

22nd ANNUAL NORTH AMERICAN SKULL BASE SOCIETY MEETING

Managing Risk at the Skull Base

February 17-19, 2012

Pre-Meeting Courses: February 15-16, 2012

Planet Hollywood ---- Las Vegas, Nevada



PRESIDENT: Dennis Kraus, MD

SCIENTIFIC PROGRAM CHAIRS: Carl Synderman, MD, MBA, John Golfinos, MD, Rick Friedman, MD, PhD, & Daniel Pieper, MD

PRACTICAL COURSE DISSECTION WORKSHOP CHAIRS: Vijay K. Anand, MD, Ehab Hanna, MD, Jacques Morcos, MD & James Evans, MD, Sandeep Samant, MD



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CME STATEMENT

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council of Continuing Medical Education through **joint sponsorship** of Science Care and the North American Skull Base Society. Science Care is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Science Care designates this educational activity for a maximum of **20.5** *AMA PRA Category 1 Credit(s)*TM. Physicians should only claim credit commensurate with the extent of their participation in the activity.

This activity has been approved for AMA PRA Category 1 Credit^M.

Welcome!

Las Vegas is a city that is associated with risk; characterized by myriads types and venues for gambling. The theme for this year's meeting of the NASBS is "Managing Risk". As a society, we manage risk by disseminating the latest advances in the management of patients with skull base disease and promoting the adoption of best practices. A meeting is an opportunity to share ideas, develop collaborations, and chart a direction for the future. We hope that this year's meeting will achieve these goals and meet all of your expectations.

The Program Committee consisting of myself, Rick Friedman, MD, PhD, John Golfinos, MD, and Daniel Pieper, MD, has labored to create an educational program that captures the wealth of experience of our senior members but also displays the talents of the latest generation of skull base surgeons. Each day begins with Breakfast Seminars with presentations of surgical techniques by master surgeons in cranial base surgery. Concurrent Sessions offer a wide variety of topics that are designed to provide state-of-the-art reviews of controversial topics and encourage audience participation.

A highlight of every NASBS meeting is the opportunity to hear from invited speakers outside of our specialty. This year, we are extremely fortunate to have two prominent and highly respected keynote lecturers. Mary Meeker is a venture capitalist and former Wall Street securities analyst who has been dubbed the "Queen of the Net" for her overviews of Internet industry. She will be addressing "The State of the US Economy" on Friday. Steve Charles, MD is a vitreoretinal surgeon, mechanical and electrical engineer, inventor, educator, innovator, and founder of medical device companies. On Saturday, he will be speaking about

"The Impact of Emerging Technologies on Skull Base Surgery". Another highlight of the meeting is "Skull Base Jeopardy" where you will have the opportunity to test your skull base knowledge while Dr. Golfinos hosts competing teams of grand masters and young skull base surgeons. Finally, the program will close with one of the most popular events in last year's program: a Plenary Session on "3D Anatomy of the Skull Base", presented by Albert Rhoton, MD and Juan Fernandez-Miranda, MD.

As evidenced by the record number of abstract submissions (395) for the 2012 Vegas meeting, cranial base surgery is a dynamic and growing surgical subspecialty. The Program Committee is indebted to all of the reviewers who performed blinded reviews of the abstracts and ranked them according to quality and preference for oral or poster presentation. The oral presentations (153) will be accommodated in 19 Proffered Paper Sessions. A record number of poster presentations (152) will be available for viewing throughout the meeting. Please support the presenters through your attendance and discussions.

This is one meeting where we hope that what happens in Vegas does *not* stay in Vegas. We hope that you will return home with new knowledge that you can apply to the care of your own patients.



Dennis Kraus, MD, NASBS, President



Carl Snyderman, MD

Carl Snyderman, MD, MBA, NASBS Chair

GENERAL INFORMATION/CME INFORMATION

LEARNING OBJECTIVES

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

- Describe the critical radiologic and pathologic assessment of patients with skull base neoplasms.
- Demonstrate an understanding of the anatomic intricacies in skull base anatomy and skull base surgery.
- Elucidate the treatment options available in skull base surgery: with an emphasis on the risk and benefits of each treatment option.
- Demonstrate an understanding of the surgical approaches including open surgical access, endoscopic and robotic means of performing skull base surgery.
- Explain reconstructive options in skull base surgery.
- Determine adjuvant therapies as they relate to skull base neoplasms.
- Recognize the basic science components of skull base neoplasms and surgery.

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 prosthedontists 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.

JOINT SPONSORSHIP ACCREDITATION STATEMENT

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council of Continuing Medical Education through joint sponsorship of Science Care and the North American Skull Base Society. Science Care is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

DESIGNATION STATEMENT *Reflecting the Number of Credit Hours (AMA)*

General Meeting: Science Care designates this educational activity for a maximum of **20.5** *AMA PRA Category 1 Credit(s)* $^{\text{TM}}$. Physicians should only claim credit commensurate with the extent of their participation in the activity.

This activity has been approved for AMA PRA Category 1 CreditTM.

COURSE DESCRIPTION/PURPOSE & NEED

The skull base is a complicated area where nerves, blood vessels, bone, the eyes, muscles and other soft tissues converge in a small area which is difficult to access. Treatment of both benign and malignant disease processes in this location represents one of the most difficult areas in the body to treat given the complex mix of structures, anatomy, and proximity to other critical organs. The specialists looking after patients afflicted in this area include head and neck surgeons, neurosurgeons, plastic and reconstructive surgeons, ophthalmologists, radiation oncologists and medical oncologists. These specialists need to understand what is pertinent in their own specialty with regards to skull base disease as well as the therapeutic options other specialties have to offer. There is an important need for physicians managing skull base disease to stay current with best practices in managing this patient population. This conference will bring together leaders in the field of skull base disease from all of the specialties listed above to discuss best practices and the latest research in this area.

This activity has been designed to change attendee knowledge and competence.

MEETING LEADERSHIP

NASBS Scientific Program Committee

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2000	Robert F. Spetzler, MD
2001	Ian T. Jackson, MD
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MEETING HOURS

REGISTRATION HOURS	Sunset 1
Thursday, February 16, 2012	2:00 pm – 6:00 pm
Friday, February 17, 2012	6:30 am – 7:00 pm
Saturday, February 18, 2012	6:30 am – 5:30 pm
Sunday, February 19, 2012	7:30 am – 11:00 am
SPEAKER PREP HOURS	Sunset 1
Thursday, February 16, 2012	2:00 pm – 6:00 pm
Friday, February 17, 2012	6:30 am – 5:00 pm
Saturday, February 18, 2012	6:30 am – 5:00 pm
Sunday, February 19, 2012	7:30 am – 10:00 am
EXHIBIT HALL/POSTER HOURS	Mezzanine
Friday, February 17, 2012	
10:00 am – 7:00 pm	Hall Open
10:15 am – 10:30 am	Break in Exhibit Hall
12:00 pm – 1:00 pm	Lunch for Non Members in Exhibit Hall
3:30 pm – 4:00 pm	Break in Exhibit Hall
4:00 pm – 5:30 pm	Break for Exhibitors/Exhibit Hall Closed
5:30 pm – 7:00 pm	Reception in Exhibit Hall
Saturday, February 18, 2012	
10:00 am – 4:00 pm	Hall Open
10:30 am – 11:00 am	Break in Exhibit Hall
12:00 pm – 1:00 pm	Lunch in Exhibit Hall
3:30 pm – 4:00 pm	Break in Exhibit Hall

Sunday, February 19, 2012

 $7:00 \text{ am} - 11:00 \text{ am} \\ 7:30 \text{ am} - 8:00 \text{ am} \\ 10:00 \text{ am} - 10:30 \text{ am} \\ \text{Break in Exhibit Hall} \\ \text{Break in Exhibit Hall}$

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, Skull
 Base 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.
- **Petrous Pulse:** Members will receive copies of *Petrous Pulse*, the official newsletter of the Society. The newsletter includes a report of the Society President, information updates on the Society, announcements and information on upcoming events and other news as appropriate.
- *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** for more information or send an email to **membership@nasbs.org**

RECOGNIZED GUESTS

Every year, the North American Skull Base Society recognizes individuals who have played an instrumental role in skull base surgery. This year, the NASBS would like to recognize Doctors Michael Gleeson, Anil Nanda, and Jatin Shah. They have been innovators in skull base surgery and are teachers to colleagues, residents and students around the world.

MICHAEL GLEESON, MD, FRCS, FRACS (HON), FDS (HON)

Professor of Otolaryngology and Skull Base Surgery to the National Hospital for Neurology and Neurosurgery, University College Hospital, London, UK Emeritus Consultant Otolaryngologist to Guy's, Kings and St. Thomas' Hospitals, London, UK Honorary Consultant Skull Base Surgeon to the Great Ormond Street Hospital for Sick Children, London, UK



Professor Gleeson was born and educated in London. He studied both Dentistry and Medicine at Guy's Hospital, London, graduating with distinctions and a number of prizes. After internships at Guy's Hospital, he undertook preliminary training in Otolaryngology and Neurosurgery at the University of Southampton before returning to Guy's for his residency in Otolaryngology, Head & Neck Surgery. In 1983, he was seconded to the University of Washington in Seattle as Chief resident to Professor Charles Cummings. Returning to London in 1984, he was awarded a scholarship to work as Fellow to Professor Ugo Fisch in Zurich the following year. Upon return to the UK, he was appointed Consultant surgeon to Guy's Hospital and Senior Lecturer to the then United Medical and Dental Schools of Guy's and St. Thomas' Hospitals. In 1994, he was appointed Hunterian Professor to the Royal College of Surgeons of England and

a year later became Professor of Otolaryngology and Skull Base Surgery to Kings College London. In 2002, he was awarded the chair of Skull Base Surgery within the Institute of Neurology at University College London.

To date, he has published 8 books, over 100 peer-reviewed papers and contributed in excess of 60 chapters to learned texts. He has delivered more than 200 presentations all over the world. In 1992, with others, he founded the European Skull Base Society and has held office on the Executive Board almost continuously since. Professor Gleeson has served as Editor-in-Chief of *Skull Base: An Interdisciplinary Approach* for over 10 years and is currently President-Elect of the World Federation of Skull Base Societies.

ANIL NANDA, MD, FACS

LSU Health Science Center, Shreveport, Louisiana



Dr. Anil Nanda is Professor and Chairman of the Department of Neurosurgery at LSU Health Sciences Center in Shreveport. Appointed Chief of Neurosurgery in 1990 and then the first Neurosurgery Department Chairman with its establishment in 1995, Dr. Nanda has ushered the growth and development of University Neurosurgery through the vision he continues to share with the department's faculty and staff. Committed to the expansion of higher education, in Spring of 2002, Dr. Nanda successfully established accreditation of a neurosurgery residency program at LSUHSC in Shreveport. He has been the invited guest lecturer and visiting professor at over 70 national institutions and international venues. He has over two hundred peer review publications and book chapters and he has published two books. In addition, Dr. Nanda continues to promote the importance of safety and prevention to both adults and children through his

involvement in local community service efforts. He has been consecutively named among the Best Doctors in America from 1996 to 2010. Currently, the Department of Neurosurgery is one of the busiest in the south with over 2,800 cases this past year. Dr. Nanda is married to Laura Nanda, an attorney, and has three children; Alexander, Christopher, and Mary Catherine.

JATIN P. SHAH, MD, PHD, (HON), FACS, FRCS (HON), FDSRCS (HON), FRACS (HON)

Memorial Sloan-Kettering Cancer Center, New York, USA



Professor Jatin P. Shah graduated from the Medical College of MS University in Baroda, India, and received his training in Surgical Oncology and Head and Neck Surgery at Memorial Sloan Kettering Cancer Center. He is Professor of Surgery, at the Weil Medical College of Cornell University, and Chief of the Head and Neck Service, Leader of the Head and Neck Disease Management Team, and holds The Elliott W. Strong Chair in Head and Neck Oncology at Memorial Sloan-Kettering Cancer Center in New York City.

Dr. Shah is a national and international leader in the field of head and neck surgery, having served as President of The New York Cancer Society, The New York Head and Neck Society, The Society of Head and Neck Surgeons, The North American Skull Base Society and the International Academy of Oral Oncology. He is Founder of The International

Federation of Head and Neck Oncologic Societies, and serves as it's Chief Executive Officer (CEO).

Professor Shah has been the recipient of numerous awards from various parts of the world. He has been continuously listed in the "Best Doctors in America" directories for the past two decades. He serves on the Editorial and Review Boards of 18 scientific journals and has published over 400 peer-reviewed articles, 60 book chapters and 8 books. His textbook of *Head and Neck Surgery and Oncology*, now in it's 4th Edition, has won numerous prizes for the best published book in otolaryngology.

DISCLAIMER

The opinions and recommendations expressed by faculty, authors and other experts whose input is included in this program are their own and do not necessarily represent the viewpoint of Science Care or the North American Skull Base Society.

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As a provider accredited by the ACCME, Science Care must ensure balance, independence, objectivity and scientific rigor in all its activities. All course directors, faculty, planners, and any other individual in a position to control the content of this educational activity are required to disclose to the audience any relevant financial relationships with any commercial interest. Science Care must determine if the faculty's relationships may influence the educational content with regard to exposition or conclusion and resolve any conflicts of interest prior to the commencement of the educational activity. In accordance with the **Accreditation Council for Continuing** Medical Education requirements on disclosure, information about relationships of presenters with commercial interests (if any) will be included in materials distributed at the time of the conference.

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EVIDENCE BASED CONTENT

As a provider of CME accredited by the ACCME, it is the policy of Science Care to review and certify that the content contained in this CME activity is valid, fair, balanced, scientifically rigorous and free of commercial bias.

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Mark your calendars for these upcoming NASBS Meetings and Workshops

Summer Resident and Fellows Practical Dissection Workshop

July 27-30, 2012

LSU Health Sciences Center • New Orleans, LA

23rd NASBS Annual Meeting

February 15-17, 2013 Pre-Meeting Practical Dissection Workshop on February 13-14th The Doral Hotel • Miami, FL

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University of Michigan Ann Arbor, MI, USA

Jie Tang, MD

Beijing Tiantan Hospital, China Beijing, China

Iai D. Thakur. MD

LSUHSC-Shreveport Shreveport, LA, USA

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University of Cincinnati Cincinnati, OH, USA

AWARDS

Awards will be presented to recipients immediately following the Presidential Address on February 17, 2012

On behalf of Dr. Dennis and Daryl Kraus and the North American Skull Base Society, the following awards were given this year:



BEST PAPER BY A MEDICAL STUDENT

Abhiram Gande, MD

2nd Year Medical Student University of Pittsburgh

"Intraoperative CT-Guidance to Confirm Decompression Following an Endonasal Approach for the Treatment of Cervicomedullary Compression"



BEST CLINICAL PAPER BY A RESIDENT

1ST PLACE: Raj C.Dedhia, MD

PGY-3, University of Pittsburgh

"Endoscopic Endonasal Pituitary Surgery: Impact of Surgical Education on Operation Length and Patient Morbidity"

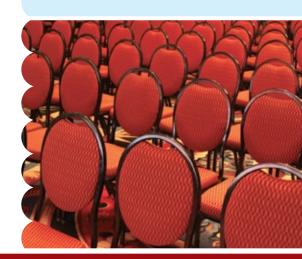
2ND PLACE: Jamie J. Van Gompel, MD *PGY-7, May Clinic*

"Long Term Outcomes of Esthesioneuroblastoma: Hyams Grade Predicts Patient Survival"

3RD PLACE: Hussein Alahmadi, MD

University of Toronto

"A Comparison of the Outcomes of Endoscopic and Microscopic Surgery for Cushing's Disease"



FACULTY DISCLOSURES

The following presenters, faculty, and program committee members have provided information indicating they have financial relationships with a proprietary entity producing healthcare goods or services with the exemption of non-profit or government organizations and non-healthcare related companies. (Financial relationships include such things as grants, research support, employer or consultant, major stockholder, member of speaker's bureau):

Name	Company	Role	Content
Vijay Anand	GE Medical Navigation	Consultant	
Ricardo Carrau	Storz Endoscopy	Speaker Bureau	
Steve Charles	Alcon	Consultant	
Carlos David	Codman Neurovascular	Consultant	
Anand Devaiah	OmniGuide CO2 Laser Surgery, Skull Base Su	Consultant Irgery, Otologic Surgery	Development Agreement
Guenther C. Feigl	Storz	Honorarium	Other Activities
Melvin Field	Stryker Corp	Consultant	
Rick A. Friedman	Otonomy	Partner	N/A
Gary L. Gallia	Karl Storz Endoscopy Stryker	Research Support Review Panel, Research Sup	pport
John G. Golfinos	Medtronic Stryker Viewray	Honorarium Honorarium Shareholder	Teach Skull Base Evaluate Instruments Stereotactic Radiation
Devon Haydon	IMRIS Inc. IMRIS Inc. supplied an unrestric	Other Financial Benefit ted educational grant which l	Other Activities nelps maintain IMRIS procedural database
Carl Heilman	Medtronics Integra	Consultant Consultant	Teach Rhoton Skull Base Course with per diem Advice on CUSA ultrasonic aspirator
Daniel F. Kelly	Mizuho-America	Consultant	Royalties Pituitary Surgery
Dennis Kraus	Endoethicon	Speakers Bureau	N/A
Michael LaRouere	Benchmarch Gamme Knife, LLC	Partial Owner	Stat Radiation
John Y. K. Lee	Baxter	Speaker	Hemostatis
Derrick T. Lin	Medtronic	One time consultant	
Lawrence J. Marentette	Stryker	Consultant	
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Maxwell B. Merkow	VisionSense LifeCell Baxter Stryker NSE	Honorarium Consulting Fee Other Financial Benefit Consultant	Speaking and/or Teaching Consulting Speaking and/or Teaching
Jayakar Nayak	Medtronic, USA Gurus-ACAI	R&D Consulting R&D Consulting	New Devices/Biometeriols and Sinus Surgery New Decives/Technology Sinus Surgery
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Chandranath Sen Pete Batra

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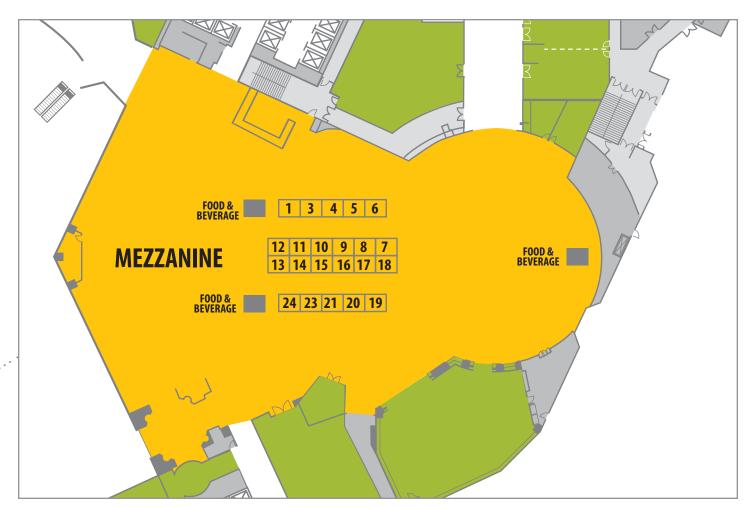
meeting.

Lee A. Zimmer

MEETING FLOOR PLAN



EXHIBITOR FLOOR PLAN



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- 1 Cook Medical
- 3 Medtronic Surgical Technologies
- 4 Elliquence, LLC
- 5 Kelyniam Global, Inc.
- 6 NICO Corp.
- 7 Biomet Microfixation
- 8 Mizuho America, Inc.
- 9 Synthes CMF
- 10 Synthes Anspach
- 11 OsteoMed
- 12 OmniGuide, Inc.

- 13 Carl Zeiss Meditec, Inc.
- 14 Visionsense
- 15 KLS Martin
- 16 Integra
- 17 Apex Medical, Inc.
- 18 Covidien
- 19 Stryker Instruments
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SPEAKER HIGHLIGHTS

KEYNOTE SPEAKER: STEVE CHARLES, MD



Steve Charles, MD is one of the world's leading vitreoretinal surgeons and has developed many of the techniques and devices used by vitreoretinal surgeons worldwide. He has performed over 29,000 vitreoretinal surgeries, lectured in 50 countries and operated in 25, delivered 14 named lectures, and over 1000 speaking trips. He authored a leading textbook in the field which is now in the 5th edition and in 5 languages, authored over 140 articles in medical literature, and 44 book chapters. He is a Fellow in the American College of Surgeons and International College of Surgeons and a member of the Retina Society, Macular Society, American Society of Retinal Specialists, Club Jules Gonin, American Society of Cataract and Refractive Surgery, American Academy of Ophthalmology, and the Dowling Society. He is on the editorial board of *Retina* and a reviewer for *Ophthalmology, Archives of Ophthalmology, American*

Journal of Ophthalmology, and British Journal of Ophthalmology, writes a column for Retina Physician and is an editor for eMedicine. He is a mechanical and electrical engineer and has 106 issued or pending patents. He is a consultant for Alcon Laboratories and the principal architect of the Alcon Accurus and Alcon Constellation Vision System. He is the Founder of MicroDexterity Systems, developing robots for dexterity enhancement for minimally invasive knee and hip replacement, spine surgery, and skull base neurosurgery. He is the President of Infinity Research, Inc., a medical device and avionics consulting company. He has received the Wacker Medal from the Club Jules Gonin, the first Founders Medal from the Vitreous Society, was inducted into the University of Miami School of Medicine Medical Alumni Association Hall of Fame, and was named by Ocular Surgery News as one of the top ten innovators in the past 25 years. He is consistently listed in Best Doctors in America and Becker's Top 34 Ophthalmologists in America. He is a Clinical Professor at the University of Tennessee and an Adjunct Professor at Columbia College of Physicians and Surgeons.

KEYNOTE SPEAKER: MARY MEEKER



Mary Meeker is partner at Kleiner Perkins Caufield & Byers and joined the firm in January 2011. She focuses on investments in the firm's digital practice and helps lead KPCB's Digital Growth Fund, targeting high-growth Internet companies that have achieved rapid adoption and scale. Mary serves on the board of Square and is actively involved in KPCB's investments in Groupon, Legalzoom, Waze, 360buy.com, Spotify, Jawbone, One King's Lane and Trendyol.

From 1991 to 2010 worked at Morgan Stanley and served as managing director and research analyst. Since beginning her career as a securities analyst in 1986, Mary has focused on discovering and understanding emerging technology trends, building relationships with visionary entrepreneurs and supporting category-defining companies during their critical phases of market adoption and growth.

A prolific writer, Mary is the co-author of the industry-defining books *The Internet Report* (1995) and *The Internet Advertising Report* (1996). She is also the co-author of *The Internet Retailing Report* (1997), *The Online Classified Advertising Report: It's About Search/Find/Obtain* (SFO) (2002), *The China Internet Report* (2004), *The Mobile Internet Report* (2009), and *The Technology IPO Yearbooks*. Beyond technology, Mary created USA, Inc. (2011), a non-partisan report/video that looks at the U.S. government (and its financials) from a business perspective. Mary's reports (including her annual Internet Trends presentations) are widely read around the world.

While at Morgan Stanley, Mary covered companies that created more than 200,000 jobs over the past two decades while the companies increased their collective market value by more than US\$900 billion, as of February 2011. These companies include Activision, Adobe, Alibaba, Amazon.com, Apple, Dell, eBay, Electronic Arts, Google, Intuit, Microsoft, priceline.com and Yahoo!. Mary is credited with having a deep understanding of what makes businesses succeed and fail.

Mary graduated from DePauw University with B.A. degree. She also received an M.B.A. from Cornell University and an Honorary Doctor of Letters degree from DePauw.

KEYNOTE SPEAKER: WILLIAM WEI, MD

Professor William I. Wei is the Li Shu Pui Professor of Surgery, Chair in Otorhinolaryngology at The University of Hong Kong, and Assistant Medical Superintendent and Head of Department of Surgery at Hong Kong Sanatorium & Hospital.



Professor Wei graduated in 1974 with an MB,BS from The University of Hong Kong. In 1979, he obtained the FRCSE in general surgery, followed by FACS in 1984 and FRCSE in otorhinolaryngology in 1986. He was granted fellowship of the Hong Kong Academy of Medicine in both otorhinolaryngology and surgery in 1995 and 1997, respectively. In recognition of his distinguished achievements, Professor Wei was elected Fellow of the Royal College of Surgeons of England in 2000, awarded Honorary Fellowship of the Royal Australasian College of Surgeons in 2003, Honorary Fellowship of the Hong Kong College of Otorhinolaryngologists in 2005, Honorary Membership of the German Ear, Nose and Throat Association in 2006, and Honorary Fellowship by the American College of Surgeons in October 2010.

To date, Professor Wei has authored more than 37 book chapters and over 370 publications including 264 articles in peer-reviewed journals, covering the whole range of topics in head and neck surgery. He has also delivered more than 339 invited and keynote lectures in different countries, including the prestigious Eugene Myers International Lecture in 1994, the Hayes Martin Lecture in 2001, the Helmuth Goepfert Lecture in 2007, and the Yearsley Lecture in 2009. He was the only Asian surgeon among the six international leaders who conducted the Head and Neck Education World Tour Program in 2008.

SCHEDULE-AT-A-GLANCE

THURSDAY, FEBRUARY 16, 2012

2:00 pm - 6:00 pm Registration/Speaker Prep

Registration Desk/Speaker Prep (Sunset 1)

FRIDAY, FEBRUARY 17, 2012	
6:30 am – 7:00 am Breakfast/Registration	Registration Desk
7:00 am – 8:00 am BREAKFAST SEMINARS (Technique Oriented)	
 #1: Otology (Middle Fossa) – MODERATOR: Rick Friedman, MD, PhD, PANELISTS: Sam Marzo, MD & Marc Schwartz, MD #2: Sinonasal Malignancy – MODERATOR: Roy Casiano, MD, PANELISTS: Ricardo Carrau, MD & Franco DeMonte, MD #3: Vascular – MODERATOR: Howard Riina, MD, PANELISTS: Murali Guthikonda, MD & Jacques Morcos, MD #4: Brain Tumor (Temporal Bone, Far-Lateral Approach) MODERATOR: Carl Heilman, MD, PANELISTS: James Liu, MD & Chandra Sen, MD 	Sunset 2 Sunset 3/4 Celebrity 1/2 Sunset 5/6
8:15 am – 9:15 am CONCURRENT SESSIONS	
 #1: Vascular – Dealing with Risk: Vascular Injury MODERATOR: Jacques Morcos, MD, PANELISTS: Anand Germanwala, MD, Michael Lawton, MD & Laligam Sekhar, Ml #2: Intracranial Neoplasia – Minimizing Risk: Making Choices for Craniopharyngioma (Consensus Panel) 	Celebrity 1/2 Sunset 2
MODERATOR: John Jane, Jr., MD, PANELISTS: Marvin Bergsneider, MD, Elizabeth Tyler-Kabara, MD & Jeffrey Wisoff,	
#3: Extracranial Neoplasia: Managing Risks of JNA MODERATOR: Ehab Hanna, MD, PANELISTS: Gustavo Nogueira, MD, Carl Snyderman, MD & Lee Zimmer, MD #4: Postoperative Complications	Sunset 3/4 Sunset 5/6
MODERATOR: Emiro Caicedo, MD, PANELISTS: Vijay Anand, MD, Giovanni Danesi, MD & Michael Gleeson, MD	
9:15 am – 10:15 am PLENARY SESSION I	Celebrity 1/2
Managing Risk (Panel of senior skull base surgeons discussing cases) MODERATOR: Anil Nanda, MD, PANELISTS: James Boggan, MD, Michael Gleeson, MD, Joung Lee, MD & William Wei, MD	
10:15 am – 10:30 am Break in Exhibit Hall	Mezzanine
10:30 am – 12:00 pm PLENARY SESSION I	Celebrity 1/2
10:30 am: Presidential Address – <i>Dennis Kraus, MD</i> GUESTS OF HONOR: Michael Gleeson, MD, Anil Nanda, MD & Jatin Shah, MD	
11:00 am: Keynote Lecture #1: Internet Trends + a Dose of 'USA, Inc.' - Mary Meeker	
12:00 pm – 1:00 pm NASBS Business Meeting/Lunch	Celebrity 3
All NASBS members welcome, lunch will be provided. Lunch for nonmembers is available in Exhibit Hall.	
1:00 pm – 2:00 pm CONCURRENT SESSIONS	
#5: Neuro-Otology: Minimizing Risk: Making Choices for Vestibular Schwannoma (Consensus Panel) MODERATOR: Daniel Pieper, MD, PANELISTS: Michael LaRouere, MD, Michael Link, MD & Parthasarathy Thirumala,	
#6: Pituitary – MODERATOR: John Y. K. Lee, MD, PANELISTS: Khaled Aziz, MD, Ricky Madhok, MD & Daniel Prevedello, MD #7: Dural Reconstruction: Dealing with Risk MODERATOR: Ian Witterick, MD, PANELISTS: Peter Neligan, MD, James Netterville, MD & Adam Zanation, MD	Celebrity 1/2 Sunset 3/4
#8: Imaging – MODERATOR: Erin McKean, MD, PANELISTS: Hilda Stambuk, MD, Steve Sullivan, MD & Eugene Yu, MD	Sunset 5/6
2:00 pm – 3:30 pm PROFFERED PAPER SESSIONS	
Proffered Paper Session I: Anterior Cranial Base – MODERATORS: Khaled Aziz, MD & Pete Batra, MD	Sunset 5/6
Proffered Paper Session II: <i>Chordoma</i> – MODERATORS: Gary Gallia, MD & Chris Rassekh, MD Proffered Paper Session III: <i>Endoscopic Techniques</i> – MODERATORS: Jean Eloy, MD & John Y. K. Lee, MD	Sunset 2 Sunset 3/4
Proffered Paper Session IV: General – MODERATORS: Ehab Hanna, MD & Daniel Prevedello, MD	Celebrity 1/2
3:30 pm – 4:00 pm Break in Exhibit Hall	
4:00 pm – 5:30 pm PROFFERED PAPER SESSIONS	
Proffered Paper Session V: <i>H&N Tumors, Endoscopic Techniques</i> – MODERATORS: Ricardo Carrau, MD & Alex Vandergrift Proffered Paper Session VI: <i>Innovative Technologies</i> – MODERATORS: Ricky Madhok, MD & Eric Wang, MD Proffered Paper Session VII: <i>Meningioma</i> – MODERATORS: Ketan Bulsara, MD & Melvin Field, MD Proffered Paper Session VIII: <i>Rehab, Temp Bone</i> – MODERATORS: Peter Costantino, MD & Giovanni Dansei, MD	, MD Sunset 2 Celebrity 1/2 Sunset 3/4 Sunset 5/6
5:30 pm – 7:00 pm Welcome Reception in Exhibit Hall	Mezzanine

SATURDAY, FEBRUARY 18, 2012 6:30 am - 7:00 am **Breakfast/Registration** 7:00 am - 8:00 am BREAKFAST SEMINARS #5: Otology - MODERATOR: John Golfinos, MD, PANELISTS: Roberto Cueva, MD, John Leonetti, MD & J. Thomas Roland, MD Sunset 2 #6: Trauma - MODERATOR: Timothy McCulloch, MD, PANELISTS: Paul Donald, MD, Bob Kellman, MD & Chris Rassekh, MD #7: Intracranial - MODERATOR: Anand Germanwala, MD, PANELISTS: Fred Gentili, MD & Daniel Pieper, MD #8: Brain Tumor - MODERATOR: Alex Vandergrift, MD, PANELISTS: Ossama Al-Mefty, MD & Carl Hardwidge, MD Celebrity 1/2 8:05 am - 10:30 am PLENARY SESSION II Celebrity 1/2 8:05 am: Keynote Lecture #2: The Impact of Emerging Technologies on Skull Base Surgery - Steve Charles, MD 9:00 am: Keynote Lecture #3: Robotic Nasopharyngectomy – William Wei, MD 9:30 am: Skull Base Jeopardy MODERATOR: John Golfinos, MD JUDGES: Juan Fernandez-Miranda, MD, Daniel Fliss, MD & Albert Rhoton, MD TEAM #1: Harshita Pant, MD, PhD, Jatin Shah, MD & Steve Sullivan, MD TEAM #2: John Y. K. Lee, MD, James Liu, MD, William Wei, MD & Lee Zimmer, MD TEAM #3: Emiro Caicedo, MD, Daniel Kelly, MD & Laligam Sekhar, MD TEAM #4: Fred Gentili, MD, Erin McKean, MD & Arturo Solares

10:25 am: Skull Base Journal Update

10:30 am – 11:00 am Break in Exhibit Hall	Mezzanine
11:00 am – 12:00 pm CONCURRENT SESSIONS	
#9: Ophthalmology Potpourri	Sunset 2
MODERATOR: Steven Newman, MD, PANELISTS: Mario Ammirati, MD, Peter Cordeiro, MD & Howard Krauss, MD #10: Intracranial: Managing Risk: Chordoma (Consensus Panel) – MODERATOR: Paul Gardner, MD PANELISTS: Ossama Al-Mefty, MD, Norbert Liebsch, MD, Laligam Sekhar, MD & Chandra Sen, MD	Celebrity 1/2
#11: Extracranial – MODERATOR: Anand Deviah, MD	Sunset 3/4
PANELISTS: Vijay Anand, MD, Pete Batra, MD, Derrick Lin, MD, Eric Wang, MD & Adam Zanation, MD #12: Proffered Papers IX: <i>Sellar SupraSellar</i> – MODERATORS: Marvin Bergsneider, MD & Trevor Hackman, MD	Sunset 5/6
12:00 pm – 1:00 pm Lunch in Exhibit Hall	Mezzanine
1:00 pm – 2:00 pm CONCURRENT SESSIONS	
#13: Otology: Temporal Bone Resection (Consensus Panel) – MODERATOR: Barry Hirsch, MD PANELISTS: Derald Brackmann, MD, Giovanni Danesi, MD, Norbert Liebsch, MD & Chandra Sen, MD	Sunset 2
#14: Intracranial – MODERATOR: Juan Carlos Fernandez-Miranda, MD PANELISTS: Melvin Field, MD & Daniel Kelly, MD	Sunset 3/4
#15: Quality of Life	Sunset 5/6
MODERATOR: Harshita Pant, MD, PANELISTS: Ziv Gil, MD, Stephen Haines, MD & Allan Vescan, MD	
#16: Diagnostic Dilemmas MODERATOR: James Evans, MD, PANELISTS: Ketan Bulsara, MD, Benjamin Judson, MD, Snehal Patel, MD & Marc R	Celebrity 1/2 Rosen, MD
2:00 pm – 3:30 pm PROFFERED PAPER SESSIONS	,
Proffered Papers X: <i>Anatomy</i> – MODERATORS: Juan Carlos Fernandez-Miranda, MD & Arturo Solares, MD Proffered Papers XI: <i>Radiosurgery</i> – MODERATORS: John Leonetti, MD & Thomas Roland, MD Proffered Papers XII: <i>Vascular Lesions</i> – MODERATORS: Anand Germanwala, MD & James Liu, MD Proffered Papers XIII: <i>Otology</i> – MODERATORS: Rick Friedman MD, PhD & Barry Hirsch, MD	Celebrity 1/2 Sunset 2 Sunset 3/4 Sunset 5/6
3:30 pm – 4:00 pm Break in Exhibit Hall	Mezzanine
4:00 pm – 5:30 pm PROFFERED PAPER SESSIONS	
Proffered Papers XIV: Anterior Cranial Base – MODERATORS: Erin McKean, MD & Steve Sullivan, MD Proffered Papers XV: Endoscopic Techniques – MODERATORS: Paul Gardner, MD & Adam Zanation, MD Proffered Papers XVI: General – MODERATOR: Allan Vescan, MD Proffered Papers XVII: Sellar/Suprasellar – MODERATORS: Mario Ammirati, MD & Lee Zimmer, MD	Sunset 2 Sunset 3/4 Celebrity 1/2 Sunset 5/6
7:00 pm – 10:00 pm Social Event	Celebrity 3
It's an offer you can't refuse Come by the juice joint for a flapper-style fling. Provide the password and travel	

back in time for an evening filled with moonshine, jazz and Charleston dancers. Whisper "Skull Base" to enter.

Sunset 3/4 Sunset 5/6

Zoot suits and fedoras encouraged.

SUNDAY, FEBRUARY 19, 2012

7:30 am – 8:00 am Breakfast/Registration	
8:00 am – 9:00 am CONCURRENT SESSIONS	
#17: Training – MODERATOR: Daniel Nuss, MD, PANELISTS: Anil Nanda, MD, Jakakar Nayak, MD & Ian Witterick, MD #18: Perineural Invasion – MODERATOR: Richard Wong, MD PANELISTS: Ehab Hanna, MD, Chris Rassekh, MD & C. Arturo Solares, MD Proferred Papers XVIII: Reconstruction – MODERATORS: Amir Dehdashti, MD & Ziv Gill, MD	Sunset 3/4 Sunset 5/6 Sunset 5/6
9:00 am - 10:00 am CONCURRENT SESSIONS	Sunset 3/0
#19: Cranial Reconstruction – MODERATOR: Lawrence Marentette, MD PANELISTS: Peter Costantino, MD, Trevor Hackman, MD, Kris Moe, MD & Mark Varvares, MD	Celebrity 1/2
#20: Keynote/Panel/Tumor Board etc: "Sometimes, it is better to say no: Deciding when NOT to operate" MODERATOR: Amir Dehdashti, MD, PANELISTS: Paul Donald, MD, Fred Gentili, MD & Daniel Nuss, MD	Celebrity 1/2
Proferred Papers XIX: General – MODERATORS: Harshita Pant, MD & Daniel Pieper, MD	Sunset 5/6
10:00 am – 10:30 am Break in Exhibit Hall	Mezzanine
10:30 am – 12:00 pm PLANERY SESSION	Celebrity 1/2

3D Anatomy Talk – Juan Fernandez-Miranda, MD & Albert Rhoton, MD



PRE-MEETING COURSES

WEDNESDAY/THURSDAY, FEBRUARY 15-16, 2012

*additional registration fee

Practical Course Diessection Worskhop, Open & Endoscopic Approaches to the Skull Base at the Medical Innovations and Training Institute in Henderson, NV

BOTH COURSES: Shuttles will leave promptly from Planet Hollywood at 7:00am. Please meet in hotel lobby for departure.

FEBRUARY 15th: Science Care designates this educational activity for a maximum of **8.5** *AMA PRA Category 1 Credit(s)* $^{\text{TM}}$. Physicians should only claim credit commensurate with the extent of their participation in the activity.

FEBRUARY 16th: Science Care designates this educational activity for a maximum of **8.25** *AMA PRA Category 1 Credit(s)* $^{\text{TM}}$. Physicians should only claim credit commensurate with the extent of their participation in the activity.

This activity has been approved for *AMA PRA Category 1 Credit*™

DOW ONE: FEBRUARY 15, 2012 COURSE CHAIRS: Dr. Vijay Anand & Dr. James Evans 7:50 am Welcome - Vijay Anand, MD 8:00 am Surgical Anatomy and Skull Base Approaches – Juan Fernandez Miranda, MD 8:20 am Sellar and Supra Sellar Approachess – Theodore Schwartz, MD 8:40 am Endoscopic Approaches to Craniopharyngiomas – John Jane, MD 9:00 am Indications and Limitations for Endoscopic Skull Base Surgerys - Brent Senior, MD 9:20 am Decision Making in Meningioma Managements – James Evans, MD 9:40 am Endoscopic Skull Base Reconstruction – Marc Rosen, MD 10:00 am Coffee Break 10:15 am Endoscopic Skull Base Surgery: Quality of Life Evaluations – Edward McCoul, MD Endoscopic Approaches to Infratemporal Fossa and Beyond – Vijay K. Anand, MD 10:30 am Successful Management of Complications of Skull Base Surgeries – Roy Casiano, MD 11:00 am 11:20 am Endoscopic Resection of Sinonasal Malignancys – Ehab Hanna, MD 11:40 am My Most Challenging Cases - MODERATOR: Vijay Anand, MD Roy Casiano, MD, James Evans, MD, John Jane, MD, Marc Rosen, MD, Theodore Schwartz, MD & Brent Senior, MD 12:30 pm Summation – James Evans, MD Lunch 1:30 pm Prosection and Demonstration 2:00 pm Lab Dissection 6:00 pm **Adjourn** Day Two: FEBRUARY 16, 2012 COURSE CHAIRS: Dr. Ehab Hanna & Dr. Jacques Morcos 8:00 am Introductions - Ehab Hanna, MD & Jacques Morcos, MD **ANTERIOR MODULE** 8:10 am Lecture: Anterior Transfacial Approachess - Dennis Kraus, MD & Sandeep Samant, MD Lecture: Cranial Orbital Zygomatic Approachess – Carlos David, MD 8:30 am 8:50 am Dissection Lab 10:30 am Break **MIDDLE MODULE** 10:45 am Lecture: Lateral Preauricular Infratemporal Approachess – Daniel Nuss, MD 11:05 am Lecture: Middle Fossa Approachess – Chandra Sen, MD 11:25 am Dissection Lab Lunch 1:00 pm **POSTERIOR MODULE** 2:00 pm Lecture: Postauricular Transtemporal Approaches. Neurootology Perspectives – Rick Friedman, MD 2:20 pm Lecture: Postauricular Transtemporal Approaches. Neurosurgery Perspectives – Mustafa Baskaya, MD 2:40 pm **Dissection Lab** 4:20 pm **Break & Questions**

Case Presentations by Dr. Ehab Hanna & Dr. Jacques Morcos, to be discussed by panel of invited faculty

4:45 pm

6:00 pm

Shuttle back to hotel

SCIENTIFIC PROGRAM

THURSDAY, FEBRUARY 16, 2012

2:00 pm - 6:00 pm Registration/Speaker Prep

Registration Desk/Speaker Prep (Sunset 1)

#1: Otology (Middle Fossa) – MODERATOR: Rick Friedman, MD, PhD, PANELISTS: Sam Marzo, MD & Marc Schwartz, MD #2: Sinonasal Malignancy – MODERATOR: Roy Casiano, MB, PhD, PANELISTS: Sam Marzo, MD & Franco DeMonte, MD #3: Vascular – MODERATOR: Howard Riina, MD, PANELISTS: Miralia (Buthikonda, MD & Jacques Morcos, MD #4: Brain Tumor (Temporal Bone, Far-Lateral Approach) MODERATOR: Carl Heilman, MD, PANELISTS: James Liu, MD & Chandra Sen, MD #1: Vascular – Dealing with Risk: Vascular Injury MODERATOR: Carl Heilman, MD, PANELISTS: James Liu, MD & Chandra Sen, MD #2: Intracranial Neoplasia – Minimizing Risk: Making Choices for Craniopharyngioma (Consensus Panel) Sunset 3/ MODERATOR: John Jane, Jr., MD, PANELISTS: Marvin Bergsneider, MD, Elizabeth Tyler-Kabara, MD & Jeffrey Wisoff, MD #3: Extracranial Neoplasia: Managing Risk: Making Choices for Craniopharyngioma (Consensus Panel) Sunset 3/ MODERATOR: John Jane, Jr., MD, PANELISTS: Gustavo Nogueira, MD, Carl Snyderman, MD & Lee Zimmer, MD #4: Postoperative Complications MODERATOR: Emiro Caicedo, MD, PANELISTS: Vijay Anand, MD, Giovanni Danesi, MD & Michael Gleeson, MD #4: Postoperative Complications Moderator: Emiro Caicedo, MD, PANELISTS: Vijay Anand, MD, Giovanni Danesi, MD & Michael Gleeson, MD #5: 10:15 am - 10:15 am PLENARY SESSION Celebrity 1/ Managing Risk (Panel of senior skull base surgeons discussing cases) MODERATOR: Amil Nanda, MD, PANELISTS: James Boggan, MD, Michael Gleeson, MD, Joung Lee, MD & William Wei, MD #6: Detail Address – Dennis Kraus, MD GUESTS OF HONOR: Michael Gleeson, MD, Anil Nanda, MD & Jatin Shah, MD 11:00 am: Keynote Lecture #1: Internet Trends + a Dose of 'USA, Inc' – Mary Meeker ** **Celebrity 1/**	FRID	AY, FEBRUA	RY 17, 2012	
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#2: Sinonasal Malignancy – MODERATOR: Roy Casiano, MD, PANELISTS: Ricardo Carrau, MD & Franco DeMonte, MD #3: Vascular – MODERATOR: Howard Riina, MD, PANELISTS: Murali Guthikonda, MD & Jacques Morcos, MD #4: Brain Tumor (Temporal Bone, Far-Lateral Approach) MODERATOR: Carl Heilman, MD, PANELISTS: James Liu, MD & Chandra Sen, MD #1: Vascular – Dealing with Risk: Vascular Injury MODERATOR: Jacques Morcos, MD, PANELISTS: Anand Germanwala, MD, Michael Lawton, MD & Laligam Sekhar, MD #2: Intracranial Neoplasia – Minimizing Risk: Making Choices for Craniopharyngioma (Consensus Panel) MODERATOR: Janae, Jr., MD, PANELISTS: Marvin Bergsneider, MD, Elizabeth Tyler-Kabara, MD & Jeffrey Wisoff, MD #3: Extracranial Neoplasia: Managing Risks of JNA MODERATOR: Ehab Hanna, MD, PANELISTS: Gustavo Nogueira, MD, Carl Snyderman, MD & Lee Zimmer, MD #4: Postoperative Complications MODERATOR: Emiro Caicedo, MD, PANELISTS: Gustavo Nogueira, MD, Giovanni Danesi, MD & Michael Gleeson, MD #9:15 am – 10:15 am PLENARY SESSION 1 Managing Risk (Panel of senior skull base surgeons discussing cases) MODERATOR: Anil Manda, MD, PANELISTS: James Boggan, MD, Michael Gleeson, MD, Joung Lee, MD & William Wei, MD #10:15 am – 10:30 am Presidential Address – Dennis Kraus, MD GUESTS OF HONOR: Michael Gleeson, MD, Anil Nanda, MD & Jatin Shah, MD 11:00 am: Keynote Lecture #1: Internet Trends + a Dose of 'USA, Inc.' – Mary Meeker 12:00 pm – 1:00 pm ASBS Business Meeting/Lunch All NASBS members welcome, lunch will be provided. Lunch for nonmembers is available in exhibit hall. **Celebrity 1* **Sunset 3* **Sunset 4* **WODERATOR: Daniel Pieper, MD, PANELISTS: Michael LaRouere, MD, Michael Link, MD & Parthasarathy Thirumala, MD #6: Pituitary – MODERATOR: John Y, K. Lee, MD, PANELISTS: Michael Ada, MD, Ricky Madhok, MD & Daniel Prevedello, MD #7: Dural Reconstruction: Dealing with Risk MODERATOR: In Michael LaRouere, MD, Michael Link, MD & Adam Zanation, MD #8: Imaging – MODERATOR: Frin McKean, MD, PANELISTS: Hidad Stambuk, MD, Steve Sullivan, MD & E	7:00 ar	n – 8:00 am	BREAKFAST SEMINARS (Technique Oriented)	
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2:00 pm – 3:30 pm PROFFERED PAPER SESSIONS	#6 #7	MODERATOR: 5: Pituitary – M 7: Dural Recons MODERATOR: 1	Daniel Pieper, MD, PANELISTS: Michael LaRouere, MD, Michael Link, MD & Parthasarathy Thirumala, ODERATOR: John Y. K. Lee, MD, PANELISTS: Khaled Aziz, MD, Ricky Madhok, MD & Daniel Prevedello, MD struction: Dealing with Risk Ian Witterick, MD, PANELISTS: Peter Neligan, MD, James Netterville, MD & Adam Zanation, MD	Sunset 2 MD Celebrity 1/2 Sunset 3/4 Sunset 5/6
Proffered Paper Session I: Anterior Cranial Base – MODERATORS: Khaled Aziz, MD & Pete Batra, MD Sunset 5/				,
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001 MINIMALLY INVASIVE EYELID INCISION FRONTO-ORBITAL CRANIOTOMY APPROACH TO THE ANTERIOR CRANIAL FOSSA: LESSONS TO LEARN IN FIFTY-EIGHT CASES – *Khaled Aziz, Alexander Yu (presenter), Erik Happ, Allegheny General Hospital, Drexel College of Medicine*

002 SURGERY VERSUS WATCHFUL WAITING IN PATIENTS WITH CRANIOFACIAL FIBROUS DYSPLASIA- A META-ANALYSIS – Moran Amit (presenter), Michael T. Collins, Edmond J. FitzGibbon, John A. Butman, Dan M. Fliss, Ziv Gil, Tel Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel Aviv University, National Institutes of Health, Bethesda, Maryland, USA

003 THE MIDLINE BIORBITOFRONTAL CRANIOTOMY APPROACH TO MENINGIOMAS OF THE OLFACTORY GROOVE AND PLANUM SPHENOIDALE – William R. Miele (presenter), Carl B. Heilman, Department of Neurosurgery, Tufts Medical Center & Tufts University School of Medicine

- 004 QUALITY-OF-LIFE IMPROVEMENTS AFTER ENDOSCOPIC SKULL BASE SURGERY FOR NON-PITUITARY TUMORS Edward D. McCoul (presenter), Vijay K. Anand, Jeffrey C. Bedrosian, Theodore H Schwartz, Weill Cornell Medical College, New York, NY
- 005 COMPARISON OF OUTCOMES FOR ANTERIOR COMMUNICATING ARTERY ANEURYSMS CLIPPED VIA A BASAL INTERHEMISPHERIC APPROACH VS. A PTERIONAL APPROACH Ravi H Gandhi (presenter), Alex Riccio, Constantine E. Plakas, Junichi Yamamoto, Alan S. Boulos, Albany Medical Center
- 006 ACCESSING THE PARAPHARYNGEAL SPACE AND INFRATEMPORAL FOSSA SKULL BASE USING ROBOTIC SURGERY: AN ANATOMIC DESCRIPTIONS AND PRELIMINARY CLINICAL SERIES Grace G. Kim (presenter), Adam M. Zanation, University of North Carolina Hospitals-Chapel Hill
- 007 LONG TERM OUTCOME OF ESTHESIONEUROBLASTOMA: HYAMS GRADE PREDICTS PATIENT SURVIVAL Jamie J. Van Gompel (presenter), Caterina Giannini, Kerry D. Olsen, Eric Moore, Manolo Piccirilli, Robert L. Foote, Jan C. Buckner, Michael J. Link, Mayo Clinic Rochester, MN
- 008 FUNCTIONAL OUTCOMES OF INDIVIDUALS UNDERGOING SURGERY OF THE INFRATEMPORAL FOSSA, A 14 YEAR EXPERIENCE Rohit Garg (presenter), David B. Keschner, Jivianne Lee, Joseph Brunworth, Eugene Chu, Marc Vanefsky, Kenneth Krantz, Sooho Choi, Terry Shibuya, Southern California Permanente Medical Group
- 009 PARANASAL SINUS AND SKULL BASE FIBRO-OSSEOUS LESIONS: WHEN IS BIOPSY INDICATED FOR DIAGNOSIS? Pete Batra (presenter), Guy Efune, Carlos L Perez, Liyue Tong, University of Texas Southwestern Medical Center

Proffered Paper Session II: Chordoma - MODERATORS: Gary Gallia, MD & Chris Rassekh, MD

Sunset 2

- **010** ABERRANT MTOR REGULATION IN CHORDOMA Anthony C. Wang, David B. Altshuler (presenter), Shawn L. Hervey-Jumper, Khoi D. Than, Xing Fan, Karin M. Muraszko, Erin L. McKean, Stephen E. Sullivan, University of Michigan
- 011 ESTABLISHMENT AND INITIAL CHARACTERIZATION OF A PRIMARY HUMAN CHORDOMA XENOGRAFT MODEL I-Mei Siu, Vafi Salmasi, Brent A. Orr, Qi Zhao, Zev A. Binder, Douglas D. Reh, Masaru Ishii, Christine L. Hann, Gary L. Gallia (presenter), Johns Hopkins Hospital
- 012 CHONDROID CHORDOMA: IS IT REALLY A CHONDROSARCOMA AND DOES IT MATTER? Christopher H. Rassekh (presenter), Courtney B. Shires, Virginia A. Livolsi, Laurie A. Loevner, Sean M. Grady, Bert W. O'Malley, University of Pennsylvania
- 013 SKULL BASE CHORDOMA: RESULTS AND OUTCOMES OF MINIMALLY INVASIVE APPROACHES IN A SINGLE INSTITUTION Waleed M. Abuzeid (presenter), Nadeem Akbar, Stephen E. Sullivan, Lawrence J. Marentette, Erin L. McKean, University of Michigan Health System
- 014 CLIVUS CHORDOMA Ibrahim Sbeih (presenter), Ibn Alhytham Hospital
- **015** MICRO-NEUROSURGICAL MANAGEMENT OF CAVERNOUS SINUS MENINGIOMA: SINGLE SURGEON EXPERIENCE FROM LOUISIANA STATE UNIVERSITY, SHREVEPORT Jai D. Thakur (presenter), Vijaykumar Javalkar, Shashikant Patil, Imad S. Khan, Mathew Burton, Anil Nanda, LSUHSC-Shreveport
- **016** SURGICAL RESULTS OF 32 FORAMEN MAGNUM MENINGIOMAS WITH A SPECIAL REFERENCE TO VASCULAR COMPLICATIONS Soichi Oya, Burak Sade, Bjorn Lobo (presenter), Joung H. Lee, Cleveland Clinic Foundation
- **017** LONG TERM CLINICAL AND SURGICAL OUTCOMES OF PATIENTS WITH INTRACRANIAL MENINGIOMAS Winward Choy (presenter), Won Kim, Ashley Osborne, Marko Spasic, Nicole Cremer, Isaac Yang, Department of Neurological Surgery, University of California Los Angeles, David Geffen School of Medicine at UCLA
- **018** SURGICAL MANAGEMENT OF JUGULAR FORAMEN MENINGIOMA Junting Zhang, Jie Tang (presenter), Zhen Wu, Liwei Zhang, Guijun Jia, Xinru Xiao, Sumin Geng, Dabiao Zhou, Beijing Tiantan Hospital, China

Proffered Paper Session III: Endoscopic Techniques – MODERATORS: Jean Eloy, MD & John Y. K. Lee, MD

Sunset 3/4

- 019 ENDONASAL ENDOSCOPIC APPROACHES TO LESIONS INVADING THE CAVERNOUS SINUS: REACHING EQUIPOISE Graeme F. Woodworth, Edward McCoul, Vijay Anand, Theodore H. Schwartz (presenter), Weill Cornell Medical College, Johns Hopkins
- **020** DIRECT HEALTHCARE COST ANALYSIS OF ENDOSCOPIC COMPARED WITH SUBLABIAL TRANSSEPTAL PITUITARY SURGERY Candace A. Mitchell (presenter), Adam M. Zanation, Brent A. Senior, Matthew G. Ewend, Charles S. Ebert, Jr., University of North Carolina at Chapel Hill
- **021** ENDOSCOPIC NASOSEPTAL FLAP REPAIR OF SKULL BASE DEFECTS: IS ADDITION OF A DURAL SEALANT NECESSARY? Jean Anderson Eloy (presenter), Arjuna B. Kuperan, Mark E. Friedel, Chirag D. Patel, Pratik A. Shukla, Osama J. Choudhry, James K. Liu, Center for Skull Base and Pituitary Surgery, Neurological Institute of New Jersey, University of Medicine and Dentistry of New Jersey, Newark, NJ
- **022** PEDICLED NASOSEPTAL FLAP PRESERVATION FOR ENDOSCOPIC RECONSTRUCTION OF THE CRANIAL BASE: TECHNIQUE AND APPROACH Seth E. Kaplan (presenter), Donald D. Beahm, Tyler J. Kenning, Christopher J. Farrell, James J. Evans, Marc R. Rosen, Thomas Jefferson University
- **023** ENDOSCOPIC ENDONASAL VERSUS MICROSCOPIC TRANSSPHENOIDAL AND OPEN TRANSCRANIAL APPROACHES FOR GIANT PITUITARY ADENOMAS Daniel M. Raper, Ricardo J. Komotar, Robert M. Starke (presenter), Vijay K. Anand, Theodore H. Schwartz, Royal North Shore Hospital; University of Miami; University of Virginia; Weill Cornell Medical College

024 THE ROLE OF ENDOSCOPIC ENDONASAL APPROACH IN THE TREATMENT OF CAVERNOUS SINUS MENINGIOMA – Daniel M. Prevedello, Ammar Shaikhouni (presenter), Rodrigo Mafaldo, Leo Ditzel Filho, Daniele de Lara, Brad Otto, Ricardo Carrau, The Ohio State University Medical Center

025 DECISION ANALYSIS: ENDOSCOPIC VERSUS OPEN RESECTION OF TUBERCULUM SELLAE MENINGIOMAS – Leif-Erik Bohman, Sherman Stein, Jason G. Newman, James Palmer, Nithin Adappa, Aamir Khan, TT Sitterley, Diana Chang, John Y Lee (presenter), University of Pennsylvania

Proffered Paper Session IV: General - MODERATORS: Ehab Hanna, MD & Daniel Prevedello, MD

Celebrity 1/2

026 A PLAUSIBLE MECHANISM FOR OPTIC NERVE DAMAGE: A COMPARATIVE STUDY OF HEAT TRANSFER DURING OPTIC CANAL DECOMPRESSION – *Brian C Kelley (presenter), MyLe Shaw, Jason Sokol, Paul J Camarata, University of Kansas*

027 TRANSSPHENOIDAL SURGERY FOR ACROMEGALY: METHODS OF SURGICAL RESECTION, REMISSION USING MODERN CRITERIA, AND PREDICTORS OF OUTCOME – Robert M. Starke (presenter), Sebastian Koga, Carrie L. Pledger, Spencer C. Payne, Edward H. Oldfield, John J. Jane, Jr, University of Virginia

028 SURGICAL TREATMENT OF TRIGEMINAL NEURALGIA WITHOUT VASCULAR COMPRESSION: 20 YEARS OF EXPERIENCE – Rogelio Revuelta-Gutierrez, Miguel A. Lopez-Gonzalez (presenter), Jose L Soto-Hernandez, National Institute of Neurology and Neurosurgery (Mexico City), The Cleveland Clinic Foundation (Cleveland, OH)

029 COMPARATIVE OUTCOME ANALYSIS OF SURGICAL PROCEDURES PERFORMED IN ACUTE AND INTERMEDIATE FACIAL PARALYSIS – Yury A. Shulev (presenter), Alexander V. Trashin, Vladimir L. Rychkov, City Hospital #2, Medical Academy of Postgraduate Studies, Saint-Petersburg, Russia

030 EXTRACRANIAL TO INTRACRANIAL BYPASS FOR TREATMENT OF COMPLEX, LARGE AND GIANT ANEURYSMS OF THE MIDDLE CEREBRAL ARTERY:AN ANALYSIS OF 27 YEARS OF EXPERIENCE IN 26 PATIENTS – Yashar Kalani (presenter), Peter Nakaji, Yin Hu, Azam Ahmed, Robert Spetzler, Barrow Neurological Institute

031 ENDOSCOPIC ENDONASAL PITUITARY SURGERY: PATIENT AND SOCIETAL COSTS OF SURGICAL EDUCATION – Raj C. Dedhia (presenter), Christopher Lord, Carlos Pinheiro-Neto, Juan C. Fernandez-Miranda, Eric W. Wang, Paul A. Gardner, Carl H. Snyderman, University of Pittsburgh

032 EARLY MORNING CORTISOL LEVELS AS PREDICTORS OF SHORT AND LONG-TERM ADRENAL FUNCTION AFTER ENDONASAL TRANSSPHENOIDAL SURGERY FOR PITUITARY ADENOMAS AND RATHKE'S CLEFT CYSTS – Nancy McLaughlin (presenter), Pejman Cohan, Philip Barnett, Amy Eisenberg, Charlene Chaloner, Daniel F. Kelly, Brain Tumor Center, John Wayne Cancer Institute at Saint John's Health Center, Santa Monica, CA; Department of Medicine, UCLA School of Medicine, Los Angeles, CA

3:30 pm – 4:00 pm

Break in Exhibit Hall

4:00 pm - 5:30 pm

PROFFERED PAPER SESSIONS

Proffered Paper Session V: H&N Tumors, Endoscopic Techniques – MODERATORS: Ricardo Carrau, MD & Alex Vandergrift, MD Sunset 2

033 ENDOSCOPIC ENDONASAL TRANSPTERYGOID NASOPHARYNGECTOMY – S. Al-Sheibani, A. Zanation, R. L. Carrau (presenter), D. M. Prevedello, C. H. Snyderman, B. A. Otto, M. Old, The Ohio State University Medical Center, University of North Carolina, Umiversity of Pittsburgh, University of Ottawa

034 PROTON THERAPY OF CANCERS OF THE NASAL CAVITY AND PARANASAL SINUSES – THE UFPTI EXPERIENCE – Robert S. Malyapa (presenter), William M. Mendenhall, Daniel Yeung, Craig McKenzie, Zuofeng Li, Chris G Morris, Nancy P. Mendenhall, Paul Okunieff, University of Florida Proton Therapy Institute, Jacksonville, Florida, USA

035 CHONDROSARCOMAS OF THE HEAD AND NECK: A 50 YEAR REVIEW – James P O'Neill (presenter), Justin Elder, Jeffrey C. Liu, Ian Ganly, Snehel Patel, Mark Bilsky, Dennis Kraus, Jatin P Shah, Memorial Sloan Kettering Cancer Center

036 SMALL MOLECULE INHIBITOR OF CBP/BETA-CATENIN SIGNALING ENHANCED RADIATION SENSITIVITY IN HEAD AND NECK SQUAMOUS CELL CARCINOMA – Vicky Yamamoto (presenter), Rohit Khanna, Michael Kahn, Vijay Kalra, Uttam Sinha, Keck School of Medicine of USC

037 INCIDENCE AND TIMING OF NECK METASTASES IN ESTHESIONEUROBLASTOMA – Victoria E. Banuchi (presenter), Luc Morris, Mark H. Bilsky, Jatin P. Shah, Dennis H. Kraus, Head and Neck Service, Memorial Sloan Kettering Cancer Center, New York, NY

038 THE USE OF RADIOFREQUENCY ABLATION FOR THE REMOVAL OF JUVENILE NASOPHARYNGEAL ANGIOFIBROMA IN CHILDREN – Matthew Whitley (presenter), Brian Dunham, Ken Kazahaya, Children's Hospital of Philadelphia

039 LOSS OF PTEN EXPRESSION IN SINONASAL SQUAMOUS CELL CARCINOMA – Michelle D. Williams (presenter), Diana Bell, Ehab Y. Hanna, University of Texas MD Anderson Cancer Center

040 ENDOSCOPIC ENDONASAL TRANSCRIBRIFORM APPROACH FOR ANTERIOR SKULL BASE TUMORS INVOLVING THE CRIBRIFORM PLATE: INDICATIONS, TECHNIQUES, AND RESULTS IN 13 PATIENTS – Smruti K. Patel, Mickey L. Smith, Osamah J. Choudhry, Jean Anderson Eloy, James K. Liu (presenter), Center for Skull Base Surgery, Neurological Institute of New Jersey, Department of Neurological Surgery, Division of Otolaryngology, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, New Jersey

041 NAVIGATED TRANSCONJUNCTIVAL ENDOSCOPIC APPROACHES TO THE ORBIT – Guenther C. Feigl, Boris Krischek (presenter), Rainer Ritz, Kristofer Ramina, Andreas Korn, Marcos Tatagiba, University Hospital Tuebingen, Department of Neurosurgery, Department of Neuroradiology, Tuebingen, Germany

- 033 ENDOSCOPIC ENDONASAL TRANSPTERYGOID NASOPHARYNGECTOMY S. Al-Sheibani, A. Zanation, R. L. Carrau (presenter), D. M. Prevedello, C. H. Snyderman, B. A. Otto, M. OLd, The Ohio State University Medical Center, University of North Carolina, Umiversity of Pittsburgh, University of Ottawa
- 034 PROTON THERAPY OF CANCERS OF THE NASAL CAVITY AND PARANASAL SINUSES THE UFPTI EXPERIENCE Robert S. Malyapa (presenter), William M. Mendenhall, Daniel Yeung, Craig McKenzie, Zuofeng Li, Chris G. Morris, Nancy P. Mendenhall, Paul Okunieff, University of Florida Proton Therapy Institute, Jacksonville, Florida, USA
- 035 CHONDROSARCOMAS OF THE HEAD AND NECK: A 50 YEAR REVIEW James P O'Neill (presenter), Justin Elder, Jeffrey C. Liu, Ian Ganly, Snehel Patel, Mark Bilsky, Dennis Kraus, Jatin P. Shah, Memorial Sloan Kettering Cancer Center
- 036 SMALL MOLECULE INHIBITOR OF CBP/BETA-CATENIN SIGNALING ENHANCED RADIATION SENSITIVITY IN HEAD AND NECK SQUAMOUS CELL CARCINOMA Vicky Yamamoto (presenter), Rohit Khanna, Michael Kahn, Vijay Kalra, Uttam Sinha, Keck School of Medicine of USC
- 037 INCIDENCE AND TIMING OF NECK METASTASES IN ESTHESIONEUROBLASTOMA Victoria E. Banuchi (presenter), Luc Morris, Mark H. Bilsky, Jatin P. Shah, Dennis H. Kraus, Head and Neck Service, Memorial Sloan Kettering Cancer Center, New York, NY
- 038 THE USE OF RADIOFREQUENCY ABLATION FOR THE REMOVAL OF JUVENILE NASOPHARYNGEAL ANGIOFIBROMA IN CHILDREN Matthew Whitley (presenter), Brian Dunham, Ken Kazahaya, Children's Hospital of Philadelphia
- 039 LOSS OF PTEN EXPRESSION IN SINONASAL SQUAMOUS CELL CARCINOMA Michelle D. Williams (presenter), Diana Bell, Ehab Y. Hanna, University of Texas MD Anderson Cancer Center
- **040** ENDOSCOPIC ENDONASAL TRANSCRIBRIFORM APPROACH FOR ANTERIOR SKULL BASE TUMORS INVOLVING THE CRIBRIFORM PLATE: INDICATIONS, TECHNIQUES, AND RESULTS IN 13 PATIENTS Smruti K. Patel (presenter), Mickey L. Smith, Osamah J. Choudhry, Jean Anderson Eloy, James K. Liu, Center for Skull Base Surgery, Neurological Institute of New Jersey, Department of Neurological Surgery, Division of Otolaryngology, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, New Jersey
- 041 NAVIGATED TRANSCONJUNCTIVAL ENDOSCOPIC APPROACHES TO THE ORBIT Guenther C. Feigl (presenter), Boris Krischek, Rainer Ritz, Kristofer Ramina, Andreas Korn, Marcos Tatagiba, University Hospital Tuebingen, Department of Neurosurgery, Department of Neuroradiology, Tuebingen Germany

Proffered Paper Session VII: Meningioma - MODERATORS: Ketan Bulsara, MD & Melvin Field, MD

Sunset 3/4

- **051** POSTERIOR CAVERNOUS ANTERIOR TRANSPETROSAL POSTEROMEDIAL RHOMBOID (DOLENC-KAWASE RHOMBOID) APPROACH TO POSTERIOR CAVERNOUS AND PETROCLIVAL LESIONS SURI ASHISH (presenter), All India Institute of Medical Sciences, New Delhi, India
- 052 IDENTIFYING RNA AND PROTEIN EXPRESSION PROFILE OF BONE INVADING AND NON-INVADING MENINGIOMAS Shahrzad Jalali, Takafumi Wataya, Sidney Croul, Gelareh Zadeh (presenter), Division of Neurosurgery, Toronto Western Hospital, University of Toronto
- 053 MENINGIOMAS INVOLVING THE DURAL VENOUS SINUSES: SURGICAL OUTCOME IN 118 PATIENTS George Al shamy (presenter), Loyola Gressot, Dima Suki, Raymond Sawaya, Franco Demonte, Nicholas B Levine, The department of neurosurgery at The University of Texas M. D. Anderson Cancer Center and Baylor College of Medicine
- **054** LONG-TERM OUTCOMES OF SURGICAL TREATMENT AND PREDICTING THE PROBABILITY OF SKULL BASE MENINGIOMAS RECURRENCE Yury A Shulev (presenter), Ovanes R Akobyan, City Hospital # 2, Medical Academy of Postgraduate Studies, Saint-Petersburg, Russia
- 055 CLINICAL CHARACTERISTICS AND SURGICAL MANAGEMENT OF MENINGIOMAS INVADING DURAL SINUSES Joshua W. Osbun (presenter), Alessandra Mantovani, Salvatore DiMaio, Michael R. Levitt, Manuel Ferreira, Laligam N. Sekhar, The University of Washington, Department of Neurological Surgery
- **056** BONE INVASION IN SKULL BASE MENINGIOMAS RESECTED BY EXPANDED ENDONASAL ENDOSCOPIC APPROACHES Leo F. Ditzel Filho (presenter), Danielle de Lara, Rodrigo C Mafaldo, Matthew O. Old, Bradley A. Otto, Ricardo L. Carrau, Daniel M. Prevedello, Departments of Neurosurgery and Otolaryngology, The Ohio State University
- **057** COMPUTER AIDED VOLUMETRIC ANALYSIS AS A SENSITIVE TOOL FOR THE MANAGEMENT OF INCIDENTAL MENINGIOMAS *Victor Chang (presenter), Jack Rock, Henry Ford Hospital*
- **058** EVALUATION OF MOLECULAR ALTERATIONS IN PETROCLIVAL MENINGIOMAS AND THEIR CORRELATION WITH EXTENT OF TUMOUR RESECTION Vaishali Suri (presenter), Sawan Kumar, Laxmi Mohan, Utkarsh Bhagat, Ashish Suri, MC Sharma, Chitra Sarkar, All India Institute of Medical Sciences
- 059 PETROCLIVAL MENINGIOMAS Ibrahim Sbeih (presenter), Ibn Alhytham Hospital

Proffered Paper Session VIII: Rehab, Temp Bone - MODERATORS: Peter Costantino, MD & Giovanni Dansei, MD

Sunset 5/6

060 FACIAL REANIMATION WITH MASSETERIC-FACIAL NERVE ANASTOMOSIS FOLLOWING SKULL BASE SURGERY – *Nobutaka Yoshioka (presenter), Saiseikai Nakatsu Hospital*

061 DETAILED ANALYSIS OF NEUROLOGICAL STATUS AND FUNCTIONAL OUTCOME AFTER SPINAL ACCESSORY NERVE-FACIAL NERVE ANASTOMOSIS: COMPARISON VERSUS OTHER REINNERVATION PROCEDURES IN REPORTED SERIES – Alexander V Trashin (presenter), Yury A Shulev, Vladimir L Rychkov, City Hospital #2, Medical Academy of Postgraduate Studies, Saint-Petersburg, Russia

062 MICROVASCULAR FREE TISSUE TRANSFER FOR FACIAL REANIMATION OF THE PARALYZED FACE – Amy L. Pittman (presenter), John P. Leonetti, Sam J. Marzo, Douglas Anderson, Darl Vandevender, Richard Borrowdale, Loyola University Medical Center

063 PRACTICAL APPROACH TO MICROVASCULAR RECONSTRUCTION OF SIGNIFICANT SKULL BASE DEFECTS – Matthew Old, Kiran Kakarala (presenter), Amit Agrawal, Enver Ozer, Ricardo Carrau, Mario Ammirati, Daniel Prevedello, Theodoros Teknos, The Ohio State University

064 GRADING FACIAL NERVE FUNCTION FOLLOWING COMBINED STATIC AND MIMETIC SURGICAL TECHNIQUES – *Joshua M. Sappington (presenter), John P. Leonetti, Sam J. Marzo, Douglas Anderson, Loyola University Medical Center*

065 MAGNETIC RESONANCE IMAGING AFTER TRANSLABYRINTHINE COMPLETE EXCISION OF VESTIBULAR SCHWANNOMAS – *James R. Tysome (presenter), David A. Moffat, Cambridge University Hospitals*

066 ENDOSCOPIC ENDONASAL APPROACH TO CHOLESTEROL GRANULOMAS OF THE PETROUS APEX: A SERIES OF 17 PATIENTS – Alessandro Paluzzi (presenter), Matthew Tormenti, Maria Koutourousiou, Carlos D. Pinheiro-Neto, Juan C. Fernandez-Miranda, Paul Gardner, Carl Snyderman, Center for Skull Base Surgery, University of Pittsburgh School of Medicine, Pittsburgh, PA

067 COMPARATIVE ANALYSIS OF THE TRANSCRANIAL "FAR LATERAL" VERSUS THE ENDOSCOPIC ENDONASAL "FAR MEDIAL" APPROACH: SURGICAL ANATOMY AND CLINICAL ILLUSTRATION – Arnau F. Benet, Daniel M. Prevedello, Jordina Rincon-Torroella, Ricardo L. Carrau, Juan Carlos Fernandez-Miranda, Leo F. Ditzel Filho (presenter), Alberto Prats-Galino, Amin B. Kassam, Departments of Neurosurgery and Otolaryngology, University of Pittsburgh/The Ohio State University, USA, University of Ottawa, Canada, Surgical Neuroanatomy Lab, University of Barcelona, Spain

5:30 pm – 7:00 pm

Welcome Reception in Exhibit Hall

Mezzanine

SATURDAY, FEBRUARY 18, 2012

6:30 am – 7:00 am Breakfast/Registration
7:00 am – 8:00 am BREAKFAST SEMINARS

#5: Otology – MODERATOR: John Golfinos, MD, PANELISTS: Roberto Cueva, MD, John Leonetti, MD & J. Thomas Roland, MD #6: Trauma – MODERATOR: Timothy McCulloch, MD, PANELISTS: Paul Donald, MD, Bob Kellman, MD & Chris Rassekh, MD Sunset 3/4

#7: Intracranial – MODERATOR: Anand Germanwala, MD, PANELISTS: Fred Gentili, MD & Daniel Pieper, MD

Sunset 5/6

#8: Brain Tumor – MODERATOR: Alex Vandergrift, MD, PANELISTS: Ossama Al-Mefty, MD & Carl Hardwidge, MD

Celebrity 1/2

8:05 am – 10:30 am PLENARY SESSION II

Celebrity 1/2

8:05 am: Keynote Lecture #2: The Impact of Emerging Technologies on Skull Base Surgery - Steve Charles, MD

9:00 am: Keynote Lecture #3: Robotic Nasopharyngectomy – William Wei, MD

9:30 am: Skull Base Jeopardy

MODERATOR: John Golfinos, MD, JUDGES: Juan Fernandez-Miranda, MD, Daniel Fliss, MD & Albert Rhoton, MD

TEAM #1: Harshita Pant, MD, Jatin Shah, MD, PhD & Steve Sullivan, MD

TEAM #2: John Y. K. Lee, MD, James Liu, MD, William Wei, MD & Lee Zimmer, MD

TEAM #3: Emiro Caicedo, MD, Daniel Kelly, MD & Laligam Sekhar, MD

TEAM #4: Fred Gentili, MD, Erin McKean, MD & Arturo Solares

10:25 am: Skull Base Journal Update

10:30 am - 11:00 am Break in Exhibit Hall

Mezzanine

11:00 am - 12:00 pm **CONCURRENT SESSIONS**

#9: Ophthalmology Potpourri

Sunset 2

MODERATOR: Steven Newman, MD, PANELISTS: Mario Ammirati, MD, Peter Cordeiro, MD & Howard Krauss, MD

#10: Intracranial: Managing Risk: Chordoma (Consensus Panel) – MODERATOR: Paul Gardner, MD PANELISTS: Ossama Al-Mefty, MD, Norbert Liebsch, MD, Laligam Sekhar, MD & Chandra Sen, MD

Celebrity 1/2

#11: Extracranial – MODERATOR: Anand Deviah, MD

Sunset 3/4

PANELISTS: Vijay Anand, MD, Pete Batra, MD, Derrick Lin, MD, Eric Wang, MD & Adam Zanation, MD

#12: Proffered Papers IX: Sellar SupraSellar - MODERATORS: Marvin Bergsneider, MD & Trevor Hackman, MD

Sunset 5/6

068 LONG-TERM QUALITY OF LIFE OUTCOMES IN MINIMALLY INVASIVE PITUITARY SURGERY – Rounak B. Rawal (presenter), Adam M. Zanation, Brent A. Senior, Matthew G. Ewend, Charles S. Ebert, Department of Otolaryngology/Head and Neck Surgery and Division of Neurosurgery, University of North Carolina Hospitals

069 WEIGHT PROFILE IN CHILDREN FOLLOWING ENDOSCOPIC ENDONASAL APPROACH TO CRANIOPHARYNGIOMA – Kimberly Foster, Maria Koutourousiou, Matthew Tormenti, Nii Addo, Carl Snyderman, Elizabeth Tyler-Kabara (presenter), Paul Gardner, University of Pittsburgh Department of Neurosurgery

070 HIGH INCIDENCE OF DURAL TUMOR INFILTRATION IN ENDOCRINE ACTIVE PITUITARY TUMORS WITHOUT MRI EVIDENCE OF CAVERNOUS SINUS INVASION – Marvin Bergsneider (presenter), Marilene B. Wang, Jeffrey Suh, Anthony Heaney, Tracie Pham, William Yong, UCLA

071 SHORT-TERM RISK OF RECURRENCE OF SURGICALLY TREATED, RADIOTHERAPY-NAIVE PITUITARY ADENOMAS – Mark P. Piedra (presenter), Nicholas D. Coppa, Aclan Dogan, Chris Yedinak, Jessica Brzana, Peter E. Andersen, Johnny B. Delashaw, Maria Fleseriu, Oregon Health & Science University

072 THE RELEVANCE OF ACTH MONITORING DURING SURGICAL MANAGEMENT OF CUSHING'S DISEASE – Daniel M. Prevedello, Danielle de Lara (presenter), Leo F. S. Ditzel Filho, Rodrigo C. Mafaldo, Bradley A. Otto, Ricardo L. Carrau, The Ohio State University Medical Center

073 PREDICTIVE VALUE OF EARLY POSTOPERATIVE GROWTH HORMONE LEVELS IN DETERMINING LONG-TERM BIOCHEMICAL CURE OF ACROMEGALY – Tyler J. Kenning (presenter), Peter G. Campbell, Christopher Farrell, David Beahm, Madeline Schaberg, Intekhab Ahmed, Marc Rosen, James I. Evans, Thomas Jefferson University

12:00 pm - 1:00 pm **Lunch in Exhibit Hall**

Mezzanine

1:00 pm - 2:00 pm **CONCURRENT SESSIONS**

#13: Otology: Temporal Bone Resection (Consensus Panel) – MODERATOR: Barry Hirsch, MD

Sunset 2

PANELISTS: Derald Brackmann, MD, Giovanni Danesi, MD, Norbert Liebsch, MD & Chandra Sen, MD

#14: Intracranial – MODERATOR: Juan Carlos Fernandez-Miranda, MD, PANELISTS: Melvin Field, MD & Daniel Kelly, MD
#15: Quality of Life

**Sunset 3/4*

**Sunset 5/6*

MODERATOR: Harshita Pant, MD, PANELISTS: Ziv Gil, MD, Stephen Haines, MD & Allan Vescan, MD

#16: Diagnostic Dilemmas

**Celebrity 1/2

MODERATOR: James Evans, MD, PANELISTS: Ketan Bulsara, MD, Benjamin Judson, MD, Snehal Patel, MD & Marc Rosen, MD

2:00 pm – 3:30 pm **PROFFERED PAPER SESSIONS**

Proffered Papers X: Anatomy - MODERATORS: Juan Carlos Fernandez-Miranda, MD & Arturo Solares, MD

Celebrity 1/2

074 PETROUS APEX CHOLESTEROL GRANULOMAS: ENDONASAL VS. INFRACOCHLEAR APPROACH – Tiago F. Scopel, Juan C Fernandez-Miranda, Carlos D. Pinheiro-Neto (presenter), Maria Peris-Celda, Alessandro Paluzzi, Barry E. Hirsch, Paul A. Gardner, Carl H. Snyderman, University of Pittsburgh

075 THE ARTERY OF DAVIDOFF AND SCHLECHTER: AN ANATOMICAL STUDY – Christoph J. Griessenauer (presenter), Martin M. Mortazavi, Shane R. Tubbs, University of Alabama at Birmingham

076 THE ARTERY OF PERCHERON: AN ANATOMICAL STUDY – *Christoph J. Griessenauer (presenter), Martin M. Mortazavi, Shane R. Tubbs, University of Alabama at Birmingham*

077 SECOND STAGE IN PREDICATIVE MEASURE FOR TRANSNASAL TRANSPHENOIDAL APPROACH TO PETROUS APEX CHOLESTEROL GRANULOMA – Angela M. Donaldson (presenter), Nael Shoman, Jeffrey Ksiazek, Myles L. Pensak, Lee A. Zimmer, University of Cincinnati Medical Center

078 ACCESSING THE PARAPHARYNGEAL SPACE; AN ANATOMICAL STUDY COMPARING THE ENDOSCOPIC ENDONASAL AND THE SUBTEMPORAL PREAURICULAR APPROACHES – Jason Van Rompaey, Marcos Francisco Mirambeaux Casso (presenter), C. Arturo Solares, Georgia Health Sciences University, Department of Otolaryngology, Georgia Skull Base Center, Hospital General Plaza De La Salud - Dominican Republic

079 MAPPING OF TANSVERSE AND SIGMOID SINUS JUNCTION: APPLICATION IN VERTICAL EXTENSION OF SUBOCCIPITAL CRANIOTOMY – Ashish Sonig (presenter), Jai Deep Thakur, Imad Khan, Sashikanth Patil, Cedric Shorter, Anil Nanda, Bharat Bharat Guthikonda, Department of Neurosurgery ,Louisiana State University , Shreveport

080 MINIMALLY INVASIVE ACCESS TO THE POSTERIOR CRANIAL FOSSA: AN ANATOMICAL STUDY COMPARING A RETROSIGMOIDAL ENDOSCOPIC APPROACH TO A MICROSCOPIC APPROACH – Jason Van Rompaey (presenter), Carrie Bush, Brian McKinnon, C. Arturo Solares, Georgia Health Sciences University, Department of Otolaryngology, Georgia Skull Base Center

081 MENINGIOMAS OF THE CEREBELLOPONTINE ANGLE: APPROACHES AND OUTCOMES – *Tarik F. Ibrahim (presenter), John A. Braca, Avinash V. Mantravadi, Andrew Mueller, John P. Leonetti, Douglas E. Anderson, Loyola University Medical Center*

082 ENDOSCOPIC ENDONASAL SKULL BASE SURGERY IN THE PEDIATRIC POPULATION – *Srinivas Chivukula, Maria Koutourousiou* (presenter), Carl H Snyderman, Paul A. Gardner, Elizabeth C Tyler-Kabara, University of Pittsburgh School of Medicine, Department of Neurological Surgery

Proffered Papers XI: Radiosurgery - MODERATORS: John Leonetti, MD & Thomas Roland, MD

Sunset 2

083 COCHLEAR RADIATION DOSE DOES NOT PREDICT HEARING LOSS AFTER SRS FOR GLOMUS JUGULARE TUMORS – Bradley C. Lega, James Stephen (presenter), Michael Ruckinstein, Douglas Bigelow, Michele Alonso-Basanta, Jay Dorsey, John Y. Lee, University of Pennsylvania

- **084** TUMOR CONTROL RATES USING LINAC RADIOSURGERY IN TREATMENT OF GROWING VESTIBULAR SCHWANNOMAS Peter A. Gooderham, Albert D. Tu (presenter), Brian Westerberg, Brian D. Toyota, Ryojo Akagami, University of British Columbia, Vancouver General Hospital, British Columbia Cancer Angency
- **085** OUTCOMES OF STEREOTACTIC RADIOSURGERY AND STEREOTACTIC RADIOTHERAPY FOR THE TREATMENT OF VESTIBULAR SCHWANNOMA Marko Spasic (presenter), Patrick Pezeshkain, Brendan Fong, Winward Choy, Teo Soleymani, Daniel Nagasawa, Garni Barkhoudarian, Alessandra Gorgulho, Antonio De Salles, Isaac Yang, UCLA Department of Neurosurgery
- **086** ROLE OF RADIATION THERAPY IN CLINICAL HORMONALLY-ACTIVE PITUITARY ADENOMAS: AN UPDATE OF THEIR EFFICACY AND SAFETY Houman Pebdani, Soroush Larijani, Idara Edem, Boris Krischek, Richard Tsang, Fred Gentili, Gelareh Zadeh (presenter), University of Toronto
- **087** DOES PRETREATMENT GROWTH RATE OF VESTIBULAR SCHWANNOMAS PREDICT RESPONSE TO RADIOSURGERY AND ADVERSE RADIATION EFFECTS? Soroush Larjani, Houman Pebdani, Caroline Hayhurst, Michael Cusimano, Fred Gentili, Gelareh Zadeh (presenter), University of Toronto
- 088 SURVIVAL IN SQUAMOUS CELL CARCINOMA OF THE TEMPORAL BONE: 1965-2011 Mitchell R Gore (presenter), Adam M Zanation, University of North Carolina at Chapel Hill
- **089** TEMPORAL MENINGOENCEPHALOCELES: DIAGNOSTIC PITFALLS, SURGICAL REPAIR, AND ASSOCIATED PATHOLOGIES Hwa J Son (presenter), Alexandre A Karkas, Ravi N Samy, Philip V Theodosopoulos, Myles L Pensak, University of Cincinnati
- **090** SURGERY FOR TEMPORAL BONE ENCEPHALOCELES: A REVIEW OF 85 CASES Spiros Manolidis (presenter), Raj Shrivastava, Albert Einstein College of Medicine, Beth Israel Hospital, Roosevelt Hospital
- **091** IMMEDIATE SINGLE-STAGE RECONSTRUCTION OF COMPLEX FRONTOFACIOBASAL INJURIES Akram M. Awadalla (presenter), Hesham Ezaldeen, Nagla F. Mohamed, North west armed hospital (KSA)- Zagazig university (Egypt)

Proffered Papers XII: Vascular Lesions - MODERATORS: Anand Germanwala, MD & James Liu, MD

Sunset 3/4

- 092 TRANSCRANIAL EXPOSURE OF LARGE DURAL VENOUS SINUSES FOR DIRECT TRANSVENOUS EMBOLIZATION OF HIGH-GRADE DURAL ARTERIOVENOUS FISTULAS James K Liu (presenter), Osamah J Choudhry, Aclan Dogan, Stanley Barnwell, Johnny Delashaw, Jr., Center for Skull Base and Pituitary Surgery, Neurological Institute of New Jersey, Newark, NJ
- 093 META-ANALYSIS OF PUBLISHED DATA ON OUTCOME OF ENDOSCOPIC VERSUS OPEN MANAGEMENT OF JUVENILE NASOPHARYNGEAL ANGIOFIBROMAS Ashutosh Kacker (presenter), Joshua Halpern, Jeffery Liu, Theodore H Schwartz, Michael G Stewart, Weill Cornell Medical College, New York, NY, USA
- **094** SKULL BASE APPROACHES TO POSTERIOR CIRCULATION ANEURYSMS-A SINGLE SURGEON EXPERIENCE FROM LOUISIANA STATE UNIVERSITY, SHREVEPORT ASHISH SONIG (presenter), Anirban deep banerjee, Imad khan, ANIL NANDA, Department of neurosurgery ,Louisiana state university, Shreveport.
- **095** DISSECTING CIRCLE OF WILLIS ARTERIES VIA ENDOSCOPIC ENDONASAL TECHNIQUES Anand V Germanwala (presenter), Adam M Zanation, Murray Ramanathan, Johns Hopkins School of Medicine, University of North Carolina School of Medicine
- **096** SUPRAORBITAL KEY HOLE APPROACH FOR ANEURYSM Ali Ayyad (presenter), Martin Glaser, department of neurosurgery, Johannes gutenberg university
- **097** TECHNICAL NUANCES OF TEMPORAL MUSCLE DISSECTION AND RECONSTRUCTION FOR THE PTERIONAL KEYHOLE CRANIOTOMY Nancy McLaughlin (presenter), Neil A Martin, Department of Neurosurgery, David Geffen School of Medicine at UCLA
- 098 VASCULAR LESIONS OF THE SKULL BASE: CORRELATION WITH IMAGING Elon Granader (presenter), Ashok Srinivasan, University of Michigan Hospital and Health Systems
- **099** WHAT THE BEST APPROACH? A CADAVER-BASED ANATOMIC COMPARISON OF THE IPSILATERAL AND CONTRALATERAL APPROACH TO SUPERIOR HYPOPHYSEAL ARTERY ANEURYSMS *Brian D Milligan (presenter), John Roufail, Gregory Anderson, Johnny B Delashaw, Oregon Health and Science University*
- **100** EXTRADURAL TRANSCAVERNOUS APPROACH TO CAVERNOUS SINUS HEMANGIOMAS: SERIES OF 12 CASES Ashish Suri (presenter), All India Institute of Medical Sciences, New Delhi, India

Proffered Papers XIII: Otology - MODERATORS: Rick Friedman MD, PhD & Barry Hirsch, MD

Sunset 5/6

- 101 SURGICAL SALVAGE OF ACOUSTIC NEUROMA AFTER FAILED RADIATION TREATMENT Rick A Friedman (presenter), Karen Berliner, Marc Bassim, Joseph Usick, Marc S Schwartz, Derald E Brackmann, House Clinic and House Research Institute
- 102 FACIAL NERVE SCHWANNOMAS OF THE CEREBELLOPONTINE ANGLE: THE MAYO CLINIC EXPERIENCE Jeffrey T Jacob (presenter), Colin L Driscoll, Michael J Link, Mayo Clinic
- 103 THE LEARNING CURVE FOR SURGICAL RESECTION OF VESTIBULAR SCHWANNOMA Tamir Ailon (presenter), Ryojo Akagami, University of British Columbia
- 104 IMPORTANCE OF LOW AMPLITUDE POSITIVE FACIAL NERVE STIMULATION FOLLOWING CP ANGLE TUMOR SURGERY Bharat Guthikonda (presenter), Cedric Shorter, Jai Thakur, Jamie Toms, Anil Nanda, LSU HSC Shreveport

- 105 SURGICAL MANAGEMENT OF ENDOLYMPHATIC SAC TUMORS Michael Hoa (presenter), Rick A. Friedman, Derald E. Brackmann, House Clinic
- 106 RETROSPECTIVE REVIEW OF TEGMEN DEHISCENCE PRESENTATION AND REPAIR USING A COMBINED TRANSMASTOID & MIDDLE CRANIAL FOSSA APPROACH Melvin Field, Aftab Patni, Lena Ning (presenter), Florida Hospital Neuroscience Institute; University of Central Florida College of Medicine
- 107 ACOUSTIC NEUROMA TREATMENT AND SYMPTOMATOLOGY: 25 YEAR TRENDS BASED ON ANALYSIS OF PATIENT SURVEYS FROM THE ACOUSTIC NEUROMA ASSOCIATION J. Patel, R. Vasan, S. Agazzi (presenter), JM Sweeney, G. Danner, A. S. Youssef, H. van Loveren, USF Health: Department of Neurosurgery and Brain Repair
- 108 THE ANATOMICALLY INTACT BUT ELECTRICALLY UNRESPONSIVE FACIAL NERVE FOLLOWING VESTIBULAR SCHWANNOMA RESECTION Matthew L. Carlson (presenter), Kathryn M. Van Abel, William R. Schmitt, Colin L. Driscoll, Charles W. Beatty, Brian A. Neff, Michael J Link, Department of Otorhinolaryngology Head and Neck Surgery, Division of Neurotology & Skull Base Surgery, Department of Neurological Surgery, Mayo Clinic, Rochester, Minnesota
- 109 USE OF PREOPERATIVE MRI TO PREDICT VESTIBULAR SCHWANNOMA INTRAOPERATIVE CONSISTENCY AND FACIAL NERVE OUTCOME William R. Copeland (presenter), Jason M. Hoover, Jonathan M. Morris, Brian A. Neff, Colin Driscoll, Fredric B. Meyer, Michael J. Link, 1) Department of Neurologic Surgery, Mayo Clinic, Rochester, Minnesota 2) Department of Radiology, Mayo Clinic, Rochester, Minnesota 3) Department of Otorhinolaryngology, Mayo Clinic, Rochester, Minnesota

3:30 pm – 4:00 pm Break in Exhibit Hall

Mezzanine

4:00 pm - 5:30 pm **PROFFERED PAPER SESSIONS**

Proffered Papers XIV: Anterior Cranial Base - MODERATORS: Erin McKean, MD & Steve Sullivan, MD

Sunset 2

- 110 PATTERNS OF DURAL INVOLVEMENT IN ANTERIOR SKULL BASE TUMORS: PROSPECTIVE CORRELATION OF MRI AND HISTOPATHOLOGIC FINDINGS Pete S Batra (presenter), John B McIntyre, Carlos L Perez, Mrudula Penta, Liyue Tong, John Truelson, University of Texas Southwestern Medical Center
- 111 OUTCOMES OF ENDOSCOPIC ENDONASAL RESECTION OF ESTHESIONEUROBLASTOMA Carlos D Pinheiro-Neto (presenter), Raj Dedhia, Eric Wang, Ricardo L Carrau, Juan C Fernandez-Miranda, Paul A Gardner, Carl H Snyderman, University of Pittsburgh; Ohio State University
- 112 COMPUTER MODELED MULTIPORTAL APPROACHES TO THE SKULL BASE Randall A Bly (presenter), David Su, Manual Ferreira, Kris S Moe, University of Washington School of Medicine, Departments of Otolaryngology and Neurological Surgery, Seattle, Washington
- **113** ESTHESIONEUROBLASTOMA: UPDATING HISTOLOGIC GRADING AS IT RELATES TO PROGNOSIS *Kelly Gallagher (presenter), Jon Paul Pepper, Emily Light, Erin McKean, Lawrence Marentette, Jonathan McHugh, University of Michigan*
- 114 POSTOPERATIVE PERFORMANCE STATUS WITH THE ANTERIOR SUBCRANIAL APPROACH Andrew G Shuman, Stephen Y Kang (presenter), Jason A Heth, Stephen E Sullivan, Lawrence J Marentette, University of Michigan
- 115 "THE ORBITAL ANGLE" UNDERSTANDING THE ROLE OF SKULL BASE TOPOGRAPHY IN DETERMINING ACCESS TO THE MIDLINE VIA A SUPRAORBITAL CRANIOTOMY Shaan M Raza (presenter), Alfred P See, Sandra Ho, Alfredo Quinones-Hinojosa, The Johns Hopkins University
- 116 EFFICACY AND SAFETY OF FRONTAL SINUS CRANIALIZATION Gilad Horowitz (presenter), Nevo Margalit, Moran Amit, Ziv Gil, Dan M Fliss, Tel Aviv Sourasky Medical Center, Tel Aviv University
- 117 THE TRANSCONJUNCTIVAL TRANSORBITAL APPROACH: A NEW KEYHOLE APPROACH TO THE MIDLINE ANTERIOR SKULL BASE Shaan M Raza (presenter), Alfredo Quinones-Hinojosa, Kofi D Boahene, The Johns Hopkins University
- 118 AN ANALYSIS OF 114 CASES OF SKULL BASE ASPERGILLOSIS OVER A DECADE Sandeep Mohindra (presenter), Satyawati Mohindra, Sunil Gupta, Postgraduate Institute of Medical Education and Research, Chandigarh, India

Proffered Papers XV: Endoscopic Techniques - MODERATORS: Paul Gardner, MD & Adam Zanation, MD

Sunset 3/4

- 119 SURGICAL MANAGEMENT OF SKULL BASE ENCEPHALOCELES Daniel M Prevedello, Danielle de Lara (presenter), Leo F S Ditzel Filho, Rodrigo C Mafaldo, Bradley A Otto, Ricardo L Carrau, The Ohio State University Medical Center
- **120** RETROSPECTIVE COHORT STUDY OF ENDOSCOPIC VERSUS MICROSCOPIC VASCULAR DECOMPRESSION *Maxwell B Merkow* (presenter), Daniel Kramer, John Y K Lee, University of Pennsylvania
- 121 COMPLICATIONS ASSOCIATED WITH A TRANSPTERYGOID APPROACH TO MENINGOENCEPHALOCELE REPAIR Nadieska Caballero (presenter), Kevin Welch, Lauren Lininger, Loyola University Medical Center
- 122 ENDOSCOPIC APPROACH TO LATERAL SPHENOID ENCEPHALOCELES ORIGINATING IN STERNBERG'S CANAL Deepak R Dugar (presenter), Rounak Rawal, Brent Senior, Charles S Ebert, Jr., Adam M Zanation, Department of Otolaryngology-Head and Neck Surgery, The University of North Carolina, Chapel Hill, NC, USA
- 123 CRITICAL APPRAISAL OF EXTENT OF RESECTION OF CLIVAL LESIONS USING THE EXPANDED ENDOSCOPIC ENDONASAL APPROACH Aaron R Cutler (presenter), Marilene Wang, Jeffrey Suh, Marvin Bergsneider, UCLA Medical Center Department of Neurosurgery and Division of Otolaryngology

- 124 QUALITY OF LIFE AFTER TRANSSPHENOIDAL PITUITARY SURGERY: A QUALITATIVE STUDY Shelly Lwu (presenter), Mark Bernstein, Gelareh Zadeh, Fred Gentili, University of Toronto
- 125 RADIOGRAPHIC ENHANCEMENT OF THE VASCULARIZED NASOSEPTAL FLAP DOES NOT PREDICT CSF LEAKS Nithin D. Adappa (presenter), Kim Learned, James N. Palmer, Jason G Newman, John Y. Lee, University of Pennsylvania Perelman School of Medicine

Proffered Papers XVI: General - MODERATOR: Allan Vescan, MD

Celebrity 1/2

- 126 FIRST BITE SYNDROME: INCIDENCE, RISK FACTORS, TREATMENT, AND OUTCOMES Gary Linkov (presenter), Luc G Morris, Jatin P Shah, Dennis H Kraus, Head and Neck Service, Memorial Sloan-Kettering Cancer Center, New York, NY
- 127 PRELIMINARY VALIDATION OF A CLINICAL INSTRUMENT FOR RHINOLOGICAL OUTCOMES IN ENDONASAL ANTERIOR SKULL BASE SURGERY: THE ANTERIOR SKULL BASE NASAL INVENTORY Andrew S Little (presenter), Peter Nakaji, John Milligan, William White, Barrow Neurological Institute
- 128 INTRANASAL CROSS-SECTIONAL AREA CHANGES FOLLOWING ENDOSCOPIC SKULL BASE SURGERY AND THEIR RELATION TO POST-OPERATIVE QUALITY-OF-LIFE Jeffrey C Bedrosian (presenter), Edward D McCoul, Vijay K Anand, Theodore H Schwartz, Departments of Otolaryngology—Head and Neck Surgery and Neurological Surgery, Weill Cornell Medical College, New York Presbyterian Hospital, New York, New York
- 129 HYPOGLOSSAL SCHWANNOMAS: SINGLE INSTITUTIONAL EXPERIENCE OF 14 CASES Ashish Suri (presenter), Sumit Bansal, Bhawani Sharma, Ashok K Mahapatra, Sharad S Kale, Sarat P Chandra, Manmohan Singh, Rajender Kumar, Manish Sharma, All India Institute of Medical Sciences, New Delhi, India
- 130 ENDOSCOPIC TRANSPTERYGOID NASOPHARYNGECTOMY: CORRELATION OF SURGICAL ANATOMY WITH MULTIPLANAR CT Seyed Mousa Sadr Hosseini, Nancy McLaughlin, Ricardo L. Carrau (presenter), Daniel M. Prevedello, Adam Zanation, Juan C. Fernandez-Miranda, Amin B. Kassam, Department of Otolaryngology-Head & Neck Surgeries Vali-E-Asr Hospital, Ohio State University Medical Center, University of North Carolina; Department of Neurological Surgeries UCLA, Ohio State University Medical Center, UPMC and University of Ottawa
- 131 TRANS-ORBITAL APPROACH TO SPHENOORBITAL MENINGIOMAS. SELECTED CASES SERIES Alfio P Piva (presenter), University of Costa Rica
- 132 INCIDENCE AND SIGNIFICANCE OF INTRAOPERATIVE CSF LEAK IN ENDOSCOPIC PITUITARY SURGERY USING INTRATHECAL FLUORESCEIN Dejan Jakimovski (presenter), Greg Bonci, A. Tsiouris, Theodore Schwartz, Weill Cornell Medical College, Department of Neurological Surgery

Proffered Papers XVII: Sellar/Suprasellar - MODERATORS: Mario Ammirati, MD & Lee Zimmer, MD

Sunset 5/6

- 133 "PSEUDOCAPSULAR" RESECTION OF PITUITARY ADENOMAS: TECHNICAL NUANCES AND UNEXPECTED CONSEQUENCES Marvin Bergsneider (presenter), Marilene B. Wang, Jeffrey Suh, UCLA
- **134** COMPARISON OF THE OUTCOMES OF ENDOSCOPIC AND MICROSCOPIC SURGERY IN CUSHING'S DISEASE Hussein Alahmadi (presenter), Kenneth Woo, Ameen Mohammed, Michael Cusimano, Jeannette Goguen, Harley Smyth, Kalman Covacs, University of Toronto
- 135 SILENT CORTICOTROPH ADENOMAS, A CLINICAL AND PATHOLOGICAL COMPARISON WITH NON-FUNCTIONAL ADENOMAS Hussein Alahmadi (presenter), Daniel Lee, Caroline Hayhurst, S. Asa, O. Mete, Fred Gentili, Gelareh Zadeh, University of Toronto
- 136 ENDONASAL MANAGEMENT OF SELLAR ARACHNOID CYSTS: SIMPLE CYST OBLITERATION TECHNIQUE Nancy McLaughlin (presenter), Alexander Vandergrift, Leo FS Ditzel Filho, Kiarash Shahlaie, Amy Eisenberg, Ricardo L. Carrau, Daniel F. Kelly, Brain Tumor Center, John Wayne Cancer Institute at Saint John's Health Center, Santa Monica, CA, USA; Department of Head and Neck Surgery, Ohio State, Columbus, Ohio USA; Department of Medicine, UCLA School of Medicine, Los Angeles, CA, USA
- 137 MINIMIZING INTRA-OPERATIVE CSF LEAKS IN ENDONASAL ENDOSCOPIC TRANS-SPHENOIDAL PITUITARY SURGERY: TECHNICAL CONSIDERATIONS & CASE SERIES REVIEW Claudio De Tommasi (presenter), Jennifer Anderson, John Lee, Michael Cusimano, University of Toronto, Saint Michael's Hospital
- 138 A RELATIONSHIP BETWEEN SPHENOID SINUS ANATOMY AND SUPRASELLAR EXTENSION OF PITUITARY TUMORS? Vijay R. Ramakrishnan (presenter), Bert W O'Malley, James N. Palmer, University of Colorado, University of Pennsylvania
- 139 GIANT INVASIVE PITUITARY ADENOMA Ibrahim Sbeih (presenter), Ibn Alhytham Hospital
- 140 ENDOSCOPIC ENDONASAL APPROACH FOR GIANT PITUITARY ADENOMAS: ADVANTAGES AND LIMITATIONS Maria Koutourousiou (presenter), Juan C. Fernandez-Miranda, Carl H. H Snyderman, Paul A. Gardner, Department of Neurological Surgery and Department of Otolaryngology, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA
- 141 RECONSTRUCTION OF THE INTRASELLAR TUMOR RESECTION CAVITY IS NOT NECESSARY TO PREVENT OPTIC CHIASM PROLAPSE FOLLOWING TRANSSPHENOIDAL REMOVAL OF PITUITARY MACROADENOMAS Christopher J. Farrell (presenter), Raul Sharma, Tyler Kenning, D. D. Beahm, Madeleine R. Shaberg, Marc R. Rosen, James J. Evans, Thomas Jefferson University

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

Celebrity 3

It's an offer you can't refuse... Come by the juice joint for a flapper-style fling. Provide the password and travel back in time for an evening filled with moonshine, jazz and Charleston dancers. Whisper "Skull Base" to enter. Zoot suits and fedoras encouraged.

SUNDAY, FEBRUARY 19, 2012

7:30 am – 8:00 am **Breakfast/Registration**

8:00 am - 9:00 am CONCURRENT SESSIONS

#17: Training – MODERATOR: Daniel Nuss, MD, PANELISTS: Anil Nanda, MD, Jakakar Nayak, MD & Ian Witterick, MD

Sunset 3/4

#18: Perineural Invasion – MODERATOR: Richard Wong, MD

Sunset 5/6

PANELISTS: Ehab Hanna, MD, Chris Rassekh, MD & C. Arturo Solares, MD

Proferred Papers XVIII: Reconstruction - MODERATORS: Amir Dehdashti, MD & Ziv Gill, MD

Sunset 5/6

148 PROPOSED CLASSFICATION FOR SKULL BASE RECONSTRUCTION AFTER ENDOSCOPIC ENDONASAL SURGERY – Amir R. Dehdashti (presenter), Geisinger Neurosciences Institute

149 BARRIER-LIMITED MULTIMODALITY CLOSURE FOR RECONSTRUCTION OF WIDE SELLAR OPENINGS – Aaron R. Cutler (presenter), Kai Xue, Jeffrey D. Suh, Marilene B. Wang, Marvin Bergsneider, Department of Neurosurgery and Division of Head and Neck Surgery, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA. Neurosurgery Department of Tianjin Huanhu Hospital, Tianjin, China

150 META-ANALYSIS OF CSF LEAK RATE FOLLOWING SKULL BASE RECONSTRUCTION WITH AND WITHOUT VASCULARIZED LOCAL PEDICLED FLAPS – Jeffrey C. Bedrosian (presenter), Edward D. McCoul, Vijay K. Anand, Theodore H. Schwartz, Departments of Otolaryngology—Head and Neck Surgery and Neurological Surgery, Weill Cornell Medical College, New York Presbyterian Hospital, New York, New York

151 ANTERIORLY BASED INFERIOR TURBINATE FLAP FOR ENDOSCOPIC SKULL RECONSTRUCTION – Ziv Gil (presenter), Nevo Margalit, Tel-Aviv Sourasky Medical Center, Sackler School of Medicine, Tel Aviv University

152 MIDDLE TURBINATE VASCULARIZED FLAP: APPLICATIONS IN SKULL BASE RECONSTRUCTION – Bradley A. Otto, Ricardo L. Carrau (presenter), Danielle M. Prevedello, Matthew O. Old, Leo F. Ditzel Filho, Danielle de Lara, Rodrigo C Mafaldo, The Ohio State University Medical Center

153v TRIPLE-LAYER RECONSTRUCTION TECHNIQUE FOR LARGE CRIBRIFORM DEFECTS AFTER ENDOSCOPIC ENDONASAL RESECTION OF ANTERIOR SKULL BASE TUMORS – Smruti K. Patel, Mickey L. Smith, Osamah J. Choudhry, Jean Anderson Eloy, James K. Liu (presenter), Center for Skull Base Surgery, Neurological Institute of New Jersey, Department of Neurological Surgery, Division of Otolaryngology, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, New Jersey

9:00 am - 10:00 am CONCURRENT SESSIONS

#19: Cranial Reconstruction Celebrity 1/2

MODERATOR: Lawrence Marentette, MD, PANELISTS: Peter Costantino, MD, Trevor Hackman, MD, Kris Moe, MD & Mark Varvares, MD #20: Keynote/Panel/Tumor Board etc: "Sometimes, it is better to say no: Deciding when NOT to operate"

Celebrity 1/2

MODERATOR: Amir Dehdashti, MD, PANELISTS: Paul Donald, MD, Fred Gentili, MD & Daniel Nuss, MD

Proferred Papers XIX: General - MODERATORS: Harshita Pant, MD & Daniel Pieper, MD

Sunset 5/6

142 PRE-OPERATIVE LUMBAR DRAIN PLACEMENT IN ANTERIOR SKULL BASE SURGERY – Paul D. Ackerman, Drew A. Spencer (presenter), Vikram C. Prabhu, Loyola University Medical Center

143 ENDOSCOPIC ASSISTED MICROSURGICAL APPROACH FOR ANTERIOR SKULL BASE LESIONS – *Ali Ayyad (presenter), Jens Conrad, Department of Neurosurgery, Johannes Gutenberg University*

144 "ROUND THE CLOCK" SURGICAL ACCESS TO THE ORBIT – Alessandro Paluzzi (presenter), Matthew Tormenti, Maria Koutourousiou, Susan Stefko, Juan C. Fernandez-Miranda, Paul Gardner, Carl Snyderman, Joseph Maroon, Center for Skull Base Surgery, University of Pittsburgh School of Medicine, Pittsburgh, PA

145 PRESERVATION OF MULTIDIMENSIONAL QUALITY-OF-LIFE AFTER ENDOSCOPIC RESECTION OF PITUITARY ADENOMA – Edward D. McCoul (presenter), Vijay K. Anand, Jeffrey C Bedrosian, Theodore H. Schwartz, Weill Cornell Medical College, New York, NY

146 THE CLINICAL IMPORTANCE OF QUALITY OF LIFE SCORES IN PATIENTS WITH SKULL BASE TUMORS – Moran Amit (presenter), Avraham Abergel, Dan M. Fliss, Nevo Margalit, Ziv Gil, Tel-Aviv Sourasky Medical Center, Sackler School of Medicine, Tel Aviv University

147 THE TRANSPALATAL APPROACH TO REPAIR OF CONGENITAL BASAL SPHENOETHMOIDAL MENINGOCELES – Stephen R. Hoff (presenter), Peter J Koltai, Northwestern University & Stanford University

10:00 am - 10:30 am **Break in Exhibit Hall**

Mezzanine

10:30 am - 12:00 pm **PLANERY SESSION**

Celebrity 1/2

3D Anatomy Talk - Juan Fernandez-Miranda, MD & Albert Rhoton, MD

POSTER SESSIONS

Posters will be open during all exhibit hours on Mezzanine Level

- **154 ENDOSCOPIC CSF REPAIR NECESSITY OF FIBRIN GLUE**' Dr. Satyawati Mohindra (presenter), Dr. Sandeep Mohindra, Dr. Jagveer Yaday, Post Graduate Institute of Medical Education and Research
- **155** ANTERIOR CRANIAL FOSSA MENINGIOMA, OUTCOME OF SURGERY USING DIFFERENT SURGICAL APPROACHES Sherif M. Elwatidy (presenter), Zain Jamjoom, Walid Murshid, College of Medicine, King Saud University
- **156 MANAGEMENT OF PEDIATRIC NASAL DERMOIDS** Jeffrey Cheng (presenter), Kazahaya Ken, The Children's Hospital of Philadelphia
- 157 CALCIFYING PSEUDONEOPLASM OF THE NEURAXIS (CAPNON) OF THE ANTERIOR SKULL BASE: REPORT OF A CASE Aaron M. Fletcher (presenter), Patricia Kirby, Jeremy Greenlee, Erin K. O'Brien, University of Iowa
- **158** ISOLATED ORBITAL PLASMACYTOMA WITH PROGRESSION TO MULTIPLE MYELOMA: A CASE PRESENTATION Vladimir Cortez (presenter), Blake Berman, Javed Siddiqi, Arrowhead Neurosurgical and Neurointerventional Institute, Arrowhead Regional Medical Center, Colton, CA
- 159 CRANIAL REPAIR OF A STERNBERG CANAL ENCEPHALOCELE FOLLOWING ATTEMPTED ENDOSCOPIC ENDONASAL REPAIR FAILURE Regis Hoppenot (presenter), Andrew J. Fabiano, Nestor Rigual, Robert A. Fenstermaker, Roswell Park Cancer Institute; SUNY at Buffalo School of Medicine
- **160 SCHWANNOMAS OF THE ANTERIOR SKULL BASE: ANALYSIS OF 41 CASES IN THE LITERATURE** Peter Sunaryo, Osamah J. Choudhry, Leroy Sharer, Jean Anderson Eloy, James K. Liu (presenter), Department of Neurological Surgery, University of Medicine and Dentistry of New Jersey New Jersey Medical School, Newark NJ
- 161 PRIMARY EWING'S SARCOMA OF THE ETHMOID SINUS WITH INTRACRANIAL AND ORBITAL EXTENSION: CASE REPORT AND LITERATURE REVIEW Mingsi Li (presenter), Aaron Hoschar, Thomas Budd, Samuel Chao, Joseph Scharpf, The Cleveland Clinic
- 162 META-ANALYSIS OF 75 CASES OF SINONASAL TERATOCARCINOSARCOMA: A RARE NEOPLASM OF THE ANTERIOR SKULL BASE Poonam Misra, Peter Sunaryo, Ada Baisre, Neena Mirani, Jean Anderson Eloy, James K. Liu (presenter), Department of Neurological Surgery and Department of Otolaryngology, University of Medicine and Dentistry of New Jersey New Jersey Medical School, Newark, NJ
- 163 MULTIMODALITY TREATMENT OUTCOMES OF SINONASAL UNDIFFERENTIATED CARCINOMA OF THE SKULL BASE Linda N Lee (presenter), Stacey T Gray, William Curry, Annie W Chan, John Clark, Eric H Holbrook, Daniel G Deschler, Derrick T Lin, Massachusetts Eye & Ear Infirmary/Massachusetts General Hospital Cranial Base Center; Department of Neurosurgery, Massachusetts General Hospital; Department of Radiation Oncology, Massachusetts
- **164 ENDOSCOPIC ENDONASAL RESECTION OF A GROOVE MENINGIOMA WITH OLFACTORY PRESERVATION** Bradley
 A. Otto, Rodrigo C. Mafaldo, Danielle de Lara (presenter), Leo S.
 Ditzel Filho, Daniel M. Prevedello, Ricardo L. Carrau, The Ohio State
 University Medical Center, Columbus, OH
- 165 SEPTAL TRANSPOSITION: A NOVEL TECHNIQUE FOR PRESERVATION OF THE NASAL SEPTUM DURING ENDOSCOPIC ENDONASAL RESECTION OF OLFACTORY GROOVE MENINGIOMAS Madeleine R. Schaberg (presenter), Christopher J. Farrell, Mindy Rabinowitz, James J. Evans, Marc R. Rosen, The New York Eye and Ear Infirmary and Jefferson Medical College

- 166 THE UNILATERAL ENDOSCOPIC ENDONASAL TRANSSPHENOIDAL APPROACH TO THE PITUITARY: A RETURN TO THE BEGINNING FOR NASAL PRESERVATION Madeleine R. Schaberg (presenter), Christopher J. Farrell, Mindy Rabinowitz, James J. Evans, Marc R. Rosen, The New York Eye and Ear Infirmary and Jefferson Medical College
- **167** THE SUPRAORBITAL APPROACH FOR REMOVAL OF INTRA-AXIAL FRONTAL BRAIN TUMORS: A TECHNICAL NOTE – Leo F. Ditzel Filho (presenter), Nancy McLaughlin, Damien Bresson, Domenico Solari, Amin B. Kassam, Daniel F. Kelly, Brain Tumor Center, John Wayne Cancer Institute at St. John's Health Center, Santa Monica, CA, USA
- **168** SURGICAL DECOMPRESSION OF SKULL BASE AND ORBITAL PROSTATE METASTASIS Miguel A. Lopez-Gonzalez (presenter), Gwynett Hughes, Benjamin Rosenbaum, Jorge A. Gonzalez-Martinez, The Cleveland Clinic Foundation
- 169 THE COMBINED USE OF PERICRANIAL FLAP AND TITANIUM MESH IN RECONSTRUCTION OF LARGE MEDIAL ORBITAL DEFECTS Homere Al Moutran (presenter), David Hiltzik, Priyam Vyas, Peter Costantino, New York Head and Neck institute Lenox Hill Hosital
- 170 ENDONASAL ENDOSCOPIC SURGERY FOR ANTERIOR SKULL BASE PATHOLOGIES: A SINGLE CENTER'S INITIAL EXPERIENCE Gary L. Gallia (presenter), Douglas D. Reh, Masaru Ishii, Johns Hopkins Hospital
- 171 STUDY OF THE NASOSEPTAL FLAP FOR ENDOSCOPIC ANTERIOR CRANIAL BASE RECONSTRUCTION Carlos D. Pinheiro-Neto (presenter), Henrique F. Ramos, Peris-Celda Maria, Alessandro Paluzzi, Juan C. Fernandez-Miranda, Paul A. Gardner, Carl H. Snyderman, Luiz U. Sennes, University of Pittsburgh and University of Sao Paulo
- 172 COMBINED SURGICAL APPROACHES FOR SKULL BASE CHORDOMAS Maria Koutourousiou (presenter), Stephanie L. Henry, Matthew J. Tormenti, Alexandro Paluzzi, Juan Fernandez-Miranda, Carl H. Snyderman, Paul A. Gardner, Department of Neurological Surgery and Department of Otolaryngology, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA
- 173 TREATMENT OF A CLIVAL CHORDOMA USING MAGNETIC RESONANCE GUIDED LASER INDUCED THERMAL THERAPY (LITT): CASE REPORT James C. Barrese (presenter), Pinakin R. Jethwa, Eric L. Hargreaves, Anil M. Shetty, Shabbar F. Danish, 1) Department of Neurosurgery, UMDNJ New Jersey Medical School, Newark, NJ, USA, 2) Division of Neurosurgery, UMDNJ Robert Wood Johnson Medical School, New Brunswick, NJ, USA, 3) Visualase, Inc., Houston, TX, USA
- **174** CONCURRENT PITUITARY ADENOMA AND CHORDOMA Stephen Y. Kang (presenter), Matthew E. Spector, Stephen E. Sullivan, Erin L. McKean, University of Michigan
- **175** ROLE OF DIFFUSION-WEIGHTED MRI IN CLIVAL CHORDOMA

 Robert M Lober (presenter), Kristen W. Yeom, Nancy Fischbein,
 Michael S. Edwards, Griffith R. Harsh, Hannes Vogel, Bret Mobley,
 Stanford Hospitals and Clinics, Vanderbilt University Medical Center
- 176 ENDOSCOPIC-ASSISTED SUPRAORBITAL
 RETROINFUNDIBULAR APPROACH TO THE INTERPEDUNCULAR
 FOSSA: A CADAVERIC OPERABILITY STUDY Chi-Tun Tang,
 Nishanta B. Baidya (presenter), Mohamed A. Ragaee, Mario Ammirati,
 Department of Neurological Surgery, Ohio State University Medical
 Center, Columbus, Ohio

- 177 INTRADURAL ENDOSCOPE-ASSISTED ANTERIOR
 CLINOIDECTOMY: A CADAVERIC STUDY Nishanta B. Baidya
 (presenter), Chi-Tun Tang, Mario Ammirati, Department of
 Neurological Surgery, The Ohio State University, Columbus, Ohio, USA
- **178** ENDOSCOPIC, TRANSNASAL, TRANSCLIVAL RESECTION OF A PONTINE CAVERNOMA Matthew R. Sanborn, James Stephen (presenter), Philip B. Storm, Nithin D. Adappa, James N. Palmer, Jason Newman, John Y. Lee, Perelman School of Medicine, Hospital of the University of Pennsylvania

179 WITHDRAWN

- 180 DELIBERATE DESIGN OF THE POSTERIOR SEPTECTOMY DURING TRANSSPHENOIDAL ENDOSCOPIC SKULL BASE SURGERY TO HARVEST SEPTAL TISSUE FOR POTENTIAL SKULL BASE RECONSTRUCTION Devyani Lal (presenter), Naresh P. Patel, Mayo Clinic, Arizona
- **181** ANTERIOR PEDICLE LATERAL NASAL WALL FLAP: A NOVEL TECHNIQUE FOR THE RECONSTRUCTION OF ANTERIOR SKULL BASE DEFECTS G. Hadad, C. Rivera-Serrano, L. Bassagasteguy, R. L. Carrau (presenter), D. M. Prevedello, J. Fernandez-Miranda, A. B. Kassam, B. A. Otto, The Ohio State University, Medical School Ciudad del Rosario
- **182** POSTERIOR PEDICLE LATERAL NASAL WALL FLAP: A NEW RECONSTRUCTIVE TECHNIQUE FOR LARGE DEFECTS OF THE SKULL BASE G. Hadad, C. Rivera-Serrano, L. Bassagaisteguy, R. L. Carrau, J. Fernandez-Miranda, A. B. Kassam, B. A. Otto (presenter), The Ohio State University, Medical School Ciudad del Rosario
- **183** PRESERVATION OF OLFACTORY FUNCTION FOLLOWING ENDOSCOPIC RESECTION OF SELECT MALIGNANCIES OF THE NASAL VAULT Y. K. Ong, A. Solares, R. L. Carrau (presenter), D. M. Prevedello, A. B. Kassam, B. A. Otto, M. Old, The Ohio State University, Univesity of Georgia Health Center
- **184 ENDOSCOPIC HARVEST OF FASCIA LATA FREE FLAP IN A CADAVERIC MODEL** Peter S. Amenta (presenter), Michael Lynn, Tyler Kenning, Troy J. DeRose, Marc Rosen, James Evans, Thomas Jefferson University Hospital/Department of Neurosurgery/Department of Otolaryngology
- 185 TRANSNASAL COMPLETELY ENDOSCOPIC RESECTION OF PITUITARY TUMORS USING A BINOSTRIL, FOUR-HANDED TECHNIQUE WHILE PRESERVING THE POTENTIAL FOR NASOSEPTAL FLAP RECONSTRUCTION: THE SUBSEPTAL APPROACH Justin M. Sweeney (presenter), Majestic Tam, James T. May, Rohit Vasan, Harry R. van Loveren, Mark H. Tabor, University of South Florida, Departments of Neurosurgery & Otolaryngology
- 186 IMPACT OF CHEMOTHERAPY AND RADIOTHERAPY ON THE SUCCESS OF CEREBROSPINAL FLUID LEAK REPAIR AFTER TRANSNASAL ENDOSCOPIC RESECTION OF SKULL BASES TUMORS Marcus V. Ortega Alves (presenter), Nicholas B. Levine, Franco DeMonte, Ehab Y. Hanna, Michael E. Kupferman, MD, Anderson Medical Cancer Center
- 187 AN INSTITUTIONAL WORKFLOW MODEL FOR ANATOMICAL SEGMENTATION IN ADVANCED IMAGE-GUIDED SKULL BASE SURGERY Stephan K. Haerle (presenter), Michael J. Daly, Harley Chan, Allan D. Vescan, Gelareh Zadeh, Ian J. Witterick, Jonathan C. Irish, Princess Margaret Hospital, University Health Network Toronto, University of Toronto, Canada

- 188 COMBINED ENDOSCOPIC ENDONASAL TRANSORBITAL APPROACH WITH TRANSCONJUNCTIVAL-MEDIAL ORBITOTOMY FOR EXCISIONAL BIOPSY OF THE OPTIC NERVE A TECHNICAL NOTE Maria Koutourousiou (presenter), Susan T. Stefko, Alexandro Paluzzi, Matthew J. Tormenti, Juan C. Fernandez-Miranda, Carl H. Snyderman, Joseph C. Maroon, Paul A. Gardner, Department of Neurological Surgery, Departments of Ophthalmology and Department of Otolaryngology, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA
- 189 ENDOSCOPIC TRANSSPHENOIDAL ENDONASAL APPROACH FOR LARGE PITUITARY ADENOMA WITH EXTRAPRASELLAR EXTENSION – Ali Ayyad (presenter), Jens Conrad, Department of Neurosurgery, Johannes Gutenberg University
- **190** INCIDENCE AND MANAGEMENT OF EPISTAXIS AFTER ENDOSCOPIC SKULL BASE SURGERY Jeffrey D. Suh (presenter), Marvin Bergsneider, Marilene B. Wang, University of California, Los Angeles
- 191 EVOLUTION OF A MICROSURGICAL TO ENDOSCOPIC PRACTICE FOR TREATMENT OF PITUITARY TUMORS AND SKULL BASE LESIONS: IMPORTANCE OF MULTI-DISCIPLINARY TEAM APPROACH AND LEARNING CURVE Mickey L. Smith, Smruti K. Patel, Osamah J. Choudhry, Jean Anderson Eloy, James K. Liu (presenter), Departments of Neurological Surgery and Otolaryngology, University of Medicine and Dentistry of New Jersey, New Jersey Medical School
- **192** MODIFIED HEMI-LOTHROP PROCEDURE FOR SUPRAORBITAL ETHMOID LESION ACCESS Mark E. Friedel, Shawn Li, Paul D. Langer, James K. Liu, Jean Anderson Eloy (presenter), Center for Skull Base and Pituitary Surgery, Neurological Institute of New Jersey, University of Medicine and Dentistry of New Jersey, Newark, NJ
- **193** ENDONASAL ACCESS TO THE UPPER CERVICAL SPINE-CADAVERIC ANALYSIS Harminder Singh, Robert M. Lober (presenter), Hector Lopez, Marc Rosen, James Evans, Stanford Hospitals and Clinics, Thomas Jefferson University Hospital
- 194 TRANSORBITAL NEUROENDOSCOPIC MANAGEMENT OF SINOGENIC COMPLICATIONS INVOLVING THE FRONTAL SINUS, ORBIT AND ANTERIOR CRANIAL FOSSA Jae H. Lim (presenter), Maya Sardesai, Manuel Ferreira, Kris Moe, University of Washington
- **195** THE ROLE OF ENDOSCOPIC ENDONASAL SURGERY IN PETROCLIVAL CHONDROSARCOMA Matthew J. Tormenti (presenter), Alessandro Paluzzi, Maria Koutoutousiou, Juan C. Fernandez-Miranda, Carl H. Snyderman, Paul A. Gardner, University of Pittsburgh Medical Center
- **196** ENDOSCOPIC ENDONASAL EXPANDED KAWASE'S APPROACH: SURGICAL TECHNIQUE AND OUTCOME Daniel M. Prevedello M. Prevedello, Rodrigo C. Mafaldo, Danielle de Lara, Leo F. Ditzel Filho (presenter), Bradley A. Otto, Ricardo L. Carrau, The Ohio State University Medical Center, Columbus, OH
- 197 TRANSORBITAL NEUROENDOSCOPIC SURGERY OF THE MIDDLE CRANIAL FOSSA BY LATERAL RETROCANTHAL APPROACH Robert Oxford (presenter), Randy Bly, Louis Kim, Kris Moe, University of Washington, Seattle, WA, USA
- **198 WITHDRAWN**
- **199 FRONTAL SINUS WINDOW FOR MINIMALLY INVASIVE ACCESS TO THE FRONTAL SINUS AND ANTERIOR SKULL BASE** Bradley A. Otto, Ricardo L. Carrau (presenter), Daniel M. Prevedello, Matthew O. Old, Danielle de Lara, Leo F. Ditzel Filho, Rodrigo C. Mafaldo, The Ohio State University Medical Center

- **200** A VISUAL INTRODUCTION TO THE ADAPTATION OF THE PEDICLED FLAP IN ENDOSCOPIC RECONSTRUCTION OF CRANIAL BASE Houman Pebdani, Soroush Larijani, Idara Edem, Boris Krischek (presenter), Al Vescan, Fred Gentili, Gelareh Zadeh, University of Toronto
- 201 ENDOSCOPIC INFRATEMPORAL RESECTION AS AN ADJUNCT TO OPEN MIDDLE FOSSA APPROACH FOR RESIDUAL GRADE 2 INFRATEMPORAL FOSSA MENINGIOMA Sarah Burgin (presenter), Sephen E. Sullivan, Erin L. McKean, University of Michigan Department of Otolaryngology, University of Michigan Department of Neurosurgery
- **202** ENDOSCOPIC RESECTION OF SOLITARY FIBROUS TUMOR OF THE ANTERIOR SKULL BASE Phillip Chaffin (presenter), Mathew Hunt, Emiro Caicedo-Granados, University of Minnesota
- **203** MANAGEMENT AND TREATMENT OF ORBITAL FUNGAL SINUSITIS WITH INTRACRANIAL INVOLVEMENT James K. Fortson (presenter), Paul King, Vijaykumar Patel, Gillian E. Lawrence, Morehouse School of Medicine
- **204** MRI FLAIR CHANGES IN TOTAL RESECTION OF OLFACTORY GROOVE MENINGIOMAS THROUGH EXPANDED ENDONASAL ENDOSCOPIC APPROACHES Leo F. Ditzel Filho (presenter), Juan Carlos Fernandez-Miranda, Danielle de Lara, Bradley A. Otto, Amin B. Kassam, Ricardo L. Carrau, Daniel M. Prevedello, Departments of Neurosurgery and Otolaryngology, The Ohio State University, USA, Department of Neurosurgery, University of Pittsburgh, USA, Department of Neurosurgery, University of Ottawa, Canada
- **205** JUGULAR FORAMEN SYNDROME AS INITIAL PRESENTATION OF METASTATIC LUNG CANCER D. M. Hayward (presenter), C. Morgan, J. Biller, B. Emami, V. C. Prabhu, Loyola University Medical Center
- **206** DIAGNOSIS AND MANAGEMENT OF NASOPHARYNGEAL BRANCHIAL CYSTS Richard O. Wein (presenter), Tufts Medical Center
- **207** INFLAMMATORY PSEUDOTUMOR INVOLVING THE PARAPHARYNGEAL SPACE AND SKULL BASE Sherief H. Garrana, Erin L. McKean (presenter), Lawrence J. Marentette, University of Michigan
- 208 MANAGEMENT OF THE NASOLACRIMAL APPARATUS IN PATIENTS UNDERGOING ANTERIOR CRANIOFACIAL RESECTION (ACFR) AND/OR MAXILLECTOMY Rahmatullah Rahmati (presenter), Gary Linkov, Jatin P. Shah, Mark Bilsky, Dennis H. Kraus, Memorial Sloan-Kettering Cancer Center, New York, NY and Columbia University Medical Center, New York, NY
- **209** MIDDLE CRANIAL FOSSA APPROACH: PATHOLOGIES AND COMPLICATIONS Kimon Bekelis (presenter), Ziev Moses, Symeon Missios, Jim Saunders, Kadir Erkmen, Dartmouth-Hitchcock Medical Center
- **210** ANATOMIC CAUSES FOR TRIGEMINAL AND FACIAL NERVE DYSFUNCTION IN PATIENTS WITH VESTIBULAR SCHWANNOMAS Albert D. Tu (presenter), Ryojo Akagami, University of British Columbia, Vancouver General Hospital
- **211 MICROVASCULAR DECOMPRESSION SURGERY: NATIONAL TRENDS, OUTCOMES, AND COMPLICATIONS** Anand Veeravagu (presenter), Bowen Jiang, Robert Arrigo, Paul Kalanithi, Melanie Hayden, Chirag Patil, Maxwell Boakye, Shivanand Lad, Stanford School of Medicine, Duke University Medical Center, University of Louisville, Cedars-Sinai Medical Center
- **212 EXPANDED ENDONASAL ENDOSCOPIC APPROACHES TO SKULL BASE LESIONS IN PEDIATRIC PATIENTS** Vafi Salmasi (presenter), Xuewei Xia, Masaru Ishii, Douglas D. Reh, Gary L. Gallia, Johns Hopkins Hospital

- 213 KLIPPEL-FEIL SYNDROME IN ASSOCIATION WITH A CERVICOCERVICAL ARACHNOID CYST: A UNIQUE CASE REPORT Imad S. Khan (presenter), Osama Ahmed, Jai D. Thakur, Cedric
- Imad S. Khan (presenter), Osama Ahmed, Jai D. Thakur, Cedric Shorter, Bharat Guthikonda, LSUHSC-Shreveport
- **214** CUSTOM-TAILORED ANTERIOR PETROSECTOMY WITHIN SURGICAL APPROACHES TO THE PETROCLIVAL REGION
- Aikaterini Patrona (presenter), Robert Behr, Department of Neurosurgery, Klinikum Fulda
- **215** MIDDLE CRANIAL FOSSA APPROACH FOR REPAIR OF TEGMEN TYMPANI DEFECTS AND TEMPORAL ENCEPHALOCELE John A. Braca (presenter), Vikram C. Prabhu, Sam Marzo, Loyola University Medical Center
- **216** JACQUES BENIGNUS WINSLOW (1669-1760): UNLOCKING THE 'JEWEL BOX' OF SKULL BASE Jai D. Thakur (presenter), Ashish Sonig, Imad S. Khan, Anil Nanda, Louisiana State University Health Science Center Shreveport
- **217** SYMPTOMATIC ADULT CHIARI I MALFORMATION: POSTERIOR FOSSA MORPHOMETRIC ANALYSIS AND CLINICAL OUTCOMES Jai D. Thakur (presenter), Rishi Wadhwa, Ashish Sonig, Shihao Zhang, Imad S. Khan, Josh Martin, Anil Nanda, Bharat Guthikonda, LSUHSC-Shreveport
- **218** HARVEY CUSHING'S TREATMENT OF SKULL BASE INFECTIONS AT THE JOHNS HOPKINS HOSPITAL, 1896-1912 Aravind Somasundaram, Shaan M. Raza, Courtney Pendleton, Alfredo Quinones-Hinojosa (presenter), The Johns Hopkins Hospital
- 219 EFFECT OF PREVIOUS SINONASAL SURGERY ON LONG-TERM RADIOGRAPHIC INCIDENCE OF SINUS DISEASE IN PATIENTS FOLLOWING ENDOSCOPIC SKULL BASE SURGERY Darshni Vira (presenter), Adam S. DeConde, Marilene B. Wang, Marvin Bergsneider, Jeffrey D. Suh, UCLA
- **220 ISOLATED MECKEL'S CAVE AND CAVERNOUS SINUS AMYLOIDOMAS MIMICKING CENTRAL SKULL BASE TUMORS** –
 W. W. Chang (presenter), M. E. Jentoft, J. J. Van Gompel, J. E. Hammack, T. J. Sebo, M. J. Link, Departments of Neurosurgery, Pathology, and Neurology, Mayo Clinic, MN
- 221 IDENTIFICATION OF MRI BIOMARKERS AND HISTOPATHOLOGICAL ALTERATIONS IN RESPONSE TO COMBINATORIAL THERAPY WITH ANTI-ANGIOGENIC AGENTS AND RADIATION IN A MURINE MODEL OF GLIOMA TUMOR Shahrzad Jalali, Warren Foltz, Kelly Burrell, Caroline Chung, Gelareh Zadeh (presenter), Division of Neurosurgery, Toronto Western Hospital, University of Toronto
- **222 JUGULAR FORAMEN SCHWANNOMAS: SINGLE INSTITUTIONAL EXPERIENCE OF 28 CASES** Ashish Suri (presenter), Sumit Bansal, Manmohan Singh, Ashok K. Mahapatra, All India Institute of Medical Sciences
- **223** ENDOSCOPIC APPROACH TO MALIGNANT TUMORS OF THE SKULL BASE Brian W. Rotenberg, Jason Franklin (presenter), University of Western Ontario
- **224** UTILITY OF 18FDG-PET IN THE INITIAL DIAGNOSIS AND WORKUP OF SINONASAL MALIGNANCY Vijay R. Ramakrishnan (presenter), Alexander G. Chiu, James N. Palmer, David W. Kennedy, Bert W. O'Malley, University of Colorado, University of Arizona, University of Pennsylvania
- **225** LATE TERM PRESENTATION OF METASTATIC RENAL CELL CARCINOMA TO THE SINONASAL CAVITY Aaron K. Remenschneider (presenter), Stacey T. Gray, Peter Sadow, Massachusetts Eye and Ear Infirmary

- **226** GANGLIONEUROMA OF THE SKULL BASE PRESENTING WITH MULTIPLE CRANIAL NERVE DEFICITS; CASE REPORT AND REVIEW OF THE LITERATURE Peter C. Revenaugh, Joseph Scharpf (presenter), Cleveland Clinic
- **227** TRANSCERVICAL DOUBLE MANDIBULAR OSTEOTOMY APPROACH TO THE INFRATEMPORAL FOSSA Stewart I. Adam, Ketan R. Bulsara, Roger Lowlicht, Benjamin L. Judson (presenter), Section of Otolaryngology, Department of Surgery, Yale School of Medicine, New Haven, CT
- **228** FACTORS CONTRIBUTING TOWARDS DELAY IN DIAGNOSIS OF SINONASAL NATURAL KILLER/T-CELL LYMPHOMA David Jung (presenter), Stacey T. Gray, Massachusetts Eye and Ear Infirmary
- **229** SCHWANNOMAS OF THE NASOPHARYNX AND PTERYGOPALATINE FOSSA Michael Shohet, Shira Koss (presenter), Mount Sinai School of Medicine
- **230** METASTATIC DISEASE TO THE CLIVUS MIMICKING A CLIVAL CHORDOMA Adam S. DeConde (presenter), Darshni Vira, Marvin Bergsneider, Marilene B. Wang, UCLA
- **231** INTRAOPERATIVE HYPERTENSIVE CRISIS DUE A
 CATECHOLAMINE-SECRETING ESTHESIONEUROBLASTOMA Vafi
 Salmasi (presenter), Adam Schiavi, Brent A. Orr, Douglas W. Ball, Zev
 A. Binder, Masaru Ishii, Gary L. Gallia, Johns Hopkins Hospital
- **232** GIANT PROLIFERATING PILAR TUMOR OF THE SCALP: A MINIMAL RISK APPROACH Christopher H. Rassekh (presenter), Kelly M. Malloy, Tom Thomas, Jason Brandt, Xiaowei Xu, Ara A. Chalian, University of Pennsylvania
- **233** SINONASAL ADENOCARCINOMA: A SINGLE SURGEON'S EXPERIENCE Sachin Gupta (presenter), Homere Al Moutran, Priyam Vyas, David Hiltzik, Peter Costantino, NYU School of Medicine Department of Otolaryngology, Lenox Hill Hospital Department of Otolaryngology-Head and Neck Surgery
- **234** PRIMARY CRANIAL ANGIOSARCOMA: LONG TERM SURVIVAL IS FEASIBLE WITH MULTIDISCIPLINARY MANAGEMENT Bharat Guthikonda (presenter), Osama Ahmed, Cedric Shorter, Imad Khan, Jai Thakur, Majed Jeroudi, Anil Nanda, LSU HSC Shreveport
- **235** ANALYSIS OF 223 BRAIN TUMOR PATIENTS TREATED AT A LEVEL 1 TRAUMA COUNTY MEDICAL CENTER Daniel T. Nagasawa (presenter), Marko Spasic, Winward Choy, Heather M. Garcia, Andy Trang, Bob Shafa, Duc Duong, James Ausman, Marvin Bergsneider, Linda Liau, Duncan McBride, Isaac Yang, University of California, Los Angeles
- **236 RARE SKULL BASE BENIGN TUMORS POSTER** Mihaela Cristiana Tatu (presenter), Central Military Hospital
- 237 NEURONAVIGATION IN ENDONASAL PITUITARY AND SKULL BASE SURGERY USING AN AUTOREGISTRATION MASK WITHOUT HEAD FIXATION: AN ASSESSMENT OF ACCURACY AND PRACTICALITY Nancy McLaughlin (presenter), Ricardo L. Carrau, Amin B. Kassam, Daniel F. Kelly, Brain Tumor Center, John Wayne Cancer Institute at Saint John's Health Center, Santa Monica, CA, USA; Department of Neurosurgery, The Ottawa Hospital, Ontario, Canada
- **238** APPLICATIONS OF TRANSORAL, TRANSCERVICAL, TRANSNASAL AND TRANSFACIAL CORRIDORS FOR ROBOTIC SURGERY OF THE SKULL BASE R. L. Carrau (presenter), E. Ozer, D. M. Prevedello, B. A. Otto, M. Old, The Ohio State University Medical Center
- **239** INNOVATIVE USE OF THE O-ARM FOR SKULL BASE RESECTION IN A SPHENOORBITAL MENINGIOMA Edward E. Kerr (presenter), Kiarash Shahlaie, Brian Dahlin, Rudolph J Schrot, University of California Davis Medical Center

- **240 DETECTION AND MANAGEMENT OF SKULL BASE CEREBROSPINAL FLUID LEAKS USING HRCT-MRI FUSION IMAGING** Satish Govindaraj, Bradley Delman, Abib A. Agbetoba (presenter), Joshua B. Bederson, Mount Sinai Medical Center
- **241 VESTIBULAR MONITORING VIA ABDUCENS EMG: OBSERVATIONS ON A SINGLE CASE** Matthew Hanson (presenter), Christopher Mascarinas, Nicholas Post, John Miller, State University of New York Health Science Center at Brooklyn
- **242** COMPARATIVE ANALYSIS OF FIESTA VERSUS CONVENTIONAL IMAGING FOR ASSESSMENT OF CEREBELLOPONTINE ANGLE EPIDERMOID TUMORS Osamah J. Choudhry (presenter), Pratik Shukla, Resha Soni, Maureen Barry, Shira Slasky, James K. Liu, Center for Skull Base and Pituitary Surgery, Neurological Institute of New Jersey, Newark, NJ
- **243** IS RETROSIGMOID APPROACH ADEQUATE FOR RESECTION OF PETROCLIVAL MENINGIOMAS Sherif M. Elwatidy (presenter), Zain Jamjoom, College of Medicine, King Saud university
- 244 COMBINED SUPRA-INFRATENTORIAL MICROSURGICAL APPROACH FOR PETRO-CLIVAL AND TENTORIAL-INCISURAL EXTRA-AXIAL LESIONS Hamad I. Farhat (presenter), Michael Schinners, Jin C. Zhao, Richard Wiet, Ivan Ciric, NorthShore University HealthSystem
- **245** ANTERIOR SKULL BASE RHABDOID MENINGIOMA MASQUERADING AS ESTHESIONEUROBLASTOMA Sriram V. Eleswarapu, Darrin J. Lee (presenter), Arthur B. Dublin, E. Bradley Strong, Quang Luu, Kiarash Shahlaie, Departments of Neurological Surgery, Radiology, and Otolaryngology, University of California, Davis School of Medicine, USA
- **246 CLINICAL CHARACTERISTICS AND SURGICAL MANAGEMENT OF ATYPICAL MENINGIOMAS OF THE SKULL BASE** Joshua W.
 Osbun (presenter), Michael R. Levitt, Manuel Ferreira, Laligam N.
 Sekhar, The University of Washington, Department of Neurological Surgery
- **247** DELAYED MALIGNANT TRANSFORMATION OF PETROCLIVAL MENINGIOMA TO CHONDROSARCOMA AFTER STEREOTACTIC RADIOSURGERY: CASE REPORT AND REVIEW Rohan R. Lall (presenter), Omar Arnaout, James P. Chandler, Northwestern University McGaw Medical Center Department of Neurosurgery, Chicago, IL
- **248** RADIOLOGY OF CAVERNOUS SINUS AND PARASELLAR REGION Michael Chan, Eric Bartlett, Walter Kucharczyk, Arjun Sahgal, Hugh Curtin, Eugene Yu (presenter), University of Toronto and Massachusetts Eye and Ear Infirmary
- **249** A PROSPECTIVE QUALITATIVE STUDY ON PATIENTS' PERCEPTIONS OF ENDOSCOPIC ENDONASAL TRANSSPHENOIDAL SURGERY Idara J. Edem, Beverly Banton, Mark Bernstein, Shelly Lwu, Allan Vescan, Fred Gentilli, Gelareh Zadeh (presenter), Division of Neurosurgery, Toronto Western Hospital, University of Toronto
- **250** SINONASAL QUALITY OF LIFE CHANGES AFTER ENDOSCOPIC PITUITARY SURGERY Lee A. Zimmer (presenter), Ojas Shah, Philip V. Theodosopoulos, University of Cincinnati Departments of Otolaryngology and Neurosurgery
- **251** FACTORS AFFECTING POROUS HIGH-DENSITY POLYETHYLENE IMPLANT EXPOSURE IN PATIENTS UNDERGOING ENDOSCOPIC TRANSSPHENOIDAL RESECTION OF SELLAR LESIONS Spencer C. Payne (presenter), Brian Hughley, Yemisi Afere, John A. Jane Jr., University of Virginia
- **252** IMAGING FEATURES OF SKULL-BASED TUMORS, WITH SPECIAL ATTENTION TO THE CENTRAL SKULL BASE Arnold Saha, Peter Thurlow, Melanie B. Fukui, Michael F. Goldberg (presenter), Division of Neuroradiology, Department of Radiology, West Penn Allegheny Health System, Pittsburgh, PA

253 ENDOSCOPIC TRANSSPHENOIDAL RESECTION OF GIANT PITUITARY ADENOMAS: EXPERIENCE IN 7 PATIENTS – Mickey L. Smith, Smruti K. Patel, Osamah J. Choudhry, Jean Anderson Eloy, James K. Liu (presenter), Departments of Neurological Surgery and Otolaryngology, University of Medicine and Dentistry of New Jersey, New Jersey Medical School

254 COMBINED APPROACHES FOR THE TREATMENT OF CRANIOPHARYNGIOMA – Chiazo S. Amene (presenter), Lissa Baird,
Michael L. Levy, University of California, San Diego Medical Center;
Rady Children's Hospital, San Diego

255 DELAYED POSTOPERATIVE PITUITARY APOPLEXY AFTER ENDOSCOPIC TRANSSPHENOIDAL RESECTION OF A GIANT PITUITARY MACROADENOMA – Smruti K. Patel, Lana D. Christiano, Jean Anderson Eloy, James K. Liu (presenter), Center for Skull Base Surgery, Neurological Institute of New Jersey, Department of Neurological Surgery, Division of Otolaryngology, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, New Jersey

256 PRIMARY SELLAR LEIOMYOMAS: A REPORT OF TWO CASES AND REVIEW OF THE LITERATURE OF A RARE ENTITY

 Andrew Ko, David K. Su (presenter), Donald Born, Manuel Ferreira Jr., University of Washington School of Medicine, Departments of Neurological Surgery and Pathology

257 ORBITAL METASTASIS OF PITUITARY GROWTH HORMONE SECRETING CARCINOMA CAUSING LATERAL GAZE PALSY: CASE REPORT, PATHOLOGY REVIEW, AND REVIEW OF THE LITERATURE – Rohan R. Lall (presenter), Steven F. Shafizadeh, Omar Arnaout, Bernard R. Bendok, James P. Chandler, Northwestern University McGaw Medical Center Department of Neurosurgery, Chicago, IL

258 IDIOPATHIC GRANULOMATOUS HYPOPHYSITIS
PRESENTING AS PITUITARY APOPLEXY: A RARE
MANIFESTATION OF A RARE DISORDER – Osamah J. Choudhry
(presenter), Alexandros Zouzias, Leroy Sharer, Jean Anderson
Eloy, James K. Liu, Center for Skull Base and Pituitary Surgery,
Neurological Institute of New Jersey, Newark, NJ

259 ENDOSCOPIC TRANSNASAL VS. OPEN TRANSCRANIAL INTERNAL CAROTID ARTERY ANATOMY: A UNIFORM APPLICATION OF NOMENCLATURE – John J. DePowell (presenter), James L. Leach, Lee A. Zimmer, Philip V. Theodosopoulos, Jeffrey T. Keller, University of Cincinnati Departments of Neurosurgery, Otolaryngology-Head and Neck Surgery, and Radiology; University of Cincinnati Neuroscience Institute; Mayfield Clinic

260 RADIOGRAPHIC ANATOMY OF THE MAJOR FORAMINA OF THE SKULL BASE – Lee A. Zimmer (presenter), Philip V. Theodosopoulos, Jeffrey T. Keller, University of Cincinnati Departments of Otolaryngology and Neurosurgery

261 IMPORTANCE OF TROCHLEAR NERVE DISSECTION FOR TENTORIAL INCISION DURING THE SUBTEMPORAL TRANSTENTORIAL APPROACH: TECHNICAL NOTE – Nancy McLaughlin (presenter), Quanfeng Ma, Josh Emerson, Dennis Malkasian, Neil A. Martin, Department of Neurosurgery, David Geffen School of Medicine at UCLA

262 COMPUTED TOMOGRAPHY ANALYSIS OF THE PREVALENCE OF ONODI CELLS – Senja Tomovic (presenter), Norman Chan, Azadeh Esmaeili, James K. Liu, Jean Anderson Eloy, University of Medicine and Dentistry of New Jersey

263 COMPUTED TOMOGRAPHY ANALYSIS OF ANATOMIC VARIATIONS OF THE SPHENOID SINUS – Senja Tomovic (presenter), Norman J. Chan, Azadeh Esmaeili, James K. Liu, Jean Anderson Eloy, University of Medicine and Dentistry of New Jersey

264 THE RELATIONSHIP BETWEEN THE SUPERIOR PETROSAL SINUS AND MECKEL'S CAVE: AN ANATOMICAL STUDY – Martin M. Mortazavi (presenter), Christoph J. Griessenauer, Sanjay Krishnamurthy, Ketan Verma, Jason Cormier, Shane Tubbs, Division of Neurological Surgery, University of Alabama at Birmingham

265 CAVERNOUS SINUS ACCESS VIA THE TRANSLATERAL ORBITAL WALL APPROACH – Sebastian F. Koga (presenter), Robert M. Starke, Steven A. Newman, University of Virginia

266 ENDOSCOPIC ENDONASAL DISSECTION OF THE INFRATEMPORAL FOSSA: ANATOMIC RELATIONSHIPS AND IMPORTANCE OF EUSTACHIAN TUBE IN ENDOSCOPIC SKULL BASE SURGERY – R. Terre Falcon, C. Rivera-Serrano, R. L. Carrau (presenter), J. Fernandez-Miranda, D. M. Prevedello, C. H. Snyderman, A. B. Kassam, The Ohio State University Medical Center, Umiversity of Pittsburgh, University of Ottawa

267 PRACTICAL SURGICAL LANDMARKS FOR THE PLANNING OF A TRANSPTERYGOID ENDOSCOPIC ENDONASAL APPROACH – R. L. Carrau (presenter), B. A. Otto, D. M. Prevedello, C. Pinheiro-Neto, L. Ditzel, D. de Lara, R Mafaldo, The Ohio State University Medical Center

268 FIRST STAGE IN PREDICATIVE MEASURE FOR TRANSNASAL TRANSPHENOIDAL APPROACH TO PETROUS APEX CHOLESTEROL GRANULOMA – Nael Shoman, Angela M. Donaldson (presenter), Jeffrey J. Ksiazek, Myles L. Pensak, Lee A. Zimmer, University of Cincinnati Medical Center

269 UNUSUAL INFECTIOUS COMPLICATIONS OF SKULL BASE SURGERY – Steven A. Newman (presenter), University of Virginia

270 EXTERNAL LANDMARKS FOR IDENTIFYING THE DRAINAGE SITE OF THE VEIN OF LABBÉ: APPLICATION TO NEUROSURGICAL PROCEDURES – Martin M. Mortazavi (presenter), Christoph J. Griessenauer, Shane Tubbs, Robert G. Louise Jr., Young-Bin Song, Marios Loukas, Mohammadali Shoja, Aaron A. Cohen-Gadol, Division of Neurological Surgery, University of Alabama at Birmingham

271 IDENTIFICATION OF A CAROTICO-CLINOIDAL FORAMEN AND ITS IMPORTANCE IN ENDONASAL SKULL BASE SURGERY

– Juan C. Fernandez-Miranda (presenter), Matthew J. Tormenti, Allesandro Paluzzi, Carl H. Snyderman, Paul A. Gardner, University Of Pittsburgh Medical Center

272 ENDOSCOPIC ENDONASAL APPROACH TO MECKEL'S CAVE – Alexandre A. Karkas (presenter), Jeffrey T. Keller, Philip V. Theodosopoulos, Lee A. Zimmer, University of Cincinnati

273 TEMPORARY BRACHYTHERAPY SEED MESH IN THE TREATMENT OF A RADIATION-INDUCED SINONASAL CARCINOSARCOMA: A CASE REPORT AND LITERATURE REVIEW – Benjamin A. Talei (presenter), Bhupesh Parashar, David I. Kutler, Cornell University Medical College

274 PATTERNS OF RECURRENCE IN SKULL BASE MENINGIOMA AFTER SECONDARY GAMMA KNIFE RADIOSURGERY – Jai D. Thakur (presenter), Ashish Sonig, Imad S. Khan, Prashant Chittiboina, Shihao Zhang, Anil Nanda, Louisiana State University Health Science Center- Shreveport

275 SYSTEMATIC ANALYSIS OF THE OUTCOMES OF STEREOTACTIC RADIOSURGERY FOR CENTRAL NEUROCYTOMA

– Andrew Y. Yew (presenter), Marko Spasic, Winward Choy, Heather

- Andrew Y. Yew (presenter), Marko Spasic, Winward Choy, Heather Garcia, Andy Trang, Antonio DeSalles, Isaac Yang, UCLA

276 POST-TRAUMATIC MUCOCLES: DOES ENCEPHALOMALACIA PREDICT ADVANCED DISEASE? – William R. Schmitt (presenter), Matthew L. Carlson, Eric J. Moore, Mayo Clinic - Rochester

277 HARVEY CUSHING'S EARLY OPERATIVE TREATMENT OF SKULL BASE FRACTURES – Courtney Pendleton (presenter), Shaan M. Raza, Alfredo Quinones-HInojosa, The Johns Hopkins Hospital

- **278** TRAUMATIC ENTRAPMENT OF THE ANTERIOR CEREBRAL ARTERY A CASE REPORT Christopher C. Gillis (presenter), Peter A. Gooderham, Charles S. Haw, University of British Columbia
- **279** UNILATERAL FRONTOPTERIONAL CRANIOTOMY FOR DURAL ARTERIOVENOUS FISTULA OF THE ANTERIOR CRANIAL FOSSA: A LATERAL APPROACH TO A MIDLINE LESION Vikram V. Nayar, Dana E. Adkins (presenter), Georgetown University Hospital
- 280 THE OCCIPITAL TRANSTENTORIAL APPROACH FOR SUPERIOR VERMIAN AND SUPEROMEDIAN CEREBELLAR ARTERIOVENOUS MALFORMATIONS: ADVANTAGES, LIMITATIONS AND OPTIONS Nancy McLaughlin (presenter), Neil A. Martin, Department of Neurosurgery, David Geffen School of Medicine at UCLA
- **281** MANAGEMENT OF JUGULOTYMPANIC PARAGANGLIOMAS-OUR EXPERIENCE IN INDIA – Suresh C. Sharma (presenter), All India Institute of Medical Sciences, New Delhi, INDIA.
- **282** ORTHOGONAL DOME FIRST TANDEM CLIPPING TECHNIQUE FOR THE RECONSTRUCTION OF GIANT OPHTHALMIC ARTERY ANEURYSM-A SINGLE-SURGEON OPERATIVE EXPERIENCE Ashish Sonig (presenter), Vijay Kumar Javalkar, Imad Khan, Jaideep Thakur, Anil Nanda, Department of neurosurgery, Louisiana State University, Shreveport.
- 283 TRANSIENT ADENOSINE-INDUCED ASYSTOLE DURING SURGICAL REMOVAL OF A GIANT CEREBELLOPONTINE ANGLE HEMANGIOBLASTOMA John C. Quinn (presenter), Yuriy Gubenko, Jame K. Liu, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Neurological Institute of New Jersey, Newark, New Jersey
- 284 TRANSIENT ADENOSINE- INDUCED ASYSTOLE FOR THE MANAGEMENT OF COMPLEX ANEURYSMS AT THE SKULL BASE Abhishek Agrawal (presenter), Gavin Britz, Department of Neurosurgery, Duke University & Medical Center, Durham, NC
- **285 STENT COIL EMBOLIZATION OF AN IATROGENIC CAVERNOUS CAROTID PSEUDOANEURYSM** Alexander Tuchman, Frank J. Attenello (presenter), Arun Amar, Gabriel Zada, Alexander A. Khalessi, University of Southern California, University of California, San Diego
- 286 POSTTRAUMATIC OPHTHALMIC ARTERY
 PSEUDOANEURYSM PRESENTING AS EPISTAXIS: CASE REPORT
 AND REVIEW OF THE LITERATURE Parviz Dolati-Ardejani
 (presenter), William F. Morrish, John H. Wong, University of Calgary
- **287** ENDOSCOPIC VASCULAR ANATOMY OF THE RETROCLIVAL JUNCTION Juan Carlos De Battista (presenter), Norberto Andaluz, Ondrej Choutka, Lee Zimmer, Jeffrey Keller, University of Cincinnati
- **288** POST-TRANSPLANT LYMPHOPROLIFERATIVE DISORDER OF THE TEMPORAL BONE: REPORT OF A UNIQUE CASE AND DISCUSSION Eric E. Berg (presenter), Ken Kazahaya, Luv Javia, The Children's Hospital of Philadelphia
- 289 CYSTIC VERSUS NON-CYSTIC LARGE VESTIBULAR SCHWANNOMAS: PRESENTATION AND OUTCOME, A MATCHED CONTROLLED SERIES Michael Canty (presenter), Sarah Eljamel, Musheer Hussain, Prof Sam Eljamel, Ninewells Hospital and Medical School
- **290 ANATOMICAL DELINEATION OF A SAFETY ZONE FOR DRILLING THE INTERNAL ACOUSTIC MEATUS** Rajesh Chhabra (presenter), Sunil Gupta, Tulika Gupta, Post Graduate Institute of Medical Education and Research and HSJ Institute of Dental Sciences and Hospital, Panjab University
- **291** LABYRINTHINE ARTERY ANEURYSM AS AN IAC MASS Rodney C. Diaz (presenter), Thomas Konia, University of California Davis Medical Center
- **292 SYMPTOMS OF PETROUS APEX LESIONS** Neerav Goyal, Jenny Liu, Sangam G. Kanekar, Soha Ghossaini (presenter), Penn State Hershey Medical Center

- 293 MALIGNANT TRANSFORMATION OF A VESTIBULAR SCHWANNOMA FOLLOWING GAMMA KNIFE RADIOSURGERY: CASE REPORT AND REVIEW OF THE LITERATURE David J. Fusco (presenter), Richard Williamson, Vijay Yanamadala, Jennifer Eschbacher, Randall Porter, Peter Weisskopf, Barrow Neurological Institute
- **294** AUTOLOGOUS FASCIA SLING TECHNIQUE FOR DURAL RECONSTRUCTION FOLLOWING TRANSTEMPORAL PETROSECTOMY APPROACHES Amanda J. Podolski, Robert W. Jyung, James K. Liu (presenter), University of Medicine and Dentistry: New Jersey Medical School
- **295** ATYPICAL SCHWANNOMA: A 10 YEAR EXPERIENCE Selena E. Heman-Ackah (presenter), Maura K. Cosetti, John G. Golfinos, John T. Roland, New York University
- **296 COMPLICATIONS IN ACOUSTIC NEUROMA MICROSURGERY: PROGRESS SINCE THE TURN OF THE CENTURY** Selena E Heman-Ackah (presenter), Maura K Cosetti, John G Golfinos, John T Roland, New York University
- 297 USE OF A RECIPROCATING SUCTION MICRODEBRIDER FOR RESECTION VIA THE MIDDLE FOSSA APPROACH OF ACOUSTIC NEUROMAS WITH SIGNIFICANT CEREBELLOPONTINE ANGLE EXTENSION Marc S. Schwartz (presenter), Gregory P. Lekovic, House Clinic, Neurosurgery
- 298 REMOVAL OF HAIRY POLYP OF THE EUSTACHIAN TUBE USING A NOVEL SKULL BASE APPROACH: EXTENDED TRANS-MASTOID EXCISION Anita Konka (presenter), Matthew B. Hanson, State University of New York, Downstate Medical Center
- **299** NFAT AND T CELL RESPONSE PLAY MAJOR ROLES IN THE FORMATION OF SPORADIC VESTIBULAR SCHWANNOMAS
- Boris Krischek (presenter), Isabel Gugel, Antje Bornemann, Georgios Pantazis, Guenther C. Feigl, Constantin Roder, Florian Roser, Martin Schuhmann, Gelareh Zadeh, Marcos Tatagiba, Division of Neurosurgery, Toronto Western Hospital; Department of Neurosurgery, Department of Neuropathology, University of Tuebingen, Germany
- 300 OUTCOMES FOLLOWING LATERAL TEMPORAL BONE
 RESECTION FOR SQUAMOUS CELL CARCINOMA Aaron D. Tward
 (presenter), Alicia Quesnel, Michael G. Moore, Daniel D. Deschler, Michael
 J McKenna, Derrick T. Lin, Massachusetts Eye and Ear Infirmary, Harvard
 Medical School, Indiana University School of Medicine
- **301** SPONTANEOUS OTOGENIC CSF LEAKS: A PRESENTATION OF CASES AND REVIEW OF LITERATURE AND MANAGEMENT OPTIONS Meghan N. Wilson (presenter), James Lin, Daniel W. Nuss, Moises A. Arriaga, Jason Durel, Louisiana State University Health Sciences Center in New Orleans
- **302 PIGMENTED VILLONODULAR SYNOVITIS OF THE INFRATEMPORAL FOSSA** Nimish A. Patel (presenter), Matthew Cox, Michael Medina, University of Florida Department of Otolaryngology Head and Neck Surgery
- 303 MANAGEMENT OF INVERTED PAPILLOMA OF THE TEMPORAL BONE Nicholas R. Rowan, Evelyne Kalyoussef (presenter), James K. Liu, Robert W. Jyung, Department of Otolaryngology Head & Neck Surgery, University of Medicine and Dentistry of New Jersey New Jersey Medical School, Department of Neurological Surgery, University of Medicine and Dentistry of New Jersey New Jersey Medical School
- **304 RECURRENT FACIAL PALSY, THE ROLE OF SURGERY** Mihaela Cristiana Tatu (presenter), Lucian Constantin Esanu, Central Military Hospital
- **305** FACIAL NERVE SCHWANNOMAS PRESENTING AS OCCLUDING EXTERNAL AUDITORY CANAL MASSES Richard K. Gurgel (presenter), Robert K. Jackler, Stanford University

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