Tivozanib Monotherapy as First-Line Treatment in Intermediate-Risk Metastatic Renal Cell Carcinoma: TIVOREAL-SOGUG, a Spanish Real-World Experience

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INTRODUCTION

Tivozanib is a selective VEGFR-TKI approved for first-line treatment of metastatic renal cell carcinoma (mRCC). Real-world evidence in IMDC intermediate-risk (IR) patients is limited, particularly regarding the impact of having 1 versus 2 IMDC risk factors (RF). This **TIVOREAL-SOGUG** subanalysis evaluates the effectiveness and safety of tivozanib in IMDC intermediate-risk mRCC.

Objective: To assess first-line tivozanib outcomes in IMDC-IR mRCC and compare patients with 1 vs 2 RF in real-world setting.

METHODS

TIVOREAL-SOGUG is a multicentre, retrospective, real-world study of **198** adult patients with **clear-cell mRCC** receiving **first-line tivozanib** (Aug 2017 – Aug 2024) at 14 Spanish oncology centers of SOGUG.

Endpoints:
- Primary: PFS
- Secondary: ORR, OS, safety, subsequent therapies.

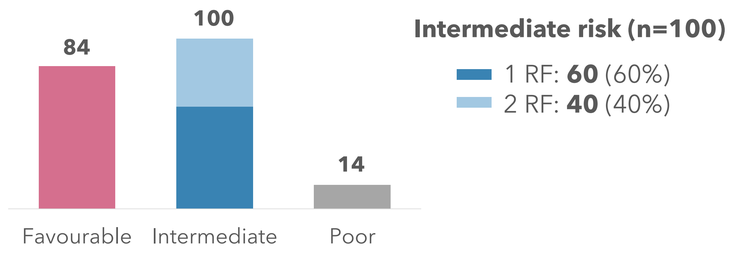
Post hoc exploratory analysis:
- IMDC intermediate-risk patients (n=100), comparing subgroups with 1 RF (n=60) vs 2 RF (n=40).

Statistics:
- Kaplan–Meier, log-rank, Cox models
- Response per RECIST 1.1.

RESULTS

PATIENT CHARACTERISTICS

Patients by IMDC risk group (n = 198)



Baseline characteristics in IMDC – IR population (n= 100)

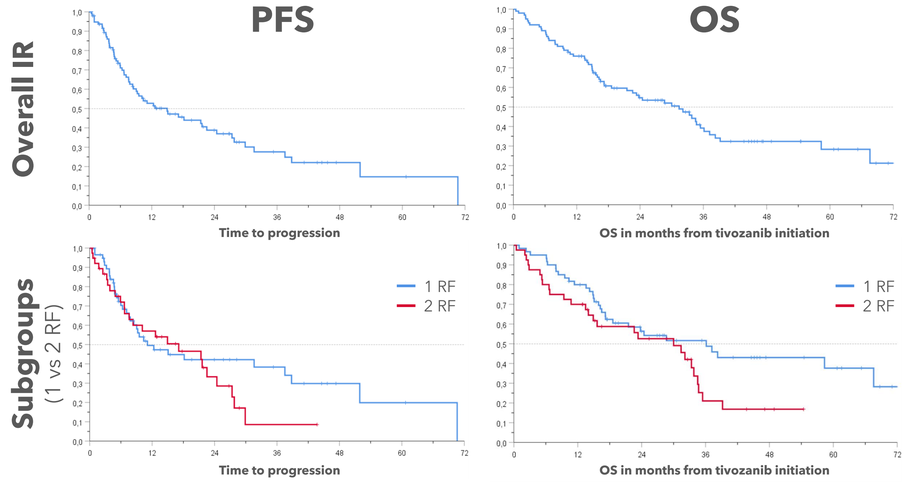
Characteristics		Overall IR (n= 100)	1 RF (n= 60), %	2 RF (N=40), %	*p* value
Sex	Male	74	81.7	62.5	*0.039*
	Female	26	18.3	37.5	
Age (years)		70.3 (40 – 87)	70	71	*NS*
Prior nephrectomy		28	18.3	43.5	*0.12*
Anemia		46	26.6	75	*< 0.001*
ECOG	0	46	58.3	28.9	*0.007*
	1	37	3.3	44.7	
	2	13	8.3	21.1	
	3 - 4	2	0	5.3	

Metastatic spread patterns were similar between 1 and 2 RF subgroups, with lung as the most frequent site (60%) and no relevant differences in non-pulmonary visceral involvement.

EFFICACY

Median follow-up: 44.6 months
(95% CI 39.3 – 49.9)

Efficacy endpoints	Overall IR (N=100)	1 RF (n= 60)	2 RF (n=40)
Median PFS Months (95% CI)	14.9 (7.3 - 22.6)	11.1 (3.9 – 18.3)	17.1 (3.8 – 30.4)
		Log-rank Mantel Cox (p NS)	
		HR (1 vs 2 RF): 1.3 (0.8 – 2.5)	
ORR %	29.0	28.3	30.0
		p NS	
Median OS Months (95% CI)	31.4 (22.0 – 40.8)	36.1 (21.1 – 51.2)	30.0 (18.5 – 41.5)
		Log-rank Mantel Cox (p 0.06)	
		HR (1 vs 2 RF): 1.6 (0.9 – 2.8)	



SAFETY

Tolerability of tivozanib	Overall IR (N=100)	1 RF (n= 60) (%)	2 RF (N=40) (%)	*p* value
Full-dose	42	27 (45.0)	15 (37.5)	*NS*
Dose reduction	13	7 (11.7)	6 (15.0)	*NS*
Discontinuation due to toxicity	9	7 (11.7)	2 (5.0)	*NS*

Adverse events were consistent with previous reports

SUBSEQUENT TREATMENT

Among patients discontinuing 1L tivozanib (n=79), **51 (64.5%) received subsequent treatment:**

- Second line: 72.5% immunotherapy; 27.5% VEGFR-TKIs
- Third or later lines: 33.3% of second-line recipients, mostly VEGFR-TKIs

CONCLUSIONS

1 First-line tivozanib showed clinically meaningful effectiveness in IMDC intermediate-risk mRCC.

2 Durable disease control was observed in patients with 1 or 2 RF, with no statistically significant differences in PFS, OS or ORR between subgroups, and efficacy outcomes similar to the overall IR cohort.

3 Tivozanib showed a favorable safety profile, with low discontinuation rates and preserved dosing in most patients.

4 These real-world data support tivozanib as a viable option in IR mRCC when IO/IO or IO/TKI combinations are not suitable, regardless of the number of associated RF

ABBREVIATIONS: CI, confidence interval; **ECOG**, Eastern Cooperative Oncology Group; **HR**, hazard ratio; **IMDC**, International Metastatic Renal Cell Carcinoma Database Consortium; **IR**, intermediate risk; **mRCC**, metastatic renal cell carcinoma; **NS**, not significant; **ORR**, objective response rate; **OS**, overall survival; **PFS**, progression-free survival; **RF**, risk factor; **SOGUG**, Spanish Genitourinary Oncology Group; **VEGFR-TKI**, vascular endothelial growth factor receptor tyrosine kinase inhibitor.

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