Emerging Technologies in Spine Surgery

Room: 111

Chairs: Doniel Drazin, MD, MA, Kirkland, WA, USA; J. Patrick Johnson, MD, Los Angeles, CA, USA

Sections include: Navigation, Emerging technologies, and Hands-on

This course will explore the new advances in the field of emerging technologies in spine surgery. We are hoping the course would provide the participants with the current state of the art in the use of technology for treating spinal pathology. Topics include and are not limited to intraoperative imaging, navigation, robotics, next generation microscopes and surgical instruments, combinatorial technologies, augmented reality and surgical simulators.

Course Objectives:
1. Develop an understanding of the role of emerging technologies in improving the care of neurosurgical and orthopedic patients with spinal disorders.
2. Identify the indications to use and the expected outcomes of utilizing navigation and emerging technologies in the treatment of spinal disorders.
3. Develop a strategy to implement new technologies providing beneficial spinal care for patients with spinal disorders.

13:00 – 13:05  Welcome, Introductions, Course Overview

Emerging Technologies: Navigation – pro’s vs con’s

Bernhard Meyer, Munich, Germany
Objectives:
- Define the accuracy of spinal navigation
- Review the literature on learning curves in navigation
- Identify the number of cases needed for expertise in navigation

Claudius Thomé, Innsbruck, Austria
Objectives:
- Illustrate the expanded indications of spinal navigation
- Indicate when navigation is not beneficial
- Utilize alternative techniques for identify anatomy/location when navigation is not indicated

13:35 – 13:50  Introducing the Role of Spinal Navigation in Clinical Practice
Peter Vajkoczy, Berlin, Germany
Objectives:
- Review incorporating navigation into your clinical practice
- Illustrate the pitfalls of navigation
- Identify various navigation technologies and review their usefulness
13:50 – 14:05  Navigating the cervical spine: Pearls and pitfalls
Ehab Shiban, Munich, Germany
Objectives:
  - Illustrate MIS techniques that incorporate navigation
  - Demonstrate where navigation is not needed for MIS
  - Indicate the reasons navigation is needed

14:05 – 14:20  Panel discussion of the disasters with navigation
Panel Leader: J. Patrick Johnson
Panelists: All
Objectives:
  - Illustrate the limits of navigation
  - Demonstrate where navigation goes wrong
  - Indicate the reasons navigation is not needed

Emerging Technologies: Robotics/System Integration/Simulators

14:20 – 14:35  The past, present and future of robotics in spine surgery
Veit Rhode, Göttingen, Germany
Objectives:
  - Indicate the benefits of using a robotics system for surgery
  - Identify when robotics is not beneficial in spine surgery.
  - Review the future of robotics and it’s applications

14:35 – 14:50  Robotics in spine surgery: an update
Enrico Tessitore, Geneva, Switzerland
Objectives:
  - Indicate the benefits of using a robotics system for surgery
  - Identify when robotics is not beneficial in spine surgery
  - Review the future of robotics and it’s applications

14:50 – 15:05  Review of Spine Simulators and Mobile Device Applications
Avelino Parajon, Madrid, Spain
Objectives:
  - Describe the current status of surgical simulators in spine surgery
  - Illustrate the benefits of a surgical simulator in neurosurgical education
  - Identify pearls for surgical simulators including modeling

15:05 – 15:10  Q&A
15:10 – 15:15  Break
15:15 – 16:50  Hands-on Demonstration section: MIS Navigation/Robotics/Microscopes
5 – 7 Consecutive hands-on demonstrations by Faculty and Medical Technology Experts
Objectives:
  - Illustration, appropriateness and application of the different systems
  - Indication of benefits and use of the involved systems
  - Demonstration of step-by-step pearls using the different systems

16:55  Closing remarks
Doniel Drazin, MD

Note: separate registration is needed ➔ http://www.eurospinemeeting.org/registration-barcelona2018