

SCOLIOSIS RESEARCH SOCIETY
Spine Deformity Solutions: A Hands-On Course
October 27-29, 2022 | Singapore, Singapore
National University Hospital (NUH) - Advanced Surgical Training Center (ASTC)

FINAL PROGRAM

MEETING OVERVIEW

Meeting Description

The Hands-On Course will provide an opportunity for participants to expand their knowledge and improve their skills through training and discussions with leading spinal deformity surgeons from around the world. Registration is limited to ensure access to faculty, small group interaction for better learning, and opportunities for hands-on work. Nine hours of the course will be devoted to lab work. Topics and lab sessions will cover all areas of the spine and a variety of conditions and techniques.

Learning Outcomes/Objectives

As a result of participating in this activity, participants should be able to:

- Identify appropriate options for cervical and adult deformity reconstruction
- Employ techniques to avoid complications in spinal deformity surgery
- Develop skills in complex cervical deformity correction
- Identify the appropriate indications for the use of spinopelvic instrumentation
- Demonstrate skills for the correct placement of spinopelvic instrumentation
- Integrate techniques for posterior and anterior lumbo-sacral deformity corrections
- Demonstrate knowledge and skills for performing basic and complex spinal osteotomies

FACULTY

Course Chairs

Munish Gupta, MD <i>St. Louis, USA</i>	Gabriel Liu, FRCS(Orth), MSC <i>Singapore</i>
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Course Faculty

Saumyajit Basu, MD <i>Kolkata, India</i>	Mun Keong Kwan, MBBS, MS Orth <i>Kuala Lumpur, Malaysia</i>	Reuben Soh, MBBS, MMedOrth, FRCS <i>Singapore</i>
Brian Hsu, MD <i>Baulkham Hills, NSW, Australia</i>	Athikom Methathien, MD <i>Bangkok, Thailand</i>	Kota Watanabe, MD, PhD <i>Tokyo, Japan</i>
Seung-Jae Hyun, MD, PhD <i>Seongnam, Korea</i>	Monchai Ruangchainikom, MD <i>Bangkok, Thailand</i>	Hee-Kit Wong, MD <i>Singapore</i>
Kenny Kwan, BMBCh(Oxon), FRCSEd <i>Hong Kong, Hong Kong</i>	Christopher Shaffrey, MD <i>Durham, USA</i>	

Case Presenters

John Chen, FRCS(Orth) <i>Singapore</i>	Leok- Lim Lau, FRCS(Orth) <i>Singapore</i>	Dennis Weng Hey, MBBS, MRCS, MMed(Orth), MCI, FRCSEd(Orth) <i>Singapore</i>
Kevin Lim, MD, FRCS(Orth), MBA <i>Singapore</i>	Jacob Oh, MBBS <i>Singapore</i>	

GENERAL MEETING INFORMATION

Target Audience

Residents, fellows and orthopaedic and neurosurgeons who have an interest in and are involved in spinal deformity management and treatment.

Language

English is the official language of the course, and all presentations and course materials will be provided in English.

Attire

Business casual attire is appropriate for the Fireside Chats. Casual attire and scrubs are appropriate for the lecture and lab sessions. Scrubs, disposables, and lead aprons will be provided at the lab. ***Thyroid protection will not be provided at the lab. Participants will need to provide their own thyroid shields if they need or want them.***

Special Needs

If you have health issues for which you may require special accommodations, please notify the SRS staff onsite. We will make every effort to accommodate any special needs.

FDA Statement (United States)

Some drugs and medical devices demonstrated during this course have limited FDA labeling and marketing clearance. It is the responsibility of the physician to be aware of drug or device FDA labeling and marketing status.

Insurance/Liabilities and Disclaimer

SRS will not be held liable for personal injuries or for loss or damage to property incurred by participants. Course participants are encouraged to take out insurance to cover loss incurred in the event of cancellation, medical expenses or damage to or loss of personal effects when traveling outside of their own countries. SRS cannot be held liable for any hindrance or disruption of course proceedings arising from natural, political, social or economic events or other unforeseen incidents beyond its control. Registration of a participant or guest implies acceptance of this condition.

The materials presented at this activity are made available for educational purposes only. The material is not intended to represent the only, nor necessarily best methods or procedures appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement or opinion of the faculty that may be helpful to others who face similar situations.

SRS disclaims any and all liability for injury or other damages resulting to any individual attending a scientific meeting and for all claims that may arise out of the use of techniques demonstrated therein by such individuals, whether these claims shall be asserted by a physician or any other person.

Disclosure of Conflict of Interest

Saumyajit Basu	No Relationships
Munish Gupta	DePuy Synthes (b,e,g); Medtronic (b,e,g); Globus Medical (b,g); Innomed (g); Honoraria-Malaysia Spine Society (g); OMeGAggrant paid to institution for fellowship (g); AO Spine-grant paid to institution for fellowship; honorarium, travel (g); J&J (c); SRS-travel for faculty (g); Honorarium-LSU (g); AO Spine -travel for faculty (g); National Spine Health Foundation-voluntary, no monies (g)
Brian Hsu	Stryker Spine (d,g)
Seung-Jae Hyun	Medtronic Korea (b), CGBIO (a, b, e), GS Medical (b, e)
Kenny Kwan	No Relationships
Mun Keong Kwan	No Relationships
Gabriel Liu	No Relationships
Athikom Methathien	No Relationships
Monchai Ruangchainikom	No Relationships
Christopher Shaffrey	NuVasive (a, b, c, g)
Reuben Soh	Nuvasive (d), Medtronic (b,d)
Kota Watanabe	No Relationships
Hee-kit Wong	SpineGuard (e)

Key:

a – grants/research support; b – consultant; c – stock/shareholder (self-managed); d – speaker’s bureau; e – advisory board or panel; f – employee, salary (commercial interest); g – other financial or material support (royalties, patents, etc.)

LOCATION INFORMATION

Thursday, October 27 | Registration and Fireside Chat Case Discussions

The Capital Kempinski

15 Stamford Rd
Singapore 178906

[Directions by Car](#)

[Directions by Public Transport](#)

Friday, October 28 and Saturday, October 29 | Lecture Sessions and Practical Exercises

National University Hospital (NUH) Advanced Surgical Training Center (ASTC)

5 Lower Kent Ridge Road
Kent Ridge Wing, Level 2
Singapore 119074

[Directions by Car](#)

[Directions by Public Transport](#)

THURSDAY, OCTOBER 27, 2022

17:30-18:30

Faculty Pre-Course Meeting

Capital Kempinski- Atelier I

15 Stamford Rd

Singapore 178906

18:30-19:30

Participant Registration & Welcome Reception

Capital Kempinski- 4th floor Foyer

15 Stamford Rd

Singapore 178906

19:30-21:30

Fireside Chat Case Discussions: Pediatric & Adult Spine Deformity (2 Concurrent Sessions)

Theme: Radiographic Evaluation and Planning for Correction of Spinal Deformity

19:30-21:30 **Pediatric & Adult Spine Deformity (12 participants) – Atelier I**

Moderator: Christopher Shaffrey, MD, Saumyajit Basu, MD, Gabriel KP Liu, FRCS(Orth), MSC

Pediatric Case Presenters: (3 faculty, 20 min/ case): Kenny Kwan, Lau Lim, Kevin Lim

Adult Case Presenters: (3 faculty, 20 min/ case): Seung-Jae Hyun, John Chen, Dennis Weng Hey

19:30-21:30 **Pediatric & Adult Spine Deformity (12 participants) – Atelier II**

Moderator: Munish Gupta, MD, Hee-Kit Wong, MD, Kota Watanabe, MD, PhD

Pediatric Case Presenters: (3 faculty, 20 min/ case): Reuben Soh, Mun Keong Kwan, Athikom Methathien

Adult Case Presenters: (3 faculty, 20 min/ case): Jacob Oh, Brian Hsu, Monchai Ruangchainikom



FRIDAY, OCTOBER 28, 2022

Advanced Surgical Training Center (ASTC), National University Hospital (NUH)

7:30-7:50

Faculty Shuttle to Lab- Meet in Capital Kempinski Lobby

7:50-8:00

Lab Registration & Check-in

8:00-8:45

Session 1: Open and Minimally Invasive Techniques and Pelvic Fixation

Moderator: Gabriel KP Liu, FRCS(Orth), MSC

8:00-8:05

Course Welcome

Gabriel KP Liu, FRCS(Orth), MSCO, Munish Gupta, MD

8:05-8:15

Fixation of Thoracic, Lumbar, Sacrum, and Pelvis (Hooks, Pedicle Screws, Iliac Screws, and S2Ala-Ilium Screws Fixation)

Kenny Kwan, BMBCh(Oxon), FRCSEd

8:15-8:25

Minimally Invasive Stabilization of the Thoracolumbar Spine with Percutaneous Screws and Navigation

Mun Keong Kwan, MBBS, MS Orth

8:25-8:35

MIS Deformity Corrections

Gabriel KP Liu, FRCS(Orth)

8:35-8:45

Discussion

8:45-9:00

Proceed to Lab and Change Clothes

9:00-10:30

Lab 1A-B, Rotation 1: Left Side – 8 Stations (4 Cadavers Prone, 4 Cadavers Lateral)

Group 1

Lab 1A: Posterior Instrumentation (Cadavers Prone) (no fluoroscope) – #1-4: Lab A

Thoracic-Lumbar-Ilium; Insertion of Hooks and Pedicle Screws; Sacro-Pelvic Fixation; S2Ala-Ilium Screws.

Open, anatomy based. (Left side only)

Group 2

Lab 1B: Anterior Interbody Fusion (Cadavers Lateral) (with fluoroscope) - #5-7: Lab A & #8: Lab B

Lateral Lumbar Approach (from left side), Interbody Fusion (L1-L2-L3)

(Each group does two discs in the upper lumbar spine)

10:30-11:00

Refreshment Break (Lab staff to rotate cadavers to right side)



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11:00-12:30

Lab 1A-B, Rotation 2: Right Side – 8 Stations (4 Cadavers Prone, 4 Cadavers Lateral)

Group 2 **Lab 1A: Posterior Instrumentation (Cadavers Prone) (no fluoroscope) – #1-4: Lab A**
Thoracic-Lumbar-Ilium; Insertion of Hooks and Pedicle Screws; Sacro-Pelvic Fixation;
S2Ala-Ilium Screws. Open, anatomy based. (Right side only)

Group 1 **Lab 1B: Anterior Interbody Fusion (Cadavers Lateral) (with fluoroscope) - #5-7: Lab A & #8:**
Lab B
Lateral Lumbar Approach (from right side), Interbody Fusion (L3-L4-L5)
(Each group does two discs in the lower lumbar spine)

12:30-13:15

Lunch & Group Photo (*Lab staff to turn cadavers to prone position*)

13:15-14:05

Session 2: Spinal Osteotomies

Moderator: Munish Gupta, MD

13:15-13:25 **Posterior Column Osteotomies Including Wide Release Ponte and Smith-Peterson Osteotomy**
Seung-Jae Hyun, MD, PhD

13:25-13:35 **Pedicle Subtraction Osteotomy**
Kota Watanabe, MD, PhD

13:35-13:45 **Vertebral Column Resection (VCR)**
Munish Gupta, MD

13:45-13:55 **Complications of Osteotomies**
Saamyajit Basu, MD

13:55-14:05 **Discussion**

14:05-14:15

Proceed to Lab

14:15-16:45

Lab 2: Posterior Spinal Osteotomies (8 Stations, Cadavers Prone)

Posterior Column Osteotomies, Ponte multiple levels between L1-L5, Smith-Peterson Osteotomy (SPO), Pedicle Subtraction Osteotomy (PSO) in the Lumbar Spine (Osteotomy at L3) and Vertebral Column Resection (VCR) of the Thoracic Spine (at T9). Participants share left/right side.

16:45-17:00

Change Clothes (Lab staff to turn cadavers to supine position)

17:00-17:30

Faculty Shuttle Provided to Capital Kempinski



19:00-21:00

Faculty and Industry Dinner (by invitation only). Participant free night out.

Shuttle provided from Capital Kempinski lobby

SATURDAY, OCTOBER 29, 2022

Advanced Surgical Training Center (ASTC), National University Hospital (NUH)

7:30-8:00

Faculty Shuttle to Lab – ASTC

8:00-9:00

Session 3: Cervical Deformity - Indications, Approach, and Execution

Moderator: Christopher Shaffrey, MD

8:00-8:10

Anterior Cervical Discectomies and Corpectomies

Athikom Methathien, MD

8:10-8:20

Occipital and Cervical Fixation with Cervical Pedicle Screws and Lateral Mass Screws

Dennis Weng Hey, MD

8:20-8:30

Planning and Execution for Cervical Osteotomies

Christopher Shaffrey, MD

8:30-8:40

Complications of the Cervical Spine

Christopher Shaffrey, MD

8:40-9:00

Discussion

9:00-9:15

Proceed to Lab and Change Clothes

9:15-10:45

Lab 3A: Anterior Approaches to the Cervical Spine and Cervicothoracic Junction (8 Stations, Cadavers Supine)

Interbody Fusion and Corpectomy, Sternotomy, and Approach to Upper Thoracic Spine

10:45-11:15

Refreshment Break (Lab staff to turn cadavers to prone position)

11:15-12:45

Lab 3B: Posterior Cervical Reconstruction from Occipital to T2 (8 Stations, Cadavers Prone)

Posterior Instrumentation: Occipital Plate, C2 Pedicle Screws, C3-C7 Pedicle Screws, C7 Osteotomy. Open Anatomy Based.

12:45-13:25

Lunch



13:25-14:35

Session 4: Surgical Approach and Complications

Moderator: Kota Watanabe, MD, PhD

13:25-13:35 **Anterior Spinal Surgery for Scoliosis Overview**

Hee-Kit Wong, MD

13:35-13:45 **Anterior Transpleural Thoracic Approaches- Deformity, Tumor, Trauma: Lateral (Flank) Thoracolumbar- Lumbar Retroperitoneal Approach for Anterior Column Reconstruction and Release**

Munish Gupta, MD

13:45-13:55 **Anterior Techniques with Anterior Lumbar Interbody Fusion, Retroperitoneal Anterior Approach to L5-S1, L4-L5 and L3-L4**

Monchai Ruangchainikom, MD

13:55-14:05 **Complications of Anterior and Lateral Surgery: How to Deal with Them**

Reuben Soh, MBBS, MMedOrth, FRCS

14:05-14:15 **How to Maximize Efficiency/ Reduce Complication Rates**

Brian Hsu, MD

14:15-14:25 **Revision Surgery for ASD: Pre-Operative Planning and Surgical Techniques**

Kota Watanabe, MD, PhD

14:25-14:35 **Discussion**

14:35-14:45

Proceed to lab

14:45-16:15

Lab 4: Anterior Thoracolumbar Approaches (8 Stations, Cadavers Lateral Then Supine)

Anterior Thoracic Transpleural Approach (Mid-Thoracic) (*Cadavers repositioned by participants*)

Anterior Lumbosacral Retroperitoneal Approach + ALIF L5-S1 & Exposure L4-L5

16:15-16:30

Open Question & Answer Wrap-up Session in Anatomy Lab

Gabriel KP Liu, FRCS(Orth), MSC

16:30-16:45

Change Clothes and Adjourn

16:45

Faculty Shuttle Provided to Capital Kempinski



CORPORATE SUPPORT

We are pleased to acknowledge and thank the companies that provided financial and in-kind support to SRS for this Hands-On Course. These companies provided educational grants to support costs for facility rental, cadavers, and other course expenses as well as necessary instrumentation and implants for the hands-on lab sessions.

DePuy Synthes
Globus Medical, Inc.
Medtronic
NuVasive
Stryker

FUTURE SRS MEETINGS

30th IMAST

March 22- 24, 2023 – Dublin, Ireland

58th Annual Meeting

September 6-9, 2023 – Seattle, United States

Spine Deformity Solutions: A Hands-On Course

June 14-16, 2023 – Nijmegen, the Netherlands

Spine Deformity Solutions: A Hands-On Course

October 13-15, 2023 – Hong Kong

Current Concepts in Spine Deformity

April 13-15, 2023 – Sao Paulo, Brazil

Scoliosis Research Society

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