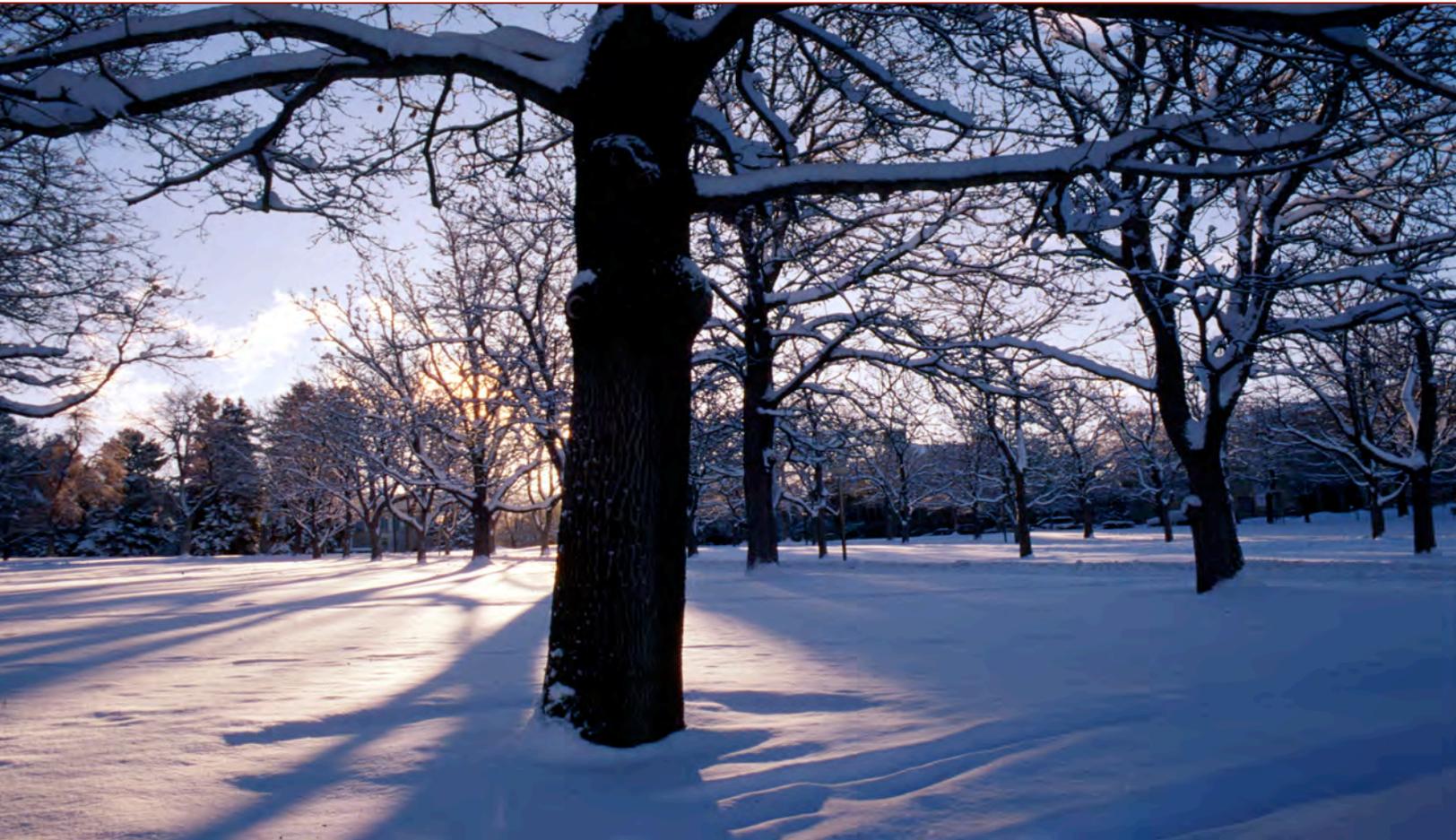




The University of Utah

Center for Alzheimer's Care, Imaging & Research



**2005 Annual Report *of the*
Center *for* Alzheimer's Care, Imaging & Research
Department *of* Neurology**



The University of Utah Center for Alzheimer's Care, Imaging and Research was inaugurated with the arrival of Norman L. Foster, M.D., on August 1, 2005. The Center is the Department of Neurology's newest venture, and owes a debt of gratitude to the guidance offered by Department Chair John E. Greenlee, M.D. The Center's faculty members are also investigators in The Brain Institute at the University of Utah. The Center exists due to a generous gift from an anonymous donor and is blessed with significant institutional support and the interest and assistance of many individuals. This encouraging environment and these collaborations have made the Center's progress possible.



At the dawn of a new year, it is appropriate to review the accomplishments made during the Center's first five months and to summarize its future plans.

Accomplishments in 2005

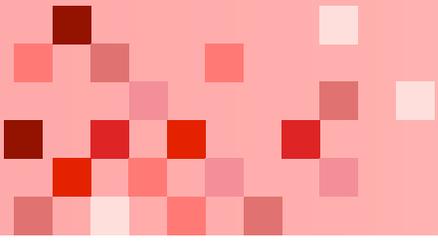
Much of the first five months of the Center's operation was spent recruiting new faculty and establishing the staff and infrastructure necessary for future development. Nevertheless, the Alzheimer's Center was also able to make significant contributions to patient care, research and education.



Center Faculty and Staff

- Norman L. Foster, M.D., a neurologist specializing in dementia and brain imaging, is the founder and Director of the Center. He came to the University of Utah from Ann Arbor, Michigan where he was Professor and the Associate Director of the Michigan Alzheimer's Disease Research Center at the University of Michigan. While at the University of Michigan, he established the first clinic devoted to the diagnosis and management of patients with dementing diseases.
- Edward Zamrini, M.D., was recruited to the faculty in 2005 and will join the Center as Director of Clinical Trials in February 2006. A neurologist specializing in dementia, Dr. Zamrini previously served as the Clinical Core Director of the University of Alabama at Birmingham's Alzheimer's Disease Research Center.
- James A. Levy, Ph.D., will join the Alzheimer's Center in February 2006 as a neuropsychologist. Before making the move to Utah, Dr. Levy served as Director of Clinical and Cognitive Neuropsychology at the National Institute of Mental Health's Geriatric Psychiatry Branch.
- Gordon Chelune, Ph.D., ABPP (CN), will join the Center faculty in early 2006 as a clinical neuropsychologist. Dr. Chelune was recruited from the Cleveland Clinic Foundation, where he was the founder and Head of the Section of Neuropsychology from 1985 to 2000 and most recently the Director of Neuropsychological Services at the Cleveland Clinic Mellen Center for Multiple Sclerosis Treatment and Research from 2001 to 2005.
- Karen Mara joined the Center as Program Administrator in early July. Ms. Mara brings with her nearly 20 years of health care administration experience, including eight years with the University of Utah School of Medicine and significant grants and contracts management background.
- Lindsey Healy began in July 2005 as the Center's Research Assistant for Image Analysis. Ms. Healy, a recent University of Utah bioengineering graduate, is the recipient of numerous honors and awards, including a National Merit Scholarship.
- Tandy Jensen was selected as the Center's Executive Secretary. Ms. Jensen is another National Merit Scholarship recipient on the Center staff and has seven years of administrative and supervisory experience.





Patient Care

In October 2005, Dr. Foster began seeing patients in consultation at the Neurology Clinic in the Center for Advanced Medical Technology (CAMT), located at 729 Arapeen Drive in the University's Research Park. Although the Cognitive Disorders Clinic will not open until the first quarter of 2006, when additional staff and facilities are in place, this represents the start of the Center's clinical program.

During these three months of clinical services, 30 patients were evaluated. They were equally composed of men and women, with an average age of 61 and ranging in age from 30 to 89 years. For 37% of these patients, their consultation with Dr. Foster was their first visit to the University Health System. Five of the patients were from Idaho; the other 25 were from Utah.

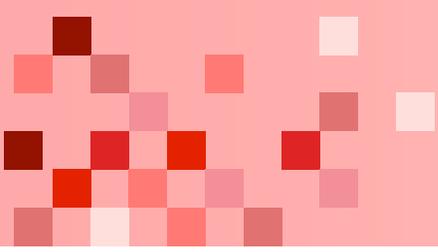
In collaboration with the Department of Radiology, the Alzheimer's Center has established positron emission tomography (PET) brain imaging with 18F-fluorodeoxyglucose (FDG) as a routine clinical procedure for dementia evaluations. Prior to the opening of the Center, there were no neurologists in the Intermountain West experienced in the interpretation of FDG-PET scans in patients with dementia and these studies had very limited availability.

The Center also implemented Neurostat, a computer program developed by Satoshi Minoshima, M.D., Ph.D., and utilized by Dr. Foster in many of his previous research studies for the routine analysis of clinical FDG-PET studies. Neurostat provides three-dimensional analysis of images and the ability to compare a patient's scan with a library of scans from normal elderly subjects, aiding accurate interpretation of FDG-PET studies.

The Center began to collaborate with subspecialty service providers to allow patients with dementia to receive qualified speech evaluations, neuropsychological services, and driving evaluations with rehabilitation specialists. In addition, initial arrangements have been made so that postmortem examinations can be arranged with the Neuropathology Service of the University of Utah Hospital. These autopsy services will provide important information to family members who have concerns about their own risk for Alzheimer's disease and related disorders.

The Alzheimer's Center uses an electronic medical record system and is working toward the complete elimination of paper medical records. This will ensure that all information obtained from clinic evaluations is readily available to patients and, with privacy protections, their families and appropriate health care providers, including those in the University of Utah Health System and referring physicians. No longer will paper medical records be unavailable or lost when they are needed.

A draft Memorandum of Understanding (MOU) was developed in conjunction with the Utah Chapter of the Alzheimer's Association. This was the first step toward establishing a link between the clinic and community based services that will greatly enhance patient care and caregiver support. Through the MOU, the Alzheimer's Association will provide educational materials and jointly support a health educator in the Cognitive Disorders Clinic.



The Brain Institute generously housed the Center's administrative offices while its permanent academic offices were being constructed in the former Evans and Sutherland Building at 650 Komas Drive. The newly renovated offices were completed and the Center moved into its permanent home at 650 Komas Drive, Suite 106-A on December 27, 2005.

Goals for the Memory Loss and Caregiver Resource Center were mapped out and architectural plans were approved. The Resource Center will be housed in the CAMT building until its permanent location is created in an addition that will be constructed adjacent to the Neurology Clinic. The Resource Center will be accessible both during clinic hours and during evenings when families often find it easier to visit.

Research, Education and Outreach

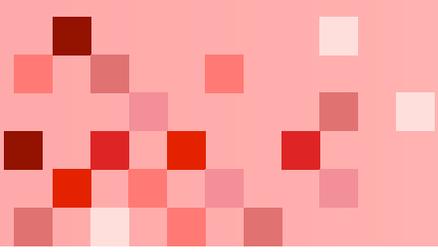
In collaboration with the Brain Institute at the University of Utah, the Alzheimer's Center began a series of symposia presented by University faculty and visiting professors and focused on Alzheimer's disease, imaging, and other topics relevant to dementia research. One of the aims of these symposia is to stimulate further collaborative research. Often with audiences of more than 40, these symposia have attracted participants from many disciplines, including faculty from three other Utah universities.

- The inaugural symposium was presented in October of 2005 by future faculty members Gordon Chelune, Ph.D., and James A. Levy, Ph.D. Their respective lectures were, "Defining reliable change in cognition at the level of the individual: The problem of longitudinal assessment of elderly individuals," and "Subtle Cognitive Effects Associated with Genetic Risk for Alzheimer's Disease."
- Dr. Foster moderated the next symposium in November 2005. The title of his presentation was: "Neuroimaging at Utah: Strategies for Collaboration."
- Symposia continued into the new year with a presentation by James B. Leverenz, M.D., Associate Professor of Neurology, Psychiatry and Behavioral Sciences at the University of Washington, whose January lecture was entitled, "Are There Two Distinct Forms of Lewy Body Disease? Lessons from a Community-Based Study."
- Also in January 2006, Dr. Foster acted as moderator for the next symposium in the series: "Neuroimaging at Utah: Image Acquisition." Dr. Foster's lecture was entitled, "What the Alzheimer's Disease Neuroimaging Initiative (ADNI) means for Researchers."

Dr. Foster began a series of 10 lectures for Neurology residents and medical students surveying major topics in Alzheimer's disease and related disorders including recognition, evaluation, diagnosis and management. In addition, the lecture series reviews the latest dementia research and research methods applicable to dementia. These lectures will prepare tomorrow's physicians to provide dementia care. The first lecturers in this series were given in 2005:

- "Recognition and Initial Assessment of Dementia"
- "Differential Diagnosis of Dementia"

Dr. Foster was invited to join the Steering Committee for the Center on Aging, a collaborative center at the University of Utah. Dr. Foster was also invited to participate in the University's Psychiatry Chair Search Committee.



Dr. Foster participated in the following community outreach activities:

- In October, Dr. Foster visited the University of Michigan for the "Critical Clinical Issues in the Care of the Older Adult: Pain Management and Palliative Care Meeting."
- At the Western Intermountain Neurological Organization Fall Meeting, Dr. Foster presented two lectures: "Alzheimer's Disease Update: Diagnosis and Treatment" and "The Use of PET in Neurological Disease." The meeting was held in Salt Lake City, Utah from October 7-8, 2005.
- In October 2005, Dr. Foster attended a meeting of the External Advisory Committee of the University of Alabama's Alzheimer's Disease Research Center, of which he is a member.
- In November, Dr. Foster lectured at the 6th Annual Norman N. Krieger, M.D. Lecture in Geriatric Medicine in Novi, Michigan. His lecture was entitled, "The Role of Neuroimaging in the Evaluation of Dementia."
- Dr. Foster delivered remarks on research and Alzheimer's Disease at the Alzheimer's Association Remembrance Day Ceremony at Myriad Genetics on November 18, 2005.
- Dr. Foster co-authored an editorial piece published in the Salt Lake Tribune, entitled "New Hope for Alzheimer's Disease." Michael Wood, President of the Board of Directors for the Utah Chapter of the Alzheimer's Association, was the co-author.
- A University of Utah press release on Dr. Foster's arrival sparked a flurry of interest in the Alzheimer's Center. Subsequently, Dr. Foster was interviewed by the University of Utah's public radio station, KUER FM 90, KUEN Channel 9 and the *Daily Utah Chronicle* student news publication.

Plans for 2006

Center Faculty and Staff

- Recruit another neurologist specializing in Alzheimer's disease and related disorders to the Center faculty.
- Hire a study coordinator and begin clinical drug trials.
- Hire a research assistant for informatics and establish a research registry and mixed clinical and research database.
- Recruit current University faculty to join the Center as research collaborators and adjunct faculty members. Hire additional support staff.
- Finalize the memorandum of understanding with the Brain Institute and the Alzheimer's Association.
- Strengthen existing collaborations and form new connections with University entities, including the Scientific Computing and Imaging Institute (SCI), the Division of Geriatrics, and the Departments of Psychology, Educational Psychology and Pathology.

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Patient Care

- Open the Cognitive Disorders Clinic, a subspecialty clinic, and the Center's clinical component in the CAMT building.
- Hire a health educator and open the Memory Loss and Caregiver Resource Center. The Resource Center is expected to occupy temporary space while the permanent space is being constructed.
- Hire a social worker that will provide consultations for dementia care.
- Continue working to obtain insurance reimbursement parity for PET scans as a diagnostic procedure in dementia patients.
- Develop comprehensive neuropsychological services for evaluating memory loss and dementia.
- Develop a mechanism so that family members can readily obtain post-mortem diagnostic services.

Research

- Develop a protocol for synthesis of 11C-PIB, an amyloid PET agent, and initiate human studies.
- Establish a pilot research project program.
- Develop methods for partial volume correction of PET images.
- Develop novel image analysis methods.
- Continue to explore opportunities for collaborative research with the Cache County Study of Memory and Healthy Aging and other research teams across the campus.
- Submit applications for external funding of research.
- In conjunction with The Brain Institute and the University of Utah Departments of Psychology and Educational Psychology, develop a cognitive disorders research laboratory adjacent to CAMT clinic space.

Education and Community Outreach

- Open the Memory Loss and Caregiver Resource Center and hire a health educator.
- Strengthen ties with the Alzheimer's Association, the Utah Commission on Aging and other relevant community organizations.
- Continue the lecture series on Alzheimer's disease and related disorders provided to neurology residents and take advantage of other opportunities to train health professions students.
- Develop a course on memory and aging for the Osher Lifelong Learning Institute at the University of Utah.
- Participate in continuing medical education programs at area hospitals.