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NEWS

RSNA Press Release

RSNA Presents First Alexander Margulis Award

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CHICAGO, Ill. — The Radiological Society of North America (RSNA) presented its first Alexander Margulis Award for Scientific Excellence to László Tabár, M.D., professor of radiology at the University of Uppsala School of Medicine and medical director of the Department of Mammography at Falun Central Hospital in Sweden, and colleagues, for the article, "Swedish Two-County Trial: Impact of Mammographic Screening on Breast Cancer Mortality During 3 Decades," published in September 2011.

Named for Alexander R. Margulis, M.D., a distinguished investigator and inspiring visionary in the science of radiology, this new annual award recognizes the best original scientific article published in RSNA's peer-reviewed journal *Radiology*.

"It is a great honor to receive the Alexander Margulis Award for Scientific Excellence," said study coauthor Stephen W. Duffy, M.Sc., professor of cancer screening at Queen Mary, University of London, who accepted the award on behalf of Dr. Tabár and the research team. "We take it as a tribute to the many colleagues and all personnel working on the Swedish Two-County Trial over the years, and to the many women who participated in the trial. They have all played an important part in providing evidence for the substantial long-term reduction in breast cancer mortality brought about by early detection and treatment in the early phases of this dreadful disease."

The Swedish Two-County Trial of mammographic screening was the first breast cancer screening trial to show a reduction in breast cancer mortality from screening with mammography alone. The trial randomized 133,065 women into two groups, one that received an invitation to screening and another that received usual care. At the conclusion of the study, there were 30 percent fewer breast cancer deaths among all women (attenders and non-attenders) in the group invited to undergo screening.

The screening phase of the trial lasted approximately seven years. Women between the ages of 40 and 49 were screened, on average, every 24 months, and women age 50 to 74 were screened, on average, every 33 months.

Nearly three decades after the beginning of the trial, the researchers analyzed the original

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data and the follow-up data to estimate the long-term effect of mammography screening on breast cancer mortality. At 29 years, this represents the longest recorded follow-up period for a mammography screening trial.

Case status and cause of death were determined by local trial end point committees and, independently, by an external committee. Mortality analysis at follow-up showed a reduction in the breast cancer mortality rate in the screening population, similar to the original trial results. But while the relative effect of screening on breast cancer mortality remained stable over the follow-up period, the absolute benefit in terms of lives saved increased with longer follow-up times. At 29 years of follow-up, the estimated number of women needed to undergo screening every 2 or 3 years over a seven-year period to prevent one breast cancer death ranged from 414 to 519.

"This three-decade follow-up of a large Swedish population provides unique insights into the long-term value of screening mammography in mortality reduction," said Herbert Y. Kressel, M.D., editor of *Radiology*. "This information is of particular importance in view of the concerns expressed regarding potential 'over-diagnosis' of breast cancer in women undergoing screening mammography."

Both the Nominating Committee and the Selection Committee for the 2012 Margulis Award felt that this was an exemplary manuscript. Long-term follow-up is exceptionally difficult to do and is crucially important to demonstrate the benefit of screening examinations such as mammography.

"Most of the deaths prevented would have occurred more than 10 years after the screening started," Dr. Duffy said. "This indicates that the long-term benefits of screening in terms of deaths prevented are more than double those often quoted for short-term follow-up."

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"Swedish Two-County Trial: Impact of Mammographic Screening on Breast Cancer Mortality During 3 Decades." Collaborating with Dr. Tabár and Professor Duffy on this paper were Bedrich Vitak, M.D., Tony Hsiu-Hsi Chen, Ph.D., Amy Ming-Fang Yen, Ph.D., Anders Cohen, M.D., Tibor Tot, M.D., Sherry Yueh-Hsia Chiu, Ph.D., Sam Li-Sheng Chen, Ph.D., Jean Ching-Yuan Fann, Ph.D., Johan Rosell, Ph.D., Helena Fohlin, M.Sc., and Robert A. Smith, Ph.D.

Note: Copies of RSNA 2012 news releases and electronic images will be available online at *RSNA.org/press12* beginning Monday, Nov. 26.

RSNA is an association of more than 50,000 radiologists, radiation oncologists, medical physicists and related scientists, promoting excellence in patient care and health care delivery through education, research and technologic innovation. The Society is based in Oak Brook, Ill. (*RSNA.org*)

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