Objective: To estimate the positive surgical margin learning curves since the start of the robotic prostatectomy program in year 2000 adjusting for risk group classification and pathologic stage.

Methods: We evaluated our robotic prostatectomy database and estimated the positive surgical margin rate trend over the last 10 years, according to risk groups and pathologic stage. Prostatectomies were performed by 5 surgeons with more than 300 laparoscopic prostatectomies prior experience. Positive margin was defined as cancer cells at inked margins. Risk groups were defined as D’Amicos 2001. Intermediate and high risk patients were analysed together. We estimated proportions of PSM by year and generated trend curves estimating R2 coefficient.

Results: From May 2000 through August 2010, 795 patients with localized prostate cancer were treated with robotic radical prostatectomy. The median age was 62 years (Interquartile range, IQR: 57, 65), BMI was 25 (23, 27), and PSA was 6.7 (5.2-9). Overall, 34% had palpable nodule (n=279), 2% had biopsy Gleason 8-10, 31% Gleason 7 and 67% Gleason 6 or less. PSM were identified in 18% (n=146), 15% pT2 and 28% pT3a-b. The proportion(n) of PSM by risk Group was: Low Risk, 17%(75), Intermediate Risk, 19%(60) and High_risk, 24%(9).

Conclusion: We observed a decreasing trend in PSM in pT2 patients with low risk features, particularly after around 100 cases; however, we failed to observe such a trend in pT3 patients even after having performed 189 such cases.