NORTH AMERICAN SKULL BASE SOCIETY

24th Annual Meeting

“Skull Base: Defining Value-Based Care”

PRESIDENT: Ehab Hanna, MD, FACS
SCIENTIFIC PROGRAM CHAIR: Ricardo Carrau, MD
PRACTICAL COURSE DISSECTION CHAIRS: James J. Evans, MD, Rick Friedman, MD, PhD, & Carl Snyderman, MD, MBA

FEBRUARY 14-16, 2014
Pre-Meeting Practical Courses: February 12-13, 2014
Grand Manchester Hyatt, San Diego, California

www.nasbs.org
Welcome

Dear Colleagues,

Welcome to the 24th Annual NASBS Meeting at the Grand Manchester Hyatt in beautiful San Diego!

The pre-meeting practical course this year offers a unique opportunity to simultaneously compare open and endoscopic approaches of various regions of the skull base. Another unique feature this year is the option of two separate attendance tracks. The “hands-on” track attendees have the opportunity to follow the prossection by the faculty and apply it through hands-on cadaver dissection with the guidance of expert instructors. The second option, the “Lectures track”, which is offered for the first time will allow attendees to watch the faculty prossection and then attend several lectures by experts on the field describing the various surgical techniques with video demonstrations.

The theme of this year’s annual meeting is “Skull Base: Defining Value Based Care”. The Scientific Program Committee chaired by Ricardo Carrau, and co-chaired by James Evans, Rick Friedman, and Carl Snyderman, presents an outstanding scientific program. This year we have 12 breakfast seminars, 20 concurrent sessions/panels, and daily plenary sessions that include keynote lectures, several symposia, round tables, debates, posters and proffered presentations. Featured guest speakers include Ivo Janecka, MD, PhD, MBA, Sam Al-Mefty, MD and Piero Nicolai, MD. The keynote speaker is David Dravecky, a major league baseball player whose career was cut short when a malignant desmoid tumor required the amputation of his left arm and shoulder. Together with his wife Jan, Dave founded the non-profit organization Endurance to help alleviate the suffering of others battling with cancer. Dave will share with us how he personally endured through this tragedy and turned it into his life vision which I am sure will be inspirational. San Diego offers a spectacular venue this time of the year and I am sure will be enjoyable to all attendees and their families.

Ehab Hanna, MD, FACS
President, NASBS
ANNUAL MEETING OBJECTIVES

At the conclusion of this activity, participants should be able to:

• Understand and explain the most recent recommendations for the management of skull base pathologies
• Express knowledge of the technical aspects of the surgical and radiosurgical management of these pathologies as learned from the experience of leaders in the field
• Describe the 3D anatomy of the skull base and neurovascular structures pertaining to the management of skull base pathologies
• List and apply the fundamentals of quality measurement and their specific application to the skull base pathologies
• Express knowledge recent development in the management of skull base pathologies as presented

WHO SHOULD ATTEND

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

TARGET AUDIENCE

• Head and neck surgeons, neurosurgeons, reconstructive surgeons, radiotherapists, radiologists, medical oncologists, physical rehabilitation physicians, ophthalmologists, neurologists, maxillofacial surgeons, maxillofacial prosthetodontists and endocrinologists.

• Targeted allied health professional will include physical therapists, oncology nurses, oral health specialists, occupational therapists, speech and language pathologists, optometrists, psychologists and anaplasologists.

ACCREDITATION STATEMENT

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the American College of Surgeons and the North American Skull Base Society. The American College 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 20 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The Final Program and abstracts can be viewed by visiting www.nasbs.org.
WHY JOIN NASBS?
Membership is based on an interest in skull base surgery and related sciences. Individuals with backgrounds in neurosurgery, otolaryngology-head and neck surgery, radiology, neuroradiology, otology, neurotology, plastic and reconstructive surgery, and others interested in skull base diseases are welcome to apply.

MEMBERSHIP BENEFITS

- **Scientific Journal:** Members will receive the official journal of the society, *The Journal of Neurological Surgery*, a quarterly publication that contains peer reviewed original articles, review articles, and position papers. It will also present news and information on an international scope to keep members aware of recent and upcoming events, activities, and evolving developments in skull base surgery.
- **Continuing Medical Education:** Members will receive listings of continuing medical educational opportunities in skull base surgery, as well as scientific courses sponsored by NASBS and will receive reduced registration fees for national scientific meetings.
- **Membership Directory:** An annual directory of the membership will be provided.
- **NASBS Website Access:** Members will have access to Member-Only discussion areas on the Society’s website.

Please visit [www.nasbs.org/about/membershipinfo.php](http://www.nasbs.org/about/membershipinfo.php) for more information or email membership@nasbs.org.
On behalf of the North American Skull base Society, the following awards were given this year:

**BEST PAPER BY A MEDICAL STUDENT**

**ABSTRACT TITLE:** "Comparison of Open and Transnasal Endoscopic Approaches to the Skull Base in the Endoscopic Skull Base Era"

Justin Miller, BSPH
The University of North Carolina at Chapel Hill, Department of Otolaryngology/Head and Neck Surgery, Chapel Hill, NC

**BEST RESIDENT CLINICAL PAPER**

**ABSTRACT TITLE:** "Surgical Management of Nonmelanoma Skin Cancers Involving the Skull Base"

Shaan M. Raza, MD
UT MD Anderson Cancer Center, Department of Neurosurgery, Houston, TX

**BEST RESIDENT BASIC SCIENCE**

**ABSTRACT TITLE:** "Comparative Proteomic Profiling Using Two-Dimensional Gel Electrophoresis and Identification Via LC-MS/MS Reveals Protein Biomarkers That Distinguish Aggressive From Non-Aggressive Phenotypes of WHO Grade I Meningioma"

Joshua Osbun, MD
University of Washington, Department of Neurological Surgery, Seattle, WA

**Distinguished Service Award**

Daniel W. Nuss, MD, FACS
George D. Lyons Professor and Chairman, LSU Department of Otolaryngology - Head and Neck Surgery, New Orleans, LA

Daniel W. Nuss, a native of New Orleans, completed his undergraduate and medical education at Louisiana State University. After medical school, he served two years as a resident in General Surgery and was honored as Charity Hospital's Intern of the Year (1981-82), and as Surgery Resident of the Year (1982-83).

In 1984, Dr. Nuss spent six months as visiting Resident in Head and Neck Oncology at M.D. Anderson Hospital in Houston, Texas. He then completed his Otolaryngology residency at L.S.U. in 1987. That same year, he became board certified, having achieved the highest possible score on the American Board of Otolaryngology's exam.

Dr. Nuss then joined the faculty of the LSU Department of Otolaryngology. In 1989-91, he completed clinical and research fellowships in Surgery of the Cranial Base, at the University of Pittsburgh’s Center for Cranial Base Surgery. During that time, he was also appointed Visiting Instructor in the University of Pittsburgh’s Department of Otolaryngology.

In 1991, Dr. Nuss rejoined the LSU faculty, focusing in head and neck oncology and skull base surgery. He became Residency Program Director in 1993, and Vice Chairman in 1994. In 1996 he was named Department Chairman and has served in that capacity ever since. He is jointly appointed as Professor in the LSU Departments of Otolaryngology and Neurosurgery, and in the LSU Neurosciences Center. In 2005, Dr. Nuss became the recipient of the George D. Lyons M.D. Chair in Otolaryngology. Later that year, after hurricane Katrina devastated New Orleans and its hospitals, he and his faculty developed a unique model for a regional residency program, which has continued to thrive and has received widespread recognition.

Dr. Nuss’ clinical practice includes management of tumors and reconstructive problems of the skull base, endoscopic and minimally invasive head and neck surgery, and traditional head and neck oncology. In 2012 he was named in the “Top 1% of Otolaryngologists in the U.S.”, according to US News & World Report.

Dr. Nuss has to his credit more than 100 publications, including peer-review articles, book chapters, and reviews. He has given over 150 scientific presentations, and has been an invited speaker on five continents.

Dr. Nuss is a Past President of the North American Skull Base Society (2009), previous Secretary of the World Federation of Skull Base Societies, Fellow of the American Academy of Otolaryngology-Head and Neck Surgery, Fellow of the American College of Surgeons, and Fellow of the American Head and Neck Society. He serves as a Senior Examiner for the American Board of Otolaryngology, and is an Associate Editor for multiple scientific journals.

Dr. Nuss and his wife Wilma have been married for more than 30 years and they have a very busy and talented teen-age daughter, Olivia. In his spare time, Nuss plays lead guitar for a New Orleans-based rock-n-roll band, whose activities include fund-raising for local schools, churches, cancer patients, cancer research, and other worthy causes.
Ivo P. Janecka, MD, MBA, PhD  FRIDAY, FEBRUARY 14, 10:15 AM

Trained in New York City at Columbia University, directed/co-directed interdisciplinary and multi-institutional Centers of Excellence, focusing on the skull base, at the University of Pittsburgh and Harvard Medical School; recently worked as a health care executive in the Middle East; MBA has health care focus and the PhD is in Applied Management and Decision Sciences; held academic and executive positions with the rank of Professor, Director, Head as well as CEO, Chief Medical Officer, Executive VP, and Managing Director; currently engaged in active consulting practice serving patients, physicians, students, academic and health care organizations as well as investment houses, corporations, and law firms; also serves as Director/Board member of two non-profit 501(c)3 Foundations.

Ossama Al-Mefty, MD  FRIDAY, FEBRUARY 14, 11:30 AM

Ossama Al-Mefty was born in Damascus, Syria. He completed his medical school at the Damascus University Medical School in 1972 and his neurosurgical training was completed at West Virginia University Medical Center. Dr. Al-Mefty is the Director of the Skull Base Surgery Program at Brigham and Women's Hospital, Harvard Medical School in Boston, MA. He has served as a Professor of Neurosurgery at Mississippi Medical Center, Loyola University Medical Center in Chicago, and Professor and Chairman of Neurosurgery at the University of Arkansas from 1993-2009.

Dr. Al-Mefty’s area of interest and expertise is skull base surgery, pioneering, and contributing to this field through numerous publications. His scientific contributions are reflected in over 450 publications that include authoring or editing nine books and 205 peer reviewer journal articles. He is a sought after lecturer and has made over 700 presentations and over 70 Visiting Professorships in national and international universities. He is a dedicated teacher and has been faculty and director of over 50 workshops and hands-on courses.

Dr. Al-Mefty is a member of several surgical societies and has served in various leadership roles including as a founding member and past president of the North American Skull Base Society and The World Academy of Neurological Surgery. Dr. Al-Mefty serves on several editorial boards of medical journals. He has been honored by several prestigious lectureships including the First Sugita Memorial Lecturer and the Penfield Lecturer and presented with honorary memberships in skull base and neurosurgical societies abroad. He was recently awarded the Olivercrona Medalist for recognition of his outstanding contributions to the neurosurgical field, based on development of microsurgical techniques, pedagogical skills or scientific contributions as well as the Paul Bucy Education Award for his dedication to education in Neurosurgery.

Piero Nicolai, MD  SATURDAY, FEBRUARY 15, 9:30 AM

Piero Nicolai, MD is Professor and Chairman of the Otorhinolaryngology – Head and Neck Surgery Unit and Director of the Department of Surgical Specialties, Radiologic Sciences, and Public Health at the University of Brescia (Italy). He received his MD degree at the University of Padua, where he also completed his residency programme in Otolaryngology and subsequently in Medical Oncology. His clinical and research activities are mainly focused on head and neck oncology and endoscopic sinus and skull base surgery.

Prof. Nicolai is an active member of several medical societies: Società Italiana di Otorinolaringologia e Chirurgia Cervico-Facciale, Società Italiana del Basicranio, European Skull Base Society, American Academy of Otolaryngology - Head and Neck Surgery, European Rhinologic Society, European Laryngologic Society, American Head and Neck Society, American Rhinologic Society, American Laryngological Association, Cartesian Society, European Academy of Oto-Rhino-Laryngology, Head and Neck Surgery, Associazione Italiana Oncologia Cervico Cefalica, and Italian Academy of Rhinology. He is currently serving as Secretary of the European Academy of Oto-Rhino-Laryngology, Head and Neck Surgery and as Member of the Executive Committee of the European Skull Base Society. In 2009, he was awarded the American Academy of Otolaryngology-Head and Neck Surgery Honor Award in recognition of his volunteer contributions to the Academy and its Foundation.

Prof. Nicolai has authored or co-authored 160 papers in peer-reviewed journals as well as 49 book chapters. He was co-editor of a book on “Imaging in Treatment Planning for Sinonasal Diseases”, and Editor of 3 issues of Current Opinion in Otolaryngology & Head and Neck Surgery on Head and Neck Oncology. He is a member of the editorial board of five journals: Annals of Otology, Rhinology & Laryngology, Current Opinion in Otolaryngology & Head and Neck Surgery, Head & Neck, International Journal of Head and Neck Surgery, and The Laryngoscope.
Keynote Speaker: David Dravecky  SATURDAY, FEBRUARY 15, 10:00 AM

My story is one of finding hope, courage and perseverance in the midst of dark and overwhelming uncertainty. In 1988, I was at the top of my game and my life. Not only did I have a wonderful family but I was also at the peak of my career, playing the game of my childhood dreams. My opening day victory over the Dodgers was overshadowed later that fall by the discovery of cancer and the removal of half of the deltoid muscle in my pitching arm. After battling cancer in my pitching arm, I came back a year later to defy the odds and pitch once again in the Major Leagues. Despite being told by my doctors, "Short of a miracle, you’ll never pitch again," I pitched a 4-3 win for the San Francisco Giants that day.

Sadly, my comeback was short-lived. Five days later, I threw “…the pitch that could be heard round the world.” My arm had split in two. As I tumbled to the ground, my mind filled with doubt and fear.

After my comeback and fall from the mound, the cancer returned, yet again. The arm refused to get better so I decided to retire from my dream, the game of baseball, in November of 1989. Finally, the arm along with my shoulder blade and the left side of my collarbone had to be amputated for fear the cancer would spread and take my life. Little did I know that the loss of my childhood dream would become a platform to share hope with the suffering around the world.

The challenges I’ve faced in the years following have taught me volumes and I now travel the country sharing the lessons I’ve learned—lessons on how to navigate loss and suffering, and how to experience encouragement and hope. More recently I’ve been exploring how we define our true worth, learning that it’s not what you do that matters most—it’s who you are. The experiences of my life have drawn me to discover and share about the value and significance of relationships—relationships with co-workers, family members and anyone else on ‘my team.’ My personal experiences have also taught me to evaluate life—challenging myself as well as others to press on towards our future goals.
In accordance with the ACCME Accreditation Criteria, the American College of Surgeons, as the accredited provider of this activity, must ensure that anyone in a position to control the content of the educational activity has disclosed all relevant financial relationships with any commercial interest. Therefore, it is mandatory that both the program planning committee and speakers complete disclosure forms. Members of the program committee were required to disclose all financial relationships and speakers were required to disclose any financial relationship as it pertains to the content of the presentations. The ACCME defines a ‘commercial interest’ as “any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients”. It does not consider providers of clinical service directly to patients to be commercial interests. The ACCME considers “relevant” financial relationships as financial transactions (in any amount) that may create a conflict of interest and occur within the 12 months preceding the time that the individual is being asked to assume a role controlling content of the educational activity.

ACS is also required, through our joint sponsorship partners, to manage any reported conflict and eliminate the potential for bias during the activity. All program committee members and speakers were contacted and the conflicts listed below have been managed to our satisfaction. However, if you perceive a bias during a session, please report the circumstances on the session evaluation form.

Please note we have advised the speakers that it is their responsibility to disclose at the start of their presentation if they will be describing the use of a device, product, or drug that is not FDA approved or the off-label use of an approved device, product, or drug or unapproved usage.

The requirement for disclosure is not intended to imply any impropriety of such relationships, but simply to identify such relationships through full disclosure and to allow the audience to form its own judgments regarding the presentation.

NASBS SCIENTIFIC PROGRAM COMMITTEE

Ehab Hanna, MD, FACS
President

Ricardo Carrau, MD
Chair

James J. Evans, MD
Co-Chairman for Neurosurgery

Carl Snyderman, MD, MBA
Co-Chairman for Head and Neck

Rick Friedman, MD, PhD
Co-Chairman for Neuro-Otology
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<td>Ev3, Consultant fee (&lt;$1000), Consultant</td>
<td>Tulane University</td>
<td>New Orleans, LA, USA</td>
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<td>Adam Zanation, MD</td>
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<td>University of North Carolina at Chapel Hill</td>
<td>Chapel Hill, NC, USA</td>
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<td>Alexander Chiu, MD</td>
<td>Olympus Gyrus, Honorarium, Consultant</td>
<td>University of Arizona</td>
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<td>Alfio Piva, MD</td>
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<td>University of Costa Rica</td>
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<td>Allan Vescan, MD</td>
<td>Merck/Advisory Board, Stipend/Honoraria, Advisory Board</td>
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<td>Amir Dehdashti, MD</td>
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<td>Cushing Neuroscience Institute – North Shore University Hospital</td>
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<td>Anand Germanwala, MD</td>
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<td>Andrew Little, MD</td>
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2151 E. Grand Avenue, El Segundo, CA 90245
TEL: 800-421-0837
WEBSITE: www.karlstorz.com
KARL STORZ is a leader in endoscopy solutions for a range of specialties including otorhinolaryngology and neurosurgery. We offer products for the latest minimally invasive neurosurgery procedures. And, for over 65 years, KARL STORZ has produced a full range of precision instruments and telescopes of superior quality for state-of-the-art otorhinolaryngology.

KLS Martin
P.O. Box 16369, Jacksonville, FL 32245
TEL: 904-641-7746 | FAX: 904-641-7378
WEBSITE: www.klsmartinnorthamerica.com
KLS Martin is a company dedicated to providing innovative medical devices and power systems for craniomaxillofacial surgery. The company’s rich history began with surgical instrument production in Tuttlingen, Germany in 1896 and continued with miniplate production in 1975. KLS Martin has advanced the capabilities of distraction osteogenesis, and revolutionized resorbable fixation with the SonicWeld Rx system.

Kogent Surgical, LLC
754 Goddard Avenue, Chesterfield, MO 63005
TEL: 636-778-3078 | FAX: 636-787-0603
WEBSITE: www.kogentneuro.com
Kogent Surgical designs and distributes a comprehensive line of neurosurgical titanium instruments, purple disposable bipolar forceps in a variety of sizes and orientations, designed with Robert F. Spetzler, MD, and other luminary neurosurgeons. Also available are innovative disposable illuminated suction tubes. Stop by our booth to see more!

Leica Microsystems
1700 Leider Lane, Buffalo Grove, IL 60089
TEL: 847-821-3447 | FAX: 847-405-0164
WEBSITE: www.leicamicrosystems.com
Designed with you in mind, Leica Microsystems brings you the only surgical microscope with ‘TrueVision’ Smart 3D inside. With the highest quality 3D HD visualization and recording along with high definition video recording in our top-of-the-line OH family of microscopes, Leica sets the standard in surgical education, easy video editing, and creating the platform for future applications. Come see it for yourself at the Leica booth.
Medtronic Surgical Technologies
Booth #16A
6743 Southpoint Drive North, Jacksonville, FL 32216
TEL: 904-296-9600 | FAX: 904-281-2771
WEBSITE: www.medtronicENT.com

Medtronic ENT is a leading developer, manufacturer and marketer of surgical products for use by ENT specialists. Medtronic ENT markets over 5,000 surgical products worldwide addressing the major ENT subspecialties — Sinus, Rhinology, Laryngology, Otology, Pediatric ENT and Image Guided Surgery.

Mizuho America, Inc.
Booth #2
30057 Ahern Avenue, Union City, CA 94587
TEL: 510-324-4500 | FAX: 510-324-4545
WEBSITE: www.mizuhomeuro.com

Mizuho America, Inc. is a cerebrovascular focused instrumentation company whose main products include Sugita T2 Aneurysm Clips, 7201B Operating Table, Cranial Stabilization Systems, Micro Instruments, Kelly Endonasal Set, Lawton Neurovascular Bypass Set, Evans Rotatable Set, Day-Bailes Suction Tubes, and Intracranial & Vascular Dopplers. When it’s Microsurgery, it’s Mizuho.

NICO CORPORATION
Booth #1
250 E. 96th Street, Suite 125, Indianapolis, IN 46240
TEL: 888-652-7071 | FAX: 317-682-0305
WEBSITE: www.niconeuro.com

NICO Corporation is progressing minimally invasive corridor neurosurgery by creating instruments that allow for access through smaller openings and resection of soft tissue abnormalities in the central nervous system.

NJR Medical
Booth #7A
P.O. Box 582, New York, NY 10021
TEL: 440-258-8204 | FAX: 866-412-8790
WEBSITE: www.njrmedical.com

Avoid a sentinel event and NEVER ALLOW NASOTRACHEAL SUCTIONING!! When Nasotracheal Suctioning is contraindicated in your at-risk Transsphenoidal Surgery and Basal Skull Fx. patients, do you have another option? Learn how fast and easy RNs and RTs can use the No-Bite V to introduce a suction catheter orally. FREE Sample “No-Bite V” at booth.

OsteoMed
Booth #21
3885 Arapaho Road, Addison, TX 75001
TEL: 972-677-4600
WEBSITE: www.osteomed.com

OsteoMed is a leading global innovator, developer, manufacturer and marketer of specialty medical devices, surgical implants and powered surgical instruments.

Plural Publishing, Inc.
Booth #3
5521 Ruffin Road, San Diego, CA 92123
TEL: 858-492-1555 | FAX: 858-792-1020
WEBSITE: www.pluralpublishing.com

Plural Publishing produces leading academic, scientific and clinical publications in the fields of audiology and otolaryngology. Enjoy a 20% conference discount and free shipping on your book purchase at our booth.

Stryker
Booth #10
750 Trade Centre Way, Suite 200, Portage, MI 49002
TEL: 269-389-3560 | FAX: 269-585-5981
WEBSITE: www.stryker.com

Stryker is a leading medical technology company and is dedicated to helping healthcare professionals perform their jobs more efficiently while enhancing patient care. The Company offers an array of medical technologies including reconstructive implants, medical and surgical equipment, and neurotechnology and spine products to help people lead more satisfying lives.

Surgical Theater
Booth #17
781 Beta Drive, Mayfield Village, OH 44143
TEL: 216-452-2177 | FAX: 216-916-3806
WEBSITE: www.surgicaltheater.net

Surgical Theater, LLC combines the science of flight simulation with advanced CT/MRI imaging technology to reconstruct dynamic and interactive 3D models with life-like tissue reaction and accurate modeling of surgery tools. The Surgical Rehearsal Platform allows surgeons to rehearse a specific patient's case, performing a real-life "flight simulation" of surgery.

Valorem Surgical
Booth #20B
3969 W. Belmont Avenue, Suite 9, Chicago, IL 60618
TEL: 312-852-2700 | FAX: 844-725-7117
WEBSITE: www.valorembsurgical.com

Valorem Surgical is an early stage medical device company that manufactures, commercializes, markets and distributes implants for orthopedic, interventional and neurosurgical pathologies.

Valorem Surgical is pleased to participate in the 2014 Annual Meeting of NASBS and to unveil a patient specific PEEK cranial flap, and is expecting FDA clearance by the end of Q1. Please visit us at Booth 20B for more information.

Visionsense Corp.
Booth #4
1270 Avenue of the Americas, Suite 302, New York, NY 10020
TEL: 845-680-0233 | FAX: 845-680-0234
WEBSITE: www.visionsense.com

Visionsense develops novel visualization solutions that bring natural HD (High Definition) stereoscopic sight to minimally invasive surgery (MIS). With advanced sensor technology and proprietary software, the Visionsense system delivers depth perception, HD resolution images and maneuvering flexibility through the smallest access diameters.

Vycor Medical
Booth #16B
6401 Congress Avenue, Suite 140, Boca Raton, FL 33487
TEL: 561-558-2020 | FAX: 561-620-2545
WEBSITE: www.vycormedical.com

Vycor Medical is dedicated to providing the medical community with innovative neurosurgical solutions, Vycor’s leading-edge Brain Access System (VBAS), a suite of 12 clear cylindrical disposable devices used to access tumors within the brain provide a minimally invasive approach with clinical advantages that have been validated in various peer-reviewed articles. Stop by our booth for additional information.
FRIDAY, FEBRUARY 14, 2014

6:30 am  Breakfast/Registration  Coronado Foyer & Terrace

7:00 am – 8:00 am  BREAKFAST SEMINARS

BS1:  Management of Vascular Complications in Endonasal Surgery  America’s Cup AB
BS2:  Role of Endoscopy in the Posterior Fossa Cranial Base Surgery  America’s Cup CD
BS3:  Skull Base in the Pediatric Population  Regatta BC
BS4:  Anterior Skull Base Resection  Coronado AB

8:05 am – 9:00 am  CONCURRENT SESSIONS

CS1:  Multidisciplinary Management of Chordomas and Chondrosarcomas  America’s Cup AB
CS2:  Management of Giant/Invasive Pituitary Tumors  America’s Cup CD
CS3:  Esthesioneuroblastoma  Coronado AB
CS4:  Management of Post-Operative CSF Leaks  Regatta BC

9:00 am – 9:30 am  Break with Exhibitors  Coronado CDE

9:30 am – 12:00 pm  PLENARY SESSION I  Coronado AB

9:30 am:  3-D Anatomy – Juan Carlos Fernandez-Miranda, MD
10:15 am:  Honored Guest Lecturer – Ivo P. Janecka, MD, MBA, PhD
10:45 am:  Symposium: Educating Future Skull Base Surgeons – Harry Van Loveren, MD, Carl Snyderman, MD, MBA & Ian Witterick, MD
11:30 am:  Honored Guest Lecturer – Ossama Al-Mefty, MD

12:00 pm – 1:00 pm  NASBS Annual Business Meeting – Lunch for All Members  Harbor AB
(Lunch in Exhibit Hall for Non-Members)

1:00 pm – 2:00 pm  CONCURRENT SESSIONS

CSS:  Management of Idiopathic CSF Leaks  America’s Cup AB
CS6:  Nasopharyngeal Malignancies  America’s Cup CD
CS7:  Reduction of Complications in Endoscopic Cranial Base Surgery  Coronado AB
CS8:  Craniopharyngioma  Regatta BC

2:05 pm – 3:30 pm  PROFFERED PAPERS

Proffered Paper I:  Endonasal Approaches  Coronado AB
Proffered Paper II:  Vestibular Schwannomas  America’s Cup AB
Proffered Paper III:  Innovative Technology  America’s Cup CD
Proffered Paper IV:  Pituitary Tumors  Regatta BC

3:30 pm – 4:00 pm  Break with Exhibitors  Coronado CDE

4:00 pm – 5:30 pm  PROFFERED PAPERS

Proffered Paper V:  Endonasal Approaches  Coronado AB
Proffered Paper VI:  Surgical Approaches  America’s Cup AB
Proffered Paper VII:  General  America’s Cup CD
Proffered Paper VIII:  Chordomas, Chondrosarcomas, and Vascular Lesions  Regatta BC

5:30 pm – 7:00 pm  Reception in Exhibit Hall  Coronado CDE

SATURDAY, FEBRUARY 15, 2014

6:30 am  Breakfast/Registration  Coronado Foyer & Terrace

7:00 am – 8:00 am  BREAKFAST SEMINARS

BS5:  Approaches to the Infratemporal Fossa  America’s Cup AB
BS6:  Reconstruction of Large Craniofacial Defects  America’s Cup AB
BS7:  Innovations in Endovascular Neurosurgery  America’s Cup CD
BS8:  Skull Base Resection For Cutaneous Malignancies  Regatta BC

8:05 am – 9:00 am  CONCURRENT SESSIONS

CS9:  Management of Atypical/Aggressive Meningiomas  Coronado AB
CS10:  Management of Complex Cranial Base Aneurysms  America’s Cup AB
CS11:  Sinonasal Carcinomas  America’s Cup CD
CS12:  Best Outcome for Glomus Tumors  Regatta BC

9:00 am – 9:30 am  Break with Exhibitors  Coronado CDE

AMA PRA Category 1 Credits™ will be provided for this activity.
9:30 am – 12:00 pm PLENARY SESSION II

9:30 am: Honored Guest Lecturer – Piero Nicolai, MD
10:00 am: Keynote Lecturer – David Dravecky, former Major league baseball player (San Francisco Giants), Founder of Endurance with Jan and Dave Dravecky
10:45 am: Awards & Recognition Ceremony
- BEST PAPER BY A MEDICAL STUDENT: “Comparison of Open and Transnasal Endoscopic Approaches to the Skull Base in the Endoscopic Skull Base Era”
  Justin Miller, BSPH, The University of North Carolina at Chapel Hill, Department of Otolaryngology/Head and Neck Surgery, Chapel Hill, NC
- BEST RESIDENT CLINICAL PAPER: “Surgical Management of Nonmelanoma Skin Cancers Involving the Skull Base”
  Shaan M. Raza, MD, UT MD Anderson Cancer Center, Department of Neurosurgery, Houston, TX
- BEST RESIDENT BASIC SCIENCE: “Comparative Proteomic Profiling Using Two-Dimensional Gel Electrophoresis and Identification Via LC-MS/MS Reveals Protein Biomarkers That Distinguish Aggressive From Non-Aggressive Phenotypes of WHO Grade I Meningioma”
  Joshua Osbun, MD, University of Washington, Department of Neurological Surgery, Seattle, WA
11:05 am: Introduction of Guest of Honors
11:15 am: Presidential Address – Ehab Hanna, MD, FACS
12:00 pm – 1:00 pm Lunch on Own

1:00 pm – 2:00 pm CONCURRENT SESSIONS
CS13: Best Outcome for Olfactory Groove Meningioma
CS14: Non Functional Pituitary Tumors
CS15: Perineural Spread
CS16: Trigeminal Schwannoma

2:05 pm – 3:30 pm PROFFERED PAPERS
Proffered Paper IX: Endonasal Approaches 3
Proffered Paper X: Temporal Bone
Proffered Paper XI: Meningiomas I
Proffered Paper XII: Sinonasal Tumors

3:30 pm – 4:00 pm Break with Exhibitors
4:00 pm – 5:30 pm PROFFERED PAPERS
Proffered Paper XIII: Reconstruction
Proffered Paper XIV: Head and Neck Cancer
Proffered Paper XV: Meningiomas 2/Basic Science
Proffered Paper XVI: Sellar/Suprasellar/Cavernous Sinus Microvascular Decompression

6:30 pm – 9:30 pm President’s Reception (Business attire)

SUNDAY, FEBRUARY 16, 2014

6:30 am Breakfast/Registration
7:00 am – 8:00 am BREAKFAST SEMINARS
BS09: Orbital Tumors
BS10: Rehabilitation of Cranial Nerves
BS11: Pearls and Pitfalls in Cranial Base Imaging
BS12: Technical Nuances of Nasopharyngectomy
8:00 am – 9:00 am CONCURRENT SESSIONS
CS17: Factors Influencing Management of Vestibular Schwannomas
CS18: Quality of Life Issues
CS19: Fibrosous Lesions
CS20: Functional Pituitary Tumors

9:05 am – 10:00 am CONCURRENT SESSIONS
CS21: Adenoid Cystic Carcinoma
CS22: Management of Vascular Complications
CS23: Temporal Bone Malignancies
CS24: Emerging Technologies
10:00 am – 10:30 am Break with Exhibitors
10:30 am – 12:45 pm PLENARY SESSION III
10:30 am: Skull Base Jeopardy
11:15 am: Interactive Tumor Board
12:15 pm: Coding/Billing
12:45 pm Meeting Adjourned
ACCREDITATION STATEMENT: This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the American College of Surgeons and the North American Skull Base Society. The American College 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 18 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Of the AMA PRA Category 1 Credits™ listed above, a maximum of 18 credits meet the requirements for Self-Assessment.

PRE-MEETING PRACTICAL COURSES
Open vs. Endoscopic: A Comparison of Skull Base Approaches

February 12-13, 2014, San Diego, CA

COURSE DIRECTORS: Carl Snyderman, MD, MBA, University of Pittsburgh Medical Center, Pittsburgh, PA, USA, & James Evans, MD, Thomas Jefferson University, Philadelphia, PA, USA

Shuttle will be available from the Grand Manchester Hyatt to the Center for the Future of Surgery at UC San Diego and back. Shuttle schedule is listed below. Please note that the shuttle will leave promptly at the scheduled time.

Wednesday, February 12, 2014
Shuttle Pick Up Time at the Manchester Hyatt: 6:30 am
Location: West Lobby Entrance. The shuttle will be on Kettner Blvd.
Return Shuttle Time: 6:00 pm

Thursday, February 13, 2014
Shuttle Pick Up Time at the Manchester Hyatt: 7:00 am
Location: West Lobby Entrance: The shuttle will be on Kettner Blvd.
Return Shuttle Time: 6:00 pm

Address for the Center for the Future of Surgery at UC San Diego is 9500 Gilman Drive, La Jolla, CA 92036.

The Center for the Future of Surgery is located on the School of Medicine campus in the Medical Education and Telemedicine Building (MET) in the basement level. The MET Building has orange umbrellas outside.

Pre-Meeting Course Objectives:
- Apply various endoscopic techniques (EEA - Endoscopic Endonasal Approach) for pituitary and skull base surgery
- Demonstrate knowledge of the advanced endoscopic anatomy
- Explain various techniques of surgery and how to avoid complications to the anterior, middle and posterior skull base
- Describe the indications, contraindications, advantages, and disadvantages of each approach

DAY ONE: Wednesday, February 12, 2014

7:00 am – 7:45 am Registration/Breakfast
7:45 am – 8:00 am Course Overview
8:00 am – 9:00 am PROSECTION: Suprasellar Pterional Approach – Joseph Zabramski, MD
9:00 am – 10:00 am PROSECTION: Suprasellar Endoscopic Endonasal Approach – James Evans, MD & Marc Rosen, MD
10:00 am – 12:30 pm DISSECTION TRACK or LECTURE TRACK
10:00 am: Break
10:15 am: Equipment/Set-Up – Frank Hsu, MD, PhD
10:45 am: Pituitary Tumors – Philip Theodosopoulos, MD
11:15 am: Craniopharyngiomas – Charles Teo, MBBS
11:45 am: Meningiomas – Johnny Delashaw, MD
12:15 pm: Discussion
12:30 pm – 1:30 pm Lunch & Case Discussions
1:30 pm – 2:30 pm PROSECTION: Anterior Cranial Base: Subfrontal Approach – Frank Hsu, MD, PhD & Steve Lee, MD, PhD
2:30 pm – 3:30 pm PROSECTION: Anterior Cranial Base: Endoscopic Endonasal Approach – Philip Theodosopoulos, MD & Ivan El-Sayed, MD
3:30 pm – 6:00 pm DISSECTION TRACK or LECTURE TRACK
3:30 pm: Break
3:45 pm: Optic Nerve/Orbit – Lee Zimmer, MD, PhD
4:15 pm: Malignancy of the Anterior Skull Base – Sandeep Samant, MS, FRCS
4:45 pm: Encephalocele – Marc Rosen, MD
5:15 pm: Reconstruction of the Anterior Cranial Base – Richard Harvey, MBBS
5:45 pm: Discussion

6:00 pm Adjournment
DAY TWO: Thursday, February 13, 2014

7:30 am – 8:00 am  
**Breakfast**

8:00 am – 9:00 am  
**PROSECTION: Transclival Endoscopic Endonasal Approach** – Charles Teo, MBBS & Richard Harvey, MBBS

9:00 am – 10:00 am  
**PROSECTION: Transclival Far Lateral** – Johnny Delashaw, MD

10:00 am – 12:30 pm  
**DISSECTION TRACK** or **LECTURE TRACK**

10:00 am: Break  
10:15 am: Chordomas and Chondrosarcomas – Paul Gardner, MD  
10:45 am: Angiofibromas – Carl Snyderman, MD, MBA  
11:15 am: Nasopharyngeal Cancer – Lee Zimmer, MD, PhD  
11:45 am: Carotid Injury – Joseph Zabramski, MD  
12:15 pm: Discussion

12:30 pm – 1:30 pm  
**Lunch & Case Discussions**

1:30 pm – 2:30 pm  
**PROSECTION: Middle Fossa Endoscopic Endonasal Approach** – Carl Snyderman, MD, MBA & Paul Gardner, MD

2:30 pm – 3:30 pm  
**PROSECTION: Infratemporal** – Sandeep Samant, MS, FRCS & L. Madison Michael II, MD

3:30 pm – 6:00 pm  
**DISSECTION TRACK** or **LECTURE TRACK**

3:30 pm: Break  
3:45 pm: Petrous Apex - Transtemporal Approaches – Rick Friedman, MD, PhD  
4:15 pm: Petrous Apex - Endoscopic – Richard Harvey, MBBS  
4:45 pm: Odontoid and Craniovertebral Junction – James Evans, MD  
5:15 pm: Reconstruction of Clival Defects – Ivan El-Sayed, MD  
5:45 pm: Discussion

6:00 pm  
**Adjournment**
FRIDAY, FEBRUARY 14, 2014

7:00 am – 8:00 am  BREAKFAST SEMINARS

**BS1: Management of Vascular Complications in Endonasal Surgery**
America's Cup AB
MODERATOR: Peter Nakaji, MD – Endoscopic Surgery for Anterior Skull Base Resection: Surgical Technique and Complications
SPEAKERS:
- Anand Germanwala, MD – Endoscopic Endonasal Clipping of Intracranial Aneurysms
- Carl Snyderman, MD, MBA – Intraoperative Management of Carotid Injury During Endoscopic Endonasal Surgery

**BS2: Role of Endoscopy in the Posterior Fossa Cranial Base Surgery**
America's Cup CD
MODERATOR: Melvin Field, MD – Expanding Role of Endoscopy in Posterior Fossa Surgery
SPEAKERS:
- Daniel Pieper, MD – Endoscopy of Cerebellopontine Angle Tumors
- Charlie Teo, MD – Endoscopic Approaches to the Petrous Apex
- John Y.K. Lee, MD – Fully Endoscopic MVD for Neurovascular Compression Syndromes

**BS3: Skull Base in the Pediatric Population**
Regatta BC
MODERATOR: Erin McKean, MD
SPEAKERS:
- Adam Zanation, MD – Pediatric Skull Base Anatomic Development: Implications for Endoscopic Skull Base Surgery
- Elizabeth Tyler Kabara, MD, PhD – The First 150 Pediatric Endoscopic Endonasal Approaches: Lessons Learned

**BS4: Anterior Skull Base Resection**
Coronado AB
MODERATOR: Daniel Nuss, MD – The Open Craniofacial Resection Techniques || Prevention of Complications in Anterior Craniofacial Resection
SPEAKERS:
- Piero Nicolai, MD – Endoscopic Surgery for Anterior Skull Base Resection and Surgical Technique and Complications
- Vikram Prabhu, MD – Surgical Approaches to the Orbital Apex

8:05 am – 9:00 am  CONCURRENT SESSIONS

**CS1: Multidisciplinary Management of Chordomas and Chondrosarcomas**
America's Cup AB
MODERATOR: Chandra Sen, MD
SPEAKERS:
- Laligam Sekhar, MD – The Importance of Complete Resection, and the Choice of Approach in Chordomas
- Daniel Prevedello, MD – The Role and Limits of Endoscopic Endonasal Approaches in the Surgical Management of Chordomas and Chondrosarcomas
- Mark McDonald, MD – Proton Therapy and Re-Irradiation
- Deric Park, MD – Molecular Aspects and Medical Therapy

**CS2: Management of Giant/Invasive Pituitary Tumors**
America's Cup CD
MODERATOR: Marvin Bergsneider, MD
SPEAKERS:
- Edward Laws, MD – The Edge of the Envelope in the Transnasal Endoscopic Management of Giant/Invasive Tumors
- Daniel Kelly, MD – The Importance of a Multidisciplinary Approach for Giant/Invasive Pituitary Adenomas
- Wenxin Shi, MD – Stereotactic Radiosurgery for Invasive Pituitary Adenomas: Risk versus Benefit
- Stephen Sullivan, MD – Surgical Approaches in the Management of Giant Pituitary Tumors
- Marvin Bergsneider, MD – Presentation of Difficult Cases for Panel to Comment On

**CS3: Esthesioneuroblastoma**
Coronado AB
MODERATOR: Dennis Kraus, MD – Introduction and Case Presentation
SPEAKERS:
- Franco DeMonte, MD – The Surgical Management of Esthesioneuroblastoma
- Roy Casiano, MD – The Reconstruction with Free Grafts
- David Rosenthal, MD – Radiation Techniques and Considerations
- Diana Bell, MD – Morphological Heterogeneity, Grading and Practical Approach to Diagnosis

**CS4: Management of Post-Operative CSF Leaks**
Regatta BC
MODERATOR: James Evans, MD
SPEAKERS:
- Ian Witterick, MD – Management of CSF Leaks Post-ESS
- Bradley Otto, MD – Endoscopic Endonasal Management of Postoperative CSF Leaks at The Ohio State University
- Peter Hwang, MD – Skull Base Reconstruction After Endoscopic Endonasal Skull Base Surgery: An Evidence-Based Approach
- Moises Arriaga, MD – Hydroxyapatite Cranioplasty in Translabyrinthine Acoustic Neuroma Surgery
9:00 am – 9:30 am  Break with Exhibitors  Coronado CDE

9:30 am – 12:00 pm  PLENARY SESSION I  Coronado AB

9:30 am:  3-D Anatomy  – Juan Carlos Fernandez-Miranda, MD
10:15 am:  Honored Guest Lecturer  – Ivo P. Janecka, MD, MBA, PhD
10:45 am:  Symposium: Educating Future Skull Base Surgeons
   Neurosurgery  – Harry Van Loveren, MD
   Otolaryngology (Open/Endo)  – Carl Snyderman, MD, MBA
   Simulation  – Ian Witterick, MD
11:30 am:  Honored Guest Lecturer  – Ossama Al-Mefty, MD

12:00 pm – 1:00 pm  NASBS Annual Business Meeting  – Lunch for All Members  Harbor AB
   (Lunch in Exhibit Hall for Non-Members)

1:00 pm – 2:00 pm  CONCURRENT SESSIONS

**CS5: Management of Idiopathic CSF Leaks**
MODERATOR: Amir Dehdashti, MD – Introduction
SPEAKERS:
- Felipe Santos, MD – Histopathology of Spontaneous CSF Leaks of the Temporal Bone
- Reza Forghani, MD – Imaging Evaluation of CSF Leaks
- Pete Batra, MD – Endoscopic Transpterygoid Approach for Lateral Sphenoid CSF Leaks
- Manish Aghi, MD – Management of Anterior Skull Base Encephaloceles

**CS6: Nasopharyngeal Malignancies**
MODERATOR: Peter Costantino, MD
SPEAKERS:
- Jimmy Yu Wai Chan, MD – Surgical Outcome of Nasopharyngectomy for Recurrent NPC
- Annie Chan, MD – Radiation Therapy for Nasopharyngeal Carcinoma: Is Advanced Technology All That Matters?
- Peter Hwang, MD – Endoscopic Endonasal Nasopharyngectomy: Technique, Outcomes, and Limitations
- Merrill Kies, MD – Rationale for Induction Chemotherapy

**CS7: Reduction of Complications in Endoscopic Cranial Base Surgery (Pre-op planning, Intra-op, Post-Op)**
MODERATOR: Christopher Rassekh, MD – Historical Aspects of Cranial Base Surgery Relevant to Complications of Endoscopic Approaches
SPEAKERS:
- Richard Harvey, MBBS – Endoscopic Resection of Chordoma: How to Minimize Complications
- Marc Rosen, MD – Prevention of Complications in Endoscopic Management of Esthesioneuroblastoma
- James Liu, MD – Avoiding Complications in Endoscopic Cerebropontyrgioma Surgery
- Eric Sauvageau, MD – Adjunctive Roles of Endovascular Therapy for Complication Prevention and Management in Management of Vascular Lesions

**CS8: Craniopharyngioma**
MODERATOR: Fred Gentili, MD
SPEAKERS:
- Theodore Schwartz, MD – Outcomes of endoscopic Resection of Craniopharyngiomas
- Wenyin Shi, MD – Radiation Treatment for Craniopharyngioma
- Charlie Teo, MD – Extended Endonasal Resection of Craniopharyngiomas: A Novel Approach with Novel Complications
- Elizabeth Tyler-Kabara, MD – Current Standard of Care in the Management of Pediatric Craniopharyngiomas

2:00 pm – 3:30 pm  PROFFERED PAPERS

**PROFFERED PAPER I: Endonasal Approaches 1** (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes)  Coronado AB
MODERATORS: C. Arturo Solares, MD & Gabriel Zada, MD

**OO1: A COMPARISON OF POST-OPERATIVE MRI SIGNAL CHANGES BETWEEN ENDOSCOPIC ENDONASAL APPROACHES AND OPEN APPROACHES FOR OLFACTORY GROOVE MENINGIOMAS: A MATCH PAIRED ANALYSIS FROM TWO INSTITUTIONS** –
John R de Almeida, MD, MSc, FRCS, Paul Gardner, MD, FACS (presenter), Felipe Carvalho, MD, Francisco Vaz Guillmaraes Filho, MD, Maria Koutourousiou, MD, Shirley Y Su, MD, Rasmus Kiehl, MD, Allan D Vescan, MD, FRCS, Ian J Witterick, MD, MSc, FRCS, Eric Wang, MD, FACS, Gelareh Zadeh, MD, FRCS, Juan C Fernandez Miranda, MD, Fred Gentili, MD, FRCS, Carl H Snyderman, MD, MBA, FACS, University of Toronto, University of Pittsburgh
O02: DEVELOPMENT OF A PHYSICAL SIMULATOR MODEL FOR DEVELOPING AND EVALUATING ENDOSCOPIC ENDONASAL SURGICAL SKILLS – Ali M Elhadi, MD (presenter), Yashar S Kalani, MD, PhD, Kaith K Almefty, MD, Samuel Kalb, MD, Peter Nakaji, MD, Kristina Chapple, PhD, Mark C Preul, MD, Andrew S Little, MD, Barrow Neurological Institute / St. Joseph’s Hospital

O03: ENDOSCOPIC ENDONASAL TRANSCAVERNOUS POSTERIOR CLINOIDECTOMY WITH INTERDURAL PITUITARY TRANSPOSITION: TECHNICAL NOTE AND CLINICAL OUTCOMES – Juan C Fernandez-miranda, MD (presenter), Paul Gardner, MD, Carl Snyderman, MD, MBA, University of Pittsburgh Medical Center

Question & Answers

O04: PREOPERATIVE CHRONIC OR ACUTE PURULENT SINUSITIS IS NOT ASSOCIATED WITH THE DEVELOPMENT OF POST OPERATIVE MENINGITIS IN ENDONASAL SKULL BASE SURGERY – Chester F Griffiths, MD (presenter), Garni Barkhoudarian, MD, Kian Karimi, MD, Ricardo Carrau, MD, Amin Kassam, MD, Sam Yost, PhD, Dorna Pourang, BS, Daniel F Kelly, MD, Brain Tumor Center & Pituitary Disorders Program, John Wayne Cancer Institute at Saint Johns Health Center, Santa Monica, California

O05: PONTINE ENCEPHALOCELE AND ABNORMALITIES OF THE POSTERIOR FOSSA FOLLOWING TRANSCLIVAL ENDOSCOPIC ENDONASAL SURGERY – Maria Koutourousiou, MD (presenter), Francisco Vaz Guimaraes Filho, MD, Juan C Fernandez-Miranda, MD, Eric W Wang, MD, Carl H Snyderman, MD, MBA, William E Rothfus, MD, Paul A Gardner, MD, Center for Cranial Base Surgery, University of Pittsburgh Medical Center

O06: SINONASAL QUALITY OF LIFE OUTCOMES AFTER MINIMALLY INVASIVE RESECTION OF SINONASAL AND SKULL BASE TUMORS – Pete S Batra, MD, FACS (presenter), Brian Harrow, MSIII, University of Texas Southwestern Medical Center

Question & Answers

O07: ENDOSCOPIC-ASSISTED MICROVASCULAR DECOMPRESSION OF THE POSTERIOR FOSSA: EARLY EXPERIENCE IN A LARGE REFERRAL CENTER – Francisco Vaz-Guimaraes Filho, MD (presenter), Robert A Miller, MD, Juan C Fernandez-Miranda, MD, Paul A Gardner, MD, University of Pittsburgh Medical Center

O08: LEARNING CURVE IN PROGRESSION FROM MICROSCOPIC TO ENDOSCOPIC TECHNIQUE IN TRANSSPHENOIDAL SURGERY FOR PITUITARY ADENOMAS – A SURGICAL AUDIT – Ribhav Pasricha (presenter), Ashish Suri, MCH, Bhawani S Sharma, MCH, Rajinder K Laythalling, MCH, Amandeep Kumar, All India Institute of Medical Sciences, New Delhi, India

O09: OLFACTORY FUNCTION FOLLOWING BILATERAL MUCOSAL PRESERVATION NASOSEPTAL RESCUE FLAP TECHNIQUE IN ENDOSCOPIC SKULL BASE SURGERY: PRELIMINARY DATA – Chester Griffiths, MD (presenter), Aaron Cutler, MD, Muy Duong, MD, Kian Karimi, MD, Garni Barkhoudarian, MD, Olivia Doyle, PAC, Daniel F Kelly, MD, Brain Tumor Center & Pituitary Disorders Program, John Wayne Cancer Institute at Saint Johns Health Center, Santa Monica, California

Question & Answers

PROFFERED PAPER II: Vestibular Schwanomas (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes)

America’s Cup AB

O10: FACIAL NERVE PRESERVATION SURGERY FOR KOOS STAGE 3 AND 4 VESTIBULAR SCHWANOMAS – Amjad N Anaizi, MD (presenter), Eric Gantwerker, MD, Myles Pensak, MD, Philip V Theodosopoulos, MD, Georgetown University Hospital, University of Cincinnati, Univessity of California, San Francisco

O11: HEADACHE DISABILITY FOLLOWING OBSERVATION, STEREOTACTIC RADIOSURGERY, AND MICROSURGERY FOR SMALL-TO-MEDIUM SIZED VESTIBULAR SCHWANNOMA – Matthew L Carlson, MD (presenter), Colin L Driscoll, MD, Brian A Neff, MD, Nicole M Tombers, Molly J Sullan, Christine M Lohse, MS, Bruce E Pollock, MD, Michael J Link, MD, Mayo Clinic, Rochester, MN

O12: PREDICTORS OF CEREBROSPINAL FLUID LEAK AFTER VESTIBULAR SCHWANNOMA SURGERY – William R Copeland, MD (presenter), Grant W Mallory, MD, Brian A Neff, MD, Colin L Driscoll, MD, Michael J Link, MD, Departments of Neurologic Surgery and Otorhinolaryngology, Mayo Clinic

Question & Answers

O13: A COMPARISON OF MANAGEMENT STRATEGIES FOR CEREBROSPINAL FLUID LEAKS FOLLOWING VESTIBULAR SCHWANNOMA REMOVAL – Grant W Mallory, MD (presenter), William R Copeland, MD, Brian Neff, MD, Colin L Driscoll, MD, Michael Link, MD, Mayo Clinic Rochester

O14: EXPLORING THERAPEUTIC TARGETS IN SCHWANNOMA THROUGH INTEGRATIVE ANALYSIS – Sameer Agnihotri, PhD, Kelly E Burrell, MSc, Shahrazad Jalali, PhD, Nesrin Sabha, BSc, Boris Krishcek, MD, PhD, Kenneth D Aldape, MD, PhD, Gelareh Zadeh, MD, PhD (presenter), Arthur & Sonia Labatt Brain Tumour Research Centre, The Hospital for Sick Children, Toronto, Canada

O15: POST-OPTERATIVE FACIAL NERVE PRESERVATION AFTER VESTIBULAR SCHWANNOMA (VS) RESECTION: A COMPARATIVE META-ANALYSIS OF ENDOSCOPIC VS OPEN RESECTION SURGERY – Abdullah Aloaid, MD, FRCS (c) (presenter), Mohammad Aref, MD, Michael Bennardo, MSc, Forough Farrokhyar, BSc, MPhil, PhD, Kesh Reddy, MD, FRCS, FACS, McMaster University
016: PURELY ENDOSCOPIC MANAGEMENT OF VESTIBULAR SCHWANNOMAS – Pradeep Setty, DO (presenter), Kenneth P D'Andrea, DO, Emily Stucken, MD, Daniel R Pieper, MD, St. John Providence Health System, Michigan State University; Michigan Ear Institute; Oakland University, William Beaumont School of Medicine

017: VERY LOW DOSE STEREOTACTIC RADIOSURGERY FOR VESTIBULAR SCHWANNOMA – Rohan R Lall, MD, Allan Nanney III, MD (presenter), Rishi R Lall, MD, Andrew Schumacher, BA, Addason McCasin, BA, John Kalapurakal, MD, James P Chandler, MD, Northwestern University

018: DOES RADIATION DOSE TO THE LABYRINTH PREDICT CHANGE IN BALANCE FUNCTION AND PATIENT PERCEIVED DIZZINESS FOLLOWING STEREOTACTIC RADIOTHERAPY FOR VESTIBULAR SCHWANNOMA? – Matthew L Carlson, MD, Mark J Stavas, MD (presenter), Albert Attia, MD, Alejandro Rivas, MD, Gary P Jacobson, PhD, George B Wanna, MD, Department of Otolaryngology-Head and Neck Surgery, Mayo Clinic School of Medicine, Rochester, MN USA 55905

019: COMPUTER MODELING OF SKULL BASE ENDOCOPIC INSTRUMENT MOTION AND SURGICAL PATHWAY ANALYSIS – R.Alex Harbison, MD (presenter), Randall Bly, MD, Jed White, BS, Randy Ching, PhD, Kris S Moe, MD, University of Washington

020: THREE-DIMENSION IMAGES IN ENDOCOPIC ENDONASAL ANATOMICAL DISSECTION: AN INNOVATIVE METHOD – Nicolas Gil Guevara, MD, Daniel M Prevedello, MD, Leo F Ditzel Filho, MD, Cristian Naudy Martinez, MD (presenter), Matteo Zoli, MD, Bradley A Otto, MD, Ricardo L Carrau, MD, Department of Neurological Surgery, The Ohio State University, Columbus, OH, United States

021: ENDOCOPIC ENDONASAL CRANIAL BASE SURGERY SIMULATION USING AN ARTIFICIAL CRANIAL BASE MODEL CREATED BY SELECTIVE LASER SINTERING – Kenichi Oyama, MD (presenter), Leo F.S. Ditzel Filho, MD, Jun Muto, MD, Daniel G Souza, MD, Mateo Zoli, MD, Cristian A. Naudy, MD, Facundo Van, MD, Edward Kerr, MD, Ali Jamshidi, MD, Bradley A. Otto, MD, Ricardo L. Carrau, MD, Daniel M. Prevedello, MD, Department of Neurological Surgery, Department of Otolaryngology - Head & Neck Surgery, The Ohio State University Wexner Medical Center

022: TOWARDS ENDONASAL ROBOTIC SKULL BASE SURGERY – Michael E Kupferman, MD (presenter), Ehab Y Hanna, MD, The University of Texas MD Anderson Cancer Center

023: NEUROSURGERY SKILLS TRAINING - PAST, PRESENT AND FUTURE: HANDS-ON SKILLS TRAINING MODULES TO VIRTUAL REALITY SIMULATION – Ashish Suri, MD (presenter), Payal Jotwani, BS, Britty Baby, BSMS, Vinkle S Khrystav, BS, Tara S Roy, MDPhD, Sanjiv Lalwani, MD, Martin Bettag, MD, PhD, Christoph Busert, MD, Marcus Mehlitz, MD, Subhasish Banerjee, PhD, Sanjiva Prasad, PhD, Prem Kalra, PhD, Subodh Kumar, PhD, Kolin Paul, PhD, Bhawani S Sharma, MD, All India Institute of Medical Sciences, New Delhi, India; Barmherzige Bruder Hospital, Trier, Germany; Indian Institute of Technology Delhi, New Delhi, India;

024: FLEXIBLE ENDOCOPIC INCREASES SURGICAL FREEDOM WHEN COMPARED TO A RIGID ENDOCOPIC ENDONASAL APPROACHES TO THE SKULL BASE – Ali M Elhadi, MD (presenter), Richard Williamson, MD, Claudio Cavallo, Mark C Preul, MD, Peter Nakaji, MD, Andrew S Little, MD, Barrow Neurological Institute / St. Joseph's Hospital

025: THE FEASIBILITY AND UTILITY OF INTRAOPERATIVE COMPUTER TOPOGRAPHY IN SKULL-BASE SURGERY – Kourosh Tavanaiepour, DO (presenter), Iman Naseri, MD, Phillip Pirgousis, MD, Daryoush Tavanaiepour, MD, University of Florida College of Medicine, Jacksonville and Saint Barnabas Medical Center, New Jersey

026: DETECTION OF SKULL BASE CSF LEAKS USING HIGH RESOLUTION CT:MRI FUSION IMAGING: A NEW ALGORITHM IN MANAGEMENT AND TREATMENT – Raj K Shrivastava, MD (presenter), Satish Govindaraj, MD, Abib Agbetoba, MD, Mount Sinai Medical center, NYC

027: ENDOSCOPIC TRANSSPHENOIDAL SURGERY: INSTITUTIONAL EXPERIENCE IN CUSHING'S DISEASE – Oscar Feo, MD, Jaime Becerra, MD (presenter), Hospital Universitario San Ignacio – Pontificia Universidad Javeriana

028: A NEW CLINICAL PROGNOSTIC SCORING SYSTEM FOR PITUITARY ADENOMA – Wang Jia, MD (presenter), Guijun Jia, MD, BEIJING TIANTAN HOSPITAL CAPITAL MEDICAL UNIVERSITY
**Question & Answers**

**029:** EXPERIMENTAL MODEL FOR TRAINING OF ENDOSCOPIC TRANSSPHENOIDAL PITUITARY ADENOMA RESECTION – J.-y. Fournier (1), MD (presenter), A.j. Tasman (2), PhD, MD, R. Schmid (3), dipl, ing, R. Schindel (3), dipl, ing, D.c. Engel (1), PhD, MD, MBA, Neurosurgery (1), ENT (2), Cantonal Hospital, St. Gall. Techn. Fed. School, Zurich (3)

**030:** IMAGING OF NONFUNCTIONING PITUITARY ADENOMAS: THE COST OF SURVEILLANCE – Heather M Kistka, MD (presenter), Rebecca A Kasl, BS, Arash Nayeri, BA, Andrea L Utz, MD, PhD, Kyle D Weaver, MD, Lola B Chambless, MD, Vanderbilt University Medical Center

**031:** CAVERNOUS SINUS INVOLVEMENT IN PITUITARY ADENOMAS – Abdulrazag Ajlan (presenter), Achal S Achrol, Abdullah H Feroze, Erick M Westbroek, Griffith H Harsh, Stanford University

**Question & Answers**

**032:** DIABETES INSIPIDUS FOLLOWING ENDOSCOPIC TRANSSPHENOIDAL RESECTION OF PITUITARY ADENOMA – Abdulrazag Ajlan (presenter), Achal S Achrol, Yousef Aljamaan, Abdullah H Feroze, Griffith H Harsh, Stanford University

**033:** COMPLICATIONS AND LEARNING CURVE FOLLOWING TRANSITION TO ENDOSCOPIC TRANSSPHENOIDAL SURGERY – Tasneem Shikary, MD (presenter), Colin Edwards, MS, Jareen Meinzen-Derr, PhD, Philip V Theodosopoulos, MD, Lee A Zimmer, MD, PhD, University of Cincinnati Medical Center

**034:** ENDOSCOPIC PITUITARY TUMOR SURGERY: THE LEARNING CURVE – Tasneem Shikary, MD (presenter), Colin Edwards, MS, Jareen Meinzen-Derr, PhD, Philip V Theodosopoulos, MD, Lee A Zimmer, MD, PhD, University of Cincinnati Medical Center

**Question & Answers**

3:30 pm – 4:00 pm  
**Break with Exhibitors**  
4:00 pm – 5:30 pm  
**PROFFERED PAPERS**

**PROFFERED PAPER V: Endonasal Approaches 2** (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes)  
MODERATORS: Ivan El-Sayed, MD & Manish Aghi, MD

**035:** ANTERIOR INFERIOR PETROSECTOMY: DEFINING THE ROLE OF ENDONASAL ENDOSCOPIC TECHNIQUES FOR PETROUS APEX APPROACHES – Puya Alikhani, MD (presenter), Jamie J Van Gompel, MD, Mark H Tabor, MD, Harry R van Loveren, MD, Sivero Agazzi, MD, MBA, Sebastien Froelich, MD, Sammy Youssef, MD, PhD, Department of Neurosurgery and Brain Repair, Department of Otolaryngology-Head & Neck Surgery, College of Medicine, University of South Florida, Tampa, Florida, Department of Neurosurgery, Mayo Clinic Rochester, MN

**036:** ENDOSCOPIC TRANSPTERYGOID NASOPHARYNGECTOMY FOR NASOPHARYNGEAL MALIGNANT TUMORS – Ronaldo N Toledo, MD, PhD (presenter), Paula A Silveira, MD, João Gonçalves Filho, MD, PhD, José G Vartanian, MD, PhD, Mauro K Ikeda, MD, PhD, Luiz P Kowalski, MD, PhD, ACCamargo Cancer Center - São Paulo/Brazil

**037:** COMPARATIVE COST ASSESSMENT OF TRANSSPHENOIDAL SURGERY CLOSURE TECHNIQUES: ARE BIOLOGICAL GRAFTS AND GLUES COST EFFECTIVE? – Sonia Teufack, MD (presenter), Saurabh Singhal, MD, Christopher Farrell, MD, Gurston Nyquist, MD, Marc Rosen, MD, James Evans, MD, Thomas Jefferson University Hospital

**Question & Answers**

**038:** ENDOSCOPIC ENDONASAL SURGERY FOR RESECTION OF CRANIAL BASE EPIDERMOID AND DERMOID CYSTS: ADVANTAGES AND LIMITATIONS – Francisco Vaz-Guimaraes Filho, MD (presenter), Maria Koutourouisiou, MD, John R de Almeida, MD, Eric W Wang, MD, Juan C Fernandez-Miranda, MD, Carl H Snyderman, MD, MBA, Paul A Gardner, MD, University of Pittsburgh Medical Center

**039:** EARLY EXPERIENCE WITH NEW DEFINITION THREE-DIMENSIONAL (HD3D) NEUROENDOSCOPY – Leif Erik Bohman, MD, James H Stephen, MD (presenter), John Y. K Lee, MD, University of Pennsylvania

**040:** THE ENDOSCOPIC ENDONASAL APPROACH TO THE ODONTOID AND ITS IMPACT ON EARLY EXTUBATION AND FEEDING – Theodore H Schwartz, MD, FACS (presenter), Tony Goldschlager, MBBS, PhD, FRACS, Roger Hartl, MD, FACS, Jeffrey P Greenfield, MD, FACS, Vijay K Anand, MD, FACS, Departments of Neurosurgery, Otorhinolaryngology, Neurology and Neuroscience, Weill Cornell Medical College, New York Presbyterian Hospital, New York, NY. Department of Neurosurgery, Monash Health, Melbourne, Australia.

**Question & Answers**

**041:** ENDOSCOPIC ENDONASAL OPTIC NERVE DECOMPRESSION FOR BENIGN PATHOLOGY OF THE OPTIC CANAL – T R DeKlotz, MD (presenter), S T Stefko, MD, J C Fernandez-Miranda, P A Gardner, MD, C H Snyderman, MD, MBA, E W Wang, MD, University of Pittsburgh Medical Center
**O42:** FREE MUCOSAL GRAFT RECONSTRUCTION FOR ANTERIOR SKULL BASE SURGERY DEFECTS – Christopher F Thompson, MD (presenter), Sophie Shay, MD, Jeffrey D Suh, MD, Marvin Bergsneider, MD, Marilene B Wang, MD, University of California Los Angeles

**O43:** ENDOSCOPIC ENDONASAL SURGERY FOR CRANIAL BASE CHONDROSARCOMAS: COMPARISON TO OPEN APPROACHES – Francisco Vaz-Guimaraes Filho, MD (presenter), Maria Koutourousiou, MD, Eric W Wang, MD, Juan C Fernandez-Miranda, MD, Carl H Snydermean, MD, MBA, Paul A Gardner, MD, University of Pittsburgh Medical Center

**Question & Answers**

**PROFFERED PAPER VI: Surgical Approaches** (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes)  
**America's Cup AB**

**Moderators:** Daniel Kelly, MD & Adam Zanation, MD

**O44:** EXTRA-DURAL ANTERIOR CLINOIDECTOMY THROUGH THE LATERAL SUPRAORBITAL APPROACH: SURGICAL ANATOMY AND INITIAL CLINICAL EXPERIENCE – Sirajeddin Belkhair, MHSc, MD, FRCSC (presenter), Amancio Guerrero Maldonado, MD, Michael Tymianski, MD, PhD, FRCSC, Ivan Radovanovic, MD, PhD, Division of Neurosurgery, Toronto Western Hospital, University Health Network and University of Toronto, Toronto, Ontario Canada.

**O45:** KEYHOLE SUPRAORBITAL APPROACH FOR MANAGEMENT OF SUPRASELLAR TUMORS – Firas Hammadi, Ali Ayyad, Dr (presenter), Department of neurosurgery, Johannes Gutenberg university

**O46:** COMPARISON OF OPEN AND TRANSNASAL ENDOSCOPIC APPROACHES TO THE SKULL BASE IN THE ENDOSCOPIC SKULL BASE ERA – Justin D Miller, BSPH, Satyan Sreenath, MD (presenter), Robert J Taylor, BS, Emily C Ambrose, BSPH, Charles S Ebert, Jr., MD, MPH, Adam M Zanation, MD, University of North Carolina Department of Otolaryngology/Head and Neck Surgery

**Question & Answers**

**O47:** BRAINSTEM CAVERNOMAS: SURGICAL MANAGEMENT AND CLINICAL OUTCOME – Ali Ayyad, MD, FRCSI (presenter), Firas Hammadi, MD, Department of neurosurgery, Johannes Gutenberg university

**O48:** OCCIPITAL TRANSENTORIAL APPROACH FOR POSTERIOR CRANIAL FOSSA TUMORS – Young Il Kim, MD (presenter), Sin Soo Jeun, MD, PhD, Department of Neurosurgery, Seoul St. Mary’s Hospital The Catholic University of Korea, Seoul, Korea

**O49:** QUANTITATIVE ANALYSIS OF THE EFFECT OF BRAINSTEM SHIFT ON SURGICAL APPROACHES TO ANTEROLATERAL TUMORS AT THE CRANIOVERTEBRAL JUNCTION – Varun R Kshettry, MD (presenter), Silky Chotai, MD, William Chen, Jun Zhang, PhD, Mario Ammirati, MD, MBA, Cleveland Clinic, Ohio State University

**Question & Answers**

**O50:** OPTIC NERVE SURFACE TEMPERATURE DURING INTRADURAL ANTERIOR CLINOIDECTOMY: A COMPARISON BETWEEN HIGH-SPEED DIAMOND BURR AND ULTRASONIC BONE CURETTE – Varun Kshettry, MD (presenter), Xiaobing Jiang, MD, Silky Chotai, MD, Mario Ammirati, MD, MBA, Cleveland Clinic, Ohio State University

**O51:** THE FAR-LATERAL TRANSCONDYLAR APPROACH TO PONTOMEDULLARY JUNCTION BRAINSTEM CAVERNOMAS – Ben Boudreaux, MD (presenter), Bruno Flores, MD, Jeremy Lewis, MD, Samuel Barnett, MD, University of Texas Southwestern Medical Center

**O52:** MODIFIED ANTERIOR TRANSPETROSAL POSTERIOR CAVERNOUS POSTEROMEDIAL RHomboID (DOLENC-KAWASE RHomboID) APPROACH TO POSTERIOR CAVERNOUS AND PETROCLIVAL LESIONS – Ashish Suri, MD (presenter), All India Institute of Medical Sciences, New Delhi, India

**Question & Answers**

**PROFFERED PAPER VII: General** (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes)  
**America's Cup CD**

**Moderators:** Luciano Prevedello, MD & Elizabeth Tyler-Kabara, MD

**O53:** PET CT CRITERIA FOR “POSITIVE” RESULT IN SKULL BASE IMAGING ARE PROBLEMATIC: CASE SERIES AND SYSTEMATIC REVIEW OF THE LITERATURE – John P Hines, MD (presenter), Brittany E Howard, MD, Joseph Hoxworth, MD, Deyyani Lal, MD, Mayo Clinic Arizona

**O54:** AN ANALYSIS OF 163 CASES OF SKULL BASE ASPERGILLOSIS OVER 12 YEARS – Sandeep Mohindra, MD, FRCS (presenter), Postgraduate Institute of Medical Education & Research, Chandigarh, India

**O55:** SUSPECTED SKULL BASE ASPERGILLOSIS: ENDOSCOPY VS RADIOLOGY – Satyawati Mohindra, MS (presenter), Sandeep Mohindra, Dr, Post Graduate Institute of Medical Education and Research, Chandigarh, India

**Question & Answers**

**O56:** REPAIR OF FRONTOETHMOIDAL ENCEPHALOCELE IN THE PHILIPPINES: AN ACCOUNT OF 30 CASES BETWEEN 2008-2015 – Amanda Lynn Marshall, MPH (presenter), Pradeep Setty, DO, Mark Hnatiuk, MD, Daniel R Pieper, MD, (1) Oakland University William Beaumont School of Medicine (2) Department of Neurosurgery, St. John Providence Health System (3) Craniofacial Institute of Michigan (4) Department of Neurosurgery, William Beaumont Hospital (Royal Oak, Michigan)
**057:** THE NAVIGATION-GUIDED CORRECTION OF CRANIAL-ORBITAL-FACIAL FIBROUS DYSPLASIA – Yiqun Wu, MD (presenter), Huayi Chen, MD, Baohua Fan, BS, Shanghai 9th People’s Hospital, Shanghai Jiaotong University School of Medicine

**058:** THE COSTS OF SKULL BASE SURGERY IN THE PEDIATRIC POPULATION – Amanda L Stapleton, MD (presenter), Elizabeth Tyler-Kabara, MD, PHD, Paul A Gardner, MD, Carl H Snyderman, MD, MBA, University of Pittsburgh Medical Center: Departments of Otolaryngology and Neurosurgery

**Question & Answers**

**059:** PATIENT PERCEPTIONS AND EXPECTATIONS OF ENDOSCOPIC SKULL BASE SURGERY – Yemeng Lu, BS (presenter), Candace A Mitchell, MD, Adam M Zanation, MD, University of North Carolina at Chapel Hill Department of Otolaryngology/Head and Neck Surgery

**060:** SKULL BASE OPERATIVE EXPERIENCE IN U.S. OTOLARYNGOLOGY RESIDENCY TRAINING PROGRAMS – Aaron K Remenschneider, MD, MPH (presenter), Josh C Meier, MD, Kyle Chambers, MD, Matthew Dedmon, MD, PhD, Derrick T Lin, MD, Stacey T Gray, MD, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, Massachusetts

**061:** COCHLEAR RADIATION DOSE DOES NOT AFFECT HEARING PRESERVATION AFTER GAMMA KNIFE RADIOSURGERY IN THOSE WITHOUT VESTIBULAR SCHWANNOMA – Jeffrey T Jacob, MD (presenter), Michael S Oldenburg, MD, Matthew L Carlson, MD, Driscoll L Colin, MD, Micheal J Link, MD, Mayo Clinic

**Question & Answers**

**PROFFERED PAPER VIII: Chordomas, Chondrosarcomas, and Vascular Lesions**

(Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes)

**MODERATORS:** Stacey Gray, MD & Daniel Prevedello, MD

**062:** TREATMENT AND OUTCOME OF PATIENTS WITH SKULL BASE CHORDOMA: A META-ANALYSIS – Moran Amit, Shorook Na’ara, Salem Balan, Gil Sviri, Jacob Cohen, Ziv Gil (presenter), Rambam Medical Center, Rappaport School of Medicine, the Technion, Israel institute of technology, Haifa, Israel.

**063:** COMBINED ENDOSANAL AND TRANSCRANIAL RESECTION OF COMPLEX SKULL BASE CHORDOMAS AND CHONDROSARCOMAS: A MULTI-CORRIDOR STRATEGY – Leo F Ditzel Filho, MD (presenter), Daniel G de Souza, MD, Edward E Kerr, MD, Ali O Jamshidi, MD, Mihir R Patel, MD, Bradley A Otto, MD, Ricardo L Carrau, MD, Daniel M Prevedello, MD, The Ohio State University Wexner Medical Center

**064:** CYBERKNIFE STEREOTACTIC RADIOSURGERY FOR INTRACRANIAL CHORDOMAS – Abdulrazag Ajlan (presenter), Scott G Soltys, Anand Veeravagu, Bowen Jiang, Marco Lee, Griffith R Harsh, Iris C Gibbs, John R Adler, Steven D Chang, Stanford University

**Question & Answers**

**065:** PEDIATRIC MESENCHYMAL CHONDROSARCOMA – Jessica M Somerville, MD (presenter), Michael Bishop, MD, Sandeep Samant, MS, FRCS, Alberto Pappo, MD, Frederick Boop, MD, Valerie McPherson, CRA, St. Jude Children’s Research Hospital

**066:** ENDOSCOPIC ENDOSANAL TRANSCRANIAL APPROACHES: CASE SERIES & OUTCOMES FOR DIFFERENT CLIVAL REGIONS – Ryan E Little (presenter), Robert J Taylor, Justin D Miller, Emily Cohn, Adam M Zanation, MD, University of North Carolina, Chapel Hill, North Carolina

**067:** ENDOSCOPIC ANATOMY AND APPROACH OF THE CAVERNOUS SINUS – Victor A Morera Porras, MD (presenter), Gelareh Zadeh, MD, PhD, FRCS, Fred Gentili, MD, MSc, FRCS, Juan Fernandez-Miranda, MD, Division of Neurosurgery, University of Toronto; Department of Neurosurgery, University of Pittsburgh

**Question & Answers**

**068:** THE UTILITY AND LIMITATIONS OF INDOCYANINE GREEN VIDEO ANGIOGRAPHY FOR ANTERIOR CIRCULATION ANEURYSM SURGERY – Bharat Guthikonda, MD, Sudheer Ambekar, MD, Mayur Sharma, MD, Osama Ahmed, MD (presenter), Menarvia Nixon, MD, Chiao Amene, MD, Anil Nanda, MD, LSU HSC Shreveport

**069:** INTRAOPERATIVE DYNAMIC ASSESSMENT OF THE POSTERIOR COMMUNICATING ARTERY AND ITS BRANCHES BY INDOCYANINE GREEN VIDEOANGIOGRAPHY – Mustafa Baskaya, Associate, professor, Bora Gurer, MD, Veyesel Antar, MD, Ulas Cikla, MD (presenter), Andy Bauer, MD, University of Wisconsin, The Department of Neurological Surgery

**070:** SUPERIOR HYPOPHYSEAL ARTERY ANATOMY: A VENTRAL PERSPECTIVE – Daniel G de Souza, MD (presenter), Daniel M Prevedello, MD, Leo F Ditzel Filho, MD, Juan Bargues-Coll, MD, Francesco Doglietto, MD, Victor Morera, MD, Bradley A Otto, MD, Ricardo L Carrau, MD, The Ohio State University

**Question & Answers**
SATURDAY, FEBRUARY 15, 2014
7:00 am – 8:00 am  BREAKFAST SEMINARS

BS5: Approaches to the Infratemporal Fossa  Coronado AB
MODERATOR: Lee Zimmer, MD, PhD – Introductions and Overview
SPEAKERS:
• C. Arturo Solares, MD – Anterior and Endoscopic Approached to the Infratemporal Fossa
• John Leonetti, MD – Neuro-otologic Approaches to the Infratemporal Fossa

BS6: Reconstruction of Large Cranialfacial Defects  America’s Cup AB
CASE STUDIES: Lessons Learned in Complex Skull Base Reconstruction a Case Based Approach
MODERATOR: Peter Neligan, MD
SPEAKERS: Mathew Old, MD & Ralph Gilbert, MD

BS7: Innovations in Endovascular Neurosurgery  America’s Cup CD
MODERATOR: Eric Sauvageau, MD
SPEAKERS:
• B. Gregory Thompson, MD – Lessons Learned with the Use of Stents for Aneurysmal Disease
• Aaron Dumont, MD – Innovations in Aneurysm Treatment

BS8: Skull Base Resection for Cutaneous Malignancies  Regatta BC
MODERATOR: Fernando Dias, MD – Introduction
SPEAKERS:
• Claudio Cernea, MD – Technical Aspects of Craniofacial Resection for Cutaneous Malignancies
• Dan Fliss, MD – Craniofacial Resection for Non Melanoma Cutaneous Malignancy
• Case Discussion – PRESENTER: Fernando L. Dias, MD, DEBATORS: Cláudio Cernea, MD & Dan Fliss, MD

8:05 am – 9:00 am  CONCURRENT SESSIONS

CS9: Management of Atypical/Aggressive Meningiomas  Coronado AB
MODERATOR: Ossama Al-Mefty, MD
SPEAKERS:
• Fred Barker, MD – Atypical Meningiomas - Decision Making
• Eugene Yu, MD – Imaging of Atypical and Aggressive Meningiomas
• Patrick Wen, MD – Novel Medical Therapies for Atypical/Aggressive Meningiomas
• Vikram Prabhu, MD – Surgical Management of Atypical Aggressive Meningiomas

CS10: Management of Complex Cranial Base Aneurysms  America’s Cup AB
MODERATOR: Laligam Sekhar, MD
SPEAKERS:
• Jacques Morcos, MD – Intracranial-Intracranial Bypasses: Video Examples
• Ketan Bulsara, MD – Patient Specific Treatment to Optimize Outcome for Aneurysms: A Disease Specific Approach
• B. Gregory Thompson, MD – Management of Complex Cranial Base Aneurysms: Use of Clip Reconstruction Versus Bypass
• Laligam Sekhar, MD – Bypasses or Pipeline Stent for Complex Aneurysms

CS11: Sinonasal Carcinomas  America’s Cup CD
MODERATOR: Jatin Shah, MD
SPEAKERS (CASE DISCUSSIONS):
• Michael Kupferman, MD
• Patrick Gullane, MD
• Merrill Kies, MD
• Lawrence Ginsberg, MD

CS12: Best Outcome for Glomus Tumors  Regatta BC
MODERATOR: Daniel Nuss, MD
SPEAKERS:
• Mark McDonald, MD – Review of Radiotherapy Options for Paragangioma
• Giovanni Danesi, MD – New Perspectives in Management of Temporal Bone Paragangliomas
• Laurie Loevner, MD – The Role of Imaging in Paragangliomas
• Michael Gleeson, MD – Paragangliomas: Ensuring Best Outcomes By A Rational Management Protocol
9:00 am – 9:30 am  Break with Exhibitors

9:30 am – 12:00 pm  PLENARY SESSION II

9:30 am:  Honored Guest Lecturer – Piero Nicolai, MD

10:00 am:  Keynote Lecturer – David Dravecky, former Major league baseball player (San Francisco Giants), Founder of Endurance with Jan and Dave Dravecky

10:45 am:  Awards & Recognition Ceremony
- BEST PAPER BY A MEDICAL STUDENT: “Comparison of Open and Transnasal Endoscopic Approaches to the Skull Base in the Endoscopic Skull Base Era”
  Justin Miller, BSPH, The University of North Carolina at Chapel Hill, Department of Otolaryngology/Head and Neck Surgery, Chapel Hill, NC
- BEST RESIDENT CLINICAL PAPER: “Surgical Management of Nonmelanoma Skin Cancers Involving the Skull Base”
  Shaan M. Raza, MD, UT MD Anderson Cancer Center, Department of Neurosurgery, Houston, TX
- BEST RESIDENT BASIC SCIENCE: “Comparative Proteomic Profiling Using Two-Dimensional Gel Electrophoresis and Identification Via LC-MS/MS Reveals Protein Biomarkers That Distinguish Aggressive From Non-Aggressive Phenotypes of WHO Grade 1 Meningioma”
  Joshua Osbun, MD, University of Washington, Department of Neurological Surgery, Seattle WA

10:55 am:  The Rhoton Project: The NASBS Skull Base Collection – Sandeep Samant, MD & Jeff Sorenson, MD

11:05 am:  Introduction of Guest of Honors – GUESTS OF HONOR: Harvey Tucker, MD, FACS, James Suen, MD, FACS, Ivo Janecka, MD, MBA, PhD, Franco DeMonte, MD, Randal Weber, MD & DISTINGUISHED SERVICE AWARD: Daniel Nuss, MD

11:15 am:  Presidential Address – Ehab Hanna, MD, FACS

12:00 pm – 1:00 pm  Lunch on Own

1:00 pm – 2:00 pm  CONCURRENT SESSIONS

**CS13: Best Outcome for Olfactory Groove Meningioma**
MODERATOR: Christopher Farrell, MD
SPEAKERS:
- Charlie Teo, MD – Olfactory Groove Meningiomas: the Pros & Cons of an Endonasal Approach
- Khaled Aziz, MD – Frontal Orbital Craniotomy (Eyelid Crease Incision) for Resection of Olfactory Groove Meningiomas
- William Couldwell, MD – Natural History of Olfactory Groove Meningiomas - Role of Observation
- Eric Chang, MD – Radiation Therapy For Olfactory Groove Meningiomas

**CS14: Non Functional Pituitary Tumors**
MODERATOR: Philip Theodosopoulous, MD
SPEAKERS:
- Daniel Kelly, MD – Endoscopic Removal of Non-functioning adenoma: Maximizing Resecting
- Philip Theodosopoulous, MD – Endoscopic Pituitary Surgery: Learning Curve and Outcomes
- Peter Savino, MD – Predicting Visual Recovery Before Surgery
- Jurij Bilyk, MD – Ophthalmologic Manifestations of Pituitary Tumors
- Gurston Nyquist, MD – Managing Postoperative Care Following Transsphenoidal Surgery for Pituitary Tumors

**CS15: Perineural Spread**
MODERATOR: Benedict Panizza, MD – Overview of Perineural Invasion
SPEAKERS:
- Richard Wong, MD – Mechanisms of Perineural Invasion
- Lawrence Ginsberg, MD – Perineural Tumor Spread-Selected Imaging Issues
- Franco DeMonte, MD – Surgical Management of Perineural Invasion
- David Rosenthal, MD – Radiotherapy of Perineural Invasion

**CS16: Trigeminal Schwannoma**
MODERATOR: Carl Heilman, MD
SPEAKERS:
- Siviero Agazzi, MD – Transcranial Approaches for Trigeminal Schwannomas
- Donald Anino, MD – Transfacial Open and Endoscopic Approaches for Trigeminal Schwannomas
- Wenyin Shi, MD – Radiosurgery and Radiation Therapy for Trigeminal Schwannomas
- Paul Gardner, MD – Trigeminal Nerve/Skull Base/Cavernous Sinus Anatomy, Endoscopic Endonasal Approach for Trigeminal Schwannoma
PROFFERED PAPER IX: Endonasal Approaches 3 (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes) America's Cup AB

071: MINIMIZING SEPTECTOMY FOR ENDOSCOPIC TRANSPHENOIDAL APPROACHES TO THE SELLAR AND SUPRASELLAR REGIONS: A CADAVERIC MORPHOMETRIC STUDY - H G Garcia, MD (presenter), M Pyfer, BS, S J Singhal, MD, M L Otten, MD, A M Illoreta, MD, C J Farrell, MD, G G Nyquist, MD, M R Rosen, MD, J J Evans, MD, Department of Neurological Surgery and Otolaryngology, Head and Neck Surgery, Thomas Jefferson University, Philadelphia, Pennsylvania

072: ENDOSCOPIC ENDONASAL APPROACHES TO INFRATEMPORAL FOSSA TUMORS: A CLASSIFICATION SYSTEM & CASE SERIES - Adam M Zanation, MD (presenter), Robert J Taylor, BS, Mihir R Patel, MD, Stephen A Wheless, MD, Kibwe A McKinney, MD, Michael E Stadler, MD, Deanna Sasaki-Adams, MD, Matthew G Ewend, MD, Anand V Germanwala, MD, University of North Carolina at Chapel Hill

073: A PERFUSION-BASED HUMAN CADAVERIC MODEL FOR MANAGEMENT OF CAROTID ARTERY INJURY DURING ENDOSCOPIC ENDONASAL SKULL BASE SURGERY - Martin Pham, MD (presenter), Aydemir Kale, MD, Yvette Marquez, MD, Jesse Winer, MD, Brian Lee, MD, PhD, Brianna Harris, BA, Michael Minnetti, BS, Joseph Carey, MD, Steven Giannotta, MD, Gabriel Zada, MD, University of Southern California

Question & Answers

074: 3D ENDOCOPIC TRANSTUBULAR ANTERIOR PETROSECTOMY FOR PETROCLIVAL MENINGIOMAS: ASSESSMENT OF RESECTION IN VARYING TUMOR VOLUMES UTILIZING A SYNTHETIC TUMOR MODEL - Alexander I Evins, MD (presenter), Alireza Shoakazemi, MD, Justin C Burrell, MS, Rahul Kapoor, BS, Philip E Stieg, MD, PhD, Antonio Bernardo, MD, Department of Neurological Surgery, Weill Cornell Medical College, New York, NY, USA

075: 3D ENDOSCOPE-ASSISTED TRANSCALLOSAL APPROACH TO THE THIRD VENTRICLE USING A MINIMALLY INVASIVE TUBULAR RETRACTOR SYSTEM - A FEASIBILITY STUDY - Alireza Shoakazemi, MD (presenter), Alexander I Evins, MD, Philip E Stieg, MD, PhD, Antonio Bernardo, MD, Department of Neurological Surgery, Weill Cornell Medical College, New York, NY, USA

076: THE ROLE OF BIMANUAL DISSECTION AND DYNAMIC ENDOSCOPY IN ENDOSCOPIC NEUROSURGICAL TRAINING: A LABORATORY INVESTIGATION - Francisco Vaz-Guiamaes Filho, MD (presenter), Milton M Rastelli, Jr, MD, Juan C Fernandez-Miranda, MD, Eric W Wang, MD, Paul A Gardner, MD, Carl H Snyderman, MD, University of Pittsburgh Medical Center

Question & Answers

077: COMPARING THE COST-EFFECTIVENESS OF ENDOCOPIC AND MICROSCOPIC APPROACHES TO TRANSPHENOIDAL PITUITARY SURGERY - Jared D Ament, MD, MPH (presenter), Zhuo Yang, MS, Patrick Tertulien, BS, Kiarash Shahlaie, MD, PhD, UC-Davis Medical Center, Sacramento, California; Center for Disease Control, Atlanta Georgia

078: EVALUATION OF SURGICAL FREEDOM FOR FOUR MICROSCOPIC AND ENDOCOPIC TRANSPHENOIDAL APPROACHES TO THE SELLA - Ali M Elhadi, MD (presenter), Yashar S Kalani, MD, PhD, Peter Nakaji, MD, William L White, MD, Mark C Preul, MD, Andrew S Little, MD, Barrow Neurological Institute / St. Joseph's Hospital

079: COMPARATIVE RESOURCE UTILIZATION IN PATIENTS UNDERGOING ENDOCOPIC AND MICROSCOPIC TRANSPHENOIDAL SURGERY FOR PITUITARY TUMORS - Andrew S Little (presenter), Heidi Jahnke, RN, MSN, Katharine Cronk, MD, Kristina Chapple, PhD, William L White, MD, Barrow Neurological Institute

Question & Answers

PROFFERED PAPER X: Temporal Bone (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes) America's Cup CD

080: OUTCOME AND COMPLICATIONS AFTER IMPLANTATION OF THE BONE-ANCHORED HEARING AID IN PATIENTS TREATED WITH RADIOTHERAPY TO THE TEMPORAL BONE - Marc-Elie Nader, MD (presenter), Beth M Beadle, MD, Dianna B Roberts, PhD, Paul W Gidley, MD, The University of Texas MD Anderson Cancer Center

081: TEMPORAL BONE ENCEPHALOCELE REPAIR – OUR EXPERIENCE. - Rahul Mehta, MD, FRCS (presenter), Samuel Spear, MD, Yu-Lan Mary Ying, MD, Kelly J Scrantz, MD, Daniel W Nuss, MD, FACOS, Moises A Arriaga, MD, MBA, FACOS, Our Lady of Lake Regional Medical Center/ LSUHSC, New Orleans

082: SQUAMOUS CARCINOMA OF THE TEMPORAL BONE: LESSONS LEARNED OVER THE PAST THIRTY YEARS - L Masterson, MRCS, M J Rouhani, BA (presenter), N P Donnelly, MSc, FRCS, J R Tyson, PhD, FRCS, P Patel, MSc, FRCS, P Axon, MD, FRCS, D A Moffatt, PhD, FRCS, Department of Neuro-otology and Skull Base Surgery , Cambridge University Teaching Hospitals NHS Trust

Question & Answers
083: EXTERNAL AUDITORY CANAL AND TEMPORAL BONE CARCINOMA WITH PAROTID GLAND AND FACIAL NERVE INVOLVEMENT - Samuel A Spear, MD (presenter), Rahul Mehta, MD, Yu-Lan Mary Ying, MD, Daniel W Nuss, MD, FACS, Moises A Arriaga, MD, MBA, FACS, Department of Otolaryngology-Head & Neck Surgery, Louisiana State University Health Science Center New Orleans and Our Lady of the Lake Hearing and Balance Center, Baton Rouge, LA

084: MANAGEMENT OF GLOMUS TUMORS IN A SINGLE REFERRAL CENTER - Ali Kouhi, MD (presenter), Masoud Motasaddi Zarandy, MD, Otorhinolaryngology research center, Tehran University of Medical Sciences

085: SURGICAL TREATMENT OF SUPERIOR SEMICIRCULAR CANAL DEHISCENCE IS ASSOCIATED WITH SIGNIFICANT IMPROVEMENT IN CLINICAL OUTCOME - Lawrance Chung (presenter), Nolan Ung, Kimberly Thill, Quinton Gopen, MD, Isaac Yang, MD, University of California, Los Angeles

Question & Answers

086: RECONSTRUCTION AFTER RETROSIGMOID APPROACHES USING AUTOLOGOUS FAT GRAFT-ASSISTED MEDPOR TITAN CRANIOLPLASTY: ASSESSMENT OF POSTOPERATIVE CEREBROSPINAL FLUID LEAKS AND HEADACHES IN 46 CASES - Phoebe Y Ling, BS (presenter), Rohit K Reddy, BS, Zachary S Mendelson, BS, Robert W Jyun, MD, James K Liu, MD, FAANS, Departments of Neurological Surgery and Otolaryngology-Head and Neck Surgery, Center for Skull Base and Pituitary Surgery, Rutgers New Jersey Medical School, Neurological Institute of New Jersey, Newark, New Jersey

087: FIBROUS DYSGPLASIA OF THE TEMPORAL BONE: CONTEMPORARY DIAGNOSIS AND MANAGEMENT - Christopher D Frisch (presenter), Matthew L Carlson, Brian A Neff, Michael J Link, Colin L Driscoll, Department of Otolaryngology-Head and Neck Surgery, University of Texas Southwestern Medical Center

088: RADIOSURGERY TREATMENT OF NEW AND RECURRENT GLOMUS TUMORS - Navjot Chaudhary, MD (presenter), Iris Gibbs, MD, Scott Soltsy, MD, Griffith Harsh, Steven D Chang, MD, Stanford University

Question & Answers

PROFFERED PAPER XI: Meningiomas 1 (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes) Coronado AB

MODERATORS: Khaled Aziz, MD & Bradley A. Otto, MD

089: THE FAR LATERAL APPROACH FOR FORAMEN MAGNUM MENINGIOMAS - Bruno C Flores, MD, Benjamin P Boudreaux, MD (presenter), Daniel R Klinger, MD, Jack M Raisanen, MD, Jeremy J Lewis, MD, Bruce E Mickey, MD, Samuel L Barnett, MD, University of Texas Southwestern Medical Center

090: TUBERCULUMSELLAE MENINGIOMAS - RADIOLOGICAL CLASSIFICATION AND ITS CLINICAL SIGNIFICANCE - Silky Chotai (presenter), Liu Yi, Pan Jun, Songtao Qi, Department of Neurosurgery, Nanfang Hospital of Southern Medical University, Guangzhou, China

091: INTRACRANIAL MENINGIOMAS: PREDICTOR FACTORS OF CLINICAL BEHAVIOR AND PATIENTS OUTCOME - George Klironomos, MD, PhD (presenter), Sorosh Larjani, HonBSc, Alireza Mansouri, MD, Aisha Ghare, HonBSc, Alexandra Kilian, Kenneth Aldape, MD, Gelareh Zadeh, MD, PhD, Toronto Western Hospital, University Health Network

Question & Answers

092: ATYPICAL MENINGIOMAS: RECURRENCE, RE-OPERATION AND RADIOTHERAPY - Daniel Klinger, MD (presenter), Jeremy Lewis, MD, Kimmo Hatanpaa, MD, PhD, Kevin Choe, MD, PhD, Bruce Mickey, MD, Samuel Barnett, MD, University of Texas Southwestern Medical Center at Dallas

093: ANALYSIS OF OUTCOMES FOR SURGICAL RESECTION AND RADIOTHERAPY IN PATIENTS WITH INTRACRANIAL PAPILLARY MENINGIOMA - Christina Fong (presenter), Kimberly Thill, Nolan Ung, Andy Trang, Quinton Gopen, MD, Isaac Yang, MD, University of California, Los Angeles

094: SURGICAL MANAGEMENT OF POSTERIOR FOSSA MENINGIOMAS: OPERATIVE TECHNIQUES, COMPLICATIONS AND OUTCOME IN 59 CASES - Nevo Margalit, MD (presenter), Lior Gonen, MD, Amir Hadani, MD, Neurosurgery Tel Aviv Medical Center

Question & Answers

095: NOVEL FINDINGS IN A CASE SERIES OF FALCINE MENINGIOMAS: EXPERIENCE WITH 115 PATIENTS - Daryoush Tavanaiepour, MD, Mohamed Abollotoh, MD, Urvashi Upadhyay, MD (presenter), Ossama Al-Mefty, MD, Brigham and Women's Hospital

096: MULTIMODALITY TREATMENT OF 15 MALIGNANT WHO III (2007 CRITERIA) MENINGIOMAS: DIFFERENTIAL SURVIVAL RATES BETWEEN DE NOVO AND PROGRESSIVE ORIGINS. - Philip D Tatman (presenter), Joshua Osbun, MD, Owais Ahmad, BS, Maciej M Mrugala, MD, PhD, MPH, Jason K Rockhill, MD, PhD, Lois Gonzalez-Cuyar, MD, Donald Born, MD, PhD, Manuel Jr. Ferreira, MD, PhD, University of Washington

097: OUTCOMES FOLLOWING MODERN-DAY MENINGIOMA SURGERY IN THE ELDERLY - Bjorn M Lobo, MD (presenter), Varun Kshettry, MD, Burak Sade, MD, Soichi Oya, MD, PhD, Joung H Lee, MD, Cleveland Clinic Foundation

Question & Answers
PROFFERED PAPER XII: Sinonasal Tumors (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes) Regatta BC

MODERATORS: Snehal Patel, MD & Anand Germanwala, MD

098: PROGNOSIS AND BIOLOGY IN ESTHESIONEUROBLASTOMA: STAGING VERSUS GRADING DILEMMA - THE MDACC EXPERIENCE. - R Saade, MD (presenter), D Roberts, PhD, Tj Ow, MD, E Hanna, MD, M Kupferman, MD, F DeMonte, MD, D Bell, MD, The University of Texas MD Anderson Cancer Center

099: INCIDENCE AND SURVIVAL PATTERNS OF SINONASAL UNDIFFERENTIATED CARCINOMA IN THE UNITED STATES - Kyle J Chambers, MD (presenter), Ashton Lehmann, MS, Aaron Remenschneider, MD, Matthew Dedmon, MD, PhD, Bharat Yarlagadda, MD, Stacey T Gray, MD, Derrick T Lin, MD, Massachusetts Eye and Ear Infirmary, Harvard Medical School

100: PREDICTORS OF SURVIVAL IN SINONASAL ADENOCARCINOMA - Michelle M Chen, BA (presenter), Sanziana A Roman, MD, Julie A Sosa, MD, Benjamin L Judson, MD, Yale University School of Medicine, Duke University School of Medicine

Question & Answers

101: ESTHESIONEUROBLASTOMA: AN UPDATE ON THE UCLA EXPERIENCE 2002-2013 - Bobby A Tajudeen, MD (presenter), Armin Arshi, BS, Jeffrey D Suh, MD, Miguel Fernando Palma-Diaz, MD, Elliot Abemayor, MD, PhD, Maie St. John, MD, PhD, Marilene B Wang, MD, David Geffen School of Medicine at UCLA

102: DEFINITIVE PROTON BEAM THERAPY FOR ADENOID CYSTIC CARCINOMA OF THE NASOPHARYNX - Darwin Yip, MD (presenter), Norbert Liebsch, MD, Daniel Deschler, MD, Derrick Lin, MD, Mark Vavares, MD, Annie Chan, MD, Massachusetts General Hospital

103: GENOMIC CHARACTERIZATION OF SINONASAL UNDIFFERENTIATED CARCINOMA - Yoko Takahashi, PhD (presenter), Curtis Pickering, PhD, Alexander Gelbard, MD, Jennifer Drummond, BS, David A Wheeler, PhD, Michael E Kupferman, MD, Jeffrey N Myers, MD, PhD, Ehab Y Hanna, MD, The University of Texas MD Anderson Cancer Center

Question & Answers

104: ENDOSCOPE ENDONASAL MANAGEMENT OF SINONASAL HEMANGIOPERICYTOMAS – A ROLE FOR AGGRESSIVE RESECTION. - M L Otten, MD (presenter), S J Singhal, MD, A M Iloreta, MD, H G Garcia, MD, G G Nyquist, MD, C J Farrell, MD, J Casey, MD, M R Rosen, MD, J J Evans, MD, Thomas Jefferson University

105: ENDOSCOPE VERSUS TRADITIONAL CRANIOFACIAL APPROACHES IN MANAGEMENT OF JUVENILE NASOPHARYNGEAL ANGIOPHIBROMAS - Andrew Kroeker, MD (presenter), Stephen B Chinn, MD, Erin McKean, David Brown, MD, Stephen Sullivan, MD, Lawrence J Marentette, MD, University of Michigan

106: SINONASAL INVERTED PAPILLOMA WITH SKULL BASE INVOLVEMENT - R. Peter Manes, MD (presenter), William Scott, MD, Samuel Barnett, MD, Pete S Batra, MD, FACS, University of Texas Southwestern Medical Center and Yale University School of Medicine

Question & Answers

PROFFERED PAPER XIII: Reconstruction (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes) America’s Cup AB

MODERATORS: Ralph Gilbert, MD & Jimmy Yu Wai Chan, MD

107: SPLIT-CALVARIAL OSTEOPERICRANIAL ROTATIONAL FLAP FOR RECONSTRUCTION FOLLOWING ENDOSCOPE ANTERIOR CRANIAL BASE RESECTION - Robert D Engle, MD (presenter), Maria Peris-Celda, MD, PhD, Trace Barrett, BS, Tyler J Kenning, MD, Carlos D Pinheiro-Neto, MD, PhD, Albany Medical Center

108: RADIOLOGICAL FEATURES OF THE POST-RECONSTRUCTED ANTERIOR SKULL BASE - A Fliker, MD (presenter), P Bou-Haidar, MD, J Ly, MD, B Woodford, MD, M Winder, MD, C Teo, MD, A Davidson, MD, R J Harvey, MD, St. Vincent’s Hospital, Sydney, Australia

109: ANATOMIC NUANCES OF THE ENDOSCOPE EXTRACRANIAL PERICRANIAL FLAP RECONSTRUCTION - Robert A Miller, MD (presenter), Rodolfo Bonilla, MD, Yancy Acosta, MD, Paul Gardner, MD, Carl H Snyderman, MD, MBA, Eric Wang, MD, Juan Fernandez-Miranda, MD, University of Pittsburgh Medical Center

Question & Answers

110: INACCURATE ASSESSMENTS OF ANTERIOR CRANIAL BASE MALIGNANCY FOLLOWING NASOSEPTAL FLAP RECONSTRUCTION - Elisa A Illing, MD, Erik M Walsh, MD (presenter), Kristen O Riley, MD, Bradford A Woodworth, MD, University of Alabama- Birmingham

111: LOWER TRAPEZIUS ISLAND MUSCULOCUTANEOUS FLAP FOR RECONSTRUCTION OF OCCIPITOTEMPORAL WOUNDS AFTER POSTERIOR AND LATERAL SKULLBASE SURGERY - Joseph Zenga, MD (presenter), Jason Diaz, MD, Washington University
112: MICROVASCULAR FREE FLAP RECONSTRUCTION OF DURAL DEFECTS - Alfred Marc C Illoreta, MD (presenter), Marc Rosen, MD, Gurston Nyquist, MD, William J Parkes, MD, Ryan N Heffelfinger, MD, Howard Krein, MD, Joseph M Curry, MD, David Cognetti, MD, Christopher Farrell, MD, Jill DeSouza, MD, James J Evans, MD, Thomas Jefferson University

Question & Answers

113: SELLAR AND PLANUM RECONSTRUCTION USING ABSORBABLE PLATES WITH ENDONASAL ENDOSCOPIC SURGERY - Marvin Bergsneider, MD (presenter), Diana L Pinto de Santana, MD, Marilene B Wang, MD, UCLA

114: USE OF ACELLULAR DERMAL ALLOGRAFT FOR SELLAR RECONSTRUCTION AFTER ENDOBSCOPIC TRANSSPHENOIDAL RESECTION OF PITUITARY TUMORS - Ellina Hattar, BA (presenter), Zachary S Mendelson, BS, Jean A Eloy, MD, FACS, James Liu, MD, Department of Neurological Surgery, Rutgers University – New Jersey Medical School, Newark, NJ; Department of Otolaryngology – Head & Neck Surgery, Rutgers University – New Jersey Medical School, Newark, NJ

Question & Answers

PROFFERED PAPER XIV: Head and Neck Cancer (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes) America’s Cup CD

MODERATORS: Allan Vescan, MD & Michael Kupferman, MD

115: SURGICAL MANAGEMENT OF NONMELANOMA SKIN CANCERS INVOLVING THE SKULL BASE - Shaan M Raza, MD (presenter), Franco DeMonte, MD, The University of Texas MD Anderson Cancer Center

116: ANALYSIS OF FAILURE IN PATIENTS WITH ADENOID CYSTIC CARCINOMA OF THE HEAD AND NECK - Moran Amit, Yoav Binenbaum, Kanika Sharma, Naomi Ramer, Ilana Ramer, Abib Aghetoba, Brett Miles, Yang Xining, Lei Delin, Kristine Bjoerndal, Christian Godballe, Thomas Mücke, Wolff Klaus-Dietrich, Dan Fliss, Andre M Eckardt, Chiara Copelli, Enrico Sesenna, Frank Palmer, Snehal Patel, Ziv Gil (presenter), Rambam Medical Center, Rappaport School of Medicine, the Technion, Israel institute of technology, Haifa, Israel.

117: SHOULD SKULL BASE SURGERY BE OFFERED FOR PATIENTS WITH ADENOID CYSTIC CARCINOMA? - Martin S Palin (presenter), P Sayal, J M Robins, A Yousefipour, J McMahon, T Westin, T A Carroll, Dept of Neurosurgery, Royal Hallamshire Hospital, Glossop Road, Sheffield S10 2JF

Question & Answers

118: INTERNATIONAL COLLABORATIVE VALIDATION AS INTRANEURAL INVASION AS A PROGNOSTIC MARKER IN ADENOID CYSTIC CARCINOMA OF THE HEAD AND NECK - Moran Amit, Yoav Binenbaum, Leonor Trejo-leider, Kanika Sharma, Naomi Ramer, Ilana Ramer, Abib Aghetoba, Brett Miles, Yang Xining, Lei Delin, Kristine Bjoerndal, Christian Godballe, Thomas Mücke, Wolff Klaus-Dietrich, Andrée M Eckardt, Chiara Copelli, Enrico Sesenna, Frank Palmer, Snehal Patel, Ziv Gil (presenter), Department of Otolaryngology Rambam Medical Center, Rappaport School of Medicine, the Technion, Israel institute of technology, Haifa, Israel.

119: LEVEL I NECK DISSECTION TECHNIQUES AND IMPLICATIONS FOR SURGERY OF THE SKULL BASE, PARANASAL SINUSES AND SALIVARY GLANDS - Christopher H Rassekh, MD (presenter), Bert W O'Malley, Jr., MD, Gregory S Weinstein, MD, University of Pennsylvania Department of Otorhinolaryngology-Head and Neck Surgery

120: COVERED STENTS FOR TREATMENT AND PREVENTION OF CAROTID BLOWOUT IN HEAD AND NECK CANCER - Brandon G Gaynor, MD (presenter), Charles R Bowie, MD, Diogo C Haussen, MD, Eric C Peterson, MD, Dileep R Yavagal, MD, Mohamed S Elhammady, MD, Mohammad A Sultan, MD, University of Miami

Question & Answers

121: LONG TERM RADIOGRAPHIC PREVALECE AND MANAGEMENT OF CHRONIC SINUSITIS AFTER ENDOBSCOPIC SKULL BASE SURGERY FOR MALIGNANCY - Lauren W Fedore, MD, Satyan Sreenath, MD (presenter), Adam M Zanation, MD, University of North Carolina Department of Otolaryngology/ Head and Neck Surgery

122: ENDOBSCOPIC TRANSORBITAL APPROACH FOR NEOPLASM AND OPTIC NERVE DECOMPRESSION - Jared D Ament, MD, MPH (presenter), Jeremy N Ciporen, MD, UC-Davis Medical Center and Kaiser Permanente, Sacramento CA

123: NEUROTROPHIC SPREAD OF MALIGNANCY. CLINICAL ASPECTS AND DIAGNOSTIC OPTIONS - Steven A Newman, MD (presenter), University of Virginia

Question & Answers

PROFFERED PAPER XV: Meningiomas 2/Basic Science (Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes) Coronado AB

MODERATORS: Peter Batra, MD & Paul Gardner, MD

124: IMPORTANCE OF EPIDURAL MICROSURGICAL WORKING IN SURGERY FOR MEDIAL SPHENOID WING MENINGIOMAS - Yutaka Mine, MD, PhD (presenter), Kazunori Yoshida, MD, PhD, Takeshi Kawase, MD, PhD, Department of Neurosurgery, Keio University School of Medicine
125: ENDONASAL AND LATERAL APPROACHES TO PETROCLIVAL MENINGIOMAS: COMPARISON AND EARLY CLINICAL OUTCOME - Maria Koutourousiou, MD (presenter), Francisco Vaz Guimaraes Filho, MD, John R de Almeida, MD, Eric W Wang, MD, Carl H Snyderman, MD, MBA, Juan C Fernandez-Miranda, MD, Paul A Gardner, MD, Center for Cranial Base Surgery, University of Pittsburgh Medical Center

126: PURELY ENDOSCOPIC RESECTION OF CEREBELLO-PONTINE ANGLE MENINGIOMAS - Pradeep Setty, DO, Kenneth P D'Andrea, DO (presenter), Emily Stucken, MD, Daniel R Pieper, MD, St. John Providence Health System, Michigan State University; Michigan Ear Institute; Oakland University, William Beaumont School of Medicine.

Question & Answers

127: COMPARATIVE PROTEOMIC PROFILING USING TWO-DIMENSIONAL GEL ELECTROPHORESIS AND IDENTIFICATION VIA LC-MS/MS REVEALS PROTEIN BIOMARKERS THAT DISTINGUISH AGGRESSIVE FROM NON-AGGRESSIVE PHENOTYPES OF WHO GRADE I MENINGIOMA - Joshua Osbun, MD, Sumanpreet Kaur, MS, Philip D Tatman (presenter), Yousef Yakkikoui, MD, PhD, Jake Barnes, BS, John Silber, PhD, Jing Zhang, MD, PhD, Manuel Jr Ferreira, MD, PhD, University of Washington

128: A ROLE FOR MATRIX REMODELING PROTEINS IN INVASIVE AND MALIGNANT MENINGIOMAS - Shahrzad Jalali, PhD, Gelareh Zadeh, MD, PhD (presenter), Labatt's Brain Tumor Research Center, Hospital for Sick Children, University of Toronto; Division of Neurosurgery, Department of Surgery, Toronto Western Hospital

129: COMPARATIVE GENOMIC ANALYSIS OF GRADE 1 AND GRADE 2 MENINGIOMAS IN NEUROFIBROMATOSIS TYPE 2 - Ramita Dewan, BS (presenter), Alexander Pemov, PhD, Abhir Ray-Chaudhury, MD, Ashok R Astagiri, MD, Settara C Chandrasekharappa, PhD, Douglas R Stewart, MD, Anand V Germanwala, MD, Surgical Neurology Branch, NINDS/NIH, Bethesda, MD; Clinical Genetics Branch, NCI/NIH, Bethesda, MD; Department of Neurosurgery, University of Virginia, Charlottesville, VA; Genome Technology Branch, NHGRI/NIH, Bethesda, MD

Question & Answers

130: GENOME-SCALE PROFILING OF DNA METHYLATION IN SPORADIC PITUITARY MACROADENOMAS: ASSOCIATION WITH TUMOR INVASION AND HISTOPATHOLOGICAL SUBTYPE - Matthew Pease (presenter), Chao Ling, Lingling Shi, PhD, Vasu Punj, PhD, Mark Shiroishi, MD, Deborah Cummins, MD, Dan Weisenberger, MD, Kai Wang, PhD, Gabriel Zada, MD, University of Southern California Keck School of Medicine

131: PREDICTORS OF MENINGIOMA RESPONSE TO STEREOTACTIC RADIOSURGERY AND POST-OPERATIVE COMPLICATIONS - Soroush Larjani, HonBSc (presenter), Alireza Mansouri, MD, Alexandra Kilian, George Kilronemos, MD, PhD, Fred Gentili, MD, Gelareh Zadeh, MD, PhD, Toronto Western Hospital, University Health Network

132: COMPARATIVE PHOSPHO-ENRICHED PROTEOMIC ANALYSIS BETWEEN THE WORLD HEALTH ORGANIZATION GRADES OF MENINGIOMAS: MECHANISMS OF ONCOGENESIS AND EVIDENCE FOR AN AGGRESSIVE GRADE I - Philip D Tatman (presenter), Joshua Osbun, MD, Sumanpreet Kaur, MS, Carolina Parada, PhD, Tina Busald, BS, Luis Gonzalez-Cuyar, MD, Donald Born, MD, PhD, Jing Zhang, MD, PhD, Min Shi, PhD, Manuel Jr. Ferreira, MD, PhD, University of Washington

Question & Answers

PROFFERED PAPER XVI: Sellar/Suprasellar/Cavernous Sinus/Microvascular Decompression

(Oral presentations are 8 minutes in length and Q&A sessions are 6 minutes)

MODERATORS: Chester Griffiths, MD & Christopher Farrell, MD

133: SINONASAL OUTCOMES FOLLOWING PITUITARY SURGERY FOR ACROMEGALY - Kevin A Peng, MD (presenter), Marvin Bergsneider, MD, Marilene B Wang, MD, University of California, Los Angeles

134: MANAGEMENT OF RHINOSINUSITIS IN THE SETTING OF ENDOSCOPIC TRANSSPHENOIDAL SKULL BASE SURGERY - Mark Friedel, MD, Gurston Nyquist, MD (presenter), Seth Kaplan, MD, David Beahm, MD, Saurabh Singhal, MD, Christopher J Farrell, MD, James J Evans, MD, Marc R Rosen, MD, Jefferson University

135: ENDOSCOPIC TRANSPHENOIDAL SURGERY: A TRANSITION TO NEUROSURGERY-ENT COLLABORATION PRODUCING BETTER OUTCOMES - Bharat Guthikonda, MD (presenter), David Connor, DO, Matthew Clavenna, MD, Chiazo Amene, MD, Vikas Mehta, MD, Timothy Lian, MD, Sudheer Ambekar, MD, Anil Nanda, MD, LSU HSC Shreveport

Question & Answers

136: ENDOSCOPIC ENDONASAL SURGERY FOR TUMORS OF THE CAVERNOUS SINUS: EXPERIENCE OF 234 CASES - Maria Koutourousiou, MD (presenter), Francisco Vaz Guimaraes Filho, MD, Juan C Fernandez-Miranda, MD, Eric W Wang, MD, Carl H Snyderman, MD, MBA, Paul A Gardner, MD, Center for Cranial Base Surgery, University of Pittsburgh Medical Center

137: ENDOSCOPIC VERSUS MICROSCOPIC TRANSPHENOIDAL RESECTION OF SELLA PATHOLOGIES: NEW AND LEARNING AGAINST THE ADVANCED EXPERT - Jean-Yves Fournier, MD (presenter), Cem Yetimoğlu, MD, Heidrun Lange, MD, Jan Abel Tasman, PhD, MD, Gerhard Hildebrand, PhD, MD, Doortje Caroline Engel, PhD, MD, MBA, Departments of Neurosurgery (1) and ENT (2) Cantonal Hospital of St. Gall
Question & Answers

138: NORMAL DIMENSIONS OF THE POSTERIOR PITUITARY BRIGHT SPOT ON MAGNETIC RESONANCE IMAGING - Martin Cote, MD (presenter), Karen L Salzman, MD, Mohammad Sorour, MBBS, William T Couldwell, MD, PhD, University of Utah

139: THE SURGICAL MANAGEMENT OF TRIGEMINAL NEURALGIA: DO WE PRACTICE WHAT WE PREACH? COST-EFFECTIVENESS DETERMINED USING THE MEDICARE CLAIMS DATABASE - Sananthan Sivakanthan (presenter), Jamie Van Gompel, MD, Harry van Loveren, MD, Ren Chen, PhD, Siviero Agazzi, MD, MBA, University of South Florida

140: HEMIFACIAL SPASM: INTRAOPERATIVE IDENTIFICATION FOR ADEQUACY OF MICROVASCULAR DECOMPRESSION - Alexander Trashin, MD (presenter), Yury Shulev, MD, City Hospital #2, North-West State Medical University, Saint-Petersburg, Russia

Question & Answers

6:30 pm – 9:30 pm  President’s Reception  (Business Attire)  

SUNDAY, FEBRUARY 16, 2014

7:00 am – 8:00 am  BREAKFAST SEMINARS

BS9: Orbital Tumors
MODERATOR: Juri Bilyk, MD
SPEAKERS:
• Philip Custer, MD – Ophthalmic Complications of Orbital and Skull-Base Surgery
• Alfi Piva, MD – Orbital Tumors: A Practical Approach to Its Differential Diagnosis and Surgical Approaches
• Edward Kassel, MD – Clues to the Unexpected Orbit Tumor
• Case Presentations & Panel Discussion – All

BS10: Rehabilitation of Cranial Nerves
MODERATOR: Steven Newman, MD – Rehabilitation of Diplopia and Motility Disturbance
SPEAKERS:
• Pardhasarathy Thirumala, MD – Cranial Nerve Monitoring During Endoscopic Endonasal Surgeries
• John Yoo, MD – Reconstruction of the Paralyzed Face

BS11: Pearls and Pitfalls in Cranial Base Imaging
MODERATOR: Lawrence Ginsberg, MD
SPEAKERS:
• Claudia Kirsch, MD – Pearls and Pitfalls in Skull Base Imaging
• Rita Bhatia, MD – Imaging Patterns of Skull Base Lesions and Their Mimics

BS12: Technical Nuances of Nasopharyngectomy
MODERATOR: Christopher Rassekh, MD – Introduction and History of Approaches to Nasopharynx
SPEAKERS:
• Peter Costantino, MD – Endoscopic Approaches for Nasopharyngectomy
• Jimmy Yu Wai Chan, MD – Open Approaches to the Nasopharynx with Emphasis on the Maxillary Swing and Reconstruction
• Christopher Rassekh, MD – Transoral Robotic Nasopharyngectomy
• Cases and/or Q&A

8:00 am – 9:00 am  Concurrent Sessions

CS17: Factors Influencing Management of Vestibular Schwannomas
MODERATOR: Rick Friedman, MD, PhD
SPEAKERS:
• Steven Giannotta, MD – Cystic Acoustic Neuromas
• Roberto Cueva, MD – Factors Influencing Hearing Preservation During Vestibular Schwannoma Surgery
• Steven Chang, MD – Single Fraction Versus Multisession Radiosurgery for Vestibular Schwannomas
• Marc Schwartz, MD – Preoperative and Intraoperative Decision Making

CS18: Quality of Life Issues
MODERATOR: Snehal Patel, MD
SPEAKERS:
• Adam Zanation, MD – Overview of QOL Studies
• Ziv Gil, MD – Influence of Treatment Parameters on QOL
• Andrew Little, MD – Influence of Nasal Function on QOL
• Discussion
### CS19: Fibroosseous Lesions
**MODERATOR:** Daniel Pieper, MD
**SPEAKERS:**
- Eric Wang, MD – Endoscopic Resections of Anterior Skull Base Fibrososseous Lesions
- Hilda Stambuk, MD – Imaging Characteristics of Fibro-Osseous Lesions of the Skull Base
- Steven Newman, MD – Visual Compromise with Fibro-Osseous Disorders; Quantitative Assessment and Indications for Intervention

### CS20: Functional Pituitary Tumors
**MODERATOR:** Gabriel Zada, MD
**SPEAKERS:**
- Russell Lonser, MD – Cushing’s Disease
- Edward Laws, MD – Acromegaly
- Daniel Kelly, MD – Prolactinomas
- Nancy McLaughlin, MD – Value-Based Pituitary Programs: Essential Components

### 9:05 am – 10:00 am  CONCURRENT SESSIONS

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<th>CS21: Adenoid Cystic Carcinoma</th>
<th><strong>MODERATOR:</strong> Mark Varvares, MD</th>
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<td><strong>SPEAKERS:</strong></td>
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<tr>
<td>- Laurie Loevner, MD – Imaging Patterns of Spread in Adenoid Cystic Carcinoma</td>
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<td>- Ricardo Carrau, MD – Systematic Review of Surgical Alternatives</td>
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<td>- Clifton D. Fuller, MD, PhD – Modern Radiotherapy for Adenoid Cystic Carcinoma</td>
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<td>- Diana Bell, MD – Molecular Characteristics of Adenoid Cystic Carcinoma, With Targeted Therapies Impact</td>
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<th>CS22: Management of Vascular Complications</th>
<th><strong>MODERATOR:</strong> Khaled Aziz, MD</th>
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<td><strong>SPEAKERS:</strong></td>
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<td>- Harry Van Loveren, MD – The Neurosurgeon and The Sagittal Sinus: A Dural Tale</td>
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<td>- Paul Gardner, MD – Internal Carotid Artery Injury During Endoscopic Endonasal Surgery: Incidence and Management</td>
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<td>- Peter Nakaji, MD – EC-IC Rescue Bypass for Inadvertent Carotid Sacrifice During Endonasal Surgery: Decision-Making and Technique</td>
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<td>- Aaron Dumont, MD – Endovascular and Microsurgical Strategies for Complication Management in Aneurysm Treatment</td>
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<th>CS23: Temporal Bone Malignancies</th>
<th><strong>MODERATOR:</strong> Moises Arriaga, MD</th>
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<tr>
<td>- Randal Weber, MD – The Head and Neck Surgeon’s Role in the Management of Cancer Involving the Temporal Bone</td>
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<td>- Paul Gidley, MD – Temporal Bone Resection</td>
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<td>- Amir Dehdashti, MD – The Infratemporal/Intracranial Bypass for Carotid Replacement in Temporal Bone Cancer</td>
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<th>CS24: Emerging Technologies</th>
<th><strong>MODERATOR:</strong> Derrick Lin, MD</th>
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<td><strong>SPEAKERS:</strong></td>
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<td>- Michael Kupferman, MD – Role of Robotics in Skull Base Surgery</td>
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<td>- Stacey T. Gray, MD – Role of Proton Beam Therapy in Skull Base Malignancies</td>
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<td>- Christopher Farrell, MD – Technical Advances in Endoscopic Skull Base Surgery</td>
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<td>- Eric Sauvageau, MD – Emerging Technologies in Cerebrovascular/Endovascular Surgery</td>
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### 10:00 am – 10:30 am  Break with Exhibitors

### 10:30 am – 12:45 pm  PLENARY SESSION III

- **10:30 am:** Skull Base Jeopardy – MODERATOR: John Golfinos, MD
- **11:15 am:** Interactive Tumor Board – MODERATORS: James Evans, MD, Sandeep Samant, MS, FRCS & Sam Marzo, MD
- **12:15 pm:** Coding/Billing – Kim Pollock, RN, MBA, CPC, Karen Zupko & Associates, Inc.

### 12:45 pm  Meeting Adjourned
141: FREE MUSCULOCUTANEOUS SUBMENTAL FLAP FOR RECONSTRUCTION OF ANTERIOR SKULL BASE DEFECTS – Brittany E Howard, MD (presenter), Carrelene B Donald, PAC, Matthew H Rigby, MD, Devyani Lal, MD, Richard E Hayden, MD, Mayo Clinic Arizona

142: EXPANDING OUR CONSIDERATIONS IN THE SURGICAL MANAGEMENT OF ANTERIOR SKULL BASE Meningoceles – Iman Naseri, MD (presenter), Melinda Davis-Malesevich, MD, Michael Petr, MD, PhD, Demetri Arnaoutakis, MD, Daryoush Tavanaeipour, MD, University of Florida College of Medicine - Jacksonville

143: SOLITARY FIBROUS TUMOR OF THE ORBIT IN CONJUNCTION WITH METASTATIC PROSTATE CANCER – Vernard S Fennell, MD (presenter), Robert Klein, MD, Lyn Polonski, MD, Michael Lemole, MD, University of Arizona, Division of Neurosurgery

144: COMBINED TRANSCRANIAL-MICROSURGICAL AND TRANSNASAL-ENDOSCOPIC “HANDSHAKE APPROACH” - A CONTRIBUTION TO THE MANAGEMENT OF INTRA-EXTRACRANIAL ANTERIOR CRANIAL BASE TUMORS – Luis Fernando Silva Jr., MD (presenter), Felipe Monteiro, MD, Lucas Aurich, MD, Gustavo Nogueira, MD, Ricardo Ramina, PhD, MSc, MD, Instituto de Neurologia de Curitiba - INC

145: NASAL CAVITY MALIGNANCIES INVOLVING THE SKULL BASE: IS THERE A ROLE FOR ENDOscopy? – Amjad N Anaizi, MD (presenter), Sanjeet Grewal, MD, Philip V Theodosopoulos, MD, Lee Zimmer, MD, MPH, Georgetown University Hospital, University of Cincinnati, University of California, San Francisco

146: SINGLE PEICE CRANIOORBITOZYGOMATIC OSTEOTOMY WITH TRANS KEY WHOLE ORBITAL OSTEOTOMY A SURGICAL MODIFICATION – Mohamed A M Ismail, MD (presenter), Aln Shams university. Faculty of medicine. Neurosurgery department. EGYPT

147: CLIVAL CHORDOMA AND SELlar-supRASELLAR GERMINOMA IN A PEDIATRIC PATIENT: A REVIEW AND 1 CASE REPORT – Hesham Soliman, MD, David Beahm, MD, Kathy Newell, MD, Roukoz Chamoun, MD (presenter), Department of Neurosurgery, Kansas University

148: ASSOCIATION BETWEEN ACROMEGALY AND CHORDOMAS OF THE SKULL BASE. CASE REPORT AND REVIEW OF THE LITERATURE – Óscar Feo Lee, MD (presenter), Juan Carlos Acevedo G, MD, Roberto Diaz O, MD, Miguel Berbeo C, MD, Óscar Zorro G, MD, Rafael Uribe C, MD, Juan Carlos Pérez R, MD, Laura Díaz S, MD, Jaime Eduardo Becerra, MD, Tatiana Quintero O, MD, Pablo Harker F, MD, Hospital universitario San Ignacio - Universidad Javeriana - Bogotá Colombia

149: “A PURE ENDOscopic TRANSpterional APROACH (ETA): CADAVERIC FEASIBILITY STUDY AND REPORT OF ONE CLINICAL CASE”. – Amancio Guerrero Maldonado, MD (presenter), Sirajeddin Belkhair, MHSC, MD, FRCSC, Michael Tymianski, MD, PhD, FRCSC, Ivan Radovanovic, MD, PhD, División de Neurosurgery, Toronto Western Hospital, University Health Network and University of Toronto, Toronto, Ontario Canada.

150: IATROGENIC MUCOSAL INJURY DURING ENDOscopic ENDOnasal SKULL BASE SURGERY – James K Byrd, MD, Eric W Wang, MD, Juan C Fernandez-Miranda, MD, Paul A Gardner, MD, Carl H Snyderman, MD, MBA (presenter), University of Pittsburgh Medical Center

151: COMPARISON BETWEEN THE CLASSIC ENDOnasal ENDOscopic TRANSCRIBRIFORM APPROACH FOR THE OLFACTORY GROVE MENINGIOMAS VS. A PERICRIBIFORM “ACCORDION” TECHNIQUE USING A TUMOR MODEL IN CADAVER SPECIMENS – Cristian A Naudy, MD (presenter), Daniel M Prevedello, MD, Matteo Zoli, MD, Nicolas Gil, MD, Bradley A Otto, MD, Facundo Van Isseldyk, MD, Leo F Ditzel, MD, Kenichi Oyama, MD, Jun Muto, MD, Ricardo L Carrau, MD, Edward Kerr, MD, ALT-VISION Laboratory - Ohio State University - Wexner Medical Center

152: COMPARATIVE ANALYSIS OF APPROACHES TO THE INFRATEMPORAL FOSSA: FISCH TYPE-C VERSUS EXPANDED ENDOnasal APPROACH – Jose G Gurrola II, MD (presenter), Eric Mason, Camilo Reyes, MD, C Arturo Solares, MD, Georgia Regents University, Universidad del Rosario; Bogota, Columbia

153: OLFACTORY PRESERVATION IN OLFACTORY GROVE MENINGIOMAS OPERATED WITH ENDOnasal ENDOscopic TECHNIQUE. A PROPOSAL OF A NEW SURGICAL CORRIDOR TROUGH A CADAVERIC STUDY – Cristian A Naudy, MD (presenter), Daniel M Prevedello, MD, Matteo Zoli, MD, Nicolas Gil, MD, Bradley A Otto, MD, Facundo Van Isseldyk, MD, Leo F Ditzel, MD, Kenichi Oyama, MD, Jun Muto, MD, Ricardo L Carrau, MD, ALT-VISION Laboratory - Ohio State University - Wexner Medical Center

154: MORMPHOMETRIC AND CLINICAL ANALYSIS OF THE “1.5 APPROACH” - A NOVEL APPROACH TO THE SPHENOID SINUS WITH PRESERVATION OF NASOSEPTAL FLAP – H G Garcia, MD (presenter), M Pyfer, BS, S J Singhal, MD, M L Otten, MD, A M Iloreta, MD, C J Farrell, MD, G G Nyquist, MD, M R Rosen, MD, J J Evans, MD, Department of Neurological Surgery and Otolaryngology, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania

155: LANDMARKS FOR ENDOscopic APPROACH TO PARAPHARYNGEAL INTERNAL CAROTID ARTERY – Brian Ho, MD (presenter), Clementino A Solares, MD, David Jang, MD, Ricardo Carrau, MD, Ramon Figueroa, MD, Jason Van Rompuy, MD, Georgia Regents University, Duke University, Ohio State University
156: ENDOSCOPIC AND OPEN SURGICAL TECHNIQUES COMBINED WITH RADIATION AND CHEMOTHERAPY IN THE TREATMENT OF SINONASAL UNDIFFERENTIATED CARCINOMA (SNUC) – Rachel Myers, Valerie A Wood, MD (presenter), Ossama Tawfi, MD, PhD, Paul Camarata, MD, Terence Tsue, MD, FACS, Larry Hoover, MD, FACS, University of Kansas Medical Center

157: PERI-OPERATIVE MI AFTER INTRANASAL APPLICATION OF COCAINE FOR TRANSNASAL PROCEDURE – Sam A Spinowitz, BA (presenter), Brendan Obrien, MD, Matthew C Miller, MD, G. E Vates, MD, Departments of Neurosurgery and Otolaryngology - Head and Neck Surgery, University of Rochester Medical Center, University of Rochester School of Medicine and Dentistry

158: ENDOSCOPIC VERSUS OPEN APPROACH TO THE INFRATEMPORAL FOSSA – Ahmed S Youssef, MD, MRCS (presenter), 1- Department Of Otolaryngology-Head and Neck Surgery, Ohio State University Wexner Medical Center, USA. 2- Department of Otolaryngology-Head and Neck Surgery, Alexandria University, Egypt.

159: COMPARISON ANTERIOR TRANSPETROSAL APPROACH WITH ENDONASAL ENDOSCOPIC APPROACH TO THE PETROSAL APEX LESION – Jun Muto, MD (presenter), Ditzel Fiho, MD, Kenichi Oyama, MD, Facundo Van, MD, Cristian Naudy, MD, Daniel GoncalvesdeSouza, MD, Matteo Zoli, MD, Ali Jamshidi, MD, Edward Kerr, MD, Bradley A Otto, MD, Ricardo L Carrau, MD, Daniel M Prevedello, MD, Department of Neurosurgical surgery, Ohio state university

160: IMMEDIATE COMPLICATIONS ASSOCIATED WITH HIGH FLOW CEREBROSPINAL FLUID EGRESS DURING ENDONASAL ENDONASAL SKULL BASE SURGERY – Edward E Kerr, MD (presenter), Leo F Ditzel Filho, MD, Ali Jamshidi, MD, Bradley A Otto, MD, Ricardo L Carrau, MD, Daniel M Prevedello, MD, The Ohio State University Wexner Medical Center Department of Neurosurgical surgery, Ohio state university

161: THE KEYHOLE RETROSIGMOID APPROACH TO THE CPA: TECHNIQUE AND RESULTS – Badr E Mostafa, Professor (presenter), Mohammed K El Sharnoubi, Dr, Ain-Shams University Faculty of Medicine

162: UNINOSTRIL ENDONASAL ENDOCSOPIC MANAGEMENT OF PITUITARY ADENOMAS – Sam Safavi-Abbasi, MD, PhD (presenter), Nathan L Pratt, Adrian J Maurer, MD, Jose A Sanclement, MD, Jonea Lim, MD, Michael E Sughrue, MD, Departments Of Neurosurgery, Otolaryngology and Endocrinology University of Oklahoma

163: ENDOCSOPIC ENDONASAL MANAGEMENT OF ESTHESIONEUROBLASTOMA – Jeremy Lewis, MD (presenter), Samuel Barnett, MD, University of Texas at Southwestern

164: VALIDATION OF A CHICKEN WING TRAINING MODEL FOR ENDOCSOPIC MICROCSURGICAL DISSECTION – Daniel J Kaplan (presenter), Francisco Vaz Guimaraes Filho, MD, Juan C Fernandez-Miranda, MD, Carl Snyderman, MD, MBA, University of Pittsburgh School of Medicine, University of Pittsburgh Medical Center

165: ENDONASAL ANTERIOR SKULL BASE SURGERY: PATHOLOGIES, RESULTS, AND COMPLICATIONS – Wenya Linda Bi, MD, PhD (presenter), Ian F Dunn, MD, Peleg Horowitz, MD, PhD, Edward R Laws, Jr, MD, FACS, Department of Neurosurgery, Brigham and Women's Hospital

166: EXPANDED ENDOCSOPIC ENDONASAL TREATMENT OF PRIMARY INTRACRANIAL TUMORS WITHIN THE PARANASAL SINUSES – Zarina S Ali, MD (presenter), Shih-Shan Lang, MD, Nithin D Adappa, MD, Ariana Barkley, BS, James N Palmer, MD, John Y K Lee, MD, University of Pennsylvania

167: ENDOCSOPIC-ASSISTED MICROSURGICAL TECHNIQUES AT THE CRANIOVERTEBRAL JUNCTION: A SYSTEMATIC REVIEW WITH ILLUSTRATIVE CASES – Silky Chotai (presenter), Varun R Kshettry, Mario Ammirati, Dardinger Skull Base Laboratory, Department of Neurological Surgery, Ohio State University Medical Center, Columbus, OH, USA

168: ENDOCSOPIC RESECTION OF A GIANT INTRADURAL RETROCLIVAL ECCORDOSIS PHYSALIPHORA – Omar Choudhri, MD (presenter), Abdullah Feroze, BS, Peter Hwang, MD, Hannes Vogel, MD, Griffith Harsh, MD, Stanford University Medical Center

169: RECONSTRUCTION OF THE ANTERIOR WALL OF THE SPHENOID SINUS WITH A COMPOSITE OSTEOMUCOSAL MIDDLE TURBINATE PEDICLED FLAP – Mark Toma, MD (presenter), Robert D Engle, MD, Maria Peris-Celda, MD, PhD, Tyler J Kenning, MD, Carlos D Pinheiro-Neto, MD, PhD, Albany Medical College, Albany, New York

170: MINIMALLY INVASIVE ENDOCSOPIC-ASSISTED APPROACH FOR EN BLOC RESECTION OF SEPTAL TUMORS – Anuraag Parikh, MD (presenter), Justin C Cohen, MD, Monica Tadros, MD, Rahmatullah Rahmati, MD, Columbia University College of Physicians and Surgeons, Columbia University Medical Center

171: MEDIAL AND SUPERIOR ORBITAL DECOMPRESSION: IMPROVING ACCESS IN ENDONASAL ENDOCSOPIC LATERAL FRONTAL SINUS SURGERY – Pavel Poczos, MD (presenter), Almaz Kurbanov, MD, Jeffrey T Keller, PhD, Lee A Zimmer, MD, PhD, University of Cincinnati Medical Center

172: SALPHINGOPHARYNGEUS MUSCLE FLAP: A NOVEL PEDICLED RECONSTRUCTIVE FLAP – Ramazan Gun(1), MD (presenter), Kenichi Oyama(2), MD, Yusuf B Kapucu(1), MD, Abdulaazaiz AlQathani(1), MD, Daniel Prevedello(2), MD, Ricardo Carrau(1), MD, Departments of Otolaryngology (1) and Neurosurgery(2), The Ohio State University

173: CYSTO-SPHENOID STENTING FOR RATHKE'S CLEFT CYSTS – James K Byrd, MD (presenter), Juan C Fernandez-Miranda, MD, Eric W Wang, MD, Paul A Gardner, MD, Carl H Snyderman, MD, MBA, University of Pittsburgh Medical Center
174: ANATOMIC AND COMPUTED TOMOGRAPHIC ANALYSIS OF THE PETROUS PORTION OF THE INTERNAL CAROTID ARTERY: LANDMARKS FOR AN ENDOSCOPIC ENDONASAL APPROACH – Eric Mason, BS (presenter), José Gurrola II, MD, Camilo Reyes, MD, C. Arturo Solares, MD, Department of Otolaryngology, Center for Cranial Base Surgery, Georgia Regents University

175: ENDOSCOPIC TRANNASAL TRANS-SPHENOIDAL RESECTION OF LEFT TEMPORAL ENCEPHALOCELE RESULTING IN DRAMATIC REDUCTION IN SEIZURE FREQUENCY – Selma Z Kominnek, MD, MPH, Department of Neurosurgery (presenter), Deanna M Sasaki-Adams, MD, Department of Neurosurgery, Adam M Zanation, MD, Department of Otolaryngology, Hae Won Shin, MD, Department of Neurology, Fisher L Tiffany, MD, Department of Neurology, UNC Chapel Hill

176: SOLITARY FIBROUS TUMOR, HAEMANGIOPERICYTOMA AND SARCOMATOUS DEGENERATION IN THE SAME PATIENT. CASE REPORT – Óscar Feo Lee, MD (presenter), Juan Carlos Acevedo González, MD, Roberto Díaz Orduz, MD, Miguel Berbeo Calderón, MD, Óscar Zorro Guio, MD, Laura Díaz S, MD, Rafael Uribe C, MD, Jaime Becerra O, MD, Silvia Quintero O, MD, Juan Pérez R, MD, Pablo Harker F, MD, Hospital universitario San Ignacio, Pontificia Universidad Javeriana.

177: SUPRACEREBELLAR TRANSENTORIAL APPROACH FOR LESIONS IN THE POSTERIOR TEMPORO-MESIAL REGION – Michel W Bojanowski, MD, FRC (presenter), Hossam Al Jehany, MD, FRSC, Elsa Magro, MD, Chiraz Chaalala, MD, Jean-Yves Fournier, MD, Division of Neurosurgery, Centre Hospitalier de l’Université de Montréal, Montréal, Canada

178: A COMPARISON BETWEEN THE KAWASE’S AND EXTENDED RETROSIGMOID APPROACHES (RETROSIGMOID TRANSIENTORIAL AND RETROSIGMOID INTRADURAL SUPRAMEATAL APPROACHES) FOR ACCESSING THE PETROCLIVAL TUMORS. A CADAVERIC STUDY – Mayur Sharma, Sudheer Ambekar (presenter), Bharat Guthikonda, Anil Nanda, Louisiana State University Health Sciences Center, Shreveport

179: AN ATYPICAL PRESENTATION OF CHRONIC INVASIVE FUNGAL RHINOSINUSITIS WITH SKULL BASE EXTENSION TREATED EXCLUSIVELY WITH ANTIFUNGAL THERAPY – Sam A Spinnowitz, BA (presenter), Eric B Hintz, MD, Matthew C Miller, MD, G. E Vates, MD, PhD, Departments of Neurosurgery and Otolaryngology – Head and Neck Surgery, University of Rochester Medical Center, University of Rochester School of Medicine and Dentistry

180: SPHENOID SINUS FUNGUS BALLS PRESENTING WITH SKULL BASE EROSION AND ASSOCIATED COMPLICATIONS: A CASE SERIES – Josh C Meier, MD (presenter), Aaron K Remenschneider, MD, MPH, Kyle Chambers, MD, Matt Dedmon, MD, PhD, Derrick T Lin, MD, Eric H Holbrook, MD, Ralph Metson, MD, Stacey T Gray, MD, Massachusetts Eye and Ear Infirmary

181: A NOVEL METHOD FOR MULTILAYER AUTOGRAFT PLACEMENT DURING MIDDLE CRANIAL FOSSA ENCEPHALOCELE AND CSF LEAK REPAIR: THE SUTURE PULL-THROUGH TECHNIQUE – Alex D Sweeney, MD (presenter), Matthew L Carlson, MD, David S Haynes, MD, George B Wanga, MD, Marc L Bennett, MD, Alejandro Rivas, MD, Department of Otolaryngology-Head and Neck Surgery, Department of Neurologic Surgery, Vanderbilt University Medical Center

182: PERILS OF ANTI-COAGULATION AFTER INTRACRANIAL SURGERY – Suresh B Velagapudi, MS, DNB, FRCS (presenter), Mohammad Saleem, FRCS, King Faisal Specialist Hospital and Research centre

183: RARE CASE OF SKULL BASE INFANTILE HEMANGIOPERICYTOMA IN 4 YEAR-OLD MALE – Selma Z Kominnek, MD, MPH, Department of Neurosurgery (presenter), Deanna M Sasaki-Adams, MD, Department of Neurosurgery, Craig A Buchman, MD, Department of Otolaryngology, University of North Carolina Hospitals

184: INTRAOPERATIVE MRI CHANGES IN CERVICO-THORACIC SYRINGE AFTER ODONTOIDECTOMY FOR BASILAR IMPRESSION – Pablo F Recinos, MD (presenter), Anubhay G Amin, MD, Yuki Otano, Ziya L Gokaslan, MD, Jean-Paul Wolinsky, MD, Johns Hopkins Hospital

185: QUALITY OF SKULL BASE DURA, HEALING - PITFALL AND PEARLS DURING RECONSTRUCTION OF SKULL BASE DURA AND THE BIOMECHANIC QUALITY OF DURA MATER CORRELATING HISTOLOGY 3D-FINDINGS AND REVIEW OF MELVIN STUDY – Jan Hemza, MD, PhD, et, PhD (presenter), Faculty Hospital at saint Ann, Pekarska 53, Brno, C.R.

186: FIBRIN GLUE INJECTION FOR CAVERNOUS SINUS HEMOSTASIS ASSOCIATED WITH CRANIAL NERVE DEFICIT: A CASE REPORT – Daryosh Tavanaiepour, MD (presenter), Ossama Al-Mefty, MD, University of Florida College of Medicine, Jacksonville and Harvard Medical School, Boston.

187: THIRD VENTRICULAR GliOBLASTOMA MULTIFORME: CASE REPORT & LITERATURE REVIEW – Omid R Hariri, DO, MSc (presenter), Saman Farr, MSc, Casey Corsino, BSc, Andrew Bieber, DO, Javed Siddiqi, MD, PhD, Arrowhead Regional Medical Center, Kaiser Permanente Fontana Medical Center, Desert Regional Medical Center, Riverside County Regional Medical Center, Neurosurgery Interest Society

188: ANTIBIOTICS IN THE MANAGEMENT OF NON-OPERATIVE MIDFACE FRACTURES – Mark S Toma, MD (presenter), Julian J Felder, BS, Daniel T Cronin, BA, Ashit Patel, MD, Carlos D Pinheiro-Neto, MD, PhD, Albany Medical Center Division of Otolaryngology Head and Neck Surgery

189: USE OF AN ULTRASONIC OSTEOTOME FOR ORBITOZYGOMATIC CRANIOTOMIES – Jacob J Ruzevick, BS (presenter), Pablo F Recinos, MD, Shaan M Raza, MD, Kaisorn L Chaichana, MD, Gustavo Pradilla, MD, Alessandro Olivi, MD, Gary L Gallia, MD, PhD, Jon D Weingart, MD, Alfredo Quinones-Hinojosa, MD, Michael Lim, MD, The Johns Hopkins University School of Medicine, Department of Neurosurgery
190: MICROsURGICAL AND ENDOSCOPIC TRAINING MODEL WITH NONLIVING SWINE HEAD: NEW ALTERNATIVE FOR SKull BASE EDUCATION – Luis Fernando Silva Jr., MD (presenter), Lucas Aurich, MD, Felipe Monteiro, MD, Lucas Zambon, MD, Gustavo Nogueira, MD, Ricardo Ramina, PhD, MSc, MD, Instituto de Neurologia de Curitiba - INC

191: EXTENSION OF ACUTE INVASIVE Fungal DISEASE THROUGH VIDIAN ARTERY MAY BE CAUSE OF INTERNAL CAROTID ARtery THROMBOSIS – Sharon Gnagi, MD, Joseph Hoxworth, MD, Dora Lam-Himlin, MD, Devyani Lal, MD (presenter), Mayo Clinic, Phoenix, Arizona

192: TREATMENT OF SEVERE INTRACRANIAL EXTENSION OF FRONTAL SINUSITIS: CASE REPORT AND REVIEW OF THE LITERATURE – Mark S Toma, MD (presenter), Robert D Engle, MD, John C Dalfino, MD, Carlos D Pinheiro-Neto, MD, PhD, Tyler J Kenning, MD, Albany Medical Center

193: DRAF IIB AND III FRONTAL SINUSOTOMY IN CYSTIC FIBROSIS PATIENTS – Robert D Engle, MD (presenter), Gregory S Neel, BS, Jonathan Rosen, MD, Tyler J Kenning, MD, Carlos D Pinheiro-Neto, MD, PhD, Albany Medical Center

194: JUVENILE XANTHOGRANULOMA OF THE CLIVUS – Kevin A Peng, MD (presenter), Ashley E Kita, BS, Marvin Bergsneider, MD, Marilene B Wang, MD, University of California, Los Angeles

195: RETROSPECTIVE CASE SERIES OF INFLAMMATORY PSEUDOTUMOR OF THE SKULL BASE – Tiffany A Glazer, MD (presenter), Erin L McKeen, MD, Lawrence J Marentette, MD, The Department of Otolaryngology, University of Michigan Health System, Ann Arbor, Michigan, USA

196: TARGETABLE PATHWAY GENOME SEQUENCING FOR A SINONASAL TERATOCARCINOSARCOMA AND XENOGRAFT CHEMOTHERAPEUTIC TESTING FOR PERSONALIZED MEDICINE – Erin L McKeen, MD, MBA (presenter), Sarah Burgin, MD, Stephen E Sullivan, MD, Jacques Nor, PhD, Chad Brenner, PhD, University of Michigan

197: SKULL BASE LYMPHOMA: RADIOGRAPHIC PRESENTATION AND SURGICAL MANAGEMENT – Ali O Jamshidi, MD (presenter), Edward E Kerr, MD, Daniel M Prevedello, MD, Ricardo L Carrau, MD, Bradley A Otto, MD, Leo F Ditzel Filho, MD, The Ohio State University Wexner Medical Center, Department of Neurological Surgery

198: METASTATIC PROSTATE CANCER OF THE SKULL BASE AND PARANASAL SINUSES – Jessica Somerville, MD (presenter), Courtney Shires, MD, Glenn B Williams, MD, University of Tennessee

199: MINIMALLY INVASIVE APPROACHES FOR RESECTION OF PARAMENINGEAL RHABDOMYOSARCOMAS – Brittany N Tillman, MD (presenter), Andrew D Kroeker, MD, Jennifer V Brinkmeier, MD, Erin L McKeen, MD, The Department of Otolaryngology, University of Michigan Health System, Ann Arbor, Michigan, U.S.A.

200: A RARE CASE OF HYALINIZING CLEAR CELL CARCINOMA PRESENTING IN THE NASOPHARYNX – Selwan B Abdullah, BS, Phillip Lee, BA, Yael Smiley, BS, Heather Weinreich, MD, Emiro Caicedo-Granados, MD (presenter), University of California, Los Angeles

201: WHOLE GENOME EXPRESSION PROFILING OF EPITHELIAL-MYOEPITHELIAL CARCINOMA OF SALIVARY GLANDS – Achim Bell, PhD, Ehab Hanna, MD, FACS, Kenneth Aldape, MD, PhD, Isabelle Fonseca, MD, Diana Bell, MD (presenter), MD Anderson Cancer Center

202: RAS MUTATIONS COEXIST WITH PI3CA AND MET MUTATIONS IN LACRIMAL GLAND EPITHELIAL NEOPLASMS – Diana Bell, md (presenter), Matthew Sniegowski, md, Khalida Wani, phd, Kenneth Aldape, md, phd, Bita Esmaili, md, MD Anderson Cancer Center

203: METASTATIC BREAST CARCINOMA OF THE JUGULAR FORAMEN: A RARE CAUSE OF VILLARET'S SYNDROME – Jeremiah C Tracy, MD (presenter), Carl B Heilman, MD, Miriam A O'Leary, MD, Tufts Medical Center

204: RADIOFREQUENCY IN REMOVAL OF JUVENILE NASAL ANGIOFIBROMAS – Suresh B Velagapudi, MS, DNB, FRCS (presenter), Michael Timms, FRCS, King Faisal Specialist Hospital & Research Center

205: SKULL BASE ADENOID CYSTIC CARCINOMA – CLINICAL SERIES AND OUTCOMES – Rahul Mehta, MD, FRCS (presenter), Samuel Spear, MD, Yu-Lan Mary Ying, MD, Moises A Arriaga, MD, MBA, FACS, Daniel W Nuss, MD, FACS, Our Lady Of Lake Region Medical Center/LSUHSC New Orleans

206: CRISPS - AN EASY ACRONYM TO INTERPRETING METASTATIC NECK LYMPHADENOPATHY – Adam A Dmytriw, MSc (presenter), Ahmed El Beltagi, MD, Eric S Bartlett, MD, MPH, Arjun Sahgal, MD, Colin S Poon, MD, PhD, Girish Fatterpekar, MBBS, Reza Forghani, MD, PhD, Eugene Yu, MD, University Health Network, Toronto; Al Sabah Hospital, Kuwait; University of Chicago, Chicago; New York University, New York; McGill University, Montreal

207: TUMOR MODEL FOR ENDOSCOPIC ENDONASAL MICROSURGICAL SIMULATION: A STEP-BY-STEP GUIDE – Facundo M Van Isseldyk, MD, Kenichi Oyama, MD, Cristian Naudy, MD (presenter), Leo F Ditzel, MD, Bradley A Otto, MD, Ricardo L Carrau, MD, Daniel M Prevedello, MD, Gustavo Hadad, MD, ALT-VISION Laboratory - Ohio State University - Wexner Medical Center

208: PAPERLESS VALUE: UTILIZATION OF TECHNOLOGY TO MAXIMIZE Rounding EFFICIENCY, TEAM COMMUNICATION, AND PATIENT SAFETY – Allan D Nanney, III, MD (presenter), Timothy R Smith, MD, PhD, MPH, James P Chandler, MD, George Cybulski, MD, Akshar Rambachan, Andrew T Parsa, MD, PhD, Northwestern University-McGaw Medical Center, Feinberg School of Medicine
209: ACELLULAR FETAL BOVINE DERMAL MATRIX IN PEDIATRIC SKULL BASE RECONSTRUCTION: INITIAL REPORT – Jeremiah C Tracy, MD (presenter), Jonathon S Sillman, MD, Mark A Vecchiotti, MD, Andrew R Scott, MD, Tufts Medical Center

210: DIRECT TUMOR EMBOLIZATION OF SINONASAL UNCLASSIFIED SPINDLE CELL SARCOMA – Prateek Srinet, MD (presenter), R P Manes, MD, K R Bulsara, MD, Yale New Haven Hospital, Yale University School of Medicine, New Haven, CT

211: FEASIBILITY OF USING INTRAOPERATIVE MAGNETIC RESONANCING IMAGING FOR ENDOSCOPIC TRANSCERVICAL ODONTOIDECTOMY – Pablo F Recinos, MD (presenter), Anubhay G Amin, MD, Jordina Rincón-Torroella, MD, Yuki Otano, Ziya L Gokaslan, MD, Jean-Paul Wolinsky, MD, Johns Hopkins Hospital

212: QUANTITATIVE ANALYSIS OF “KAWASE’S TRIANGLE” VERSUS “MODIFIED ANTERIOR PETROSECTOMY (MAP) RHOMBOID” APPROACH FOR EXTENDED MIDDLE CRANIAL FOSSA LESIONS EXTENDING INTO POSTERIOR CRANIAL FOSSA – Manjul Tripathi, MS, MCh (presenter), Rama C Deo, MS, MCh, Ashish Suri, MS, MCh, Tara S Roy, MD, Sanjeev Lalwani, MD, Britty Baby, M Tech, Vinkle K Srivastav, B Tech, Subhashish Banerjee, PhD, Prem Kalra, PhD, Sanjiva Prasad, PhD, Kolin Paul, PhD, Subodh Kumar, PhD, Department of Neurosurgery*, Anatomy and Forensic Medicine+, All India Institute of Medical Sciences, New Delhi Department of Computer Science Engineering#, Indian Institute of Technology Delhi

213: VOLUMETRIC ANALYSIS OF ENDOSCOPIC AND TRADITIONAL SURGICAL APPROACHES TO THE INFRATEMPORAL FOSSA – Carol Fahmy (presenter), Ricardo L Carrau, MD, Claudia Kirsch, MD, Darlene Meeks, MD, Danielle de Lara, MD, M. Arturo Solares, MD, Bradley A Otto, MD, Daniel M Prevedello, MD, The Ohio State University Wexner Medical Center

214: VOLUMETRIC ANALYSIS OF A NASOPHARYNGECTOMY PERFORMED VIA ENDOSCOPIC, MAXILLARY TRANSPOSITION AND LATERAL TEMPORAL-SUBTEMPORAL APPROACHES – Burak Kapuçu, MD, Ramazan Gun, MD, Claudia Kirsch, MD, Darlene Meeks, MD, Bradley A Otto, MD, Daniel M Prevedello, MD, Ricardo L Carrau, MD (presenter), The Ohio State University Medical Center

215: AN ALTERNATIVE WAY OF LEARNING INTRANASAL PEDICLED FLAP: CORRELATION OF 3D ANATOMY MODELS AND SURGICAL TECHNIQUES WITH RADIOGRAPHIC IMAGES AND CASE STUDIES – Ing Ping Tang, MD, Pornthep Kasemsiri, MD, Bradley Otto, MD, Daniel M Prevedello, MD, Ricardo L Carrau, MD (presenter), Claudia Kirsch, MD, University of Malaysia, Kuala Lumpur; Wexner Medical Center, The Ohio State University

216: ATTICOSTOMY- A NEW APPROACH TO EPITYMPPANIC TUMORS – Suresh C Sharma, Prof (presenter), All India Institute of Medical Sciences, New Delhi, INDIA

217: RADIOLOGIC CLASSIFICATION OF CONVEXITY MENINGIOMA TO PREDICT THE AGGRESSIVE MENINGIOMA BEHAVIOR – Silky Chotai (presenter), Liu Yi, Pan Jun, Songtao Qi, Department of Neurosurgery, Nanfang Hospital of Southern Medical University, Guangzhou, China

218: MANAGEMENT OF A GIANT INTRAVENTRICULAR MENINGIOMA WITH A MINIMALLY INVASIVE PORT TECHNIQUE: CASE REPORT AND REVIEW OF INTRAVENTRICULAR PATHOLOGIES – Ali O Jamshidi, MD (presenter), Daniel Goncalves de Souza, MD, Edward E Kerr, MD, Leo F Ditzel Filho, MD, Daniel M Prevedello, MD, The Ohio State University Wexner Medical Center

219: THE GRADE 1.5 MENINGIOMA: CLINICAL CHARACTERISTICS OF AN AGGRESSIVE SUBSET OF TYPICALLY BENIGN WHO GRADE I TUMORS – Joshua Osbun, MD, Owais Ahmad, BS, Philip D Tatman (presenter), Jakes Barnes, BS, Manuel Jr Ferreira, MD, PhD, University of Washington

220: INTRACRANIAL ARTERIOVENOUS MALFORMATION EMBEDDED IN A MENINGIOMA – CASE REPORT AND REVIEW OF THE LITERATURE – Moujahed Labidi, MD (presenter), Genevieve Lapointe, MD, FRSCS, CHU de Quebec - Hopital de l’Enfant-Jesus

221: SURGERY OF LARGE AND GIANT PETROCLIVAL REGION TUMORS WITH MIDDLE FOSSA EXTENSION – Yury Shulev, MD (presenter), Ovanes Akobyany, MD, Alexander Trashin, MD, City Hospital #2, North-West State Medical University, Saint-Petersburg, Russia

222: MANAGEMENT OF PETROCLIVAL MENINGIOMAS: A REVIEW OF THE DEVELOPMENT OF MANAGEMENT STRATEGIES – Sam Safavi-Abbasi, MD, PhD (presenter), Adrian J Maurer, MD, Ahmed A Cheema, MD, Michael E Sughrue, MD, University of Oklahoma Health Science Center

223: UNILATERAL VOCAL CORD PALSY AND DYSPHAGIA: A RARE CEREBELLO-PONTINE ANGLE MENINGIOMA AND ITS MANAGEMENT – Andrew Senior, Dr (presenter), James Douglas, Mr, Stuart D Thompson, Mr, Princess Royal Hospital, Telford, Shropshire, UK

224: SURGICAL NUANCES OF MICROSURGICAL KEYHOLE AND ENDONASAL ENDOSCOPIC APPROACHES FOR MANAGEMENT OF INTRACRANIAL MENINGIOMAS – Sam Safavi-Abbasi, MD, PhD (presenter), Adrian J Maurer, MD, Jacob B Archer, Michael E Sughrue, MD, Department Of Neurosurgery, University Of Oklahoma Medical Center

225: SINUSITIS AFTER ENDOSCOPIC TRANSSPHENOIDAL PITUITARY SURGERY: IS PRE-OPERATIVE CT IMAGING PREDICTIVE OF POST-OPERATIVE SINONASAL DISEASE? – Michael C Topf (presenter), Caitlin C McLean, Matthew C Miller, George E Vates, University of Rochester Department of Otolaryngology
Poster Sessions

226: PARASELLAR XANTHOGRANULOMAS: A CASE REPORT – Angela Donaldson, MD (presenter), Vijay Anand, MD, Redi Rahmani, BA, Madhav Sukumaran, BS, Ehud Lavi, MD, Theodore Schwartz, MD, Weill Cornell Medical College

227: THIRD VENTRICULAR GlioBLASTOMA Multiforme: Case Report and Literature Review – Omid R Hariri, DO, MSc (presenter), Saman Farr, MSc, MSIII, Casey Corsino, MSII, Andrew Bieber, DO, Arrowhead Regional Medical Center, Dept. of Neurosurgery

228: SUB-TEMPORAL APPROACH TO SUPRASELLAR RETROCHIASMATIC TUMORS: CASE SERIES AND ANATOMIC CADAVERIC CORRELATION – Puya Alikhani, MD (presenter), Kenneth De Los Reyes, MD, Sananthan Sivakanthan, BS, Jamies J Van Gompel, MD, Harry R Van Loveren, MD, Sivenero Agazzi, MD, MBA, University of South Florida, Tampa, Florida, Mayo Clinic, Rochester, Minnesota

229: ENDONASAL TRANSSHENOIDAL PITUITARY SURGERY: INSTITUTIONAL REVIEW OF INITIAL EXPERIENCE – Bakhtiyar Pashaev, MD (presenter), Valery Danilov, MD, Gulnar Vagapova, MD, Vladimir Bochkarev, MD, Farida Nasibullina, MD, Andrey Alekseev, MD, Department of Neurosurgery, Interregional Clinical Diagnostic Center, Kazan. Kazan Medical State University, Kazan Medical state Academy, Russian Federation.

230: ENDOSCOPIC TRANSSHENOIDAL SURGERY: RETROSPECTIVE ANALYSIS OF PATIENTS WITH A KNOWN HISTORY OF ACROMEGALY – Oscar Feo, md (presenter), Hospital Universitario San Ignacio - Pontificia Universidad Javeriana

231: FIRST REPORTED CASE OF SUNCT SYNDROME RESOLVED BY RESECTION OF PITUITARY TUMOR IN PEDIATRIC PATIENT – HG García, MD (presenter), S Gottlieb, MD, M R Rosen, MD, J J Evans, MD, Department of Neurological Surgery and Otolaryngology, Head and Neck Surgery, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania

232: DYNAMICS OF VISUAL FUNCTIONS IN PATIENT WITH PITUITARY TUMORS BEFORE AND AFTER SURGERY – Liliya Khisanova, MD, Bakhtiyar Pashaev, MD (presenter), Gulnar Vagapova, MD, Valery Danilov, MD, Dmitry Bochkarev, MD, Department of Neurosurgery, Interregional Clinical Diagnostic Center, Kazan. Kazan Medical State University, Kazan Medical state Academy, Russian Federation.

233: CASE REPORT - RESECTION OF RARE CLIVAL GIANT CELL TUMOR BY LE FORT I OSTEOTOMY APPROACH – Julie Le (presenter), Kongkrit Chaiyasate, MD, Kliment Donev, MD, Sabih Effendi, MD, Daniel K Fahim, MD, Oakland University William Beaumont School of Medicine, Beaumont Health Systems Royal Oak, Michigan

234: ACTH-SECRETING ESTHESIONEUROBLASTOMA OCCURRING AFTER TREATMENT FOR CROOKE’S CELL ADENOMA – Sarah J Burgin, MD, Andrew S McDaniel, MD, PhD, Jonathan B McHugh, Stephen Sullivan, MD, Erin McKeen, MD, Andrew D Kroeker, MD (presenter), University of Michigan

235: LOW-GRADE FIBROMYXOID MESENCHYMAL TUMOR MIMICKING A CHORDOMA OF THE CLIVUS. CASE REPORT – Oscar Feo, MD (presenter), Jaime E. Becerra, MD, Juan Carlos Acevedo, MD, Roberto Diaz, MD, Miguel Berbeo, MD, MSc, Oscar Zorro, MD, Rafael Uribe, MD, Silvia T. Quintero, MD, Laura Diaz, MD, Juan Carlos Perez, MD, Pablo Harker, MD, Pontificia Universidad Javeriana - Hospital Universitario San Ignacio

236: THE SURGICAL IMPLICATIONS OF THE ARACHNOID MEMBRANE IN SKULL BASE TUMORS – Hamad I Farhat, MD (presenter), Michael Shinners, MD, Ivan Ciric, MD, NorthShore University HealthSystem

237: ANATOMICAL STUDY FOR THE TRANS-ORAL ENDOSCOPIC APPROACH TO THE DORSUM SELLAE AND POSTERIOR CLINOIDS – Robert D Engle, MD (presenter), Mark S Toma, MD, Trace Barrett, BS, Maria Peris-Celda, MD, PhD, Tyler J Kenning, MD, Carlos D Pinheiro-Neto, PhD, Albany Medical Center

238: ENDOSCOPIC ENDONASAL APPROACH TO THE ORBIT: AN ANATOMICAL AND CLINICAL STUDY – Matteo Zoli, MD, Daniel M Prevedello, MD, Cristian Naudy Martinez, MD (presenter), Nicolas Gil Guevara, Leo F Ditzel Filho, Jun Muto, MD, Kenichi Oyama, Bradley A Otto, MD, Ricardo L Carrau, MD, Department of Neurological Surgery, The Ohio State University, Columbus, OH, United States

239: LANDMARK FOR MEDIAL EXTENT OF PARACLIVAL CAROTID ARTERY AT ANTERIOR GENU – Javan J Nation, MD (presenter), Michael Kaufmann, MS, Adam Folbe, MD, Wayne State University Department of Otolaryngology

240: CADAVERIC FEASIBILITY STUDY FOR SKULL BASE RECONSTRUCTION USING ANTERIORLY BASED INFERIOR TURBINATE FLAP – Moran Amit, Jacob Cohen, Ilan Koren, Ziv Gil (presenter), Department of Otolaryngology Head and Neck Surgery, Rambam Medical Center, the Technion, Israel Institute of Technology

241: NERVE TRANSFER SOURCES FOR FACIAL REANIMATION – Justin Brown, MD, Mark A Mahan, MD, Andrew Little, MD (presenter), Barrow Neurological Institute

242: ENDOSCOPIC ANATOMY OF MIDDLE ETHMOIDAL ARTERY – Liang Wang, MD (presenter), Ahmed Youseef, MD, AbdulAziz AlQahtani, MD, Ramazan Gun, MD, Daniel M Prevedello, MD, Bradley A Otto, MD, Leo Ditzel Filho, MD, Ricardo L Carrau, MD, Wexner Medical Center, The Ohio State University; 1st Affiliated Hospital, Zhengzhou University, Zhengzhou

243: DORELLO’S CANAL: A TRIDIMENSIONAL ENDOSCOPIC ENDONASAL PERSPECTIVE – Nicolas Gil Guevara, MD, Daniel M Prevedello, MD, Leo F Ditzel Filho, MD, Matteo Zoli, MD, Cristian Naudy Martinez, MD (presenter), Bradley A Otto, MD, Ricardo L Carrau, MD, Department of Neurological Surgery, The Ohio State University, Columbus, OH, United States
244: ANATOMICAL STUDY OF THE PROMINENCES ON THE POSTERIOR WALL OF THE MAXILLARY SINUS: CLINICAL IMPLICATIONS – Liang Wang, MD (presenter), Ramazan Gun, MD, Ahmed Yousef, MD, Ricardo L. Carrau, MD, Daniel Prevedello, MD, Bradley A Otto, MD, Leo Ditzel Filho, MD, Wexner Medical Center, The Ohio State University; 1st Affiliated Hospital, Zhengzhou University, Zhengzhou, Henan, 450052, China

245: THE VENTRAL ENDOSCOPIC ANATOMY OF THE INTRACAVERNOUS BRANCHES OF THE INTERNAL CAROTID ARTERY AND ITS SURGICAL CORRELATIONS – Matteo Zoli, MD, Daniel M Prevedello, MD, Solari Domenico, MD, Leo F Ditzel Filho, Cristian Naudy Martinez, MD (presenter), Nicolas Gil Guevara, MD, Conti Michele, MD, Roger Robert, MD, Bradley A Otto, MD, Ricardo L Carrau, MD, Department of Neurological Surgery, The Ohio State University, Columbus, OH, United States

246: DEFINITION AND EXAMINATION OF THE BRAINSTEM SAFE ENTRY ZONES WITH 4.7T MAGNETIC RESONANCE IMAGING AND DIFFUSION TRACTOGRAPHY – Mustafa Baskaya, Associate, professor, Bora Gurur, MD, Veyssel Antar, MD, Ulas Cikla, MD (presenter), Gabriel Nerves, Aliriza Sadighi, MD, Tomer Hananya, Aaron Field, MD, PhD, Shahriar Salamat, MD, PhD, University of Wisconsin, The Department of Neurological Surgery

247: TRANSPTERYGOID APPROACH TO MANDIBULAR NERVE – Ahmed S Youssef, MD, MRCS (presenter), 1: Department of Otolaryngology-Head and Neck Surgery, Alexandria University, Egypt. 2: Department of Otolaryngology-Head and Neck Surgery, Ohio State University Wexner Medical Center, USA

248: RISK FACTORS FOR CEREBROSPINAL LEAK AFTER ENDOSCOPIC SKULL BASE RECONSTRUCTION WITH NASOSEPTAL FLAP – Calvin L Gruss, MS (presenter), Ivan El-Sayed, MD, Mohammed Al Komser, MD, MA, Steven D Fletcher, MD, Andrew N Goldberg, MD, MSCE, Michael McDermott, MD, School of Medicine, Vanderbilt University; Department of Otolaryngology - Head and Neck Surgery, University of California at San Francisco

249: PETROUS APEX PNEUMATIZATION – Margherita Bruni, MD (presenter), Robert Wong, MD, K Paul Boyev, MD, Mark Tabor, MD, University of South Florida

250: THE DRAINAGE OF THE SUPERFICIAL MIDDLE CEREBRAL VEIN AND PRESERVATION OF VEIN IN AN ANTERIOR TRANSPETROSAL APPROACH – Shunsuke Shibao, MD (presenter), Masahiro Toda, MD, PhD, Takashi Horiguchi, MD, PhD, Takeshi Kawase, MD, PhD, Kazunari Yoshida, MD, PhD, Department of Neurosurgery, Keio University School of Medicine, Tokyo, Japan

251: CLINICAL CORRELATES OF THE ANATOMICAL RELATIONSHIPS OF FORAMEN OVALE: A RADIOANATOMICAL STUDY – Ahmed Youssef, MD (presenter), Ricardo L. Carrau, MD, C. Arturo Solares, MD, Ahmed Tantawy, MD, Ahmed Aly Ibrahim, MD, Bradley A Otto, Daniel M Prevedello, MD, Leo L Ditzel, Filho, MD, The Ohio State University Wexner Medical Center; Alexandria University, Alexandria, Egypt

252: SURGERY OPTIMIZING RADIOSURGERY: THE NEOADJUVANT ROLE IN CAVERNOUS SINUS MENINGIOMA – Felipe Marques DO REGO Monteiro, Dr (presenter), Luís Fernando Moura da Silva Júnior, Dr, Mauricio Coelho de Almeida, Dr, Ricardo Ramina, PhD, Instituto de Neurologia de Curitiba

253: TRAUMATIC DISSECTION OF THE INTERNAL CAROTID ARTERY AT THE SKULL BASE – Orhan Kalemci, MD, Ozan Durmaz, MD, Suleyman Men, MD, Nuri Karabay, MD, Burak Sade, MD, FACS (presenter), Departments of Neurosurgery and Radiology, Dokuz Eylul University

254: THE CONTROVERSIES IN SKULL BASE TRAUMA – Jan Hemza, MD, PhD, et, PhD (presenter), Faculty Hospital at saint Ann, Pekarska 55, Brno, C.R.

255: IMMEDIATE SINGLE-STAGE RECONSTRUCTION OF COMPLEX FRONTOFACIOBASAL INJURIES: PART II – Sherif Emara, MD, Hassan Nablsi, BDS, Facharzt, Tarek ELKammash, MD, Mohamed A Sief, MD, Khaled S Attia, Akram Awadalla (presenter), North Western Armed Forces Hospital - Neurosurgery Department

256: DELAYED ENDOVASCULAR COIL EXTENSION AFTER EMBOLIZATION FOR INTERNAL CAROTID ARTERY INJURY DURING ENDOSCOPIC SINUS SURGERY – Matthew Dedmon, MD, PhD (presenter), Josh Meier, MD, Kyle Chambers, Aaron Remenschneider, MD, MPH, Brijesh Mehta, MD, Albert Yoo, MD, William Curry, MD, Derrick Lin, MD, Stacey Gray, MD, Dept. of Otology & Laryngology, Harvard Medical School, Dept. of Otolaryngology, Massachusetts Eye & Ear Infirmary, Division of NeuroInterventional Radiology, Massachusetts General Hospital, Division of Neurosurgery, Massachusetts General Hospital

257: ANGIOSYNIZESIS – VENOUS BEHAVIOUR, OUT FLOW FROM BRAIN VIA SKULL BASE – Jan Hemza, MD, PhD, et, PhD (presenter), Faculty Hospital at saint Ann, Pekarska 55, Brno, C.R.

258: CAVERNOUS HEMANGIOMAS OF THE INTERNAL AUDITORY CANAL AND CEREBELLOPONTINE ANGLE – Michael Oldenburg, MD, Kathryn Van Abel, MD, Matthew Carlson, MD, Jeffrey Jacob, MD (presenter), Alejandro Rivas, MD, Collin Driscoll, MD, Michael Link, MD, Mayo Clinic, Vanderbilt University

259: ANTERIOR CHOROIDAL ARTERY (ACHA) ANEURYSM MIMIC: DUPLICATED ACHA WITH DUAL INFUNDIBULUM – Brian D Milligan, MD (presenter), Coleman O Martin, MD, Saint Luke's Neuroscience Institute
**Poster Sessions**

**260:** TRENDS IN VERTEBRAL ARTERY DISSECTION AS A RESULT OF CHIROPRACTIC CERVICAL MANIPULATION – Sean Hashemi (presenter), Ashkan Monfared, The George Washington University

**261:** USE OF ONYX EMBOLIZATION IN LATERAL SKULL BASE SURGERY – Justin S Golub, MD (presenter), Ravi N Samy, MD, Todd Abruzzo, MD, Mario Zuccarello, MD, Myles L Pensak, MD, University of Cincinnati, Cincinnati Children's Hospital Medical Center

**262:** CEREBRO-SINO-ORBITAL MUCORMYCOSIS: CASE REPORT OF NOVEL BIOPSY TECHNIQUE AND REVIEW OF LITERATURE – Maya H Maloney, MD, Patrick R Maloney, MD (presenter), Miachel J Link, MD, James A Garrity, Harry J Cloft, MD, PhD, Joon H Uhm, MD, Departments of Ophthalmology, Neurosurgery, Neuroradiology and Neurology Mayo Clinic, College of Medicine, Rochester, MN, USA.

**263:** ORGANIZATION OF SURGICAL CARE FOR PATIENTS WITH ANEURYSMAL SUBARACHNOID HEMORRHAGE IN A LARGE REGION OF RUSSIA (ACCORDING TO THE REPUBLIC OF TATARSTAN) – Valery I Danilov, MD, Andrey G Alekseev, MD, Michail JU Volodjkhin, MD, Aleksandr M Nemirovsky, MD, Nail G Shayakhmetov, MD, Bakhtiyar Pashaev, MD (presenter), Kazan State Medical University, Interregional Clinical Diagnostic Centre

**264:** INTERNAL MAXILLARY TO MCA BYPASS: INFRATEMPORAL APPROACH TO THE INTERNAL MAXILLARY ARTERY. ANATOMY AND TECHNIQUE – Erez Nossek, MD, Peter Costantino, MD, Mark Eisenberg, MD, David Langer, MD (presenter), North Shore LIJ, Lenox Hill

**265:** COMPLEXITY OF TREATMENT FOR PICA ANEURYSM: A CASE SERIES AND REVIEW OF LITERATURE – Vladimir Cortez, D (presenter), Ajeet Sodhi, MD, Muhammed Taqi, MD, Javed Siddiqi, MD, PhD, Desert Regional Medical Center

**266:** THE MEDIALLY MIGRATING INTRACANALICULAR VESTIBULAR SCHWANNOMA: CAN WE COUNT ON MR IMAGING TO GIVE US AN ACCURATE ESTIMATE OF THE LATERAL EXTENSION OF A TUMOR? – Matthew L Carlson, MD (presenter), Colin L Driscoll, MD, John I Lane, MD, Michael J Link, MD, Mayo Clinic, Rochester, MN

**267:** INTERNAL ACOUSTIC CANAL RECONSTRUCTION AFTER DRILLING VIA RETROSIGMOID APPROACH – STEP BY STEP TECHNIQUE AND TIPS – Luis Fernando Silva Jr., MD (presenter), Felipe Monteiro, MD, Erasmo Silva Jr., MSc, MD, Maurício Coelho Neto, MD, Ricardo Ramina, PhD, MSc, MD, Instituto de Neurologia de Curitiba - INC

**268:** DIAGNOSIS AND MANAGEMENT OF SPONTANEOUS MASSIVE PNEUMOCEPHALUS WITHOUT CSF LEAK – Ammar Shaikhouni, MD, PhD (presenter), Paul Porensky, MD, Leo Ditzel, MD, Daniel Prevedello, MD, Ohio State University

**269:** DOES THE USE OF A JACKSON-PRATT DRAIN FOLLOWING CRANIOPLASTY WITH TITANIUM MESH AND HYDROXY APATITE DECREASE THE RATE OF CRANIOPLASTY COMPLICATIONS? – Jonathan Hatch, MD (presenter), Jonathan P Blecha, BS, Austin D Person, BS, Dwight T Jones, MD, Gary F Moore, MD, Universitof of Nebraska Medical Center, Nebraska Methodist Hospital

**270:** SURGICAL RESECTION FOLLOWING PRIMARY RADIATION TREATMENT FOR VESTIBULAR SCHWANNOMAS: DOES RADIATION IMPACT SURGICAL OUTCOMES AND EXTENT OF RESECTION? – Amjad N Anaizi, MD (presenter), Myles Pensak, MD, Philip V Theodosopoulos, MD, Georgetown University Hospital, University of Cincinnati, University of California, San Francisco

**271:** MANAGEMENT OF THE FALLOPIAN CANAL MENINGOCELE: A CASE SERIES AND LITERATURE REVIEW – Alex D Sweeney, MD (presenter), Marc-Elie Nader, MD, Alexander Sevy, MD, Robert A Williamson, MD, Jeffrey T Vrabec, MD, Baylor College of Medicine

**272:** POSTERIOR TRANSPOSITION OF THE FACIAL NERVE USING A MODIFIED TRANSCOCHLEAR APPROACH – Imithri Bodhinayake, MD, Alexander I Evins, MD, Malte Ottenhausen, MD, Antonio Bernardo, MD (presenter), Department of Neurological Surgery, Weill Cornell Medical College, New York, NY, USA

**273:** GLOMUS FACIALE TUMORS: A REPORT OF TWO CASES AND LITERATURE REVIEW – John P Leonetti, MD, Sahar Nadimi, MD (presenter), Sam J Marzo, MD, Douglas A Anderson, MD, Loyola University Medical Center

**274:** CLINICAL PRESENTATION OF VESTIBULAR SCHWANNOMA IN PATIENTS WITH BASELINE COGNITIVE DISABILITY – Matthew L Carlson, MD (presenter), George B Wanga, MD, Colin L Driscoll, MD, Kyle D Weaver, MD, Michael J Link, MD, Mayo Clinic School of Medicine, Rochester, MN USA 55905; Vanderbilt University Medical Center, Nashville, TN USA 37232

**275:** SKULL BASE RECONSTRUCTION ION AFTER FAR LATERAL TRANSCONDYLAR APPROACHES USING AUTOLOGOUS FAT GRAFT-ASSISTED MEDPOR TITAN CRANIOPLASTY: SURGICAL TECHNIQUE AND NUANCES – Rohit K Reddy, BS, Phoebe Y Ling, BS, Zachary S Mendelson, BS, James K Liu, MD, FAANS (presenter), Departments of Neurological Surgery and Otolaryngology-Head and Neck Surgery, Center for Skull Base and Pituitary Surgery, Rutgers New Jersey Medical School, Neurological Institute of New Jersey, Newark, New Jersey

**276:** THE PREVALENCE OF HIGH-RIDING JUGULAR BULB IN PATIENTS WITH ENDOLYMPHATIC HYDROPS – Christopher D Brook, MD (presenter), Karen Buch, MD, Matthew Kaufmann, BA, Osamu Sakai, MD, Anand K Devaiah, MD, Boston Medical Center

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- Endoscopic Techniques
- Meningiomas
- Chordomas
- Skull Base Radiosurgery
- Skull Base Anatomy
- Innovative Technologies
- Skull Base Trauma
- Rehabilitation
- General topics

Awards will be given to top Medical Student and Resident Papers! We encourage everyone to submit an abstract, whether or not you are a member of the NASBS. For general information regarding the meeting, please contact Adriana Michaels at 310-424-3326, ext. 159 or Adriana@nasbs.org.

ABSTRACT SUBMISSIONS WILL OPEN MAY 2014