PE10

Modelling of potency outcomes following robot assisted laparoscopic radical prostatectomy using cumulative incidence function for competing risks

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Introduction & Objectives: Potency rates reported in the literature vary from 54% to 90% at 12 months and 63% to 94% at 24 months respectively. Currently, there is no definitive way of predicting potency post RALP. We aimed to predict patients who have optimal potency outcomes following RALP using CIFs to study the covariate effects.

Materials & Methods: Analysis of 7268 patents that underwent RALP in our institution by a single surgeon from 2008 to 2018. Cox regress on model used to identify covariates affecting potency Cumulative incidence functions (CIFs) were used to compare the probability and time to potency between the different grades of NS.

Results: ge preoperative SHIM and the NS with potency were selected as covariates based on Cox regression model predicting potency. Patients with SHIM score >22 had a better chance of potency vs patient with SHIM <17 (OR - 1 69, CI-1.47 -1.79) Grade 1 NS had better potency vs Grade 4 NS (OR-3.1,CI- 2. 51- 3. 83). Older patients >65 years had poorer rates of potency compared to patents <55 years (OR- 0 68, CI- 0.61- 0.75). On CIFs of the time to potency, the overall probability of achieving potency at 24 months in Grade 1 NS is 72% (95% CI-71%-74%) and at 36 months is 74% (95% CI 73%- 76%) in Grade 2 NS. The probability of achieving potency at 24 months is 48% (95% CI 46%- 50%) and at 36 months is 50.2% (95% CI 48.4%- 52.2%) Patients with no Pre-op ED (SHIM >22with Grade 1 NS had a probability of potency recovery at 24 months is 83% (95% CI 82.3% - 85.5%) and at 36 months is 85.8% (95% CI 84.27% 87.33%). In patients less than 55 years with grade 1 NS the probability of potency recovery at 24 months is 5.85% (95% CI 82.81%- 87.05 %) and at 36 months is 87.5% (95%CI 85.38%- 89.44%) (Fig 1).

Fig No 1A: - Cumulative incidence functions of potency classified on nerve-sparing approach (irrespective of NS, age and pre-op SHIM score.)

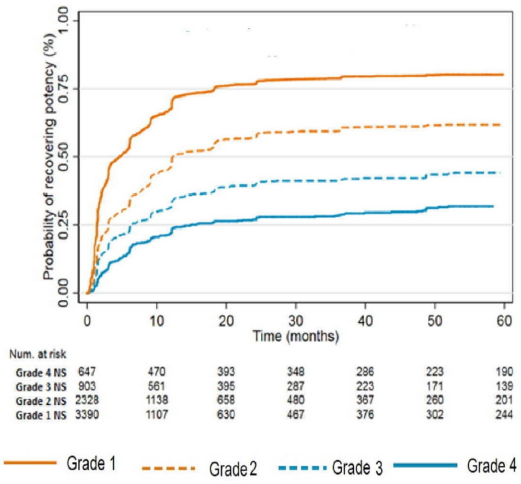


Fig 1 B: - Cumulative incidence functions of potency classified based on nerve-sparing approach grouped based on pre-operative EF.

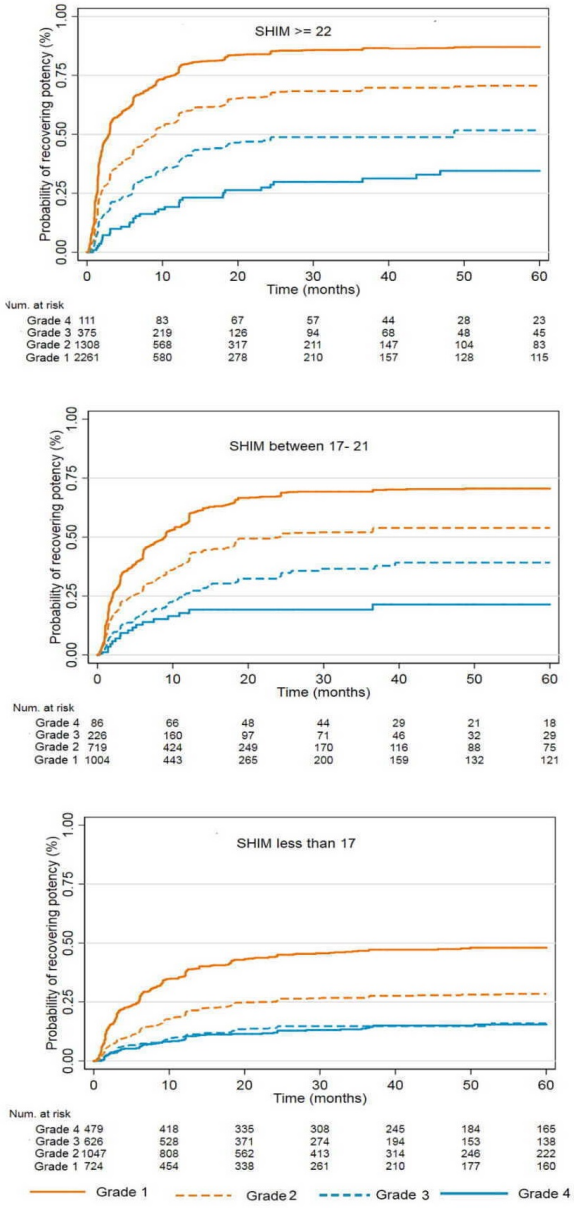
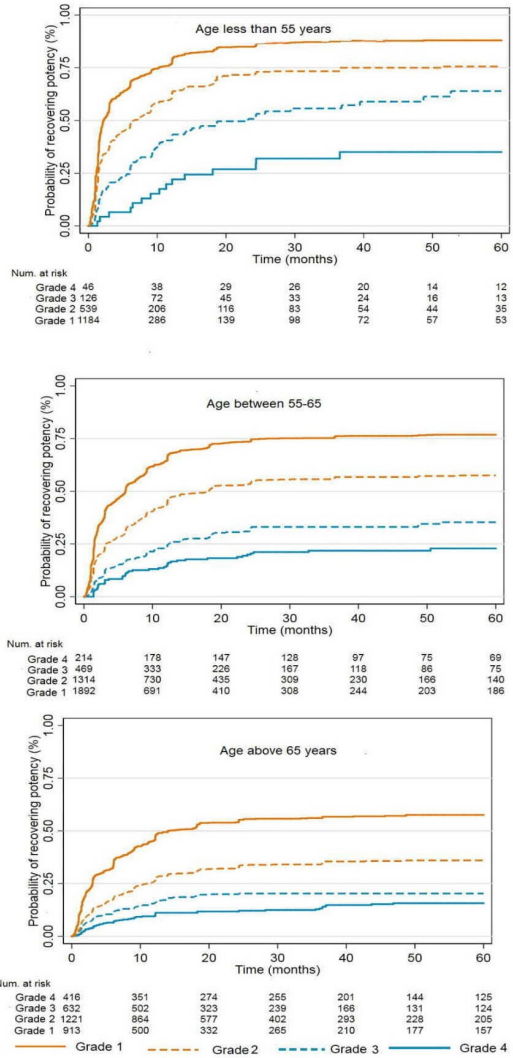


Fig 1 C: - Cumulative incidence functions of potency classified based on nerve-sparing approach grouped based on age



Conclusions: Preoperative EF age and the NS are the most influential for potency recovery in the order of significance following RALP. Young patents with good preoperative sexual function and grade 1 NS have earlier and better potency outcomes compared to counterparts.