

# Supplemental Online Content

Ozay ZI, Jo Y, Galarza Fortuna G, et al. Treatment and attrition trends for metastatic clear cell renal cell carcinoma in the United States. *JAMA Netw Open*. 2025;8(3):e251201. doi:10.1001/jamanetworkopen.2025.1201

**eTable 1.** Baseline Demographic Characteristics of Patients With Metastatic Clear Cell Renal Cell Carcinoma

**eTable 2.** Number of Patients Receiving Approved ICI-TKI Combinations by Year

**eFigure 1.** STROBE Flow Diagram

**eFigure 2.** Treatment Trends by Line of Therapy in Patients With Metastatic Clear Cell Renal Cell Carcinoma

This supplemental material has been provided by the authors to give readers additional information about their work.

**eTable 1. Baseline demographic characteristics of patients with metastatic clear cell renal cell carcinoma**

<b>Variable</b>	<b>No. of patients (%) n = 8,534</b>
Age, median (IQR), years	66 (59 – 74)
<b>Sex</b>	
Female	2,502 (29.3%)
Male	6,032 (70.7%)
<b>Race and ethnicity</b>	
Asian	131 (1.7%)
Black	629 (8.1%)
Hispanic or Latino	697 (9%)
White	5,493 (71%)
Missing	796
Other*	788 (10.2%)

\*Other: non-Hispanic Alaska Native, American Indian, Native Hawaiian, or Pacific Islander or multiracial

Abbreviations: IQR: interquartile range.

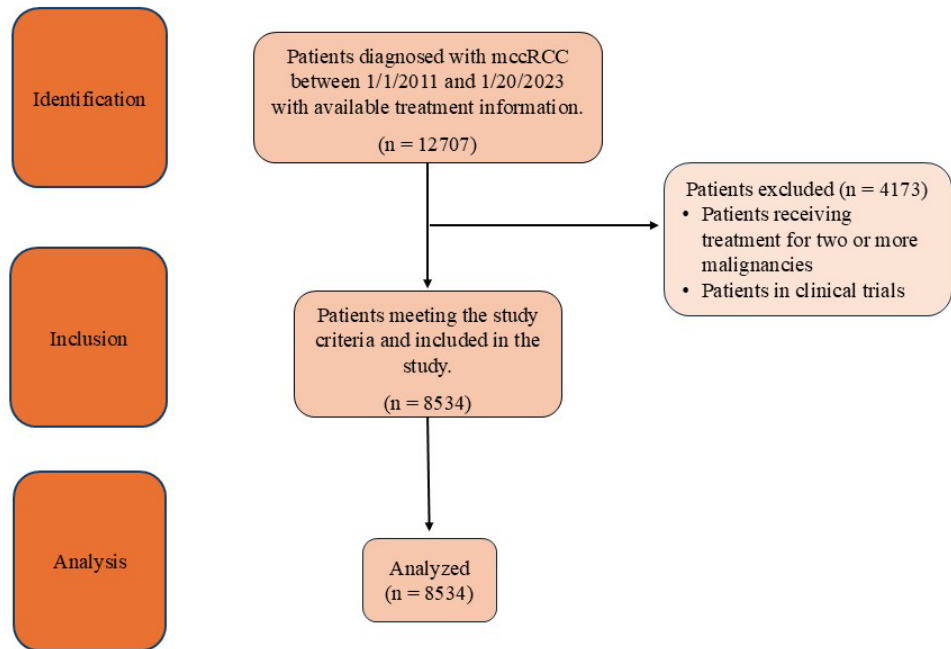
**eTable 2. Number of patients receiving approved ICI-TKI combinations by year\***

	<b>Axitinib + pembrolizumab, n</b>	<b>Cabozantinib + nivolumab, n</b>	<b>Lenvatinib + pembrolizumab, n</b>	<b>Axitinib + avelumab, n</b>
2017	-	12	-	-
2018	2	10	-	-
2019	233	18	1	11
2020	296	23	2	10
2021	286	160	56	6
2022	210	172	103	2
2023	15	10	8	1

\*Patients receiving non-approved ICI-TKI combinations are not included in this table.

Abbreviations: ICI, immune checkpoint inhibitor; TKI, tyrosine kinase inhibitor.

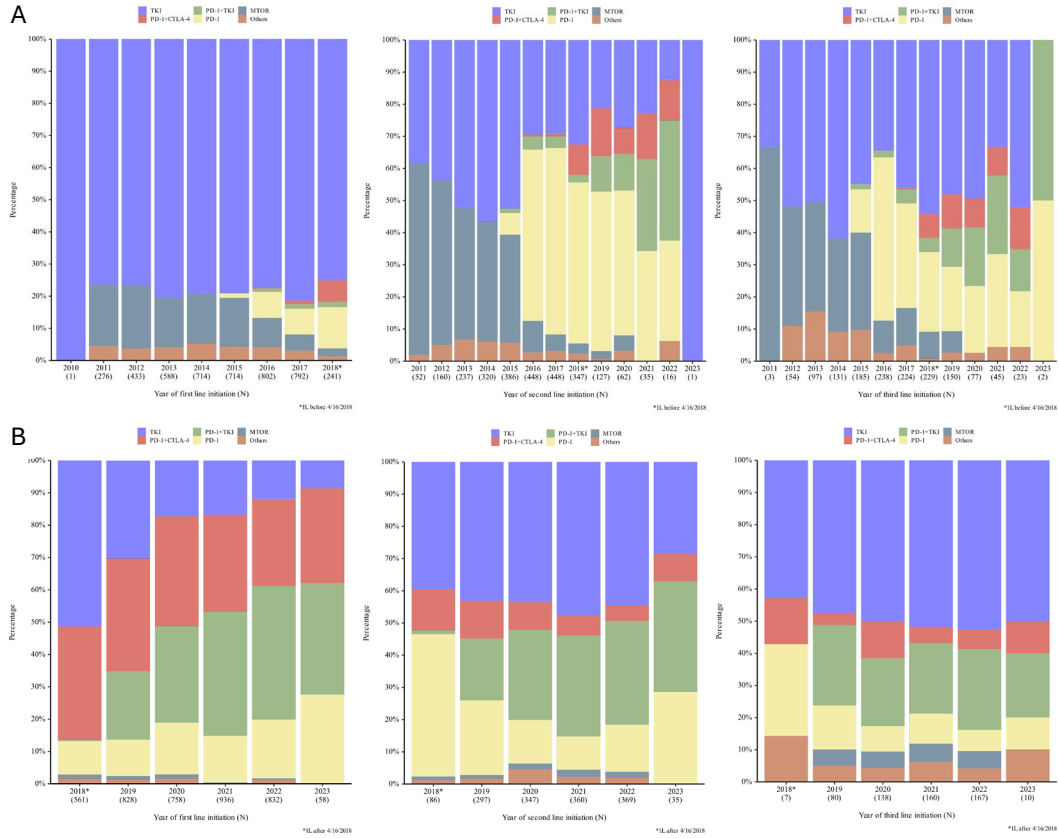
**eFigure 1. STROBE Flow Diagram**



**eFigure 2. Treatment trends by line of therapy in patients with metastatic clear cell renal cell carcinoma**

A) Patients in cohort 1 (initiating first-line therapy before April 16th, 2018)

B) Patients in cohort 2 (initiating first-line therapy after April 16th, 2018)



Abbreviations: CTLA-4, cytotoxic T-lymphocyte-associated antigen 4; mTOR, mammalian target of rapamycin; PD-1, programmed cell death protein 1; TKI, tyrosine kinase inhibitor.