

Oncological outcomes and pathological characteristics of cT1 upstaging to pT3a renal cell carcinoma compared with de novo pT3a tumors

Abstract

Introduction: The significance of upstaging of cT1 renal tumors to pT3a is not clear. We evaluate the incidence of upstaging, identify predictors and analyze oncological outcomes of these patients versus those who did not upstage. We also compared the oncological outcomes of cT1 upstaging to pT3a with de novo pT3a renal tumors.

Methods: From a database of 1021 renal tumors with complete available follow-up data, 517 patients had cT1. Patients upstaging to pT3a were compared to those who did not. Baseline clinical, perioperative, histopathologic features and oncological outcomes were analysed.

Results: Out of 517 cT1 patients, 105 (20.3%) upstaged to pT3a and 412 (79.7%) did not. Proportion of patients in each group undergoing partial and radical nephrectomy, postoperative tumor size, histology, margin status and lymph node involvement were similar. Among upstaged, 9 patients (8.6%) developed first recurrence as compared to only 3 (0.7%) in those not upstaging ($P < 0.001$). The median time to recurrence (57 vs. 107 months; $P < 0.001$) was lesser in de novo pT3a renal tumors.

Conclusions: Pathological upstaging from cT1 to pT3a and necrosis on histopathology were associated with recurrence. Advanced age, smoking, necrosis on histopathology, clear cell histology and higher Fuhrman grades contributed to pathological upstaging of cT1 tumors. De novo pT3a RCC had worse survival when compared to cT1 patients upstaging to pT3a RCC.