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# Real-world study assessing physician rationale for initiating first-line immuno-oncology therapy for patients with advanced urothelial cancer

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# SCOPE



- To assess physicians' rationale for initiating first-line (1L) immuno-oncology (IO) therapy for patients with advanced urothelial cancer (aUC)
- This study also sought to understand the criteria physicians used to determine aUC patients' ineligibility to receive cisplatin-based treatment (cis ineligibility)

# CONCLUSIONS



- This study found that criteria for determining cis ineligibility in real-world settings are consistent with published literature, and cis ineligibility, together with carboplatin ineligibility, are the main reasons for selecting 1L 10 therapy
- As PD-L1 testing is mandatory per label for cis-ineligible patients, it was expected that a greater percentage of physicians treating such patients would have reported PD-L1+ status, in addition to treatment ineligibility, as their rationale for selecting 1L IO therapy
- Results should be interpreted in the context of the following limitations:
- Results are based only on the population eligible for inclusion in the sample and not all patients with aUC
- Caution is required when interpreting results of comparative observational studies, considering the lack of randomization and subsequent biases (eg, channeling) introduced in an observational design
- Future research should evaluate the criteria used in real-world settings to determine platinum ineligibility, as they seem to impact physicians' decisions regarding treatment for patients with aUC

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## BACKGROUND

- Urothelial cancer (UC) is characterized by malignant tumors that arise from the urothelium; the disease encompasses carcinomas of the renal pelvis, ureter, bladder, and urethra
- Worldwide, UC accounts for 3.1% of new cancer cases, ie, more than 380,000 new cases each year and more than 150,000 deaths annually<sup>2</sup>
- aUC (ie, unresectable locally advanced or metastatic UC) is considered a chemotherapy-sensitive malignancy<sup>3</sup>
- 1L treatment with platinum-based chemotherapy regimens remains the standard-of-care treatment for patients with aUC<sup>4</sup>
- The US Food and Drug Administration and the European Commission have approved the IO therapies, atezolizumab and pembrolizumab, as 1L treatments for patients with aUC who are cis ineligible and whose tumors express PD-L1 (PD-L1+), or those who are platinum ineligible (US label only)<sup>5-8</sup>
- To our knowledge, no real-world study has examined physicians' rationale for selecting IO therapy as 1L treatment for patients with aUC

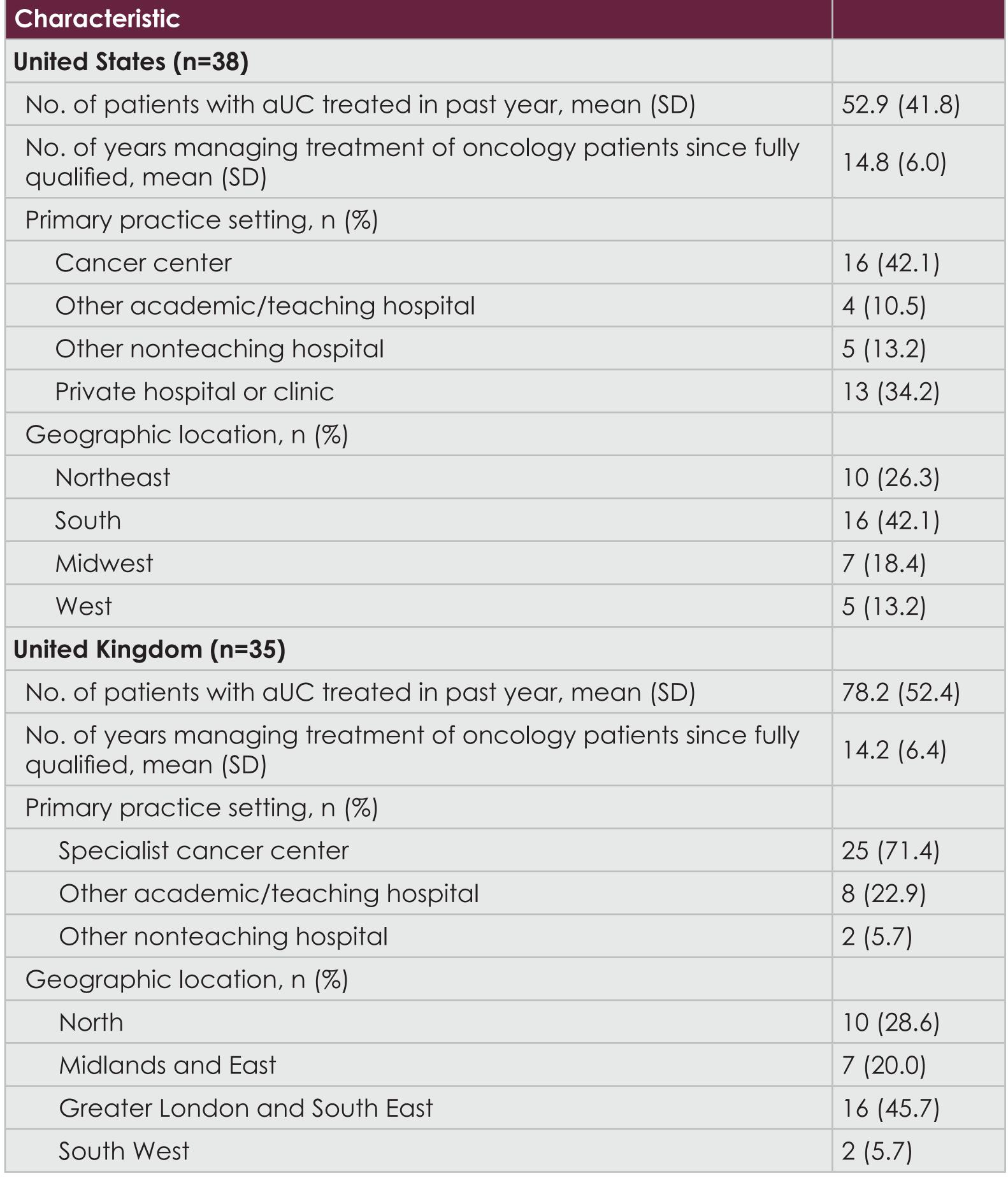
#### METHODS

- Oncologists conducted a retrospective review of medical records for patients aged ≥18 years who initiated 1L IO between 1 January 2017 and 31 May 2019
- Physicians provided their rationale for selecting 1L IO therapy and the criteria they used to determine cis ineligibility, with the option to select multiple responses
- Physicians also provided information on patients' PD-L1 testing status and result (if test was performed)
- Descriptive analyses were conducted for all measures

## RESULTS

- A total of 38 physicians in the US and 35 in the UK provided data for 249 patients with aUC (US, n=98; UK, n=151) whom they had treated in the past year
- Table 1 describes characteristics of the treating physicians
- The majority of physicians in both the US (42.1%) and UK (71.4%) practiced in a cancer center
- Most US physicians practiced in the South (42.1%) and Northeast (26.3%)
- Most UK physicians practiced in Greater London and the South East (45.7%), the North (28.6%), and the Midlands and East (20.0%)

### Table 1. Characteristics of physicians treating patients with advanced urothelial carcinoma



- Table 2 describes the unique reasons physicians reported for initiating 1L IO therapy; Figure 1 displays the overlap between these reasons
- Physicians selected both cis ineligibility and PD-L1 positivity as the reasons for initiating 1L IO in only 3.1% of patients in the US and 5.3% in the UK
- **Table 3** shows the top 5 unique criteria physicians used to determine cis ineligibility
- A total of 75 patients in the US and 130 in the UK had PD-L1 tests performed prior to initiating treatment
- Among patients who tested PD-L1+ (US, n=73; UK, n=121), testing PD-L1+ prior to treatment was selected as a reason for initiating 1L IO in 56.2% (US) and 33.1% (UK)

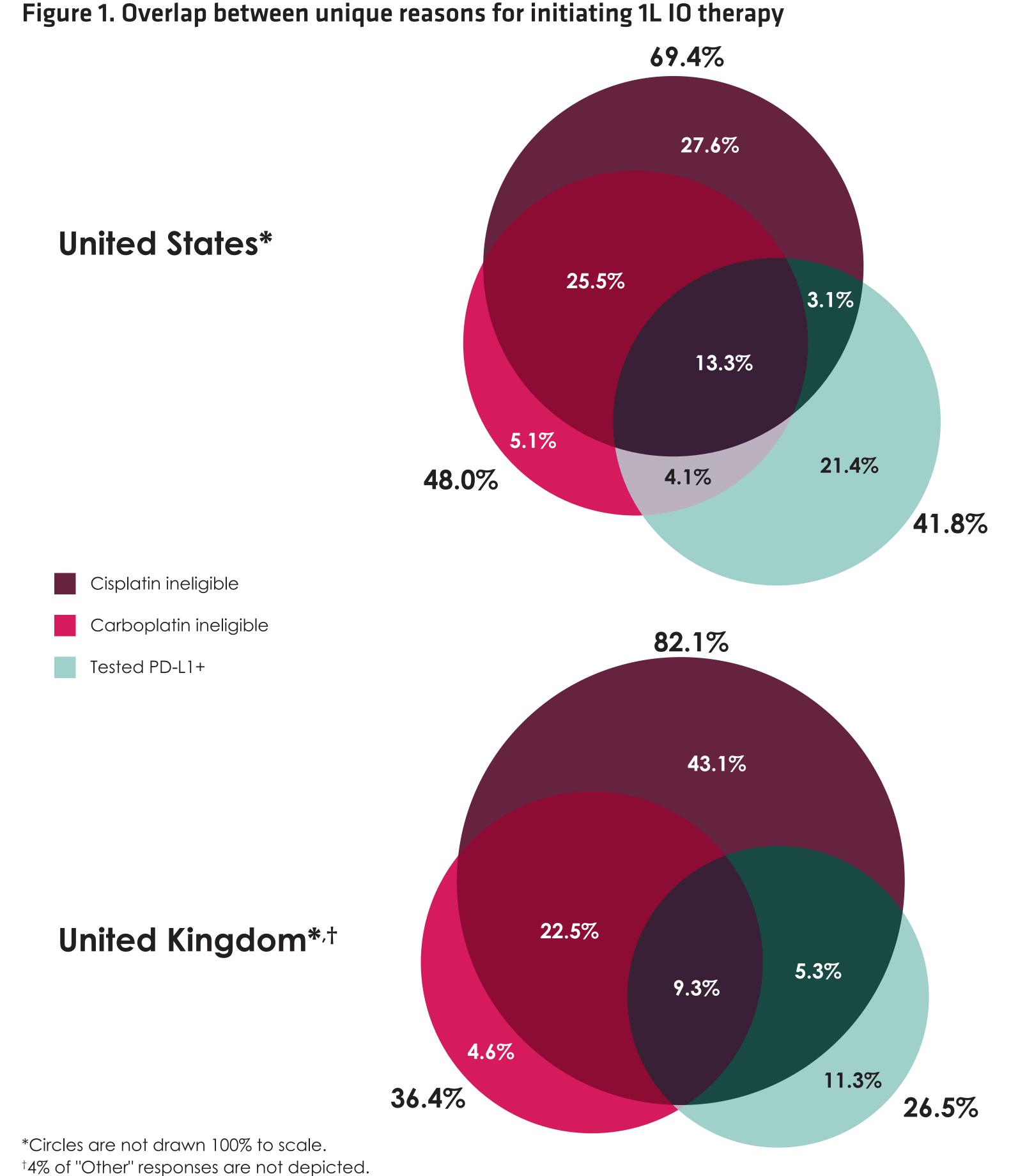


Table 2 Physician-reported reasons for initiating 11 In therapy

Reasons, $\%^*$	US (n=98)	UK (n=151)
Cisplatin ineligible	27.6	43.1
Platinum ineligible	25.5	22.5
Tested PD-L1+ <sup>†</sup>	21.4	11.3
Platinum ineligible‡ and tested PD-L1+†	13.3	9.3
Carboplatin ineligible	5.1	4.6
Carboplatin ineligible and tested PD-L1+†	4.1	0.0
Cisplatin ineligible and tested PD-L1+†	3.1	5.3
Other	0.0	4.0

Multiple responses were allowed.

1L, first line; IO, immuno-oncology.

Response options included cisplatin ineligible; carboplatin ineligible; tested PD-L1+ prior to initiating treat write-in option. †Prior to 1L IO treatment

Platinum ineligible is defined as patient being ineligible to receive both cisplatin- and carboplatin-based regimens

#### Table 2 Ton 5 criteria\* physicians used to determine cisplatin ineligibility

Criteria, %*		
United States (n=68)		
Renal dysfunction	26.5	
Poor performance status and renal dysfunction	8.8	
Neuropathy	7.4	
Poor performance status	5.9	
Advanced age and poor performance status		
Advanced age and renal dysfunction	4.4	
Cardiovascular dysfunction		
Hearing loss and renal dysfunction		
United Kingdom (n=124)		
Renal dysfunction	46.8	
Poor performance status and renal dysfunction	10.5	
Cardiovascular dysfunction and renal dysfunction	4.8	
Neuropathy	4.0	
Neuropathy and renal dysfunction	4.0	
Hearing loss	3.2	

Multiple responses were allowed.

\*Among patients with cis ineligibility selected as reason for starting 1L IO. Response options included: renal dysfunction; poor performance status; neuropathy; solitary kidney; hearing loss; advanced age; cardiovascular dysfunction; other with

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**aUC**, advanced urothelial carcinoma.

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