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New Published Evidence for Deadly High-Grade Gliomas Linked to Improved Survival *Data shows BrainPath® surgical approach achieves 97 percent average tumor removal*

INDIANAPOLIS, May 22, 2018 — Patients with the “worst of the worst” kind of brain tumor have new hope today with [recent clinical study data](#) on high-grade gliomas (HGG) that shows a new trans-sulcal surgical approach resulted in an average tumor resection of 97 percent with limited-to-no deficits. Safely reaching abnormalities without causing increased patient deficits is a challenge to achieving gross tumor removal – clinically proven to be linked with improved patient survival rates, according to the paper’s authors. The study suggests this challenge is addressed using [NICO Corporation's](#) trans-sulcal, parafascicular [BrainPath Approach](#).

“We have performed extensive studies on extent of resection for high grade gliomas, and all the studies show that increased extent of resection and decreased residual tumor are associated with better survival and delayed recurrence,” said Kaisorn Chaichana, MD, one of the paper’s authors. “However, we have also shown that if you cause a deficit, these patients do worse regardless of your extent of resection.

This important study was led by Dr. Chaichana, neurosurgeon at Mayo Clinic in Jacksonville, FL, and included 14 patients he treated for deep-seated HGG using the BrainPath Approach while at Johns Hopkins Hospital in Baltimore. Key highlights from the study, “Minimally Invasive Resection of Deep-Seated High-Grade Gliomas Using Tubular Retractors and Exoscopic Visualization” published April 25 in the [Journal of Neurological Surgery](#), point to unmatched clinical results for these patients that presented with HGG in eloquent regions of the brain:

- 97% average tumor resection
- 93% of patients improved or were stable
- Karnofsky Performance Status (KPS) scores improved from 70 to 87, indicating improved functional recovery
- Median hospital stay of four days
- No post-operative complications/infections or surgical deaths

“Deep-seated tumors are typically biopsied because surgeons fear causing a deficit,” explained Dr. Chaichana. “The problem is, you don’t get the benefits of maximum resection with a biopsy.”

After six years of dedicated work in developing the patented technology and surgical approach, NICO President and CEO, Jim Pearson, said the company could not be more pleased that true, non-

disruptive surgical options are emerging for patients with high-grade gliomas or with any subcortical abnormality.

“The golden rule is maximal safe resection,” Pearson said. “This study suggests the BrainPath Approach is a minimally-disruptive way to safely reach and remove these deep-seated brain tumors. We are the only company in the world with trans-sulcal access technology, and we expect to see more cases like this with independently published outcomes data.”

Pearson added that the timing of the study’s publishing during May’s Brain Tumor and Stroke Awareness month is ideal for highlighting the many advancements being made in neurosurgery. NICO’s FDA-cleared technologies address both primary and secondary tumors, as well as hemorrhagic stroke – the deadliest, costliest and most debilitating form of stroke impacting more than 160,000 people in the U.S. and 3.4 million people worldwide with a mortality rate of 32-50 percent.

More than 7,000 BrainPath procedures and 16,300 Myriad procedures have been completed to date at over 210 BrainPath Centers in the United States, United Kingdom, Canada, Singapore, and Australia. More than 900 neurosurgeons, residents and fellows in the U.S. are trained on the BrainPath Approach, and over [50 peer-reviewed independent papers, posters and abstracts](#) have been published on the technologies with evidence showing improved clinical outcomes for appropriate patients.

To learn more about BrainPath and other technologies used in the BrainPath Approach, visit NICOneuro.com. Follow news updates on [LinkedIn](#) and view surgical videos and patient stories on YouTube at [NICOneuroCorp](#).