



“TPMG supports so many opportunities for physicians to follow their passions – to identify a need and then use all the resources available to us to create change that positively influences the lives of our patients.”

Thomas Urbania, MD - Radiology, KP Oakland

Morris F. Collen Research Award for Recent Publication

Lung cancer makes up nearly 25% of all cancer deaths — by far the leading cause — with higher annual mortality rates than colon, breast, and prostate cancers combined. Because people can't see or feel their lungs, this type of cancer often isn't detected until there are symptoms, which usually don't appear until the disease is advanced.

Early diagnosis is associated with better outcomes, so sound management of pulmonary nodules, which are often inadvertently discovered on imaging studies, is essential. But because these nodules are common and often benign, they often don't get the consistent attention they deserve.

When Thomas Urbania, MD, a radiologist at KP Oakland, joined The Permanente Medical Group in 2014, he quickly noticed his medical center had an excellent system in place to help ensure rapid evaluation of patients with suspected lung cancer.

He and several of his colleagues also noticed an opportunity: Given the highly integrated nature of our KP Northern California health care system, why not spread this best practice across all medical centers in the region?

Dr. Urbania collaborated with a team of radiologists, pulmonologists, thoracic surgeons, and technology consultants to design and integrate into our electronic

medical record a structured reporting system that prompts radiologists to comment on every pulmonary nodule on all chest CT scans, and then standardizes the tagging of these findings. The system also automates the referral of patients with suspicious findings to a multidisciplinary care team for rapid review and follow-up. They implemented the reporting system incrementally, one medical center at a time, which yielded interesting opportunities for research.

"Implementing it on a facility-by-facility basis enabled us to compare lung nodules and lung cancer in patients before and after the system was in place," says Dr. Urbania. "What we found is that we were able to capture a larger proportion of early-stage lung cancers in patients after we had rolled out this reporting system."

In multivariable analyses, the intervention indeed was associated with 24% greater odds of early-stage diagnosis.

"Dr. Urbania's efforts have revolutionized the care we provide," says Rita Ng, MD, physician-in-chief at KP Oakland. "He recognized an opportunity, worked with researchers at the Division of Research to analyze a rich set of data from our large, integrated health care system, and then translated the findings into actionable changes that have changed patients' lives."