



# **3<sup>rd</sup> Annual Advances in Motion Preservation of the Spine**

**Friday, October 22 – Saturday, October 23,  
2021**

## **Syllabus**

## ESTEEMED FACULTY

**Jens R. Chapman, M.D.**

**Course Co-Chair**

Complex Spine Surgeon  
Swedish Neuroscience Institute  
Seattle, Washington

**Jack E. Zigler, M.D.**

**Course Co-Chair**

Orthopaedic Spine Surgeon  
Texas Back Institute  
Plano, Texas

**Scott Blumenthal, M.D.**

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Orthopaedic Spine Surgeon  
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**Hyun Bae, M.D.**

Co-Medical Director, Spine Education  
Cedars-Sinai Medical Center  
Los Angeles, California

**John Burleson, M.D.**

Orthopaedic Spine Surgeon  
Hugston Clinic Orthopaedics  
Nashville, Tennessee

**Christoph Hofstetter, M.D., Ph.D.**

Associate Professor  
Fellowship Program Co-Director  
Director of Spine Surgery  
University of Washington Medical Center  
Seattle, Washington

**Wellington K. Hsu, M.D. (virtual)**

Clifford C. Raisbeck Distinguished Professor of  
Orthopaedic Surgery  
Professor, Orthopaedic & Neurological Surgery  
Northwestern University Feinberg  
School of Medicine  
Chicago, Illinois

**Armen Khachatryan, M.D.**

Orthopaedic Surgeon & Founder & Director  
The Disc Replacement Center  
Holladay, Utah

**Roland Kent, M.D. (virtual)**

Spine Surgeon & Co-Founder  
Axis Spine Center  
Coeur D'Alene, Idaho

**Ravi Nunna, M.D. (virtual)**

Neurosurgeon  
University Neurosurgery  
Chicago, Illinois

**Todd Lanman, M.D. (virtual)**

Spinal Neurosurgeon  
Lanman Spinal Neurosurgery  
Beverly Hills, California

**Gregory Schroeder, M.D. (virtual)**

Orthopaedic Surgeon  
Rothman Orthopaedic Institute  
Associate Professor, Orthopaedic Surgery  
Thomas Jefferson University  
Philadelphia, Pennsylvania

**Matthew Scott-Young, M.D. (virtual)**

Orthopaedic Surgeon  
Gold Coast Spine  
Southport, Australia

## AGENDA

### FRIDAY, OCTOBER 22, 2021

- 6 p.m.      **Registration & Appetizers**
- 6:25 p.m.      **Welcome & Course Overview**
- 6:30 p.m.      **Featured Lecture: Return to Play in Contact Sports: What Does the Data Show?**  
*Wellington Hsu, M.D.*  
**Objectives:**
- Evaluate the known evidence behind surgical procedures for cervical disc herniations in the elite athlete population
  - Assess evidence-based literature regarding total disc arthroplasty in return to play for different types of sporting activities
  - Describe the indications of surgical versus conservative management for nerve root compression in the cervical spine
- 6:45 p.m.      **Case Reviews and Panel Discussion**  
**Failed Cervical and Lumbar Disc Arthroplasty**  
*Moderator: Jens R Chapman, M.D.*  
*Panelists: Jack E. Zigler, M.D., Armen Khachatryan, M.D., Scott Blumenthal, M.D., & Wellington Hsu, M.D. (virtual)*  
**Objectives:**
- Summarize how to approach failed disc arthroplasty diagnostically
  - Explain treatment for managing osteolysis vs. infection after cervical TDR
  - Outline therapeutic interventions for failed lumbar disc arthroplasty
- 8 p.m.      **Adjourn**

### SATURDAY, OCTOBER 23, 2021

- 7 a.m.      **Breakfast & Registration**
- 7:25 a.m.      **Welcome & Introductions**  
*Jens R. Chapman, M.D.*

#### SESSION 1: UPDATE ON DISC ARTHROPLASTY

- 7:30 a.m.      **What's New Cervical Arthroplasty 2021**  
*Armen Khachatryan, M.D.*  
**Objectives:**
- Outline new peer reviewed literature in 2021
  - Outline FDA approvals 2021
  - Describe implant additions and removals from the market
- 7:40 a.m.      **Q&A**
- 7:45 a.m.      **Expanded Indications for Cervical Arthroplasty (virtual)**  
*Todd Lanman, M.D.*  
**Objectives:**

- Outline the scientific evidence for hybrids and multiple levels
- Explain the scientific evidence for expanded use

7:55 a.m. Q&A

8 a.m. **Live Broadcast Demonstration from BioSkills Lab No. 1**

**Single Level Cervical Disc Arthroplasty**

*Hyun Bae, M.D*

**Objectives:**

- Demonstrate a single level cervical disc replacement
- Demonstrate safe instrumentation practices and how to avoid complications

8:20 a.m. **What's New in Lumbar Disc Replacement in 2021**

*Jack E. Zigler, M.D.*

**Objectives:**

- List new peer-reviewed literature
- Outline what is in the pre-market approval (PMA) pipeline and what is in use outside of the US (OUS)
- Provide an update on insurance coverage and/or class-action legal actions

8:30 a.m. Q&A

**SESSION 2: TWO LEVEL CERVICAL TDR**

8:35 a.m. **Live Broadcast Demonstration from BioSkills Lab No. 2**

**Two Level Cervical Disc Arthroplasty: A Demonstration of Different Technologies Side-by-Side**

*Armen Khachatryan, M.D. & Scott Blumenthal, M.D.*

*Moderator: Jack E. Zigler, M.D.*

**Objectives:**

- Demonstrate similarities and differences in implantation techniques for 2 level cervical total disc replacement
- Identify how to avoid complications with the procedure
- Utilize safe instrumentation practices

9:15 a.m. **Lumbar Facet Replacement Surgery Revisited (virtual)**

*Roland Kent, M.D.*

**Objectives:**

- Explain the role of facets in normal spinal motion and how they contribute to spinal pathology
- Describe the FDA IDE study design for the Premia Spine TOPS device
- Present the preliminary data of the study

9:30 a.m. Q&A

- 9:35 a.m.      **Endoscopic Spine Surgery for Reduction of Surgical Invasiveness  
Cervical and Lumbar Spine Clinical Applications**  
*Christoph P. Hofstetter, M.D., Ph.D.*  
**Objectives:**
- Outline indications and contraindications for endoscopic cervical and lumbar decompressions
  - Describe three clinical cases where endoscopic surgery was successful in reducing surgical invasiveness
  - Describe learning curve and suggested educational venues

9:50 a.m.      **Q&A**

- 9:55 a.m.      **Live Broadcast Demonstration from BioSkills Lab No. 3  
Side-by-Side**  
*Moderator: Jack E. Zigler, M.D. & Scott Blumenthal, M.D.*  
**Part 1. Microscopic Cervical Foraminotomy**  
*Jens R. Chapman, M.D.*  
**Part 2. Endoscopic Lumbar Foraminotomy**  
*Christoph P. Hofstetter, M.D., Ph.D.*  
**Objectives:**
- Outline the surgical techniques for endoscopic cervical and lumbar decompression
  - Describe troubleshooting methods for endoscopic surgery
  - Describe how to avoid complications in endoscopic surgery

### **SESSION 3: ADVANCED TECHNOLOGY AND ITS USE IN MOTION PRESERVATION**

- 10:25 a.m.      **Posterior Based Motion Preservation Procedures: Past & Present**  
*Hyun Bae, M.D.*  
**Objectives:**
- Outline the necessary requirements for posterior based motion preservation procedures
  - Describe conditions would motion preservation options provide benefit
  - List the potential complications of motion preservation
- 10:40 a.m.      **Q&A**
- 10:45 a.m.      **Young Surgeons: Practice Building in 2021**  
*John Bureson, M.D.*  
**Objectives:**
- Define the three most common practice models in the US and their relative pros and cons
  - Evaluate impediments to starting a practice for a new spine surgeon
  - Outline how to use new technology as a young surgeon
- 11 a.m.      **Q&A**

- 11:05 a.m. **Live Broadcast Demonstration from BioSkills Lab No. 4**  
**Lumbar Disc Arthroplasty: A Side-by-Side Look at Different Techniques**  
*Jack E. Zigler, M.D. & Scott Blumenthal, M.D.*  
*Moderator: Jens Chapman, M.D.*  
**Objectives:**
- Describe details of disc space surgical preparation
  - Explain how to perform a comprehensive intradiscal release
  - Outline tips and tricks for correct implant placement

11:50 a.m. **Break, Exhibits & Pick Up Lunch** (*not for CME credit*)

#### **SESSION 4: CONTROVERSIES IN USING NON-FUSION TECHNOLOGIES**

- 12 p.m. **Down Under Experience: Cervical ADR in Collision Sports** (*virtual – working lunch*)  
*Matthew Scott-Young, M.D.*  
**Objectives:**
- Outline pros and cons of cervical ADR in the high-level athlete
  - Describe the experience of ADR in professional athletes in Australia

12:15 p.m. **Q&A**

- 12:20 p.m. **North American Perspective: Return to Play in Contact & Collision Sports – Does Cervical ADR Help?** (*virtual*)  
*Gregory Schroeder, M.D.*  
**Objectives:**
- Outline the pros and cons of cervical ADR in the high-level athlete
  - Describe the experience in professional athletes in North America

12:35 p.m. **Q&A**

- 12:40 p.m. **Controversy: Symptomatic L5-S1, Degenerative Disk Disorder, Fusion or ADR**  
*Scott Blumenthal, M.D.*  
**Objectives:**
- Describe degenerative conditions at L5-S1 that would contraindicate ADR
  - Dispel the myth that ADR shouldn't be used at L5-S1
  - List diagnostic "tips" that may suggest fusion vs ADR in preop planning

12:55 p.m. **Q&A**

- 1 p.m. **Live Broadcast Demonstration from BioSkills Lab No. 5**  
**Open Door Laminoplasty: How to Do It**  
*Jens R. Chapman, M.D.*  
**Objectives:**
- Show safe and effective expansion and stabilization techniques for opening door spinal laminoplasties
  - Demonstrate differences of surgical techniques for open door laminoplasty compared to other techniques

1:30 p.m. **Cervical Artificial Disc Replacement (C-ADR): A Big Picture Perspective on Market**

**Acceptance** (*virtual*)

*Ravi Nunna, M.D.*

**Objectives:**

- Summarize the development and implementation history of C-ADR
- Compare and contrast C-ADR vs. ACDF (Anterior Cervical Discectomy and Fusion)
- Describe future directions for C-ADR

**1:45 p.m. Q&A**

**1:50 p.m. Course Wrap Up**  
*Jens Chapman, M.D. & Jack Zigler, M.D.*

**2 p.m. Adjourn**

## Acknowledgements

The Planning Committee gratefully acknowledges support for this conference from the following:

<b><u>Educational Grant</u></b>	<b><u>Exhibit Support</u></b>	<b><u>In-Kind Support</u></b>
Aesculap Centinel Spine Globus Medical Orthofix Nuvasive Zimmer Biomet	Globus Medical Orthofix	Aesculap Centinel Spine Globus Medical Orthofix NuVasive Zimmer Biomet

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## Course Planning Committee

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### Course Evaluation

Please take a moment to complete our online evaluation, which will be emailed to you. Your feedback helps to ensure the effectiveness of this CME activity, as well as improve future educational activities. All responses are considered anonymous. <https://www.surveymonkey.com/r/MotionPres2021>

If you do not receive the survey via email, please call (206) 732-6500 or email [cme@seattle-sciencefoundation.org](mailto:cme@seattle-sciencefoundation.org).

### Accreditation



Seattle Science Foundation is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

### **AMA PRA Category 1 Credits™**

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## **Identifying and Resolving Conflicts of Interest**

**Purpose:** The information you provide addresses several requirements of the Accreditation Council for Continuing Medical Education (ACCME) to help **ensure independence** in CME activities. Everyone in a position to control the content of a CME activity must disclose all relevant financial relationships with an ineligible company to the CME provider. This information must be disclosed to participants prior to the beginning of the activity. Also, CME providers must mitigate current conflicts of interest prior to the educational activity.

**Definitions: “Financial relationships”** are those relationships in which the individual benefits by receiving a salary, royalty, intellectual property rights, consulting fee, honoraria, ownership interest (e.g., stocks, stock options or other ownership interest, excluding diversified mutual funds), or other financial benefit.

The ACCME defines a **“ineligible company”** as any entity producing, marketing, re-selling or distributing health care goods or services consumed by, or used on, patients. Among the exemptions to this definition are government organizations, non-health care related companies and non-profit organizations that do not advocate for ineligible companies.

Circumstances create a **“conflict of interest”** when an individual has an opportunity to affect CME content about products or services of an ineligible company with which he/she has a financial relationship.

ACCME focuses on financial relationships with ineligible companies in the 24-month period preceding the time that the individual is being asked to assume a role controlling content of the CME activity. ACCME has not set a minimal dollar amount for relationships to be significant. Inherent in any amount is the incentive to maintain or increase the value of the relationship. The ACCME defines **“relevant financial relationships”** as financial relationships in any amount occurring within the past 24 months that create a conflict of interest.

**CME Activity Planning Committee Members:** If a conflict of interest exists, the Planning Committee member must withdraw from the Planning Committee unless the conflict can be mitigated. Mitigation may be made by one of the following methods: (1) Peer review of CME content will be conducted at another oversight level to assure no ineligible company bias exists; (2) Change in focus of course so the activity does not include information related to products or services about which the planning committee member has a conflict; (3) Severing relationship(s) between the member and any related ineligible company; (4) Others to be determined by SSF CME Committee.

**CME Activity Presenter:** When a conflict of interest exists, the Planning Committee must address the conflict by one of the following methods: (1) Review content to be presented by speaker in advance to assure content balance; (2) Change topic so the presentation is not related to products or services where a conflict exists; (3) Select a different presenter without any related ineligible company; (4) Include presentations by other faculty to provide an overall balance to the content of the course; (5) Limit or specify the sources for recommendations that the presenter can use. Each speaker is required to give a balanced, evidence-based presentation based on published research. No conclusions or recommendations without external validation may be made by a speaker with a conflict of interest.

## Faculty Disclosure Summary

The following planners and presenters have/had a financial relationship with a commercial interest:  
(*S = Speaker; P = Planner*)

**Hyun Bae, M.D.** (S): Royalty: Zimmer Biomet, DePuy Synthes, Nuvasive, Stryker  
**Scott Blumenthal, M.D.** (S, P): Consultant/Teaching/SAB/Royalty/Investment: Aesculap, Centinel Spine, Orthofix, Zimmer Biomet, Simplify  
**John Burleson, M.D.** (S): Consultant: Kalitec, Degen Medical, CTLAmedica  
**Jens Chapman, M.D.** (S, P): Consultant: Globus Medical  
**Christoph Hofstetter, M.D., Ph.D.** (S): Consultant: Innovasis, Globus Medical, Joimax, J&J; Grant Support: Raisbeck Foundation, NIH, Department of Defense, Neilsen Foundation  
**Wellington K. Hsu, M.D.** (S): Royalty: Stryker; Consultant: Stryker, Bioventus, Medtronic; Contracted Research: Inion  
**Armen Khachatryan, M.D.** (S): Consultant: Zimmer Biomet, Orthofix, Dymicron; Contracted Research: Nuvasive, Centinel Spine, SpineArt  
**Roland Kent, M.D.** (S): Contracted Research: Globus Medical, SI Bone; Speaker: Globus Medical, SI Bone; Product Design Funding: Globus Medical  
**Gregory Schroeder, M.D.** (S): Consultant: Zimmer, Stryker, Innovative Surgical Designs, Astura, Teledoc, Bioventus, Wolfers Kluwer, AOSpine, Medtronic  
**Jack Zigler, M.D.** (S, P): Consultant: Centinel Spine, Orthofix, Simplify; Investment Interest: Centinel Spine

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The following planners and/or presenters have/had no financial relationship with a commercial interest:  
(*S = Speaker; P = Planner*)

**Todd Lanman, M.D.** (S), **Ravi Nunna, M.D.** (S), **Matthew Scott-Young, M.D.** (S), **Periklis Godolias, M.D., Ph.D.** (P), **Linda Sahlin** (P)

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All planners and presenters attested that their content suggestions and/or presentation(s) will provide a balanced view of therapeutic options and will be entirely free of promotional bias. All presentations have been reviewed by a planner with no conflicts of interest to ensure that the content is evidence-based and unbiased.