SPECIAL INVITATION

Advanced Training in Open and Endoscopic Surgery: A Hands-on Skull Base Training Program

A comprehensive dissection experience including 2 lab days.

October 25 - 26, 2019
in downtown Chicago

Northwestern Center For Advanced Surgical Education (NCASE)
240 East Huron Street
Suite LC-0549
Chicago, Illinois

Sponsored by Northwestern Medicine Skull Base Laboratory

ONLY 14 SEATS AVAILABLE. RESERVE YOUR SEAT TODAY.

REGISTER ONLINE: www.nmskullbase.org/advanced-training
Advanced Training in Open and Endoscopic Surgery: A Hands-on Skull Base Training Program

Course Directors: James P. Chandler, MD, and Robert C. Kern, MD

Bringing together the skill sets of neurosurgery and otolaryngology, this comprehensive 2-day course offers a unique opportunity to collaborate and learn complex surgical techniques from some of the top experts in the field of skull-based pathologies, and to take advantage of the leading-edge technologies and cadaver dissection available in our lab.

The Skull Base team will teach by didactic presentations, 3D and virtual reality (VR) anatomy demonstrations and guided cadaveric dissection. By incorporating 3D visualizations, we are able to fully illustrate the complexities of the human brain in a way that we believe will further cement your visuospatial knowledge. Our comprehensive and translational approach using real surgical techniques will also better equip your residents and fellows with the skills they need in the OR.

Invited Faculty include, Omar Arnaout, MD, and Timothy R. Smith, MD, of Harvard University, and Jean Anderson Eloy, MD, of Rutgers New Jersey Medical School.

PROGRAM OBJECTIVES
The objective of this course is to improve patient care through didactic instruction and 3D visualization. Participating surgeons will have hands-on dissection experience, each group utilizing two specimens to rehearse several complex approaches in both open and endoscopic cranial base surgery.

Upon completion of the course, participants will be able to:

1) Review the surgical approaches (open and endoscopic) for complex, skull base pathologies.
2) Recognize the advantages of a team-based approach for managing pre-, peri- and postoperative skull base pathologies.
3) Demonstrate proficient endoscopic instrument handling and performing standard open skull base approaches.

For more information, please contact Sarah Baggs, Continuing Medical Education administrator, Northwestern Memorial HealthCare, at sbaggs@nm.org, or visit www.nmskullbase.org/advanced-training.
# Agenda Day 1

**Friday, October 25, 2019**

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<th>Time</th>
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<tr>
<td>7:00 am</td>
<td>Breakfast and Registration</td>
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| 7:15 am| Welcome/Course Overview  
  *James P. Chandler, MD*                                      |
| **Module 1:** SELLAR/PARASELLAR/SUPRASELLAR APPROACHES | |
| 7:30 am| 3D Anatomy  
  *Michael Walsh, MD*                                       |
| 8:00 am| Endoscopic Endonasal Sellar w/ Nasoseptal flap  
  *Robert C. Kern, MD*                                        |
| 8:30 am| LAB: Endoscopic Dissection                                                                |
| 10:00 am| Transcranial Suprasellar Approach                                                          |
| 10:30 am| LAB: Transcranial Dissection                                                              |
| 12:00 pm| Lunch with Case Presentations                                                            |
| **Module 2:** ANTERIOR CRANIAL BASE | |
| 1:00 pm| 3D Anatomy  
  *Michael Walsh, MD*                                       |
| 1:30 pm| Endoscopic Anterior Cranial Base Resection: Suprasellar Approach  
  *David B. Conley, MD*                                       |
| 2:00 pm| LAB: Endoscopic Dissection                                                                |
| 3:30 pm| Anterior Cranial Base Resection: Subfrontal Approach w/ Pericranial Flap  
  *James P. Chandler, MD*                                        |
<p>| 4:00 pm| LAB: Open Dissection                                                                      |
| 5:00 pm| Review and Adjournment                                                                    |
| 7:00 pm| Dinner with Faculty and Participants                                                      |</p>
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<td><strong>MODULE 3:</strong></td>
<td><strong>MIDDLE CRANIAL FOSSA, INFRATEMPORAL SKULL BASE</strong></td>
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| 7:30 am | 3D Anatomy  
*Michael Walsh, MD* |
| 8:00 am | **Endoscopic Endonasal Transpterygoid/Transmaxillary Approach to the Middle Cranial Fossa**  
*Jean Anderson Eloy, MD, FACS, FARS, and Robert C. Kern, MD* |
| 8:30 am | LAB: Endoscopic Dissection |
| 10:00 am | **Lateral Subtemporal Approach to the Middle Cranial Fossa**  
*Alan G. Micco, MD, and Timothy R. Smith, MD, PhD, MPH* |
| 10:30 am | LAB: Subtemporal Dissection |
| 12:00 pm | Lunch with Case Presentations |
| **MODULE 4:** | **TRANSCLIVAL APPROACHES** |
| 1:00 pm | 3D Anatomy  
*James P. Chandler, MD, David B. Conley, MD, and Michael Walsh, MD* |
| 1:30 pm | **Endoscopic Endonasal Transclival Approach**  
*James P. Chandler, MD, David B. Conley, MD, Jean Anderson Eloy, MD, FACS, FARS, and Michael Walsh, MD* |
| 2:00 pm | LAB: Endoscopic Dissection |
| 3:30 pm | **Transpetrosal/Far Lateral Approach to the Clivus**  
*Omar Arnaout, MD* |
| 4:00 pm | LAB: Far Lateral Dissection |
| 5:30 pm | Review and Adjournment |
Program Course Directors

James P. Chandler, MD  
Vice Chair, Department of Neurological Surgery  
Lavin/Fates Professor of Neurological Surgery  
Director, Skull Base Laboratory  
Co-director, Lou and Jean Malnati Brain Tumor Institute of the Robert H. Lurie Comprehensive Cancer Center  
Professor of Neurosurgery and Otolaryngology – Head and Neck Surgery  
Northwestern University  
Feinberg School of Medicine

Robert C. Kern, MD  
Chair, Department of Otolaryngology – Head and Neck Surgery  
George A. Sisson, MD, Professor of Otolaryngology  
Professor of Otolaryngology – Head and Neck Surgery and Medicine (Allergy and Immunology)  
Northwestern University  
Feinberg School of Medicine

Invited Faculty

Omar Arnaout, MD  
Center for Skull Base and Pituitary Surgery  
Co-Director, Computational Neuroscience Outcomes Center (CNOOC)  
Assistant Professor of Neurosurgery, Harvard Medical School Department of Neurosurgery, Brigham and Women’s Hospital

Jean Anderson Eloy, MD  
Professor and Vice Chairman  
Department of Otolaryngology - Head and Neck Surgery  
Director, Rhinology and Sinus Surgery, Director, Otolaryngology Research  
Co-Director, Endoscopic Skull Base Surgery Program  
Professor of Neurological Surgery; Professor of Ophthalmology and Visual Science  
Rutgers New Jersey Medical School

Timothy R. Smith, MD, PhD, MPH  
Computational Neurosurgical Outcomes Center  
Assistant Professor of Neurosurgery  
Harvard Medical School Department of Neurosurgery, Brigham and Women’s Hospital

Program Faculty

David B. Conley, MD  
Associate Professor, Otolaryngology – Head and Neck Surgery  
Northwestern University  
Feinberg School of Medicine

Osaama H. Khan, MD, MSc  
Oncology and Skull Base Neurosurgeon  
Director, Surgical Neuro-oncology  
Director, Brain Tumor Bank  
Northwestern Medicine  
Central DuPage Hospital  
Northwestern Medicine  
Cancer Center Warrenville  
Assistant Professor, Department of Neurosurgery  
Northwestern University  
Feinberg School of Medicine

Alan G. Micco, MD  
Professor, Otolaryngology, Head and Neck Surgery  
Medical Education and Neurological Surgery  
Northwestern University  
Feinberg School of Medicine

Michael Walsh, MD  
Health System Clinician, Neurological Surgery  
Northwestern University  
Feinberg School of Medicine
Program Location
The program will be held at Northwestern Center For Advanced Surgical Education (NCASE) on Northwestern Medicine’s downtown campus,
240 East Huron Street, Suite LC-0549
Chicago, Illinois 60611

Hotel Accommodations
Visit nm.org to download our Hotel Guide. Or contact Sarah Baggs, Continuing Medical Education administrator, Northwestern Memorial HealthCare, at sbaggs@nm.org.

Parking
Discounted day and overnight parking will be available at 222 East Huron Street.

Audience
This comprehensive 2-day course is designed for both novice and experienced surgeons, residents and fellows in neurosurgery and otolaryngology.

Registration Fee
The fee is $2,500 for physicians and $1,500 for trainees. Breakfast, refreshments and lunch are provided. Space is limited. No refunds will be issued after October 1.

Registration Procedure
To register online, please visit www.nmskullbase.org/advanced-training. If paying with check, please mail your check, made payable to Northwestern Memorial Hospital (CME), to the following address, prior to October 1.

Sarah Baggs
c/o Northwestern Memorial HealthCare
420 East Superior Street, Suite 9-905
Chicago, Illinois 60611

Accreditation Statement
The Northwestern University Feinberg School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation Statement
The Northwestern University Feinberg School of Medicine designates this educational activity for a maximum of 18.5 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Family Attractions
Northwestern Medicine’s downtown campus is located in the heart of Chicago, within walking distance of a variety of restaurants, Navy Pier and the Magnificent Mile, Chicago’s premier shopping area. For a listing of all Chicago has to offer, visit cityofchicago.org.

Register as a pair (neurosurgery and otolaryngology - head and neck surgery) and receive a discount of $250 off your registration.
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Registration Form

Registration Category

- Attending Physician $2,500
- Trainee $1,500
- Neuro/Oto Team $2,250/$1,250

How to Register

- ONLINE: www.nmskullbase.org/advanced-training
- MAIL with check (payable to Northwestern Memorial Hospital (CME))
  - Sarah Baggs
  - c/o Northwestern Memorial HealthCare
  - 420 East Superior Street
  - Suite 9-905
  - Chicago, Illinois 60611

For Questions:

- Email: sbaggs@nm.org
- Phone: 312.503.4005

Please Type or Print

Last Name ____________________________________________ First Name ______________________________________________

Institution _____________________________________________________________________________________________________

Address _______________________________________________________________________________________________________

City _____________________________________________________ State ________________________ ZIP Code _______________

Email (Required) ________________________________________________________________________________________________

Specialty ______________________________________________________________________________________________________

Special Dietary Requirements ____________________________________________________________________________________

Disability Accommodations _______________________________________________________________________________________

Please advise us of your needs

How did you hear about our program?

- Brochure
- Email
- Website
- Twitter
- Word of Mouth
- Previous Attendee

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