

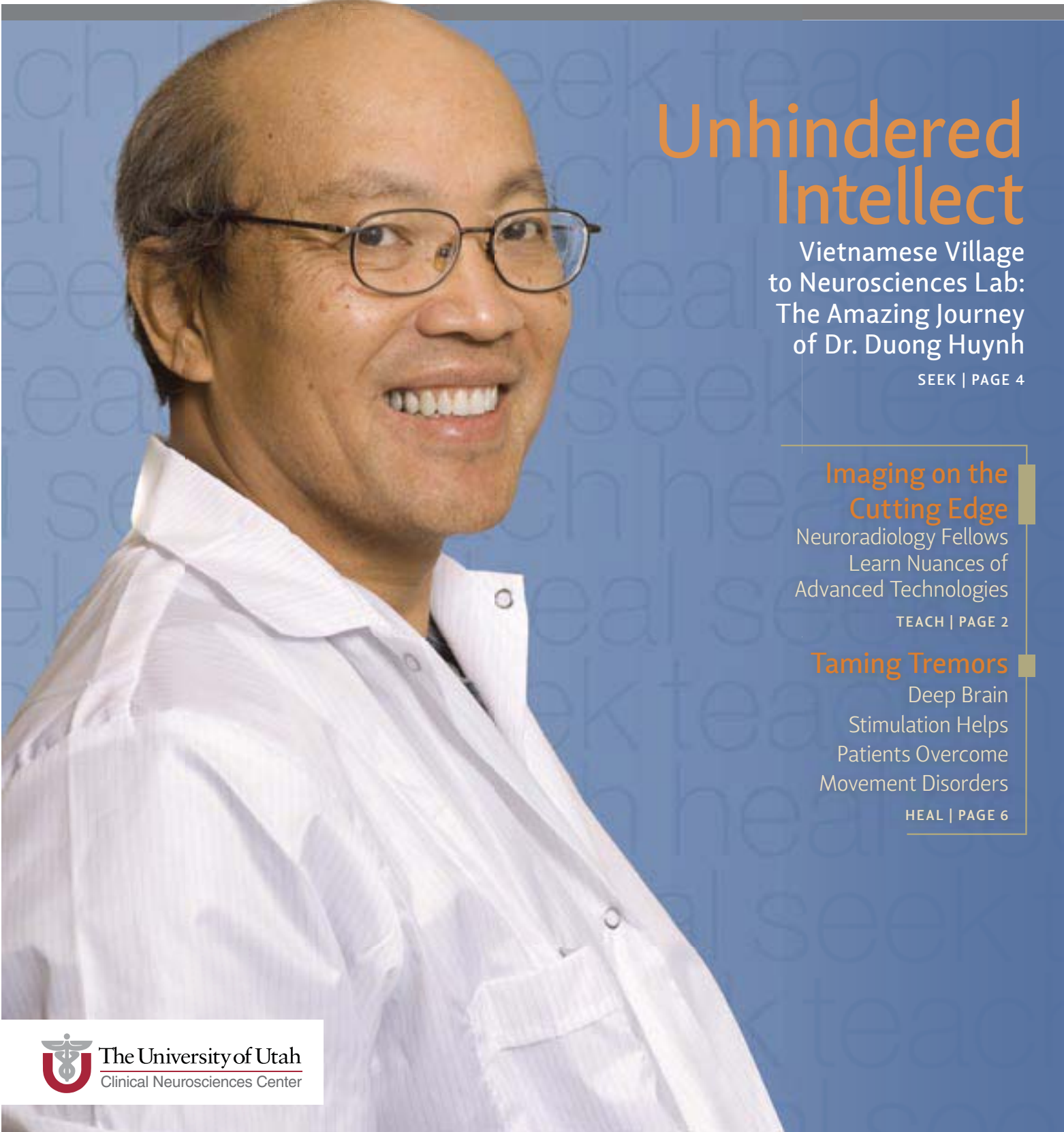
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gray matters

THE UNIVERSITY OF UTAH
CLINICAL NEUROSCIENCES CENTER



Unhindered Intellect

Vietnamese Village to Neurosciences Lab:
The Amazing Journey of Dr. Duong Huynh

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Imaging on the Cutting Edge

Neuroradiology Fellows
Learn Nuances of
Advanced Technologies

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Taming Tremors

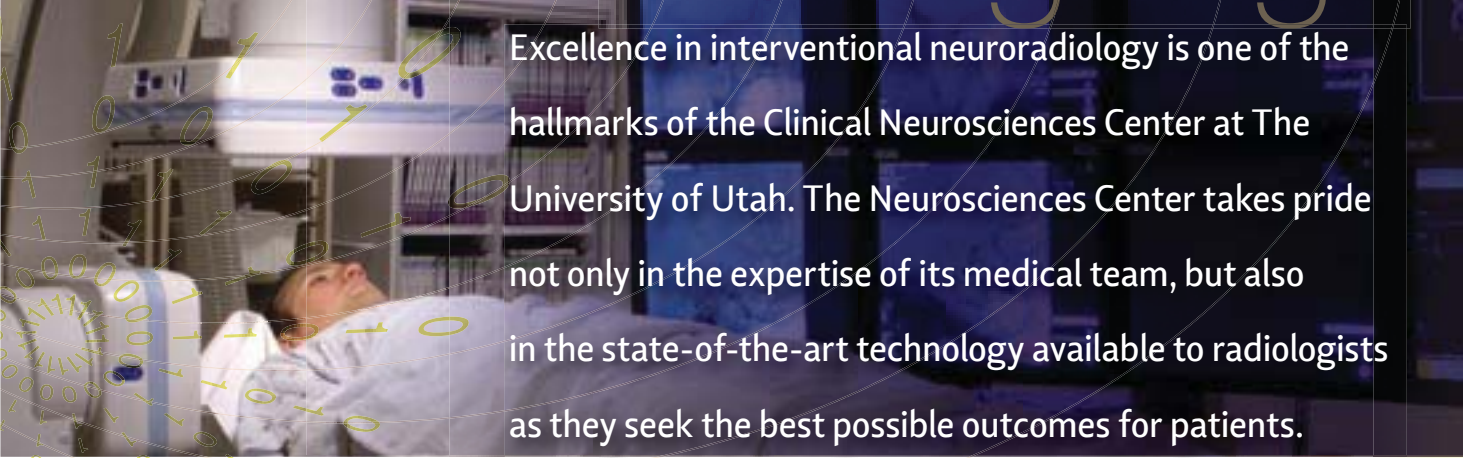
Deep Brain
Stimulation Helps
Patients Overcome
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The University of Utah
Clinical Neurosciences Center

Radiology ON THE Cutting Edge




Excellence in interventional neuroradiology is one of the hallmarks of the Clinical Neurosciences Center at The University of Utah. The Neurosciences Center takes pride not only in the expertise of its medical team, but also in the state-of-the-art technology available to radiologists as they seek the best possible outcomes for patients.

Software Improvements

After two years of careful selection and implementation, The University of Utah Department of Radiology recently installed two new software systems that will improve patient care by enhancing access to diagnostic images for physicians and radiologists.

The GE Radiology Information System (RIS) and the Phillips iSite Picture Archiving and Communication System (PACS) allow for quick and easy access to high-quality images anywhere on the Neurosciences Center network, as well as more accurate and efficient archiving of images.

The GE RIS and Phillips iSite PACS were first used on December 2, 2008, and both systems represent significant upgrades over their predecessors. With these new software systems, patients can be certain they are receiving the most accurate and timely diagnoses and treatments possible. In addition, referring physicians will receive swifter radiology reports on their patients. 

AMONG the advanced equipment employed by neurointerventional radiologists is the biplane, flat-detector Siemens Neuroangiography machine, which can perform 3-dimensional digital subtraction angiography (3D-DSA).

The Siemens Artis zee biplane system allows clinicians to perform neuro, spine, and abdominal imaging using two large detectors. Outstanding clarity is the Artis zee's calling card, as its imaging chain enhances the visualization of therapeutic devices, and its wealth of 3D applications means clinicians are able to give patients the quickest, most precise care possible.

The Digital Age

DSA represents an improvement over traditional angiography due to its ability to obtain quick, isolated images of blood vessels.

With traditional angiography, images of blood vessels appear on film after exposing the area under scrutiny to time-controlled X-rays, and simultaneously injecting a contrast medium into the blood vessels to make them more easily visible. However, other structures also show up on the film and need to be removed in order to see the vessels clearly. To do this, a mask image—a view of the area without any contrast medium—is taken, and a clear picture of the blood vessels is manually produced in a darkroom after subtracting the other structures from the image.

Using DSA, images are captured digitally on a computer and other structures are subtracted automatically. Images of the blood vessels alone are available much more swiftly than with traditional angiography. In 3D-DSA, clinicians use a workstation to view blood vessels from every angle in order to gain better understanding of the area in question.

“Using 3D-DSA decreases the amount of contrast and radiation exposure to the patient,” says Donald V. La Barge III, MD, Neurointerventional Radiology Fellow at the Neurosciences Center. “In addition, it facilitates intervention planning and efficiency.”

For more information about neurointerventional radiology at the Neurosciences Center or to refer a patient, visit www.utahneurosciences.com. 