

## **Is Routine Computed Tomography of Upper Urinary Tract Justified Following Bladder Cancer Surgery in the Era of Powerful Ultrasonography?**

**Introduction and Objective:** The purpose of the present study was to evaluate the justification of routine use computed tomography (CT) for exploration of upper urinary tract during follow-up after bladder cancer (BC) surgery and validity of the ultrasonography (US) using in this respect.

**Materials and Methods:** After institutional review board approval was obtained, we identified 36 upper tract urothelial carcinomas (UTUC) surgically treated at our institution from 2006 to 2011. BC surgery had undergone in all patients previously. A total of 36 patients treated for UTUC after BC surgery were evaluated including 23 men (64%) and 13 women (36%). The median age at operation was 62 years (range 40-82). The mean interval between UTUC surgery and previous BC surgery was 3.8 years (range 1 to 7). No patients had an UTUC before operation for BC. Abdominal US and CT urography were performed in all patients preoperatively.

**Results:** Pyelocaliceal tumors were founded in 20 (56%) and ureteral in 16 (44%) patients. Several degrees of ureteral and/or pyelocaliceal dilatation were identified with CT urography and US in 21 (58%) patients. Pyelocaliceal and ureteral dilatation had 14 (88%) patients with ureteral tumors. US performed correct diagnosis of UTUC in 28 (78%) patients and all other patients had ultrasonographically suspicion UTUC. Clear diagnosis of UTUC established with CT in 33 (92%) patients and in the rest with CT suspicion tumors, ureteropyeloscopy was used to support diagnosis.

**Conclusions:** Our study has suggested that US might be comparable to CT for routine use in detection of UTUC during follow-up of patients underwent BC surgery. CT scan could be helpful in any doubtful case when US findings for UTUC are not clear. Because of high cost, radiation and possible allergic adverse effect, CT have limited access and should be an optimal test and there are no indications for its routine use for imaging of upper urinary tract following BC surgery.