

Prevalence & Pathological Features of Renal Cell Carcinoma in a Tertiary Referral Center: A Surprisingly High Prevalence of the Chromophobe Type



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Objective

To study the prevalence and pathological features of chromophobe renal cell carcinoma in the middle east region using the *American University of Beirut Medical Center (AUBMC)* nephrectomy database.

Materials & Methods

- Retrospective review of all nephrectomies (partial or radical) performed at the AUBMC
- January 2002 until December 2012
- Total: 133 patients – 50 partial, 83 radical nephrectomies

Preoperative variables

- Age
- Body Mass Index
- Blood group
- Smoking status
- Tumor size
- R.E.N.A.L. score

Perioperative renal functional/patient outcomes

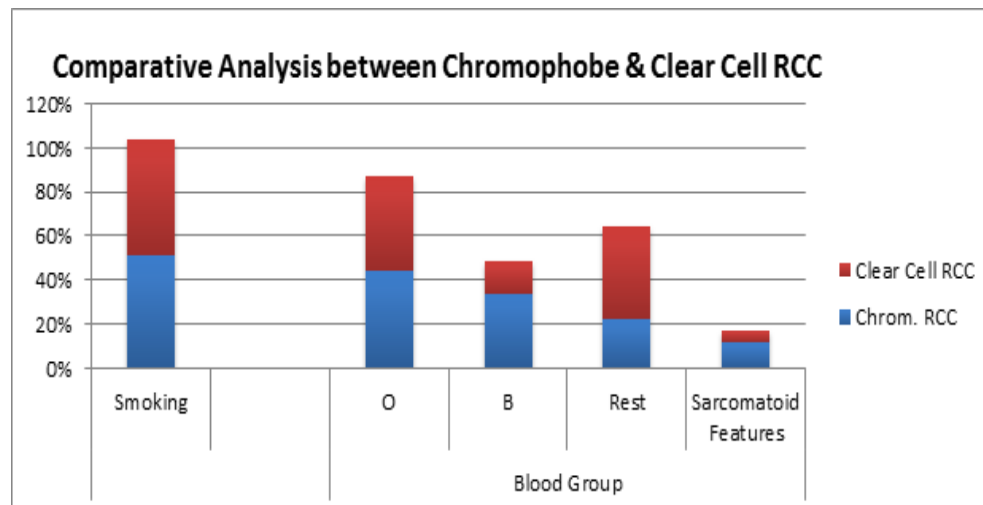
- Estimated change in GFR
- Ischemia time
- Intraoperative blood loss
- Pathological type & stage
- Fuhrman Grade
- Total operating time
- Length of hospital stay

Results

- Prevalence of ChRCC: 23% (31/133) vs. 5-8 % in western series
- Percentage T1a lesions at presentation: 26% vs. 55% in western series
- Percent recurrence at 7 years = 3% (1/31)

Compared to other subtypes of RCC:

- ChRCC not associated with smoking
- ChRCC not associated with increased BMI
- ChRCC associated with:
 - Blood Group "O": 14/31=45% (p<0.05)
 - Blood Group "B": 11/31 = 35% (p<0.05)
- ChRCC more associated with sarcomatoid features: 4/31 = **12%** vs. Clear cell RCC = 4/71= **5%** (p=0.03)



Conclusions

- Prevalence ChRCC in the middle east: significantly higher than in western hemisphere.
 - racial disparity?
 - genetic/environmental factors?
 - referral bias?
- utility of nephron sparing surgery (38%) at our institution is high despite lower proportion of T1a lesions (26%) compared to west
- sarcomatoid differentiation is higher in ChRCC → but prognosis remains excellent