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Radiation for Breast Cancer Not Likely to Increase Heart Attack Risk

Fairfax, Va., May 3, 2007 – In 1973, two researchers published an article in the journal *Lab Investigation* saying that radiation to the breast area might damage the capillaries and restrict blood flow to the heart. Since that time, conflicting reports about the long-term risk of radiation to the heart have been published. According to a study released today in the *International Journal of Radiation Oncology* Biology*Physics*, the official journal of ASTRO, elderly women who receive radiation therapy for early-stage breast cancer appear to have no increased risk of a heart attack after taking pre-existing cardiac risk factors into account. Interestingly, pre-existing cardiac risk factors such as diabetes, hypertension and hyperlipidemia do not potentiate the effects of radiation on the heart.

Using the Surveillance, Epidemiology and End-Results (SEER) database, researchers conducted a retrospective study of female Medicare recipients aged 65 and older who were diagnosed with breast cancer from 1992 to 2000. Researchers then reviewed the records of more than 48,000 breast cancer patients. Of those women, 19,897 had lumpectomies (42 percent) and 26,534 has mastectomies (55 percent). Of all the patients in the study, 21,502 (45 percent) received radiation therapy and 4,151 (9 percent) received both radiation and chemotherapy. Patients with pre-existing heart disease were less likely to receive radiation.

After adjusting for pre-existing heart problems as well as other health and socioeconomic factors like age, race, marital status, income, rural versus urban living and receipt of chemotherapy, doctors found that women who received radiation were not at an increased risk of having heart attacks. As would be expected, heart attacks were more likely to be found among individuals already at higher risk for heart disease, such as women of increased age, African-American ethnicity and those with more co-morbid conditions.

“Women with breast cancer are naturally concerned about the side effects of their treatments, including radiation therapy. This study provides them and their physicians with some peace of mind knowing that the

benefits of radiation appear to outweigh the cardiac risks,” said John Doyle, Dr.P.H., the lead author on the study and an Adjunct Assistant Professor of Health Policy and Management and Epidemiology at the Mailman School of Public Health of Columbia University in New York.

To learn more about breast cancer, visit www.rtanwers.org. To obtain a full copy of the study or to arrange an interview with Dr. Doyle, please contact Julie Barden at 1-800-962-7876 or julieb@astro.org.

ASTRO is the largest radiation oncology society in the world, with more than 8,600 members who specialize in treating patients with radiation therapies. As the leading organization in radiation oncology, biology and physics, the Society is dedicated to the advancement of the practice of radiation oncology by promoting excellence in patient care, providing opportunities for educational and professional development, promoting research and disseminating research results and representing radiation oncology in a rapidly evolving socioeconomic healthcare environment.

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