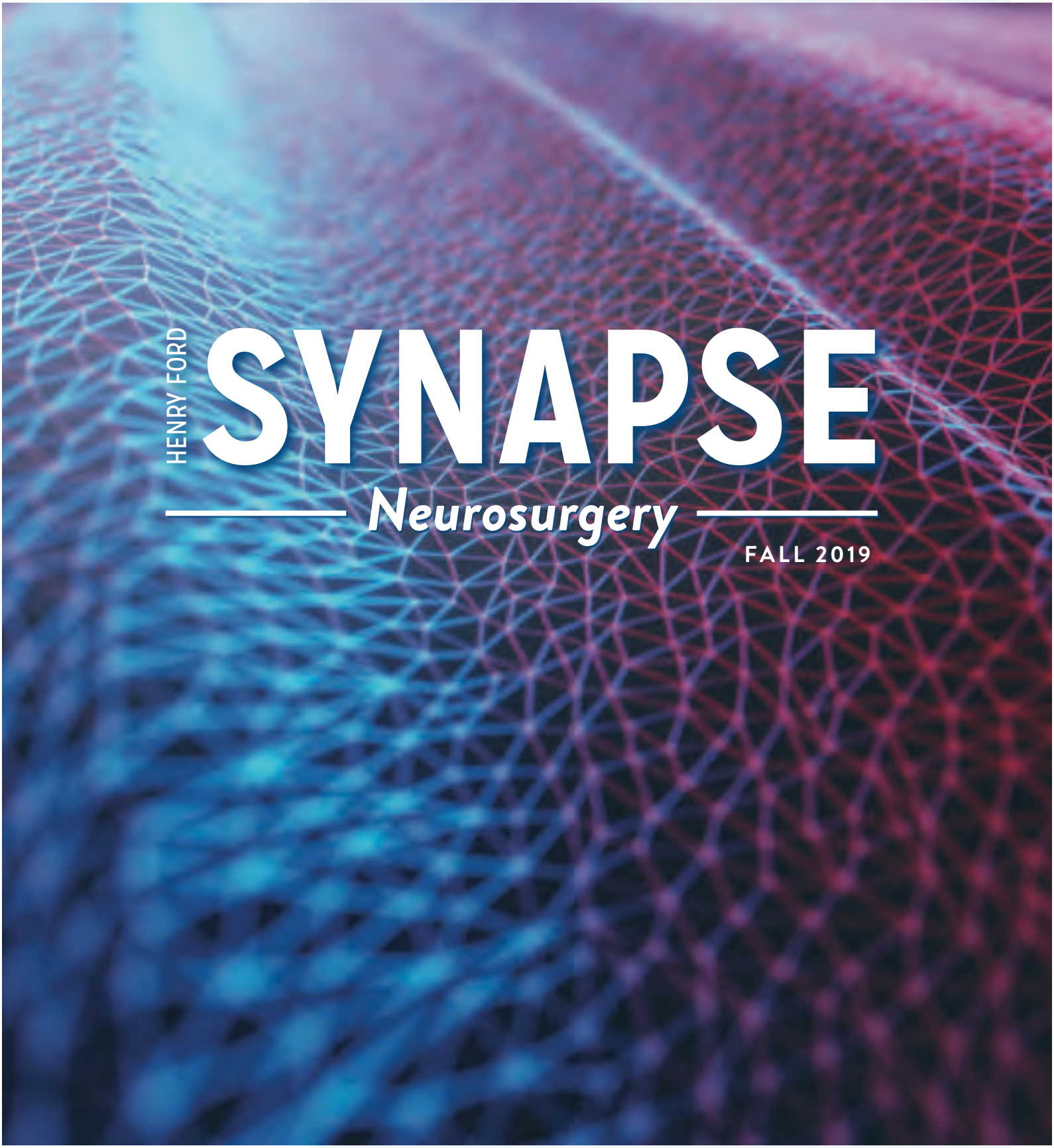


HENRY FORD

SYNAPSE

Neurosurgery

FALL 2019

Henry Ford Health System

A LOOK INSIDE

- GBM AGILE
- Spinal Laser Ablation
- Cerebrovascular Occlusive Program
- Residents' Corner
- Clinical Trials

LETTER FROM THE CHAIR

Dear colleagues and friends,

This issue of Synapse highlights the many ways we have been working to drive forward, achieving our vision of a patient-centered, neurosurgery department of tomorrow.

GBM AGILE CROSSES A NEW MILESTONE

We recently enrolled the first patient in the world in the landmark GBM AGILE trial. This next-generation clinical trial program, and the first-ever adaptive platform trial for brain cancer, uses data-driven innovation to enable more patients to get access to experimental therapies for glioblastoma, while rapidly discovering the most effective treatments.

BRINGING ABLATION TREATMENT TO THE SPINE

We have offered minimally invasive ablation treatment for brain tumors for several years, but recently became the first team in Michigan to use this treatment for cancer that has metastasized to the spine. This approach offers a better prognosis, reduced risk of infection and quicker recovery.

ADVANCING CEREBROVASCULAR CARE

Henry Ford also will be the first stroke program in Michigan to pilot Viz.AI software to provide early detection of clots. In addition, at our new Cerebrovascular Occlusive Clinic, we offer procedures that help patients with recurrent strokes and related conditions, who have been essentially untreatable in the past. At presstime, we were also preparing for our annual Detroit Stroke Conference in November, bringing together experts from Henry Ford and other programs to share the latest in stroke care.

With these advancements and several other recent honors and awards, including being ranked by U.S. News & World Report in the top 50 nationally for our specialty, I could not be more proud of our team and their efforts. From our senior staff physicians and industrious residents to our researchers and administrators, we all continue to be focused and aligned on one goal: provide the most innovative care that transforms our patients' lives.

Steven N. Kalkanis, M.D.
Professor and Chairman, Department of Neurosurgery
Mark L. Rosenblum Endowed Chair in Neurosurgery
Co-Director, Neuroscience Institute
Medical Director, Henry Ford Cancer Institute

Henry Ford Hospital ranked among nation's best

Recognized by U.S. News & World Report as a High Performing specialty each year since 2016, this year our Neurology and Neurosurgery program marked improvement into the top 50 nationally.

Henry Ford Hospital has been recognized as a Best Hospital in the Neurology & Neurosurgery specialty on U.S. News & World Report's 2019-20 list of America's Best Hospitals, tying for 42nd nationally.

FOCUSED ON IMPROVING OUTCOMES

"Our experts are committed to leading the nation in advancing care," says Steven N. Kalkanis, M.D., chair of the Henry ## Survivors celebrate at Henry Ford

Recently, three of our patients celebrated a rare anniversary – 10-year survival after a glioblastoma diagnosis. To commemorate this milestone, Henry Ford Hospital held a "craniversary" event, which included the three 10-year glioblastoma survivors, other brain tumor survivors as well as their physicians and other care team members.

The celebration included a butterfly release with the three 10-year survivors. **FROM LEFT:** *Chris, Danielle and Sasha.*

Hospital earns advanced Thrombectomy-Capable Stroke Center certification

In September, Henry Ford West Bloomfield Hospital became the second in Michigan to be awarded advanced stroke certification as a Thrombectomy-Capable Stroke Center.

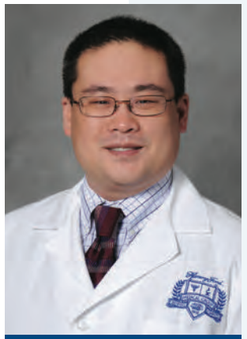
To earn this certification, Henry Ford West Bloomfield Hospital met all requirements for the Joint Commission's Primary Stroke Center certification, plus these additional requirements:

- Minimum mechanical thrombectomy volume requirement of 15 or more per year.
- Ability to perform mechanical thrombectomy 24/7.
- Dedicated intensive care unit beds to care for acute ischemic stroke patients.
- Availability of staff and practitioners closely aligned with Comprehensive Stroke Center expectations.
- A process to collect and review data regarding adverse patient outcomes following mechanical thrombectomy.

"Earning this certification from The Joint Commission is a symbol of our deep commitment to providing the most effective treatments, as quickly as possible, for our stroke patients," says Hebah Hefzy, M.D., medical director of the stroke program at Henry Ford West Bloomfield Hospital. "Recent studies have shown the efficacy of mechanical thrombectomy for large vessel occlusive ischemic strokes. It is critically important to have a dispersed network of certified hospitals, so patients can receive the care they need."

FACULTY SPOTLIGHT

The latest in brain tumor treatment: Q&A with Dr. Ian Lee



IAN LEE, M.D.

FOCUS AREAS

- Brain and spine tumor resection
- Neurotrauma
- von Hippel Lindau VHL syndrome

ACADEMIC POSITIONS

- Co-director, Hermelin Brain Tumor Center
- Director, Spinal Neuro-oncology
- Co-director, Intraoperative MRI
- Senior Staff Neurosurgeon

SELECT HONORS

- 2018 Asian Pacific American Chamber of Commerce Salute to Excellence Award
- 2018 Hour Detroit Magazine Innovation of Care Award Winning Team
- 2016-2019 Hour Detroit Magazine Top Docs

Dr. Lee received fellowship training in Neurosurgical Oncology at the University of Texas, MD Anderson Cancer Center. He has pioneered innovative technologies for safer, aggressive brain and spinal tumor resection and currently serves in many leadership positions at Henry Ford, including co-director of the Hermelin Brain Tumor Center.

WHAT'S CHANGED MOST SINCE THE TIME OF YOUR TRAINING?

We have more minimally invasive treatments available. We have newer methods of visualizing functional anatomy, so we can better work around language, motor function and other important centers of the brain. White matter tractography through diffusion tensor imaging allows us to define safer corridors to access deep tumors. Real-time imaging through intraoperative MRI allows us to maximize resection safely as well as do other types of surgery that rely on real-time imaging, such as laser ablation. With all of these techniques, and now for the spine, as well (see related story on p. 5), we can operate on formerly inoperable tumors, do more complete resections and cut recovery time.

WHAT ABOUT THE PERSONAL TOUCH?

The surgeon's hands-on experience is still the important element. Knowing where the tumor is located is only part of it. There's an interplay with what you see in the tumor, and integrating it with anatomic and functional anatomical knowledge.

HOW HAS PRECISION MEDICINE CHANGED TUMOR TREATMENT?

Precision medicine uses specific, individual genetic markers to diagnose patients, before developing treatment options that work on a molecular level. The pace has increased, and now we can sequence an entire genome in days. With this advancement and with the tissue samples in our Tumor Bank, we are learning a lot more about genetics of these tumors, which can help us develop new sets of markers to help with prognosis and treatment. These types of studies as well as trials like 5-ALA will ultimately help to drive better treatments.

WHY IS 5-ALA A GAME CHANGER?

It's been the standard of care in Europe for over 10 years, but is new in the United States. 5-ALA is a natural chemical your body produces that fluoresces pink under blue light. Tumor cells take it up preferentially, so it causes the tumor to light up pink, making surgery almost like a paint by numbers to show you where the tumor is. This is important, because to the naked eye, tumors can be hard to differentiate from the surrounding, more normal tissue.

WHAT CHALLENGES REMAIN IN BRAIN TUMOR TREATMENT?

We're pretty close with how aggressive we can be with surgery, and it's an integral part, but on its own it's not curative. There's more work to be done in finding the balance between precision in tumor resection, while preserving neurological function and quality of life.

WHAT'S NEXT FOR THE CENTER?

An even greater focus on precision medicine. Continued advancements in making surgery less invasive, and better integrating surgery with other treatments. Liquid biopsies to diagnose tumors noninvasively through urine, blood and spinal fluid, which is something that we're researching at Hermelin.

Henry Ford neurosurgery team first in Michigan, second in world to complete groundbreaking laser spinal ablation procedure

The innovative cancer treatment known as spinal laser interstitial thermal therapy (SLITT) destroys cancer cells that are adjacent to the spine without the need for open surgery. SLITT is a minimally invasive procedure that allows a patient to recover within days, instead of the months of recovery that are necessary for open surgery.

"We've offered laser ablation as an effective brain cancer treatment since 2013, but using it to treat cancer that has metastasized to the spine is a newer approach," says Henry Ford neurosurgeon Ian Lee, M.D. "Cancer metastasizing to the spine is common, and SLITT will offer many patients a treatment option with quicker recovery and reduced risk of infection."

RECURRENT, METASTASIZED CANCER

For Jacquelyn Donley, SLITT was a promising alternative treatment option for what would otherwise require a more invasive open surgery.

Jacquelyn was diagnosed with lung cancer in 2013. Following the successful removal of the left lobe of her lung, she underwent radiation and chemotherapy treatments. These were effective for her until 2017, when she had a recurrence that doctors learned had metastasized to a different area of her body – her spine.

To treat her metastasized cancer, Henry Ford radiation oncologist Mira Shah, M.D., used the Edge® Radiosurgery System. Following the procedure, all signs of cancer on Jacquelyn's spine were gone until the spring of 2019, when it appeared again.

Jacquelyn's care team met and determined she was a strong candidate for SLITT. Stereotactic radiation therapy is a common treatment for patients whose cancer has metastasized to the spine. But, if the tumor is touching the spinal cord, it must be separated before radiation can be safely used. Prior to SLITT, patients would have to undergo open surgery to treat these tumors. As was the case with Jacquelyn, SLITT is ideal for patients who have already received the maximum cumulative dose of radiation to the spine and are not strong candidates for open surgery. Since undergoing SLITT, Jacquelyn is recovering well.

BETTER PROGNOSIS, QUICKER RECOVERY

In addition to providing an alternative option to open spine surgery for patients like Jacquelyn, SLITT offers several other benefits.

"Patients who have metastatic cancer to the spine typically have a poor prognosis," Dr. Lee says. "All of them are on chemotherapy and are sick. With open surgery, they may have to stop their chemotherapy for at least a month. With spinal laser ablation, it may only be days."

Dr. Lee also notes that SLITT patients recover much faster – days, not months – and the procedure reduces the chance that a patient will need spinal fusion.

"Even with small incisions, spinal procedures can introduce instability and require placing spinal fusion hardware. With newer techniques such as SLITT, we can avoid spinal fusion in some cases."

To refer a patient, visit ***henryford.com/rpo*** or call ***(313) 916-1340.***

CEREBROVASCULAR OCCLUSIVE PROGRAM

Advanced, multidisciplinary care for narrowing or complete blockages

ALEX B. CHEBL, M.D.
Neuroendovascular

MAX K. KOLE, M.D.
Neuroendovascular & Cerebrovascular Surgery

HORIA L. MARIN, M.D.
Interventional Neuroradiology

At our new Cerebrovascular Occlusive Clinic, our team of specialists is active in advancing cerebrovascular care for patients who can prove difficult to treat effectively or have been considered untreatable in the past.

We offer an innovative, multidisciplinary approach that includes fellowship-trained stroke neurologists working in tandem with interventional neurologists, cerebrovascular neurosurgeons and interventional neuroradiologists.

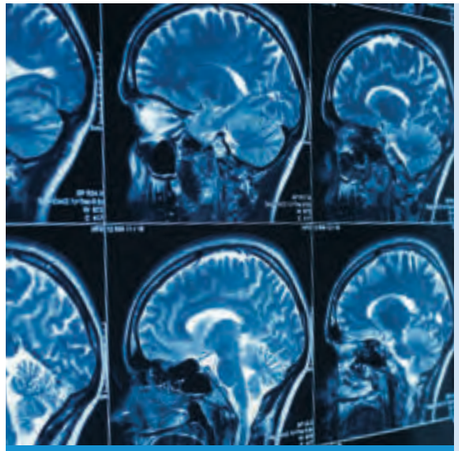
CONDITIONS WE TREAT

We treat anyone who has narrowing or 100 percent blockage, including the most complex cases:

- Recurrent TIA or stroke
- Total internal carotid artery (ICA) occlusion
- Carotid, vertebral, subclavian and intracranial arterial stenosis

HOPE AND TREATMENT FOR PATIENTS WITH FEW OPTIONS

- **Optimized medical therapy:** Our team is active in stroke and cerebrovascular research, including the latest medical therapies.
- **Neuroendovascular interventions:** Our interventional specialists offer standard approaches such as carotid angioplasty and stenting as well as total endovascular reconstruction of the ICA (see sidebar at right).
- **Surgical bypass:** Our neurosurgeons and neurocritical care specialists are experienced in the most advanced cerebrovascular bypass procedures, restoring blood flow while effectively managing the blood pressure issues inherent in these complex surgeries.
- **Advanced facilities:** Henry Ford's surgical and endovascular facilities include the only intraoperative MRI capability in the state of Michigan, as well as advanced bi-plane surgical suites that provide 3D imaging of blood vessels and tissues, CTA/CT perfusion imaging capability to assess cerebral blood flow, portable CT scanners and intraoperative video angiography.



Total endovascular reconstruction of the ICA

Patients with chronic total occlusion of the ICA have essentially been untreatable in the past. We have helped to pioneer an innovative neuroendovascular reconstruction procedure:

- Minimally invasive approach
- Uses catheters and tiny wires to drill through the ICA blockage
- Complex dissection of the artery's layers
- Reconstruction of native artery
- Allows for immediate restoration of blood flow to natural state, reducing the risk of stroke

We are the only team in Michigan, and one of few in the country, offering this advanced procedure.

PATIENT CASE STUDY

Avid gardener thriving after cerebrovascular occlusion treatment

I recently treated a 61-year-old woman who had a total occlusion of the left internal carotid artery and related issues. Following a total endovascular reconstruction and other treatments, she is now on the path to better health.

ALEX B. CHEBL, M.D.
Director, Henry Ford Stroke Center
Director, Division of Vascular Neurology, Department of Neurology

The patient initially presented at our Cerebrovascular Occlusive Clinic with several symptoms, including aphasia and right side weakness. Her symptoms had been getting progressively worse, and she had experienced recurrent strokes in the past.

THE DIAGNOSIS

Our team diagnosed her with a chronic total occlusion in the left internal carotid artery (ICA) and she was experiencing a stroke in her left middle cerebral artery as a result. She also had stenosis in her right internal carotid artery. Given that carotid endarterectomy and other surgical procedures are not done to open carotid occlusions, in the past this patient would have been considered essentially untreatable.

THE PROCEDURE

With the patient's past history of recurrent strokes and current presenting issues, she was a good candidate for total endovascular reconstruction of the left ICA. With the patient awake, I utilized an endovascular approach through the groin artery to advance a thin wire into the occluded carotid artery. I was then able to open the artery using a balloon and a stent.

THE RESULTS

The reconstruction treatment was successful at immediately restoring blood flow, and the patient went home with progressive improvement of symptoms. She returned two weeks later for endovascular treatment of the right ICA stenosis, which also went well.

ADDITIONAL FOLLOW-UP & LIFESTYLE CHANGES

The patient was placed on both aspirin and Plavix for three months. At 30 days, we performed a follow-up carotid ultrasound to confirm both carotid arteries remained open, and we'll perform additional scans at six months and one year. Given that the patient was a smoker, we also referred her to our smoking cessation program. In addition, we have educated her on other lifestyle changes to help reduce her risk of additional strokes.

FEATURED ARTICLE

Henry Ford enrolls first patient in GBM AGILE trial

Henry Ford Cancer Institute is first-in-the-world to enroll a patient in the GBM AGILE Trial (Adaptive Global Innovative Learning Environment) – a novel trial design and architecture made possible by an international collaboration of experts in the care of patients with glioblastoma and the design of clinical trials.

GLOBAL COALITION FOR ADAPTIVE RESEARCH™

Led by the trial sponsor Global Coalition for Adaptive Research (GCAR), GBM AGILE is a seamless Phase II (Efficacy and Safety) / Phase III (Confirmatory) trial aimed at identifying the most effective therapies for patients with glioblastoma, the most aggressive form of brain cancer.

ADAPTING THE TRADITIONAL CLINICAL TRIAL

A next-generation clinical trial program and the first-ever adaptive platform trial for brain cancer, GBM AGILE is a move away from the traditional, one-size-fits-all approach to clinical trials – a major step forward for precision medicine.

"We are launching an era of unprecedented collaboration and advancement in glioblastoma treatment," says Steven N. Kalkanis, M.D., chairman of the Henry Ford Health System Department of Neurosurgery and medical director of the Henry Ford Cancer Institute. "Current treatments have been refined – including surgery, radiation and chemotherapy – but in the era of molecular medicine, dramatic leaps in outcomes through immunotherapy or targeted therapies are yet to be fully realized. With GBM AGILE, those dramatic leaps in outcomes will be more attainable, and at a faster pace, than ever before."

Traditional clinical trials take three to seven years to produce results, cannot be modified once started, and study only one treatment against the standard of care. GBM AGILE is uniquely designed as a long-standing platform with the ability to test multiple therapies concurrently against a common control (or standard of care). This enables more patients on trial to get access to experimental therapies. Another innovation of GBM AGILE is adaptive randomization, which means it is continuously updated with the latest information. As information accrues, the trial defines subsets of patients more likely to benefit from therapy. Patients are more likely to receive promising therapies at a faster and less costly rate.

"Progress in the treatment of patients with malignant brain tumors has been slow," says Tom Mikkelsen, M.D., of the Henry Ford Cancer Institute and medical director of the Precision Medicine Program and Clinical Trials Office at Henry Ford Health System. "The efficiency, speed and learning of GBM AGILE is intended to allow rapid discovery of better and better treatments for patients with glioblastoma. The era of data-driven innovation has arrived, and it's being applied to the most difficult problems in cancer therapy."

"The efficiency, speed and learning of GBM AGILE is intended to allow rapid discovery of better and better treatments for patients with glioblastoma. The era of data- driven innovation has arrived, and it's being applied to the most difficult problems in cancer therapy."

– TOM MIKKELSEN, M.D.

Dr. Tom Mikkelsen discusses the GBM AGILE clinical trials benefits with a patient at the Hermelin Brain Tumor Center.

A WORLDWIDE EFFORT TO BATTLE GLIOBLASTOMA

GBM AGILE was first conceived in 2015 by an international group of more than 130 clinicians, researchers, biostatisticians, imagers, pathologists, patient advocates, and leaders from government and industry known as the "GBM Knowledge Network":

- It came together in response to a worldwide effort known as The Cancer Genome Atlas (TCGA), which was launched in 2006 by the National Cancer Institute (NCI) and the National Human Genome Research Institute (NHGRI).
- The organizations led a nationally coordinated effort to perform a 10-year, deep-dive into the molecular basis of certain kinds of cancers.
- One of the first types of tumors studied in the landmark precision medicine effort was glioblastoma.
- Henry Ford was a major TCGA contributor, nearly 25 percent of all the gliomas studied over the course of the initiative having been donated by Henry Ford's Hermelin Brain Tumor Center (see sidebar at right).

CONTINUE **GBM AGILE ON P.10 >**

Hermelin Brain Tumor Center

Since 1993, the Hermelin Brain Tumor Center has been a global leader. As part of the Henry Ford Cancer Institute, our experts have worked together to redefine the standard of brain tumor treatment.

- **ADVANCED TREATMENT:** Including 3D conformal radiation therapy and stereotactic radiosurgery, and chemotherapy delivery designed to minimize toxicity. We also led development on the national guidelines for metastatic brain tumor treatment.
- **THE LATEST TECHNOLOGY:** Including the BrightMatter™ Surgical Solutions imaging platform for inoperable tumors, high-field functional and intraoperative MRI, electroencephalography, magnetoencephalography, ROSA™ robot for minimally invasive targeting, laser ablation, genetic tumor typing, intraoperative CT and neuropsychological assessments.
- **TUMOR BOARD:** Our multidisciplinary brain tumor board reviews each case and develops a personalized treatment plan.
- **COORDINATED, COMPASSIONATE CARE:** We guarantee patient appointments with a neurosurgeon or neuro-oncologist within 24 business hours, schedule same-day MRIs and select only the most promising therapies, with minimal side effects, so your patients can achieve the highest quality of life.

1,900 glioblastoma patients treated

5,750 brain tumor surgeries performed

4,500 tissue samples in our tumor bank

$50M in research funding since 1993

< GBM AGILE CONTINUED FROM PAGE 9

Former Vice President Joe Biden has been an outspoken supporter of GBM AGILE and attended the GBM AGILE launch event in November 2015. Biden's son, Beau Biden, passed away from glioblastoma in May 2015 at the age of 46. Beau had been diagnosed in 2013 and was treated with surgery, chemotherapy and radiation. He suffered a recurrence in the spring of 2015, at which time his condition deteriorated rapidly.

Biden acknowledged the potential of GBM AGILE to offer unparalleled hope for many patients who had previously waited several years to benefit from advances in brain cancer research.

ENROLLING THE FIRST GBM AGILE PATIENT

Henry Ford enrolled GBM AGILE's first patient in collaboration with GCAR, an international partnership that comprises some of the world's foremost clinical, translational, and basic science investigators. Through this collaboration and open exchange of ideas, the ultimate beneficiary – the patient – is supported in the fight against rare and deadly diseases.

"This is an important milestone for GBM AGILE and all those involved in this effort, most importantly, the patients, who desperately need new treatment options," says Dr. Meredith Buxton, Chief Operating Officer of GCAR. "We value the dedication of Dr. Tom Mikkelsen and the team at Henry Ford Cancer Institute to make this trial available to their patients and are eager to continue to work with our other committed study sites and investigators to make this trial available to patients across the United States this year, and internationally in 2020."

Glioblastoma is one of the deadliest diseases on the planet. When treated with surgery, radiation and chemotherapy, patients have a median life expectancy of 11-15 months. The disease most commonly affects men ages 60 or older, although it can develop at any age in both men and women. The NCI estimates that 22,850 adults were diagnosed with brain and other nervous system cancers in 2015. It also estimates that in the same year, more than 15,000 of those diagnoses resulted in death.

Harnessing the power of precision medicine treatment

The GBM AGILE clinical trial provides a glimpse into the future power of precision medicine. Henry Ford Health System is implementing advanced precision medicine options today, while working with thought leaders around the world to explore additional bioinformatics approaches in understanding and treating diseases.

Dr. Tom Mikkelsen, medical director of the Henry Ford Precision Medicine Program and Clinical Trials Office, is at the forefront of this work. Dr. Mikkelsen previously served as president and chief scientific officer at the Ontario Brain Institute, which followed an accomplished 23-year career with Henry Ford, where his work planted the seeds of the AGILE trial and precision medicine.

Today, Henry Ford is one of 10 health systems participating in the National Institutes of Health All of Us research project, enrolling 1 million volunteers to advance precision medicine. Within the Henry Ford Cancer Institute, the Precision Medicine Program is the first and most comprehensive in Michigan to offer integrated genomic testing and treatment expertise to all cancer patients.

Our leadership in precision medicine is further supported by the Henry Ford Center for Precision Diagnostics, which includes the state's largest group of board-certified molecular pathologists and Ph.D. scientists, and our Molecular Tumor Board, whose recommendations are powered by partners that share aggregated cancer genomics data through an advanced software platform.

"As we work to refine our biorepository and connections with other genomics data worldwide, we are envisioning the development of one of the country's first Positive Mutations Clinics, reflecting our advances in molecular testing and predictive biomarkers across many disease types," Dr. Mikkelsen says.

Chair begins 1-year term as CNS President

Steven Kalkanis, M.D., chair of the Henry Ford Department of Neurosurgery and medical director of the Henry Ford Cancer Institute, began his term as president of the Congress of Neurological Surgeons (CNS) at the 2019 CNS Annual Meeting in San Francisco in October. His year will culminate in the CNS Annual Meeting in Miami, Florida, from Sept. 12-15, 2020, where the theme will be "Neurosurgery 20/20: Vision for the Future."

Dr. Kalkanis has served as president-elect of the CNS since his election in October 2018 – the latest of many neurosurgical leadership positions and other honors during his distinguished career (see sidebar at right).

He is internationally recognized as a leader in brain and spinal cord tumor surgery, intracranial and stereotactic neurosurgery, and adult cervical and lumbar spine disease. Dr. Kalkanis authored the definitive set of guidelines for the multidisciplinary treatment of brain metastases. He also has published extensively on the topic of brain tumors in many prestigious medical journals and authored 20 book chapters, currently receives National Institutes of Health funding for his research on precision medicine molecular genetic treatments for brain tumors, and has been invited as a visiting professor or honored guest to over 25 locations around the world.

Dr. Kalkanis received his undergraduate degree from Harvard University, graduating with the distinction of a John Harvard Scholar. He earned his medical degree from Harvard Medical School, receiving the Linnane Prize for highest overall achievement and serving as Class Marshal. He completed his residency in neurological surgery at Massachusetts General Hospital in Boston.

THE CONGRESS OF NEUROLOGICAL SURGEONS

The CNS is the largest neurosurgical association in the world and the global leader in neurosurgical education, serving to promote health by advancing neurosurgery through innovation and excellence in education. With more than 9,700 members worldwide, the CNS provides global leadership in neurosurgery by inspiring and facilitating scientific discovery and its translation into clinical practice.

STEVEN N. KALKANIS, M.D.

Career Highlights

140+ PEER-REVIEWED JOURNAL ARTICLES

200+ MEDICAL PRESENTATIONS AT NATIONAL MEETINGS

15 CLINICAL TRIALS INVOLVED AS PI OR CO-PI

SELECT AWARDS AND HONORS

- President of the CNS
- Director, American Board of Neurological Surgery
- Past Chair, AANS/CNS Section on Tumors
- Recently selected for induction to the American Academy of Neurological Surgery, an honor reserved for the top 120 academic and research-oriented neurosurgeons in the country
- Founder, CNS Guidelines Committee
- AANS/CNS Joint Guidelines Review Committee, Chair-Elect
- Lead author of the national guidelines for the treatment of brain metastases
- Past President, Michigan Association of Neurological Surgeons
- Section Editor, Neurosurgery journal
- Selected as the national first-place research award recipient by both the ACS and the CNS

RESIDENTS' CORNER

Neurosurgery residents distinguish themselves locally, nationally

Our program graduates residents who are ready to become actively contributing members of the neurosurgical community. They show this in many ways during their years at Henry Ford, including through local and national honors, and patient dedication.

HENRY FORD RESIDENT AWARDS

Every year, out of the hundreds of residents being trained across all specialties at any given time at Henry Ford Health System, only 19 are nominated for special achievement recognition. This year, Hesh Zakaria, M.D., was awarded the 2019 Outstanding Resident Award and Richard Rammo, M.D., was nominated for the 2019 Outstanding Teaching Resident Award. It is rare for a department – especially one as small as ours considering all of the medicine and surgical trainees – to have residents recognized at this level in both categories.

EXCELLING IN WRITTEN BOARD EXAMS

Over the last few years, Henry Ford neurosurgery residents have steadily improved their scores on the American Board of Neurological Surgery (ABNS) written board exams, culminating with the first break into the 700+ range last year, by Dr. Rammo. This year, Karam Asmaro, M.D., has achieved an even more momentous record. With a score in the high 800s and the 99th percentile, Dr. Asmaro is now the highest scoring resident in our program for the board exams. In addition, out of more than 400 neurosurgery residents, Dr. Asmaro earned the top score in the country for 2019.

FOCUSING ON PATIENT NEEDS

Recently, Resident Scott Lim, M.D., with shunt programmer in hand and without being asked, drove an hour a half to reset a shunt valve for a patient whose settings became altered after an MRI. This patient would have had to pay $1,500 for ambulance transportation (not covered by insurance because he had come to our clinic one week prior) and they had no other means of transportation to get the valve checked. Thanks to Dr. Lim, everything was reset appropriately and the patient and family now have tremendous peace of mind.

RECENT RESIDENT FELLOWSHIPS

- Lara Massie, M.D., 2019, Spine, University of Virginia
- Richard Rammo, M.D., 2019, Functional/Epilepsy, Cleveland Clinic
- Rizwan Tahir, M.D., 2020, Cerebrovascular, Thomas Jefferson University
- Hesham Zakaria, M.D., 2020, Spine/Spine Oncology, Johns Hopkins University

Clinical Trials

The Henry Ford Department of Neurosurgery is active in clinical research, and is currently offering these prospective clinical trials as a treatment option. For more information about these or other current studies, please call (313) 916-1756.

BRAIN TUMORS

ABTC 1403: A Phase I and Pilot Study of the Effect of rhIL-7-hyFc (NT-I7) on CD4 Counts in Patients with High Grade Gliomas and Severe Treatment-Related CD4 Lymphopenia after Concurrent Radiation and Temozolomide

ABTC 1501: A Phase I Trial of Anti-LAG-3 or Anti-CD137 Alone or in Combination with Anti-PD-1 in Patients with Recurrent GBM

ABTC 1603: Phase I Study of Neoadjuvant GMCITM Plus Immune Checkpoint Inhibitor Combined with Standard of Care for Newly Diagnosed High-Grade Gliomas

ABTC 1604: Phase 0/I Study of AMG 232 Concentrations in Brain Tissue in Patients with Recurrent Glioblastoma and of AMG 232 in Combination with Radiation in Patients with Newly Diagnosed Glioblastoma and Unmethylated MGMT Promoters

BBI-DSP7888-201G: Randomized, Multicenter, Phase 2 Study of DSP-7888 Dosing Emulsion in Combination with Bevacizumab versus Bevacizumab Alone in Patients with Recurrent or Progressive Glioblastoma following Initial Therapy

BTTC 17C0034 Pembro: A Randomized, Double Blind Phase II Trial of Surgery, Radiation Therapy plus Temozolomide and Pembrolizumab With and Without HSPPC-96 in Newly Diagnosed Glioblastoma (GBM) in Patients with Recurrent or Progressive Glioblastoma following Initial Therapy

Coping with Glioblastoma: A Study of Communication between Physicians, Patients, and Caregivers

CTSU EAF151: Change in Relative Cerebral Blood Volume as a Biomarker for Early Response to Bevacizumab in Patients with Recurrent Glioblastoma

FORMA 2102-ONC-102: Phase 1b/2 Study of FT-2102 in Patients with Advanced Solid Tumors and Gliomas with an IDH1 Mutation

GBM AGILE GLOBAL ADAPTIVE TRIAL MASTER PROTOCOL

Orbus OT-15-001: A Phase 3, Randomized, Open-label Study To Evaluate the Efficacy and Safety of Eflornithine with Lomustine Compared to Lomustine Alone in Patients with Anaplastic Astrocytoma That Progress/Recur After Irradiation and Adjuvant Temozolomide Chemotherapy

RTOG 1119: Phase II Randomized Study of Whole Brain Radiotherapy in Combination With Concurrent Lapatinib in Patients With Brain Metastasis From HER2-Positive Breast Cancer; a Collaborative Study of RTOG and KROG

IRB 9736: Functional Assessment of Cancer Therapy – Meningioma (FACT-MNG): Tumor Site Specific Web-Based Outcome Instrument for Meningioma Patients

IRB 9936: Validity and Reliability of Self-Reported Karnofsky Performance Status

IRB 10722: NeMeRe, a Multi-Institutional Retrospective and Prospective Registry of Neoplastic Meningitis in Adults

IRB 10934: Quantification of the Blood Brain Barrier in Patients Receiving Laser Ablation Therapy

IRB 11438: Vigilant Observatlon of GlladeL WAfer ImplaNT (VIGILANT) Registry: A Multicenter, Observational Registry to Collect Information on the Safety and Effectiveness of Gliadel® Wafer (Carmustine Implant) Used in Medical Practice AR22.001

IRB 12357: Restriction Spectrum Imaging in Patients With Newly Diagnosed Suspected Gliomas

EPILEPSY

IRB 10701: Stereotactic Laser Ablation for Temporal Lobe Epilepsy (SLATE) Study

PAIN

IRB 12825: High-Frequency Nerve Block for Post-Amputation Pain: A Pivotal Study

SPINE

IRB 9165: Three-Dimensional Motion Analysis in Patients' Status Post Anterior Cervical Fusion and Cervical Disc Arthroplasty, a Clinical Study_MOTION STUDY (Supported by the Mentored Clinician Scientist program of HFHS)

IRB 10675: The Effect of Tizanidine on Post-operative Analgesia in Lumbar Decompression

IRB 10912: Genetic Basis of Diffuse Idiopathic Sclerosing Hyperostosis (DISH)

IRB 12228: Postoperative Pain and Opioid Use Following Spine Surgery

VASCULAR

IRB 11254: Decision Support System for Predictions of Aneurysm Rupture and DVT/VTE in Aneurysm Patients

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We offer world-class translational research and treatment in several subspecialty areas, including **BRAIN TUMORS** *(see featured article on p. 8), and the four highlighted programs below.*

STROKE & NEUROVASCULAR

2,600
stroke patients in 2018 at our Certified Comprehensive Stroke Center

214%
increase in patients treated with endovascular stroke treatment from 2017 to 2018

84%
successful reperfusion after endovascular stroke treatment

EPILEPSY

4,000
patient visits annually

3,000
EEG studies annually

500
epilepsy surgeries over 20 years

SPINAL DISORDERS & NEUROTRAUMA

- First in Michigan to perform minimally invasive spine surgery techniques
- A study center for tumors metastatic to the spine
- Blue Cross Blue Shield Blue Distinction Center+

PARKINSON'S DISEASE & MOVEMENT DISORDERS

- One of the nation's leading centers for DBS
- Founding member of the Parkinson Study Group (PSG), a national research consortium
- First in Michigan to offer high-field intraoperative MRI

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