



8th Annual Robotics Course,
aka, "Everything Cool in Spine"

Saturday, December 9, 2023

Syllabus

DISTINGUISHED FACULTY

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Course Co-Chair
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Jens R. Chapman, M.D.

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Orthopedic Spine Surgeon
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Chester Donnally, M.D. (pre-recorded)

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David Polly, M.D.

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Nicholas Theodore, M.D., M.S. (pre-recorded)

Director, Neurosurgical Spine Center & Professor of
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Surgical Demonstrations Supported by Swedish Neuroscience Institute Fellows

Bryan Anderson, D.O., Donald Davis III, M.D., Neel Patel, M.D., & Gautam Rao, M.D.

AGENDA

- 7 a.m. **Registration & Breakfast**
- 7:30 a.m. **Welcome, Introductions, Course Overview**
Doniel Drazin, M.D., Isador Lieberman, M.D., M.B.A., J. Patrick Johnson, M.D. & Jens R. Chapman, M.D.
- 7:35 a.m. **Expanding the Frontiers of Technology-Assisted Surgery**
Roger Hartl, M.D. (virtual)
Objectives:
- Describe examples on the state of robotic-assisted surgery today
 - Outline the expanding frontiers of technology-assisted surgery
 - Present cases that illustrate the expanding frontiers of technology-assisted surgery
- 7:50 a.m. **Q & A**
- 7:55 a.m. **Artificial Intelligence and Pre-Operative Planning**
Isador Lieberman, M.D., M.B.A.
Objectives:
- Elucidate the types of cases that would benefit from preoperative planning
 - Demonstrate a typical case of preoperative planning
 - Update on AI
- 8:10 a.m. **Q & A**
- 8:15 a.m. **Lumbo-pelvic Fixation for Deformity with Navigation and/or Robotics**
David Polly, M.D.
Objectives:
- Identify which cases are suitable for SI fusion
 - Describe steps to perform MIS robotic-assisted SI fusion
 - Describe steps to perform Navigation-assisted SI fusion
- 8:30 a.m. **Q & A**
- 8:35 a.m. **Convincing Your Hospital to Invest in Navigation/Robotics/AR/VR**
Terrence Kim, M.D.
Objectives:
- Evaluate the cost of navigation and robotics
 - Illustrate the barriers to implementing assistive technologies in your hospital
 - Define talking points to hospital administrators why technology is essential for advancing patient care and outcomes
- 8:50 a.m. **Q & A**

8:55 a.m. **Live Demonstration Broadcast from BioSkills Lab No. 1**
Navigated Lumbar-Pelvic Fixation

David Polly, M.D.

Objectives:

- Outline the workflow for setting up a SI surgery
- Demonstrate the nuances of performing the surgery
- Illustrate the pearls of performing the surgery

9:25 a.m. **Q & A**

9:30 a.m. **Pearls and Pitfalls of Technology-Assisted Surgeries**

Moderator: Doniel Drazin, M.D. and J. Patrick Johnson, M.D.,

Panel: Isador Lieberman, M.D., M.B.A., Terrence Kim, M.D., David Polly, M.D., Andrew Manista, M.D. &

Objectives:

- Outline pearls for successful robotic-assisted surgeries
- Contrast pitfalls of unsuccessful robotic-assisted surgeries
- Identify and evaluate lessons learned from failures of robotic-assisted surgeries

10:05 a.m. **Q & A**

10:10 a.m. **Break & Exhibits** (not for CME Credit)

10:25 a.m. **The Good, The Bad, & The Ugly of Spinal Robotics**

Kevin Foley, M.D. (virtual)

Objectives:

- Update on the current state of spinal robotic technologies
- Describe advantages, limitations, and future needs of spinal robots

10:40 a.m. **Q & A**

10:45 a.m. **Live Demonstration Broadcast from BioSkills Lab No. 2**
Robotic-Assisted Cervical Pedicle Screws

Michael Gallizzi, M.D.

Objectives:

- Demonstrate robotic-assisted cervical fusion
- Demonstrate minimally invasive cervical fusion using robotic assistance
- Employ robotic-assisted surgery in the cervical spine using different techniques

11:15 a.m. **Q & A**

- 11:20 a.m. **The 2024 Update on Augmented Reality in Spine Surgery**
Chester Donnally, M.D. (pre-recorded)
- Define Augmented Reality
 - Explain open vs. percutaneous, is this technology great for both?
 - Describe what is on the horizon for augmented reality technology in 2024

11:35 a.m. **Q & A**

11:40 a.m. **Live Demonstration Broadcast from BioSkills Lab No. 3**
Robotic Assisted Thoracolumbar Fusion
Anderew Manista, M.D.

Objectives:

- Demonstrate robotic-assisted thoracolumbar fusion
- Demonstrate minimally invasive thoracolumbar fusion using robotic assistance
- Employ robotic-assisted surgery in the thoracolumbar using different techniques

12:10 p.m. **Q & A**

12:15 p.m. **Lunch Break & Exhibits** (working lunch)

- 12:30 p.m. **MIS & Robotics: Pearls of My Practice**
Ali Anissipour, M.D. (virtual)
- Objectives:**
- Navigate learning curve challenges of robotics in spine surgery
 - Describe pearls of practice to equip colleagues to minimize complications
 - Illuminate the future of spine surgery by exploring the possibilities that emerge from facet decortication

12:45 p.m. **Q & A**

12:50 p.m. **Live Demonstration Broadcast from BioSkills Lab No. 4**
Minimally Invasive Robotic Arthrodesis
Terrence Kim, M.D.

Objectives:

- Exemplify planning and workflow of minimally invasive robotic-assisted arthrodesis
- Demonstrate minimally invasive robotic assisted facet decortication
- Execute bone graft placement using robotic guidance

1:20 p.m. **Q & A**

1:25 p.m.

Current & Emerging Trends in Imaging and Robotics

Nicholas Theodore, M.D (pre-recorded)

Objectives:

- Describe the current emerging trends in imaging
- Outline the current indication for utilizing robotics in spine surgery
- Predict emerging trends in the future of spine surgery

1:40 p.m.

Q & A

1:45 p.m.

End of CME Accredited Content

2:15 p.m.

Introducing Expanded Existence - Building the Surgical Metaverse-AI Enhanced Surgery

Jeff Larson, M.D.

2:30 p.m.

Q & A

2:35 p.m.

Open Technology Experience (in Lab)

3:15 p.m.

Adjourn

Acknowledgements

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Educational Grant

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Medtronic/Mazor

Course Planning Committee

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Seattle Science Foundation

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/Robotics-2023>

If you do not receive the survey via email, please call (206) 732-6500 or email cme@seattlesciencefoundation.org.

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Identifying and Resolving Conflicts of Interest

Purpose: The information provided addresses several requirements of the ACCME to help **ensure purpose** in CME activities. Everyone in a position to control the content of a CME activity must disclose all relevant financial relationships with commercial interests to the CME provider. This information must be disclosed to participants prior to the beginning of the activity. Also, CME providers must resolve 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 for promotional speakers' bureau, ownership interest (e.g., stocks, stock options or other ownership interest, excluding diversified mutual funds), or other financial benefit. Financial benefits are usually associated with roles such as employment, management position, independent contractor (including contracted research), consulting, speaking and teaching, membership on advisory committees or review panels, board membership, and other activities from which remuneration is received, or expected. ACCME considers relationships of the person involved in the CME activity to include financial relationships of a spouse or partner.

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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 resolved. Resolution 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 commercial 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 commercial interest; (4) Others to be determined by SSF CME Committee.

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Faculty Disclosure Summary

The following planners and presenters, in the last 24 months, have/had a financial relationship with a commercial interest:

(S = Speaker; P = Planner)

Ali Anissipour, D.O. (S): Consultant: Medtronic; Royalties: SeaSpine, Stryker

Jens R. Chapman, M.D. (P): Advisor: Globus Medical; Speaker: DePuy Synthes, Medtronic, SeaSpine

Kevin Foley (S): Research: Medtronic; Royalties: Medtronic; Board: Discgenics, DuraStat, RevBio, Tissue Differentiation Intelligence, True Digital Surgery; Stocks: Accelus, Companion Spine, Medtronic, NuVasive, SpineWave, Vori Health

Michael Gallizzi, M.D. (S): Consultant: Globus, Arthrex, Cerapedics, Healthtrustpg, Medtronic; Royalties: Globus, Arthrex

Roger Hartl, M.D. (S): Consultant: DePuy Synthes, Brainlab; Royalties: Zimmer Biomet; Advisor: RealSpine

Terrence Kim, M.D. (S): Consultant: Medtronic, Johnson & Johnson

Jeffrey Larson, M.D. (S): Stocks: Mirus, Spine BioPharma; Royalties: Stryker, SeaSpine

Isador Lieberman, M.D. (P,S): Consultant: Globus Medical, Bioventus, ECentinal Robotics, SI Bone, Safe Orthopaedics; Royalties: SI Bone, Globus; Ownership: AGADA Medical

Andrew Manista, M.D. (S): Consultant: Globus, SI Bone

David Polly, M.D. (S): Consultant: SI Bone, Globus; Speaker: SI Bone; Grant: Mizuho OSI, Medtronic, AO Spine

Nicholas Theodore, M.D. (S): Consultant: Globus Medical; Royalties: Globus Medical

The following planners and/or presenters, in the last 24 months, have/had no financial relationship with a commercial interest

(S = Speaker; P = Planner)

Chester Donnally, M.D. (S); **Doniel Drazin, M.D.** (S); **J. Patrick Johnson, M.D.** (P); **Clifford Pierre, M.D.** (P); **Cory Kepler** (P)

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.