Early Impact of Pretreatment Colonoscopies and Colonic Findings on Post Prostate Stereotactic Body Radiation Therapy (SBRT) Gastrointestinal (GI) Patient-Reported EPIC Quality of Life

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Objectives: The impact of screening colonoscopies (CS) findings on quality of life outcomes following SBRT have not been thoroughly studied in the literature. Screening colonoscopies are commonly performed prior to radiotherapy given the need to rule out comorbid GI conditions and avoid untoward post-radiotherapy instrumentation of the pelvis. Herein, we investigate the association of colonic findings on pre-treatment CS with subsequent changes in GI quality of life based on EPIC questionnaires following SBRT for localized prostate cancer.

Methods: An institutional registry of patients undergoing five-fraction robotic prostate SBRT was interrogated to identify those who underwent screening CS prior to radiotherapy from Feb. 2021 – May 2023. Patients were categorized into those who did and did not undergo CS within 6 months of SBRT. A detailed analysis of CS findings including polyp resection, presence of diverticulosis, and hemorrhoids was reviewed on CS reports. The majority of patients had polyethylene glycol gel spacers placed prior to SBRT. EPIC bowel summary and subscale scores for function and bother were assessed using generalized linear mixed models, including the main effects of time (0, 3, 6, 9, and 12 months), group, and the difference in groups across time. The minimally important difference (MID) was utilized to assess a clinically significant change in these measures from baseline, and was set as half a standard deviation (SD) as defined in prior publications. A result was considered significant at $p < 0.05$.

Results: A total of 156 patients underwent prostate SBRT with the distribution of risk grouping as follows: low 9% (n = 14), intermediate 67% (n = 104), and high 24% (n = 38). Of the entire group, 85 patients underwent pre-treatment CS with a median time from CS to SBRT of 2.9 months (IQR range: 2.3 – 3.7 months). Overall, there was no significant difference in EPIC bowel summary ($p = 0.318$), subscale GI function ($p = 0.433$), or subscale GI bother ($p = 0.182$) between those who did and did not have screening colonoscopies. Polyp resection prior to SBRT displayed no detrimental impact on bowel summary ($p = 0.938$), subscale GI function ($p = 0.459$), or subscale GI bother ($p = 0.887$). Similarly,

identification of diverticulosis displayed no significant worsening of bowel summary (p = 0.782), subscale GI function (p = 0.855), or subscale GI bother (p = 0.499). Pre-SBRT CS identified hemorrhoids also had no impact on bowel summary (p = 0.814), subscale-function (p = 0.832), or subscale bother (p = 0.763). Finally, the presence of any polyps, diverticulosis, or hemorrhoids had no quality of life impact.

Conclusion(s): Pretreatment CS was not associated with worsening of post-SBRT EPIC reported GI quality of life. Moreover, in a cohort where the majority underwent pre-SBRT rectal gel spacer placement, identification of diverticulosis, hemorrhoids, and polyps resulted in no detriment to GI quality of life following prostate SBRT.