



Exploring Neurosurgery's Future through the Eyes of Innovation

July 21 - 23, 2022 | St Julien Hotel | Boulder, CO

REGISTER NOW



**SUBCORTICAL
SURGERY GROUP**

Dear Friends and Colleagues:

Welcome to the 9th Annual Meeting of the Subcortical Surgery Group (SSG). Your favorite neurosurgery meeting is back in-person July 21 – 23, 2022. Please join us as we continue our mission of optimizing Minimally Invasive Parafascicular Surgery or MIPS through collaborative research and technology applications that are proving to be better for the patient, the hospital, and the surgeon.

This year's theme, ***Exploring Neurosurgery's Future through the Eyes of Innovation***, presents a diverse agenda over 1½ days. Over 25 presenters to include ten Chairmen of Neurosurgery will share their experiences and published evidence using MIPS and advanced technologies. Day one of the meeting focuses on innovations in subcortical neurosurgery, the neurosurgeon's evolving role in the advancement of precision medicine and finding the answer to functional recovery in the deadliest form of stroke. Day two highlights many new technologies and its adjunct role in MIPS surgery.



Julian Bailes, MD

New in 2022, we are excited to offer 3 hands-on workshops on Thursday, July 21 – the day before the meeting. Attend any or all of the following workshops:

- **Workshop 1 – MIPS: A Deficit Sparing Approach**
- **Workshop 2 – Optimizing Precision Network Surgery through the Lens of Connectomics**
- **Workshop 3 – Building the Modern-Day Neurosurgical OR**

The meeting is designed as an interactive learning experience to honor our commitment to open collaboration, learning and idea sharing. We encourage active participation in panel discussions, presentations, and audience polling.

This event will be held at the St Julien Hotel in Boulder, Colorado. The St Julien Hotel is a beautiful resort, full of family-oriented amenities. It is steps from Pearl Street Mall where visitors stroll the brick-paved pedestrian walkway, linger on restaurant patios, shop, and watch street performers. You are also walking distance to Boulder's iconic flatirons and creek path.

I am grateful for the SSG's leadership team and this year's presenters. Without their support, this meeting would not be possible. I thank the membership of the SSG for the honor to serve as your President. I hope this meeting exceeds your expectations.

Regards,

A handwritten signature in black ink, appearing to read "Julian Bailes", written in a cursive, flowing style.

Julian E. Bailes, Jr., MD
President, Subcortical Surgery Group
Bennett-Tarkington Chair
Department of Neurosurgery, NorthShore University Health System
Co-Director, NorthShore Neurological Institute
Clinical Professor of Neurosurgery, University of Chicago Pritzker School of Medicine



Comprehensive 2½ Day Event

Three Hands-on Workshops

- 1. Introduction to MIPS: A Deficit Sparing Approach**
Thursday, July 21 • 7am – 12pm
- 2. Optimizing Precision Network Surgery through the Lens of Connectomics**
Thursday, July 21 • 12pm – 2:45pm
- 3. Building the Modern-Day Neurosurgical OR**
Thursday, July 21 • 3pm – 6pm

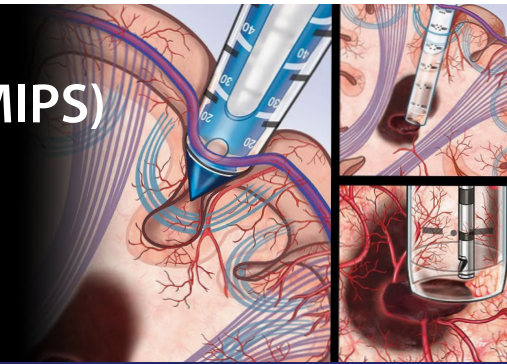
Annual Meeting (didactic)

- 9th Annual Meeting of the Subcortical Surgery Group**
Exploring Neurosurgery's Future through the Eyes of Innovation
Friday, July 22 • 7am – 5pm
Saturday, July 23 • 7am – 12pm

Minimally Invasive Parafascicular Surgery (MIPS) A Deficit Sparing Approach

Workshop 1

Thursday, July 21, 2022 | 7am – 12pm



Target Audience

Neurosurgeons who have **NOT** previously attended a MIPS education program

Workshop Description

Neurosurgery has continued to expand Minimally Invasive Surgical applications over the last decade. Through modern advancements in neurosurgery tools, technology, and refined microsurgical techniques, neurosurgeons now have more expanded options in subcortical surgical intervention than ever before.

This didactic and hands-on program introduces the concepts and skills of a deficit sparing approach for the subcortical space, known as MIPS (Minimally Invasive Parafascicular Surgery). This workshop is designed to provide current evidence-based content, personal surgeon experiences, a hands-on skills workshop, and is taught by tenured MIPS Neurosurgeons.

A recent Meta-Analysis published on MIPS Suggests*

- ✓ MIPS technologies reduce parenchymal injury as compared to traditional retraction
- ✓ There is lower surgical morbidity and post-operative complications as compared to traditional retraction
- ✓ There is consistency in clinical outcomes for ICH and tumor resection reported across studies
- ✓ There is an economic benefit to MIPS through shorter hospital stays as noted in several studies

*Mansour et al., <https://dx.doi.org/10.1016/j.wneu.2019.08.218>

By attending this workshop, you can increase surgical efficiency, potentially improve clinical outcomes over historical measures, and develop your practice further by becoming a leader in minimally disruptive subcortical neurosurgery.

Agenda

7:00am	Registration & Breakfast
7:45am	Principles of MIPS: ACCESS, REMOVAL, and COLLECTION
9:30am	WHO and WHY: Patient Selection Guidance and Creating Value for Your Practice
10:15am	Hands-on Skills Lab
12:00pm	Workshop 1 Concludes & Lunch

Faculty



Julian Bailes, MD
President & Chairman, SSG
Bennett-Tarkington Chairman
Department of Neurosurgery
NorthShore University HealthSystem
Co-director - NorthShore Neurological Institute



Kaisorn Chaichana, MD, FACS
Professor of Neurosurgery
Mayo Clinic



Gustavo Pradilla, MD
Associate Professor of Neurosurgery
Emory University School of Medicine
Chief of Neurosurgery Service
Grady Memorial Hospital



Justin Singer, MD
Director of Vascular Neurosurgery Program
Spectrum Health



Ronald Young II, MD
Neurosurgeon
Delray Medical Center

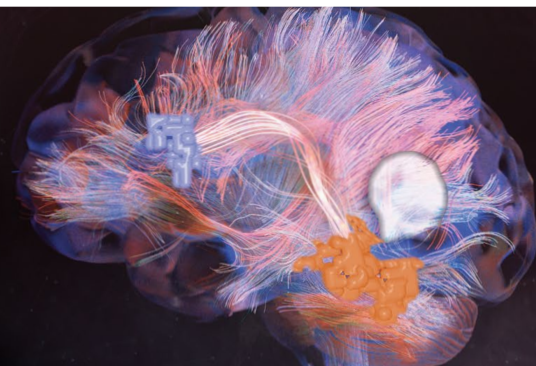


Jefferson Chen, MD, PhD
Professor of Neurological Surgery
Director of Neurological Trauma,
Neurosurgery Services
UCI Health

Optimizing Precision Network Surgery through the Lens of Connectomics

Workshop 2

Thursday, July 21, 2022 | 12pm – 2:45pm



Target Audience

Neurosurgeons seeking an advanced understanding of connectomic anatomy as it correlates to subcortical surgery

Workshop Description

Connectomics is the use of machine learning to make sense of brain connectivity data and has enormous potential in improving our understanding of patients with neurologic disease. This workshop will explore the latest techniques for precision network surgery through practical use of structural and functional mapping to achieve greater onco-functional balance. The event will be conducted through a brief lecture and interactive case reviews from field leading experts through the lens of Connectomics.

Faculty



Michael Sughrue, MD
Neurosurgeon
Prince of Wales Hospital

Agenda

12:00pm	Registration & Lunch
12:45pm	Welcome & Introductions
1:00pm	Practical Use of Connectomics in Neurosurgery
1:30pm	Practical Applications: A Series of Case Reviews & Experiences
2:00pm	Hands-on Structural & Functional Mapping Exercise
2:30pm	Discussion/Q&A
2:45pm	Workshop 2 Concludes

Building the Modern-Day Neurosurgical OR

Workshop 3

Thursday, July 21, 2022 | 3pm – 6pm



Target Audience

For experienced MIPS neurosurgeons interested in improving clinical outcomes and OR efficiency during subcortical cases, while broadening their technical skills and surgical applications through the use of neurosurgery's most advanced technologies

Workshop Description

Minimally invasive subcortical neurosurgery is expanding and evolving at a rapid pace. This workshop provides a vast range of advanced technology to explore hands-on. It is designed to allow attendees to explore surgical adjuncts to assist in increasing appropriate surgical volume, efficiency, and performance in the OR. Attendees will choose up to 3 in-depth labs. The final hour of the workshop allows for independent exploration.

Agenda

3:00pm	Registration & Select up to 3 Labs to Explore
3:30pm	Lab Rotation 1
4:00pm	Lab Rotation 2
4:30pm	Lab Rotation 3
5:00pm	Independent Exploration
6:00pm	Workshop 3 Concludes

In-depth Labs 1 thru 6

Lab 1 – The Efficient & Expanded Neurosurgical OR – Innovations in Port Surgery

Experience the latest technology advancements that enable you to improve OR efficiency while safely expanding the breadth of possible case selection.

- Gain experience with new technologies and techniques that enable larger abnormalities to be resected safely and efficiently through an 11mm or 13mm port
- Practice skills using multifunctional and automated technology during the microdissection phase to improve operative efficiency
- Understand OR options to use less equipment during surgery set up and potentially remove need to pin your patient for stereotaxy while allowing your choice of surgical optics – loupes, microscope or exoscope
- Practice skills that minimize instrument exchange while navigating your resection technology

Lab 2 – Intraoperative Tissue Differentiation – Improving the Odds of Maximal Safe Resection

Intraoperative tissue differentiation is a key principle in gaining maximal safe resection. Gain hands-on experience with multiple technologies to improve your ability to safely gain GTR.

- Couple automated resection with Fluorescence and 5ALA detection to remove abnormalities safely and efficiently
- Practice MIS skills with the latest ultrasound technology for improved intraoperative real time visualization

Lab 3 – Tissue is the Issue in the Molecular Era Starting in the OR & Extending through the Preclinical Lab

Gain hands-on experience with technology that expands your role, as the neurosurgeon, in the OR, as well as the research lab. Key elements include:

- Understand how to improve the volume of tissue for research purposes to beyond just making the diagnosis
- Improve the quality of tissue collected for precision medicine initiatives by automating biological preservation in the OR
- Streamline workflow and minimize sample variability between the OR, pathology, and research lab without adding distractions
- Experience a new paradigm in the preclinical PDX lab setting that enables serial interrogation of the murine model to evaluate mutagenic changes while keeping the murine animal alive for each biopsy
- Review new in vivo anti-inflammatory delivery strategies post ICH evacuation
- Discuss how this has opened new possibilities for research, grant application and clinical trials

Lab 4 – Vascular Applications – Explore Exoscopic to Endoscopic (E2E) Technique, MIPS for ICH and More

Gain valuable insights on how to advance your surgical practice safely and efficiently during vascular cases.

- Learn the E2E technique for channel-based transsulcal evacuation and resection
- Learn multiple techniques to intervene earlier on ICH while minimizing iatrogenic injury and maximizing clot evacuation
- Collaborate with your colleagues during case review session exploring MIS surgical options for patients with cavernous malformations, AVMs, ICHs and IVHs

Lab 5 – MRI Workflow

Gain hands-on experience with an MRI mock-up system with full scale MRI. See functional scans on the MRI (DTI, perfusion, tumor imaging) from clinical cases on the workstations and simulate the workflow on it.

Lab 6 – Connectomics

Explore the latest techniques for precision network surgery through practical use of structural and functional mapping to achieve greater onco-functional balance. This session will focus on interactive case reviews to bridge the gap between the esoteric to true patient application.



Exploring Neurosurgery's Future through the Eyes of Innovation

Friday, July 22

Annual Meeting Agenda

- 7:00 am **REGISTRATION, EXHIBIT VIEWING & BREAKFAST**
- 8:00 am **Welcome, Mission and Progress of the SSG**
Julian Bailes, MD: NorthShore University HealthSystem
- 8:15 am **MIPS SURGICAL APPLICATIONS + INTRAOPERATIVE BIOLOGICAL PRESERVATION + ADVANCED RESEARCH**
- Minimally Invasive Parafascicular Surgery: Who and Where in the Neuro-Oncology Landscape**
Ranjeev Bhargoo, MD: Kings Hospital, London
- Improving Clinical Outcomes & Expanding Surgical Options in Brain Metastases**
J.D. Day, MD: UAMS Health
- Maximal Safe GTR of Primary Brain Tumors in Eloquent Locations**
Kaisorn Chaichana, MD: Mayo Clinic
- 9:45 am **Keynote Presentation: Tissue is the Issue in the Molecular Era: How the Neurosurgeon Uniqueley Meets the Unmet Need**
Henry Brem, MD: Johns Hopkins Medicine
- 10:15 am **BREAK WITH EXHIBITORS**
- 10:40 am **Molecular Biobanking Begins in the Operating Room: Role of the Neurosurgeon**
Analiza Rodriguez, MD, PhD: UAMS Health
- Surgical Applications: Improving our Understanding of GBM through Biological Tissue Preservation**
Alireza Mohammadi, MD: Cleveland Clinic
- 11:20 am **Solving Neuro-Oncology Problems in the Operating Suite via Intra-Operative Tissue Collection with Biological Preservation – MUSC Experience**
Arabinda Das, PhD: Medical University of South Carolina
- Spatially-Registered Sampling to Elucidate Intra-Tumor Heterogeneity of the Glioblastoma Immune Landscape**
Dionysios Watson, MD, PhD: Cleveland Clinic
- 12:00 pm **LUNCH WITH EXHIBITORS**

- 12:45 pm **MIPS IN VASCULAR NEUROSURGERY – WILL THESE TRIALS DELIVER?**
- ENRICH: A 300 Patient Randomized Controlled Trial Progress Report**
Gustavo Pradilla, MD: Emory University School of Medicine
- INVEST/MIND/MIRROR/EVACUATE/MINUTE: Endoscopic & Surgiscopic ICH Trials**
Christopher Kellner, MD: Mount Sinai
- ENRICH Plus: Building on What We have Learned – A Neuroprotective Agent ICH Trial**
J. Marc Simard, MD: University of Maryland School of Medicine
- 1:45 pm **Vascular Indications & Case Selection for MIPS with Emerging Technology**
Justin Singer, MD: Spectrum Health
- Biomarker Identification in Hemorrhagic Stroke**
Jay Lusk: Duke University
- 2:25 pm **BREAK WITH EXHIBITORS**
- 2:50 pm **THE LEARNING CURVE IN MIPS, TIPS & TECHNIQUES TO LIMIT COMPLICATIONS & IMPROVE OUTCOMES**
- Straight Talk on Complications – What can go Wrong**
Moderator - Zachary Litvack, MD, MCR, FAANS, FACS: Swedish Neuroscience Institute
- 5-ALA Fluorescence-Guided Surgery and Intraoperative Photodynamic Therapy for Gliomas**
Constantinos Hadjipanayis, MD, PhD: Mount Sinai
- 3:55 pm **EXPLORING THE FUTURE POSSIBILITIES IN PRECLINICAL MODELS AND BRAIN COMPUTER INTERFACE**
- Subcortical Chip Implantation in Rodents: A Feasibility Milestone**
Julian Bailes, MD: NorthShore University Health System
- New Paradigm Brain Tumor Models for Serial Interrogation of Disease Progression & Therapy Evaluation**
Graeme Woodworth, MD: University of Maryland Medical System
- 4:30 pm **Day 1 Wrap-Up**
Julian Bailes, MD: NorthShore University Health System
- 5:00 pm **NETWORKING RECEPTION** – *sponsored by* KARL STORZ
Red Garden Terrace, St Julien Hotel



7:00 am **BREAKFAST & EXHIBIT VIEWING**

8:00 am **Keynote Presentation: Optimizing MIPS through the Lens of Connectomics**

Michael Sughrue, MD: Prince of Wales Hospital, Australia

9:00 am **ADVANCED TECHNOLOGY & ITS ROLE IN BROADENING MIPS APPLICATIONS & IMPROVING OUTCOMES**

Awake Craniotomy Tips and Technique

Ronald Young II, MD: Delray Medical Center

Can Proximity of Excitation Light Improve Differentiation between Normal Parenchyma & Tumor Boundary?

Martin Young, DVM, DACVIM (Neurology)

Integrated Neuro Monitoring in MIPS

José Pedro Lavrador, MD: Kings Hospital, London

The Debate on MIPS for Traumatic ICH

Jefferson Chen, MD, PhD: UCI Health

10:15 am **BREAK WITH EXHIBITORS**

10:40 am **Gamma Tile for Recurrent Meningiomas and Metastases**

Clark Chen, MD, PhD: University of Minnesota Medical School

High Performance Mid-Field MRI: Clinical Experience in Neuroscience

Sebastian Koga, MD: Ochsner Neuroscience Institute, New Orleans, University of Queensland (AU)

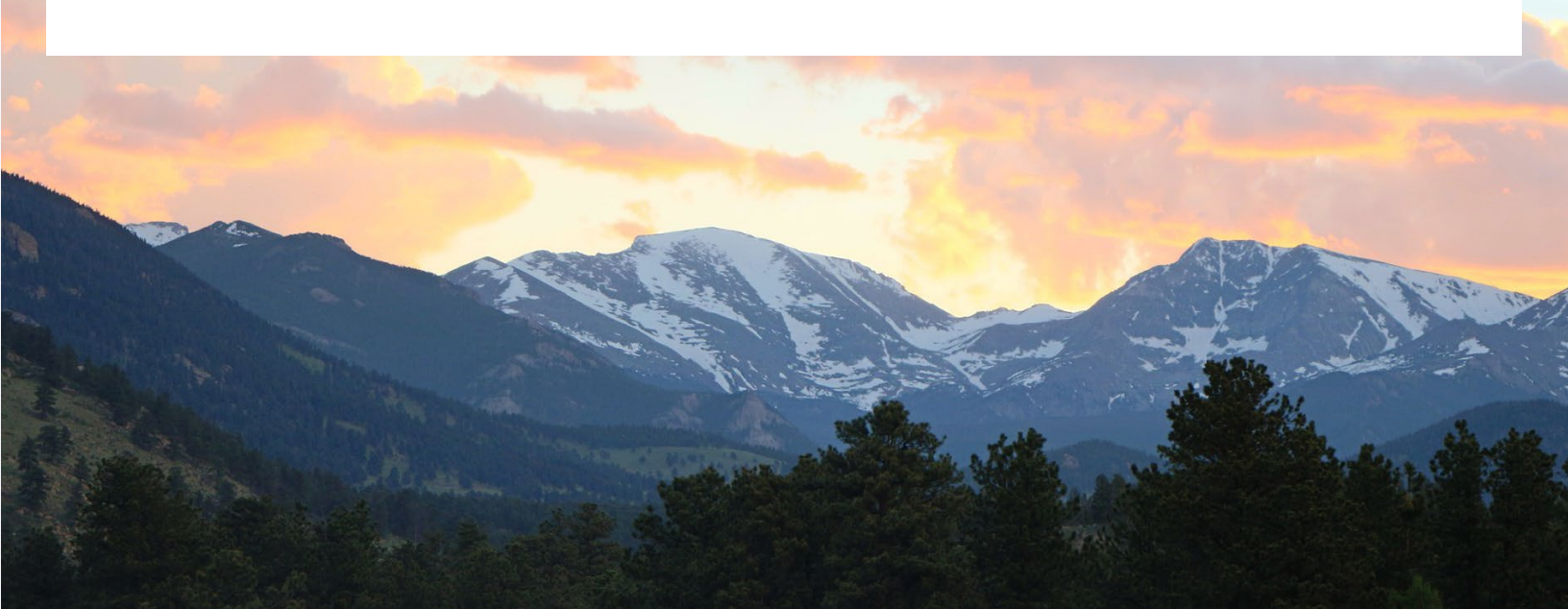
Real-Time Information and Ultrasound's Role in Minimizing Deficits & Improving GTR

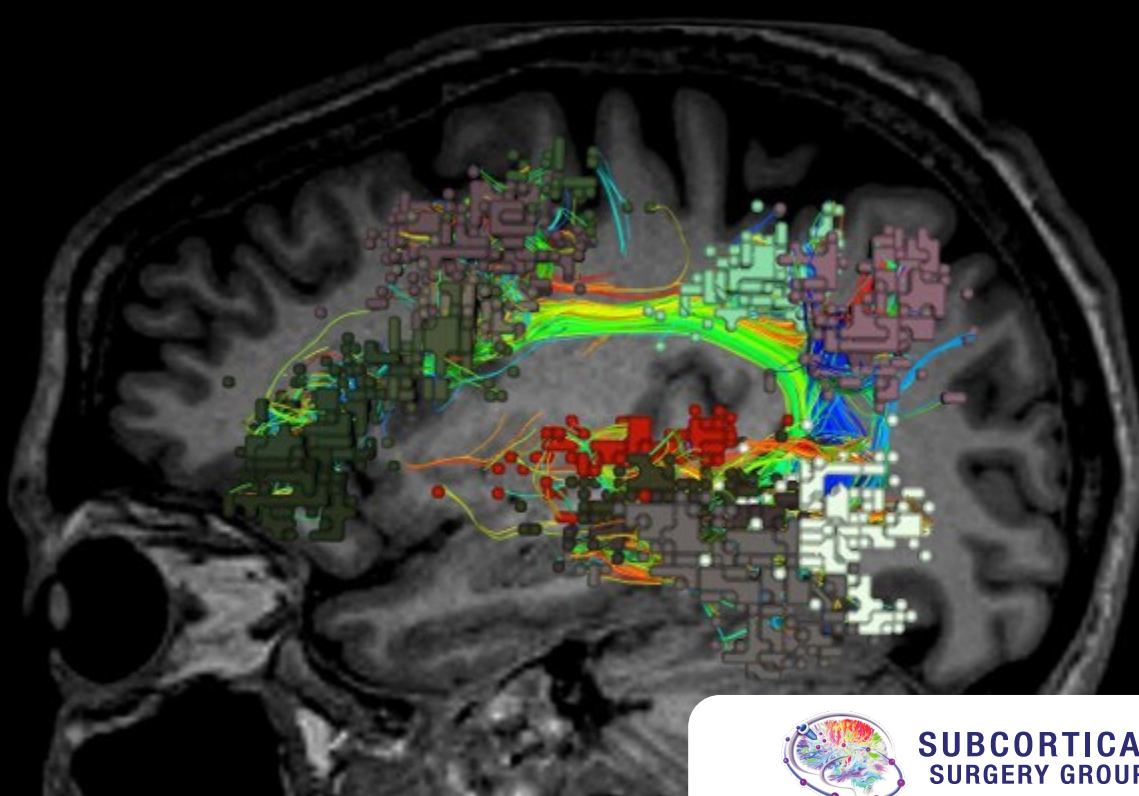
TBD

11:55 am **Summary Points & Questions**

Julian Bailes, MD: NorthShore University HealthSystem

12:00 pm **MEETING ADJOURNED**





**SUBCORTICAL
SURGERY GROUP**

Click the button or scan the QR code to Register

- No cost for neurosurgeons to attend
- Workshops are limited to 36 attendees

REGISTER NOW



For questions, contact:

Jennifer Oakley

Oakley Meetings & Events

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