



Interventional Neuroradiology Update

Neurology

Neurovascular diseases produce neurologic deficits because of problems with the blood supply to the brain and spinal cord. These deficits result not only from blockages in blood vessels that cause damage by interrupting the flow of blood (ischemia) but also from bleeding into the brain or spinal cord (hemorrhage). The Weill Cornell Stroke Center treats patients with the entire spectrum of neurovascular diseases in collaboration with Interventional Neuroradiology and Neurological Surgery and many other specialties including Hematology, Cardiology, and Rehabilitation Medicine.

The Stroke Center has a team of expert stroke neurologists available 24/7 to provide emergency care for acute stroke patients. The stroke team treats eligible patients with intravenous clot-busting drugs to break up the blood clots that most often block blood vessels to cause ischemic strokes. In collaboration with Interventional Neuroradiology, patients are also treated with the most advanced intra-arterial techniques to remove clots from blocked arteries and to open narrowed arteries in the neck and even within the skull through the use of specially designed metal stents. The Stroke Center works closely with neurosurgeons to treat patients who need surgery to re-open blocked vessels or to prevent additional bleeding from abnormal blood vessels that have ruptured (aneurysms, arteriovenous malformations). Stroke Center neurologists also focus on medical treatments to reduce the risk of stroke by identifying and treating risk factors such as high blood pressure, high cholesterol, diabetes, smoking, and irregular heart rhythms. In selected patients, other reasons for stroke such as abnormal tendencies for blood to clot excessively are also sought and treated.

The Stroke Center has numerous active research efforts. The Center is participating in several multi-center NIH-sponsored clinical trials and is also involved in investigator-initiated NIH-sponsored projects that are seeking to identify the causes of stroke in younger people and to study blood clotting mechanisms that are important in younger stroke patients and others who have abnormal tendencies to form blood clots.

Stroke Center neurologists are also actively participating in public policy efforts to improve stroke care by advising at the state and national levels in development of guidelines for primary and comprehensive stroke centers.

Through all of these efforts, the Weill Cornell Stroke Center is seeking to provide the most advanced levels of care for all of our stroke patients and to develop new treatment protocols that will make even better treatments possible in the future.

Neurosurgery

Neurosurgeons, radiologists and neurologists collaborate in Interventional Neuroradiology (INR) to treat vascular, oncologic, and spinal disease. The neurosurgical team at Weill Cornell is world renowned for delivering these "patient friendly" minimally invasive treatments for Carotid Disease, Aneurysms, Vascular Malformations and Tumors of the eye, brain and spine. Thanks to the generosity of Joan and Sanford Weill, leading physicians, nurses and technicians are able to provide patients with outstanding care in this state of the art Weill INR Suite.

Weill Cornell has pioneered several exciting medical procedures which are benefiting patients with better outcomes. The MERCI retriever, developed by one of our physicians, is now used globally to treat blocked blood vessels in the brain after stroke. Our team introduced the concept of Chemosurgery and conceived of a new and efficient way to deliver chemotherapy directly to eye, brain and spinal tumors (Figure 1) safely and with superb results. This medical breakthrough was recently profiled in the *New York Times* November 17, 2009 issue. Our department also works closely with scientists to develop safer techniques to treat aneurysms without a skin incision (Figure 2).

The (INR) field continues to grow as we pilot safe, minimally invasive techniques to treat brain and spine disease. The Weill Cornell neurosurgical team offers patients a trusted "medical home" for all neurologic diseases of the brain and spine with a focus on compassionate patient care, cutting edge medical technology and access to some of the world's best physicians.

Figure 1

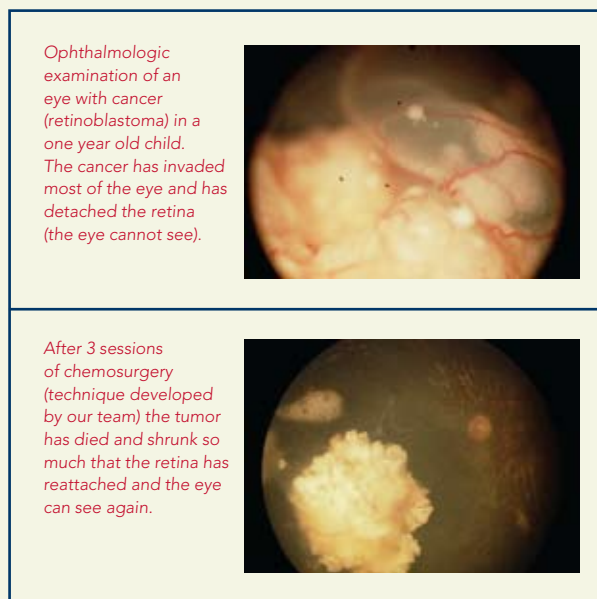
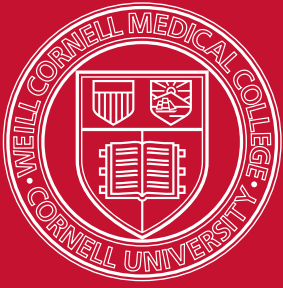


Figure 2





Weill Cornell Medical College

Brain and Spine Center

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NEWS AND HIGHLIGHTS

The Department of Neurological Surgery thanks Joan and Sanford I. Weill for their support of a new, state-of-the-art Interventional Neuroradiology Suite. This new premier facility has enhanced the Department of Neurosurgery's delivery of advanced life-saving treatments for a variety of neurological conditions, from stroke to malignant brain tumors.



Upcoming CME Activities and Other Events

BRAIN AND SPINE 2010

May 7, 2010

A CME course providing a comprehensive update on neurological and neurosurgical topics for the primary care physician. For more information, please contact Amy Sabek at ams2008@nyp.org

THE ART AND SCIENCE OF GLIOMA THERAPY: EMERGING CONCEPTS IN BIOLOGY AND TREATMENT

May 13, 2010, 6pm – 9pm

For more information, please contact Amy Sabek at ams2008@nyp.org

ADVANCED ENDOSCOPIC SKULL BASE AND PITUITARY SURGE

June 11 & 12, 2010

A CME course providing an overview of the newly emerging field of endoscopic skull base surgery combining didactic sessions with hands-on cadaver dissection. For more information and to register, visit our website at www.cornellneurosurgery.org

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

- CREST is a clinical trial that compares the treatment of carotid stenosis by surgery versus stenting. The first results of CREST were published recently and showed that the two techniques are equivalent and because the investigators were carefully selected the rate of complications was very low in both treatment groups. We are very proud to have been selected as investigators in this landmark study. (NIH-sponsored multi-center trial)
- SMART Carotid is a study initiated by our group to analyze the intellectual benefits after carotid stenting.
- Aneurysms: We are involved in multiple studies of stents in the treatment of difficult intracranial aneurysms, and in studies analyzing outcome after coil treatment.
- SAMMPRIS is a clinical trial that analyze the potential benefits of stenting intracranial stenosis. (NIH-sponsored multi-center trial)
- Treatment of Idiopathic Intracranial Hypertension with sinus stenting.
- Intra-arterial chemotherapy (Chemosurgery): we are involved in multiple protocols for the treatment of cancers of the eye, brain and spine.
- MR Recanalization of Stroke Clots Using Embolectomy (MR RESCUE). This study compares the effectiveness of the Concentric Retriever Device (CRD) to standard medical treatment and to identify people who might benefit from the device by appearance of the stroke on MRI. The trial is sponsored by the NIH and the National Institutes of Neurological Disorders and Stroke (NINDS). Patients are randomized to either embolectomy or medical treatment depending on Inclusion and Exclusion criteria, and MRI. (NIH-sponsored multi-center trial)
- NeUSTART is exploring the safety and efficacy of very high doses of statins (medicines widely used to lower cholesterol) to minimize damage during stroke. (NIH-sponsored multi-center trial)
- The POINT trial will investigate the use of alternative regimens to prevent recurrent strokes in the period immediately after transient ischemic attacks and minor strokes when the risk of recurrent stroke is especially high. (NIH-sponsored multi-center trial)
- CRYSTAL AF is a clinical trial that will investigate the role of long-term cardiac monitoring with an implanted device to detect atrial fibrillation in ischemic stroke patients.
- THICK and TROVAD are NIH-sponsored studies initiated by Weill Cornell Stroke investigators that examine mechanisms of strokes related to abnormalities in blood clotting.

ACTIVE CLINICAL TRIALS:

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