

NICO and Elite Medical “Dream Team” Form Oncology Tissue Advisory Board

Collaboration aims to modernize tissue biobanking for improved treatment of GBM and other brain cancers

INDIANAPOLIS (September 8, 2022) – Surgeons, oncologists and researchers all agree: When it comes to understanding complex and deadly brain tumors, *tissue is the issue*. Backed by dozens of published papers, the *need for obtaining better quality tissue* is identified as a key element in the scientific understanding of aggressive brain tumors like Glioblastoma Multiforme (GBM).

Published data also suggests that NICO Corporation’s advanced tissue collection and biological preservation system slows the degradation of critical molecular information within resected tumor tissue. This biological preservation process mimics the tissue microenvironment and may impact the understanding of tumor biology for GBM and other complex, aggressive brain cancers. NICO’s newly formed Oncology Tissue Advisory Board (OTAB) is tasked with pushing forward the standardization of tissue collection and preservation, with the goal of enabling more effective precision medicine therapies.

“Changes in the World Health Organization guidelines to include molecular diagnostics – and work done by the GLASS Consortium on the molecular profiling and clinical annotation of tumors – are showing us the need to limit variables in the tissue collection and preservation process,” said James Rutka, MD, PhD, OTAB chair and chair emeritus of Neurosurgery and Surgery at the University of Toronto.

Rutka added that the OTAB has a deep list of priorities – many with the end goal of enabling more effective therapies for patients through standardizing the tissue collection and biological preservation process.

Susan Chang, MD, OTAB member and co-leader of the NeuroOncology Program for the UCSF Helen Diller Family Comprehensive Cancer Center, agrees. Standardization of how tissue is acquired and preserved, ideally linked to imaging coordinates, said Chang, “is critical as we expand the use of precision-based decisions for clinical management.”

GBM is the deadliest form of brain cancer with complex tumor heterogeneity, making this disease an initial priority for this surgical-oncological “dream team”. Over the past 50 years, billions of dollars have been spent on biobanking tumor tissue to find better treatment options for GBM patients – extending their life expectancy by even two to three months. Despite these efforts, little progress has been made in improving timelines for GBM survival.

If the goal is providing researchers and novel therapeutic developers more complete molecular information, then “we should be preserving the tissue *immediately*, while we’re still in the operating room,” said Rutka. “This step toward modernizing tissue biobanking should ultimately improve the validity and specificity of precision medicine options for GBM patients.”

With advances in science and technology over the past decade, several initiatives have elevated efforts

to gather and deliver better tissue biology for molecular identification, giving renewed hope to cancer patients for personalized treatment options. The process of identifying gene expressions and matching them with effective treatment options has become common practice for cancers elsewhere in the body. This same process is now being created for brain cancers with the help of NICO's *biological* tissue preservation system.

NICO technologies provide neurosurgeons with a systems approach to automating the biological preservation of GBM tissue in the operating room using the NICO Myriad® and Automated Preservation System®. These fully integrated technologies allow the neurosurgeon an automated method of collecting more quality tissue and annotating the site of tissue procurement – with less variability for pre-clinical and translational science uses.

“Accurate and complete pathology plays a key role in how precision medicine decisions will unfold for patients with GBM and other malignant brain tumors,” said Jim Pearson, president and CEO of NICO Corporation. “A single tumor may have multiple molecular profiles, so we shouldn’t rely on a single sample, nor should we allow samples to degrade.”

Pearson added that NICO developed its technology based on specific needs identified by researchers, scientists and leading academic surgeons. “In doing this, we improve the tissue characteristics that are so critical for everyone involved in developing and providing better therapeutic options,” he said. “That’s what this collaboration is all about.”

NICO ONCOLOGY TISSUE ADVISORY BOARD		
CHAIR		
James Rutka, MD, PhD	Chair Emeritus, Depts. of Surgery & Neurosurgery	University of Toronto
NEURO-ONCOLOGISTS		
Manmeet Ahluwalia, MD Susan Chang, MD Tom Mikkelsen, MD	Chief, Solid Tumor Medical Oncology Co-Leader, Neuro-Oncology Program Medical Dir., Precision Medicine & Clinical Trials	Miami Cancer Institute Diller Comprehensive Cancer Ctr, UCSF Henry Ford Health System
NEUROSURGEONS		
Chetan Bettegowda, MD PhD Henry Brem, MD Bob Carter, MD, PhD Sunit Das, MD, PhD Thomas Garzon-Muvdi, MD, MSc Costas Hadjipanayis, MD, PhD Alex Khalessi, MD, MBA Michael McDermott, MD Analiz Rodriguez, MD, PhD Mark Rosenblum, MD Graeme Woodworth, MD	Professor of Neurosurgery Neurosurgeon Chief, Dept. of Neurosurgery Chief of Neurosurgery Service Associate Professor, Dept. of Surgery Assistant Professor, Dept. of Neurosurgery Director, Neurosurgical Oncology Chair, Dept. of Neurological Surgery Chief Medical Executive Associate Professor, Dept. of Neurosurgery Chair Emeritus, Dept. of Neurosurgery Chair, Dept. of Neurosurgery	Johns Hopkins Medicine Johns Hopkins Medicine Massachusetts General Hospital University of Toronto Emory Univ School of Medicine University of Pittsburgh Medical Center UC San Diego Health Miami Neuroscience Institute Univ of Arkansas for Medical Sciences Henry Ford Health System Univ of Maryland School of Medicine

Follow NICO news on [LinkedIn](#) and [Twitter](#).