



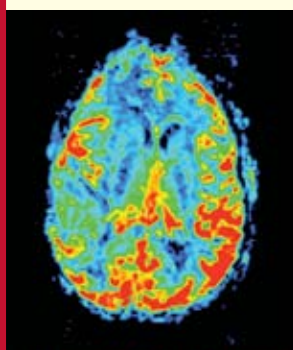
Weill Cornell Medical College

Brain and Spine Center

January 2010

Brain and Spinal Tumor Program

Neuro-Oncology

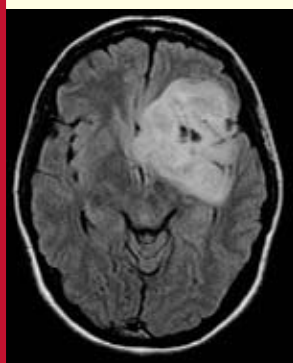


MRI Perfusion Scan of patient with malignant glioma

I. NEURO-ONCOLOGY PROGRAM: Weill Cornell's Brain and Spinal Tumor Program is a national leader in the diagnosis, treatment and research of brain and spinal tumors. Our multidisciplinary approach involves the coordinated efforts of multiple specialists. Through weekly "tumor board" meetings, this cooperative approach provides for consensus management plans that are individualized and focused on the best mix of medical, surgical and radiotherapy treatments. Among the novel modalities of therapy available at Weill Cornell include:

- **Advanced Surgical Navigation:** Computer-guided surgery capable of employing MR spectroscopy, diffusion tensor imaging (DT) and functional magnetic imaging (fMRI)
- **Novel Chemotherapy Agents:** New targeted therapies with fewer side effects
- **Molecular Diagnostic and Cytogenetic Techniques:** Personalized diagnostic and treatment approaches

- **MR perfusion and regional cerebral blood volume/MR spectroscopy:** Novel imaging modalities to assess treatment response
- **Minimally Invasive Endoscopic Techniques:** Smaller incisions and faster recovery
- **Vaccine Trials for Malignant Brain Tumors**
- **Multiple Radiosurgery Tools:** Gamma Knife and LINAC
- **Convection-Enhanced Delivery:** Slow continuous infusion of drugs through the brain utilizing implanted catheters
- **Intra-arterial Chemotherapy:** Interventional Neuro-Oncology techniques to deliver high doses of local drug delivery while sparing the patient of systemic toxicities



MRI of patient with low grade glioma

II. CLINICAL RESEARCH PROGRAMS: Our clinical research program is committed to the development of new and innovative treatments for patients with benign and malignant brain tumors. Weill Cornell's Brain Tumor Clinical Research Program offers patients both investigator-initiated and consortium trials. Examples of single and multicenter clinical trials being led by Cornell Physicians include:

- Superselective Intra-arterial Cerebral Infusion of Bevacizumab (Avastin) for Malignant Glioma
- Intrathecal Infusion of Bevacizumab (Avastin) for Neoplastic Meningitis (Leptomeningeal Disease)
- Superselective Intra-arterial Cerebral Infusion of Temozolamide (Temodar) for newly diagnosed Malignant Glioma
- Phase I/II Trial of Erlotinib (Tarceva, OSI-774) for Treatment of Relapsed/Refractory Glioblastoma Multiforme and Anaplastic Astrocytoma
- A Phase II, Multicenter, Exploratory Study, Evaluating the Treatment Effect of Surgery Plus Gliadel® Wafer in Patients with Metastatic Brain Cancer

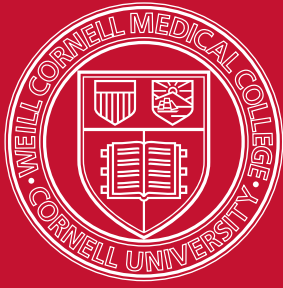
- Treatment of Newly Diagnosed, High-Grade, Malignant Glioma with Polifeprosan 20 Containing Carmustine Implant (Gliadel® Wafer) Using MR Spectroscopy (MRS) Data as a Primary Indicator of Therapeutic Response
- A Prospective, Multi-Center Trial of NovoTTF-100A Compared to Best Standard of Care in Patients with GBM
- Superselective Intra-arterial Cerebral Infusion of Cetuximab (Erbixux) for recurrent Malignant Glioma Superselective Intra-arterial Infusion of Chemotherapy for Brain and Spinal metastasis

Additional Clinical Research programs include:

- Brain Mapping Program
- Convection-enhanced Delivery of Anti-tumoral Agents
- Vaccine Therapy
- Radiosurgery for Brain Metastasis
- Complimentary and Alternative Medicine
- Intra-cavitary Radiation Therapy

III. LABORATORY AND BASIC RESEARCH PROGRAMS: Our basic science efforts are geared to understanding the causes and mechanisms of tumor development and resistance to current treatments. Our translational laboratories aim to perform pre-clinical testing of the most promising anti-cancer agents that may be of use for treating brain and spinal tumors.

- **Pediatric Brain Tumor Laboratory:** Understand the molecular underpinnings of pediatric low grade glioma
- **Convection Enhanced Delivery Laboratory:** Evaluate Interstitial Infusion for Pediatric Brain Tumors
- **Laboratory of Molecular Neurosurgery:** Evaluate the application of gene therapy to neurological disease
- **Brain Mapping Laboratory:** Using novel electrical and optical mapping techniques to localize functions in the brain
- **Skull Base Laboratory:** Integrate cadaveric dissection, 3-D visualization, and virtual reality for training of surgical procedures
- **Laboratory for Translational Stem Cell Research:** Investigate the mechanisms of normal and brain tumor stem cell biology



Weill Cornell Medical College

Brain and Spine Center

News and Highlights

NATION'S FIRST INTERVENTIONAL NEURO-ONCOLOGY SUITE OPENED:



BREACHING A BARRIER TO FIGHT BRAIN CANCER, SCIENCE TIMES, THE NEW YORK TIMES, NOVEMBER 17, 2009

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For these and other active clinical trials, visit our website at <http://www.weillcornellneurosurgery.com/research/clinical-trials.html>

- Prospective, Multi-center Trial of NovOTF-100A (NOVACURE) in Patients with Newly Diagnosed GBM.
- Phase I Trial of Super-Selective Intra-arterial Carotid Infusion of Avastin (Bevacizumab) for Treatment of Relapsed/Refractory GBM.
- Phase I Trial of Super-Selective Intra-arterial Intracranial Infusion of Temozolamide (Temodar) for Treatment of Newly Diagnosed GBM.
- Phase I/II Trial of Erlotinib (Tarceva, OSI-774) for Treatment of Relapsed/Refractory GBM.
- Phase III Comparing Human Corticotrophin-Releasing Factor (hCRF) to Dexamethasone for Control of Symptoms Associated with Peritumoral Brain Edema in Patients with Primary Malignant Glioma.
- The Effect of Meditation and Guided Imagery on Quality of Life in Brain Tumor Patients.
- Phase I Trial of Super-Selective Intra-arterial Intracranial Infusion of Erbitux (Cetuximab) for Treatment of Relapsed/Refractory GBM.
- Phase I/II Trial of Intraventricular Bevacizumab (Avastin) for Treatment of Leptomeningeal Metastatic Disease (Neoplastic Meningitis).
- Phase I Trial of Super-Selective Intra-arterial Infusion of Avastin (Bevacizumab) for Treatment of Vestibular Schwannoma.
- Local Therapy of Gliomas with an Antibody-Drug Conjugate.
- A Children's Oncology Group Protocol for Collecting and Banking Pediatric Brain Tumor Research Specimens.

Active Trials

CLINICAL TRIALS:

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