

EDITORIAL

A Solution in Search of a Problem: Why the Current Advanced Practice Radiation Therapist Model Doesn't Fit the United States Health Care Landscape

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Introduction

We would like to bring attention to an ongoing development in the field of radiation oncology: the introduction of the Advanced Practice Radiation Therapist (APRT) role. The APRT model has been previously discussed in the literature, including publications by Vapiwala et al¹ and more recently by McDonagh et al.² The Spring 2025 issue of *The Radiation Therapist* journal is entirely dedicated to promoting this model, underscoring the momentum behind its advancement. Although this concept has gained traction internationally, we believe it is not ideally suited to the unique clinical, regulatory, and reimbursement frameworks of the United States radiation oncology practices.

At the core of this movement is an expansion of radiation therapist's responsibilities into domains traditionally held by physicians, physicists, dosimetrists, and advanced practice providers (APPs). Proposed APRT duties include independent image verification and decision-making in adaptive treatments, optimizing treatment plans through independent assessment and delivery of image guided therapies, and

providing autonomous patient care. In some models, APRTs would also perform initial patient evaluations, conduct complex discussions with patients and families, and engage in treatment planning through target and organ-at-risk contouring.^{3,4} These activities are not only fundamental to radiation oncology physician practice but are also intimately tied to clinical accountability and quality and safety of care, in large part due to the years of education and clinical training that goes into becoming a radiation oncologist. We believe delegating these core physician and medical physicist responsibilities to APRTs introduces meaningful concerns around quality and safety, inappropriate role dilution, and liability.

Below, we outline why the APRT role—as it is currently formulated—raises structural, clinical, and operational concerns for the United States radiation oncology landscape.

Overlapping responsibilities

International APRT models have been successful because they function in the absence of radiation support personnel

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ubiquitous in the United States, such as dosimetrists—a profession that is uniquely American.⁵ In many countries, radiation therapists (RTTs) perform the function that in the United States has been filled by *certified medical dosimetrists*—organs-at-risk contouring and treatment planning. Moreover, medical physicists in these settings often assume a much broader role in treatment planning, including tasks typically performed by dosimetrists or physicians in the United States. In contrast, the United States workflow is segmented, with dosimetrists playing a central role in treatment planning, which further reduces the clinical and operational need for radiation therapists to expand into these areas.

The core responsibilities being proposed for APRTs—ranging from patient assessment and on-treatment management to target delineation—are currently performed at the *physician* level in the United States. Shifting core responsibilities to an APRT would create redundancy, risk duplication of effort, and siphon away tasks anchored into the radiation oncologist's purview given their unique and extensive training.

Understanding the training gap

In the United States, RTTs complete focused programs—typically associate or bachelor-level—that emphasize treatment delivery, image acquisition, and machine operation. These programs do not include substantial clinical medical training or even specific skills in contouring or treatment planning decision-making.

By contrast, radiation oncologists undergo many years of formal training, encompassing 4 years of medical school, a year-long clinical internship, and a 4-year radiation oncology residency. This includes rigorous experience in human anatomy and physiology, cancer pathophysiology, pharmacology, diagnosis, staging and treatment options, medical ethics, and comprehensive management of oncologic patients across all disease sites.

Many of the tasks proposed for APRTs—particularly target volume delineation and treatment plan approval—require a deep understanding of tumor biology, anatomic subtleties, and treatment trade-offs that cannot be acquired through abbreviated or nonstandardized training. The proposal to allow APRTs—based on additional coursework or supervised experience—to assume physician-level responsibilities mirrors other APP roles but misses an important distinction fundamental to the current APP scope—PAs and NPs do not independently prescribe or perform irreversible treatments carrying significant risk of injury—and introduce serious clinical and liability risks.

From a quality and safety standpoint, this shift raises significant concerns and is not in the best interest of patient care or quality and safety given the substantial difference in training. We must ask ourselves, what would we want for our own family members?

“Time savings” is not a true driver

A frequent argument in favor of APRTs involves the notion of “time savings” for physicians.³ However, in the United States context, many radiation oncology clinics already employ APPs (nurse practitioners, physician assistants/associates) who can help address routine patient needs. These existing professionals are well-positioned to handle evaluations, documentation, patient education, and certain on-treatment interventions. These roles are well-established and recognized under current regulatory frameworks.

Although APRTs are being proposed as another way to offload physician tasks, it is important to recognize that their proposed responsibilities—such as image verification, contouring, and treatment planning—extend into core clinical domains that are central to the radiation oncologist's training and decision-making authority. Unlike APPs who typically support in-clinic care, APRTs would be stepping into tasks uniquely specific to the radiation oncologist, many of which directly influence treatment quality, clinical judgment, and patient safety.

Workforce alignment: misplaced priorities

Proponents of the APRT role often cite a growing workforce gap as a justification. However, in the United States, the shortage lies with RTTs, not physicians. There is no current deficit of radiation oncologists.⁶ Diverting experienced RTTs into advanced practice roles may inadvertently undermine one of the very problems the APRT model claims to address. By incentivizing therapists to leave frontline treatment roles, the field risks further straining an already limited pool of professionals available to deliver daily care. Rather than alleviating staffing challenges, this shift could deepen operational bottlenecks and impair patient access.

The perils of role erosion

If radiation oncologists gradually offload key responsibilities to other providers, the profession risks experiencing a “slippery slope” of role erosion at the peril of high-quality patient care. A cautionary parallel is found in anesthesiology, where nurse anesthetists have assumed ever-increasing responsibilities in certain settings. Over time, reimbursement differentials and a shift in the perceived need for anesthesiologists have led to financial and professional challenges within that specialty.

Likewise, if radiation oncologists delegate core duties (target contouring, treatment setup approval, and on-treatment management) to APRTs, the specialty could see a diminishing perception of the physician's role—eventually reducing it to supervisory sign-off rather than active clinical decision-making. We believe physician-led treatment planning is in the best interest of the patient given the disparate training noted above. Anything less not only threatens

professional stature and patient outcomes but may also lower professional reimbursement if codes are revised to reflect a change in physician labor.

Conclusion

All health care professionals should have opportunities for career advancement. However, we believe that multiple pathways are already available in the United States (dosimetry and physician assistant programs) and employers should ensure clinical ladders that provide such opportunities. Although the APRT role has gained momentum in other countries, the United States radiation oncology landscape is shaped by unique regulatory frameworks, reimbursement models, and physician-driven scopes of practice. The duplication of tasks already coded and billed for by physicians, the availability of other extenders, and the unresolved question of how APRTs would be sustainably reimbursed all point to a misalignment between APRT implementation and American clinical practice. Most importantly, we worry that such a shift would lead to a diminishment in quality and safety given the chasm in training and education between radiation oncologists and RTTs. Additionally, the current state of the respective workforces does not warrant this shift.

The future of radiation oncology, particularly as automation and new techniques reshape the field, should focus on

optimizing workflows that maintain high-value physician decision-making. Rather than introducing a new mid-level category that brings redundancy and reduces the quality and safety of patient care, United States radiation oncology can better advance patient care through targeted process improvements, thoughtful use of existing providers, and embracing emerging technologies.

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