

Massachusetts General Hospital  
Brigham & Women's Hospital  
Harvard Medical School

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## Neurocritical Care Training Program

Welcome!



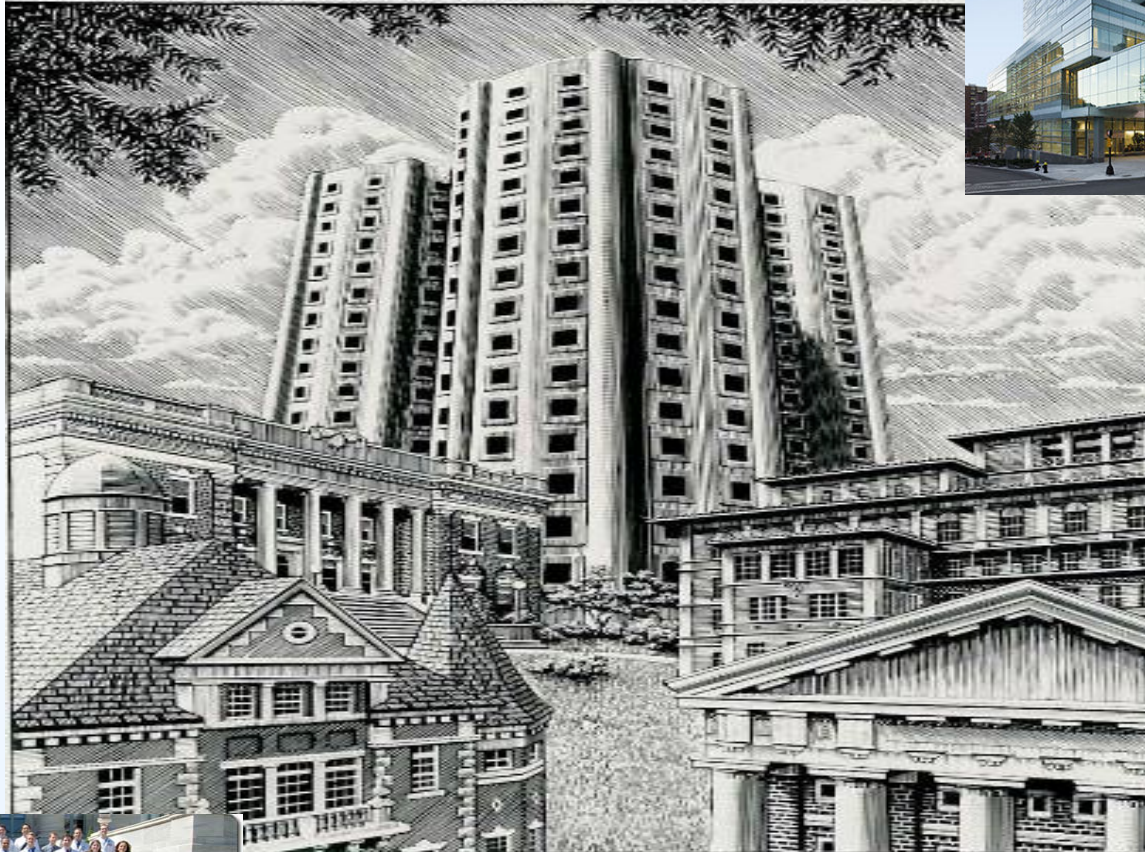
# Brigham & Women's Hospital

## Neurocritical Care and Acute Stroke

Sherry Chou  
Steven K. Feske  
Galen V. Henderson  
Leigh R. Hochberg  
Allan H. Ropper  
Farzaneh A. Sorond

## Neurosurgery and Neurocritical Care

William Gormley



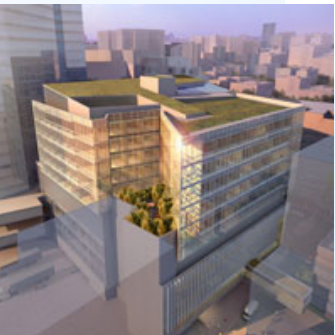
# Massachusetts General Hospital

## Neurocritical Care and Acute Stroke

Leigh R. Hochberg  
 W. Taylor Kimberly  
 Guy A. Rordorf  
 Jonathan Rosand  
 Eric Rosenthal  
 Lee H. Schwamm

## Acute Stroke

Ferdinando Buonanno  
 Karen L. Furie  
 Natalia S. Rost  
 Scott Silverman  
 Aneesh Singhal  
 Anand Viswanathan



# Clinical Training in Neurocritical Care

## ■ Current Fellow Rotations

- MGH
  - Senior Fellow
  - Junior Fellow
    - Blue: neurovascular and perioperative
    - Red: neurology and neurotrauma
  - Night Float
  - Electives
- BWH
  - Neurological Critical Care and Acute Stroke
  - Neurosurgical Critical Care

## ■ Projected Fellow Rotations

- MGH
  - Neuromedical Fellow
  - Neurosurgical Fellow
  - Night Float
  - Electives
  - Selectives
- BWH
  - Neurological Critical Care and Acute Stroke
  - Neurosurgical Critical Care

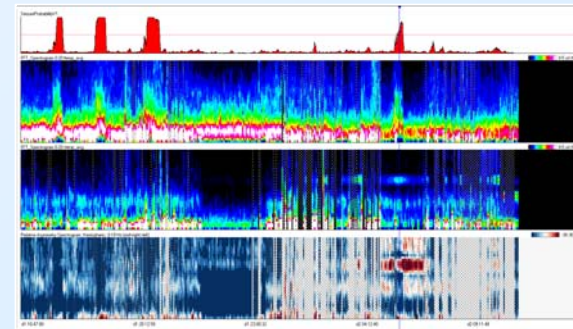
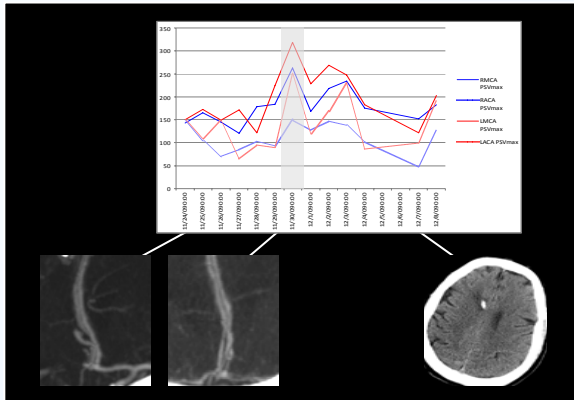
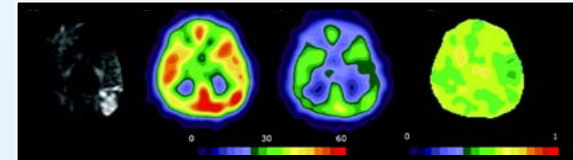
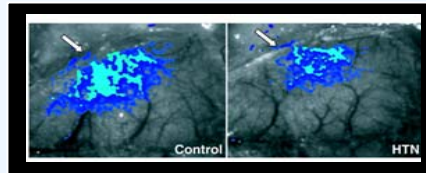
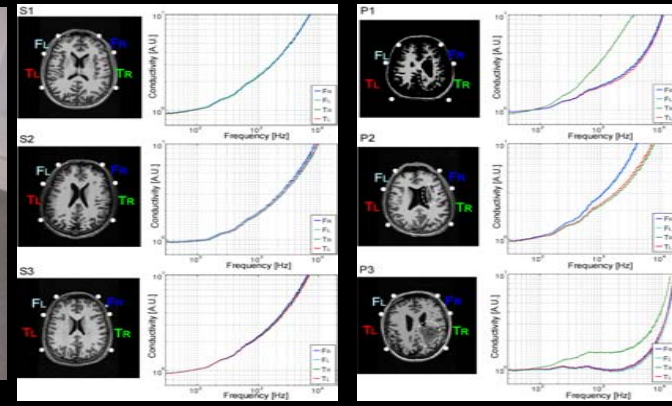
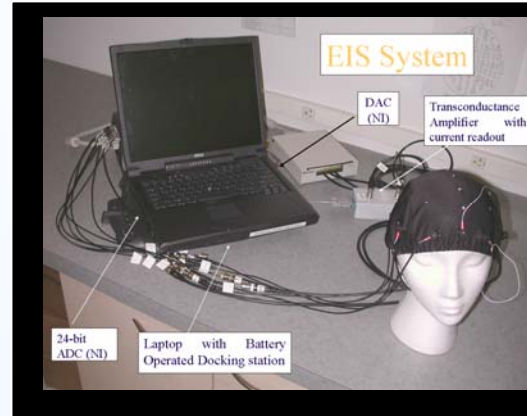
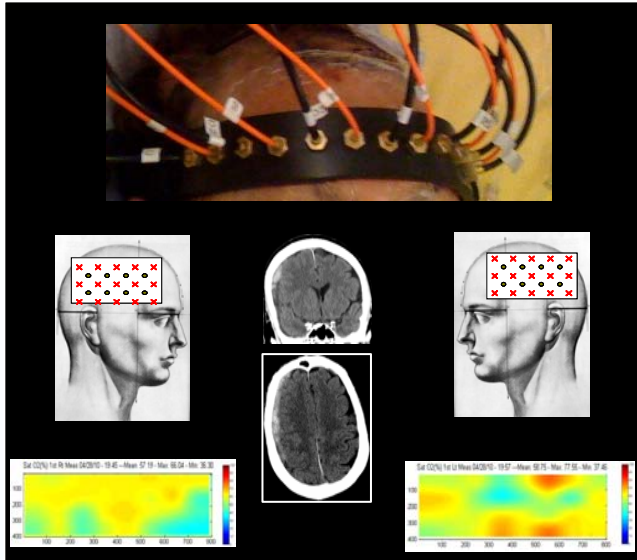


# Broadening and Redefining Neurocritical Care

- Advanced Electives
  - Bronchoscopy
  - Airway Management and Neuroanesthesia
  - Surgical Intensive Care
  - Code Management
  - Echocardiography
  - EEG
  - TCD
  - Simulation



# Research and Mentorship

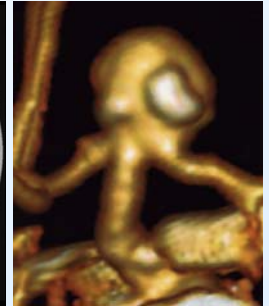
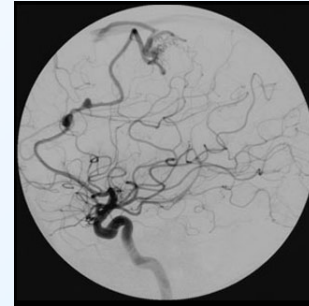
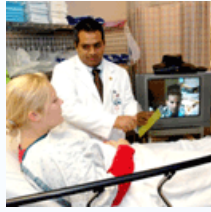
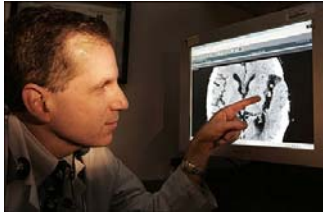


# Research and Mentorship

- Outcomes and Prognosis
  - ICH and anticoagulation
  - ICH and outcome
  - SAH risk factors
  - Ischemic Stroke and Thrombolysis
- Clinical Trials
  - GAMES
  - MR Rescue
  - MR Witness
  - DIAS 4
  - STOP-IT
  - Statin Therapy in Acute Stroke
- Tissue Repository and “-omics”
  - Genomics
  - Metabolomics
- Animal Models of Ischemia
- Anticoagulation after ICH
- Neuroimaging
  - CT/MRI Perfusion Imaging
  - PET-CT Imaging
  - Metabolic MRI
- Neuromonitoring
  - TCD Dynamic Autoregulation
  - Near-Infrared Spectroscopy
  - EEG Ischemic Monitoring
  - Electrical Impedance Spectroscopy
  - Continuous Neurotransmitter Probes
  - Biomarkers in SAH
- Computer-brain interfaces
  - P300 study
  - BrainGate technology
- Health Care Process
  - Hand-offs in and out of the ICU
  - Quality Improvement in Acute Stroke
  - Cost Effectiveness



# Acute Stroke Management and Thrombolysis



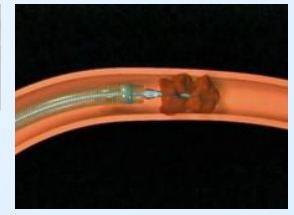
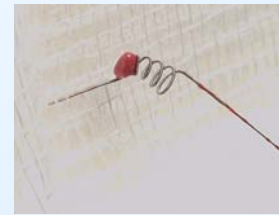
**PARTNERS TELESTROKE CENTER**



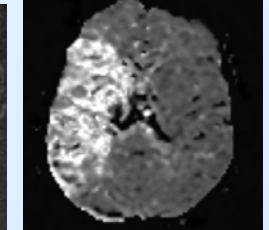
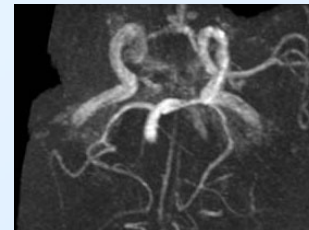
MASSACHUSETTS  
GENERAL HOSPITAL



BRIGHAM AND  
WOMEN'S HOSPITAL



Partners TeleStroke  
network and s



# Conferences and Didactics

## ■ MGH

- Neurocritical Care
  - Research and Development
  - Journal Club
  - Protocol Development
  - M&M
- Acute Stroke Conference

## ■ BWH

- Journal Club
- Research
- Neurosurgery Vascular Conference
- Neurosurgery Didactic Conference

## ■ Dedicated Fellow Didactics

## ■ Additional Conferences

### ▫ MGH Conferences

- Monday 7:30-8am, Resident Morning Report
- Monday 7:30-8am, Ambulatory Neurology Conference
- Monday 12-1pm, Resident Didactic Noon Conference
- Monday 12-1pm, EEG Reading Conference
- Monday 1-2pm, Epilepsy Conference
- Tuesday 7:30-8am, Resident Morning Report
- Tuesday 12-1pm, Chief's Rounds
- Wednesday 7:30-8am
- Wednesday 8-9am, Neurooncology Conference
- Wednesday 12-1pm, Resident Didactic Noon Conference
- Wednesday 1:30-2:30pm, RDA Neuroradiology Conference
- Thursday 7:30-8am, Resident Morning Report
- Thursday 9-10am, Neurology Grand Rounds
- Thursday 8-9am, Neurosurgery Grand Rounds
- Thursday 12-1pm, Resident Didactic Noon Conference
- Thursday 12-1pm, Epilepsy Journal Club
- Thursday 12:30-1pm, Neuro-ID Conference
- Thursday 1:30-2:30pm, CMF Neuroradiology Conference
- Thursday 6:00-7:00pm, Wine and Cheese Neurology Research Conference
- Friday 7:30-8:30am Neuropathology Conference
- Friday 11:30am-1pm, Morbidity and Mortality Conference

### ▫ BWH Conferences

- Monday 7:30-8:00am, Resident Morning Report
- Monday 12-1pm, Resident Didactic Noon Conference
- Tuesday 7:00-8:00, Vascular Neurosurgery and Interventional Neuroradiology Conference
- Tuesday 7:30-8:00am, Resident Morning Report
- Tuesday 12-1pm, Chief's Rounds
- Tuesday 2-3pm, Neuroradiology Conference
- Wednesday 6:45-7:30am, Pediatric Neurosurgery Conference
- Wednesday 7:30-8:30am, Neurosurgery Morbidity and Mortality
- Wednesday 7:30-8:00am, Resident Morning Report
- Wednesday 8:30-9:30am, Clinical Neuromuscular/EMG Conference
- Wednesday 9:30-10:30am, Longwood Neurology Grand Rounds
- Wednesday 12-1pm, Resident Didactic Noon Conference
- Thursday 7:30-8:00am, Resident Morning Report
- Thursday 7:00-8:00am, Neurosurgery Grand Rounds
- Thursday 8:00-9:00am, Neurosurgery-Neuroradiology Conference
- Thursday 11:15am-12:00pm (once monthly), BWH Neurology-Neurosurgery conference
- Thursday 12-1pm, Resident Didactic Noon Conference
- Thursday 12:30am-1:30pm, Neurosurgery Didactic Conference
- Thursday 1:30-2:30pm, Neurosurgery Board Review and Journal Club
- Thursday 3:00-4:00pm, Neurosurgery Didactic Conference
- Thursday 1-2pm, Epilepsy LTM Conference
- Thursday 2-3pm, EEG Conference
- Thursday 6-7pm (first Thursday of each month), Wine and Cheese Clinical Neurology Conference, Tyler Library: Dr. Martin Samuels and Dr. Allan Ropper
- Friday 7:30am-8:30am, Neuropathology Conference
- Friday 11:00-11:45am, BWH Neurooncology Conference
- Friday 12:00am-1:00pm, Morbidity and Mortality Conference



# Learning How to Run a Neurocritical Care Unit

- Recent Protocols
  - Management of SAH
    - Vasospasm Prevention and Treatment
    - Ischemic Monitoring
      - TCD
      - EEG
    - Management of Angio-negative SAH
    - EVD Wean Protocol
  - Hypothermia
    - TBI
    - Cardiac Arrest
  - Malignant Stroke
    - Hemicraniectomy
    - Hyperosmolar Therapy Sedation Management
  - GI prophylaxis
  - Compression Stockings Usage
  - Brain Death Declaration
  - etc.....



Thank you!  
...now come help us innovate

