

EFFICACY AND TOLERABILITY OF IMMUNE CHECKPOINT INHIBITORS IN OLDER VERSUS YOUNGER PATIENTS WITH METASTATIC RENAL CELL CARCINOMA: A REAL-WORLD ASIAN COHORT



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INTRODUCTION

Older adults are underrepresented in pivotal immune checkpoint inhibitor (ICI) trials for metastatic renal cell carcinoma (mRCC), resulting in uncertainty regarding treatment effectiveness and tolerability in routine clinical practice. We compared clinical outcomes and treatment-related toxicities between younger and older patients with mRCC receiving ICIs in a real-world Asian cohort.

METHODS

We conducted a retrospective study of 171 patients with mRCC treated with ICIs at the National Cancer Centre Singapore. Patients were stratified into younger (<65 years; n=96) and older (≥65 years; n=75) groups. Baseline demographic and clinicopathological characteristics, best objective response, treatment-related adverse events, progression-free survival (PFS), and overall survival (OS) were evaluated. Kaplan-Meier analysis with log-rank testing and Cox proportional hazards models were used for survival analyses.

CONTACT INFORMATION

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Initial Immunotherapy Regimen (n = 171)

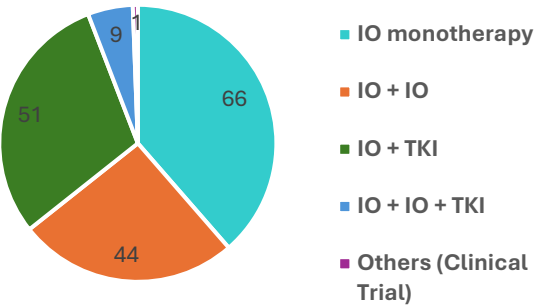


Table 2. Best Response to Immunotherapy in Evaluable Patients

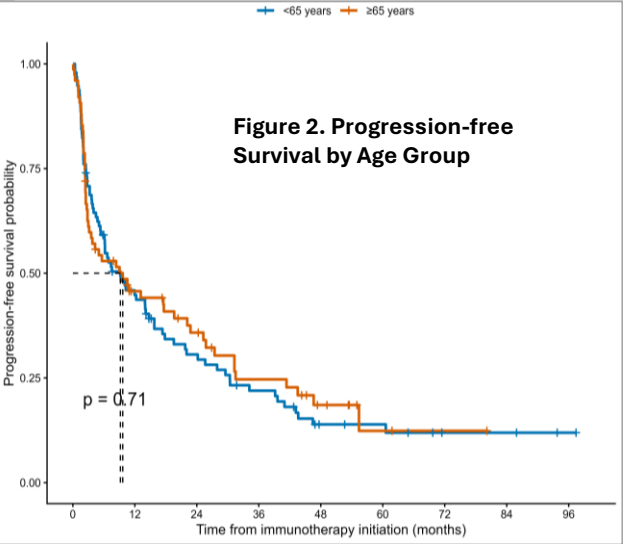
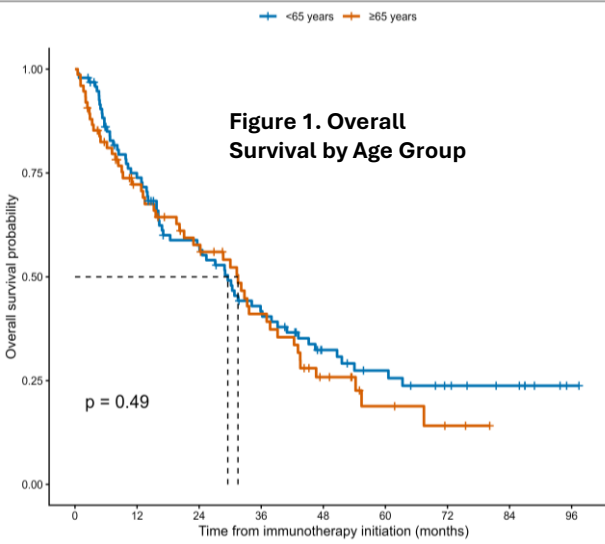
Response	Age group		p-value ²
	<65 N = 95 ¹	≥65 N = 73 ¹	
Best response			0.947
CR	2 (2.1%)	1 (1.4%)	
PR	37 (39%)	26 (36%)	
SD	24 (25%)	18 (25%)	
PD	27 (28%)	25 (34%)	
MIXED RESPONSE	5 (5.3%)	3 (4.1%)	

Table 3. Adverse Events

Adverse event	Age group		p-value ²
	<65 N = 96 ¹	≥65 N = 75 ¹	
Grade 1–2 toxicity	80 (83%)	64 (85%)	0.834
Grade 3–5 toxicity	26 (27%)	31 (41%)	0.072
Treatment discontinued due to toxicity	14 (15%)	21 (28%)	0.036

¹n (%)

²Fisher's exact test



KEY FINDINGS

Baseline characteristics were well balanced between age groups:

No significant differences in gender, race, histology, ECOG performance status, prior nephrectomy, or line of immunotherapy.

Comparable efficacy across age groups:

Objective response rates were similar in younger and older patients (41.1% vs 37.4%; p=0.947). Median progression-free survival was comparable (9.2 vs 9.7 months; HR 0.94, p=0.714). Median overall survival was also similar (29.5 vs 31.5 months; HR 1.14, p=0.491).

Increased treatment toxicity burden in older adults:

Rates of grade 1-2 toxicity were similar between groups (83% vs 85%). Older patients experienced numerically higher rates of grade 3-5 toxicity (41% vs 27%). Treatment discontinuation due to toxicity was significantly higher in older adults (28% vs 15%; p=0.036).

Conclusion & Clinical implication:

Age alone should not preclude ICI treatment in mRCC. Careful toxicity monitoring and supportive care are important to optimize treatment delivery in older adults.