

Introduction

Northwell developed daily Smart Rounds (SR) since 2013. This daily prospective peer review plays a crucial rule in quality assurance and safety in radiation oncology. Pre-planning peer evaluation minimized errors in target volume delineation and ensured adherence to evidence-based standard treatments. Daily SR promotes patient safety, improves treatment quality and supports a culture of continuous learning in our clinical practice.

Methods

A multidisciplinary team of peers include radiation oncologists, residents, physicists and medical dosimetrists.

Smart Rounds are conducted over a one-hour session during which approximately 25 patient cases are presented with relevant clinical history, diagnosis and imaging.

SR peers evaluate the accuracy of target delineation, organs at risk (OAR) constraints, and compliance with departmental clinical treatment directives

Any concerns or suggestions are registered through our SR grading system. Each case will be assigned with a grade (A, B or C) after presentation.

Results

A total of 7484 entries, based on prescription, underwent Smart Rounds review from March 2025 to March 2026. **72.3% cases received an “A”, 24.6% received a “B”, and 3.1% received a “C”.**

- Most “A” scored cases were palliative or 3D breast cases
- Most “B” scored cases consisted of more complex techniques such as IMRT and SBRT. Minor modifications include contour adjustments (e.g., PTV margins and OAR refinement)
- Most “C” scored cases required clearer case presentation or major target volume revision.

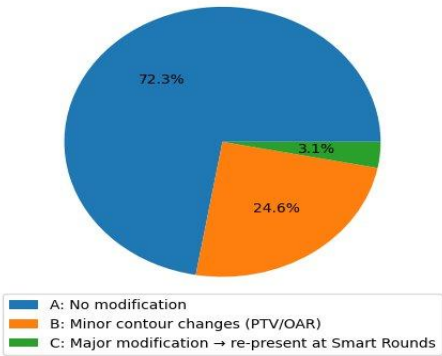


Figure 1. Smart Rounds Grading Distribution

Challenges

Smart Rounds is dependent on attendance and participation of peers. To ensure this happens, we require a minimum of two dosimetrists, one physicist, one medical resident and three attendings with cameras turned on for virtual meetings. This allows all peers to actively engage in both technical and clinical aspects of each case.

Conclusion

Northwell daily Smart Rounds is a great innovation that enhances patient safety and treatment quality by identifying and correcting issues prior to treatment planning. This integration into routine clinical workflow not only improves patient safety and outcomes but also reinforces a culture of multidisciplinary collaboration and continual learning within our clinical practice.

References

1) Riegel AC, Vaccarelli MJ, Cox BW, et al. Impact of Multi-Institutional Prospective Peer Review on Target and Organ-At-Risk Delineation in Radiation Therapy. *Pract Radiat Oncol.* 2018;9(2) doi:10.1016/j.pro.2018.10.016

2) Tchelebi L, Kapur A, Potters, L Improving Radiation Quality Through the Implementation of Prospective Peer Review *International Journal of Radiation Oncology *Biology* Physics* 114(3):e477 doi10.1010/j.ijrobp.2022.07.1738

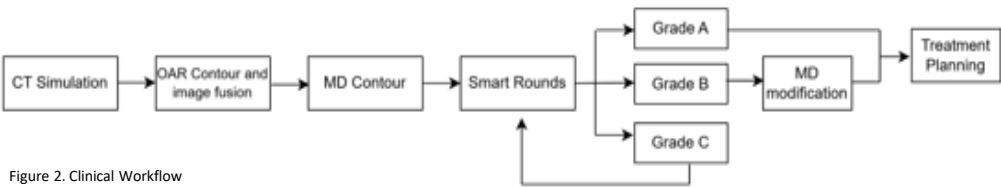


Figure 2. Clinical Workflow