INTRODUCTION & OBJECTIVES: The standard treatment for upper urinary tract urothelial tumors (UUTUT) is nephroureterectomy with bladder cuff excision, but low grade tumors can benefit from a more conservative type of treatment. Preoperative staging is essential for optimal care.

MATERIAL & METHODS: From 2008 to 2013, a total of 195 patients have been biopsied and treated for UUTUT at St. John’s Clinical Emergency Hospital. The endoscopic approach was used in 65 cases, and in the other 130 cases, nephroureterectomy with bladder cuff excision was performed. The diagnostic protocol consisted of i.v. urography, CT urography, urine cytology (selected cases), cistoscopy and rigid or flexible ureteroscopy with tumor biopsy in case of diagnostic uncertainty or conservative management (98 cases). Basket catheters, 5 or 3 F forceps or the Storz ureteral resectoscopes were used for biopsying. Radical nephroureterectomy was proposed for 38 of the 98 cases which underwent ureteral biopsy. Three cases were a no-show for the follow-up and were not analysed. The correlation between the pathology report for the ureteroscopic biopsy fragments and the one for the final tumor specimen after nephroureterectomy was retrospectively analysed for 35 cases. Additionally, the tumor grade and tumor stage correlation was analyzed.

RESULTS: For 32 of the 35 cases (91.4%) that were analyzed, the ureteroscopic biopsy established the diagnosis of urothelial carcinoma. In 2 cases, the biopsy fragments were too small and couldn’t be used for diagnostic purposes, and in 1 case the diagnosis was of a benign lesion. For those 32 cases with ureteroscopic diagnosis of urothelial tumor, a tumor grade correlation of 84.37% (27 cases) was established between the pathology report of the nephroureterectomy specimen and that of the endoscopic biopsy fragments. The other 5 patients were preoperatively undergraded. As for the correlation between tumor grading and tumor staging, the pathology report of the nephroureterectomy specimens revealed 14 cases of low or medium grade tumors, 12 (85.7%) of which were non-invasive tumors (pT1a, pT1). Of the other 21 cases with high grade tumors, 15 (71.4%) were invasive tumors (pT2, pT3).

CONCLUSIONS: Ureteroscopic biopsy of UUTUT does not allow accurate tumor staging, because the fragments are too small and do not include all the layers of the affected segment. Still, the correlation between diagnostic ureteroscopy and the pathology report is significant in regards to tumor grading, thus helping to establish therapeutic strategy, which is especially relevant in cases where conservative management is sought.