

2024 FINAL PROGRAM



North American Skull Base Society

33rd Annual Meeting

The Skull Base is Flat

February 16-18, 2024

Atlanta Marriott Marquis | Atlanta, GA

Pre-Meeting Dissection Course: **February 14-15, 2024**

Pre-Meeting Radiosurgery Course: **February 15, 2024**

2023-2024 PRESIDENT: Siviero Agazzi, MD, MBA, FACS

SCIENTIFIC PROGRAM CO-CHAIRS: Donato Pacione, MD and Shirley Su, MBBS, FRACS

PRE-MEETING DISSECTION COURSE CO-CHAIRS: Brian Thorp, MD and Gustavo Pradilla, MD

PRE-MEETING RADIOSURGERY COURSE CO-CHAIRS: Douglas Kondziolka, MD and Jack Phan, MD

Meeting Leadership

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Pre-Meeting Radiosurgery Course Co-Chairs:

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Dr. Ralph Abi Hachem

Track Co-Chairs - Anterior Skull Base:

Dr. Jamie Van Gompel
Dr. Edward Kuan

Track Co-Chairs - Jugular Foramen/Infratemporal-parapharyngeal Head and Neck-cranio-cervical Junction:

Dr. Mathew Geltzeiler
Dr. Paul Gidley
Dr. Davide Croci

Track Co-Chairs - Lateral Skull Base/Neurotology:

Dr. Ashley Nassiri
Dr. J. Thomas Roland, Jr.

Track Co-Chairs - Sellar-Suprasellar:

Dr. Hamid Borghei-Razavi
Dr. Arjun Parasher

Track Chairs - Vascular/Endovascular/CSF Leak, Bypass:

Dr. Kunal Vakharia
Dr. Christopher Rassekh
Dr. Amir Dehdashti

Session Co-Chairs - Adjuvant Treatments/Radiation/Systemic Therapy

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Session Chair - Cavernous Sinus:

Dr. George Zenonos

Session Chair - Diagnosis/Radiology/Lab:

Dr. Claudia Kirsch

Session Chair - Orbit:

Dr. S. Tonya Stefko

Session Chair - Pediatric Neurosurgery:

Dr. Guillermo Aldave Orzaiz

Session Chair - Women in Skull Base:

Dr. Jennifer Moliterno Gunal

Skull Base Jeopardy Chair:

Dr. Walter Jean

Marketing Chair:

Dr. Carlos Pinheiro-Nieto

Surgical Education Committee Co-Chairs:

Dr. Rahul Mehta
Dr. Bharat Guthikonda

Message from the President

Dear Colleagues,

Welcome to Atlanta!

I hope that the **33rd Annual Meeting of the North American Skull Base Society (NASBS)** will be an unforgettable time for all of us.

For the past 12 months, my team and I have put all our efforts towards crafting the most innovative, educational, and convivial program. Today, I would like to give you a preview of the highlights and innovations.



Siviero Agazzi, MD, MBA

This year's scientific program has been organized in "specialty tracks" to allow a structured educational experience and to prevent overlapping subjects in parallel sessions. I hope you will find this format easy to navigate and tailor to your specific interests and curiosity. Our Scientific Program Co-Chairs **Donato Pacione** and **Shirely Su**, along with the rest of the Scientific Program Committee have done an incredible job in developing this program, recruiting the faculty, and arranging the sessions to maximize the collaboration, innovation, and exchange of ideas that are vital to our mission.

Alongside our always sold-out microsurgery cadaveric lab, a new radiosurgery course has been added to the pre-meeting program. This course will provide an in-depth education on the delivery of radiosurgery and advanced radiation oncology for skull base pathologies. I would like to thank Drs. **Doug Kondziolka**, **Jack Phan**, **Gustavo Pradilla**, and **Brian Thorp** for their hard work in putting together those two outstanding educational events.

Generative Artificial Intelligence (AI) is increasingly embedded in our daily lives, therefore we have deliberately included lectures on this subject throughout the program. Additionally, I have invited two experts in the field to discuss the impact of AI on our specialty, during the General Sessions. **Dr. Michael Link**, Co-Editor in Chief of our journal (JNLS-B Skull Base) will give a special lecture on "Artificial Intelligence in Scientific Writing" and **Dr. Claudia Kirsch**, our inaugural Curtin Call Lecturer will give a presentation on "AI in Skull Base Radiology".

Our collaboration with overseas skull base societies remains strong, with representation in Atlanta from the European Skull Base Society (**Dr. Davide Locatelli**, President), Italian Skull Base Society (**Dr. Maurizio Iacoangeli**, President), and the Korean Society of Endoscopic Neurosurgery (**Dr. Tae-Bin Won**, KOSEN President). Please welcome them to the meeting and make them feel at home, here in North America. Special KOSEN sessions on Sunday morning will be dedicated to endoscopic orbital and transorbital surgery.

This year's Honored Guest Speakers are two prominent figures in Skull Base and Cerebrovascular Surgery. **Dr. Luca Regli** is the Professor and Chairman of the Neurosurgery Department at the University of Zurich, Switzerland. In addition to holding the most prestigious Neurosurgery Chair in Europe, he is recognized as one of the leading experts in cerebrovascular surgery. **Dr. Harry van Loveren** is the Professor and Chairman of the Neurosurgery Department at the University of South Florida and is one of the pioneers of modern skull base surgery. His dedication to teaching,

Message from the President (cont.)

innovating, and mentoring skull base surgeons has made him one of the very few to be invited twice as an Honored Guest Speaker to the NASBS Annual Meeting.

Finally, I am confident that Atlanta's southern hospitality will make this meeting a perfect occasion to make new friends, reconnect with old acquaintances, and continue to collaborate across specialties and borders. Our social event will take place at the world-famous Georgia Aquarium where you will experience dining surrounded by beluga whales and whale sharks in one of the largest living reef exhibits in the world.

It has been an honor and privilege to serve as your president.

Sincerely

Siviero Agazzi, MD, MBA
2023 NASBS President

Message from the President (cont.)



SKULL BASE FELLOWSHIP MATCH

Powered by NASBS

SPECIAL RECOGNITION FOR THE NEUROSURGERY SKULL BASE FELLOWSHIP MATCH

This year, the North American Skull Base Society has established the first “Neurosurgery Skull Base Fellowship Match” This incredible achievement has been many years in the making and would not have been possible without the collaboration of all the Skull Base fellowship program directors, the NASBS board and the dedicated Fellowship Match Committee.

For the first time this year, a match system like the US match for medical and surgical residencies has allowed North American and International applicants to apply, interview, and rank neurosurgical skull base fellowships in a fair, transparent, and synchronized way.

I would like to thank all those who made this possible and encourage fellowship programs who are not yet participating, to join for the next match cycle.

My most sincere recognition to:

Fellowship Match Committee:

- Siviero Agazzi
- Lola Chambless
- James Evans Lola Chambless
- Juan Fernandez-Miranda
- Paul Gardner
- Michael Link
- Daniel Prevedello
- Shaan Raza
- Nathan Zwagerman

Participating Fellowship Programs:

- Brigham & Women's Hospital/Harvard Medical School - Timothy Smith, MD, PhD, MPH
- Cleveland Clinic - Pablo Recinos, MD
- Cleveland Clinic, Florida - Badih Adada, MD
- John Hopkins Hospital - Gary Gallia, MD, PhD,
- Lehigh Valley Fleming Neuroscience Institute - Walter Jean, MD
- Loma Linda University - Miguel Angel Lopez-Gonzalez, MD, MSc
- LSU Health Shreveport - Bharat Guthikonda, MD, MBA
- Mayo Clinic - Michael Link, MD
- Medical College of Wisconsin - Nathan Zwagerman, MD, FAANS
- Pacific Neuroscience Institute - Daniel Kelly, MD
- Stanford University - Juan Fernandez-Miranda, MD
- Swedish Neuroscience Institute - Zachary Litvack, MD, MCR FAANS FACS
- The Ohio State University - Daniel Prevedello, MD
- The University of Toronto - Gelareh Zadeh, MD, PhD
- Thomas Jefferson University - James Evans, MD, FACS, FAANS
- University of Colorado School of Medicine - Samy Youssef, MD, PhD, FAANS
- University of Ottawa - Fahad Alkherayf, MD, MSc, CIP, FRCSC
- University of Pittsburgh Medical Center - Paul Gardner, MD
- University of South Florida, Tampa - Siviero Agazzi, MD, MBA
- University of Texas MD Anderson Cancer Center - Shaan Raza, MD
- Weill Cornell Medicine - Theodore Schwartz, MD

Honored Guest Speakers

Honored Guest Speakers



Luca Regli, MD

Luca Regli studied Medicine at the University of Lausanne, and trained under the mentorship of Dr. Nicolas de Tribolet. His commitment to advancing microsurgical techniques led him to undertake a research and clinical fellowship at Mayo Clinic in Rochester, USA, working closely with Dr. Fredric B. Meyer and Dr. David Piepgras. During this period, he specialized in the microsurgical treatment of complex vascular and skull base lesions.

Upon completing his fellowship, Luca Regli returned to the University Hospital Lausanne. His expertise was recognized with an appointment as full professor and chair of neurosurgery at the University Medical Center of Utrecht, the Netherlands, in 2008. A testament to his dedication, Luca Regli was subsequently invited to assume the position of full professor and chair of the Department of Neurosurgery at the University of Zurich and the University Hospital Zurich in 2012. This appointment placed him in the lineage of renowned neurosurgeons like Dr. U. Krayenbuehl, Dr. M. G. Yaşargil, and Dr. Y. Yonekawa. The department remains an international reference center for cerebrovascular diseases, skull base surgery and neuro-oncology.

Luca Regli's research projects have been driven by clinical inquiries about cerebral hemodynamics, and applications of machine intelligence in clinical neuroscience with the direct goal of improving patient care. His focus extends to pioneering surgical techniques for cerebral revascularization and intra-operative imaging. His academic contributions are evident in a prolific publication record, comprising over 450 articles in peer-reviewed journals and 18 chapters in textbooks. He is an appreciated guest speaker in meetings. His stature within the neurosurgical community is further underscored by the frequent invitations as honored guest speaker and numerous referrals of patients with complex vascular and skull base lesions, a proof to his widely acknowledged leadership in this domain.



Harry van Loveren M.D.

Dr. Harry van Loveren serves as David W. Cahill Professor and Chair of the Department of Neurosurgery and Brain Repair, as well as Interim-Chair of Internal Medicine at the Morsani College of Medicine, University of South Florida. He is the Director of the USF Health Neuroscience Institute, and Director of the Tampa General Hospital Neuroscience Institute. He is the vice-Chair of the USF Physicians Group Executive Committee, serves on the Board of Directors of the Academic Medical Group (USFTGP, an affiliation of the USF and TGH Physicians) and on the Advisory Board of the Tampa General Rehabilitation Hospital.

Currently Dr. van Loveren is the Director of the USF Skull Base Surgery Team and regularly performs complex brain tumor surgery. He also conducts clinical research with a current \$28 million grant for the study of Hyperbaric Oxygen Therapy for TBI and PTSD in Veterans.

He is a Summa Cum Laude graduate of the University of Cincinnati with a B.S. in Chemistry. He completed training in Neurosurgery with the combined programs of the Mayfield Neurological Institute and the University of Cincinnati Department of Neurosurgery with an enrolled fellowship in the neurophysiology laboratory of Professors Jean Siegfried M.D and Helmut Haas PhD at the University of Zurich, Switzerland. He served as vice-Chair of the U.C. Neurosurgery Department. He also served as Interim-Dean of USF Health, Morsani College of Medicine. Dr. van Loveren is a founding member of the North American Skull Base Society (NASBS), a founding member of the Mayfield Neurosurgical Society, and Past-President of the Southern Neurosurgical Society.

Dr. van Loveren has authored more than one-hundred and fifty peer-reviewed articles, fifty book

Honored Guest Speakers

chapters, and a two-volume Atlas of Operative Microneurosurgery that won the prestigious Association of Medical Illustrators Award. He has presented his work at more than two-hundred and fifty national and international conferences, hosted more than sixty hands-on dissection courses demonstrating his surgical techniques, and organized more than twenty Symposia. He is a member of the American Association of Neurological Surgeons, the Congress of Neurological Surgeons, the Society of Neurological Surgeons, the Academy of Neurological Surgeons, the American Board of Neurological Surgeons, the North American Neurosurgical Society, the Southern Neurosurgical Society, and the Florida Neurosurgical Society.

Curtin Call Radiology Lecturer



Claudia F.E. Kirsch MD, FACR, FASFN

A Fellow in the American College of Radiology (ACR) and American Society of Functional Neuroradiology, and currently completing her PhD Thesis research with neopath.org at the University of Sheffield School of Clinical Dentistry on “Viral mediated disease in the skull base, head and neck”, utilizing high resolution 7T MRI at the BioMedical Engineering and Imaging Institute (BMEII) at Mount Sinai Medical Center and artificial intelligence to enhance understanding of how viruses affect the skull base.

Dr. Kirsch received the American Society of Neuroimaging Oldendorf award for MRI 2COSY of spinal cord trauma, numerous research, and additional awards for Primal Pictures Anatomy.tv and educational interactive 3-D software of head and neck anatomy. She is on the Editorial board of Clinical Imaging and Frontiers, has numerous peer-reviewed publications and is former Vice-Chair of Expert Panel on Neuroimaging for the ACR Appropriateness Use Criteria Committee, and American Society of Neuroradiology Collaborative Committee for Practice Parameters in Computed Tomography of the Head and Neck. She was recently elected to the American Society of Head and Neck Radiology (ASHNR) Executive Committee as the Senior Member at Large and is currently Chair of the ASHNR Research Committee. She is a member of the NASBS Program Committee, Value Based Healthcare Committee and Research Committee.

Her current focus are on skull base and viral mediated pathology in the head and neck including Idiopathic Intracranial Hypertension, Human Papilloma virus (HPV), Epstein Barr Virus (EBV) and SARs-CoV-2 COVID19. Phase III trials, and a Primary Investigator Grant recipient, analyzing Pseudotumor Cerebri. Prior grants and research led to national and international presentations, including a TEDx talk on imaging how cancer “hitchhikes” via perineural invasion through the skull base. As a Neuroradiologist and PhD researcher she believes in fostering positive teaching, collaborative and inspiring environments that lead to improved patient outcomes, innovative teaching and research, and scientific advancement.



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General/CME Information

NASBS 2024 Annual Meeting CME Accreditation Statement

CONTINUING MEDICAL EDUCATION CREDIT INFORMATION

Accreditation

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of American College of Surgeons and North American Skull Base Society. The American College of Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

AMA PRA Category 1 Credits™

The American College of Surgeons designates this live activity for a maximum of **16.0 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



Award of CME credits by ACS is based on compliance of the program with the ACCME accreditation requirements and does not imply endorsement by ACS of the content, the faculty, or the sponsor of the program.

General Information

ANNUAL MEETING OBJECTIVES

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

- Understand and explain most recent recommendations for management of skull base pathology
- Describe recent advances in instrumentation and technology in skull base surgery
- Gain knowledge in challenging skull base pathology from experienced leaders in the field
- Collaborate in multidisciplinary working groups to identify state of the art management for select skull base pathology
- To gain knowledge on optimal technical surgical management of complex skull base pathology through video analysis and expert critique of intraoperative video
- Establish consensus statement on management of complex skull base pathology through review of existing medical literature

WHO SHOULD ATTEND

The NASBS meeting is open to NASBS members and non-members.

TARGET AUDIENCE

- Otolaryngologists, head and neck surgeons, neurosurgeons, reconstructive surgeons, radiation oncologists, radiologists, medical oncologists, physical rehabilitation physicians, ophthalmologists, neurologists, maxillofacial surgeons, maxillofacial prosthodontists and endocrinologists
- Targeted allied health professionals include physical therapists, oncology nurses, oral health specialists, occupational therapists, speech and language pathologists, optometrists and psychologists

DISCLOSURE INFORMATION

Ineligible Company: The ACCME defines an “ineligible company” as any entity producing, marketing, re-selling, or distributing health care goods or services used on or consumed by patients. Providers of clinical services directly to patients are NOT included in this definition.

Financial Relationships: Relationships in which the individual benefits by receiving a salary, royalty, intellectual property rights, consulting fee, honoraria, 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.

Conflict of Interest: Circumstances create a conflict of interest when an individual has an opportunity to affect CME content about products or services of an ineligible company with which he/she has a financial relationship.

The ACCME also requires that ACS manage any reported conflict and eliminate the potential for bias during the educational activity. Any conflicts noted below have been managed to our satisfaction. The disclosure information is intended to identify any commercial relationships and allow learners to form their own judgments. However, if you perceive a bias during the educational activity, please report it on the evaluation.

In accordance with the ACCME Accreditation Criteria, the American College of Surgeons must ensure that anyone in a position to control the content of the educational activity (planners

General Information

and speakers/authors/discussants/moderators) has disclosed all financial relationships with any commercial interest (termed by the ACCME as “ineligible companies”, defined on the previous page) held in the last 24 months. Please note that first authors were required to collect and submit disclosure information on behalf of all other authors/contributors, if applicable. Full listing found on [page 139](#).

MEMBERSHIP BENEFITS

- Active members will receive the official journal of the society, The Journal of Neurological Surgery Part B, a publication that contains peer reviewed original articles, review articles, and position papers. It also presents news and information on an international scope to keep members aware of recent and upcoming events, activities, and evolving developments in skull base surgery. Affiliate, International and Candidate members may subscribe to the journal for \$100 annually.
- Discounted rates to attend the Annual Meeting
- Opportunities to network with colleagues and experts from across North America and globally
- Committees which provide opportunities for camaraderie, involvement and leadership development
- Online access to all members' contact information.

Please visit www.nasbs.org/membership for more information or email membership@nasbs.org.

For information on membership, visit the Membership table near the Exhibit Hall at the NASBS 2024 Annual Meeting.

Meeting Hours

REGISTRATION HOURS

Registration located in Imperial Foyer

Thursday, February 15, 2024	1:00 pm – 6:00 pm
Friday, February 16, 2024	6:30 am – 6:00 pm
Saturday, February 17, 2024	6:30 am – 5:00 pm
Sunday, February 18, 2024	6:30 am – 9:00 am

EXHIBIT HALL/POSTER HOURS

Exhibit Hall located in Marquis Ballroom

Friday, February 16, 2024

Exhibits/Poster	9:00 am to 4:00 pm
Welcome Reception	6:05 pm to 7:35 pm
Breaks, and Lunch will be available in the Exhibit Hall	

Saturday, February 17, 2024

Exhibit Hall Open	9:00 am to 4:00 pm
Breaks, and Lunch will be available in the Exhibit Hall	

SPEAKER READY ROOM

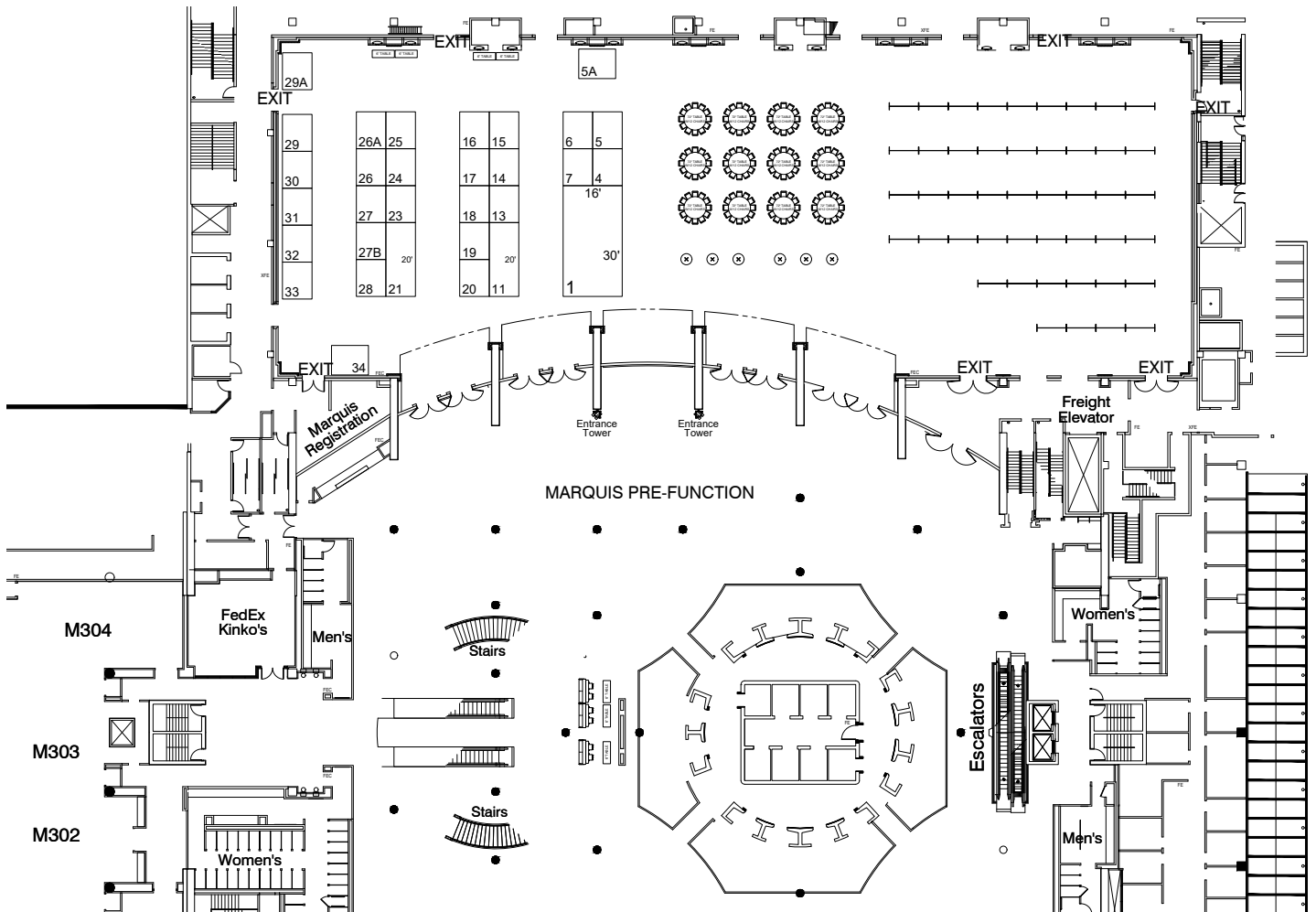
Speaker Ready Room located in M202

Thursday, February 15, 2024	2:00 pm – 6:00 pm
Friday, February 16, 2024	6:30 am – 6:30 pm
Saturday, February 17, 2024	6:30 am – 6:00 pm
Sunday, February 18, 2024	6:30 am – 11:00 am

Past Presidents

1990	Paul J. Donald, MD	2006	Anil Nanda, MD
1991	Laligam N. Sekhar, MD	2007	Guy J. Petrozzelli, MD
1992	Ivo P. Janecka, MD	2008	Franco DeMonte, MD
1993	Peter G. Smith, MD, PhD	2009	Daniel Nuss, MD
1994	Albert L. Rhoton, Jr., MD	2011	Peter Neligan, MD
1995	Hugh Curtin, MD	2012	Dennis Kraus, MD
1996	Derald E. Brackmann, MD	2013	Carl Heilman, MD
1997	Ossam Al Mefty, MD	2014	Ehab Hanna, MD, FACS
1998	Steven A. Newman, MD	2015	Michael Link, MD
1999	John P. Leonetti, MD	2016	Carl Snyderman, MD, MBA
2000	Robert F. Spetzler, MD	2017	Jacques Morcos, MD, FRCS, FAANS
2001	Ian T. Jackson, MD	2018	Ian Witterick, MD
2002	Vinod K. Anand, MD	2019	James Evans, MD, FACS, FAANS
2003	Jon H. Robertson, MD	2020	Ricardo Carrau, MD, MBA
2004	Jatin Shah, MD	2021-22	John G. Golfinos, MD
2005	Patrick J. Gullane, MD	2023	Lee A. Zimmer, MD, PhD

Hotel Exhibit Hall Floor Plan



Pre-Meeting Course

**Registration for this course is separate from the annual meeting*

2024 Pre-Meeting Dissection Course Lecture

WEDNESDAY, FEBRUARY 14 & THURSDAY, FEBRUARY 15, 2024

February 14, 2024

7:30 AM	Introduction/Welcome
8:00 AM	Endonasal Skull Base Anatomy and Flaps/Flap Modifications
8:30 AM	Step by Step Sellar Exposures
8:45 AM	Step by Step Cribiform
9:00 AM	Step by Step Tubercular/Planar
9:15 AM	Step by Step Transclival/Transodontoid
9:30 AM	DISSECTION
	Trans-Sellar Prosection
	Trans-Cribiform Prosection
	Transclival, Odontoidectomy Prosection
	Trans-Tuberculum, Trans-planum Prosection
12:00 PM	Lunch/Managing Endonasal Skull Base Complications
1:00 PM	PPF/ITF 3DAnatomy
1:30 PM	Step by Step PPF/ITF with Middle Fossa/Mekels/Cavernous
1:45 PM	Break
2:00 PM	DISSECTION
	PPF/ITF with Middle Fossa/Mekels/Cavernous Prosection

Pre-Meeting Course (cont.)

2024 Pre-Meeting Dissection Course Lecture

WEDNESDAY, FEBRUARY 14 & THURSDAY, FEBRUARY 15, 2024

February 15, 2024

7:30 AM	Introduction/Welcome
7:45 AM	Open Skull Base 3D Anatomy
8:00 AM	Eyebrow Craniotomy
8:15 AM	Tones/Lat Orbital
8:30 AM	Step by Step Pterional, OZ, Pre-temporal Transcavernous
8:45 AM	Step by Step Middle Fossa with Kawase
9:00 AM	Step by Step Retrosigmoid/Far Lateral
9:15 AM	Break
9:30 AM	DISSECTION
	Eyebrow Prosection
	Lateral Transorbital Prosection
	Pterional, OZ, Pre-temporal Transcavernous Prosection
	Middle Fossa with Kawase Prosection
	Retrosigmoid/Far Lateral Prosection
12:00 PM	Lunch
1:00 PM	Temporal and Posterior Fossa 3D Anatomy
1:30 PM	Step by Step Translabyrinthine/Transcochlear
1:45 PM	DISSECTION
	Translabyrinthine/Transcochlear Prosection

Radio Surgery Pre-Meeting Course

**Registration for this course is separate from the annual meeting*

2024 Radiosurgery Pre-Meeting Course Program

Thursday, February 15, 2024

7:59 AM	Welcome and Course Introduction
8:00 AM	Technical Aspects of Stereotactic Radiosurgery - <i>Dr. Douglas Kondziolka</i>
8:30 AM	Cerebello-pontine Angle/Petroclival - <i>Dr. John Golfinos</i>
8:45 AM	IAC, Cochlea and Hearing - <i>Dr. Michael Link</i>
9:00 AM	Jugular Foramen and Foramen Magnum
9:15 AM	Cavernous Sinus and Petrous Apex - <i>Dr. Joshua Silverman</i>
9:30 AM	Break
10:00 AM	Pituitary Adenomas: Dose, Contour and Endocrine Considerations - <i>Dr. Michael McDermot</i>
10:15 AM	Anterior Skull Base and Perioptic Tumors - <i>Dr. Michael McDermott</i>
10:30 AM	How Much to Resect? How Much for Radiosurgery? - <i>Dr. Roy Daniel</i>
11:00 AM	LINAC Based Radiosurgery - <i>Dr. Brian Collins</i>
11:15 AM	Comparing Target and Dose Distribution Between SRS Machines - <i>Dr. Jack Phan</i>
11:30 AM	Radiosurgery Dose Planning Around the Skull Base
12:00 PM	Working Lunch
1:00 PM	Introduction: Stereotactic Radiosurgery or Radiation Therapy at the Skull Base - <i>Dr. Jay Paul Reddy</i>
1:10 PM	Protons or Photons? - <i>Dr. G. Brandon Gunn</i>
1:30 PM	Stereotactic Radiation Therapy: SBRT, FSRs, SBPT - <i>Dr. Jack Phan</i>
1:45 PM	RT Toxicity and Normal Tissue Complication Probability (NTCP) - <i>Dr. Michael Spiotto</i>
2:05 PM	Target Delineation with MRI/CT & Functional Imaging Co-registration - <i>Dr. Clifton Fuller</i>
2:20 PM	Use of Structures at Risk - <i>Dr. Clifton Fuller</i>
2:35 PM	IGRT and Motion Management - <i>Dr. Jay Paul Reddy</i>
2:45 PM	Radiotherapy Mapping and Boost Strategies for R1/R2 Resections - <i>Dr. Michael Spiotto</i>
3:00 PM	Skull Base Reirradiation - <i>Dr. Jack Phan</i>
3:20 PM	Break
3:30 PM	Dural Metastases from Esthesioneuroblastoma - <i>Dr. Chris Goodman</i>
3:45 PM	Adenoid Cystic Carcinoma with PNS - <i>Dr. G. Brandon Gunn</i>
4:00 PM	T4 Nasopharynx Cancer and SNUC - <i>Dr. Anna Lee</i>

Friday, February 16, 2024

Time	Session	Location
7:30 am - 8:30 am	<p><u>Anterior & Orbit Track: Management of Anterior Fossa Meningiomas</u></p> <p><i>Dr. Samuel Barnett, Dr. Christopher S Graffeo, Dr. Frank P Hsu, Dr. Nathan T Zwagerman, Dr. John David</i></p> <p>This session will explore the surgical options for the management of anterior fossa meningiomas including transcranial and endoscopic endonasal approaches. It is intended for anterior skull base surgeons.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Articulate the transcranial and endoscopic endonasal approaches to anterior fossa meningiomas. » Develop a treatment strategy for individual anterior fossa meningiomas based upon imaging findings. » Recognize the clinical factors involved in surgical decision-making for anterior fossa meningiomas. 	M301
7:30 am - 8:30 am	<p><u>Cavernous Sinus and Middle Fossa Track : Anatomic, Radiographic and Pathologic Considerations</u></p> <p><i>Dr. Maria Peris Celda, Dr. Karuna Shekdar, Dr. Wenya Linda Bi, Dr. Carolina G Benjamin, Dr. Michael E Ivan</i></p> <p>This session is an up-to-date review of the anatomy, imaging, genetics, and biology as well as the natural history of pathology affecting the cavernous sinus and middle fossa. The presentations are relevant to all practitioners treating diseases affecting these anatomical areas.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Recognize novel anatomical concepts pertaining to the cavernous sinus and middle fossa. » Interpret advanced imaging findings relevant to this pathology. » Integrate the pathology, biology, and genetics of diseases affecting the cavernous sinus and middle fossa. » Apply findings related to the natural history in the decision making relevant to this pathology 	M304

7:30 am - 8:30 am

Jugular Foramen/Infratemporal-parapharyngeal H&N-craniocervical Junction Track: Paragangliomas: Syndromic and Sporadic, Diagnosis, Genetic Testing, and Management

M101

Dr. Melissa Chen, Dr. Camilo Jimenez, Dr. Ian Witterick, Dr. Joshua Silverman, Dr. Camilo Jimenez

This session will provide a comprehensive review of state-of-the-art strategies for the management of paraganglioma. It will be of interest to all those involved in the interdisciplinary treatment of paraganglioma.

At the conclusion of this session, attendees will be able to:

- » Integrate multimodality approaches for the management of paraganglioma.
- » Identify novel therapeutic targets in the treatment of paraganglioma.
- » Recognize the role of interdisciplinary management of paraganglioma.

7:30 am - 8:30 am

Lateral Skull Base / Neurotology Track: Unusual Temporal Bone Lesions & Management Strategies

M303

Moderators: Dr. Emily Kay-Rives, Dr. J. Thomas Roland, Jr.

Panelist: Dr. Kestutis Paul Boyev, Dr. Benjamin Cooper, Dr. John Golfinos, Dr. Sean McMenomey

This one hour session will be a case based program where the moderator will present four cases of unusual lesions of the lateral skull base including a very large destructive cholesteatoma, a malignant jugular paraganglioma, a chondrosarcoma, a large papillary endolymphatic sac tumor and a facial schwannoma. The panel, consisting of a neurosurgeon, a neurotologist and a radiation oncologist will field questions about the management of these lesions including surgical approaches and radiation considerations.

At the conclusion of this session, attendees will be able to:

- » Understand the surgical approaches to unusual skull base lesions.
- » Describe the indications for radiation therapy for unusual skull base lesions.
- » Identify the cranial nerves at risk with unusual skull base lesions management.

7:30 am - 8:30 am

Sellar - Suprasellar Track: Fred Gentili Pituitary Education Day Part 1

Imperial Ballroom

Dr. Hamid Borghei-Razavi, Dr. Arjun Parasher, Dr. Karam Asmaro, Dr. Darshan Trivedi, Dr. Lea M Alhilali, Dr. Howard Krauss

This session will cover various crucial topics, including a tribute to Dr. Fred Gentili for his contributions to pituitary surgery, discussions on anatomical nuances of modern pituitary surgery, updates in pathology classification of pituitary tumors, advances in imaging modalities and surgical outcome predictors for pituitary tumors, comprehensive ophthalmologic assessment for pituitary tumors beyond hemitemporal hemianopia, and strategies for growing a pituitary surgery practice and increasing market share. This session is a must-attend for neurosurgeons, neurologists, ophthalmologists, and ENTs seeking to enhance their knowledge and expertise in the management of pituitary-related disorders.

At the conclusion of this session, attendees will be able to:

- » Recognize the anatomical nuances relevant to modern pituitary surgery.
- » Classify pituitary tumors based on updated pathology classifications presented during the session.
- » Apply advanced imaging modalities and surgical outcome predictors discussed in the session to enhance preoperative assessment and decision-making for pituitary tumor management.

7:30 am - 8:30 am

Proffered Papers 1: Vascular 1

M102

S001: BENIGN NATURAL PROGRESSION OF SMALL CAVERNOUS CAROTID ANEURYSMS SUGGESTS LIMITED CLINICAL UTILITY OF SERIAL LONGITUDINAL FOLLOW-UP

- Rohan Jha¹; Maryann Zhao¹; Jack Ghannam¹; Joshua Chalif, MD, PhD²; [Marcelle Altshuler, MD²](#); Rose Du, MD, PhD²; ¹Harvard Medical School, Boston, MA 02115, USA; ²Department of Neurosurgery, Brigham and Women's Hospital, Boston, MA 02115, USA

S002: INCIDENCE AND LONG-TERM OUTCOMES OF MACROVASCULAR DECOMPRESSION FOR HEMIFACIAL SPASM

- [Varadaraya Satyanarayan Shenoy, MD](#); Caroline Hadley, MD; Lalgam N Sekhar, MD, FACS, FAANS; Harborview Medical Center, Univ. of Washington

S003: INTRAOPERATIVE CAROTID ARTERY INJURY DURING ENDOSCOPIC TRANSSPHEOIDAL SURGERY FOR PITUITARY ADENOMAS

- [Rajeev Sen, MD](#); Spencer Raub, BA; Fatima EL-Ghazali, MD; R. Michael Meyer, MD; Basavaraj Ghodke, MD; Louis J Kim, MD, MBA; Samuel Emerson, MD, PhD; Jacob Ruzevick, MD; Manuel J Ferreira, MD, PhD; Michael Levitt, MD; Melanie Walker, MD; Stephanie Chen; University of Washington

S004: INTERNAL JUGULAR VEIN COMPRESSION COLLAR FOR SYMPTOMATIC RELIEF OF VENOUS PULSATILE TINNITUS

- [Benjamin S Succop](#); Nicholas J Thompson, MD; Matthew M Dedmon, MD, PhD; Aaron Gelinne; Anne Selleck, MD; Samuel Reed, MD; Brian D Sindelar, MAJ, MD; University of North Carolina at Chapel Hill

S005: MIXED REALITY IN THE SURGICAL MANAGEMENT OF BRAIN ARTERIOVENOUS MALFORMATIONS

- [Edinson Najera](#), MD; Gavin Lockard, MS; Miguel Saez-Alegre, MD, PhD; Keaton Piper, MD; Walter C Jean, MD; Department of Neurosurgery, Lehigh Valley Health Network,

S006: EARLY VERSUS LATE CLIPPING OF PARTIALLY COILED RUPTURED INTRACRANIAL ANEURYSMS WITH MINIMALLY INVASIVE APPROACHES

- [Ehsan Dowlati](#)¹; Jorge Roa, MD²; Daniel R Felbaum, MD³; Jeffrey C Mai, MD, PhD³; Rocco A Armonda, MD³; Samir Sur, MD³; ¹University of Michigan; ²Loma Linda University; ³MedStar Georgetown University Hospital

S007: INFRATENTORIAL HEMANGIOBLASTOMA IN PREGNANCY: A SYSTEMATIC REVIEW AND CASE REPORT

- [Amna Hussein](#), MD; Giovanni Barbagli, MD; Osama Aglan, MD; Esteban Quiceno, MD; Peter Nakaji, MD; Banner University Medical Center Phoenix University of Arizona, College of Medicine

S008: MINIMALLY INVASIVE KEYHOLE CRANIOTOMIES FOR MICROSURGICAL CLIPPING OF CEREBRAL ANEURYSMS: A COMPARATIVE META-ANALYSIS OF THE MINI-PTERIONAL AND SUPRAORBITAL KEYHOLE APPROACHES

- [Nolan J Brown](#)¹; Joelle N Hartke, MD²; Mark Pacult, MD²; Julian Gendreau, MD³; Joshua S Catapano, MD²; Michael T Lawton, MD²; ¹University of California Irvine; ²Barrow Neurological Institute; ³Johns Hopkins

S009: LONG-TERM OUTCOMES OF CEREBRAL BYPASSES FOR SKULL BASE TUMORS

- [Varadaraya Satyanarayan Shenoy](#), MD; Laligam N Sekhar, MD, FACS, FAANS; Harborview Medical Center, Univ. of Washington

S010: RADIOSURGICAL OUTCOME OF INTRACRANIAL AVMS PLANNED ON MRI ALONE

- [Kanwaljeet Garg](#); Manmohan Singh; Devasheesh Kamra; Shweta Kedia; Dattaraj Swarkar; Deepak Agrawal; Rajinder Kumar; Shashank S Kale; AIIMS

S011: INDICATIONS, OPERATIVE TECHNIQUES, AND OUTCOMES OF OCCIPITAL ARTERY-VERTEBRAL ARTERY BYPASS: A SYSTEMATIC REVIEW AND INSTITUTIONAL SERIES

- [Paolo Palmisciano](#)¹; Seth Street, BS²; Samer Hoz, MD³; Ondrej Choutka, MD⁴; Norberto Andaluz, MD²; Mario Zuccarello, MD²; ¹University of California, Davis; ²Department of Neurosurgery, University of Cincinnati College of Medicine, Cincinnati, OH, USA; ³University of Pittsburgh Medical Center; ⁴Saint Alphonsus

8:35 am - 9:35 am	<p><u>Anterior & Orbit Track: Literature Review: What's New in Olfactory Neuroblastoma?</u></p> <p><i>Dr. Edward Kuan, Dr. Garret Choby, Dr. Mathew Geltzeiler, Dr. Matt Lechner, Dr. G. Brandon Gunn</i></p> <p>This evidence-based session will review recent literature updates on esthesioneuroblastoma, providing attendees with an overview of new developments and state-of-the-art diagnostic and management strategies. This session is geared towards rhinologists, head and neck oncologists, neurosurgeons, radiation and medical oncologists, pathologists, radiologists, and trainees.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Understand recent literature updates on olfactory neuroblastoma diagnosis and management. » Summarize key principles in modern understanding of olfactory neuroblastoma and how they differ from traditional understanding. » Discuss controversies surrounding the olfactory neuroblastoma literature. 	M301
8:35 am - 9:35 am	<p><u>Cavernous Sinus and Middle Fossa Track: Evolution of Approaches to the Cavernous Sinus and Middle Fossa: Standing on the Shoulders of Giants</u></p> <p><i>Dr. Harry Van Loveren, Dr. Badih Adada, Dr. Francesco Doglietto, Dr. Paul Gardner, Dr. Doo-Sik Kong, Dr. Erin L. McKean</i></p> <p>This session aims to discuss the difficulties in management and rehabilitation for patients with NF2. Panelists will discuss illustrative cases and their philosophy around decision making for these challenging patients.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Prioritize goals of care for patients with NF2. » Select an appropriate surgical approach to address the patient's primary symptom or sign. » Identify options for hearing rehabilitation for patients with NF2 	M304
8:35 am - 9:35 am	<p><u>Jugular Foramen/Infratemporal-parapharyngeal H&N-craniocervical Junction Track: Management of Paraganglioma: Panel with Cases</u></p> <p><i>Dr. Sarah Rohde, Dr. Harishanker Jeyarajan</i></p> <p>This session aims to discuss the difficulties in the management of paraganglioma. Panelists will discuss illustrative cases and their philosophy around decision-making for these challenging tumors.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Prioritize goals of care for patients with paraganglioma. » Select an appropriate treatment approach to address the patient's primary symptom or sign. » Compare different management philosophies regarding paraganglioma. 	M101

8:35 am - 9:35 am **Lateral Skull Base / Neurotology Track: State of the Art Facial Nerve Reanimation** *M303*

Dr. Michael Baddour, Dr. Andrew Huang, Dr. Irene Kim, Dr. Priyesh Patel, Dr. Danielle Eytan

Expert lectures from facial plastic surgeons on the timing of an ideal facial reconstruction option for patients with facial nerve weakness from skull base pathology or treatment.

At the conclusion of this session, attendees will be able to:

- » Learn when to refer for facial therapy and reanimation with facial palsy after skull base surgery.
- » Understand facial synkinesis management options.
- » Counsel patients about surgical reanimation timing.

8:35 am - 9:35 am **Sellar - Suprasellar Track: Fred Gentili Pituitary Education Day Part 2: Functional Pituitary Tumors: Management and Challenges** *Imperial Ballroom*

Dr. Marla Elaine Sevilla Alsina, Dr. Ali Jalali, Dr. Michael McDermott, Dr. Divya Yogi-Morren, Dr. Andrew S. Little, Dr. Gabriel Zada

The session on `Functional Pituitary Tumors: Management and Challenges` will feature leading experts in the field of neurosurgery discussing updates on the diagnosis and management of Cushing disease, acromegaly, MRI-negative ACTH-secreting pituitary tumors, and prolactinomas. Additionally, the role of stereotactic radiosurgery (SRS) and pharmacological therapy in managing these conditions will be explored, along with an update on current clinical trials in pituitary tumors. This session is designed for neurosurgeons, endocrinologists, ENTs and healthcare professionals interested in the latest advancements and challenges in the management of functional pituitary tumors.

At the conclusion of this session, attendees will be able to:

- » Diagnose and distinguish Cushing`s disease and acromegaly accurately.
- » Apply comprehensive strategies for the diagnosis and management of MRI-negative ACTH-secreting pituitary tumors, addressing challenges in identifying and treating these cases effectively.
- » Evaluate and prioritize expanding surgical indications for prolactinomas, considering the potential benefits and risks to optimize patient outcomes.

8:35 am - 9:35 am

Proffered Papers 2: Basic/Translational Science

M102

S012: EXPLORING THE INFLUENCE OF OLFACTORY EPITHELIUM HISTOLOGY ON AGE-RELATED OLFACTORY RECOVERY AFTER ENDOSCOPIC ENDONASAL ANTERIOR SKULL BASE SURGERY - [Jayoung Oh, MD¹](#); Jin-A Park, MD¹; Tae-Bin Won, MD, PhD¹; Jeong-Whun Kim, MD, PhD¹; Chae-Seo Rhee, MD, PhD¹; Kihwan Hwang, MD, PhD²; Sung-Woo Cho, MD, PhD²; ¹Department of Otorhinolaryngology-Head and Neck Surgery, Seoul National University College of Medicine, Seoul National University Bundang Hospital; ²Department of Neurosurgery, Seoul National University College of Medicine, Seoul National University Bundang Hospital

S013: MULTI-OMIC ANALYSIS OF SPORADIC VESTIBULAR SCHWANNOMA REVEALS A NERVE INJURY-LIKE STATE AND NOVEL MOLECULAR TARGETS - [Bhuvic Patel, MD¹](#); Thomas F Barrett, MD¹; Saad M Khan, PhD²; Riley Mullens¹; Aldrin K Yim, PhD¹; Sangami Pugazenthi¹; Tatenda Mahlokozer, MD, PhD¹; Gregory J Zipfel, MD¹; Jacques A Herzog, MD¹; Michael R Chicoine, MD³; Cameron C Wick, MD¹; Nedim Durakovic, MD¹; Joshua W Osbun, MD¹; Matthew Shew, MD¹; Alex D Sweeney, MD⁴; Akash J Patel, MD⁴; Craig A Buchman, MD¹; Allegra A Petti, PhD²; Sidharth V Puram, MD, PhD¹; Albert H Kim, MD, PhD¹; ¹Washington University in St. Louis School of Medicine, The Brain Tumor Center, Siteman Cancer Center; ²Massachusetts General Hospital and Harvard Medical School; ³University of Missouri School of Medicine, Columbia; ⁴Baylor College of Medicine

S014: MYD88-TLR4-DEPENDENT CHOROID PLEXUS ACTIVATION PRECEDES SECONDARY BRAIN INJURY AFTER INTRACRANIAL HAEMORRHAGE - [Kevin Akeret, MD, PhD¹](#); Raphael M Buzzi, MD, PhD²; Bart R Thomson, MSc¹; Nina Schwendinger, MD¹; Jan Klohs, PhD³; Nadja Schulthess²; Livio Baselgia, MSc²; Kerstin Hansen²; Luca Regli, MD¹; Florence Vallelian, MD²; Dominik Schaer, MD²; Michael Hugelshofer, MD¹; ¹Department of Neurosurgery, Clinical Neuroscience Center, Universitätsspital and University of Zurich, Zurich; ²Division of Internal Medicine, Universitätsspital and University of Zurich, Zurich; ³Institute for Biomedical Engineering, University of Zurich and ETH Zurich, Zurich

S015: CLINICAL CHARACTERISTICS AND GENETIC EVOLUTION OF SKULL BASE CHONDROSARCOMAS - [Jessica C Eaton](#); Carolina A Parada; Oscar Parrish; Mallory Tucker; Zirun Zhao; Jennifer Delegard; Eric Lassiter; Evgeniya Tyrtova; Samuel Emerson; Jacob Ruzevick; Lee Cranmer; Manuel Ferreira Jr.; University of Washington

S016: NEUTROPHILS: NOVEL CONTRIBUTORS TO ESTROGEN-DEPENDENT INTRACRANIAL ANEURYSM RUPTURE VIA NEUTROPHIL EXTRACELLULAR TRAPS - [Brandon Lucke-Wold](#); University of Florida

S017: COLD ATMOSPHERIC PLASMA EXPOSURE DECREASES CHORDOMA SURVIVAL IN VITRO - [Sophie F Peeters](#); Amber Armellini; Wi Jin Kim; Blake Haist; Zhitong Chen; Richard Obenchain; Weihong Ge; Aparna Bhaduri; Richard Wirz; Anthony C Wang; UCLA

S018: ADROPIN PROTECTS AGAINST SUBARACHNOID HEMORRHAGE-ASSOCIATED BRAIN INJURY THROUGH ACTIVATION OF ENDOTHELIAL NITRIC OXIDE SYNTHASE - [Brandon Lucke-Wold](#); University of Florida

S019: INTRAOPERATIVE CULTURES IN ENDOSCOPIC ENDONASAL NEUROSURGICAL CASES SHOW PERSISTENT SURGICAL SITE COLONIZATION WITH PATHOGENIC BACTERIA AFTER PREPARATION - [Nataniel J Mandelberg, MD, PhD¹](#); Michael S Phillips, MD²; Seth M Lieberman, MD³; John G Golfinos, MD¹; Donato R Pacione, MD¹; ¹New York University Grossman School of Medicine Department of Neurosurgery; ²New York University Grossman School of Medicine Department of Medicine, Division of Infectious Diseases and Immunology; ³New York University Grossman School of Medicine Department of Otolaryngology

S020: MENINGIOMA-INDUCED HYPEROSTOSIS IS ASSOCIATED WITH TRAF7 GAIN-OF-FUNCTION MISSENSE MUTATION IN PRIMARY PATIENT-DERIVED MENINGIOMA CELLS - Charlotte D Eaton; [Ezequiel Goldschmidt](#); Zhenhong Chen; Jacob S Young; David R Raleigh; UCSF

S021: ESTABLISHMENT OF A PATIENT-DERIVED ORGANOID CULTURE MODEL OF OLFACTORY NEUROBLASTOMA - [John B Finlay, MPhil](#); Ralph Abi Hachem, MD; David Jang, MD; Bradley J Goldstein, MD, PhD; Duke University School of Medicine

S022: DNA METHYLATION SUBGROUP AND CNV PREDICTS RESPONSE TO RADIOTHERAPY - [Andrew Ajisebutu](#); Jeffery Zucatto; Vikas Patil; Gelareh Zadeh; University of Toronto

S023: MULTIMODAL ANATOMY OF THE HUMAN FORNICEAL COMMISSURE - [Kevin Akeret, MD, PhD¹](#); Stephanie J Forkel, PhD²; Raphael M Buzzi, MD, PhD³; Flavio Vasella, MD¹; Irmgard Amrein, PhD⁴; Giovanni Colacicco, MD⁴; Luca Regli, MD¹; Carlo Serra, MD¹; Niklaus Kräyenbühl, MD⁵; ¹Department of Neurosurgery, University Hospital Zurich; ²Brain Connectivity and Behaviour Laboratory, Sorbonne Universities, Paris, France; ³Division of Internal Medicine, University Hospital Zurich; ⁴Institute of Anatomy, University of Zurich, Zurich; ⁵Division of Pediatric Neurosurgery, University Children's Hospital, Zurich

9:35 am - 10:05 am **Break**

Marquis Ballroom

10:05 am - 12:20 pm **General Session: Publication Presentations, Curtin Call Radiology Lecture, Honored Guest Speaker, Skull Base Jeopardy**

Imperial Ballroom

12:20 pm - 1:20 pm **Lunch in Exhibit Hall**

Marquis Ballroom

12:20 pm - 1:20 pm	Business Meeting (NASBS Members Only)	Imperial Ballroom
1:20 pm - 2:20 pm	<p><u>Anterior & Orbit Track: Protons vs. Photons for Anterior Skull Base Pathology</u></p> <p><i>Dr. Mark W. McDonald, Dr. David Ira Rosenthal, Dr. Brandi R Page, Dr. Eric Lehrer, Dr. Jack Phan</i></p> <p>This session will detail the use of proton vs photon radiation therapy for Anterior Skull Base Pathologies. Illustrative cases will be discussed to help attendees which modality is more appropriate when radiation therapy is needed.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Identify the differences between proton and photon therapy. » Recognize when proton therapy may be an appropriate treatment. » Categorize the risks and benefits of both modalities of radiation treatment. 	M301
1:20 pm - 2:20 pm	<p><u>Cavernous Sinus and Middle Fossa Track: State of the Art Management of Tumors of the Cavernous Sinus and Middle Fossa</u></p> <p><i>Dr. Constantinos (Costas) George Hadjipanayis, Dr. Jacques J. Morcos, Dr. William Couldwell, Dr. Ajay Niranjana, Dr. Stephen T. Magill, Dr. Carl Snyderman, Dr. Michihiro Kohno</i></p> <p>This session aims to provide a literature update on topics relevant to middle fossa and cavernous sinus pathology. Practitioners of all specialties treating such diseases would benefit.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Recognize the recent advancements in the treatment of a variety of middle fossa and cavernous sinus pathology » Integrate the updated data into management strategies for middle fossa and cavernous sinus pathology. 	M304
1:20 pm - 2:20 pm	<p><u>Jugular Foramen/Infratemporal-parapharyngeal H&N-cranio cervical Junction Track: Jugular Foramen Tumors Beyond Paragangliomas: Surgical Nuances</u></p> <p><i>Dr. Mai-Lan Ho, Dr. Brandon Isaacson, Dr. Ivan El-Sayed, Dr. Adam L Holtzman</i></p> <p>Review the different treatment options and approaches for tumors, other than paragangliomas, involving the jugular foramen. Case presentation with video presentations and focus on surgical techniques. Discussion of cranial nerve preservation and role of carotid artery stents.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Evaluate the different surgical approaches to the jugular foramen. » Evaluate the radiotherapy options for the treatment of jugular foramen tumors. » Develop a multimodality algorithm for management of jugular foramen tumors. 	M101

1:20 pm - 2:20 pm

Lateral Skull Base / Neurotology Track: Radiology of the Lateral Skull Base

M303

Dr. Mari Hagiwara, Dr. Elcin Zan, Dr. A. Samy Youssef, Dr. Jennifer Becker

This session will highlight the radiology of the lateral skull base with presentations by experts with an emphasis on new concepts and techniques. The discussion will emphasize how physicians might use this information for patient management and decision-making.

At the conclusion of this session, attendees will be able to:

- » Understand new imaging concepts for lateral skull base pathology.
- » Learn how radiologic imaging contributes to clinical decision-making with lateral skull base lesions.
- » Determine which radiologic test to order for specific lesions of the lateral skull base.

1:20 pm - 2:20 pm

Sellar - Suprasellar Track: Fred Gentili Pituitary Education Day Part 3: Surgical Management of Pituitary Tumors

Imperial Ballroom

Dr. Douglas A Hardesty, Dr. Raj Shrivastava, Dr. Ossama Al-Mefty, Dr. Garni Barkhoudarian, Dr. Juan C. Fernandez-Miranda, Dr. John Jane

The session on `Surgical Management of Pituitary Tumors` will showcase cutting-edge techniques and approaches employed by leading experts in the field of neurosurgery. Topics covered will include the utilization of new technologies in pituitary surgery, endoscopic approaches for giant pituitary adenomas, indications and nuances of the transcranial approach for pituitary tumors, gland preservation strategies, and the intricacies of cavernous sinus middle wall resection in functional pituitary tumors. Additionally, the session will delve into the surgical management of MRI-negative ACTH-secreting pituitary tumors, providing valuable insights for neurosurgeons and healthcare professionals seeking to stay at the forefront of pituitary tumor surgical techniques and advancements.

At the conclusion of this session, attendees will be able to:

- » Identify and evaluate the application of new technologies in pituitary surgery, understanding their potential benefits in improving surgical outcomes and patient care.
- » Analyze and differentiate the endoscopic and transcranial approaches for giant pituitary adenomas, considering their indications and nuances to optimize surgical strategies.
- » Recognize and prioritize gland preservation techniques during pituitary adenoma surgery, aiming to enhance hormonal function and patient quality of life postoperatively.

1:20 pm - 2:20 pm

Proffered Papers 3: Anterior Skull Base/Middle Fossa Video Session

M102

V001: ENDOSCOPIC TRANSPHENOIDAL ACCESS FOR NEUROSURGEONS - [Racheal Peterson, MD](#); Gabriel Zada, MD; Department of Neurosurgery, Keck School of Medicine, University of Southern California

V002: MINIPTERIONAL APPROACH FOR THE RESECTION OF A CLINOIDAL MENINGIOMA - [Ehsan Dowlati](#)¹; Gnel Pivazyan, MD²; Jorge Roa, MD³; Samir Sur, MD²; ¹University of Michigan; ²MedStar Georgetown University Hospital; ³Loma Linda University

V003: EXOSCOPIC KEYHOLE SURPAORBITAL APPROACH FOR RESECTION OF A PRE-INFUNDIBULAR CRANIOPHARYNGIOMA - [Erion J de Andrade, MD](#); Arpan Patel, MD; Pablo F Recinos; Cleveland Clinic

V004: MINIMALLY INVASIVE LATERAL ORBITOTOMY FOR RESECTION OF TRIGEMINAL SCHWANNOMA - [Bhuvic Patel, MD](#); Anna K Terrarosa, MD²; Susan Stefko, MD²; Georgios A Zenonos, MD¹; ¹University of Pittsburgh Medical Center, Department of Neurological Surgery; ²University of Pittsburgh Medical Center, Department of Ophthalmology

V005: ENDOSCOPIC ENDONASAL TRANS-SEPTAL APPROACH FOR REMOVAL OF AN ORBITAL APEX CAVERNOUS VENOUS MALFORMATION - [Oded Sagiv, MD](#)¹; Lev Bedrin, MD²; Guy J Ben Simon, MD²; Arkadi Yakirevitch, MD²; ¹The University of Texas MD Anderson Cancer Center, Houston, TX, USA and the Sheba Medical Center, Israel; ²The Sheba Medical Center, Israel

V006: SELLAR DERMOID IN A 6-YEAR-OLD BOY: NUANCES OF NEUROENDOSCOPIC EXCISION - [Alhusain Nagm, MD, MSc, PhD](#); Department of Neurosurgery, Al-Azhar University School of Medicine, Cairo, Egypt.

V007: TRANSCAVERNOUS RESECTION OF ADENOMA EMBEDDED IN MEDIAL WALL IN MRI-NEGATIVE CUSHING DISEASE. - [Alix Bex, MD](#); Vera Vigo, MD, PhD; Enrico Gambatesa, MD; Christine Lee, MD; Zara Patel, MD; Laurence Katznelson, MD; Nancy Fischbein, MD; Juan Fernandez-Miranda, MD; Stanford University

V008: SINO-ORBITAL OSTEOMA: COMBINED ENDOSCOPIC AND OPEN CRANIOFACIAL RESECTION - [Lacy Brame, DO](#)¹; Aniruddha Parikh, MD²; Jeremy Tan, MD³; Kibwei McKinney, MD²; ¹Oklahoma State University Center for Health Sciences; ²University of Oklahoma Health Sciences Center; ³Dean McGee Eye Institute

V009: CRANIO-ORBITAL PRETEMPORAL SKULL BASE APPROACH WITH ANTERIOR CLINOIDECTOMY FOR REMOVAL OF LARGE LEFT CLINOID MENINGIOMA: "UNWRAPPING" ENCIRCLED INTERNAL CAROTID ARTERY AND DECOMPRESSING OPTIC NERVE - [Nebojsa Lasica, MD](#)¹; [Kara A Parikh, MD](#)²; Kenan I Arnautovic, MD²; ¹Clinic of Neurosurgery, University Clinical Center of Vojvodina, Novi Sad, Serbia; ²University of Tennessee/Semmes Murphey

V010: INTRADURAL PITUITARY HEMITRANSPOSITION:

TECHNICAL NOTE AND CASE SERIES ILLUSTRATION - Joao Paulo Almeida, MD, PhD¹; Guilherme Finger, MD, MSc²; Matthieu D Weber³; Mark A Damante, MD²; Kyle C Wu, MD²; Patrick Walz, MD⁴; Jeffrey R Leonard, MD²; Ricardo L Carrau, MD, FACS⁴; Daniel M Prevedello, MD, FACS²; ¹Department of Neurosurgery, Mayo Clinic Florida, Jacksonville, FL, USA; ²Department of Neurosurgery, The Ohio State University Wexner Medical Center, Columbus, OH, USA; ³The Ohio State University College of Medicine, The Ohio State University, Columbus, OH, USA; ⁴Department of Otolaryngology and Skull Base Surgery, The Ohio State University Wexner Medical Center, OH, USA

V011: SUPERIOR ETHMOIDAL APPROACH TO AN OLFACTORY GROOVE MENINGIOMA: A NOVEL APPROACH THAT MAXIMIZES PRESERVATION OF NASAL ANATOMY - A. Yohan Alexander, BA¹

Edoardo Agosti, MD²; Carlos D Pinheiro-Neto, MD, PHD³; Maria Peris-Celda, MD, PHD³; ¹Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA. ; University of Minnesota, Medical School, Minneapolis, Minnesota, USA; ²Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA.4. Department of Otolaryngology - Head and Neck Surgery, Mayo Clinic, Rochester Minnesota, USA ; Division of Neurosurgery, Department of Medical and Surgical Specialties, Radiological Sciences and Public Health, University of Brescia, Brescia, Italy; ³Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA. ; Department of Otolaryngology - Head and Neck Surgery, Mayo Clinic, Rochester Minnesota, USA

V012: ENDOSCOPIC TRANSORBITAL APPROACH FOR LEFT SPHENO-ORBITAL MENINGIOMA RESECTION AND OPTIC CANAL DECOMPRESSION - Tristan Brunette-Clément, MD¹

Charles Gervais, BScHons²; Stephan Tobalem, MD, FRCSC¹; Evan Kalin, MD, FRCSC¹; Pascal Lavergne, MD, FRCSC¹; ¹Université de Montréal, Department of Surgery; ²McGill University, Faculty of Medicine

2:25 pm - 3:25 pm

Anterior & Orbit Track: My Most Challenging Ventral Skull Base Reconstruction Cases

M301

Dr. Kibwei A McKinney, Dr. Raj Sindwani, Dr. Adam Zanation, Dr. Brian David Thorp, Dr. Mindy Rabinowitz, Dr. Pete Batra

This session showcases illustrative case examples of highly challenging skull base reconstruction cases by experienced surgical teams. Rhinologists, head and neck oncologists, neurosurgeons, and trainees will benefit from this session.

At the conclusion of this session, attendees will be able to:

- » Recognize factors that make a specific skull base defect particularly challenging to reconstruct.
- » Describe strategies and principles for effective skull base reconstruction when fewer options are available.
- » Compare challenging factors across different defect sites and based on patient factors.

2:25 pm - 3:25 pm **Cavernous Sinus and Middle Fossa Track: Video Session: Surgical Techniques for the Cavernous Sinus and Middle Fossa** **M304**

Dr. Garret Choby, Dr. Kris S. Moe, Dr. Daniel Prevedello, Dr. Vijay Agarwal, Dr. Giovanni Danesi, Dr. Jia Wang, Dr. Garni Barkhoudarian

This session features narrated surgical videos of procedures treating middle fossa and cavernous sinus pathology, and is appropriate for all specialists treating these diseases. The audience will vote for the best videos, the authors of which will be presented with an award!

At the conclusion of this session, attendees will be able to:

- » Identify surgical pearls and pitfalls in the treatment of cavernous sinus and middle fossa pathology.
- » Compare different treatment surgical techniques in the treatment of cavernous sinus and middle fossa pathology.

2:25 pm - 3:25 pm **Jugular Foramen/Infratemporal-parapharyngeal H&N-craniocervical Junction Track: Robots vs Endoscopes vs Open: Approach Strategies to the Parapharyngeal Space and Infratemporal Fossa** **M101**

Dr. Daniel Nuss, Dr. Christopher Rassekh, Dr. Ricardo Carrau, Dr. Meghan T Turner, Dr. Benedict J Panizza

This session will feature cases involving tumors of the infratemporal fossa. Management strategies will be discussed, with an emphasis on the controversies surrounding the surgical approach.

At the conclusion of this session, attendees will be able to:

- » Identify and evaluate treatment options for patients' tumors of the infratemporal fossa.
- » Understand the factors which inform choice of surgical approach.
- » Understand vascular control strategies including IMA ligation, carotid artery access and control.

2:25 pm - 3:25 pm **Lateral Skull Base / Neurotology Track: Optimizing Stereotactic Radiosurgery Outcomes In Lateral Skull Base Lesions** **M303**

Dr. Brian T Collins, Dr. Joshua Silverman, Dr. Christopher S. Graffeo, Dr. Oystein Tveiten, Dr. Lawrence Berk, Dr. Jack Phan

This session will consist of five presentations, each discussing the indications for, radiation physics, and the potential complications of different radiation paradigms for skull base lesion management.

At the conclusion of this session, attendees will be able to:

- » Counsel and inform patients about radiation therapy options for skull base lesions.
- » Understand the difference between the various radiation options.
- » Understand the complications of radiation therapy.

2:25 pm - 3:25 pm

**Sellar - Suprasellar Track: Fred Gentili Pituitary Education Day
Part 4: Surgical Complications and Post-op Management in
Pituitary Surgery**

Imperial
Ballroom

*Dr. Jean Anderson Eloy, Dr. Varun Kshetty, Dr. Jeremy N
Ciporen, Dr. Luma Ghalib, Dr. Michael Karsy*

The session on `Surgical Complications and Post-op Management in Pituitary Surgery` will cover critical aspects of pituitary surgery. Topics discussed will include reconstruction techniques in endonasal endoscopic pituitary surgery, updates on the management of pituitary apoplexy, intra-operative management of carotid injury during pituitary surgery, electrolyte management after pituitary surgery, the implementation of enhanced recovery and accelerated discharge protocols, and the emerging application of artificial intelligence in pituitary surgery. This session is designed for neurosurgeons and healthcare professionals seeking to enhance their knowledge on surgical complications and post-operative care for patients undergoing pituitary surgery.

At the conclusion of this session, attendees will be able to:

- » Implement effective reconstruction techniques in endonasal endoscopic pituitary surgery to enhance surgical outcomes and minimize postoperative complications.
- » Apply updated strategies for the management of pituitary apoplexy, focusing on prompt diagnosis and tailored treatment approaches to optimize patient recovery.
- » Demonstrate proficiency in intra-operative management of carotid injury during pituitary surgery, recognizing the importance of immediate interventions to prevent potential complications.

2:25 pm - 3:25 pm

Proffered Papers 4: Surgical Approaches and Technology 1

M102

S024: CHALLENGING A PARADIGM: POTENTIAL BENEFITS OF THE ENDOSCOPIC ENDONASAL APPROACH FOR ATLANTOAXIAL FIXATION WITH A CALL FOR INDUSTRY PARTNERS TO PIONEER SPECIALIZED TOOLS- PILOT DATA FROM A CADAVERIC STUDY - [Diego D Luy, MD¹](#); Gianna Ruiz, BS¹; Joseph Frazzetta, MD¹; Robert Hand, MS²; Michael Wesolowski, MPH¹; Muturi Muriuki, PhD¹; Robert Havey, MS¹; Leonard Voronov, MD³; Avinash Patwardhan, PhD¹; Anand V Germanwala, MD¹; ¹Loyola University Medical Center; ²Loyola University Chicago Stritch School of Medicine; ³Edward Hines, Jr. VA Hospital

S025: SAFE LANDING IN THE PINEAL REGION: KEY STEPS IN SEMI-SITTING POSITIONS - [Alhusain Nagm, MD, MSc, PhD](#); Department of Neurosurgery University of Maryland School of Medicine

S026: CONTRALATERAL NASOFRONTAL TREPHINATION: A NOVEL CORRIDOR FOR A "DUAL PORT" APPROACH TO THE PETROUS APEX - Moataz D Abouammo, MD, MSc¹; Maithrea S Narayanan, MBBS, MMED²; Mohammad Bilal Alsavaf, MD¹; Mohammed Alwabli, MD³; Kyle C Wu, MD⁴; Basit Jawad, MD¹; Kyle K VanKoeveering, MD¹; Ricardo L Carrau, MD, MBA¹; Daniel M Prevedello, MD, MBA⁴; ¹Department of Otolaryngology-Head and Neck Surgery, The Ohio State University Wexner Medical Center, Columbus, USA.; ²Department of Otolaryngology, Hospital Raja Permaisuri Bainun, Jalan Raja Ashman Shah, 30450 Ipoh, Perak, Malaysia; ³Department of Otorhinolaryngology-Head and Neck Surgery, Prince Sultan Military Medical City, Riyadh, Saudi Arabia; ⁴Department of Neurological Surgery, The Ohio State University Wexner Medical Center, Columbus, USA.

S027: CONTRALATERAL SUPRACEREBELLAR INFRATENTORIAL APPROACH FOR THALAMIC CAVERNOUS MALFORMATIONS: A FEASIBILITY STUDY AND RELEVANT ANATOMY REVIEW - Diego Morales Roccuzzo, MD; Mohammadmahdi Sabahi, MD, MPH; Raphael Bastianon Santiago, MD; Shadi Bsati, MD; Romel Corecha Santos, MD; Badih Adada, MD; Hamid Borghei-Razavi, MD; Cleveland Clinic Florida

S028: POSTOPERATIVE COMPLICATIONS AFTER SURGERY FOR TRIGEMINAL NEURALGIA - Bao Y Sciscent, BS¹; David R Hallan, MD²; Hanel W Eberly, BS¹; Neerav Goyal, MD, MPH¹; Elias B Rizk, MD, PhD²; ¹Department of Otolaryngology-Head and Neck Surgery, Penn State Milton S. Hershey Medical Center; ²Department of Neurosurgery, Penn State Milton S. Hershey Medical Center

S029: APPROACHES TO BASILAR ARTERY AND PREPONTINE CISTERN, AN ANATOMICAL STUDY - Yasaman Alam, MD; Mariagrazia Nizzola, MD; Luciano Leonel, PhD; Maria Peris-Celda, MD, PhD; Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program, Mayo Clinic, Rochester, Minnesota, USA

S031: OUTCOMES OF THE MIDDLE TURBinate SWING TECHNIQUE DURING THE EXPANDED ENDONASAL APPROACH (EEA): A TERTIARY CENTER EXPERIENCE - Axel E Renteria, MD, MS; Lirit Levi, MD; Bruna Castro Silva, MD; Li-Ting Hung, MD; Alyssa Azevedo, MSN, FNPBC; Christine K Lee, MD, PhD; Michael T Chang, MD; Peter H Hwang, MD; Zara M Patel, MD; Juan-Carlos Fernandez-Miranda, MD; Jayakar V Nayak, MD, PhD; Stanford University

S032: EXTREME LATERAL SUPRACEREBELLAR INFRATENTORIAL AND TRANSTENTORIAL APPROACH FOR LESIONS IN THE AMBIENT CISTERN: ANATOMICAL CONSIDERATIONS AND SURGICAL NUANCES - Yuanzhi Xu, MD¹; Christine K Lee, MD, PhD¹; Maximiliano A Nunez, MD¹; Enrico Gambatesa, MD¹; Aaron A Cohen-Gadol, MSc, MBA²; Juan C Fernandez-Miranda, MD¹; ¹Stanford Hospital; ²Neurosurgical Atlas

S034: USING INDOCYANINE GREEN FLUORESCENCE ANGIOGRAPHY TO EVALUATE THE IMPACT OF SURGICAL AND PATIENT FACTORS ON VASCULAR PERFUSION OF NASOSEPTAL FLAPS IN ENDOSCOPIC SKULL BASE SURGERY

- Rachel Daum, BS; David Grimm, MS; Michael Yong, MD, MPH, MBA; Farideh Hosseinzadeh, MD; Christine K Lee, MD; Juan C Fernandez-Miranda, MD; Jayakar V Nayak, MD, PhD; Zara M Patel, MD; Peter H Hwang, MD; Michael T Chang, MD; Stanford University

S035: ENDOSCOPIC ENDONASAL TRANSPTERYGOID

APPROACH AND THE NEED FOR MYRINGOTOMY - [Mark A. Damante, MD¹](#); Stephen T Magill, MD, PhD²; Daniel Kreatsoulas, MD¹; Guilherme Finger, MD, MSc¹; Ben McGahan, MD¹; Douglas Hardesty, MD¹; Ricardo Carrau, MD¹; Daniel M Prevedello, MD¹; ¹The Ohio State University Wexner Medical Center; ²Northwestern University Medical Center

3:30 pm - 4:00 pm

Break

Marquis
Ballroom

4:00 pm - 5:00 pm

Anterior & Orbit Track: Sinonasal Malignancies: Pathology Nuances and Therapeutic Advances

Dr. Snjezana Dogan, Dr. Lisa M Rooper, Dr. Neal Akhave, Dr. Glenn Hanna

This session will explore the rapid evolution of the diagnostic and molecular landscape of sinonasal cancers, which has implications for treatment selection.

At the conclusion of this session, attendees will be able to:

- » Discuss the updated WHO classification of sinonasal cancers.
- » Review evidence based indications for induction chemotherapy sinonasal cancers.
- » Discuss current clinical trials, recent advances in biomarker discovery and implications for future therapies.

M301

4:00 pm - 5:00 pm

Cavernous Sinus and Middle Fossa Track: The Clash: Controversies in Cavernous Sinus and Middle Fossa Pathologies

Dr. Georgios Zenonos & Dr. Shaan M. Raza

This session is a case based discussion between a panel of experts. A variety of cases will be presented and discussed by the experts. The audience will then have the chance to vote before the management strategy is followed and the outcomes are presented. The discussions will benefit any specialist treating pathology affecting the cavernous sinus and middle fossa.

At the conclusion of this session, attendees will be able to:

- » Identify a variety of treatment strategies for pathology involving the cavernous sinus and middle fossa.

M304

4:00 pm - 5:00 pm **Jugular Foramen/Infratemporal-parapharyngeal H&N-
craniocervical Junction Track: Tailoring the Surgical Approach
of the Occipito-Cervical Junction** **M101**

Dr. Joao Paulo Almeida, Dr. Franco DeMonte, Dr. Sebastien Froelich, Dr. Andrew Dailey

This session will highlight the surgical options in treating pathologies affecting the craniocervical junction, with a specific focus on the anatomical surgical approach to maximize surgical resection and maintenance of the biomechanical stability at the occipital cervical junction in the long term. This will allow us to better understand the importance of, and how to preserve, craniocervical stability in order to optimize patient outcomes not only from an oncological standpoint, but from a functional, and quality of life as well.

At the conclusion of this session, attendees will be able to:

- » Demonstrate the anatomy and biomechanical principles of the craniocervical junction.
- » Compare the surgical approaches to the craniocervical-junction.
- » Identify the limits of the extension of the surgical approach in order to not compromise the biomechanical stability.
- » Recognize when and how craniocervical stabilization is needed.

4:00 pm - 5:00 pm **Lateral Skull Base / Neurotology Track: Surgical Approaches
to the Skull Base for Lesions of the CPA** **M303**

Dr. Robert Yawn, Dr. Carlos David, Dr. Pamela Roehm, Dr. Giovanni Danesi

This session will consist of four presentations, each outlining the key steps and concepts for lateral approaches to the skull base. The presenters will review the anatomic considerations and potential complications associated with each approach.

At the conclusion of this session, attendees will be able to:

- » Understand the advantages of each of the lateral skull base approaches.
- » List the potential pitfalls of each of the lateral skull base approaches.
- » Differentiate hearing preservation and non -hearing preservation approaches.

4:00 pm - 5:00 pm **Sellar - Suprasellar Track: Fred Gentili Pituitary Education Day** *Imperial Ballroom*
Part 5: Debates

Dr. Kiarash Shahlaie, Dr. Vijay Agarwal, Dr. Timothy Smith, Dr. Ahmed Mohyeldin, Dr. Manish Aghi, Dr. Luma Ghalib

Moderators: Dr. Hamid Borghei-Razavi & Dr. George Bovis

The `Debates` session will feature a panel discussion covering key themes in pituitary pathology, including challenges in managing persistent Cushing`s and acromegaly, complexities of giant pituitary adenomas, and insights into Rathke cleft cysts. Attendees can expect engaging discussions and valuable perspectives from renowned experts in the field.

At the conclusion of this session, attendees will be able to:

- » Differentiate treatment approaches and outcomes for persistent Cushing, giant pituitary adenoma with multi-compartment involvement, and Rathke cleft cysts.
- » Evaluate and prioritize surgical interventions for cases of acromegaly or Cushing with medial wall invasion, considering the potential risks and benefits to optimize patient outcomes.
- » Formulate evidence-based strategies for managing recurrent Cushing and persistent acromegaly cases, integrating the latest advancements in treatment options and patient care.

4:00 pm - 5:00 pm **RHOTON ROOM: Dueling Dissections Session 1: The World Around the Orbit** *M103*

Dr. Maria Peris Celda, Dr. Carlos Pinheiro-Neto, Dr. Mario Zuccarello, Dr. Kris S. Moe, Dr. Aria Jafari, Dr. Ben Bleier, Dr. Suzanne Freitag, Dr. Kyle Godfrey, Dr. Theodore H. Schwartz

The orbit is both a target and a route to the skull base depending on the pathology to treat. In this session we will review the surgical anatomy of the optic canal and orbit. We will discuss the indications and limits of the orbital approaches from the endonasal and transorbital routes. Attendance is recommended for all trainees and skull base specialists with an interest in treating pathology located in the orbit and transorbital approaches to the skull base.

At the conclusion of this session, attendees will be able to:

- » Develop a better understanding of the surgical anatomy of the orbit as a target and as a route to the skull base.
- » Recognize key surgical landmarks and technical nuances for the endonasal and open transorbital approaches to and through the orbit.
- » Compare the benefits and disadvantages of endonasal and open transorbital approaches.

4:00 pm - 6:05 pm **Women in Skull Base Session: Considering Diversity in Defining and Creating a Successful Career in Skull Base Surgery**

M102

A career in skull base surgery can undoubtedly be both demanding and rewarding. Being a person of a diverse and minority background, whether of female sex or otherwise, can create even more challenges and potential barriers for success. Participants should include both men and women who are interested in learning strategies for defining and pursuing success for a robust and balanced career in skull base surgery.

At the conclusion of this session, attendees will be able to:

- » Define what a successful career in skull base surgery could encompass.
- » Identify potential challenges for a skull base specialist of a diverse or minority background.
- » Develop realistic strategies for ways to overcome diversity barriers to success.
- » The realization that there is a supportive network committed to enhancing diversity in skull base surgery.

5:05 pm - 6:05 pm **Proffered Papers 5: Best Video Session**

Imperial
Ballroom

V013: TRI-LAYERED DECOMPRESSION OF THE MIDDLE CRANIAL FOSSA FOR CAVERNOUS SINUS MENINGIOMA -

Rafael Martinez-Perez, MD, PhD; Geisinger Commonwealth SOM & Geisinger Neuroscience Institute

V014: ENDOSCOPIC ENDONASAL TRANSTUBERCULUM APPROACH WITH STALK PRESERVATION FOR RESECTION OF RECURRENT CRANIOPHARYNGIOMA - Diogo Moniz Garcia; Susan Samson; Angela Donaldson; Alfredo Quinones-Hinojosa; Joao Paulo Almeida; Mayo Clinic Florida

V015: ENDOSCOPIC ENDONASAL TRANSTUBERCULUM APPROACH FOR EXCISION OF HEAVILY CALCIFIED TUBEROINFUNDIBULAR CRANIOPHARYNGIOMA - Kelly Shaftel; John Craig; Amrita Ray; Jacob Eide; Karam Asmaro; Henry Ford Health

V016: WE DESCRIBE THE USE OF LATISSIMUS DORSI MUSCLE FREE FLAP TO RECONSTRUCT THE ANTERIOR SKULL BASE AS PART OF THE TREATMENT OF AN INFECTED GUNSHOT WOUND TO THE ANTERIOR SKULL BASE THAT FAILED PRIOR REPAIR. THE PROCEDURE INCLUDED REMOVAL OF AN INFECTED PRIOR - Claudio Callejas, MD; Lucas Carlstrom; Kyle Wu; Joseph Lee; Michael Li; Lauren Miller; Matthew Old; Prevedello Daniel; Ricardo Carrau; Kyle VanKoeveering; OSU

V017: INNOVATIVE ORBITAL PERIOSTEUM SUTURING TECHNIQUE: HOW WE DO IT - Teppe Takeda, MD¹; Scott Hardison, MD²; Kazuhiro Omura, MD, PhD¹; Yudo Ishii, MD, PhD¹; Adam J Kimple, MD, PhD²; Brian D Thorp, MD²; Nobuyoshi Otori, MD, PhD¹; Brent A Senior, MD²; ¹The Jikei University School of Medicine; ²University of North Carolina - Chapel Hill

V018: COMBINED ANTERIOR TRANSPETROSAL & ENDOSCOPIC-ASSISTED RETROSIGMOID INFRALABYRINTHINE AND INFRAJUGULAR APPROACH FOR CHONDROSARCOMA

- Walter C Jean, MD¹; Edinson Najera, MD¹; Amed Natour, MD²; Sean M Parsel, DO²; Ravi N Samy, MD²; ¹Lehigh Valley Fleming Neuroscience Institute; ²Lehigh Valley Health Network, Division of Otolaryngology

V019: COMBINED ENDOVASCULAR EMBOLIZATION AND FAR LATERAL CRANIECTOMY FOR MICROSURGICAL TRAPPING AND RESECTION OF GIANT THROMBOSED VERTEBRO-BASILAR ANEURYSM

- Vincent N Nguyen¹; Mustafa Motiwala²; Daniel Hoit²; Lattimore M Michael²; Adam S Arthur²; Nickalus R Khan²; ¹University of Southern California; ²University of Tennessee Health Science Center

V020: ENDOSCOPIC ENDONASAL CLIPPING OF LEFT CAROTID CAVE ANEURYSM

- Zachary C Gersey, MD; Bhuvic Patel, MD; Eric Wang, MD; Georgios A Zenonos, MD; University of Pittsburgh Medical Center, Department of Neurological Surgery

5:05 pm - 6:05 pm

Proffered Papers 5: Best Video Session

M301

S036: UTILITY OF MAGNETIC RESONANCE IMAGING VERSUS COMPUTED TOMOGRAPHY TO ASSESS TEMPORALIS MUSCLE AND MASSETER MUSCLE THICKNESS AS PROXIES FOR FRAILITY IN SINONASAL SQUAMOUS CELL CARCINOMA

- Preston M Carey, BS¹; Shreya Mandloi, BS²; Amanda Bingaman, BS, MS³; Shreya Vinjamuri, BS¹; David Bray, MD, MSc³; Mindy Rabinowitz, MD²; Gurston Nyquist, MD²; Marc Rosen, MD²; James Evans, MD, FACS, FAANS³; ¹Sidney Kimmel Medical College; ²Department of Otolaryngology, Thomas Jefferson University Hospital; ³Department of Neurosurgery, Thomas Jefferson University Hospital

S037: MULTI-INSTITUTIONAL, INTERNATIONAL EVALUATION OF PRACTICE PATTERNS AND OUTCOMES FOR RECURRENT AND METASTATIC SINONASAL UNDIFFERENTIATED CARCINOMA

- Anirudh Saraswathula, MD¹; Mohammed N Ullah, BS¹; Jacklyn Liu, BS²; Yoko Takahashi, MS, PhD³; Arushi Mahajan, BS⁴; Simonetta Battocchio⁵; Paolo Bossi⁶; Paolo Castelnovo⁷; Fabio Facchetti⁵; Carla Facco⁸; Marco Ferrari⁹; Martin D Forster, MD, PhD²; Alessandro Franchi¹⁰; Amrita Jay¹¹; Davide Lombardi¹²; Valerie J Lund¹³; Davide Mattavelli¹²; Piero Nicolai⁹; Vittorio Rampinelli¹²; Fausto Sessa⁸; Shirley Su, MBBS, FRACS³; Mario Turri-Zanoni⁷; William Vermi¹²; Erin McKean, MD, MBA, FACS⁴; Matt Lechner, MD, PhD, FRCS, FHEA^{2,14}; Ehab Hanna, MD, FACS³; Nyall R London Jr., MD, PhD^{1,15}; ¹Department of Otolaryngology - Head and Neck Surgery, Johns Hopkins University School of Medicine, Baltimore, MD, USA; ²UCL Cancer Institute, University College London, London, UK; ³Department of Head and Neck Surgery, The University of Texas MD Anderson Cancer Center, Houston, TX, USA; ⁴Department of Otolaryngology-Head and Neck Surgery, University of Michigan, Ann Arbor, Michigan, United States; ⁵Pathology Unit, Department of Molecular and Translational Medicine, University of Brescia, ASST Spedali Civili, Brescia, Italy; ⁶Medical Oncology, Department of Medical and

Surgical Specialties, Radiological Sciences, and Public Health, University of Brescia, Brescia, Italy; ⁷Unit of Otorhinolaryngology - Head & Neck Surgery, Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy; ⁸Unit of Pathology, ASST Sette Laghi, University of Insubria, Varese, Italy; ⁹Section of Otorhinolaryngology - Head and Neck Surgery, Department of Neurosciences, University of Padova, Italy; ¹⁰Department of Translational Research, University of Pisa, Pisa, Italy; ¹¹Department of Histopathology, University College London Hospitals NHS Trust, London, UK; ¹²Unit of Otorhinolaryngology - Head and Neck Surgery, Department of Medical and Surgical Specialties, Radiological Sciences, and Public Health, University of Brescia, Brescia, Italy; ¹³Royal National Throat, Nose and Ear Hospital and Head and Neck Centre, University College London Hospitals NHS Trust, London, UK; ¹⁴UCL Head & Neck Academic Centre, Division of Surgery and Interventional Science, University College London, London, UK; ¹⁵Sinonasal and Skull Base Tumor Program, Surgical Oncology Program, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA

S038: TIMING OF NECK DISSECTION FOR PATIENTS WITH SINONASAL MALIGNANCY UNDERGOING ANTERIOR CRANIAL BASE RESECTION - [Samuel R Shing, BS, BA](#)¹; Shreya Mandloi, BS¹; Peter A Benedict, MD¹; Chase Kahn, MD¹; Alexander Duffy, MD¹; Mindy R Rabinowitz, MD¹; Elina Toskala, MD¹; Marc R Rosen, MD¹; Christopher J Farrell, MD²; James J Evans, MD²; Gurston G Nyquist, MD¹; ¹Thomas Jefferson University Department of Otolaryngology - Head & Neck Surgery; ²Thomas Jefferson University Department of Neurological Surgery

S039: OLFACTION PRESERVATION AND LONG-TERM OUTCOMES OF UNILATERAL OLFACTORY NEUROBLASTOMA RESECTION: OUR EXPERIENCE AND LITERATURE REVIEW - [Alejandra Rodas, MD](#); Georges Daouds, MD; Joseph Schertzer, MD; Jackson R Vuncannon, MD; Youssef M Zohdy, MD; Juan M Revuelta Barbero, MD, PhD; Edoardo Porto, MD; Tomas Garzon-Muvdi, MD; John M DelGaudio, MD; Sarah K Wise, MD; Gustavo Pradilla, MD; Emily Barrow, MD; C. Arturo Solares, MD; Emory University

S040: THE PRESENCE OF PIGMENT INCONTINENCE IN SINONASAL MUCOSAL MELANOMA - [Shreya Mandloi, BS](#)¹; Stacey M Gargano, MD²; Alexander Duffy, MD¹; Samuel R Shing, BS, BA¹; Chase Kahn, MD¹; Peter A Benedict, MD¹; Alexander M Knops, MD¹; David Bray, MD, MSc³; Elina Toskala, MD, PhD, MBA¹; Marc Rosen, MD¹; Mindy Rabinowitz, MD¹; James J Evans, MD, FACS, FAANS³; Gurston Nyquist, MD¹; ¹Department of Otolaryngology, Thomas Jefferson University Hospital, Philadelphia PA, USA; ²Department of Pathology, Thomas Jefferson University Hospital, Philadelphia PA, USA; ³Department of Neurosurgery, Thomas Jefferson University Hospital, Philadelphia PA, USA

S041: TEMPORALIS AND MASSETER MUSCLE THICKNESS AS PROXY MEASURES OF SARCOPENIA AND FRAILTY IN SINONASAL MALIGNANCY

- Amanda Bingaman, BA, MS¹; Shreya Mandloi, BS²; Preston Carey, BS³; Arbaz Momin, MD¹; David Bray, MD, MS¹; Mindy Rabinowitz, MD²; Gurston Nyquist, MD²; Marc Rosen, MD²; Elina Toskala, MD, PhD, MBA²; James Evans, MD, FACS, FAANS¹; ¹Department of Neurological Surgery, Thomas Jefferson University Hospital, Philadelphia, PA, United States; ²Department of Otolaryngology, Thomas Jefferson University Hospital, Philadelphia, PA, United States; ³Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA, United States

S042: OLFACTORY NEUROBLASTOMA PATTERNS OF RECURRENCE AND TREATMENT: A SINGLE INSTITUTION'S EXPERIENCE

- Alejandra Rodas, MD; Youssef M Zohdy, MD; Jackson R Vuncannon, MD; Roberto M Soriano, MD; Juan M Revuelta Barbero, MD, PhD; Edoardo Porto, MD; Mariana Agudelo Arrieta, MD; Biren K Patel, MD; Tomas Garzon-Muvdi, MD; Sarah K Wise, MD; John M DelGaudio, MD; Emily Barrow, MD; Gustavo Pradilla, MD; C. Arturo Solares, MD; Emory University

S043: REVISITING INTRA-ARTERIAL CHEMOTHERAPY - PALLIATIVE UTILITY IN A CASE OF RECURRENT ESTHESIONEUROBLASTOMA AND LITERATURE REVIEW

- Jaims Lim, MD¹; Vinay Jaikumar, MBBS¹; Moleca Channam, MD¹; Ammad A Baig, MD¹; Hanna Algattas, MD¹; Adnan H Siddiqui, MD, PhD¹; Kunal Vakharia, MD²; Laszlo Mechtler, MD³; Elad I Levy, MD, MBA¹; ¹University at Buffalo Neurosurgery; ²University of South Florida; ³Roswell Park Comprehensive Cancer Center

S044: EVALUATION OF THE IMMUNE MICROENVIRONMENT WITH TUMOR RECURRENCE IN SINONASAL UNDIFFERENTIATED CARCINOMA

- Yoko Takahashi, PhD¹; Javier Gomez, MS¹; Jared Burks, PhD¹; Moran Amit, MD, PhD¹; Diana Bell, MD²; Tong-Xin Xie, MD, PhD¹; Austin Hoke, MD³; Nyall London, MD, PhD⁴; Ehab Y Hanna, MD¹; ¹The University of Texas MD Anderson Cancer Center; ²City of Hope; ³Vanderbilt University; ⁴National Institutes of Health

S045: CRITICAL APPRAISAL OF SURGICAL MODALITIES IN OLFACTORY NEUROBLASTOMA: A SYSTEMATIC REVIEW

- Mariana Agudelo Arrieta, MD¹; Maria Isabel Ocampo, MD¹; Sergio Chacon¹; Alex Taub-Krivoy²; Isabella Lacouture²; Oscar Feo-Lee¹; ¹Department of Neurosurgery, Hospital Universitario San Ignacio, Pontificia Universidad Javeriana; ²Neurosurgery Interest Group, Pontificia Universidad Javeriana

S046: A COMPARISON OF NEOADJUVANT VERSUS ADJUVANT RADIOTHERAPY IN THE MANAGEMENT OF SINONASAL MALIGNANCY: A SINGLE QUATERNARY SKULL BASE UNIT EXPERIENCE

- Raphael Machado, MD¹; Leba Sarkis, MD²; Weerawong Sangphosuk, MD¹; Aristotelis Kalyvas, MD, MSc, PhD¹; John De Almeida, MD, MSc, FRCSC²; ¹Toronto Western Hospital; ²Toronto General Hospital

S047: SINONASAL LYMPHOEPITHELIAL CARCINOMA: TWO CASE REPORTS OF A RARE MALIGNANCY - [Luke P Trapp, MD](#); Joseph Allegretti, MD; Victoria Lee, MD; Department of Otolaryngology - Head and Neck Surgery, University of Illinois Chicago College of Medicine, Chicago, Illinois

5:05 pm - 6:05 pm

Proffered Papers 7: Lateral Skull Base/CPA/Jugular Foramen 1 M303

S049: THE MANAGEMENT OF TRIGEMINAL SCHWANNOMA: A SINGLE INSTITUTION EXPERIENCE OF 49 CASES - [Robert J Dambrino, MD, MPH¹](#); Nathan R Lindquist, MD²; Fatima Guahar, MBBS¹; Gunther Wong, BS³; Michael H Freeman, MD⁴; Lola B Chambless, MD¹; Patrick D Kelly, MD, MSCI¹; Kareem O Tawfik, MD⁴; ¹Vanderbilt University Medical Center, Department of Neurological Surgery; ²Baylor College of Medicine; ³Vanderbilt University School of Medicine; ⁴Vanderbilt University Medical Center, Department of Otolaryngology

S050: SURGICAL APPROACHES TO REPAIR TEGMEN DEFECTS: A SYSTEMATIC REVIEW - [Katelyn Robillard, MD, PhD](#); Aimée Galatas, BS; Rahul Mehta, MD; Louisiana State University Health Sciences Center

S051: RELEVANCE OF THE COCHLEAR AQUEDUCT IN PRESIGMOID APPROACHES: A RADIO-ANATOMICAL STUDY - [A. Yohan Alexander, BA^{1,2,3}](#); Mariagrazia Nizzola, MD^{1,2,4}; Luciano CPC Leonel, PHD^{1,2}; Colin L Driscoll, MD^{1,2,5}; Michael J Link, MD^{1,2,5}; Maria Peris-Celda, MD, PHD^{1,2,5}; ¹Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program, Mayo Clinic, Rochester, MN, USA; ²Department of Neurologic Surgery, Mayo Clinic, Rochester, MN, USA; ³Medical School, University of Minnesota, Minneapolis, MN, USA; ⁴Department of Neurosurgery and Gamma Knife Radiosurgery, San Raffaele Scientific Institute, Vita-Salute University, Milan, Italy; ⁵Department of Otorhinolaryngology, Mayo Clinic, Rochester, MN, USA

S052: AUDIOMETRIC OUTCOMES AFTER SURGERY FOR SPONTANEOUS CSF OTORRHEA AND TEMPORAL BONE ENCEPHALOCELES: A SYSTEMATIC REVIEW AND META-ANALYSIS - [Mustafa G Bulbul, MD, MPH¹](#); Bilal Sawaf²; Brian Kellermeyer, MD¹; ¹Department of Otolaryngology, West Virginia University; ²Department of Otolaryngology, Ohio State University

S053: CHARACTERIZING HEARING OUTCOMES FOLLOWING TREATMENT OF EPIDERMOID AND MENINGIOMA TUMORS OF THE CPA - [Michael R Papazian, MD¹](#); Justin Cottrell, MD²; Lydia Pan, BA²; Emily Kay-Rivest, MD³; Lauren Rotman, MD⁴; David R Friedmann, MD²; Daniel Jethanamest, MD²; Douglas Kondziolka, MD⁴; Donato Pacione, MD⁴; Chandra Sen, MD⁴; John G Golfinos, MD⁴; J. Thomas Roland, Jr., MD²; Sean McMenomey, MD²; ¹Department of Otolaryngology-Head and Neck Surgery, Vanderbilt University Medical Center; ²Department of Otolaryngology-Head and Neck Surgery, NYU Langone Health; ³Department of Otolaryngology-Head and Neck Surgery, Royal Victoria Hospital; ⁴Department of Neurological Surgery, NYU Langone Health

S054: TRENDS IN MEDICARE REIMBURSEMENT FOR THE RESECTION OF VESTIBULAR SCHWANNOMAS: 2000-2021 - [Shravan C Atluri](#); Ethan Cline; Anthony Guidotti; ICOM

S055: QUALITY OF LIFE IN PATIENTS WITH SMALL-MEDIUM VESTIBULAR SCHWANNOMA COMPARED ACROSS TREATMENT MODALITIES: A SYSTEMATIC REVIEW - [Ashton Huppert Steed](#)¹; Alma Jukic¹; Robert Unger¹; Annie Pico¹; Katherine Riordan²; Pedro Aguilar, MD³; Peter Nakaji, MD⁴; ¹University of Arizona College of Medicine Phoenix; ²University of Arizona College of Medicine Tucson; ³University of Arizona College of Medicine Tucson - Department of Neurosurgery; ⁴University of Arizona College of Medicine Phoenix - Department of Neurosurgery

S056: SUBTOTAL RESECTION OF VESTIBULAR SCHWANNOMA THAT FAILED STEREOTACTIC RADIOSURGERY: A FOCUS ON FACIAL NERVE FUNCTION PRESERVATION - Othman Bin-Alamer, MBBS¹; [Hussam Abou-Al-Shaar](#), MD¹; Anthony Tang, BS²; Tritan Plute, BS²; Georgios A Zenonos, MD¹; Ajay Niranjan, MD, MBA¹; Constantinos G Hadjipanayis, MD, PhD¹; L. Dade Lunsford, MD¹; Paul A Gardner, MD¹; ¹Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA; ²University of Pittsburgh School of Medicine, Pittsburgh, PA

S057: IMAGING MODALITY AND OUTCOMES IN PATIENTS WITH SKULL BASE OSTEOMYELITIS - [Nicholas A Waring](#), BS; Mickie Hamiter, MD; Phillip Chung, BS; Ana H Kim, MD; Department of Otolaryngology-Head and Neck Surgery, Columbia University Irving Medical Center

S058: OPTIMIZING NEUROVASCULAR-PROTECTIVE TRANSPOSITION OF THE PTERYGOPALATINE FOSSA THROUGH ORBITO-PTERYGO-SPHENOIDAL LIGAMENT RELEASE AND DESCENDING PALATINE CANAL DECOMPRESSION: ANATOMICAL PRINCIPLES AND SURGICAL STRATEGIES - [Edoardo Agosti](#)¹; Luciano Leonel²; Ronsard Mondesir²; Stephen Graepel²; Maria Peris-Celda²; Carlos Pinheiro-Neto²; ¹University of Brescia; ²Mayo Clinic

S059: KEYHOLE RETRACTORLESS RETROSIGMOID APPROACH FOR CPA MENINGIOMAS - [Rafael Martinez-Perez](#), MD, PhD; Michel Lacroix, MD; Geisinger Commonwealth SOM & Geisinger Neuroscience Institute

5:05 pm - 6:05 pm

Proffered Papers 8: Cavernous Sinus/Middle Fossa 1

M304

S060: ORIGIN AND COURSE OF THE BRANCHES OF THE CAVERNOUS INTERNAL CAROTID ARTERY FROM THE ENDOSCOPIC ENDONASAL PERSPECTIVE: A CADAVERIC STUDY - [Edoardo Agosti](#)¹; A. Yohan Alexander²; Danielle Dang³; Luciano Leonel²; Carlos Pinheiro-Neto²; Maria Peris-Celda²; ¹University of Brescia; ²Mayo Clinic; ³Inova Neurosciences

S061: COMBINED MASTOIDECTOMY AND MIDDLE FOSSA CRANIOTOMY FOR TEGMEN DEFECT REPAIR: LONG-TERM OUTCOMES OF A MULTIDISCIPLINARY APPROACH - [Kara A Parikh, MD](#); Camille Milton, MD; Jordan Roach; Emal Lesha, MD; Jon Robertson, MD; L. Madison Michael; University of Tennessee/Semmes Murphey

S062: MORPHOMETRIC ANALYSIS OF THE POSTERIOR WALL OF THE CAVERNOUS SINUS. - [Mariano P Rinaldi, MD](#); Stanford Neurotrain Center

S063: TRANSCAVERNOUS APPROACH FOR CAVERNOUS SINUS MENINGIOMAS: A SINGLE INSTITUTION EXPERIENCE - [Shadi Bsati, MD](#); Raphael Bastianon Santiago, MD; Diego S Morales Roccuzzo, MD; Mohammadmahdi Sabahi, MD; Hamid Borghei-Razavi, MD; Badih Adada, MD; Cleveland Clinic Florida

S064: ENDOSCOPIC ENDONASAL RESECTION OF THE MEDIAL WALL OF THE CAVERNOUS SINUS: MAYO CLINIC EXPERIENCE AND IMPACT ON PITUITARY SURGERY OUTCOMES - [Jesus Emiliano Sanchez Garavito, MD](#); Carlos Perez-Vega, MD; Juan Pablo Navarro Garcia de Llano, MD; Angela Donaldson, MD; Olomu Osarenoma, MD; Susan Samson, MD; Alfredo Quinones-Hinojosa, MD; Kaisorn Chaichana, MD, PhD; Joao Paulo Almeida, MD, PhD; Mayo Clinic Florida

S065: MINIMALLY INVASIVE LATERAL ORBITOTOMY APPROACH FOR MIDDLE FOSSA AND ORBITAL LESIONS - [Bhuvic Patel, MD¹](#); David Fernandes Cabral, MD¹; Anna K Terrarosa, MD²; Gabrielle R Bonhomme, MD²; Susan Stefko, MD²; Paul A Gardner, MD¹; Georgios A Zenonos, MD¹; ¹University of Pittsburgh Medical Center, Department of Neurological Surgery; ²University of Pittsburgh Medical Center, Department of Ophthalmology

S066: PATENCY OF THE CAVERNOUS SINUS AFTER MEDIAL WALL RESECTION: A TERTIARY CENTER EXPERIENCE - [Axel E Renteria, MD, MS](#); Bruna Castro Silva, MD; Lirit Levi, MD; Li-Ting Hung, MD; Alyssa Azevedo, MSN, FNPBC; Christine K Lee, MD, PhD; Michael T Chang, MD; Peter H Hwang, MD; Jayakar V Nayak, MD, PhD; Nancy Fischbein, MD; Juan-Carlos Fernandez-Miranda, MD; Zara M Patel, MD; Stanford University

S067: MIDDLE CRANIAL FOSSA APPROACH FOR VESTIBULAR SCHWANNOMA: A SINGLE-INSTITUTION SERIES OF 500 CONSECUTIVE PATIENTS - [Anna K D'Agostino, BS](#); Susan Ellsperman, MD; Adam Olszewski, MD; Dominic Chau, BS; William Slattery, MD; Gregory Lekovic, MD, PhD; House Institute Foundation

S068: MICROSURGICAL ANATOMY OF THE "TRUE" PETROUS APEX: ANATOMICAL CONSIDERATIONS AND TECHNICAL NUANCES IN ENDOSCOPIC ENDONASAL SURGERY - [Yuanzhi Xu, MD¹](#); Christine K Lee, MD, PhD¹; Maximiliano A Nunez, MD¹; Aaron A Cohen-Gadol, MD, MSc, MBA²; Juan C Fernandez-Miranda, MD¹; ¹Stanford Hospital; ²Neurosurgical Atlas

S069: SURGICAL MANAGEMENT FOR PETROUS APEX TRIGEMINAL NERVE HERNIATION CAUSING TRIGEMINAL NEURALGIA: A CASE REPORT AND REVIEW OF THE LITERATURE

- Jonathan A Tangsrivimol, MD; Guilherme Finger, MD; Matthieu Weber, MS; Daniel Prevedello, MD, MBA; Department of Neurological Surgery, The Ohio State University Wexner Medical Center, Columbus, Ohio, USA

S070: PATTERNS OF RESPONSE AFTER GAMMA KNIFE RADIOSURGERY IN CASES OF CAVERNOUS SINUS LESIONS.

- Nishanth Sadashiva; Prabhuraj Ar; Vikas Vazhayil; Anand Kalgudi; National Institute of Mental Health and Neurosciences (NIMHANS)

5:05 pm - 6:05 pm

Proffered Papers 9: Meningioma I

M101

S071: SUPERIOR ORBITAL FISSURE NARROWING AND TUMOR ASSOCIATED PAIN IN SPHENO-ORBITAL MENINGIOMAS

- Youssef M Zohdy; Ali Alawieh; Matthew Agam; Fadi Jacob; Alejandra Rodas; J. Manuel Revuelta Barbero; Samson Argaw; Justin Maldonado; Arman Jahangiri; Katherine Chandler; Emily Barrow; Megan Cosgrove; Edoardo Porto; Gustavo Pradilla; Tomas Garzon-Muvdi; Emory University

S072: IMPACT OF CHROMOSOME COPY NUMBER THRESHOLDS ON MENINGIOMA MOLECULAR CLASSIFICATION

- Ruchit V Patel, BS; Hia S Ghosh, BS; Sandro Santagata, MD, PhD; Wenya Linda Bi, MD, PhD; Brigham and Women's Hospital

S073: GRADE 3 MENINGIOMA SURVIVAL AND RECURRENCE OUTCOMES IN AN INTERNATIONAL MULTICENTER COHORT

- Brandon Lucke-Wold; University of Florida

S074: UNILATERAL VERSUS BILATERAL APPROACHES FOR RESECTION OF OLFACTORY GROOVE MENINGIOMAS: A COMPARATIVE META-ANALYSIS

- Nolan J Brown¹; Zach Pennington, MD²; Yusuf Mehkri³; Cathleen Kuo⁴; Sachiv Chakravarti⁵; Julian Gendreau, MD⁵; Jamie J Van Gompel, MD²; ¹University of California, Irvine; ²Mayo Clinic Rochester; ³Florida; ⁴University at Buffalo; ⁵Johns Hopkins

S075: SPHENO-ORBITAL MENINGIOMAS: A COMPREHENSIVE STUDY ON PROGNOSTIC FACTORS AND A NOVEL CLASSIFICATION APPROACH

- Youssef M Zohdy; Fadi Jacob; Matthew Agam; Ali Alawieh; David Bray; J. Manuel Revuelta Barbero; Samson Argaw; Justin Maldonado; Alejandra Rodas; Vivek Sudhakar; Edoardo Porto; Arman Jahangiri; Jeffery Olson; Emily Barrow; Gustavo Pradilla; Tomas Garzon-Muvdi; Emory University

S076: MULTICENTRE PROSPECTIVE VALIDATION OF A DNA METHYLATION BASED PREDICTOR OF MENINGIOMA RECURRENCE RISK AND MOLECULAR CLASSIFICATION - Justin

Z Wang, MD¹; Chloe Gui, MD¹; Alexander P Landry, MD¹; Vikas Patil, PhD²; Andrew Ajisebutu, MD¹; Aaron Cohen-Gadol, MD³; Christopher Wilson, MD³; Serge Makarenko⁴; Stephen Yip, MD, PhD⁴; Farshad Nassiri, MD, PhD¹; Gelareh Zadeh, MD, PhD¹; ¹The University of Toronto; ²Macfeeters Hamilton Centre for Neuro-Oncology; ³Indiana University; ⁴University of British Columbia

S077: PATHOLOGIC GRADING OF MENINGIOMA TISSUE VIA MACHINE LEARNING AND NON-CONTACT FLUORESCENCE SPECTROSCOPY - Syed M Adil, MD

Tanner J Zachem, BSE; Jacob E Sperber, BA; Andreas Seas, BSE; Pranav Warman, BS; Benjamin Wissel, MD, PhD; Jihad Abdelgadir, MD; Daniel Sexton, MD; Jordan Komisarow, MD; Ralph A Hachem, MD; Shivanand Lad, MD, PhD; Steven Cook, MD; Peter Fecci, MD, PhD; Ali Zomorodi, MD; David Hasan, MD; Anoop Patel, MD; Timothy Dunn, PhD; Allan Friedman, MD; Gerald Grant; Rory C Goodwin, MD, PhD; Patrick J Codd, MD; Duke University

S078: COMPARISON OF THE EFFICACY IN IMPROVING TRIGEMINAL NEURALGIA IN PETROCLIVAL MENINGIOMA BETWEEN MICROSURGERY AND RADIOSURGERY: A META-ANALYSIS - Joonho Byun¹

Sae Min Kwon²; Min Kyun Na³; ¹Korea University Guro Hospital; ²Dongsan Medical Center; ³Hanyang University College of Medicine

S079: COMBINATION THERAPY WITH MTOR INHIBITION AND IONIZING RADIATION IN MENINGIOMA RESULTS IN SUPERIOR CYTOSTATIC EFFECT THAN MONOTHERAPY - Maya Harary, MD

Elizabeth Fernandez, BS; Joshua Casaos, MD; Jeremie Vitte, PhD; David Nathanson, PhD; Brian Na; Robert Prins, PhD; Marco Giovannini, MD, PhD; Richard Everson, MD; UCLA

S081: A GREATER DEGREE OF TUMOR SOFTNESS, DECREASE IN TUMOR BLUSH, AND GROSS TOTAL RESECTION IS ACHIEVED AT 24 HOURS OR LESS BETWEEN MENINGIOMA PREOPERATIVE EMBOLIZATION TO TUMOR RESECTION - Mahlet Mekonnen, BS¹

Ammad A Baig, MD²; Maya Harary, MD¹; Gabrielle Hovis, BS¹; Elad Levy, MD²; Isaac Yang, MD¹; ¹UCLA Department of Neurosurgery; ²University at Buffalo Neurosurgery

S082: BASAL BCL-2-INTERACTING MEDIATOR OF CELL DEATH (BIM) RESPONSIVENESS CORRELATES WITH RADIOSENSITIVITY IN MENINGIOMA - Maya Harary, MD

Elizabeth Fernandez, BS; Joshua Casaos, MD; Jeremie Vitte, PhD; David Nathanson, PhD; Brian Na, MD, PhD; Robert Prins, PhD; Marco Giovannini, MD, PhD; Richard Everson, MD; UCLA

Saturday, February 17, 2024

Time	Session	Location
7:30 am - 8:30 am	<p><u>Anterior & Orbit Track: AI in Skull Base Surgery, Head and Neck Radiology</u></p> <p><i>Dr. Claudia Kirsch, Dr. Nancy Pham, Dr. Todd Hollon, Dr. Clifton David Fuller, Dr. Mai-Lan Ho</i></p> <p>The continued advances in artificial intelligence (AI) and machine learning (ML), have grown dramatically in the past decade, affecting the ability to diagnose tumors, quantitate pathology and predict disease outcomes. (1-3). This session presents current work on how artificial intelligence and machine learning, presenting the basic `pearls` and `pitfalls`, and how AI and ML are currently utilized in patients with skull base pathology, the impact diagnosis, treatment planning, determining pathology and predicting patient outcomes.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Appraise AI applications in Head and Neck Imaging and their utility in radiopathologic correlation. » Distinguish subtypes of AI applications for skull base, vascular, spine, tumor, pediatric radiographic and pathologic evaluations. 	M301
7:30 am - 8:30 am	<p><u>Jugular Foramen/Infratemporal-parapharyngeal H&N-craniocervical Junction Track: Management of Advanced Salivary Gland Malignancies of the Skull Base: Presentation and Case Discussion</u></p> <p><i>Dr. Snjezana Dogan, Dr. Glenn Hanna, Dr. Christopher T Wilke, Dr. Marc A. Cohen</i></p> <p>This session aims to discuss controversies in the management of advanced salivary gland malignancies of the skull base. Panelists will discuss illustrative cases and their philosophy around decision-making for these challenging tumors.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Understand pathology nuances of minor salivary tumors of the skull base. » Compare multimodality management options regarding advanced salivary gland malignancies of the skull base. » Understand therapeutic advances for this difficult to treat tumor. 	M101

7:30 am - 9:35 am

RHOTON ROOM: Dueling Dissections Session 2: Suprasellar and Paraclinoid Regions, Cavernous Sinus, Meckel's Cave and Petrous Apex

M103

Dr. Maria Peris Celda, Dr. Edoardo Agosti, Dr. Jacques J. Morcos, Dr. Gabriel Zada, Dr. Ossama Al-Mefty, Dr. Paulo Abdo do Seixo Kadri

In this session we will review the surgical anatomy of the paraclinoid and suprasellar space, cavernous sinus, Meckel's cave and petrous apex and we will discuss the pros and cons of endonasal and transcranial approaches to these regions. Attendance is recommended for all trainees and skull base specialties with an interest in treating pathology located in the suprasellar and paraclinoid regions.

At the conclusion of this session, attendees will be able to:

- » Develop a better understanding of the surgical anatomy of the paraclinoid and suprasellar regions, cavernous sinus, Meckel's cave and petrous apex.
- » Recognize key surgical landmarks and technical nuances for the endonasal and transcranial approaches to the paraclinoid and suprasellar regions, cavernous sinus, Meckel's cave and petrous apex.
- » Compare the benefits and disadvantages of endonasal and transcranial approaches to the paraclinoid and suprasellar regions, cavernous sinus, Meckel's cave and petrous apex.

7:30 am - 8:30 am

Lateral Skull Base / Neurotology Track: Vestibular Schwannoma and Neurofibromatosis Education Day Part 1: Ethics & Decision Making in Vestibular Schwannoma Management

Imperial Ballroom

Dr. Liese Pruitt, Dr. Jean Anderson Eloy, Dr. Matthew Luke Carlson

Decision-making in vestibular schwannoma management is complex for both physicians and patients. This session will review ethical considerations, physician-patient communication, informed consent, and moving toward consensus on general management strategies as a field.

At the conclusion of this session, attendees will be able to:

- » Articulate ethical considerations in decision-making and patient communication.
- » Describe the nuances associated with informed consent for complex skull base surgery.
- » Recognize the importance of developing general guidelines for VS management.

7:30 am - 8:30 am

Sellar - Suprasellar Track: Update and Challenges in Craniopharyngioma

M303

Dr. Kumar Abhinav, Dr. Frederick G Barker II, Dr. Nicholas Bambakidis, Dr. Davide Locatelli, Dr. Michael Chicoine

This session will feature expert discussions on anatomical nuances and classification of craniopharyngioma, neuropsychological findings, challenges in recurrent cases, and long-term treatment morbidity. Attendees will gain valuable insights into the complexities of this rare brain tumor and the importance of comprehensive patient care. This session is essential for healthcare professionals seeking to enhance their knowledge of craniopharyngioma management and improve patient outcomes.

At the conclusion of this session, attendees will be able to:

- » Classify craniopharyngioma based on anatomical nuances to facilitate precise surgical planning and optimize patient outcomes.
- » Analyze neuropsychological findings in craniopharyngioma cases.
- » Evaluate challenges in managing recurrent craniopharyngioma and devise effective strategies for addressing treatment complexities to enhance long-term patient care.

7:30 am - 8:30 am

Vascular/Endovascular/CSF Leak, Bypass Track: Idiopathic Intracranial Hypertension

M304

Dr. Bradley Delman, Dr. Roger E Turbin, Dr. Eric Appelbaum, Dr. Omar A Choudhri, Dr. Naomi Abel, Dr. Carl Heilman

A review of the radiographic findings, ophthalmologic findings, clinical manifestations, medical management, as well as endovascular/surgical treatment options for idiopathic intracranial hypertension. This session is meant for neurosurgeons, ENT surgeons, ophthalmologists, radiologists, and endovascular surgeons.

At the conclusion of this session, attendees will be able to:

- » Diagnose idiopathic intracranial hypertension from a radiographic and clinical standpoint.
- » Recommend appropriate medical management of idiopathic intracranial hypertension.
- » Choose appropriate surgical management of idiopathic intracranial hypertension.

7:30 am - 8:30 am

Expert Debate 7: Endonasal vs Transorbital vs Transcranial Approaches for Anterior Skull Base Meningioma

M102

S083: A FEASIBILITY OF ROBOTIC SURGERY FOR POSTERIOR FOSSA SKULL BASE SURGERY - Min Ho Lee, MD¹; Xiao

Limin, MD²; Juan Fernandez-Miranda, MD³; ¹Department of Neurosurgery, Uijeongbu St.Mary's Hospital, The Catholic University of Korea, Seoul, Korea; ²Department of Neurosurgery, The First Affiliated Hospital of Nanchang University, Nanchang, China.; ³Department of Neurosurgery, Stanford Hospital, Stanford, California

S084: PERIOPERATIVE MOBILITY ASSESSMENT OF PATIENTS UNDERGOING ENDOSCOPIC ENDONASAL SURGERIES FOR SELLAR LESIONS USING DIGITAL PHENOTYPING - Christopher

Hong¹; Jakob Gerstl¹; Krish Maniar¹; John Kilgallon¹; Jukka-Pekka Onnela²; Timothy Smith¹; ¹Brigham and Women's Hospital; ²Harvard T.H. Chan School of Public Health

S085: DOES IT MATTER NOT BEING STUCK IN THE CORNER? ADDITIONAL UPPER PARAPHARYNGEAL EXPOSURE IN ENDOSCOPIC BIPORTAL TRANSPTERYGOID AND ENDOSCOPIC TRANSMAXILLARY APPROACHES COMPARED TO ENDOSCOPIC TRANSPTERYGOID APPROACH ONLY: AN ANATOMICAL AND IMAGING STUDY. - Leonardo Tariciotti,

MD¹; Biren Patel, MD¹; Alejandra Rodas Calderon, MD¹; J. Manuel Revuelta Barbero, MD, PhD¹; Erion Jr De Andrade, MD¹; Justin Maldonado, BA²; Francesco DiMeco, Prof³; C. Arturo Solares, Prof¹; Tomas Garzon-Muvdi, MD, MSc¹; Gustavo Pradilla, Prof¹; ¹Emory University; ²Emory University, School of Medicine; ³University of Milan

S086: IMPLEMENTING MACHINE LEARNING TO DETECT CHANGES IN FACIAL NERVE EMG DURING VESTIBULAR SCHWANNOMA RESECTION - Jihad Abdelgadir, MD, MSc; Daniel

Sexton, MD; Harrison Hockenberry; Tanner Zachem; Syed Adil, MD; Holly Johnson, MS, CNIM; Patrick Codd, MD; Rory Goodwin, MD, PhD; Ali Zomorodi, MD; Duke University

S087: INCIDENCE AND RISK FACTORS OF CHRONIC SUBDURAL HEMATOMA AFTER ENDOSCOPIC ENDONASAL SURGERY -

Motoyuki Umekawa, MD¹; Hirotaka Hasegawa, MD, PhD¹; Yuki Shinya, MD, PhD²; Masahiro Shin, Prof, MD, PhD³; Nobuhito Saito, Prof, MD, PhD¹; ¹The University of Tokyo Hospital; ²Mayo Clinic; ³Teikyo University Hospital

S088: INTRAOPERATIVE VISUAL EVOKED POTENTIAL AND ELECTRORETINOGRAPHIC MONITORING DURING ENDOSCOPIC TRANSSPHEOIDAL SURGERY - Christopher

Hong; Chady Omara; Sauradeep Sarkar; John Kilgallon; Kaasinath Balagurunath; Linda Aglio; Carleton Corrales; Dinesh Nair; Timothy Smith; Brigham and Women's Hospital

S089: PEDIATRIC ENDOSCOPIC ENDONASAL SKULL BASE RECONSTRUCTION SURGICAL TECHNIQUES: A SYSTEMATIC REVIEW AND META-ANALYSIS - [Myra A Zaheer, MDc, BA¹](#);

Ari Ettleson, MDc, BS¹; Abhisri Ramesh, MDc, MBA, BS¹; Aadit Mehta, MDc, BS¹; Arhum Naeem¹; Nish Gowda, MDc, BS¹; Peter Harris, MD¹; Daniel Donoho MD²; ¹George Washington University School of Medicine and Health Sciences, Washington, DC 20052; ²Division of Neurosurgery, Center for Neuroscience, Children's National Medical Center, Washington, DC 20010

S091: ENDOSCOPIC SUBLABIAL CONTRALATERAL TRANSMAXILLARY VERSUS PRECARUNCULAR CONTRALATERAL MEDIAL TRANSORBITAL CORRIDOR AS A MULTI-PORT ENDOSCOPIC ENDONASAL APPROACH TO PETROUS APEX - [Jaskaran Singh Gosal, MCh¹](#);

Govind S Bhuskute, MS²; Mohammad Bilal Alsavaf, MD³; Sunil Manjila, MD⁴; Ricardo L Carrau, MD³; Daniel M Prevedello, MD³; ¹AIIMS, Jodhpur, India; ²AIIMS, Patna, India; ³Ohio State University Wexner Medical Center, OH, USA; ⁴Insight Institute of Neurosurgery & Neuroscience, Flint, Michigan, USA

S092: COMBINING CAVERNOUS-PETROUS DRILLING WITH INTRADURAL POSTERIOR CLINOIDECTOMY ENHANCES THE MANEUVERABILITY INSIDE THE INTERPEDUNCULAR CISTERN

- [Alhusain Nagm, MD, MSc, PhD](#); University of Maryland School of Medicine

S093: APPROACH SELECTION BETWEEN COMBINED TRANSSEPTAL/TRANSNASAL VERSUS BILATERAL TRANSNASAL APPROACH ACCORDING TO THE SINONASAL OUTCOMES FOR ENDOSCOPIC ENDONASAL TRANSSPHENOIDAL SURGERY - [Do Hyun Kim](#);

Jae Yoon Lee; Yeo Song Kim; Stephen Ahn; Sung Won Kim; Sin-Soo Jeun; Jae-Sung Park; Seoul St. Mary's Hospital

S094: DIRECT PUNCTURE EMBOLIZATION IN SKULL BASE TUMORS: A CASE SERIES - [Abhijeet Sambangi, BS](#);

Patrick D Kelly, MD, MSCI; David Bray, MD, MSCI; Michael R Gooch, MD; James J Evans, MD; Thomas Jefferson University

8:35 am - 9:35 am

Anterior & Orbit Track: International Consensus Statements: How Can the International Consensus of Skull Base (ICSB) and International Consensus of Sinonasal Tumors (ICSNT) Help Your Practice?

M301

Dr. Marilene Beth Wang, Dr. Eric Wang, Dr. Edward Kuan, Dr. Nithin D. Adappa, Dr. Shirley Y. Su, Dr. James N Palmer

This session provides an overview of the highlights in the ICSB and ICSNT documents and implications for clinical practice for skull base surgeons. It is relevant for rhinologists, head and neck oncologists, neurosurgeons, radiation and medical oncologists, pathologists, radiologists, and trainees.

At the conclusion of this session, attendees will be able to:

- » Understand the methodology and objectives of the ICSB and ICSNT documents.
- » Summarize the overall findings of the ICSB and ICSNT documents.
- » Integrate key content from the ICSB and ICSNT documents which are relevant to skull base surgical practice.

8:35 am - 9:35 am

Jugular Foramen/Infratemporal-parapharyngeal H&N-craniocervical Junction Track: Management of Advanced Cutaneous Malignancies Involving the Skull Base: Immunotherapy, Surgical Techniques, and Clinical Trials

M101

Dr. Benedict J Panizza, Dr. John P Kirkpatrick, Dr. Melissa Chen, Dr. Glenn Hanna, Dr. Renata Ferrarotto, Dr. Ehab Hanna

Discuss the management options for patients with locally advanced cutaneous malignancies involving the lateral skull base.

At the conclusion of this session, attendees will be able to:

- » Discuss the indications for neoadjuvant therapy for cutaneous malignancies.
- » Discuss surgical treatment of cutaneous malignancies with skull base involvement.
- » Understand the role of radiotherapy, in relation to surgery and systemic therapy.

8:35 am - 9:35 am

Lateral Skull Base / Neurotology Track: Vestibular Schwannoma and Neurofibromatosis Education Day Part 2: NF2 in the Young Patient

Imperial Ballroom

Dr. Omar Pathmanaban, Dr. Kaleb Yohay, Dr. Lisa Schimmenti, Dr. J. Thomas Roland, Jr.

Vestibular Schwannoma and Neurofibromatosis Education Day Part 2: NF2 in the Young Patient

This session reviews current practices in NF2 in this special patient population, controversial situations, active clinical trials, and genetics.

At the conclusion of this session, attendees will be able to:

- » Understand genetic variations of NF2 disease and their clinical impact.
- » Outline overall treatment strategy and medical and surgical options in young NF2 patients.
- » Delineate nuances in decision-making in young patients with aggressive NF2 phenotype.

8:35 am - 9:35 am

Sellar - Suprasellar Track: Surgical/Adjuvant Management of Craniopharyngioma

M303

Dr. Gustavo Pradilla, Dr. Badih Adada, Dr. John R Craig, Dr. Georgiana Dobri, Dr. Susan McGovern, Dr. Ian F. Dunn

This session will focus on crucial aspects of craniopharyngioma treatment, covering technical nuances of surgical approaches, reconstruction techniques post-resection, post-operative endocrinological management, and the evolving role of radiation therapy. This session is essential for neurosurgeons, oncologists, endocrinologists, and healthcare professionals seeking to enhance their understanding of comprehensive management strategies for craniopharyngioma.

At the conclusion of this session, attendees will be able to:

- » Apply technical nuances of the endoscopic endonasal approach for craniopharyngiomas to optimize surgical outcomes and minimize postoperative complications.
- » Differentiate indications and nuances of the microsurgical approach for craniopharyngiomas.
- » Develop effective reconstruction techniques after craniopharyngioma resection to improve patient recovery and preserve neurological function.

8:35 am - 9:35 am

Vascular/Endovascular/CSF Leak, Bypass Track: CSF Leak

M304

Dr. Bradley Delman, Dr. Rick Nelson, Dr. Michael Yim, Dr. Karen Moeller, Dr. Mark Tabor, Dr. Theodore Schwartz

This session will discuss the radiologic evaluation and surgical management of Skull base spontaneous CSF leaks and encephaloceles. It is intended for neurosurgeons, ENT surgeons, pediatric skull base surgeons, and radiologists.

At the conclusion of this session, attendees will be able to:

- » Implement appropriate and effective radiologic evaluation for the diagnosis of skull base css leaks.
- » Differentiate the appropriate surgical approach for the repair of skull base css leaks and encephaloceles.
- » Recognize and understand congenital malformations of the pediatric skull base.

8:35 am - 9:35 am

Proffered Papers 11: Anterior Skull Base and Orbit

M102

S095: ANTI-EPILEPTIC PROPHYLAXIS IN SKULL BASE SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS

- Soroush Farsi¹; Kathy Le²; Nrusheel Kattar, MD³; Michael T Yim, MD³; Bharat Guthikonda, MD⁴; Omar G Ahmed, MD⁵; ¹Department of Surgery, Texas Tech HSC Paul Foster School of Medicine, El Paso, TX; ²Long School of Medicine, University of Texas Health Science Center at San Antonio, TX; ³Department of Otolaryngology-Head and Neck Surgery, LSU Health Shreveport, LA, USA; ⁴Department of Neurosurgery, LSU Health Shreveport, LA, USA; ⁵Department of Otolaryngology-Head and Neck Surgery, Houston Methodist, Houston, TX, USA

S096: THE ROLE OF EARLY OPTIC NERVE DECOMPRESSION IN TRANSCRANIAL RESECTION OF TUBERCULUM SELLAE

MENINGIOMAS - Caroline Hadley, MD; Varadaraya Shenoy, MBBS; Laligam Sekhar, MD; University of Washington Department of Neurosurgery

S097: COMPARING THE EFFECTS OF ABSORBABLE VS NON-ABSORBABLE NASAL PACKING ON POSTOPERATIVE OUTCOMES FOLLOWING ENDOSCOPIC VENTRAL SKULL BASE SURGERY

- Joseph Lebowitz, MD; Maya Hatley, BS; Mackenzie O'Connor, MD; Michele Santacatterina, PhD; Donato Pacione, MD; Seth Lieberman, MD; NYU Langone Health

S098: A COMPARATIVE SURGICAL ANALYSIS OF SURGICAL ACCESS TO THE SELLAR AND PERISELLAR REGIONS BETWEEN THE FRONTOTEMPORAL-ORBITOZYGOMATIC APPROACH WITH PERICLINOID EXPOSURE OF THE CAVERNOUS SINUS AND THE ENDOSCOPIC TRANSORBITAL APPROACH

- Alexander I Evins, MD, PhD; Travis J Atchley, MD; Sergio Cornvino, MD; Philip E Stieg, PhD, MD; Antonio Bernardo; Weill Cornell Medicine, Neurological Surgery

S099: RISK OF VENOUS THROMBOEMBOLISM IN ENDOSCOPIC SKULL BASE SURGERY: A SYSTEMATIC REVIEW - [Farideh Hosseinzadeh, Dr](#); Michael Yong, Dr; Rachel Daum; Yifei Ma;

Evans Whitaker; Christine Kyuyoung Lee; Juan Carlos Fernandez-Miranda; Michael T. Chang; Jayakar V. Nayak, MD; Zara M. Patel, MD; Peter H. Hwang; Stanford University, School of medicine

S100: SURVIVAL OUTCOMES AND PATTERNS OF CARE FOR PATIENTS DIAGNOSED WITH OPTIC PATHWAY GLIOMA: ANALYSIS OF THE SURVEILLANCE EPIDEMIOLOGY AND END RESULTS (SEER) DATABASE - [Nolan J Brown](#)¹; Cathleen C Kuo¹;

Zach Pennington, MD²; Megan M Bauman, MS²; Julian Gendreau³; Drew B Givens¹; Jonathan D Schwartz, DO, MPH²; David J Daniels, MD, PhD²; ¹UC Irvine; ²Mayo Clinic Rochester; ³Johns Hopkins

S101: SPHENO-ORBITAL MENINGIOMAS: DOES THE RESIDUAL HYPEROSTOSIS HAVE AN IMPACT ON THE RISK OF RECURRENCE? - [Edoardo Porto, MD](#)¹; Giorgio Fiore, MD²; Giovanni Carone, MD¹; Massimiliano Del Bene, MD¹; Francesco Prada, MD¹;

Cecilia Casali, MD¹; Federico Legnani, MD¹; Andrea Saladino, MD¹; Francesco DiMeco, MD¹; ¹Department of Neurosurgery, IRCCS Fondazione Istituto Neurologico Carlo Besta, Milan, Italy; ²Unit of Neurosurgery, IRCCS Ca' Granda Foundation Ospedale Maggiore Policlinico, Milan, Italy.

S102: PRE-OPERATIVE RISK FACTORS INFLUENCING ORBITAL DECOMPRESSION SURGERY OUTCOMES FOR THYROID EYE DISEASE - [Lazaro R Peraza, MD](#)¹; Forrest W Fearington, BS²; Janalee K Stokken, MD³; ¹Department of Otolaryngology - Head & Neck Surgery, Mayo Clinic - Rochester, MN; ²Mayo Clinic Alix School of Medicine - Rochester, MN; ³Department of Otolaryngology - Division of Rhinology and Skull Base Surgery, Mayo Clinic - Rochester, MN

S103: OLFACTORY GROOVE MENINGIOMAS: SUPRAORBITAL KEYHOLE VERSUS ORBITOFRONTAL, FRONTOTEMPORAL OR BIFRONTAL APPROACHES - Evan D Bander, MD¹; [Abhinav Pandey](#)²; Jenny Yan²; Alexandra Giantini-Larsen²; Apostolos John Tsiouris²; Theodore H Schwartz²; ¹MD Anderson Cancer Center; ²Weill Cornell Medical College

S104: ARTIFICIAL INTELLIGENCE BASED SEMI-AUTOMATIC SEGMENTATION FOR ORBITAL TUMOR PREOPERATIVE MODELING - [Margaret B Mitchell, MD, MSHPEd](#)¹; Ryan Bartholomew, MD¹; Angela Zhu, MD²; Benjamin Bleier¹; Barak Ringel, MD¹; ¹Dept. of Otolaryngology, Mass Eye and Ear, Harvard Medical School; ²Warren Alpert Medical School

S105: ASSESSMENT OF ENDOSCOPIC AND EXTERNAL APPROACHES FOR FRONTAL SINUS LESIONS - Moataz D Abouammo, MD, MSc¹; Hossam S Elsherif, MD, PhD¹; Medhat H Mansour, MD, PhD¹; Magdy E Saafan, MD, PhD¹; Mahmoud F Abdel-Aziz, MD, PhD¹; Ricardo L Carrau, MD, MBA²; ¹Department of Otolaryngology - Head and Neck Surgery, Tanta University, Tanta, Egypt; ²Department of Otolaryngology - Head and Neck Surgery, the Ohio State University Wexner Medical Center, Columbus, Ohio, USA

S106: THE EYELID TRANS-ORBITAL TRANS-CAVERNOUS APPROACH TO THE BASILAR APEX, A CADAVERIC PROOF-OF-CONCEPT STUDY: NEW PERSPECTIVE - [Xiaochun Zhao](#)¹; Jeremy Tan¹; Mohamed Labib²; Christopher Graffeo¹; Andrew Bauer¹; Ian Dunn¹; ¹University of Oklahoma; ²University of Maryland

9:35 am - 10:05 am	Break	Marquis Ballroom
10:05 am - 12:20 pm	General Session Presidential Address, Research Presentations, Guest Speaker, Abstract Awards, Travel Scholarship recipients	Imperial Ballroom
12:20 pm - 1:20 pm	Lunch in Exhibit Hall	Marquis Ballroom
1:20 pm - 2:20 pm	<u>Anterior & Orbit Track: Video Session: Margin Analysis</u> <i>Dr. Diana Bell, Dr. John de Almeida, Dr. Daniel Nuss, Dr. Clementino Arturo Solares, Dr. Teppei Takeda</i> This session will showcase techniques and principles behind sampling margins for surgical treatment of skull base tumors, an area of little consensus and much controversy. The session will be of interest to rhinologists, head and neck oncologists, neurosurgeons, radiation oncologists, and trainees. At the conclusion of this session, attendees will be able to: <ul style="list-style-type: none"> » Compare different techniques for sampling margins endoscopically. » Understand nuances of margin sampling across different surgical sites. » Understand emerging research and techniques in minimally invasive margin assessment. 	M301
1:20 pm - 2:20 pm	<u>Jugular Foramen/Infratemporal-parapharyngeal H&N-craniocervical Junction Track: Maximizing Clinical Outcomes in Sporadic Vestibular Schwannoma Management</u> <i>Dr. Matthew Luke Carlson, Dr. Morten Lund-Johansen, Dr. Moises Arriaga, Dr. Gregory P. Lekovic, Dr. Matthew Luke Carlson</i> This session will review various vestibular schwannoma management. At the conclusion of this session, attendees will be able to: <ul style="list-style-type: none"> » Review the current treatment strategies for sporadic vestibular schwannomas with an emphasis on patient quality of life outcomes. 	M101

1:20 pm - 2:20 pm

Lateral Skull Base / Neurotology Track: Vestibular Schwannoma and Neurofibromatosis Education Day Part 3: Molecular Understanding & Advancements in Vestibular Schwannoma

Imperial
Ballroom

Dr. Omar Pathmanaban, Dr. Cathal Hannan, Dr. Matthias Karajannis

Experts will give lectures on the updated understanding of the biology of vestibular schwannoma, predictors of growth, the future of medical management, and active clinical trials.

At the conclusion of this session, attendees will be able to:

- » Identify current fields of research in vestibular schwannoma biology.
- » Apply understanding of vestibular schwannoma biology to determine potential predictors of growth.
- » List active areas of research in medical management and gene therapy for vestibular schwannoma

1:20 pm - 2:20 pm

Sellar - Suprasellar Track: Clivus Surgery: Technical Pearls

M303

Dr. Diego Mazzatenta, Dr. Juan C. Fernandez-Miranda, Dr. Sebastien Froelich, Dr. André Beer-Furlan, Dr. Brian David Thorp, Dr. Carl Snyderman

The `Clivus Surgery: Technical Pearls` session will cover surgical techniques and approaches for clival pathologies, including the expanded endonasal approach to chordoma, maximizing lateral access in the endoscopic approach for chondrosarcoma, and the pros and cons of transcranial versus endoscopic approaches to the lower clivus. The session will also include a video session on the far medial technique, considerations for cholesterol granuloma management, and indications for the contralateral transmaxillary approach. This session is relevant for healthcare professionals interested in enhancing their expertise in clival surgery.

At the conclusion of this session, attendees will be able to:

- » Apply technical pearls for the expanded endonasal approach to chordoma, optimizing surgical techniques for improved resection and patient outcomes.
- » Maximize lateral access during the endoscopic approach for chondrosarcoma.
- » Compare and contrast the pros and cons of the transcranial and endoscopic approaches to the lower clivus.

1:20 pm - 2:20 pm **Vascular/Endovascular/CSF Leak, Bypass Track: Endovascular Session** M304

Dr. Vernard Fennell, Dr. Erez Nossek, Dr. Stephen Chen, Dr. Ashish Sonig, Dr. Stephan A Munich

The session focuses on endovascular interventions and diagnostic testing that can assist skull-base surgeons. It also endeavors to look at novel therapies for CSF leak and prophylactic management of challenging head and neck tumors.

At the conclusion of this session, attendees will be able to:

- » Use balloon test occlusion and preoperative embolization in surgical skull base management.
- » Recognize situations where endovascular solutions may help surgical approaches and vascular injury.
- » Integrate venous stenting in practice for patients with encephaloceles and CSF leaks.

1:20 pm - 2:20 pm **Proffered Papers 12: Pituitary Adenoma 1** M102

S107: ASSESSMENT OF MULTIMODAL TREATMENT OPTIONS IN RECURRENT AND PERSISTENT ACROMEGALY: A SYSTEMATIC REVIEW AND META-ANALYSIS

- Seyed Farzad Maroufi, MD, MPH, MPHE¹; Mohammadmahdi Sabahi, MD, MPH²; Manijeh Assar, DO³; MirHojjat Khorasanizadeh, MD⁴; Fatemeh Mahdavi Sabet, MD¹; Rocco Dabecco, DO²; Badih Adada, MD²; Gabriel Zada, MD⁵; Hamid Borghei-Razavi, MD²; ¹Tehran University of Medical Sciences; ²Department of Neurological Surgery, Pauline Braathen Neurological Centre, Cleveland Clinic Florida, Weston, Florida, USA.; ³Department of Surgery, University of Florida, Jacksonville, FL, USA; ⁴Department of Neurosurgery, Mount Sinai Hospital, Icahn School of Medicine, New York City, NY, USA; ⁵Department of Neurosurgery, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA

S108: PITUITARY ADENOMAS WITH SUBARACHNOID INVASION: SURGICAL NUANCES AND OUTCOMES

- Jonathan B Lamano, MD, PhD; Christine K Lee, MD, PhD; Karam P Asmaro, MD; Adrian J Rodrigues, BA; Juan Carlos Fernandez-Miranda, MD; Stanford University

S109: MULTI-CENTER CLINICAL, RADIOGRAPHIC, AND SURGICAL OUTCOMES OF SILENT TPIT+ PITUITARY NEUROENDOCRINE TUMORS

- Spencer Raub, BS¹; Thomas Hanks, BS¹; Jessica Eaton, MD¹; Evgeniya Tyrtova, MD¹; Zirun Zhao, MD¹; Norman Garrett III, BA²; Racheal Peterson, MD²; Gabriel Zada, MD²; Samuel Emerson, MD, PhD¹; Manuel Ferreira, MD, PhD¹; Jacob Ruzevick, MD¹; ¹University of Washington; ²University of Southern California

S110: OUTPATIENT ENDOCRINE PROTOCOL AND TESTING CONINCIDES WITH REDUCED LENGTH OF POST PITUITARY SURGERY ADMISSION

- Taylor Cave, MD¹; Dana Eitan, BA²; Bernard R Bendok, MD¹; Chandon Krishna, MD¹; Devyani Lal, MD¹; Amar Miglani, MD¹; Naresh P Patel¹; Ali Turkmani, MD¹; Michael J Marino, MD¹; ¹Mayo Clinic Arizona; ²Creighton University

S111: HYPOTHYROIDISM FOLLOWING ENDOSCOPIC ENDONASAL RESECTION OF THYROTROPIN-SECRETING PITUITARY ADENOMA: A CASE SERIES - [Vikas Munjal, BS](#); Lucas P Carlstrom, MD, PhD; Guilherme Finger, MD, MSCI; Luma Ghalib, MD; Kathleen Kelly, MD; Bradley A Otto, MD; Ricardo Carrau, MD; Daniel M Prevedello, MD, MBA; The Ohio State University College of Medicine

S112: MULTI-CENTER CLINICAL, RADIOGRAPHIC, AND SURGICAL OUTCOMES OF SILENT CORTICOTROPH PITUITARY NEUROENDOCRINE TUMORS - Spencer Raub, BS¹; Thomas Hanks¹; Jessica Eaton, MD¹; [Evgeniya Tyrtova, MD¹](#); Zirun Zhao¹; Norman Garrett III, BA²; Racheal Peterson, MD²; Gabriel Zada, MD²; Samuel Emerson, MD, PhD¹; Manuel Ferreira, MD, PhD¹; Jacob Ruzevick, MD¹; ¹University of Washington; ²University of Southern California

S113: REPEAT EXPANDED ENDOSCOPIC SURGERY FOR RESIDUAL GROWTH HORMONE PRODUCING TUMORS AND PERSISTENT ACROMEGALY - [Karam Asmaro¹](#); Christine Lee²; Ahmed Mohyeldin³; Vlad Ljubimov²; Vera Vigo²; Juan Fernandez-Miranda²; ¹Henry Ford Health; ²Stanford University; ³University of California Irvine

S114: OUTCOMES OF ENDOSCOPIC ENDONASAL TRANSCAVERNOUS SURGERY FOR PITUITARY ADENOMAS: A BY-COMPARTMENT ANALYSIS - [Christine K Lee, MD, PhD¹](#); Karam P Asmaro, MD²; Vladimir Ljubimov, MD¹; Adrian J Rodrigues, MD¹; Jonathan Lamano, MD, PhD¹; Ahmed Mohyeldin, MD, PhD³; Vera Vigo, MD¹; Julia Chang, MD¹; Laurence J Katznelson, MD¹; Juan C Fernandez-Miranda, MD¹; ¹Stanford University; ²Henry Ford Health; ³University of California Irvine

S115: GENETIC AND MOLECULAR INSIGHTS INTO AGGRESSIVE PROLACTINOMAS: A LITERATURE REVIEW - [Youssef M Zohdy](#); Alejandra Rodas; Justin Maldonado; Eduardo Medina; Edoardo Porto; Juan M. Revuelta Barbero; David Bray; Arman Jahangiri; Miguel Mayol; Ali Alawieh; Bryan Morales; Stewart Neill; Emily Barrow; Gustavo Pradilla; Adriana Ioachimescu; Tomas Garzon-Muvdi; Emory University

S116: SURGICAL PREDICTORS OF CUSHING'S DISEASE REMISSION: PILOT INVESTIGATIONS USING THE MULTICENTER RAPID REGISTRY - Matthew Findlay¹; Conner Massey¹; Jeremiah Alt¹; Robert Rennert¹; William Couldwell¹; James Evans²; Sarah Collopy²; Won Kim³; William Delery³; Donato Pacione⁴; Albert H Kim⁵; Mridu Kanga⁵; Michael Chicoine⁶; Paul Gardner⁷; Benita Valappi⁷; Gabriel Zada⁸; Trey Garrett⁸; Hussein Abdallah⁷; Christina Saris⁹; Benjamin Henricks¹⁰; Ildiko Torok¹⁰; Trevor Low¹⁰; Tomi Crocker¹⁰; Kevin CJ Yuen¹⁰; Douglas Hardesty¹¹; Vera Viga¹²; Juan Fernandez-Miranda¹²; Carolina Benjamin¹³; Varun Kshetty¹⁴; Andrew Little¹⁰; Michael Karsy¹⁵; ¹University of Utah; ²Thomas Jefferson University Hospital; ³UCLA; ⁴NYU; ⁵Washington University School of Medicine; ⁶University of Missouri; ⁷University of Pittsburgh Medical Center; ⁸USC; ⁹The Children's Hospital of Philadelphia; ¹⁰Barrow Neurological Institute; ¹¹The Ohio State University; ¹²Stanford University; ¹³University of Miami Miller School of Medicine; ¹⁴Cleveland Clinic Foundation; ¹⁵GNI, Drexel University College of Medicine

S117: 30-DAY HOSPITALIZATION PERIOD FOR PITUITARY ADENOMA PATIENTS: INTRODUCING A NOVEL OUTCOME METRIC - Anthony Tang¹; Hussein M Abdallah²; Paul Gardner²; Georgios A Zenonos²; Yue-Fang Chang²; Garret Choby³; Eric W Wang³; Carl Snyderman³; ¹University of Pittsburgh, School of Medicine; ²University of Pittsburgh Medical Center, Department of Neurological Surgery; ³University of Pittsburgh Medical Center, Department of Otolaryngology-Head and Neck Surgery

S118: PITUITARY APOPLEXY: UNVEILING PREDICTORS AND OUTCOMES" - Rajesh Chhabra, Dr; Apinder Preet Singh, DR; Raja R Raman, DR; Rama Walia, DR; PGIMER

2:25 pm - 3:25 pm

Anterior & Orbit Track: Video Session: Nasopharynx

M301

Dr. Ian Witterick, Dr. Weihsin Wang, Dr. Tae-Bin Won, Dr. Matthew J Mifsud, Dr. Ivan El-Sayed

This session will demonstrate surgical videos of the emerging field of nasopharyngeal surgery, such as that for nasopharyngeal carcinoma and radiation necrosis. The session will be of interest to rhinologists, head and neck oncologists, neurosurgeons, and trainees.

At the conclusion of this session, attendees will be able to:

- » Comprehend the indications and contraindications for nasopharyngeal resection.
- » Describe surgical techniques and instruments relevant for nasopharyngeal surgery.
- » Understand outcomes and complications related to nasopharyngeal surgery.

2:25 pm - 3:25 pm **Sellar - Suprasellar Track: Complications and Optimizing Long-Term Outcomes in Clivus Surgery** M303

Dr. Paul Gardner, Dr. James Evans, Dr. Ralph Abi Hachem, Dr. Benjamin Cooper, Dr. Chandranath Sen, Dr. Gelareh Zadeh

The `Complications and Optimizing Long-Term Outcomes in Clivus Surgery` session will cover crucial topics related to clivus surgery. Expert speakers will discuss strategies to avoid and manage basilar artery injury, optimize cranial nerve outcomes, and reconstruct clival defects. The session will also explore the role of radiation in managing chordoma and chondrosarcoma, options for recurrent chordoma management, and the significance of molecular subtyping and novel therapeutic targets in chordoma cases. This session is valuable for healthcare professionals seeking to enhance their knowledge and improve long-term outcomes in clivus surgery.

At the conclusion of this session, attendees will be able to:

- » Demonstrate strategies to avoid and manage basilar artery injuries during clivus surgery, prioritizing patient safety and minimizing postoperative complications.
- » Optimize cranial nerve outcomes in clival surgery.
- » Evaluate and select appropriate reconstruction techniques for clival defects, considering the specific patient presentation and optimizing surgical outcomes.

2:25 pm - 3:25 pm **Vascular/Endovascular/CSF Leak, Bypass Track: Cerebrovascular Session** M304

Dr. Mustafa Baskaya, Dr. Harry Van Loveren, Dr. Laligam Sekhar, Dr. Amir R. Dehdashti, Dr. Erez Nossek

This session is intended for those interested in complex intracranial cerebrovascular surgery with emphasis on the close link between skull base surgery and open cerebrovascular surgery.

At the conclusion of this session, attendees will be able to:

- » Integrate cerebrovascular surgery into skull base practice.
- » Apply skull base approaches for cerebrovascular lesions.
- » Recognize the intimate relationship between the two subspecialties.

2:25 pm - 3:25 pm

Proffered Papers 13: Best Written Abstracts

M101

S119: UNPLANNED HOSPITAL READMISSIONS FOLLOWING TRANS-SPHENOIDAL SURGERY FOR CUSHING'S DISEASE FROM A MULTICENTER PITUITARY SURGERY OUTCOMES REGISTRY OF 26 SURGEONS

- [Mark A Pacult, MD¹](#); Michael Karsy, MD²; James J Evans, MD³; Won Kim, MD⁴; Donald R Pacione, MD⁵; Albert H Kim, MD⁶; Paul A Gardner, MD⁷; Benjamin K Hendricks, MD¹; Christina E Sarris, MD¹; Ildiko E Torok, MD¹; Trevor M Low, MS¹; Tomiko A Crocker¹; Benita Valappil⁷; Mridu Kanga⁶; Hussein Abdallah, MD⁷; Sarah Collopy³; Juan C Fernandez-Miranda⁸; Vera Vigo⁸; William Delery⁴; Kevin C Yuen, MD¹; Robert C Rennert, MD⁹; William T Couldwell, MD, PhD⁹; Julie M Silverstein, MD⁶; Varun R Kshetry, MD¹⁰; Michael R Chicoine, MD¹¹; Andrew S Little, MD¹; ¹Barrow Neurological Institute, St. Joseph's Hospital and Medical Center; ²Drexel University; ³Jefferson University; ⁴University of California, Los Angeles; ⁵New York University; ⁶Washington University; ⁷University of Pittsburgh; ⁸Stanford University; ⁹University of Utah; ¹⁰Cleveland Clinic Foundation; ¹¹University of Missouri

S120: AQP-4 EXPRESSION AND PERITUMORAL EDEMA IN SECRETORY MENINGIOMAS: INSIGHTS FROM IMMUNOHISTOCHEMICAL ANALYSIS

- [Derrick Obiri-Yeboah](#); Ajay Zalavadia; Judy Drazba, PhD; Justin Lathia, PhD; Pablo Recinos, MD; Varun Kshetry, MD; Cleveland Clinic

S121: SURGICAL ANATOMY OF THE RETROSIGMOID APPROACH WITH ENDOSCOPIC-ASSISTED REVERSE ANTERIOR PETROSECTOMY (RAP): OPTIMIZING MECKEL'S CAVE ACCESS FROM THE POSTERIOR FOSSA

- [Alessandro De Bonis, MD](#); Danielle Dang, MD; Luciano Leonel, PhD; Mariagrazia Nizzola, MD; Simona Seriola, MD; Michael Link, MD; Maria Peris Celda, MD, PsD; Mayo Clinic Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program

S122: INTRAOPERATIVE ELECTRICAL STIMULATION FOR TREATMENT OF BELL'S Palsy: A PROMISING STRATEGY

- [Monique S North¹](#); Kareem M Shukairy, MD²; John P Leonetti, MD²; ¹Loyola University Chicago Stritch School of Medicine; ²Loyola University Health System

S123: DEVELOPMENT AND APPLICATION OF MACHINE LEARNING CLASSIFIERS AND EXPLAINABLE ARTIFICIAL INTELLIGENCE FOR PREDICTING LONG-TERM FACIAL NERVE FUNCTION AFTER VESTIBULAR SCHWANNOMA SURGERY

- [Lukasz Przepiorka, MD¹](#); Slawomir Kujawski, PhD²; Katarzyna Wojtowicz, MD¹; Andrzej Marchel, MD, PhD¹; Przemyslaw Kunert, MD, PhD¹; ¹Department of Neurosurgery, Medical University of Warsaw, Warsaw, Poland; ²Department of Exercise Physiology and Functional Anatomy, Ludwik Rydygier Collegium Medicum in Bydgoszcz Nicolaus Copernicus University in Torun, Bydgoszcz, Poland

S124: MUCOSAL SUTURING IN TARGETED ENDOSCOPIC

ENDONASAL APPROACHES TO THE CLIVUS - [Thibault Passeri](#), MD; Tancredo Alcantara, MD; Paolo di Russo, MD; Sébastien Froelich, MD; Department of Neurosurgery, Lariboisière Hospital, APHP, Paris France

S125: EPIGENETIC ANALYSIS IDENTIFIES MOLECULAR MARKERS OF MALIGNANT POTENTIAL IN PITUITARY

ADENOMAS - [Bhuvic Patel](#)¹; Diane Aum²; Sangami Pugazenthi²; Miguel Hernandez Rovira²; Kaleigh Roberts, MD, PhD²; Nima Sharifai, MD, PhD²; Sonika Dahiya²; Julie Silverstein, MD²; Craig Horbinski, MD, PhD³; Albert H Kim, MD, PhD²; Felix Sahm, MD, PhD⁴; ¹Washington University in St. Louis School of Medicine, Universitätsklinikum Heidelberg, and German Cancer Research Center (DKFZ); ²Washington University in St. Louis School of Medicine, The Brain Tumor Center, Siteman Cancer Center; ³Northwestern University, Feinberg School of Medicine; ⁴Universitätsklinikum Heidelberg and German Cancer Research Center (DKFZ)

S126: TRANSORBITAL ROUTES TO THE SKULL BASE. A

COMPARATIVE ANATOMICAL STUDY - [Maria Karampouga](#)¹; Anna K Terrarosa²; Kyle Affolter¹; Eric Wang³; Tonya S Stefkó²; Garret W Choby³; Carl Snyderman³; Michael McDowell¹; Paul Gardner¹; Georgios Zenonos¹; ¹Department of Neurological Surgery, Center for Cranial Base Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA; ²Department of Ophthalmology, Center for Cranial Base Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA; ³Department of Otolaryngology, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA

3:30 pm - 4:00 pm **Break**

Marquis
Ballroom

4:00 pm - 5:00 pm **Anterior & Orbit Track: Exoscopic Surgery and Virtual Planning for Craniofacial Surgery**

M301

Dr. John Y.K. Lee, Dr. Bernard R. Bendok, Dr. Walter Jean, Dr. Miguel Saez-Alegre, Dr. Vijay Agarwal, Dr. Alexander K Yu

This session will explore the current utilization of the exoscope and virtual planning in anterior skull base surgery. The limitations of the current technology in illumination and optical visualization will be discussed along with the advantages of the exoscope over conventional visualization modalities. The session will be interesting for trainees and surgeons in the fields of neurosurgery, otolaryngology, ophthalmology, radiology and plastic surgery.

At the conclusion of this session, attendees will be able to:

- » Recognize the advantages of the exoscope over current visualization modalities.
- » Understand the current landscape of virtual planning for surgery.
- » Predict the future direction of exoscope utilization in skull base surgery.

4:00 pm - 5:00 pm **Jugular Foramen/Infratemporal-parapharyngeal H&N-
craniocervical Junction Track: Endoscopic vs Open Surgical
Approach to the Craniocervical Junction**

M101

*Dr. Davide Croci, Dr. Hamid Borghei-Razavi, Dr. Andrew Dailey,
Dr. Luciano Mastronardi, Dr. James K. Liu*

This session aims to discuss the difficulties in the management of tumors affecting the craniocervical junction. Panelists will discuss illustrative cases and their philosophy around decision-making for these challenging tumors.

At the conclusion of this session, attendees will be able to:

- » Prioritize the goal of care of patients affected by tumor in the craniocervical-junctions.
- » Select an appropriate surgical approach to address the patient`s primary symptom or sign.
- » Compare different management philosophies in regard to tumors of the craniocervical junction.

4:00 pm - 5:00 pm **Lateral Skull Base / Neurotology Track: Vestibular
Schwannoma and Neurofibromatosis Education Day Part 5:
Auditory Brainstem Implants: Where We Are and Next Steps**

Imperial
Ballroom

Dr. Courtney Cj Voelker, Dr. Daniel Lee, Dr. Emily Kay-Rivest, Dr. William Shapiro

Auditory Brainstem Implant outcomes in patients with NF2 and in Children without cochleae or cochlear nerves are varied and relatively modest. In this session, the panelists will discuss current outcomes, new device designs and new programming concepts to enhance ABI performance. The moderators will lead a Q&A to end the session.

At the conclusion of this session, attendees will be able to:

- » Understand current outcomes with ABI.
- » Learn concepts to counsel patients considering ABI.
- » Understand new ideas in ABI device design and programming concepts.

4:00 pm - 5:00 pm **Sellar - Suprasellar Track: Tumor Board: Challenging Cases**

M303

Dr. Anand V. Germanwala, Dr. Clementino Arturo Solares, Dr. Chandranath Sen, Dr. Shannon MacDonald, Dr. Shaan Raza

The `Tumor Board: Challenging Cases` session will feature engaging discussions on challenging cases in neurosurgical oncology. Moderated by experts in the field, the session will cover various cases related to chordoma, chondrosarcoma, and recurrent chondrosarcoma, offering valuable insights into the management of these complex tumors. This session is ideal for healthcare professionals seeking to enhance their understanding of difficult cases and advance their expertise in neurosurgical oncology.

At the conclusion of this session, attendees will be able to:

- » Recognize and differentiate unique challenges in the management of chordoma and chondrosarcoma cases.
- » Formulate evidence-based strategies for managing recurrent chondrosarcoma and chordoma cases.
- » Infer and prioritize multidisciplinary approaches and novel therapeutic targets for challenging chordoma and chondrosarcoma cases, aiming to improve patient outcomes and quality of life.

4:00 pm - 5:00 pm **Vascular/Endovascular/CSF Leak, Bypass Track: Pediatric Skull Base I**

M304

Dr. Guillermo M Aldave Orzaiz, Dr. Vince Horne, Dr. Ronny Rotondo, Dr. Patrick C Walz, Dr. David Bauer

This session will highlight the unique challenges in pediatric skull base, from a generalized overview to more specific challenges we face in children, key to choose the best possible approach from a multidisciplinary perspective. Considerations on the hypothalamic-pituitary function, the role of radiation and unique anatomic aspects that could determine the approach or the reconstruction will be discussed in this session.

At the conclusion of this session, attendees will be able to:

- » Identify unique challenges in pediatric skull base.
- » Evaluate the particular endocrinological considerations in children when we choose a treatment.
- » Identify unique anatomic considerations in children that can affect approach or reconstruction

4:00 pm - 5:00 pm **Proffered Papers 14: Reconstruction/CSF Leak 1**

M102

S127: EFFICACY OF AN INFERIOR FREE MUCOSAL GRAFT FOR SELLAR RECONSTRUCTION IN A NEUROSURGEON-ONLY PITUITARY PRACTICE - [Tyler J Kenning, MD](#); Douglas Farquhar, MD; Piedmont Atlanta Hospital

S128: COMPARATIVE EVALUATION OF ENHANCEMENT PATTERNS OF NASOSEPTAL FLAPS AND FREE MUCOSAL GRAFTS IN PRIMARY ENDOSCOPIC PITUITARY SURGERY AND ASSOCIATION WITH CSF LEAK - Jakob L Fischer, MD; Brandon Gisi, MD; Jessa E Miller, MD; Meodyanne Y Cheng, MS; Janice J Chung, MD; Haidee Chen, BA; Ryan M Shih, BS; Noriko Salamon, MD, PHD; Marvin Bergsneider, MD; Won Kim, MD; Jeffrey D Suh, MD; Jivianne T Lee, MD; Marilene B Wang, MD; University of California, Los Angeles (UCLA)

S129: IN-HOSPITAL DESIGN AND MANUFACTURING OF POLYETHERETHERKETONE PEEK CRANIAL IMPLANTS - Alexander Kuffer, MD, DMD, PhD¹; Milan Wijnmaalen²; Tristan van Doormaal, MD²; Dehdashti R Amir, MD¹; Luca Regli, MD²; ¹North Shore University Hospital; ²University Hospital Zurich

S130: GASKET SEAL PDS PLATE ENDOSCOPIC REPAIR OF ANTERIOR SKULL BASE DEFECTS: OPERATIVE TECHNIQUE AND LONG-TERM COHORT OUTCOMES - Nikita Chapurin, MD, MHS¹; Jorge A Gutierrez, BA²; Zachary M Soler, MD, MSc²; Thomas Larrew Larrew, MD²; Jeffrey E Wessell, DO²; Rodney J Schlosser, MD²; Alexander Vandergrift, MD²; ¹University of Florida; ²Medical University of South Carolina

S131: SURGICAL TECHNIQUE FOR REPAIR OF MIDDLE FOSSA CRANIAL FOSSA SEMICIRCULAR CANAL DEHISCENCE: A RETROSPECTIVE CASE SERIES REVIEW - Marcelle S Altshuler, MD; Saksham Gupta, MD; Chris Hong, MD; Rohan Jha, BS; Jakob Gertsli, MBBS; Kaasinath Balagurunath; Carleton E Corrales, MD; Timothy Smith, MD, PhD, MPH; Brigham and Women's Hospital, Harvard Medical School

S134: INTRADURAL REPAIR OF TEMPORAL BONE ENCEPHALOCELE AND CSF LEAK: RESULTS FROM A SINGLE INSTITUTION - Susan E Ellsperman, MD¹; Anna K D'Agostino, BS²; Adam M Olszewski, MD¹; Kevin A Peng, MD¹; William H Slaterry, III, MD¹; Gregory P Lekovic, MD, PhD¹; ¹House Ear Clinic; ²Campbell University School of Osteopathic Medicine

S135: THE IMPACT OF VENOUS STENTING FOR PATIENTS WITH IDIOPATHIC INTRACRANIAL HYPERTENSION AND SPONTANEOUS CEREBROSPINAL FLUID LEAK ON SYMPTOMS AND QUALITY OF LIFE - Shreya Mandloi, BS¹; Alexander Duffy, MD¹; Chase Kahn, MD¹; Samuel R Shing, BS, BA¹; Areeba Nisar, MD²; Kareem E Naamani, MD³; Hsiangkuo Yuan, MD, PhD²; M. Reid Gooch, MD³; Elina Toskala, MD, PhD, MBA¹; James J Evans, MD, FACS, FAANS³; Christopher J Farrell, MD³; Marc Rosen, MD¹; Mindy Rabinowitz, MD¹; Gurston Nyquist, MD¹; ¹Department of Otolaryngology, Thomas Jefferson University Hospital, Philadelphia PA, USA; ²Department of Neurology, Thomas Jefferson University Hospital, Philadelphia PA, USA; ³Department of Neurosurgery, Thomas Jefferson University Hospital, Philadelphia PA, USA

S136: DIAGNOSTIC ACCURACY OF BETA-2 TRANSFERRIN GEL ELECTROPHORESIS FOR DETECTING CEREBROSPINAL FLUID RHINORRHEA

- [Jacob Eide, MD¹](#); William Mason, MD¹; Hussein Mackie, BS¹; Bernard Cook, PhD²; Amrita Ray, DO¹; Karam Asmaro, MD³; Adam Robin, MD³; Jack Rock, MD³; John Craig, MD¹; ¹Henry Ford Health - Department of Otolaryngology-Head and Neck Surgery; ²Henry Ford Health - Department of Pathology; ³Henry Ford Health - Department of Neurosurgery

S137: INSTITUTION EXPERIENCE WITH A MANAGEMENT ALGORITHM FOR IDIOPATHIC INTRACRANIAL HYPERTENSION IN MENINGOENCEPHALOCELES AND SPONTANEOUS CEREBROSPINAL FLUID LEAKS

- [Mihika Thapliyal, MA¹](#); Roger Murayi, MD²; Pranay Soni, MD³; Raj Sindwani, MD⁴; Troy Woodard, MD⁴; Pablo F Recinos, MD³; Varun R Kshetty, MD³; ¹Cleveland Clinic Lerner College of Medicine, Cleveland, Ohio; ²Department of Neurological Surgery, Cleveland Clinic, Cleveland, Ohio; ³Rosa Ella Burkhardt Brain Tumor & Neuro-Oncology Center, Neurological Institute, Cleveland Clinic, Cleveland, Ohio; ⁴Department of Otolaryngology and Head & Neck Surgery, Cleveland Clinic, Cleveland, Ohio

S138: HYDROSET-BASED CLOSURE IS A SAFE AND EFFICACIOUS ADJUVANT FOR SKULL BASE RECONSTRUCTION FOLLOWING ENDOSCOPIC RESECTION OF SUPRASELLAR TUMORS

- [Rupen Desai, MD](#); Zoe Kapur; Benjamin Hammond; Catia Dombaxe; Abtin Tabaei, MD; Vijay K Anand, MD; Ashutosh Kacker, MD; Theodore H Schwartz, MD; Weill Cornell Medical College, New York Presbyterian Hospital

4:00 pm - 6:05 pm

RHOTON ROOM: Dueling Dissections Session 3: Petroclival Region

M103

Dr. Maria Peris Celda, Dr. Varun Kshetty, Dr. Laligam Sekhar, Dr. Pablo Recinos, Dr. Paul Gardner, Dr. Eric Wang, Dr. Michael Link, Dr. Neil S Patel

In this session we will review the 3D surgical anatomy of the petroclival region, and we will discuss the pros and cons of endonasal and transcranial approaches to this complex area. Attendance is recommended for all trainees and faculty with an interest in managing pathology in this location.

At the conclusion of this session, attendees will be able to:

- » Develop a better understanding of the surgical anatomy of the petroclival region.
- » Recognize key surgical landmarks and technical nuances for the endonasal and transcranial approach to the petroclival region.
- » Compare the benefits and disadvantages of endonasal and transcranial approaches to the petroclival region.

5:05 pm - 6:05 pm **Vascular/Endovascular/CSF Leak, Bypass Track: Pediatric Skull Base II - Tumor Board** M304

Moderators: Dr. Lissa Baird and Dr. Guillermo M Aldave Orzaiz

Panelists: Dr. Lissa Baird, Dr. Uma Ramaswamy, & Dr. Jeffrey H. Wisoff

Speakers: Dr. Joshua Chern, Dr. Sara Hartnett, Dr. Peter Morgenstern, Dr. Rita Nguyen, & Dr. Vijay Patel, Dr. Rafael Sillero

This session will feature case presentations by different pediatric skull base teams (across the country) with subsequent discussion among the audience and a panel of experts that includes broad representation of all specialties (Neurosurgery, ENT, Radiation oncology, endocrinology). The teams will present cases that pose a challenge in the management of different ways, treatment modality, indication, or surgical approach.

At the conclusion of this session, attendees will be able to:

- » Identify unique challenges in pediatric skull base.
- » Evaluate the particular endocrinological considerations in children when we choose a treatment.
- » Identify unique anatomic considerations in children that can affect approach or reconstruction.

5:05 pm - 6:05 pm **Proffered Papers 15: Vestibular Schwannoma 1**

Imperial Ballroom

S139: VESTIBULAR SCHWANNOMA MANAGEMENT: COMPARING TRAJECTORIES OF HEALTH-RELATED QUALITY OF LIFE AND PATIENT-REPORTED OUTCOMES - [Fatima Gauhar, MBBS](#); Robert J Dambrino IV, MD, MPH; Reid C Thompson, MD; Lola B Chambless, MD; Peter J Morone, MD; Patrick D Kelly, MD, MSCI; Vanderbilt University Medical Center

S140: AN ARTIFICIAL NEURAL NETWORK MODEL FOR PREDICTING POSTOPERATIVE FACIAL NERVE OUTCOME AFTER VESTIBULAR SCHWANNOMA SURGERY - [Youssef M Zohdy](#)¹; Ali Alawieh¹; David Bray¹; Arman Jahangiri¹; Alejandra Rodas¹; Juan M. Revuelta¹; Emily Barrow¹; Gustavo Pradilla¹; Yasmine A Ashram²; Tomas Garzon-Muvdi¹; ¹Emory University; ²Alexandria University

S141: A TRANSCRIPTOME-WIDE ASSOCIATION STUDY OF VESTIBULAR SCHWANNOMA - Robert J Dambrino, MD, MPH¹; Phillip Lin, BS²; Xavier Bledsoe, BA²; Campbell Liles, MD¹; Reid C Thompson, MD¹; Peter J Morone, MD, MSCI¹; Eric R Gamazon, PhD, MS²; ¹Vanderbilt University Medical Center, Department of Neurological Surgery; ²Vanderbilt University Medical Center, Division of Genetics

S142: IMPACT OF PATIENT AGE ON LENGTH OF SURGERY AND BLOOD LOSS DURING MICROSURGERY FOR VESTIBULAR SCHWANNOMA - Alexander S Fabiano, BS¹; [Jeffrey I Traylor, MD](#)¹; Pooja Venkatesh, BS¹; Michelle Zhu, BS¹; Kelsey Schmitt, BA¹; Srinivas Pulipaka, BS¹; Aaron R Plitt, MD²; Ankur Patel, MD¹; Samuel L Barnett, MD¹; ¹Department of Neurological Surgery, The University of Texas Southwestern Medical Center; ²Department of Neurological Surgery, Mayo Clinic School of Medicine

S143: HEARING PRESERVATION IN VESTIBULAR SCHWANNOMA AFTER RADIOSURGERY: A META-ANALYSIS -

Gabrielle Hovis; Anubhav Chandla; Aryan Pandey; Isaac Yang, MD; UCLA

S144: COMPARING COCHLEAR IMPLANT OUTCOMES IN 100 PATIENTS WITH SPORADIC VESTIBULAR SCHWANNOMA MANAGED WITH OBSERVATION, RADIOSURGERY, OR MICROSURGERY: A MULTI-INSTITUTIONAL REVIEW -

James R. Dornhoffer, MD¹; John P Marinelli, MD¹; Christine M Lohse, MS¹; Justin Cottrell, MD²; Sean O McMenomey, MD²; J. Thomas Roland, MD²; Nicholas J Thompson, MD³; Kevin D Brown, MD³; Jacob C Lucas, MD⁴; Seilesh C Babu, MD⁴; Nathan R Lindquist, MD⁵; Elizabeth L Perkins, MD⁵; Torsten Rahne, MD⁶; Stefan K Plontke, MD⁶; Donald Tan, MD⁷; Jacob B Hunter, MD⁷; Erin Harvey, MD⁸; Nicholas L Deep, MD¹; Samantha Y Cerasiello, MD⁹; Matthew L Kircher, MD⁹; Mana Espahbodi, MD¹⁰; Evan L Tooker, MS¹⁰; Simon K Lloyd, MBBS, FRCS¹¹; Matthew L Carlson, MD¹; ¹Mayo Clinic; ²New York University Langone Medical Center; ³University of North Carolina; ⁴Michigan Ear Institute; ⁵Vanderbilt University Medical Center; ⁶University Hospital Halle Martin Luther University Halle; ⁷University of Texas Southwestern; ⁸Medical College of Wisconsin; ⁹Loyola University; ¹⁰University of Utah; ¹¹Manchester Royal Infirmary, Manchester Academic Health Sciences Centre

S145: PREOPERATIVE VESTIBULAR TESTING TO IDENTIFY THE VESTIBULAR NERVE BRANCH OF VESTIBULAR SCHWANNOMA ORIGIN: IS IT POSSIBLE TO PREDICT THE COURSE OF THE FACIAL NERVE, OPTIMIZE THE SURGICAL STRATEGY AND IMPROVE THE FACIAL NERVE RESULTS? -

Alberto Campione, MD^{1,2}; Amer A Alomari, MD²; Francesca Cianfrone, MD³; Italo Cantore, MD³; Paolo Ruscito³; Luciano Mastronardi, MD, PhD²; ¹Neurosurgery Residency Program, Università degli Studi dell'Insubria, Varese, Italy; ²Neurosurgery Department, ASL Roma1, San Filippo Neri Hospital, Rome, Italy; ³Otolaryngology and Head&Neck Surgery Department, ASL Roma1, San Filippo Neri Hospital, Rome, Italy

S146: THE UTILITY OF STEREOTACTIC RADIOSURGERY IN PRIMARY TREATMENT OF SMALL TO MEDIUM SPORADIC VESTIBULAR SCHWANNOMAS: A SYSTEMATIC REVIEW AND META-ANALYSIS -

Bryce J Bonin, MD¹; Scott Beckman¹; Ryan Diaz, MD¹; Danielle Terrell, MD, MPH¹; Sultan Mahmud, MS²; Mohammad Alfrad Nobel Bhuiyan, PhD¹; Deepak Kumbhare, PhD¹; Amey Savardekar, MD¹; Bharat Guthikonda, MD, MBA, FACS, FAANS¹; ¹Louisiana State University Health Sciences Center - Shreveport; ²Institute of Statistical Research and Training ISRT, University of Dhaka

S147: LOSARTAN DOES NOT PREVENT VESTIBULAR SCHWANNOMA GROWTH OR RELATED HEARING LOSS DURING OBSERVATION -

Benjamin D Lovin, MD¹; Marc-Elie Nader, MD²; Yun Qing, PhD²; Mike Hernandez, MS²; Shaan Raza, MD²; Franco DeMonte, MD²; Paul W Gidley, MD²; ¹Baylor College of Medicine; ²MD Anderson Cancer Center

S148: LONG-TERM QUALITY OF LIFE OUTCOMES ACROSS A MATCHED SERIES UNDERGOING RADIATION, SURGERY AND ACTIVE SURVEILLANCE IN ACOUSTIC NEUROMA PATIENTS

- [Seika Taniguchi](#)¹; Jeremy Kam, MBBS, BMedSci, MMed, Clin, Epi, FRACS²; Ryojo Akagami, BSc, MSc, MD, FRCSC²; ¹University of British Columbia Faculty of Medicine; ²Department of Neurosurgery, Vancouver General Hospital, Vancouver, BC, Canada

5:05 pm - 6:05 pm

Proffered Papers 16: Meningioma 2

M301

S150: DIFFERENTIAL TUMOR AND SOCIOECONOMIC FACTORS INFLUENCE SURVIVAL IN MINORITY PATIENTS WITH MENINGIOMAS

- [Alper Dincer, MD](#)¹; Joanna K Tabor, BS²; Joseph O'Brien, BA²; Miri Kim, MD²; Jennifer Moliterno, MD²; ¹Tufts Medical Center; ²Yale School of Medicine

S151: EXTENDED LONG-TERM OUTCOMES OF SINGLE FRACTION STEREOTACTIC RADIOSURGERY FOR PRIMARY MANAGEMENT OF SPORADIC MENINGIOMAS

- [Lucas P Carlstrom, MD, PhD](#)¹; Christopher S Graffeo, MD, MS²; Rahul Kumar, MD³; Paul Brown, MD³; Michael J Link, MD³; Bruce E Pollock, MD³; ¹The Ohio State University Wexner Medical Center; ²University of Oklahoma; ³Mayo Clinic

S152: A MODERN APPROACH TO OLFACTORY GROOVE MENINGIOMAS

- [Mark A Damante, MD](#)¹; Stephen T Magill, MD, PhD²; Daniel KREATSOULAS¹; Guillerme Finger, MD, MSc¹; Ben McGahan, MD¹; Jeffrey Hatef¹; Angel Hatef, MD¹; Ricardo L Carrau, MD¹; Douglas Hardesty, MD¹; Daniel M Prevedello, MD¹; ¹The Ohio State University Wexner Medical Center; ²Northwestern University Medical Center

S153: IDENTIFYING FACTORS ASSOCIATED WITH RECURRENCE OF INTRACRANIAL MENINGIOMAS AFTER SURGICAL RESECTION

- [Sonia Ajmera, MD](#); Antonio Corral Tarbay; Om H Gandhi; Rachel Blue, MD; Sawaan Patel; Ritesh Karsalia; Sai Mannam; Alex Vax, MD, PhD; Rashad Jabarkheel, MD; John Y Lee, MD; Christina Jackson, MD; University of Pennsylvania Health System

S154: COMPARISON OF ADJUVANT RADIATION VS OBSERVATION AND SALVAGE RADIATION AFTER SUBTOTAL RESECTION OF A GRADE I SKULL BASE MENINGIOMA - [Anish R Kosanam, BS¹](#); [Alexandra J White, MD²](#); [Roger Murayi, MD³](#); [Jun Ma, MD³](#); [Pranay Soni, MD³](#); [Pablo F Recinos, MD⁴](#); [Varun R Kshetty, MD⁴](#); ¹Case Western Reserve University School of Medicine; Department of Neurological Surgery, Neurological Institute, Cleveland Clinic, Cleveland; ²Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, OH; Department of Neurological Surgery, Neurological Institute, Cleveland Clinic, Cleveland; ³Department of Neurological Surgery and Rosa Ella Burkhardt Brain Tumor & Neuro-Oncology Center, Neurological Institute, Cleveland Clinic, Cleveland, OH; ⁴Department of Neurological Surgery and Rosa Ella Burkhardt Brain Tumor & Neuro-Oncology Center, Neurological Institute, Cleveland Clinic, Cleveland, OH; Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, OH

S155: CAN HISTOPATHOLOGICAL FEATURES PREDICT OUTCOMES IN GRADE 2 MENINGIOMAS? - [Madeline W Elder¹](#); [Alexander D Rebchuk²](#); [Kira Tosefsky¹](#); [Celine Hounjet²](#); [Karina Chornenka³](#); [Stephen Yip³](#); [Serge Makarenko²](#); ¹M.D. Undergraduate Program, Faculty of Medicine, University of British Columbia; ²Division of Neurosurgery, University of British Columbia; ³Division of Neuropathology, University of British Columbia

S156: SURGICAL MANAGEMENT OF FORAMEN MAGNUM MENINGIOMAS: TARGET-BASED APPROACH SELECTION AND SURGICAL OUTCOMES IN 15 PATIENTS - [Tannishtha Som, MS¹](#); [Andrea L Castillo, MD¹](#); [Ali Tayebi Meybodi, MD²](#); [James K Liu, MD²](#); ¹Rutgers New Jersey Medical School, Newark; ²Department of Neurological Surgery, Rutgers New Jersey Medical School, Newark, NJ

S157: ROLE OF TRANSCRANIAL MOTOR EVOKED POTENTIALS IN ANTERIOR AND MIDDLE SKULL BASE MENINGIOMAS SURGERY - [Antonio Pisano, MD¹](#); [Giovanni Barbagli, MD¹](#); [Andrea Boschi, MD¹](#); [Vita Maria Montemurro, MD¹](#); [Agnese Pedone, MD¹](#); [Federico Capelli, MD¹](#); [Riccardo Carrai, MD²](#); [Alessandro Della Puppa, MD¹](#); ¹Neurosurgery Unit, Department of Neuroscience, Psychology, Pharmacology and Child Health, Careggi University Hospital and University of Florence, Florence, Italy; ²SODc Neuropathology, Department Neuromuscolo-Scheletrico e degli Organi di Senso, AOU Careggi University Hospital, Florence, Italy.

S157: ROLE OF TRANSCRANIAL MOTOR EVOKED POTENTIALS IN ANTERIOR AND MIDDLE SKULL BASE MENINGIOMAS SURGERY - [Antonio Pisano, MD¹](#); [Giovanni Barbagli, MD¹](#); [Andrea Boschi, MD¹](#); [Vita Maria Montemurro, MD¹](#); [Agnese Pedone, MD¹](#); [Federico Capelli, MD¹](#); [Riccardo Carrai, MD²](#); [Alessandro Della Puppa, MD¹](#); ¹Neurosurgery Unit, Department of Neuroscience, Psychology, Pharmacology and Child Health, Careggi University Hospital and University of Florence, Florence, Italy; ²SODc Neuropathology, Department Neuromuscolo-Scheletrico e degli Organi di Senso, AOU Careggi University Hospital, Florence, Italy.

S157: ROLE OF TRANSCRANIAL MOTOR EVOKED POTENTIALS IN ANTERIOR AND MIDDLE SKULL BASE MENINGIOMAS SURGERY - [Antonio Pisano, MD¹](#); [Giovanni Barbagli, MD¹](#); [Andrea Boschi, MD¹](#); [Vita Maria Montemurro, MD¹](#); [Agnese Pedone, MD¹](#); [Federico Capelli, MD¹](#); [Riccardo Carrai, MD²](#); [Alessandro Della Puppa, MD¹](#); ¹Neurosurgery Unit, Department of Neuroscience, Psychology, Pharmacology and Child Health, Careggi University Hospital and University of Florence, Florence, Italy; ²SODc Neuropathology, Department Neuromuscolo-Scheletrico e degli Organi di Senso, AOU Careggi University Hospital, Florence, Italy.

S158: SITE OF DURAL ATTACHMENT AND CRANIAL NERVE RELATIONSHIPS PREDICT CLINICAL OUTCOME IN PETROUS MENINGIOMAS

- [Mariagrazia Nizzola](#)¹; [Francesco Calvanese](#)²; [Nicola Boari](#)¹; [Alfio Spina](#)¹; [Gianluca Nocera](#)¹; [Michele Bailo](#)¹; [Alessandro De Bonis](#)¹; [Maria Peris Celda](#)³; [Pietro Mortini](#)¹; ¹Department of Neurosurgery and Gamma Knife Radiosurgery, I.R.C.C.S. San Raffaele Scientific Institute, Vita-Salute University, Milan, Italy; ²Department of Neurosurgery, Helsinki University Hospital, Helsinki, Finland.; ³Department of Neurosurgery, Mayo Clinic, Rochester, Minnesota; Mayo Clinic Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program

S159: GAMMA KNIFE RADIOSURGERY FOR PATIENTS WITH PETROCLIVAL MENINGIOMAS: COHORT STUDY

- [Salomon Cohen](#) [Cohen, MD](#); [Michael J Link](#); Mayo Clinic

S160: 3D MRI-BASED TOPOLOGICAL ANALYSIS WITH MACHINE LEARNING TO PREDICT SKULL BASE MENINGIOMA PATHOLOGIC GRADE

- [Syed M Adil](#), MD; [Pranav Warman](#), BS; [Andreas Seas](#), BSE; [Tanner J Zachem](#), BSE; [Jihad Abdelgadir](#), MD; [Daniel Sexton](#), MD; [Benjamin Wissel](#), MD, PhD; [Jordan Komisarow](#), MD; [Steven Cook](#), MD; [Ralph A Hachem](#), MD; [Peter Fecci](#), MD, PhD; [Shivanand Lad](#), MD, PhD; [Ali Zomorodi](#), MD; [David Hasan](#), MD; [Patrick J Codd](#), MD; [Christopher J Tralie](#), PhD; [Timothy Dunn](#), PhD; [Allan Friedman](#), MD; [Gerald Grant](#), MD; [Evan Calabrese](#), MD, PhD; [Anoop Patel](#), MD; Duke University

5:05 pm - 6:05 pm

Proffered Papers 17: Sella/Suprasellar 1

M303

S161: THE IMPORTANCE OF OSSIFICATION OF THE FALCIFORM LIGAMENT IN DECOMPRESSION PROCEDURES

- [Cassidy Werner](#)¹; [Pate Duddleston](#), MD¹; [Mansour Mathkour](#), MD¹; [Aaron S Dumont](#), MD¹; [Joseph R Keen](#), MD²; [Blair Barton](#), MD²; [Joe Iwanaga](#), PhD¹; [R. Shane Tubbs](#), PhD¹; ¹Tulane University; ²Ochsner Medical Center

S162: ENDOSCOPIC ENDONASAL VERSUS TRANSCRANIAL APPROACHES TO CRANIOPHARYNGIOMA RESECTION: A RETROSPECTIVE SERIES OF 38 CASES

- [Amanda Bosland](#), BS¹; [Andrea L Castillo](#), MD¹; [Tannishtha Som](#), MS¹; [Joseph M Wardell](#), MS¹; [Wayne D Hsueh](#), MD²; [Jean Anderson Eloy](#), MD²; [James K Liu](#), MD³; ¹Rutgers New Jersey Medical School; ²Department of Otolaryngology-Head and Neck Surgery, New Jersey Medical School; ³Department of Neurological Surgery, New Jersey Medical School

S163: ENDOSCOPIC ENDONASAL PITUITARY SACRIFICE FOR SELECTED COMPLEX TUMORS WITH RETROCHIASMATIC AND RETROCLIVAL EXTENSION: SURGICAL ANATOMY, STEP BY STEP OPERATIVE TECHNIQUE AND CASE SERIES

- [Jonathan Rychen](#)¹; [Karam Asmaro](#)²; [Vladimir Ljubimov](#)¹; [Min Ho Lee](#)¹; [Mariano Rinaldi](#)¹; [Limin Xiao](#)¹; [Felipe Constanzo](#)¹; [Enrico Gambatesa](#)¹; [Vera Vigo](#)¹; [Juan C. Fernandez-Miranda](#)¹; ¹Department of Neurosurgery, Stanford University, Stanford, California, USA; ²Department of Neurosurgery, Henry Ford Health, Detroit, Michigan, USA

S164: TWENTY-FOUR-HOUR DISCHARGE FOLLOWING TRANSSPHENOIDAL RESECTION OF PITUITARY ADENOMAS: SAFETY AND FEASIBILITY OF A PITUITARY CENTER COHORT

- Carlos Perez-Vega, MD; J. Emiliano Sanchez-Garavito, MD; Krishnan Ravindran, MD; Angela M Donaldson, MD; Osarenoma U Olomu, MD; Kaisorn L Chaichana, MD; Alfredo Quinones-Hinojosa, MD; Susan L Samson, MD, PhD; Joao P Almeida, MD, PhD; Mayo Clinic Florida

S165: SUCCESSFUL TREATMENT OF RECURRENT LYMPHOCYTIC HYPOPHYSITIS WITH FRACTIONATED STEREOTACTIC RADIOTHERAPY: A SINGLE-CENTER EXPERIENCE AND SYSTEMATIC LITERATURE REVIEW - Mehdi Khaleghi; Guilherme Finger; Kyle Wu; Vikas Munjal; Luma Ghalib; Peter Kobalka; Dukagjin Blakaj; Ricardo Carrau; Daniel Prevedello; Ohio State University, Wexner Medical Center

S166: THE ROLE OF RADIOTHERAPY IN THE SHORT- AND LONG-TERM SURVIVAL FOR CRANIOPHARYNGIOMAS: A NATIONAL CANCER DATABASE ANALYSIS - A. Yohan Alexander, BA¹; Edoardo Agosti, MD²; Giorgos D Michalopoulos, MD³; Panagiotis Kerezoudis, MD³; David J Daniels, MD, PHD³; Maria Peris-Celda, MD, PHD⁴; ¹Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA. ; University of Minnesota, Medical School, Minneapolis, Minnesota, USA; ²Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA. ; Division of Neurosurgery, Department of Medical and Surgical Specialties, Radiological Sciences and Public Health, University of Brescia, Brescia, Italy; ³Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA.; ⁴Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA. ; Department of Otolaryngology - Head and Neck Surgery, Mayo Clinic, Rochester Minnesota, USA

S167: ARE ENDOSCOPIC ENDONASAL TRANSSPHENOIDAL SURGICAL APPROACHES SAFE IN THE PRESENCE OF RHINOSINUSITIS? - Jordan Larsson, BS¹; Jacob Lipovac, BS¹; Kurtis Young, BS²; Toby Steele, MD³; ¹School of Medicine, University of California, Davis, CA, USA; ²John A. Burns School of Medicine, Honolulu, HI, USA; ³Department of Otolaryngology-Head and Neck Surgery, University of California-Davis

S168: PRE-OPERATIVE CONSIDERATIONS FOR SEPTOPLASTY BEFORE ENDOSCOPIC TRANSSPHENOIDAL PITUITARY RESECTION - Maria Catalina L Espinosa, MD¹; Lauren Brewster, BS²; Varsha Varghese, BS²; Tran Locke, MD¹; Daniel Yosher, MD³; Mas Takashima, MD⁴; Meha Fox, MD¹; Ali Jalali, MD, PhD⁵; K Kelly Gallagher, MD¹; ¹Bobby R Alford Department of Otolaryngology Baylor College of Medicine; ²Baylor College of Medicine; ³Department of Neurosurgery at University of Pennsylvania; ⁴Department of Otolaryngology, Houston Methodist Hospital; ⁵Department of Neurosurgery at Baylor College of Medicine

S169: SPONTANEOUS REGRESSION OF RATHKE'S CLEFT CYSTS: CASE SERIES AND SYSTEMATIC REVIEW - Racheal Peterson, MD; Benjamin Fixman, BS; Gabriel Zada, MD; Department of Neurosurgery, USC Keck School of Medicine, University of Southern California

S170: SYSTEMATIC REVIEW AND META-ANALYSIS OF ADULT ATYPICAL TERATOID/RHABDOID TUMOR MANAGEMENT: INSIGHTS INTO SURVIVAL OUTCOMES - K. Walkiria Zamudio-Coronado; Youssef Zohdy; Justin Maldonado; Alejandra Rodas; Ali Alawieh; Arman Jahangiri; Juan M. Revuelta Barbero; Emily Barrow; Gustavo Pradilla; Tomas Garzon-Muvdi; Emory University

S171: ENDOSCOPIC ENDONASAL TRANSSPHEOIDAL, TRANSLIVAL RESECTION OF A RECURRENT SELLAR AND ECTOPIC CERBELLOPONTINE ANGLE CRANIOPHARYNGIOMA - Maryam Alshangiti, MD¹; Alaa Turkistani, MD²; Mohammed Aref, MD, MS, FRCSC²; ¹King Fahad General Hospital, Medina, SA; ²King Faisal Specialist Hospital & Research Center, Jeddah, SA

5:05 pm - 6:05 pm

Proffered Papers 18: Lateral Skull Base/CPA/Jugular Foramen

M101

S172: CHARACTERIZATION OF CANCER STEM CELLS IN OLFACTORY NEUROBLASTOMA IDENTIFIES INCREASED PD-LI EXPRESSION - Shivani Ramolia¹; Riley Larkin²; Yvette Robbins¹; Diana Lopez³; Wiem Lassoued¹; James Gulle¹; Gary Gallia³; Clint Allen¹; Nyall London¹; ¹National Cancer Institute/National Institutes of Health; ²University of Miami; ³Johns Hopkins Medicine

S173: TREATMENT RESULTS OF CRANIOFACIAL RESECTION FOR SINONASAL TUMORS INVOLVING THE ANTERIOR SKULL BASE - Sun A Han¹; Sung Woo Cho²; Kihwan Hwang³; Yong Hw Kim⁴; Sun Ha Paek⁴; Tae-Bin Won⁵; ¹Department of Otorhinolaryngology-Head and Neck Surgery Hallym University Dongtan Sacred Heart Hospital; ²Department of Otorhinolaryngology-Head and Neck Surgery, Seoul National University Bundang Hospital; ³Department of Neurosurgery, Seoul National University Bundang Hospital; ⁴Department of Neurosurgery, Seoul National University Hospital; ⁵Department of Otorhinolaryngology-Head and Neck Surgery, Seoul National University Hospital

S174: BIPHENOTYPIC SINONASAL SARCOMA: CLINICOPATHOLOGIC FEATURES IN 16 PATIENTS - Brian P Hall, BA; Joshua L Anderson, MD; Clementino Solares Rivera, MD; Oswaldo A Henriquez, MD; John M DelGaudio, MD; Mark W McDonald, MD; Kelly R Magliocca, MD; Emory University

S175: GLOMUS TYMPANICUM AND JUGULARES: OVERVIEW OF INSTITUTIONAL EXPERIENCE -

Alex Z Graboyes¹; Tanaya Oliphant, MPH¹; Bonita Bennett, BSN²; Maria Bonanni, NP²; Ayelet Rubenstein³; Swar Vimawala⁴; Debbie Cohen, MD²; Christopher H Rassekh, MD¹; Jason A Brant, MD¹; Yonghong Huan, MD²; ¹Department of Otorhinolaryngology, Head and Neck Surgery - University of Pennsylvania; ²Renal, Electrolyte, and Hypertension Division, Department of Medicine, University of Pennsylvania; ³Perelman School of Medicine, University of Pennsylvania; ⁴Division of Otolaryngology - Head & Neck Surgery, Cooper University Health Care

S176: MD ANDERSON LONG-TERM EXPERIENCE WITH MANAGEMENT OF TEMPORAL BONE PARAGANGLIOMAS. -

Franco Rubino¹; Shaan M Raza, MD¹; Franco DeMonte, MD¹; Paul Gidley, MD¹; Marc Nader, MD¹; Shirley Su, MD¹; Ehab Hanna, MD¹; Paul D Brown, MD²; Susan McGovern, MD¹; Adam Gardner, MD¹; Gary B Gunn, MD¹; Amy Moreno, MD¹; Anna Lee, MD¹; Phan Jack, MD¹; ¹MDACC; ²Mayo Clinic Rochester

S177: RARE CONCURRENT SINONASAL INVERTED PAPILLOMA AND LYMPHOMA: A CASE REPORT -

Mohammad Bilal Alsavaf, MD¹; Moataz Desouky Abouammo, MD, MSc²; Govind S Bhuskute, MS¹; Ricardo L. Carrau, MD, MBA, FACS¹; ¹Department of Otolaryngology-Head and Neck Surgery, Wexner Medical Center at The Ohio State University, Columbus, Ohio, USA; ²Department of Otolaryngology - Head and Neck Surgery, Tanta University, Tanta, Egypt

S178: MASTOIDITIS COMPLICATIONS: A MODERN CLINICAL AND RADIOGRAPHIC REVIEW OF A CRITICAL SKULL BASE INFECTION -

Neal M Jackson, MD; **Lauren Mueller, BA**; Andrew Parker, BA; Tulane University School of Medicine

S179: MANAGEMENT AND OUTCOMES OF FACIAL NERVE HEMANGIOMAS: A SYSTEMATIC REVIEW OF THE LITERATURE

- **Emal Llesha, MD¹**; Kara Parikh¹; John Dugan¹; Alexandra Kraemer¹; Arba Cecilia²; Taylor Orr¹; Nickalus Khan, MD¹; ¹University of Tennessee Health Science Center; ²Loyola Stritch School of Medicine

S181: MORPHOMETRIC ANALYSIS OF THE TRANSMASTOID APPROACH -

Joseph Lockwood, MD¹; Mansour Mathkour, MD²; Peter Amenta, MD³; R Shane Tubbs, PhD²; ¹University of California, Irvine Department of Neurosurgery; ²Tulane/Ochsner Neurosurgery Department; ³University of Massachusetts Department of Neurosurgery

S182: MORBID OBESITY AND DIABETES INCREASE THE RISK OF REOPERATION FOLLOWING MICROVASCULAR DECOMPRESSION -

Alper Dincer, MD¹; Joanna K Tabor, BS²; Alexandros F Pappajohn²; Joseph O'Brien, BA²; Saul Morales-Valero, MD²; Miri Kim, MD²; Jennifer Moliterno, MD²; ¹Tufts Medical Center; ²Yale School of Medicine

5:05 pm - 6:05 pm

Proffered Papers 19: Pituitary Adenoma 2

M102

S183: OPTIMIZED STRATEGY FOR THE MANAGEMENT OF CUSHING'S DISEASE WITH CAVERNOUS SINUS INVASION -

Maxwell T Laws, MD¹; Ihika Rampalli, BS¹; David T Asuzu, MD, PhD, MPH¹; Elizabeth Hogan, MD²; Reiner Alvarez, MD³; Christina Hayes, RN, CRNP¹; Michaela Cortes, RN¹; Raven McGlotten, RN¹; Christina Tatsi, MD¹; Lynnette Nieman, MD¹; Prashant Chittiboina, MD, MPH¹; ¹Surgical Neurology Branch, National Institute of Neurological Diseases and Stroke, Bethesda, MD; ²Department of Neurological Surgery, George Washington University, Washington, DC; ³Department of Neurological Surgery, University of Colorado, Denver, CO

S184: CLINICAL AND RADIOGRAPHIC CHARACTERISTICS AND POSTOPERATIVE OUTCOMES OF A SINGLE CENTER EXPERIENCE OF COMBINED ENDOSCOPIC AND TRANSCRANIAL APPROACH FOR GIANT PITUITARY NEUROENDOCRINE TUMORS -

Thomas Hanks, BS; Spencer Raub, BS; Jessica Eaton, MD; Evgeniya Tyrtova, MD; Malia McEvoy, MD; Zirun Zhao, MD; Aria Jafari, MD; Waleed Abuzeid, MD; Ian Humphreys, DO; Samuel Emerson, MD, PhD; Manuel Ferreira, MD, PhD; Jacob Ruzevick, MD; University of Washington

S185: SURGICAL EXPERIENCE OF PROLACTINOMAS AT A SINGLE CENTER: OUTCOMES OF SURGERY FOR SILENT, WEAKLY SECRETING, AND FUNCTIONAL TUMORS -

Thomas Hanks, BS; Spencer Raub, BS; Jessica Eaton, MD; Evgeniya Tyrtova, MD; Zirun Zhao, MD; Malia McEvoy, MD; Samuel Emerson, MD, PhD; Manuel Ferreira, MD, PhD; Jacob Ruzevick, MD; University of Washington

S186: OUTCOMES OF PITUITARY FUNCTION FOLLOWING PITUITARY APOPLEXY: A RETROSPECTIVE REVIEW AT A SINGLE INSTITUTION -

Jesse D Lawrence; Jeremy Lewis, MD; West Virginia University

S187: IMPACT OF PATIENT DEMOGRAPHICS AND SOCIOECONOMIC STATUS ON SURGICAL OUTCOMES IN ENDONASAL ENDOSCOPIC PITUITARY SURGERY -

Rachel Blue, MD; Stephen P Miranda, MD; Sonia Ajmera, MD; Nankee Kumar, BS; Maya Alexis, BS; Sabrina Heman-Ackah, MD, DPhil, MSE; Sanjana Salwi, MD; James N Palmer, MD; Nithin D Adappa, MD; John YK Lee, MD, MSCE; M. Sean Grady, MD; Daniel Yoshor, MD; Christina Jackson, MD; University of Pennsylvania

S188: CROOKE CELL ADENOMA CONFERS POORER ENDOCRINOLOGICAL OUTCOMES COMPARED WITH CORTICOTROPH ADENOMA: RESULTS OF A MULTICENTER, INTERNATIONAL ANALYSIS - [Matt Findlay](#)¹; Richard Drexler²; Mohammed Azab³; Arian Karbe²; Roman Rotermund²; Franz Ricklefs²; Jörg Flitsch²; Timothy Smith⁴; John Kilgallon⁴; Jürgen Honegger⁵; Isabella Nasi-Kordhishti⁵; Paul Gardner⁶; Zachary Gersey⁶; Hussein Abdallah⁶; John Jane⁷; Alexandria Marino⁷; Ulrich Knappe⁸; Nesrin Uksul⁸; Jamil Rzaev⁹; Anatoliy Bervitskiy⁹; Henry Schroeder¹⁰; Márton Eördögh¹⁰; Marco Losa¹¹; Pietro Mortini¹¹; Rüdiger Gerlach¹²; Apio Antunes¹³; William Couldwell¹; Karol Budohoski¹; Robert Rennert¹; Michael Karsy¹⁴; ¹University of Utah; ²University Medical Center Hamburg-Eppendorf; ³Boise State University; ⁴Brigham and Women's Hospital; ⁵University Hospital Tübingen; ⁶University of Pittsburgh Medical Center; ⁷University of Virginia Health System; ⁸Johannes Wesling Hospital Minden; ⁹Novosibirsk State Medical University; ¹⁰University Medicine Greifswald; ¹¹I.R.C.C.S. San Raffaele Scientific Institute; ¹²Helios Kliniken; ¹³Hospital de Clínicas de Porto Alegre; ¹⁴Global Neurosciences Institute, Drexel University College of Medicine

S189: FEATURES OF METASTATIC DISEASE TO THE SELLAR REGIONS AND IMPACT OF TREATMENT MODALITY ON SURVIVAL - Christian M Shannon, MS, APAff¹; Rachel Daum, BS¹; Landon Ashby, BS¹; Imelda Vetter, MLIS¹; Ankur Patel, MD²; Samuel Barnett, MD²; [Scott Connors](#), MD²; Ellen Wang, MD²; Toral Patel, MD²; Matt Sun, MD²; Ashleigh Halderman, MD²; ¹Dell Medical School; ²UT Southwestern Medical Center

S190: RECURRENCE RATES IN TNTS FOR GROSS TOTAL RESECTION OF PITUITARY ADENOMA STATISTICALLY SIMILAR REGARDLESS OF EXTENT OF PSEUDOCAPSULE DISSECTION - [Zoe E Teton](#), MD; Sasha White, MD; Jonathan Attalla; William Delery; Won Kim, MD; UCLA

S191: IMPACT OF TRANSCAVERNOUS EXTENSION OF THE ENDONASAL ENDOSCOPIC APPROACH ON POSTERIOR PITUITARY FUNCTION FOR RESECTION OF PITUITARY ADENOMAS - [Enrico Gambatesa](#), MD¹; Felipe Constanzo, MD¹; Alix Sophie Bex, MD¹; Vera Vigo, MD¹; Thomas Michael Johnstone¹; Christine K. Lee, MD, PhD²; Juan Carlos Fernandez-Miranda, MD²; ¹Stanford NeuroTrain Center - Department of Neurosurgery - Stanford University School of Medicine; ²Department of Neurosurgery - Stanford University School of Medicine

S192: LENGTH OF HOSPITAL STAY AFTER PITUITARY TUMOR RESECTION AMONG A SOCIOECONOMICALLY DISADVANTAGED POPULATION - [Isabella L Pecorari](#), BS; Vijay Agarwal, MD; Department of Neurological Surgery, Albert Einstein College of Medicine, Bronx, NY, USA; Department of Neurological Surgery, Montefiore Medical Center, Bronx, NY, USA

S193: BENIGN MENINGIOMAS DEVELOP THROUGH A FOUR-HIT MECHANISM - [Alex Devarajan, BS](#); Carina Seah, MS; Vikram Vasan, BA; Rui Feng, MD; Emily K Chapman, MD; Tomoyoshi Shigematsu, MD, PhD; Joshua Bederson, MD; Raj K Shrivastava, MD; Icahn School of Medicine at Mount Sinai

S194: A COMPARISON OF THE VOLUMETRIC GROWTH RATE OF NONFUNCTIONAL PITUITARY MICROADENOMAS VERSUS MACROADENOMAS - [Zain Peeran, BS](#)¹; Tej Tummala²; Edward Fisher²; Elaina Wang, MD²; Jacob Young, MD²; Robert C Osorio, BS¹; Manish K Aghi, MD, PhD²; ¹School of Medicine, University of California San Francisco, San Francisco, CA, USA; ²Department of Neurological Surgery, University of California San Francisco, San Francisco, CA, USA

6:30 pm - 7:30 pm **New Member Reception (*invite only*)**

Georgia Aquarium

7:30 pm - 10:00 pm **Main Social Event**

Georgia Aquarium

Sunday, February 18, 2024

Time	Session	Location
7:00 am - 8:30 am	<p><u>Anterior & Orbit Track: Orbital Education Day Part 1: Thyroid Eye Disease: Medical and Surgical Treatment</u></p> <p><i>Dr. Howard Krauss, Dr. Oded Sagiv, Dr. Lilly Wagner, Dr. Andrea Kossler</i></p> <p>This session will aim to educate on orbital eye disease management for thyroid eye disease.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Understand the nuances of thyroid eye disease. » Gain an appreciation for surgical decompression of the eye in thyroid eye disease. » Understand the role of medical management in thyroid eye disease. 	Imperial Ballroom
7:30 am - 8:30 am	<p><u>Surgical Approaches for Sinonasal Tumors</u></p> <p><i>Dr. Ji Heui Kim, Dr. Sang Duk Hong, Dr. Sung-Woo Cho</i></p> <p>Hosted by the Korean Society of Endoscopic Neurosurgeons (KOSEN)</p> <p>This session will outline recent advances in the management of sinonasal and nasopharyngeal tumors.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Discuss clinical considerations and surgical approaches for sinonasal tumors. » Describe endoscopic approach to the nasal pharynx and technical nuances. » Discuss management of skull base osteoradionecrosis. 	M301
7:30 am - 8:30 am	<p><u>Rhoton Room Dueling Dissections Session 4: Lower Clivus and Foramen Magnum</u></p> <p><i>Dr. Maria Peris Celda, Dr. Jeffrey M. Sorenson, Dr. L. Madison Michael II, Dr. James Evans, Dr. Juan C. Fernandez-Miranda, Dr. Zara Patel, Dr. Yohan Alexander, Dr. Chandranath Sen</i></p> <p>In this session we will review the 3D surgical anatomy of the Lower Clivus and Foramen Magnum regions, and we will discuss the pros and cons of endonasal and transcranial approaches to these regions. Attendance is recommended for all trainees and faculty with an interest in managing pathology in these locations.</p> <p>At the conclusion of this session, attendees will be able to:</p> <ul style="list-style-type: none"> » Develop a better understanding of the surgical anatomy of the Lower Clivus and Foramen Magnum. » Recognize key surgical landmarks and technical nuances for the endonasal and transcranial approach to the Lower Clivus and Foramen Magnum. » Compare the benefits and disadvantages of endonasal and transcranial approaches to the Lower Clivus and Foramen Magnum. 	M103

7:30 am - 8:30 am

Proffered Papers 20: Pituitary Adenoma 2

M303

S195: RISK FACTORS FOR POSTOPERATIVE DIABETES INSIPIDUS FOLLOWING ENDONASAL SELLAR/PARASELLAR TUMOR RESECTION - DOES TIMING OF POSTOPERATIVE ADMINISTRATION PREDICT LONG-TERM NEED? - Douglas Farquhar, MD; [Tyler J Kenning, MD](#); Piedmont Atlanta Hospital

S196: PREDICTORS OF NEW NEED FOR POSTOPERATIVE HORMONE SUPPLEMENTATION AFTER NONFUNCTIONAL PITUITARY NEUROENDOCRINE TUMOR RESECTION: A RETROSPECTIVE REVIEW OF 701 CASES - [Robert C Osorio, BS](#); Rithvik Ramesh, BA; Daniel Quintana, BA; Giuliana N Lee, BA; Philip V Theodosopoulos, MD; Sandeep Kunwar, MD; Jose Gurrola II, MD; Ivan H El-Sayed; Lewis S Blevins Jr; Manish K Aghi, MD, PhD; Ezequiel Goldschmidt, MD, PhD; University of California, San Francisco

S197: USE OF INTRA-OPERATIVE PROLACTIN LEVELS AS PREDICTOR FOR REMISSION IN PATIENTS WITH PROLACTIN SECRETING ADENOMAS. - [Salomon Cohen Cohen](#); Giorgos Michalopoulos; Jamie J Van Gompel; Mayo Clinic

S198: MACHINE LEARNING-BASED MODEL TO PREDICT LONG-TERM TUMOR CONTROL AND ADDITIONAL INTERVENTIONS FOLLOWING PITUITARY SURGERY - [Yuki Shinya, MD, PhD](#)¹; Abdul Karim Ghaith, MD¹; John L Atkinson, MD¹; Fredric B Meyer, MD¹; Michael J Link, MD¹; Bruce E Pollock, MD¹; Maria Peris Celda, MD, PhD¹; Mohamad Bydon, MD¹; Carlos D Pinheiro Neto, MD, PhD²; Irina Bancos, MD³; Caroline J Davidge-Pitts, MD³; Justine S Herndon, PAC³; Dana Erickson, MD³; Antonio Bon-Nieves, BS¹; Sukwoo Hong, MD¹; Jamie J Van Gompel, MD¹; ¹Department of Neurologic Surgery, Mayo Clinic; ²Department of Otolaryngology-Head and Neck Surgery, Mayo Clinic; ³Division of Endocrinology, Diabetes, and Nutrition, Mayo Clinic

S199: ROLE OF RACE, ETHNICITY, AND HEALTHCARE COVERAGE IN THE PRESENTATION AND OUTCOME OF ENDOSCOPIC TRANSPHENOIDAL SURGERY IN A DIVERSE TERTIARY-CARE PITUITARY PRACTICE - R Snyder¹; [P Athukuri, BS](#)¹; S Lee, MD, PhD²; E Ngo, MD¹; M Fox, MD¹; S Fakhri, MD³; M Takashima, MD⁴; S Samson, MD, PhD⁵; K Gallagher, MD¹; D Yoshor, MD⁶; A Jalali, MD, PhD¹; ¹Baylor College of Medicine; ²Louisiana State University; ³Kelsey-Seybold Clinic; ⁴Houston Methodist; ⁵Mayo Clinic; ⁶University of Pennsylvania

S200: SMELL PRESERVATION AFTER SARS-COV2 INFECTION AND ENDOSCOPY SKULL BASE SURGERY: A FAVORABLE RESULT - [Estephania Candelo Gomez, MD, MSc](#); Osarenoma Olomu, MD; Angela M Donaldson, MD; Mayo Clinic

S201: CRANIAL NERVE DEFICITS IN PITUITARY APOPLEXY: A RETROSPECTIVE CASE SERIES AND REVIEW OF THE LITERATURE - [Emma Celano, MD](#)¹; Lily A McLaughlin, BS, MS²; Joseph Watson, MD¹; ¹MedStar Georgetown University Hospital; ²Georgetown University School of Medicine

S202: A MULTI-INSTITUTIONAL STUDY OF RADIOGRAPHIC AND SURGICAL OUTCOMES OF SINGLE AND MULTIHORMONAL STAINING OF SILENT CORTICOPH PITUITARY NEUROENDOCRINE TUMORS

- Spencer Raub, BS¹; Thomas Hanks, BS¹; Jessica Eaton, MD¹; Evgeniya Tyrtova, MD¹; Zirun Zhao, MD¹; Norman Garrett III, BA²; Racheal Peterson, MD²; Gabriel Zada, MD²; Samuel Emerson, MD, PhD¹; Manuel Ferreira, MD, PhD¹; Jacob Ruzevick, MD¹; ¹University of Washington; ²University of Southern California

S203: FOUNDING OF A NATIONAL SURGICAL RESEARCH CONSORTIUM FOR PITUITARY DISORDERS: DESCRIPTION OF CUSHING'S DISEASE COHORT, SURGEON CHARACTERISTICS, AND REPORT OF OUTCOMES

- Andrew S Little, MD, MBA¹; Michael Karsy, MD²; James Evans, MD³; Won Kim, MD⁴; Paul Gardner, MD⁵; Donato Pacione, MD⁶; Albert Kim, MD⁷; Ildiko Torok, MD¹; Tomi Crocker¹; Trevor Low¹; Julie Silverstein, MD⁷; Robert Rennert, MD⁸; Kyle Wu, MD⁹; William Couldwell⁸; Hussein Abdallah, MD⁵; Trey Garrett¹⁰; Vera Vigo, MD¹¹; Juan Fernandez-Miranda¹¹; Gabriel Zada, MD¹⁰; Garni Barkhoudarian, MD¹²; Kevin Yuen, MD¹; Carolina Benjamin, MD¹³; Varun Kshetry, MD¹⁴; Michael Chicoine, MD¹⁵; ¹Barrow Neurological Institute; ²Global Neurosciences Institute; ³Thomas Jefferson University; ⁴University of California, Los Angeles; ⁵University of Pittsburgh Medical Center; ⁶New York University; ⁷Washington University; ⁸University of Utah; ⁹Ohio State University; ¹⁰University of Southern California; ¹¹Stanford University; ¹²Pacific Neuroscience Institute; ¹³University of Miami; ¹⁴Cleveland Clinic Foundation; ¹⁵University of Missouri

S204: ASSOCIATION OF GROWTH HORMONE-SECRETING ADENOMA PATHOLOGY CLASSIFICATION WITH THE INTRAOPERATIVE TUMOR TEXTURE FINDINGS AND RESECTION OUTCOMES

- Diego D Luy, MD; Faraz Behzadi, MD; Joseph F Zywieci, BS; Ewa Borys, MD; Chirag R Patel, MD; Anand V Germanwala, MD; Loyola University Medical Center

S205: OUTCOMES OF THE ENDOSCOPIC ENDONASAL APPROACH FOR NONFUNCTIONAL PITUITARY ADENOMAS IN ELDERLY PATIENTS

- Hussein M Abdallah¹; Anthony Tang²; Tritan J Plute²; Zachary C Gersey¹; Hussam Abou-Al-Shaar¹; David T Fernandes Cabral¹; Keerthi Arani³; Tonya Stefko⁴; Gabrielle Bonhomme⁴; Pouneh Fazeli⁵; Hussain Mahmud⁵; Eric W Wang⁶; Carl H Snyderman⁶; Georgios A Zenonos¹; Paul Gardner¹; ¹University of Pittsburgh Medical Center, Department of Neurological Surgery; ²University of Pittsburgh School of Medicine; ³University of Pittsburgh Medical Center, Department of Radiology; ⁴University of Pittsburgh Medical Center, Department of Ophthalmology; ⁵University of Pittsburgh Medical Center, Department of Endocrinology; ⁶University of Pittsburgh Medical Center, Department of Otolaryngology-Head and Neck Surgery

S206: SMOKING CESSATION EQUILIBRATES RISK OF PERIOPERATIVE COMPLICATIONS FOLLOWING ENDOSCOPIC ENDONASAL RESECTION OF PITUITARY NEUROENDOCRINE TUMORS - [Spencer Raub, BS](#); Thomas Hanks, BS; Jessica Eaton, MD; Evgeniya Tyrtova, MD; Zirun Zhao, MD; Samuel Emerson, MD, PhD; Manuel Ferreira, MD, PhD; Jacob Ruzevick, MD; University of Washington

7:30 am - 8:30 am

Proffered Papers 21: Cavernous Sinus/Middle Fossa 2

M304

S207: ASSOCIATION OF SUPERIOR CANAL DEHISCENCE LOCATION AND DISTANCE TO TEMPORAL BONE OUTER TABLE WITH SYMPTOMATIC RESPONSE FOLLOWING THE MIDDLE FOSSA REPAIR - [Hong-Ho Yang, BS](#); Isaac Yang, MD; Quinton S Gopen, MD; David Geffen School of Medicine at UCLA

S208: SURGICAL ANATOMY OF INFERIOR HYPOPHYSEAL ARTERY AND ITS RELEVANCE FOR ENDOSCOPIC ENDONASAL SURGERY - Limin Xiao; Christine Lee; Mariono Rinaldi; Enrico Ganbastesi; Min Lee; Jonathan Rychen; [Muhammad Reza Arifianto](#); Department of Neurosurgery, Stanford University

S209: MANAGEMENT OF CAVERNOUS SINUS MENINGIOMA VIA ENDOSCOPIC SKULL BASE SURGERY AND ADJUNCTIVE STEREOTACTIC RADIOTHERAPY - Raywat Noiphithak, MD¹; [Juan C Yanez-Siller, MD, MPH²](#); Pree Nimmanitya, MD¹; ¹Division of Neurosurgery, Department of Surgery, Thammasat University Hospital, Faculty of Medicine, Thammasat University, Pathumthani, Thailand; ²Dept of Otolaryngology-Head & Neck Surgery, University of Missouri

S210: ANTITHROMBOTIC THERAPY IN CEREBRAL CAVERNOUS MALFORMATIONS: A SYSTEMATIC REVIEW, META-ANALYSIS, AND NETWORK META-ANALYSIS - Basel Musmar¹; [Jihad Abdelgadir¹](#); Samantha Spellicy¹; Nimer Adeeb²; Pascal Jabbour³; David Hasan¹; ¹Duke University Hospital; ²Louisiana State University; ³Thomas Jefferson University Hospital

S211: ENDOSCOPIC TRANSORBITAL APPROACHES FOR SURGICAL TREATMENT OF MIDDLE FOSSA PATHOLOGY: A CASE SERIES. - Charles Gervais, BSc, Hons¹; [Tristan Brunette-Clément, MD²](#); Stephan Tobalem, MD, FRCSC³; Evan Kalin, MD, FRCSC²; Pascal Lavergne, MD, FRCSC²; ¹McGill University, Faculty of Medicine; ²Université de Montréal, Department of Surgery; ³Université de Montréal

S212: ENDOSCOPIC PRELACRIMAL APPROACH AND MODIFIED ENDOSCOPIC DENKER'S APPROACH TO THE MIDDLE CRANIAL FOSSA - [Yun-Kai Chan, MD¹](#); Chia-Hsing Lin, MD²; Ying-Piao Wang, MD, PhD²; ¹Department of Neurosurgery, MacKay Memorial Hospital, Taipei, Taiwan; ²Department of Otolaryngology-Head and Neck Surgery, MacKay Memorial Hospital, Taipei, Taiwan

S213: SURGICAL ANATOMY OF THE SUPERIOR ORBITAL FISSURE AND IMPLICATIONS IN OPEN AND ENDOSCOPIC SKULL BASE SURGERY. - Mauro E Ruella; Krishnan Ravindran, MD; Guilherme Gago; Mateus Dal Fabbro; Angela Donaldson, MD; Osaneroma Olomu, MD; Kaisorn Chaichana; Alfredo Quinones Hinojosa; Joao Paulo Almeida; Mayo Clinic

S214: ENDOSCOPIC ENDONASAL TRANSCAVERNOUS APPROACH TO PITUITARY ADENOMAS WITH CAVERNOUS SINUS INVASION: A SINGLE-CENTER EXPERIENCE - Hassan A Fadel; Jacob Pawloski, MD; Kelly Shaftel, MD; Amrita Ray, DO; Jacob Eide, MD; John Craig, MD; Karam P Asmar, MD; Henry Ford Hospital

S215: ENDOSCOPIC ENDONASAL APPROACHES TO THE PETROUS APEX - SURGICAL ANATOMY AND REVIEW OF TECHNIQUES - Mauro E Ruella, MD; Krishnan Ravindran, MD; Mateus Dal Fabbro, MD; Kaisorn Chaichana, MD; Angela Donaldson, MD; Osaneroma Olomu, MD; Alfredo Quinones Hinojosa, MD; Joao Paulo Almeida, MD; Mayo Clinic

S216: TOP-DOWN AND DOWN-TOP IPSILATERAL BIportal ENDOSCOPIC TRANSORBITAL AND TRANSMAXILLARY TRANSALISPHEOID (BPTONES-EATT) APPROACH TO THE CRANIO-ORBITAL REGION AND MIDDLE CRANIAL FOSSA: A FEASIBILITY VOLUMETRIC ANATOMICAL AND IMAGING STUDY - Leonardo Tariciotti, MD¹; Biren Patel, MD¹; J. Manuel Revuelta Barbero, MD, PhD¹; Alejandra Rodas Calderon, MD¹; Edoardo Porto, MD²; Erion Jr De Andrade, MD¹; Justin Maldonado, BA³; Youssef M Zohdy, MD¹; Francesco DiMeco, Prof²; C. Arturo Solares, Prof¹; Tomas Garzon-Muvdi, MD, MSc¹; Gustavo Pradilla, Prof¹; ¹Emory University; ²University of Milan; ³Emory University, School of Medicine

7:30 am - 8:30 am

Proffered Papers 22: Surgical Approaches and Technology 3

M101

S218: ENDOSCOPIC RETROLABYRINTHINE CRANIOTOMY FOR EXPOSURE OF THE TRIGEMINAL NERVE ROOT ENTRY ZONE: VOLUMETRIC ANALYSIS OF ANATOMIC EXPOSURE IN THE CADAVER - Dominic Chau, BS; Adam Olszewski, MD; Anna K D'Agostino, BS; Susan Ellsperman, MD; William Slattey, MD; House Institute

S219: MODIFYING THE MODIFIED DENKERS: A NOVEL VARIATION FOR APPROACHING INFRATEMPORAL FOSSA AND PTERYGOPALATINE FOSSA PATHOLOGY VIA ANTERIOR MAXILLOTOMY - Eric Nisenbaum, MD, MSc; Corinna Levine, MD, MPH; University of Miami Miller School of Medicine Department of Otolaryngology Head and Neck Surgery

S220: DEVELOPMENT OF A NEURONAVIGATION-COMPATIBLE SYSTEM FOR SELECTIVE ACCESS OF TRIGEMINAL ROOTLES IN RADIOFREQUENCY LESIONING: A CADAVERIC MORPHOMETRIC STUDY - Joel Kaye, MD¹; Vishan Ramanathan, BA¹; Manish Aryal, MS²; Sam Anand, PhD²; John Tew, MD¹; Jonathan A Forbes, MD¹; ¹University of Cincinnati College of Medicine; ²University of Cincinnati

S221: COMPARATIVE STUDY OF MORPHOMETRIC ANALYSIS BETWEEN ENDOSCOPIC ENDONASAL AND MIDLINE SUBOCCIPITAL SUBTONSILLAR APPROACHES TO THE JUGULAR TUBERCLE

- Jaskaran Singh Gosal, MCh¹; Govind Bhuskute, MS²; Mohammad Bilal Alsavaf, MD³; Sunil Manjila, MD⁴; Ricardo Carrau, MD³; Daniel M Prevedello, MD³; ¹AIIMS, Jodhpur, India; ²AIIMS, Patna, India; ³Ohio State University Wexner Medical Center, USA; ⁴Insight Institute of Neurosurgery & Neuroscience, Flint, Michigan, USA

S222: ENDOSCOPIC SUPRACEREBELLAR TRANSTENTORIAL APPROACH FOR AMYGDALOHIPPOCAMPECTOMY (ESTAH): AN ANATOMIC STUDY OF THE MINIMALLY INVASIVE KEYHOLE TECHNIQUE

- Romel Corecha Santos, MD; Bhavika Gupta, MD; Diego Morales Roccuzzo, MD; Rocco Dabecco, DO; Raphael Bastianon Santiago, MD; Shadi Bsati, MD; Brandon Kaye, BS; Badih Adada, MD; Hamid Borghei-Razavi, MD; Cleveland Clinic Florida

S223: ONYX OR GLUE? A REPRESENTATIVE CASE COMPARISON OF EMBOLIC AGENTS FOR DIRECT PUNCTURE EMBOLIZATION OF JUVENILE NASOPHARYNGEAL ANGIOFIBROMA

- Sarit Dhar, BS¹; Alice Lee, MD²; Mark B Chaskes, MD²; Amir R Dehdashti, MD, FACS²; Lucas Eljovich, MD¹; L. Madison Michael, MD¹; Athos Patsalides, MD, MPH²; Sanjeet V Rangarajan, MD, MEng¹; Judd H Fastenberg, MD²; ¹University of Tennessee Health Science Center; ²Zucker School of Medicine at Hofstra/Northwell Health

S224: AI-BASED SURGICAL TOOLS DETECTION FROM ENDOSCOPIC ENDONASAL PITUITARY VIDEOS

- Margaux Masson-Forsythe¹; Juan Vivanco Suarez, MD²; Muhammad Ammar Haider³; James K Liu, MD⁴; Daniel A Donoho, MD⁵; ¹Surgical Data Science Collective; ²University of Iowa; ³CMH Lahore Medical College, Pakistan; ⁴Rutgers - New Jersey Medical School; ⁵Children's National Hospital

S225: COMPARATIVE ANALYSIS OF SURGICAL DRILL ATTACHMENTS FOR ENHANCED MANEUVERABILITY IN SKULL BASE APPROACHES

- J. Manuel Revuelta Barbero; Youssef Zohdy; Alejandra Rodas; Edoardo Porto; Justin Maldonado; Tomas Garzon-Muvdi; Gustavo Pradilla; Emory University

S226: SUPRAORBITAL KEYHOLE AND SUPERIOR EYELID TRANSORBITAL ENDOSCOPIC APPROACHES TO THE IPSILATERAL OPTICOCAROTID CISTERN: AN ANATOMICAL COMPARATIVE ANALYSIS

- J. Manuel Revuelta Barbero; Youssef Zohdy; Alejandra Rodas; Edoardo Porto; Eduardo Medina; Justin Maldonado; Emily Barrow; Tomas Garzon-Muvdi; Gustavo Pradilla; Emory University

S227: QUANTITATIVE MEASUREMENTS FOR TRIGEMINAL NERVE TETHERING SECONDARY TO CYSTIC DEGENERATION OF VESTIBULAR SCHWANNOMAS: CLINICAL IMPLICATIONS.

- Maud Boreel, MD¹; [Krish Suresh, MD²](#); Jeffrey Guenette, MD²; Jayender Jagadeesan, PhD²; James Napels, MD³; Timothy Smith, MD, PhD⁴; Eduardo Corrales, MD¹; ¹Brigham and Women's Hospital-Division of Otolaryngology--Head and Neck surgery, Harvard Medical School, Boston, Massachusetts, United States; ²Brigham and Women's Hospital-Department of Radiology, Harvard Medical School, Boston, Massachusetts, United States; ³Beth Israel Hospital Division of Otolaryngology--Head and Neck surgery, Harvard Medical School, Boston, Massachusetts, United States; ⁴Brigham and Women's Hospital-Division of Neurosurgery, Harvard Medical School, Boston, Massachusetts, United States

7:30 am - 8:30 am

Proffered Papers 23: Miscellaneous - Tech, Outcomes and AI

M102

S228: DEMOGRAPHIC DISTRIBUTION OF CRANIOFACIAL FRACTURES: A 2022 NEISS DATABASE STUDY - [Samantha M. Shave, BS¹](#); Afash Haleem, BS²; Jean A Eloy, MD²; ¹Rutgers Robert Wood Johnson Medical School; ²Rutgers New Jersey Medical School

S229: MICROSURGICAL RESECTION VERSUS STEREOTACTIC RADIOSURGERY FOR TRIGEMINAL SCHWANNOMA: A METAANALYSIS OF 949 PATIENT TREATMENT OUTCOMES - [Hana Hallak¹](#); Luisa Figueredo²; Basel Jobeir¹; Hussam Abou-Al-Shaar³; Paul Gardner³; Imad Kanaan¹; ¹Department of Neurological Surgery, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia; ²Department of Neurological Surgery, New York University, NY, USA; ³Department of Neurological Surgery, University of Pittsburgh Medical Center, PA, USA

S230: FRAILTY INDEX IN SUPERIOR SEMICIRCULAR CANAL DEHISCENCE PATIENTS - [Taranjit Kaur, BS¹](#); Hong-Ho Yang, BS¹; Isaac Yang, MD²; Quinton S Gopen, MD¹; ¹UCLA Health Department of Head and Neck Surgery; ²UCLA Health Department of Neurosurgery

S231: USING AI CHATBOT IN PRODUCING NOVEL RESEARCH QUESTIONS IN SKULL-BASED SURGERY - Kevin Eid, MD¹; Deena Dahshan, MD²; Diane Wang, MD²; [Sairisheel G Reddy, MD²](#); Meghan Turner, MD²; Chadi Makary, MD²; John Nguyen, MD²; ¹Moran Eye Institute; ²West Virginia University

S232: UTILIZATION OF ADIPOSE-DERIVED STEM CELLS IN CRANIAL NERVE REGENERATION: A SYSTEMATIC REVIEW - [Nolan J Brown¹](#); Alex Aguirre²; Keanu Chee³; Alex Himstead¹; Mike Kortz³; ¹UC Irvine; ²University at Buffalo; ³University of Colorado

S233: NON-INVASIVE ASSESSMENT OF CSF DYNAMICS AFTER SKULL BASE TUMOR SURGERY: A FEASIBILITY STUDY - [Erin A. Yamamoto¹](#); Olabisi Sanusi¹; Dogan Aclan¹; Mathew Geltzeiler¹; Jay Gantz¹; Miranda M Lim¹; Jesse J Liu¹; Swati Levendovszky²; Juan Piantino¹; ¹OHSU - Oregon Health & Science University; ²University of Washington

S235: A RANDOM FOREST ALGORITHM FOR PREDICTION OF FUNCTIONAL OUTCOMES FOLLOWING MICROVASCULAR DECOMPRESSION FOR TRIGEMINAL NEURALGIA - [Sabrina M. Heman-Ackah, MD, DPhil, MSE](#); [Rachel Blue, MD](#); [Sonia Ajmera, MD](#); [John Lee, MD, MSCE](#); University of Pennsylvania, Department of Neurosurgery

S236: SURGICAL ERGONOMIC PILOT STUDY USING A POSTURE BIOFEEDBACK DEVICE IN RHINOLOGY: A MULTI-PHASE QUALITY IMPROVEMENT STUDY - [Shreya Mandloi, BS](#)¹; [Bita Naimi, BA](#)¹; [Emily Garvey, BA](#)¹; [Stephanie Hunter, PhD](#)²; [Alexander Duffy, MD](#)¹; [Samuel R Shing, BS, BA](#)¹; [Ayan Kumar, MD](#)¹; [Chase Kahn, MD](#)¹; [Lisa Bitton, BS](#)³; [Marc Rosen, MD](#)¹; [Elina Toskala, MD, PhD, MBA](#)¹; [Gurston Nyquist, MD](#)¹; [Mindy Rabinowitz, MD](#)¹

¹Department of Otolaryngology, Thomas Jefferson University Hospital, Philadelphia PA, USA; ²Monell Chemical Senses Center, Philadelphia PA, USA; ³Department of Occupational Therapy, Thomas Jefferson University Hospital, Philadelphia PA, USA

S237: CORRELATING MRNA EXPRESSION BETWEEN NEUROBLASTOMA CELL LINES AND PRIMARY TUMORS - [Brandon Lucke-Wold](#); University of Florida

S238: THYMIC SQUAMOUS CELL CARCINOMA AND BRAIN METASTASES: A CASE REPORT AND LITERATURE REVIEW - [Mariana Agudelo-Arrieta, MD](#)¹; [Maria Isabel Ocampo-Navia, MD](#)¹; [Maria Carolina Martinez, MD](#)²; [Maria Paula Rodriguez](#)³; [Isabella Lacouture](#)³; [Luis Fernando Jaramillo, MD](#)²; [Eugenio Aladin Meek-Benigni](#)²; [Oscar Hernando Feo-Lee, MD](#)¹; ¹Department of Neurosurgery, Hospital Universitario San Ignacio, Pontificia Universidad Javeriana; ²Department of Pathology, Hospital Universitario San Ignacio, Pontificia Universidad Javeriana; ³Neurosurgery Interest Group, Pontificia Universidad Javeriana

S239: RADIOGRAPHIC ESTIMATION OF SUPERIOR CANAL DEHISCENCE AREA AND SURGICAL OUTCOMES FOLLOWING THE MIDDLE FOSSA APPROACH - [Hong-Ho Yang, BS](#); [Isaac Yang, MD](#); [Quinton S Gopen, MD](#); David Geffen School of Medicine at UCLA

8:35 am - 9:35 am

Anterior & Orbit Track: Orbital Education Day Part 2: Margins In The Orbit: Fantasy or Reality?

Imperial Ballroom

Dr. Marc A. Cohen, Dr. Tanya Rath, Dr. Katherine Joan Williams, Dr. Jeremy F Tan, Dr. James C Fleming, Dr. Norbert Liebsch

This session will address the controversies of operating on and radiating neoplasms adjacent to and involving the orbit. Otolaryngologists, ophthalmologists, plastic surgeons, and neurosurgeons who operate at the anterior skull base should attend. Part of the session will be devoted to the particular considerations of orbital surgery in children.

At the conclusion of this session, attendees will be able to:

- » Predict via radiologic studies the likelihood of orbital involvement in skull base pathology.
- » Plan an appropriate method of orbital reconstruction after any level of surgical resection.
- » Design an orbit-sparing surgical plan when appropriate.
- » Infer from pathology and radiologic studies what will be the effect of surgery on a child's facial and visual development.

10:00 am - 11:00 am

Transorbital Endoscopic Skull Base Surgery

Imperial Ballroom

Dr. Doo-Sik Kong, Dr. Yong-Hwi Kim, Dr. Chang-Ki Hong, Dr. Ju Hyung Moon

Hosted by the Korean Society of Endoscopic Neurosurgeons (KOSEN)

This session will discuss recent advances in endoscopic transorbital approach and its utility in managing skull base tumors.

At the conclusion of this session, attendees will be able to:

- » Describe basic concepts and indications for endoscopic transorbital approaches.
- » Describe the scope and applications of endoscopic transorbital approaches.
- » Discussed management of various skull base pathology with the endoscopic transorbital approach.

8:35 am - 9:35 am

Proffered Papers 24: Vascular Video Session

M301

V021: KEYHOLE ENDOSCOPIC APPROACH FOR CLIP LIGATION OF A DURAL ARTERIOVENOUS FISTULA PRESENTING WITH TRIGEMINAL NEURALGIA

- Amna Hussein, MD; Nader Delavari, MD; Esteban Quiceno, MD; [Giovanni Barbagli, MD](#); Peter Nakaji, MD; Banner University Medical Center Phoenix University of Arizona, College of Medicine

V022: MICROSURGICAL RESECTION OF GIANT CAROTID BODY PARAGANGLIOMA WITH REPAIR OF INTRAOPERATIVE CAROTID ARTERY INJURY USING HEPARIN-COATED INTERPOSITIONAL GRAFT WITH PARACHUTE ANASTOMOSIS

- [Joseph M Wardell, MS](#)¹; Trong D Hyunh, MD²; Andrea L Castillo, MD¹; Amanda N Bosland, BS¹; Richard Chan Woo Park, MD³; Cindy Sturt, MD⁴; James K Liu, MD²; ¹Rutgers New Jersey Medical School; ²Department of Neurological Surgery, New Jersey Medical School; ³Department of Otolaryngology-Head and Neck Surgery, New Jersey Medical School; ⁴Department of Vascular Surgery, Cooperman Barnabas Medical Center

V023: EXPANDED ENDOSCOPIC ENDONASAL CLIPPING OF A GIANT CAVERNOUS CAROTID ANEURYSM

- [Shravan C Atluri, MHA](#)¹; Anthony Guidotti²; Ethan Cline²; Erin Reilly, MD¹; Ondrej Choutka, MD¹; ¹Saint Alphonsus Regional Medical Center; ²ICOM

V024: M2-M2 SIDE TO SIDE BYPASS FOR A CALCIFIED MCA ANEURYSM

- [Ali Alattar, MD, MAS](#); Bhuvic Patel, MD; Georgios Zenonos, MD; University of Pittsburgh Medical Center, Department of Neurological Surgery

V025: FAR MEDIAL APPROACH FOR CLIPPING OF VENTRAL RUPTURED PICA ANEURYSM

- [Bhuvic Patel, MD](#)¹; David Fernandez-Cabral, MD¹; Carl H Snyderman, MD, MBA²; Georgios A Zenonos, MD¹; ¹University of Pittsburgh Medical Center, Department of Neurological Surgery; ²University of Pittsburgh Medical Center, Department of Otolaryngology

V026: VESSEL TRANSPOSITION FOR MICROVASCULAR DECOMPRESSION: SLING AND SLING-LESS TECHNIQUES FOR TRIGEMINAL NEURALGIA

- [Ramin Morshed, MD](#); Edward Chang, MD; UCSF

V027: CLIPPING OF BILATERAL MCA ANEURYSMS NECESSITATING A CONTRALATERAL ANTERIOR CLINOIDECTOMY

- [David Fernandes Cabral, MD](#); Bhuvic Patel, MD; Mohammed S Ali, MD; Georgios A Zenonos, MD; University of Pittsburgh Medical Center, Department of Neurological Surgery

V028: EC-IC BYPASS AND TRAPPING OF GIANT CAVERNOUS CAROTID ANEURYSM WITH PRESERVATION OF OPHTHALMIC ARTERY AND SUCTION DECOMPRESSION

- [David Fernandes Cabral, MD](#); Bhuvic Patel, MD; Mohammed S Ali, MD; Maria Karampouga; Georgios A Zenonos, MD; University of Pittsburgh Medical Center, Department of Neurological Surgery

V029: USE OF REAL TIME SUPERIOR HYPOPHYSEAL ARTERY ICG ANGIOGRAM DURING ENDOSCOPIC RESECTION OF A THIRD VENTRICULAR CRANIOPHARYNGIOMA - [Ezequiel Goldschmidt](#); Jose Gurrola, MD; Milagros Troccoli, MD; UCSF

V030: LEFT OCCIPITAL ARTERY TO RIGHT P3 BYPASS WITH RADIAL INTERPOSITION GRAFT AND TRAPPING OF P3 ANEURYSM - [Bhuvic Patel](#), MD; Maria Karampouga; Georgios A Zenonos, MD; University of Pittsburgh Medical Center, Department of Neurological Surgery

V031: TRANSMASTOID TIP FAR LATERAL APPROACH WITH VERTEBRAL ARTERY TRANSPOSITION FOR FORAMEN MAGNUM MENINGIOMA - [Je Beom Hong](#), MD; Kangbuk Samsung Hospital

V032: MODIFIED ORBITOZYGOMATIC CRANIOTOMY, ANTERIOR CLINOIDECTOMY, AND RETROGRADE SUCTION DECOMPRESSION "DALLAS TECHNIQUE" FOR LARGE UNRUPTURED CLINOIDAL-OPHTHALMIC SEGMENT ANEURYSM - Kara A Parikh, MD¹; Vincent N Nguyen, MD¹; Eva Wu, MD²; Adam S Arthur, MD¹; L. Madison Michael, 2nd, MD¹; Nickalus R Khan, MD¹; ¹University of Tennessee/Semmes Murphey; ²University of Miami

8:35 am - 9:35 am

Proffered Papers 25: Pituitary Adenoma 4

M303

S240: CHANGES IN PITUITARY ADENOMA PATIENT PRESENTATION AND OUTCOMES DURING THE COVID PANDEMIC AT A PITUITARY CENTER OF EXCELLENCE - [Anthony Tang](#)¹; Hussein M Abdallah²; Yue-Fang Chang²; Georgios A Zenonos²; Garret Choby³; Eric W Wang³; Paul A Gardner²; Carl Snyderman³; ¹University of Pittsburgh, School of Medicine; ²University of Pittsburgh Medical Center, Department of Neurological Surgery; ³University of Pittsburgh Medical Center, Department of Otolaryngology-Head and Neck Surgery

S241: TREATMENT OF THE PATIENTS WITH GROWTH HORMONE-SECRETING ADENOMAS IN THE REGIONAL MEDICAL CENTER. COMPARISON WITH NATIONAL REGISTER. - [Bakhtiyar Pashaev](#), M, D¹; Gulnar Vagapova, M, D²; Arseniy Pichugin, M, D³; Andrey Alekseev, M, D¹; Artur Khafizov, M, D¹; Regina Ashimova²; ¹Interregional Clinical Diagnostic Center; ²Kazan State Medical Academy; ³Kazan State Medical University

S242: HYPERENHANCEMENT OF PITNETS ON PREOPERATIVE MRI: IMPLICATIONS ON TUMOR CHARACTERISTICS AND OUTCOMES - [Robert C Osorio](#), BS; Philip E Shih, BA; Lynn Leng, BA; Blanca Morales Lugo, BS; Shiv Gupta, BA; Philip V Theodosopoulos, MD; Sandeep Kunwar, MD; Jose Gurrola II, MD; Ivan H El-Sayed, MD; Lewis S Blevins Jr, MD; Manish K Aghi, MD, PhD; University of California, San Francisco

S243: PROGNOSTIC SIGNIFICANCE OF CROOKE CELL PITUITARY NEUROENDOCRINE TUMOR/ADENOMA SUBTYPE STATUS IN TIME TO RECURRENCE OF CORTICOTROPH TUMORS

- [Georgios A Maragkos, MD¹](#); Lena Young, DO²; Vince L Popolizio, BS³; Sean Runge, BS³; Angelica Fuentes, MD¹; Georgios Mantziaris, MD¹; Michael P Catalino, MD¹; Gregory K Hong, MD⁴; Mary-Lee Vance, MD⁴; Beatriz Lopes, MD, PhD²; John Jane Jr., MD⁵; ¹Department of Neurosurgery, University of Virginia; ²Department of Pathology, University of Virginia; ³University of Virginia School of Medicine; ⁴Department Medicine, Division of Endocrinology & Metabolism, University of Virginia; ⁵Department of Neurosurgery, Carilion Clinic

S244: CORRELATING PRE-OPERATIVE, OPERATIVE, AND POST-OPERATIVE FACTORS WITH SUCCESSFUL HORMONAL REMISSION IN CUSHING'S DISEASE FOLLOWING ENDOSCOPIC TRANSPHENOIDAL SURGERY: A SINGLE-CENTER RETROSPECTIVE ANALYSIS

- [Alex Renn](#); Zain Kashif; Max Yang; Gage Guerra; Racheal Peterson; Gabriel Zada; Department of Neurosurgery, Keck School of Medicine of the University of Southern California, Los Angeles, California

S245: SEVEN PITUITARY TRANSPOSITION TECHNIQUES:

TECHNICAL NUANCES AND CLINICAL APPLICATIONS - [Yuanzhi Xu, MD¹](#); Kumar Abhinav, MD¹; Christine K Lee, MD, PhD¹; Karam Asmaro, MD¹; Aaron A Cohen-Gadol, MD, MSc, MBA²; Juan C Fernandez-Miranda, MD¹; ¹Stanford Hospital; ²Neurosurgical Atlas

S246: PREDICTORS OF VENOUS THROMBOEMBOLISM IN PATIENTS RECEIVING ENDOSCOPIC PITUITARY ADENOMA RESECTION

- [Lily Huo](#); Tony Chung; Vikram Vasan; Alex Devarajan; Jonathan T Dullea; Rui Feng; Joshua Bederson; Raj K Shrivastava; Icahn School of Medicine at Mount Sinai

S247: PITUITARY MICROADENOMAS AND HEADACHE: DOES TRANSPHENOIDAL RESECTION HELP?

- [Zain Peeran, BS¹](#); Harmon Khela, BS²; Poojan Shukla, BS¹; Nisha Kaneriyaa²; Robert C Osorio, BS¹; Manish K Aghi, MD, PhD²; ¹School of Medicine, University of California San Francisco, San Francisco, CA, USA; ²Department of Neurological Surgery, University of California San Francisco, San Francisco, CA, USA

S248: PROGNOSTIC VALUE OF IMMEDIATE POSTOPERATIVE PROLACTIN FOLLOWING PROLACTINOMA RESECTION ON LONG-TERM REMISSION OF HYPERPROLACTINEMIA

- [Zain Peeran, BS¹](#); Tej Tummala²; Chris Kourkoulakos²; Jacob Young, MD²; Austin Lui, BS, MS²; Aarav Badani²; Harmon Khela, BS²; Aymen Kabir, BS¹; Robert C Osorio, BS¹; Manish K Aghi, MD, PhD²; ¹School of Medicine, University of California San Francisco, San Francisco, CA, USA; ²Department of Neurological Surgery, University of California San Francisco, San Francisco, CA, USA

S249: IMPACT OF THE AFFORDABLE CARE ACT ON DISPARITIES IN PITUITARY SURGERY - Somtochi I Okafor, MD; Kayla Kilpatrick, PhD; Katherine Gonzalez, BS; Maragatha Kuchibhatla, PhD; Alankrita Raghavan, MD; Jordan Komisarow, MD, FAAN; Ralph Abi Hachem, MD, MSc; David W Jang, MD; Nosayaba Osazuwa-Peters, BDS, PhD, MPH, CHES; Duke University Hospital

S250: PREDICTORS OF DOPAMINE AGONIST RESISTANCE IN PROLACTINOMAS - Youssef M Zohdy; K. Walkiria Zamudio-Coronado; Justin Maldonado; Alejandra Rodas; Samir Lohnar; Biran Patel; J. Manuel Revuelta Barbero; Ali Alawieh; Arman Jahangiri; Edoardo Porto; Emily Barrow; Gustavo Pradilla; Tomas Garzon-Muvdi; Emory University

8:35 am - 9:35 am

Proffered Papers 26: Reconstruction/CSF Leak 2

M304

S251: A NOVEL RECONSTRUCTION TECHNIQUE AFTER ENDOSCOPIC ENDONASAL SURGERY FOR SUPRASELLAR TUMORS: CLIPPING TECHNIQUE WITH ARTIFICIAL DURAL SUBSTITUTE WITHOUT NASOSEPTAL FLAP GRAFT - Euihyun Kim; Yonsei University College of Medicine

S252: THE EFFICACY OF BARIATRIC SURGERY REFERRAL IN PREVENTING CSF LEAK RECURRENCE FOLLOWING REPAIR - Adam S Vesole, MD¹; Edward J Doyle, MD²; Ravi N Samy, MD³; ¹University of Cincinnati College of Medicine, Department of Otolaryngology- Head & Neck Surgery; ²Cleveland Clinic, Department of Otolaryngology- Head & Neck Surgery; ³Lehigh Valley Health Network-LVHN, Otolaryngology-Head and Neck Surgery, Institute for Surgical Excellence

S253: RISK FACTORS FOR SPONTANEOUS CEREBROSPINAL FLUID LEAK IN PATIENTS WITH IDIOPATHIC INTRACRANIAL HYPERTENSION: A MULTI-NATIONAL DATABASE STUDY - Shreya Mandloi, BS¹; Samuel R Shing, BS, BA¹; Chase Kahn, MD¹; Alexander Duffy, MD¹; Peter A Benedict, MD¹; Bitu Naimi, BA¹; Emily Garvey, BA¹; Zachary Urdang, MD, PhD¹; Elina Toskala, MD, PhD, MBA¹; Mindy Rabinowitz, MD¹; Marc Rosen, MD¹; Christopher J Farrell, MD²; James J Evans, MD, FACS, FAANS²; Gurston Nyquist, MD¹; ¹Department of Otolaryngology, Thomas Jefferson University Hospital, Philadelphia PA, USA; ²Department of Neurosurgery, Thomas Jefferson University Hospital, Philadelphia PA, USA

S254: IMPACT OF PREVIOUS SURGERY AND/OR RADIATION THERAPY ON POSTOPERATIVE ENDOSCOPIC ENDONASAL MORBIDITY AT A HIGH-VOLUME TERTIARY CANCER CARE CENTER - R Snyder, MD; F Rubino, MD; S Su, MBBS; E Hanna, MD; F DeMonte, MD; S Raza, MD; Department of Neurosurgery and Head and Neck Surgery, The University of Texas M.D. Anderson Cancer Center, Houston, Texas

S255: THE INCIDENCE OF RADIOGRAPHIC MARKERS OF IDIOPATHIC INTRACRANIAL HYPERTENSION IN THOSE WITH SPONTANEOUS CSF LEAK - Chibueze Agwu; Jay Patel; Jesse Huang; Paramita Das, MD; University of Chicago

S256: VENOUS SINUS STENTING FOR CEREBROSPINAL FLUID LEAKS IN SETTING OF IDIOPATHIC INTRACRANIAL HYPERTENSION - AN INSTITUTIONAL REVIEW AND SYSTEMATIC REVIEW OF LITERATURE. - [Jaims Lim, MD¹](#);

Vinay Jaikumar, MBBS¹; Moleca Channam, MD¹; Ammad A Baig, MD¹; Hanna Algattas, MD¹; Elad I Levy, MD, MBA¹; Adnan H Siddiqui, MD, PhD¹; Kunal Vakharia, MD²; ¹University at Buffalo Neurosurgery; ²University of South Florida

S257: USE OF THE VASCULARIZED LATERAL NASAL WALL FLAP FOR CLOSURE OF COMPLEX SKULL BASE DEFECTS -

[Bhuvic Patel, MD¹](#); [Brandon R Rosvall, MD²](#); Garret W Choby, MD²; Georgios Zenonos, MD¹; Eric Wang, MD²; Paul A Gardner, MD¹; Carl H Snyderman, MD, MBA²; ¹University of Pittsburgh Medical Center, Department of Neurological Surgery; ²University of Pittsburgh Medical Center, Department of Otolaryngology

S258: MEDICALLY REFRACTORY IDIOPATHIC INTRACRANIAL HYPERTENSION VS IDIOPATHIC INTRACRANIAL HYPERTENSION WITH SPONTANEOUS CEREBROSPINAL FLUID LEAK: INSIGHTS BASED ON NEUROIMAGING - [Shreya Mandloi, BS¹](#);

Areeba Nisar, MD²; Samuel R Shing, BS, BA¹; Chase Kahn, MD¹; Alexander Duffy, MD¹; Peter A Benedict, MD¹; Kareem E Naamani, MD³; M. Reid Gooch, MD³; Hsiangkuo Yuan, MD, PhD²; Elina Toskala, MD, PhD, MBA¹; Christopher J Farrell, MD³; Mindy Rabinowitz, MD¹; Marc Rosen, MD¹; James J Evans, MD, FACS, FAANS³; Gurston Nyquist¹; ¹Department of Otolaryngology, Thomas Jefferson University Hospital, Philadelphia PA, USA; ²Department of Neurology, Thomas Jefferson University Hospital, Philadelphia PA, USA; ³Department of Neurosurgery, Thomas Jefferson University Hospital, Philadelphia PA, USA

S260: THE RISK OF CSF RHINORRHEA FROM EARLY INITIATION OF CPAP AFTER TRANSSPHEOIDAL SURGERY WITH AUTOLOGOUS ABDOMINAL FAT GRAFT REPAIR - [Leo J Kim, MD, PhD](#);

Robert C Rennert, MD; William T Couldwell; Department of Neurosurgery, University of Utah Health

S262: QUANTITATIVE ASSESSMENT OF A PERFUSION PUMP MODEL REPRESENTING INTRATHECAL PRESSURE IN A CADAVERIC MODEL - [Gabriella H Bal, BA¹](#);

Katarina Stephen, BS²; Franco Bochicchio³; Joel Kaye, MD¹; Oleksandr Komarov, MD⁴; Jonathan Forbes, MD¹; ¹University of Cincinnati College of Medicine; ²Loyola Stretch School of Medicine; ³University of Milan; ⁴Bogomolets National Medical University

8:35 am - 9:35 am

Proffered Papers 27: Training and Education/Surgical Approaches

M101

S263: EFFECT OF IRRIGATION ON MULTI-MODALITY INTRAOPERATIVE NEUROMONITORING DURING SKULL BASE SURGERY

- Allyson Eismont¹; Hussam Abou-Al-Shaar, MD²; Joshua Sunderlin¹; Andrew A McCall, MD³; Philip L Perez, MD³; Jeffrey R Balzer¹; Paul A Gardner, MD²; Georgios A Zenonos, MD²; ¹Procirca Neurological Services, University of Pittsburgh Medical Center, Pittsburgh, PA; ²Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA; ³Department of Otolaryngology, University of Pittsburgh Medical Center, Pittsburgh, PA

S264: CRANIO-ORBITAL APPROACHES FOR VASCULAR PATHOLOGY: APPROACH SELECTION AND TECHNICAL CONSIDERATIONS

- Kara A Parikh, MD; Mustafa Motiwala, MD; Vincent N Nguyen, MD; Taylor Orr; Nickalus R Khan, MD; University of Tennessee/Semmes Murphey

S265: INTRAOPERATIVE ULTRASOUND-ASSISTED ENDOSCOPIC ENDONASAL RESECTION OF A RATHKE'S CLEFT CYST IN AN ATYPICAL LOCATION, USING A NOVEL SMALL ULTRASOUND PROBE

- Mehdi Khaleghi; Bradley Otto; Ricardo Carrau; Daniel Prevedello; Ohio State University, Wexner Medical Center

S266: SURGICAL ANATOMY OF THE EXTREME LATERAL INFRAJUGULAR TRANSCONDYLAR (ELITE) APPROACH: COMPARISON BETWEEN THE ANTEROLATERAL AND DORSOLATERAL VARIANTS

- Estrella Barrero Ruiz; Mariana Agudelo-Arrieta; Alejandra Rodas; Biren Patel; Erion Jr de Andrade; Manuel Revuelta Barbero; Gustavo Pradilla; Department of Neurological Surgery Emory University School of Medicine

S267: FULL-SPECTRUM PHOTOGRAPHY IN SURGICAL NEUROANATOMY: ANATOMICAL NUANCES BEYOND THE NAKED EYE

- Roberto Rodriguez Rubio; Andre Payman; Ivan El-Sayed; UCSF

S268: SIMULTANEOUS VERSUS STAGED COMBINED ENDOSCOPIC ENDONASAL APPROACH FOR RESECTION OF COMPLEX SKULL BASE TUMORS

- Alix Bex, MD¹; Enrico Gambatesa, MD¹; Vera Vigo, MD, PhD¹; Thomas Johnstone¹; Felipe Constanzo, MD²; Juan Fernandez-Miranda¹; ¹Stanford University; ²Hospital Clinico Regional de Concepcion

S269: EXPLORING THE PSC- FR LINE TO ACCESS THE FORAMEN ROTUNDUM: A CADAVERIC STUDY

- Biren K Patel, MBBS, MS, MCh; Leonardo Tariciotti, MD; Erion Jr Andrade, MD; Manuel Revuelta, MD; Alejandra Rodas, MD; Justin Maldonado, BA; Tomas Garzon-Muvdi, MDFAANS; Gustavo Pradilla, MD, FAANS; Emory University

S270: STAGED REPAIR OF COMPLEX PAN-ORBITAL TRAUMA:

A NOVEL SURGICAL APPROACH - Arjav Shah, MD¹; Maureen B Beederman, MD²; Peleg Horowitz³; Hassan Shah¹; ¹University of Chicago Department of Ophthalmology; ²University of Chicago Department of Plastics and Reconstructive Surgery; ³University of Chicago Department of Neurological Surgery

S271: A NOVEL MODEL FOR ACQUISITION OF MICROSURGICAL SKILLS: A PILOT STUDY FOR JUNIOR RESIDENTS

- Alankrita Raghavan, MD; Alexander Suarez, MD; Jihad Abdelgadir, MD; Brandon Smith, MD; Duke

S272: COMPARING CHAT GPT-4 TO BARD FOR ACCURACY AND COMPLETENESS OF RESPONSES TO QUESTIONS DERIVED FROM THE INTERNATIONAL CONSENSUS STATEMENT ON

ENDOSCOPIC SKULL BASE SURGERY - Yavar Abgin, BA¹; Kayla Umemoto, BA¹; Sean Polster, MD²; Arthur W Wu, MD³; Andrew Goulian, BS, MPH¹; Christopher R Roxbury, MD²; Omar G Ahmed, MD⁴; Pranay Soni, MD⁵; Dennis M Tang, MS, MD³; ¹California Northstate University; ²University of Chicago; ³Cedars-Sinai Medical Center; ⁴Houston Methodist; ⁵Cleveland Clinic

8:35 am - 9:35 am

Proffered Papers 28: Miscellaneous - Rare Lesions and Skull Base Trends

M102

S274: COMPLICATIONS ASSOCIATED WITH AN EXTENSIVELY PNEUMATIZED SKULL BASE: SYSTEMATIC REVIEW AND

META-ANALYSIS - Kedar Patel¹; Karthik Pittala¹; Spencer Short, MD²; Amed Natour, MD²; Ravi N Samy, MD²; Sean M Parsel, DO²; ¹University of South Florida - Morsani College of Medicine; ²Lehigh Valley Health Network, Division of Otolaryngology-Head and Neck Surgery

S275: CLINICAL FEATURES AND SURGICAL OUTCOME IN THE PATIENTS WITH CENTRAL SKULL BASE OSTEOMYELITIS

- Jin Hyung Jung, MD; So Hee Kang, MD; Ji Heui Kim, MD, PhD; Department of Otorhinolaryngology-Head and Neck surgery, Asan Medical Center, University of Ulsan College of Medicine

S276: USING A NATIONWIDE INSURANCE DATABASE TO STUDY SKULL BASE TUMORS

- Sara Saleh, MD¹; Erin L McKean, MD, MBA²; ¹University of Michigan Department of Neurosurgery; ²University of Michigan Department of Otolaryngology

S277: EPILEPSY IN ASSOCIATION WITH GIANT SKULL BASE TUMORS: A RETROSPECTIVE CASE SERIES OF GIANT SKULL BASE TUMORS IN THE ANTERIOR FOSSA.

- Brandon M Edelbach, BS¹; Miguel A Lopez-Gonzalez, MD²; ¹Loma Linda University; ²Loma Linda University Hospital

S278: AREA DEPRIVATION INDEX IS ASSOCIATED WITH EXTENT OF DISEASE AT PRESENTATION IN INVERTED

PAPILLOMA - Alan Workman, MD, MTR; Panara Kush, MD; Shravan Asthana; David Lerner, MD; Dana Lopez; Jennifer Douglas, MD; Michael Kohanski, MD, PhD; Adappa Nithin, MD; Palmer James, MD; University of Pennsylvania

S279: FOURTH VENTRICULAR SOLITARY FIBROUS TUMOR: A LITERATURE REVIEW REGARDING A CASE REPORT OF THIS EXTREMELY RARE PATHOLOGY. - Mariana Agudelo-Arrieta¹; Sara Henao-Romero¹; Alex Taub-Krivoy¹; Julián Alfonso Sierra-Peña¹; Diana Valentina Ariza-Muñoz²; Eugenio Aladin Meek-Benigni²; Oscar Hernando Feo-Lee, MD¹; ¹Department of Neurosurgery, Hospital Universitario San Ignacio, Pontificia Universidad Javeriana; ²Department of Pathology, Hospital Universitario San Ignacio, Pontificia Universidad Javeriana

S280: EVALUATING THE QUALITY OF REPORTING AND TRANSPARENCY IN THE NEUROSURGICAL LITERATURE: HOW WELL ARE WE DOING? - Yifei Sun, BS¹; Evan Gross, BS¹; Mohammad A Hamo, BM¹; Rodrigo G Guillen²; Nicholas M Laskay, MD³; Travis J Atchley, MD³; James M Markert, MD, MPH³; Dagoberto E Ordonez, MD³; ¹Heersink School of Medicine, University of Alabama, Birmingham; ²University of Washington School of Medicine; ³Department of Neurosurgery, University of Alabama at Birmingham, Alabama

S281: CLINICAL MANAGEMENT OF CUTANEOUS HEAD AND NECK SQUAMOUS CELL CARCINOMA WITH TRIGEMINAL NERVE INVOLVEMENT: A SYSTEMATIC REVIEW - Justin J Maldonado, BA¹; Samir Lohana¹; Emily Barrow, MD¹; Jackson Vuncannon, MD¹; Youssef Zohdy, MD¹; Juan Manuel Revuelta-Barbero, MD, PhD¹; Alejandra Rodas, MD¹; Travis Atchley, MD²; Biren Patel¹; Tomas Garzon-Muvdi, MD, MSc¹; Gustavo Pradilla, MD¹; ¹Emory University; ²University of Alabama at Birmingham

S282: ANALYSIS OF UNPLANNED SURGERY FOLLOWING ENDOSCOPIC SKULL BASE SURGERY - Jakub Jarmula, BA; Tyler Merrill, MD; Troy Woodard, MD; Varun Kshettry, MD; Pablo Recinos, MD; Raj Sindwani, MD; Cleveland Clinic Foundation, Cleveland, OH

S283: REPEAT GAMMA KNIFE RADIOSURGERY FOR TRIGEMINAL NEURALGIA: A SINGLE INSTITUTIONAL EXPERIENCE - Bhargava Chitti, MD¹; Bin Gui, MD¹; Anthony Ma, PhD, Senior Physicist²; Ashwatha Narayana, MD, Chairman Radiation Oncology²; Danilo Silva, MD, Director of Neurosurgery³; ¹Northwell Health; ²Northern Westchester Hospital, Northwell Health; ³Phelps Hospital, Northwell Health

S284: PRESIDENTS OF THE NORTH AMERICAN SKULL BASE SOCIETY: ANALYSIS OF LEADERSHIP ATTRIBUTES AND INNOVATION - Tritan Plute, BS¹; Othman Bin-Alamer, MBBS²; Arka N Mallela, MD, MS²; Georgios A Zenonos, MD²; Eric W Wang, MD³; Paul A Gardner, MD²; William T Couldwell, MD, PhD⁴; Carl H Snyderman, MD, MBA³; Hussam Abou-Al-Shaar, MD²; ¹University of Pittsburgh School of Medicine, Pittsburgh, PA; ²Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA; ³Department of Otolaryngology, University of Pittsburgh Medical Center, Pittsburgh, PA; ⁴Department of Neurosurgery, Clinical Neurosciences Center, University of Utah, Salt Lake City, UT

10:05 am - 11:05 am **Proffered Papers 29: Vestibular Schwannoma 2**

M301

S285: ASSOCIATIONS BETWEEN NEUTROPHIL LYMPHOCYTE RATIO AND CRANIAL NERVE OUTCOMES IN SURGICALLY RESECTED VESTIBULAR SCHWANNOMAS - [Bryan Clampitt, BS¹](#); [Mehdi Rizk, BS¹](#); [Maryam Kazelka, BS¹](#); [Alexander Tai, MD²](#); [Harry van Loveren, MD³](#); [Siviero Agazzi, MD³](#); [Davide Croci, MD³](#);

¹USF Health Morsani College of Medicine, Tampa, Florida, USA; ²Washington Brain and Spine Institute, Washington, District of Columbia, USA; ³Department of Neurosurgery and Brain Repair, University of South Florida, Morsani College of Medicine, Tampa, Florida, USA

S286: BLINK REFLEX AND FACIAL NERVE OUTCOMES; USING A MACHINE LEARNING TOOL - [Jihad Abdelgadir, MD, MSc](#);

[Harrison Hockenberry](#); [Tanner Zachem](#); [Syed Adil, MD](#); [Daniel Sexton, MD](#); [Holly Johnson, MS, CNIM](#); [Patrick Codd, MD](#); [Rory Goodwin, MD, PhD](#); [Ali Zomorodi, MD](#); Duke University

S287: CYBERKNIFE-BASED STEREOTACTIC RADIOSURGERY FOR VESTIBULAR SCHWANNOMA: META-ANALYSIS OF LONG-TERM TUMOR CONTROL AND HEARING PRESERVATION OUTCOMES - [Nolan J Brown¹](#); [Oanh T Nguyen²](#); [Julian Gendreau³](#);

¹UC Irvine; ²UC Riverside; ³Johns Hopkins

S288: COLOSSAL COLLISION TUMORS OF THE SKULL BASE IN NF-2 PATIENTS: 14 YEARS' EXPERIENCE OF A COMPLEX SURGICAL TREATMENT PARADIGM - [Peyton L Nisson, MD¹](#);

[Steven Curry, MD²](#); [Dominic Chau, BS³](#); [William H Slattery, MD³](#); [Derald E Brackman, MD³](#); [Gregory P Lekovic, MD, PhD³](#); ¹Cedars Sinai; ²University of California Los Angeles; ³House Institute

S289: RESECTION OF VESTIBULAR SCHWANNOMAS WITH CN VII POSTERIOR TO THE TUMOR: SURGICAL TECHNIQUES AND CLINICAL OUTCOMES - [A. Yohan Alexander, BA¹](#); [Aaron R Plitt, MD²](#); [Lucas P Carlstrom, MD, PHD³](#); [Jamie J Van Gompel, MD⁴](#);

[Matthew L Carlson, MD⁴](#); [Brian A Neff, MD⁴](#); [Colin L Driscoll, MD⁴](#); [Maria Peris-Celda, MD, PHD⁴](#); [Michael J Link, MD⁴](#); ¹Mayo Clinic Department of Neurosurgery ; University of Minnesota Medical School; ²Mayo Clinic Department of Neurosurgery ; Department of Neurosurgery, Aurora Health Care; ³Mayo Clinic Department of Neurosurgery ; The Ohio State University Department of Neurosurgery; ⁴Mayo Clinic Department of Neurosurgery ; Mayo Clinic Department of Otorhinolaryngology

S290: ROLE OF NEUTROPHIL LYMPHOCYTE RATIO ON RADIOLOGICAL CHANGES OF THE MIDDLE CEREBRAL PEDUNCLE IN VESTIBULAR SCHWANNOMA - [Maryam Kazelka, BS¹](#); [Bryan Clampitt, BS¹](#); [Mehdi Rizk, BS¹](#); [Ivo Peto, MD²](#); [Alexander Tai, MD³](#); [Harry van Loveren, MD²](#); [Siviero Agazzi, MD²](#); [Davide Croci, MD²](#);

¹USF Health Morsani College of Medicine, Tampa, Florida, USA; ²Department of Neurosurgery and Brain Repair, University of South Florida, Morsani College of Medicine, Tampa, Florida, USA; ³Washington Brain and Spine Institute, Washington, District of Columbia, USA

S291: OUTCOMES AFTER STEREOTACTIC RADIOSURGERY FOR VESTIBULAR SCHWANNOMA

- [Heather J Smith](#); Jason Steele; Mana Espahbodi, MD; Neil Patel, MD; Richard Gurgel, MD; University of Utah

S292: CORRELATIONS BETWEEN CRANIAL NERVE V AND VII OUTCOMES AND PERIOPERATIVE RADIOLOGICAL MRI FLAIR CHANGES IN THE MIDDLE CEREBRAL PEDUNCLE OF SURGICALLY TREATED VESTIBULAR SCHWANNOMA PATIENTS

- [Mehdi Rizk, BS¹](#); Bryan Clampitt, BS¹; Maryam Kazelka, BS¹; Ivo Peto, MD²; Alexander Tai, MD³; Harry van Loveren, MD²; Siviero Agazzi, MD²; Davide Croci, MD²; ¹USF Health Morsani College of Medicine, Tampa, Florida, USA; ²Department of Neurosurgery and Brain Repair, University of South Florida, Morsani College of Medicine, Tampa, Florida, USA; ³Washington Brain and Spine Institute, Washington, District of Columbia, USA

S293: DEVELOPMENT AND VALIDATION OF A DECISION AID FOR NEWLY DIAGNOSED VESTIBULAR SCHWANNOMA PATIENTS

- [Ahmad O Odeh, BS¹](#); Devesh Malik, BS²; Nedim Durakovic, MD¹; Jay Piccirillo, MD¹; Dorina Kallogjeri, MD, MPH¹; Craig Buchman, MD¹; ¹Washington University in St. Louis; ²Yale School of Medicine

S294: PILOT STUDY EVALUATING UTILITY OF PSMA-PET FOR MANAGEMENT OF VESTIBULAR SCHWANNOMAS

- [Pavnesk Kumar, MD¹](#); Kyle Wu, MD¹; Daniel Prevedello, MD¹; Edward Dodson, MD¹; Divya Yadav, MD²; Rituraj Upadhyay, MD¹; Steven Pan²; Jonathan Knisely, MD²; Evan Thomas, MD, PhD¹; Raju Raval, MD, DPhil¹; Sasha J Beyer, MD, PhD¹; Adunka Oliver, MD¹; Jana Ivanidze, MD, PhD²; Joshua Palmer, MD¹; ¹Ohio State University; ²Weill Cornell Medicine

S295: A CLINICAL GUIDELINE DRIVEN AUTOMATED LINEAR FEATURE EXTRACTION FOR VESTIBULAR SCHWANNOMA

- [Navodini Wijethilake¹](#); Steve Connor²; Anna Oviedova²; Aaron Kujawa, PhD¹; Rebecca Burger²; Tom Vercauteren¹; Jonathan Shapey²; ¹School of BMEIS, King's College London, London, United Kingdom; ²King's College Hospital, London, United Kingdom

10:05 am - 11:05 am

Proffered Papers 30: Lateral Skull Base Video Session

M303

V033: KEYHOLE RETRACTORLESS RETROSIGMOID APPROACH FOR A LARGE CYSTIC VESTIBULAR SCHWANNOMA

- [Erion J de Andrade, MD](#); Pablo F Recinos, MD; Cleveland Clinic

V034: FUSION OF ENDOSCOPIC SURGICAL FIELD AND MICROSURGICAL DISSECTION: KEY STEPS TO PRESERVE CRITICAL PERFORATORS AND NEURAL STRUCTURES IN ENDOSCOPIC REMOVAL OF MENINGIOMAS

- [Hirotaka Hasegawa, MD, PhD¹](#); Yuki Shinya, MD, PhD²; Motoyuki Umekawa, MD¹; Naoyuki Shono, MD, PhD¹; Satoshi Koizumi, MD¹; Hironobu Nishijima, MD, PhD³; Kenji Kondo, MD, PhD³; Nobuhito Saito, MD, PhD¹; ¹Department of Neurosurgery, The University of Tokyo; ²Department of Neurologic Surgery, Mayo Clinic; ³Department of Otorhinolaryngology, The University of Tokyo

V035: SIMULTANEOUS VESTIBULAR SCHWANNOMA RESECTION AND COCHLEAR IMPLANTATION VIA A TRANSLABYRINTHINE APPROACH - [Robert J Macielak, MD](#); Vivian F Kaul, MD; Daniel M Prevedello, MD; Oliver F Adunka, MD, MBAQ; The Ohio State University Wexner Medical Center

V036: FACIAL NERVE SCHWANNOMA RESECTION AND AUDITORY BRAINSTEM IMPLANTATION VIA TRANSLABYRINTHINE APPROACH - [Samuel Barber, MD](#); Jared Robichaux, MD; Frank Culicchia, MD, FAANS; Moises Arriaga, MD, FACS; LSU School of Medicine

V037: RETROSIGMOID TRANS-TENTORIAL APPROACH (RSTTA) FOR RESECTION OF A TROCHLEAR SCHWANNOMA - [Rachel Blue, MD](#); [Sonia Ajmera, MD](#); [John YK Lee, MD, MSCE](#); University of Pennsylvania

V038: ENDOSCOPIC ENDONASAL REPAIR OF SPONTANEOUS CSF RHINORRHEA FOR EN PLAQUE MENINGIOMA: A CASE REPORT - [Moataz D Abouammo, MD, MSc¹](#); Maithrea S N., MBBS, MMED²; Mohammad Bilal Alsavaf, MD¹; Joshua Vignolles-Jeong, BA³; Daniel M Prevedello, MD, MBA⁴; Ricardo L Carrau, MD, MBA¹; ¹Department of Otolaryngology - Head and Neck Surgery, the Ohio State University Wexner Medical Center, Columbus, Ohio, USA; ²Department of Otolaryngology, Hospital Raja Permaisuri Bainun, Jalan Raja Ashman Shah, 30450 Ipoh, Perak, Malaysia; ³The Ohio State University Collage of Medicine; ⁴Department of Neurological Surgery, The Ohio State University Wexner Medical Center, Columbus, USA

V039: TROCHLEAR NERVE DECOMPRESSION VIA SUBOCCIPITAL SUPRACEREBELLAR INFRATENTORIAL APPROACH - [Joshua Vignolles-Jeong, BA¹](#); Guilherme Finger, MD²; Amanda Zakeri, MD²; Jonathan Tangsrivimol, MD²; Alexander Keister, BS¹; Kyle C Wu, MD²; Daniel M Prevedello, MD, MBA²; ¹The Ohio State University College of Medicine; ²The Ohio State University Department of Neurological Surgery

V040: POSTERIOR TRANSPETROSAL APPROACH TO A SUPRASELLAR RETROINFUNDIBULAR PITUITARY CYTOMA - [Tancredo Alcântara, MD, MSc¹](#); Jerold Justo, MD, MBA¹; Tingting Jiang, MD¹; Rosaria Abbritti, MD¹; Stefan Lieber, MD¹; Thibault Passeri, MD¹; Marc-Antoine Labeyrie, MD²; Sébastien Froelich, MD, PhD¹; ¹Neurosurgery Department, Lariboisière Hospital, Paris, France; ²Neuroradiology Department, Lariboisière Hospital, Paris

V041: SITTING SUPRACEREBELLAR INFRATENTORIAL ENDOSCOPIC RESECTION OF FALCOTENTORIAL MENINGIOMA - [Kevin Zhao, DO](#); Giovanni Barbagli, MD; Amna Hussein, MD; Peter Nakaji, MD; Michaela Lee, MD; Banner University Medical Center Phoenix University of Arizona, College of Medicine

V042: THE USE OF VIRTUAL REALITY FOR SURGICAL GUIDANCE IN A TWO-STAGED COMBINED PETROSAL APPROACH FOR RESECTION OF A PETROCLIVAL MENINGIOMA: CASE REPORT - [Hayes Patrick, MD](#); Peter Harris, MD; Myra Zaheer; Ashkan Monfared, MD; Daniel Donoho, MD; George Washington University

V043: RESECTION OF A PARASAGITTAL MENINGIOMA INVOLVING THE SUPERIOR SAGITTAL SINUS AND TORCULA: SURGICAL TECHNIQUE - [Caroline Hadley, MD](#); Madeline Greil, MD; Lalgam Sekhar, MD; University of Washington Department of Neurosurgery

V044: MODIFIED FISCH A APPROACH FOR RESECTION OF RECURRENT JUGULAR FORAMEN MENINGIOMA - [Olivia A. Kalmanson, MD, MS](#); Omaditya Khanna, MD; Samy Youssef, MD, PhD; Ashley Nassiri, MD, MBA; University of Colorado School of Medicine

10:05 am - 11:05 am **Proffered Papers 31: Endoscopic Skull Base and Reconstruction Video Session**

M304

V045: TRANSORBITAL NEUROENDOSCOPIC REPAIR OF A FRONTAL SINUS ENCEPHALOCELE - [Neal R Godse, MD¹](#); Tyler Merrill²; Raj Sindwani, MD²; Troy D Woodard, MD²; Varun R Kshetry²; ¹University of Minnesota; ²Cleveland Clinic Foundation

V046: MINI-EXTENDED NASOSEPTAL FLAP FOR RECONSTRUCTION OF SELLAR TO PLANUM SPHENOIDALE SKULL BASE DEFECTS - [Ryan Rimmer, MD](#); R. Peter Manes, MD; Bulent Omay, MD; Yale School of Medicine

V047: "COLD STEEL": ENDOSCOPIC TRANS-CLIVAL AND NASOPHARYNGEAL APPROACH FOR REMOVAL OF A PENETRATING BLOW DART AND SKULL BASE RECONSTRUCTION - [Satyan B Sreenath, MD](#); Matthew P Partain, MD; Kaete A Archer, MD; Mitesh Shah, MD; Indiana University School of Medicine

V048: USE OF A SEPTAL STAPLER TO SECURE A FREE MUCOSAL GRAFT TO THE NASOSEPTAL FLAP DONOR SITE FOLLOWING ENDOSCOPIC ENDONASAL RESECTION OF A PITUITARY ADENOMA - [Jessa E Miller, MD](#); Jakob L Fischer, MD; Marilene B Wang, MD; University of California, Los Angeles

V049: TAILORED APPROACHES TO NASOSEPTAL FLAP REUTILIZATION: NAVIGATING CHALLENGES IN REDO ENDOSCOPIC PITUITARY SURGERIES - [Weerawong Sangphosuk, MD¹](#); Raphael Machado, MD¹; Gelareh Zadeh, MD, PhD¹; Eric Monteiro, MD, MSc²; Aristotelis Kalyvas, MD, MSc, PhD¹; ¹Toronto Western Hospital; ²Mount Sinai Hospital

V050: FEASIBILITY OF ENDOSCOPIC ENDONASAL APPROACH FOR INTERNAL CAROTID ARTERY LIGATION: CADAVERIC STUDY AND CASE REPORT - [Sung-Woo Cho, MD¹](#); Seung Koo Yang, MD²; Tae-Bin Won, MD, PhD²; ¹Seoul National University Bundang Hospital; ²Seoul National University Hospital

V051: CAVERNOUS SINUS EXENTERATION FOR INVASIVE MUCORMYCOSIS - [Christine K Lee, MD, PhD](#); Enrico Gambatesa, MD; Michael T Chang, MD; Nancy J Fischbein, MD; Gary K Steinberg, MD, PhD; Juan C Fernandez-Miranda, MD; Stanford University

V052: TRANSPTERYGOID TRANSCAVERNOUS APPROACH FOR RESECTION OF PREVIOUSLY RADIATED RECURRENT CHORDOMA WITH TEMPOROPARIETAL FASCIA FLAP RECONSTRUCTION - [Jacob Pawloski](#); Jacob Eide; Amrita Ray; Jack Rock; John Craig; Karam Asmaro; Henry Ford Health

V053: "TEAM WORK MAKES THE DREAM WORK": ENDOSCOPIC CLIVAL CHORDOMA RESECTION WITH SERRATUS FREE FLAP RECONSTRUCTION FOR CSF LEAK - [Satyan B Sreenath, MD](#); Avinash Mantravadi, MD; Jonathan Y Ting; Mitesh Shah, MD; Indiana University School of Medicine

V054: MONONOSTRIL CONTRALATERAL CHOPSTICKS TECHNIQUE TO PETROUS APEX AND CLIVAL LESIONS - [Jerold Justo, MD, MBA](#); Tancredo Alcantara, MD, MSc; Tingting Jiang, MD; Thibault Passeri, MD; Rosaria Viola Abbritti, MD; Sebastien Froelich, MD, PhD; Assistance Publique-Hôpitaux de Paris, Hôpital Lariboisière

V055: COMBINED APPROACH FOR THE MANAGEMENT OF A SEVERE VENTRAL BRAINSTEM COMPRESSION: ENDOSCOPIC ENDONASAL ODONTOIDECTOMY FOLLOWED BY POSTERIOR DECOMPRESSION WITH FUSION - [Erion J de Andrade, MD](#); Kody Bolk, MD; Biren Patel, MD; Leonardo Tariciotti, MD; Arturo Solares; Tomas Garzon-Muvdi, MD; Gustavo Pradilla, MD; Emory University

V056: "KNOTLESS" WATERTIGHT CONTINUOUS DURAL SUTURING FOR ENDOSCOPIC SKULL BASE RECONSTRUCTION: TECHNICAL NUANCES AND SELECTION OF SUTURES - [Hirotaka Hasegawa, MD, PhD](#)¹; Yuki Shinya, MD, PhD²; Motoyuki Umekawa, MD¹; Kenya Kobayashi, MD, PhD³; Yuki Saito, MD, PhD³; Nobuhito Saito, MD, PhD¹; ¹Department of Neurosurgery, The University of Tokyo; ²Department of Neurologic Surgery, Mayo Clinic; ³Department of Otorhinolaryngology, The University of Tokyo

10:05 am - 11:05 am

Proffered Papers 32: Training and Education/Value Based Care

M101

S296: PRICE TRANSPARENCY IN SKULL BASE SURGERY: THE PRICE TO OPERATE - [Shrey Patel, MS](#)¹; Julianna Mastropierro¹; Genevieve Spagnuolo, MD²; Jacob Kosarchuk, MD³; Julian Wu, MD³; Carl Heilman, MD³; Kathryn Noonan, MD²; ¹Tufts University School of Medicine; ²Tufts Medical Center Department of Otolaryngology - Head and Neck Surgery; ³Tufts Medical Center Department of Neurological Surgery

S297: WHAT'S WRONG WITH MENTORSHIP IN SKULL BASE SURGERY AND WHAT NEEDS TO CHANGE - [Janissardhar Skulsampaopol, MD](#)¹; Sylvia Shitsama, MD²; Michael D Cusimano, MD, MHPE, FRCSC, DABNS, PhD, FACS¹; ¹St. Michael's Hospital, University of Toronto; ²Jomo Kenyatta University of Agriculture and Technology, Kenya

S298: ORAL AND GENERAL-HEALTH QUALITY OF LIFE FOLLOWING A SUBTEMPORAL PREAURICULAR INFRATEMPORAL APPROACH WITH CONDYLAR FOSSA OSTEOTOMY IN SURGICAL SKULL-BASE TUMOR RESECTION

- Seika Taniguchi¹; [Jeremy Kam](#), MBBS, MMED, FRACS²; Mendel Castle-Kirsbaum, MBBS, PhD³; Serge Makarenko, MD, FRCSC²; Ryojo Akagami, MD, BSc, MHSc, FRCSC²; ¹Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada; ²Department of Neurosurgery, Vancouver General Hospital, Vancouver, BC, Canada; ³Department of Neurosurgery, Monash Medical Centre, Melbourne, Victoria, Australia

S299: INCREASED ANXIETY AND DEPRESSION AFTER SELLAR SURGERY. IS OXYTOCIN THE CULPRIT? - [Josephine Levy](#), MSc¹

Olufisayo Adeyina, BSc²; Stephanie Robert, MD, PhD²; Ryan Rimmer, MD²; Silvio Inzucchi, MD²; Helena Rutherford, PhD³; Bulent Omay, MD²; ¹Yale School of Medicine - Neurosurgery Department, Child Study Center; ²Yale School of Medicine - Neurosurgery Department; ³Yale School of Medicine - Child Study Center

S300: LONGITUDINAL QUALITY OF LIFE OUTCOMES OF SKULL-BASE CHONDROSARCOMA PATIENTS FOLLOWING SURGICAL RESECTION - [Seika Taniguchi](#)¹

Jeremy Kam, MBBS, MMED, FRACS²; Mendel Castle-Kirsbaum, MBBS, PhD³; Ryojo Akagami, BSc, MSc, MD, FRCSC²; ¹Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada; ²Department of Neurosurgery, Vancouver General Hospital, Vancouver, BC, Canada; ³Department of Neurosurgery, Monash Medical Centre, Melbourne, Victoria, Australia

S301: UTILIZING SMARTPHONE AND WEARABLE ACTIVITY MONITORING OF MOBILITY CHANGES AS A MARKER FOR RECOVERY AFTER SKULL BASE SURGERY - [Ronald Wang](#), BS

Justin Cottrell, MD; Emily Kay-Rivest, MD; Seth Lieberman, MD; Janine D'Agrosa, ANPBC; Daniel Jethanamest, MD; David R Friedmann, MD; Sean O McMenomey, MD; J. Thomas Roland Jr., MD; Chandra Sen, MD; John G Golfinos, MD; Donato R Pacione, MD; NYU Langone Health

S302: MODELING NASAL SEPTAL FLAP REPAIR OF AN ANTERIOR SKULL BASE DEFECT: A PILOT SIMULATION STUDY

- [Amber Cradeur](#), BS; Mark I Knackstedt, MD; Mackenzie Latour, MD; Michael T Yim, MD, FACS; LSU Health and Science Center Shreveport

S303: HEALTH DISPARITIES IN THE NEUROSURGICAL CARE OF PATIENTS WITH TRIGEMINAL NEURALGIA - [Maikerly Reyes](#), BS¹

India Shelley, BS¹; Shreya Vinjamuri, BS¹; Amanda Bingaman, BS²; Allison Kayne, BS¹; Patrick Kelly, MD³; David Bray, MD³; James J Evans, MD³; ¹Sidney Kimmel Medical College at Thomas Jefferson University; ²Case Western University; ³Thomas Jefferson University Hospital Department of Neurosurgery

S304: RHINOGENIC HEADACHES: AN IN-DEPTH EXPLORATION OF SINONASAL ANATOMY, RADIOLOGICAL NUANCES, AND CLINICAL IMPLICATIONS - [Alexander Sasse, Mr](#); Ryan Rimmer; Claudia Kirsch; Yale School of Medicine

S305: AN INSTITUTIONAL EXPERIENCE IN APPLYING QUALITY IMPROVEMENT MEASURES TO PITUITARY SURGERY: CLINICAL AND RESOURCE IMPLICATIONS - [Panayiotis E Pelargos, MD](#)¹; Aamr Hasanjee, BS²; Benjamin Lee¹; Audrey Grossen¹; Matthew Baier¹; Kiana Prather¹; Xiaochun Kyle Zhao¹; Prince Ohene-Nyako²; Amanda Kate McDaniel¹; Kibwei McKinney²; Christopher Graffeo¹; Edward El Rassi²; Ian Dunn¹; ¹University of Oklahoma, Department of Neurosurgery; ²University of Oklahoma, Department of Otolaryngology - Head and Neck Surgery

S306: INSTRUMENT TRACKING AS A MODALITY FOR DETERMINING SURGICAL AUTONOMY AND PROGRESSION IN ENDOSCOPIC ENDONASAL SURGERY - [Alankrita Raghavan, MD](#); Alexander Suarez, MD; Tanner J Zachem, BSE; Somtochi Okafor, MD; Jihad Abdelgadir, MD; David Jang; Ralph A Hachem, MD; Patrick J Codd, MD; Duke University

S307: CREATING HYPERREALISTIC NEUROANATOMICAL VOLUMETRIC MODELS WITH ARTIFICIAL INTELLIGENCE: A FUSION OF PHOTOGRAMMETRY CONCEPTS AND INSTANT NERF - [Roberto Rodriguez Rubio](#); Andre Payman; Ivan El-Sayed; UCSF

10:05 am - 11:05 am **Proffered Papers 33: Vascular 2**

M102

S308: INFRATENTORIAL DURAL ARTERIOVENOUS FISTULAS - MICROSURGICAL ANATOMY AND TECHNIQUES. - Jorge Rios-Zermeno, MD; Viola Bartoletti, MD; [Andre Payman, BS](#); Nicolo Norri, MD; Adib Abla, MD; Roberto Rodriguez Rubio, MD; University of California San Francisco

S309: UNRUPTURED INTRACRANIAL ANEURYSM CO-EXISTING WITH PITUITARY TUMORS: A SYSTEMATIC REVIEW - [Biren K Patel, MS, MCh](#); Silvia Vergara, MD; Samir Lohana; Leonardo Tariciotti, MD; Mariana Arrieta; Estrella Barrero; Justin Maldonado; Erion Jr De Andrade; Manuel Reuvelta; Tomas Garzon, MD, FAANS; Gustavo Pradilla, MD, FAANS; Emory University

S310: MICROSURGICAL RESECTION OF BRAINSTEM CAVERNOMAS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF COMPLICATIONS AND OUTCOMES - Ibrahim Albalkhi¹;

Areez Shafqat²; Othman Bin-Alamer, MBBS³; Arka N Mallela, MD, MS³; Chloe Kuminkoski, BS³; Mohamed A Labib, MD⁴; Michael J Lang, MD³; Michael T Lawton, MD⁵; Jacques J Morcos, MD⁶; William T Couldwell, MD, PhD⁷; Hussam Abou-Al-Shaar, MD³; ¹Department of Neuroradiology, Great Ormond Street Hospital NHS Foundation Trust, London, United Kingdom; ²College of Medicine, Alfaisal University, Riyadh, Saudi Arabia; ³Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA; ⁴Department of Neurosurgery, University of Maryland School of Medicine, Baltimore, Maryland, USA; ⁵Department of Neurosurgery, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, Phoenix, Arizona, USA; ⁶Department of Neurological Surgery, University of Miami School of Medicine, Miami, Florida, USA; ⁷Department of Neurosurgery, Clinical Neurosciences Center, University of Utah, Salt Lake City, Utah, USA

S311: ACUTE DEVELOPMENT OF TRAUMATIC INTRACRANIAL ANEURYSMS IN CIVILIAN GUNSHOT WOUNDS TO THE HEAD - Riccardo Serra;

Chixiang Chen; Wilhelmy Bradley; Jesse Stokum, MD, PhD; Oliver Jeffrey, MD; Gary Schwartzbauer, MD, PhD; Bizhan Aarabi, MD; University of Maryland Medical Center

S312: SIMULATION OF MANAGEMENT OF INTERNAL CAROTID ARTERY INJURY IN ENDOSCOPIC SINUS SURGERY - Neil Verma,

MDCM, MSc; Danielle Nichols; John Lee, MD, MSc; Amr Hamour, MD, MBT; Allan Vescan, MD, MSc; University of Toronto

S313: INSIGHTS INTO DORSOLATERAL VARIANT OF THE EXTREME LATERAL INFRAJUGULAR TRANSCONDYLAR (ELITE) APPROACH: A DESCRIPTIVE CADAVERIC STUDY - Mariana

Agudelo-Arrieta; Estrella Barrero; Biren Patel; Erion Jr de Andrade; Alejandra Rodas; Manuel Revuelta-Barbero; Youssef Zohdy; Arturo Solares; Tomas Garzon-Muvdi; Gustavo Pradilla; Skull Base Laboratory, Emory University

S314: CEREBRAL VASOSPASM FOLLOWING SKULL BASE TUMOR RESECTION - Ehsan Dowlati, MD¹;

Josef Williams, BS²; Sarah Lucas, BS²; Samir Sur, MD²; Amjad Anaizi, MD²; Vinay Deshmukh, MD²; Daniel R Felbaum, MD²; ¹University of Michigan; ²MedStar Georgetown University Hospital

S315: MANAGEMENT OF BRAIN STEM CAVERNOMAS IN SETTING OF MULTIPLE INTRACRANIAL CAVERNOMAS (A RETROSPECTIVE ANALYSIS OF SINGLE INSTITUTIONAL EXPERIENCE.) - Abdulla Alobaid, MD¹;

Mohammed Alaswad, MD¹; Ahmed Elkholy, MD¹; Abdunasser Alwably, MD²; Rakan Shaheen, MD²; Shaimaa Jamous, MD²; Hana Hallak, MD³; ¹King Fahad Medical City; ²Dar Al Uloom University. Riyadh, Kingdom of Saudi Arabia.; ³King Faisal Specialist Hospital

S316: ARTERY OF PERCHERON STROKE FOLLOWING

ENDOSCOPIC PITUITARY SURGERY - [Andrea Boschi, MD¹](#);

[Antonio Pisano, MD¹](#); [Anastasia Galletti, MD¹](#); [Giovanni Barbagli,](#)

[MD²](#); [Enrico Fainardi, MD³](#); [Alessandro Della Puppa, MD³](#);

¹Neurosurgery, Department of NEUROFARBA, Careggi University

Hospital, Florence, Italy; ²Banner University Medical Center

Phoenix University of Arizona, College of Medicine; ³Department

of Experimental and Clinical Biomedical Sciences, University of

Florence, Florence, Italy

S317: ASSESSMENT OF CAROTID VASCULITIS IN HEAD AND NECK CANCER PATIENTS FOLLOWING INDIVIDUAL PROTON/PHOTON RADIATION THERAPY AND COMBINED THERAPY

USING 18F-FDG PET/CT IMAGING - [Om H Gandhi](#); [Sarth Shah](#);

[Emmaline Wittwer](#); [Jaskeerat Gujral](#); [Omar Al-Daoud](#); [Moein](#)

[Moradpour](#); [William Y Raynor, MD](#); [Tom Werner](#); [Abass Alavi,](#)

[MD](#); Department of Radiology, Hospital of the University of

Pennsylvania

S319: VERTEBRAL ARTERY BYPASS VIA FAR LATERAL APPROACH FOR CERVICAL SPINAL CORD TUMOR RESECTION

- [Jihad Abdelgadir](#); [David Sykes](#); [Muhammad Abd-El-Barr](#); [Rory](#)

[Goodwin](#); [Ali Zomorodi](#); [Duke](#)

11:10 am - 12:10 pm

Proffered Papers 34: Sella/Suprasella and Orbit

Imperial
Ballroom

S320: ECTOPIC CRANIOPHARYNGIOMA IN ADULTS - [Silvia M](#)

[Vergara, MD¹](#); [Justin Maldonado, BA¹](#); [Leonardo Tariciotti, MD¹](#);

[Felipe Gutierrez Pineda, MD²](#); [Samir Lohana¹](#); [Tomas Garzon-](#)

[Muvdi, MD¹](#); [Gustavo Pradilla, MD¹](#); ¹Emory University; ²University of

Antioquia

S321: SURGICAL OUTCOMES IN PATIENTS WITH ADULT-ONSET CRANIOPHARYNGIOMA: CRANIOTOMY VERSUS ENDOSCOPIC ENDONASAL TRANSSPHENOIDAL SURGERY - [Evgeniya Tyrtova,](#)

[MD¹](#); [Zirun Zhao, MD¹](#); [Shreya Swaminathan²](#); [Jessica Eaton, MD¹](#);

[Thomas Hanks¹](#); [Spencer Raub¹](#); [Samuel Emerson, MD, PhD¹](#);

[Jacob Ruzevick, MD¹](#); [Manuel Ferreira, MD, PhD¹](#); ¹University of

Washington; ²Thomas Jefferson University

S322: TRENDS AND COMPLICATIONS IN ENDOSCOPIC AND OPEN APPROACHES TO ORBITAL DECOMPRESSION SURGERY IN THE US: ANALYSIS OF THE TRINETX DATABASE - [Benjamin F](#)

[Bitner, MD¹](#); [Theodore V Nguyen, BS¹](#); [Jonathan C Pang, MS¹](#); [Arash](#)

[Abiri, MS¹](#); [Christopher R Dermakarian, MD²](#); [Edward C Kuan,](#)

[MD, MBA¹](#); ¹University of California Irvine Medical Center; ²Duke

University

S323: EARLY EXPERIENCE WITH THE SUPRAORBITAL KEYHOLE CRANIOTOMY THROUGH AN EYEBROW INCISION. -

[Youngbeom Seo, MD](#); [Yeungnam University Hospital](#)

S324: ENDOSCOPIC TRANSORBITAL-SUPRAORBITAL COMBINED APPROACH THROUGH AN EYELID INCISION FOR POTT PUFFY TUMOR - [Kiana Y Prather](#)¹; Lacy S Brame, DO²; Avigeet Gupta, MD³; Anirhudda C Parikh, MD³; Jeremy F Tan, MD⁴; Kibwei A McKinney, MD³; Christopher S Graffeo, MD, MS¹; ¹Department of Neurosurgery, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ²Department of Otolaryngology - Head and Neck Surgery, Oklahoma State University Center for Health Sciences, Tulsa, OK; ³Department of Otolaryngology - Head and Neck Surgery, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ⁴Dean McGee Eye Institute & Department of Ophthalmology, University of Oklahoma College of Medicine, Oklahoma City, OK

S325: PENETRATING TRANSORBITAL BRAIN INJURY: CASE SERIES AND LITERATURE REVIEW - Daniel-Felipe Ruiz-Pérez, MD¹; Michelle Ruiz-Pérez, MD¹; Andres-Felipe Pineda-Martinez, MD²; Juliana Mayorga-Corvacho, MD²; Cristhian Barrera-Guzmán, MD¹; Alberto Daza-Ovalle, MD³; Oscar Gutiérrez, MD⁴; Leonardo Palacios-Sánchez, MD²; William M. Riveros-Castillo, MD, MsC⁵; [Javier M. Saavedra, MD, MsC](#)³; ¹Centro De Investigacion Y Entreamiento En Neurocirugía; ²Universidad del Rosario, School of Medicine; ³Neurosurgery Department, Hospital Universitario Mayor Mederi, Bogotá, Colombia.; ⁴Department of Neurological Surgery, Hospital de Kennedy, Bogotá, Colombia.; ⁵Department of Neurological Surgery, Hospital Universitario de la Samaritana, Bogotá, Colombia.

S326: THE V-BRIDGE RECONSTRUCTION TECHNIQUE FOR SECURING THE PERICRANIAL FLAP IN COMBINED TRANSBASAL/ENDOSCOPIC ENDONASAL APPROACHES: TECHNICAL NOTE AND EXPERIENCE IN SIX CASES - [Meghna Bhattacharyya, MD](#)¹; Andrea L Castillo, MD¹; Jean Anderson Eloy, MD²; James K Liu, MD³; ¹Rutgers New Jersey Medical School; ²Department of Otolaryngology-Head and Neck Surgery, New Jersey Medical School.; ³Department of Neurological Surgery, New Jersey Medical School

S327: THE EYELID TRANSORBITAL PRETEMPORAL APPROACH AND MODIFIED ORBITO-ZYGOMATIC APPROACH TO THE ANTERIOR COMMUNICATING ARTERY COMPLEX: A QUANTITATIVE CADAVERIC COMPARATIVE ANALYSIS - [Xiaochun Zhao](#); Alexander Evens; Ian Dunn; Panayiotis Pelargos; Christopher Graffeo; Andrew Bauer; University of Oklahoma

S328: TRANSSPHEOIDAL SURGERY IN CRANIOPHARYNGIOMA PATIENTS: OUTCOMES STRATIFIED BY TUMOR SUBTYPE - [Kaasinath Balagurunath, BA](#); Christopher S Hong, MD; Sauradeep Sarkar, MBBS; Michelle Robbins, BS; Jakob Gerstl, MBBS; Carleton E Corrales, MD; Timothy R Smith, MD, PhD, MPH; Brigham and Women's Hospital

S329: REPOSITORY CORTICOTROPIN INJECTION (ACTHAR® GEL) RESOLVING RECURRENT IDIOPATHIC ORBITAL MYOSITIS: A CASE REPORT - Christopher P Cheng¹; [Tony Chung](#)¹; James G Chelnis²; ¹Icahn School of Medicine at Mount Sinai; ²Manhattan Face and Eye

S331: COMPREHENSIVE META-ANALYSIS ASSESSING SURGICAL RESECTION APPROACHES FOR OLFACTORY GROOVE MENINGIOMAS: A COMPARATIVE ANALYSIS OF OUTCOMES. - Estephania Candelo, MD, MSc; Srivatsa S Vasudevan, MD; Kaisorn Chaichana, MD; Angela M Donaldson, MD; Mayo Clinic Florida

11:10 am - 12:10 pm

Proffered Papers 35: Meningioma 3

M301

S332: SEIZURES FOLLOWING PROTON BEAM THERAPY FOR MENINGIOMAS: CASE SERIES AND SYSTEMATIC REVIEW OF THE LITERATURE - Travis J Atchley, MD¹; Matthew Jarrell, BS²; Dagoberto Estevez-Ordonez, MD¹; Nicholas Laskay, MD¹; Kristen Riley, MD¹; Philip Schmalz, MD¹; ¹University of Alabama at Birmingham Health System; ²University of Alabama at Birmingham Heersink School of Medicine

S334: THE EFFICACY OF PREOPERATIVE MENINGIOMA EMBOLIZATION IN DECREASING OPERATIVE ESTIMATED BLOOD LOSS - Ahmad Alhourani; Philip B Ostrov, MD; Dale Ding; Isaac J Abecassis; Akshitkumar M Mistry; Brian J Williams; University of Louisville

S335: LATERAL SPHENOID WING MENINGIOMA RESECTION WITH PRESERVATION OF BILATERAL COCHLEAR IMPLANTS

- David Mahan, BS¹; Ghaidaa Ebrahim, BS²; Sandra C Yan, MD²; Si Chen, MD³; Maryam Rahman, MD, MS, FAANS²; ¹University of Florida College of Medicine; ²Lillian S. Wells Department of Neurosurgery - University of Florida; ³University of Florida Department of Otolaryngology - Head & Neck Surgery

S336: SECONDARY MALIGNANCIES IN PATIENTS WITH MENINGIOMA: A SURVEILLANCE, EPIDEMIOLOGY, AND END RESULTS (SEER) DATA ANALYSIS - Maxwell W Pickles, BA¹; Thomas Z Rohan, BS¹; David P Bray, MD, MSc²; James J Evans, MD²; ¹Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA; ²Department of Neurological Surgery, Thomas Jefferson University, Philadelphia, PA

S337: FRAILTY DOES NOT IMPACT POSTOPERATIVE OUTCOMES IN EXTENDED ENDONASAL APPROACHES FOR OLFACTORY GROOVE MENINGIOMAS COMPARED WITH OPEN CRANIOTOMY - Sonia Ajmera, MD; Om H Gandhi; Rachel Blue, MD; Jennifer Douglas, MD; Christina Jackson, MD; Nithin Adappa, MD; James N Palmer, MD; Rashad Jabarkheel, MD; John Y Lee; University of Pennsylvania Health System

S338: SECONDARY TRIGEMINAL NEURALGIA CAUSED BY MENINGIOMAS INVOLVING THE MECKEL'S CAVE AND MICROSURGICAL DECOMPRESSION - Yukyeng Byeon; Chaejin Lee; Sang Woo Song; Young-Hoon Kim; Chang-Ki Hong; Jeong Hoon Kim; Asan Medical Center

S339: ENDOSCOPIC ENDONASAL APPROACH FOR RETROCLIVAL MENINGIOMAS: INSIGHTS FROM A SINGLE INSTITUTIONAL CASE SERIES - Chaejin Lee, MD; Sang Woo Song, PhD; Young-Hoon Kim, PhD; Jeong Hoon Kim, PhD; Chang Ki Hong; Asan Medical Center

S340: MENINGIOMA RECURRENCE AND POSTOPERATIVE RESIDUAL TUMOR LOCATION - [Shreya Vinjamuri](#)¹; Keenan Piper¹; Preston Carey¹; Caleb Song¹; Siddharth Vemuri¹; Saket Gokhale¹; Patrick Kelly²; James Evans¹; ¹Thomas Jefferson University; ²Vanderbilt University

S341: RADIOLOGICAL DETERMINANTS OF POSTOPERATIVE MENINGIOMA REMNANTS PROGRESSION - [Marc-Olivier Comeau](#); François Gascon; Mégan Corbeil, MD; Xavier Roberge, MD; Martin Côté, MD; Pierre-Olivier Champagne, MD, PhD, FRCSC; Laval University

S342: THE INFLUENCE OF FACILITY TYPE ON INTRACRANIAL MENINGIOMA TREATMENT AND OUTCOMES: PREDICTING OVERALL SURVIVAL USING THE NATIONAL CANCER DATABASE - [Nolan J Brown](#)¹; Julian Gendreau²; Sachiv Chakravarti²; Benjamin Abraham³; Yusuf Mehkri⁴; Cathleen Kuo⁵; Aaron Cohen-Gadol⁶; ¹UC Irvine; ²Johns Hopkins; ³Marian University; ⁴University of Florida; ⁵University at Buffalo; ⁶University of Indiana

S343: THE ASSOCIATION OF THROMBOEMBOLIC COMPLICATIONS WITH THE USE OF TRANEXAMIC ACID FOR RESECTION OF INTRACRANIAL MENINGIOMA - [Nolan J Brown](#)¹; Andrew Nguyen²; Zach Pennington, MD³; Brandon Nguyen³; Julian Gendreau, MD⁴; Dontre' Dousse, MD³; Angie Zhang, MD¹; Mark Harris¹; Jamie J Van Gompel, MD³; ¹University of California Irvine; ²Florida; ³Mayo Clinic Rochester; ⁴Johns Hopkins

11:10 am - 12:10 pm

Proffered Papers 36: Clivus, Craniocervical Junctions and Chordoma

M303

S344: ASSESSING SURVIVAL OUTCOMES AND COMPLICATION PROFILES FOLLOWING SURGICAL EXCISION OF SKULL BASE CHORDOMA: A SYSTEMATIC REVIEW AND META-ANALYSIS OF OPERATIVE MARGINS AND SURGICAL APPROACHES - [Nolan J Brown](#)¹; Cathleen Kuo²; Oanh Nguyren³; Chenyi Yang¹; Julian Gendreau⁴; ¹UC Irvine; ²University at Buffalo; ³UC Riverside; ⁴Johns Hopkins

S345: RADIOGENOMICS AND RADIOMICS OF SKULL BASE CHORDOMA: MACHINE LEARNING-BASED CLASSIFICATION OF GENETIC SIGNATURES AND CLINICAL OUTCOMES BY MULTIPARAMETRIC MRI - [Zachary C Gersey, MD](#)¹; Serafettin Zenkin, MD²; Tritan Plute, BS³; Murat Ak²; Priyadarshini Mamindla²; Vishal Peddagangireddy²; Hussein Abdallah, MD¹; Nallammai Muthiah, MD¹; Eric W Wang, MD⁴; Carl H Snyderman, MD⁴; Paul A Gardner, MD¹; Rivka Colen, MD²; Georgios A Zenonos, MD¹; ¹Department of Neurological Surgery, University of Pittsburgh; ²Department of Radiology; University of Pittsburgh; Pittsburgh, PA; ³University of Pittsburgh School of Medicine, Pittsburgh, PA; ⁴Department of Otolaryngology, University of Pittsburgh

S346: INTRADURAL PREPONTINE CHORDOMA IN A CHILD: CASE REPORT AND REVIEW OF THE PEDIATRIC SKULL BASE LITERATURE - [Danielle D Dang, MD](#); Andrew D Gong, MD; Cheddhi Thomas, MD; Nilesh Vyas, MD; Leon E Moores, MD, DSc; Inova Fairfax Medical Campus

S347: AN EXAMINATION OF MORPHOLOGICAL CHARACTERISTICS AND SURGICAL OUTCOMES IN TYPE I CHIARI MALFORMATION: A COMPARATIVE STUDY - [Jonathan A Tangsrivimol, MD¹](#); Mohammad Bilal Alsavaf, MD²; Guilherme Finger, MD³; Kyle C Wu, MD³; Daniel Prevedello, MD³; ¹Department of Neurosurgery, Chulabhorn hospital, Chulabhorn Royal Academy, Bangkok, Thailand; ²Department of Otolaryngology - Head and Neck Surgery, The Ohio State University Wexner Medical Center, Columbus, Ohio, USA; ³Department of Neurological Surgery, The Ohio State University Wexner Medical Center, Columbus, Ohio, USA

S348: THE NASOPHARYNGO-SEPTAL BUTTERFLY FLAP; A NOVEL SALVAGE OPTION FOR RECONSTRUCTION OF CLIVAL AND CRANIOCERVICAL JUNCTION DEFECTS - [Moataz D. Abouammo, MD, MSc¹](#); Maithrea S N., MBBS, MMED²; Mohammad Bilal Alsavaf, MD¹; Mohammed Alwabibili, MD³; Jaskaran S Gosal, MCh⁴; Govind S Bhuskute, MS⁵; Kyle K VanKoeveering, MD¹; Kyle C Wu, MD⁶; Daniel M Prevedello, MD, MBA⁶; Ricardo L Carrau, MD, MBA¹; ¹Department of Otolaryngology - Head and Neck Surgery, the Ohio State University Wexner Medical Center, Columbus, Ohio, USA; ²Department of Otolaryngology, Hospital Raja Permaisuri Bainun, Jalan Raja Ashman Shah, 30450 Ipoh, Perak, Malaysia; ³Department of Otorhinolaryngology-Head and Neck Surgery, Prince Sultan Military Medical City, Riyadh, Saudi Arabia; ⁴Department of Neurosurgery, All India Institute of Medical Sciences (AIIMS), Jodhpur, Rajasthan, India; ⁵Department of Otolaryngology, All India Institute of Medical Sciences (AIIMS), Patna, Bihar, 801507; ⁶Department of Neurological Surgery, The Ohio State University Wexner Medical Center, Columbus, USA.

S349: CARBON ION RADIOTHERAPY: AN EVIDENCE-BASED REVIEW AND SUMMARY RECOMMENDATIONS OF CLINICAL OUTCOMES FOR SKULL-BASE CHORDOMAS AND CHONDROSARCOMAS - [Adam Holtzman¹](#); Katharina Seidensaal²; Alberto Iannalfi³; Kyung-Hwan Kim⁴; Masashi Koto⁵; Wan-Chin Yang⁶; Anita Mahajan⁷; Safia Ahmed⁸; Daniel Trifiletti¹; Jennifer Peterson¹; Daniel Koffler¹; Laura Vallow¹; Bradford Hoppe¹; Michael Rutenberg¹; ¹Mayo Clinic Florida; ²University Hospital Heidelberg; ³National Center for Oncological Hadrontherapy; ⁴Yonsei University College of Medicine; ⁵National Institutes for Quantum Science and Technology; ⁶Taipei Veterans General Hospital; ⁷Mayo Clinic Rochester; ⁸Mayo Clinic Arizona

S351: ADVANCING SURGICAL PRECISION: EXTENDED ENDOSCOPIC ENDONASAL APPROACH FOR C1-C2 TRAUMATIC AND INFLAMMATORY LESIONS - Denis Aiudi¹; [Maurizio Gladi¹](#); Fabio Greco²; Alessio Iacoangeli¹; Lucia Giovanna Maria di Somma¹; Love Chibuzor Ilochonwu¹; Ruggero Antonini¹; Maurizio Iacoangeli¹; ¹Università Politecnica delle Marche - Clinica di Neurochirurgia - Ancona (Italy); ²Fondazione Policlinico Universitario Campus Bio-Medico - UOC di Otorinolaringoiatria - Roma (Italy)

S352: RACIAL DISPARITIES IN THE SURGICAL TREATMENT OF CHORDOMA AND CHONDROSARCOMA - [Gabrielle Hovis, BS](#); Sanah Vohra, MPH, PhD; Mahlet Mekonnen, BS; Isaac Yang, MD; UCLA

S353: PRIMARY DIFFUSE LARGE B-CELL LYMPHOMA OF THE CLIVUS: SYSTEMATIC REVIEW AND ILLUSTRATIVE CASE EXAMPLE - [Alexander R Evans, BS](#); Panayiotis Pelargos, MD; Chelsey D Deel, MD; Ian F Dunn, MD; University of Oklahoma

11:10 am - 12:10 pm

Proffered Papers 37: Pituitary Adenoma and Reconstruction

M304

S355: SINGLE CENTER EXPERIENCE OF THE INCIDENCE AND SUBSEQUENT NATURAL HISTORY OF RESIDUAL PITUITARY NEUROENDOCRINE TUMORS FOLLOWING SUBTOTAL RESECTION - [Thomas Hanks, BS](#); Spencer Raub, BS; Jessica Eaton; Evgeniya Tyrtova, MD; Malia McEvoy, MD; Zirun Zhao, MD; Samuel Emerson, MD, PhD; Manuel Ferreira, MD, PhD; Jacob Ruzevick, MD; University of Washington

S356: THE IMPORTANCE OF PALATINE BONE FOR ENDOSCOPIC ENDONASAL SKULL BASE SURGERY - [Noritaka Komune¹](#); Satoshi Matsuo²; Osamu Akiyama³; Yuhei Sangatsuda⁴; Daisuke Kuga⁴; Yusuke Miyamoto¹; Tomoharu Suzuki¹; Daisuke Murakami¹; Koji Yoshimoto⁴; Takashi Nakagawa¹; ¹Department of Otorhinolaryngology, Graduate School of Medical Sciences, Kyushu University; ²Department of Neurosurgery, Fukuoka Tokushukai Hospital; ³Department of Neurosurgery, Juntendo University Faculty of Medicine; ⁴Department of Neurosurgery, Graduate School of Medical Sciences, Kyushu University

S357: IMPACT OF FRAILTY ON OUTCOMES AFTER SURGERY IN PATIENTS WITH CUSHING'S DISEASE: FINDINGS FROM THE MULTICENTER RAPID REGISTRY - [Matt Findlay¹](#); [Conner Massey¹](#); Robert Rennert¹; Brandon Lucke-Wold²; James Evans³; Sarah Collopy³; Won Kim⁴; William Delery⁴; Donato Pacione⁵; Albert Kim⁶; Julie Silverstein⁶; Mridu Kanga⁶; Michael Chicoine⁷; Paul Gardner⁸; Benita Valappil⁸; Hussein Abdallah⁸; Christina Sarris⁹; Benjamin Henricks¹⁰; Ildiko Torok¹⁰; Trevor Low¹⁰; Tomi Crocker¹⁰; Kevin Yuen¹⁰; Vera Viga¹¹; Juan Fernandez-Miranda¹¹; Varun Kshetry¹²; Andrew Little¹⁰; Michael Karsy¹³; ¹University of Utah; ²University of Florida; ³Thomas Jefferson University; ⁴University of California Los Angeles; ⁵New York University; ⁶Washington University School of Medicine; ⁷University of Missouri; ⁸University of Pittsburgh Medical Center; ⁹The Children's Hospital of Philadelphia; ¹⁰Barrow Neurological Institute; ¹¹Stanford University; ¹²Cleveland Clinic Foundation; ¹³Global Neurosciences Institute, Drexel University College of Medicine

S358: PREDICTORS OF CEREBROSPINAL FLUID LEAK IN PATIENTS RECEIVING SURGICAL TREATMENT FOR IDIOPATHIC INTRACRANIAL HYPERTENSION - [Tony Chung, MS](#); Lily Huo, MScGH; Vikram Vasan, BA; Alex Devarajan, BS; Jonathan T Dullea, MPH; Rui Feng, MD; Joshua Bederson, MD; Raj K Shrivastava, MD; Icahn School of Medicine at Mount Sinai

S359: USE OF CALCIUM PHOSPHATE BONE CEMENT IN RETROSIGMOID CRANIOTOMIES REDUCES RATES OF CRANIOTOMY SITE CSF LEAK AND PSEUDOMENINGOCELE: A COHORT STUDY AND META-ANALYSIS

- [Megan M Bauman, MS](#); Kevin L Webb, BS; Charlotte E Michaelcheck, BS; Lucas P Carlstrom, MD, PhD; Jamie J Van Gompel, MD; Michael J Link, MD; Maria Peris Celda, MD, PhD; Mayo Clinic

S360: THE EFFECT OF CABERGOLINE USE ON PITUITARY TUMOR FIBROSIS

- [Isabella L Pecorari, BS](#)^{1,2}; Eros Qama, MD^{3,4}; Vijay Agarwal, MD^{1,2}; ¹Department of Neurological Surgery, Albert Einstein College of Medicine, Bronx, NY, USA; ²Department of Neurological Surgery, Montefiore Medical Center, Bronx, NY, USA; ³Department of Pathology, Albert Einstein College of Medicine, Bronx, NY, USA; ⁴Department of Pathology, Montefiore Medical Center, Bronx, NY, USA

S361: MACHINE LEARNING AND STATISTICAL ANALYSIS OF BIOCHEMICAL REMISSION PREDICTORS IN SOMATOTROPH ADENOMA RESECTIONS

- [Robert C Osorio, BS](#); Aymen Kabir, BS; Alexander F Haddad, MD; Aarav Badani; Harmon Khela, BS; Atul Saha, BS; Zain Peeran, BS; Philip V Theodosopoulos, MD; Sandeep Kunwar, MD; Jose Gurrola II, MD; Ivan H El-Sayed, MD; Lewis S Blevins Jr, MD; Manish K Aghi, MD, PhD; University of California, San Francisco

S362: MULTI-CENTER STUDY OF SELLAR RECONSTRUCTION AFTER ENDOSCOPIC TRANSPHENOIDAL RESECTION OF PITUITARY TUMORS

- [Hawa M Ali, MD](#)¹; Evelyn M Leland, MD¹; Emily Stickney, BS¹; Christine Lohse, MS¹; Benita Valappil, MPH²; Andrey Filimonov, MD, PharmD²; Kaitlin Goetschel, BS³; Sarah C Young, MS³; Maryam N Shahin, MD⁴; Davaine Joel Ndongo Sonfack⁵; Sylvie Nadeau, MD⁵; Pierre-Olivier Champagne, MD, PhD⁵; Olabisi Sanusi⁴; Mathew Geltzeiler⁴; Nathan Zwagerman, MD³; Paul Gardner, MD²; Eric W Wang²; Georgios A Zenonos, MD²; Garret Choby, MD²; Carl Snyderman, MD, MBA²; Jamie Van Gompel, MD¹; Maria Peris-Celda, MD, PhD¹; Carlos D Pinheiro-Neto, MD, PhD¹; ¹Mayo Clinic; ²University of Pittsburgh School of Medicine; ³Medical College of Wisconsin; ⁴Oregon Health & Science University; ⁵CHU de Québec - Université Laval

S363: ENDOSCOPIC ENDONASAL APPROACH FOR THE PITUITARY ADENOMA INVADING POSTERIOR COMPARTMENT OF THE CAVERNOUS SINUS AND BASILAR PLEXUS: ANATOMICAL CONSIDERATION AND SURGICAL STRATEGY FOR MAXIMIZING EXTENT OF RESECTION

- [Kyoung Su Sung](#)¹; Minkyun Na²; Jaejoon Lim³; Ju Hyung Moon⁴; ¹Dong-A University College of Medicine; ²Hanyang University College of Medicine; ³CHA University College of Medicine; ⁴Yonsei University College of Medicine

S365: SILENT CORTICOTROPH ADENOMAS: AN AGGRESSIVE TUMOR TYPE THAT MERITS APPROPRIATE PRE-OPERATIVE CHARACTERIZATION

- [Carlos Perez-Vega](#), MD; J. Emiliano Sanchez-Garavito, MD; Krishnan Ravindran, MD; Joao P Almeida, MD, PhD; Kaisorn L Chaichana, MD; Alfredo Quinones-Hinojosa, MD; Susan L Samson, MD, PhD; Mayo Clinic Florida

S366: A MULTICENTER STUDY OF CLINICAL OUTCOMES AND VOLUMETRIC TRENDS IN MICROPROLACTINOMAS

- [Christopher Hong](#)¹; Jack Kilgallon¹; Sauradeep Sarkar¹; Chady Omara¹; Sulaiman Sajed¹; Leontine Bakker²; Nienke Biermasz²; Wouter van Furth²; Marco Verstegen²; Daniel Lobatto²; Richard Drexler³; Jorg Flitsch³; Franz Ricklefs³; Alice Ryba³; Federica Guaraldi⁴; Le Min¹; Timothy Smith¹; ¹Brigham and Women's Hospital; ²Leiden University Medical Center; ³University Medical Center Hamburg-Eppendorf; ⁴IRCCS Institute of Neurological Sciences of Bologna

11:10 am - 12:10 pm

Proffered Papers 38: Pediatric Skull Base and Adjuvant Therapies

M101

S367: PITUITARY METASTASES: A CASE SERIES AND SCOPING REVIEW

- [Kaiyun Yang](#)¹; Sabrina Begley²; Daniel Lynch²; Vincent Ye³; Jasleen Saini³; Enrique Gutiérrez-Valencia³; Jaclyn Violet²; Barbara-Ann Millar³; Tatianna Conrad³; Normand Laperriere³; Mark Bernstein³; Gelareh Zadeh³; David Shultz³; Paul Kongkham³; ¹Community Neurosciences Institute; ²Northwell Neurosurgery; ³University of Toronto

S368: THE ENDOSCOPIC ENDONASAL APPROACH IN PEDIATRIC PATIENTS: A SINGLE-INSTITUTION EXPERIENCE

- [Noah J Burket](#), BS; Jenna K Koenig, BS; Matthew Blackwell, BS; Sidrah Badar, BS; Drew Streicher, MD, MBA; Karl Balsara, MD; Elisa Illing, MD; Satyan Sreenath, MD; Jonathan Ting, MD; Mitesh Shah, MD; Jignesh Tailor, MD, PhD; Indiana University School of Medicine

S369: ENDOSCOPIC ENDONASAL APPROACH TO ANTERIOR SKULL BASE TUMOR RESECTION IN YOUNG CHILDREN

- David K Lerner, MD¹; [Mackenzie Castellanos](#), BS¹; Alan D Workman, MD, MTR¹; Michael A Kohanski, MD, PhD¹; Jennifer E Douglas, MD¹; Phillip B Storm, MD²; James N Palmer, MD¹; Nithin D Adappa, MD¹; ¹University of Pennsylvania; ²Children's Hospital of Philadelphia

S370: EVALUATION OF THE LEARNING CURVE FOR PEDIATRIC ENDOSCOPIC ENDONASAL SURGERY: TWENTY-THREE YEARS OF EXPERIENCE AT A SINGLE INSTITUTION

- [Ali A Alattar](#), MD, MAS¹; Joseph Garcia, MD¹; Anna L Slingerland, BS²; David T Fernandes-Cabral, MD¹; Georgios A Zenonos, MD¹; Garret Choby, MD³; Amanda Stapleton, MD³; Eric W Wang, MD³; Carl H Snyderman, MD, MBA³; Paul A Gardner, MD¹; Michael McDowell, MD¹; ¹Department of Neurosurgery, University of Pittsburgh Medical Center; ²University of Pittsburgh School of Medicine; ³Department of Otolaryngology, University of Pittsburgh Medical Center

S371: IMPACT OF ADJUVANT AND SALVAGE RADIATION THERAPY IN CONVENTIONAL TYPE 2 CHONDROSARCOMAS

- Franco Rubino, MD¹; George Zenonos, MD²; Hanna Algattas, MD²; Paul Gardner, MD²; Daniel Prevedello³; Guilherme Finger, MD³; Ricardo Carrau, MD³; Juan Carlos Fernandez Miranda, MD⁴; Christine Lee, MD⁴; Franco DeMonte, MD¹; Shaan M Raza, MD¹; ¹MDACC; ²UPMC; ³Ohio State University; ⁴Stanford Medical Center

S372: SKULL BASE NEUROSURGERY IN THE PEDIATRIC

POPULATION: A SINGLE-CENTER CASE SERIES - Ali A Alattar, MD, MAS¹; Joseph Garcia, MD¹; Anna L Slingerland, BS²; David T Fernandes-Cabral, MD¹; Georgios A Zenonos, MD¹; Garret Choby, MD³; Amanda Stapleton, MD³; Eric W Wang, MD³; Carl H Snyderman, MD, MBA³; Paul A Gardner, MD¹; Michael McDowell, MD¹; ¹Department of Neurosurgery, University of Pittsburgh Medical Center; ²University of Pittsburgh School of Medicine; ³Department of Otolaryngology, University of Pittsburgh Medical Center

S373: VALIDATING THE UPMC JNA STAGING SYSTEM: 10-YEAR EXPERIENCE FROM A TERTIARY PEDIATRIC HOSPITAL

- Sulaiman Karim, BS¹; Uma S Ramaswamy, MD²; Guillermo A Aldave, MD, PhD²; Karen S Chen, MD²; Haleh Sangi, PhD³; ¹Texas Tech University School of Medicine; ²Texas Children's Hospital and Baylor College of Medicine; ³Baylor College of Medicine

S374: THE PTERYGOID-SPHENOIDAL FISSURE IN CHILDREN: RADIOLOGICAL STUDY AND IMPLICATIONS IN PEDIATRIC ENDOSCOPIC ENDONASAL SURGERY - Yuanzhi Xu, MD¹;

Christine K Lee, MD, PhD¹; Tatsuya Uchida, MD¹; Laura M Prolo, MD, PhD¹; Maximiliano A Nunez, MD¹; Aaron A Cohen-Gadol, MD, MSc, MBA²; Juan C Fernandez-Miranda, MD¹; ¹Stanford Hospital; ²Neurosurgical Atlas

S375: PROGNOSTIC FACTORS AND NOMOGRAM FOR CHOROID PLEXUS TUMORS: A POPULATION-BASED RETROSPECTIVE SURVEILLANCE, EPIDEMIOLOGY, AND END RESULTS DATABASE ANALYSIS - Abhishek S Bhutada; Srijan Adhikari, MD;

Joshua A Cuoco, DO; Alexander In; Cara M Rogers, DO; John A Jane Jr., MD; Eric A Marvin; ¹Virginia Tech Carilion School of Medicine

S376: RECONSTRUCTION OF PEDIATRIC SKULL BASE DEFECTS: THINKING BEYOND THE NASOSEPTAL FLAP FOR INTRAOPERATIVE CSF LEAKS - Monirah Albathi, MBBS, MPH;

Patrick Walz, MD; Nationwide Children's Hospital

S377: MANAGEMENT OF ADENOID CYSTIC CARCINOMA WITH TRIGEMINAL NERVE INVASION - Justin Maldonado, BA; Silvia M Vergara, MD;

Edoardo Porto, MD; Youssef Zohdy, MD; Mayra A Rodas, MD; Juan M Revuelta Barbero, MD, PhD; Samir Lohana; Emily Barrow, MD; Jackson Vuncannon; Tomas Garzon-Muvdi, MD; Gustavo Pradilla, MD; Emory University

S378: PREDICTORS OF TREATMENT FAILURE FOLLOWING STEREOTACTIC RADIOSURGERY FOR TRIGEMINAL NEURALGIA

- [Travis Atchley, MD¹](#); Ben Marquess, BS²; Yasaman Alam, MD¹; Dagoberto Estevez-Ordonez, MD¹; Nicholas Laskay, MD¹; Marshall Holland, MD¹; Philip Schmalz, MD¹; Winfield Fisher, MD¹; ¹University of Alabama at Birmingham Health System; ²University of Alabama at Birmingham Heersink School of Medicine

11:10 am - 12:10 pm

Proffered Papers 39: Minimally Invasive Skull Base: Video Session

M102

V057: INTERHEMISPHERIC TRANSCALLOSAL INTERFORNICEAL APPROACH TO A 3RD VENTRICULAR TUMOR. - [Guillermo Aldave](#)

; Texas Children's Hospital

V058: TRANSPALPEBRAL TRANSORBITAL APPROACH FOR LEFT TEMPORAL EPILEPTOGENIC LESION - [Karim Hafazalla, MD](#)

; Sonia Ajmera, MD²; William Katowitz, MD³; Benjamin Kennedy, MD⁴; ¹Department of Neurological Surgery, Thomas Jefferson University Hospitals; ²Department of Neurological Surgery, Penn Medicine; ³Division of Ophthalmology, Children's Hospital of Philadelphia; ⁴Division of Neurosurgery, Children's Hospital of Philadelphia

V059: USE OF A SUCTION-MONOPOLAR STIMULATOR FOR CONTINUOUS NEUROPHYSIOLOGY MONITORING DURING THE ENDONASAL RESECTION OF A CAVERNOUS SINUS SCHWANNOMA - [Ezequiel Goldschmidt](#)

; Ivan El-Sayed; Milagros Troccoli; UCSF

V060: ENDOSCOPIC ASSISTED SUPRAORBITAL APPROACH FOR REMOVAL OF TUBERCULUM SELLA MENINGIOMA: TECHNICAL NUANCES IN KEYHOLE SURGERY - Adnan H Shahid, MD, MCh; Luke Harris; Garrett Dyess; Danielle N Chason; Ursula Hummel; [Jai D Thakur, MD](#)

; University of South Alabama Mobile

V061: A CASE OF BALANCING ACT: OPTIMISING ONCOFUNCTIONAL OUTCOMES IN ENDOSCOPIC CRANIOPHARYNGIOMA RESECTION - Ruth Lau, MD; Carolyn Lai, MD; Eric Monteiro, MD; Gelareh Zadeh, MD; [Aristotelis Kalyvas, MD](#)

; University of Toronto

V062: ENDOSCOPIC-ASSISTED ANTERIOR PETROSECTOMY FOR A RECURRENT PETROUS CHONDROSARCOMA - [Edoardo Agosti](#)

; Michelle Grous²; Tingting Jiang³; Thibault Passeri⁴; Sebastian Froelich⁴; ¹University of Brescia; ²University Medical Center Utrecht; ³AOU Policlinico Umberto I; ⁴Lariboisière Hospital

V063: ENDOSCOPIC ENDONASAL TRANSPLANUM APPROACH FOR A TUBERO-INFUNDIBULAR CRANIOPHARYNGIOMA IN A PEDIATRIC PATIENT. - [Felipe Constanzo, MD](#)

; Vladimir Ljubimov, MD; Vera Vigo, MD; Jonathan Rychen, MD; Enrico Gambatesa, MD; Mariano Rinaldi, MD; Tatsuya Uchida, MD; Min Ho Lee, MD; Alix Bex, MD; Yuanzhi Xu, MD; Xiao Limin, MD; Christine K Lee, MD; Juan C Fernandez-Miranda, MD; Stanford University

V064: TARGETED CHOPSTICK MONONOSTRIL APPROACH FOR A LOWER CLIVUS CHORDOMA - [Tancredo Alcântara, MD, MSc](#); Jerold Justo, MD, MBA; Tingting Jiang, MD; Rosaria Abbritti, MD; Thibault Passeri, MD; Sébastien Froelich, MD, PhD; Neurosurgery Department, Lariboisière Hospital, Paris, France

V065: ENDOSCOPIC ENDONASAL FAR MEDIAL APPROACH FOR RESECTION OF CRANIOCERVICAL CHORDOMA - [Hassan Fadel](#); Travis Hamilton; Jacob Pawloski; Amrita Ray; Jacob Eide; Muwaffak Abdulhak; John Craig; Karam Asmaro; Henry Ford Health

V066: TRANSCAVERNOUS APPROACH VIA EYEBROW INCISION FOR RADIATION INDUCED MEDIAL TEMPORAL LOBE CAVERNOMA: 2-DIMENSIONAL OPERATIVE VIDEO - Eva M Wu, MD; [Jacques J Morcos](#); University of Miami

V067: THE INFUNDIBULOCIASMATIC ANGLE INDICATES FAVORABILITY OF ENDOSCOPIC ENDONASAL APPROACH IN TYPE IV CRANIOPHARYNGIOMA: CASE STUDY AND TECHNICAL NOTE - [Guilherme Finger, MD, MSc](#)¹; Maria Jose C Ruiz, MD²; Eman H Salem, MD²; Matthew D Marquardt, BA³; Kyle C Wu, MD¹; Lucas P Carlstrom, MD, PhD¹; Ricardo L Carrau, MD, FACS²; Luciano M Prevedello, MD⁴; Daniel M Prevedello, MD, FACS¹; ¹Department of Neurosurgery, The Ohio State University College of Medicine, Columbus, OH, USA; ²Department of Otolaryngology and Skull Base Surgery, The Ohio State University Wexner Medical Center, OH, USA; ³The Ohio State University College of Medicine, Columbus, OH, USA; ⁴Department of Radiology, The Ohio State University College of Medicine, Columbus, OH, USA

V068: ENDOSCOPIC transcortical transventricular fenestration for management of giant interpeduncular fossa arachnoid cyst: TECHNICAL NOTE & CASE ILLUSTRATION - [Matthieu Weber, BS](#)¹; Guilherme Finger, MD²; Joshua Vignolles-Jeong, BA¹; Benjamin McGahan, MD²; Kyle C Wu, MD²; Saniya Godil, MD²; Daniel Prevedello, MD²; ¹The Ohio State University College of Medicine; ²The Ohio State University Department of Neurological Surgery

Poster Listing

P001: STEREOTACTIC RADIOSURGERY FOR INTRACRANIAL SOLITARY FIBROUS TUMORS: SYSTEMATIC REVIEW AND POOLED QUANTITATIVE ANALYSIS - [Danielle Golub, MD, MSCI](#)¹; Joshua D McBriar, ScM¹; Taylor Wong, BS²; Hayley Donaldson, BS³; Prashin Unadkat, MBBS¹; Timothy G White, MD¹; Eric T Quach, MD¹; Bhargava Chitti, MD¹; Yonah Ziemba, MD¹; Anuj Goenka, MD¹; Michael Schulder, MD¹; Amir R Dehdashti, MD¹; ¹Northwell Health/Zucker School of Medicine; ²SUNY Downstate Medical Center, College of Medicine; ³Rutgers New Jersey Medical School

P002: NECROTIZING PHENOMENON IN WHO GRADE I MENINGIOMA IN AN SLE PATIENT FOLLOWING IMMUNOSUPPRESSIVE TREATMENT. - [Thitikan Wangapakul, MD](#)¹; Ambar Riley, MD²; ¹Yala Hospital; ²ISSSTE "Tro de Octubre", Mexico City, Mexico

P004: SUDDEN ONSET UNILATERAL BLINDNESS DUE TO POSTERIOR ETHMOID MUCOCELE - Kedar Patel¹; [Karthik Pittala](#)¹; Steven Aziz²; Arjun Parasher²; ¹University of South Florida Morsani College of Medicine; ²University of South Florida Department of Otolaryngology

P005: THE LATERAL SUPRAORBITAL (LSO) APPROACH FOR SURGICAL RESECTION OF TUMORS OF ANTERIOR AND MIDDLE CRANIAL FOSSA - [Racheed M Mani, MD](#)¹; Jade I Basem, BA²; Kevin Gilotra, BA²; Reza Dashti, MD, PhD¹; ¹Department of Neurosurgery, Stony Brook University Hospital; ²Renaissance School of Medicine at Stony Brook University

P006: ADULT-ONSET TRAUMATIC EXTRADIPLOIC ENCEPHALOCELE: A SYSTEMATIC REVIEW OF THE LITERATURE AND A CASE REPORT - [Mehdi Khaleghi](#); Kyle Wu; Moataz Abouammo; Daniel Prevedello; Ohio State University, Wexner Medical Center

P007: WORSENING ORBITAL ROOF "BLOW-IN" FRACTURES FOLLOWING TRAUMATIC BRAIN INJURY: A CASE SERIES - [Vera Ong, BS](#)¹; Clayton H Gerndt, MD²; Varun Rao, BS³; E B Strong²; Kiarash Shahlaie, MD, PhD²; ¹University of Hawaii; ²University of California, Davis; ³Indiana University School of Medicine

P008: CLINICAL MANAGEMENT OF ADULT OPTIC NERVE GLIOMA: A SYSTEMATIC REVIEW - [Samir Lohana](#); Biren Patel, MS, MCh; Youssef Zohdy, MD; Leonardo Tariciotti, MD; Silvia Vergara, MD; Justin Maldonado; Tomas Garzon, MD, FAANS; Gustavo Pradilla, MD, FAANS; Emory University

P009: SCALP FLAP FOR LARGE ANTERIOR SKULL BASE AND DURAL DEFECTS CLOSURE IN MALIGNANCIES - [Carlos T Chone, MD, PhD, Prof](#); University of Campinas

P010: FRONTAL EPIDURAL HEMATOMA DRAINAGE THROUGH A TRANSORBITAL NEUROENDOSCOPIC SURGERY (TONES) - Sara Gomez-Niebles¹; Cristhian Barrera-Guzmán¹; Juliana Mayorga-Corvacho²; Andrés Pineda-Martínez²; Oscar Gutiérrez³; Camilo Peña⁴; William Mauricio Riveros-Castillo⁴; [Javier M Saavedra](#)⁵; ¹Center for Research and Training in Neurosurgery (CIEN), Bogotá, Colombia.; ²Universidad del Rosario School of Medicine, Bogotá, Colombia; ³Neurosurgery Department, Hospital del Occidente de Kennedy, Bogotá, Colombia.; ⁴Neurosurgery Department, Hospital Universitario Mayor- Mederi, Bogotá, Colombia; ⁵Neurosurgery Department, Hospital Regional de la Orinoquia (HORO), Yopal, Colombia.

P011: IMPACT OF ENDOSCOPIC SKULL BASE SURGERY ON SLEEP AND COGNITIVE FUNCTION - Mohamed A Aboueisha¹; Nadia Y Popovici, BS¹; Jacob Ruzevick, MD²; Sam Emerson, MD²; Manuel Ferreira, MD²; Ashton E Lehmann, MD³; Waleed M Abuzeid, MD¹; Ian M Humphreys, DO³; [Aria Jafari, MD](#)¹; ¹Department of Otolaryngology - Head and Neck Surgery, University of Washington; ²Department of Neurosurgery, University of Washington; ³Department of Otolaryngology - Head and Neck Surgery, Geisinger Medical Center

P012: NEW APPROACH - BIPORTAL ENDOSCOPIC TRANSFRONTAL SINUS APPROACH, A NOVEL MINIMALLY INVASIVE APPROACH TO THE ANTERIOR CRANIAL FOSSA: CADAVERIC FEASIBILITY STUDY - [Miguel Saez-Alegre, MD, PhD](#)¹; Walter C Jean, MD²; Carlos D Pinheiro Neto, MD, PhD³; Ramin A Morshed, MD¹; Michael J Link, MD¹; Jamie J Van Gompel, MD¹; Maria Peris-Celda, MD, PhD⁴; ¹Department of Neurologic Surgery, Mayo Clinic, Rochester, MN, USA; ²Division of Neurosurgery, Lehigh Valley Health Network, Allentown, Pennsylvania, USA.; ³Division of Rhinology and Skull Base Surgery, Department of Otolaryngology-Head & Neck Surgery Mayo Clinic Rochester Minnesota USA.; ⁴Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program, Mayo Clinic, Rochester, MN, USA.

Poster Listing (cont.)

P013: FULLY ENDOSCOPIC SUPRAORBITAL TRANSLAMINAR APPROACH. STEP-BY-STEP ILLUSTRATIVE DESCRIPTION - [Mehdi Khaleghi](#); Kyle Wu; Daniel Prevedello; Ohio State University, Wexner Medical Center

P014: MANAGEMENT OF FRONTOETHMOIDAL OSTEOMA CAUSING PNEUMOCEPHALUS AND CSF LEAK: CASE REPORTS AND LITERATURE REVIEW - [Guilherme Finger](#), MD, MSc¹; Nicholas G Candy, MD²; Kyle C Wu, MD¹; Claudio Callejas³; Kyle VanKoeveering, MD³; Daniel M Prevedello, MD, FACS¹; ¹Department of Neurosurgery, The Ohio State University College of Medicine, Columbus, OH, USA; ²Department of Surgery - Otolaryngology, Head and Neck Surgery, The University of Adelaide, Basil Hetzel Institute for Translational Research, Woodville South, Adelaide, Australia; ³Department of Otolaryngology and Skull Base Surgery, The Ohio State University Wexner Medical Center, OH, USA

P015: IS CONTINUOUS POSITIVE AIRWAY PRESSURE USE SAFE FOLLOWING ENDOSCOPIC TRANSNASAL SURGERY? - [Glen D Souza](#), MD; Alexander Duffy; Shreya Mandloi; Emily Garvey; Bitu Naimi; Paavali Hannikainen; Elina Toskala; Gurston Nyquist; Christopher Farrell; Marc Rosen; James Evans; Mindy Rabinowitz; Thomas Jefferson University Hospital

P017: ANATOMICAL STEP-BY-STEP DISSECTION OF COMPLEX SKULL BASE APPROACHES FOR TRAINEES: SURGICAL ANATOMY OF THE MICROSURGICAL AND ENDOSCOPIC APPROACHES TO AND THROUGH THE ORBIT - [Edoardo Agosti](#)¹; A. Yohan Alexander²; Luciano Leonel²; Carlos Pinheiro-Neto²; Maria Peris-Celda²; ¹University of Brescia; ²Mayo Clinic

P018: THE ANATOMICAL STUDY OF THE CRIBRIFORM PLATE - NEW CONCEPT. IS THE CRIBRIFORM PLATE AN EFFECTIVE BORDER ? - [Jan Hemza](#), MD, PhD, et, PhD, MPA; Faculty Hospital at Saint Ann, Dpt. of Neurosurgery

P019: NLRP3 INFLAMMASOME INHIBITION PROTECTS AGAINST INTRACRANIAL ANEURYSM RUPTURE AND ALTERS PHENOTYPE OF INFILTRATING MACROPHAGES - [Brandon Lucke-Wold](#); University of Florida

P020: MRI NEGATIVE MENINGIOMA CAUSING ISOLATED ABDUCENS NERVE PALSY - [Samon Tavakoli-Sabour](#), MD; Medical College of Wisconsin

P022: TREATMENT STRATEGIES FOR PRIMARY CAVERNOUS SINUS MENINGIOMAS: A SYSTEMATIC REVIEW AND META-ANALYSIS - [Ahmad Ozair](#), MBBS¹; Richard Rogers²; Nathan VanderVeer-Harris²; Raghuram Reddy²; Starlie Belnap, PhD³; Anshul Saxena, PhD⁴; Manmeet Ahluwalia, MD, MBA⁴; Michael W McDermott, MD³; ¹Johns Hopkins Bloomberg School of Public Health; ²Herbert Wertheim College of Medicine, Florida International University; ³Miami Neuroscience Institute, Baptist Health South Florida; ⁴Miami Cancer Institute, Baptist Health South Florida

P024: A THREE-DIMENSIONAL ANTERIOR AND MIDDLE CRANIAL FOSSA MODEL FOR SKULL BASE SURGICAL TRAINING WITH TWO LAYERS OF THE COLORED DURA MATER - [Yamaoka Hiroto](#)¹; Sugawara Takashi²; Ebiko Yusuke¹; Okada Tomoyasu¹; Mizoue Tatsuya¹; Wakabayashi Shinichi¹; ¹Suiseikai Kajikawa Hospital; ²International University of Health and Welfare Narita Hospital

P025: ANTERIOR PETROSECTOMY FOR RESECTION OF MENINGIOMA CAUSING COMPRESSION OF TRIGEMINAL NERVE CISTERNAL SEGMENT AND WITHIN MECKEL'S CAVE; WITH SIMULTANEOUS MICROVASCULAR DECOMPRESSION FOR TYPE 1 FACIAL PAIN - Reginald P Fong, MD¹; [Raghuram Sampath](#), MD, FAANS, FACS²; ¹LSUHSC Shreveport; ²KP/NWP Center for Health Research

P027: ECTOPIC PRESENTATION OF A CORTICOTROPH PITUITARY ADENOMA IN THE CAVERNOUS SINUS MIMICKING A RADIOGRAPHIC CAVERNOUS HEMANGIOMA - [Alexander S Himstead](#), MD; Bryce Picton; Gianna M Fote, MD, PhD; Sophia Luzzi; Sean S Solomon; Chloe E Villars, BS; Lea J Tan, BA; Janet Nguyen; Kamran Urgun, MD; Justin H Granstein, MD; Gelareh Sadigh, MD; William H Yong, MD; Suichi Suzuki, MD, PhD; Eduard C Kuan, MD; Aaron B Simon, MD, PhD; Ahmed Mohyeldin, MD, PhD; University of California, Irvine

P028: DECOMPRESSIVE SURGERY FOR SMALL CAVERNOUS SINUS MENINGIOMA WITH DIPLOPIA AND TRIGEMINAL NEURALGIA : A CASE SERIES - [Young Il Kim](#); Seung Ho Yang; St. Vincent's Hospital, The Catholic University of Korea

Poster Listing (cont.)

P029: LATERAL TRANSORBITAL ENDOSCOPE-ASSISTED APPROACH TO THE CAVERNOUS SINUS - Evan D Bander, MD¹; Joseph A Carnevale²; Umberto Tosi²; Kyle J Godfrey²; Theodore H Schwartz²; ¹MD Anderson Cancer Center; ²Weill Cornell Medical College/New York Presbyterian

P030: ENDOSCOPIC ENDONASAL APPROACH TO MECKEL'S CAVE FOR TREATMENT OF TRIGEMINAL MENINGOENCEPHALOCELE: BOLSTER TECHNIQUE - Jihad Abdelgadir, MD, MSc; Viraj Patel, MD; Ali Zomorodi, MD; David Jang, MD; Duke University

P031: SYMPTOMATIC KERATOCONJUNCTIVITIS SICCA IS RARE AFTER VIDIAN NEURECTOMY DURING EXPANDED ENDONASAL SKULLBASE APPROACHES - Jacob A Pawloski, MD¹; Kelly Shaftel, MD¹; Hassan A Fadel, MD¹; John Craig, MD²; Jacob Eide, MD²; Amrita Ray, DO²; Jack Rock, MD¹; Karam Asmaro, MD¹; ¹Henry Ford Health, Dept of Neurosurgery; ²Henry Ford Health, Dept of Otolaryngology

P033: ENDOSCOPIC VS. OPEN SURGICAL PATHWAY SEEDING OF SKULL BASE CHORDOMA. - Silvia M Vergara, MD; Biren K Patel, MD; Samir Lohana; Tomas Garzon-Muvdi; Gustavo Pradilla, MD; Emory University

P034: UNILATERAL TRANSCONDYLAR APPROACH TO CHORDOMA OF BILATERAL C1 AND BILATERAL OCCIPITAL CONDYLES - Jihad Abdelgadir; Rory Goodwin; Ali Zomorodi; Duke University

P035: ANTEROLATERAL TRANSCERVICAL [BERNARD GEORGE] APPROACH TO AN UPPER CERVICAL RECURRENT CHORDOMA: STEP BY STEP ILLUSTRATION WITH A CASE REPORT. - Chandrima Biswas, MD; Joseph Lee, MD; Daniel Kreatsoulas, MD; Lucas Carlstrom, MD; Ricardo Carrau, MD; Andrew Grossbach, MD; Daniel Prevedello, MD; Ohio State University and Wexner Medical Centre

P036: ECTOPIC INTRANASAL CHORDOMA RECURRENCE FOLLOWING SUBLABIAL TRANSSEPTAL TRANSPHENOIDAL RESECTION: CASE REPORT AND LITERATURE REVIEW - Douglas Farquhar, MD; Lindsey Lowder, MD; Aaron G Mammoser, MD; Tyler J Kenning, MD; Piedmont Atlanta Hospital

P037: ANTERIOR FULL-ENDOSCOPIC TRANSCERVICAL (AFETA) ODONTOIDECTOMY AS A SURGICAL ALTERNATIVE TO ENDONASAL ODONTOIDECTOMY - Sara Gomez-Niebles, MD¹; Cristhian Barrera-Guzman, MD¹; Juan Felipe Abaunza-Camacho, MD²; Alberto Daza-Ovalle, MD²; Humberto Madrinan-Navia, MD²; Jorge Torres-Mancera²; Camilo Peña²; Natalia Guevara-Moriones¹; William Mauricio Riveros-Castillo²; Javier M Saavedra¹; ¹Center for Research and Training in Neurosurgery; ²Universidad del Rosario School of Medicine, Bogotá, Colombia

P038: EXPANDED ENDOSCOPIC ENDONASAL APPROACH TO OCCIPITAL CONDYLE: A MORPHOMETRIC STUDY IN INDIAN CADAVERS - Keyur G Shah, Dr; Dwarakanath Srinivas, Prof; National Institute of Mental Health and Neurosciences

P039: THE EXTENSIONS OF THE FAR LATERAL APPROACH: AN ANATOMICAL GUIDE. - Alessandro De Bonis, MD; Danielle Dang, MD; Luciano Leonel, PhD; Michael Link, MD; Maria Peris Celda, MD, PhD; Mayo Clinic Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program

P040: MEASUREMENT OF THE SUPERIOR AND INFERIOR LIMIT THROUGH THE PURE ENDOSCOPIC ENDONASAL TRANS-CHOANAL APPROACH TO THE CRANIOVERTEBRAL JUNCTION: CADAVERIC ANATOMICAL STUDY - Joonho Byun¹; Sae Min Kwon²; Minkyun Na³; ¹Department of Neurosurgery, Korea University Guro Hospital, Korea University College of Medicine, Seoul, Republic of Korea; ²Department of Neurosurgery, Dongsan Medical Center, Keimyung University School of Medicine, Daegu, Republic of Korea; ³Department of Neurosurgery, Hanyang University Hospital, Hanyang University College of Medicine, Seoul, Republic of Korea

P041: RESECTION OF FORAMEN MAGNUM MENINGIOMA THROUGH TRANSCONDYLAR FAR LATERAL APPROACH; NUANCES AND TECHNIQUES - Raghuram Sampath, MD, FAANS, FACS; Jason Weistein, MD; KP/NWP Center for Health Research

Poster Listing (cont.)

P042: OSTEOMYELITIS ASSOCIATED WITH ACUTE SINUSITIS IN THE SETTING OF AN EXTENSIVELY PNEUMATIZED SKULL BASE - Kedar Patel¹; Karthik Pittala¹; [Spencer Short, MD²](#); Amed Natour, MD²; Ravi N Samy, MD²; Sean Parsel, DO²; ¹University of South Florida - Morsani College of Medicine; ²Lehigh Valley Health Network, Division of Otolaryngology-Head and Neck Surgery

P043: CLIVAL ASPERGILLOSIS - [Selfy Oswari](#); Indonesia National Brain Center Hospital

P044: DECISION MAKING IN CLIVAL MASS LESIONS: RISK FACTORS FOR MALIGNANT DISEASE & AN ILLUSTRATIVE CASE EXAMPLE - Matthew P Baier¹; Daniel A Cheong¹; Helen H Shi, MD¹; Jo Elle Peterson, MD²; Kar-Ming A Fung, MD²; Ian F Dunn, MD¹; Kibwei A McKinney, MD³; [Christopher S Graffeo, MD, MS¹](#); ¹Department of Neurosurgery, University of Oklahoma Health Sciences Center; ²Department of Pathology, University of Oklahoma Health Sciences Center; ³Department of Otolaryngology, University of Oklahoma Health Sciences Center

P045: THE ROLE OF ENDOSCOPIC ENDONASAL APPROACH IN THE MANAGEMENT OF FORAMEN MAGNUM MENINGIOMAS - [Hussam Abou-Al-Shaar, MD¹](#); Othman Bin-Alamer, MBBS¹; Tritan Plute, BS²; Arka N Mallela, MD, MS¹; Lauren M North, MD³; Garret W Choby, MD³; Eric W Wang, MD³; Carl H Snyderman, MD, MBA³; Paul A Gardner¹; Georgios A Zenonos, MD¹; ¹Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA; ²University of Pittsburgh School of Medicine, Pittsburgh, PA; ³Department of Otolaryngology, University of Pittsburgh Medical Center, Pittsburgh, PA

P046: ENDOSCOPIC ENDONASAL ODONTOIDECTOMY IN PEDIATRIC PATIENTS WITH CONGENITAL SKELETAL DYSPLASIA: A CASE SERIES - Hudin N Jackson, MD¹; Uma Ramaswamy, MD²; Carla Giannoni, MD²; William E Whitehead, MD, MPH²; David F Bauer, MD, MPH²; ¹Baylor College of Medicine; ²Texas Children's Hospital

P047: ENDOSCOPIC TRANSCLIVAL APPROACH TO BRAINSTEM CAVERNOMAS: OUR PRELIMINARY EXPERIENCE AND THE ROLE OF DIFFUSION TENSOR IMAGING WITH TRACTOGRAPHY - Maurizio Gladi¹; Alessio Iacoangeli¹; Fabio Greco²; [Denis Aiudi¹](#); Andrea Mattioli¹; Alessio Raggi¹; Valentina Liverotti¹; Maurizio Iacoangeli¹; ¹Università Politecnica delle Marche - Clinica di Neurochirurgia - Ancona (Italy); ²UOC di Otorinolaringoiatria, Fondazione Policlinico Universitario Campus Bio-Medico - Roma (Italy)

P051: TAILORED PERSONALIZED STRATEGIES AND OUTCOMES WITH GRADUATED MULTI-ANGLE, MULTI-CORRIDOR ENDOSCOPIC REMOVAL OF JUVENILE NASOPHARYNGEAL ANGIOFIBROMAS - Jinsoo Kim, MS¹; Andrea L Castillo, MD¹; Wayne D Hsueh, MD²; Jean Anderson Eloy, MD²; [James K Liu, MD³](#); ¹Rutgers New Jersey Medical School; ²Department of Otolaryngology-Head and Neck Surgery, New Jersey Medical School; ³Department of Neurological Surgery, New Jersey Medical School

P052: INTRACRANIAL EXTRA-AXIAL TUMOURS INVADING THE EXTRACRANIAL PARAPHARYNGEAL SPACE (PPS): A SYSTEMATIC REVIEW. - [Leonardo Tariciotti, MD¹](#); Justin Maldonado, BA²; Samir Lohana¹; Biren Patel, MD¹; Alejandra Rodas Calderon, MD¹; J. Manuel Revuelta Barbero, MD, PhD¹; Erion Jr. De Andrade, MD¹; Youssef M Zohdy, MD¹; C. Arturo Solares, Prof¹; Tomas Garzon-Muvdi, MD, MSc¹; Gustavo Pradilla, Prof¹; ¹Emory University; ²Emory University, School of Medicine

P053: A PROPOSED SIMPLIFIED CLASSIFICATION SYSTEM FOR THE TRANSVERSE/ SIGMOID AND SUPERIOR PETROSAL SINUS COMPLEX - [Maria Karampouga¹](#); Kyle Affolter¹; Philip L Perez²; Michael Mcdowell¹; Paul Gardner¹; Georgios Zenonos¹; ¹Department of Neurological Surgery, Center for Cranial Base Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA; ²Department of Otolaryngology, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA

P054: MICROSURGICAL ANATOMY OF ACCESS TO THE PERITRIGEMINAL ZONE: AN ANATOMIC AND RADIOLOGIC COMPARISON BETWEEN TRANSCRANIAL SKULL BASE APPROACHES. - [Alessandro De Bonis, MD¹](#); Danielle Dang, MD; Luciano Leonel, PhD; Michael Link, MD; Maria Peris Celda; Mayo Clinic Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program

P055: SEVERE EPISTAXIS: ATYPICAL PRESENTATION OF A GLOMUS TYMPANICUM - Benjamin Wibonele, MD; Kaitlyn Brooks, MD; Jackson Vuncannon, MD; [Alejandra Rodas, MD¹](#); Esther Vivas, MD; C. Arturo Solares, MD; Emory University School of Medicine

Poster Listing (cont.)

P056: FACIAL NERVE SCHWANNOMA MASQUERADING AS JUGULAR PARAGANGLIOMA - [Krish Suresh, MD](#); Nicole T Jiam, MD; Ryan A Bartholomew, MD; C E Corrales, MD; Brigham & Women's Hospital

P057: SURGICAL ANATOMY OF THE TRANSMASTOID TRANSCERVICAL INTRADURAL (CRANIOCERVICAL) APPROACH TO THE JUGULAR FORAMEN. - [Felipe Constanzo, MD](#); Jonathan Rycken, MD; Enrico Gambatesa, MD; Mariano Rinaldi, MD; Vera Vigo, MD; Tatsuya Uchida, MD; Min Ho Lee, MD; Alix Bex, MD; Yuanzhi Xu, MD; Vladimir Ljubimov, MD; Christine K Lee, MD; Xiao Limin, MD; Juan C Fernandez-Miranda, MD; Stanford University, Stanford, CA, United States

P058: CLINICAL MULTIFACETED FEATURES OF RHOMBOID LIP AND CLINICAL CONSIDERATIONS FOR RETROSIGMOID APPROACH - [Osamu Akiyama, PhD¹](#); Yuzaburo Shimizu, PhD²; Takuma Kodama²; Mario Suzuki, PhD²; Satoshi Matsuo, PhD³; Noritaka Komune, PhD⁴; Akihide Kondo, PhD²; ¹Department of Neurosurgery, Juntendo University, Faculty of Medicine, Tokyo, Japan/ Akiyama Neuro Surgery Clinic, Yamanashi, Japan; ²Department of Neurosurgery, Juntendo University, Faculty of Medicine, Tokyo, Japan; ³Department of Neurosurgery, Fukuoka Tokushukai Hospital, Fukuoka, Japan; ⁴Department of Otorhinolaryngology, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan

P059: EXTRACRANIAL MENINGIOMA WITH MIDDLE EAR INVASION VIA THE JUGULAR FORAMEN: A CASE REPORT - [Paul F Chisolm, MD](#); James D Johns, MD; Peter H Ahn, MD; H J Kim, MD; MedStar Georgetown University Hospital

P060: TRANSMASTOID APPROACH AS AN ALTERNATIVE FOR THE MANAGEMENT OF INTRACRANIAL PATHOLOGY: REPORT OF TWO CASES - [Juan C Yanez-Siller, MD, MPH¹](#); Jeffrey Liaw, MD¹; Sami Abdulnabi, BS²; Michael Ortiz, MD³; Arnaldo L Rivera, MD¹; ¹University of Missouri, Dept of Otolaryngology-Head and Neck Surgery; ²University of Missouri School of Medicine; ³University of Missouri, Dept of Neurological Surgery

P061: MICROVASCULAR DECOMPRESSION OF A RARE CASE OF TRIGEMINAL NEURALGIA ARISING FROM DUAL AICA-PICA COMPRESSION ON THE TRIGEMINAL SENSORY NUCLEUS AND TRACT: AN ILLUSTRATIVE CASE DESCRIPTION - [Mehdi Khaleghi¹](#); Chandrima Biswas, MD¹; Matthieu Weber¹; Badriye Nur Ustun²; Daniel Prevedello¹; ¹Ohio State University, Wexner Medical Center; ²Istanbul University-Cerrahpasa faculty of medicine, Istanbul, Turkey

P062: COMBINED SINGLE- OR TWO-STAGE ANTEROLATERAL TRANSCRANIAL AND ENDOSCOPIC APPROACHES TO ADDRESS SPHENO-PETROCLIVAL TUMOURS: A SYSTEMATIC REVIEW. - [Leonardo Tariciotti, MD¹](#); Justin Maldonado, BA²; Biren Patel, MD¹; Samir Lohana¹; Alejandra Rodas Calderon¹; J. Manuel Revuelta Barbero, MD, PhD¹; Erion Jr De Andrade, MD¹; Youssed M Zohdy¹; C. Arturo Solares, Prof¹; Tomas Garzon-Muvdi, MD, MSc¹; Gustavo Pradilla, Prof¹; ¹Emory University; ²Emory University, School of Medicine

P063: CEREBELLAR FLOCCULUS PSEUDOMASS PROTRUDING INTO THE INTERNAL AUDITORY CANAL - [Haley R Kowalski¹](#); Justin Cottrell, MD²; Mari Hagiwara, MD³; Sean O McMenomey, MD²; ¹NYU Grossman School of Medicine; ²Department of Otolaryngology-Head & Neck Surgery, NYU Grossman School of Medicine; ³Department of Radiology, New York University Grossman School of Medicine

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P084: COMBINED APPROACHES TO MANAGEMENT OF PETROCLIVAL MENINGIOMAS: SYSTEMATIC REVIEW OF INDICATIONS AND APPROACH SELECTION - [Nolan J Brown, MBA](#)¹; Cathleen Kuo¹; Dontre M Douse, MD²; Julian Gendreau, MD³; Ramin Morshed²; Matthew L Carlson, MD²; Jamie J Van Gompel²; ¹UC Irvine; ²Mayo Clinic Rochester; ³Johns Hopkins

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P105: SOCIOECONOMIC PREDICTORS OF POST-OPERATIVE REMISSION STATUS IN ACROMEGALIC PATIENTS WITH GROWTH HORMONE-SECRETING PITUITARY ADENOMAS - [Aymen S Kabir¹](#); [Zain Peeran¹](#); [Robert C Osorio¹](#); [Poojan Shukla¹](#); [Aarav Badani²](#); [Harmon Khela²](#); [Manish K Aghi, MD, PhD²](#); ¹School of Medicine, University of California, San Francisco; ²Department of Neurological Surgery, University of California, San Francisco

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[Abdul Karim Ghaith, MD](#)¹; [John L Atkinson, MD](#)¹; [Fredric B Meyer, MD](#)¹; [Michael J Link, MD](#)¹; [Bruce E Pollock, MD](#)¹; [Maria Peris Celda, MD, PhD](#)¹; [Mohamad Bydon, MD](#)¹; [Carlos D Pinheiro Neto, MD, PhD](#)²; [Irina Bancos, MD](#)³; [Caroline J Davidge-Pitts, MD](#)³; [Justine S Herndon, PAC](#)³; [Dana Erickson, MD](#)³; [Antonio Bon-Nieves, BS](#)¹; [Sukwoo Hong, MD](#)¹; [Miguel Saez-Alegre, MD, PhD](#)¹; [Ramin A Morshed, MD](#)¹; [Charbel K Moussalem, MD](#)¹; [Jamie J Van Gompel, MD](#)¹; ¹Department of Neurologic Surgery, Mayo Clinic; ²Department of Otolaryngology-Head and Neck Surgery, Mayo Clinic; ³Division of Endocrinology, Diabetes, and Nutrition, Mayo Clinic

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[Vijay Agarwal, MD](#); Department of Neurological Surgery, Albert Einstein College of Medicine, Bronx, NY, USA; Department of Neurological Surgery, Montefiore Medical Center, Bronx, NY, USA

P110: POSESS-STUDY (POSITIONING IN ENDOSCOPIC ENDONASAL SKULL BASE SURGERY): SEMI-SITTING (30&DEG;) VERSUS SUPINE POSITION: A RANDOMIZED CONTROLLED TRIAL - [Jonathan Rychen](#)¹

[Tim Hallenberger](#)¹; [Christoph Oetliker](#)¹; [Yves Brand](#)²; [Luigi Mariani](#)¹; [Michel Röthlisberger](#)¹; ¹University Hospital of Basel, Switzerland; ²Kantonspital Graubünden, Chur, Switzerland

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[Ming-Ying Lan, MD, PhD](#)²; [Yu-Wen Huang, MD](#)²; [Chien-Fu Yeh, MD, PhD](#)²; [Yun-Ting Chao, MD, PhD](#)²; [Li-Ting Hong, MD](#)²; ¹Department of Neurosurgery, Taipei Veterans General Hospital; ²Department of Otorhinolaryngology- Head and Neck Surgery, Taipei Veterans General Hospital

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Kaiser Permanente Woodland Hills Medical Center

P114: HEALTHCARE DISPARITIES IN PITUITARY SURGERY: A SYSTEMATIC REVIEW - [Mohammadmahdi Sabahi, MD, MPH](#)

[Seyed Farzad Maroufi, MD, MPH, MPHE](#)²; [Adrianna Wierzbicka, MD](#)¹; [Lana Maniakina](#)³; [Badih Adada, MD](#)¹; [Hamid Borghei-Razavi, MD](#)¹; ¹Department of Neurological Surgery, Pauline Braathen Neurological Center, Cleveland Clinic Florida; ²Tehran University of Medical Sciences; ³Medical School, Edward Via College of Osteopathic Medicine, Spartanburg, SC, USA.

P115: CLINICAL LANDSCAPE OF PITUITARY ADENOMA - [Alexander Landry, MD](#)

[Justin Wang, MD](#); [Farshad Nassiri, MD, PhD](#); [Gelareh Zadeh, MD, PhD](#); University of Toronto

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[Gabriel Andino](#); [Shirley Marino Lee](#); [Scott Connors, MD](#); [Ellen Wang, MD](#); [Ankur Patel, MD](#); [Toral Patel, MD](#); [Matthew Sun, MD](#); [Samuel Barnett, MD](#); [Ashleigh A Halderman, MD](#); University of Texas Southwestern Medical Center

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[Thomas Z Rohan, BS](#)¹; [David P Bray, MD, MSc](#)²; [James J Evans, MD](#)²; ¹Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA; ²Department of Neurological Surgery, Thomas Jefferson University, Philadelphia, PA

P119: DIABETES INSIPIDUS AFTER ENDONASAL ENDOSCOPIC PITUITARY MACROADENOMA RESECTION, CORRELATION OF PATIENT -RELATED RISK FACTORS - [Zeina Korban, Dr](#)

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P124: SYMPTOMATIC CEREBELLAR PTOSIS FOLLOWING CEREBELLAR HEMATOMA EVACUATION: A CASE REPORT AND REVIEW OF THE LITERATURE - Vinay Suresh¹; [Ahmad Ozair, MBBS](#)¹; Fnu Anbuvaran²; Malavika Jayan³; Vivek Sanker, MBBS⁴; Bharath Raju, MD, MCh⁵; Suresh H.S., MCh⁶; ¹King George's Medical University, Lucknow, India; ²Madras Medical College, Chennai, India; ³Bangalore Medical College and Research Institute, Bengaluru, India; ⁴Government Medical College, Thiruvananthapuram, India; ⁵Department of Neurosurgery, University of Texas at Houston; ⁶Premier Neuro And Eye Care Hospital, Bengaluru, India

P125: EFFICACY OF VENOUS SINUS STENTING FOR PATIENTS WITH IDIOPATHIC INTRACRANIAL HYPERTENSION PRESENTING WITH SPONTANEOUS CEREBROSPINAL FLUID LEAK: A SINGLE INSTITUTION'S EXPERIENCE - [A. Yohan Alexander, MD](#)¹; Giorgos D Michalopoulos, MD²; Waleed Brinjikji, MD³; Carlos D Pinheiro-Neto, MD⁴; Maria Peris Celda, MD, PhD⁴; ¹Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA; University of Minnesota, Medical School, Minneapolis, Minnesota, USA; ²Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA; ³Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA; Department of Radiology, Mayo Clinic, Rochester, Minnesota, USA; ⁴Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA; Department of Otorhinolaryngology, Mayo Clinic, Rochester, Minnesota, USA

P126: THE USE OF INTRA-OPERATIVE LUMBAR DRAIN AND LOCAL FLAPS/GRAFTS IN PITUITARY ADENOMA SURGERY: A 5-YEAR INSTITUTIONAL EXPERIENCE - Zeina Korban, Dr; [Christophe Abi Zeid Daou, Dr](#); Hussein Darwich, Dr; Jad Hosri; American University of Beirut Medical Center

P127: BEDSIDE PNEUMOENCEPHALOGRAPHY IN THE ERA OF MODERN ENDOSCOPIC ENDONASAL SURGERY: BRINGING A CENTURY OLD TECHNIQUE TO TODAY'S PRACTICE - [Kelly Shaftel, MD](#); Jacob Pawloski, MD; Hassan Fadel, MD; Scott Lim; Amrita Ray, DO; Jacob Eide, MD; Jack Rock, MD; John Craig, MD; Karam Asmaro, MD; Henry Ford Health

P128: TRANSMASTOID APPROACH TO TEMPORAL BONE CEREBROSPINAL FLUID (CSF) LEAKS REPAIR: A SINGLE-CENTER EXPERIENCE - [Andres Restrepo](#); Leonard Verhey; Gregory Artz; Todd Vitaz; Corewell Health

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P130: THE USE OF FIBRIN SEALANTS IN REDUCING POSTOPERATIVE COMPLICATIONS IN SKULL BASE SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS - [Hanel W Eberly, BS](#)¹; Mattie Rosi-Schumacher, MD²; Bao Y Sciscent, BS¹; Nguyen M Truong, BS¹; Tonya S King, PhD¹; David Goldenberg, MD, FACS¹; Neerav Goyal, MD, FACS¹; ¹Penn State College of Medicine; ²University at Buffalo

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P135: NOVEL NASOSEPTAL MUCOSAL FLAP FOR RECONSTRUCTION OF SKULL BASE AND OROPHARYNGEAL DEFECTS - [Pearla Hodo](#); Kelly Staricha, MD; Simona Seriola, MD; Luciano Leonel, PhD; Maria Peris Celda, MD, PhD; Carlos Pinheiro Neto, MD, PhD; Mayo Clinic

P138: TRANSMASTOID REPAIR OF CSF LEAKS INTO THE TEMPORAL BONE FOLLOWING INTERNAL AUDITORY CANAL TUMOR REMOVAL VIA RETROSIGMOID APPROACH - Neal M Jackson, MD; [Lauren Mueller, BA](#); Tulane University School of Medicine

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P142: RETROSELLAR RATHKE'S CLEFT CYST: A SYSTEMATIC REVIEW OF THE LITERATURE AND REPORT OF A CASE - [Mehdi Khaleghi](#); Joshua Vignolles-Jeong; Bradley Otto; Ricardo Carrau; Daniel Prevedello; Ohio State University, Wexner Medical Center

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P152: MANAGEMENT OF A PROGRESSIVE GIANT MAXILLARY AMELOBLASTOMA EXTENDING TO THE CRIBRIFORM PLATE: A CASE REPORT - [Ladan Navari, BS](#)¹; Claudio Callejas, MD¹; Joseph Lee, MD¹; Ricardo Carrau, MD¹; Kyle Wu, MD²; Kyle VanKoeveering, MD¹; ¹The Ohio State University Department of Otolaryngology - Head & Neck Surgery; ²The Ohio State University Department of Neurological Surgery

P153: GENOMICS AND PDL1 EXPRESSION IN A SMALL BASE OF THE SKULL COMPLEX PATHOLOGY SERIES - [Sammy Khalili, MD, MSc, FRCSC](#); Melanie Fukui, MD; Neil K Mundi, MD, FRCSC; Stephen Winkler, MD; Russel Wagner; Asad Khan, MD; Amin Kassam, MD, FRCSC; George Bobustuc, MD; Intent Medical Group

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P155: HUMAN PAPILLOMAVIRUS STATUS IN SINONASAL ADENOID CYSTIC CARCINOMA - [Claudio Callejas](#); Abberly L Limbach; Marquardt Matthew; Kathleen Kelly; Kyle Wu; Daniel Prevedello; Ricardo L Carrau; Kyle VanKoeveering; OSU

P157: EVOLUTION IN SURGICAL MANAGEMENT OF SINONASAL ADENOID CYSTIC CARCINOMA IN THE ENDOSCOPIC AGE: A SYSTEMATIC REVIEW WITH SINGLE-INSTITUTIONAL CASE SERIES - Timothy Becker, MS¹; [Fezaan Kazi](#)¹; Varun Rao¹; Michael Ye, MD²; Steven X Chen, PhD, MD²; Kayla Powell, MS¹; Elisa A Illing, MD²; Jonathan Y Ting, MD, MS, MBA²; Satyan B Sreenath, MD²; ¹Indiana University School of Medicine; ²Department of Otolaryngology-Head and Neck Surgery, Indiana University

P158: DENTINOGENIC GHOST CELL TUMOR WITH MALIGNANT TRANSFORMATION: A CASE PRESENTATION OF A RARE AND AGGRESSIVE NEOPLASM REQUIRING RADICAL CRANIOFACIAL RESECTION AND RECONSTRUCTION - [Bradley Chauvin, BS](#); Stephen Hernandez, MD; LSUHSC New Orleans

P159: IMMUNOTHERAPY IN THE MANAGEMENT OF SINONASAL MUCOSAL MELANOMA: A SYSTEMATIC REVIEW AND META-ANALYSIS - [Anthony Tang](#)¹; Suchet Taori¹; Sophia Dang²; Paul Gardner³; Georgios A Zenonos³; Diwakar Davar⁴; Edward C Kuan⁵; Eric W Wang²; Carl Snyderman²; Garret Choby²; ¹University of Pittsburgh, School of Medicine; ²University of Pittsburgh Medical Center, Department of Otolaryngology-Head and Neck Surgery; ³University of Pittsburgh Medical Center, Department of Neurological Surgery; ⁴University of Pittsburgh Medical Center, Division of Hematology/Oncology; ⁵University of California Irvine, Department of Otolaryngology-Head and Neck Surgery

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P161: SOLITARY FIBROUS TUMOR OF THE NASAL CAVITY: A CASE REPORT AND REVIEW OF THE LITERATURE - Kathryn S Marcus, MD; Isaac Wasserman, MD, MPH; Roy Xiao, MD, MS; Noel Ayoub, MD, MBA; Stacey T Gray, MD; Eric H Holbrook, MD, MS; Massachusetts Eye & Ear

P162: OUTCOMES OF NECK RECURRENCE IN OLFACTORY NEUROBLASTOMA: A SINGLE INSTITUTION'S EXPERIENCE - [Alejandra Rodas](#), MD; Youssef M Zohdy, MD; Jackson R Vuncannon, MD; Georges Daouds, MD; Juan M Revuelta Barbero, MD, PhD; Edoardo Porto, MD; Tomas Garzon-Muvdi, MD; John M DelGaudio, MD; Gustavo Pradilla, MD; Emily Barrow, MD; C. Arturo Solares, MD; Emory University

P163: COMBINED ENDOSCOPIC AND OPEN APPROACHES FOR SINONASAL AND SKULL BASE ANEURYSMAL BONE CYST: A CASE REPORT - [Hana Hallak](#)¹; Sarah Basindwah²; Abdulrazag Ajlan²; Ashwag AlQurashi²; ¹Department of Neurosurgery, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia; ²Division of Neurosurgery, King Saud University Medical City, Riyadh, Saudi Arabia.

P164: OLFACTORY NEUROBLASTOMA: TRENDS IN SURGICAL MANAGEMENT AND POSTOPERATIVE COMPLICATIONS THROUGH TIME - [Alejandra Rodas](#), MD; Youssef M Zohdy, MD; Jackson R Vuncannon, MD; Roberto M Soriano, MD; Juan M Revuelta Barbero, MD, PhD; Edoardo Porto, MD; Tomas Garzon-Muvdi, MD; Charles E Moore, MD; Sarah K Wise, MD; John M DelGaudio; Emily Barrow, MD; Gustavo Pradilla, MD; C. Arturo Solares, MD; Emory University

P165: COMBINED PETROSECTOMY WITH RETROSIGMOID CRANIOTOMY FOR A RECURRENT NASOPHARYNGEAL CARCINOMA: AN ILLUSTRATIVE CASE REPORT - [Ness Jerold A Justo](#), MD, MBA; Stephanie Suyhogo, MD; Ian Bayan, MD; John Dy; The Medical City

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P167: MACHINE LEARNING- USE OF ARTIFICIAL INTELLIGENCE TO PREDICT THE VOLUMETRIC EXTENT OF RESECTION IN GIANT PITUITARY ADENOMAS - Biren K Patel, MBBS, MS, MCh; Leonardo Tariciotti, MD; Samir Lohana; Justin Maldonado, BA; Silvia Vergara, MD; Alejandra Rodas, MD; Erion Jr Andrade, MD; Manuel Revuelta, MD; Tomas Garzon-Muvdi, MDFAANS; Gustavo Pradilla, MD, FAANS; Emory University

P168: PEELING THE TENTORIUM - A RENAISSANCE FOR PETROSAL APPROACHES? QUANTITATIVE ANATOMICAL ANALYSIS OF THE INTERTENTORIAL COMBINED PETROSAL APPROACH - [David R Peters](#)¹; Lorenzo Giammattei¹; Arianna Fava²; Sara Sabatasso¹; Sami Schranz¹; Hugues Cadas¹; Mahmoud Messerer¹; Daniele Staron¹; Roy T Daniel¹; ¹University of Lausanne; ²IRCCS Neuromed Pozzilli

P169: A NOVEL TECHNIQUE FOR NASOPHARYNGEAL STENOSIS REPAIR: COMBINED TRANSORAL ROBOTIC AND ENDONASAL APPROACHES FOR ENHANCED VISUALIZATION AND SURGICAL PRECISION - [Russel T Wagner](#); Sammy Khalili, MD; Blake G Hennings; Neilkamal Mundi, MD; Northwest Community Hospital

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P171: THOUGHTFUL, INTEGRATED, TECHNOLOGY ENHANCED, COMPLEX SURGICAL APPROACH IN BASE OF SKULL PATHOLOGIES COULD CONSISTENTLY RENDER ONCOLOGIC RELEVANT RESULTS - [Sammy Khalili](#), MD, MSc, FRCSC; Neil K Mundi, MD, FRCSC; Melanie Fukui, MD; Stephen Winkler, MD, FACS; Russel Wagner; Asad Khan, MD; George Bobustuc, MD; Amin Kassam, MD, FRCSC; Intent Medical Group

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P174: NO-DRILL SINGLE-PIECE FRONTO-ORBITO-ZYGOMATIC CRANIOTOMY: SURGICAL TECHNIQUE AND PRELIMINARY RESULTS FROM AN AFRICAN DEVELOPING COUNTRY - Amos O Adeleye, MBBS¹; Oghenekvwe E Okere, MBBS²; Samuel Moscovici, MD³; [Michael R Chicoine, MD⁴](#); ¹College of Medicine, University of Ibadan, and University College Hospital, UCH, Ibadan, Nigeria; ²University College Hospital, UCH, Ibadan, Nigeria; ³Department of Neurosurgery, Hadassah-Hebrew University Medical Center, Ein-Kerem, Jerusalem, Israel; ⁴Department of Neurosurgery, University of Missouri, MO, United States of America

P175: EPIDURAL SUBTEMPORAL INTERTENTORIAL APPROACH (ESIA) TO THE MESIOTEMPORAL LOBE AND LATERAL MIDBRAIN: A CADAVERIC EXPLORATION OF THE TENTORIUM - [David R Peters¹](#); Lorenzo Giammattei¹; Pablo Gonzalez-Lopez²; Giulia Cossu¹; Mercy George¹; Mahmoud Messerer¹; Daniele Starnoni¹; Roy T Daniel¹; ¹University of Lausanne; ²Hospital General Universitario Alicante

P176: QUANTITATIVE ANATOMORADIOLOGICAL COMPARISON BETWEEN MINIPTERIONAL AND SUPRAORBITAL EYEBROW APPROACHES TO THE PARASELLAR REGION - [Fabio Torregrossa, MD¹](#); Luciano Leonel, PhD¹; Simona Serioli, MD²; Maria Peris-Celda, MD, PhD¹; ¹Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA; ²Division of Neurosurgery, Department of Medical and Surgical Specialties, Radiological Sciences and Public Health, University of Brescia, Brescia, Italy

P177: NERVE COMBING FOR TRIGEMINAL NEURALGIA VIA "PEELING" OF THE MIDDLE FOSSA: A NEW STRATEGY FOR FAILED PRIOR MICROVASCULAR DECOMPRESSION - Romel Corecha Santos, MD; Bhavika Gupta, MD; [Diego Morales Roccuzzo, MD](#); Rocco Dabecco, DO; Raphael Bastianon Santiago, MD; Shadi Bsai, MD; Badih Adada, MD; Hamid Borghei-Razavi, MD; Cleveland Clinic Florida

P178: VERSATILITY OF SPIWAY IN SURGERY: NEW IMPLEMENTATIONS AND REVIEW OF THE LITERATURE - [Brandon R Rosvall, MD¹](#); Anthony Tang, BS²; Bhuvic Patel, MD³; Garret W Choby, MD¹; Georgios A Zenonos, MD³; Paul A Gardner, MD³; Eric W Wang, MD¹; Carl H Snyderman, MD, MBA¹; ¹University of Pittsburgh Medical Center, Department of Otolaryngology; ²University of Pittsburgh, School of Medicine; ³University of Pittsburgh Medical Center, Department of Neurological Surgery

P179: SURGICAL APPROACH TO THE ANTERIOR BRAINSTEM: COMPARATIVE CADAVERIC ANALYSIS BETWEEN ANTERIOR TRANSPETROSAL PETROSAL AND ENDOSCOPIC TRANSORBITAL ROUTE - [Min Kyun Na¹](#); Joonho Byun²; Sae Min Kwon³; ¹Department of Neurosurgery, College of Medicine, Hanyang University, Seoul, Korea; ²Korea university guro hospital, Korea university college of medicine, Seoul, Korea; ³Department of Neurosurgery, Dongsan Medical Center, Keimyung University School of Medicine, Daegu, Korea

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P182: IMMERSIVE SURGICAL ANATOMY OF MAIN ENDOSCOPIC ENDONASAL EXPOSURES: A STEP FORWARD INTO THE IMPLEMENTATION OF 3D TECHNOLOGIES FOR EDUCATION - [Andre Payman, BS](#); Ivan El Sayed, MD; Roberto Rodriguez Rubio, MD; University of California San Francisco

P183: ENDOSCOPIC ENDONASAL APPROACH TO THE INFRATEMPORAL FOSSA: EXPERIENCE AT THE NEUROSURGERY INSTITUTE DR. ALFONSO ASENJO - [J. Matias Gómez](#)¹; Valeria Cepeda²; Cristián Naudy¹; ¹Neurosurgery Institute Dr. Alfonso Asenjo; ²University of Chile

P184: ENDOSCOPIC NASOPHARYNGECTOMY INDICATIONS AND OUTCOMES: A 10-YEAR SINGLE-INSTITUTION EXPERIENCE - [Jacquelyn K Callander, MD](#); Ezequiel D Goldschmidt, MD, PhD; Ivan H El-Sayed, MD; University of California San Francisco

P185: KEYHOLE MIDDLE FOSSA CRANIOTOMY FOR REPAIR OF TEGMEN TYMPANI DEFECT - [Syed M Adil, MD](#)¹; Jihad Abdelgadir, MD¹; Kimberly Hoang, MD²; Patrick J Codd, MD¹; ¹Duke University Medical Center; ²Emory University School of Medicine

P186: ENDONASAL SKULL BASE 3D ANATOMICAL MODELLING: AN INNOVATIVE APPROACH TO A SURGICAL ATLAS - [Moataz D Abouammo, MD, MSc](#)¹; Maithrea S N., MBBS, MMED²; Mohammad Bilal Alsavaf, MD¹; Luigi Melaragno³; Kyle C Wu, MD⁴; Kyle K VanKoeveering, MD¹; Daniel M Prevedello, MD, MBA⁴; Ricardo L Carrau, MD, MBA¹; ¹Department of Otolaryngology - Head and Neck Surgery, the Ohio State University Wexner Medical Center, Columbus, Ohio, USA; ²Department of Otolaryngology, Hospital Raja Permaisuri Bainun, Jalan Raja Ashman Shah, 30450 Ipoh, Perak, Malaysia; ³Center for Design and Manufacturing Excellence, branch of The Ohio State University's College of Engineering; ⁴Department of Neurological Surgery, The Ohio State University Wexner Medical Center, Columbus, USA.

P187: THE ANTEROLATERAL APPROACH, REVISITED FOR BENIGN JUGULAR FORAMEN TUMORS WITH PREDOMINANT EXTRACRANIAL EXTENSION: MICROSURGICAL ANATOMY AND CASE SERIES - [Hun Ho Park, MD, PhD](#)¹; Jihwan Yoo, MD¹; Hyeong-Cheol Oh, MD¹; Sebastien Froelich, MD²; Kyu Sung Lee, MD, PhD¹; ¹Gangnam Severance Hospital, Yonsei University; ²Lariboisiere Hospital, Paris VII-Diderot University

P188: COMBINED ENDOSCOPIC AND OPEN CRANIAL APPROACH FOR TREATMENT OF SKULL BASE LESIONS: A CASE SERIES - [Elsa Olson, MD](#)¹; Lucinda Chiu, MD¹; Bradley Kolb, MD¹; Russell Whitehead, BS²; Tamara Simpson²; Peter Filip, MD³; Peter Papagiannopoulos³; Bobby Tajudeen, MD³; Stephan Munich, MD¹; ¹Department of Neurosurgery, Rush University Medical Center; ²Department of Otolaryngology, Rush University Medical College; ³Department of Otolaryngology, Rush University Medical Center

P189: ANATOMIC STUDY OF NOVEL ENDOSCOPIC SURGICAL APPROACHES TO THE PARAPHARYNGEAL INTERNAL CAROTID ARTERY - [Anthony Tang](#)¹; Sophia Dang²; Xinni Xu³; Kyle Affolter⁴; Paul Gardner⁴; Carl Snyderman²; ¹University of Pittsburgh, School of Medicine; ²University of Pittsburgh Medical Center, Department of Otolaryngology-Head and Neck Surgery; ³National University Hospital, Department of Otolaryngology-Head and Neck Surgery, Singapore; ⁴University of Pittsburgh Medical Center, Department of Neurological Surgery

P190: MOBILIZATION OF THE LATERAL BUTTRESS OF THE MAXILLA TO CONNECT THE INFRATEMPORAL FOSSA AND THE BUCCAL SPACE DURING SUBLABIAL TRANSMAXILLARY APPROACHES - [Brennan Olson, MD, PhD](#); Kendall Tasche, MD; Luciano CPC Leonel, PhD; Maria Peris-Celda, MD, PhD; Carlos Pinheiro-Neto, MD, PhD; Mayo Clinic

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P191: 360° AND MIDLINE TO THE PETROUS APEX: COMPREHENSIVE SURGICAL ANATOMY AND LIMITATIONS OF OPEN AND ENDOSCOPIC ENDONASAL APPROACHES TO THE PETROUS APEX - [A. Yohan Alexander, BA^{1,2,3}](#); Edoardo Agosti, MD^{1,2,4}; Pedro L Plou, MD^{1,2,5}; Luciano CPC Leonel, PHD^{1,2}; Carlos D Pinheiro-Neto, MD, PHD^{1,2,6}; Maria Peris-Celda, MD, PHD^{1,2,6}; ¹Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program, Mayo Clinic, Rochester, MN; ²Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota, USA; ³University of Minnesota Medical School, Minneapolis, Minnesota, USA; ⁴Division of Neurosurgery, Department of Medical and Surgical Specialties, Radiological Sciences and Public Health, University of Brescia, Brescia, Italy; ⁵Department of Neurologic Surgery, Ospedale Italiano, Buenos Aires, Argentina; ⁶Department of Otolaryngology / Head and Neck Surgery, Mayo Clinic, Rochester, Minnesota, USA.

P192: ARTIFICIAL INTELLIGENCE IN SKULL BASE SURGERY: A SCOPING REVIEW - [Brandon R Rosvall, MD¹](#); Chareeni E Kurukulasuriya, BS²; Bhuvic Patel, MD³; Garret W Choby, MD¹; Georgios A Zenonos, MD³; Paul A Gardner, MD³; Carl H Snyderman, MD, MBA¹; Eric W Wang, MD¹; ¹University of Pittsburgh Medical Center, Department of Otolaryngology; ²University of Pittsburgh, School of Medicine; ³University of Pittsburgh Medical Center, Department of Neurological Surgery

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P194: DUAL SURGEON FOUR HANDED TECHNIQUE FOR OPEN SKULLBASE SURGERY: A TECHNICAL AND NON TECHNICAL GUIDE AND SYSTEMATIC REVIEW - [Jeremy Kam, MBBS, MMED, FRACS¹](#); Fidel Toomey, MD¹; [Celine Hounjet, MD²](#); Seika Taniguchi³; Serge Makarenko, MD, FRCSC²; Sandra Li¹; Tony Goldschlager¹; Ryojo Akagami, MD, BSc, MHSc, FRCSC²; ¹Department of Neurosurgery, Monash Medical Centre, Melbourne, Victoria, Australia; ²Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada; ³Department of Neurosurgery, Vancouver General Hospital, Vancouver, BC, Canada

P195: SURGICAL ANATOMY OF THE RETROSIGMOID APPROACH WITH TRANSTENTORIAL EXTENSION: PROTECTING THE 4TH CRANIAL NERVE - [Mariagrazia Nizzola](#); Luciano Leonel; Alessandro De Bonis; Maria Peris Celda; Department of Neurosurgery, Mayo Clinic, Rochester, Minnesota; Mayo Clinic Rhoton Neurosurgery and Otolaryngology Surgical Anatomy Program

P197: HOLOGRAM-BASED CRANIECTOMY FOR RESECTION OF AN EXTENSIVE EN PLAQUE MENINGIOMA COMPARED TO 3D-PRINTED RESECTION TEMPLATE - [Alexander Kuffer, MD, DMD, PhD¹](#); Alexandra Stauffer, MD²; Elisa Colombo, MD²; Amir R Dehdashti, MD¹; Luca Regli, MD²; ¹North Shore University Hospital; ²University Hospital Zurich

P198: ANATOMICAL STEP-BY-STEP DISSECTION OF COMPLEX SKULL BASE APPROACHES FOR TRAINEES: SURGICAL ANATOMY OF THE ENDOSCOPIC ENDONASAL SUPERIOR ETHMOIDECTOMY - [Edoardo Agosti¹](#); A. Yohan Alexander²; Luciano Leonel²; Carlos Pinheiro-Neto²; Maria Peris-Celda²; ¹University of Brescia; ²Mayo Clinic

P199: VIRTUAL SURGICAL PLANNING FOR A SINGLE STAGE SPHENO-ORBITAL MENINGIOMA RESECTION AND RECONSTRUCTION OF ORBIT AND CRANIUM - [Allyson R Alfonso, MD](#); Rami S Kantar, MD, PhD, MPH; Liliana Camison, MD; Andre Alcon, MD; Chandra Sen, MD; David A Staffenberg, MD; NYU Langone Health

P200: CONTRALATERAL TRANSMAXILLARY AND IPSILATERAL TRANSPTERYGOID APPROACHES: A BALANCED EVALUATION FOR ENHANCED ENDOSCOPIC PETROSECTOMY SAFETY - [Jonathan Chainey, MD, MSc, FRCSC¹](#); Ruth Lau, MD¹; Efstathios Papatsoutsos, MD, MSc²; John de Almeida, MD, MSc, FRCSC¹; Gelareh Zadeh, MD, PhD, FRCSC¹; Aristotelis Kalyvas, MD, PhD¹; ¹University of Toronto; ²Klinikum Dortmund gGmbH

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NASBS Skull Base Surgery SUMMER WORKSHOP

August 15-18, 2024 • LSU Health Sciences Center, New Orleans, LA



SAVE THE DATE

The NASBS 2024 Skull Base Surgery Summer Course is the ideal educational activity for Neurosurgical and Otolaryngology/Head and Neck Residents and Fellows

This course is not to be missed! Registration will be first come, first served, and opens April 2024. For more information visit <https://www.nasbs.org/summer-course/> or contact NASBS Course Coordinator, Meghan Nabors meghan@nasbs.org.



Disclosures



AMERICAN COLLEGE OF SURGEONS
Inspiring Quality:
Highest Standards, Better Outcomes

AMERICAN COLLEGE OF SURGEONS
DIVISION OF EDUCATION
Blended Surgical Education and Training for Life®

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Ineligible company: Any entity producing, marketing, re-selling, or distributing health care goods or services used on or consumed by patients. Providers of clinical services directly to patients are NOT included in this definition.

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**Please click the links below to see the disclosure insert to this program
for the complete disclosure list.**

[Annual Meeting](#) | [Pre-Meeting Dissection Course](#) | [Pre-Meeting Radiosurgery Course](#)

Disclosures (cont.)

NASBS 2024 Pre-Meeting Dissection Course CME Accreditation Statement

CONTINUING MEDICAL EDUCATION CREDIT INFORMATION

Accreditation

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of American College of Surgeons and North American Skull Base Society. The American College of Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

AMA PRA Category 1 Credits™

The American College of Surgeons designates this live activity for a maximum of **5.5** AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



NASBS 2024 Pre-Meeting Radiosurgery Course CME Accreditation Statement

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2025 Save the Date!



North American Skull Base Society

34th Annual Meeting

and 9th World Congress of the World Federation of Skull Base Societies

The Unified Skull Base

February 14-16, 2025

Sheraton, New Orleans, LA

February 12-13, 2025 | Pre-Meeting Dissection Course

PRESIDENT: Erin L. McKean, MD, MBA, FACS

PROGRAM CHAIRS: Shirley Y. Su, MBBS, FRACS and Nickalus Khan, MD

PRE-MEETING DISSECTION COURSE CO-CHAIRS:

Bharat Guthikonda, MD and Rahul Mehta, MD



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Save the Date!

Visit nasbs.org/future_meetings
for additional information.