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Introduction

Chairman, Ranking Member, and Members of the Subcommittee:

Thank you for the opportunity to testify today on the role artificial intelligence can play in strengthening healthcare for patients and clinicians across the United States.

My name is Demetri Giannikopoulos, and I serve as Chief Innovation Officer at Rad AI, where I oversee the development and responsible clinical integration of artificial intelligence technologies used by radiologists and health systems nationwide. My work focuses on ensuring these systems are safely integrated into clinical workflows, support physicians in delivering accurate and timely diagnoses, and help strengthen care coordination and patient outcomes.

I previously served as Chief Transformation Officer at Aidoc, where I led the clinical, operational, and governance protocol transformation required to safely integrate multiple FDA-cleared artificial intelligence medical devices into frontline physician workflows across health systems nationwide. This work involved close collaboration with clinicians, health system leadership, and regulatory stakeholders to ensure these technologies functioned reliably in real-world clinical environments and strengthened, rather than disrupted, the delivery of patient care.

In parallel, I have been actively involved in national governance efforts focused on establishing standards for responsible artificial intelligence in healthcare. I participate in the Applied Model Card Workgroup of the Coalition for Health AI, a clinician-led coalition advancing transparency, accountability, and safety in healthcare artificial intelligence. I also serve on the Artificial Intelligence Accreditation Advisory Committee for URAC, where we are developing accreditation frameworks to help ensure artificial intelligence is implemented safely, consistently, and responsibly across diverse healthcare settings.

I have also served on the Patient and Family Centered Care Clinical Excellence Committee of the American College of Radiology, where I contributed to the development of the Scanxiety Toolkit, which addresses the anxiety patients experience while waiting for imaging results. I bring this perspective not only through my professional work, but also through personal

experience. I supported my wife through her cancer diagnosis and treatment, and I have also lived for more than two decades as a patient with multiple sclerosis, undergoing regular imaging and waiting for results that help determine the course of my care. These experiences reinforced for me how deeply patients and families depend on timely, accurate diagnosis, and clear communication during some of the most vulnerable moments of their lives.

Together, these experiences have given me a comprehensive perspective on both the extraordinary potential and the profound responsibility associated with integrating artificial intelligence into the practice of medicine. Artificial intelligence in healthcare has reached an inflection point. The central question is no longer whether these technologies are promising, but how they perform in real clinical environments and whether they meaningfully improve safety, productivity, and patient care.

Imaging as a Critical Component of Modern Diagnosis

Radiology plays a foundational role in modern medicine. Imaging is often the step that confirms a diagnosis, rules out life-threatening conditions, and determines the course of treatment. That matters because diagnostic error remains a major source of preventable harm. Research from Johns Hopkins Medicine, published in *BMJ Quality & Safety*, estimates that each year nearly 800,000 Americans die or are permanently disabled because of diagnostic error.[1] Conditions such as aortic dissection and stroke are among the exact types of time-sensitive diagnoses that contribute to that harm.

Acute aortic dissection is a race against the clock. National cardiology guidelines tell us that for dissections involving the ascending aorta, the risk of death rises by about 1 to 2 percent every hour without treatment.[2] And we see the impact of that urgency very clearly. Nearly one in four patients treated with medication alone died within two days, compared to fewer than one in twenty patients who received surgery.[3]

Stroke care follows the same pattern. Nearly 1.9 million neurons are lost each minute that treatment is delayed.[4] In both cases, rapid imaging is what makes timely treatment possible. It is what allows physicians to see the problem, make the diagnosis, and act before irreversible harm occurs. In these moments, imaging is not just diagnostic. It is decisive.

Artificial intelligence can help strengthen this process. It can flag life-threatening findings for rapid physician review, support accurate interpretation, and help ensure that critical diagnoses are communicated quickly so patients receive the care they need without delay. This responsibility exists across all healthcare settings, including rural and community hospitals where subspecialty expertise may not always be immediately available. Artificial intelligence can help reinforce this diagnostic infrastructure, supporting clinicians in delivering timely and accurate care regardless of geography.

Artificial Intelligence Across the Diagnostic Continuum

Artificial intelligence supports care across the full diagnostic continuum, from triage to interpretation to communication and follow-up.

The first stage is triage and prioritization. Artificial intelligence can analyze imaging studies shortly after acquisition and help identify findings that require urgent attention. This helps ensure that time-sensitive conditions are reviewed promptly, improving patient safety.

The second stage is interpretation. Artificial intelligence can help integrate trusted clinical knowledge and evidence directly into physician workflows, supporting radiologists as they make diagnostic decisions. These tools support clinicians, not replace them, and help improve consistency and efficiency in care delivery. Artificial intelligence can also improve clinical documentation and communication by helping ensure diagnoses are clearly recorded, reports are completed efficiently, and information is shared accurately across care teams. This supports faster clinical action and reduces delays in treatment.

The third stage is follow-up and longitudinal care. Imaging frequently identifies findings that require monitoring over time, yet failure to complete recommended follow-up remains a significant patient safety challenge. In one large academic health system study, only about half of patients completed recommended follow-up imaging, with completion rates of just 51.9 percent at one institution and 52.0 percent at another.[5] Similarly, studies of pulmonary nodules have shown that more than half of patients may not receive recommended follow-up imaging.[6]

Artificial intelligence systems can help address this gap by identifying patients who need follow-up, tracking whether that care occurs, and supporting care teams in closing the loop. This helps ensure that important findings do not fall through the cracks and that patients receive the care they need. Together, these capabilities improve safety, strengthen productivity, and support better care for patients.

Workforce Challenges and Cognitive Burden

Healthcare systems today face growing workforce challenges. Imaging volume has increased substantially over time, while workforce growth has not kept pace with demand.[7] This imbalance reflects broader trends in healthcare, driven by population aging and expanded reliance on diagnostic imaging. At the same time, clinician exhaustion, cognitive overload, and burnout remains widespread, affecting a substantial portion of the clinical workforce.[8]

Artificial intelligence can help address this challenge by improving productivity, reducing administrative burden, and supporting clinicians as they manage increasing workload demands. A recent task-based analysis by Dr. Curtis Langlotz of Stanford University, the immediate past President of the Radiological Society of North America, projects that artificial intelligence could significantly reduce the time radiologists spend on certain tasks, particularly report drafting and workflow coordination. However, the study also concludes that because imaging demand

continues to grow and the radiology workforce has remained relatively stable, artificial intelligence is unlikely to eliminate the need for radiologists.[9] Instead, these technologies are expected to help clinicians work more efficiently and focus more of their time on direct patient care.

In addition to improving efficiency, artificial intelligence can help reduce cognitive burden by assisting with information management, documentation, and follow-up tracking. This support helps clinicians focus their attention on patient care and clinical decision making, which is especially important as workforce shortages and burnout continue to affect healthcare nationwide. Artificial intelligence supports clinicians; it does not replace them.

Improving Access to Care

Healthcare access challenges are particularly acute in rural and underserved communities. More than 46 million Americans live in rural areas, where access to specialists may be limited.[10] Many rural hospitals operate with constrained clinical staffing and may not have immediate access to subspecialty expertise, including radiologists with advanced training in specific conditions.

Artificial intelligence can help address these gaps by supporting clinicians in delivering timely and effective care. For example, artificial intelligence can help identify urgent findings, assist with interpretation, and ensure that critical results are communicated promptly. These capabilities help clinicians work more efficiently and reduce the risk that important findings are delayed or missed. Ensuring that patients receive consistent, high-quality diagnostic care regardless of geography is one of the most important opportunities for artificial intelligence to improve healthcare nationally.

Governance, Oversight, and Accountability

The safe and effective use of artificial intelligence requires strong governance, clear accountability, and ongoing oversight.

Based on my experience deploying these systems nationwide, the most important determinant of safety is not only how artificial intelligence is evaluated before deployment, but how it is governed, monitored, and supported once it is in clinical use. Importantly, artificial intelligence systems operate within existing legal and professional accountability frameworks. Physicians remain responsible for clinical decision making, and health systems are responsible for safe implementation. Existing laws, including patient privacy protections, medical malpractice standards, and civil rights protections, continue to apply. Artificial intelligence does not replace these safeguards; it operates within them.

Governance initiatives such as those led by the Coalition for Health AI and accreditation programs such as those being released by URAC play an important role in supporting safe and

responsible implementation. Maintaining clinician leadership in patient care decisions remains essential to ensuring patient safety and preserving trust.

Regulatory Considerations and Responsible Innovation

The United States has established strong regulatory frameworks to evaluate medical devices and protect patient safety. Through my experience implementing FDA-cleared artificial intelligence systems, I have seen how regulatory clarity and predictability support responsible innovation and safe deployment. Peer-reviewed research has consistently shown that artificial intelligence performs best when used to support clinicians, not replace them.[11]

Artificial intelligence introduces new considerations because these technologies operate within complex clinical environments and continue to evolve over time. Ongoing collaboration among regulators, healthcare providers, and developers can help ensure regulatory frameworks continue to support patient safety while enabling beneficial innovation. Thoughtful evolution of regulatory approaches can strengthen both safety and public trust.

Conclusion

Artificial intelligence is already helping strengthen healthcare delivery when it is implemented responsibly, governed carefully, and designed to support clinicians and patients. These technologies can help clinicians diagnose disease earlier, improve productivity, strengthen care coordination, and improve patient outcomes.

Artificial intelligence supports clinicians; it does not replace them. It helps clinicians do what they trained their entire lives to do: care for patients. Behind every scan is a patient, a family, and a moment where getting the diagnosis right can change the course of a life. Thank you for the opportunity to testify. I look forward to your questions.

Footnotes

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