



Research Article

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## Renal Tumours : Risk Factors, Clinical Profile, and Histopronosis : A Review of 58 Cases

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### Abstract

**Introduction:** Kidney cancer accounts for 3% of all adult solid cancers, with clinical and imaging findings evoking a diagnosis that is confirmed by histology, and a clinical and historical prognosis. The goal of this study is to describe the risk factors for kidney cancer as well as the prognostic profile.

**Patients and Methods:** The UHC ibn Rochd's Urology andrology department conducted a descriptive study with retrospective data collection from February 2018 to June 2021.

Patients who had a total nephrectomy for a renal tumour were included in this study. Patient age, sex, clinical and paraclinical data, and anatomopathological results were all collected on pre-determined forms.

**Results:** The mean age was 62.8 years. The M/F ratio was 1.9 (male predominance). The mean time to consultation was 8 months (1 month). The risk factors were mainly smoking (21%), obesity (7%) and hypertension (10.3%). 38% of cases were diagnosed with low back pain, followed by haematuria in 24%. The discovery was incidental in 11% of cases. ECOG /OMS rated 1 in 55.1%, 2 in 31%. Left nephrectomy was the most common in 62% of cases.90% of cases were renal cell carcinoma (RCC).3% of cases were renal metastases.95% were clear RCC.10% of cases had a sarcomatoid component.PT2 stage was predominant (47.8%) followed by PT3 (34.5%). PT4 stage: 10.35%. In 6.9% of cases, lymph node metastases were found, with Furrman grade II predominating (51.7%) followed by grade IV (19%). Vascular emboli: 17% of cases.

**Conclusion:** Kidney cancer is a clear cell renal cell carcinoma ccRCC until proven otherwise; two men are affected for every one woman. In half of the cases, the prognosis is intermediate. The risk factors that must be addressed are smoking and hypertension.

**Keywords:** Renal Tumours, Risk Factors, Clinical Profile, Histopronosis  
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### Introduction

Kidney cancer accounts for 3% of all solid cancers in adults. Clinical and imaging findings elicit the diagnosis, but histology confirms it. It has a

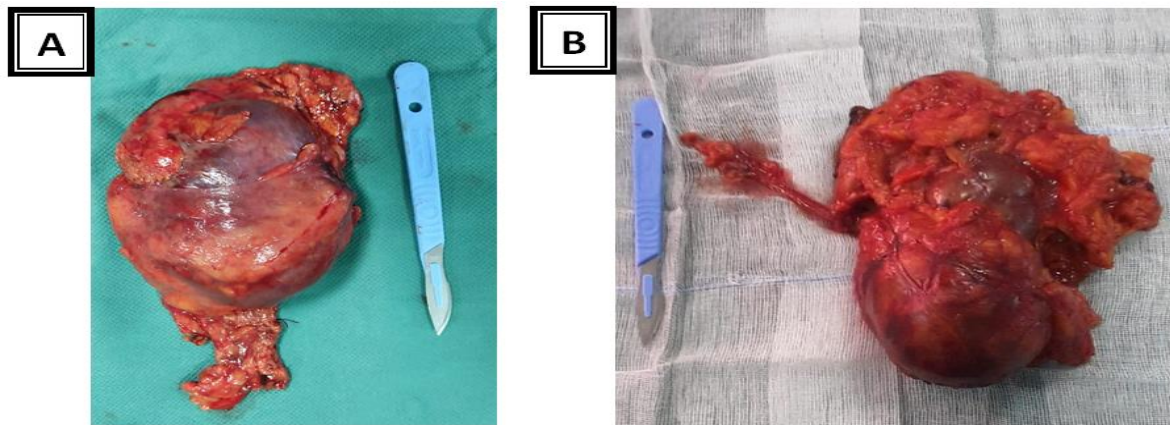
clinico-histological prognosis. The purpose of this study is to describe the risk factors for kidney cancer as well as the histological prognosis.

# Renal Tumours : Risk Factors, Clinical Profile, and Histopronosis : A Review Of 58 Cases

## Patients and Methods

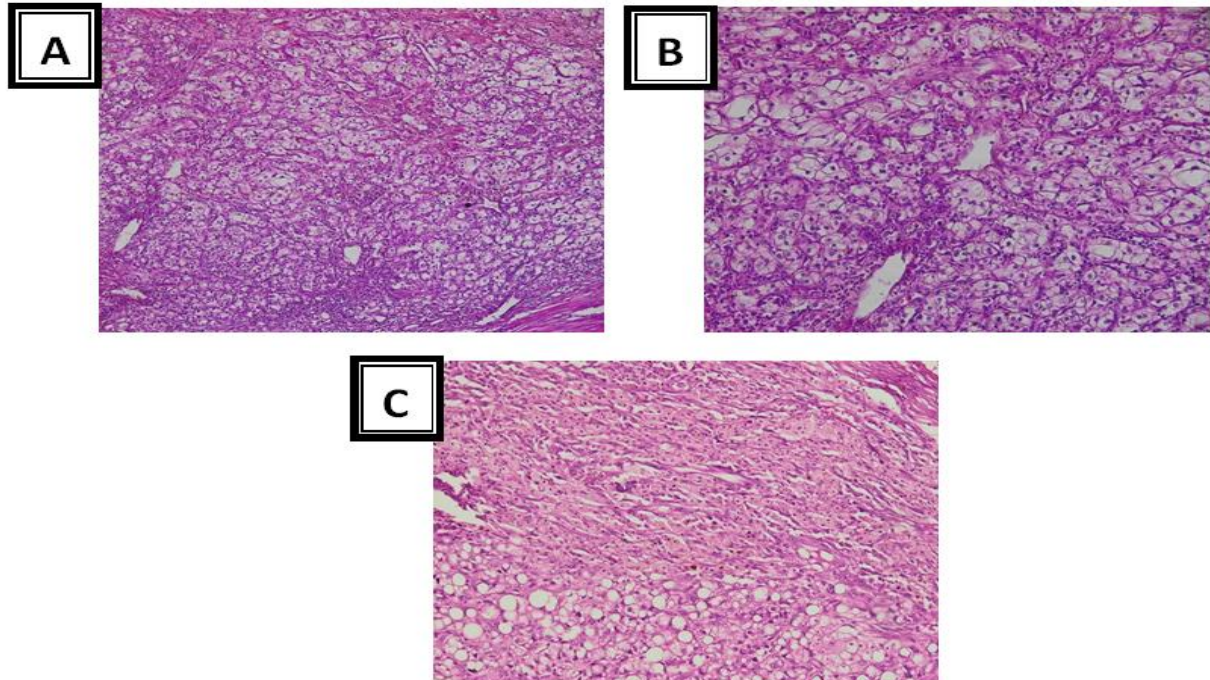
This was a descriptive study with retrospective data collection from February 2018 to June 2021, carried out in the Urology-andrology department of Chu ibn Rochd. All patients who underwent partial or total nephrectomy for a renal tumour detected by SCANNER were included in our study. All incomplete records and non-tumour results (tuberculosis) were excluded. The exploitation of the files was done with the help of a data processing form, the size of our sample was 34. The clinical data collected were: vital signs,

location of pain, associated urinary, neurological and digestive symptoms and pelvic touch. All patients had undergone a renal-vesical ultrasound scan on admission, supplemented by a uroscanner. Creatinine, uraemia and kalaemia were measured, as well as a blood count. The standard technique of nephrectomy was conventional (open surgery) under general anaesthesia, and the operative specimen (**Figure 1**) was sent to anapath for histological study (**Figure 2**). The data processing and analysis was done using EPI info and



Excell.

**Figure 1 : Nephrectomy operation specimens: A- Right B- Left**



**Figure 2 : clear cell renal cell carcinoma growth 10 (A) and 20 (B) ; chromophobe renal cell carcinoma with liposarcomatous component (C)**

## Results

The mean age was 62.8 years. The M/F ratio was 1.9 (male predominance). The risk factors were

mainly: smoking (21%), obesity (7%) and arterial hypertension (10.3%) (**Table I**).

# Renal Tumours : Risk Factors, Clinical Profile, and Histopronosis : A Review Of 58 Cases

**Table I; Risk factors for renal tumours**

Risk factors	%
Smoking	20,7
Arterial Hyper Tension	10,3%
Obesity	7%

Low back pain was the most frequent mode of revelation in 38% of cases, followed by

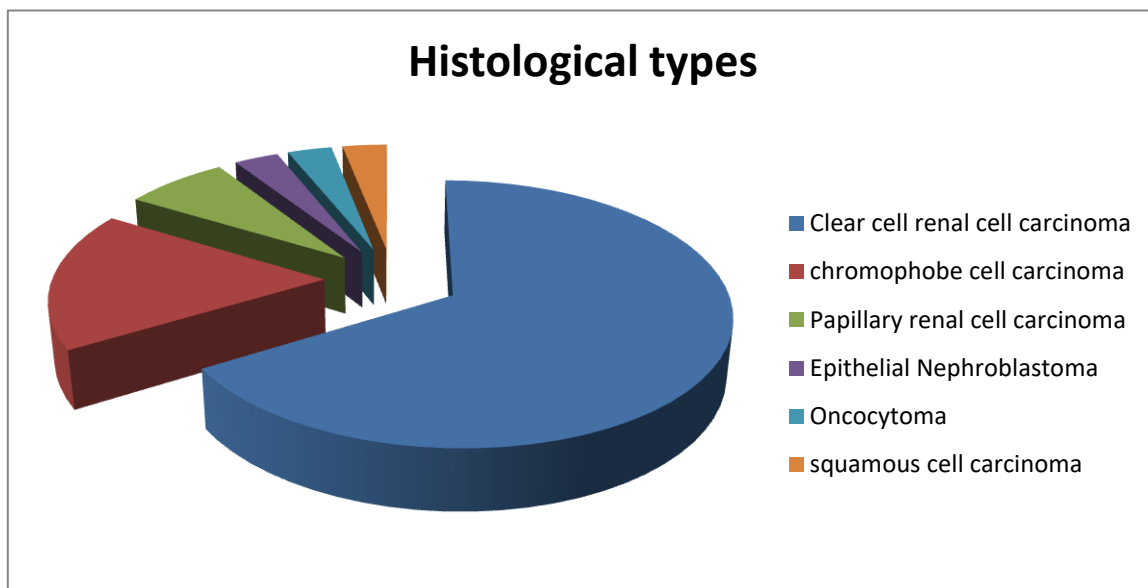
haematuria in 24%, and incidental discovery in 11% of cases (**Table II**).

**Table II : Distribution of patients according to mode of revelation**

Symptomatology	Effectif	Frequency
Low back pain	17	58,6%
Haematuria	10	34,4%
Classic triad	7	24,1%
incidental discovery	6	20,6%

ECOG /OMS rated 1 in 55.1% to 2 in 31%. Left nephrectomy was predominant in 62% of cases and right nephrectomy in 38% of cases. Renal cell carcinoma (RCC) was the most common tumour in 90% of cases. Renal metastases accounted for 3% of cases. Clear cell RCC was the most

common tumour in 95% of cases, followed by chromophobe renal cell carcinoma in 17.2% and sarcomatoid component in 10% of cases.(**Table III**) (**Figure 3**) groups the pathological findings into subtypes.



**Figure 3 : Distribution of patients according to histological subtype**

**Table III : Distribution of patients according to histological subtype**

Histological types	Effectif	%
Clear cell renal cell carcinom	34	65,6
chromophobe cell carcinoma	10	17,2
Papillary renal cell carcinoma	4	7
Epithelial Nephroblastoma	2	3,4
Oncocytoma	2	3,4
squamous cell carcinoma	2	3,4
Total	58	100

PT2 stage was predominant (47.8%) followed by PT3 (34.5%). The PT4 stage was 10.35% (**Table IV**).

# Renal Tumours : Risk Factors, Clinical Profile, and Histopronosis : A Review Of 58 Cases

**Table IV : Distribution of patients according to tumour stage**

TUMOR STAGE	EFFECTIFS	%
<b>PT1</b>	4	6,4
<b>PT2</b>	28	47,8
<b>PT3</b>	20	35,4
<b>PT4</b>	6	10,4
<b>TOTAL</b>	58	100

In 6.9% of cases lymph node metastases were found. Fuhrmann grade II was the most common

(51.7%) followed by grade IV (19%) (Table V). Vascular emboli: 17% of cases.

**Table V : Distribution of patients according to tumour grade**

Grade Tumoral	Effectif	%
<b>I</b>	<b>10</b>	<b>17,2</b>
<b>II</b>	<b>30</b>	<b>51,7</b>
<b>III</b>	<b>7</b>	<b>12,1</b>
<b>IV</b>	<b>11</b>	<b>19</b>
<b>Total</b>	<b>58</b>	<b>100</b>

## Discussion

Kidney cancer represents 3% of adult solid cancers. It is twice as common in men as in women (1)(2) as in our study. The risk factors are mainly obesity, hypertension, smoking and end-stage renal failure(3)(4). The most frequent mode of diagnosis is incidental discovery by an imaging examination (ultrasound) (5)(6), unlike in our study, where low back pain was a frequent reason for consultation, followed by the classic triad of low back pain(7). CT with injection of contrast medium and different passages is the reference examination for the characterization and surgical planning of renal lesions as well as for the evaluation of the locoregional extension(8). An increase in contrast of more than 20UH after injection defines a tissue lesion(9). CRC is the most common adult renal tumour, representing about 80 to 85% of all renal tumours: Benjelloun, A et al (10) in a series of 155 cases reported 84.4% CRC, Coulange and Bretheau (5) reported 66% clear cell carcinoma, and in our study it was found in 95% of cases. For all stages combined, the recurrence-free survival rate of these patients operated on for CRC is 70% (11). Chromophobe cell carcinoma of the kidney is a particular anatomical-clinical entity, characterised by a favourable prognosis thanks to a low Fuhrman grade and its limitation to the kidney (12). This type gives less metastasis, Chromophobe carcinoma represented 17% of the renal tumours in our study, 100% of which were Fuhrmann grade II. O. Yddoussalaha et al (13) reported

18.6% of this subtype. Anatomopathological examination can also establish a TNM (tumor, node, metastasis) stage of CRC. The prognostic factors for kidney cancer used routinely are: performance status, TNM and pTNM classification (2009), Fuhrman grade, distinction between the different histological types and the search for microangiogenesis and vascular emboli(14). PT2 stage was predominant (47.8%) followed by PT3(34.5%).

## Conclusion

Until proven otherwise, kidney cancer is a clear cell RCC, and two men are concerned for one woman. In half of the cases, the prognosis is intermediate. The risk factors to be addressed are smoking and hypertension. Patients should be encouraged to have annual check-ups in the context of school and occupational medicine in order to detect and treat incidental forms of poor prognosis.

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