



## Is Peri-Rectal Spacer Improving Clinical Outcomes in Radiotherapy for Localised Prostate Cancer – a Systematic Review and Meta-Analysis

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### Introduction

There is increasing adoption of per-rectal spacer prior radiotherapy for prostate cancer to reduce treatment associated toxicity. However, there is a lack of updated quantitative analysis.

### Objective

To delineate the clinical outcomes of peri-rectal spacers used in localised prostate cancer patients treated with radiotherapy.

### Patients and Methods

In March 2024, a systematic search was performed on MEDLINE, Embase, and Cochrane Central Register of controlled trials. Early ( $\leq 3$  months) and late rectal toxicity, genitourinary toxicity were stratified according to the Common Terminology Criteria for Adverse Events (CTCAE); quality of life (QoL) in bowel, sexual and urinary domains, were compared, extracted from Expanded Prostate Cancer Index Composite (EPIC) report.

### Results

The systematic review included 17 studies, including 3 randomised controlled trials, 3 prospective cohorts and 11 retrospective cohorts.

A total of 3200 patients were included, with 1471 patients who received peri-rectal spacer and 1729 patients without.

Use of spacer was associated with lower likelihood of late (1.62% vs 9.35%, RR=0.25, 95% CI=0.15-0.42, P<0.001) and early grade 2 or above rectal toxicity (3.07% vs 6.05%, RR=0.53, 95% CI=0.33-0.86, P<0.001). There was no statistical difference in bowel related QoL (risk difference = -0.16, 95% CI=-0.38-0.06, P=0.15). Peri-rectal spacer was not associated with negative impact to urinary or sexual domains of QoL either.

### Conclusion

In localised prostate cancer patients treated with radiotherapy, the use of peri-rectal spacer was associated with better GI related adverse events profiles with no additional negative impact to QoL.