

# Non-Clear Renal Cell Carcinoma: Metastatic Patterns and Survival from a Real-World

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## Background & Methods

### Background

- nccRCC is heterogeneous and under-represented in clinical trials.
- Clinical behaviour, metastatic pattern and outcomes may differ by histology.

### Methods

- Retrospective cohort across two UK centres (2012–2025)
- Endpoints: PFS and OS.
- Kaplan–Meier medians.

## Patient Cohort & Metastatic Patterns

### Patient Cohort

- Total patients: 41
- Median age: 56 years (range 18–78)
- Male: 56%

### IMDC

- Favourable 22%
- Intermediate 61%
- Poor 17%

### Histology

- Papillary 56%
- Chromophobe 14.6%
- Unclassified 14.6%
- MIT-family/TFE3 12.2%
- Oncocytic 2.4%

### SUBTYPE-SPECIFIC METASTATIC PATTERNS

MIT-FAMILY /  
TFE3 (5/41, 12.2%)



**BRAIN  
METASTASES**

PAPILLARY /  
UNCLASSIFIED  
(29/41, 70.7%)



**LUNG  
METASTASES**

CHROMOPHOBE  
(6/41, 14.6%)



**LIVER  
METASTASES**

## Survival & Conclusions

### Kaplan–Meier Survival

| Histology Subtype | Median OS (months) | Median PFS (months) |
|-------------------|--------------------|---------------------|
| Papillary RCC     | 24.38              | 16.10               |
| Chromophobe RCC   | 24.15              | 24.15               |
| Unclassified RCC  | 11.01              | 7.52                |
| MIT-Family / TFE3 | 47.54              | 7.52                |

### Conclusions

- Metastatic patterns differed by histology.
- Brain metastases occurred in 40% of MIT-family tumours.
- Supports baseline contrast-enhanced CT/MRI brain imaging in this subgroup.
- Unclassified tumours showed poorest outcomes.
- MIT-family showed longest OS (limited events).
- Findings support subtype-informed imaging strategies requiring validation.