Objectives: Dissection of seminal vesicles (SV) can damage the pelvic plexus, compromise trigonal, bladder neck and cavernosal innervation, and contribute to delayed gain of continence and erectile function. According to our preliminary experience and to recent reports, the seminal nerve sparing radical prostatectomy (SNSRP) technique improves functional postoperative results (earlier recovery of continence, better preservation of erectile function and quality of orgasm) without compromising oncological outcomes. In this study we presented our experience in the SNSRP to evaluate oncological and functional results.

Methods: 113 patients (pts), 95 with evaluable data, with clinically localized prostate cancer (cT1c-T2a, PSA < 10 ng/ml, Gleason score < 7, percentage positive biopsy < 33%) underwent neck sparing SNSRP from November 2001 to July 2009. All pts were continent, potent and able to achieve orgasm at baseline. Continence was defined as the use of no or one pad per day, man was considered potent if they engaged in sexual intercourse with or without the use of 5-phosphodiesterase inhibitors. Intraoperative histological examination on frozen section was performed to assess the absence of tumor invasion at the level of the junction between prostate and SV. One month after surgery all pts started sexual rehabilitation with 5-phosphodiesterase inhibitors.

Results: Neck sparing SNSRP was feasible in all patients. Medium follow-up is 37 months (range 14-106). Pathological stage was pT0 in 1/113 pts (1%), pT2 in 95/113 pts (84%), pT3 in 17/113 pts (15%). 16/113 pts (14%) had a positive surgical margins (8 pT3, 8 pT2). Histological examination on frozen sections showed no cancer infiltration at the junction between prostate gland and SV. 5/96 pts (5.2%) had PSA release (median time 46 months) all pts received adjuvant radiotherapy and PSA decreased in all pts at < 0.2 ng/ml. 80/95 pts (84%) maintained sexual function, 52/95 pts (55%) without use of 5-phosphodiesterase inhibitors. Median and medium time of recovery sexual function were 8.5 months. 80/95 pts (70%) with normal sexual intercourse, referred good ability to achieve orgasm. 80/95 pts (95%) were continent after median time to 3 months.

Conclusions: The SNSRP showed good feasibility and improved early continence.