

# Pathological Features of Renal Cell Carcinoma, A 10- Year Tertiary Centre Experience

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## ABSTRACT

**Background:** Malignant kidney tumors are not uncommon worldwide. They are heterogeneous but have unified pathological prognostic features.

**Objectives:** we focused on studying renal tumor in our centre, a large tertiary centre in the western region of Saudi Arabia, addressing gross and microscopic features of prognostic significance.

**Methodology:** Nephrectomies due to renal parenchymal neoplasm from July 2010 to June 2020 in King Abdulaziz University Hospital were studied. Patients' demographic and radiology data were extracted from the Hospital data system. Pathological features were reviewed by combining the radiology, gross and microscopic features and applying the recent diagnostic, grading, and staging guidelines.

**Results:** 146 out of 154 renal neoplasms were malignant. The patient's average age was 53 years. 62% of the patients were male. Clear cell renal cell carcinoma is the most common subtype (66%), followed by papillary and chromophobe renal cell carcinoma. 59% of the tumors have low nuclear ISUP grade. 55% of tumors were pT1 stage. Two cases were up-staged according to the updated guidelines for renal vein invasion. A shift toward partial nephrectomy is observed in the second five years.

**Conclusion:** The patients' demographics and pathological tumor features are similar to the results of regional studies in our country and the Middle East. The updated staging guidelines modified the stage of two tumors. Lacking information such as tumor laterality may impact the patients' follow-up. A shift toward partial nephrectomy reflects early-stage tumor detection and advanced radiology modalities and will improve the patient's outcome and save the residual kidney function.

**Key words:** Clear cell renal cell carcinoma, Chromophobe RCC, ISUP grading, Papillary RCC, Renal cell carcinoma, RCC staging, RCC prognosis, Translocation RCC

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