INTRODUCTION & OBJECTIVES: Few studies have documented long term changes in uroflowmetry after RARP. We analyzed the long term effect of RAP on changes in peak flow rates (PFRs) and post void residual (PVR) on age cohorts and men with low preoperative PFRs.

MATERIAL & METHODS: RARP was performed by one surgeon (TA) (cases 1-670) from 2002-2007. Men were asked to come to the clinic with a full bladder for pre/postoperative visits. Only voided volumes > 150cc were included, and manually reviewed for voiding artifacts. Overall 634 men had a preoperative uroflow of which 543 were ≥ 150cc. Likewise at 3M 218/265, at 9M 137/152 and ~5Yrs 88/101 men had uroflow volumes > 150cc and were usable for this study. Uroflowmetric PFRs, PVRs and Voided volumes (VV), were collected for all 88 men at preOP and paired with Long term follow up (FU), at average FU of 5.3 years (range 3.0 –10.3 Yrs), 72% available at 3 months and 55% at 9 months.

RESULTS:
Average age was 61.0 at baseline and 67.0 at long term. Baselines were BMI (26.4), and prostate weight (51.8). AUA and Bother scores improved from 8.3 and 1.7 at baseline to 5.2 and 1.1 at long term. Overall for all 88 paired men, PFRs improved from a baseline 17.8 cc/sec to 28.9, 31.5, and 33.4 at 3M, 9M, and 5 year follow up (all p < 0.01). PVRs declined from 112 cc preop to 28 cc at 5Yrs (p <0.01). Voided volumes remained stable from 403cc to 371cc (p>.65). Figures 1 AB demonstrate that both groups of men with baselines PFRs of ≤10 or >10 both, PFR increased ≥2-fold (p <0.01) after surgery and the results durable to 5 years. Age cohorts had similar improvements in PFR beginning at 3M and remained stable throughout the 5 year follow up across all age cohorts. PVR declined in all age groups, while voided volumes remained stable, Figure 2 ABC.

CONCLUSIONS: This study of uroflowmetry following RARP, paired pre and long term postoperative results had durable benefits across all ages in PFR, reductions in PVR and stable voided volumes persisting over time and ~5 years after surgery. Both groups of men with either low or normal baseline PFR improved after RARP. In contrast to the general decline of PFR in community based populations, RARP raised the average PFR>28, and is stable across long term follow up and advancing age.