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Research Article

Radiology Technologists' Pivotal Role in Early Detection and Systematic Escalation of Incidental Critical Findings During Imaging Procedures

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Abstract:

Radiology Technologists (RTs) serve as critical frontline safeguards in modern diagnostic imaging, playing an indispensable role in the early detection and urgent escalation of incidental critical findings (ICFs). During imaging procedures, RTs conduct real-time image surveillance, utilizing systematic search patterns, anatomical knowledge, and clinical context to identify potentially life-threatening abnormalities—such as large hemorrhages, aortic dissections, or tension pneumothoraxes—that are unrelated to the primary exam indication. This proactive detection triggers a mandated escalation protocol, requiring immediate, direct communication to the interpreting radiologist to ensure timely clinical intervention. Fulfilling this responsibility successfully hinges on robust institutional policies, interdisciplinary collaboration, and a supportive safety culture that empowers RTs to act. Ultimately, by bridging the gap between image acquisition and formal interpretation, RTs transform from technical operators into vital patient advocates, directly enhancing outcomes and strengthening the entire diagnostic safety net within healthcare.

1. Introduction

The contemporary diagnostic imaging department is a dynamic, high-stakes environment where technology and human expertise converge to unlock vital diagnostic information. Within this ecosystem, the radiologist has traditionally been unequivocally recognized as the physician expert responsible for the final interpretation and diagnosis. However, the pathway from image acquisition to definitive diagnosis is not a linear relay but a complex, collaborative process involving multiple skilled professionals. Central to this process is the radiology technologist (RT), whose role has evolved far beyond the technical execution of imaging protocols. Today, the RT is an essential frontline observer, a critical node in the patient safety and diagnostic chain, particularly in the identification and initial management of incidental critical findings (ICFs) discovered during imaging procedures. An incidental finding is defined as a previously undiagnosed medical condition that is unexpectedly discovered and is unrelated to the current medical condition for which the examination was initially requested [1]. When such a finding has the potential to imminently threaten a patient's life or long-term health—such as an unsuspected large aortic aneurysm, a pulmonary embolism, a massive intracranial hemorrhage, or a newly detected aggressive malignancy—it is classified as critical, necessitating immediate and unambiguous communication to ensure timely intervention [2].

The increasing volume and complexity of diagnostic imaging examinations, propelled by technological advancements in multi-detector computed tomography (CT), magnetic resonance imaging (MRI), and hybrid modalities like positron emission tomography/computed tomography (PET/CT), have exponentially increased the probability of encountering ICFs [3]. Radiologists, often working under significant workload pressures and interpreting studies remotely or asynchronously, may not view the images in real-time as they are acquired. This temporal gap between acquisition and formal interpretation creates a crucial window wherein a vigilant and knowledgeable RT, present with the patient and monitoring images as they are generated, can serve as the first line of detection for a life-altering abnormality. This frontline capacity transforms the RT from a purely technical operator into an active participant in diagnostic surveillance and patient safety advocacy.

The concept of the "right-siting" of responsibilities in healthcare emphasizes delegating tasks to the most appropriate professional to improve efficiency and outcomes. The detection of obvious critical abnormalities during image acquisition is a prime candidate for such right-siting. It is an ethical imperative and a standard of care that a grossly abnormal finding, visible during the procedure, should not go unremarked until a formal report is issued hours or days later, potentially with catastrophic consequences for the patient [4]. Consequently, professional bodies, including the American Society of Radiologic Technologists (ASRT) and the American College of Radiology (ACR), have formally acknowledged and incorporated this responsibility into practice standards and position statements. They affirm that RTs have a professional obligation to review images for technical quality and, in doing so, may recognize abnormalities that require immediate communication [5, 6].

This expanded role, however, is fraught with complexity. It navigates a delicate boundary between appropriate observation and inappropriate diagnosis. The RT is not trained to diagnose, and their role is explicitly not to usurp the radiologist's interpretative function. The core competency lies not in pathological characterization but in *pattern*

recognition for escalation—the ability to identify an image that appears grossly and significantly deviant from normal anatomy and to initiate a predefined, institutionally sanctioned escalation protocol without delay. This requires a sophisticated blend of perceptual skills, anatomical knowledge, clinical judgment, and clear communication abilities, all underpinned by robust ethical principles and legal awareness.

Furthermore, the effective management of ICFs is not the solitary act of a single technologist but a systemic process. It depends on the existence of clear, written institutional policies, seamless interdisciplinary communication channels, and a supportive culture that empowers RTs to speak up without fear of reprisal for being "wrong." Barriers such as hierarchical gradients, fear of litigation, ambiguous protocols, and lack of feedback can severely undermine this safety net [7]. The educational preparation of RTs must also evolve to strengthen their image evaluation competencies, not for diagnosis, but for systematic observation and critical thinking within their defined scope of practice [8].

2. The Spectrum of Incidental Critical Findings:

The nature of incidental critical findings varies considerably based on the anatomical region being imaged, the clinical indication for the study, and the imaging modality employed. For the radiology technologist, a working familiarity with the most common and time-sensitive ICFs is essential to guide their observational focus. This knowledge is not encyclopedic but targeted towards recognizing dramatic deviations from normal anatomical structure that suggest imminent danger. It is categorically understood that the technologist's goal is to identify the *presence of a potential critical finding*, not to specify its exact pathological etiology. The following overview categorizes these findings by major body systems, illustrating the scope of conditions where a technologist's alertness is paramount.

In neuroimaging, performed via CT or MRI, several findings demand immediate attention. A large intracranial hemorrhage, such as an epidural, subdural, or intraparenchymal hematoma, often presents as a hyperdense (bright on CT) extra-axial or intra-axial collection causing significant mass effect, evidenced by midline shift, effacement of ventricles, or uncal herniation [9]. Acute ischemic stroke may be subtle initially, but a large established infarct with clear hypodensity involving more than one-third of a vascular territory, or signs of acute basilar artery occlusion, can be discernible. A ruptured intracranial aneurysm with subarachnoid hemorrhage typically appears as hyperdense blood filling the basal cisterns. Furthermore, obstructive hydrocephalus from a mass lesion, evident as dramatically enlarged ventricles, is a critical finding requiring urgent neurosurgical evaluation [10].

Within the thorax, chest radiographs and CT scans frequently reveal life-threatening conditions. A tension pneumothorax, visible on a chest X-ray as a large unilateral lucency with a distinct visceral pleural line and contralateral mediastinal shift, is a classic surgical emergency [11]. A massive pulmonary embolism, though often more definitively diagnosed on CT pulmonary angiography, can sometimes be suspected on a routine contrast-enhanced chest CT by observing a large filling defect in the main pulmonary arteries or signs of right heart strain. An enlarging thoracic aortic aneurysm, particularly if exhibiting a high-attenuation crescent sign suggesting impending rupture, or a visible aortic dissection flap are cardiovascular catastrophes that cannot wait for routine reporting [12]. Similarly, a large mediastinal mass causing significant tracheal or vascular compression is an urgent finding.

Abdominal and pelvic imaging is another common source of ICFs. The most feared is likely a ruptured abdominal aortic aneurysm (AAA), seen on non-contrast or contrast CT as a large retroperitoneal aneurysm often with peri-aortic hematoma or active extravasation of contrast [13]. Solid organ injuries from unsuspected trauma, such as a lacerated liver or spleen with active hemorrhage, are critical discoveries in a patient scanned for unrelated reasons. A suspected perforated viscus, indicated by free intraperitoneal air (pneumoperitoneum), is an acute surgical condition. In the kidneys, newly identified bilateral hydronephrosis suggesting obstruction, or a large renal mass with invasive features, also warrants prompt escalation [14].

Musculoskeletal examinations, while often considered less acute, can reveal critical findings. A missed fracture, such as a femoral neck fracture in an elderly patient or a cervical spine fracture, can have devastating consequences if the patient is mobilized. Aggressive bone lesions with extensive soft tissue components or pathological fractures in the setting of an unknown primary malignancy are significant findings that require urgent oncological attention [15]. Even in routine extremity imaging, the presence of a deep vein thrombosis, especially if extensive, should be flagged. Across all modalities, the technologist must also be alert to the correctable error of wrong-patient or wrong-side imaging, which, if undetected, constitutes a critical safety failure in itself [16].

3. The Technologist's Toolkit: Strategies for Proactive Image Surveillance

The ability to reliably identify potential critical findings is not an innate talent but a cultivated skill set, a "toolkit" that blends perceptual acuity, structured methodology, and clinical correlation. This proactive surveillance is an active process that occurs concurrently with the technical responsibilities of the examination. The foundational strategy is the adoption of a systematic search pattern. Rather than a cursory glance, the technologist should develop and consistently apply a disciplined approach to reviewing localizer images, scout images, and reconstructed series. For a chest CT, this might mean routinely checking the lungs, mediastinum, bones, and upper abdomen on the scout and initial slices. For an abdominal study, a quick assessment of solid organs, vascular structures, and the presence of free fluid or air becomes habitual [17]. This systematic approach minimizes the risk of satisfaction of search, where detection of one abnormality leads to missing others.

Crucial to this surveillance is a deep and practical understanding of cross-sectional anatomy. The technologist must be proficient in recognizing normal anatomical structures in multiple planes (axial, sagittal, coronal) and on different imaging sequences (T1, T2, DWI on MRI; pre- and post-contrast on CT). This knowledge allows for the rapid identification of anomalies—a structure that is missing, displaced, enlarged, or of abnormal density/intensity. For instance, recognizing that the pancreatic head should nestle within the C-loop of the duodenum, or that the quadrigeminal plate cistern should have a characteristic shape, allows for swift detection of mass effect [18]. This anatomical proficiency is honed through continued education, case review, and side-by-side collaboration with radiologists.

Integration of patient history and clinical context is the third pillar of effective surveillance. While technologists are not diagnosticians, awareness of the patient's age, presenting symptoms, and medical history provides an essential lens through which to view the images. A non-contrast head CT on an elderly patient who fell takes on a different urgency, with a focused search for hemorrhage. Knowing a patient has a history of cancer should heighten sensitivity to potential metastatic disease. The technologist should review the requisition and, when appropriate, engage in brief, professional dialogue with the patient or nursing staff to clarify the clinical scenario. This context transforms an observed abnormality from an abstract curiosity into a clinically relevant finding that must be acted upon [19].

Finally, the technologist must master the technical aspects of image display to optimize detection. This includes adjusting window width and level (windowing) to best evaluate different tissues. Reviewing lung parenchyma requires a lung window (e.g., width 1500, level -600), while evaluating the mediastinum requires a soft tissue window (e.g., width 350, level 40). A subtle pneumothorax may be invisible on soft tissue settings but glaringly obvious on lung windows. Similarly, reviewing bone windows is essential for detecting fractures. The competent technologist fluidly adjusts these settings during their review to ensure no finding is obscured by suboptimal display parameters [20]. This technical mastery, combined with systematic observation, anatomical knowledge, and clinical context, forms a comprehensive toolkit for proactive image surveillance.

4. From Detection to Action: The Escalation Protocol Imperative

The identification of a potential critical finding is only the first, albeit vital, step. Its true value is realized only through immediate and effective action—the escalation. Ad hoc, verbal communication is unreliable and prone to failure. Therefore, the cornerstone of a safe and effective response is a formally established, written, and universally understood Critical Findings Escalation Protocol. This protocol serves as a roadmap, removing ambiguity and ensuring consistent, timely communication regardless of the time of day or the individuals involved. A robust protocol typically encompasses several key stages: initial assessment and verification, primary communication, documentation, and escalation for non-response.

Upon suspecting a critical finding, the technologist's first action is a brief but deliberate verification. This involves reviewing the images again, ensuring the finding is not an artifact (e.g., motion, beam hardening), and confirming patient identifiers. If possible and without causing undue delay, a second experienced technologist or a supervising technologist may be consulted for a quick confirmation of the observation—a "second pair of eyes" to bolster confidence and reduce false positives [21]. However, the protocol must emphasize that in cases of clear and dramatic abnormality (e.g., massive hemorrhage, tension pneumothorax), verification should not delay immediate notification.

The protocol must explicitly designate the primary recipient of the communication. This is invariably

the interpreting radiologist for that examination or the radiologist on call. The method of communication should be direct and interruptive—a phone call or in-person conversation is mandatory. Sending a text message, an email, or leaving a voicemail is insufficient, as these can be missed or delayed [22]. The communication itself must be structured and clear. The technologist should state their name, role, the patient's identifiers, the examination performed, and a concise, non-diagnostic description of the finding using anatomical and descriptive terms. For example: "This is [Name], the CT technologist. I am calling about patient [ID] who just had a non-contrast head CT. I am looking at the images and see a large, hyperdense extra-axial collection in the right frontoparietal region with about 1 cm of midline shift. The patient is currently in the scanner and awake." This format provides the radiologist with all necessary information to immediately assess the images and take clinical command.

Concurrent with or immediately after the verbal communication, the technologist must document the event meticulously in the patient's medical record, according to institutional policy. This documentation should be factual and objective, avoiding diagnostic language. It should note the time the finding was observed, a brief description of the observation, the name of the radiologist (or other provider) notified, the time of notification, and the method of communication [23]. This creates a legal and professional audit trail, protecting both the patient and the healthcare providers.

A critical component of any protocol is the defined pathway for escalation if the primary contact cannot be reached or does not respond within a specified, short timeframe (e.g., 5-10 minutes). This escalation chain may proceed to the lead radiologist, the radiology department director, the referring physician directly (if their contact is readily available), or even the emergency department charge physician if the patient is in a critical setting [24]. The protocol must be designed to ensure the information reaches a licensed independent practitioner capable of acting on it, even if the radiology chain of command is temporarily broken. Regular drills and education on this protocol for all imaging staff are essential to ensure familiarity and compliance.

5. Educational Foundations and Competency Development

The safe and effective execution of the role described necessitates a solid and evolving educational foundation. The competency to identify findings for escalation is not an ancillary skill but a core professional requirement that must be integrated into the formal education of radiology technologists and reinforced through continuing professional development. Academic programs must move beyond purely technical and procedural instruction to include robust training in image analysis, pathology recognition, and critical thinking within a defined scope.

In the academic setting, curricula should incorporate dedicated courses in cross-sectional anatomy and image evaluation. These courses should use a systems-based approach, teaching students to recognize normal anatomy on CT and MRI and then introducing them to classic presentations of major, critical pathologies—not to diagnose, but to recognize as "abnormal and potentially urgent." Learning should be case-based and interactive, utilizing picture archiving and communication system (PACS) simulators where students can practice systematic review, adjust window settings, and describe abnormalities in appropriate language [25]. Ethical and legal modules must explicitly address the technologist's responsibilities and limitations regarding incidental findings, fostering a clear understanding of the boundary between observation and diagnosis.

Clinical internships are the crucible where theoretical knowledge is applied. Clinical instructors and supervising technologists must model vigilant image surveillance and demonstrate proper escalation procedures. Students should be encouraged, in a supervised manner, to review images, articulate their observations, and participate in communication drills. Feedback is essential; when a student correctly identifies a finding that leads to escalation, positive reinforcement solidifies the behavior. Conversely, constructive review of missed findings is a powerful learning tool [26].

For practicing technologists, continuing education (CE) is paramount. Mandatory CE offerings should include topics on "Red Dot" or critical finding policies, updates on escalation protocols, and case review sessions led by radiologists. These sessions are particularly valuable for discussing challenging cases, near-misses, and reinforcing the descriptive language to be used. Interprofessional education (IPE) sessions involving both technologists and radiologists can break down hierarchical barriers, clarify expectations, and build mutual respect, fostering a culture of shared responsibility for patient safety [27]. Furthermore, certification bodies and professional societies like the ASRT can develop advanced credentialing options, such as a Certificate of Merit in Image Evaluation, to formally recognize and incentivize the development of this expertise. Ultimately, a lifelong learning

mindset, supported by structured educational opportunities, is fundamental to maintaining and enhancing this critical competency across the profession.

6. Legal, Ethical, and Professional Frameworks Governing Practice

The radiology technologist's involvement in the incidental findings pathway operates within a complex matrix of legal, ethical, and professional guidelines. Understanding these frameworks is not merely an academic exercise but a practical necessity for safe and defensible practice. The core legal principle is the standard of care, which is defined by what a reasonably prudent technologist with similar training would do under the same circumstances [28]. Courts and professional boards now increasingly recognize that the standard of care for a modern RT includes a duty to review images for technical adequacy and, in the course of that review, to act upon clearly evident critical abnormalities. Failure to recognize and escalate a blatant, life-threatening finding visible during the procedure could potentially expose the technologist and the institution to allegations of negligence.

Ethically, the profession is guided by principles of beneficence (doing good), non-maleficence (avoiding harm), and patient advocacy. The ASRT Code of Ethics explicitly states that technologists must "provide care intended to maximize the patient's well-being" and "utilize equipment and accessories appropriate to the needs of the patient" [5]. This extends to utilizing one's knowledge and position to prevent harm. Withholding knowledge of a critical finding, when one has the capacity and protocol to communicate it, could be viewed as a breach of these ethical duties. The ethical tension often lies in the fear of overstepping or being wrong. However, a well-designed escalation protocol resolves this by framing the action not as diagnosis but as a safety alert—a request for expert review based on a concerning observation.

Professionally, authority is derived from scope of practice documents and position statements. The ASRT, in its "Radiologic Technologist Practice Standards," includes "evaluating images for proper positioning and technical quality" and "recognizing and reporting any significant patient condition changes or equipment abnormalities to the appropriate supervisor" [29]. The ACR, while emphasizing the radiologist's ultimate interpretative responsibility, supports policies that enable and guide technologists in communicating potentially critical observations. Many institutions formalize this through "Critical Test Result" or "Unexpected Finding" policies that include technologists as authorized initiators [30]. Operating within these institutional policies provides legal and professional shelter; deviating from them creates vulnerability.

A significant legal concern is the concept of "practicing medicine without a license." This risk is mitigated by strict adherence to the defined role: observation and communication using descriptive language, not diagnostic conclusions. Saying "there is a large dense collection in the brain causing shift" is observation; saying "the patient has a subdural hematoma" is diagnosis. The former is within scope; the latter is not [31]. Documentation must also reflect this distinction. Finally, the legal doctrine of "respondent superior" (let the master answer) typically holds the employer institution vicariously liable for the actions of its employees acting within their scope. This underscores the institution's responsibility to provide clear policies, proper training, and a non-punitive culture that supports safe escalation [32]. In summary, the legal and ethical landscape strongly supports the technologist's vigilant role, provided it is exercised within the boundaries of defined protocols, professional standards, and appropriate communication.

7. Systemic and Cultural Enablers and Barriers

The efficacy of individual technologists in detecting and escalating ICFs is profoundly influenced by the larger system and culture of the radiology department and the healthcare institution. A proactive, safety-oriented culture can empower technologists, while a hierarchical, blame-oriented one can silence them. Key systemic enablers include leadership commitment, interdisciplinary collaboration, and robust feedback loops. Conversely, common barriers encompass resource constraints, ambiguous protocols, and punitive responses to errors.

A foundational enabler is visible and unwavering commitment from radiology and hospital leadership. When department chairs, chief technologists, and hospital administrators explicitly endorse and resource critical finding protocols, it sends a powerful message that this is a priority. Leadership must allocate time for training, invest in technology that facilitates communication (such as secure messaging platforms with read receipts), and participate in reviews of escalation events [33]. A culture of psychological safety, where staff feel comfortable speaking up about concerns without fear of humiliation, retribution, or being ignored, is perhaps the most critical cultural enabler. This is cultivated by leaders who respond to alerts with gratitude, investigate near-misses without assigning

blame, and treat errors as opportunities for system improvement rather than individual failure [34].

Interdisciplinary collaboration and mutual respect between technologists and radiologists are vital. When radiologists actively encourage technologists to bring forward concerning images, thank them for their vigilance, and provide constructive feedback, it builds trust and reinforces the behavior. Joint morbidity and mortality conferences or case review sessions that include technologists demystify the radiologist's thought process and validate the technologist's contributions to the diagnostic team [35]. Clear, streamlined technology is another enabler. Integrated alert systems within the PACS or electronic health record that allow technologists to flag a study for immediate radiologist attention can standardize and accelerate the communication process [36].

Significant barriers, however, persist. Chronic understaffing and high workload pressures can force technologists to prioritize throughput over thorough image review, making systematic surveillance difficult. Ambiguous or poorly disseminated escalation protocols leave technologists uncertain about whom to call or what constitutes a "critical" finding, leading to hesitation [37]. A persistent hierarchical medical culture, where a technologist's input is dismissed or belittled by a physician, is a potent disincentive. The fear of legal liability for a false positive or for "overstepping" can be paralyzing, especially in the absence of clear institutional indemnity [38]. Finally, a lack of closed-loop feedback is a major demotivator. If a technologist never learns the outcome of their alert—whether it was significant, whether the patient received timely care—they cannot gauge the impact of their actions, and the behavior is not reinforced [12]. Addressing these barriers requires deliberate, ongoing system redesign and cultural work.

8. Modality-Specific Considerations and Challenges

While the core principles of detection and escalation are universal, their application presents unique nuances and challenges across different imaging modalities. The technologist's proximity to real-time image generation, the nature of the pathology, and the workflow vary significantly, necessitating modality-specific strategies and awareness.

In **Computed Tomography (CT)**, especially with modern multi-slice scanners, vast datasets are generated rapidly. The technologist often reviews a "scout" topogram and may monitor axial slices in real-time during the acquisition. Critical findings like a large hemorrhage, aortic dissection, or pulmonary embolism can be strikingly evident even on single slices. The challenge in CT is the volume of data; a subtle finding in one organ could be missed while focusing on another. A disciplined, systematic review of reconstructed images in at least two planes (e.g., axial and coronal) before the patient leaves the department is a key strategy [37]. Protocols for non-contrast studies (e.g., for renal colic) must also account for potentially critical non-urological findings.

Magnetic Resonance Imaging (MRI) presents a different set of challenges. Acquisitions are lengthier, and images from a sequence may not be fully available until the scan is complete. However, technologists can monitor images as each sequence finishes. Critical findings in MRI, such as an acute spinal cord compression or a large pituitary apoplexy, are often highly conspicuous on certain sequences (e.g., T2-weighted or diffusion-weighted imaging). The technologist must be adept at recognizing abnormal signal intensities and mass effect across diverse pulse sequences. The prolonged scan time also means the patient is under direct observation for longer, allowing the technologist to correlate imaging findings with any acute change in the patient's clinical status (e.g., neurological decline during a brain MRI) [19].

In **General Radiography (X-ray)**, particularly in emergency and portable settings, the technologist is frequently the first and sometimes the only person to see the image before a radiologist's interpretation, which may be delayed. Findings like a tension pneumothorax, a misplaced endotracheal tube, or a large pneumoperitoneum are often glaringly obvious and require instantaneous action. The technologist in this setting must have the confidence to immediately contact the treating clinical team (e.g., the emergency physician or intensivist) in addition to the radiologist, as minutes can be critical [38]. Fluoroscopy introduces the element of real-time dynamic imaging. During procedures like barium studies or interventional radiology assists, the technologist may observe a perforation, acute obstruction, or device malfunction in real time, necessitating immediate verbal communication to the performing physician.

Ultrasound is uniquely operator-dependent, and the sonographer (a specialized RT) performs both the image acquisition and the real-time evaluation simultaneously. Their role in identifying critical findings is therefore even more direct and immediate. An ectopic pregnancy, a ruptured AAA on a bedside scan, a large pericardial effusion, or deep vein thrombosis are often discovered by the sonographer first. Escalation protocols must be seamless, often requiring the sonographer to

directly alert the referring obstetrician, surgeon, or cardiologist while simultaneously ensuring the images are saved and the radiologist is notified [14]. Each modality, therefore, tailors the universal mandate of vigilance to its specific technological and workflow context.

9. Conclusion

The landscape of diagnostic imaging is one of immense diagnostic power coupled with significant responsibility. Within this landscape, the radiology technologist has emerged as a vital sentinel, a professional whose eyes and judgment form an indispensable early-warning system for patient safety. The role in the early detection and escalation of incidental critical findings represents a sophisticated evolution of the profession, blending technical mastery with perceptual skill, ethical commitment, and communicative clarity. It is a role defined not by diagnosis but by diligent observation and systematic action—a critical bridge between image acquisition and definitive medical intervention.

This responsibility, however, does not rest on the shoulders of individual technologists alone. It is enabled and sustained by a tripartite foundation: robust education that builds competency in image evaluation and critical thinking; clear legal and professional frameworks that define the scope and standards of practice; and, most importantly, a supportive systemic culture and infrastructure that includes unambiguous escalation protocols, interdisciplinary respect, and leadership commitment to safety. When these elements align, the radiology department functions as a high-reliability organization where every team member is empowered to act upon a shared goal: the timely well-being of the patient.

The detection of an incidental critical finding is a pivotal moment. It transforms a routine imaging procedure into a potential lifesaving intervention. By embracing this role with competence and confidence, radiology technologists profoundly affirm their value as essential collaborators in the diagnostic process. They move from being mere operators of complex machinery to being proactive guardians of the patients under their care, ensuring that the powerful eyes of modern imaging technology are matched by the vigilant human eyes of a committed professional. In doing so, they not only enhance patient outcomes but also elevate the standing and impact of the entire radiologic technology profession.

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