

Singh S.¹, Das P.²¹Max Institute of Cancer Care, Urooncology, Delhi, India, ²Govt. Medical College, Urology, Trivandrum, India

Introduction & Objectives: Introduction: About 2-3% of all cancers are renal cell carcinoma (RCC). Nephrectomy is the main treatment. The decision among radical and partial nephrectomy often relies on the tumor size diagnosed by CT scan. It is thus justified to investigate the variation between the radiologic and pathologic size of the tumor and its implications on the management of renal cell carcinoma.

Aim: To assess the variation between the radiologic tumor size (RTS) of localized renal cell cancer as measured by Computed tomography (CT) preoperatively and the pathologic tumor size (PTS) as determined from surgical specimen postoperatively.

Materials & Methods: The records of 240 patients who underwent nephrectomy due to RCC were taken from the Urology Department of Trivandrum Medical College, Kerala, India. The difference of means for the tumor size on Computed Tomography (CT) scan/ the radiologic tumor size (RTS) and pathologic tumor size (PTS) was calculated using paired T test; the difference was also categorised in terms of sex, type of RCC, type of nephrectomy and T staging. A p value of <0.05 was considered statistically significant.

Results: The mean age of cases included was 54.82 years (22-78 years) (SD 10.991). The mean RTS was larger than PTS (5.22 ± 2.15 vs. 4.98 ± 2.04 cm, $p = <0.001$) with a discrepancy of 0.24 cm. The difference among means was found significant for both males and females; significant among clear cell RCC and non - clear cell RCC; and significant for radical nephrectomy but not for partial nephrectomy. Overall 41 of the 240 tumors were down-staged while another 5 up-staged.

Table 1 : Characteristics of the 240 patients with localized renal cell carcinomas

Number of patients	240
Average age (years)	54.82 (SD 10.991)
Gender-	
Male	159 (66.2%)
Female	81 (33.8%)
Histopathologic type-	
Clear Cell Carcinoma	198 (82.5%)
Total-Non Clear Cell Carcinoma	42 (17.5%)
Papillary	22 (9.2%)
Chromophobe	7 (2.9%)
PNET	3 (1.2%)

Sarcomatoid	5 (2.1%)	
Unclassified	5 (2.1%)	
Average tumor size-		
RTS	5.22 (SD 2.15)	
PTS	4.98 (SD 2.04)	
Average difference between RTS and PTS-	0.24 (SD 0.37)	
Fuhrman grade		
I	10 (4.2%)	
II	177 (73.8%)	
III	45 (18.8%)	
IV	8 (3.3%)	
T stage-	Radiologic	Pathologic
T1a	100 (41.7%)	121 (50.4%)
T1b	102 (42.5%)	95 (39.6%)
T2a	30 (12.5%)	17 (7.1%)
T2b	8 (3.3%)	7 (2.9%)
Stage change-		
Down-staged	41 (17.1%)	
Up-staged	5 (2.1%)	
Total	46 (19.2%)	

Conclusions: There can be a discrepancy between radiologic size and pathologic tumor size in renal cell cancer which bears repercussions for its management. So, management of renal cell carcinoma should be carefully selected based on the tumor size diagnosed by CT scan.