

Timing is Key: Expediting Radiation Therapy after Definitive Surgery for Head and Neck Cancer

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Background

Head and neck cancer is the seventh most common cancer worldwide. The 5-year relative survival rate for advanced stage is 68.5%. Advanced stage disease requires multimodal treatment. Delays in treatment lead to poorer survival outcomes. The National Comprehensive Cancer Network (NCCN) guidelines recommend postoperative radiation therapy (PORT) be initiated within 6 weeks of definitive surgery for squamous cell carcinoma of the head and neck. Nationwide, guideline adherence estimates range between 40-60% for patients starting PORT within 6 weeks after surgery. In 2022, the American College of Surgeons (ACS), Commission on Cancer (CoC) introduced HadjRT measure based on evidence-based practice and NCCN guidelines as an accredited standard for cancer programs.

Purpose

Specific

- Time to initiation of postoperative radiation therapy less than 6 weeks for patients with surgically-managed head and neck squamous cell carcinoma

Measurable

- Increase number of patients who start RT within 6 weeks of surgery by 10% relative to baseline

Achievable

- By identifying reasons for delays in the referral appointment process and take necessary steps to improve outcomes
- Established measure criteria for reporting; Existing benchmark data exists

Relevant

- Higher rate of recurrence and/or mortality when RT is delayed >6 weeks

Timeline

- By December 2024, deploy interventions resulting in 10% increase

Methods

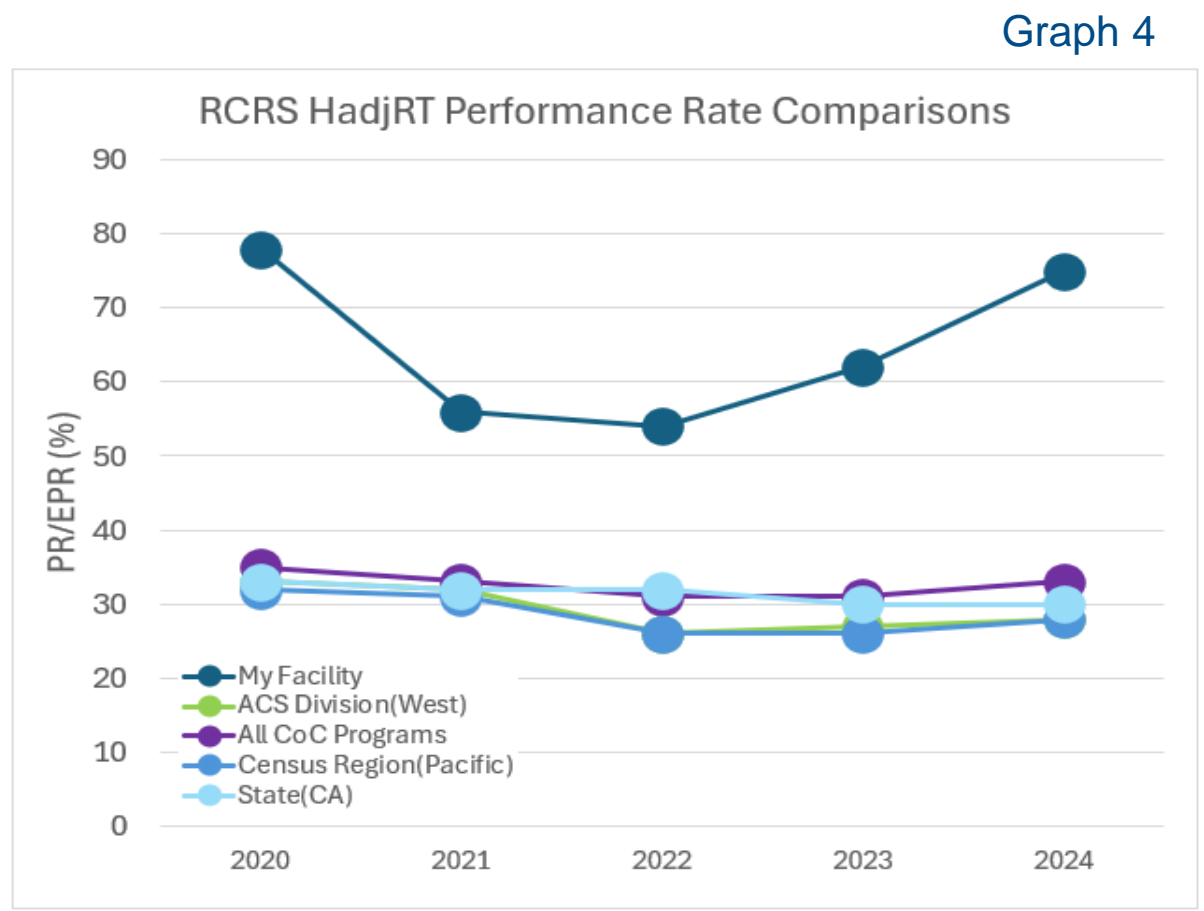
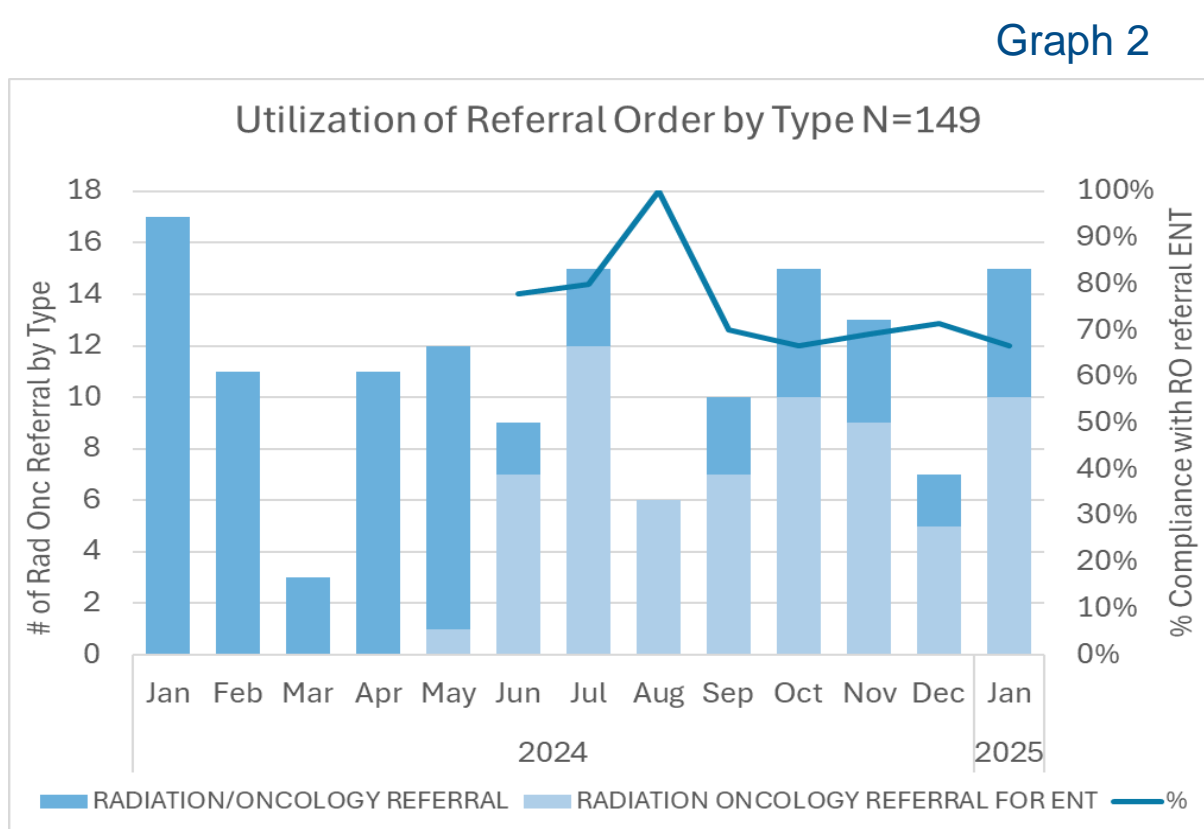
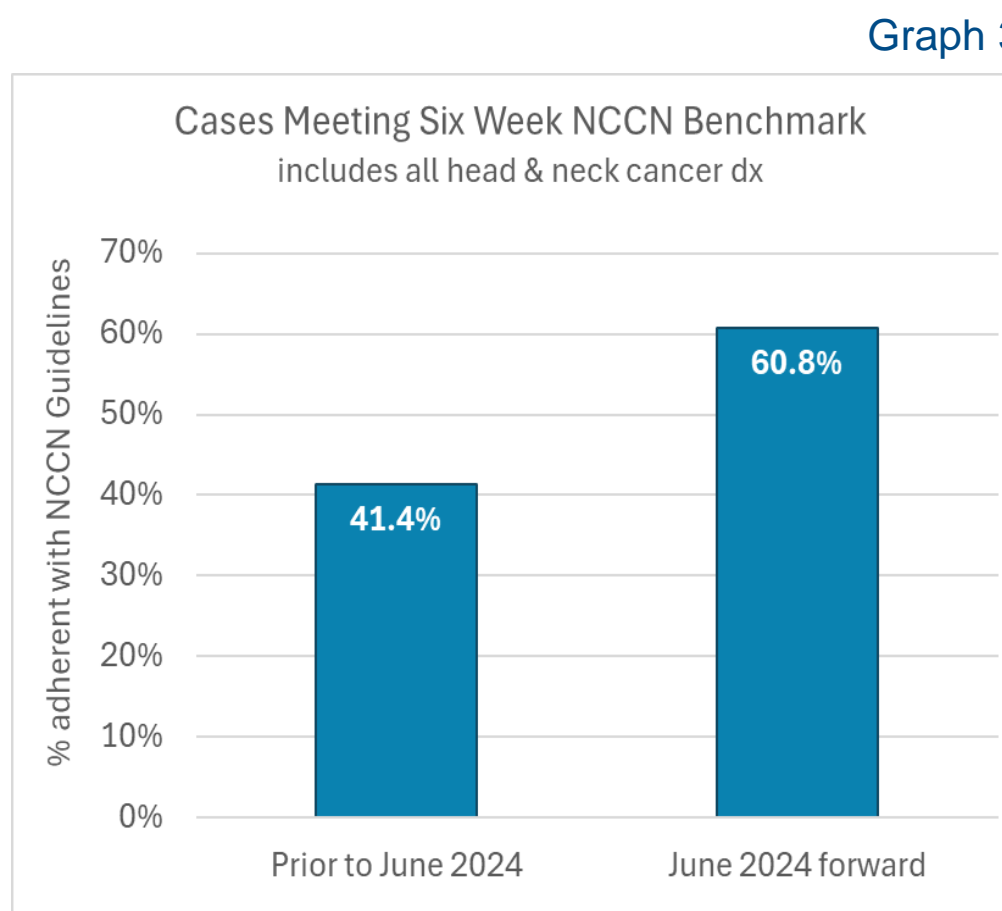
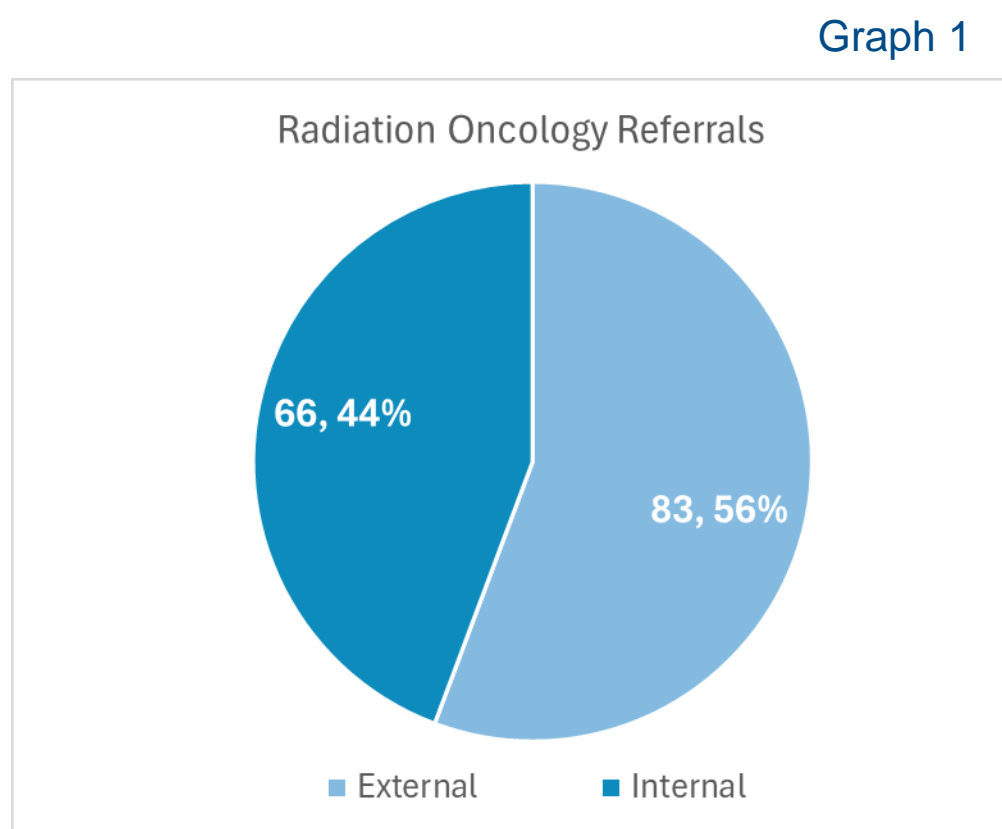
- Setting:** UC Davis Health is a high-volume, level one, academic tertiary care hospital in Sacramento annually treating ~600 neoplasm cases
- Patients:** Include those with definitive surgery for head and neck cancer with PORT January 2024 to January 2025.
- Data Source:** EPIC® electronic health record (EHR)
- Data Points:** Referral order type, external vs internal referral, turnaround time from order date to radiation consult and surgery date to starting radiation
- Compliance:** ACS CoC HadjRT Rapid Cancer Reporting System database used to track outcomes. New order usage compared to prior referral order practice

Implementation

- Current State:** No standardized timing or process for radiation oncology referral
- Barriers:** identified reasons for delay of radiation after surgery (Figure 1)
- Review:** Analyzed current workflow process and opportunities for improvement
- Previous Practice:** Referral not specific to head and neck population, defaulted to routine status and internal order class requiring manual changes (Figure 2)
- Change:** EPIC® “Radiation Oncology Referral for ENT” created. Default to urgent status, order confirmation for internal vs external referral processing, scheduling criteria meeting NCCN guidelines, surgical date to facilitate order triage (Figure 3)
- Education:** Providers educated on the new order tool use starting June 1, 2024, with direct instruction, preference order support, and email reminders to optimize

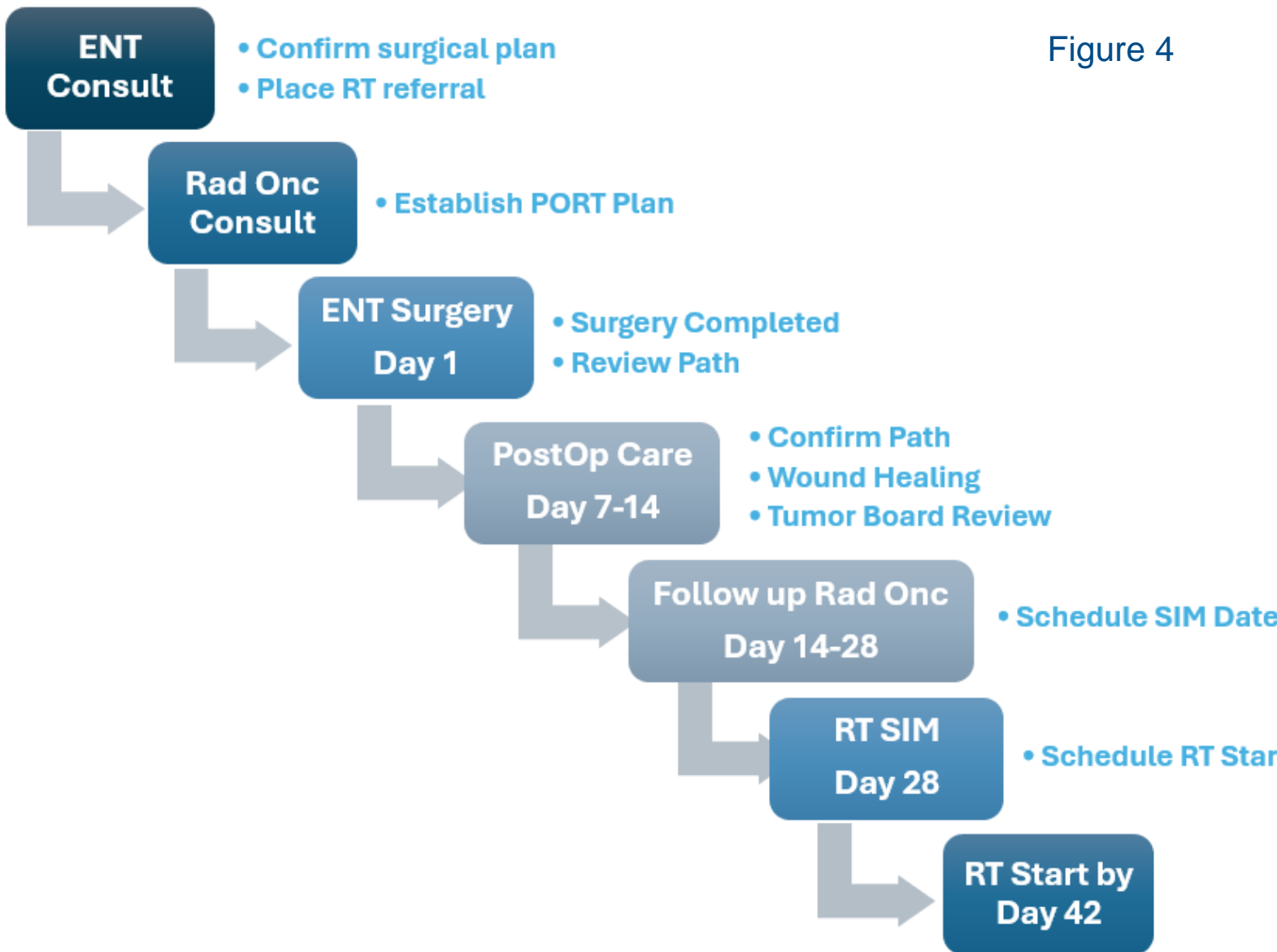
Results

- Referrals:** 274 placed; 149 had definitive surgery; 106 PORT consult; 80 started radiation during study period
- Referral Type:** External referrals > internal referrals (Graph 1)
- Compliance:** 73.3% use of the new EPIC® “Radiation Oncology Referral for ENT” order (Graph 2)
- Consult Timing:** 5-day reduction in avg days to radiation oncology consult
- Improvement:** 19.4% increase meeting NCCN guidelines (Graph 3)
- HadjRT:** QI metric increased 12% from 2023 (Graph 4)



Implications

Early and efficient referral processes (Figure 4) help reduce delays in starting PORT by improving interdepartmental care coordination, referral processing and authorization, consult scheduling, and treatment planning.



Conclusion

- Implementing an EPIC® enhanced radiation oncology referral tool, along with education and new referral workflow, improved NCCN guideline adherence for head and neck cancer patients.
- The time from referral order placement to radiation oncology consult decreased after implementing the enhanced order.
- While a modest improvement was observed in the time from definitive surgery to radiation start, barriers to NCCN guideline adherence exist that require further investigation.

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References

Available upon request

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