

CLINICAL PERSPECTIVE

Optional No More:

Why “Low-Risk” Lung Nodules Demand Systematic Surveillance

New research presented at AABIP 2025 reveals why health systems can no longer afford to overlook small nodules—and how automation makes follow-up feasible at scale.

By Scott Skibo, MD, FCCP, Chief Medical Officer, Eon

Executive Summary

Lung cancer remains the leading cause of cancer-related death worldwide⁽¹⁾. Early detection is the single most effective way to improve survival—but a blind spot persists.

Every year, **1.6 million** incidental pulmonary nodules (IPNs) are detected in the United States, most during CT scans ordered for reasons unrelated to cancer. Nearly 70% of patients—about 1.1 million people—never receive the recommended follow-up imaging⁽²⁾.

The 2017 Fleischner Guidelines make surveillance optional for nodules under 6mm⁽³⁾, leading many programs to defer or ignore follow-up. Yet **new research presented at AABIP 2025 shows that 7.3% of these “low-risk” patients progressed to high-risk within one year**. Treating follow-up as “optional” means systematically missing opportunities to diagnose Stage I cancers, where survival rates approach 90%.

This evidence necessitates a reevaluation of how health systems approach the management of small nodules—shifting from passive observation toward strategies that recognize risk as dynamic and ensure patients remain under surveillance for as long as needed.

 **26.2%**

of patients initially classified as low or moderate risk **moved to higher-risk category within just 12 months**

 **16.7%**

of all initially low- and moderate-risk patients **progressed directly to high-risk within just 12 months**

THE EVIDENCE:

Small Nodules, Big Risk

In a retrospective study of 6,380 patients across 170 facilities, Eon’s research team uncovered critical insights:

- More than one in four patients (26.2%) with initially low- or moderate-risk nodules were reclassified into a higher-risk category within 12 months.
- Among those first considered “low-risk,” **7.3% progressed directly to high-risk status within one year.**
- Nodule growth, even in small lesions, has proven to be a powerful predictor of malignancy.

1-YEAR CHANGE IN FLEISCHNER RISK CATEGORY			Overall N=6,380
Low to high	463		7.3%
Low to moderate	612		9.6%
Moderate to high	597		9.4%
Shrank (moderate to low)	588		9.2%
Stayed low	2,792		43.8%
Stayed moderate	1,328		20.8%
1-YEAR CHANGE IN NODULE SIZE (IN MM)			
Mean (SD)	2.05		7.90
Median (min, max)	0		-6.00, 155



These findings confirm what clinicians have long recognized—**every malignant nodule was once a small nodule that grew.** Current guidelines, which treat small nodules as optional to follow, risk leaving patients undiagnosed until cancer is far more advanced and far less treatable.

THE COST OF INACTION:

Clinical and Economic Stakes

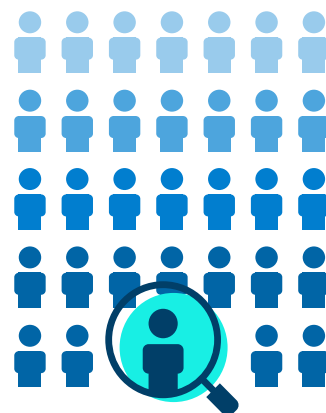
The consequences of missed surveillance extend well beyond classification debates. Clinically, the difference between early and late detection is profound. Stage I lung cancer carries a five-year survival rate approaching 90%, compared with just 15% for Stage IV disease⁽⁴⁾. Each time a patient with a small nodule is lost to follow-up, the window for curative treatment narrows.

**Survival
Rates by
Stage of
Detection**

90% vs. **15%**
Stage I Stage IV

The economic implications are equally significant. The relatively modest cost of surveillance CTs is outweighed many times over by the expense of treating advanced disease. Data show that for every 100 follow-up scans performed on patients initially considered low- or moderate-risk, approximately 17 will be identified on a trajectory toward high-cost cancer care.

Operationally, most health systems remain constrained by fragmented or manual processes that span spreadsheets, registries, or partial EMR workflows. These approaches are static, unable to keep pace with the volume of patients with incidental findings and the dynamic nature of disease progression. Inevitably patients fall through the cracks. The result is lost opportunities for earlier intervention, preventable progression to late-stage disease, and unrealized clinical and financial value from early detection. The evidence presented at AABIP 2025 makes clear that this operational reality must change.



For every
100
low- & moderate-risk
follow-up scans

Clinicians identify
~17
patients on a trajectory
toward high-cost care

Sources:

- (1) <https://doi.org/10.1001/jamaoncol.2015.0735>
- (2) <https://doi.org/10.1164/rccm.201505-0990OC>
- (3) <https://doi.org/10.1148/radiol.2017161659>
- (4) <https://doi.org/10.1016/j.chest.2016.10.010>

Conclusion

The evidence presented at AABIP 2025 underscores an important truth that health systems can no longer ignore: 'low-risk' must never be equated with 'no-risk.'

In this study, more than one in four patients with small nodules progressed to a higher-risk category within a year, and 7.3% of those initially considered "low-risk" advanced directly to high-risk. These findings reveal the dynamic nature of risk and the potential danger in treating follow-up as optional.

Rather than viewing small nodules as a low priority, this evidence necessitates a fundamental reevaluation of how health systems approach their management. Surveillance strategies must adapt to the clinical reality that risk evolves over time and that even nodules classified as "low-risk" today may become clinically significant tomorrow.

With the right tools, health systems can move from static, optional follow-up toward approaches that ensure earlier intervention opportunities are not missed.

About Eon

Eon is a healthcare technology company focused on supporting health systems in the identification and ongoing management of patients at risk of cancer and other life-threatening conditions. Powered by condition-specific clinical AI, Eon's longitudinal care management platform extracts incidental findings documented in radiology reports and helps ensure patients receive timely, guideline-based follow-up and remain in appropriate surveillance over time.

More than 70 health systems across over 1,200 facilities rely on Eon and its care management services to scale early detection programs, enable earlier diagnosis and treatment, and support sustained patient engagement — outcomes that also carry meaningful financial implications for health systems.

Ready to Transform Incidental Findings Management?

Learn how leading health systems are adapting their surveillance models. [Request a consultation](#)