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## Renal cell carcinoma in kidney transplant candidates

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**Introduction:** End stage renal disease (ESRD) presents increased risk for renal cell carcinoma (RCC). It is becoming increasingly clear that outcomes in treated RCC are better prior to kidney transplantation than after. The stage of RCC also determines the required observation time prior to kidney transplant. It is challenging to diagnose RCC in ESRD patients as the kidney parenchyma undergoes cystic degeneration and after a critical point of kidney degeneration, they do not process intravenous contrast agents. Ineffectiveness of intravenous contrast use in ESRD patients' kidney imaging renders even more difficulty for the detection of RCC. We present our experience with screening kidney transplant candidates with a plain abdominal computerized axial tomography scan (CAT-Scan).

**Materials & Methods:** From October 2013 to October 2015, 637 consecutive patients with ESRD referred to Temple University Hospital (Abdominal Organ Transplantation Department) for kidney transplant evaluation. From all these patients, 157 found not complying with the transplant criteria and they stopped further evaluation. The rest of patients proceeded with the evaluation and underwent an abdominal CAT-scan without intravenous contrast; according to our institution screening protocol. The CAT-Scan's reports together with the films were reviewed for findings suspicious for elements of renal neoplasia i.e., cysts, solid masses, calcifications. A radical nephrectomy was proposed to any patient who had radiological findings suspicious for malignancy

**Results:** A total of 20 patients had radiological criteria suspicious for malignancy. Radical nephrectomy was proposed and performed to all these 20 patients before transplantation. After pathological examination, 14 patients had malignant lesions, 4 patients had benign lesions and in the rest of them there was no malignancy. Nine of the 14 patients with malignancy, had papillary renal cell carcinoma, 4 patients had clear cell carcinoma and 1 patient found to have two types of renal cell carcinoma in the same kidney (papillary and chromophobe type). Two of the patients with benign lesions found to have oncocytomas, 1 patient had papillary adenoma and one had focal areas of clear cell changes in both kidneys. All patients with RCC were males and all were African American, except 1 who was Caucasian. Eleven of the 14 patients found to have blood type 0 and Rhesus positive. Eight of 14 patients had a solid mass in CT-scan and the rest of them had cysts. The prevalence of RCC in kidney transplant candidates is 2.91%, which is several times higher than that found in the general population (0.858%).

**Conclusions:** There is an increased risk of renal cell carcinoma in kidney transplant candidate population and a screening program merit further investigation.

### Biography

Konstantinos A Zorbas has completed his MD from University of Athens Medical School, Athens, Greece. He is a Clinical Research Fellow at Temple University Hospital. He has published 1 case report and 1 review article.

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