

A retrospective analysis of the oncological outcomes of T3a Renal Cell Carcinomas which have undergone Partial Nephrectomy

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Introduction:

Radical Nephrectomy is the gold standard surgical approach for T3a Renal Cell Carcinomas. However, a small but not insignificant number of patients pre-operatively staged cT1/cT2 are treated with a partial nephrectomy but at final pathology are subsequently upstaged to pT3a. Data was collected retrospectively using the Royal Free database. 16 of the 306 partial nephrectomies demonstrated stage T3a at final histology. Primary outcome analysed was Recurrence-Free Survival. Secondary outcome analysed was Renal Function Preservation (post-operative eGFR/ preoperative eGFR).

Graphical Abstract:

Of the 16 patient, 14 patients presented with localised T3a RCC at presentation with an average follow up of 17.3 months. No evidence of local or metastatic recurrence was found in this series of 14 patients. 2 patients were excluded as they presented with metastatic disease. This study found a respectable Renal Function Preservation. In this series, the eGFR±SD (mL/min/1.73m2) was 77.3±18.8 pre-operatively and 69.7± 19.7 post-operatively, displaying a Renal Function Preservation (post/pre eGFR) of 90.2%.

This pilot study concluded that a partial nephrectomy is oncologically safe for certain T3a kidney renal cell carcinomas. Nephrectomy in certain selected patients with clinical T3a tumours, especially in patients with imperative reasons for nephron-sparing surgery as long as a negative margin can be achieved. This study seeks to advise that surgeons should not be deterred from carrying out a partial nephrectomy for fear of pathological upstaging. Renal cell carcinoma (RCC) is a kidney cancer that originates in the lining of the proximal convoluted tubule, a part of the very small tubes in the kidney that transport primary urine. RCC is the most common type of kidney cancer in adults, responsible for approximately 90–95% of cases. RCC occurrence shows a male predominance over women with a ratio of 1.5:1. RCC most commonly occurs between 6th and 7th decade of life.