

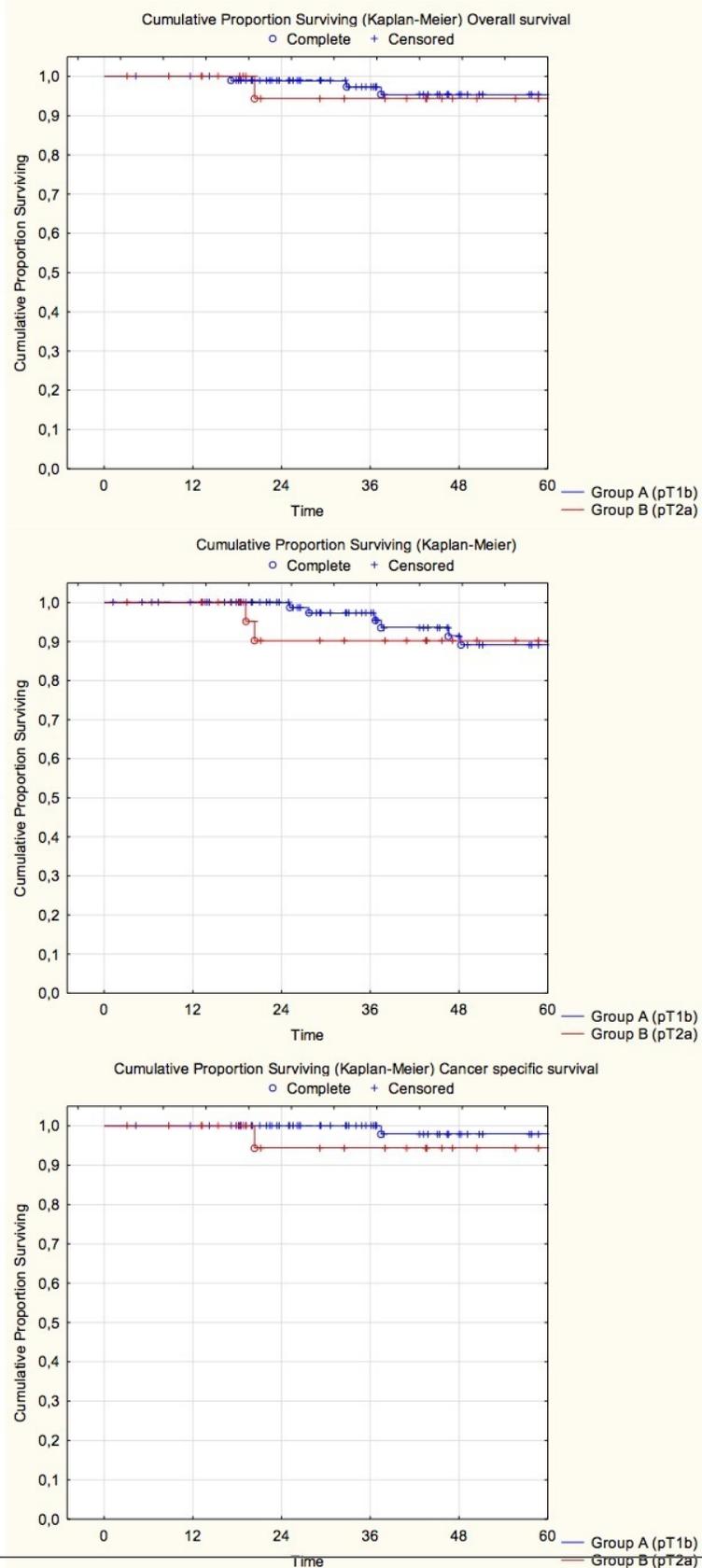
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Introduction & Objectives: While Partial Nephrectomy (PN) is nowadays considered the gold standard treatment for T1 renal masses, the nephron sparing approach for higher stage renal masses is still debated. The aim of the study was to compare the perioperative, pathological and oncological outcomes of clinical T2a (cT2a) and clinical T1b (cT1b) renal tumors treated with minimally invasive PN.

Materials & Methods: We retrospectively reviewed our prospective maintained database and extracted data of patients who underwent minimally invasive PN between 06/2008 and 06/2018 for cT1b (group A) and cT2a (group B) renal masses. All the PN were performed by the same surgeon. Demographics, perioperative (size and PADUA score of the tumor, solitary kidney, operative time - OT, estimated blood loss - EBL, ischemia time, intra and postoperative complications - graded by Clavien, length of stay - LOS), pathological (tumor pathology, pT, positive surgical margin – PSM, ISUP grade and pT3a upstaging) and follow up data (recurrence and survival) were collected and analyzed. The overall survival (OS), the cancer specific survival (CSS), and the recurrence free survival (RFS) were evaluated. T-test and Mann Whitney U test were performed to compare the two groups. Kaplan-Meier Survival Analysis (KMSA) and Cox model were built to compare the oncologic outcomes.

Results: 234 patients were considered; Concerning pathological findings, 190 lesions were malignant (81.2%), with PSM rate of 2.1% (4/190). Median ISUP grade was 2 (IQR 2-3). pT3a upstaging was found in 34/190 cases (17.8%). The median follow-up of the whole cohort was 36 (IQR 20-63) months. The overall recurrence rate was 5.8% (11/190). Stratifying the patients per clinical stage 188 were cT1b and 46 cT2a. No significant differences were found between the groups for all the variables considered except for age (61.7+12.3 vs 56.2+13.6 yrs, $p=0.018$), tumor size (51+7 vs 79+7 mm, $p<0.001$) and ISUP grade (2 [IQR 1] vs 3 [IQR 2], $p=0.025$). KMSAs for 5-year OS were 94% and 93% for cT1b and cT2a respectively ($p=0.83$), for 5-year CSS 98% and 94% ($p=0.31$), and for 5-year RFS 89% and 90% ($p=0.13$).



Conclusions: The present study suggested that, if performed by experienced hands, an organ-sparing approach can be offered even in case of cT2a renal masses without compromising safety and oncological outcomes.