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Organization

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Title

New Horizons in Radon-Related Lung Cancer Screening

Abstract

Radon accounts for approximately 3,200 lung cancer deaths annually in Canada, yet current low-dose computed tomography (LDCT) screening programs rely almost exclusively on age and smoking history, thereby excluding radon-exposed, COPD, wildfire smoke-exposed, and other environmentally at-risk populations. Radon has a long latency period, during which cumulative DNA damage, metabolic dysregulation, and malignant transformation occur below LDCT detection thresholds, with no established early detection pathway. BioMark has developed and clinically evaluated a blood-based metabolomic panel for early lung cancer detection and nodule malignancy assessment in large Canadian cohorts and in the HANSE German trial.