

SOUTHWESTERN NEWS

Contact: Kris Mullen
(214) 648-3404

NEW MAGNETIC IMAGING EQUIPMENT ENHANCES TREATMENT

DALLAS – June 13, 1995 – Radiologists at UT Southwestern Medical Center at Dallas are using a new magnetic resonance imaging and spectroscopy scanner that makes the MRI and MRS experience easier for patients and provides physicians with high-quality anatomic images for more accurate diagnoses.

The Department of Radiology spent months researching which new scanner to buy for the Mary Nell and Ralph B. Rogers Magnetic Resonance Center on the North Campus, where the one scanner used for patients was no longer enough to keep up with the demand.

Dr. Paul Weatherall, associate professor of radiology, said a 1.5 Tesla Philips NT Gyroscan was selected because it is the most versatile and patient-friendly high-field scanner available, providing images quickly and reducing the claustrophobia some patients feel during the procedure.

"This scanner has the capabilities that everybody wants," Weatherall said. "It doesn't just provide the high-resolution quality images you need for standard brain and bone exams. It is so flexible that we can image tiny cranial nerves, analyze brain chemicals, produce a picture of the blood circulation and actually calculate the amount of blood flowing through the vessels, all at one sitting."

The system lays the foundation for the future of medical imaging that includes real-time assessment of some procedures. Soon, Weatherall said, the radiologists will be able to monitor how much diseased tissue is destroyed while using catheters inside vessels or fiber-optic lasers.

Dr. Dianne Mendelsohn, director of neuro MRI and the Algur H. Meadows Imaging Center at UT Southwestern, said the new system will be used to develop imaging techniques

(MORE)

MAGNETIC IMAGING – 2

and interventional procedures in the brain, neck and head that will guide surgeons more accurately and sometimes eliminate the need for surgery.

Dr. Ronald Peshock, a cardiovascular specialist and medical director of the Rogers MRI Center, said the system allows for "one-stop shopping" for analysis of some cardiovascular disease that traditionally requires several exams and procedures.

In MRI, a patient lies on a table that slides into a cylindrical magnet that causes certain atoms in the body to line up as if they were tiny bar magnets. When a radio wave pulse is transmitted, some atoms are tipped. When the pulse stops, these atoms emit a radio signal that is used to produce a "picture," or image. Magnetic resonance spectroscopy (MRS) uses the same radio signals to determine the amounts of certain biological substances in diseased tissue.

A high-field magnet excites more atoms than a weaker magnet does, which results in a more detailed image in a shorter period. The new scanner uses the highest field strength allowed for patients in the United States.

Weatherall, Peshock and Dr. Pamela Nurenberg – all of whom have extensive MRI training and experience – are the imaging specialists who will most use the scanner for research and care of patients referred by physicians on and off campus.

"The new magnet can hold patients who weigh up to 550 pounds, which is more than most other scanners can," said Nurenberg, an assistant professor of radiology. "It is shorter than any other high-field magnet, is one of the widest and has flared ends, so the claustrophobia some patients experience is lessened. Patients and physicians have reason to be excited about this system."

###