disease, New York, NY, USA,
Effect of PLL Resection on TDR Kinematics: To Cut or Not To Cut
A.G. Patwardhan,1 L.J. Voronov,2 P.P. Tsitsopoulos,1 T. Potturi,2 S. Hannan,2 J. Zelenakova, G. Carandang,1 F.M. Phillips,1 M.R. Zindrick,2 A.J. Ghanayem,3 R.M. Havery1
1Loyola University Chicago, Orthopaedic Surgery and Rehabilitation, Maywood, IL, USA, 2Edward Hines Jr VA Hospital, Hines, IL, USA, 3Rush University Medical Center, Chicago, IL, USA

Facet Engagement in the Intact Cervical Spine
R. Havery1, J. Goodsitt2, T. Potturi2, S. Hannan2, B. McIntosh3, F. Phillips1, M. Zindrick1, P. Tsitsopoulos1, L. Voronov1, A. Patwardhan1
1Loyola University Chicago, Orthopaedic Surgery and Rehabilitation, Maywood, IL, USA, 2Edward Hines Jr VA Hospital, Hines, IL, USA, 3Rush University Medical Center, Chicago, IL, USA

The Ventral Lamina and Superior Facet Rule: The Key to Accurate Placement for Thoracic Pedicle Screws
R.A. Lehman1, D.G. Kang1, L.G. Lenke2, R. Gaume1, H. Paik1, A.J. Bevevino1
1Walter Reed National Military Medical Center, Orthopaedic Surgery, Bethesda, MD, USA, 2Washington University School of Medicine, Orthopaedic Surgery, St. Louis, MO, USA

In vitro Lumbar TDA Wear Rate Susceptibility Depends on Phasing of Motions and Device Design
P.J. Hyde1, J. Fisher1, R.M. Hall1
1University of Leeds, Institute of Medical and Biological Engineering, Leeds, United Kingdom

The Effect of Changing the Length in Levels of a Posterior Instrumentation Construct on Induced Lumbosacratal Screw Strains and ROM
G. Fleischer1, J. Malcolm2, A. Freeman1, L. Ferrara4
1Spine and Brain Center of New England, Nashua, NH, USA, 2Pinnacle Orthopaedics, Marietta, GA, USA, 3Excelen Center for Bone and Joint Research and Education, Minneapolis, MN, USA, 4OrthoKinetic Technologies, LLC, Southport, NC, USA

In vivo Forces on Pedicle Screws during Posterior Correction Procedures for Adolescent Idiopathic Scoliosis
M. Ito1, Y. Abe2, K. Fujisaki3, S. Tadano2, K. Abum3, H. Sudo2, Y. Kotani3, K. Nagahama2, A. Iwata2
1Hokkaido University Graduate School of Medicine, Department of Advanced Medicine for Spine and Spinal Cord Disorders, Sapporo, Japan, 2Hokkaido University Graduate School of Medicine, Sapporo, Japan, 3Hokkaido University Graduate School of Engineering, Sapporo, Japan

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l) 58
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12:25pm - 12:30pm

90

Vertebroplasty Increases Strain in Adjacent Intervertebral Discs and Vertebrae in Osteopenic Spines

S. Nagaraja1, H.K. Awada1, S. Gupta1, M.L. Dreher1
1US Food and Drug Administration, Office of Science and Engineering Laboratories, Silver Spring, MD, USA

12:31pm - 12:36pm

468

Which Factors Prognosticate Spinal Instability Following Lumbar laminectomy? A Human Cadaver Study

A. Bisschop1, B.J. van Royen1, M.G. Mullender1, C.P.L. Paul1, A.J. van der Veer1, T.U. Jiya1, I. Kingma1, J.H. van Dieën1
1VU University Medical Center, Orthopedic Surgery, Amsterdam, Netherlands, 2VU University Medical Center, Physics and Medical Technology, Amsterdam, Netherlands, 3VU University Amsterdam, Faculty of Human Movement Sciences, Amsterdam, Netherlands

12:37pm - 12:42pm

351

Impact of Different Interspinous Implant Designs on Kinematics & Load Bearing of the FSU. An in-vitro Flexibility Study

M. Pfeiffer1, C. Schilling2,3, T. Grupp2,4, W. Blömer2
1Helios Rosmann Clinic Breisach, Breisach, Germany, 2Aesculap AG R&D, Tuttingen, Germany, 3Julius Wolff Institute and Berlin-Brandenburg Center for Regenerative Therapies, Charité, Universitätsmedizin Berlin, Berlin, Germany, 4Ludwig Maximilians University, Clinic for Orthopedic Surgery, Campus Grosshadern, Munich, Germany

12:43pm - 12:48pm

447

Isolation of BMP-producing Mesenchymal Stem Cells from Vertebral and Iliac Crest during Spinal Fusion

T. Nguyen1, D. Collins1, G. Fleischer1
1Spine and Brain Center of New England, Neurosurgery, Nashua, NH, USA, 2BioE, Minneapolis, MN, USA, 3Spine and Brain Center of New England, Orthopedic Spine Surgery, Nashua, NH, USA

12:49pm - 1:00pm

DISCUSSION

1:00PM - 2:30PM

INDUSTRY WORKSHOPS

Rooms: A, B, E1-E3, E4-E6, H1, H2, and H3

2:30PM - 3:30PM

MIS: HOPE OR HYPE

Room: Auditorium

Moderators:
Frank Phillips, MD and Stephen Hochschuler, MD

2:30pm - 2:35pm

224

Can Minimally Invasive Surgical Strategies for Deformity Correction Avoid the Need for Routine Osteotomies in Moderate to Severe Adult Scoliosis?

N. Anand1, B. Khandheroo1, S. Kathwaty2, E.M. Baron1
1Cedars-Sinai Medical Center, Spine Center, Los Angeles, CA, USA

2:36pm - 2:41pm

190

Predictors of Early Postoperative Discharge Following Minimally Invasive Lateral Interbody Fusion (MI-LIF)

W.B. Rodgers1, E.J. Gerber1, J.A. Lehmen1, J.A. Rodgers1
1Spine Midwest, Inc., Research, Jefferson City, MO, USA

2:42pm - 2:47pm

420

Meta-analysis of Fusion Rates for Minimally Invasive TLIF performed without Posterolateral Bone Grafting D.E. Gwinn1, R.A. Lehman1, D.G. Kang1, A.J. Bevevino1
1Walter Reed National Military Medical Center, Orthopaedic Surgery, Bethesda, MD, USA

2:48pm - 2:53pm

422

Geyer Lumbar Interbody Fusion (GLIF) Procedure: Safety and Efficacy Multi-center Results in a Commercial Setting

A. Arapah1, D.O.1, M.P. Lorio2, C. Lauryssen3, H.D. Brown2
1The Core Institute, Phoenix, AZ, USA, 2Neuro-Spine Solutions, P.C., Bristol, TN, USA, 3Olympia Medical Center, Beverly Hills, CA, USA

2:54pm - 2:59pm

498

MIS Lumbar Fusion in an Ambulatory Surgery Center (ASC): Safety, Treatment Outcomes, and Comparison with Inpatient Lumbar Fusion

W.D. Smith1, G. Christian2
1University Medical Center, Neurosurgery, Las Vegas, NV, USA, 2Western Regional Center for Brain and Spine Surgery, Research, Las Vegas, NV, USA

3:00pm - 3:05pm

466

Percutaneous Fixation of Thoracolumbar Fractures: 2-year Follow-up

M. Sharma1, F. Siddiqui1, J. White2, S. Safdari1
1Spine Care Center, Manassas, VA, USA, 2Inova Fairfax Hospital, Fairfax, VA, USA

3:06pm - 3:11pm

477

Interim Results from a US IDE Trial Evaluating the OsseoFix Implant for Treatment of Vertebral Compression Fractures

M.P. Lorio1, D. Beall1, R. Eastlack1, A. Mahar1,5
1Neuro-Spine Solutions, P.C., Bristol, TN, USA, 2Clinical Radiology of Oklahoma, Oklahoma City, OK, USA, 3Scripps Clinic, La Jolla, CA, USA, 4Department of Orthopedic Surgery, University of California - San Diego, San Diego, CA, USA, 5Biomechanical and Clinical Research, Alphatec Spine, Carlsbad, CA, USA

3:12pm - 3:17pm

127

Minimally Invasive Treatment of Thoracolumbar Spine Fractures

T. Julien1
1West Virginia University, Neurosurgery, Morgantown, WV, USA
Thursday | March 22nd

3:18pm - 3:23pm
44
Leg Pain Presented as a Lumbar Radiculopathic Pain due to Acute Aggravated Leg Pain after Lumbar Osteoporotic Vertebral Compression Fractures
H.S. Kim1, S.J. Jeong1, H.J. Ahan1, K.H. Jeon1, W.J. Choi1, K.T. Kim1, C.I. Ju1, S.W. Kim1, S.M. Lee1, H. Shin1
1Hurisarang Spine Hospital, Neurosurgery, Daejeon, Korea, Republic of, 2College of Medicine, Chosun University, Neurosurgery, Gwangju, Korea, Republic of

3:24pm - 3:30pm
DISCUSSION

2:30pm - 3:30pm
INSTRUCTIONAL COURSE SYMPOSIUM:
TDR Evidence-Based Medicine
Room: J
Moderators:
Matthew Scott-Young, MD and Rudolf Bertagnoli, MD

2:30pm - 2:35pm
518
ProDisc®-L Total Disc Replacement Over Time: 4-10 Year Follow-up
R. Bertagnoli1
1ProSpine, Straubing Bogen, Germany

2:36pm - 2:41pm
409
Late Subsidence after Cervical Disc Arthroplasty at One to Four Levels
M.F. Gornet1, B.A. Taylor1, J.H. Peloza1, F. Schranck1
1The Orthopedic Center of St. Louis, Spine Research Center, St. Louis, MO, USA, 2Center for Spine Care, Dallas, TX, USA

2:42pm - 2:47pm
255
Clinical Outcomes for a Viscoelastic Total Disc Replacement Compared to Other Total Disc Replacements in the SWISSspine Registry
B. Rischke1, V. Kammermeier1, M. Runke1, K.B. Zimmer1, J.M. Kuras1
1Center of Orthopaedic and Spine Surgery, Spine-Center-Rischke, Zurich, Switzerland, 2Konstanz Hospital, Konstanz, Germany, 3AxioMed Spine Corporation, Garfield Heights, OH, USA

2:48pm - 2:53pm
73
The Change of Cervical Motion with Progression of Heterotopic Ossification in Cervical Artificial Disc Replacement
S. Yi1, H. Lee1, N. You1, J. Oh1, T.Y. Kim1, G. Choi1, K.N. Kim1, D.H. Yoon1
1Spine and Spinal Cord Institute, Yonsei University, College of Medicine, Neurosurgery, Seoul, Korea, Republic of

2:54pm - 2:59pm
312
Lumbar Total Disc Replacement: Clinical and Radiographic Outcome Comparison between One and Two levels with Average of 60 Months Follow-up
K. Zhang1, F. Mo2, C. Abjornson2, F. Girardid1, J. Yue1, F. Cammisa2
1Yale New Haven Hospital, New Haven, CT, USA, 2Hospital for Special Surgery, New York, NY, USA

3:00pm - 3:20pm
PRESENTATION OF TDR CASES

3:21pm - 3:30pm
DISCUSSION

2:30pm - 3:30pm
INSTRUCTIONAL COURSE SYMPOSIUM
DIFFICULT SPINAL PRESENTATIONS: RHEUMATOID ARTHRITIS AND INFECTION
Room: F
Moderators:
Hans Meisel, MD, PhD and Larry Khoo, MD

2:30pm - 2:35pm
8
Posterolateral Endoscopic Debridement and Irrigation for Postoperative Spinal Infections in the Thoraco-lumbar Spine
K. Nagahama1, M. Ito1, N. Hojo1, K. Abumi1, Y. Kotani1, H. Sudo1, M. Takahata1, A. Iwata1, A. Minami1
1Hokkaido University, Orthopaedics, Hokkaido, Japan

2:36pm - 2:41pm
161
5,5 Year Follow up of Infection Rate in Open versus Percutaneous Spondylodesis in the Lumbar Spine
T. Pfandsteiner1, K. Seidel1, C. Wimmer1
1Schön Klinik Vogtareuth, Clinic for Spine Surgery with Scoliosis Center, Vogtareuth, Germany

2:42pm - 2:47pm
146
Postoperative Drains and the Risk of Surgical Site Infection Following Spinal Surgery
T. Andres1, R. Takemoto1, P.A. Ricart Hoffiz2, B. Lonner1, T. Errico1
1NYU Hospital for Joint Diseases, New York, NY, USA, 2Westchester Medical Center, Valhalla, NY, USA

3:00pm - 3:20pm
PRESENTATION OF DIFFICULT SPINAL CASES

3:19pm - 3:30pm
DISCUSSION

3:30pm - 4:00pm
BREAK ON EXHIBIT FLOOR
4:00pm - 4:04pm
392
Anterior Cervical Fusion with Stand-alone Polyetheretherketone (PEEK) Cages: 82 Cases and 182 Levels Clinical Experience Focusing on Subsidence


1Taichung Veterans General Hospital, Department of Neurosurgery, Taichung, Taiwan, Republic of China, 2National Defense Medical Center, School of Public Health, Taipei, Taiwan, Republic of China, 3Taichung Veterans General Hospital, Department of Radiology, Taichung, Taiwan, Republic of China, 4China Medical University Hospital, Department of Orthopaedic Surgery, Taichung, Taiwan, Republic of China

4:05pm - 4:09pm
111
Anterior Cervical Discectomy and Fusion versus Cervical Disc Arthroplasty: Cost Analysis of Peri-operative and Operating Room Related Costs

D.T. Warren, J.M. Marzluff, J.A. Bendo, J.A. Goldstein

1NYU Hospital for Joint Diseases, New York, NY, USA, 2Westchester Medical Center, Valhalla, NY, USA

4:10pm - 4:14pm
173
Comparative Clinico-Radiological Study of Interlaminar Decompression in Lumbar Canal Stenosis with and without Coflex™ Interspinous Spacer; Prospective Observational Study

S.I. Wijerathne, N. Kumar, Y.H. Ng, B.W.L. Tan

1National University Health System, Orthopaedic Surgery, Singapore, Singapore

4:15pm - 4:19pm
433
L5-S1 Isthmic Spondylolisthesis Stabilized with AxiaLIF and Percutaneous Posterior Fixation: A Novel Technique

R. Nasca, T. Raley, W. Tobler, P. Gerszten

1Trans-1, Wilmington, NC, USA, 2Georgetown University Medical Center/ Virginia Hospital Center, Orthpaedics, Arlington, VA, USA, 3Mayfield Clinic, Neurosurgery, Cincinnati, OH, USA, 4University of Pittsburgh Medical Center, Pittsburgh, PA, USA

4:20pm - 4:24pm
282
Lessons Learned on Cervical Total Disc Replacement after 8 Years Follow-up


1Instituto de Patologia da Coluna, São Paulo, Brazil, 2Unifesp, DDI, São Paulo, Brazil, 3University of California San Diego, Neurosurgery, San Diego, CA, USA

4:25pm - 4:29pm
108
Accuracy of Abstracts for Original Randomized Controlled Clinical Trials of the Lumbar Spine in Spine Journals

J.A. Lehmen, R.M. Deering, A.K. Simpson, C.S. Carrier, C.M. Boni

1Harvard Medical School, Brigham & Women’s Hospital, Department of Orthopaedic Surgery, Boston, MA, USA, 2Harvard Medical School, Brigham & Women’s Hospital, Department of Orthopaedics, Boston, MA, USA

4:30pm - 4:34pm
300
Impact of Cervical Symptoms on Ability to Participate in Recreational Activities


1Texas Back Institute Research Foundation, Plano, TX, USA, 2Texas Back Institute, Plano, TX, USA

4:35pm - 4:39pm
63
The Impact of Positive Regional Sagittal Alignment on Outcomes in Posterior Cervical Fusion Surgery


1International Spinal Deformity Study Group, 2University of California San Francisco, Neurological Surgery, San Francisco, CA, USA, 3University of California San Diego, Neurological Surgery, Charlotte, NC, USA, 4University of California San Francisco, Orthopaedic Surgery, San Francisco, CA, USA, 5Rocky Mountain Scoliosis and Spine Center, Denver, CO, USA, 6Oregon Health and Science University, Portland, OR, USA, 7NYU Hospital for Joint Diseases, Orthopaedic Surgery, New York, NY, USA

4:40pm - 4:44pm
252
The Clinic Outcome and the Status of Adjacent Segment Degeneration Five Years after Bryan Disc Replacement

Y. Sun, Y. Zhao, F. Zhou, F. Zhang, S. Pan, Z. Liu

1Peking University Third Hospital, Orthopaedic Surgery, Beijing, China

4:45pm - 4:49pm
426
Analysis of the Effects of Cervical Arthroplasty Compared to Anterior Cervical Discectomy and Fusion on Adjacent Level Disease


1Charleston Brain and Spine, Charleston, SC, USA, 2Globus Medical, Inc., Audubon, PA, USA

4:50pm - 5:00pm
DISCUSSION
4:00PM - 5:00PM
ORAL POSTERS:
RECONSTRUCTION AND DEFORMITY
Room: J
Moderators:
Karin Buettner-Janzen, MD, PhD and
Isador Lieberman, BSc, MD, MBA, FRCSC

4:00pm - 4:04pm
215
Impact of Magnitude and Percentage Global Sagittal Plane Correction on Health Related Quality of Life at 2 Years Follow up
V. Lafage1, B. Blondel1, F. Schwab2, B. Ungar1, J. Smith2, K. Birdwell3, S. GlassmanC, C. Shaffrey4, B. Moal1, J.-P. Farcy1
1New York University Hospital for Joint Diseases, Spine Division, New York, NY, USA, 2University of Virginia, Department of Neurological Surgery, Charlottesville, VA, USA, 3Washington University School of Medicine, Spine Department, Saint Louis, MO, USA, 4University of Louisville, Spine Institute for Special Surgery, Louisville, KY, USA

4:05pm - 4:09pm
211
Adjacent Level Total Disc Replacement Supplemented by Spinal Osteotomy as a Treatment for Failed Fusion Surgery
U.R. Hahnle1, I.R. Weinberg2
1Netcare Linksfield Hospital, Orthopaedic Surgery, Johannesburg, South Africa, 2Netcare Linksfield Hospital, Neurosurgery, Johannesburg, South Africa

4:10pm - 4:14pm
508
Anterior MIS Rod Instrumentation with XLIF Deformity: Techniques and Outcomes
P.C. McAfee1, L. Chotikul2, E. Shucosky2
1St Josephs Hospital, Spine and Scoliosis Surgery, Baltimore, MD, USA, 2St Josephs Hospital, Spine and Scoliosis Center, Towson, MD, USA

4:15pm - 4:19pm
413
When Do Lumbar TDR Patients Achieve Maximum Medical Improvement?
R. Garcia1, J.Y. Yue2, M. Taylor3
1Orthopedic Care Center, Aventura, FL, USA, 2Yale University School of Medicine, New Haven, CT, USA, 3Orthopedic Care Center, Aventura, FL, USA

4:20pm - 4:24pm
360
Combined Assessment of Pelvic Tilt, Pelvic Incidence/Lumbar Lordosis Mismatch and Sagittal Vertical Axis Predicts Disability in Adult Spinal Deformity: A Prospective Analysis
V. Lafage1, B. Blondel1, S. Bess2, C. Shaffrey3, J. Smith3, O. Boachie-Adjei1, B. Akbarnia4, C. Ames5, B. Moal2, R. Hart2, J. Demakakos1, F. Schwab1, International Spine Study Group
1New York University Hospital for Joint Diseases, Spine Division, New York, NY, USA, 2Rocky Mountain Hospital for Children, Orthopedic Surgery, Denver, CO, USA, 3University of Virginia, Department of Neurological Surgery, Charlottesville, VA, USA, 4Hospital for Special Surgery, Orthopedic Surgery, New York, NY, USA, 5University of California San Francisco, Neurosurgery, San Francisco, CA, USA

Thursday Oral Posters
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4:05pm - 4:09pm

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Volumetric Change of Lumbar Intervertebral Disc Herniation in Conservative Treatment
J.-Y. Seo1, K.-Y. Ha2, S.W. Choi1, K.W. Nam3, K.B. Seo1, S.R. Kim1, S.J. Shin
1Jeju National University, Department of Orthopaedic Surgery, Jeju, Korea, Republic of, 2The Catholic University of Korea, Department of Orthopaedics, Seoul, Korea, Republic of

4:10pm - 4:14pm

128

Novel Anterior versus Combined Anterior-posterior Instrumentation Technique for a Simulated Bilateral Cervical Facet Dislocation: An in-vitro Human Cadaver Study
W. Beutler1, W. Peppelman1, M. Gudipally1, M. Adu-Larney1, J. Brooks1, P. Niknam1, S. Khalili2
1PA Spine Institute, Harrisburg, PA, USA, 2Globus Medical, Inc., Audubon, PA, USA

4:15pm - 4:19pm

145

Hybrid Decompression Technique Employing ACDF and Corpectomy May Be an Effective Treatment Option for Multi-level Cervical Spondylotic Myelopathy: A Biomechanical Evaluation
A. Goodrich1, A.M. Muzumdar2, I. Volcan3, M. Gudipally2, S. Khalili2
1Augusta Bone & Joint Clinic, Augusta, GA, USA, 2Globus Medical, Inc., Research, Audubon, PA, USA, 3Neurological Associates of Augusta, Augusta, GA, USA

4:20pm - 4:24pm

131

The Use of Self-mating PEEK for Cervical Disc Arthroplasty
T. Brown1, Q.-B. Bao1
1Pioneer Surgical, Marquette, MI, USA

4:25pm - 4:29pm

172

A Comparison of Intra-Capsular Facet (IF) and Peri-Facet (PF) Injections in Patients with Low Back Pain (LBP)
D. Wardlaw1, A. Nandakumar1, J. Beastall1, A. Kumar1, F. Smith1
1Woodend Hospital, NHS Grampian Hospital, Aberdeen, United Kingdom

4:30pm - 4:34pm

71

Can the Intradiscal Inflammation after Annulus Puncture Be Prevented by Polylactic Acid Patch Repairment? An Animal Model Study
X. Liu1, H. Liu1
1Sichuan University, Chengdu, China, 2West China Hospital, Sichuan University, Department of Orthopaedics, Chengdu, China

4:35pm - 4:39pm

467

Rotational Instability of the Lumbar Spine Following Laminectomy: Is there a Role for Bone Mineral Density and Disc Degeneration?
A. Bisschop1, J.H. van Dieën2, M.G. Mullender3, C.P.L. Paul1, A.J. van der Veen4, T.U. Jiya1, I. Kingma5, B.J. van Rooyen1
1VU University Medical Center, Orthopedic Surgery, Amsterdam, Netherlands, 2VU University Amsterdam, Faculty of Human Movement Sciences, Amsterdam, Netherlands, 3VU University Medical Center, Orthopedic Surgery, Amsterdam, Netherlands

4:40pm - 4:44pm

451

Balloon-sacroplasty- A Potential Operation for Sacral Insufficiency Fractures: Presentation by Means of 7 Cases
A. Behnke1, P. Büchlin-Emunds1, C.R. Schätz1
1Orthopedic Clinic Markgröningen, Markgröningen, Germany

4:45pm - 5:00pm

DISCUSSION

4:00PM - 5:00PM

ORAL POSTERS:

CERVICAL THERAPIES

Room: H2

Moderators:
Steven Garfin, MD and Christopher Bono, MD

4:00pm - 4:04pm

144

Metanalysis of Class I Results of Anterior Cervical Decompression and Fusion with Allograft and Plating
K.A. Pettine1, L. Eiserman2
1The Spine Institute, Loveland, CO, USA, 2Eisertech, Sandiego, CA, USA

4:05pm - 4:09pm

396

A Prospective, Randomized Clinical Investigation of the Porous Coated Motion (PCM) Artificial Cervical Disc: 2 Year Results from the US IDE Study
F.M. Phillips1, A. Cappuccino2, F.H. Geisler3, C.D. Chaput4, J.G. DeVine5, K. Gilder6, K. Howell7, P.C. McAfee8
1Midwest Orthopedics at Rush University, Chicago, IL, USA, 2Buffalo Spine Surgery, Buffalo, NY, USA, 3Chicago Back Institute, Chicago, IL, USA, 4Scotti and White Hospital, Temple, TX, USA, 5Dwight D. Eisenhower Army Medical Center, Fort Gordon, GA, USA, 6NuVasive, Inc., Biometrics, San Diego, CA, USA, 7NuVasive, Inc., Clinical Resources, San Diego, CA, USA, 8St. Joseph’s Hospital, Baltimore, MD, USA

4:10pm - 4:14pm

425

SECURE®-C Cervical Artificial Disc Two Year Clinical Outcomes: Randomized vs. Non-randomized Patients
J. Mcconnell1, J. Lindley2, J. Small3, J. Myer4, K. Baker4
1OAA Orthopaedic Specialists, Allentown, PA, USA, 2Neurlogic Institute of Savannah, Savannah, GA, USA, 3Florida Orthopaedic Institute, Tampa, FL, USA, 4Globus Medical, Inc., Audubon, PA, USA

63 ISASS12 Annual Meeting
Thursday | March 22nd

4:15pm - 4:19pm
297
Two Year Clinical and Radiographic Results from an Advanced Generation Artificial Cervical Disc Study
C. Lauryssen1, D. Coric2, T. Dimmig3, D. Musante3, R. Liebelt4
1The Institute for Advanced Spinal Research in California, Beverly Hills, CA, USA, 2Carolina Neurosurgery & Spine Associates, Charlotte, NC, USA, 3Triangle Orthopedics, Durham, NC, USA

4:20pm - 4:24pm
75
Factors Determining the Long-term Clinical Success Rate after Anterior Cervical Discectomy and Fusion for One and Two-level Radiculo-myelopathy
P.D. Nunley1, A. Jawahar2, E.J. Kerr2, D.A. Cavanaugh2, M. Boltes3, D. Coric1
1Spine Institute of Louisiana, Orthopedic Surgery, Shreveport, LA, USA, 2Spine Institute of Louisiana, Neurosurgery, Shreveport, LA, USA, 3Carolina NeuroSurgery & Spine Associates, Neurosurgery, Charlotte, NC, USA

4:25pm - 5:00pm
DISCUSSION

4:00PM - 5:00PM
ORAL POSTERS: LUMBAR THERAPIES
Room: H3
Moderator: Morgan Lorio, MD, FACS

4:00pm - 4:04pm
267
Outpatient Minimally Invasive Lumbar Fusion
K.A. Pettine1
1The Spine Institute, Loveland, CO, USA

4:05pm - 4:09pm
283
Low-grade Degenerative Spondylolisthesis Treated by Stand-alone Lateral Interbody Fusion
L. Marchi1,2, L. Oliveira1, R. Amaral1, C. Castro1, E. Coutinho1, T. Coutinho1, L. Pimenta1,3
1Instituto de Patologia da Coluna, São Paulo, Brazil, 2Unifesp, DDI, São Paulo, Brazil, 3University of California San Diego, Neurosurgery, San Diego, CA, USA

4:10pm - 4:14pm
310
Clinical Outcome of Two-level Total Disc Replacement in 84 Patients with Minimum 5 Years Follow-up
M. Scott-Young1, A. Kasis1, C. Magno1, D. Nielsen1, E. Mitchell1, N. Bianchi1
1Gold Coast Spine, Gold Coast, QLD, Australia

4:15pm - 4:19pm
338
Pedicle Based Posterior Dynamic Stabilization System (DSS®)
R. Bertagnoli1
1ProSpine, Straubing, Germany

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l)
Thursday | March 22nd

4:30PM - 6:30PM
CADAVER LECTURE
Room: H1

Welcome
James Yue, MD

4:30pm - 4:50pm
Anterior Access
Gary Fantini, MD

4:50pm - 5:10pm
Revision Anterior Access
Salvador Brau, MD

5:10pm - 5:30pm
Lateral Approach to Spine
Luiz Pimenta, MD, PhD

5:30pm - 5:55pm
MISS Approaches
Choll Kim, MD

5:55pm - 6:10pm
Endoscopic Entry Site Approaches
Anthony Yeung, MD

6:10pm - 6:30pm
Questions and Answers

5:00PM - 6:00PM
WORLD CAFÉS

INTERSPINOUS PROCESS DEVICES
Room: A
Moderators:
Matthew Gornet, MD
Anand Agarwal, MD

DEGENERATIVE SPONDYLOLISTHESIS: TO FUSE OR NOT TO FUSE
Room: B
Moderators:
Jean-Charles LeHuec, MD, PhD
Larry Khoo, MD

COMPLICATIONS IN ARTHROPLASTY
Room: E1 - E3
Moderator:
Scott Blumenthal, MD

The challenges of life in the 21st Century require us to find new ways to access the wisdom and intelligence inherent in groups both small and large. The need for collaboration, insight and coordinated action has never been greater. ISASS12 will continue and expand on past successes with featured events developed by leaders in the spine industry.

World Café Case Studies and New Device Demonstration Tables

At this year’s meeting, ISASS’ innovative World Café program will be based around case studies on three topics:

- Interspinous Process Devices
- Degenerative Spondylolisthesis, and
- Complications in Arthroplasty

The World Café is an intensive round table discussion program that presents a series of challenging case studies and allows participants to confer on treatment options and protocols.

This year, device demonstration tables will be added to expand the World Café program content. A tabletop for each device company will be available for hands-on product display. Surgeons will visit each tabletop for a specific period of time and rotate to the following table. The devices will remain in the room for the World Café session while related cases are discussed.
6:45AM - 1:00PM
CADAVER LAB

6:45am
Depart for Lab

7:10am
Arrive at lab/Breakfast/Change into Scrubs

8:00 -9:45 AM
XLIF

Station 1A, 1B
Luiz Pimenta, MD, PhD

Station 2A, 2B
Choll Kim, MD
James Yue, MD

Station 3A, 3B
Larry Khoo, MD

10:00AM - 11:15 AM
MISS TLIF

Stations 1A and 1B
Choll Kim, MD

Stations 2A and 2B
Richard Kube, MD

Stations 3A and 3B
Larry Khoo, MD

11:15AM - 12:15PM
ALIF

Stations 1A and 1B
Salvador Brau, MD

Stations 2A and 2B
James Yue, MD

Stations 3A and 3B
Gary Fantini, MD

12:15PM – 1:00PM
GELSTIX PERCUTANEOUS DISC AUGMENTATION

Station 1A and 1B
Anthony Yeung, MD

Station 2A and 2B
Rudolf Morgenstern, MD

Station 3A and 3B
James Yue, MD
Harwant Singh, MD

9:00AM - 10:15AM
LUMBAR THERAPIES

Room: Auditorium
Moderator:
Michael Hisey, MD, FAAOS

9:00am - 9:05am
513
Degenerative Lumbar Disease Surgery Outcomes in Elderly Patients
D. Pérez Prieto¹, M. Ramírez², C. Lozano², G. Saló², M. Antoni²,
L. Andreu²
¹Hospital del Mar, Orthopaedic Surgery, Barcelona, Spain,
²Hospital del Mar, Barcelona, Spain

9:06am - 9:11am
308
Adjacent Level Degeneration after Lumbar Total Disk Replacement with Average of 60 Months Post Op
K. Zhang¹, F. Mo¹, M. Pumberger¹, C. Abjomson², F. Girardi², J. Yue¹, F. Cammisa²
¹Yale New Haven Hospital, New Haven, CT, USA,
²Hospital for Special Surgery, New York, NY, USA

9:12am - 9:17am
342
Closing the Barn Door: Can an Endoprosthesis Prevent Reherniation and Loss of Disc Height?
M. Vilendecic¹, D. Ledic², G. Grahovac¹, D. Vukas²
¹University Hospital Dubrava, Zagreb, Croatia,
²University Hospital, Rijeka, Croatia

9:18am - 9:23am
166
Selective Decompression and Inter-laminar Dynamic Stabilization for the Treatment of Degenerative Lumbar Stenosis: Clinical Application and Complications
Y. Hai¹, S. Lu¹, L. Zang¹
¹Chaoyang Hospital, Capital Medical University, Orthopedic Surgery, Beijing, China

9:24am - 9:29am
83
Does Two Level 360° Lumbar Spinal Fusion Improve Long-term Clinical Outcomes after Failure of Conservative Treatment in Patients with Functionally Disabling Two Level Degenerative Lumbar Disc Disease? Results of 5 Year Follow-up in 62 Randomized Postoperative Patients
J.E. Zigler¹, R. Delamarter²
¹Texas Back Institute, Plano, TX, USA,
²Cedars-Sinai Spine Center, Los Angeles, CA, USA

9:30am - 9:37am
DISCUSSION

Questions? (866) 423-9440 (U.S.) +1(630) 995-9994 (Int’l)
11:00AM - 1:00PM
MIS
Room: Auditorium
Moderators: Michael Mayer, MD, PhD and Neel Anand, MD

11:00am - 11:05am
359
A Peri-operative Cost and Charge Analysis Comparing Single-level Minimally Invasive and Open Transforaminal Lumbar Interbody Fusion
K. Singh1, F.M. Phillips1, M.A. Pelton1, G. Andersson1, D. Isayeva2
1Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, USA, 2Rush University Medical Center, Chicago, IL, USA

11:06am - 11:11am
220
Can Transsacral AxialLIF Fixation at the Bottom of a Long Construct Avoid the Need for Iliac Bolt?
N. Anand1, B. Khandehroo1, S. Kahwaty1, E.M. Baron2
1Cedars-Sinai Medical Center, Spine Center, Los Angeles, CA, USA

11:12am - 11:17am
55
An Ipsilateral Bi-portal Arthroscopic Trans-iliac Approach to L5-S1 Disc and Foramen - A Cadaver Study
S.G. Osman1
1American Spine Center, Surgery, Frederick, MD, USA

11:18am - 11:23am
124
The Tissue Retraction Index: A New Tool to Compare the Relative Invasiveness of Different Minimally Invasive and Open Posterior Approached Spinal Procedures
G.J. Regev1, K. Salame1, O. Keynan2, Z. Lidar1
1Tel Aviv Sourasky Medical Center, Spine Unit, Department of Neurosurgery, Tel-Aviv, Israel, 2Tel Aviv Sourasky Medical Center, Spine Unit, Department of Orthopaedic Surgery, Tel-Aviv, Israel

11:24am - 11:29am
130
The Learning Curve Associated with a Lateral Transpsoas Approach to the Lumbar Spine with the Patient in the Prone Position
M.P. Lorio1, A. Mahar2,3, E. Sokolowski2, H.D. Brown1
1Neuro-Spine Solutions, P.C., Bristol, TN, USA, 2Biomechanical and Clinical Research, Alphatec Spine, Carlsbad, CA, USA, 3Department of Orthopedic Surgery, University of California - San Diego, San Diego, CA, USA

11:30am - 11:35am
334
Non-fusion, Fracture Vertebral Augmented, Percutaneous Short Segment Transpedicular Screwing after Postural Reduction and Percutaneous Implant Removal in Neurologically Intact Unstable Thoracolumbar Burst Fractures
H.S. Kim1, S.J. Jeong1, H.J. Ahan1, K.H. Jeong1, W.J. Choi1, K.T. Kim1, C.I. Ju2, S.W. Kim2, S.M. Lee2, H. Shin2
1Hurisarang Spine Hospital, Neurosurgery, Daejeon, Korea, Republic of, 2College of Medicine, Chosun University, Neurosurgery, Gwangju, Korea, Republic of
11:36am - 11:41am
438
Minimally Invasive Direct Lateral Thoraco-lumbar Corpectomy Using a XLIF (Extreme Lateral Lumbar Interbody Fusion) Modified Approach. A Prospective Clinical Follow-up Study
R. Diaz¹, M. Berbeo¹, Grupo de Neurociencias del Hospital Universitario San Ignacio, Pontificia Universidad Javeriana
¹Hospital Universitario San Ignacio, Pontificia Universidad Javeriana, Neurosurgery, Bogota, Colombia

11:42am - 11:58am
DISCUSSION

11:59am - 12:04pm
459
MAST (Minimal Acces Spinal Technology) vs Open Surgery: A Micro-costing Analysis of Spinal Fusion Procedure
R. Assietti¹, F. De Iure²
¹Ospedale Fatebenefratelli e Oftalmico, Neurosurgery, Milano, Italy, ²Ospedale Maggiore, Orthopedics-Spinal Section, Bologna, Italy

12:05pm - 12:10pm
195
Minimally Invasive Treatment of Adjacent Segment Degeneration via the Lateral Approach
W.B. Rodgers¹, E.J. Gerber¹, J.A. Lehmen¹, J.A. Rodgers¹
¹Spine Midwest, Inc., Research, Jefferson City, MO, USA

12:11pm - 12:16pm
354
Minimally Invasive Anterior Lumbar Interbody Fusion with Stand-alone Cage in Treatment of Degenerative Lumbar Spinal Disease: Comparative Study with Minimally Invasive Transforaminal Lumbar Interbody Fusion
C.K. Chough¹, K. Cho²
¹The Catholic University of Korea, Department of Neurosurgery, Seoul, Korea, Republic of, ²Yeoungdeungpo Hosp, Depart of Neurosurgery, Seoul, Korea, Republic of

12:17pm - 12:22pm
495
Minimally Invasive Pedicle Screw Instrumentation and Fusion for Adult Scoliosis - Functional and Radiological Outcomes
N. Anand¹, B. Khandehroo¹, S. Kahwaty¹, E.M. Baron¹
¹Cedars-Sinai Medical Center, Spine Center, Los Angeles, CA, USA

12:23pm - 12:28pm
181
MIS in the Treatment of Idiopathic Scoliosis. A Comparison Study
C. Wimmer¹, T. Pfandlsteiner¹, K. Seidel²
¹Schön Klinik Vogtareuth, Clinic for Spine and Deformity, Vogtareuth, Germany, ²Schön Klinik Vogtareuth, Vogtareuth, Germany

12:29pm - 12:34pm
296
Complication Associated with Lateral Lumbar Interbody Fusion Surgery. A Prospective Report on 173 Patients. Up to 4 Years Follow up
H. Nicola¹, M. Da Silva¹
¹Hospital San Juan de Dios, Caracas, Venezuela, ²Clinica Sanatrix, Caracas, Venezuela

12:35pm - 12:40pm
278
A Comparative Study On Cage Subsidence Following Standalone Lateral Interbody Fusion
L. Marchi¹, L. Oliveira¹, R. Amaral¹, C. Castro¹, T. Coutinho¹, E. Coutinho¹, L. Pimenta¹,²
¹Instituto de Patologia da Coluna, São Paulo, Brazil, ²Unifesp, DDI, São Paulo, Brazil, ³University of California San Diego, Neurosurgery, San Diego, CA, USA

12:46pm - 12:51pm
212
Outcomes in Minimally Disruptive Lateral Interbody Fusion: 24 Month Minimum Follow-up in 268 Patients
W.B. Rodgers¹, E.J. Gerber¹, J.A. Lehmen¹, J.A. Rodgers¹
¹Spine Midwest, Inc., Research, Jefferson City, MO, USA

12:52pm - 1:00pm
DISCUSSION

1:00PM - 2:00PM
LUNCH ON EXHIBIT FLOOR

2:00PM - 3:15PM
BIOLOGY AND BIOMECHANICS OF SPINAL DISORDERS
Room: J
Moderator: Hee-Kit Wong, MD, PhD

2:00pm - 2:05pm
421
Tapping Insertional Torque Allows Prediction for Better Pedicle Screw Fixation and Optimal Screw Size Selection
M.D. Helgeson¹, R.A. Lehman¹, A.E. Dmitriev¹, D.G. Kang¹, A.J. Bevevino¹, S.J. Luhmann²
¹Walter Reed National Military Medical Center, Orthopaedic Surgery, Bethesda, MD, USA, ²Washington University School of Medicine, Orthopaedic Surgery, St. Louis, MO, USA

2:06pm - 2:11pm
298
Effects of Magnesium Ion on Proliferation and Differentiation of Human Bone Marrow Stromal Cells
D.-H. Lee¹, K.-S. Lee¹, S.-H. Kim¹, M.-R. Choi¹, J.-S. Chang¹
¹Asan Medical Center, Univ. of Ulsan, College of Medicine, Dept. of Orthopaedic Surgery, Seoul, Korea, Republic of
2:12pm - 2:17pm

**Axial Pullout Strengths of Different Screw Designs:**
 **Fenestrated Screw, Dual Outer Diameter Screw, and Standard Pedicle Screw**

K. Kefchitsas¹, S.R. Chinthakunta², D. Reddy², E. Christodoulou³, S. Khalil³

¹Johannes-Gutenberg-Universität Mainz, Mainz, Germany, ²Globus Medical Inc, Research, Audbon, PA, USA, ³St. Marienhospital, Muehlheim an der Ruhr, Germany

2:18pm - 2:23pm

**Kinematic Evaluation of the Multi-directional Flexibility Properties of the STALIF-C™: A Cadaveric Biomechanical Study**

A.E. Castellvi¹, M. Stein², A. Nayak³, A. Cabezás³, R.B. Gaskins³, B.G. Santoni⁴

¹Florida Orthopaedic Institute, Orthopaedic Spine Surgery, Tampa, FL, USA, ²University of South Florida, Orthopaedics, Tampa, FL, USA, ³Foundation for Orthopaedic Research and Education, Phillip Spiegel Orthopaedic Research Laboratory, Tampa, FL, USA

2:24pm - 2:29pm

**Compensatory Mechanisms and the Effect of Age on Sagittal Balance in Degenerative and Isthmic Spondylolisthesis: An Analysis Utilizing the Pelvic Radius Technique**

S.A. Mokhtar¹, P.F. McCombe², D. Saravanja³, I. Sergides⁴, G. White³, W.R. Sears³

¹Macquarie University, School of Advanced Medicine, Sydney, NSW, Australia, ²Royal Brisbane Hospital, Brisbane, QLD, Australia, ³Dalcross Adventist Hospital, Sydney, NSW, Australia, ⁴Wentworth Spine Clinic, Sydney, NSW, Australia

2:30pm - 2:35pm

**Anterior Cervical Fusion Using Demineralized Cancellous Sponge**

K.T. Huntsman¹, S.M. Scott¹, M.A. Berdugo¹, G. Juda³, S.G. Roper²

¹Salt Lake Orthopaedic Clinic, Salt Lake City, UT, USA, ²Intermountain Medical Group, Orthopedics, Salt Lake City, UT, USA, ³Bacterin International, Belgrade, MT, USA

2:30pm - 2:39pm

DISCUSSION

2:00PM - 3:15PM

**INNOVATIVE TECHNOLOGIES**

Room: F
Moderator: Scott Blumenthal, MD and Philip Yuan, MD

2:00pm - 2:04pm

**An Inexpensive Computer Assisted Technique Using iPad for Pedicle Screw Placement in Scoliosis Surgery**

Y. Abe¹, M. Ito², K. Abumi³, Y. Kotani³, H. Sudo³, M. Takahata³, K. Nagahama³, ¹A. Iwata³, S. Sato³, A. Minami³

¹Eniwa Hospital, Orthopedic Surgery, Eniwa, Japan, ²Hokkaido University, Advanced Medicine for Spine and Spinal Cord Disorders, Sapporo, Japan, ³Hokkaido University, Spinal Reconstruction, Sapporo, Japan

2:05pm - 2:09pm

**Prospective Study of Disc Repair for Lumbar Degenerative Disc Disease with NuQu Injectables**

K. Pettine¹, D. Coric², A. Sumich³, M. Boltes³

¹Rocky Mountain Orthopedic Associates, Loveland, CO, USA, ²Carolina Neurosurgery & Spine Associates, Charlotte, NC, USA

2:10pm - 2:14pm

**The Accuracy of Intraoperative O-arm Images for the Assessment of Pedicle Screw Position**

E.R.G. Santos¹, C.G.T. Ledonio¹, C.A. Castro¹, W.H. Truong¹, S.C. Yson¹, J.N. Sembrano¹

¹University of Minnesota, Orthopaedic Surgery, Minneapolis, MN, USA

2:15pm - 2:19pm

**Facet Resurfacing: First Experience with the FENIX® Facet Implant**

E. Van de Kelft¹, M. Ahrens², H. Hale³

¹AZ Nikolaas, Neurosurgery, Sint Niklaas, Belgium, ²Roland Klinik Bremen, Center for Spine Surgery, Bremen, Germany, ³Gerraspine AG, St. Gallen, Switzerland

2:20pm - 2:24pm

**Early Clinical Outcomes Using a Flexible Microblade Shaver System for Lumbar Decompression**

L. Dickinson¹, C. Lauryssen², C. Summa³, R.I. Mimran¹

¹Pacific Brain and Spine Medical Group, Inc., Castro Valley, CA, USA, ²Tower Orthopedics & Sports Medicine, Beverly Hills, CA, USA, ³The Spine Clinic of Monterey Bay, Soquel, CA, USA

2:25pm - 2:29pm

**Radiofrequency-kyphoplasty Compared to Conventional Kyphoplasty in the Treatment of Vertebral Compression Fractures: A Prospective Randomized Study**

A.W. Licht¹, W. Kramer², V. Afanasjev²

¹Asklepioskliniken Kandel, Orthopedic Surgery/Spine-Center, Kandel, Germany, ²Asklepioskliniken Kandel, Orthopedic Surgery, Kandel, Germany

2:30pm - 2:34pm

**Extreme Lateral Cervical Foraminotomy with an Anterior-oblique MIS Approach. Feasibility Cadaveric and Radiologic Study**

M.E. Berbeo¹, R.C. Diaz¹, Grupo de Neurociencias HUSI - PUJ

¹Hospital Universitario San Ignacio - Pontificia Universidad Javeriana, Neurociencias - Neurocirugia, Bogota, Colombia
Friday | March 23rd

3:15PM - 4:30PM
LIGHTNING ROUND: CERVICAL TECHNOLOGIES UPDATE
Room: F
Moderator: John Sutcliffe, MD
3:15pm - 3:19pm
262
Cervical Artificial Disc Replacement at an Ambulatory Surgery Center
K.A. Pettine
1The Spine Institute, Loveland, CO, USA
3:20pm - 3:24pm
263
Effects of Cervical Posture in Cervical Disc Replacement Surgery on Cervical Motion and Stability after Surgery
Y. Deng1, H. Liu2, Y. Hong3, C. Ding1, T. Hu1, R. Shi1, Y. Song1, T. Li1, B. Wang1
1West China Hospital, Sichuan University, Orthopedics, Chengdu, China, 2West China Hospital, Sichuan University, Operation Room, Chengdu, China
3:25pm - 3:29pm
361
Polyetheretherketone Cage Filled with Beta-tricalcium Phosphate versus Autogenous Tricortical Iliac Bone Graft in Anterior Cervical Discectomy and Fusion
C.K. Chough1, H. Park2, K. Cho2
1The Catholic University of Korea, Department of Neurosurgery, Seoul, Korea, Republic of, 2Yeoungdeungpo Hospital, Department of Neurosurgery, Seoul, Korea, Republic of
3:30pm - 3:34pm
407
Cervical Disc Arthroplasty in Patients with Prior Fusions: Results from the PCM US IDE Prospective Randomized Clinical Trial
F.H. Geisler1, F.M. Phillips2, A. Cappuccino3, C.D. Chaput4, J.G. DeVine5, K. Gilder6, K.M. Howell6, P.C. McAfee6
1Chicago Back Institute, Chicago, IL, USA, 2Midwest Orthopedics at Rush University Medical Center, Chicago, IL, USA, 3Buffalo Spine Surgery, Buffalo, NY, USA, 4Scott and White Hospital, Temple, TX, USA, 5Dwight D. Eisenhower Army Medical Center, Fort Gordon, GA, USA, 6NuVasive, Inc., Biometrics, San Diego, CA, USA, 7NuVasive, Inc., Clinical Resources, San Diego, CA, USA, 8St. Joseph’s Hospital, Baltimore, MD, USA
3:35pm - 3:39pm
301
Experience and Clinical Results with Cervical Total Disc Arthroplasty in Treatment of Cervical Disc Disease: Venezuelan Experience in 6 Years
G. Bazares1, A. Pérez-Oliva2, N. Cruz1, A. Acosta1, J.L. Oropeza1
1Instituto de Columna Caracas, Hospital de Clínicas Caracas, Caracas, Venezuela, 2Centro Médico Docente La Trinidad, Clínica de Columna, Servicio de Cirugía Ortopédica y Traumatología, Caracas, Venezuela
3:40pm - 3:44pm
412
A Prospective, Randomized Clinical Investigation of the Porous Coated Motion (PCM) Artificial Cervical Disc: 2 Year Results Comparing Outcomes of Compensated and Non-compensated Patients
A. Cappuccino1, F.H. Geisler1, F.M. Phillips2, C.D. Chaput3, J.G. DeVine1, K. Gilder4, K. Malone5, P.C. McAfee6
1Chicago Back Institute, Chicago, IL, USA, 2Buffalo Spine Surgery, Buffalo, NY, USA, 3Midwest Orthopedics at Rush University Medical Center, Chicago, IL, USA, 4Chicago Back Institute, Chicago, IL, USA, 5Scott and White Hospital, Temple, TX, USA, 6Dwight D. Eisenhower Army Medical Center, Fort Gordon, GA, USA, 7NuVasive, Inc., Biometrics, San Diego, CA, USA, 8NuVasive, Inc., Clinical Resources, San Diego, CA, USA, 9St. Joseph’s Hospital, Baltimore, MD, USA

Friday, March 23rd

2:40pm - 2:44pm
46
Early Relapse after Discectomy of Herniated Lumbar L5-S1 Discs: Fissure Fragmentectomy and Sealing Procedure for a Percutaneous Endoscopic Interlaminar Approach
H.S. Kim1, S.J. Jeong1, H.J. Ahan1, K.H. Jeon1, W.J. Choi1, K.T. Kim1, C.I. Ju2, S.W. Kim2, S.M. Lee2, H. Shin2
1Hurisarang Spine Hospital, Neurosurgery, Daejeon, Korea, Republic of, 2College of Medicine, Chosun University, Neurosurgery, Gwangju, Korea, Republic of
2:45pm - 2:49pm
227
Minimally Invasive Lumbar Interbody Fusion (MI-LIF) Using a βTCP-HA Bone Graft Substitute (FormaGraft): Fusion Rates out to 2 Years
W.B. Rodgers1, E.J. Gerber1, J.A. Lehman1, J.A. Rodgers1
1Spine Midwest, Inc., Research, Jefferson City, MO, USA
2:50pm - 2:54pm
364
3-D Analysis of the Porcine Scoliosis Model: Impact of a Corrective Tether
B. Moal1, F. Schwabi1, J. Demakakos1, B. Ungar1, P. Riviere1, R. Lafage1, V. Lafage1
1N.Y.U-Hospital for Joint Diseases, New York, NY, USA
2:55pm - 2:59pm
120
Cytokines in the Intervertebral Disc of Patients Undergoing Lumbar Anterior Discectomy and Interbody Fusion for Degenerative Disc Disease
J.M. Cuellar1, N. Marien2, V.G. Cuellar3, M.S. Angst1, D.C. Yeomans2, P.X. Montesano4
1N.Y.U-Hospital for Joint Diseases, Orthopaedic Surgery, New York, NY, USA, 2Sutter Institute for Medical Research, Sacramento, CA, USA, 3Stanford University School of Medicine, Anesthesia, Palo Alto, CA, USA, 4Private Practice, Spine Surgery, West Palm Beach, FL, USA
3:00pm - 3:04pm
514
Is the Core Outcome Measures Index an Adequate Instrument but Faster and More Simple than Other Questionnaires for the Evaluation of the Quality of Life and Disability of the Patients Affected by Degenerative Lumbar Disease?
D. Pérez Prieto1, M. Ramirez2, C. Lozano2, G. Saló2, M. Antoni2, A. Lladó2
1Hospital del Mar, Orthopaedic Surgery, Barcelona, Spain, 2Hospital del Mar, Barcelona, Spain
3:05pm - 3:09pm
175
Resistive Straight Leg Raise Test (RSLRT), Resistive Forward Bend Test (RFBT), Heel Compression Test (HCT) - Novel Techniques in Identifying Secondary Gain Objectives in Low Back Pain Cases
N. Kumar1, S.I. Wijerathne1, B.W.L. Tan1
1National University Health System, Orthopaedic Surgery, Singapore, Singapore
3:10pm - 3:14pm
385
Nerve Protection in Extreme Lateral Interbody Fusion
F.G. Diaz1, K. Karami1, C.R. Cook2, R. Tyo1, M. Hyska2
1Oakland University, Neurosurgery, Southfield, MI, USA, 2Providence Hospital, Surgery, Southfield, MI, USA, 3NOC2 Foundation, Research, Nashville, MI, USA, 4Michigan State University, Surgery, Lansing, MI, USA

Questions? (866) 423-9440 (U.S.)  +1(630) 995-9994 (Int'l)
3:45pm - 4:30pm

LIGHTNING ROUND:
OUTPATIENT MEDICAL ECONOMICS

Room: J
Moderator: Richard Kube, MD

3:15pm - 3:19pm
230

Spinal Keyhole Approach to Intraspinal Pathology
M. Westphal1, F. Raimund2, U. Grzyska2, D. Winkler1, J. Regelsberger1
1UK Eppendorf, Neurosurgery, Hamburg, Germany, 2UK Eppendorf, Neuroradiology, Hamburg, Germany

3:20pm - 3:24pm
226

Minimally Invasive Lateral Interbody Fusion (MI-LIF) in Smokers
W.B. Rodgers1, E.J. Gerber2, J.A. Lehmen3, J.A. Rodgers1
1Spine Midwest, Inc., Research, Jefferson City, MO, USA

3:25pm - 3:29pm
101

Implementation of a Quality Assurance Program for Spine Surgery in a Multi-site Private Practice
1Texas Back Institute, Plano, TX, USA, 2Texas Back Institute Research Foundation, Plano, TX, USA

3:30pm - 3:34pm
496

Mitigation of Investigator Bias in Adverse Event Reporting from an Industry-sponsored Spine Surgery Study: Utilization of an Independent Clinical Events Committee
J.D. Auerbach1, K. McGowan2, M. Halevi2, G. Maislin2
1Bronx-Lebanon Hospital Center, Department of Orthopaedics, Bronx, NY, USA, 2MCRA, New York, NY, USA, 3Paradigm Spine, New York, NY, USA, 4Biomedical Statistical Consulting, Wynnewood, PA, USA

3:35pm - 3:39pm
110

Anterior Cervical Discectomy and Fusion versus Cervical Disc Arthroplasty: Cost-utility Analysis Based on an Institutional Financial Data Economic Model
D.T. Warren1, C.M. Hoelscher1, T.M. Andres2, P.A. Ricart Hoffiz1, J.A. Bendo3, J.A. Goldstein1
1NYU Hospital for Joint Diseases, New York, NY, USA, 2Westchester Medical Center, Valhalla, NY, USA

3:40pm - 3:44pm
269

Lumbar Artificial Disc Replacement at an Ambulatory Surgery Center
K.A. Pettine1
1The Spine Institute, Loveland, CO, USA

3:45pm - 4:30pm

DISCUSSION

CLOSING OF ISASS12