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First Line Tyrosine Kinase Inhibitors (TKIs) in metastatic Renal Cell Cancer (mRCC)- A regional cancer Centre experience.

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Background:

The therapeutic landscape of metastatic renal cancer (mRCC) management has undergone a paradigm shift recently with the introduction of immune checkpoint inhibitors (ICI) alongside established tyrosine kinase inhibitors (TKIs) used in combination or as monotherapy. Despite robust clinical trial efficacy evidence, factors like International Metastatic RCC Database Consortium (IMDC) risk status, potential side effect profile, and comorbidities often impact treatment choice.

Objective:

To evaluate the real-world efficacy and safety outcomes of 1L Pazopanib and Sunitinib.

Method:

A retrospective service evaluation study of all mRCC managed at regional cancer unit with 1L Pazopanib or Sunitinib monotherapy from November 2020 to October 2025.

Result:

A total of 93 patients were eligible for analysis with a median age of 65 years (range:21-81); 69.9% were males and the remaining females. Commonest site of metastasis on diagnosis was lung in 54.8% of patients. Bone, liver and brain metastasis were found in 17.2%, 10.8% and 2.2% of patients respectively. Most (90.3%) were clear cell carcinoma rest were non-clear cell histologies.. Patients were mostly distributed between IMDC good (53.8%) and intermediate risk (40.9%), and only 5.4% were poor risk. 1L TKI option was Pazopanib in 52.7% and Sunitinib in 47.3%.

Median progression free survival (PFS) across all groups was 13.9 months (95%CI: 8.7-19.18). Although Sunitinib showed a longer median PFS of 16.6 months (95%CI: 10.6-22.5) than Pazopanib of 10.5 months (95%CI: 4.0-17.0). Cumulative median overall survival (OS) across all IMDC groups was 67.5 months (95%CI: 16.4-118.7); The median PFS of 88.0 months (95% CI: 17.4-158.6), 48.0 months (95%CI: 0.0- 111.7) and 15.3 months (95%CI: 2.8-28.8) noted in IMDC good, intermediate and poor risk groups respectively. Log rank's test did not show statistical significance in the observed PFS (p-value: 0.54) or OS (p-value of 0.08) differences. There was no statistically significant relationship between gender or sites of metastasis with OS. Grade ≥3 toxicities were observed in 8.6% of patients.

Conclusion:

This study showed that 1L TKI monotherapy provides durable outcomes in routine clinical practice and remains a valuable option for patients who are unable to receive immunotherapy. However, a larger sample size is required for more granular analyses.