

**Seventh Annual Selected Topics in Neuroplastic & Reconstructive Surgery:  
An International Symposium on Head/Spine Trauma, Cranioplasty  
and Implantable Neurotechnologies with Cadaver Lab  
December 9-11, 2022  
Intercontinental at Doral Miami  
Doral, Florida**

Jointly Provided by: The University of Miami and Global Neuro Foundation  
In Collaboration with the Society of Neuroplastic Surgery  
and the Society for Laser Interstitial Thermal Therapy

<b>COURSE DIRECTOR:</b>	Chad Gordon, DO, FNPS	
<b>COURSE CO-CHAIRS:</b>	Nicholas Theodore, MD, MS	Johns Hopkins School of Medicine
	Allan Levi, MD	University of Miami School of Medicine
	Ricardo Komatar, MD	University of Miami School of Medicine
	Michael Ivan, MD	University of Miami School of Medicine
	Judy Huang, MD	Johns Hopkins School of Medicine
	Paul Manson, MD	Johns Hopkins School of Medicine
	Michael Yaremchuk, MD	Harvard Medical School/MGH
	Michael Lim, MD	Stanford University School of Medicine

**Friday, December 9, 2022**

- 7:00 – 8:00      Registration and Continental Breakfast
- 8:00 – 8:10      **Welcome Remarks and Symposium Course Introduction**  
Chad Gordon, DO, FNPS
- 8:10 – 8:30      **Opening Remarks**  
Nicholas Theodore, MD, MS  
Paul Manson, MD

**Session 1: Craniocerebral Trauma and Clinical Management**

*Moderators: Justin Caplan, MD, Nicholas Theodore, MD and Michael Yaremchuk, MD*

- 8:30 – 8:50      **Evidence-based Medicine and Medicine-based Evidence in TBI: Guidelines and Recommendations**  
Randy Chesnut, MD
- 8:50 – 9:10      **Goal-Directed Therapy in Traumatic Brain Injury (TBI)**  
David Okonkwo, MD, PhD
- 9:10 – 9:30      **The Role of Decompressive Craniectomy: Evidence-Based Perspectives**  
Judy Huang, MD
- 9:30 – 9:50      **Advanced techniques for Improving Outcomes in Cranioplasty**  
Chad Gordon, DO, FNPS
- 9:50 – 10:10    **Pediatric Head Injuries and Surgical Management**  
Anand Kumar, MD

- 10:10 – 10:25 Refreshment Break
- 10:25 – 10:45 **Head Trauma in the National Football League (NFL)**  
Nicholas Theodore, MD, MS
- 10:45 – 11:05 **Adult Neurosurgical Critical Care and Recent Advances**  
Jose Suarez, MD
- 11:05 – 11:25 **Magic Numbers and Basic Paradigms in TBI: Quo Vadimus?**  
Randy Chesnut, MD
- 11:25 – 12:15 **Case-based Panel Discussion with Neurocritical Care Focus**  
Paul Manson, MD, Shelly Timmons, MD, and Rafael Tamargo, MD
- 12:15 – 12:45 Lunch

**Session 2: Spine Trauma and Spinal Cord Injury Management**

*Moderators: Bizhan Aarabi, MD, Ali Bydon, MD and Timothy Witham, MD*

- 12:45 – 1:05 **Basic Science of Spinal Cord Injury (SCI): State of the Art**  
Bizhan Aarabi, MD
- 1:05 – 1:25 **Clinical Translation Advances in SCI**  
Nicholas Theodore, MD, MS
- 1:25 – 1:45 **Advanced Therapeutics in SCI**  
Allan Levi, MD, PhD, FACS
- 1:45 – 2:05 **Neurorraphy following Spine and Nerve Trauma**  
Daniel Lubelski, MD
- 2:05 – 2:25 **Spine Reconstruction following Complex Cervical Injury**  
Timothy Witham, MD
- 2:25 – 2:45 **Complex Thoracolumbar Spine Trauma and Reconstruction**  
Daniel Sciubba, MD, MBA
- 2:45 – 3:25 **Case-based Panel Discussion with Neurocritical Care Focus**  
Rocco Armonda, MD
- 3:25 – 3:30 **Closing Remarks**

**Saturday, December 10, 2022**

6:00 – 7:00 Registration and Continental Breakfast

7:00 – 7:10 **Welcome and Conference Goals**  
Chad Gordon, DO, FNPS

7:10 – 7:20 **Opening Remarks**  
Kymberlee Manni, MD

7:20 – 7:35 **Chairman’s Welcome**  
Henry Brem, MD and Allan Levi, MD

7:35 – 7:45 **Patient Experience with Neuroplastic Surgery**  
Earl Henry, MD

**Session 1: Innovation and Discovery in Brain Tumor Management**

*Moderators: Krzysztof Bankiewicz MD, PhD, Chetan Bettagodwa, MD, PhD and Michael Lim, MD*

7:45 – 8:00 **Advances and Opportunities in Brain Tumor Therapies**  
Karisa Schreck, MD, PhD

8:00 – 8:15 **Challenges with Resecting Recurrent GBM Disease**  
Jon Weingart, MD

8:15 – 8:30 **Anti-PD-1 Antitumor Immunity Enhanced by Chemotherapy**  
Michael Lim, MD

8:30 – 8:45 **T-cell Therapy for Brain Tumors**  
Christopher Jackson, MD

8:45 – 9:00 **Metabolism Genes fueling Brain Tumors**  
Albert Kim, MD, PhD

9:00 – 9:15 Refreshment Break

9:15 – 9:30 **How to Approach the Blood Brain Barrier for Tumors**  
Chetan Bettagodwa, MD, PhD

9:30 – 9:45 **Image-guided, Convection-enhanced Delivery**  
Russell Lonser, MD, PhD

9:45 – 10:00 **Intra-tumoral CED versus Peri-tumoral Infusion Pre-resection**  
Krzysztof Bankiewicz MD, PhD

10:00 – 10:20 **Smart technology for Medicine Delivery to Brain**  
Chad Gordon, DO, FNPS

10:20 – 10:50 **Seventh Annual Keynote Lectureship**  
**Current Discoveries for Blocking Cancer Progression**  
Gregg Semenza, MD, PhD

## **Session 2: Functional Neurosurgery and Embedded Interfaces**

*Moderators: Nathan Crone, MD, Leigh Hochberg, MD, PhD and Dennis Spencer, MD*

- 10:50 – 11:05 **Neuromodulation for Epilepsy**  
Dennis Spencer, MD
- 11:05 – 11:20 **Braingate Neuronal Interface System**  
Leigh Hochberg, MD, PhD
- 11:20 – 11:35 **Investigation with Brain Stimulation for Speech**  
Nathan Crone, MD
- 11:35 – 11:50 **Network Brain-Computer Interface (nBCI) for Cognitive Prosthetics**  
Vivek Buch, MD
- 11:50 – 12:05 **Neuropixels Si probe for Extracellular Recording**  
Timothy Harris, PhD
- 12:05 – 12:20 **Challenges of Achieving Innovation in Academia**  
Erol Veznedaroglu, MD
- 12:20 – 1:15 Lunch

## **Session 3: Reconstructive Considerations and Neuroplastic Technology**

*Moderators: Judy Huang, MD, Alan Levi, MD, and Russell Lonser, MD*

- 1:15 – 1:30 **Cranial Implants for Neuro-monitoring**  
Kerry-Ann Mitchell, MD, PhD
- 1:30 – 1:45 **Achieving Near Real-time Intraoperative Brain Tumor Diagnoses**  
Daniel Orringer, MD
- 1:45 – 2:00 **Retrospective Analysis of 500 Cranial Implants**  
Amir Wolff, MD, DMD
- 2:00 – 2:15 **Post-craniotomy Temporal Deformities and Dermal Fillers**  
Mary Sheu, MD

## **Session 4: Neurocranial Reconstruction: Skull base, Pediatric, and Military**

*Moderators: Paul Manson, MD, Nelson Oyesiku, MD and Nicholas Theodore, MD*

- 2:15 – 2:30 **Skull Base Surgery and Reconstructive Considerations**  
Christopher Jackson, MD and Rafael Tamargo, MD
- 2:30 – 2:45 **Craniosynostosis and Pediatric Cranioplasty**  
Peter Taub, MD
- 2:45 – 3:00 **Battlefield Neurotrauma and War-time Advances**  
Christopher Carroll, MD

- 3:00 – 3:15     **Neuroplastic Surgery and its application to the Military**  
Colleen Perez, MD
- 3:15 – 3:30     **Military Cranioplasty with Implants**  
Gabriel Santiago, MD
- 3:30 – 3:45     **Free Tissue Transfer in Wounded Warriors**  
Anand Kumar, MD

**Session 5: Future considerations in Laser Interstitial Thermal Therapy**

*Moderators: Daniel Lubelski, MD, Michael Ivan, MD and Ricardo Komatar, MD*

- 3:45 – 4:00     **LITT for Metastatic Brain Disease**  
Michael Ivan, MD
- 4:00 – 4:15     **LITT for Gliomas**  
Ashish Shah, MD
- 4:15 – 4:30     **LITT for Radiation Necrosis**  
Daniel Eichberg, MD
- 4:30 – 4:45     **LITT for Thalamic and Posterior Fossa Lesions**  
Alexis Morell, MD
- 4:45 – 5:00     **Closing Remarks**  
Chad Gordon, DO, FNPS

**Sunday, December 11, 2022**

- 7:00 – 7:45 Registration and Continental Breakfast
- 7:45 – 7:55 **Welcome and Faculty Overview**  
Chad Gordon, DO, FNPS
- 8:00 – 9:45 **Session I: Neurosurgical Approaches to the Craniofacial Skeleton**
1. Burr hole for Ventriculostomy Placement
  2. Pterional Craniotomy for Trauma
  3. Parasagittal Craniotomy
  4. Bifrontal Craniotomy for Frontal Sinus Trauma
  5. Orbito-zygomatic Osteotomy
  6. Occipital Craniotomy
  7. Posterior Fossa Craniotomy
- 9:45 – 10:00 Refreshment Break
- 10:00 – 11:45 **Session II: Neurocranial Reconstruction and Cranioplasty with Implants**
1. Bifrontal Cranioplasty for Frontal Bone/Frontal Sinus Trauma
  2. Cranioplasty with Customized Cranial Implant
  3. Cranioplasty with Titanium Mesh Implant
  4. Chiari Reconstruction with Alloplastic Implant
  5. Temporal Hollowing Defect Reconstruction
  6. Complex Scalp Reconstruction Techniques for Large Defects
- 11:45 – 12:00 Closing Remarks

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INVITED CADAVER FACULTY

- 1) Chad Gordon
- 2) Justin Caplan
- 3) Chris Jackson
- 4) Kerry-Ann Mitchell
- 5) Gabriel Santiago
- 6) Amir Wolff
- 7) Nati Ben-Shalom
- 8) Colleen Perez
- 9) Tamir Shay
- 10) Peter Taub
- 11) Anand Kumar
- 12) Daniel Lubelski
- 13) Chetan Bettagodwa
- 14) Vladimir Shapira
- 15) H. Brett Friedman