

news THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS

southwestern medical school - graduate school of biomedical sciences - school of allied health sciences

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******Diagnoses aided by new ultrasound
lab*

DALLAS--Startling advances in the use of ultrasound will come into use during the next few years as a new generation of equipment and trained specialists are employed, says Dr. Melvyn Conrad, assistant professor of radiology and the new chief of the ultrasound section at The University of Texas Health Science Center at Dallas.

Dr. Conrad, formerly with Johns Hopkins Medical Center, has written several articles on using diagnostic ultrasound in such areas as obstetrics and in kidney and gallbladder defects. Work in the ultrasound lab at Parkland Memorial Hospital which Dr. Conrad has headed since July 1, concentrates on diagnostic medical imaging in the abdomen and pelvis.

The lab opened July 1, 1975, and is equipped with the latest in ultrasound technology, thanks to a \$100,000 grant from the Hillcrest Foundation.

Ultrasound is "a safe, non-invasive, diagnostic imaging procedure without the hazards of radiation," Dr. Conrad says. "It complements the use of X-ray exams and replaces them in certain areas."

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first add ultrasound lab

Ultrasound is based on the same principle as sonar. Pulses of sound--at frequencies too high to be perceived by the human ear--are sent deep into body tissues. Echoes are recorded as the sound waves bounce off the various organs. Using the "gray scale" imaging technique which was developed just two years ago, the echoes are electronically converted into images on a TV screen, the shades of gray corresponding to the differing strengths of the echoes.

"The gray scale technique has significantly improved ultrasound imaging because it allows depiction of low-level echoes that were previously not shown," Dr. Conrad explains.

Using this rapidly developing technology, it is possible to diagnose defects in the heart, blood vessels, liver, kidney, and gallbladder, as well as detect abdominal tumors and gynecological and obstetrical problems. A number of very sophisticated pieces of ophthalmic equipment in the ultrasound lab allow assessment of the eye, too.

"The next area for ultrasound that needs to be defined is in breast cancer detection," Dr. Conrad says. "Commercial equipment is currently being developed for utilization in this area."

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