OBJECTIVES: In this study, we investigated the association of positive biopsy core percent (PBCP), as well as other preoperative factors, with prostate cancer outcomes in a cohort of consecutive patients with clinically localized prostate cancer who underwent RRP. METHODS: Data from 203 patients who underwent RRP from March 1993 to May 2004 for clinically organ confined prostate cancer was analysed. The correlation of preoperative serum prostate specific antigen (PSA) level, biopsy Gleason score, total number of positive biopsies and PBCP with the extent of disease at final pathology and biochemical progression were analyzed. RESULTS: The mean PBCP was 29.8±21.1 (median 25). Histopathological examination of the RRP specimens revealed ECE in 66 (32.5 %), SVI in 43 (21.2 %), LNI in 8 (4 %), and positive SM in 59 (29.1 %). Overall, only 9% of patients (18 of 203) had biochemical progression at a median postoperative follow-up of 22 months. Univariate analysis revealed serum PSA, biopsy Gleason score, the number of positive cores and PBCP as predictive factors for extra-prostatic disease in RRP specimens. However, multivariate analysis revealed that biopsy Gleason score and serum PSA were the strongest independent predictive factors for extra-prostatic disease while percent positive biopsy cores carried significance in the prediction of ECE and SM positivity. The number of positive cores was not a predictor of non-organ confined disease. Preoperative serum PSA was the only prognostic factor for determination of biochemical failure. CONCLUSION: Gleason score is the most important and independent predictive factor for extra-prostatic disease. The percentage of cores positive for cancer has significance only in the prediction of ECE and SM positivity. Further studies are needed before routine use of PBCP as one of the important preoperative prognostic factors.

Keywords
Prostatic neoplasm, Prognostic factors, Positive biopsy core percent