RSNA®
Radiological Society of North America

820 Jorie Blvd
Oak Brook, IL 60523
TEL 1-630-571-2670
FAX 1-630-571-7837
RSNA.org

NEWS

RSNA Press Release

Screening Mammography Detects Early Recurrent Cancer in the Reconstructed Breast

Released: June 26, 2002

Media Contacts:

Maureen Morley
(630) 590-7754
mmorley@rsna.org

Marijo Millette Zerfoss
(630) 590-7727
mzerfoss@rsna.org

OAK BROOK, Ill.--Women who've undergone mastectomy and breast reconstruction using their own abdominal tissue-called TRAM flaps-can be screened with mammography for early recurrent cancer, according to a study appearing in the July issue of Radiology. As reported by lead investigator Mark A. Helvie, M.D., from the Department of Radiology at the University of Michigan Health System, "We found that, indeed, mammography of TRAM flaps can find cancer recurrence prior to clinical exam in most patients."

Today many women who require mastectomy to remove a breast cancer opt to have a new breast constructed at the same time or shortly afterwards. Because cancer may recur in the chest wall whenever a mastectomy is done, and because it also may recur within the reconstructed breast itself, researchers sought to learn whether screening mammography - the same imaging study that detects so many small breast cancers in the first place - might be used to discover recurrent cancers at an early stage when they are easiest to eliminate.

Formerly, silicone implants were frequently used for breast reconstruction, but today an operation utilizing the patient's own tissue from the lower abdomen is becoming increasingly popular. A TRAM (transverse rectus abdominis musculocutaneous) flap, containing skin, muscle tissue,and fat, is moved to the chest to form a new breast. The abdominal fat, which makes up the bulk of the reconstruction, resembles breast tissue closely enough to suggest that mammography should detect any new cancerous growth just as it would in an ordinary breast. This is a relatively new procedure, but studies to date suggest that between 4 percent and 11 percent of women having this surgery will develop recurrent cancer in the TRAM flap, most of them within five years of surgery. Annual incidence of recurrence averages 1 percent. This figure is in line with recurrence rates following mastectomy with or without reconstruction.

In this study, a group of 113 women who had undergone breast reconstruction with a TRAM flap had 214 screening mammograms done in a period of approximately two years. None of them had a mass felt on breast examination. Six patients whose studies were read as suspicious or highly suggestive of cancer had a biopsy, and two of them were found to have invasive cancer. One other cancer was later found in a patient whose screening mammogram

was read as "probably benign," representing a false-negative result.

These findings indicate that mammographic screening of women having TRAM flap reconstruction after removal of a cancerous breast will detect early recurrent cancers even if they are too small to be felt on examining the new breast. As with any mammographic screening, occasionally a patient with suspicious findings will have a breast biopsy negative for cancer. It is important to note, as Dr. Helvie points out, "the vast majority of women given a TRAM flap following mastectomy for cancer will not have recurrence." Additionally, cost is not a major factor, as most of these women have routine screening mammography to check the status of the remaining natural breast.

It remains to be seen whether finding early-stage cancers translates into better survival. The situation is much the same as in women who have "lumpectomy" - removal of only the lesion itself with some surrounding tissue. These patients are routinely followed up with periodic mammography.

The authors believe that, ultimately, the decision to screen is best made by the patient and clinician consulting together. However, Dr. Helvie concludes that, since screening mammography detected most cancer recurrences before they were evident on physical examination, "this provides support for mammography screening of breast cancer patients treated with mastectomy and TRAM reconstruction."

# # #

Radiology is a monthly scientific journal devoted to clinical radiology and allied sciences. The journal is edited by Anthony V. Proto, M.D., School of Medicine, Virginia Commonwealth University, Richmond, Virginia. *Radiology* is owned and published by the Radiological Society of North America, Inc. (http://radiology.rsna.org)

The RSNA is an association of more than 30,000 radiologists and physicists in medicine dedicated to education and research in the science of radiology. The Society's headquarters is located at 820 Jorie Boulevard in Oak Brook, Illinois 60523-2251.

"Mammographic Screening of TRAM Flap Breast Reconstructions for Detection of Nonpalpable Recurrent Cancer." Collaborating with Dr. Helvie on this paper were Janet E. Bailey, M.D., Marilyn A. Roubidoux, M.D., Helen A. Pass, M.D., Alfred E. Chang, M.D., Lori J. Pierce, M.D., and Edwin G. Wilkins, M.D.