



NORTH AMERICAN SKULL BASE SOCIETY

21ST ANNUAL MEETING

**Innovations and Excellence in
Skull Base Surgery: The Future is Here**

PRESIDENT: **Peter Neligan, MD**

SCIENTIFIC PROGRAM CHAIRS:

Ian Witterick, MD & James Evans, MD

PRACTICAL COURSE DISSECTION WORKSHOP CHAIRS:

**Vijay K. Anand, MD, Ehab Hanna, MD,
Jacques Morcos, MD & James Evans, MD**

2011 FINAL PROGRAM

February 18-20, 2011

Pre-Meeting Practical Courses: February 16 & 17, 2011

HILTON SCOTTSDALE RESORT & VILLAS | SCOTTSDALE, ARIZONA

WWW.NASBS.ORG



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MEETING HOURS

REGISTRATION HOURS (Salon I Foyer)

Thursday, Feb. 17, 2011	2:00pm-6:00pm
Friday, Feb. 18, 2011	6:30am-5:30pm
Saturday, Feb. 19, 2011	6:30am-5:30pm
Sunday, Feb. 20, 2011	7:30am-11:00am

EXHIBIT HALL/POSTER HOURS (Pavilion)

Friday, February 18, 2011

Hall Open	10:30am-3:00pm
Hall Open	5:30pm-7:00pm
Break in Exhibit Hall	10:30am-11:00am
Lunch	12:00pm-1:00pm
Break in Exhibit Hall	3:30pm-4:00pm
Break for Exhibitors/ Exhibit Hall Closed	4:00pm-5:30pm
Reception in Exhibit Hall	5:30pm-7:00pm

Saturday, February 19, 2011

Hall Open	10:00am-3:00pm
Break in Exhibit Hall	10:30am-11:00am
Lunch in Exhibit Hall	12:00pm-1:00pm
Break in Exhibit Hall	3:30pm-4:00pm

Sunday, February 20, 2011

Hall Open	7:00am-11:00am
Breakfast in Exhibit Hall	7:00am-8:00am
Break in Exhibit Hall	10:00am-10:30am

WELCOME!

On behalf of the Board of Directors, and the Annual Meeting Scientific Committee, it is my great pleasure to welcome all to Scottsdale for the **21st Annual Meeting of the North American Skull Base Society**. The NASBS continues to attract the world's greatest expertise in neurosurgery, otolaryngology-head & neck surgery, plastic and reconstructive surgery, ophthalmology, maxillofacial surgery, neuroradiology, radiation oncology, interventional radiology, medical oncology, and other related specialties. I am very proud of our program and we have worked hard to represent all areas of our society on the podium.

In line with our theme of "Innovations and Excellence in Skull Base Surgery: The Future is Here", our Program Committee, under the leadership of Dr. Ian Witterick (Program Chair) and Dr. James Evans (Program Co-Chair) have put together a very exciting collection of breakfast seminars, keynote lectures, debates, concurrent sessions, and scientific paper sessions.

The keynote lectures feature Dr. Laurent Lantieri on facial transplantation, Dr. Bert O'Malley on robotic surgery and Mr. Terry Goddard (Attorney General of Arizona) on the Arizona immigration bill and its national ramifications. Dr. Albert Rhoton will give his incomparable 3-D skull base anatomy lectures and three teams of talented members will compete in *Skull Base Jeopardy*. We are honoring two pioneers in the field of skull base surgery, Drs. Patrick Gullane and Ian Jackson, whose contributions to skull base surgery and reconstruction are enormous.

The two-day pre-meeting *Practical Dissection Course*, at Barrow Neurological Institute in Phoenix, highlights open and endoscopic approaches to the skull base. This is always a wonderful educational experience with masterful displays of surgical technique directed by Drs. Vijay Anand, Ehab Hanna, Jacques Morcos, and James Evans.

I hope you have a wonderful time in Scottsdale refreshing traditional concepts, learning new ones, reconnecting with colleagues and meeting new ones. This is a unique meeting and a unique society; I am distinctly honored to serve as President. I look forward to personally welcoming you to Scottsdale.

Peter C. Neligan, *President, North American Skull Base Society 2010*

SAVE THE DATES!

Mark your calendars for these upcoming NASBS Meetings and Workshops:

SUMMER RESIDENT & FELLOWS PRACTICAL DISSECTION WORKSHOP

July 29 - August 1, 2011
New Orleans, LA

22ND ANNUAL MEETING

February 17-19, 2012, *Pre-Meeting Courses*: February 15 & 16, 2012
Las Vegas, Nevada

23RD ANNUAL MEETING

February 15-17, 2013, *Pre-Meeting Courses*: February 13 & 14, 2013
Miami, Florida



GENERAL INFORMATION

CME INFORMATION

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)**[™]. 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*[™].

Annual Meeting Objectives

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

- Identify the clinical and radiologic manifestations of skull base neoplasms and propose appropriate treatment algorithms.
- Demonstrate a thorough understanding of the important anatomy and surgical approaches to the skull base.
- Contrast the therapeutic options for skull base tumors including endoscopic and open skull base surgical techniques, radiation, and the most recent novel adjuvant therapies.
- Recognize and plan reconstructive options for management of simple and complex cranial base defects.
- Update their knowledge of the latest clinical and basic science research in skull base surgery to immediately assist in patient care.

Target Audience/Scope of Practice

Head and neck surgeons, neurosurgeons, plastic and reconstructive surgeons, ophthalmologists, radiation oncologists, and medical oncologists.

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

Peter Neligan, MD (President)

Ian Witterick, MD (Chair)

James Evans, MD (Co-Chair)

NASBS EXECUTIVE COMMITTEE

Peter Neligan, MD

President – Seattle, WA

Dennis Kraus, MD

President-Elect – New York, NY

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Saleem I. Abdulrauf, MD, FACS

Secretary – Saint Louis, MO

Ehab Y. Hanna, MD, FACS

Treasurer – Houston, TX

Daniel Nuss, MD, FACS

Immediate Past President – New Orleans, LA

DIRECTORS AT LARGE

Mario Ammirati, MD (2012)

Vijay Anand, MD (2011)

Eric Chang, MD (2010)

Peter Cordiero, MD (2012)

Rick Friedman, MD (2011)

Michael Link, MD (2010)

Jacques Morcos, MD (2011)

Christopher H. Rassekh, MD (2010)

Mark Varvares, MD (2012)

BOARD OF ADVISORS

Franco DeMonte, MD (2013)

Patrick J. Gullane, MD (2010)

Anil Nanda, MD (2011)

Daniel Nuss, MD (2014)

Guy Petruzzelli, MD, PhD (2012)

PAST PRESIDENTS

1990 Paul J. Donald, MD

1991 Laligam N. Sekhar, MD

1992 Ivo P. Janecka, MD

1993 Peter G. Smith MD, PhD

1994 Albert L. Rhoton, JR., MD

1995 Hugh Curtin, MD

1996 Derald E. Brackmann, MD

1997 Ossama Al-Mefty, MD

1998 Steven A. Newman, MD

1999 John P. Leonetti, MD

2000 Robert F. Spetzler, MD

2001 Ian T. Jackson, MD

2002 Vinod K. Anand, MD

2003 Jon H. Robertson, MD

2004 Jatin Shah, MD

2005 Patrick J. Gullane, MD

2006 Anil Nanda, MD

2007 Guy J. Petruzzelli, MD

2008 Franco DeMonte, MD

2009 Daniel Nuss, MD

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.

*For more information
about membership, please visit*

WWW.NASBS.ORG

and click on "Membership".

*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 Patrick Gullane and Ian Jackson. Both have been innovators in skull base surgery and are teachers to colleagues, residents and students around the world.



Patrick J. Gullane, CM, MB, FRCS(C), FACS, FRACS (Hon), FRCS (Hon)

Otolaryngologist-in-Chief, Department of Otolaryngology-Head & Neck Surgery, University Health Network, Wharton Chair Head and Neck Surgery, Princess Margaret Hospital, Professor and Chair Department of Otolaryngology-Head and Neck Surgery, University of Toronto

Professor Gullane was born in Ireland and received his medical degree from Galway University, Ireland in 1970. He

is a Fellow of the Royal College of Surgeons of Canada and certified by the American Board of Otolaryngology-Head and Neck Surgery. In 1975 he was selected as the McLaughlin Fellow and then pursued advanced training in Head and Neck Oncology in Pittsburgh, and New York.

In 1978 Dr. Gullane was appointed to the Department of Otolaryngology-Head and Neck Surgery at the University of Western Ontario. He was subsequently recruited to the Department of Otolaryngology-Head and Neck Surgery at the University of Toronto in 1983. In 1989 he was appointed as Otolaryngologist-in-Chief within the University Health Network and in 2002 appointed as Professor and Chair of the Department of Otolaryngology-Head and Neck Surgery, University of Toronto.

Dr. Gullane is a member of numerous Surgical Societies, nationally/internationally and has been invited as a Visiting Professor to over 65 countries lecturing on all aspects of Head and Neck Oncology. He has delivered over 750 presentations nationally/internationally and serves on the Editorial Board of 10 Journals. Dr. Gullane has published 253 papers in peer-reviewed journals and 71 chapters in textbooks. In addition he has published 9 books on various aspects of Head and Neck Surgery. The most recent, 2nd Edition of Principles and Practice of Head and Neck Surgery and Oncology was published July 2009.

Dr. Gullane has been a PI or collaborator on numerous research grants (8 ongoing) receiving funding from various Agencies, including NCIC and NIH.

Honours/Awards

- 1998** Facilitated the establishment of four University-Hospital Chairs: Head & Neck Surgery, Reconstruction, Radiation Oncology, and Basic Science, from private funding donations in excess of \$14.5 M. - with continual funding up to the present time
- 2004-05** Served as President of the North American Skull Base Society
- 2004-05** Served as President of the American Head and Neck Society
- 2005-06** Served as Vice-President, Triological Society (Eastern Section)
- 2006** Recipient of the Royal Australasian College of Surgeons *Honorary Fellowship* (FRACS), Sydney Australia
- 2008** Invited Faculty - *1st Educational World Tour* (11 countries) - International Federation of Head and Neck Oncologic Societies - Current Concepts in Head and Neck Surgery and Oncology.
- 2010** Recipient of Royal College of Surgeons of England *Honorary Fellowship* (FRCS), London England
- 2010** Appointed as a Member to the *Order of Canada* by the Governor General of Canada. Cited for his inspiration of young surgeons and his contributions to the field of Head and Neck Surgery



**Ian T. Jackson, MD, DSc (Hon),
FRCS, FACS, FRACS (Hon)**

A native of Glasgow, Scotland, Dr. Ian T. Jackson obtained his MB, ChB degree from the University of Glasgow in 1959. He completed his internship in general surgery in 1960, followed by a residency in pathology (1962) and surgery (1965) at the Glasgow Royal Infirmary. He received his F.R.C.S. Glasgow and

his F.R.C.S. Edinburgh in 1964. He spent the years 1965-1967 completing his plastic surgery residency at the Glasgow Royal Infirmary and then became senior resident in plastic surgery at Canniesburn Hospital in Scotland from 1967-1969. During this time he spent one year in Sweden, Germany and Switzerland on a Royal College of Surgeons Fellowship.

After completion of his training, he became Consultant Plastic Surgeon at Canniesburn Hospital in Glasgow and the Glasgow Royal Infirmary, Scotland. He also served as a Consultant Plastic Surgeon at the Centre for Rheumatic Diseases in Glasgow. While practicing in Scotland, Doctor Jackson received many awards for his outstanding contributions in the field of plastic and reconstructive surgery, both in research and clinical areas.

In 1979, Doctor Jackson joined the staff of the Mayo Clinic in Rochester, Minnesota where he served as Consultant Plastic Surgeon; Head, Section of Plastic Surgery; and Professor of Plastic Surgery at the Mayo Medical School.

Doctor Jackson's current academic appointments are as follows:

- Director, Institute for Craniofacial and Reconstructive Surgery (1989 to present)
- Director, Craniofacial Cleft Palate Diagnostic Clinic, Providence Hospital (1989 to present)
- Medical Chairman, Department of Physiology, Providence Hospital (1992 to present)
- Clinical Professor, Department of Oral and Maxillofacial Surgery, University of Texas at Houston (1996 to present)
- Clinical Professor, Department of Orthodontics, University of Detroit Mercy (1997 to present)

Doctor Jackson is recognized as a leader in the field of craniofacial and reconstructive surgery and in 1991 received an Honorary Fellowship of the Royal Australasian College of Surgeons. In 1986, he was the Sir Benjamin Rank Visiting Professor in Australia. He was also given the Clinician of the Year Award by the American Association of Plastic Surgeons in 1992 at the Annual Meeting in Vancouver, British Columbia. In 1993, he was the only plastic surgeon in Michigan to be included in *One Hundred Best Doctors in the United States*. In June 1993 he received an honorary D.Sc. degree from St. Louis University. In April 1995, he received the Sir Norman Rowe medal from the British Association of Oral and Maxillofacial Surgeons, and in November 1995 the Sir Harold Gillies medal from the British Association of Plastic Surgeons. In 1996 and 1997, he was the Navroji Godrej Visiting Professor to the Association of Plastic Surgeons of India. In 1998, he was awarded the Royal College of Surgeons of Edinburgh Medal in recognition of his contribution to craniofacial and reconstructive surgery. In 1998 he also received Honorary Membership of the Indian Association of Surgeons. In 1999 he received an honorary award from the American Association of Plastic Surgeons, and was President of the Midwestern Association of Plastic Surgeons. He was President of the North American Skull Base Society for 2000-2001. In June 2001, he received an honorary D.Sc. degree of the University of Glasgow. In November 2002, he received an Honorary Fellowship from the Royal College of Physicians and Surgeons of Glasgow. In 2003, he was awarded the first Ralph Millard Visiting Professorship from the Indian Society of Cleft Lip, Palate and Craniofacial Anomalies.

He is a member of numerous medical societies, both national and international, and has had visiting professorships all over the world mainly lecturing on craniofacial surgery, head and neck tumor resection and reconstruction, and cleft lip and palate surgery. He was the 1984 Junior Visiting Professor of the Plastic Surgery Educational Foundation, and in 1994 was the Senior Visiting Professor of the American Society of Plastic and Reconstructive Surgeons. He was the 2000 Ethicon Cosmetic Surgery Professor.

Doctor Jackson has written over 350 papers for medical journals, 116 chapters in textbooks, and has had 17 books published on various aspects of plastic surgery. He is the editor of the *European Journal of Plastic Surgery*; and is on the Editorial Board of 18 journals.

This year, the **NASBS** would like to recognize

Doctors Patrick Gullane & Ian Jackson

for playing an instrumental role in skull base surgery



2011 MEETING FACULTY

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

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King Hussien Cancer Center
and King Hussien Medical Center
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NHS Trust London, England

Carl Heilman, MD

Tufts Medical Center
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2011 MEETING FACULTY *Continued...*

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Beijing, China

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Beijing Tiantan hospital
Beijing, China

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Charlottesville, VA

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University School of Medicine
Daegu, Republic of Korea

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Howard Krauss, MD

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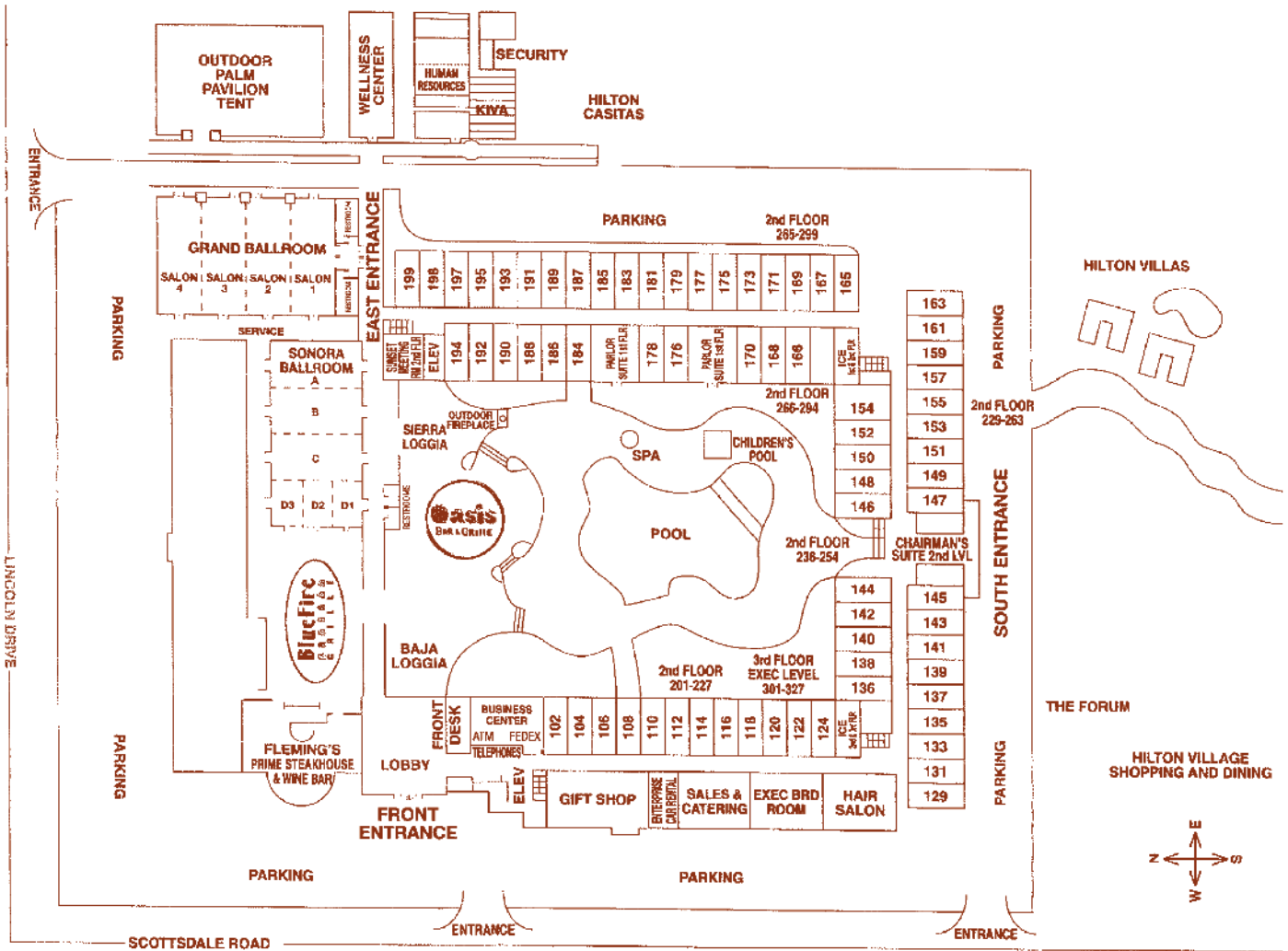
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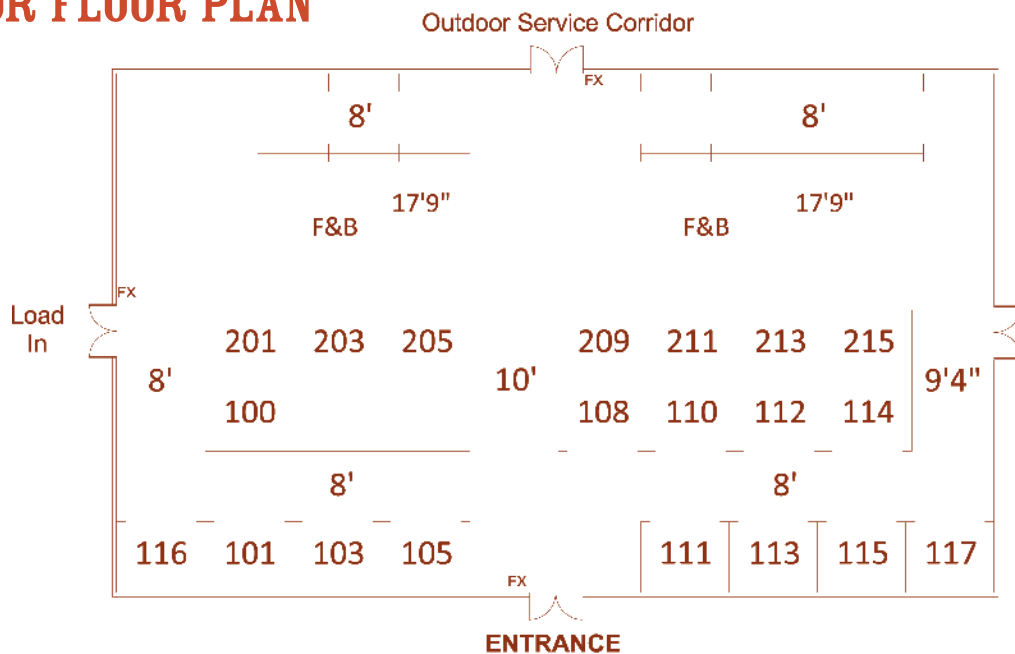
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SPEAKER HIGHLIGHTS



KEYNOTE SPEAKER: Laurent Lantieri, MD

Laurent Lantieri is a Plastic Surgeon and Professor of Plastic Surgery at Assistance Publique Hopitaux de Paris and Head of the Department at Henri Mondor Hospital. Born in 1963, Lantieri went to medical school at Paris Descartes University in Paris, France. He became a Resident in Surgery in 1986 after succeeding at the National French Residency contest. In 1993, he became a Research Fellow at Washington University in Dr. Khouri's laboratory in the Department of Plastic Surgery, which was directed by Dr. Paul Weeks. From 1994 to 2002, he was at the Henri Mondor Hospital and became Professor

in 2002 and Head of the Department in 2003. Lantieri specializes in several topics. He implanted the Development of Perforator Microsurgical Free Flap in France. He also developed, in cooperation with Pr. Wolkenstein, the French Referral Center for the Management of Neurofibromatosis. He focused part of his work developing original techniques for facial disfigurement due plexiform neurofibromas. He developed an original activity on face transplant to solve problems of unreconstructable solutions. To date, his team has performed five of the thirteen facial transplants worldwide. His work has been published in many peer review journals (75 articles). Pr. Lantieri has gained popularity in France and was elected by RTL radio an "Aujourd'hui en France" journal. (The equivalent of USA Today "Personality of the Year 2010).



GUEST SPEAKER: Bert O'Malley, MD

Bert W. O'Malley, Jr., M.D. is the Gabriel Tucker Professor and Chairman of the of the Department of Otorhinolaryngology - Head & Neck Surgery. He is the Director of the Head and Neck Cancer Research Program, Co-Director of the Center for Head and Neck Cancer and Co-Director of the Center for Cranial Base Surgery, with joint appointments in the Departments of Neurosurgery and Radiation Oncology.

Dr. O'Malley received his medical degree from the University of Texas Southwestern at Dallas. He completed two years of general surgery residency at the University of Texas Southwestern and Parkland Memorial Hospital and then a residency in Otolaryngology - Head and Neck Surgery at Baylor College of Medicine. Dr. O'Malley completed a fellowship in head and neck oncology and cranial base surgery at the University of Pittsburgh and subsequently began his academic faculty career at the Johns Hopkins University in 1995.

Dr. O'Malley previously served as Professor and Chairman of the Division of Otolaryngology - Head and Neck Surgery at the University of Maryland School of Medicine from February 1, 1999 through July of 2003 with joint appointments in the Department of Surgery and the Greenebaum Cancer Center. Prior to his appointment at Maryland, he held the position of Associate Professor and Director of Gene and Molecular Therapy in the Department of Otolaryngology - Head & Neck Surgery at the Johns Hopkins School of Medicine.

Dr. O'Malley brings clinical expertise in the area of skull base tumor surgery, head and neck and thyroid cancer and endoscopic sinus surgery. His clinical research focuses on the development of novel technologies such as image-guided surgery and robotic surgery. Dr. O'Malley co-founded the first human

robotics head and neck and skull base program in the world and is co-principal investigator of the first IRB approved human clinical trial for robotic surgery in our specialty. He is actively developing novel robotic surgical procedures (TORS) and instrumentation to advance the use of this technology in all aspects of Otolaryngology - Head and Neck Surgery. He was instrumental in the achievement of US FDA approval in December 2009 for TORS (Trans Oral Robotic Surgery).

Dr. O'Malley is conducting laboratory research in the area of gene and molecular therapy, investigating both viral and non-viral based gene therapies for the treatment of head and neck cancer. The newest direction of this research is the use of molecular therapies to enhance the anti-tumor effects of chemotherapy and radiation while reducing the known toxicities of these treatments.

Board certified in Otolaryngology - Head & Neck Surgery, Dr. O'Malley is a Fellow of the American College of Surgeons and the International College of Surgeons. Dr. O'Malley is a member of numerous professional societies, including the American Academy of Otolaryngology - Head & Neck Surgery, the American Society of Head & Neck Surgery, the Triological Society, the American Laryngologic Society, the American BrochoEsophagology Society, the American Rhinologic Society, the Society of University Otolaryngologists - Head & Neck Surgeons, The John Morgan Society, The Russian-American Cancer Alliance, The American College of Head and Neck Surgery, American Society for Gravitational and Space Biology and the Philadelphia County Medical Society. He is a founding member of the Cell Transplant Society and the Society of Robotic Surgery.

Dr. O'Malley is Editor-in-Chief of the Journal for Oto-Rhino-Laryngology and Editor of the textbook Atlas of Skull Base Surgery. He is also Co-Editor of a new textbook on TransOral Robotic Surgery for release in 2010.



GUEST SPEAKER: Terry Goddard Attorney General of Arizona

Throughout his public service career, Terry Goddard has fought to protect Arizonans - a commitment he continues as Attorney General.

Terry has focused on protecting Arizona families:

- Fighting cyber crime, especially identity theft and Internet crimes against children.
- Tackling companies that mislead and financially harm homeowners.
- Suing drug manufacturers and payday lenders for abusing consumers.
- Leading our State's fight against Meth.

Terry has long fought to secure our southern border. For over six years, he has disrupted human smuggling operations and seized millions of illegally transferred dollars. He recently concluded a historic settlement with Western Union, which will give anti-money laundering efforts important new investigative leads, as well as establishing a fund dedicated to border-wide crime suppression.

In June of this year, he received the prestigious Kelley-Wyman Award, the highest honor of the National Association of Attorneys General. The award is presented annually to the Attorney General who has done the most to advance the objectives of the nation's attorneys general. Goddard was selected to receive this honor in recognition of his \$94 million recovery from Western Union and his national leadership on several law enforcement initiatives, including mortgage fraud.

Terry has a long history of serving the public. He was elected four times as Mayor of Phoenix and served for seven years as the Arizona State Director for the U.S. Department of Housing and Urban Development (HUD).

Terry is an Arizona native, born and raised in Tucson. He received his law degree from Arizona State University. He served an active duty tour in the Navy and retired as a Commander after 27 years in the Naval Reserves. He and his wife Monica have a young son..

SCHEDULE-AT-A-GLANCE

THURSDAY, FEBRUARY 17, 2011

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

Salon I Foyer

FRIDAY, FEBRUARY 18, 2011

6:30am Breakfast/Registration

Sierra Patio/Salon I Foyer

7:00am-8:00am

BREAKFAST SEMINARS

Breakfast Seminar #1: Acoustic Neuroma-Hearing Preservation

Salon III

Moderators: Michael Gleeson, MD, David Andrews, MD, L. Dade Lunsford, MD, & Derald Brackmann, MD

Breakfast Seminar #2: Cranial Base Trauma

Salon IV

Moderator: Carl Hardwidge, Hillary Brodie, MD, Rocco Armonda, MD, & Paul Donald, MD

Breakfast Seminar #3: Unique Challenges in the Pediatric Skull Base

Sonora A

Moderator: Amir Dehdashti, MD, Carl Snyderman, MD, Elizabeth Tyler-Kabara, MD, & Ruth Bristol, MD

Breakfast Seminar #4: Anatomic Radiologic Correlations

Salon I, II

Moderator: Brian Rotenberg, MD, Juan Carlos Fernandez-Miranda, MD, & Eugene Yu, MD

8:05am-10:30am

PLENARY SESSION I

Salon I, II

8:05am

Presidential Address: Peter Neligan, MD

Guests of Honor: Patrick Gullane, MD & Ian Jackson, MD

8:35am

Keynote Lecture #1: Laurent Lantieri, MD

Face Transplant: Looking to the Past and Facing the Future

9:45am

Endoscopic vs. Open Surgery for Malignancies (Interactive Debate)

Moderator: Patrick Gullane, MD, Ehab Hanna, MD, Anil Nanda, MD

10:30am

Break in Exhibit Hall

Pavilion

11:00am-12:00pm

CONCURRENT SESSIONS

Concurrent Session #1: Craniopharyngioma

Salon I, II

Moderator: Fred Gentili, MD, Theodore Schwartz, MD, L. Dade Lunsford, MD, Norm Laperriere, MD

Concurrent Session#2: Vascular Bypass: Giant Aneurysms

Salon III

Moderator: Laligam Sekhar, MD, Jacques Morcos, MD, Saleem Abdulrauf, MD

Concurrent Session #3: Quality of Life

Salon IV

Moderator: Ziv Gil MD, PhD, Michael Gleeson, MD, Carl Snyderman, MD, Snehal Patel, MD

Proffered Paper Session I: Approaches

Sonora A

Moderators: Shaun Kilty, MD & Guy Petruzzelli, MD

Each paper session will allot for groups of three papers, each presenter will have 7 minutes,

Q&A will follow after each group of three for 9 minutes

12:00pm-1:00pm

NASBS Business Meeting

Sonora BCD

All NASBS members welcome: lunch will be provided

Lunch for Non-Members will be available in the exhibit hall

1:00pm-2:00pm

CONCURRENT SESSIONS

Concurrent Session #4: Chordoma/Chondrosarcoma - Radiation (Photon, Proton, Fractionated Stereotactic)

Salon I, II

Moderator: G. Michael LeMole, Jr, MD, Carl Hardwidge, MD, Norbert J. Liebsch, MD, Norm Laperrier, MD

Concurrent Session #5: Management of Cranial Base Defects

Salon III

Moderator: Ian Jackson, MD, Peter Neligan, Ricardo Carrau, MD & Alex Chiu, MD

Concurrent Session #6: Reducing Complications in Endonasal Surgery - Preop/Intraop/Postop

Salon IV

Moderator: Vijay K.Anand, MD, Marc Rosen, MD, Peter Hwang, MD, Ameet Singh, MD, Allan Vescan, MD

Proffered Paper Session II: Orbit

Sonora A

Moderators: Steve Newman, MD & Howard Krauss, MD

Each paper session will allot for groups of three papers, each presenter will have 7 minutes,

Q&A will follow after each group of three for 9 minutes

SCHEDULE-AT-A-GLANCE *Continued...*

12:00pm	Lunch in Exhibit Hall	<i>Pavilion</i>
1:00pm-2:00pm	<p>CONCURRENT SESSIONS</p> <p>Concurrent Session #10: 3D Endoscopic Anatomy Talk Albert Rhoton, MD, & Juan Carlos Fernandez-Miranda, MD</p> <p>Concurrent Session #11: Esthesioneuroblastoma Management <i>Moderator:</i> Jatin Shah, MD, Franco DeMonte, MD, Roy Casiano, MD, & Brian O'Sullivan, MD</p> <p>Concurrent Session #12: American Rhinologic Society: Endoscopic Resection of Benign Sinonasal Tumors <i>Moderator:</i> Brent Senior, MD, Alex Chiu, MD, Devyani Lal, MD, & Adam Zanation, MD</p> <p>Proffered Papers VIII: Visualization <i>Moderators:</i> Christopher Rassekh, MD & Siviero Agazzi, MD</p>	<p><i>Salon I, II</i></p> <p><i>Salon III</i></p> <p><i>Salon IV</i></p> <p><i>Sonora A</i></p>
2:00pm-5:30pm	<p>PROFFERED PAPER SESSIONS (Break from 3:30pm-4:00pm)</p> <p>Proffered Papers IX: Meningioma/General <i>Moderators I:</i> Peter Nakaji, MD & Michael Chicoine, MD <i>Moderators II:</i> Ryojo Akagami, MD & Franco DeMonte, MD</p> <p>Proffered Papers X: Reconstruction/Pituitary <i>Moderators I:</i> Peter Cordiero, MD & Lawrence Marentette, MD <i>Moderators II:</i> Francois Lavigne, MD & Michel Bojanowski, MD</p> <p>Proffered Papers XI: Chordoma/Esthesioneuroblastoma/Craniopharyngioma/General <i>Moderators I:</i> Saleem Abdulrauf, MD & Kadir Erkman, MD <i>Moderators II:</i> Thomas Origitano, MD & Derrick Lin, MD</p> <p>Proffered Papers XII: Anatomy/Head & Neck <i>Moderators I:</i> Alex Chiu, MD & Arthur Dublin, MD <i>Moderators II:</i> Samant Sandeep, MD & Marilene Wang, MD</p>	<p><i>Salon I,II</i></p> <p><i>Salon III</i></p> <p><i>Salon IV</i></p> <p><i>Sonora A</i></p>
3:30pm-4:00pm	Break in the Exhibit Hall	<i>Pavilion</i>
7:00pm-10:30pm	<p>Social Event</p> <p>Head down to the Poolside Patio to enjoy this Western Themed Event. Enjoy some BBQ and take a shot at one of the various games such as the Tomahawk Toss or Bucking Barrel. Attire: Cowboy Casual! (Bring a jacket as it might get chilly-it is the desert!)</p>	<i>Poolside Patio</i>

SUNDAY, FEBRUARY 20, 2011

7:00am	Breakfast/Registration	<i>Pavilion/Salon I Foyer</i>
8:00am-9:00am	<p>CONCURRENT SESSIONS</p> <p>Concurrent Session #13: Paragangliomas - Treatment Options - Surgery vs. Radiation <i>Moderator:</i> Daniel Prevedello, MD, John Leonetti, MD, Ossam Al-Mefty, MD, & Brian O'Sullivan, MD</p> <p>Concurrent Session #14: Craniovertebral Junction - Transoral/Endoscopic/Fusions <i>Moderator:</i> Ketan Bulsara, MD, Mario Ammirati, MD, Chandranath Sen, MD, & Paul Gardner, MD</p> <p>Proffered Papers XIII: Outcomes <i>Moderators:</i> Mark Varvares, MD & John Golfinos, MD</p> <p>Proffered Papers XV: General <i>Moderators:</i> Ben Dixon, MD & Daniel Nuss, MD</p>	<p><i>Salon I, II</i></p> <p><i>Salon III</i></p> <p><i>Salon IV</i></p> <p><i>Sonora A</i></p>
9:00am-12:00pm	<p>PLENARY SESSION III</p> <p>Tumor Board <i>Moderator:</i> Dennis Kraus, MD, Michael Link, MD, Paul Donald, MD, Ricardo Carrau, MD, Brian O'Sullivan, MD, & Patrick Wen, MD</p>	<i>Salon I,</i>
10:00am	Break with Exhibitors	<i>Pavilion</i>
10:30am	<p>3D Anatomy Talk Albert Rhoton, MD</p>	<i>Salon I, II</i>

PRE-MEETING PRACTICAL COURSES

WEDNESDAY/THURSDAY, FEBRUARY 16-17, 2011  Additional Registration Fee

Practical Course Dissection Workshop, Open & Endoscopic Approaches to the Skull Base at Barrow Neurological Institute in Phoenix, Arizona

DAY ONE » Wednesday, Feb. 16

*Shuttles will leave promptly from the Hilton Scottsdale at 7:00am.
Please meet in the hotel lobby for departure.

Course Chairs: Drs. Vijay Anand & James Evans

- 7:50am** Welcome: Vijay Anand, MD
8:00am Surgical Anatomy and Skull Base Approaches
Abtin Tabaee, MD
8:15am Sellar and Supra Sellar Approaches
Theodore Schwartz, MD
8:30am Endoscopic Approaches to Craniopharyngioma
John Jane, MD
8:45am Indications and Limitations for Endoscopic Skull
Base Surgery: Brent Senior, MD
9:00am Decision Making in Meningioma Management
James Evans MD
9:15am Endoscopic Skull Base Reconstruction
Marc Rosen MD
9:30am Coffee Break
10:00am Endoscopic Skull Base Reconstruction for Large
Skull Base Defects: Ian Witterick MD
10:15am Endoscopic or Microscopic Skull Base Approaches:
When and Why: Dan Kelly MD
10:30am Endoscopic Approaches to Infratemporal Fossa
and Beyond: Vijay K. Anand MD
10:45am Successful Management of Complications of Skull
Base Surgeries: Roy Casiano MD
11:00am Endoscopic Resection of Sinonasal Malignancy:
Ehab Hanna, MD
11:15am My Most Challenging Case
Moderators: Vijay Anand MD, Brent Senior MD,
James Evans MD, John Jane MD, Dan Kelly MD,
Theodore Schwartz MD, Marc Rosen MD,
Ian Witterick MD, & Roy Casiano MD
12:30pm Lunch
1:00pm From the Lab to the OR: Endoscopic Endonasal
Skull Base Surgery: Juan Carlos Fernandez-
Miranda, MD
1:30pm Prosection and Demonstration
2:00pm Lab Dissection
6:00pm Adjourn (*Shuttle will leave promptly at 6:00pm to bring
participants back to Hilton Scottsdale*)

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

- Apply various endoscopic techniques for pituitary and skull base surgery
- Demonstrate knowledge of the advanced endoscopic anatomy
- Explain various techniques of surgery and how to avoid complications

Dr. Vijay Ananda would also like to thank the following doctors for their help with this course: Seth Brown MD MBA, Abtin Tabaee MD, Ameet Singh MD, Gurston Nyquist MD, Madeiline Schaberg MD MPH, & Edward McCoul MD MPH

DAY TWO » Thursday, Feb. 17

*Shuttles will leave promptly from the Hilton Scottsdale at 7:15am.
Please meet in the hotel lobby for departure.

Course Chairs: Drs. Ehab Hanna & Jacques Morcos

- 8:00am** Introduction by Ehab Hanna, MD & Jacques Morcos, MD

ANTERIOR MODULE

- 8:10am** LECTURE: Anterior Transfacial Approaches
Dennis Kraus, MD & Sandeep Samant, MD
8:30am LECTURE: Cranial Orbital Zygomatic Approaches
Carlos David, MD
8:50am Dissection Lab
10:30am Break

MIDDLE MODULE

- 10:45am** LECTURE: Lateral Preauricular Infratemporal Approaches
Daniel Nuss, MD
11:05am LECTURE: Middle Fossa Approaches
Chandra Sen, MD
11:25am Dissection Lab
1:00pm Lunch

POSTERIOR MODULE

- 2:00pm** LECTURE: Postauricular Transtemporal Approaches:
Neurotology Perspective
Rick Friedman, MD, PhD
2:20pm LECTURE: Postauricular Transtemporal Approaches:
Neurosurgery Perspective
Mustafa Baskaya, MD
2:40pm Dissection Lab
4:20pm Break & Questions
4:45pm Case Presentations by Hanna/Morcos
to be discussed by panel of invited faculty
6:00pm Adjourn (*Shuttle will leave promptly to bring
participants back to Hilton Scottsdale*)

At the conclusion of the program, participants will be able to:

- List the various surgical approaches to the anterior, middle and posterior skull base
- Describe the indications, contraindications, advantages, and disadvantages of each approach
- Perform the soft tissue dissection and osteotomies required for tumor access in each approach

February 16th: Science Care designates this educational activity for a maximum of **8.5 AMA PRA Category 1 Credit(s)[™]**. Physicians should only claim credit commensurate with the extent of their participation in the activity.

February 17th: Science Care designates this educational activity for a maximum of **8.25 AMA PRA Category 1 Credit(s)[™]**. 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[™]**.

SCIENTIFIC PROGRAM

THURSDAY, FEBRUARY 17, 2011

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

Salon I Foyer

FRIDAY, FEBRUARY 18, 2011

6:30am Breakfast/Registration

Sierra Patio/Salon I Foyer

7:00am-8:00am BREAKFAST SEMINARS

Breakfast Seminar #1: Acoustic Neuroma-Hearing Preservation

Salon III

Introduction & Overview – Michael Gleeson, MD (Moderator)

Hearing Preservation in Patients with Acoustic Neuromas Treated by Fractionated Radiotherapy – David Andrews, MD

Hearing Preservation in Patients with Acoustic Neuromas Treated by Gamma Knife Radiosurgery – L. Dade Lunsford, MD

Hearing Preservation in Patients with Acoustic Neuromas Treated by Surgery – Derald Brackmann, MD

Case Discussion and Consensus Statement – Michael Gleeson, MD

Breakfast Seminar #2: Cranial Base Trauma

Salon IV

Management of the Complications of Temporal Bone Fractures – Hillary Brodie, MD

The Diagnosis, Treatment and Complication Avoidance in Vascular Injury

of Cranial Base Trauma Management – Rocco Armonda, MD

Frontal Sinus Injury: When to and When Not – Paul Donald, MD

Case Discussion & Questions

Moderator: Carl Hardwidge, MD

Breakfast Seminar #3: Unique Challenges in the Pediatric Skull Base

Sonora A

Endoscopic Endonasal Surgery in the Pediatric Population – Benefits & Limitations – Carl Snyderman, MD

Congenital Skull Base Defects – Elizabeth Tyler-Kabara, MD

Craniosynostosis – Ruth Bristol, MD

Moderator: Amir Dehdashti, MD

Breakfast Seminar #4: Anatomic Radiologic Correlations

Salon I, II

Anatomy of the Anterior and Central Skull Base (2D & 3D) – Juan Carlos Fernandez-Miranda, MD

Imaging of the Anterior and Central Skull Base – Eugene Yu, MD

Moderator: Brian Rotenberg, MD

8:05am-10:30am PLENARY SESSION I

Salon I, II

8:05am Presidential Address: Peter Neligan, MD

Guests of Honor: Patrick Gullane, MD & Ian Jackson, MD

8:35am Keynote Lecture #1: Laurent Lantieri, MD

Face Transplant: Looking to the Past and Facing the Future

9:45am Endoscopic vs. Open for Malignancies (Interactive Debate)

Endoscopic Resection of Sinonasal Cancers: Outcomes and Limitations – Ehab Hanna, MD

Open Approaches – Anil Nanda, MD

Moderator: Patrick Gullane, MD

10:30am Break in the Exhibit Hall

Pavilion

11:00am-12:00pm CONCURRENT SESSIONS

Concurrent Session #1: Craniopharyngioma

Salon I, II

Open Surgery – Fred Gentili, MD

Endoscopic Surgery – Theodore Schwartz, MD

Adjuvant Therapies – L. Dade Lunsford, MD

Radiation Therapy – Norm Laperriere, MD

Moderator: Fred Gentili, MD

Concurrent Session #2: Vascular Bypass: Giant Aneurysms

Salon III

Vascular Bypasses for Anterior Circulation Aneurysms – Jacques Morcos, MD

Evolving Minimally Invasive Techniques for EC to IC Bypass – Saleem Abdulrauf, MD

Bypasses for Posterior Circulation Aneurysms – Laligam Sekhar, MD (Moderator)

Concurrent Session #3: Quality of Life*Salon IV*

Introduction – Ziv Gil MD, PhD (Moderator)

Quality of Life Issues in the Management of Skull Base Paragangliomas and Schwannomas – Michael Gleeson, MD

Quality of Life Following Endonasal Skull Base Surgery – Carl Snyderman, MD

Quality of Life After Skull Base Surgery: Open vs. Endoscopic Approaches – Ziv Gil MD, PhD

Multi-Institutional Quality of Life Research – Can We Make it Happen? – Snehal Patel, MD

Proffered Paper SS01: Approaches*Sonora A**Moderators:* Shaun Kilty, MD & Guy Petruzzelli, MD

Each paper session will allot for groups of three papers, each presenter will have 7 minutes,

Q&A will follow after each group of three for 9 minutes

001 FRONTOLATERAL APPROACH FOR ANTERIOR CRANIAL FOSSA, SELLAR AND PARASELLAR TUMORS;**ADVANTAGES AND TECHNICAL ASPECTS** Maher Elayyan (presenter), Amer Al Shurbaji, Asem Mansour, King Hussien Cancer Center and King Hussien Medical Center**002 ENDOSCOPIC GRADUATED MULTI-ANGLE APPROACH FOR ACCESS TO THE INFRATEMPORAL FOSSA: A****CADAVERIC STUDY** Kim P. Murray (presenter), Jean Anderson E. Loy, James K. Liu, University of Medicine and Dentistry of New Jersey – New Jersey Medical School**003 COMBINED APPROACHES FOR ADVANCED MALIGNANCIES OF THE CRANIO-ORBITO-FACIAL COMPLEX: AN****OUTCOME STUDY OF 46 PATIENTS** Joseph M. Curry (presenter), Robert C. Gerring, Joshua M. Anderson, Elizabeth J. Franzmann, David J. Arnold, David Tse, Thomas E. Johnson, Francisco J. Civantos, Donald T. Weed, Jacques J. Morcos, Zoukaa B. Sargi, University of Miami Miller School of Medicine/Jackson Memorial Hospital**004 COMBINED TRANSORBITAL - ENDONASAL APPROACH TO THE ANTERIOR SKULL BASE** Shaan M. Raza

(presenter), Kofi Boahene, Alfredo Quinones-Hinojosa, The Johns Hopkins Hospital

005 TRANSCONJUNCTIVAL APPROACH TO THE ANTERIOR SKULL BASE Shaan M. Raza (presenter), Gustavo Pradilla,

Alfredo Quinones-Hinojosa, Kofi Boahene, The Johns Hopkins Hospital

006 MINIMALLY INVASIVE TRANSPALPEBRAL “EYELID” APPROACH TO THE ANTERIOR CRANIAL BASE: EXPERIENCE**IN FORTY CASES** Khaled Aziz (presenter), Mohammad Hammad, Raymond Sekula, Sanjay Bhatia, Erik Happ, Allegheny General Hospital, Drexel College of Medicine**12:00pm****NASBS Business Meeting***Sonora BCD*

All NASBS members welcome, lunch will be provided

Lunch for nonmembers will be provided in Exhibit Hall

1:00pm-2:00pm**CONCURRENT SESSIONS****Concurrent Session #4: Chordoma/Chondrosarcoma – Radiation (Photon, Proton, Fractionated Stereotactic)***Salon I, II*

Introduction – G. Michael LeMole, Jr., MD (Moderator)

Gamma Knife: Does it Make Any Difference? – Carl Hardwidge, MD

Interdisciplinary Treatment of Pediatric Skull Base Chordoma – Norbert J. Liebsch, MD

IMRT – Norm Laperriere, MD

Concurrent Session #5: Management of Cranial Base Defects*Salon III*

Free Flap Reconstruction of the Cranial Base – Peter Neligan, MD

Endonasal Vascular Pedicled Flaps – Ricardo Carrau, MD

Tissue Glues/Laser – Alex Chiu, MD

Moderator: Ian Jackson, MD**Concurrent Session #6: Reducing Complications in Endonasal Surgery – Preop/Intraop/Postop***Salon IV*

Management of Intraoperative Complications in Endoscopic Skull Base Surgery – Marc Rosen, MD

Successful Management of Bleeding in Endoscopic Skull Base Surgery – Peter Hwang, MD

Management of Recalcitrant CSF Leaks as a Complication of Endoscopic Skull Base Surgery – Ameet Singh, MD

Outcome Evaluation in Endoscopic Skull Base Surgery – Allan Vescan, MD

Moderator: Vijay Anand, MD

SCIENTIFIC PROGRAM *Continued...*

Proffered Paper SS02: Orbit

Sonora A

Moderators: Steve Newman, MD & Howard Krauss, MD

007 ANATOMY OF THE OPTIC CANAL: A COMPUTED TOMOGRAPHY STUDY OF ENDOSCOPIC NERVE DECOMPRESSION Lee A. Zimmer (presenter), Catherine K. Hart, University of Cincinnati Medical Center

008 ENDOSCOPIC ANATOMY OF THE INFERIOR ORBITAL FISSURE Lee A. Zimmer (presenter), Juan Carlos De Battista, Philip V. Theodosopoulos, Jeffrey Keller, University of Cincinnati Medical Center

009 ANATOMICAL ANALYSIS OF THE ENDOSCOPIC ENDONASAL APPROACH TO THE MEDIAL ORBITAL WALL AND ORBITAL APEX C. Bush (presenter), T. Farrag, E. Khabbaz, J. Van Rompey, C.A. Solares, Department of Otolaryngology - Head and Neck Surgery, Medical College of Georgia, Augusta, GA, USA

010 THE EXTENDED ENDOSCOPIC ENDONASAL APPROACH FOR ORBITAL APEX TUMOR RESECTION Naresh P. Patel (presenter), Christopher Oliver, Richard Hayden, Stacie E. DeMent, Devyani Lal, Mark K. Lyons, Mayo Clinic Arizona

011 PREDICTIVE FACTORS FOR VISION RECOVERY AFTER OPTIC NERVE DECOMPRESSION FOR CHRONIC COMPRESSIVE NEUROPATHY: SYSTEMATIC REVIEW AND META-ANALYSIS Andrew P. Carlson (presenter), Martina Stippler, Sarah K. Morley, Orrin B. Myers, University of New Mexico

012 ENDOSCOPIC ORBITAL ROOF FENESTRATION: A PROPOSAL TECHNIQUE FOR SURGICAL TREATMENT OF PSEUDOTUMOR CEREBRI: A CADAVERIC ANATOMICAL STUDY Asem Salma, Tariq Lamki (presenter), Martin Lubow, Ashley Scheffer, Mario Ammirati, Ohio State University

2:00pm-5:30pm

PROFFERED PAPER (A Break will be held in the Exhibit Hall from 3:30pm-4:00pm)

Each paper session will allot for groups of three papers, each presenter will have 7 minutes, Q&A will follow after each group of three for 9 minutes

Proffered Paper SS03: Quality of Life/CSF Leaks/Endoscopic Reconstruction/3D Endoscopy/Skull Base Imaging *Salon I, II*

Moderators I: Allan Vescan, MD & Iman Naseri, MD)

Moderators II: John Lee, MD & Pete Batra, MD

013 SITE-SPECIFIC QUALITY-OF-LIFE AFTER ENDOSCOPIC ANTERIOR SKULL BASE SURGERY Edward D. McCoull (presenter), Vijay K. Anand, Theodore H. Schwartz, Weill Cornell Medical Center

014 OLFACTORY OUTCOMES AFTER ENDOSCOPIC TRANSSPHENOIDAL PITUITARY SURGERY Brian W. Rotenberg, Samantha Saunders (presenter), Neil Duggal, Matthew Hebb, University of Western Ontario

015 AN ITEM-REDUCED SKULL BASE INVENTORY (SBI) QUALITY OF LIFE QUESTIONNAIRE John R. de Almeida (presenter), Allan Vescan, Patrick Gullane, Fred Gentili, Jolie Ringash, Lynne Lohfeld, Gordon Guyatt, Achilles Thoma, Ian Witterick, University of Toronto, McMaster University

016 PROSPECTIVE CLINICAL TRIAL OF NASAL HEALING, SINONASAL QUALITY OF LIFE AND OLFACTION IN EXPANDED ENDONASAL SKULL BASE SURGERY Kibwei A. McKinney (presenter), Stephen A. Wheless, Adam M. Zanation, University of North Carolina - Chapel Hill

017 PROSPECTIVE STUDY COMPARING NASAL SYMPTOMS AND GENERAL HEALTH RECOVERY BETWEEN ENDOSCOPIC AND MICROSCOPIC TRANSSPHENOIDAL APPROACHES Mohamad Khaled (presenter), Mohamed ElZoghby, Spencer Payne, Edward Oldfield, John Jane Jr., UVA

018 SPONTANEOUS CSF LEAK DUE TO CLINICALLY-OCCULT ELEVATED ICP Casey J. Madura (presenter), Hakan Seckin, Samuel P. Gubbels, G. Mark Pyle, Mustafa K. Baskaya, University of Wisconsin

019 ENDOSCOPIC LASER WELDING (ELW) FOR SPONTANEOUS CEREBROSPINAL FLUID LEAK (CSF) REPAIR: A PRELIMINARY REPORT Benjamin S. Bleier (presenter), Rodney J. Schlosser, Massachusetts Eye and Ear Infirmary, Harvard Medical School; Medical University of South Carolina

020 SUCCESSFUL MANAGEMENT OF RECALCITRANT ENDOSCOPIC CEREBROSPINAL FLUID LEAKS: TECHNICAL CONSIDERATIONS Ameet Singh (presenter), Edward McCoull, Fabio Roberti, Vijay K. Anand, Theodore H. Schwartz, Cornell University & George Washington University

021 SYSTEMATIC ANALYSIS OF CEREBROSPINAL FLUID LEAK AFTER ENDOSCOPIC SKULL BASE SURGERY: TUMOR LOCATION, CLOSURE METHOD, AND PATHOLOGY Ricardo J. Komotar, Daniel M. Raper, Robert M. Starke, Vijay K. Anand, Theodore H. Schwartz (presenter), Memorial Sloan-Kettering Cancer Center; Weill Cornell Medical College; University of Virginia; University of Sydney

- 022 THE BIPEDICLED ANTERIOR SEPTAL(BAS) FLAP FOR ANTERIOR FRONTAL TABLE AND SKULL BASE RECONSTRUCTION: A RADIOANATOMIC AND CADAVERIC STUDY** Benjamin S. Bleier (presenter), Rodney J. Schlosser, Massachusetts Eye and Ear Infirmary, Harvard Medical School; Medical University of South Carolina
- 023 COMPARISON OF ENDOSCOPIC TECHNIQUES FOR SECURING THE DURAL RECONSTRUCTION FOR SURGICAL DEFECTS OF THE ANTERIOR CRANIAL FOSSA** Marc A. Tewfik (presenter), Rowan Valentine, Andrew Foreman, Peter-John Wormald, The Queen Elizabeth Hospital, Adelaide and Flinders Universities
- 024 LONG-TERM OUTCOMES OF ENDOSCOPIC SKULL BASE RECONSTRUCTION WITH THE NASOSEPTAL FLAP** Edward D. McCoul (presenter), Vijay K. Anand, Ameet Singh, Gurston G. Nyquist, Madeleine R. Schaberg, Theodore H. Schwartz, Weill Cornell Medical Center
- 025 3-D ENDOSCOPIC APPROACH TO THE CRANIAL BASE- THE OTOLARYNGOLOGY PERSPECTIVE** Jason G. Newman (presenter), John Y. Lee, M. Sean Grady, Bert W. O'Malley, University of Pennsylvania
- 026 COMPARISON STUDY BETWEEN CONVENTIONAL AND 3-DIMENSIONAL NASAL ENDOSCOPY FOR RESECTION OF SKULL BASE TUMORS** Oshri Waserzug, Noam Weizman, Nevo Margalit, Dan M. Fliss, Ziv Gil (presenter), ¹Department of Otolaryngology - Head and Neck Surgery, ²Department of Neurosurgery, ³The Head and Neck Surgery Unit, Tel-Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel
- 027 3D VISIONSENSE ENDONASAL RESECTION OF VENTRAL SKULL BASE TUMORS** John Y Lee (presenter), Arun Jacob, Jason G. Newman, Bert W. O'Malley, Jr., M. Sean Grady, University of Pennsylvania
- 028 COMPARISON BETWEEN MANUAL AND SEMIAUTOMATED VOLUMETRIC MEASUREMENTS OF PITUITARY ADENOMAS** Qasim Al Hinai (presenter), Anthouny Zeitouni, Juan Rivera, Kelvin Mok, Mark Tewfik, Denis Sirhan, McGill University
- 029 IMPLEMENTING A DEPARTMENTAL OUTPATIENT IMAGE MANAGEMENT SYSTEM** B. Lega (presenter), L. Macyszyn, M. Grady, University of Pennsylvania
- 030 CONE-BEAM CT-ASSISTED ENDOSCOPIC SINUS AND SKULL BASE SURGERY: QUANTITATIVE ANALYSIS OF SURGICAL PERFORMANCE USING A NEXT-GENERATION C-ARM PROTOTYPE** Stella Lee (presenter), Gary Gallia, Douglas Reh, Sebastian Schafer, Ali Uneri, Daniel Mirota, Sajendra Nithianathan, Yoshito Otake, J. Webster Stayman, Wojciech Zbijewski, Jeffrey Siewerdsen, Johns Hopkins University

Proffered Paper SS04: Vascular/Approaches

Salon III

Moderators I: Raj Shrivastava, MD & Denis Sirhan, MD

Moderators II: Ivan El-Sayed, MD & Brian Rotenberg, MD

- 031 PARACLINOID ANEURYSMS: SURGICAL MANAGEMENT** Paulo H. Pires de Aguiar (presenter), Rogério Aires, Marcos V. Maldaun, Alexandros T. Panagopoulos, Antonio M. Souza Filho, Carlos A. Zicarelli, Márcio F. Lehmann, Romulo Marques, Renata F. Simm, Oswaldo Cruz Hospital
- 032 A NOVEL OSTEOMYOPLASTIC PTERIONAL CRANIOTOMY FOR ANEURYSM SURGERY: ITS TECHNICAL FEASIBILITY AND FUNCTIONAL OUTCOME** Ealmaan Kim (presenter), Department of Neurosurgery, Dongsan Medical Center, Keimyung University School of Medicine, Daegu, Republic of Korea
- 033 USE OF AN ULTRASONIC BONE ASPIRATOR (SONOPET?) FOR ANTERIOR CLINOIDECTOMY DURING PARACLINOID CEREBRAL ANEURYSM SURGERY** Kimon Bekelis, Symeon Missios, Kadir Erkmen (presenter), Section of Neurosurgery, Dartmouth-Hitchcock Medical Center, Lebanon, NH
- 034 SKULL BASE APPROACH TO CAROTID ARTERY LESIONS - TECHNIQUE, INDICATIONS, AND OUTCOMES** Alexander Langerman (presenter), Thomas C. Naslund, James L. Netteville, Vanderbilt University Medical Center
- 035 SHORT SEGMENT INTERNAL MAXILLARY ARTERY TO MIDDLE CEREBRAL ARTERY BYPASS: A NOVEL TECHNIQUE FOR EXTRACRANIAL-TO-INTRACRANIAL BYPASS** Saleem I. Abdulrauf (presenter), Justin M. Sweeney, Y. S. Mohan, Sheri K. Palejwala, Saint Louis University School of Medicine
- 036 VASCULAR MANAGEMENT IN COMPLEX SKULL BASE TUMORS INCLUDING BYPASS SURGERY** Jorge Mura (presenter), David Rojas-Zalazar, Francisco Riquelme, Institute of Neurosurgery Asenjo. Department of Neurological Sciences. University of Chile.
- 037 ICA INJURY** Paul Gardner (presenter), TBD

038 COMBINED BALLOON TEST OCCLUSION AND SPECT ANALYSIS FOR HEAD AND NECK TUMORS AND GIANT CAROTID ANEURYSMS FOR POSSIBLE CAROTID SACRIFICE: ARE THERE ANGIOGRAPHIC PREDICTORS FOR SUCCESS OR FAILURE OF THIS TECHNIQUE? Arthur B. Dublin (presenter), Katherine Tansavatdi, University of California, Davis, Medical Center

039 EMERGENT CAVERNOUS CAROTID STENTING FOR IATROGENIC AND SKULL BASE INJURIES Armen Choulakian, Abhineet Chowdhary (presenter), Michael J. Alexander, Cedars-Sinai

040 MODIFIED ONE-PIECE EXTENDED TRANSBASAL APPROACH FOR ANTERIOR SKULL BASE TUMORS: THE ANTERIOR WALL OF THE FRONTAL SINUS REVISITED James K. Liu (presenter), Bradley S. Kushner, Jean A. Eloy, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, New Jersey, USA

041 REFINING THE INDICATIONS FOR THE ADDITION OF ORBITAL OSTEOTOMY FOR ANTERIOR CRANIAL BASE APPROACHES: MORPHOMETRIC AND RADIOLOGIC STUDY OF THE ANTERIOR CRANIAL BASE OSTEOLOGY Juan C. DeBattista, Norberto Andaluz (presenter), Jeffrey T Keller, Department of Neurosurgery, University of Cincinnati

042 CLASSIFICATION OF APPROACHES FOR ENDONASAL ENDOSCOPIC RESECTION OF INFRATEMPORAL FOSSA TUMORS Michael E. Stadler (presenter), Mihir R. Patel, Anand V. Germanwala, Adam M. Zanation, University of North Carolina at Chapel Hill

043 AVOIDING FACIAL INCISIONS: COMBINED TRANSCRANIAL - TRANSFACIAL APPROACHES TO THE SKULL BASE Shaan M. Raza (presenter), Kofi Boahene, Alfredo Quinones-Hinojosa, The Johns Hopkins Hospital

044 WHAT IS THE BEST ROUTE TO MECKEL'S CAVE? ANATOMICAL COMPARISON BETWEEN THE ENDOSCOPIC ENDONASAL APPROACH AND A LATERAL APPROACH Jason Van Rompaey (presenter), C. Bush, T. Farrag, E. Khabbaz, B. Panizza, C.A. Solares, (1) Dept. of Otolaryngology – Head and Neck Surgery, Med. College of Georgia, USA; (2) Queensland Skull Base Unit, Princess Alexandra Hosp., Australia; (3) School of Med., Univ. of Queensland, Australia

045 ENDOSCOPIC ANATOMY OF THE PALATOVAGINAL CANAL (PALATOSPHEOIDAL CANAL): A LANDMARK FOR DISSECTION OF THE VIDIAN NERVE DURING ENDONASAL TRANSPTERYGOID APPROACHES Carlos D Pinheiro-Neto (presenter), Juan C Fernandez-Miranda, Carlos M Rivera-Serrano, Alec E Vaezi, Carl H Snyderman, Paul A Gardner, University of Pittsburgh School of Medicine: (1) Department of Neurosurgery; (2) Department of Otolaryngology

046 THE TRANSCRIBIFORM APPROACH TO THE ANTERIOR CRANIAL FOSSA Mihir R. Patel (presenter), Michael E. Stadler, Anand V. Germanwala, Adam M. Zanation, University of North Carolina at Chapel Hill

047 ANATOMO-SURGICAL CLASSIFICATION OF ENDOSCOPIC ENDONASAL TRANSCLIVAL APPROACHES A. Paluzzi (presenter), J. C. Fernandez-Miranda, M. Tormenti, Carlos Pinheiro-Neto, C. Snyderman, P. Gardner, University of Pittsburgh Medical Center, Pittsburgh: Department of Neurosurgery; Department of Ear Nose and Throat

048 THE ROADMAP FOR THE INTERNAL CAROTID ARTERY IN EXPANDED ENDOSCOPIC ENDONASAL APPROACHES Mohamed Labib (presenter), Daniel Prevedello, Juan Fernandez-Miranda, Ricardo Carrau, Amin Kassam, The University of Western Ontario, Ohio State University, The University of Pittsburgh, The University of Ottawa

Proffered Paper SS05: Craniovertebral Junction/ Pituitary

Salon IV

Moderators I: Paul Gardner, MD & Michael Link, MD

Moderators II: Amir Dehdashti, MD & Mario Ammirati, MD

049 QUANTIFICATION OF SURGICAL OPERATIVE CORRIDOR IN TRANS-NASAL ODONTOIDECTOMY Richard D. Murray (presenter), Travis M. Dumont, Michael A. Horgan, Division of Neurosurgery, University of Vermont - College of Medicine

050 EXTENDED TRANSORAL APPROACH TO THE CRANIOVERTEBRAL JUNCTION. TECHNICAL NOTE Samy Youssef, Tsz Lau, Raul Olivera (presenter), Juan Uribe, University of South Florida, Tampa, FL

051 ENDONASAL VERSUS TRANSORAL ODONTOID RESECTION: A SYSTEMATIC META-ANALYSIS OF OUTCOMES Ricardo J. Komotar, Daniel M. Raper, Robert M. Starke, Vijay K. Anand, Theodore H. Schwartz (presenter), Memorial Sloan-Kettering Cancer Center; Weill Cornell Medical College; University of Virginia; University of Sydney

052 ENDOSCOPIC TRANSNASAL RESECTION OF OS ODONTOIDEUM: A MICROANATOMAL STUDY Rohit Koppula, Ameet Singh (presenter), Fabio Roberti, George Washington University

053 SURGICAL MANAGEMENT OUTCOME OF CRANIOVERTEBRAL JUNCTION LESIONS Yury Shulev (presenter), Vitaliy Stepanenko, Vladimir Klimov, Alexander Trashin, City Hospital # 2, Medical Academy of Postgraduate Studies, Saint-Petersburg, Russia

054 MICROSURGICAL TREATMENT AND OUTCOME OF SKULL BASE CHONDROMAS Sumin Geng (presenter), Junting Zhang, Liwei Zhang, Beijing TianTan Hospital

055 POSTOPERATIVE HEADACHES IN PATIENTS UNDERGOING CRANIOTOMY WITH EXTRADURAL CLINOIDECTOMY Jerome M Volk (presenter), Frank Culicchia, Louisiana State University-New Orleans

056 THE TRANSVELUMIAN APPROACH TO THE IVTH VENTRICLE AND BRAIN STEM Haim Ezer (presenter), Anirban D. Banerjee, Bollam Papireddy, Bharat Guthikonda, Anil Nanda, Department of Neurosurgery, Louisiana State University Health Sciences Center, Shreveport, LA

057 USE OF A NOVEL SIDE-CUTTING ASPIRATION DEVICE FOR MICROSCOPIC AND ENDOSCOPIC SKULL BASE TUMOR RESECTION Nancy McLaughlin (presenter), Daniel F. Kelly, Kiarash Shahlaie, Leo F. S. Ditzel Filho, Daniel M. Prevedello, Ricardo L. Carrau, Amin B. Kassam, Brain Tumor Center, John Wayne Cancer Institute at Saint John's Health Center

058 CAVERNOUS SINUS INVASION BY PITUITARY ADENOMAS; NOT AN ISSUE Charlie Teo (presenter), Scott Wait, Center for Minimally Invasive Neurosurgery

059 ENDOSCOPIC ENDONASAL SURGERY IN RECURRENT AND RESIDUAL PITUITARY ADENOMAS AFTER MICROSCOPIC RESECTION Hussein Alahmadi (Presenter), Amir Dehdashti, Fred Gentili, Toronto Western Hospital

060 ENDOSCOPIC ENDONASAL SURGERY FOR RECURRENT PITUITARY TUMORS: TECHNICAL CHALLENGES TO THE SURGICAL APPROACH Jagmeet Mundi (presenter), Marilene Wang, Marvin Bergsneider, Martin Neil, UCLA

061 THE ENDOSCOPIC TRANSSPHENOIDAL BINOSTRIL APPROACH FOR SURGICAL TREATMENT FOR HORMONE SECRETING PITUITARY ADNOMAS Ali Ayyad (presenter), Department of neurosurgery , Johannes Gutenberg university

062 ENDOSCOPIC TRANSSPHENOIDAL SURGERY FOR PITUITARY ADENOMA IN CUSHING'S DISEASE: RESULTS AND OUTCOMES Murali Guthikonda (presenter), Fadi Delly, Jay Jagannathan, Nathan Deckard, Sandeep Mittal, Adam Folbe, Mark Hornyak, Wayne State University/Detroit Medical Center

063 ENDOSCOPIC ENDONASAL SURGERY FOR GROWTH HORMONE SECRETING PITUITARY ADENOMAS Paul A. Gardner (presenter), Samuel S. Shin, Matthew J. Tormenti, Sue M. Challinor, Tian Wang, Juan C. Fernandez-Miranda, Carl H. Snyderman, University of Pittsburgh, Department of Neurosurgery

064 COMPARISON OF INTRAOPERATIVE AND POSTOPERATIVE MRI FOR ENDOSCOPIC TRANSSPHENOIDAL RESECTION OF PITUITARY MACROADENOMAS Michael R Chicoine (presenter), John A. Evans, Franz J. Wippold, Greg J. Zipfel, Keith M. Rich, Ralph G. Dacey, Washington University

065 THE SENSE OF SMELL AND PITUITARY TUMOR RESECTION Lee A. Zimmer (presenter), Catherine K. Hart, Philip V. Theodosopoulos, University of Cincinnati Medical Center

066 THE INTERSPHENOID SINUS SEPTUM: AN IMPRACTICAL ANATOMIC LANDMARK IN TRANS-SPHENOIDAL ENDOSCOPIC PITUITARY SURGERY Justin Poirier (presenter), Donald Lee, Neil Duggal, Brian W Rotenberg, Univeristy of Western Ontario

Proffered Paper SS06: Vestibular Schwannoma/ Schwannoma-Other/ Otoneurology

Sonora A

Moderators I: Derald Brackmann, MD & Khaled Aziz, MD

Moderators II: Rick Friedman, MD, PhD

067 EXPECTANT MANAGEMENT OF VESTIBULAR SCHWANNOMA: A RETROSPECTIVE MULTIVARIATE ANALYSIS OF TUMOUR GROWTH AND OUTCOME Mark Hughes (presenter), Christopher Skillbeck, Shakeel Saeed, Robert Bradford, Department of Neurosurgery, Royal Free Hospital, London and Department of Neuro-otology, University College London Ear Institute, Royal National Throat, Nose and Ear Hospital, London

068 T3 AND T4 SAMII CLASSIFICATION ACOUSTIC NEURINOMAS: DETAILED OPERATIVE TECHNIQUE. PITFALLS TO PRESERVE THE FACIAL NERVE Paulo H. Pires de Aguiar (presenter), Rogério Aires, Romulo Marques, Marcos V. Maldaun, Antonio M. Souza Filho, Carlos A. Zicarelli, Márcio F. Lehmann, Alexandros T. Panagopoulos, Renata F Simm, Oswaldo Cruz Hospital

069 CURRENT TRENDS IN THE MANAGEMENT OF ACOUSTIC NEUROMA IN THE UNITED STATES: ARE WE OVER TREATING? Tsz Lau (presenter), Raul Olivera, Harry van Loveren, Siviero Agazzi, University of South Florida

SCIENTIFIC PROGRAM *Continued...*

070 COCHLEAR DOSE AND PREDICTORS OF HEARING LOSS FOLLOWING GAMMA KNIFE RADIOSURGERY FOR VESTIBULAR SCHWANNOMAS Melandee Brown (presenter), Ruckenstein Michael, Bigelow Douglas, Kevin Judy, Vasthi Wilson, Michelle Alonso-Basanta, John Y K Lee, Department of Neurosurgery, Hospital of University of Pennsylvania, Philadelphia, Pennsylvania

071 PATTERNS OF TUMOR RESPONSE AND NONAUDITORY MORBIDITY FOLLOWING CONTEMPORARY REDUCED DOSE GAMMA KNIFE RADIOSURGERY FOR VESTIBULAR SCHWANNOMA Gelareh Zadeh (presenter), Eric Monsalves, Caroline Hayhurst, University Health Network, University of Toronto

072 PREOPERATIVE IDENTIFICATION OF THE FACIAL NERVE IN PATIENTS WITH LARGE CPA TUMORS USING ADVANCED MRI TRACTOGRAPHIC TECHNIQUES Neil Roundy (presenter), Justin Cetas, Johnny Delashaw, Oregon Health Science University

073 INTRAOPERATIVE TRANSCRANIAL MOTOR-EVOKED POTENTIAL MONITORING OF THE FACIAL NERVE DURING CEREBELLOPONTINE ANGLE TUMOR RESECTION Maura Cosetti (presenter), Ming Xu, Andrew Rivera, Maggie Kuhn, John G Golfinos, J. Thomas Roland, New York University School of Medicine

074 UNPLANNED SUBTOTAL RESECTION OF VESTIBULAR SCHWANNOMA Albert D Tu (presenter), Ryojo Akagami, Vancouver General Hospital

075 VOLUMETRIC MEASUREMENT OF ACOUSTIC NEUROMA TUMOR GROWTH FOLLOWING RESECTION AND PREDICTORS FOR RECURRENCE Siavosh Vakilian (presenter), Luis Souhami, Anthony Zeitouni, McGill University Health Centre

076 MINIMALLY INVASIVE SURGERY AT THE CEREBELLOPONTINE ANGLE: ENDOSCOPIC DIRECTED VESTIBULAR NEURECTOMY Aaron R Cutler (presenter), Sean Kaloostian, John Frazee, Akira Ishiyama, UCLA Medical Center Department of Neurosurgery

077 MICROSURGICAL TREATMENT FOR TRIGEMINAL SCHWANNOMA Zhen Wu (presenter), Junting Zhang, Liwei Zhang, Guijun Jia, Jie Tang, Yong Cui, Beijing Tiantan hospital

078 MICROSURGICAL TREATMENT FOR NON-GLOMUS TUMORS OF JUGULAR FOREMAN Jie Tang (presenter), Zhen Wu, Junting Zhang, Liwei Zhang, Guijun Jia, Xinru Xiao, beijing tiantan hospital

079 GAMMA KNIFE RADIOSURGERY IN PATIENTS WITH GLOMUS JUGULARE TUMORS Hideki Ogiwara (presenter), James P. Chandler, Northwestern Memorial Hospital

080 VIRTUAL TRANSLABYRINTHINE PETROSECTOMY FOR SKULL BASE TUMORS USING A THREE-DIMENSIONAL SURGICAL SIMULATION MODULE James Sun, James K Liu, Robert W Jyung (presenter), University of Medicine and Dentistry of New Jersey, New Jersey Medical School

081 THE NON-PETROSAL ROUTE TO PETRO-CLIVAL LESIONS Sunil k Gupta (presenter), Postgraduate Institute of Medical Education & Research, Chandigarh

082 MICROSURGICAL ANATOMY OF THE COCHLEA IN THE EXTENDED MIDDLE FOSSA APPROACH Jonathan A Forbes M (presenter), Alejandro Rivas, Luke Tomycz MD, Owoicho Adogwa BS, Kyle Weaver, George Wanna MD, Vanderbilt University Medical Center

3:30pm-4:00pm Break in the Exhibit Hall *Pavilion*

5:30pm-7:00pm Welcome Reception in the Exhibit Hall *Pavilion*

SATURDAY, FEBRUARY 19, 2011

6:30am Breakfast/Registration *Sierra Patio/Salon I Foyer*

7:00am-8:00am BREAKFAST SEMINARS

Breakfast Seminar #5: Endoscopic Repair of CSF leaks & Meningoencephaloceles *Salon I, II*

Diagnostic and Therapeutic Challenges in CSF Leak Management – Daniel Nuss, MD

Technical Nuances in Endoscopic Repair of CSF Leaks/Meningoencephaloceles – Vijay Anand, MD

The Role of CSF Diversion in Skull Base CSF Leak Repair – Frank Culicchia, MD

Case Review/Discussion – James Liu, MD (Moderator)

Breakfast Seminar#6: Fundamentals of Neuro-Ophthalmology *Salon III*

Howard Krauss, MD

Steven Newman, MD (Moderator)

	Breakfast Seminar #7: Endoscopic Approaches to the Posterior Fossa	<i>Salon IV</i>
	Introduction: Endoscopic Approaches to the Posterior Fossa – Peter Nakaj, MD (Moderator) Role of Endoscopy in Surgery for Acoustic Neuroma and Other Vestibulocochlear Pathology – Daniel Pieper, MD Endoscopy for Neurovascular Compression Syndromes – A Surgical Advancement or Gimmick? – Melvin Field, MD Endonasal Approach to Tumors Extending into or Arising from the Posterior Fossa – Charlie Teo, MD	
	Breakfast Seminar # 8: Endoscopic Skull Base CPT Coding Working Group	<i>Sonora A</i>
	Introduction to the CPT Process – Wayne Koch, MD Meta-Analysis of Literature Re Endoscopic Anterior Skull Base Procedures – Gary Gallia, MD Endoscopic Middle Cranial Fossa – Brent Senior, MD Experience Negotiating Payment for Unlisted Codes – Emiro Caicedo, MD Neurosurgical Perspective – Stephen Haines, MD	
8:05am-10:30am	PLENARY SESSION	<i>Salon I, II</i>
8:05am	Keynote Lecture #2: Bert O'Malley, MD TransOral Robotic Surgery (TORS) for Head and Neck and Skull Base Tumors	
8:50am	Keynote Lecture #3: Terry Goddard (Attorney General of Arizona) Arizona: The Cross Years	
9:30am	Skull Base Jeopardy <i>Judges:</i> Albert Rhoton, MD & Jatin Shah, MD <i>Moderator:</i> Dennis Kraus <i>Team Eastern US:</i> Carl Heilman, MD (Lead), John Golfinos, MD, Jacques Morcos, MD, & Greg Thompson, MD <i>Team Western US:</i> Robert Spetzler, MD (Lead), Franco DeMonte, MD, Paul Donald, MD, & Devyani Lal, MD <i>Team Canada/Other:</i> Fred Gentili, MD (Lead), Michael Gleeson, MD, Patrick Gullane, MD, & Carl Hardwidge, MD	
10:25am	Skull Base Journal Update Dennis Kraus, MD	
10:30am-11:00am	Break with Exhibitors & New Technology Talk Michael LeMole, MD	<i>Pavilion</i>
11:00am-12:00pm	CONCURRENT SESSIONS	
	Concurrent Session #7: Therapeutic Options Atypical/Recurrent Meningiomas	<i>Salon I, II</i>
	Surgical Options – Fred Barker, MD Adjuvant Therapies – Patrick Wen, MD Radiation Therapy – Norm Laperriere, MD <i>Moderator:</i> Fred Gentili, MD	
	Concurrent Session #8: Training in Skull Base Surgery – How Can It Be Improved?	<i>Salon III</i>
	Developing Laboratory and Simulator Training – David W. Kennedy, MD (Moderator) Training in Open Skull Base Surgery and Reconstruction – Mark Varvares, MD How Should We Modify Neurosurgical Training as We Move Forwards? – Harry Van Loveren, MD How Many Cases Does It Take to Achieve Proficiency in Endoscopic Endonasal Skull Base Surgery? – Carl Snyderman, MD	
	Concurrent Session #9: Pituitary Surgery	<i>Salon IV</i>
	Paul Gardner, MD, Anand Germanwala, MD & Charlie Teo, MD	
	Proffered Papers SS07: General	<i>Sonora A</i>
	<i>Moderators:</i> Stephanie Joe, MD & Ketan Bulsara, MD	
	083 PREOPERATIVE EMBOLIZATION OF JUVENILE NASOPHARYNGEAL ANGIOFIBROMAS: TRANSARTERIAL VERSUS DIRECT TUMORAL PUNCTURE Mohamed Samy Elhammady (presenter), Jeremiah N. Johnson, Eric C. Peterson, Mohammad Ali Aziz-Sultan, University of Miami	
	084 SINONASAL HEMANGIOPERICYTOMA: ENDOSCOPIC MANAGEMENT MADE POSSIBLE BY PRE-OPERATIVE EMBOLIZATION Blake J. LeBlanc (presenter), Monsour Mirfakhraee, Brandi Kelly, Cherie-Ann O. Nathan, Louisiana State University Health Sciences Center - Shreveport, Louisiana, United States	
	085 CRANIOFACIAL JNAS Yashar Kalani (presenter), Barrow Neurological Institute - Division of Neurological Surgery	
	086 A COMBINED PERICAVERNOUS AND TRANSCAVERNOUS SURGICAL AVENUE TO THE UPPER BASILAR ARTERY REGION Bart Regaert, Luigi Berra, Collin Tebo, Joss Cohen, Philip E. Stieg, Antonio Bernardo (presenter), Department of Neurosurgery, Weeill Cornell Medical College, New York	

SCIENTIFIC PROGRAM *Continued...*

087 MANAGEMENT OF INTRATEMPORAL FACIAL NERVE INJURIES Yury Shulev (presenter), Alexander Trashin, Vladimir Rychkov, City Hospital #2, Medical Academy of Postgraduate Studies, Saint-Petersburg, Russia

088 ENDOSCOPIC ASSISTED MICROVASCULAR DECOMPRESSION OF THE TRIGEMINAL AND FACIAL NERVE Ali Ayyad (presenter), Department of Neurosurgery, Johannes Gutenberg University

12:00pm

Lunch

1:00pm-2:00pm

CONCURRENT SESSIONS

Concurrent Session #10: 3D Endoscopic Anatomy

Salon I,II

3D Anatomic Basis of Endoscopic Skull Base Surgery – Albert Rhoton, MD

From the Lab to the OR: Endoscopic Endonasal 3D Anatomy and Surgery of the Skull Base – Juan Carlos Fernandez-Miranda, MD

Concurrent Session #11: Esthesioneuroblastoma Management

Salon III

Pathology and Craniofacial Open Procedures and Outcomes – Franco DeMonte, MD

Endonasal Endoscopic Resection: Indications, Selection Criteria, and Outcomes – Roy Casiano, MD

Role of Radiotherapy – Brian O’Sullivan, MD

Moderator: Jatin Shah, MD

Concurrent Session #12: American Rhinologic Society: Endoscopic Resection of Benign Sinonasal Tumors

Salon IV

Endoscopic Management of Bone Tumors – Alex Chiu, MD

Endoscopic Management of Inverted Papilloma – Devyani Lal, MD

New Technology in Endoscopic Management of Benign Tumors of the Sinonasal Cavity – Adam Zanation, MD

My 3 Key Tips for Success in Endoscopic Removal of Tumors – All

Moderator: Brent Senior, MD

Proffered Papers SS08: Visualization

Sonora A

Moderators: Christopher Rassekh, MD & Siviero Agazzi, MD

089 PRE-CLINICAL ASSESSMENT OF VARIOUS TECHNOLOGICAL AIDS FOR ANTERIOR SKULL BASE ENDOSCOPIC NAVIGATION Ben J. Dixon (presenter), Michael J. Daly, Harley Chan, Ian J. Witterick, Jonathan C. Irish, Departments of Surgical Oncology and Otolaryngology, Head and Neck Surgery, Princess Margaret Hospital, University Health Network, Toronto

090 3D VISIONSENSE ENDSCOPE-ASSISTED RETROSIGMOID CRANIOTOMY AND EYEBROW CRANIOTOMY John Y. Lee (presenter), Jason G. Newman, University of Pennsylvania

091 UTILITY OF NOVEL 3-DIMENSIONAL STEREOSCOPIC VISION SYSTEM FOR ENDOSCOPIC SINONASAL AND SKULL BASE SURGERY R. Peter Manes (presenter), Sam Barnett, Pete S. Batra, Yale University School of Medicine Section of Otolaryngology; Comprehensive Skull Base Program, Department of Otolaryngology – Head and Neck Surgery and Department of Neurosurgery University of Texas Southwestern Medical Center

092 PARALLEL INTEGRATION OF THE OPERATING MICROSCOPE, NEURONAVIGATION AND ENDSCOPE BY USING HD PICTURE-IN-PICTURE IMAGE INJECTION SYSTEM: A PROOF OF CONCEPT BASED ON LABORATORY DISSECTION Asem Salma, Tariq Lamki (presenter), Mario Ammirati, Ohio State University

093 SEMI-SITTING POSITION – STILL RELEVANT IN TODAY’S SURGICAL WORLD? EXPLORING THE SAFETY AND EFFICACY OF SEMI-SITTING POSITION IN NEUROSURGERY Tariq T. Lamki (presenter), Andrew Shaw, Braxton Forde, Ichiro Nakano, Asem Salma, Mario Ammirati, Ohio State University

094 THE SITTING POSITION FOR POSTERIOR FOSSA TUMORS – INDICATIONS, TECHNIQUE AND COMPLICATIONS IN OUR FIRST 90 CASES Nevo S. Margalit (presenter), Tel Aviv Medical Center

2:00pm-5:30pm

PROFFERED PAPER SESSIONS (A Break will take place from 3:30pm-4:00pm in the Exhibit Hall)

Each paper session will allot for groups of three papers, each presenter will have 7 minutes,

Q&A will follow after each group of three for 9 minutes

Proffered Papers SS09: Meningioma/General

Salon I, II

Moderators I: Peter Nakaji, MD & Franco DeMonte, MD

Moderators II: Michael Cusimano, MD & Ryojo Akagami, MD

095 DIFFUSION TENSOR IMAGING PREDICTION OF SKULL BASE MENINGIOMA PATHOLOGY John Y Lee (presenter), Peter Syre, Sumei Wang, University of Pennsylvania

- 096 TISSUE AND RNA MICROARRAY ANALYSIS OF INVASIVE AND NON-INVASIVE MENINGIOMAS** Fateme Salehi, Ryan Alkins, Shahrzad Jalili, Ivan Radovanovic, Caroline Hayhurst, Kelly Burrell, Joon-Il Lee, Sameer Agnithori, Sidney Croul, Fred Gentili, Gelareh Zadeh (presenter), Toronto Western Hospital
- 097 THE NATURAL HISTORY OF ASYMPTOMATIC MENINGIOMAS: A SYSTEMATIC REVIEW AND META-ANALYSIS** Diana J. Jho (presenter), Mohammed H. Eltantawy, Raymond F. Sekula, Khaled M. Aziz, Allegheny General Hospital
- 098 MICROSURGICAL TREATMENT AND CLASSIFICATION OF PETROCLIVAL MENINGIOMA: EXPERIENCES IN 471 PATIENTS AT A SINGLE INSTITUTE FOR 18 YEARS** Junting Zhang (presenter), Zhen Wu, Liwei Zhang, Guijun Jia, Jie Tang, Shuyu Hao, Xinru Xiao, Beijing Tiantan Hospital
- 099 MICROSURGICAL MANAGEMENT AND CLINICAL OUTCOME BY MENINGIOMAS OF CENTRAL REGION SKULL BASE** V. Remenez (presenter), A.J.A Terzis, F. Weber, Department of Neurosurgery, General Hospital of the City of Cologne, Cologne-Merheim, Germany
- 100 MINIMALLY INVASIVE APPROACH FOR ANTERIOR SKULL BASE MENINGIOMAS** Ali Ayyad (presenter), Department of Neurosurgery, Johannes Gutenberg university
- 101 TUBERCULUM SELLAE MENINGEOMAS OPERATED BY SUPRAORBITAL MINIMAL CRANIOTOMY** Ante Melada (presenter), Bojan Milanov, Marijan Rozankovic, Velimir Lupret, Department of neurosurgery CHC Zagreb
- 102 A COMBINED FAR LATERAL, SUBLABYRINTHINE, TRANSPETROSAL,TRANSCERVICAL APPROACH TO THE JUGULAR FORAMEN, ANTERIOR BRAINSTEM AND CLIVUS** Luigi Berra, Bart Regaert, Joss Cohen, Collin Tebo, Philip E. Stieg, Antonio Bernardo (presenter), Department of Neurosurgery, Weill Cornell Medical College, New York
- 103 AGGRESSIVE RESECTION OF INVASIVE SKULL BASE MENINGIOMAS** Kiyoshi Saito (presenter), Taku Sato, Eiji Ito, Tadashi Watanabe, Masahiro Ichikawa, Keiko Oda, Hitoshi Ando, Yuka Matsumoto, Jun Sakuma, Department of Neurosurgery, Fukushima Medical University, Fukushima, Japan
- 104 SPHENOORBITAL MENINGIOMA: SURGICAL TECHNIQUE AND OUTCOME** Soichi Oya (presenter), Burak Sade, Joung H. Lee, Brain Tumor and Neuro-oncology Center, Cleveland Clinic
- 105 ENDOSCOPIC ENDONASAL RESECTION FOR OLFACTORY GROOVE MENINGIOMAS** Matthew J. Tormenti, Nestor D. Tomycz, Tian Wang, Juan C. Fernandez-Miranda, Carl H. Snyderman, Paul A. Gardner (presenter), University of Pittsburgh Medical Center
- 106 ENDOSCOPIC ENDONASAL VERSUS OPEN TRANSCRANIAL RESECTION OF SKULL BASE MENINGIOMAS: A SYSTEMATIC META-ANALYSIS OF OUTCOMES** Ricardo J. Komotar, Daniel M. Raper, Robert M. Starke, Vijay K. Anand (presenter), Theodore H. Schwartz, Memorial Sloan-Kettering Cancer Center; Weill Cornell Medical College; University of Virginia; University of Sydney
- 107 RECONSTRUCTION OF THE ORBIT AFTER RESECTION OF SPHENO-ORBITAL MENINGIOMAS - A NOVEL TECHNIQUE** Lola B. Chambless (presenter), Louise A. Mawn, Reid C. Thompson, Vanderbilt University
- 108 PEDICLED PERICRANIAL FLAP FOR DURAL RECONSTRUCTION FOLLOWING SUPRATENTORIAL CONVEXITY MENINGIOMA RESECTION: INITIAL 25 CASES** Cintasha Frazier, Anand V. Germanwala (presenter), University of North Carolina School of Medicine
- 109 DIFFUSION TENSOR IMAGING (DTI) TO CHARACTERIZE GLIAL TUMOR PROGRESSION TO MALIGNANT GLIOMA: A 3-T STUDY OF A COHORT OF PRE-TREATMENT PATIENTS** Augustus J. Perez (presenter), Hao Huang, University of Texas Southwestern Medical Center - Advanced Imaging Research Center
- 110 PATH TO THE INTERPEDUNCULAR FOSSA: ANATOMICAL COMPARISON OF ENDOSCOPIC -ASSISTED VERSUS STANDARD SUBTEMPORAL APPROACH** Asem Salma, Tariq Lamki (presenter), Nishant Baidya, Steffen Sammet, Mario Ammirati, Ohio State University
- 111 MANAGEMENT OF RECURRENT PETROUS APEX CHOLESTEROL GRANULOMAS USING THE ENDONASAL ENDOSCOPIC APPROACH** Nancy McLaughlin (presenter), Daniel F. Kelly, Daniel M. Prevedello, Ricardo L. Carrau, Kiarash Shahlaie, Amin B. Kassam, Brain Tumor Center, John Wayne Cancer Institute at Saint John's Health Center, Santa Monica, CA, USA
- 112 THE "AGNES FAST"* CRANIOTOMY OR THE MODIFIED PTERIONAL (OSTEOPLASTIC) CRANIOTOMY** Haim Ezer (presenter), Anirban D. Banerjee, Cedric Shorter, Anil Nanda, Department of Neurosurgery, Louisiana State University Health Sciences Center, Shreveport, LA

Proffered Papers SS10: Reconstruction/Pituitary

Salon III

Moderators I: Peter Cordiero, MD & Lawrence Marentette, MD

Moderators II: François Lavigne, MD & Michel Bojanowski, MD

113 MUCOPERICHONDRIAL FLAP AS A CLOSURE TECHNIQUE FOR EXPANDED ENDONASAL ENDOSCOPIC SURGERY Stephan Munich, Andrew J. Fabiano (presenter), Nestor Rigual, Rohan Wijewickrama, Robert A. Fenstermaker, Roswell Park Cancer Institute

114 THE NASOSEPTAL FLAP FOR SKULL BASE DEFECTS: AN INSTITUTIONAL EXPERIENCE S. Morong (presenter), P. Goetz, EH Ooi, G. Zadeh, F. Gentili, I.J. Witterick, A.D. Vescan, Department of Otolaryngology-Head and Neck Surgery, Mount Sinai Hospital, University of Toronto, Toronto, Ontario, Canada. Division of Neurosurgery, Toronto Western Hospital, UHN, University of Toronto, Ontario, Canada.

115 EXTENDED DISSECTION OF NASOSEPTAL FLAP PEDICLE FOR IPSILATERAL TRANSPTERYGOID APPROACH Carlos D. Pinheiro-Neto (presenter), Carl H. Snyderman, Juan C. Fernandez-Miranda, Alec E. Vaezi, Paul A. Gardner, University of Pittsburgh School of Medicine: (1) Department of Neurosurgery; (2) Department of Otolaryngology

116 NASOSEPTAL FLAP HARVEST AFTER PREVIOUS TRANSNASAL TRANSEPTAL SURGERY Stephanie A. Joe (presenter), G. Michael Lemole, Mike Yao, Dept. of Otolaryngology-Head and Neck Surgery, University of Illinois at Chicago

117 ENDOSCOPIC HARVEST AND TRANSPOSITION OF VASCULARIZED PERICRANIAL FLAP FOR MINIMAL ACCESS OPEN AND ENDOSCOPIC SKULL BASE REPAIR: TECHNICAL NOTES AND CASE ILLUSTRATION Thuy-Anh Melvin (presenter), Alfredo Quinones-Hinojosa, Michael Lim, Charles Stewart, Kofi Boahene, Johns Hopkins

118 RESTORATION OF THE ORBITAL AESTHETIC SUBUNIT WITH THE THORACODORSAL ARTERY SYSTEM OF FLAPS Eric J. Chanowski (presenter), Keith A. Casper, Shamir P. Chandarana, Mark E. Prince, Jeffrey S. Moyer, Jason A. Heth, Lawrence J. Marentette, Douglas B. Chepeha, University of Michigan Health System

119 RECONSTRUCTION OF PTERIONAL AND TEMPORAL DEFECTS AFTER FRONTOTEMPORAL AND ORBITOZYGOMATIC CRANIOTOMY USING THE TITAN MEDPOR IMPLANT: COSMETIC RESULTS IN 50 PATIENTS Lana D. Christiano (presenter), Omar Arnaout, Joseph Adel, James K. Liu, University of Medicine and Dentistry of New Jersey, New Jersey Medical School

120 THE FRONTO-TEMPORAL-ORBITO-ZYGOMATIC APPROACH: RECONSTRUCTIVE TECHNIQUE AND OUTCOME Samy Youssef, Laura Willard, Angela Downes, Kathryn Hall, Raul Olivera (presenter), Harry Van Loveren, University of South Florida

121 OSSEOINTEGRATED IMPLANT APPLICATIONS IN SKULL BASE REHABILITATION Brent J. Benschoter (presenter), James J. Jaber, Matthew L. Kircher, Sam J. Marzo, Loyola University Medical Center

122 VOLUMETRIC CLASSIFICATION FOR GIANT PITUITARY MACROADENOMAS PREDICTS OUTCOME AND MORBIDITY OF ENDOSCOPIC ENDONASAL TRANSSPHENOIDAL SURGERY Christoph Hofstetter (presenter), Michael Nanszko, Lynn Mubita, John Tsiousris, Vijay Anand, Theodore Schwartz, Weill Cornell Medical College

123 MICROSURGICAL STRATEGY AND TECHNIQUE FOR PRESERVATION OF PITUITARY STALK IN GIANT PITUITARY ADENOMA Guijun Jia (presenter), Wang Jia, Ming Ni, Weiming Liu, Junting Zhang, Beijing Tiantan Hospital, China

124 ENDOSCOPIC TREATMENT OF PITUITARY APOPLEXY: OUTCOMES IN A SERIES OF 10 PATIENTS Madeleine R. Schaberg (presenter), Vijay K. Anand, Dimitri Sigounas, Theodore H. Schwartz, Weill Medical College of Cornell University and Thomas Jefferson University

125 A COMPARATIVE OUTCOME ANALYSIS OF THREE-DIMENSIONAL (3D) AND TWO-DIMENSIONAL (2D) ENDOSCOPIC TRANS-SPHENOIDAL SURGERY IN THE TREATMENT OF PITUITARY ADENOMAS IN A SERIES OF 115 PATIENTS Vladimir Dadashev (presenter), Nelson Oyesiku, Emory University SOM, Department of Neurosurgery

126 MANAGEMENT OF PITUITARY ADENOMAS WITH CAVERNOUS SINUS INVASION AND PROGNOSTIC VALUE OF MIB-1 LABELING INDEX Junko Matsuyama (presenter), Tsukasa Kawase, Koichiro Yoshida, Yuichi Hirose, Shinnya Nagahisa, Mitsuhiro Hasegawa, Department of Neurosurgery, Fujita Health University

127 CONCOMITANT TRANSSPHENOIDAL APPROACH TO THE ANTERIOR SKULL BASE AND ENDOSCOPIC SINUS SURGERY IN PATIENTS WITH CHRONIC RHINOSINUSITIS Madeleine R. Schaberg, Gopi Shah (presenter), James J. Evans, Marc R. Rosen, Thomas Jefferson University

128 ENDOSCOPIC VERSUS MICROSCOPIC TRANSSPHENOIDAL PITUITARY SURGERY: THE ADELAIDE EXPERIENCE

Marc A. Tewfik (presenter), David J. Torpy, Georgina Irish, Eric Fong, Steve Santoreneos, John Field, Peter-John Wormald, The Royal Adelaide Hospital, Adelaide University

129 RECURRENT AND RESIDUAL TUMORS OF THE SUPRASellar SPACE: UTILITY OF THE SUPRAORBITAL APPROACH

Nancy McLaughlin (presenter), Leo F. S. Ditzel Filho, Amin B. Kassam, Daniel F. Kelly, Brain Tumor Center, John Wayne Cancer Institute at Saint John's Health Center

130 MICROSURGERY FOR PITUITARY ADENOMAS IN ADOLESCENCE

Wang Jia (presenter), Guijun Jia, Ming Ni, Department of Neurosurgery, BeiJing Tiantan hospital, Capital Medical University Beijing 100050, China

Proffered Papers SS11: Chordoma/Esthesioneuroblastoma/Craniopharyngioma/General

Salon IV

Moderators I: Saleem Abdulrauf, MD & Kadir Erkman, MD

Moderators II: Thomas Origitano, MD & Derrick Lin, MD

131 IDENTIFYING DIFFERENTIAL GENE EXPRESSION BETWEEN RECURRENT VERSUS NON-RECURRENT CHORDOMAS

Takafumi Wataya (presenter), Fateme Salehi, Joon-Il Lee, Ivan Radovanovic, Shahrzad Jalili, Kelly Burrell, Sidney Croul, Fred Gentili, Gelareh Zadeh, Toronto Western Hospital, University Health Network

132 MULTIMODALITY TREATMENT FOR CLIVAL CHORDOMAS

Hideki Ogiwara (presenter), James P. Chandler, Northwestern Memorial Hospital

133 FROM CHORDOMAS TO GLIOMAS: PUTTING THE BRAKES ON BRACHYURY

Ahmed R. Mohyeldin (presenter), Sagar R. Shah, Wesley Hsu, Jean-Paul Wolinsky, Ziya L. Gokaslan, Alfredo Quinones-Hinojosa, Johns Hopkins University School of Medicine, Dept. of Neurosurgery

134 A SINGLE INSTITUTION EXPERIENCE WITH MANAGEMENT OF LESIONS INVOLVING THE CLIVUS

Matthew A. Bowen (presenter), Rohan R. Walvekar, Daniel W. Nuss, Louisiana Health Sciences Center, Department of Otolaryngology Head & Neck Surgery, New Orleans, LA 70112

135 ENDOSCOPIC VERSUS OPEN CLIVAL CHORDOMA RESECTION – A SYSTEMATIC REVIEW

Ricardo J. Komotar, Daniel M. Raper, Robert M. Starke, Vijay K. Anand (presenter), Theodore H. Schwartz, Memorial Sloan-Kettering Cancer Center; Weill Cornell Medical College; University of Virginia; University of Sydney

136 CURRENT COMPREHENSIVE MANAGEMENT OF CRANIAL BASE CHORDOMAS: 10-YEAR META-ANALYSIS OF OBSERVATIONAL STUDIES

Salvatore Di Maio (presenter), Dinesh Ramanathan, Manuel Ferreira, Robert C Rostomily, Laligam N Sekhar, Department of Neurological Surgery, Harborview Medical Center, University of Washington Medical Center, Seattle, Washington

137 ENDONASAL ENDOSCOPIC RESECTION OF ESTHESIONEUROBLASTOMA: THE JOHNS HOPKINS HOSPITAL EXPERIENCE AND

Gary L. Gallia (presenter), Douglas Reh, Vafi Salmasi, Wayne M. Koch, Ari M. Blitz, Masaru Ishii, Johns Hopkins Hospital

138 THE INCIDENCE OF SYNDROME OF INAPPROPRIATE ANTIDIURETIC HORMONE SECRETION IN PATIENTS WITH ESTHESIONEUROBLASTOMA

Derrick T. Lin, Stacey T. Gray (presenter), William T. Curry, Massachusetts Eye and Ear Infirmary

139 PROTON THERAPY OF ESTHESIONEUROBLASTOMA – THE UFPTI EXPERIENCE

Robert S. Malyapa (presenter), William M. Mendenhall, Craig McKenzie, Daniel Yeung, Zuofeng Li, Nancy P Mendenhall, Paul Okunieff, University of Florida Proton Therapy Institute, Jacksonville, Florida, USA

140 ENDOSCOPIC RESECTION OF CRANIOPHARYNGIOMAS: A MINIMALLY INVASIVE MANAGEMENT STRATEGY

Lewis Z. Leng (presenter), Jeffrey P. Greenfield, Mark M. Souweidane, Vijay K. Anand, Theodore H. Schwartz, Departments of Neurosurgery, Otolaryngology, and Neurology and Neuroscience, Weill Cornell Medical College, New York Presbyterian Hospital, New York, NY

141 ENDOSCOPIC ENDONASAL VERSUS TRANSSPHENOIDAL MICROSCOPIC AND OPEN TRANSCRANIAL RESECTION OF CRANIOPHARYNGIOMAS: A SYSTEMATIC META-ANALYSIS OF OUTCOMES

Ricardo J. Komotar, Daniel M. Raper, Robert M. Starke, Vijay K. Anand (presenter), Theodore H. Schwartz, Memorial Sloan-Kettering Cancer Center; Weill Cornell Medical College; University of Virginia; University of Sydney

142 COMBINED MICROSURGICAL AND ENDOSCOPIC RESECTION OF EXTENSIVE SUPRASSELLAR AND PREPONTINE EPIDERMOID TUMORS Taku Sato (presenter), Tadashi Watanabe, Eiji Ito, Masahiro Ichikawa, Keiko Oda, Hitoshi Ando, Yuka Matsumoto, Jun Sakuma, Kiyoshi Saito, Department of Neurosurgery, Fukushima Medical University, Fukushima, Japan

143 DIFFERENCES IN PHYSICAL SYMPTOMS BY TUMOR LOCATION AND SURGICAL APPROACH IN SKULL BASE SURGERY John R. de Almeida (presenter), Allan Vescan, Patrick Gullane, Fred Gentili, Jolie Ringash, Lynne Lohfeld, Achilles Thoma, Ian Witterick, University of Toronto, McMaster University

144 SINONASAL INVERTED PAPILOMA WITH INTRACRANIAL EXTENSION Shafik Wassef, Pete S. Batra, Samuel L. Barnett (presenter), University of Texas Southwestern Medical Center

145 A NEW CLASSIFICATION CONCEPT FOR THE ANTERIOR SKULL BASE DEFECT Tomoyuki Yano (presenter), Okazaki Mutsumi, Kentaro Tanaka, Seiji Kishimoto, Tokyo Medical and Dental University

146 PNEUMATIZATION OF THE LATERAL RECESS OF SPHENOID IS CORRELATED WITH INCREASED SEPARATION BETWEEN THE V2 AND VIDIAN NERVES A. Vaezi (presenter), C. Pinheiro-Neto, B.H. Branstetter, P. Gardner, J.C. Fernandez-Miranda, C.H. Snyderman, (1) Dept of Otolaryngology and HNS, Univ of Pittsburgh, PA; (2) Dept of Radiology, Univ of Pittsburgh, PA; (3) Dept of Neurological Surg, Univ of Pittsburgh, PA

147 THE MEDIAL OPTICOCAROTID RECESS: AN ENDOSCOPIC KEYHOLE TO THE VENTRAL CRANIAL BASE Mohamed Labib (presenter), Daniel Prevedello, Juan Fernandez-Miranda, Ricardo Carrau, Amin Kassam, University of Western Ontario, Ohio State University, University of Pittsburgh, University of Ottawa

148 THERAPY STRATEGY FOR INTRASELLAR CYSTIC LESIONS Guijun Jia (presenter), Weiming Liu, Wang Jia, Ming Ni, Beijing Tiantan Hospital

Proffered Papers SS12: Anatomy/Head & Neck

Sonora A

Moderators I: Arthur Dublin, MD & Alex Chiu, MD

Moderators II: Sandeep Samant, MD & Marilene Wang, MD

149 RADIOLOGIC ASPECTS OF A HIGH-RISK ETHMOID AND THE RHINOBASE IN CONE BEAM TOMOGRAPHY Christian Gueldner, Isabell Diogo, Siegfried Bien, Afshin Teymoortash, Jochen A Werner (presenter), Department of ENT and Department of Neuroradiology - University Marburg

150 DORELLO'S CANAL FOR LAYMEN A LEGO® LIKE PRESENTATION Haim Ezer (presenter), Anirban D. Banerjee, Anil Nanda, Department of Neurosurgery, Louisiana State University Health Sciences Center, Shreveport, LA

151 MULLER'S MUSCLE, NO LONGER VESTIGIAL IN ENDOSCOPIC SURGERY Juan Carlos De Battista (presenter), Lee A. Zimmer, Jose Francisco Rodriguez-Vasquez, Sebastien C. Froelich, Philip V. Theodosopoulos, John J. DePowell, Jeffrey T. Keller, University of Cincinnati (UC) Neuroscience Institute, UC College of Medicine, Mayfield Clinic, Cincinnati, Oh; University of Strasbourg, France

152 A MORPHOMETRIC ELUCIDATION OF THE TENTORIAL ARTERY Anirban D. Banerjee (presenter), Haim Ezer, Anil Nanda, Department of Neurosurgery, Louisiana State University Health Sciences Center- Shreveport

153 C-SHAPED INCISION FOR LATERAL SUBOCCIPITAL APPROACH: ANATOMICAL STUDY AND CLINICAL CORRELATION Siviero Agazzi, Tsz Lau, Raul Olivera (presenter), Harry Van Loveren, University of South Florida

154 ENDOSCOPIC ANATOMY OF THE MEDIAL WALL OF THE LATERAL SELLAR ORBITAL JUNCTION Juan Carlos De Battista, Lee A. Zimmer, Philip V. Theodosopoulos, Jeffrey T. Keller, Sebastien C. Froelich, Shah Ojas (presenter), University of Cincinnati (UC) Neuroscience Institute, UC College of Medicine, Mayfield Clinic, Cincinnati, Oh; University of Strasbourg, France

155 ENDOSCOPIC ANATOMY OF THE MAXILLARY STRUT-A CADAVERIC STUDY Ojas N. Shah, Lee A. Zimmer (presenter), Philip V. Theodosopoulos, Jeffrey T. Keller, Juan Carlos De Battista, University of Cincinnati Medical Center

156 LOCALIZATION OF THE INTERNAL MAXILLARY ARTERY FOR EC-IC BYPASS THROUGH THE MIDDLE CRANIAL FOSSA: A CADAVERIC STUDY Jorge L. Eller (presenter), Justin Sweeney, Deanna Sasaki-Adams, Saleem I Abdulrauf, Saint Louis University Center for Cerebrovascular and Skull Base Surgery

157 RADIOGRAPHIC ANALYSIS OF INTERNAL MAXILLARY ARTERY ANATOMY Deanna M. Sasaki-Adams (presenter), Jorge Eller, Justin Sweeney, Saleem I. Abdulrauf, Saint Louis University Hospital

158 SURGICAL RESECTION FOR CLINICAL PERINEURAL INVASION FROM CUTANEOUS SQUAMOUS CELL CARCINOMA OF THE HEAD AND NECK C. A. Solares (presenter), B. Panizza, M. Redmond, P. Parmar, P. O'Rourke, (1) Dept of Otolaryngology, Med College of Georgia; (2) Queensland Skull Base Unit, Princess Alexandra Hosp; (3) School of Med, Univ of Queensland;(4) Cancer and Population Studies Group, Queensland Institute of Med Research Brisbane

159 RESECTION DEEP INVASION OF SCALP CARCINOMA USING SKULL BASE TECHNIQUES Paul J. Donald (presenter), Donald G. Farwell, Danny Enepekides, James E. Boggan, Arthur B. Dublin, University of California, Davis

160 SKULL BASE CARCINOMA Yashar Kalani (presenter), Barrow Neurological Institute - Division of Neurological Surgery

161 OUTCOMES OF TEMPORAL BONE RESECTION FOR LOCALLY ADVANCED PAROTID CANCER Saral Mehra (presenter), Luc G. Morris, Jatin P. Shah, Mark H. Bilsky, Samuel H. Selesnick, Dennis H. Kraus, Departments of Surgery (Head and Neck Service) and Neurosurgery, Memorial Sloan-Kettering Cancer Center, New York, NY

162 PREDICTORS OF SURVIVAL AND RECURRENCE AFTER TEMPORAL BONE RESECTION FOR CANCER Luc G. Morris (presenter), Saral Mehra, Jatin P. Shah, Mark H. Bilsky, Samuel H. Selesnick, Dennis H. Kraus, Departments of Surgery (Head and Neck Service) and Neurosurgery, Memorial Sloan-Kettering Cancer Center, New York, NY

163 RECONSTRUCTION OF LATERAL SKULL BASE DEFECTS AFTER COMBINED PAROTIDECTOMY AND TEMPORAL BONE RESECTION FOR ADVANCED MALIGNANCY Zoukaa B. Sargi (presenter), Robert C. Gerring, Adrien Eshraghi, David J. Arnold, Francisco J. Civantos, Simon I. Angeli, Fred F. Telischi, Jacques J. Morcos, Donald T. Weed, University of Miami Miller School of Medicine/Jackson Memorial Hospital

164 HEAD AND NECK PARAGANGLIOMAS: MSKCC EXPERIENCE 1986-2008 Rahmatullah Rahmati (presenter), Junaid A. Channa, Jeffrey C. Liu, Dennis H. Kraus, Snehal G. Patel, Jatin P. Shah, Ian Ganly, Memorial Sloan-Kettering Cancer Center

165 SKULL BASE INVOLVEMENT BY ACINIC CELL CARCINOMA OF THE PAROTID GLAND Joseph T. Breen (presenter), Matthew L. Carlson, Michael J. Link, Eric J. Moore, Brian A. Neff, Colin L. Driscoll, Mayo Clinic

166 ENDOSCOPIC AND OPEN SKULL BASE SURGERY OUTCOMES BY A SINGLE TEAM: ANALYSIS OF INITIAL 100 CASES Anand V. Germanwala (presenter), Oluwaseun Omofoye, Adam M. Zanation, University of North Carolina School of Medicine

3:30pm-4:00pm Break in the Exhibit Hall *Pavilion*

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

Head down to the Poolside Patio to enjoy this Western Themed Event. Enjoy some BBQ and take a shot at one of the various games such as the Tomahawk Toss or Bucking Barrel. Attire: Cowboy Casual! (Bring a jacket as it might get chilly-it is the desert!)

SUNDAY, FEBRUARY 20, 2011

7:30am Breakfast/Registration *Pavilion/Salon I Foyer*

8:00am-9:00am CONCURRENT SESSIONS

Concurrent Session #13: Paragangliomas - Treatment Options - Surgery vs. Radiation *Salon I, II*

The Surgical Management of Glomus Tympanicum and Mastoid Tumors – John Leonetti, MD

Surgery for Complex Paragangliomas – Ossama Al-Mefty, MD

Radiation Therapy – Brian O'Sullivan, MD

Moderator: Daniel Prevedello, MD

Concurrent Session #14: Craniovertebral Junction - Transoral/Endoscopic/Fusions *Salon III*

Ventral/Traditional Transoral Approach(es) – Mario Ammirati, MD

Posterolateral Approach(es) – Chandranath Sen, MD

Endoscopic Approaches – Paul Gardner, MD

Moderator: Ketan Bulsara, MD

Proffered Papers SS13: Outcomes *Sonora IV*

Moderators: Mark Varvares, MD & John Golfinos, MD

SCIENTIFIC PROGRAM *Continued...*

167 OVERLOOKED CONTRIBUTIONS TO SKULL BASE SURGERY: HARVEY CUSHING'S EXPERIENCE AT THE JOHNS HOPKINS HOSPITAL, 1896 TO 1912 Courtney Pendleton, Shaan M Raza, Alfredo Quinones-Hinojosa (presenter), The Johns Hopkins University School of Medicine, Department of Neurosurgery. Baltimore, MD

168 ENDOSCOPIC ENDONASAL SKULL BASE SURGERY IN EMERGING ECONOMIES: A THREE YEAR ANALYSIS OF 71 CASES PERFORMED AT A SINGLE INSTITUTION Oscar H. Feo Lee, Alfredo J. Herrera Vivas, Rafael Uribe Cárdenas (presenter), Hospital Universitario San Ignacio - Pontificia Universidad Javeriana

169 ADOPTION OF ENDOSCOPIC ENDONASAL RESECTION OF SKULL BASE TUMORS: EARLY RESULTS IN 85 PATIENTS Justin C. Spooler (presenter), David Constable, Patrick Poquiz, Richard McHugh, Dennis Cheng, Frank P. Hsu, Loma Linda University Medical Center

170 BUILDING A ENDOSCOPIC SKULL BASE PROGRAM FROM THE GROUND UP: THE GEORGE WASHINGTON UNIVERSITY HOSPITAL EXPERIENCE Alan Siu (presenter), Fabio Roberti, Ameet Singh, George Washington University

171 OUTCOMES AFTER ENDOSCOPIC ENDONASAL SURGERY FOR NONVESTIBULAR SCHWANNOMAS Paul Gardner (presenter), TBD

172 SECONDARY TRIGEMINAL NEURALGIA IN CEREBELLOPONTINE ANGLE TUMORS Yury Shulev (presenter), Konstantin Gordienko, Alexander Trashin, City Hospital #2, Medical Academy of Postgraduate Studies, Saint-Petersburg, Russia

Proffered Papers SS14: General

Sonora A

Moderators: Ben Dixon, MD & Daniel Nuss, MD

173 AN ANALYSIS OF 114 CASES OF SKULL BASE ASPERGILLOSIS OVER A DECADE Sandeep Mohindra (presenter), Postgraduate Institute of Medical Education and Research, Chandigarh, India

174 VORICONAZOLE FOR SKULL BASE ASPERGILLOSIS; A PROSPECTIVE STUDY OF 56 PATIENTS Dr. Satyawati Mohindra (presenter), Dr. Sandeep Mohindra, Dr. Amanjit Bal, Post Graduate Institute Of Medical Education & Research, Chandigarh, India

175 ASSOCIATION BETWEEN MENINGITIS AND CSF LEAK AFTER SKULL BASE SURGERY Gilad Horowitz (presenter), Dan M Fliss, Nevo Margalit, Oshri Wasserzug, Gil Ziv, Tel Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

176 OUTPATIENT POST-OPERATIVE CARE FOR THE ENDOSCOPIC ENDONASAL CRANIAL BASE PATIENT Jason G. Newman (presenter), James N. Palmer, John Y. Lee, M. Sean Grady, Bert W. O'Malley, Jr., University of Pennsylvania

177 RELIABLE CRANIALIZATION OF THE FRONTAL SINUS FOR DELAYED ONSET SINUS COMPLICATIONS AFTER CRANIOTOMY Nobutaka Yoshioka (presenter), Atsuhiko Arakawa, Shin-ichi Sesaki, Saiseikai Nakatsu Hospital

178 TRANSCRANIAL ORBITOTOMY FOR EXCISION OF ORBITAL TUMORS: A CASE SERIES David A Stidd (presenter), Lynn Polonski, Rein Anton, G. M. Lemole, The University of Arizona

9:00am-12:00pm

Plenary Session

Salon I, II

9:00am

Tumor Board

The moderator will present a series of cases to our expert tumor board for management of complex skull base neoplasms. The tumor board will consist of head and neck surgeons, neurosurgeons, radiation oncologist, and other related specialists. Emphasis will be placed on the evaluation and multidisciplinary management of patients with complex neoplasms of the skull base. Upon completion of the panel, participants should be facile in the evaluation and management of patients with an array of tumors involving the anterior and middle cranial fossa and skull base. Ample time will be afforded for audience participation.

Panelists: Michael Link, MD, Paul Donald, MD, Ricardo Carrau, MD, Brian O'Sullivan, MD, Patrick Wen, MD

Moderator: Dennis Kraus, MD

9:45am

Questions & Answers

10:00am

Break with Exhibitors

Pavilion

10:30am-12:00pm

3D Anatomy Talk: Albert Rhoton, MD

Sonora I, II

3D Anatomic Basis of Skull Base Surgery

POSTER SESSIONS *Posters will be open during all exhibit hours in the Pavilion*

- 179 SPONTANEOUS CEREBROSPINAL FLUID RHINORRHEA OF THE FORAMEN CAECUM** Megan M. Gaffey (presenter), Kim P. Murray, James K. Liu, Jean Anderson Eloy, University of Medicine and Dentistry of New Jersey - New Jersey Medical School
- 180 INVERTED PAPILLOMA WITH INTRACRANIAL EXTENSION** Ernie Wright (presenter), Natalya Chernichenko, Jennifer Moliterno, Eylem Ocal, Benjamin L. Judson, Ketan R. Bulsara, Yale University School of Medicine; Department of Neurosurgery and Division of Otolaryngology
- 181 ANATOMICAL AND RADIOLOGICAL LANDMARKS OF ENDOSCOPIC APPROACH TO LATERAL RECESS SINUS CAVERNOSUS** V. Remenez (presenter), F. Weber, Department of Neurosurgery, General Hospital of the City of Cologne, Cologne-Merheim, Germany
- 182 ANTERIOR SKULL BASE DIFFICULT MENINGIOMAS – SURGICAL MANAGEMENT: SHORT SERIES OF 20 CASES** Alok A. Umredkar (presenter), Sunil K. Gupta, Postgraduate Institute of Medical Education & Research, Chandigarh
- 183 ESTHESIONEUROBLASTOMA AND SINONASAL UNDIFFERENTIATED CARCINOMA RECURRING AS ADENOCARCINOMA** Stephen Y. Kang (presenter), Erin M. Lin, Jonathan B. McHugh, Stephen E. Sullivan, Lawrence J Marentette, University of Michigan
- 184 USE OF ABDOMINAL FREE FAT FOR COSMETIC AUGMENTATION AND PRIMARY CSF CLOSURE IN SUPRATENTORIAL SKULL BASE SURGERY: MANAGING THE STIGMATA OF THE TEMPORAL DEFECT** TC Origitano (presenter), Loyola University Medical Center
- 185 ENDOSCOPIC ASSISTED ANTERIOR SKULL BASE RESECTION OF FIBROSARCOMA USING AN ULTRASONIC BONE CURETTE** John Wood (presenter), Amy Anstead, Roy Casiano, University of Miami, FL and Virginia Mason Medical Center Seattle, WA
- 186 ANTERIOR AND CENTRAL SKULL BASE TUMORS: RADIOLOGIC-PATHOLOGIC OVERVIEW** Eugene Yu (presenter), Hugh Curtin, Bayardo Perez-Ordonez, Ian Witterick, Patrick Gullane, Eric Bartlett, Princess Margaret Hospital, Mount Sinai Hospital, Massachusetts Eye and Ear Infirmary
- 187 ENDOSCOPIC EXTENDED ENDONASAL APPROACH FOR TREATMENT OF A RECURRENT SKULL BASE PETROUS APEX CHOLESTEROL GRANULOMA** Alia Hdeib (presenter), Chad Zender, Warren Selman, Nicholas Bambakidis, Department of Neurological Surgery and Department of Otolaryngology Head and Neck Surgery, University Hospitals Case Medical Center, Cleveland, Ohio
- 188 DOUBLE FLAP TECHNIQUE FOR RECONSTRUCTION OF ANTERIOR SKULL BASE DEFECTS AFTER CRANIOFACIAL TUMOR RESECTION** Lana D Christiano (presenter), Dare V. Ajibade, Jean Anderson Eloy, James K Liu, University of Medicine and Dentistry of New Jersey - New Jersey Medical School
- 189 SINGLE PIECE BIFRONTAL UNILATERAL ORBITO ZYGOMATIC TEMPORAL CRANIOTOMY- UNIQUE CASE OF ETHMOIDAL OSTEOSARCOMA** Banu Prakash A. S. (presenter), Thimappa Hegde, Nirav Trivedi, Moni A. Kuriakose, Komal Prasad, Kiran M., Ganesh Prasad, Narayana Hrudayalaya Institute Of Neurosciences
- 190 MALIGNANT TRANSFORMATION OF CLIVAL CHORDOMA TO OSTEOSARCOMA AFTER PHOTON RADIOTHERAPY AND GAMMA KNIFE RADIOSURGERY** Abhishek Chaturvedi (presenter), Ronald Kim, Mark Linskey, University of California Irvine, Department of Neurosurgery
- 191 TRANSNASAL ENDOSCOPIC OPTIC NERVE DECOMPRESSION** John J. DePowell (presenter), Lee A. Zimmer, Jeffrey T. Keller, Robert G. Kerr, Philip V. Theodosopoulos, John M. Tew, Jr., University of Cincinnati Department of Neurosurgery
- 192 UTILITY OF A ROTATION-SUCTION MICRODEBRIDER FOR REMOVAL OF SOLID TUMORS IN ENDOSCOPIC ENDONASAL SKULL BASE SURGERY** James K. Liu (presenter), Jean A. Eloy, University of Medicine and Dentistry of New Jersey, New Jersey Medical School
- 193 ENDOSCOPIC NASOSEPTAL FLAP REPAIR FOR PERSISTENT CSF LEAK AFTER OPEN SKULL BASE SURGERY** Evelyne Kalyoussef (presenter), Soly Baredes, Chirag D. Gandhi, James K. Liu, Jean Anderson Eloy, University of Medicine and Dentistry of New Jersey - New Jersey Medical School
- 194 EXTENDED ENDOSCOPIC ENDONASAL TRANSSPHENOIDAL APPROACH FOR RESECTION OF RETROCHIASMATIC CRANIOPHARYNGIOMA** James K. Liu (presenter), Lana D. Christiano, Jean A. Eloy, University of Medicine and Dentistry of New Jersey, New Jersey Medical School
- 195 ENDOSCOPIC RESECTION OF A RECURRENT JUVENILE NASOPHARYNGEAL ANGIOFIBROMA** Michael V Medina (presenter), Department of Otolaryngology-Head and Neck Surgery, University of Florida
- 196 EXPANDED ENDONASAL APPROACH FOR RESECTION OF A CARCINOID TUMOR OCCURRING IN THE SPHENOID SINUS** Sarah J. Burgin (presenter), Stephen E Sullivan, Lawrence J. Marentette, Erin M. Lin, University of Michigan
- 197 MODIFIED HEMI-LOTHROP PROCEDURE FOR SUPRAORBITAL FRONTAL SINUS ACCESS: A CADAVERIC STUDY** Mark E Friedel (presenter), Kim P. Murray, James K. Liu, Jean Anderson Eloy, University of Medicine and Dentistry of New Jersey - New Jersey Medical School
- 198 RISK OF NECROSIS FOLLOWING PREOPERATIVE EMBOLIZATION AND ENDOSCOPIC RESECTION OF SINONASAL METASTATIC RENAL CELL CARCINOMA** Peter S. Amenta (presenter), James Evans, Madeleine Schaberg, Marc R. Rosen, Thomas Jefferson University Hospital
- 199 PSEUDOTUMOR CEREBRI – A NEW CONCEPT OF PATHOPHYSIOLOGY** Jan Hemza (presenter), Dpt. of Neurosurgery
- 200 DIFFUSE CEREBRAL VASOSPASM AFTER RESECTION OF A POSTERIOR FOSSA EPENDYMOMA** Jeffrey T. Jacob (presenter), Michael J. Link, Mayo Clinic
- 201 EXPANSILE LESION OF THE ANTERO-LATERAL SKULL BASE: ATYPICAL PRESENTATION OF A SPINDLE-CELL LIPOMA** Paul C Frake, Alex Cheng, Ameet Singh (presenter), The George Washington University Medical Center
- 202 TRANSPOSITION OF THE PTERYGOPALATINE FOSSA DURING ENDONASAL ENDOSCOPIC TRANSPTERYGOID APPROACHES** Juan C. Fernandez-Miranda, Carlos D. Pinheiro-Neto (presenter), Alec E. Vaezi, Alessandro Paluzzi, Carl H. Snyderman, Paul A. Gardner, University of Pittsburgh School of Medicine: (1) Department of Neurosurgery; (2) Department of Otolaryngology

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- 203 POSTERIOR PEDICLE NASOSEPTAL FLAP FOR VELOPHARYNGEAL INSUFFICIENCY: A NOVEL FLAP FOR PHARYNGOPLASTY AND PHARYNGEAL RECONSTRUCTION** Carlos M. Rivera-Serrano, Carlos D. Pinheiro-Neto (presenter), Carl H Snyderman, Juan C. Fernandez-Miranda, Alec E. Vaezi, Paul A. Gardner, University of Pittsburgh School of Medicine: (1) Department of Neurosurgery; (2) Department of Otolaryngology
- 204 "ASSOCIATION OF TRACHEOSTOMAL SIZE WITH CLINICAL AND DEMOGRAPHIC CHARACTERISTICS AFTER TOTAL LARYNGECTOMY WITH PRIMARY VOICE RECONSTRUCTION IN A PHILIPPINE TERTIARY HOSPITAL"** Jacqueline C Angeles (presenter), Celso V Ureta, Veterans Memorial Medical Center, Philippines
- 205 TRANSORAL RESECTION OF A RETROPHARYNGEAL MYXOMA: A CASE REPORT** James R. White (presenter), Sean Weiss, Rohan R. Walvekar, Stephen E Mason, Dwayne Anderson, LSU Health Sciences Center
- 206 SKULL BASE OSTEOMYELITIS FROM CAPNOCYTOPHAGIA SPECIES IN A 47-YEAR-OLD IMMUNE COMPETENT FEMALE** D. David Beahm (presenter), Rohan R. Walvekar, Daniel Nuss, Louisiana State University Health Sciences Center Department of Otolaryngology Head and Neck Surgery
- 207 EXTRAMEDULLARY PLASMACYTOMA OF THE SPHENOID SINUS** Kedar Kakodkar (presenter), Stephanie Joe, The University of Illinois at Chicago
- 208 FACIAL BUCCAL BRANCH MALIGNANT PERIPHERAL NERVE SHEATH TUMOR (MPNST) WITH EXTENSION TO THE MID TEMPORAL FOSA A TWO TIMES SURGERY MANAGEMENT EXPERIENCE** Rodrigo Navarro-Ramirez (presenter), Noe Vargas-Tentori, Hospital General de Mexico O.D.
- 209 THE TRANSPTERYGOID APPROACH FOR REMOVAL OF A VIDIAN NERVE NEUROFIBROMA** Nancy McLaughlin (presenter), Damien Bresson, Leo F. S. Ditzel Filho, Ricardo L. Carrau, Daniel F. Kelly, Daniel M. Prevedello, Amin B. Kassam, Brain Tumor Center, John Wayne Cancer Institute at Saint John's Health Center, Santa Monica, CA, USA
- 210 EXPANDED ENDONASAL ENDOSCOPIC APPROACH FOR RESECTION OF A CAVERNOUS SINUS TERATOMA** Vafi Salmasi (presenter), Gustavo Pradilla, Douglas Reh, Gary L. Gallia, Johns Hopkins Hospital
- 211 REVIEW OF THE CLINICAL APPLICATIONS OF INTRAOPERATIVE COMPUTED TOMOGRAPHY IN SKULL BASE AND SINONASAL SURGERY: LIMITED VALUE OR UNDERUTILIZED TECHNOLOGY?** Ben J. Dixon (presenter), Ian Witterick, Jonathan C. Irish, Michael J. Daly, Harley Chan, Departments Of Surgical Oncology And Otolaryngology, Head And Neck Surgery, Princess Margaret Hospital, University Health Network, Toronto
- 212 ANTERIOR PETROSECTOMY USING SONOPET FOR BRAINSTEM CAVERNOMA RESECTION IN 13 MONTH-OLD CHILD: YOUNGEST REPORTED IN LITERATURE USING NOVEL TECHNIQUE** Ravi N. Samy (presenter), Nael M. Shoman, Ondrej Choutka, Mario Zuccarello, University of Cincinnati/Cincinnati Children's Hospital
- 213 THE ANGIOSYNTHESIS - THE PHYSIOLOGICAL PHENOMEN OF BRAIN OUTFLOW (THE EFFECT OF MATERIAL PROPERTIES AND AXIAL TENSION ON THE COLLAPSE OF BRAIN BRIDGING VEINS)** Jan Hemza (presenter), František Maršík, Dpt. of Neurosurgery
- 214 EXTRACRANIAL EXTENSION OF MENINGIOMA WITHIN THE INTERNAL JUGULAR VEIN - A CASE REPORT** Nitin Bhatia (presenter), Yi-Hsuan Wu, Richard Wein, Carl Heilman, Tufts Medical Center
- 215 MANAGEMENT OF NON-MISSILE PENETRATING BRAIN INJURIES: A DESCRIPTION OF THREE CASES AND REVIEW OF THE LITERATURE** Justin M. Sweeney, Jonathon J. Lebovitz, Jorge L. Eller, Jeroen R. Coppens, Richard D. Bucholz, Saleem I. Abdulrauf (presenter), Center for Cerebrovascular and Skull Base Surgery, Saint Louis University
- 216 RADIATION INDUCED SARCOMA OF THE TEMPORAL BONE: CASE REPORT AND REVIEW OF THE LITERATURE** Ravi N Samy (presenter), Nael M Shoman, Ondrej Choutka, Mario Zuccarello, University of Cincinnati / Cincinnati Children's Hospital
- 217 CASE REPORT: CALCIUM PYROPHOSPHATE DEPOSITION DISEASE OF THE TMJ** Vasisht Srinivasan (presenter), Andrew Wensel, Paul Dutcher, Shawn Newlands, Mahlon Johnson, Edward Vates, University of Rochester Medical Center
- 218 ANGIOSARCOMA OF THE TEMPORAL BONE** Nael M. Shoman, Ravi N. Samy (presenter), Myles L. Pensak, University of Cincinnati / Cincinnati Children's Hospital
- 219 STAGED SURGERY FOR ZERO MORBIDITY IN HYPOGLOSSAL SCHWANNOMA** Banu Prakash (presenter), Thimappa Hegde, Komal Prasad, Bopanna M., Ashok R. Kaul, Ganesh Prasad, Praveen Ganigi, Kiran M., Narayan Hrudayalaya Institute Of Neurosciences
- 220 MYCOSIS FUNGOIDES - SURGICAL MANAGEMENT - CASE REPORT** Mihaela Cristiana M. Tatu (presenter), E.N.T. and HNS Clinic, "Carol Davila" Emergency Central Military Hospital, Bucharest, Romania;
- 221 SURGICAL MANAGEMENT OF GIANT GLOMUS JUGULARE TUMORS AND ASSOCIATED CHALLENGES OF CARE** Matthew L. Carlson (presenter), Colin L. Driscoll, Joaquin J. Garcia, Jeffrey R. Janus, Michael J. Link, Mayo Clinic School of Medicine, Rochester, MN 55905
- 222 A MULTIDISCIPLINARY APPROACH IN CASE OF THE VERY AGGRESSIVE EAR AND TEMPORAL BONE CARCINOMA - CASE REPORT** Mihaela Cristiana M. Tatu (presenter), Central Military Hospital Bucharest, Romania ENT Clinique

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