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Purpose

Review current outcomes following radical chemoradiotherapy for cervical cancer with the view to informing future resource investment.

Methods

A retrospective review of 79 consecutive women treated with external beam radiotherapy (50.4 Gy in 28 fractions) and high dose rate brachytherapy (21 Gy in 3 fractions) for cervical cancer between November 2017 and November 2019 was performed. Brachytherapy dose was prescribed to Point A (2 cm above and lateral to the cervical os, perpendicular to the uterine axis). D2cc (minimum dose to the most exposed 2 cm³, $\alpha/\beta = 3$) dose constraints were 75 Gy_{EQD2} to bowel and rectum and 90 Gy_{EQD2} to bladder.^{1,2}

Results

Mean age was 47 years (range 24-78 years). More than half of patients had FIGO stage IIB (n=28; 35.4%) or FIGO stage IIIC1 (n=23; 29.1%) disease. Nine patients experienced grade 3 or higher bowel toxicity, for seven the mean cumulative (EBRT plus brachytherapy) D2cc of bowel was ≥ 65 Gy_{EQD2}.

Sixteen patients (20.3%) developed local and/or distant disease recurrence; three had parametrial involvement (FIGO stage IIB), the remainder had locally advanced disease of at least stage IIIB. Mean HRCTV D90 (the minimum dose covering 90% of the high risk clinical target volume) for those patients who developed a recurrence was lower at 84.6 Gy (standard deviation (SD) 12.1 Gy) than the mean HRCTV D90 of 96.5 Gy (SD 14.5 Gy) for those patients who did not develop a recurrence.

At two years, overall survival was 88% and disease-free survival was 78% (Fig. 1).

Conclusion

While outcomes were comparable with international standards, recent technological advances in brachytherapy have the potential to further improve tumour control and reduce toxicity.

Patients with locally advanced, bulky disease may benefit from interstitial brachytherapy.³ Positioning uncertainties could be reduced by *in vivo* dosimetry to monitor radiation dose and radioactive source location in real-time.⁴

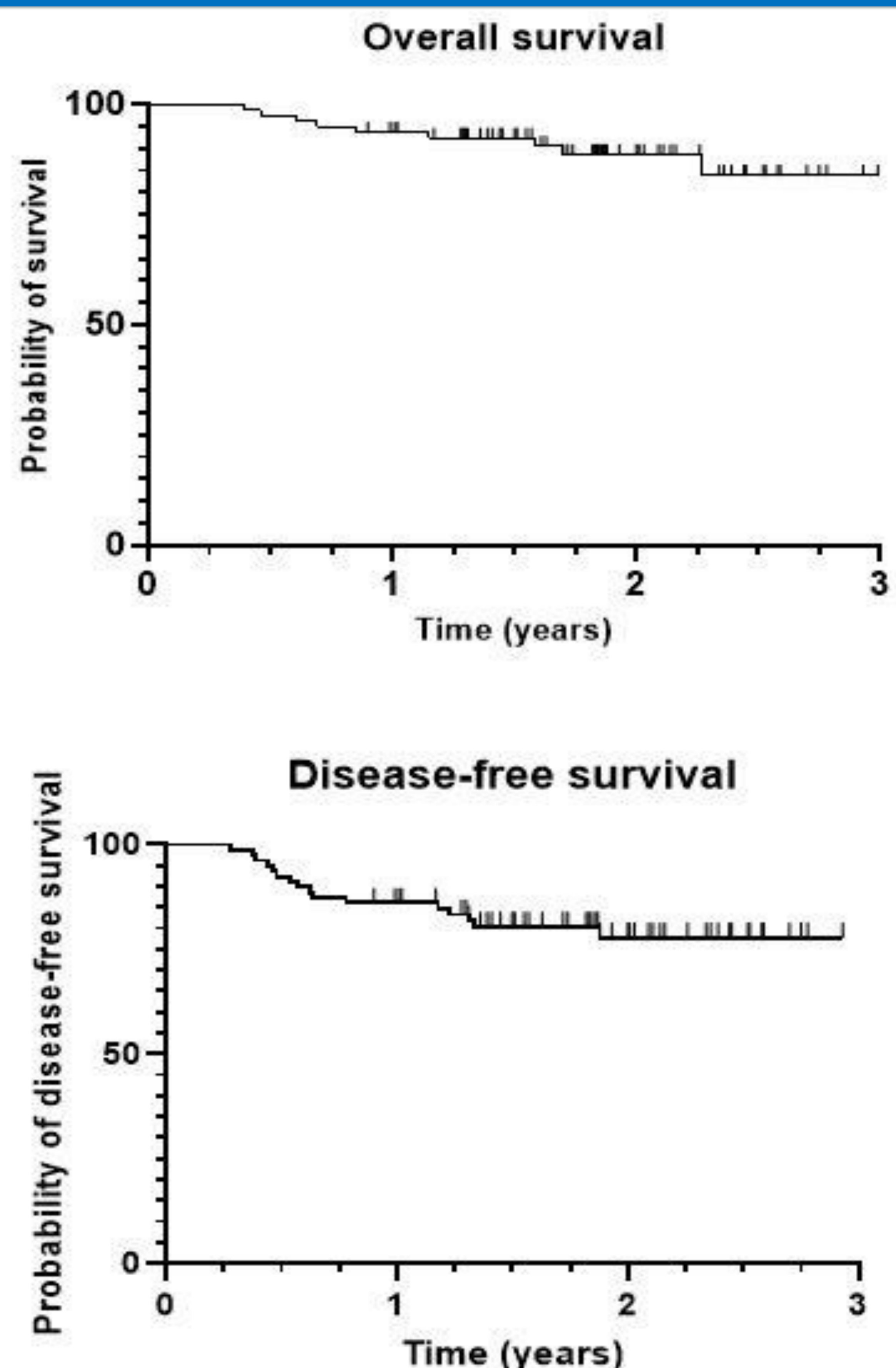


Fig. 1. Kaplan-Meier curves demonstrating overall survival and disease-free survival

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