

RSNA Margulis Award Honors Research in Lung Cancer Screening

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OAK BROOK, Ill. — (Nov. 19, 2024) – The Radiological Society of North America (RSNA) 2024 Alexander R. Margulis Award for Scientific Excellence will be presented to authors of the *Radiology* article, "A 20-year Follow-up of the International Early Lung Cancer Action Program (I-ELCAP)."

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

Decades after launch, I-ELCAP has demonstrated a stable, long-term, lung cancer-specific survival rate for participants of the low-dose CT program of annual screening.

"The 2024 Margulis Award is the first study to report on 20-year lung cancer-specific survival for low-dose CT screening programs," said Radiology Editor Linda Moy, M.D. "Through accurate tracking of participants' lung cancer diagnoses, treatments and outcomes, the study showed that patients diagnosed with lung cancer by low-dose CT screening have a 20-year survival rate of 80%. These results unequivocally demonstrate the life-saving impact of low-dose CT screening for early lung cancer detection."

Between 1992 and 2022, I-ELCAP enrolled more than 89,000 participants from over 80 institutions distributed across North America and countries in Europe and Asia. Out of this patient population, 1,257 participants were diagnosed with lung cancer, the majority of whom had Stage I disease.

"With this study, we hoped to demonstrate persistence of the high cure rate of lung cancer resulting from low-dose CT screening in our 10-year follow-up published in the *New England Journal of Medicine* in 2006," said lead author Claudia I. Henschke, Ph.D., M.D., professor of radiology and director of the Early Lung and Cardiac Action Program at the Icahn School of Medicine at Mount Sinai in New York. "More importantly, we want people to understand that if you enter into a screening program that uses a well-defined protocol and comprehensive management system, your chances of being cured are very high."

The estimated cure rate based on the 20-year survival rate for all 1,257 participants diagnosed with lung cancer in the I-ELCAP program of annual screening was 80%. In a subset of 181 participants who underwent surgery for the smallest size category of stage IA lung cancer (10 mm or less), the survival rate was 95%. For solid tumors, the 20-year survival rate was 83%, while for subsolid tumors, it was 100%.

"Our study highlights the importance of a rigorous screening protocol, comprehensive data management, and consistent follow-up to achieve high survival rates," Dr. Henschke said. "The low percentage of deaths from lung cancer in this group (16.9%) over our follow-up period further underscores the potential life-saving impact of this work."

After Dr. Henschke and her fellow researchers first began their study, they faced challenging feedback from radiology colleagues who expressed concern about the potential for overdiagnosis, lead time biases and the risk of adding to an already overburdened radiology workload.

"We used those comments to stimulate our research, evaluating the claims to find answers," Dr. Henschke said. "We now have nearly 400 publications altogether. With this work, we have come to think of this low-dose CT scan as a necessary health check, as we can identify other early diseases in lungs as well as cardiovascular diseases."

The program has continued collaborations with clinical and government organizations to initiate lung cancer screening programs for underserved populations in additional countries.

With many areas of exploration still on the horizon, Dr. Henschke credited the long-term success of the I-ELCAP program with hard work, perseverance and a steady team. After 20 years, her core group of physicians, oncologists and researchers has remained stable.

"Recognition of the contributions of the I-ELCAP team in bringing the life-saving potential of low-dose CT screening is deeply rewarding and provides further impetus to bring this benefit to people throughout the world," Dr. Henschke said.

The Margulis Award will be presented during the RSNA 110th Scientific Assembly and Annual Meeting ([RSNA 2024](#)) in Chicago, Dec. 1-5.

Access the *Radiology* study, "[A 20-year Follow-up of the International Early Lung Cancer Action Program \(I-ELCAP\)](#)."

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For patient-friendly information on lung cancer screening, visit [RadiologyInfo.org](#).