FEBRUARY 2025| ISSUE 2

THE GEORGE WASHINGTON UNIVERSITY

WASHINGTON, DC

The Clinical Neurosciences Newsletter

IN THIS ISSUE

The GW Medical Faculty Associates
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A WELCOME MESSAGE

Dear Colleagues,

I am delighted to share the latest updates from our department in this edition of the Clinical Neurosciences Newsletter. We are excited to have launched the Clinical Neurosciences Weekly Grand Rounds, a series that brings together experts from across neurology and neurosurgery. These sessions can be viewed from anywhere in the world, and we are actively working on archiving them on our website to ensure broad and lasting access to these valuable discussions.

As we continue to grow our department, we are thrilled to be interviewing outstanding candidates who will help us expand our clinical, educational, and research missions. Our goal is not only to build the capacity needed to cover Cedar Hill Hospital but also to enhance our subspecialty expertise and strengthen our academic footprint. Some of our new recruits will have labs at the School of Medicine and clinics at MFA, further reinforcing our commitment to translational research and fostering stronger bridges between clinical care and scientific discovery.

Despite our busy clinical schedules, we continue to push the frontiers of research, with new projects emerging in ALS, multiple sclerosis, epilepsy, and stroke. The dedication of our faculty and trainees to advancing knowledge while providing exceptional patient care remains truly inspiring.

Thank you all for your hard work and contributions to our shared mission. I look forward to seeing what we accomplish together in the months ahead.

Warm regards,

M. Z. Koubeissi, MD
Professor and Interim Chair
GW Department of Neurology & Rehabilitation Medicine

OUR NEWS

Dr. Asish Gulati published an article in the Stroke: Vascular and Interventional Neurology (SVIN) journal, focusing on predictors of hematoma expansion and neurological decline in intracerebral hemorrhage on mobile stroke units.

Dr. Asish Gulati is the new Director of Equity; advancing our efforts to promote diversity and inclusion, fostering greater awareness and impact within our department and beyond.

As of the end of January, Dr. Zachary Levine and the neurosurgical team will have treated 21 patients with tremor using MRgFUS - The program began in August of 2024 and continues to grow.

Multiple investigators received the IDDRC pilot award including Dr Sepeta, Dr Xie, Dr Greenwald, Dr Stoodly and Dr Zohn.

Dr Syed anwar and Dr. William Gaillard received a CAO pilot award.

Dr. Ted Rothstein has been selected for membership in Sigma Xi, the International Science Research Honor Society.

OUR NEWS

Dr. Mohamad Koubeissi's poster titled ' Piriform Cortex in Epilepsy' will be presented at the Organization for Human Brain Mapping (OHBM), Brisbane, Australia. June 24 - 28, 2025.

Dr. Mohamad Koubeissi presented two topics:
1. Neurology Grand Rounds. University of Florida. Jan 14, 2025. Presentation: The Neural Correlates of Semiological Manifestations of Focal Epilepsy
2. XXXVI th GRAL (Groupe de Recherche sur La Maladie d'Alzheimer) Congress – Phoenix Arizona, USA -Jan 29-31 2025. Presentation: Aging and Epilepsy

Dr. Mohamad Koubeissi et al. published a paper titled 'How accurate are machine learning models in predicting anti-seizure medication responses: A systematic review'. Epilepsy Behav. 2024 Dec 13;163:110212. Epub ahead of print. PMID: 39673992.

Our team has published a paper titled 'Effectiveness and tolerability of cenobamate: A single center experience'. Saouda C, Nofal O, Makke Y, Eid A, Vinarsky V, Edelberg H, Lee SM, Koubeissi M. Epilepsy Res. 2025 Jan;209:107498. PMID: 39708385.

Researchers at the George Washington University are looking for interested volunteers for a healthy control study to better understand an autoimmune, neuromuscular (disease affecting nerves and muscles) known as Myasthenia Gravis.

Faculty and staff are welcome to participate.

PARTICIPATION INVOLVES:
One-time blood draw (You will have either 4 teaspoons (20 milliliters) or 10 teaspoons (50 milliliters) from an arm vein.

YOU MAY QUALIFY IF YOU:
- Don't have any autoimmune diseases
- No prednisone or corticosteroid use
- No vaccinations within a month

For more information, contact goztosun@mfa.gwu.edu

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WHAT'S NEW IN NEUROLOGY

WHAT'S NEW

Recent trials have expanded our understanding of the management of large-core strokes, particularly regarding the benefits of endovascular thrombectomy (EVT):

The SELECT2 Trial, published in February 2023, sought to determine if patient's with a large area of brain damage due to stroke improved with endovascular therapy (EVT) within 24 hours of stroke onset. This study showed that using advanced stroke treatments, like removing a blood clot with a procedure called endovascular therapy (EVT), can significantly improve recovery for patients with large areas of brain damage caused by a stroke. Patients with severe strokes who had EVT, in addition to standard medical treatment, were more likely to regain independence compared to those who only received medical treatment.

After three months, 20% of patients treated with EVT were able to perform daily activities independently, compared to only 7% of those who received medical care alone. Similarly, fewer patients experienced severe disability and there was a higher overall quality of life. The research highlights the importance of presenting to the emergency department as soon as possible following the discovery of stroke symptoms and the importance of a multidisciplinary discussion on the benefit of EVT in the setting of large ischemic core and brain damage.

A similar trial evaluating the benefit of EVT in patients with a large area of brain damage due to stroke, called the ANGEL-ASPECT Trial, was conducted in China and published in February 2023. The study found that patients who underwent EVT had higher likelihood of functional independence at 3 months with 30% of patients treated with EVT able to perform daily activities independently compared to only 12% of those who received medical care alone. Several other trials have recently been published showing similar outcomes. These findings reinforce the broader applicability of EVT for large-core strokes.

WHY IT MATTERS

These studies show that patients with severe strokes can benefit significantly from EVT, even when previous guidelines were cautious about using this treatment for such cases. However, while outcomes are better with EVT, recovery in these patients is still more challenging than for those with smaller areas of damage. These findings underscore the need to refine treatment strategies, carefully select patients for EVT, and emphasize the importance of multidisciplinary collaboration in decision-making.

If you or someone you know experiences stroke symptoms, act fast—getting to the hospital quickly can be life-changing.

References:
1.Sarraj A, Hassan AE, Abraham MG, Ortega-Gutierrez S, Kasner SE, Hussain MS, Chen M, Blackburn S, Sitton CW, Churilov L, et al.. Trial of Endovascular Thrombectomy for Large Ischemic Strokes. New England Journal of Medicine. 2023;388:1259–1271.
2.Huo X, Ma G, Tong X, Zhang X, Pan Y, Nguyen TN, Yuan G, Han H, Chen W, Wei M, et al.. Trial of Endovascular Therapy for Acute Ischemic Stroke with Large Infarct. New England Journal of Medicine. 2023;388:1272–1283.

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When it comes to Stroke

BE FAST. Call 911.

Any one of these sudden symptoms could mean a stroke.

HOW TO SPOT A **STROKE**

B E F A S T

Balance

Sudden loss of balance, dizziness

Eyes

Sudden loss of vision or blurred vision

Face

Uneven smile, one side of face is drooping or numb

Arm

One arm is weak or numb

Speech

Slurred speech or difficulty speaking

Time

Time to call 911 immediately

KEYS TO **PREVENTION** Know and manage your risks.

Manage high blood pressure, the leading cause of stroke.

Avoid tobacco use and vaping.

Get regular physical activity.

Manage cholesterol.

Eat healthy foods including vegetables, fruits, and lean protein.

Interview with

Dr. Carlos Sanchez

Interview with

Dr. Carlos Sanchez

Could you provide us with a brief overview of your work?

I am a neurosurgeon with a primary focus on cranial neurosurgery. My clinical practice largely revolves around managing cerebrospinal fluid (CSF) disorders and treating brain tumors. Additionally, I maintain a specialized focus on the care of patients who underwent pediatric neurosurgical procedures and now require care as adults. Alongside my clinical work, I am actively involved in translational research and have a strong commitment to education. I direct the Ammerman skull base lab at the medical school and serve as the Director of Diversity for our department.

What types of surgeries do you currently specialize in?

I specialize in surgeries for brain tumors, which include metastatic tumors, primary gliomas, and skull base tumors. My primary focus is on treating primary and metastatic brain tumors, where we incorporate advanced technologies such as intraoperative MRI and ultrasound to enhance precision and outcomes. For skull base tumors, another neurosurgeon in our department typically handles those cases.

How has patient longevity for brain tumors changed over time compared to the past?

Patient longevity is influenced by advances both within and beyond neurosurgery. Historically, patients with metastatic brain tumors were often nearing the end of life. However, with significant improvements in chemotherapy and immunotherapy, we've seen better control of systemic cancer, allowing patients to live longer. This has made neurosurgical interventions, like tumor resections, more impactful and aggressive when appropriate.

In neurosurgery, advancements such as intraoperative MRI and techniques for safer tumor resections have improved outcomes. However, for certain brain tumors, like glioblastomas, there is still much room for progress. Current research efforts focus on translating scientific discoveries into better treatment options, combining molecular biology with surgical precision to push the boundaries of neuro-oncology.

Interview with
Dr. Carlos Sanchez

Where do you see the field of neurosurgery heading in the coming years?

The future of neurosurgery lies in integrating cutting-edge technologies and translating bench-side research into clinical practice. One promising area is immunotherapy and cellular therapy, such as CAR-T and PTT-T cells, which modify a patient's immune cells to target cancer effectively. While these therapies are still challenging to implement broadly, they hold incredible potential.

Another exciting area is convection-enhanced delivery, which involves using viral vectors to deliver gene therapies directly to the brain. This method combines advancements in molecular biology and neurosurgical techniques, addressing challenges in safely and effectively delivering these treatments. Progress in these areas will depend on collaboration across fields like engineering, molecular biology, and neurosurgery to develop therapies that are both effective and safe.

Can you share more about cell enhancement technologies and immunotherapy?

Cell enhancement and immunotherapy are key research areas here at GW and Children's National, supported by the Cellular Enhancement and Translational Immunotherapy (CETI) program. At GW, I work closely with Dr. Rohan Fernandes, who is pioneering research on photothermal therapy to enhance the immunogenicity of tumors. CETI unites basic scientists and clinicians to bridge the gap between lab discoveries and clinical applications.

Both GW and Children's National have GMP certified facilities that produce therapeutic products for various applications, including cancer and chronic viral infections. This infrastructure allows us to take innovative therapies from the lab to clinical trials, fostering collaboration between researchers and clinicians to create new treatment paradigms.

Interview with

Dr. Carlos Sanchez

What does GW offer to patients?

GW offers a diverse team of highly skilled surgeons, each with specific expertise, enabling us to provide safe, effective, and tailored care for a broad spectrum of neurosurgical conditions. Additionally, we are actively involved in research and innovation, allowing patients to benefit from the latest advancements in technology and therapeutics.

How long have you been at GW, and what do you enjoy most about working here?

have been at GW for about four years. What I enjoy most is working with our residency program. The residents are exceptional and mentoring them is one of the most rewarding aspects of my work.

Do you have a message for our readers?

GW is one of the few institutions in the country conducting cutting-edge research and clinical trials in cell therapy for high-grade gliomas. By seeking care here, patients not only receive excellent surgical treatment but also contribute to the future of neuro-oncology by participating in research initiatives.

From an adult care perspective, GW is uniquely positioned to address the needs of patients with pediatric neurosurgical conditions who have transitioned into adulthood. This often-overlooked population benefits from our combined expertise in pediatric and adult neurosurgery.

Another area of focus is the underdiagnosed condition of normal pressure hydrocephalus (NPH), which presents with cognitive decline and gait disturbances, often misattributed to aging. At GW, we are dedicated to improving awareness and providing effective treatment, which can dramatically improve patients' quality of life, working with Dr. Kassavetis and the neurology department.

Our goal is to deliver world-class care while advancing the science of neurosurgery to benefit future generations.

January 7, 2025
Carlos Sanchez, MD
The George Washington University
Title: Cellular Engineering of Autologous Glioblastoma Specific T cells

January 14, 2025
Mark J. Edwards, MD
King's College London, United Kingdom
Title: TBD

January 28, 2025
Victor Wang, MD
Sutter East Bay Medical Group
Title: Headache Medicine in the LGBTQIA Community: Sex, Drugs, and Everything in Between

February 4, 2025
Saleem Abdulrauf, MD
The George Washington University
Title: TBD

February 11, 2025
Cheryl Bushnell, MD
Atrium Wake Forest Baptist Health
Title: Advancing Blood Pressure Management after Stroke: A New Model of Care

February 18, 2025
Aline Herlopian, MD
Yale University
Title: HFO and the Epilepsy Networks

February 25, 2025
David Hafler, MD
Yale University
Title: The Underlying Cause of Multiple Sclerosis

March 4, 2025
Dimitri Sigounas, MD
The George Washington University
Title: TBD

March 11, 2025
Erik St. Louis, MD
Mayo Clinic
Title: TBD

March 18, 2025
Raman Sankar, MD,PhD
UCLA
Title: TBD

March 25, 2025
James Grotta, MD
UT Houston/Memorial Hermann
Title: TBD

April 1, 2025
Justin Kwan, MD
National Institute of Health
Title: TBD

April 8, 2025
Chase Foster, MD
Johns Hopkins University
Title: TBD

April 15, 2025
Pierre Fayad, MD
University of Nebraska
Title: TBD

April 22, 2025
David Auerbach, PhD
Upstate Medical University
Title: Looking Beyond the Classically Studied Organ: Bedside-to-Bench Approaches to Study Electrical Disturbances in the Brain and Heart

April 29, 2025
Simon Little, PhD
UCSF
Title: Closed Loop/adaptive DBS

May 6, 2025
Donald Shields, MD
Spartanburg Regional Healthcare
Title: TBD

May 13, 2025
Casey Albin, MD
Emory School of Medicine
Title: Interesting Subjects within NCC

May 20, 2025
John Schreiber, MD
Children's National
Title: TBD

May 27, 2025
James Mastrianni, MD,PhD
University of Chicago
Title: TBD

June 3, 2025
Chima Oluigbo, MD
Children's National
Title: TBD

June 10, 2025
Steven Zeiler, MD,PhD
John's Hopkins University
Title: TBD

June 17, 2025
John Stern, MD
UCLA
Title: TBD

June 24, 2025
Alberto Espay, MD
University of Cincinnati
Title: TBD

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Connect with us

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