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## RSNA Press Release

### Breast-Saving Technique Also Decreases Treatment Time

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NEW YORK CITY - Many women are unnecessarily undergoing mastectomy when there is an effective, breast-saving treatment that can be performed in under a week, according to a leading breast cancer specialist.

Robert R. Kuske, M.D., a radiation oncologist with Arizona Oncology Services, discussed accelerated partial breast irradiation (APBI)-also known as brachytherapy-at a Radiological Society of North America (RSNA) media briefing today in New York City.

According to Dr. Kuske, approximately 80 percent of women diagnosed with breast cancer are candidates for breast conservation therapy, in which the lump is surgically removed and any remaining cancerous cells are destroyed by radiation therapy, leaving the breast intact. Unfortunately, despite 20 years of studies demonstrating no difference in survival rates between women receiving mastectomy or lumpectomy followed by radiation therapy, only 55 percent of women opt for the latter treatment.

Dr. Kuske cites two major reasons breast cancer patients avoid breast-saving radiation treatments: "I believe women choose mastectomy because of the inconvenience of six to seven weeks of conventional external beam radiation therapy (EBRT) and the fear of whole-breast irradiation to uninvolved breast, skin, ribs, lung and the heart."

Dr. Kuske has led three trials investigating brachytherapy, a technique that eliminates those barriers. Brachytherapy involves placing a tiny radioactive seed inside the breast, up against the tissues harboring the breast cancer. Since the radiation is directed to the 1 to 2 centimeters of breast surrounding the lumpectomy site, the rest of the breast and surrounding organs are spared, and the entire radiation treatment takes only four to five days. These trials have shown low toxicity and cancer recurrence rates of only 3 to 4 percent in the breast.

#### At A Glance

- Breast brachytherapy is a breast-conserving technique that also decreases a woman's treatment time from six or seven weeks to just four or five days.
- Clinical studies show that breast conservation therapy offers the same cure rate as mastectomy for eligible patients.
- Recent brachytherapy research outcomes show a low 3 to 4 percent disease recurrence rate in the breast.

Two brachytherapy methods are currently used to place radiation into the treatment area: interstitial brachytherapy, which involves multiple catheters (thin, hollow plastic tubes) around the surgical excision site, or a single balloon catheter that is inserted and then inflated in the lumpectomy cavity. Compared to EBRT, brachytherapy intensely treats the part of the breast that is at the greatest risk for a recurrence of cancer with minimal radiation exposure to the rest of the breast, heart, lungs and skin.

Women are eligible for breast brachytherapy if their tumor size is 3 centimeters or smaller as long as the cells do not reach the surgical margin. Up to three lymph nodes under the arm may be involved.

"Brachytherapy makes breast conservation therapy more convenient for women located in rural areas and for those who have busy lifestyles or occupations that will not accommodate up to seven weeks of radiation treatment," Dr. Kuske said.

Dr. Kuske is currently serving as a co-principal investigator of an upcoming Phase III clinical trial comparing APBI and EBRT, sponsored by the National Cancer Institute through the National Surgical Adjuvant Breast and Bowel Project and the Radiation Therapy Oncology Group.

RSNA is an association of more than 35,000 radiologists, radiation oncologists and related scientists committed to promoting excellence in radiology through education and by fostering research, with the ultimate goal of improving patient care. The Society is based in Oak Brook, Ill. (<http://www.rsna.org>)

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