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**EXTERNAL VALIDATION OF PADUA CLASSIFICATION FOR THE RENAL TUMOR ENUCLEATION TECHNIQUE**

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*Introduction:* To assess the ability of PADUA score to predict the surgical results and the peri-operative complications of open tumor enucleation (TE) technique for renal tumors. *Patients and Methods:* Between July 2006 and March 2011, we prospectively gathered data from 244 consecutive patients treated with open TE with warm ischemia. All clinical and surgical data of patients and tumors were registered. Among the parameters of PADUA score, clinical tumor dimension, polar, face and rim location, and relationship with UCS were prospectively assigned. Instead, the tumor relationship with renal sinus was retrospectively assigned. The relationship between preoperative variables (including PADUA score) and surgical results/perioperative complications was assessed with univariate analysis (Spearman correlation coefficient, unpaired *t*-test, and Pearson's chi square test, as appropriate). A multivariate logistic regression model was done to test the ability of PADUA score, with the other significant variables, to predict overall surgical complications and Clavien grade 3 surgical complications. *Results:* The median PADUA score of renal tumors was 8 (IQR:7-9), and it was  $\geq 10$  in 52 (21.3%) patients. The mean WIT was 16.8 min. The mean operative time was 109.4 min and the mean EBL was 183.0 mL. Overall, 47 perioperative complications occurred in 45 patients (45/244=18.4%); of these, 39 (16%) were surgical and 8 (3.3%) medical. Surgical complications included blood loss treated with bedrest in 2 patients (0.8%), with transfusions in 25 (10.2%) and with a second invasive procedure in 5 (2.1%) patients. Urinary fistula occurred in 7 patients (2.9%); it was treated with bedrest and antibiotics in 4 (1.7%), while it needed ureteral stenting in the other 3 cases (1.2%). Two patients had two surgical adverse events each (urinary fistula and blood loss). According to Clavien system, 6 surgical complications were grade I (2.5%), 25 grade II (10.2%), and 8 grade III (3.3%). No grade IV and V surgical complications occurred in this series. At univariate analysis the entirely endophytic tumor growth, the involvement of UCS and renal sinus, the clinical diameter and the PADUA score resulted significantly correlated with WIT and EBL. Only PADUA score and surgical indications resulted as significant predictors of operative time. Significant predictors of overall surgical complications were the entirely endophytic tumor growth

( $p=0.049$ ), the involvement of UCS ( $p=0.029$ ) and renal sinus ( $p=0.036$ ), the tumor diameter ( $p=0.021$ ) and the PADUA score ( $p=0.0007$ ). At multivariate analysis, among all the anatomical variables, only PADUA score was found to be an independent predictor of overall surgical complications ( $p=0.016$ ), and Clavien grade III surgical complications ( $p=0.008$ ). The surgical indication was also an independent predictor of major surgical complications ( $p=0.029$ ). *Conclusion:* The PADUA score was significantly associated with the parameters of technical difficulty of TE, and it was an independent predictor of overall and major surgical complications of this technique.

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**PREDICTORS OF ACUTE GENITO-URINARY TOXICITY AFTER HIGH-DOSE PROSTATE CANCER RADIOTHERAPY: INITIAL RESULTS OF A PROSPECTIVE STUDY**

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*Background and Purpose:* In April 2010, a prospective observational study (DUE01) aimed at developing quantitative predictive models of genito-urinary (GU) toxicity and erectile dysfunction after high dose ( $\geq 70$ Gy) external radical radiotherapy (RT) for clinically localized prostate cancer was activated. The aim of this first analysis was to assess predictors of GU symptoms during treatment scored by IPSS and ICIQ-SF. *Patients and Methods:* A questionnaire collecting detailed clinical information was filled before RT; four questionnaires on QoL, GU and erectile dysfunction