

IOIS 2015

Dedicated to the Memory of FerencAndras Jolesz

Scientific Program

Thursday, February 12, 2015

3:00 - 7:00 pm	Registration
7:00 - 9:00 pm	Welcome Remarks / Reception
	Host Chairman - Ajaya Nand Jha

Friday, February 13, 2015

7:00 am - 5:00 pm	Registration Desk Open
7:00 am - 8:00 am	Continental Breakfast
8:00 am - 8:30 am	Welcome-Opening Remarks

Ajaya Nand Jha, Michael Schulder, Richard Bucholz

8:30-10:30 am **Concepts and Methods**

Chairmen: Amir Samii, Jeff Weinberg and B. K. Misra

Arya Nabavi **Tribute to FerencAndras Jolesz: Visionary, Pioneer and Friend**

Joerg-Christian Tonn

(15 min & 5 min discussion) Glioma Surgery - towards a conceptual approach of resection

Alexandra Golby

(15 min & 5 min discussion) AMIGO Multimodal Intraoperative Imaging in Neurosurgery

Ajaya Nand Jha

(15 min & 5 min discussion) Modern intra operative imaging in the Indian set up: challenges and opportunities

Mitsunori Matsumae

(15 min & 5 min discussion) Multimodality diagnostic, interventional and surgical procedure suite: MRI/ Xray/ Operations suite (MRXO)

Keki Turel

(15 min & 5 min discussion) Utility of Intraoperative Ultrasound in Neurosurgery

10:30-10:45

Refreshment Break / Exhibits & Posters

10:45-12:30

Glioma: Design and results of clinical studies

Chairmen: Moshe Hadani, Arya Nabavi and Keki Turel

Andreas Unterberg

(15 min & 5 min discussion) How to Analyze the Impact of Intraoperative MRI in Clinical Studies

Aliasgar Moiyadi

(10 min & 5 min discussion) Navigated ultrasound for resection of gliomas-predictive value, influence on resection and survival

Vivek Tandon

(8 min & 4 min discussion) IOMRI and Glioma: Influence on resection using an intra-operative MRI during glioma-resection

Mortiz Scherer

(8 min & 4 min discussion) Impact of Tumor Volume Reduction and Influence of Intraoperative MRI Guidance on Survival in Low-Grade Astrocytomas

Taiichi Saito

(8 min & 4 min discussion) Long-term Clinical Results of 237 Patients with Glioblastomas – Evaluation of Extensive Resection by Volumetric Analysis in 137 cases

Aditya Gupta

(8 min & 4 min discussion) Comparison of early survival in Glioblastoma multiforme (GBM) patients operated using intra-operative magnetic resonance imaging (iMRI) alone vs iMRI and 5-aminolaevulinic acid (ALA dye – single center experience

Vikas Sharma

(8 min & 4 min discussion) Glioblastoma Multiforme surgery using intraoperative MRI and 5-ALA- single center experience post 1 year follow-up

Karanjit Singh

(8 min & 4 min discussion) Role of Intraoperative Ultrasound in setting of Intraoperative MRI

Sanju Lama

(8 min & 4 min discussion) Image-guided Robotics in the Treatment of Glioma

12:30 – 1:30 pm Lunch

1:30 pm – 2:30 pm **intraoperative CT-Imaging**

Panel and Speakers: Alex Olivi, Joerg- Christian Tonn

2:30 - 4:30 pm **Optical Imaging**

Chairmen: Dan Orringer, Anand BalaSubramaniam, Walter Stummer

Walter Stummer

(15 min & 5 min discussion) Fluorescence Guidance Origins and Future directions

Sergey Goryaynov

(10 min & 5 min discussion) Fluorescence Microscopy in Brain Tumor Surgery

Rene Bernays

(10 min & 5 min discussion) Glioblastoma resection with 5-ALA fluorescence and iMRI

Dan Orringer

(15 min & 5 min discussion) Stimulated Raman Scattering Microscopy for Brain Tumor Surgery

Alf Giese

(15 min & 5 min discussion) Quantum Dots and OCT

Walter Stummer

(10 min & 5 min discussion) Fluorescence microscopy (ICG) for vascular Neurosurgery

Manas Panigrahi

(10 min & 5 min discussion) Microscope-integrated Near-Infrared Indocyanine Green Video Angiographic (ICG-VA) during surgery of cerebral aneurysms: The Kims Experience

4:45 – 6:00 PM **Pituitary and Special applications**

Chairmen: Christian Senft, Sarat Chandra, Gord von Campe

Mike Chicoine

(15 min & 5 min discussion) Pituitary Adenomas and other skull base lesions

Tae-Kyu Lee

(10 min& 5 min discussion) Endonasal/Endoscopic Transphenoidal Approach for Pituitary Adenoma with Intraoperative Mobile Computed Tomography Scan

Anand BalaSubramanium

(8 min & 4 min discussion) Abstract of a study in Pituitary Adenomas

Vivek Tandon

(8 min & 4 min discussion) High field intra-operative magnetic resonance imaging guided resection as compared to 2D fluoroscopic guidance resection of pituitary macroadenoma: a randomized two arm parallel group clinical trial (interim analysis)

Sudhir Dubey

(8 min& 4 min discussion)

Intraoperative Technology, operative endpoints and post operative residue in cases of Pituitary Adenomas

Special Applications:

Takashi Maruyama

(10 min & 5 min discussion) Photodynamic therapy with Talaporfin Sodium for malignant glioma, combination with intraoperative MRI

Short presentations:

Rishab Kedia

(5 min & 3 min discussion) Utility of intraoperative MRI in successful resection of a large cystic cerebellar lesion with a tiny mural nodule

Saturday, February 14, 2015

7:30 am – 8:30 am Registration and Continental Breakfast

8:30 am – 9:30 am **Anesthesia Considerations for Intraoperative Imaging**

Moderator: Christian Senft, Richard Bucholz, Sergio Bergese

Panelists: Yatin Mehta, Promod Bithal, Bhavsar Shreyas, Sergio Bergese, Harsh Sapra

9:30 am-12:00 pm **Combining techniques: imaging and electrophysiology**

Chairmen: Mike Chicoine, Suresh Nair, Sarat Chandra

Sujit Prabhu

(15 min & 5 min discussion) Awake Craniotomies for Gliomas

Yoshihiro Muragaki

(15 min & 5 min discussion) Workflow Description and Paradigms for Awake Surgery in Low and Mid-field MRI

Michael Schulder

(15 min & 5 min discussion) Awake Craniotomy and low-field iMRI

Amir Samii

(15 min & 5 min discussion) High-Field iMRI and Stimulation for tumor resection in eloquent areas

Geirmund Unsgard

(15 min & 5 min discussion) Methodology and results by operating (asleep) low grade glioma patients with 3D US guidance and navigated CUSA

Jeff Weinberg

(15 min & 5 min discussion) Pediatric cases in the MRI

Tina Kapur

(15 min & 5 min discussion) Intraoperative Imaging and Navigation: Translation from Brain Tumor Surgery to cancers of Prostate, Cervix, Liver, Lung, Parathyroid and Breast

12:00 to 12:20 pm **Refreshment Break & Exhibits**

12:20- 2:00 pm **Honoured Guests of IOIS Session “From Space to Earth”**

K Radhakrishnan, ISRO
(Indian Space Research Organization)

Garnette Sutherland
(Committee-member of the Canadian Space agency for human space exploration)

General Remarks: Arya Nabavi

12:30 – 1:00 pm

K Radhakrishnan
Introduced by Ajaya Jha
MOM- Mars Orbiter Mission

1:00 – 2:00 pm

Garnette Sutherland
Introduced by Michael Schulder
Robotics and intraoperative Imaging

2:00 – 3:00 pm

Lunch and IOIS Business Meeting

3:00 pm – 4:00 pm

Intraoperative Ultrasound IOUS – a powerful and versatile tool

Moderators: Geirmund Unsgard, Aliasgar Moiyadi, SujitPrabhu,

Geirmund Unsgard Novel aspects for operations of gliomas by 3D US: shift correction,
“acoustic fluid” and elastography

Aliasgar Moiyadi Intraoperative Ultrasound: Evolution from 2D to 3D navigable US

Geirmund Unsgard AVM patients operated by assisted 3D US (Doppler) angiography;
methodology and results

4:00 pm- 4:15 pm

Refreshment Break & Exhibits

4:15 pm – 6:00 pm

Chairman:Michael Schulder, Andreas Unterberg, C. E. Deopujari

Gordvon Campe

(10 min & 5 min discussion) High density Tractography

Sujit Prabhu

(8 min & 4 min discussion) Impact of multimodality monitoring using direct electrical
stimulation (DES) and corticospinal tract (CST) shift in iMRI

Ozdil Baskan

(8 min & 4 min discussion) Intraoperative Ultrasound Characteristics of the Glial Tumors

Sasha Gulati

(8 min & 4 min discussion) Three-dimensional Ultrasound-Guided Placement of Ventricular Catheters

Pawan Goyal

(8 min & 4 min discussion) Evaluation of neuronavigation in lesional and non-lesional epilepsy surgery

S. Srivastava

(8 min & 4 min discussion) Intraoperative Navigation: Increases Safety and Efficacy for endoscopy treatment of cystic lesions of the ventricles

Arnoldo Mayer

(8 min & 4 min discussion) Robust registration between pre-operative diagnostic MRI and low-field intraoperative MRI

Vinod Tewari

(8 min & 4 min discussion) New Wine in Old Bottle – Cost Effective intraoperative MRI for Cranial and Spinal Cases using pre-existing three side open MRI – adjacent to operation theatre

7:45 – 10:30 pm

Social Dinner TBD

Sunday, February 15, 2015

8:00 am - 8:30 am

Breakfast

8:30 am - 10:30 am

Spinal Surgery

Chairmen: Michael Winking, R. C. Mishra, Manas Panigrahi

Mike Chicoine

(10 min & 5 min discussion) iMRI and Chiari Malformation

C. E. Tatsui

(15 min & 5 min discussion) Spinal metastasis treated with LITT using intraoperative thermal MR

Manas Panigrahi

(15 min & 5 min discussion) Adjuncts for cervico-thoracic junction fixation

Pavel Barsa

(8 min & 4 min discussion) Intraoperative CT-based navigation is more accurate and safer way of lower thoracic and lumbar pedicle screw insertion than traditional fluoroscopy guidance (prospective randomised study)

Shashikant Patil

(8 min & 4 min discussion) Intraoperative Compute Tomography Navigation as a Supplemental Tool in Preventing Adjacent Endplate Injury in Vertebral Corporectomy

A. Yousni

(8 min & 4 min discussion) Navigation assisted mini-open approach in instrumented Lumbar Spinal Surgery? Results of 90 Patients with lumbar Pedicle Screw Fixation and Interbody Fusion

Ozdil Baskan

(8 min & 4 min discussion) Intraoperative CT in Spinal Surgery: Radiation Dose Study

10:30 am – 10:45 am

Refreshment Break &Exhibits

10:45 am - 11:45 am

Symposium iSpine: Intraoperative Spine Imaging

Panel and Speakers: Michael Winking, Manas Panigrahi, R. N. Bhattacharya, M. Bhaskar Rao

11:45 am – 12:45 pm Specialized Challenges and Future Directions

Sarat Chandra

(15 min & 5 min discussion) Multimodal Imaging with iMRI for localizing Epileptogenic Networks

Michael Schulder

(15 min & 5 min discussion) LITT in Brain tumor treatment

Richard Bucholz

(15 min & 5 min discussion) Networking of Intraoperative Instrumentation

12:45 pm

Announcements Closing Remarks

IOIS Presidents Michael Schulder/ Richard Bucholz and Local Organizing Committee