

# Department of Neurological Surgery Newsletter

S U M M E R - 2 0 2 0

## Letter from the Department Chair

Just as the world has changed around us, the Department of Neurosurgery has also gone through some changes since our last newsletter. Although COVID-19 has changed a great deal in our daily lives, our team has worked hard to operate as usual while keeping our staff and our patients safe and healthy. Recently, we welcomed a new spine attending, **Ziev B. Moses, MD**, a new resident for this year, **Brittany Owusu-Adjei, MD**, advanced practice practitioners **Anne Cropp (PA)**, **Katherine Palmer (PA)**, **Amanda Sibai (PA)**, **Amy Bouchard (PA)**, **Jamie Rogers (NP)**, new office certified medical assistant **Carol Kazanjian (CMA)**, and new clinical research and project coordinator **Angela Foley (BA)**. As a department, we have transitioned to using a virtual model for many of our operations. This pertains not only to meetings, conferences and orientations, but also to social media platforms. By creating new platforms, we have been able to expand our outreach. This digital footprint has become crucial to the continued growth of our program, as the resident application and Match process for this year will be entirely remote. The department has found great success in sharing more about our team and hosting webinars where prospective resident applicants from all over the world can attend. Though much has and will change, we as a department are continuing to progress toward our goal of providing world class care to every patient.

Sincerely,

**Mark D. Johnson, MD, PhD**  
Maroun Semaan Professor in Neurological Surgery  
Chair, Department of Neurological Surgery



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Neurological Surgery's Advanced Practice Practitioners.

## Welcome Brittany Owusu-Adjei, MD, Neurological Surgery Intern Resident

We are pleased to announce that **Brittany Owusu-Adjei, MD** has joined us this academic year as the next resident in Neurological Surgery. Brittany was born and raised in New York City. She graduated this spring from the combined 7 year BS/MD program at the City College of New York/CUNY School of Medicine. Brittany has numerous undergraduate academic honors, including being named to the Dean's List and graduating magna cum laude with a degree in Biomedical Education. Her clinical performance in medical school was outstanding. According to a letter from the CUNY School of Medicine, she would have been considered for membership in the AOA medical honor society if the school had an AOA chapter. Brittany was the recipient of a Mack Lipkin Research Fellowship to study the effects of intense exercise and deep brain stimulation on Parkinson's Disease. In addition, she has conducted re-



search on the restorative effect of sleep on learning, and she also studied the therapeutic effect of middle meningeal artery embolization on chronic subdural hematoma. She has been involved in numerous community activities as well, having started the first bone marrow drive at her school and having mentored disadvantaged students whose parents were incarcerated. Brittany's letters of recommendation from medical school are filled with superlatives. One of her

professors described her as "gifted, highly intelligent, extremely organized and determined" and "one of the best students I have encountered in my thirty plus-year career in the academic world." Another wrote "Brittany is an exceptional human being...I see her as a shining star in neurosurgery." Our own faculty were uniformly impressed with Brittany's academic accomplishments and outstanding personal qualities and deemed her to be among the best of the hundreds of applicants who applied to our program this year. Please join us in welcoming her to the UMass community.

Mark D. Johnson, MD, PhD

For more information about the Neurological Surgery Residency Program: <https://www.umassmed.edu/neurosurgery/residency/>

## A Year of Residency at UMass Neurological Surgery by Rrita Daci, MD PGY-2

I started off my intern year at UMass Neurosurgery with the Northeast bootcamp for neurosurgical interns. Pictured right here are colleagues from Albany, Columbia, Brown, and Tufts! We had a great time learning some neurosurgery basics and practicing bedside procedures and drilling.

During my intern year at UMass, I was on the neurosurgery service for 3 months. During that time, I was able to scrub over 130 OR cases and do 80 bedside procedures. Cases ranged from craniotomy for trauma to pediatric tumors to open aneurysmal surgery to complex spine fusions. I was extremely happy with this and I look forward to the next 6 years of residency.

I was able to publish 3 journal articles this year, in the journals Neurosurgery, American Journal of Neuroradiology (AJNR), and Cureus. I am also working on a couple of case reports. I am still trying to figure out what exactly to study during my research years -- the opportunities are endless!

All I can say is that I am extremely happy with my choice of residency and I am so lucky to be surrounded by a supportive and caring team of neurosurgeons, advanced practice providers and staff.



**Rrita Daci, MD, PGY-2** (front) and Colleagues at Northeast Neurological Intern Bootcamp during her intern year.

## AANS UMass Student Chapter

by Oghomwen E. Igiesuorobo, Co-President AANS UMass Student Chapter

The University of Massachusetts Medical School (UMass) student chapter of the American Association of Neurological Surgeons (AANS), is a student-led group formed by Daniel Munger, MD (alumni, Class of 2018) currently in the neurological surgery residency at Oregon Health & Science University. It is continued by elected officers **Oghomwen E. Igiesuorobo, and Lucinda Chiu.**

The AANS aims to promote the highest quality of patient care and advances the specialty of neurological surgery.

The medical student chapter of AANS at UMass will advance and increase the interest of medical students in neurosurgery. Working with the UMass Neurosurgery Department, our goal is to help medical students access opportunities for research, shadowing, mentorship, networking, advice on residency, and conferences.

We hold monthly journal clubs led by a faculty member to discuss articles with recent discoveries in the field. **Rrita Daci, MD, and Brittany Owusu-Adjei, MD,** will serve as our resident advisors and be able to share their experiences as they advance during residency.

**Mark Johnson, MD, PhD** (our faculty sponsor) and the Neurosurgery Department continue to support our chapter, encourage new ideas that will enhance students' knowledge, and increase their zeal to pursue a career in neurological surgery.

### 2020-2021 AANS UMass Student Chapter Elected Officers

Co-Presidents

**Oghomwen E. Igiesuorobo, Lucinda Chiu**

Co-Vice Presidents

**Gabrielle Luiselli, Charles Ogagan**

Treasurer

**Coleman Riordan**

Chair of Student Research and Mentoring Committee

**Omar Sorour**

Research and Mentor Committee Member

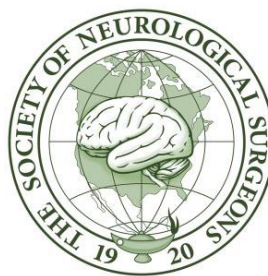
**Nichita Kulkarni**

Secretary and Student Outreach Committee

**Ashwin Panda**

Resident Advisors

**Dr. Rrita Daci, Dr. Brittany Owusu- Adjei**



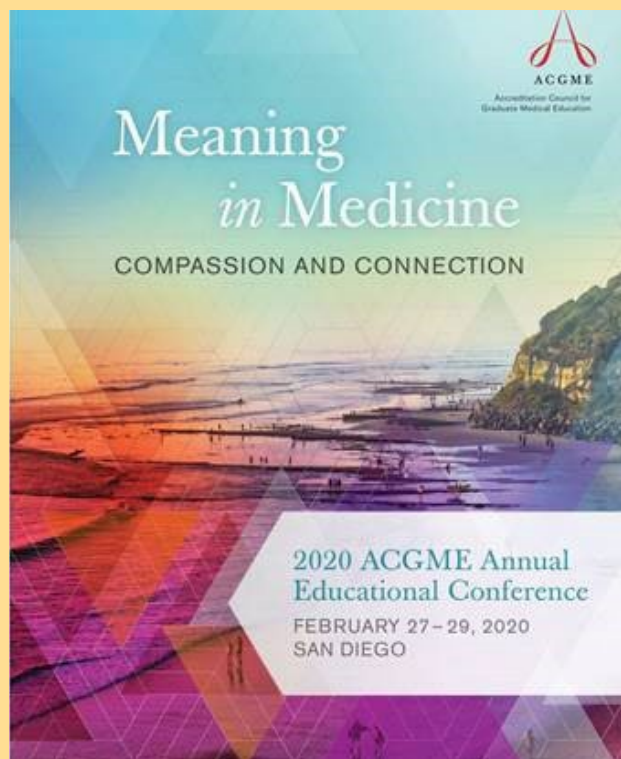
## Congratulations Mark D. Johnson, MD, PhD

Congratulations to **Dr. Mark Johnson** for being elected to Active Membership in The Society of Neurological Surgeons! The "Senior Society" is dedicated to enhancing the quality of neurosurgical education. The Society of Neurological Surgeons is the leadership organization for neurosurgical educators.

## ACGME 2020 Annual Meeting in San Diego, California

**Mark D. Johnson, MD, PhD**, Residency Program Director and Chair of Neurological Surgery, and **Cassandra Wamester**, Residency Program Coordinator, attended the ACGME Annual Meeting in San Diego, CA this past February. This year's program explored the theme of "Meaning in Medicine".

The annual meeting had over 4,000 people from all over the country and world and was the highest attendance of all years. Next year's meeting will be virtual.



# Intrathalamic and Intrathecal Infusion of rAAVrh8-HEXA/HEXB Gene Therapy in Children with Tay-Sachs and Sandhoff Disease

Oguz Cataltepe, MD, Professor of Neurosurgery and Pediatrics, UMass Medical School



Oguz Cataltepe, MD

Tay-Sachs disease (TSD) is a monogenic rapidly fatal, ultra-rare neurodegenerative disorder due to a deficiency of the Hexosaminidase A (HexA) enzyme. Preclinical studies done in the Esteves Lab at UMass demonstrated the safety and efficacy of CNS gene therapy using intrathalamic infusion of AAVrh8-HEXA/HEXB

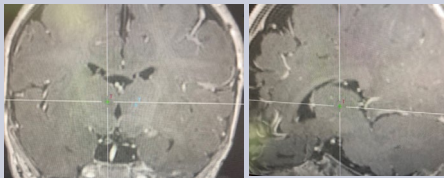
by way of the convection enhanced delivery technique. The application of this technique in children has numerous challenges, including obtaining optimal coverage and containment of the drug infusion without compromising patient safety. Another challenge is how to apply established stereotactic techniques for Convection Enhanced Delivery (CED) in young infants using currently available tools and equipment.

We had an expanded access trial for gene therapy at UMass in two patients with infantile TSD, and we performed the first human bilateral intrathalamic infusion

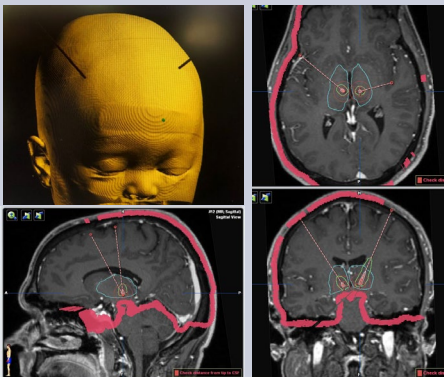
of this gene therapy in a 6-month old patient with infantile-onset TSD. The stereotactic infusion in our patient was achieved using a robotic platform (ROSA Surgical Robot, Medtech, Montpellier, France), and the patient tolerated the procedure very well without any complication.

We showed in these two young infants that administration of AXO-AAV-GM2 by intrathecal and thalamic injections was safe, and we also documented that HexA activity increased in CSF and that ongoing myelination was apparent in the younger patient treated at an early symptomatic stage. This expanded access use of AXO-AAV-GM2 provided early proof-of-concept in humans for treatment of TSD patients by AAV gene therapy and serves as the basis for a future clinical trial of AXO-AAV-GM2 in patients with TSD and SD. Following this expanded access trial, a new clinical trial for two-stage dose escalation and safety & efficacy study of bilateral intrathalamic and intrathecal administration of AXO-AAV-GM2 in Tay-Sachs and Sandhoff Disease was designed, and this clinical trial will start at UMass in the coming months.

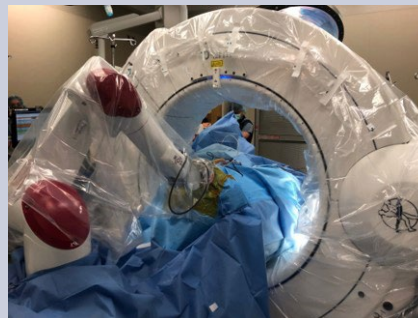
Preoperative Planning for Cannula Placement in Thalamus



Preoperative Planning for Thalamic Infusion

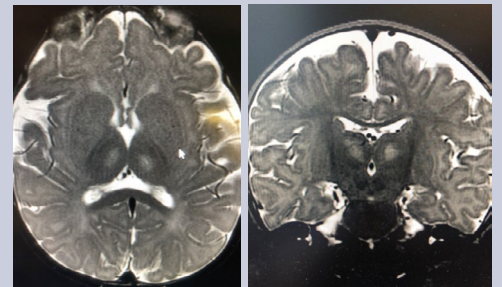


To find more information about Dr. Cataltepe's research, select the link below:  
<https://profiles.umassmed.edu/display/133594>

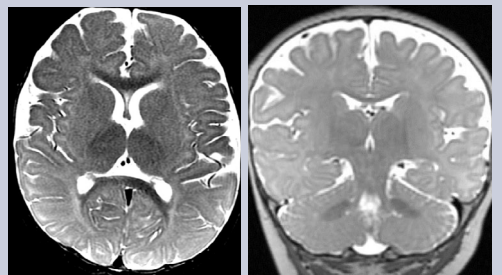


Surgical Set-Up: ROSA Robotic Surgical Assistant and O-Arm

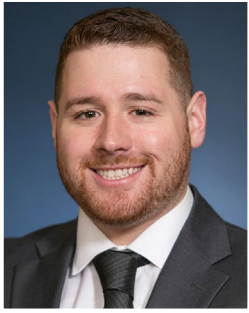
Post-Infusion MRI: Bilateral Thalamic Infusion



3-Month Follow-up MRI: Bilateral Thalamic Infusion



## Neurological Surgery Spotlight: Joseph Vazquez, NP (Clinical APP Coordinator)



Joseph Vazquez, NP

### What was your job prior to UMass Memorial Health Care?

I entered healthcare as a Personal Care Assistant (PCA) at Fairlawn Rehab Hospital on the Traumatic Brain Surgery (TBI) unit where I later worked as an RN. Shortly after that, I worked at Boston Childrens Hospital on the Neurosurgery/Neurology floor. My first job as a nurse practitioner was at UMass practicing Hospital Medicine. I then went to St. Vincent's Hospital where I worked with Dr. McGillicuddy and Dr. Sungarian in neurosurgery.

### What are three traits that define you?

Amicable, dedicated and mildly impatient

### If you weren't in your current profession, what would you be?

I probably would have joined the military or taken a professional trade. My dream job is to own a delicatessen.

### What is your favorite thing about working at UMass Memorial?

Hands down, our team! They make the days go by quickly and everyone lifts each other up. UMass in general has so many talented providers. You don't need to travel an hour into Boston to work with amazing people or be treated by world renowned experts. UMass hits a sweet spot between being a large academic medical center while also having a tightly woven hospital community.

### I am happiest when...

I can sneak onto the golf course, go for a hike, play some video games and spend time with my wife and our two boys.

### If you could learn to do anything, what would it be

I would like to learn mixed martial arts or improve my Spanish speaking skills.

### If you could meet anyone, living or dead, who would it be and why?

J.R.R Tolkien. I am a big *Lord of the Rings* fan and would love to pick his brain.



## Second Annual - 2019 Neurological Surgery Symposium

### THE BERNARD STONE LECTURE

#### Advancing Patient Satisfaction

#### Speaker: Richard B. Siegrist Jr., MS, MBA, CPA

Chair, Board of Trustees, UMass Memorial Health Care  
Professor, Harvard T.H. Chan School of Public Health  
Former CEO and Chief Innovation Officer of Press Ganey Associates

## Treasurer and Delegate - Norma Mills, CMA, BSHA

By Norma Mills, Executive Administrative Secretary,  
Department of Neurological Surgery.

The American Association of Medical Assistants (AAMA) held its 63rd annual conference in Greensboro, NC in mid-September 2019. As a member of the AAMA, and a member of the Executive Board for the Massachusetts Society of Medical Assistants (MSMA), I was elected delegate for the conference's annual "House of Delegates" meeting. As part of my responsibilities, I represent Massachusetts with three other delegates, and three alternates. I'll be honest, I had only joined the MSMA in April 2019, and after only one month I was voted in as Treasurer for the MSMA and as a delegate. Everything happened very quickly! I was terrified to make decisions and vote on articles, motions, and officers from across the country. I had never met them before. I had never worked with them before. I had no information on who they were, or what my vote would mean. Ultimately, I became more comfortable, and once the motions were reviewed and the delegates for Massachusetts came to a consensus, we

voted for what we thought was best. One major motion that passed was to accept certain accredited training schools that were outside the AAMA's requirements for education. This turned into a heated debate amongst the entire state. Some were worried we were letting in medical assistants with "lesser training", as they could bring down the noted reputation of the AAMA. I felt that most MAs who are in school have no idea what the difference is between one certification and another. Ultimately, I believe, it was benched for further review before a decision could be made and it will be discussed this year. Unfortunately, no one from MA will be attending due to the current COVID Pandemic and strict quarantine requirements (the conference is supposed to be held at Disney World in Florida).

The conference was amazing and I, as a member, earned 16 CEU's just by attending the educational sessions. The most educational session, which directly affected my job, was entitled "Medical Scribing as Part of the Curriculum." The AAMA is trying to get scribing to be part of basic medical assistant education since there is no true, reputable certification program for current MAs who want to learn to scribe. I also took "Cranial Remolding for Plagiocephaly" which taught me about the connection between plagiocephaly, scaphocephaly, and torticollis. I have worked with Pedi Neurosurgery for 12 years, but I never knew that! I also took "Teaching Community Involvement", "Hospice and the Grieving Process", and "Diagnosis and Treatment of Epilepsy", all of which in some way or another affect my job. I got to know my other Executive Board members (Dawn, President; Julie, Vice President, Nick, Secretary), as well as other members of other chapters (Hampden, Greater Fall River, Southeastern, and Greater Boston). I had never been to North Carolina and drove down with my daughter, who had never been past Washington, D.C. We had a blast! Meeting dozens of new people, learning the politics of being a Medical Assistant, learning new things that directly (or indirectly) affect my job, etc... It was amazing and I wish I could go this year, but no conference is worth the risk of COVID --even if it's in Disney World. However, I am definitely going to Houston in 2021!



Top Row left to right: Jean Lynam, Elizabeth Carr, Ramona Sterczala. Bottom Row left to right: **Norma Mills** (Treasurer), Julie Rotando (VP), Nick Kelliher (Secretary), Dawn Jordan (President)

## UMass Celebrates 32nd Annual Tribute to Reverend Dr. Martin Luther King, Jr

**Mark D. Johnson, MD, PhD**, Chair of Neurological Surgery, UMass Medical School (right) introduced featured speaker and longtime friend, **Robert L. Satcher, MD, PhD**, Associate Professor (left), Department of Orthopaedic Oncology, University of Texas.

Keynote speaker Robert L. Satcher, MD, PhD, juxtaposed how the National Aeronautics and Space Administration (NASA) was ahead of its time in recruiting and training African Americans to be astronauts, a pioneering cohort of which he is a member, during the turbulent civil rights movement of which Dr. King was a central figure. Dr. Satcher, associate professor of orthopaedic oncology at the University of Texas MD Anderson Cancer Center and a space shuttle astronaut who walked in space, shared his "observations from orbit" as to the relevance of race, diversity and inclusion in challenging times.



## Department Updates



### Our New Attending

**Ziev B. Moses, MD**, Assistant Professor of Neurological Surgery, specializing in minimally invasive spine surgery, spine tumor surgery, complex spine surgery, spinal cord injury, medical device development and tissue engineering

Dr. Ziev Moses provides a broad spectrum of surgical treatments for spine disorders and injuries.

He is a graduate of Dartmouth Medical School in Hanover, NH and completed his neurosurgical residency at Brigham and Women's Hospital/Harvard Medical School in Boston, MA.

Dr. Moses completed a fellowship in minimally invasive and complex spine surgery at Rush University Medical Center in Chicago, IL.

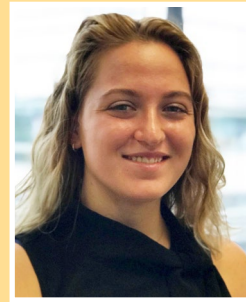
### Welcome New Staff



**Amy Bouchard, PA-C**  
Received her MPAS degree from Seton Hall University in 2020. She is excited to begin her career and join the Neurosurgery team.



**Anne Cropp, PA-C**  
Received her MPAS degree from MCPHS University in 2020. Previously, she worked as a Biomedical Engineer in the medical device industry and as a clinical research coordinator at the Dana Farber Cancer Institute.



**Angela Foley, BA**  
Neurosurgery Clinical Research and Project Coordinator. Graduated from Wellesley College with a major in Middle Eastern Studies. Fluent in Russian.



**Carol Kazanjian, CMA**  
Certified Medical Assistant. Previously worked at Leominster Internal Medicine and Marlborough Cancer Center.



**Katherine Palmer, PA-C**  
Received her MPAS degree from MCPHS University in 2019. She received her Bachelor of Science in Biology at Syracuse University in 2014

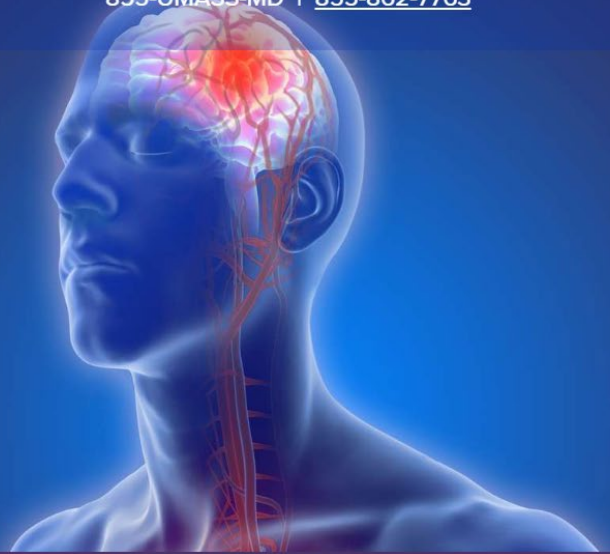


**Jaime Rogers, AGACNP-BC**  
Received her MSN from University of Texas Health Science Center, San Antonio, TX in 2015. Since becoming an RN in 2002, she has worked primarily in Neuro Trauma in 6 different states



**Amanda Sibai, PA-C**  
Received her masters in Biomedical Sciences from University of South Carolina with interest in Neuroscience, and MPAS from University of St. Francis, Albuquerque, NM

# ADVANCED BRAIN & SPINE SURGERY



[Learn more](#) about the steps we are taking to keep you safe during the COVID-19 pandemic.

## Media for the UMasses: UMass Neurological Surgery Accrues 500 Followers in Social Media Initiative

The Department of Neurological Surgery is excited about our new social media initiative! Our goal in expanding the department's social media platforms has been to create a digital footprint that is representative of the growth of our program. The advent of our media development has coincided with the COVID-19 pandemic.

During a time when people are experiencing much of the world through their phones, and computers, the department has been able to greatly expand it's following. As we approach a remote residency application cycle and MATCH process, we are hopeful that our media outreach will allow us to reach a greater number of potential applicants. The creation of our media platforms has helped us to learn more about our department than anyone thought possible, and we've had a lot of fun along the way!



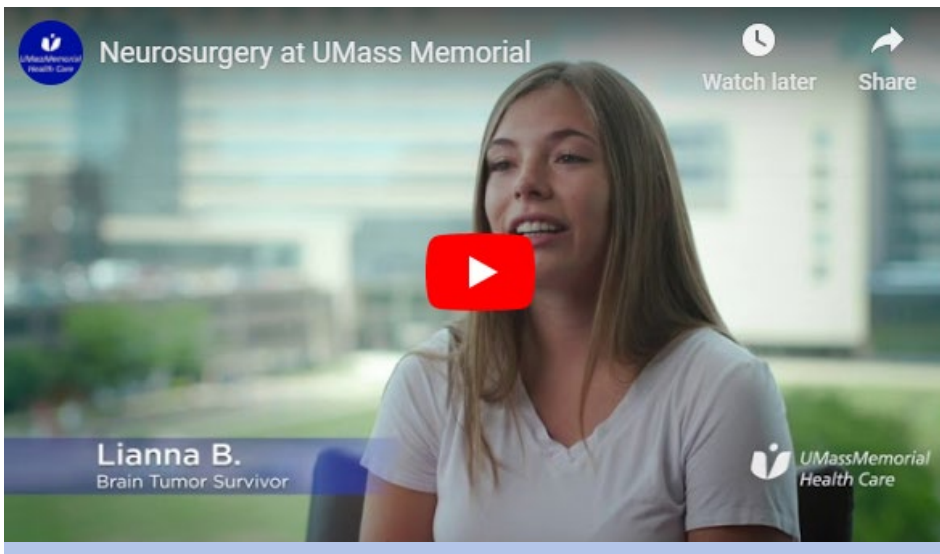
**INSTAGRAM:** [https://www.instagram.com/umass\\_neurosurgery](https://www.instagram.com/umass_neurosurgery)

**TWITTER:** <https://twitter.com/UMassNeuroSurg?lang=en>

**FACEBOOK:** <https://www.facebook.com/UMassNeurologicalSurgery>

**YOUTUBE:** <https://www.youtube.com/channel/UCTuS3m2TxWyTumDmwf233A>

## UMass Neurological Surgery Launches 3 New Videos



### Department of Neurological Surgery Newsletter

SUMMER - 2020

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