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Identifying Barriers to Completion of Radiotherapy: Baseline Findings of a Commission on Cancer National Quality Improvement Project

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OBJECTIVE

Many patients face barriers to cancer care, leading to disparities in cancer-specific outcomes. For example, missing multiple (≥3) radiation treatments is associated with increased locoregional recurrence. Our objective was to describe the frequency and reasons for missed radiotherapy treatments among hospitals participating in a national quality improvement (QI) project.

METHODS

The Commission on Cancer (CoC) “Breaking Barriers” national QI project enrolled 332 accredited programs from February-March 2023. Programs recorded all patients scheduled for a 15- to 45-day course of curative-intent radiotherapy, identifying those who missed ≥3 treatments, referred to “at-risk” for worse clinical outcomes. Kruskal-Wallis tests assessed differences in rates of missed treatments.

RESULTS

Overall, 264 (79.5%) programs identified at-risk patients, totaling 1,284 patients who did not complete radiotherapy as prescribed. The median percentage of at-risk patients at participating programs was 9.2% (IQR 5.2%-16.7%). Differences by geographic region or program type (e.g., academic vs. community) were not observed. Patients with rectal and upper gastrointestinal cancers most frequently missed treatments (**Table**), followed by patients with gynecologic, head and neck, lung, breast, and prostate cancer ($p<0.001$). After excluding illness and toxicity, reasons for missed treatments most frequently included transportation issues (31.8%),

conflicting appointments (15.2%), and no longer wishing to pursue treatment (14.0%). Employment- (2.3%) and childcare-related (2.8%) barriers were less common.

CONCLUSION

Barriers to completing radiotherapy are disease-specific and highly prevalent among CoC programs nationwide. Participating in a national QI project that identifies barriers to completing radiotherapy treatments and implements interventions to address specific barriers could lead to improved outcomes.

Table. Number of programs and total number of patients who missed 3 or more radiotherapy treatments (i.e. at risk) by disease site.

	No. of Programs reporting at-risk patients[a]	**Total No. of at-risk patients[b]**
Disease Site, No. (%)		
Gyn	73/78 (93.6)	49/420 (11.7)
Upper GI	67/72 (93.1)	46/368 (12.5)
Lung	130/148 (87.8)	142/1726 (8.2)
H & N	152/176 (86.4)	216/2210 (9.8)
Breast	178/228 (78.1)	348/6937 (5.0)
Prostate	130/156 (83.3)	144/3229 (4.5)
Rectum	69/75 (92.0)	38/255 (14.9)
Other	106/118 (89.8)	301/4928 (6.1)

Abbreviations: *IQR* interquartile range; *Gyn* gynecologic cancers; *H & N* head and neck cancers; *GI* gastrointestinal cancers.

[a]Participating programs were able to select up to 3 specific disease sites. The numerator reflects the number of programs reporting at-risk patients. The denominator reflects the total number of programs who chose to submit that specific disease site.

[b]The numerator reflects the total number of at-risk patients. The denominator reflects the total number of patients who received radiotherapy treatment during the data collection period by each disease site.