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Continuing Medical Education

Learn about upcoming continuing medical education course offerings from Brigham and Women’s Hospital, through the Harvard Medical School Department of Continuing Education.
Functional Neurosurgery Reduces Symptoms for Patients with Movement Disorders and Epilepsy

Functional neurosurgical techniques are providing increasing benefits to patients with movement disorders and epilepsy. In addition to reducing or eliminating symptoms, the techniques often enable a reduction in the dose and subsequent side effects of medications used to manage these conditions.

Neurosurgeons at Brigham and Women’s Hospital are using functional neurosurgical techniques, including deep brain stimulation, temporal lobectomy, vagus nerve stimulation, and advanced brain mapping techniques to decrease symptoms and improve quality-of-life for patients with movement disorders and epilepsy.

**Deep Brain Stimulation**

Brigham and Women’s Hospital is one of few centers in New England to offer Deep Brain Stimulation (DBS), which is currently used for select patients with Parkinson’s disease, essential tremor, and dystonia.

**Team of Experts**

William S. Anderson, MD, PhD, a neurosurgeon who is fellowship trained in functional neurosurgery, and Michael T. Hayes, MD, a neurologist who recently joined Brigham and Women’s Hospital and has more than 17 years experience treating patients with movement disorders, work as part of a multidisciplinary team of specialists in the Movement Disorder Program. In collaboration with neuropsychiatrists and other specialists in the Program, Dr. Hayes provides a comprehensive evaluation for prospective candidates for DBS, including a full review of medications and complete assessment of motor and cognitive functioning.

Detailed magnetic resonance images are used prior to device implantation to coordinate targets. Microelectrode mapping and tracking of electrical cellular activity guide placement of probes, and testing of the system in the OR helps to ensure that placement is improving symptoms without adversely affecting other areas, such as language function. Dr. Hayes provides close post-surgical follow-up and adjustment of the implanted device to achieve the best clinical response, while reducing residual side effects.

**Expanded Use of DBS**

Commonly, DBS is most beneficial for treating tremor, motor fluctuation, and patients who do not tolerate medications well due to side effects. Traditionally reserved for patients in later stages of Parkinson’s disease, DBS is being evaluated for patients earlier in the disease process, especially when medications become less effective in controlling symptoms.

**Reported Success Rates**

Studies of patients who have undergone DBS have shown:

- Up to an 80 percent decline in medication doses and similar declines in off-time and dyskinetic movements in patients with Parkinson’s disease;
- A 51 percent average decline in symptoms 12 months following the procedure, as well as demonstrated functional improvements in quality-of-life, walking, hygiene and eating, among patients with dystonia;
- Eighty-one percent declines in tremor score among patients with essential tremor.

**During deep brain stimulation device implantation, a stereotactic frame fixed to the OR table minimizes patient movement.**

**Functional Neurosurgical Treatment for Epilepsy**

Working as part of a multidisciplinary team of specialists in the Epilepsy and EEG Program, a Level IV Epilepsy Center, Alexandra J. Golby, MD, Director of Image-Guided Neurosurgery and Principal Investigator of the Surgical Brain Imaging Laboratory, neurosurgeon Joseph R. Madsen, MD, and Dr. Anderson perform innovative functional neurosurgical procedures using image guidance to reduce or eliminate symptoms for patients with epilepsy.
Functional brain mapping, including functional magnetic resonance imaging (fMRI), diffusion tensor imaging (DTI), magnetoencephalography (MEG), and ictal SPECT, are used together to non-invasively localize seizure activity and identify areas of eloquent cortex related to critical function, including language, motor skills, and memory. These techniques are being combined with intraoperative electrocortical stimulation (ECS) and phase II epilepsy monitoring using intracranial electrophysiologic studies to perform more complete and precise resections, while preserving neurological functions.

Neurosurgical techniques used to reduce or eliminate seizure activity include:

- **Temporal lobectomy** is used for partial seizures originating in the temporal lobe, a form of epilepsy that is difficult to control with medication. The procedure completely eliminates seizures in approximately 70 percent of appropriately selected patients, and an additional 20 percent of patients experience a reduction in seizure activity. Many patients also are able to reduce numbers and doses of medications, and some can eventually discontinue antiepileptic drugs;

- **Extratemporal resections and disconnections** are used for epilepsy originating from other areas of the brain, including epilepsy associated with brain tumors. Surgery often requires advanced studies to localize the source of the seizures and to define critical brain areas which may be involved. Individual treatment decisions and prognostic impressions are made based on analysis of integrated results from multiple tests;

- **Vagus Nerve Stimulation (VNS)** is used for patients with intractable generalized seizures to reduce the frequency and severity of symptoms and restore quality-of-life. VNS implantation generally reduces frequency of epileptic activity by 25 to 33 percent, which improves to approximately 40 percent one year following the procedure.

**Information and Referrals**

For more information, or to refer a patient, please contact our Referral Coordinators at (617) 732-9894 or bwhteleservices@partners.org.

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**Indications for Referral**

Functional neurosurgical techniques are used to help reduce symptoms and medication dose in patients with:

- Parkinson's disease;
- Essential tremor;
- Dystonia;
- Epilepsy.
Published Outcomes Study Supports Use of Robotic Approach to Radical Hysterectomy

Specialists in the Gynecologic Oncology Program at Dana-Farber/Brigham and Women’s Cancer Center have published a comparative study of outcomes of patients who have undergone either robotic radical hysterectomy or open radical hysterectomy for the treatment of early stage cervical cancer.

Gynecologic oncologists Colleen M. Feltmate, MD, Director of Minimally Invasive Surgery in Gynecologic Oncology, Michael G. Muto, MD, and Ross S. Berkowitz, MD, Director of the Gynecologic Oncology Program, recently published results of a comparative study of robotic and open radical hysterectomies for Stage I and II cervical cancer in *Gynecology Oncology* (Gynecology Oncology III (2008), 425-430).

The study, which compared 48 type III radical hysterectomies, included 16 robotic radical hysterectomies and 32 open radical hysterectomies performed at Brigham and Women’s Hospital between August 1, 2004 and August 1, 2007. The patients selected for this study did not differ significantly in age, body mass index, stage, or histology.

### Patient Benefits of Robotic Radical Hysterectomy

Robotic surgery for gynecologic cancers offers outstanding benefits for patients, including:

- **Shorter hospital stay** – average 1.5 day stay for robot-assisted radical hysterectomy, compared with a four-to-five day hospital stay following open hysterectomy;
- **Faster recovery** – Many patients are able to return to work two to four weeks following robotic radical hysterectomy;
- **Decreased blood loss** – average of 50 mL or less of blood loss and 3 cm or smaller incision with robot-assisted radical hysterectomy;
- **Minimally invasive option** for gynecologic cancer patients with poor vaginal access, obesity, or scarring from prior surgery;
- **Enhanced safety** with improved range-of-motion, more finite control of instruments, and a three dimensional view with magnification of the patient’s anatomy.

The study results support lower blood loss, shorter length of stay, and fewer post-surgical complications with robotic radical hysterectomy. Fifty percent of patients who underwent robotic radical hysterectomy were discharged one day postoperatively (87 percent within two days), compared with a four-to-seven day stay for patients undergoing open radical hysterectomy.

Patients who had robotic radical hysterectomy also experienced less blood loss (mean estimated blood loss of 81 mL compared with 665 mL in the open radical hysterectomy group), and fewer blood transfusions than those who had open radical hysterectomy. Gynecologic oncologists at Dana-Farber/Brigham and Women’s Cancer Center were the first in New England to offer robot-assisted radical hysterectomy. To date, they have performed more than 170 robotic hysterectomies.

### Indications for Referral

Robotic surgery for gynecologic cancers may be used for:

- Select patients with cervical and uterine cancer;
- Staging or restaging of ovarian, endometrial, and uterine cancers;
- Primary and recurrent gynecological tumors.

### Information and Referrals

For more information regarding the Gynecologic Oncology Program at Dana-Farber/Brigham and Women’s Cancer Center, or to refer a patient, please contact our Referral Coordinators at 1-877-332-4294 or email bwhteleservices@partners.org.
Minimally Invasive Thoracic Surgery Offers Expansive Benefits for Patients

Thoracic surgeons specializing in minimally invasive techniques offer extensive experience in video-assisted thoracoscopic surgery (VATS) lobectomy and are among few in New England to participate in a national, multi-center, randomized trial comparing lobectomy and segmentectomy.

Scott J. Swanson, MD, Director of Minimally Invasive Thoracic Surgery at Brigham and Women’s Hospital and Chief Surgical Officer at Dana-Farber/Brigham and Women’s Cancer Center, and nearly a dozen other expert thoracic surgeons at Brigham and Women’s Hospital perform approximately 3,000 procedures each year and comprise one of the largest groups of their kind in the country. They also are an integral part of the multidisciplinary team of specialists in the Thoracic Oncology Program at Dana-Farber/Brigham and Women’s Cancer Center, providing highly specialized and advanced care for patients with thoracic malignancies.

Pioneering Minimally Invasive Treatments

Dr. Swanson was the Principal Investigator of the first prospective multi-institution trial supporting the technical feasibility and safety of video-assisted thoracoscopic surgery (VATS) lobectomy for the treatment of early non-small cell lung cancer. Supported by the Cancer and Leukemia Group B (CALGB), the study results were published in the November 1, 2007 issue of the Journal of Clinical Oncology. Since that time, emerging data indicates that there may be a survival benefit among cancer patients who have undergone VATS lobectomy.

Nationally, less than 20 percent of all lobectomies are performed as VATS lobectomies. Approximately 80 to 90 percent of lobectomies at Brigham and Women’s Hospital are VATS lobectomies, where surgeons make several small incisions for surgical instruments and use a thoracoscope to guide resection. This procedure does not require rib spreading – offering a much faster rate of recovery for patients over conventional techniques.

Indications for Referral

- Patients with a stage IA non-small cell lung cancer tumor less than 2cm may be eligible for the open trial comparing lobectomy and segmentectomy;
- VATS lobectomy is generally available for patients with stage I or stage II lung cancer and is considered the treatment of choice compared with thoracotomy and conventional lobectomy.

Compared with conventional lobectomy, VATS lobectomy offers:

- More rapid delivery of adjuvant therapy – Full doses of postoperative chemotherapy often can be provided sooner;
- Patients considered ineligible for traditional surgery may be able to receive this treatment;
- Fewer complications and shorter length-of-stay – two-to-three days compared to six-to-10 days;
- Faster return to full function – Lung function tends to be better and recovery is generally faster.

Dana-Farber/Brigham and Women’s Cancer Center is one of few centers in New England to participate in a national, Phase III, randomized trial supported by the National Cancer Institute, evaluating outcomes in patients undergoing either lobectomy or segmentectomy for the treatment of stage IA non-small cell lung cancer. The trial aims to determine the amount of lung tissue needed to be removed in order to cure patients with early lung cancer, and participating centers may choose to perform each procedure using a minimally invasive or open technique.

Information and Referrals

For more information, or to refer a patient, please contact our Referral Coordinators at (617) 732-9894 or bwhteleservices@partners.org.
Brigham and Women’s/Mass General Health Care Center Offers Advanced Technologies and Outpatient Care

Located at Patriot Place next to Gillette Stadium in Foxborough, Massachusetts, the new Brigham and Women’s/Mass General Health Care Center offers a wide variety of advanced medical, surgical, and diagnostic services.

Part of Patriot Place in Foxborough, Massachusetts, Brigham and Women’s/Mass General Health Care Center is a state-of-the-art outpatient and day surgery facility. The Center offers convenience and quality care provided by Brigham and Women’s Hospital and Massachusetts General Hospital physicians practicing at the Center. The Center follows the same clinical direction as the hospitals’ services in Boston.

Medical, Surgical, and Diagnostic Services

- **Breast Imaging** – dedicated breast ultrasound and the latest in digital mammography for screening and diagnostic examinations;
- **Cardiac Diagnostics**;
- **Cardiac Surgery** – Consultation and post-operative follow-up for valvular heart disease, coronary artery disease, thoracic aortic aneurysm/dissection, heart failure, and congenital and inherited cardiac disorders;
- **Cardiology** – Full consultative services with complete noninvasive diagnostic services;
- **Dermatology** – Medical and procedural dermatologic care and evaluation, diagnosis and treatment of skin conditions;
- **Diagnostic Imaging** – 3.0T MR scanner, 64-slice CT scanner, SPECT imaging, ultrasound, bone densitometry and digital X-ray are offered onsite;
- **General and Colorectal Surgery** – Comprehensive diagnosis, surgical treatments, and follow-up of surgical disorders of the gastrointestinal tract;
- **Interventional Radiology** – Comprehensive treatment options for symptomatic varicose veins, including the latest advances in minimally invasive treatment such as endovenous laser treatment, sclerotherapy, and ambulatory phlebectomy;
- **Neurology** – Electrodagnostic testing, nerve conduction and electromyography (EMG) for peripheral neuropathy, carpal tunnel syndrome, nerve root problems, myasthenia gravis, ALS, and muscular dystrophy;
- **Orthopedic Surgery** – Personalized care for orthopedic conditions, including hand disorders, athletic injuries, spine disorders, foot and ankle issues, and hip and knee disorders;
- **Pain Management** – Evaluation and treatment of patients with a wide range of acute, chronic and cancer-related painful conditions;
- **Physiatry** – Diagnosis, non-surgical management and care for athletic injuries and general musculoskeletal disorders, non-surgical spine care/interventional spine procedures, alternative therapies (including medical acupuncture), and electrodagnostic medical consultations;
- **Plastic Surgery** – Adult outpatient services for patients, including breast and cosmetic surgery, rhinoplasty, skin graft, lesion excisions, wound care, and injectable cosmetic treatments;
- **Primary Care** – Comprehensive adult medical care, ranging from routine health screening to complex diagnostic evaluation and treatment;
- **Rheumatology** – Diagnosis, treatment, and multidisciplinary management of arthritis and related rheumatic disorders;
- **Sports Medicine**.

Rehabilitative Services

- **Physical and Occupational Therapy**;
- **Hand Therapy**;
- **Wellness, Injury and Illness Prevention**;

Laboratory and Pharmacy Services

- **Phlebotomy**;
- **Clinical Labs**;
- **Surgical Center Support**;
- **Pharmacy for Center patients**.

Information and Referrals
To refer a patient to the Brigham and Women’s/Mass General Health Care Center, please call (866) 378-9164 or visit brighamandwomens.org/foxborough.
Patrick O’Gara, MD, Appointed Medical Director of New Watkins Cardiovascular Clinic

Patrick O’Gara, MD, has been appointed medical director of the Watkins Cardiovascular Clinic, a multidisciplinary outpatient practice in the Carl J. and Ruth Shapiro Cardiovascular Center.

The Clinic is located on the second and third floors of the Shapiro Cardiovascular Center and comprises all of Brigham and Women’s Hospital’s outpatient cardiovascular services, including multiple specialties, advanced diagnostic testing, and activities related to cardiology, cardiac surgery, vascular surgery, and interventional radiology.

“The Watkins Cardiovascular Clinic is a comprehensive outpatient clinic with 30 exam rooms, integrated clinics, diagnostic capabilities, centralized scheduling and one-stop access to our multidisciplinary cardiovascular practice,” says Dr. O’Gara.

With more than 20 years of experience practicing cardiovascular medicine, Dr. O’Gara also serves as Director of Clinical Cardiology at Brigham and Women’s Hospital.

Information and Referrals

- To refer a patient to the Watkins Cardiovascular Clinic, please call (857) 307-4000;
- For inpatient transfers and consultations with our team of cardiovascular experts, please call Cardiovascular Access Manager Justin Precourt, RN, BSN, at (617) 543-4170.

Continuing Medical Education

Brigham and Women’s Hospital is pleased to offer the following courses, occurring in June and July 2009, through the Harvard Medical School Department of Continuing Education. Please call (617) 384-8600 or visit www.med.harvard.edu/conted for more information.

June

June 1-4
6th Annual Course on Practical MR Imaging of the Abdomen and Pelvis (with CT Correlation)
Location: Boston Marriott Long Wharf, 296 State Street, Boston, MA
Director: Koenraad J. Mortele, MD
Offered by: Brigham and Women’s Hospital, Department of Radiology

June 7-11
21st Annual Advances in Cytology
Location: The Fairmont Copley Plaza Hotel, 138 St. James Avenue, Boston, MA
Directors: Edmund S. Cibas, MD; Jeffrey F. Krane, MD, PhD
Offered by: Brigham and Women’s Hospital, Department of Pathology

June 14-17
Neurology for the Non-Neurologist
Location: The Colony Hotel, Kennebunkport, Maine
Director: Martin A. Samuels, MD
Offered by: Brigham and Women’s Hospital, Department of Neurology

July

July 9-11
Breast Cancer: Current Controversies and New Horizons
Location: InterContinental Hotel Boston, 510 Atlantic Avenue, Boston, MA
Directors: Judy E. Garber, MD, MPH; Barbara Smith, MD, PhD; Eric P. Winer, MD
Offered by: Dana-Farber Cancer Institute; Dana-Farber/Brigham and Women's Cancer Center; Massachusetts General Hospital Cancer Center
Access to Brigham and Women’s Hospital

Physician Referral Service
1-800-MD-TO-BWH (1-800-638-6294)
Experienced referral coordinators assist with outpatient appointments, access to our physicians, and information regarding our specialists and services.

Physician Liaison
Physician Liaison Ellen Steward provides direct assistance with patient referrals and consultations with our specialists. Ellen is available to meet with you in person and can be reached at (617) 732-9598, esteward@partners.org, or pager (617) 732-5700, ID #36031.

MD Connect
(Inpatient Transfers and Transportation Services)
1-877-637-3337

Care Coordination
(Facilitation of Care Plan and Discharge Planning)
(617) 732-6469

The Carl J. and Ruth Shapiro Cardiovascular Center

Cardiovascular Access Manager
Cardiovascular Access Manager Justin Precourt, RN, BSN, assists with inpatient transfers and consultations with our team of cardiovascular experts. Justin can be reached at (617) 543-4170.

Watkins Cardiovascular Clinic
(857) 307-4000

Innovative techniques in functional neurosurgery, robotic radical hysterectomy, and minimally invasive thoracic surgery inside this issue.