Closing the Communication Loop in Radiology Follow-Ups

CME Webinar | Cooperative of American Physicians

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Disclosures to Learners

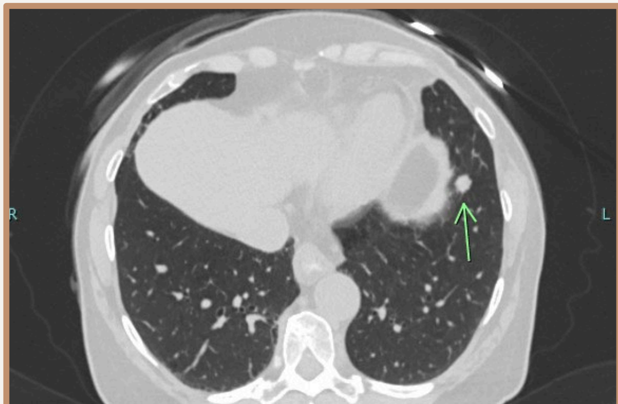
Planner/Speaker Benjamin Hentel, M.D., has identified a financial relationship with Radloop as an Executive Vice President of Radloop. This has been mitigated by peer review.

All other planners, reviewers, faculty and staff for this activity have no relevant financial relationships with ineligible companies.

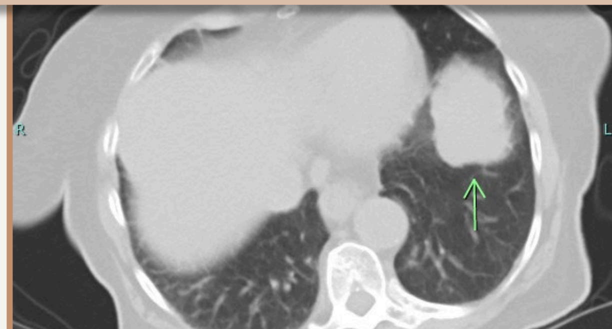
Prologue

When follow-up falls through: A patient story

UPDATED STATISTICS
Localized lung cancer 5-yr survival: 64.7%
Distant lung cancer 5-yr survival: 9.7%
SEER 5-yr relative survival, NSCLC 2015–2021 (ACS/NCI, 2025)



2015
Incidental 8 mm pulmonary nodule



2018
Nodule progressed to a mass

2015: Incidental 8 mm pulmonary nodule. 3-month follow-up CT recommended. **(Stage I 5-yr survival: 61%)**
2018: Pulmonary mass discovered. Patient diagnosed with stage IV lung cancer. **(Stage IV 5-yr survival: 6%)**

Learning objectives

After completing this activity, participants will be able to:

1. Quantify the scope of follow-up recommendation failures in radiology and their impact on patient
2. Identify communication breakdowns that create medicolegal liability
3. Review real-world malpractice cases stemming from follow-up recommendations that were not completed
4. Learn about evidence-based strategies/systems that improve follow-up recommendation adherence
5. Apply risk-reduction frameworks to your own practice environments

SECTION I

The Clinical Crisis

Patients lost in the gap

Follow-up Recommendations: The scale of the problem

~10%

of radiology reports contain follow-up recommendations

Mabotuwana et al., JACR, 2018

38-69%

adherence rates depending on modality

Mabotuwana et al., JACR, 2018

39.1%

adherence for incidental CT findings

Hansra et al., JACR, 2021

17%

follow-up rate for ED incidental findings

Moore CL et al., JACR, 2023

Why follow-up recommendations fail — a systems problem

Radiologist’s recommendation is ambiguous

Referring physician does not see or act on the recommendation in the report

No standardized recommendation tracking or alerting system in place

Patient lack of awareness — findings/need for follow-up never communicated to patients

This is usually not a single-provider failure — it is a systemic communication breakdown.

Hansra et al., JACR, 2021; Mabotuwana et al., JACR, 2018

The clinical consequences

Delayed cancer diagnosis (lung, breast, colon, thyroid)

Disease progression from treatable to untreatable stage

Increased morbidity from more invasive treatments at later stages

Patient mortality — preventable deaths from cancers caught too late

Incidental findings: More Statistics

20-44%

of patients undergoing total-body CT evaluations for trauma have incidental findings

Hansra et al., 2021

<50%

of incidental findings are communicated to patients

Hansra et al., 2021

~50%

of all imaging follow-up recommendations are for lung nodules

ACR Learning Network website

Only a small minority are malignant — but given the massive volume, recapturing missed follow-ups represent a significant opportunity to detect early-stage cancers.

SECTION I-B

Health Equity & Follow-Up Disparities

Does everyone fall through the cracks at the same rate? The answer is no

Follow-up adherence — the equity dimension

Adherence by care setting

Outpatient (with PCP)

ED patients

Inpatient

Hansra et al., JACR, 2021

Where implicit bias and structural barriers compound the problem

- **Race/ethnicity** — Black and Hispanic patients have lower follow-up adherence even after socioeconomic adjustment *(Schut & Mortani Barbosa, JACR, 2020)*
- **Limited English proficiency** — findings not communicated in patient's language; notification materials are not multilingual
- **No primary care physician** — no homebase to receive and act on recommendations

THE EQUITY IMPERATIVE

<50%

of incidental findings communicated directly to patients

When notification depends on individual judgment rather than a protocols, implicit bias may determine who gets notified.

Hansra et al., 2021

Culturally & linguistically competent interventions:

- Direct patient notification in patient's preferred language
- Navigator outreach with interpreter access
- Materials at appropriate health literacy levels
- Standardized protocols for notification (eliminate implicit bias by removing subjective decision-making)

Kaminetzky et al., 2018; Zaki-Metias et al., 2023; Schut & Mortani Barbosa, JACR, 2020

SECTION II

The Legal Landscape

When the loop doesn't close, the courtroom can open

The medicolegal framework

Four elements of medical malpractice applied to radiology

1 **Duty**
Physician-patient relationship established when radiologist dictates a study — radiologist's duty extends to communication of findings and recommendations

2 **Breach**
Failure to meet the standard of care — failure to recommend follow-up or adequately communicate findings and recommendations

3 **Causation**
The breach directly caused delayed diagnosis and patient harm

4 **Damages**
Patient suffered injury (disease progression, additional treatment burden) or death

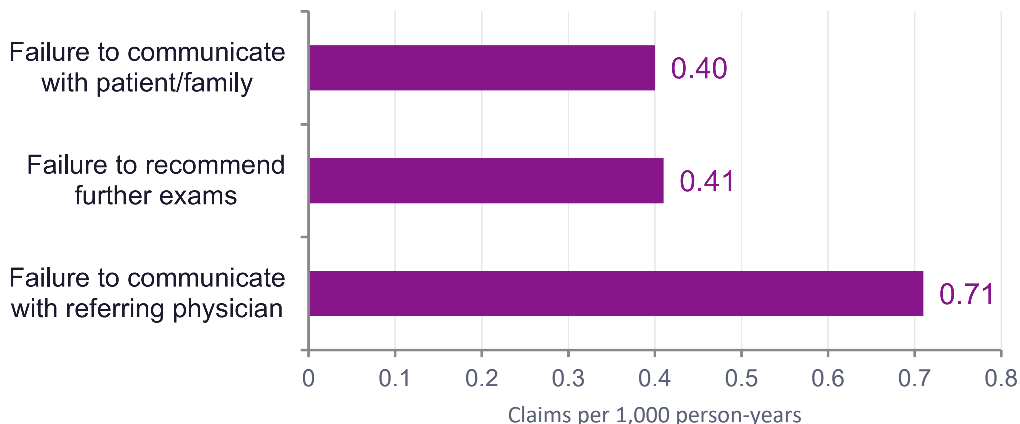
14.83

claims per 1,000 person-years

for diagnostic errors in radiology (missed findings, misinterpretations, failure to communicate)

Berlin L, AJR, 2007
Whang JS et al., as cited in Bruno MA et al., 2011

Communication failure as a distinct liability



Key Insight

Even when the radiologist correctly identifies the finding, failure to effectively communicate can result in liability.

CANDELLO/CRICO 10-YEAR TREND

30% → 40%

40% of all asserted malpractice cases now involve a communication failure — up from 30% a decade ago. (Analysis of 73,000+ closed and 64,000+ asserted cases [2014–2024]).

Candello/CRICO Benchmarking Report: Malpractice Risks from Communication Failures, 2025

Whang JS et al., Radiology, 2013

Case study 1

The report nobody read

$2.5M

Settlement

THE FACTS

- Radiologist interpreted a chest CT and noted a small anterior mediastinal mass.
- Recommended a 6-month follow-up.
- Radiologist did not verbally communicate the finding.
- Referring physician claimed he never saw the report.
- Two years later, the patient was diagnosed with a large, incurable malignant thymoma and subsequently died.

LESSON

Written reports alone may not satisfy the duty to communicate significant unexpected findings.

Berlin L, Applied Radiology; ACR Practice Parameter for Communication of Diagnostic Imaging Findings (Revised 2020)

Case study 2

The lung nodule lost to follow-up

$1.5M

Settlement

THE FACTS

- 58-year-old woman presented to a California ED.
- Radiologist interpreted chest radiographs as "probably normal"… but recommended a CT scan to evaluate a small ill-defined density in the right upper lobe.
- Radiologist did not directly communicate this to the ED physician.
- Eighteen months later, the patient was diagnosed with cancer in the right upper lobe.

LESSON

"Probably normal" language combined with a follow-up recommendation creates ambiguity… and liability.

Berlin L, Applied Radiology; ACR Practice Parameter for Communication of Diagnostic Imaging Findings (Revised 2020)

Case study 3

The second page nobody saw

$2.0M

Radiologist contribution

THE FACTS

- Radiologist identified a significant incidental colonic finding.
- Finding was on the second page of the radiology report.
- Report was faxed it to the referring urologist's office.
- Urologist never reviewed the second page.
- Patient's colon cancer went undiagnosed for 19 months.
- The plaintiff argued the radiologist should have called directly and ensured the finding was acknowledged.

LESSONS

Radiologists may bear liability for ensuring significant findings reach the right people. Shared responsibility: Urologist also deemed responsible (total verdict was $4.5 million)… more to follow here.

Miller & Zois, Radiology Malpractice Case Database, 2017 Massachusetts

Case study 4

The referring physician who didn't follow through

Settled

Cardiologist conceded liability

THE FACTS

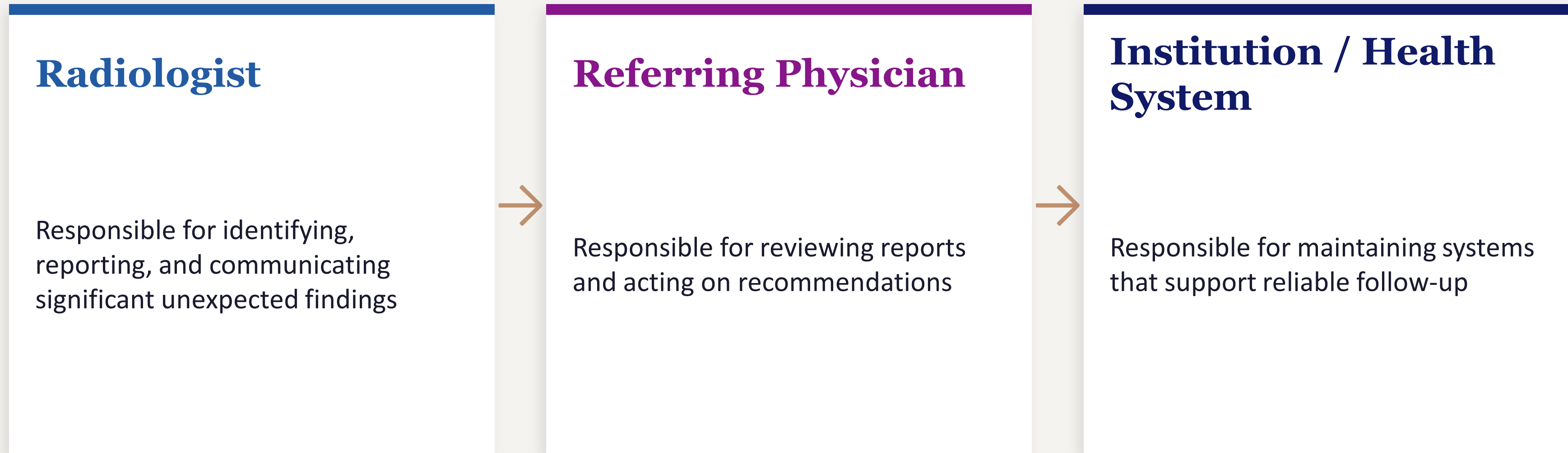
- 69-year-old man presented to the ED in May 2013 with shortness of breath.
- Chest CT revealed bilateral pulmonary nodules
- Radiologist recommended PET/CT or repeat CT in 4–6 months.
- Over the next year, the cardiologist saw the patient four times — but never mentioned the abnormal CT or ordered follow-up imaging.
- When a repeat CT was finally performed in May 2014, nodules had progressed to multiple bilateral lung masses.
- Biopsy confirmed high grade, poorly differentiated small cell neuroendocrine carcinoma

LESSON

Defense experts conceded the cardiologist’s care was below the standard of care. Although oncologists argued the cancer was likely already incurable at the time of the original scan, the case was settled because conceding liability made it nearly unwinnable at trial.

TMLT Closed Claim Study; Painter Law Firm case summary

Who bears the responsibility? Shared liability

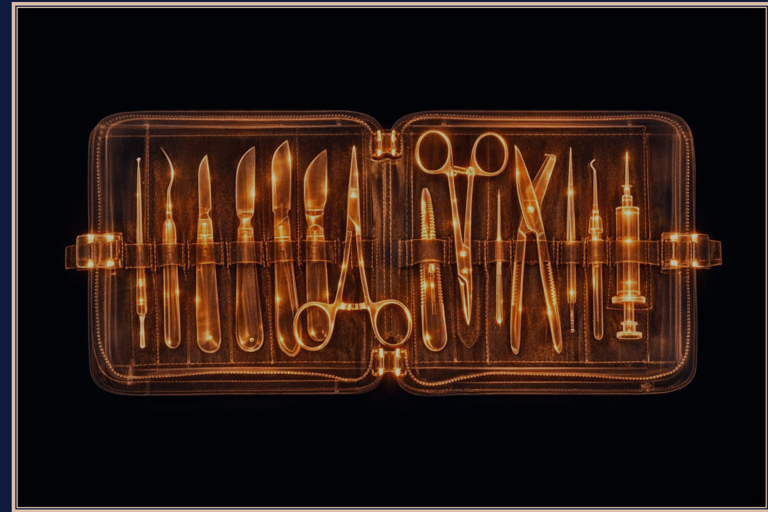


Emerging trend – Systemic Accountability: Courts increasingly view care as a shared, system-level responsibility. In a NORCAL closed claim, a radiologist, ED physician, and hospital were all named after a known EHR glitch prevented a STAT head CT report from reaching the ordering physician — the patient died of a treatable subdural hematoma. Source: Claims Rx, February 2017. norcal-group.com

SECTION III

Closing the loop

What the radiology literature tells us works



It starts with the radiology report

Recommendation specificity directly predicts whether follow-up happens

Analysis of 2.97 million radiology exams over 7 years
Follow-up interval was not mentioned in 79.4% of recommendations
Modality was missing in 47.4%.

3×

more likely to receive follow-up when the radiology report explicitly states a follow-up time interval

USE — Definitive language

"Recommend follow-up non-contrast CT chest in 12 months"
"Follow-up MRI brain without and with contrast in 6 months is recommended"

AVOID — Conditional language

"Consider follow-up imaging" — not definitive, no timeframe or modality
"Clinical correlation recommended"

Reviewing the literature and getting feedback on our reports changed the way my entire practice and I dictated follow-up recommendations

Mabotuwana T et al., JACR, 2018; Mabotuwana T et al., Stud Health Technol Inform, 2022; Mabotuwana T et al., AMIA Annu Symp Proc, 2018

Published outcomes from follow-up programs

Peer-reviewed evidence that systematic interventions improve adherence

CT Lung Cancer Screening Navigator Program

Full-time program navigators, tracking system, patient notification letters, 30/60/90-day reminders

85.7%
Patient adherence rate

vs ~35–58%
Typical real-world adherence

Kaminetzky M et al., Clin Imaging, 2018

FIND Program — Trinity Health

NLP-based recommendation extraction, dedicated nurse navigators, systematic patient outreach, feedback to radiologists

19.2% → 55.0%
ED follow-up adherence

75.4% → 95.7%
Recommendation quality (modality + timeframe specified)

Zaki-Metias K et al., J Imaging Inform Med, 2023

ACR Learning Network Collaborative

Fleischner society recommendations. Shared learning, dedicated care coordination teams, across 7 sites

62.3% → 89.0%
Guideline adherence

41.4% → 61.1%
Follow-up completion

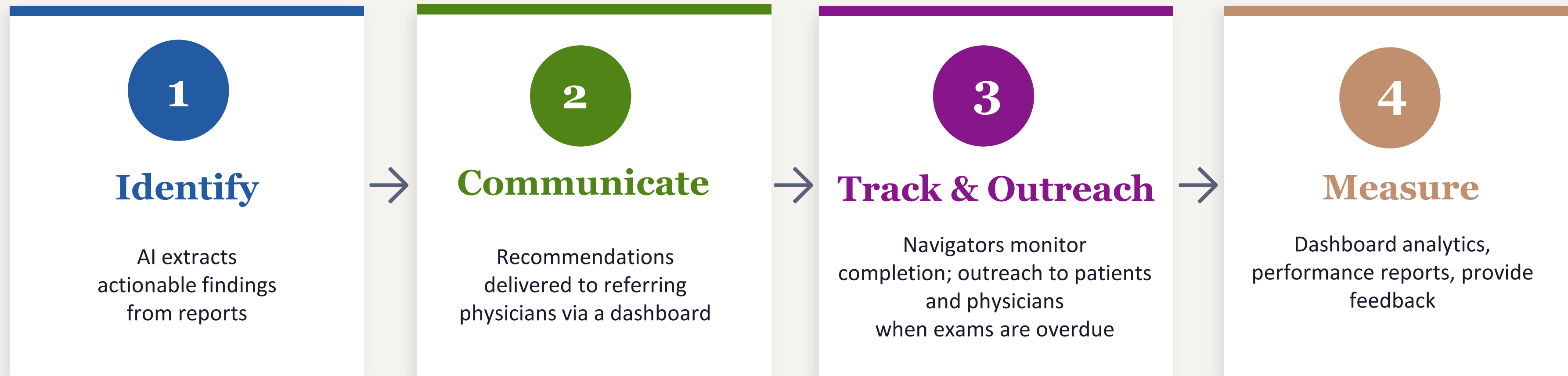
Wandtke B et al., JACR, 2025

What successful programs have in common

The literature converges on a consistent set of elements across institutions

	Standardized report language	Standardized recommendations that align with published guidelines, ensuring recommendations include modality, timeframe, and urgency.
	Automated identification and tracking	AI algorithms extract actionable findings from reports, eliminating reliance on manual review. Automated tracking ensures recommendations are not lost.
	Dedicated care coordination	Programs with nurse navigators or dedicated coordinators consistently outperform those without. Need a human in the loop.
	Closed-loop communication with audit	Documented acknowledgment of findings by referring providers, with escalation protocols when communication fails. Audit both sides: Are radiologists communicating clearly? Are referring physicians acknowledging and acting?
	Patient notification and engagement	Direct patient outreach — including letters, portal messages, and reminder calls

A literature-supported framework for closing the loop



Key finding from the literature: *"A synergistic combination of people, process, and technological interventions perform better than any single intervention alone."*

Wandtke B et al., JACR, 2025 — ACR Learning Network Recommendations Follow-Up Collaborative

THE BUSINESS CASE

These programs pay for themselves

4.1×

return on investment vs. labor cost

A multistage recommendation tracking system generated annual revenue 4.1 times greater than the labor cost of operating the program.

Wandtke B, Gallagher S. AJR. 2017;209:970-975.

$980K

revenue attributed to safety net team

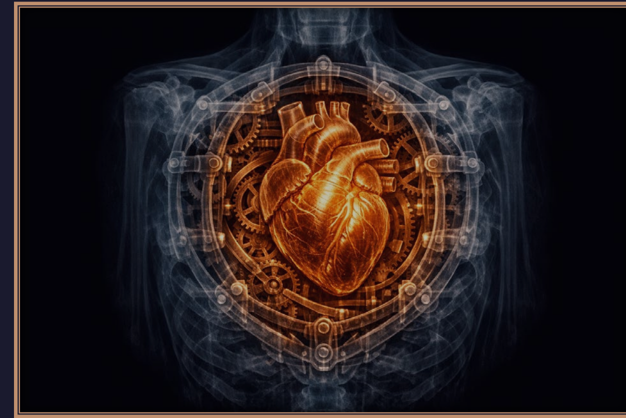
An IT-enabled safety net program (ensured patients with actionable radiology findings received appropriate follow-up) at Brigham and Women's was fully self-funding, generating ~$350K net revenue per FTE.

Jhala K et al. JACR. 2024;21(8):1258-1268.

One prevented malpractice payout would pay for these program for years.

PATIENT, MALPRACTICE, AND BUSINESS CASE IN ONE!

Follow-up Programs

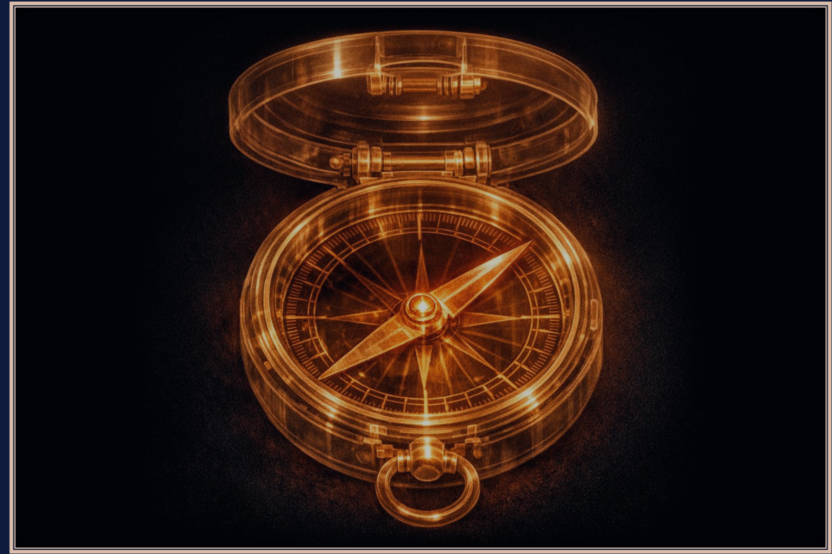


- Improve patient safety
- Reduce malpractice exposure
- Generate revenue that exceeds their operating costs

SECTION IV

Call to Action

What you can do tomorrow morning



Risk assessment — questions for your practice

Do you know your follow-up recommendation adherence rate?

Who is responsible for tracking incidental findings at your institution?

How are significant unexpected findings communicated — and is it documented?

Do patients receive direct notification of findings that require follow-up?

Is there a system in place to identify patients who are lost to follow-up?

When was the last time you audited your communication workflow?

Practical next steps — by stakeholder

Radiologists

Standardize recommendations with timeframe and modality. Communicate significant unexpected findings directly to the referring provider.

Referring Physicians

Review follow-up recommendations. Document clinical reasoning if deferring.

Quality and Risk

Measure baseline adherence rates. Implement closed-loop communication protocols with documented acknowledgment and escalation for communication failures.

IT and Informatics

Deploy AI-based recommendation extraction, automated alerts, and care coordinator dashboards.

Institutional Leadership

Fund the technology and care coordination staffing. Frame around compliance (Joint Commission, CMS/MIPS, and ACR accreditation requirements).

All Stakeholders

Shared learning! Join the ACR Learning Network or similar QI collaborative.

What we covered today

Learning objectives revisited

1

The scope of the problem

Follow-up recommendations are common and adherence depends on modality. Follow-ups are missed at every care setting, with ED and inpatient patients most at risk.

2

Communication failures → liability

Failure to communicate findings (not just failure to detect them) drives an increasing share of radiology malpractice claims.

3

Real malpractice cases

Four cases illustrated how communication failures lead to verdict or settlement.

4

Evidence-based solutions

Published programs (CT Lung Screening, FIND, ACR Learning Network) demonstrate significant adherence improvements through tracking, coordination, and report standardization. Programs pay for themselves.

5 **Apply this to your practice:** Use risk-assessment questions to identify gaps in your institution's follow-up workflow — and try to close them.

Epilogue

When follow-up happens: A recent patient story

THE FACTS

- 11 mm ground glass nodule incidentally discovered on a CTA of the chest preformed for pre-operative planning of a thoracic aortic aneurysm.
- Follow-up CT chest was recommended, per Fleischner guidelines.
- AI extracted follow-up recommendation
- Patient was sent a letter one month after due date of follow-up study.
    - **Patient was not aware of nodule**
    - Patient reestablished care with a previously seen pulmonologist
- CT Chest performed
- PET/CT performed
- Wedge resection performed
- Final surgical pathology:
    - Adenocarcinoma (lepdic and acinar patterns) of the lung
    - Negative resection margins
    - **Staging: pT1b, pN0**

Questions & Discussion

Thank you!

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