

Black Boxes in mUC: What to do Beyond ADC-CPI Progression What is the Clinical Evidence?

Vadim S. Koshkin, MD

**Associate Professor of Clinical Medicine
Division of Hematology/Oncology, Department of Medicine
University of California San Francisco
Helen Diller Family Comprehensive Cancer Center
San Francisco, CA**

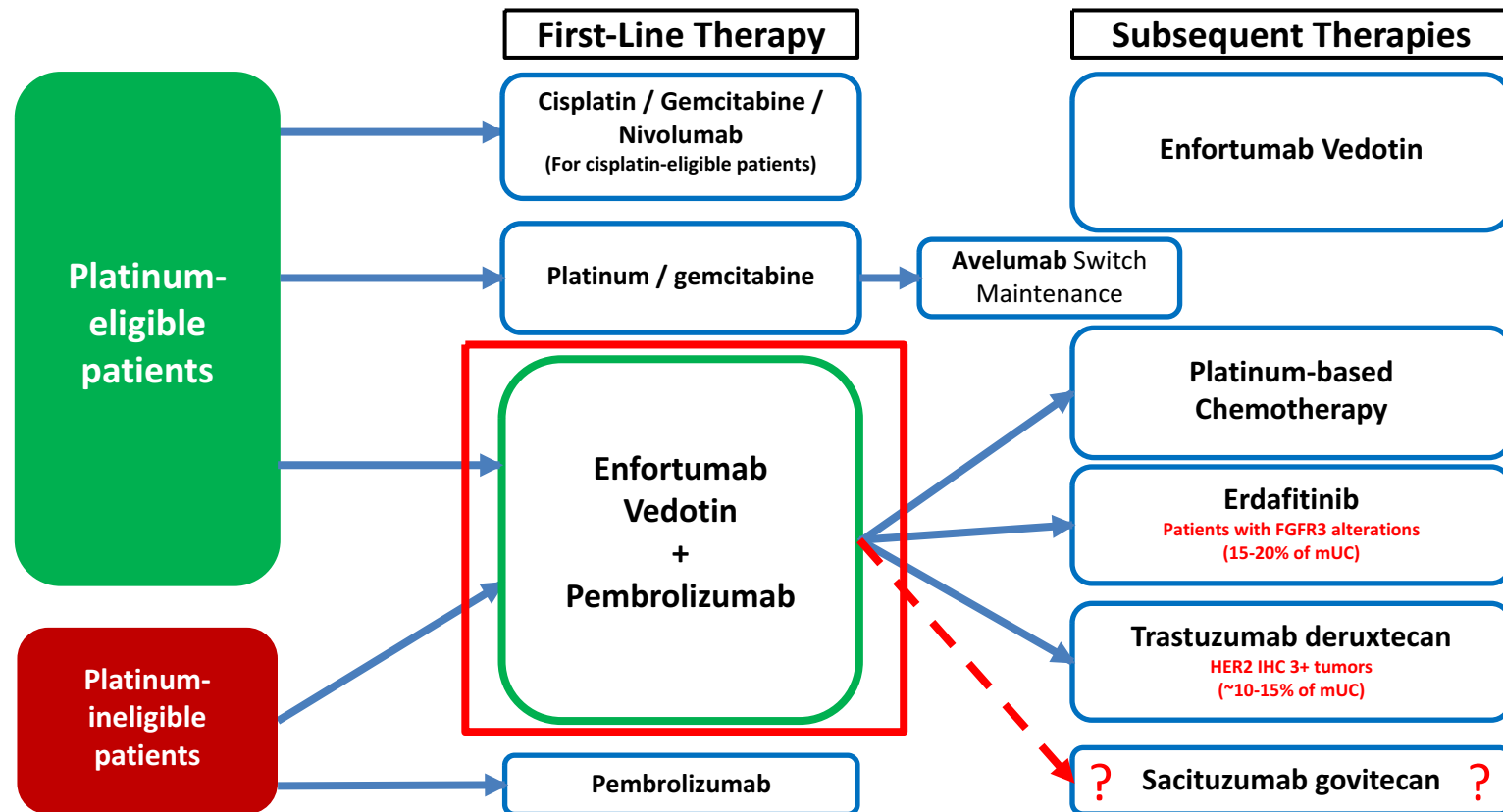
Disclosures

Research Support (Institution): Curium, Eli Lilly, Endocyte/Novartis, Gilead, Merck, Nektar, Seagen/Pfizer and Taiho

Research Funding: Eli Lilly, Astellas/Merck, Prostate Cancer Foundation

Consulting or Advisory Role: Astellas, AstraZeneca, Bicycle Therapeutics, BMS, Janssen, Loxo Oncology, MSD, Pfizer/Seagen, Roche, Tempus

Metastatic Urothelial Carcinoma Treatment Landscape in 2025



Recent Advances in Perioperative Treatment: EV+ICI Combinations Will Likely be Used Earlier

	Clinical Trial	N	Treatment Arms	Control Arm
CISPLATIN ELIGIBLE	NIAGARA ³	1063	Durvalumab + GC	GC
	KEYNOTE-866 ¹	907	Pembrolizumab + GC	GC
	KEYNOTE-B15/EV-304 ²	784	Pembrolizumab + EV	GC
	ENERGIZE ⁴	861	Nivolumab + GC	GC
CISPLATIN INELIGIBLE	KEYNOTE-905/EV-303 ⁵	857	A: Pembro + EV B: Pembro mono	RC
	VOLGA ⁶	830	A: Durva/Tremi + EV B: Durva + EV	RC

1. NCT03924856. 2. NCT04700124. 3. NCT03732677. 4. NCT03661320.
5. NCT03924895. 6. NCT04960709. 7. NCT04871529.

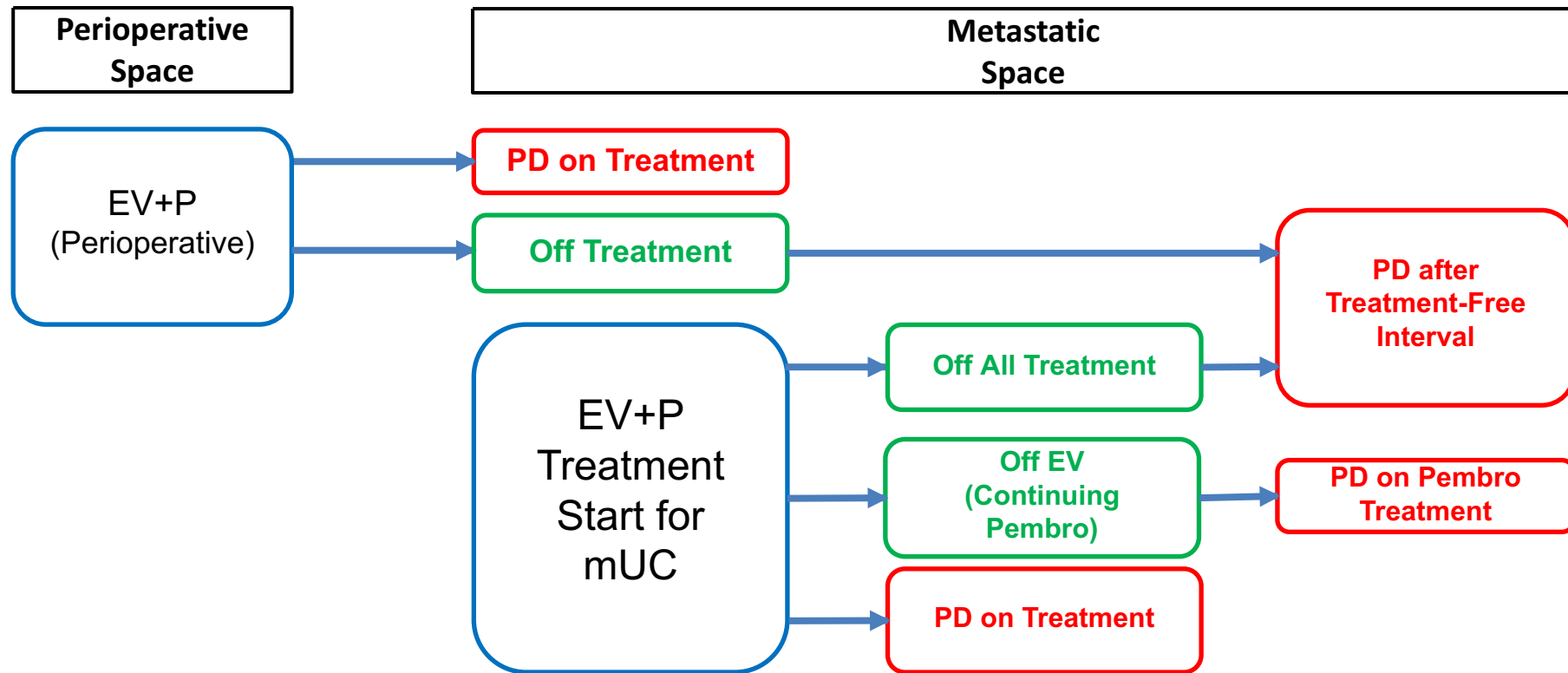
EV: Enfortumab vedotin
GC: Gemcitabine/cisplatin
RC: Radical cystectomy

What is the Next Treatment After EV+P for Patients with mUC Who Need It?

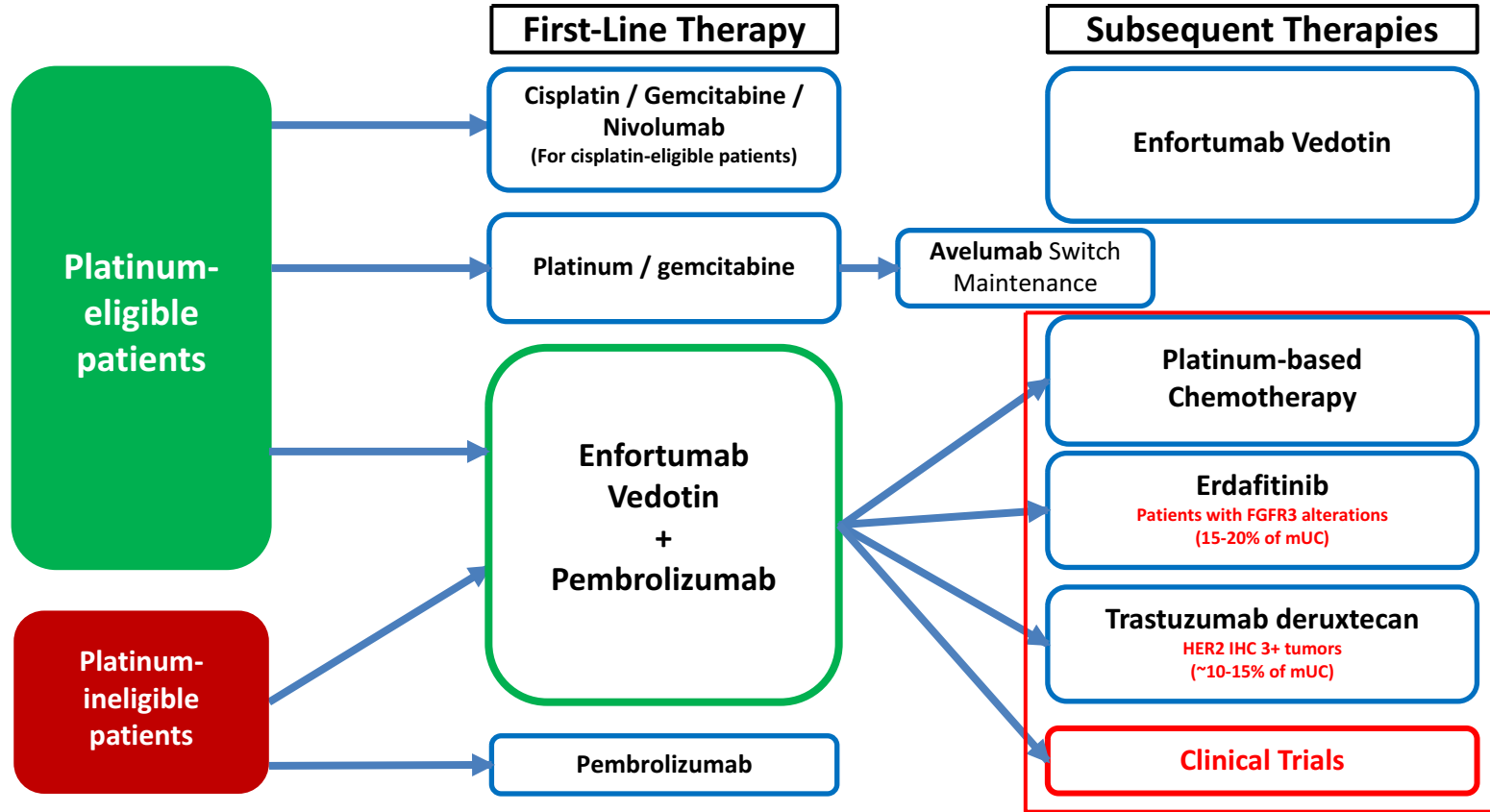
- No prospective data currently
- Retrospective data emerging
- Treatment context matters
- Distinction between prior exposure to EV+P and progression on EV+P?



Patients with Prior EV/P Exposure and/or Progression



Metastatic Urothelial Carcinoma Treatment Landscape in 2025



Options Oncologists Prefer After EV/P: Survey Outcomes

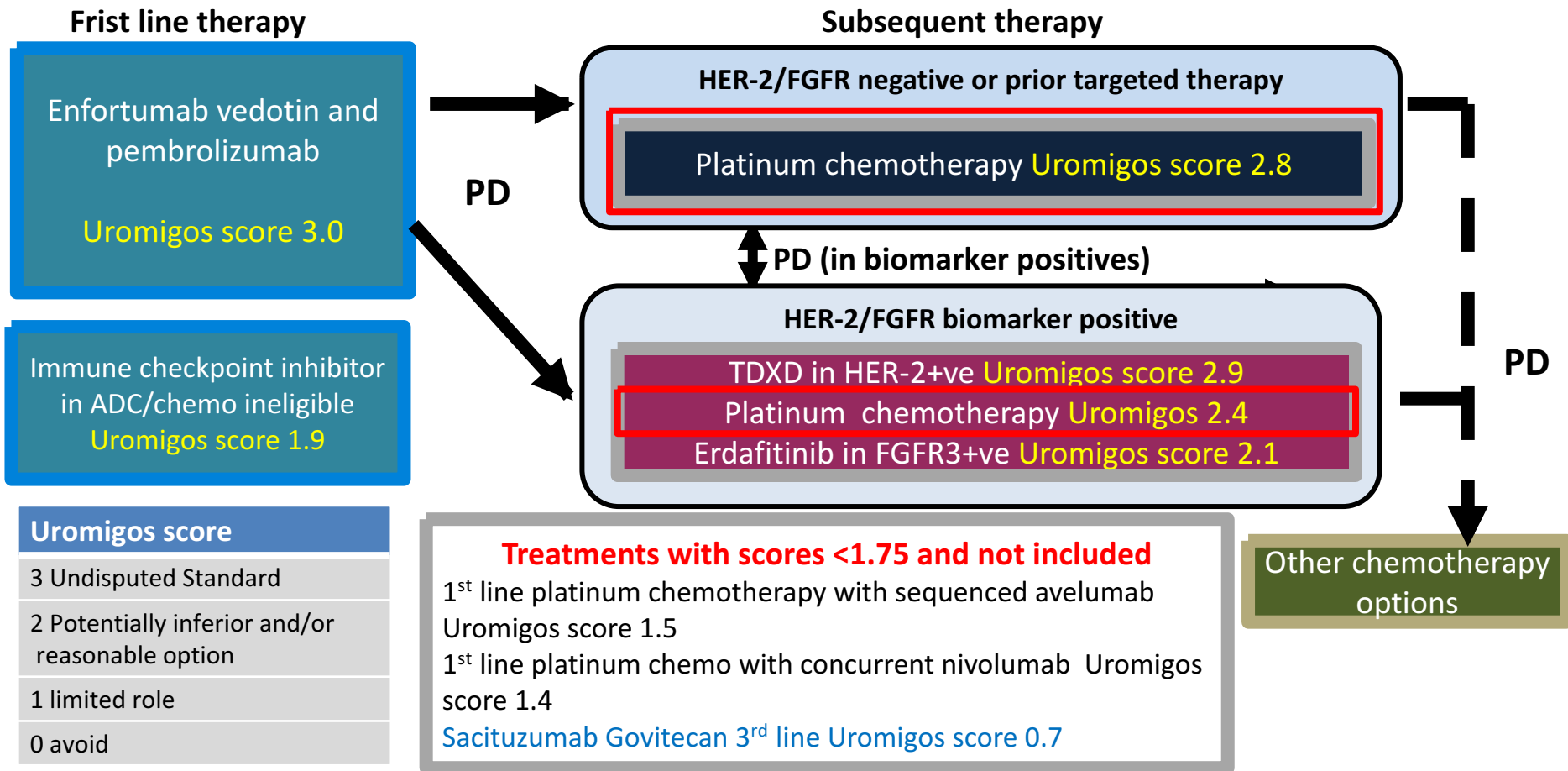
Question: If a patient has progression on first-line Enfortumab vedotin + Pembrolizumab, how likely are you to give each of the following options as second-line treatment?

- Survey responses received from 71 of 227 (31%) bladder-focused oncologists

- After progression on EV/Pembro, most oncologists favored **platinum-based chemotherapy (PBC) without ICI switch maintenance**, or **erdafitinib (in FGFR3-altered tumors)** as **2L therapies**
- For **2L clinical trials**, more oncologists favored **non-ICI containing regimens**

2L Treatment after EVP	Somewhat or very likely to use, % (n)	Somewhat or very unlikely to use, % (n)
Gemcitabine + Cisplatin + Nivolumab	11 (8)	80 (57)
PBC with switch maintenance ICI	31 (22)	62 (44)
PBC without switch maintenance ICI	77 (55)	13 (9)
Erdafitinib for <i>FGFR3</i> -altered patients	87 (62)	7 (5)
ICI-combination trial	54 (38)	35 (25)
Non-ICI trial	80 (57)	8 (6)
Continue EVP for progression in 1-2 sites after using local therapy (e.g. radiation)	83 (59)	8 (6)
Sacituzumab*	56 (40)	30 (21)

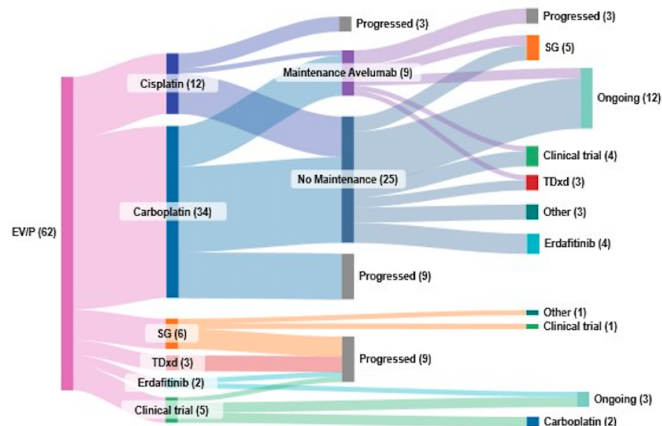
More Expert Opinion: The Uromigos Score



Platinum-Based Chemotherapy Following EV+P: Retrospective Data

Among 236 patients treated at MSKCC with 1L EV+P from 10/2018-12/2024, 62 received any subsequent treatment

- 46 patients (74%) received platinum-based chemo



		Any platinum N=46	Carboplatin N=34	Cisplatin N=12
Best response	CR	2 (4.4%)	2 (5.9%)	0 (0%)
	PR	20 (44%)	14 (41%)	6 (55%)
	SD	9 (20%)	8 (24%)	1 (9.1%)
	PD	14 (31%)	10 (29%)	4 (36%)
	Unknown	1	0	1
ORR (95% CI)		49% (34%, 64%)	47% (30%, 65%)	55% (23%, 83%)
Median DOR months (95% CI)		4.6 (3.6, 7.7)	3.8 (2.9, -)	5.7 (4.6, -)
Median PFS months (95% CI)		4.6 (3.6, 5.7)	4.6 (3.6, 6.6)	5.7 (2.4, -)
Median OS months (95% CI)		11 (9.7, 17)	10 (9.7, -)	11 (4.6, -)

	MSKCC (New York, USA)	Samsung Medical Center (Seoul, S Korea)	Dana Farber Cancer Institute (Boston, USA)
Patients (N) with EV/P in 1L	236	37	101
Patients (N) with platinum-based chemotherapy (PBC) in 2L	46	10	13
ORR with PBC	48% (2 CR, 20 PR)	10% (1 PR)	N/A
Clinical benefit rate with PBC (CR,PR,SD)	66% (2 CR, 20 PR, 9 SD)	40% (1 PR, 3 SD)	55%
Median PFS	4.6 months	3.4 months	N/A
Median OS	11.0 months	8.0 months	N/A



@koshkin85

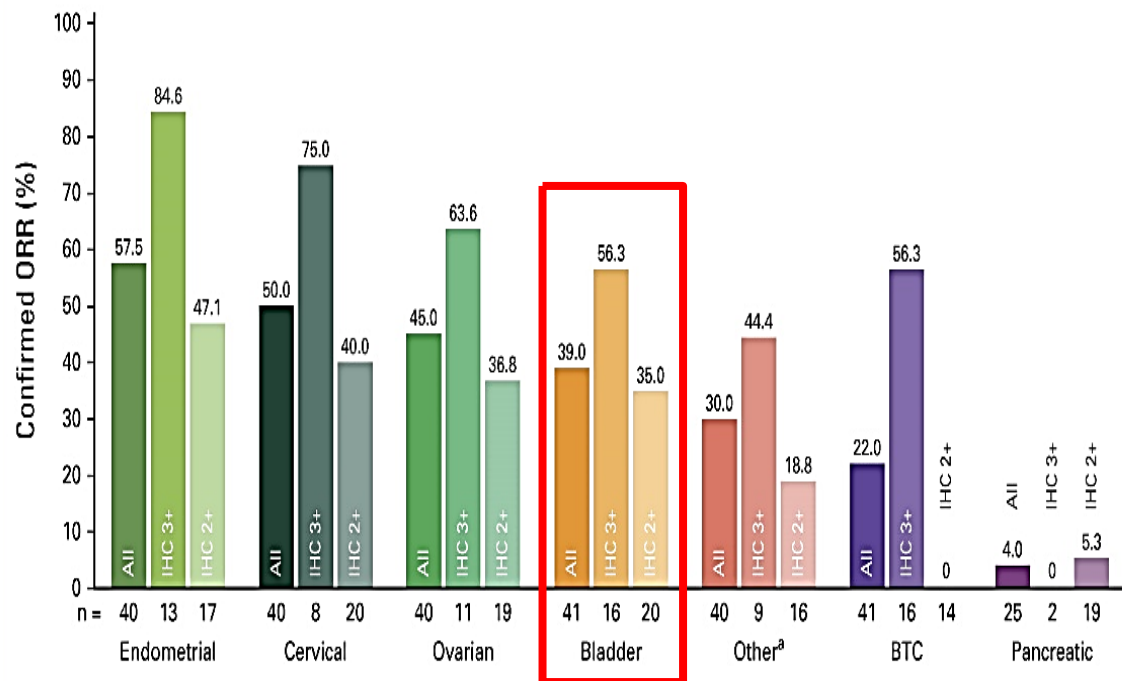


@vadimkoshkin.bsky.social

Sternschuss et al. ASCO 2025, Galera et al. ASCO 2025 ePoster, Kim et al. ASCO GU 2025

Trastuzumab Deruxtecan in Treatment-Refractory Patients (HER2-Positive)

DESTINY-PanTumor02: Phase 2 Study of Trastuzumab deruxtecan Monotherapy in HER2-Expressing (IHC 2+/3+) Patients With 1+ Prior Lines of Treatment



Bladder Cohort	All (n=41)	IHC 3+ (n=16)	IHC 2+ (n=20)
Investigator-assessed ORR	39%	56%	35%
Median PFS, mos	7.0	7.4	7.8
Median OS, mos	12.8	13.4	13.1

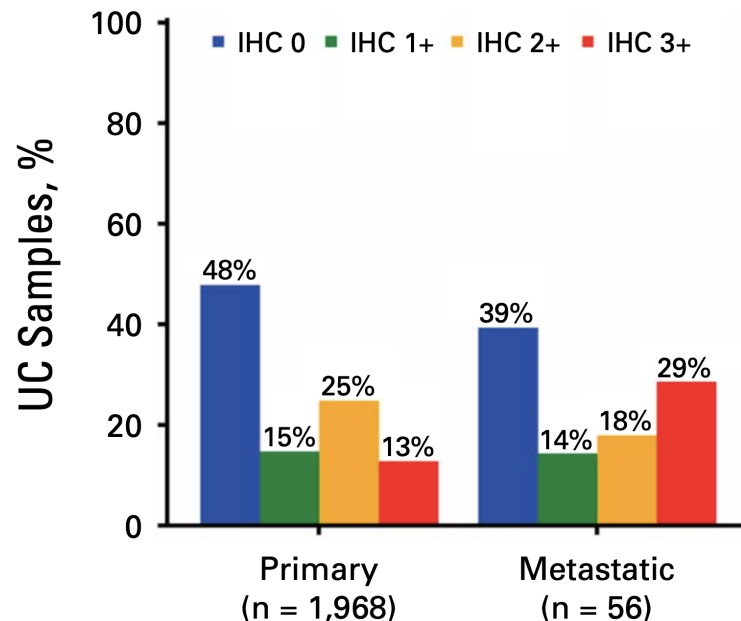


For HER2-positive (IHC 3+) tumors

HER2 Expression in Advanced Urothelial Cancer

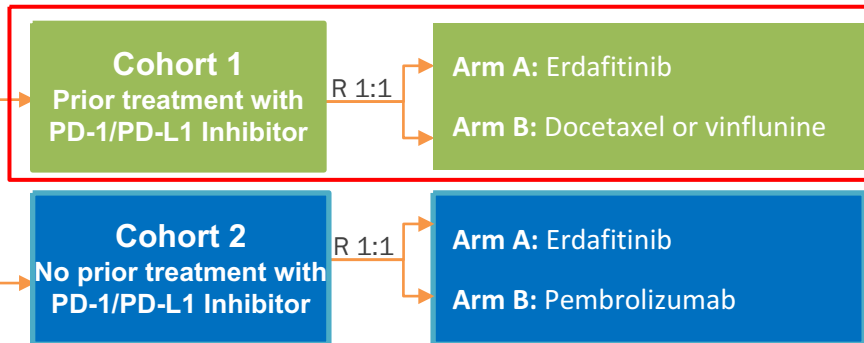
Standardized testing with immunohistochemistry (IHC) assay in a large, commercially sourced, global cohort of tumor samples with advanced primary or mUC (**N=2024**)

- **13% with IHC 3+ HER2 expression**
 - Current FDA approval for trastuzumab deruxtecan
- **>50% with HER2 expression (1+, 2+, 3+)**
 - Potential benefit with HER2-targeted therapy



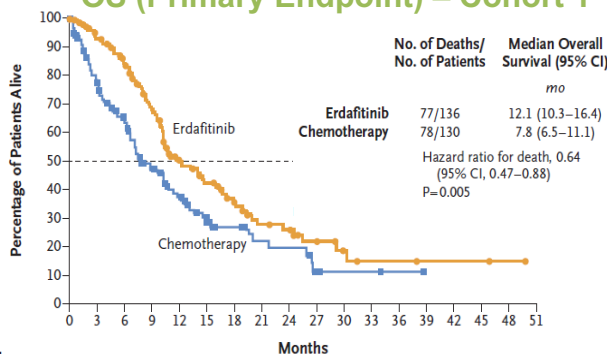
FGFR3-Altered Patients: THOR Trial of Erdafitinib vs Chemotherapy in Pretreated Patients With mUC and *FGFR3* Alterations

- Unresectable or mUC
- Confirmed progression on/after 1-2 prior therapies
- Select *FGFR* aberrations



Primary endpoint: OS
Secondary endpoints:
 DOR, ORR, PFS, PK,
 PROs, safety

OS (Primary Endpoint) – Cohort 1

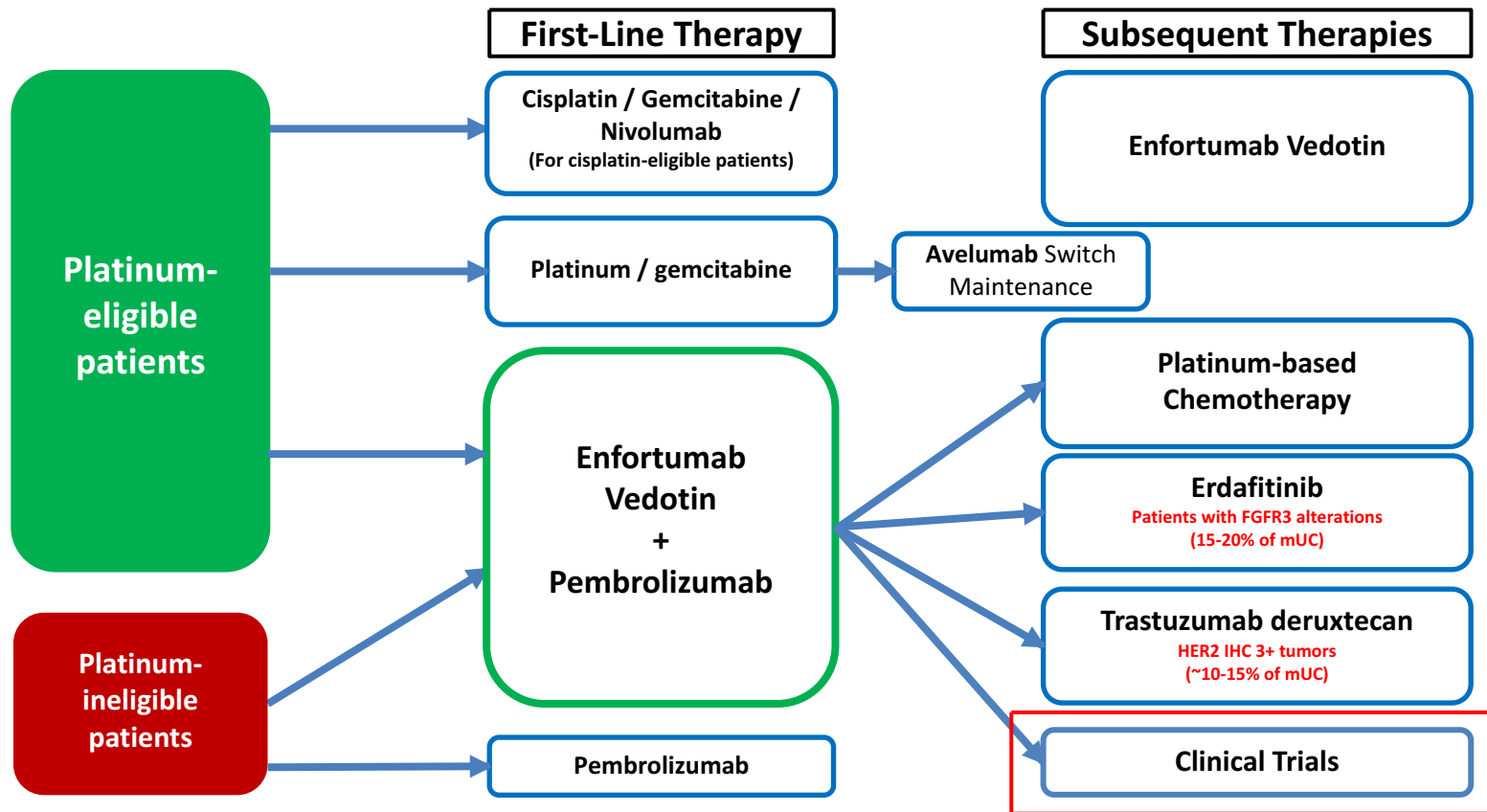


No. at Risk (no. with censored data)	0	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51
Erdafitinib	136	117	97	74	46	35	25	17	15	9	5	3	3	2	2	2	1	0
	(0)	(10)	(20)	(25)	(35)	(39)	(44)	(47)	(48)	(52)	(55)	(56)	(56)	(57)	(57)	(58)	(58)	(59)
Chemotherapy	130	87	66	43	30	18	13	9	8	3	2	2	1	0	0	0	0	0
	(0)	(17)	(25)	(30)	(35)	(41)	(45)	(47)	(47)	(49)	(50)	(50)	(51)	(52)	(52)	(52)	(52)	(52)

Cohort 1	Erdafitinib (n=136)	Chemo (n=130)
ORR (INV), %	45.6	11.5
CR	6.6	0.8
PR	39.0	10.8
mPFS, months (95% CI)	5.6 (4.4–5.7)	2.7 (1.8–3.7)

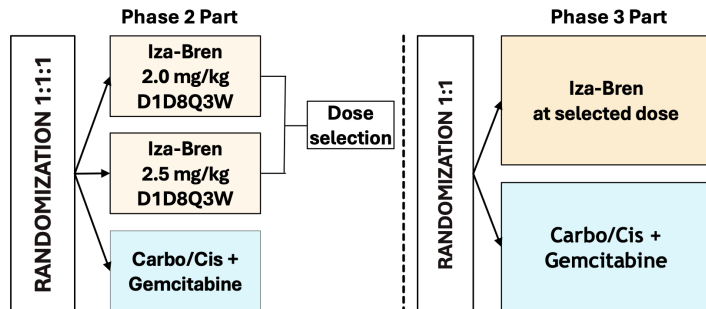
Erdafitinib now indicated
 for patients with **la/mUC**
 and **susceptible *FGFR3***
 alterations whose
 disease has **progressed**
 after at least one line of
 prior systemic therapy

Metastatic Urothelial Carcinoma Treatment Landscape in 2025



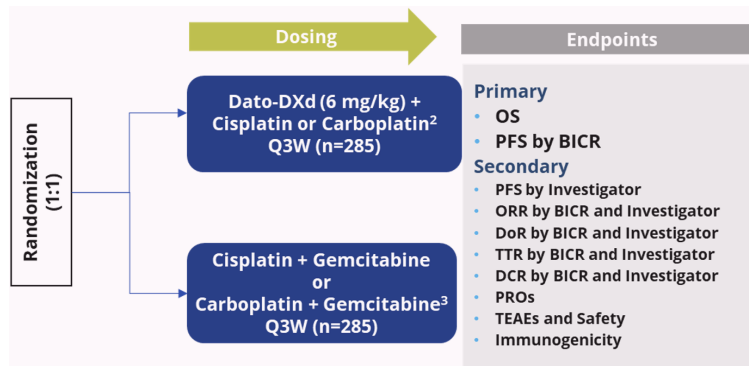
Registrational Trials in the Post EV/P Setting

IZABRIGHT-Bladder01 (HER3/EGFR ADC)

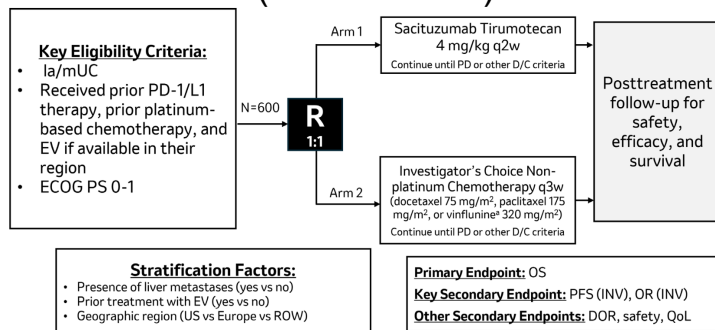


Study design schema of IZABRIGHT-Bladder01: Dual primary endpoints of OS & PFS

TROPION-Urothelial03 (TU03) (TROP2 ADC)



MK2870-031 (TROP2 ADC)



Other Investigational Agents in Post-EV+P Space

Biomarker-Selected

- HER2-Targeted: (Disitamab Vedotin)
- Next-generation FGFR3-inhibitors

Alternate Nectin-4 Targeted Therapies

- Nectin4-Targeted ADCs (Topo1 Payload or Others)
- Nectin4-Targeted RLT
- Dual-targeting ADCs (Nectin4/Trop2)

Combinations for ICI Rechallenge

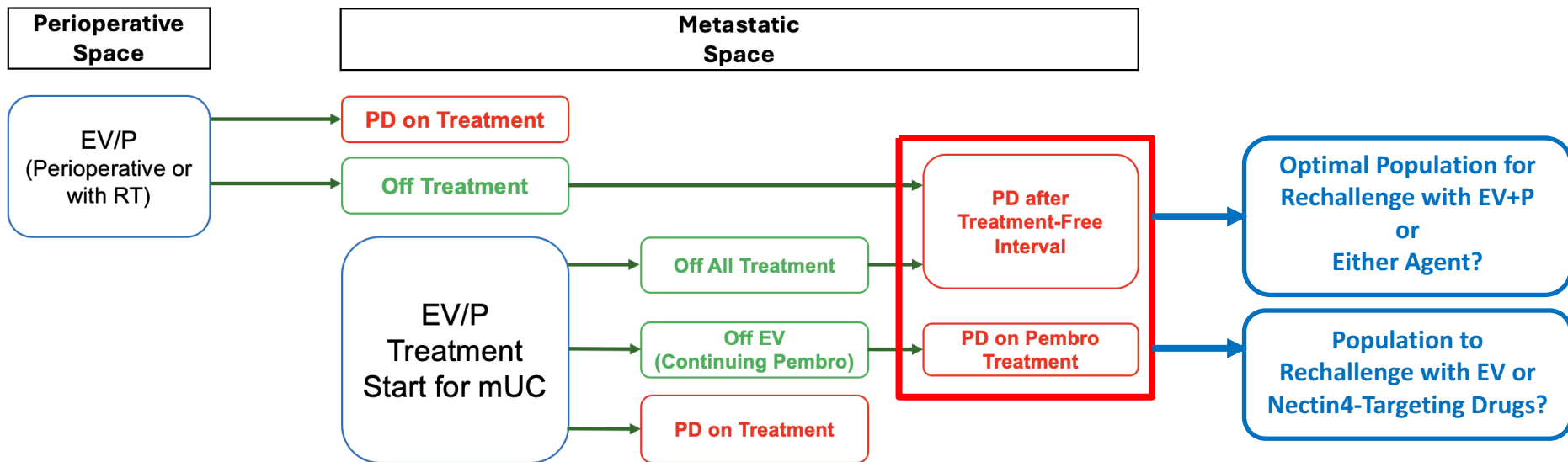
- Pembrolizumab + Nectin4 ADC (Topo1 Payload)
- Pembrolizumab + SG
- Bispecific Antibody (Nectin4/CD28) + Pembrolizumab

Role for Rechallenge with EV +/- P or Similar Agents

- Which patients can be rechallenged successfully?
 - How relevant is time from prior treatment?
- Role for Rechallenge with Nectin4 Targeting Drugs?
- Which patients can be rechallenged with ICI?
- Role for retrospective studies and future clinical trials to answer these questions?



Other Options for Patients Who Have Not Progressed on EV-Based Treatment?



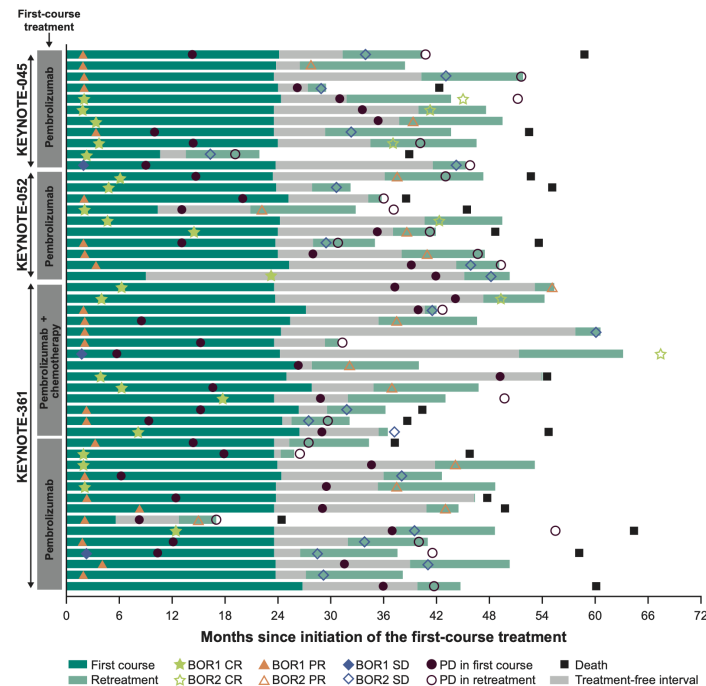
Rechallenge with Pembrolizumab after Prior Pembrolizumab-Based Regimens

Post-Hoc Analysis of KEYNOTE Pembrolizumab Trials (KEYNOTE-045, KEYNOTE-052, KEYNOTE-361)

- Patients with CR or completing full course of treatment (35 cycles; 2 years) could stop Pembrolizumab
- Could then be rechallenged if PD occurred off treatment

49 patients were retreated with Pembro and analyzed

- Median treatment-free interval: 10.7 months
- Retreatment ORR: 41%, DCR: 82%
- Median time to response: 2 months
- From start of retreatment:
 - Median PFS: 9.5 months
 - Median OS: 25.7 months
 - Median DOR (for responders): 14.0 months



- Pembrolizumab rechallenge is effective for patients with prior clinical benefit on Pembrolizumab-based regimens
- This is a highly selected patient population; approach for all patients is unclear

EV+Pembrolizumab Treatment after Prior ICI

UNITE Study

- Retrospective cohort study
- Investigating outcomes of patients with mUC treated with targeted agents, including EV-based combinations
- Over 17 sites and 900 patients in the United States

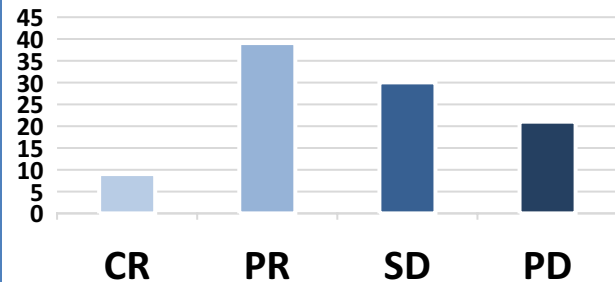
EV+Pembrolizumab: 202 Patients From 14 sites

- Subset of 43 patients who previously received ICI

Treatment and Survival Outcomes (n=43)

Median Follow Up	14 months
Median Overall Survival	15.4 mos (95% CI: 8.7 – NR)
Median Progression-Free Survival	6.9 mos (95% CI: 3.91 – 12.2)
Observed Response Rate	48% (95% CI: 31 - 66) [16/33]
Disease Control Rate (CR/PR/SD)	79% (95% CI: 65 - 93) [26/33]

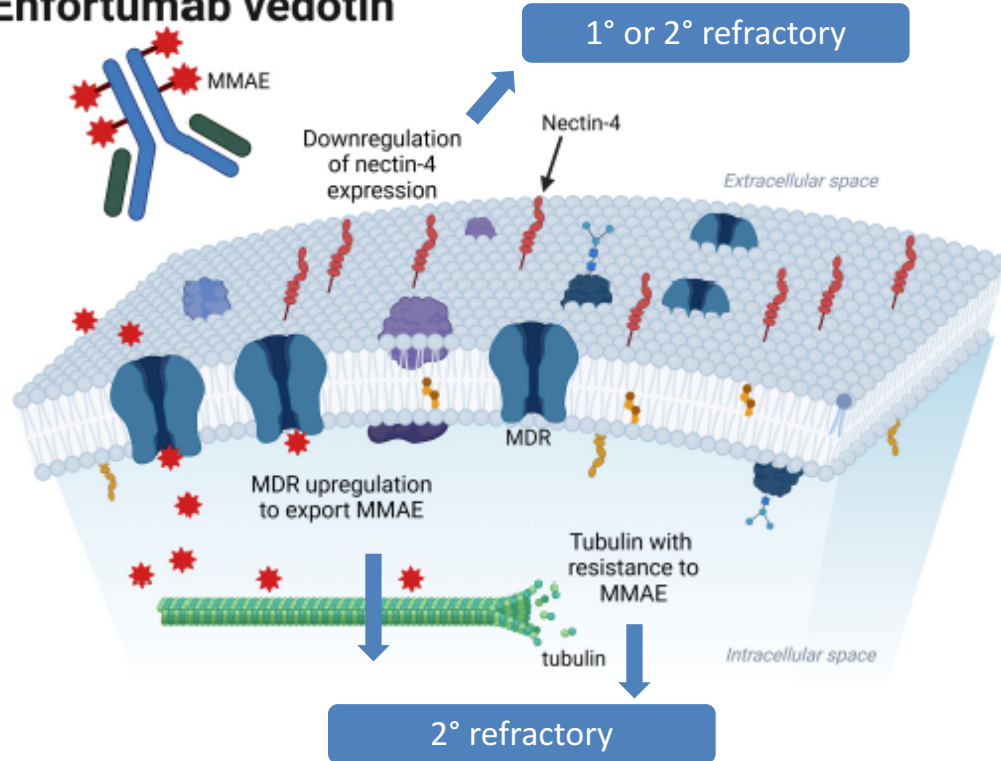
Observed Response Rate (%)



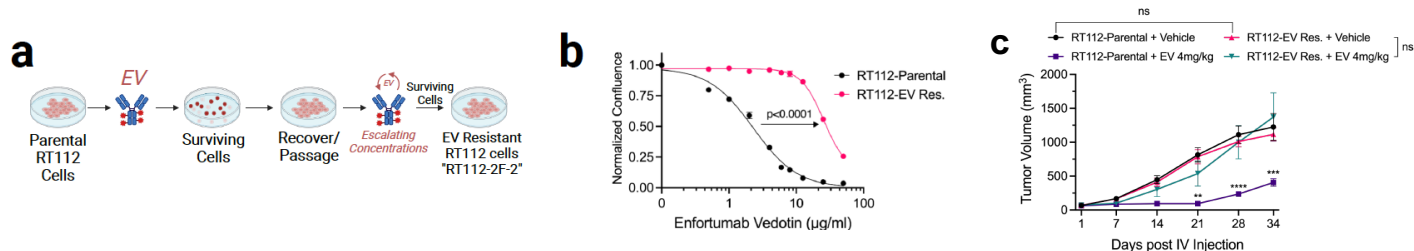
Can We Rechallenge with Nectin4-Targeting Agents?

Mechanisms of Resistance to EV

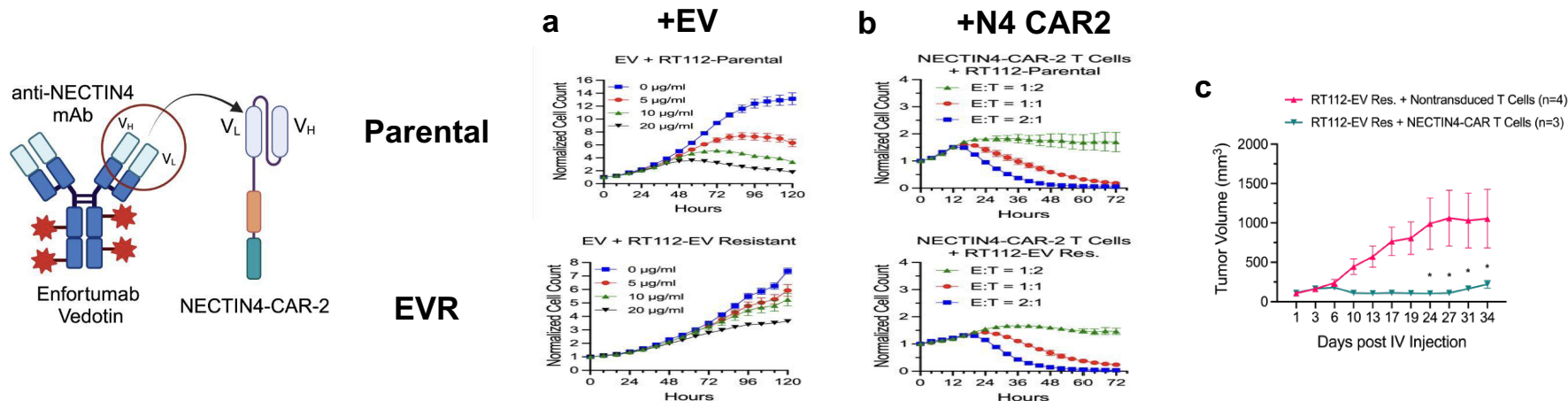
Enfortumab vedotin



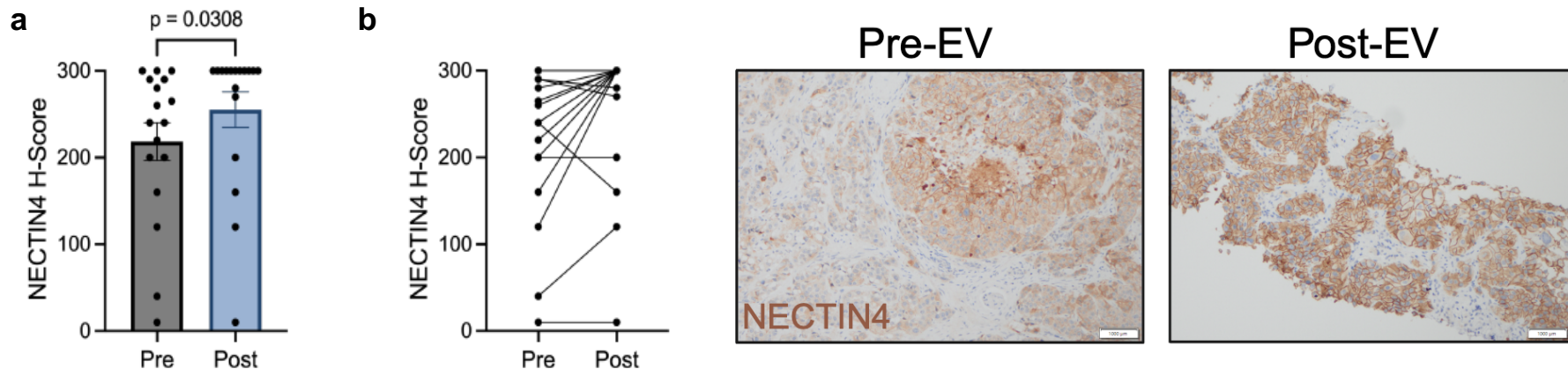
NECTIN4 is retained in EV-resistant cells, suggesting that switching of treatment modalities is a viable approach



NECTIN4 Targeted CAR T's retain activity against EV-resistant cells

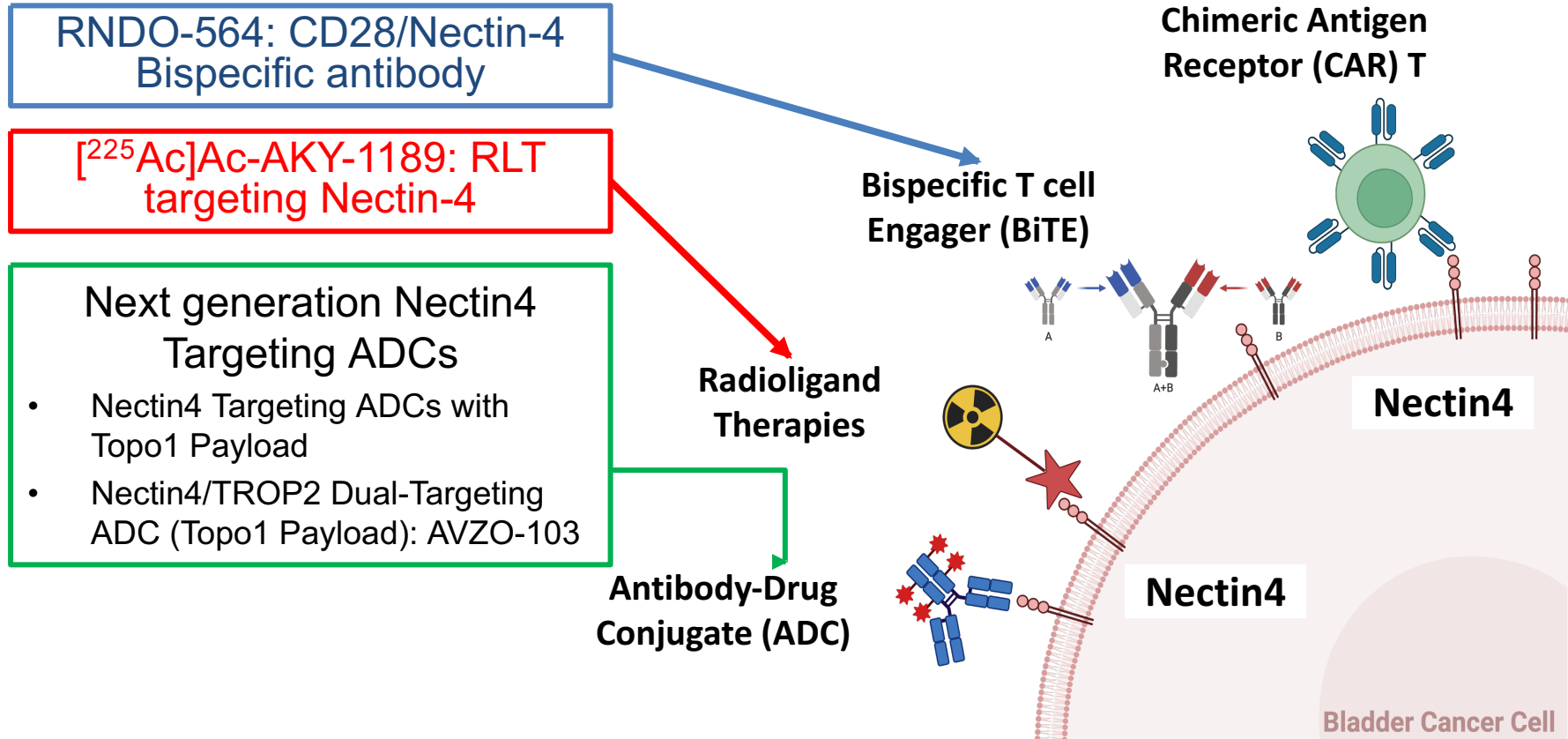


NECTIN4 Expression is Retained in Biopsies Following EV Treatment



Rationale for Rechallenging with Nectin4-Targeting Agents after Progression on EV+Pembrolizumab

Future Trials Targeting Nectin4



Summary

- EV + Pembrolizumab is becoming the key regimen for patients with aUC
 - Moving earlier to perioperative setting
- Creates important questions regarding treatment space following EV+P
- Heterogeneous patient populations requiring personalized approaches
- Roles for novel and targeted agents, clinical trials and potential for treatment rechallenge in selected patients



Thank you!

vadim.koshkin@ucsf.edu



@koshkin85



@vadimkoshkin.bsky.social