

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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DALLAS--A new easy-to-use computer system which matches available kidneys to persons requiring kidney transplants has been developed at The University of Texas Health Science Center at Dallas for use in Texas, Oklahoma and Arkansas.

The new on-line, computer-based renal matching system, called RENTRAN, was developed by the Medical Computing Resources Center at UTHSCD under the direction of Dr. David J. Mishelevich in collaboration with The Tissue Typing Laboratory and the Southwest Kidney Transplant Center directed by Dr. Peter Stastny, a Veterans Administration researcher and Southwestern Medical School associate professor. According to Dr. Stastny, representatives from the three states to the Southwest Kidney Transplant Center approved the implementation of RENTRAN at a recent meeting in Dallas. RENTRAN was developed with financial support from the Renal Program of the Texas Regional Medical Program.

Computer terminals are to be installed in Austin, Dallas, Galveston, Houston, Little Rock, Oklahoma City, and San Antonio from which one will be able to interact with the data bank located on the DECsystem-10 computer in the Medical Computing Resources Center.

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Dr. Mishelevich stated that "we have attempted to develop an interactive system for health professionals with no previous computer experience". RENTRAN provides a computer file of potential recipients which will be available to the eight medical centers 24 hours a day. Should a kidney become available in the region--these are usually from accident victims--the data bank may be searched from a remote terminal any time for the best recipients for any given kidney. In turn, the Center with the kidney will notify the hospital where the potential recipient is located that a possible donor is available. To date, RENTRAN has already performed a match on a request from Houston prior to full implementation, said Dr. Mishelevich.

Dr. Stastny is conducting a study to determine the effectiveness of a relatively new type of recipient-donor matching system involving what are called "HL-A" antigens (the tissue's identification markers). Named for "Human Histocompatibility Locus-A" the HL-A system involves immunity reactions of about 30 possible known factors of which each individual has a maximum of four. In RENTRAN, up to four factors, along with the blood type are stored in the data bank for each person who needs a kidney.

Specialists at the UTHSCD's Southwestern Medical School have performed more than 100 kidney transplants over nearly a decade and have participated in development of a life-supported machine which keeps the kidneys alive for long periods of time after they are removed from a donor.

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