

OCTOBER, 2024

QUALITY IMPROVEMENT CASE STUDY

Advancing Radiology Care at East Alabama Medical Center

AI-Empowered Radiology Follow-up and Quality Improvement Outcomes

Introduction: The Challenge

[East Alabama Medical Center \(EAMC\)](#), a 314-bed regional referral hospital, has a long history of improving patient care through innovative programs and partnerships. So when they identified a critical gap in their radiology and lung nodule management workflows—timely and effective follow-up imaging for incidental findings—radiology leaders looked to AI advancements that could address the need without increasing resource strain.

Lung cancer accounts for [20% of all cancer deaths](#), killing more people each year than colon, breast, and prostate cancers combined. Early detection is the most critical key to improving survival rates, and many early-stage lung cancers are discovered during imaging for unrelated reasons. Approximately one in three chest CT scans reveals lung nodules, with the majority being benign. Yet, without a consistent approach to follow-up, many hospitals—EAMC included—have struggled to ensure timely monitoring and treatment, impacting patient outcomes.

Through an innovative collaboration with Inflo Health and the [American College of Radiology \(ACR\) Learning Network](#), EAMC brought to bear a technology-enabled, process-driven approach to lung nodule management that drove dramatic and immediate impact.

“Inflo Health’s collaboration with East Alabama Medical Center and the ACR Learning Network has dramatically enhanced our approach to lung nodule management and radiology follow-up. The technology introduced by Inflo Health has significantly streamlined our processes, reduced manual effort and boosted staff efficiency. This has also enabled us to expand care navigator roles to other clinical areas. This partnership exemplifies how integrating advanced technology with strategic collaboration can set new standards in radiology practices and operational excellence.”

~ Melinda Johnson,
Radiology director
at EAMC

Problem: Lack of Structured Follow-Up for Lung Nodules

Before collaborating with Inflo Health and ACR, EAMC had no scalable or comprehensive system for tracking incidental lung nodules. Manual processes were time-consuming, with clinical staff spending hours sifting through unstructured radiology reports to identify patients who needed follow-up care. Adherence to the Fleischner Society Guidelines, which standardize follow-up care, was inconsistent, and completion rates for follow-up imaging were low.

Key challenges included:

- **Data management:** Unstructured radiology reports made it difficult to efficiently track patients needing follow-up.
- **Communication gaps:** Patients discharged from acute care often lacked coordinated handoffs to primary care providers (PCPs), further reducing follow-up completion rates.
- **Manual efforts:** The time-consuming process required to manually review reports limited the number of studies and modalities reviewed, which hindered the speed and breadth of follow-up recommendations actioned by care navigators.

Solution: EAMC, Inflo Health, and ACR Collaborative

EAMC's journey toward better lung nodule follow-up management began with participating in ACR's Recommendations Follow-Up (RFU) Collaborative and implementing Inflo Health's AI-driven follow-up orchestration platform. This dual approach focused on:

- **Automating Data Extraction:** Inflo Health's natural language understanding (NLU) models automated the identification of lung nodules in radiology reports, reducing the time spent from five hours per week to just 15 minutes—a 95% efficiency improvement.
- **Adherence to Guidelines:** With the support of Inflo Health's insights into appropriateness measures, EAMC worked to improve adherence to Fleischner Society guidelines, raising compliance from 65% to 85% by the end of the collaborative period.
- **Improving Completion Rates:** Leveraging Inflo Health's automated outreach and follow-up tracking, EAMC coordinated follow-up care with PCPs and raised the completion rate for recommended imaging by 74%.

Results: Improved Outcomes and Efficiency

EAMC's collaboration with Inflo Health and the ACR Collaborative yielded impressive results:

- **20% Improvement** in adherence to Fleischner guidelines.
- **74% Increase** in completion rates for recommended lung nodule follow-ups.
- **95% Increase** in staff efficiency, freeing up time for clinical teams to focus on patient care.

These improvements enhanced patient outcomes without requiring additional EAMC resources and provided a compelling return on investment. EAMC generated an estimated \$9,000 per month in additional revenue by increasing follow-up completion, which justified expanding Inflo Health to other follow-up programs and expanding navigator roles to additional clinical areas.

East Alabama Medical Center's success story illustrates how integrating AI-driven tools with collaborative process improvements can transform healthcare practices. EAMC's approach to managing lung nodules sets a new standard for improving patient safety, enhancing radiology follow-up, and increasing operational efficiency. Their experience serves as a model for other hospitals looking to optimize patient care through technology and partnerships.

Technology in Action

How Inflo Health Transforms Radiology Follow-Up

Inflo Health, an **ACR Learning Network Vendor Partner**, uses advanced tools to help hospitals better manage incidental and explicit findings, such as lung nodules, from radiology reports. Typically, these reports are written in free-form text, which makes it hard to track important findings without manual effort. Inflo Health solves this by automatically reviewing reports, identifying key details, and ensuring that necessary follow-up actions are taken.

Key aspects of the system include:

- **Intelligent report analysis:** Inflo Health's natural language processing capability scans radiology reports, identifying opportunities for follow-up and comparing findings against clinical guidelines to ensure appropriateness..
- **Automated notifications:** Inflo Health sends automated, timely notifications to clinical staff, patients, and providers to ensure follow-up completion without manual intervention.
- **Tracking and reporting:** Inflo Health empowers clinical staff through easy-to-action dashboards that allow healthcare teams to monitor follow-up activity and guideline adherence. This helps hospitals like EAMC improve patient care and streamline operations.