Sociodemographic Disparities in Treatment Patterns and Clinical Outcomes Among Real-World Patients With Locally Advanced/Metastatic Urothelial Carcinoma in the United States

Poster Bd# D4

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Conclusions

- In this real-world study of patients with locally advanced/metastatic urothelial cancer (la/mUC) treated with systemic and antibody drug conjugate (ADC) therapies, several sociodemographic factors were identified to impact survival outcomes
  - Asian patients showed a trend toward longer median overall survival (OS) in the overall cohort and in the ADC subset. Black and Asian patients showed longer time to treatment discontinuation (TTD) in the ADC subset
  - Older age, smoking history, and an Eastern Cooperative Oncology Group performance status (ECOG PS) of 2+ were associated with higher odds of death in both cohorts. Females had higher odds of death compared with males in the overall cohort, but this was not seen in the ADC subset
- Limitations: This study was limited by small sample sizes for some race subgroups especially in the ADC subset, and in Asian subgroups in both cohorts
- Further research is needed to understand disparities and patient-centric factors that may impact treatment decisions and address the unmet medical needs of these patients

Plain Language Summary

- This real-world study explored differences in patient survival after treatment for advanced urothelial carcinoma based on their race or social-economic factors. Group 1 comprised patients who received any type of cancer treatment, and group 2 comprised patients who received antibody drug conjugates, a specific type of cancer drug
- This study found that Asian patients had a trend toward longer average survival time in both groups. Older patients, those who smoked, and those who had worse performance status were at higher risk of death in both groups. Females had a higher risk of death compared with males in group 1 but not in group 2
- The patient numbers in race subgroups were small, especially Asian patients, and therefore further research is needed to understand what factors may influence treatment decisions. This will help address the unmet medical needs of these patients

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Introduction

- Survival associated with UC appears to vary by race and ethnicity[1,2]
- Sociodemographic factors such as sex, accessibility to health care, level of health insurance, level of income, level of trust for physicians, health beliefs, socioeconomic status (SES), education, and comorbidity score have also been reported to contribute to outcomes[3-5]
- Real-world database analyses can help to identify sociodemographic factors that impact outcomes and patient subgroups that could benefit from intervention

Objective

- To evaluate differences in clinical outcomes by race and other clinical and sociodemographic factors among patients with la/mUC receiving systemic therapies overall and those initiating an ADC in first line and later (1L+) in real-world health settings in the United States

Methods

- This descriptive, retrospective cohort study used the nationwide, longitudinal Flatiron Health electronic health record–derived deidentified database, comprising patient-level data originating from ~ 280 cancer clinics (~ 800 sites of care; primarily community oncology settings) and curated via technology-enabled abstraction[6,7]
- Patients aged ≥ 18 years were grouped into: overall cohort (all patients with la/mUC initiating any systemic therapy) and ADC subset (patients with la/mUC initiating sacituzumab govitecan [SG] or enfortumab vedotin [EV] in 1L+) with treatment initiation on/after January 2017 and December 2019, respectively; data cutoff for both cohorts was July 2024
- Patient demographics and clinical outcomes (OS and TTD) were calculated overall and by race
- Predictors of survival were assessed using univariate Cox proportional hazards model as exploratory analysis due to small subgroup size

Results

Demographic and Clinical Characteristics

- There were 5102 patients in the overall cohort and 1117 patients in the ADC subset. Black patients comprised 5% and Asian patients comprised 1% of the population in both cohorts (Table 1)
- In the ADC subset, 45% of Asian patients had a primary cancer site of ureter
- The median (IQR) follow-up duration was 8.5 (3.0-20.0) and 5.7 (2.4-11.1) months for patients in the overall cohort and ADC subset, respectively

Treatment Patterns

- In the overall cohort, most patients received either platinum-based chemotherapy (49%) or programmed death ligand-1 (PD-[L]1) inhibitor (39%) in the first line (Figure 1)
- In the ADC subset, of the 359 patients who received EV in the first line, the majority were censored or died before second-line therapy (Figure 1)
- Patients receiving avelumab maintenance were captured in the first line

OS and TTD

- Asian patients had the longest median OS in the overall cohort and in the ADC subset (25.2 and 14.7 months, respectively). Patients from Other race and Black patients had the shortest OS (11.1 and 11.2 months, respectively) in the overall cohort (Table 2)
- In the overall cohort, median TTD was similar across all races. In the ADC subset, median TTD was longest for Asian (8.5 months) and Black patients (6.5 months) (Table 2)
- These observations were limited by the small sample sizes of subgroups by race, especially in the ADC subset

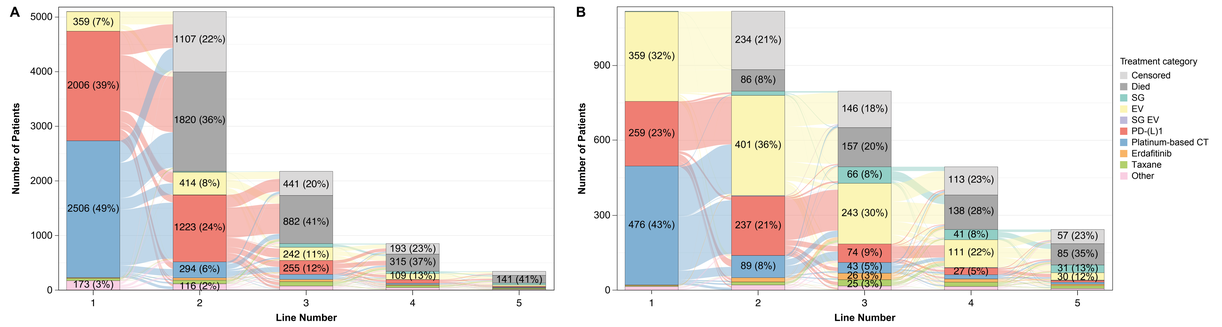
Results

Table 1. Key Demographic and Clinical Characteristics

Characteristic, n (%)	Overall Cohort					ADC Subset				
	All Patients[a] (N = 5102)	Asian (n = 60)	Black or AA (n = 256)	White (n = 3475)	Other (n = 564)	All Patients[b] (N = 1117)	Asian (n = 11)	Black or AA (n = 61)	White (n = 774)	Other (n = 81)
Male	3721[c] (73)	33 (55)	160 (63)	2581[c] (74)	412 (73)	846 (76)	4 (36)	39 (64)	600 (78)	60 (74)
Median (IQR) age at index, years	74 (66-80)	70 (66-79)	70 (64-78)	74 (67-80)	75 (66-81)	73 (66-79)	70 (67-78)	67 (62-75)	73 (66-79)	74 (70-80)
SES index[d]										
1: Lowest SES	693 (14)	8 (13)	94 (37)	420 (12)	73 (13)	145 (13)	2 (18)	27 (44)	85 (11)	8 (10)
2-4	3019 (59)	34 (57)	121 (47)	2101 (60)	340 (60)	643 (58)	6 (55)	22 (36)	474 (61)	48 (59)
5: Highest SES	911 (18)	17 (28)	22 (9)	643 (19)	70 (12)	239 (21)	3 (27)	9 (15)	158 (20)	12 (15)
History of smoking	3696 (72)	24 (40)	180 (70)	2575 (74)	395 (70)	789 (71)	0 (0)	39 (64)	572 (74)	48 (59)
Stage at initial diagnosis[d]										
Stage 0-II	611 (12)	5 (8)	30 (12)	457 (13)	60 (11)	149 (13)	1 (9)	8 (13)	114 (15)	11 (14)
Stage III-IV	2294 (45)	31 (52)	134 (52)	1518 (44)	237 (42)	494 (44)	7 (64)	30 (49)	331 (43)	32 (40)
Primary site										
Bladder	3998 (78)	36 (60)	218 (85)	2725 (78)	443 (79)	852 (76)	3 (27)	48 (79)	601 (78)	59 (73)
Renal pelvis	620 (12)	14 (23)	22 (9)	425 (12)	68 (12)	136 (12)	3 (27)	7 (12)	90 (12)	14 (17)
Ureter	452 (9)	10 (17)	16 (6)	303 (9)	50 (9)	123 (11)	5 (45)	6 (10)	79 (10)	8 (10)
Urethra	32 (< 1)	0	0	22 (< 1)	3 (< 1)	6 (< 1)	0	0	4 (< 1)	0

SES index was calculated using Yost index score (1 = lowest category; 5 = highest category).[a]Missing race, n = 747. [b]Missing race, n = 190. [c]Other or unknown sex, n = 1. [d]Excludes missing or unknown/not documented data. AA, African American; la/mUC, locally advanced/metastatic urothelial cancer; SES, socioeconomic status.

Figure 1. Treatment Patterns in the Overall Cohort (A) and the ADC Subset (B)



Panel A: Data labels are only shown for bars with ≥ 100 patients. Panel B: Data labels are only shown for bars with ≥ 25 patients. CT, chemotherapy; EV, enfortumab vedotin; PD-(L)1, programmed death-(ligand) 1; SG, sacituzumab govitecan.

Table 2. Overall Survival and Time to Treatment Discontinuation

	Overall Cohort					ADC Subset				
	All Patients[a] (N = 5102)	Asian (n = 60)	Black or AA (n = 256)	White (n = 3475)	Other (n = 564)	All Patients[b] (N = 1117)	Asian (n = 11)	Black or AA (n = 61)	White (n = 774)	Other (n = 81)
Deaths, n (%)	3249 (64)	30 (50)	167 (65)	2217[c] (64)	421 (75)	534 (48)	3 (27)	27 (44)	379 (49)	61 (75)
Median OS (95% CI)	13.3 (12.6-13.9)	25.2 (11.9-41.9)	11.2 (9.2-15.9)	13.5 (12.7-14.4)	11.1 (9.7-13.4)	12.1 (11.1-13.2)	14.7 (9.3-NR)	11.4 (7.0-20.5)	11.8 (10.4-13.0)	8.7 (5.9-13)
Discontinuations, n (%)	4392 (86)	51 (85)	227 (89)	3012 (87)	522 (93)	714 (64)	5 (46)	36 (59)	500 (65)	76 (94)
Median TTD (95% CI)	3.0 (2.8-3.0)	2.8 (2.2-3.8)	2.8 (2.3-3.4)	2.9 (2.8-3.1)	2.8 (2.5-3.0)	5.1 (4.6-5.4)	8.5 (4.2-NR)	6.5 (3.1-9.9)	4.9 (4.4-5.3)	3.3 (1.9-4.2)

[a]Missing race, n = 747. [b]Missing race, n = 190. AA, African-American; NR, not reached; OS, overall survival; TTD, time to treatment discontinuation.

Exploratory Cox Regression Analysis

- In both cohorts, the following factors were associated with worse survival in the univariate Cox model:
  - Older age (≥ 75 years) vs < 65 years of age (hazard ratio [HR] [95% CI], 1.4 [1.3-1.5], *P* < .0001 and 1.4 [1.1-1.8], *P* = .008, respectively)
  - History of smoking vs no history of smoking (HR [95% CI], 1.1 [1.0-1.2], *P* = .005 and 1.2 [1.0-1.5], *P* = .026, respectively)
  - ECOG PS of 2+ vs ECOG PS of 0 to 1 (HR [95% CI], 2.3 [2.1-2.5], *P* < .0001 and 2.3 [1.9-2.8], *P* < .0001, respectively)
- In the overall cohort, worse survival was seen in females vs males (HR [95% CI]: 1.1 [1.0-1.2], *P* = .027) and Other race vs White (1.1 [1.0-1.2], *P* = .022); treatment in academic vs community center resulted in better survival (0.8 [0.8-0.9], *P* < .0001); however, these were not observed in the ADC subset
- In the ADC subset, a high SES index of 5 was associated with better survival vs low SES index of 2 to 4 (0.8 [0.6-1.0], *P* = .020)

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