

Factors influencing overnight hospital stay following LDR Prostate Brachytherapy at Mount Vernon Cancer Centre (MVCC): A Retrospective Study

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Introduction

Low dose rate (LDR) seed brachytherapy is a treatment for localised prostate cancer with generally short recovery times¹. However, some patients require overnight admission following the procedure. Identifying factors influencing discharge is important for patient management and resource planning².

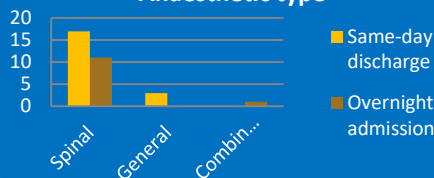
Purpose

This retrospective study examined whether prostate volume and anaesthetic type or duration are associated with overnight hospital stay in patients undergoing LDR brachytherapy in 2025. The study aimed to determine if the aforementioned factors are linked to a slower recovery time therefore requiring an overnight admission following the procedure.

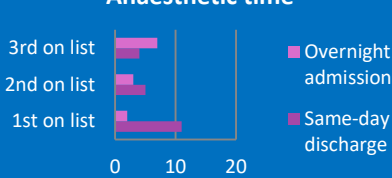
Method

This retrospective study looked at 32 patients who received LDR brachytherapy at MVCC during 2025. Data was collected using a Microsoft Excel spreadsheet with various columns that included: Patient details (name and date of birth), admission and discharge date, prostate volume, type of anaesthetic and time of implant. This was analysed to see if there was any correlation associated with overnight stays.

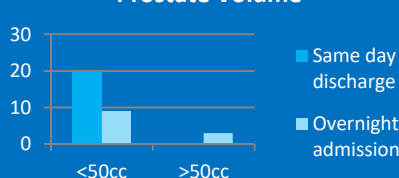
Anaesthetic type



Anaesthetic time



Prostate Volume



Results

The mean prostate volume of the 32 patients included in the study was 36.0cc (range 17.7–57.9cc). 29 patients (90.6%) had a prostate volume <50cc; 9 stayed overnight. 3 patients (9.4%) had a prostate volume of >50cc and all required an overnight stay. However, when comparing the overall prostate volumes between patients discharged same day and those that required an admission, no statistically significant difference ($p=0.124$) was identified, suggesting prostate size alone is not a strong predictor of overnight admission.

For 28 patients (87.5%) the procedure was performed under spinal anaesthetic with fewer under general anaesthetic (GA) (9.4%) or combined approaches (3.1%). 39.3% of patients receiving spinal anaesthetic required an overnight stay. All GA patients were discharged the same day. Overall, 37.5% of all patients required an overnight stay due to bladder emptying issues.

Of the patients requiring overnight admission, 2 were 1st on the theatre list, 3 were 2nd and 7 were 3rd. This indicates that patients treated later in the day, 3rd on the operating list may be more likely to remain overnight. However this also does not reach statistical significance ($p=0.78$).

Conclusion

There was no clear relationship between prostate volume and likelihood of overnight admission, as volumes were similar between same-day discharge and overnight groups although there is a trend toward larger prostate patients requiring an overnight stay. In contrast, anaesthetic modality showed a potential correlation: patients receiving GA were discharged the same day, while those undergoing spinal anaesthetic were more likely to require overnight observation. These findings suggest anaesthetic choice may influence post-procedural recovery and discharge timing. Of the 3 variants, anaesthetic time i.e last on the theatre list was most predictive of patients requiring an overnight stay. LDR seed brachytherapy appears to be a well-tolerated, resource efficient intervention with short hospital stays. Improved data collection would strengthen future outcome evaluation and clinical insights which would in turn improve patient experience and pathway.

