Impact of margin status at 37 months after robot assisted radical prostatectomy.

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Abstract

INTRODUCTION: We evaluate the impact of margin length, location, and pathologic stage on biochemical recurrence (BCR) after robot assisted radical prostatectomy (RARP) at 37 months of follow up.

MATERIALS AND METHODS: A total of 1420 patients underwent a robot assisted radical prostatectomy between March 2004 and May 2010. Patients who received adjuvant therapy, those who never achieved an undetectable prostate-specific antigen (PSA), and those who had less than 18 months of follow up were excluded. Patients were then divided and evaluated based on margin status.

RESULTS: In total, 419 patients were included in the analysis. Eighty-three had a positive surgical margin (PSM) (19.8%), 336 had a negative surgical margin (NSM) (80.2%). The overall mean follow up was 37 months. On multivariate analysis the Gleason sum and PSM were independent predictors of BCR. Margin length and location had no significant difference on the rate of BCR. Patients with a PSM and pT2 disease had an increased rate of BCR compared to pT2 and NSM. The relative risk of BCR was 2.03 and 3.21 for patients who have a PSM versus a NSM, overall and in those with pT2 disease respectively. No different BCR is seen in pT2 PSM versus ≥pT3 NSM; or ≥pT3 PSM versus NSM.

CONCLUSION: With 37 months follow up; positive surgical margin and postoperative Gleason sum impact the rate of BCR. Location and length of the PSM do not appear to have an impact on BCR. There was an increased risk of BCR with PSM, especially in pT2 disease.

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