



From the Research and Clinical Trials Administration Office

Multiplex Family Alzheimer's Study

The Rush Alzheimer's Disease Center (RADC) is participating in an Alzheimer's disease genetics initiative: the multiplex family study. The purpose of this study is to find genetic risk factors that determine whether a person is at greater risk of getting Alzheimer's disease by looking at families that have a history of Alzheimer's disease and analyzing DNA samples from both affected and nonaffected members of a family. After giving a one-time blood sample, participants must undergo cognitive testing and psychiatric assessments once a year either at the RADC clinic, at home or on the phone.

Participants must meet the following criteria:

- Have two blood-related family members over the age of 60 who have been diagnosed with Alzheimer's disease*
- Have one family member over age 60 who has not been diagnosed with any memory deficits*

*These family members must be living, unless brain tissue or a blood sample has been preserved from a deceased family member.

This is a partial list of inclusion and exclusion criteria. The principal investigator at Rush is **David A. Bennett, MD**. For more information, contact Jenny Haddow at (312) 942-4799.

New Methods for Early Detection and Monitoring of Ovarian Cancer

The Section of Gynecologic Oncology is participating in a study of new methods for early detection and monitoring of ovarian cancer. The purpose of this study is to determine the usefulness of new blood measurements for detecting ovarian cancer and for monitoring the effectiveness of treatment.

Participants must meet one of the following criteria:

- Be an ovarian cancer patient (age 19 or over)
- Be a patient (before surgery) who requires that a diagnosis of ovarian cancer is confirmed or excluded
- Do not have ovarian cancer but have a family history of ovarian or breast cancer

This is a partial list of inclusion and exclusion criteria. The principal investigator at Rush is **Jacob Rotmensch, MD**. For more information, contact **Robert Anderson, PhD**, at (312) 942-5451, or Jessica Drope at (312) 942-7254.

Progress Notes

Lynda H. Powell, PhD, has been appointed chairperson of the Department of Preventive Medicine. She has been a faculty member in the department since 1993 and has served as acting chairperson since July 2005. A leader in multi-disciplinary research, Powell has been the principal investigator on more than a dozen National Institutes of Health grants throughout her career, including the Study of Women's Health Across the Nation (SWAN) and the Women in the Southside Health Project (WISH).

Programs and Services Spotlight

The Department of Radiation Oncology

Under the guidance of chairperson **Ross A. Abrams, MD**, the Department of Radiation Oncology is committed to strengthening the comprehensive cancer program at Rush. Its goal: maximizing outcomes, while minimizing the physical and emotional burdens of treatment, for the large percentage of cancer patients who undergo radiation therapy.

Clinical expertise is a hallmark of the department. Radiation oncologists at Rush are all subspecialty focused, enabling them to provide consultation, treatment and follow-up for every type of cancer. To ensure continuity of care, they work closely with specialists across the Medical Center to devise fully coordinated treatment plans for each patient.

New space improves form and function

Recently implemented facility and technology upgrades have helped the department to improve the patient experience, better meet staff needs and offer additional treatment options. Facility upgrades include revamped reception and waiting areas, three additional exam rooms, a space for patients to meet with dietitians and social workers on site, and a new work room for physicians and dosimetrists.

The department also enhanced its treatment capabilities by adding **TomoTherapy** for the treatment of sarcomas and prostate, head and neck, and brain cancers; a new **CT simulator**; a respiratory gating system that allows radiation treatments to be timed in relation to a patient's breathing; and more brachytherapy options, including **MammoSite** and the new electronic brachytherapy system **Xoft**. Rush is the first medical center in the Midwest to offer Xoft, which has the potential to reduce the time required for radiation therapy for early stage breast cancer from seven weeks (for external radiation) to five days.

A range of treatment options

In addition to those newer options, the radiation oncology team uses a full range of standard techniques and advanced radiation therapies, including the following:

- External beam radiation
- Intensity-modulated radiation therapy
- Internal radiation therapy (brachytherapy)
- Stereotactic radiosurgery
- Three-dimensional conformal radiotherapy
- Total body irradiation
- Total skin electron irradiation

Patients with lung cancer undergo comprehensive pretreatment assessment of lung function, including spirometry and ventilation-perfusion lung scanning, to determine the risk of treatment and minimize damage to healthy tissue. This enables radiation oncologists at Rush to use radiation therapy in patients with lung function so marginal that other centers may recommend only chemotherapy.

In summer 2008, the department will add to its arsenal the Varian Trilogy system, the first ever image-guided radiation therapy system capable of delivering all forms of external beam radiation therapy. The system will enable physicians to choose and use the most appropriate treatment modality and to deliver the full spectrum of treatments, all on one machine in a single room. (*Read more about the Varian Trilogy system in a future issue of Rush Physician.*)

Participating Physicians

Ross A. Abrams, MD

Chairperson

Cancers of the stomach, intestine, rectum, anus, liver, bile ducts and pancreas
Lymphoma — including Hodgkin's and non-Hodgkin's
Sarcomas
Skin cancer

Joy Coleman, MD

Brain and spinal cord cancers
Head and neck cancer
Malignancies in children — including Wilms' tumor, neuroblastoma, brain tumors, Ewing's sarcoma, other sarcomas and lymphoma

Katherine L. Griem, MD

Breast cancer

Arnold Herskovic, MD

Bladder cancer
Esophageal cancer
Lung cancer
Prostate cancer

Thomas W. Zusag, MD

Gynecologic cancers
Lung cancer
Malignancies (other than prostate cancer) requiring brachytherapy

Department of Radiation Oncology
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Clinical CORNER

New Tool Aids Diagnosis of Concussions

Neurosurgeon **Shaun O'Leary, MD**, is now using ImpACT, a new neurocognitive screening tool, to help determine the severity of sports-related concussions, as well as if and when it is safe for athletes to return to contact sports after suffering a concussion.

With ImpACT, physicians and team athletic trainers collect and store preseason baseline data on the athletes' neurocognitive functional state by having them take a 20-minute computerized test that measures brain processing, speed, memory and visual motor skills.

If an athlete experiences a concussion during the season, he or she is re-tested, and the post-concussion data are compared to the baseline data. This information helps physicians and athletic trainers determine the player's post-concussion neurocognitive status and when it is safe for the player to return to active sports. The system also includes historical norms for each age group so it can be used even if an athlete did not perform a baseline test.

"Prior to ImpACT, physicians and medical trainers had only rough guidelines," says O'Leary, who is the first credentialed ImpACT consultant in Chicago. "Now, we can objectively measure cognitive function to ensure we are allowing enough time for healing and recovery."

Moderate Pain Medication Use Doesn't Impair Driving Ability

Moderate, long-term use of opioid pain relievers, such as morphine and other narcotics, does not impair a person's ability to drive safely, according to a study by anesthesiologist **Asokumar Buvanendran, MBBS**, of the Rush Pain Center. The study was presented at the American Society of Anesthesiologists meeting in San Francisco on October 13, 2007.

In a recent preliminary study, Buvanendran found no difference in the driving skills and reaction times of patients taking morphine compared to nonmedicated drivers. Study participants used a driving simulator that measured deviation from the center of the road, weaving, number of accidents and reaction time to surprise events. The amount of weaving was identical, there was no statistical difference in the number of collisions and reaction times for both groups were comparable.

"The results suggest that patients who need long-term pain medicine actually may become tolerant to the medication side effects that potentially impair function," Buvanendran says. "In the future, these patients may be able to live like normal functioning people, without the stigma and limitations now associated with long-term pain medication use."

This research model will be used in future studies to assess the effects of other types of anesthetics and pain medication.

INTRODUCTIONS

The following is a list of physicians who joined the Medical Staff of Rush University Medical Center between August 1 and October 31, 2007. The Medical Staff Office and the Office of Marketing and Communications have made every effort to publish accurate information that is as complete as possible; if, however, the information below is incorrect or we have omitted information, we apologize and ask that you contact Muriel Coleman in the Medical Staff Office at (312) 942-5496.

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New Rush University Web Site Up and Running

The first phase of the new Rush University Web site, www.rushu.rush.edu, went live on November 12, 2007. The launch was the culmination of more than three years of collaboration between staff in marketing and communications, information services and Rush University.

The Rush Medical College, College of Health Sciences and Information for Students audience portal sites were all launched during phase one. Several new user-friendly features have also been added, including a comprehensive events calendar and faculty profiles that can be searched by name, college, department, research areas and laboratory techniques.

Three more phases are in the works, with phase four expected to go live no later than September 2008. When completed, all four colleges, the Library of Rush University, all student services areas, five audience portal sites, Graduate Medical Education and Continuing Medical Education will be represented on the site. In addition, "Research at Rush" content will move from the consumer Web site to the University site.

Get Your Profile Online

Faculty who would like to have their profiles on the new Rush University Web site should contact their departmental Web page manager. If you have any questions about the site or need to know the name of your departmental Web page manager, contact Ken Quandt, Web editor for Rush University, at (312) 942-6846 or kenneth_quandt@rush.edu.

Kudos

Rush has earned the **Gold Seal of Approval** from the **Joint Commission for Primary Stroke Centers**. Certification from the Joint Commission signifies that Rush makes exceptional efforts to foster better outcomes for stroke care.

The American College of Radiology (ACR) has designated the **Rush Breast Imaging Center** a center of excellence. The facility is accredited by the ACR in

mammography, stereotactic breast biopsy, breast ultrasound and ultrasound-guided breast biopsy.

The Rush EEG lab has been accredited by the American Board of Registration for Electroneurodiagnostic Technology, a five-year designation. Rush is the first and only accredited EEG lab in Chicago and the second in Illinois. In addition to employing seven EEG technologists, the most in the Chicago area, Rush has technologists on site 24 hours a day, something few epilepsy monitoring units have.