### Sequencing Therapy Throughout the Urothelial Treatment Continuum

### Daniel P. Petrylak, MD

Professor of Medicine and Urology Division Chief, Genitourinary Oncology Smilow Cancer Center, Yale University

What role, if any, do you believe TAR-200 will eventually play in the management of urothelial bladder cancer (UBC)? If this strategy were available today, in which patients with UBC would you prioritize its use?

### TAR-200: Intravesical Administration of Gemcitabine in Muscle Invasive Disease: Phase I study





## **TAR-200 Efficacy**

- In Arm 1, patients had, at minimum, residual tumor >3 cm after transurethral resection of bladder tumor (TURBT) while, in arm 2, patients had had maximal TURBT with any residual tumor <3 cm.</li>
- For Arm 1 patients at radical cystectomy, 4 out of 10 patients exhibited pathologic downstaging with 1 demonstrating a pCR and 3 a pPR. In Arm 2, 6 out of 10 patients exhibited downstaging with 3 experiencing a pCR and 3 a pPR.
- No systemic absorption of gemcitabine

## **TAR-200**

- No systemic absorption: micrometastatic disease untreated.
- In combination with checkpoints for patients ineligible for cystectomy
- SunRISe-1: TAR-200 in Combination With Cetrelimab, TAR-200 Alone, or Cetrelimab Alone in Participants With High Risk NMIBC Unresponsive to Intravesical BCG Who Are Ineligible for or Elected Not To Undergo Radical Cystectomy
- SunRISe-2: Phase 3, Multicenter, Randomized Study Evaluating the Efficacy of TAR-200 in Combination with Cetrelimab versus Concurrent Chemoradiotherapy in Participants with Muscle-Invasive Urothelial Carcinoma of the Bladder

What are your thoughts about clinical trials combining antibody-drug conjugates and immune checkpoint inhibitors (eg, enfortumab vedotin and pembrolizumab) in metastatic UBC (mUBC)? Which patients do you feel are best suited for this strategy?

### **ENFORTUMAB VEDOTIN + PEMBROLIZUMAB COHORTS**

#### EV 1.25 mg/kg + pembrolizumab (200 mg) in 1L la/mUC patients



<sup>1</sup> Not included in the current analysis: three 1L patients treated with EV 1 mg/kg + pembro 200 mg and two 2L patients treated with EV 1.25 mg/kg + pembro 200 mg
 <sup>2</sup> Rosenberg et al. *J Clin Oncol. Epub July* 2019

### Efficacy

### Best Overall Response Per RECIST v 1.1 by investigator (N=45)

Confirmed ORR	73.3% (33)
95% CI	(58.1, 85.4)
Complete response	15.6% (7)
Partial response	57.8% (26)
Stable disease	20.0% (9)
Progressive disease	2.2% (1)
Not evaluable	4.4% (2)
ORR in patients with liver metastasis	53.3% (8/15)
ORR by PD-L1 Expression	
High expression:	78.6% (11/14)
Low expression:	63.2% (12/19)

- Enfortumab vedotin

   pembrolizumab
   demonstrated an ORR of of 73.3% in 1L cisplatinineligible la/mUC patients, per investigator
- Responses observed regardless of PD-L1 expression level

Rosenberg et al. Genitourinary Cancers Symposium 2020; Abstract 441.

# EV-103: Percent Reduction from Baseline in the Sum of the Diameters of Target Lesions per Investigator by PD-L1 Status



Hoimes CJ et al. J Clin Oncol 2023 Jan 1;41(1):22-31.

### **Enfortumab Vedotin Patient Selection**

- Responses in liver consistently 40%
- Studies of EV/Pembrolizumab are in cisplatin-ineligible patients
  - EV-302 is a randomized trial of EV/Pembrolizumab vs std chemo in both cisplatin eligible and ineligible patients
- Will similar results be seen with platinum-based chemotherapy followed by avelumab in lymph node only metastatic disease?

### **EV-103: Updated Survival Data**



Hoimes CJ et al. J Clin Oncol 2023 Jan 1;41(1):22-31.



Rosenberg et al. Genitourinary Cancers Symposium 2020; Abstract 441.

#### Duration of Response



- Median DOR has not been reached with a median follow-up of 10.4 months
  - DOR (range: 1.2, 12.9+ months)
- Out of the 33 responders,
  - 18 (55%) had an ongoing response
  - 11 (33%) had progressed or died
  - 4 (12%) had started a new antitumor treatment before progressive disease

Rosenberg et al. Genitourinary Cancers Symposium 2020; Abstract 441.

How do you generally sequence enfortumab vedotin, erdafitinib and sacituzumab govitecan for patients with mUBC who are eligible to receive all of these agents?

### **EV in FGFR2/3+ patients**



#### Abib BJUI Compass 2022

### TROPHY-U-01 (IMMU-132-06) Study

A Phase II Open Label, Study of IMMU-132 in Metastatic Urothelial Cancer After Failure of Platinum-based Regimen or Anti-PD-1/ PD-L1 Based Immunotherapy

- Results from the Study-01 basket trial warranted further investigation in a dedicated phase 2 trial.
- TROPHY-U-01 (NCT03547973) is an international, single-arm, open-label, phase 2 trial evaluating the antitumor activity and safety of sacituzumab govitecan in 140 pts with advanced UC.

<u>Cohort 1 (100 patients)</u> : pts who progressed after prior platinum- based and anti PD-1/anti PD-L1 based therapies.	Sacituzumab Govitecan 10 mg/kg Days 1 and 8, every 21 days	Continue treatment in the	Objectives: • Overall response rate (ORR) will be centrally reviewed
<u>Cohort 2</u> (40 patients): pts ineligible for platinum-based therapy and who progressed after prior anti PD-1/anti PD-L1 based therapies.		absence of unacceptable toxicity or PD	<ul> <li>Duration of response (DOR)</li> <li>Progression-free survival (PFS)</li> <li>Overall survival (OS)</li> </ul>

NCT Trial Number: 03547973 PD-1, programmed cell death-1; PD-L1, programmed death ligand-1.

View TROPHY-U-01 Poster on Feb 15th TPS #495; Poster Board #N5

### **Case: Retroperitoneal Lymph Node Metastasis**

- 61 year-old male with past medical history of G1 neuropathy and RLE edema, with target lesions consisting of periportal, retroperitoneal, and mesenteric adenopathy
- Refractory to adjuvant tx: Cisplatin/gemcitabine
- Prior metastatic regimens:
  - Atezolizumab (24 mon)
  - Enfortumab vedotin (8 mon)
  - Pemetrexed (3 mon)
- Confirmation of PR after cycle 4 with SG treatment<sup>a</sup>
  - No worsening of neuropathy reported
  - Significant reduction in lower extremity edema
  - On treatment for 7 mon and ongoing at time of data cut-off

Images provided by Daniel P. Petrylak from the Yale School of Medicine, New Haven, CT



**Baseline CT** 

Follow-up CT (after 10 cycles of SG)

#### 70% reduction of target lesions

<sup>a</sup>Assessed by investigator using RECISTv1.1.

CT, computed tomography; G1, grade 1; PR, partial response; RECIST, Response Evaluation Criteria In Solid Tumors; RLE, right leg extremity; SG, sacituzumab govitecan.

## **Sequencing of Urothelial Agents**

- No randomized data comparing outcomes.
- Drugs are apparently non cross resistant
- Selection based on efficacy, route of administraton, and toxicities

What is the optimal first-line therapy for patients with metastatic renal cell carcinoma (mRCC), and how does this vary based on risk status, symptomatology and other factors?

## **Frontline Renal Cell Carcinoma Landscape**

	KEYNOTE-426 (Axi/Pembro)	CheckMate 9ER (Cabo/Nivo)	JAVELIN Renal 100 (Axi/Avelumab)	IMmotion 151 (Bevacizumab/Atezolizumab)	CheckMate-214 (Nivolumab/Ipilimumab)	COSMIC-313 (Cabozantinib/Nivo/Ipi)
mOS, months HR (CI);	NR vs 35.7 <b>0.68</b> (0.55-0.85);	NR vs NR <b>0.60</b> (0.40–0.89);	NR vs NR <b>0.79</b> (0.62-1.03)	33.6 vs 34.9 <b>0.93</b> (0.76-1.14)	NR vs 38.4 <b>0.69</b> (0.59-0.81)	Not reported
Landmark OS at 12 mo Landmark OS at 24 mo	90% vs. 79% 74% vs. 66%	<b>87%</b> vs. 78% (est) NA	86% vs. 82% (est) 70% vs. 65% (est)	82% vs. 79% (est) 63% vs. 60%	<b>84%</b> vs 79% (est) <b>56%</b> vs 48% (est)	Not reported
mPFS, months HR (CI)	<b>15.4</b> vs 11.1 0.71 (0.60–0.84)	<b>16.6</b> vs 8.3 0.51 (0.41–0.64)	<b>13.8</b> vs 7.0 0.69 (0.57-0.83)	<b>11.2</b> vs 8.4 0.83 (0.70-0.97)	<b>12.2</b> vs 12.3 <b>0.89</b> (0.76-1.05)	<b>NR</b> vs 11.3 <b>0.73</b> (0.57-0.94)
ORR, %	<b>60</b> vs 40	56 vs 27	53 vs 27	<b>37</b> vs 33	<b>39</b> vs 32	<b>43</b> vs 36
CR, %	<b>9</b> vs 3	<b>8</b> vs 5	4 vs 2	5 vs 2	<b>11</b> vs 3	3 vs 3
Med f/u, months	30.6	18.1	19.3	24	48	17.7
<u>Prognostic risk,%</u> Favorable Intermediate Poor	32 55 13	23 58 19	21 61 16	20 69 12	23 61 17	Not reported
Randomization period	Oct 2016 – Jan 2018	July 2017–May 2019	March 2016 – Dec 201	7 May 2015 – Oct 2016	Oct 2014—Feb 2016	Not reported
Subsequent systemic therapy for sunitinib arm	Overall (69%) IO (48%)	Overall (40%) IO (29%)	Overall (51%) IO (36%)	NR	Overall (64.1%) IO (38.6%)	Not applicable

Rini BI et al. *N Engl J Med*. 2019;380(12):1116-1127; Choueiri TM et al. 2020 ESMO Virtual Meeting. Abstract 6960\_PR. Motzer RJ et al. *N Engl J Med*. 2018;378(14):1277-1290; Rini BI et al. *Lancet*. 2019; Albiges L et al. *ESMO Open*. 2020;5:e001079; Choueiri T et al. ESMO 2022;Abstract LBA8.

## Caveats about Front Line Therapy for Metastatic RCC

- Longest Follow-up: Ipilimumab/nivolumab-tail to survival curve (30%)
- Quickest response: IO/TKI
- Sites of disease: Bone favor Cabozantinib
- Comorbidities: Hypertension with TKI

How do you generally sequence available therapies for mRCC that has progressed on front-line immunotherapy and/or a TKI?

### **TKI Therapy Following Immune Checkpoint Blockade**

Author	Study	Agents	No. of Patients	ORR	PFS/TTF
Ornstein et al <sup>5</sup>	Prospective; phase II	Axitinib, dose titrated	38	45%	8.8 months
Choueiri et al <sup>6</sup>	Subgroup; phase III, METEOR	Cabozantinib/everolimus	32	22%	NR/4.1 months
Rini et al <sup>7</sup>	Subgroup; phase III, TIVO-3	Tivozanib	47	NR	7.3 months
Singh et al <sup>8</sup>	Retrospective	Cabozantinib	86	36%	6.5 months
Wiele et al <sup>9</sup>	Retrospective	Lenvatinib +/- everolimus	40	30%	4.2 months
Hamieh et al <sup>10</sup>	Retrospective	Lenvatinib + everolimus	5	40%	NR
Shankar et al <sup>11</sup>	Retrospective	VEGF TKI	70	41%	13.2 months
Powles et al <sup>12</sup>	Retrospective	VEGF TKI	70	28%	6.4 months
Hammers et al <sup>13</sup>	Retrospective	VEGF TKI	56	13%	6.9 months
Ravi et al14	Retrospective	VEGF TKI	56	33%	8.0 months
Choueiri et al <sup>15</sup>	Retrospective	VEGF TKI	55	30%	3.7/5.4 months*
Choueiri et al <sup>16</sup>	Retrospective	VEGF TKI	33	36%	8 months
Tykodi et al17	Retrospective	VEGF TKI	33	29%	6.4 months

TABLE 1. Activity of Targeted Therapy Following Immune Checkpoint Blockade

Abbreviations: ORR, overall response rate; PFS, progression-free survival; TTF, time to treatment failure; NR, not reported; TKI, tyrosine kinase inhibitor.

\*Following immune checkpoint blockade-VEGF and ipilimumab-nivolumab combination, respectively.