

Inaugural Southern California Genitourinary Cancer Research Forum

Key Updates in Bladder Cancer

Alexandra Drakaki, MD, PhD

Associate Professor of Medicine, Hematology/Oncology and Urology

Medical Director of the Genitourinary Oncology Program

Leader of the Genitourinary Research Program

University of California, Los Angeles



Bladder Cancer

Can we finally make a difference ???

From NeoAdjuvant to Adjuvant to Metastatic,
and there is still a **Chance of Cure!!!**

Disclosures

- Consultant for AstraZeneca, Eli Lilly, EMD Serono, Exelixis, Genentech, Merck, and Seagen.

This presentation and/or comments will be free of any bias toward or promotion of the above referenced companies or their product(s) and/or other business interests.

This presentation and/or comments will provide a balanced, non-promotional, and evidence-based approach to all diagnostic, therapeutic and/or research related content.

This presentation has been peer-reviewed and no conflicts were noted.

The off-label/investigational use of Durvalumab, Tremelimumab, Tiragolumab, Atezolizumab, and Enfortumab Vedotin will be addressed.

Cultural Linguistic Competency (CLC) & Implicit Bias (IB)

STATE LAW:

The California legislature has passed Assembly Bill (AB) 1195, which states that as of July 1, 2006, all Category 1 CME activities that relate to patient care must include a cultural diversity/linguistics component. It has also passed AB 241, which states that as of January 1, 2022, all continuing education courses for a physician and surgeon **must** contain curriculum that includes specified instruction in the understanding of implicit bias in medical treatment.

The cultural and linguistic competency (CLC) and implicit bias (IB) definitions reiterate how patients' diverse backgrounds may impact their access to care.

EXEMPTION:

Business and Professions Code 2190.1 exempts activities which are dedicated solely to research or other issues that do not contain a direct patient care component.

This presentation is dedicated solely to research or other issues that do not contain a direct patient care component.

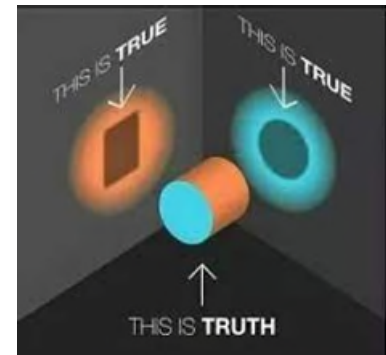
Agenda

- **NEOADJUVANT:** Current SOC and Ongoing Needs / Studies
- **ADJUVANT:** Making science to make a difference!
- **METASTATIC:** Finally a step forward

Basic Principle in Urothelial Cancer Treat based on Cisplatin Eligibility

For Neoadjuvant-Adjuvant-1st Line Metastatic

1. Creatinine Clearance > 60 (Adjusting to Cr Cl 40-60)
2. Neuropathy grade <2 (Subjective grade 1 vs 2)
3. Ototoxicity grade <2 (Subjective need vs use hearing aids)
4. NYHA class <3
5. ECOG 0-1



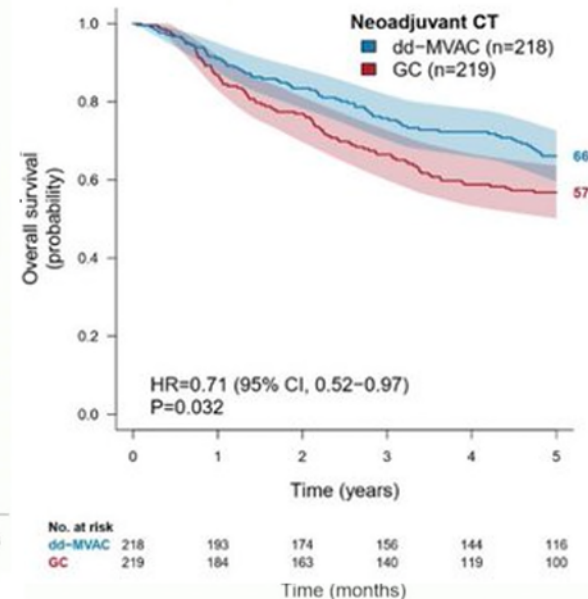
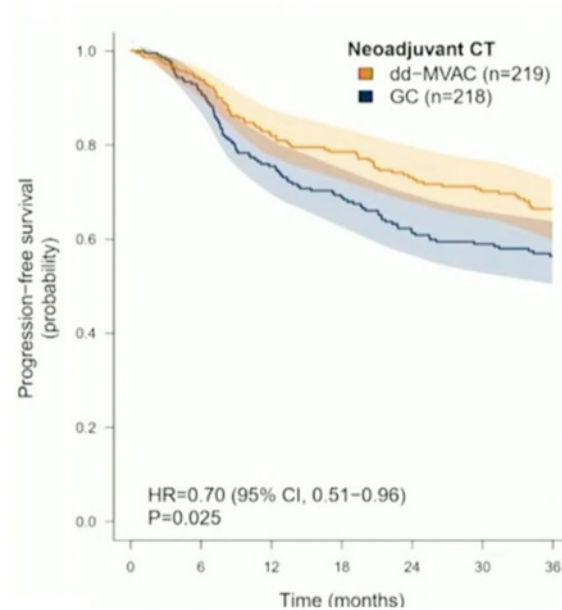
Current SOC In Cisplatin Eligible

MULTICENTER RANDOMIZED PHASE III TRIAL OF DOSE DENSE MVAC OR GC IN PERIOPERATIVE CHEMOTHERAPY FOR MUSCLE INVASIVE BLADDER CANCER
GETUG/AFU VESPER PH III

ASCO 2023

GC: Gemcitabine
Cisplatin

MVAC: Methotrexate
Vinblastine
Anthracycline
Cisplatin

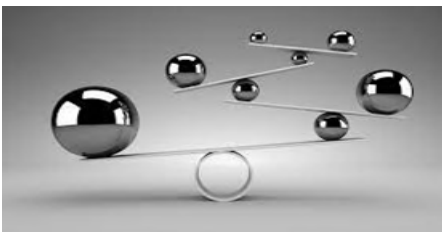


GETUG/AFU VESPER Ph III

500 patients randomized to
ddMVAC * 6cy vs GC * 4cy

5yr OS
64% in dd MVAC vs 56% in GC

5yr DFS
72% in dd MVAC vs 59% in GC



CISPLATIN ELIGIBLE TRIALS

KEYNOTE-B15: A Phase III study of Gemcitabine+Cisplatin vs Perioperative Enfortumab Vedotin (EV) Plus Pembrolizumab (PI: Chamie-urology)

Patient Population
 -Cisplatin Eligible
 -Stage cT2-T4aN0M0
 -Stage cT1-T4aN1M0
 -Any PD-L1 status

R
 (1:1)
 N=784

Arm A
 EV 1.25 mg/kg Q3W on
 days 1 and 8 +
 Pembrolizumab 200 mg
 Q3W on day 1 (4 cycles)

Arm B
 Gemcitabine 1000 mg/m²
 Q3W on days 1 and 8 +
 Cisplatin 70 mg/m² Q3W
 on day 1 (4 cycles)

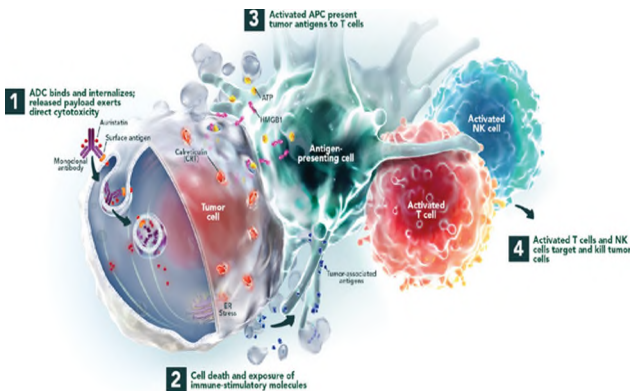
RC + PLND

EV 1.25 mg/kg Q3W on
 days 1 and 8
 (5 cycles) +
 Pembrolizumab 200 mg Q3W
 on day 1 (13 cycles)^a

Observation

Neoadjuvant Phase

Adjuvant Phase

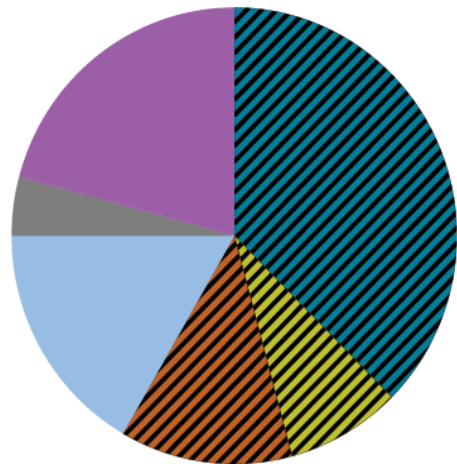
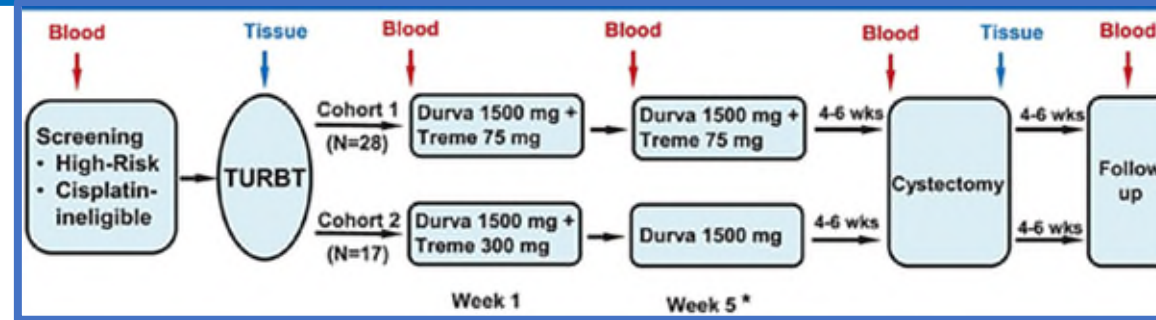


What is the SOC in Cisplatin Ineligible?

- Bladder Sparing: Chemo Radiation
- Surgical Candidates: Radical Cystectomy & LN Dissection → Adjuvant Tx

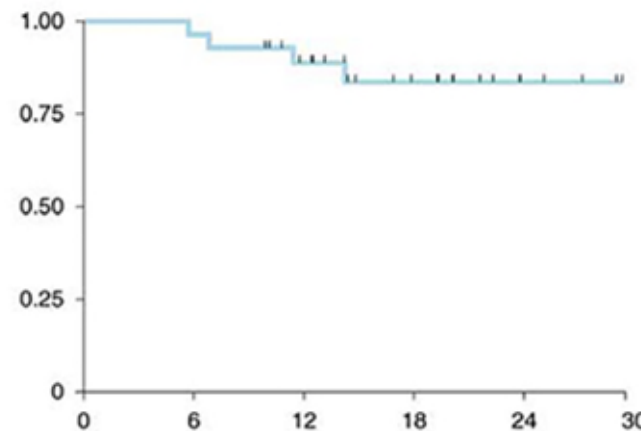
Neoadjuvant therapy is the SOC in MIBC
If that holds true for CISPLATIN ELIGIBLE,
is probably true for CISPLATIN INELIGIBLE
IF we can give Effective Drugs Safely

Neoadjuvant PD-L1 plus CTLA-4 blockade in patients with cisplatin-ineligible operable high-risk urothelial carcinoma

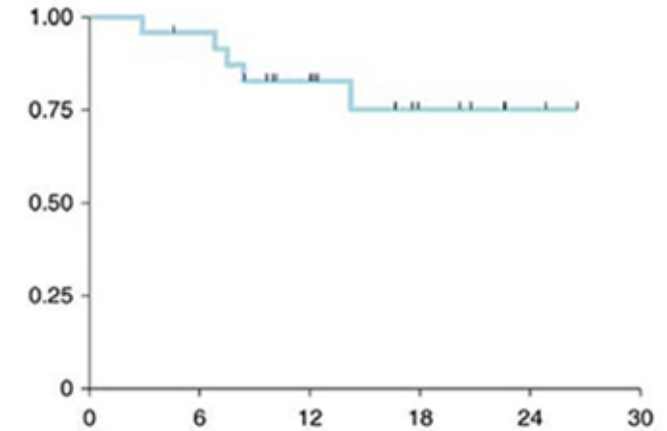


- pCR, 37.5%
- pT2N0, 16.6%
- pTaN0, 8%
- pT4aN0, 4%
- pT1N0, 12%
- LN⁺, 21%

Pathologic Responses post cystectomy



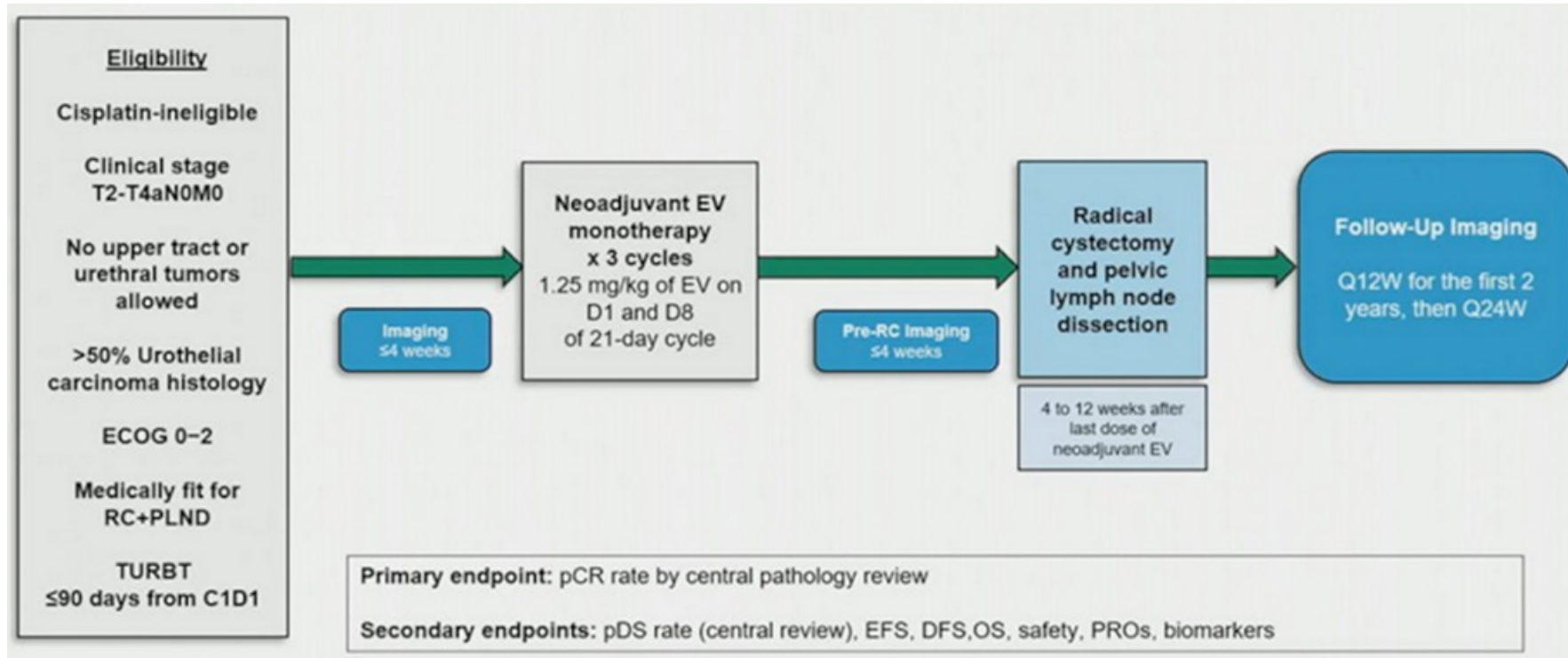
Overall Survival



Relapse Free Survival

EV-103 Cohort H: Neoadjuvant Enfortumab Vedotin in patients Cisplatin Ineligible MIBC

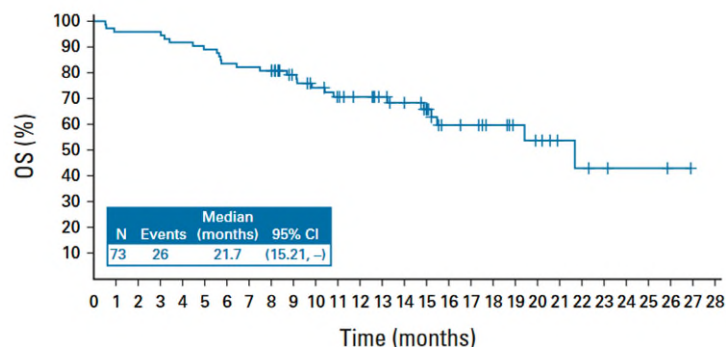
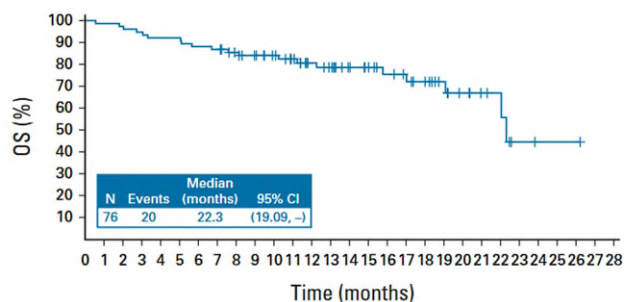
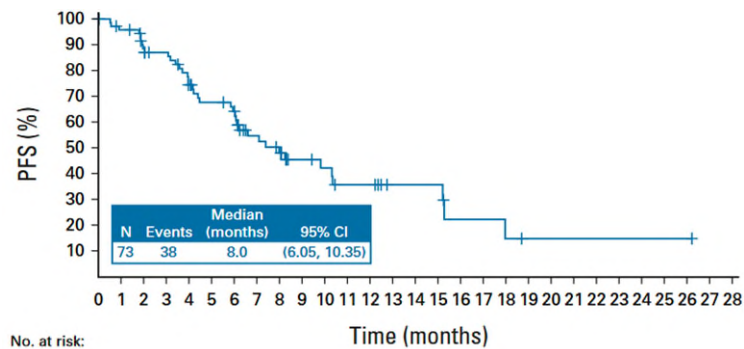
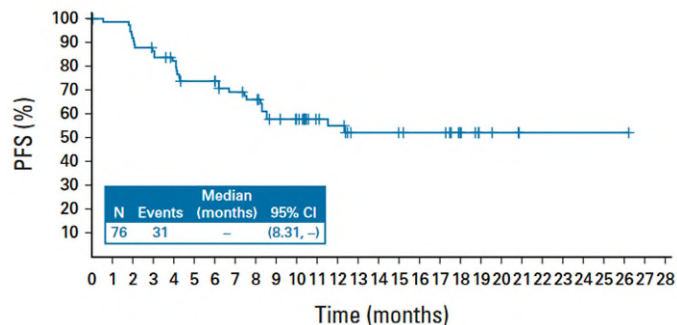
J Clin Oncol. 40, 2022 (suppl 6; abstr 435)



Pathological Response	Central Pathology Results (N=22) n (%) [95% Confidence Interval]
Pathological Complete Response Rate (defined as absence of any viable tumor tissue: ypT0 and N0)	8 (36.4%) [17.2–59.3]
Pathological Downstaging Rate (defined as presence of ypT0, ypTis, ypTa, ypT1, and N0)	11 (50.0%) [28.2–71.8]

Enfortumab Vedotin With or Without Pembrolizumab in Cisplatin Ineligible Untreated Advanced Bladder Cancer

O'Donnell et al, J Clin Oncol 2023



	EV + Pembro (N = 76)	EV Monotherapy (N = 73)
Confirmed ORR, No. (%) (95% CI)	49 (64.5) (52.7, 75.1)	33 (45.2) (33.5, 57.3)
Best overall response		
CR	8 (10.5)	3 (4.1)
PR	41 (53.9)	30 (41.1)
Stable disease	17 (22.4)	25 (34.2)
PD	6 (7.9)	7 (9.6)

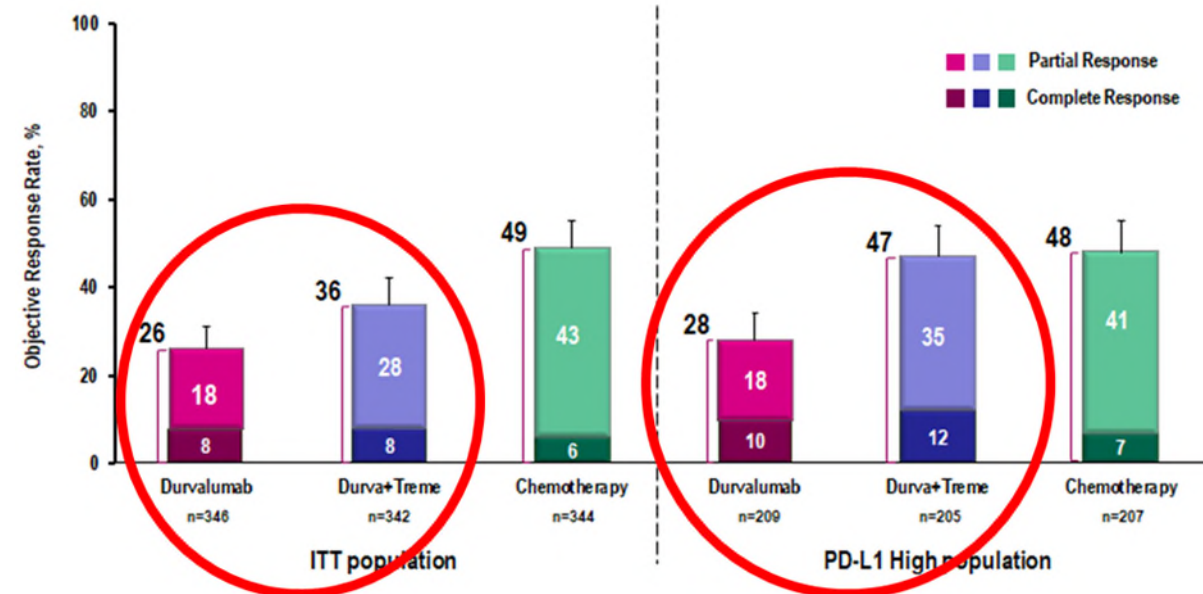
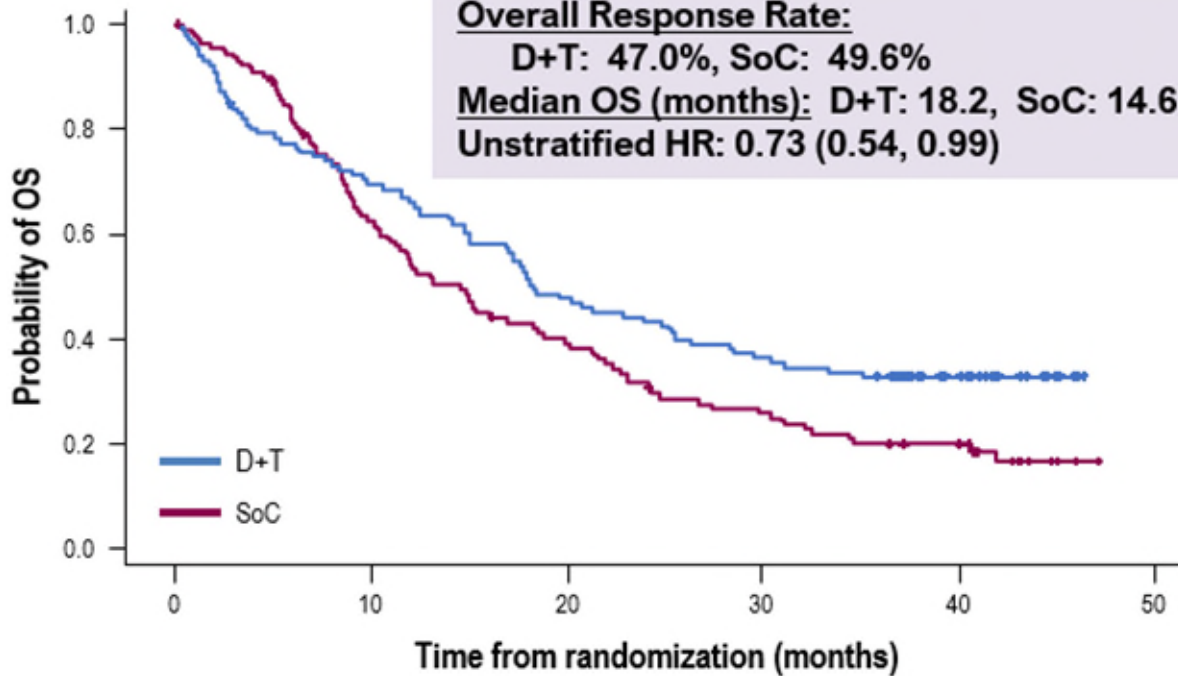
EV + Pembro (N = 76)	
mPFS, months	-
95% CI	(8.31, -)
mOS, months	22.3
95% CI	(19.09, -)

EV Monotherapy (N = 73)	
mPFS, months	8.0
95% CI	(6.05, 10.35)
mOS, months	21.7
95% CI	(15.21, -)

Response rates for Durvalumab vs Durvalumab/Tremilimumab vs Chemo in front line Urothelial Cancer (DANUBE trial)

Cisplatin-eligible population

Overall Response Rate:
 D+T: 47.0%, SoC: 49.6%
Median OS (months): D+T: 18.2, SoC: 14.6
Unstratified HR: 0.73 (0.54, 0.99)

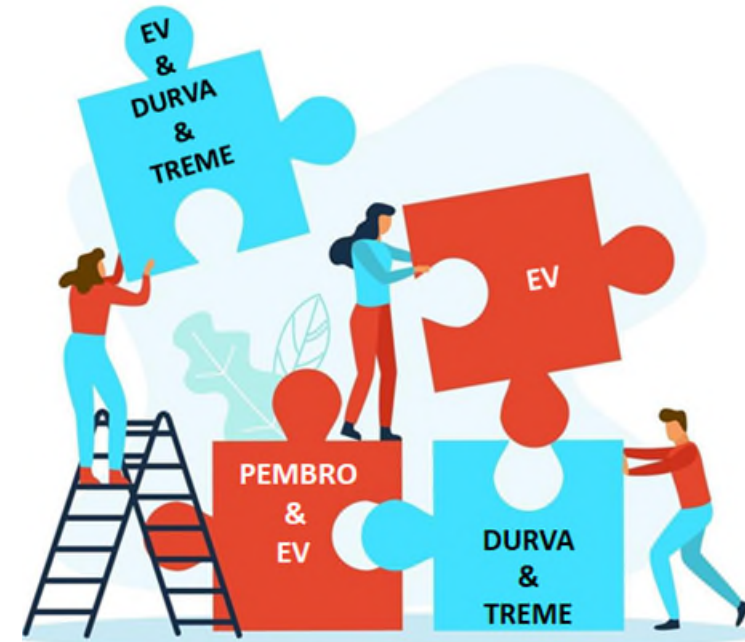


BUILDING UPON PAST KNOWLEDGE

- ✓ We know Durvalumab-Tremelimumab combo is Safe & Effective in Cisplatin Ineligible
- ✓ EV 103 coh H confirms Enfortumab Vedotin is also safe and effective in this population
- ✓ Durvalumab Adds to Tremelimumab
- ✓ Enfortumab Vedotin adds to PD-1 Therapy



Let's Study a Triple Combination of
Durvalumab/Tremelimumab/Enfortumab Vedotin
in the Neoadjuvant setting

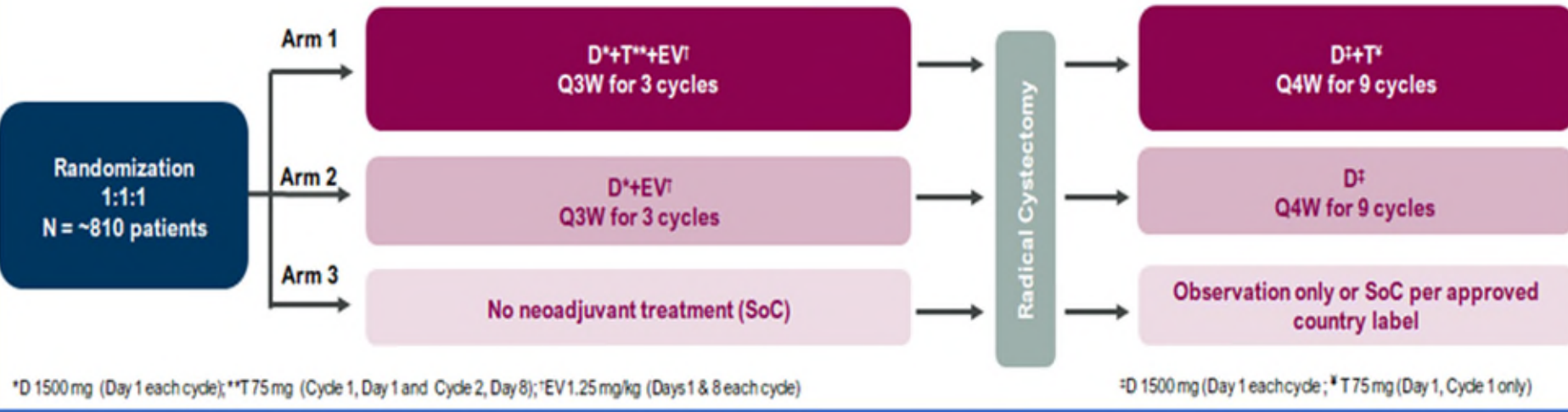


Phase 3 Study of Durvalumab (D) + Tremelimumab (T) + Enfortumab Vedotin (EV) or D + EV In Neoadjuvant Cisplatin-Ineligible Muscle-Invasive Bladder Cancer (VOLGA)

PHASE 3 RANDOMIZED TRIAL

NEOADJUVANT TREATMENT

ADJUVANT THERAPY/ OBSERVATION



Primary Endpoints

- * Pathologic complete response
- * Event-free survival (EFS)

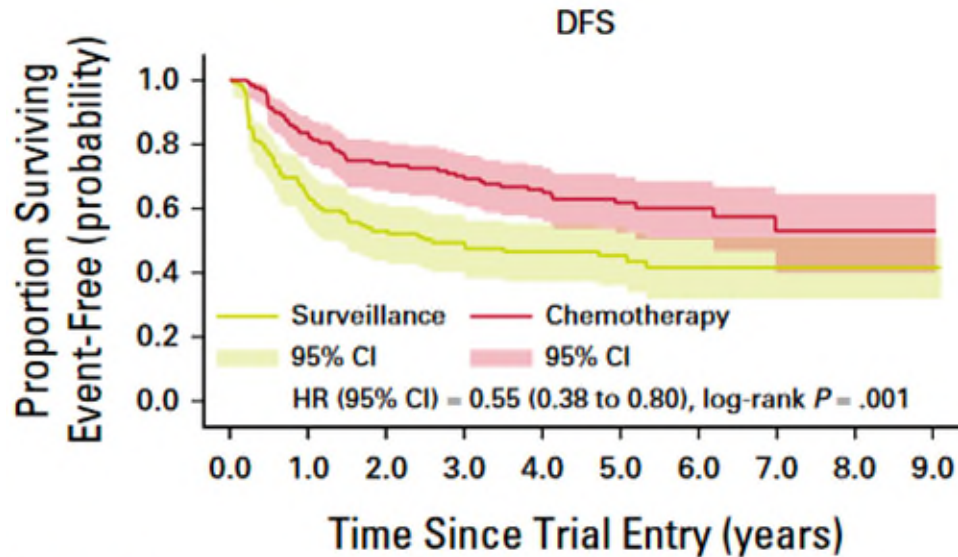
Secondary Endpoints

- * OS, DSS, QOL
- * Pathologic downstaging to <pT2N0M0
- * Safety / Tolerability



Adjuvant Chemotherapy After Nephroureterectomy
for Upper Tract Urothelial Cancer:
Final Results of the POUT Trial

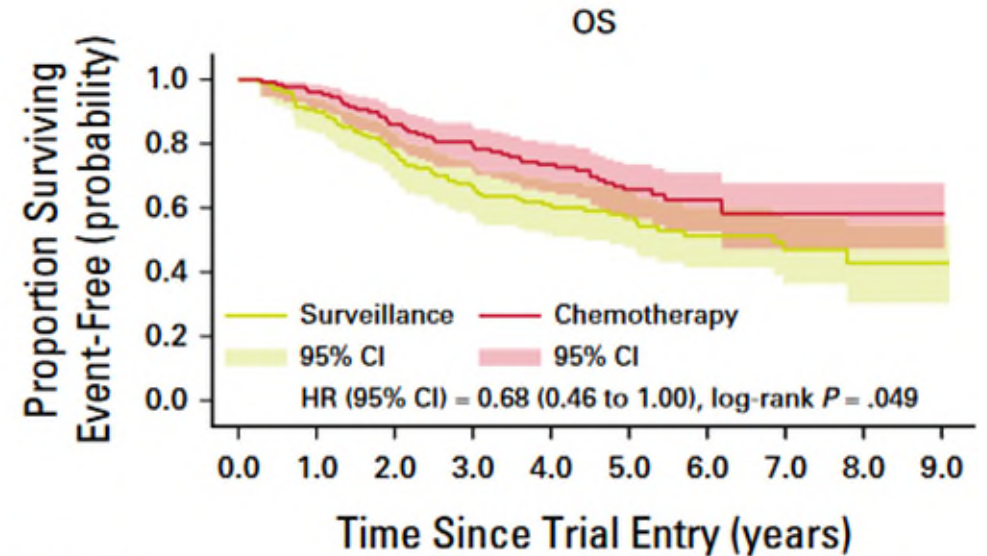
Brittle et al, JCO 2024



No. at risk:

Surveillance	129	74	59	52	47	29	18	12	4	1
Chemotherapy	131	107	93	85	75	53	29	12	6	1

5-yr DFS **62%** Chemo vs **45%** Surveillance
HR = 0.55 (95% CI, 0.38 to 0.80, $P = .001$)



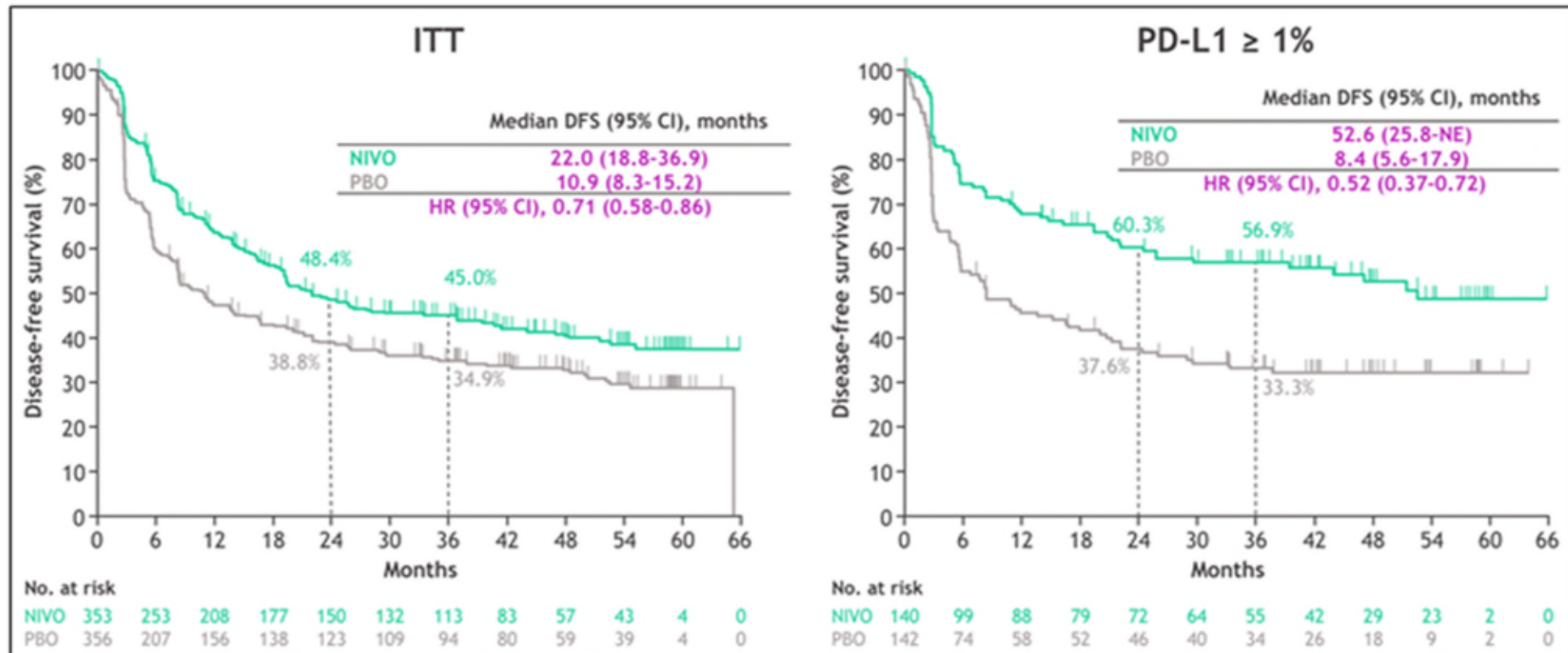
No. at risk:

Surveillance	129	114	97	82	72	46	31	19	7	2
Chemotherapy	131	124	111	103	92	62	35	15	6	1

5-yr OS **66%** Chemo vs **57%** Surveillance
HR = 0.68 (95% CI, 0.46 to 1.00, $P = .049$)

Adjuvant Nivolumab versus Placebo in Muscle-Invasive Urothelial Carcinoma

Bajorin et al, June 3, 2021



AMBASSADOR: Phase 3 Randomized Adjuvant Study of Pembrolizumab in Muscle-Invasive and Locally Advanced Urothelial Carcinoma (MIUC) vs Observation

Key Eligibility

- Muscle-invasive urothelial carcinoma: bladder, urethra, renal pelvis, ureter
- Post-radical surgery (cystectomy, nephrectomy, nephroureterectomy, or ureterectomy) ≥ 4 but ≤ 16 weeks
- Post-neoadjuvant chemotherapy and \geq pT2 and/or N+/ $+$ margins
OR
- cisplatin-ineligible or refusing and \geq pT3 and/or pN+/ $+$ margins

Stratify

- PD-L1 status*
- Neoadjuvant chemotherapy yes/no
- Pathologic stage:
 - pT2/3/4aN0
 - pT4aN0
 - pT4bNx/N1-3
 - +surgical margins

N=739

R
1:1

Pembrolizumab
200 mg q3W
1 year (18 cycles)

Observation

Dual Primary Endpoints

- Disease-free survival
- Overall survival

Key Secondary Endpoints

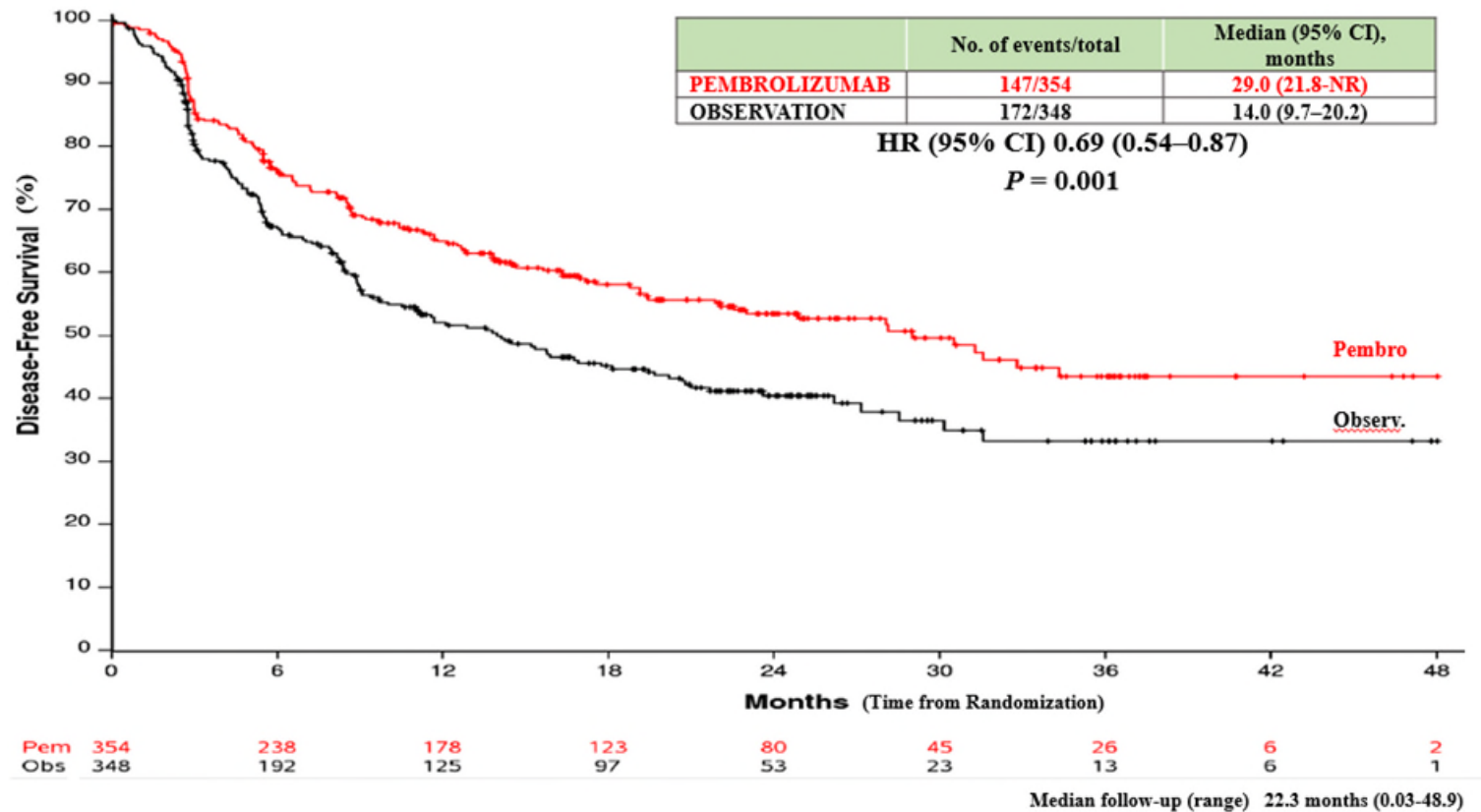
- DFS/OS PD-L1 +/-
- Safety

Correlative Endpoints

- DFS/OS ctDNA +/-
- DFS/OS immune gene signatures
- DFS/OS tumor molecular subtype
- DFS/OS TCR clonality
- QOL

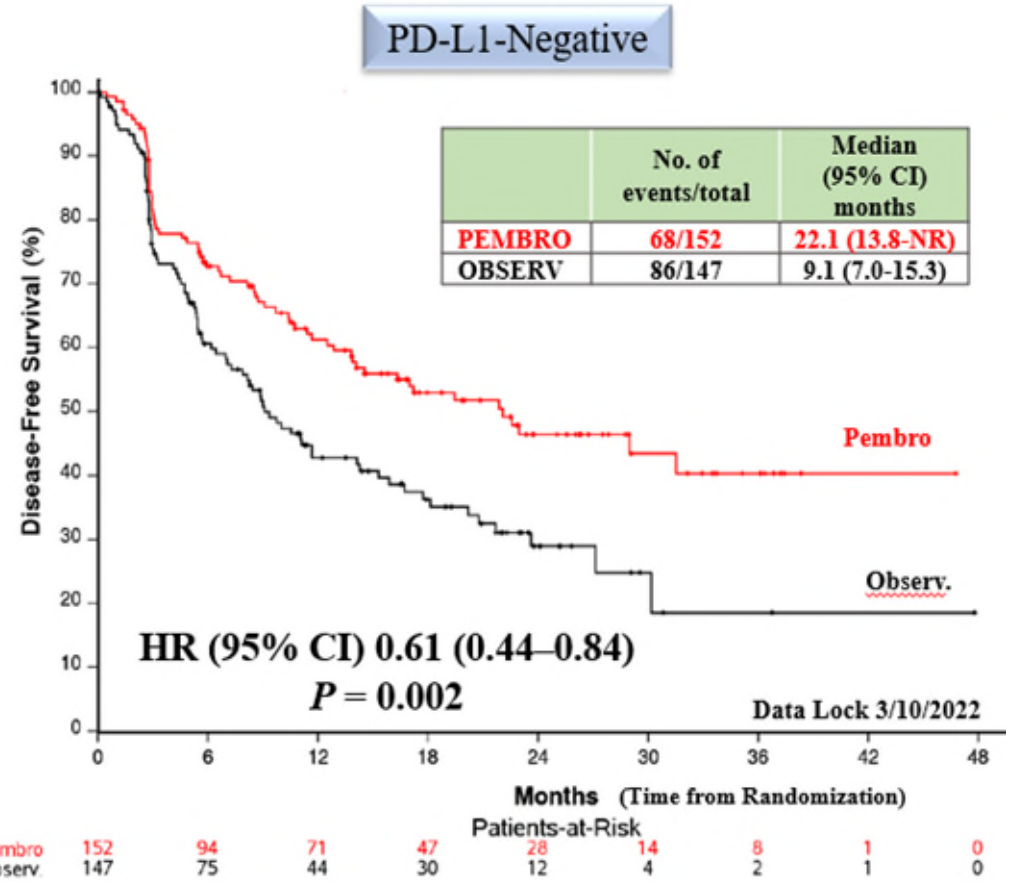
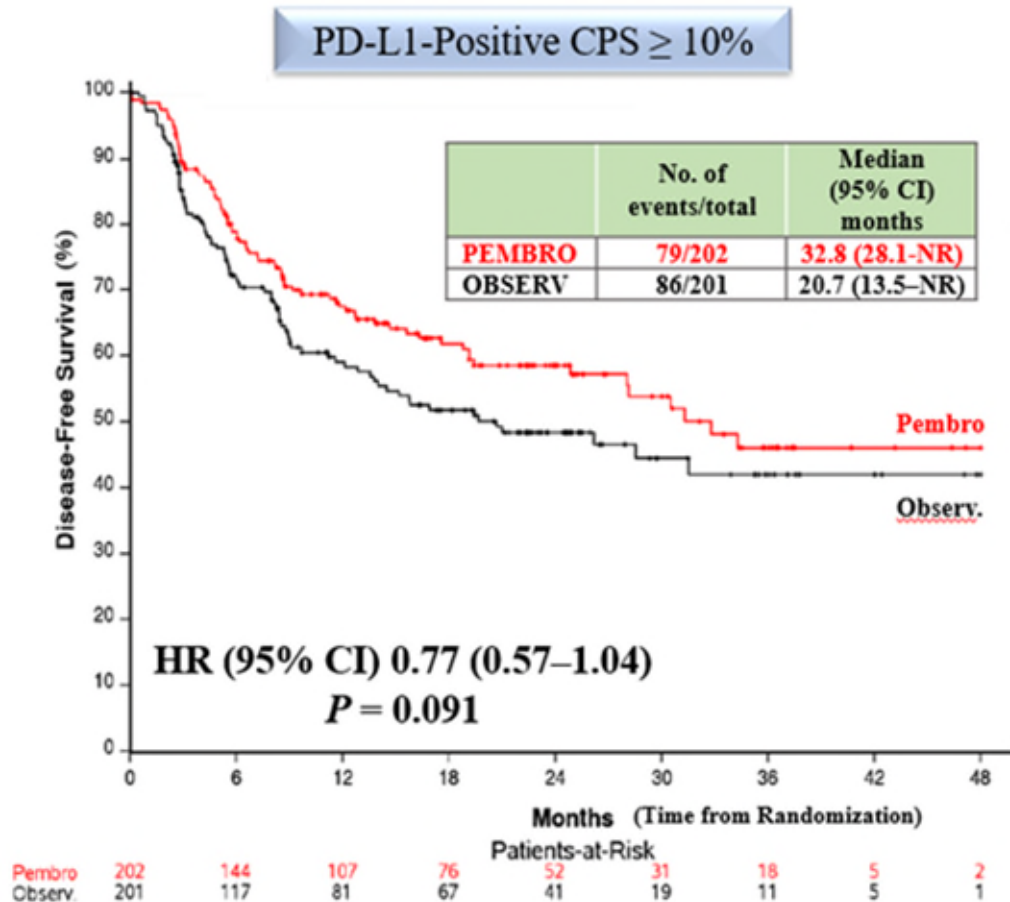
AMBASSADOR: Adjuvant Pembrolizumab in Muscle-Invasive and Locally Advanced Urothelial Carcinoma (MIUC) vs Observation

DISEASE FREE SURVIVAL



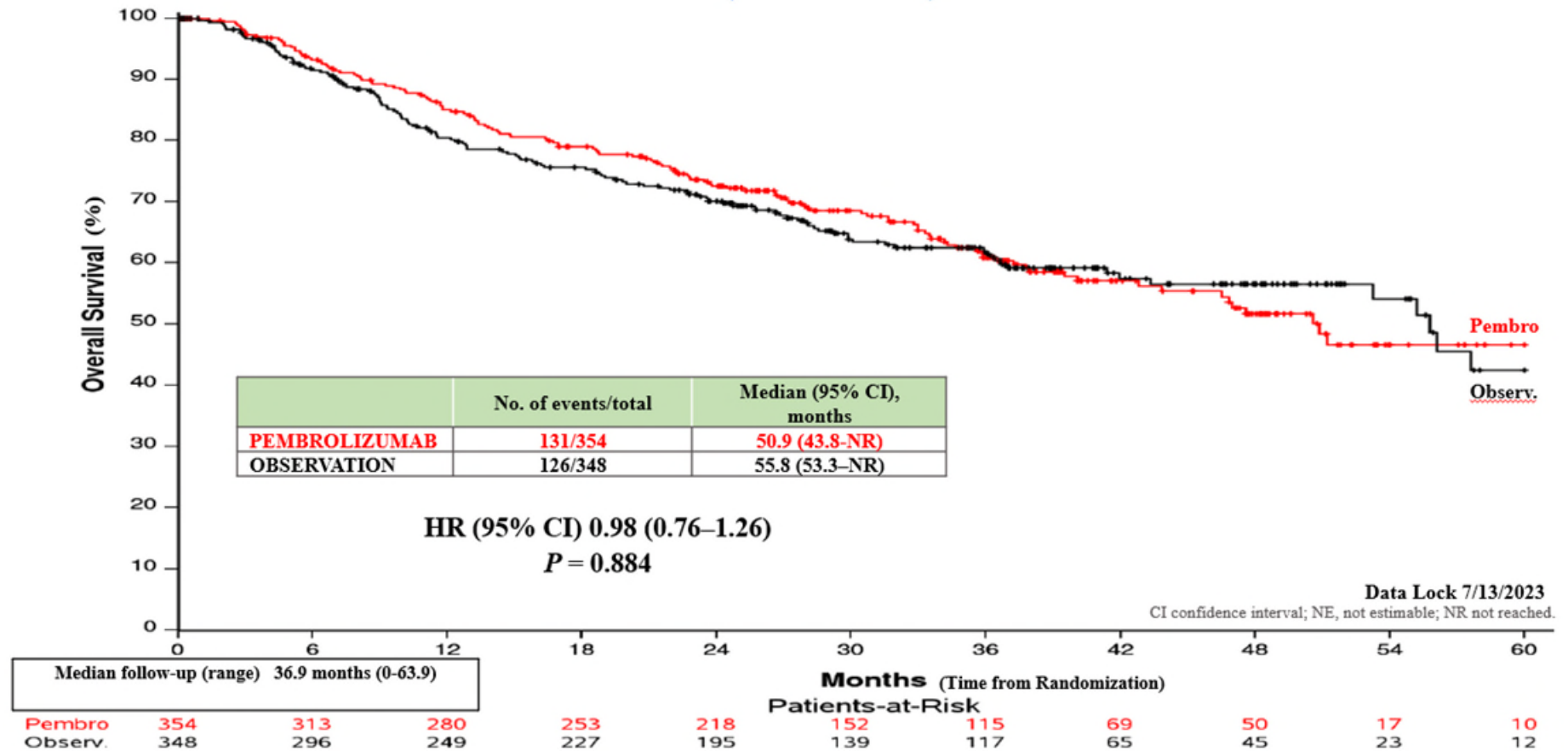
AMBASSADOR: Adjuvant Pembrolizumab in Muscle-Invasive and Locally Advanced Urothelial Carcinoma (MIUC) vs Observation

DISEASE FREE SURVIVAL PER PD-L1 STATUS



AMBASSADOR: Adjuvant Pembrolizumab in Muscle-Invasive and Locally Advanced Urothelial Carcinoma (MIUC) vs Observation

OVERALL SURVIVAL



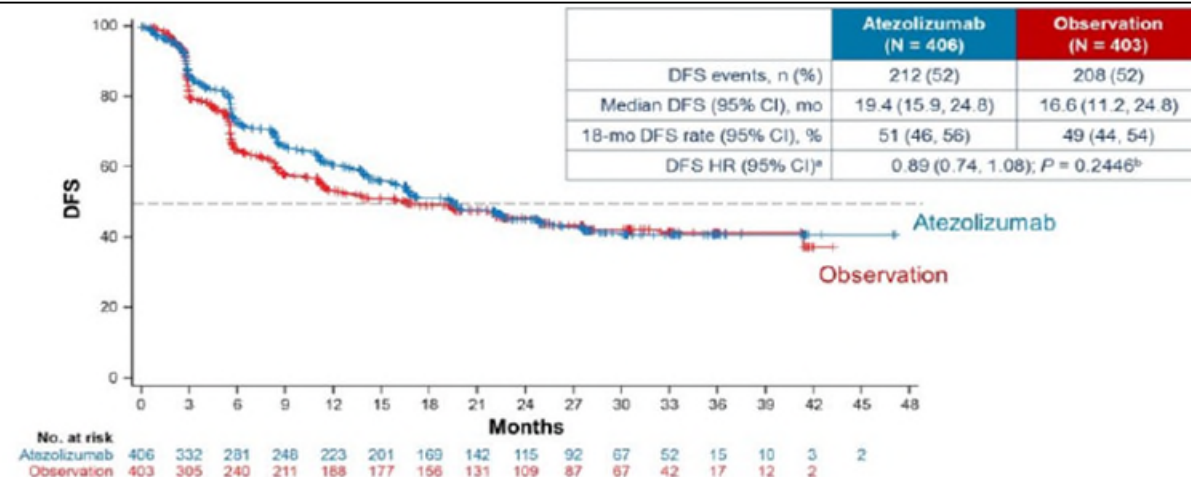
ADJUVANT CLINICAL TRIAL

Lessons from the past

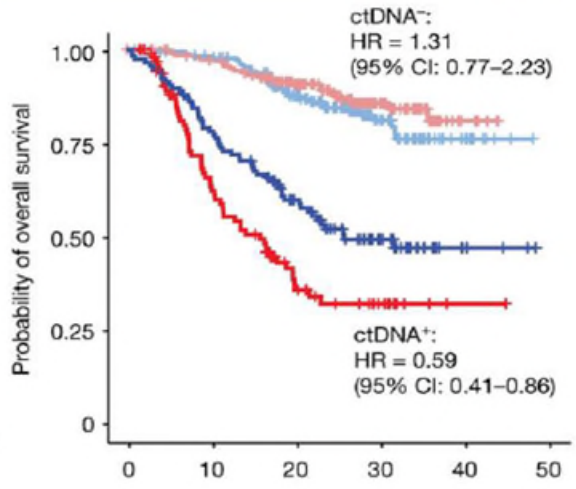
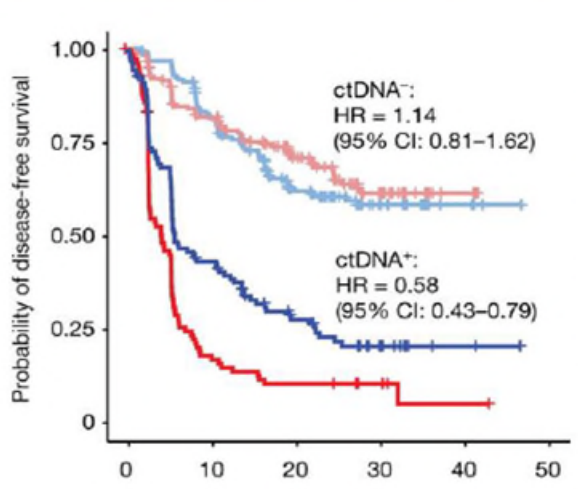
Adjuvant atezolizumab versus observation in muscle-invasive urothelial carcinoma (IMvigoro10): a multicentre, open-label, randomised, phase 3 trial

Bellmunt J, Hussain M, Gschwend J, Albers P, Oudard S, Castellano D, Deneschmand S, Grivas P, Drakaki A, O'Donnell P, Rosenberg J, Geynisman D, Petrylak D, Hoffman-Censits J, Zakharia Y, Van der Heijen M, Stendberg C, Davarpanah N, Powles T, IMvigoro10 Study group

Lancet Oncol. 2021



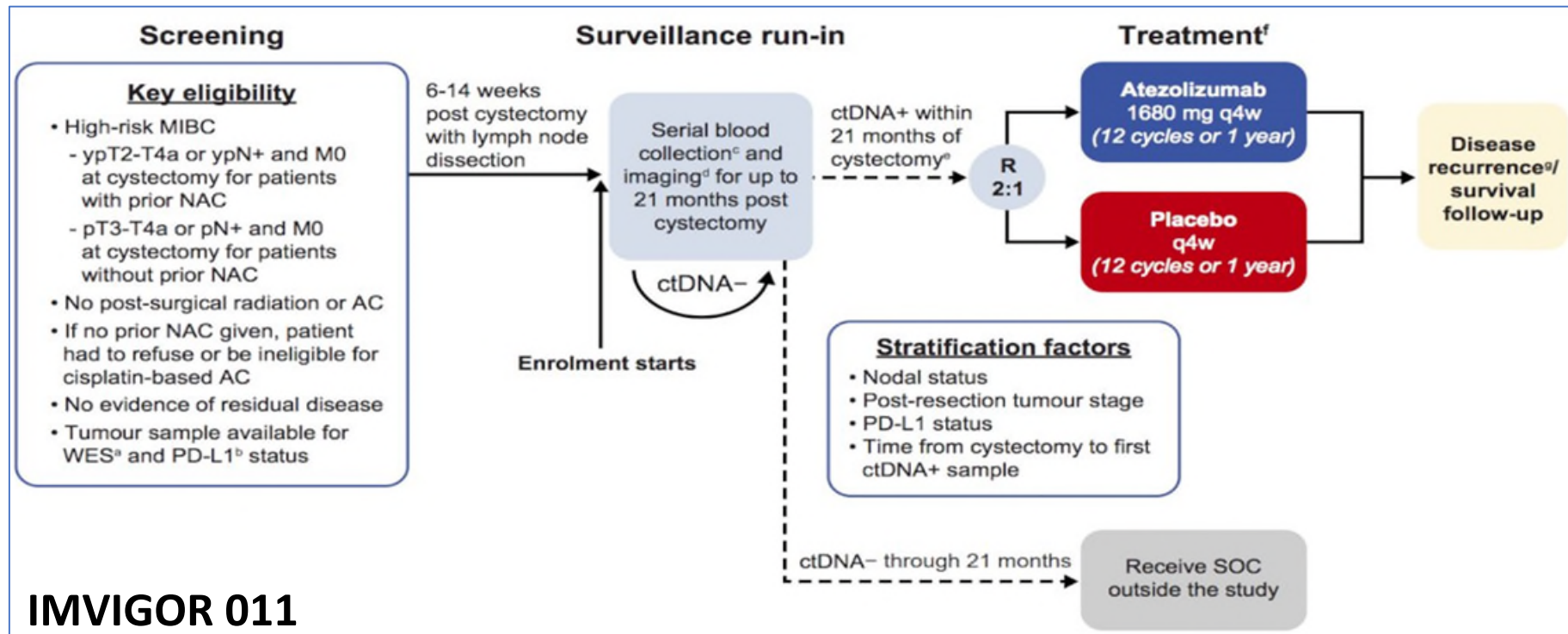
Atezolizumab was NOT associated with DFS



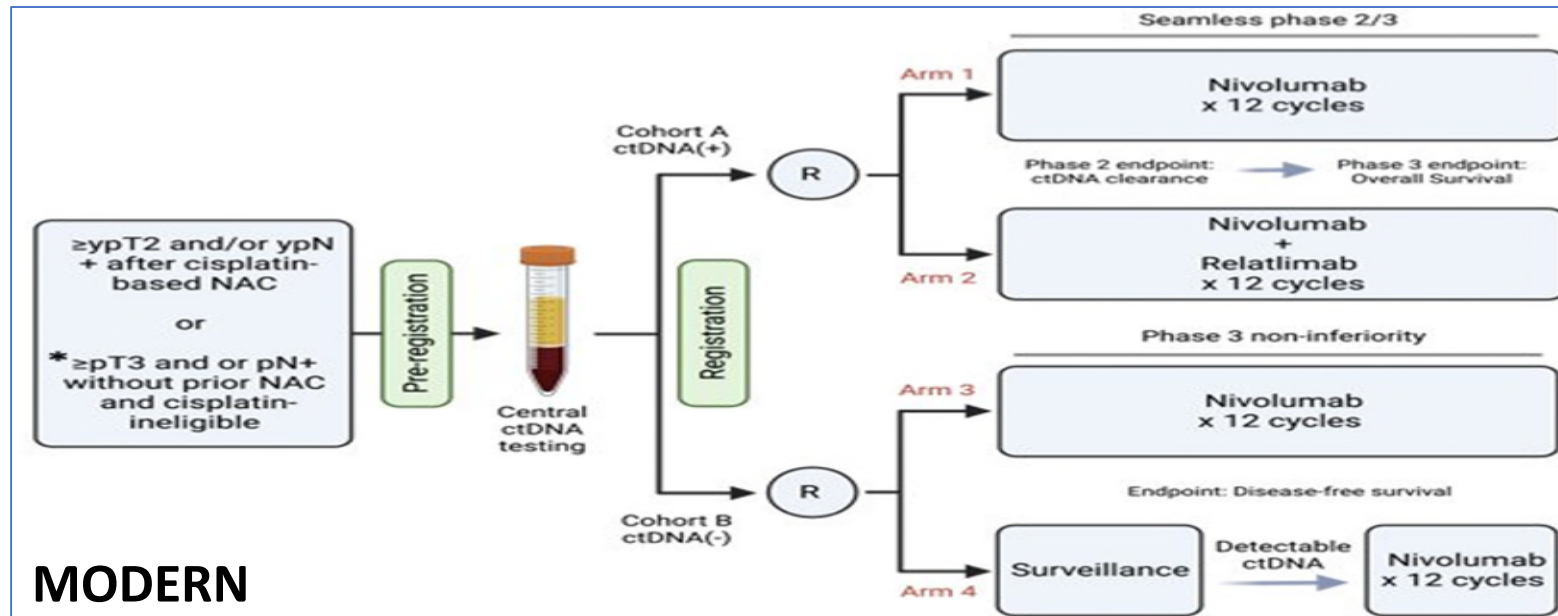
	DFS (mo)	OS(mo)
ct DNA+		
Atezolizumab	5.9	25.8
Observation	4.4	15.8

No. at risk		Time (months)					
		0	10	20	30	40	50
Atezolizumab	ctDNA ⁻	184	144	85	44	5	0
	ctDNA ⁺	116	48	25	13	2	0
Observation	ctDNA ⁻	183	140	90	46	6	0
	ctDNA ⁺	98	17	10	5	1	0

ADJUVANT MAKING HISTORY



IMVIGOR 011



MODERN

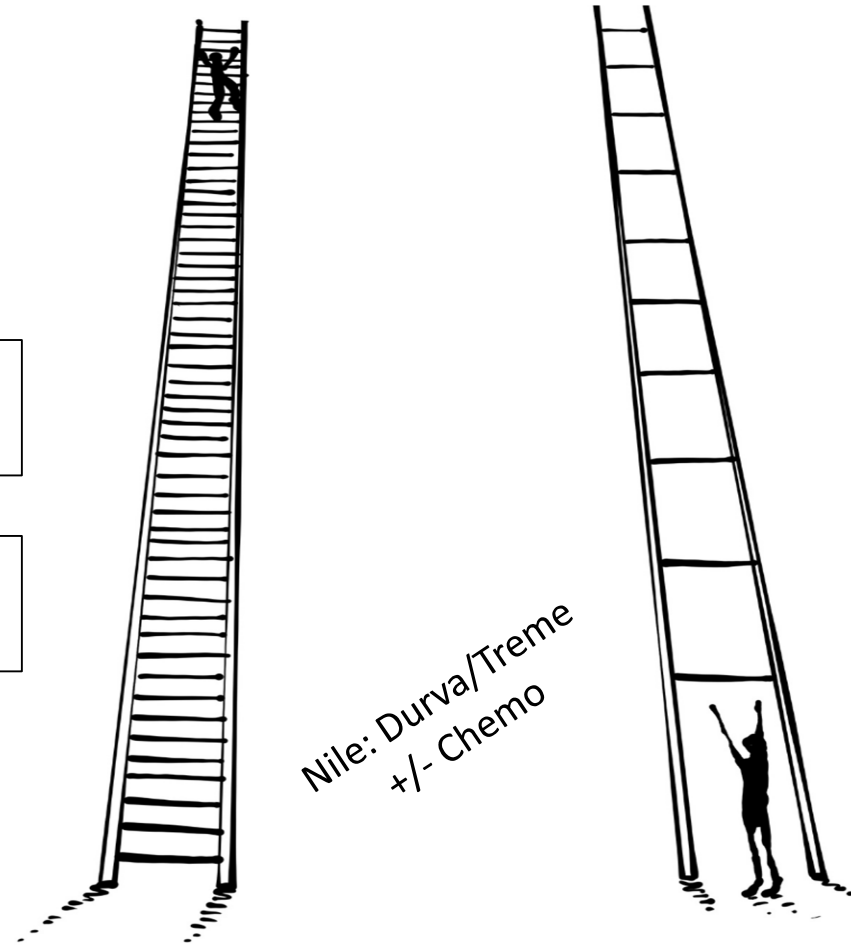
Treating Metastatic Bladder Cancer a 10 year journey

The importance of small steps



EV 302 : Enfortumab Vedotin &
Pembro vs cis/carbo & gem

Checkmate 901 : Cis/Gem vs
Nivolumab & Cis/Gem



Merck 361 : Pembrolizumab & Chemo
vs Pembro vs Chemo

IMVIGOR 130: Atezolizumab & Chemo
vs Chemo vs Atezo

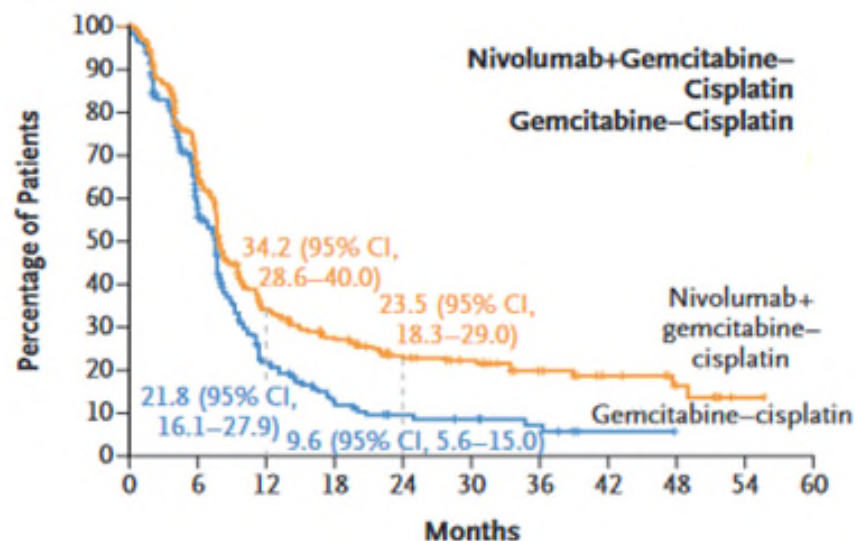
DANUBE: Durvalumab & Tremelimumab
vs Durvalumab vs Chemo

Failure is not the opposite of
success; it's part of success.

ORIGINAL ARTICLE

Nivolumab plus Gemcitabine–Cisplatin in Advanced Urothelial Carcinoma

Progression-free Survival



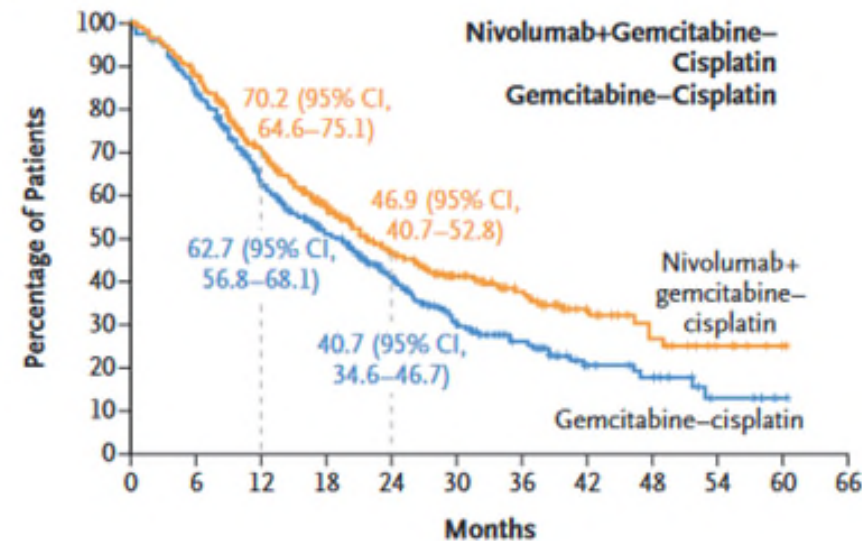
No. at Risk

Nivolumab+gemcitabine–cisplatin	304	179	82	57	41	31	19	11	6	1	0
Gemcitabine–cisplatin	304	119	35	17	10	8	5	1	0	0	0

No. of Events/ No. of Patients	Median Progression-free Survival (95% CI) <i>mo</i>
211/304	7.9 (7.6–9.5)
191/304	7.6 (6.1–7.8)

Hazard ratio for disease progression or death, 0.72 (95% CI, 0.59–0.88)
P=0.001

Overall Survival



No. at Risk

Nivolumab+gemcitabine–cisplatin	304	264	196	142	97	69	48	25	15	7	2	0
Gemcitabine–cisplatin	304	242	166	122	82	49	33	17	13	4	1	0

No. of Events/ No. of Patients	Median Overall Survival (95% CI) <i>mo</i>
172/304	21.7 (18.6–26.4)
193/304	18.9 (14.7–22.4)

Hazard ratio for death, 0.78 (95% CI, 0.63–0.96)
P=0.02

Big Step Forward!



EV-302 A Phase III study of Enfortumab Vedotin & Pembrolizumab vs Gemcitabine + Cisplatin / Carboplatin

Treatment Naïve
Metastatic Urothelial
Cancer

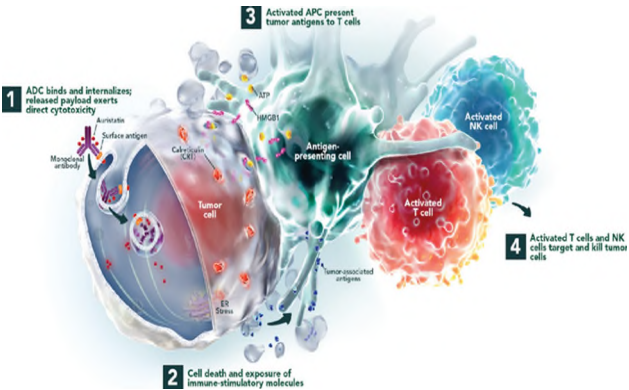
- Cisplatin Eligible/Ineligible
- PDL1 +/-

Randomization 1:1
1095 patients

Arm A
Enfortumab vedotin (Days 1 and 8)
+ Pembro (Day 1)

Arm B
Gemcitabine (Days 1 and 8)
+ Cisplatin/Carboplatin (Day 1)

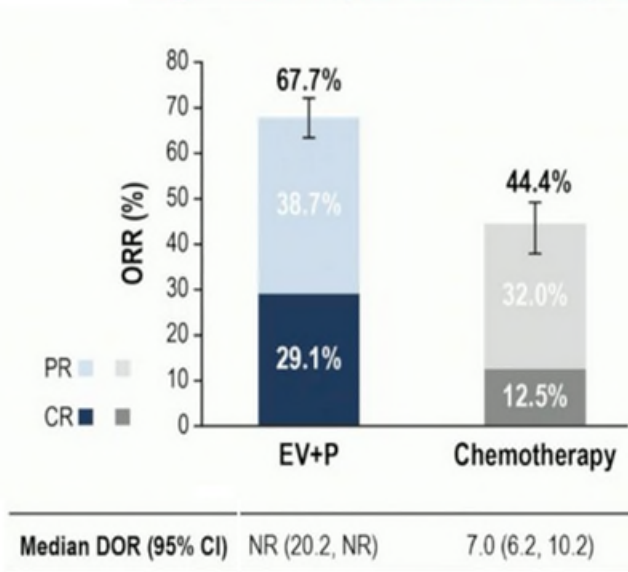
Practice Changing



EV-302 A Phase III study of Enfortumab Vedotin & Pembrolizumab vs Gemcitabine + Cisplatin / Carboplatin

Confirmed Overall Response per BICR

Significant improvement in objective response rate was observed with EV+P

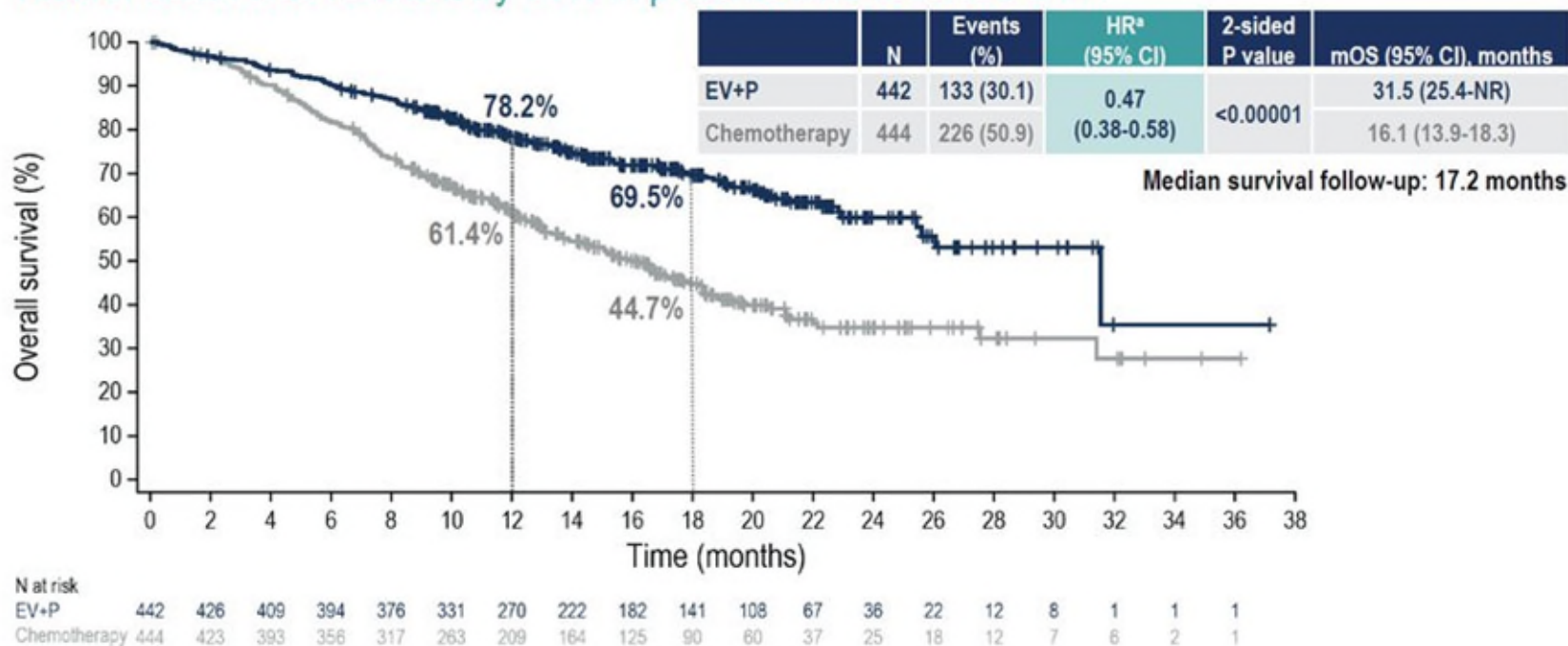


	EV+P (N=437)	Chemotherapy (N=441)
Confirmed ORR, n (%) (95% CI)	296 (67.7) (63.1-72.1)	196 (44.4) (39.7-49.2)
2-sided P value	<0.00001	
Best overall response ^a , n (%)		
Complete response	127 (29.1)	55 (12.5)
Partial response	169 (38.7)	141 (32.0)
Stable disease	82 (18.8)	149 (33.8)
Progressive disease	38 (8.7)	60 (13.6)
Not evaluable/No assessment ^b	21 (4.8)	36 (8.2)

EV-302 A Phase III study of Enfortumab Vedotin & Pembrolizumab vs Gemcitabine + Cisplatin / Carboplatin

Overall Survival

Risk of death was reduced by 53% in patients who received EV+P



Data cutoff: 08 Aug 2023



Powles et al.

OS at 12 and 18 months was estimated using Kaplan-Meier method
 mOS, median overall survival; NR, not reached
^aCalculated using stratified Cox proportional hazards model. A hazard ratio <1 favors the EV+P arm

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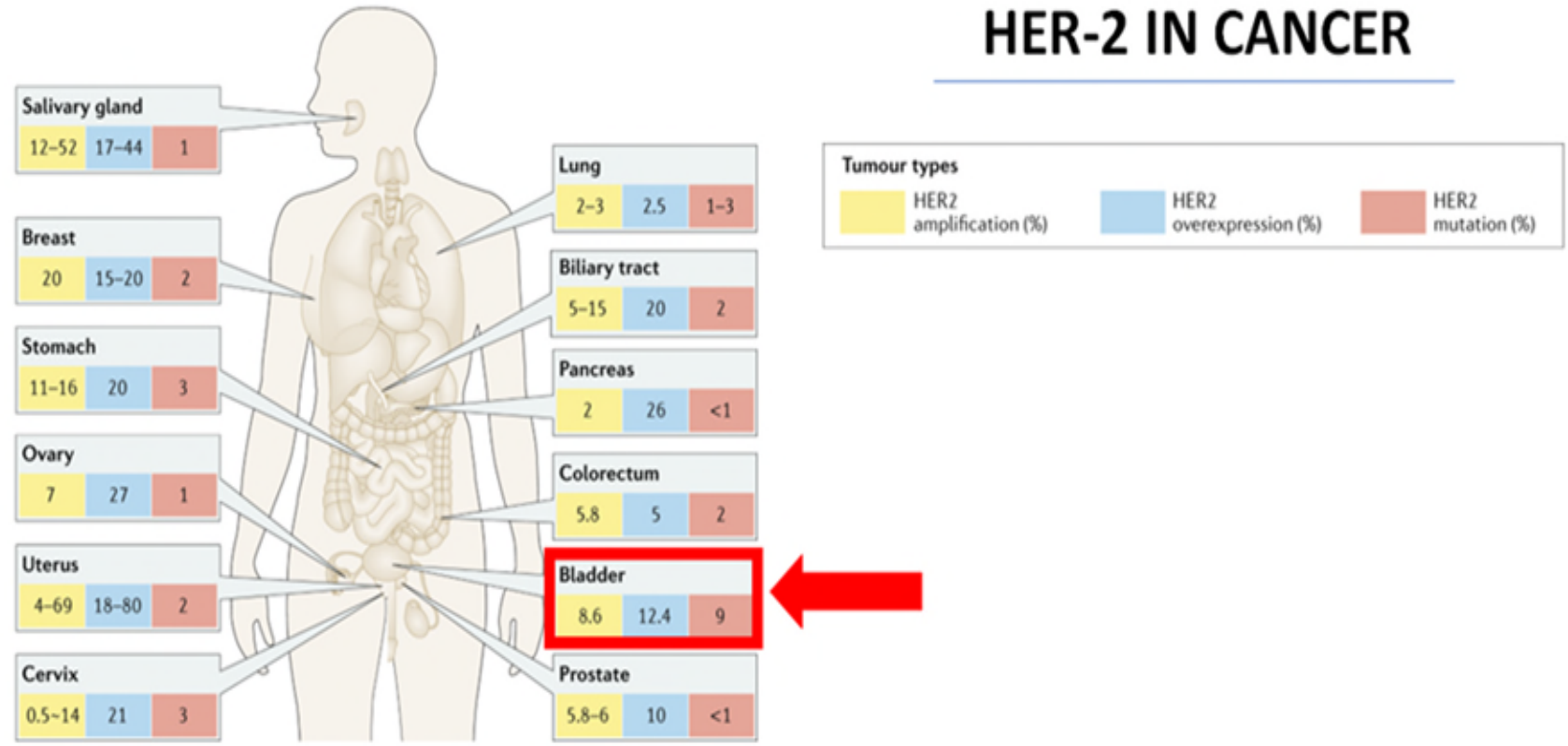


25 years of Herceptin: A groundbreaking advancement in breast cancer treatment

This year marks the 25th anniversary of the FDA approval of the first gene-based drug for cancer, developed by UCLA's Dr. Dennis Slamon



HER-2 IN CANCER



Phase 2 Study Evaluating the Efficacy & Safety of Disitamab Vedotin in HER-2 expressing Urothelial Ca

Koshkin V, Powles T, Iyer G, Loriot Y, Drakaki A, Duran I, De Santis M, Retz M, Jain R, Chan S, Ichimaru M, Galsky M



Phase 2 Study Evaluating efficacy and safety of Disitamab Vedotin with or without Pembrolizumab in patients with Her2 Urothelial Cancer

Matsubara N, Powles T, Rosenberg J, Koshkin V, Brown J, Aragon-Ching J, Drakaki A, O'Donnell P, Yu E, Campbella M, Krieger L, Chan S, Sokolowski K, Galsky M.

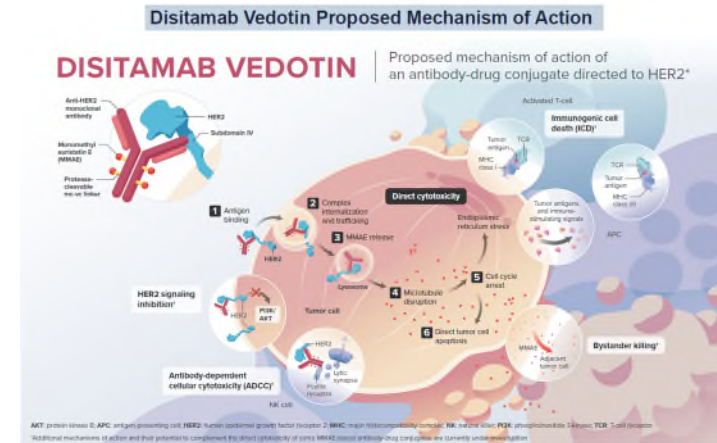
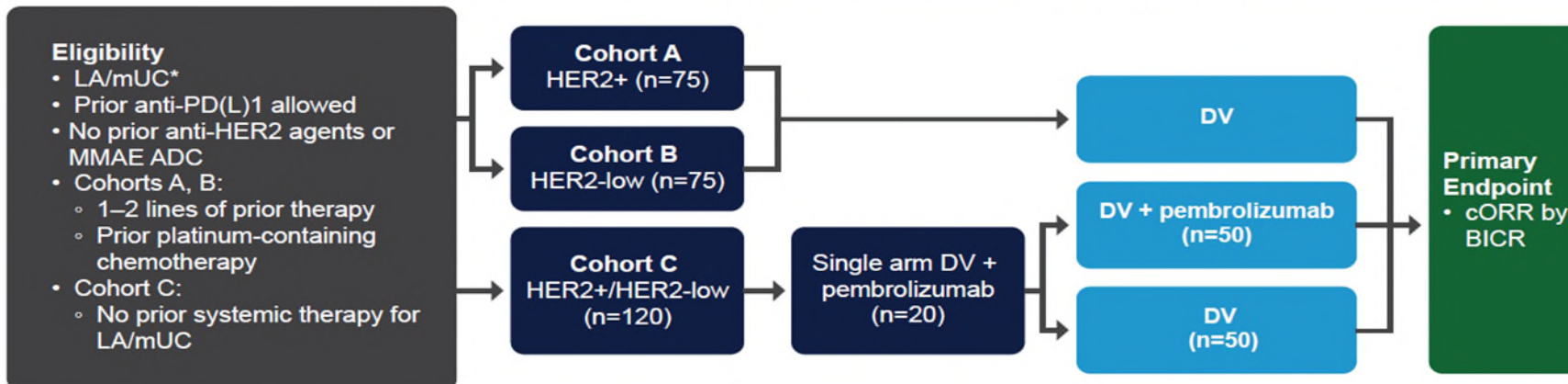


Japan Society of Clinical Oncology

- ✓ HER-2 overexpression correlates with poor outcome in UC
- ✓ No HER-2 directed tx approved for UC in USA
- ✓ Phase 1B/II DV in HER2 expressing UC : ORR of 51 %
- ✓ DV has breakthrough designation in China for gastric and UC
- ✓ DV & Pembro in HER2 untreated UC

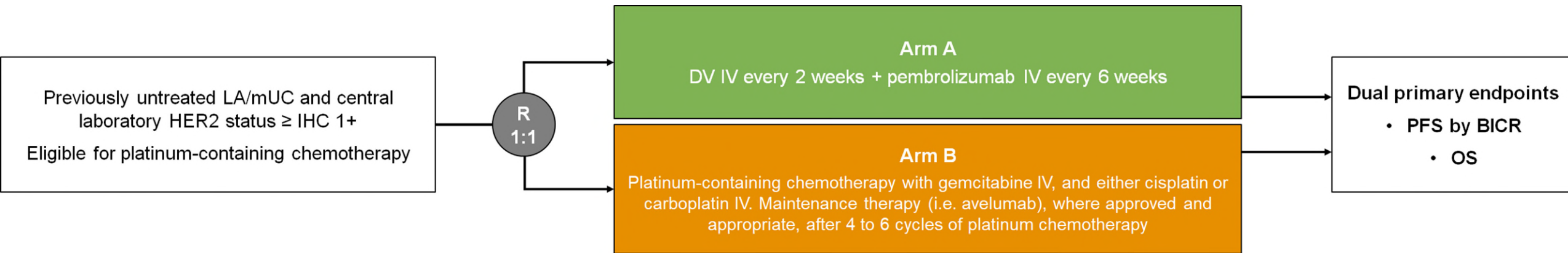
Study Design

PHASE 2 • OPEN-LABEL • MULTICENTER



What's Next

Phase 3 open-label, randomized, controlled study of disitamab vedotin with pembrolizumab versus chemotherapy in untreated locally advanced or metastatic urothelial carcinoma that expresses HER2 (DV-001; Trial in Progress).

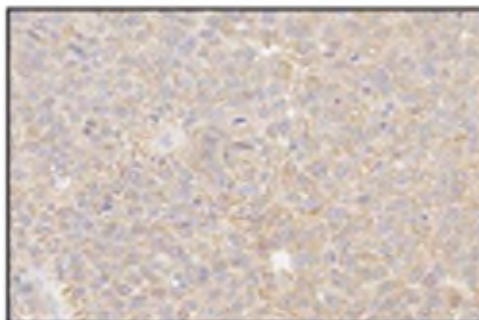


Enfortumab Vedotin Antibody-Drug Conjugate Targeting Nectin-4 Is a Highly Potent Therapeutic Agent in Multiple Preclinical Cancer Models

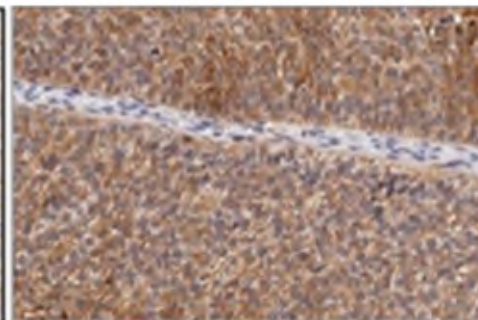
Challita-Eid et al, Cancer Res 2016

Cancer type	Overall positive (%)	H-Score *			
		Strong	Moderate	Low	Negative
Bladder (N = 524)	83	162 (31)	154 (29)	118 (23)	90 (17)
Breast (N = 654)	78	174 (27)	168 (26)	170 (26)	142 (22)
Pancreatic (N = 164)	71	21 (13)	39 (24)	56 (34)	48 (29)
Lung (N = 618)	55	46 (7)	121 (20)	173 (28)	278 (45)
Ovarian (N = 118)	57	0	21 (18)	46 (39)	51 (43)
Head & Neck (N = 135)	59	3 (2)	22 (16)	54 (40)	56 (41)
Esophageal (N = 181)	55	7 (4)	37 (20)	55 (30)	82 (45)
Total (N = 2,394)	69	413 (17)	562 (24)	672 (28)	747 (31)

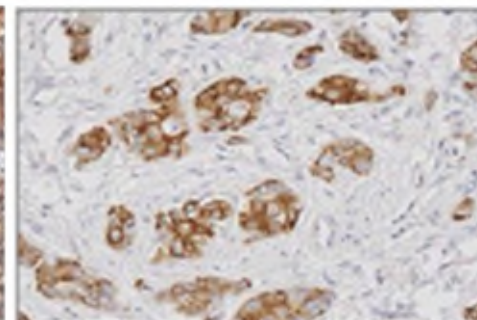
* H-Score based on intensity of staining: 200-300 100-199 15-99 0-14



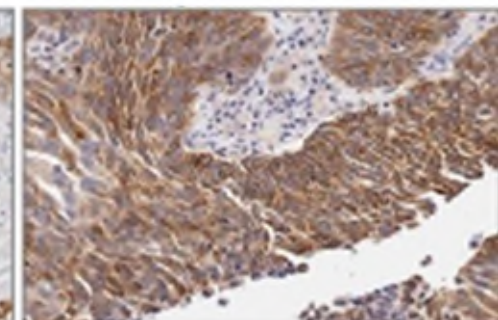
Breast, H-score =110



Bladder, H-score= 250



Pancreatic, H-score=300



Lung, H-score= 250

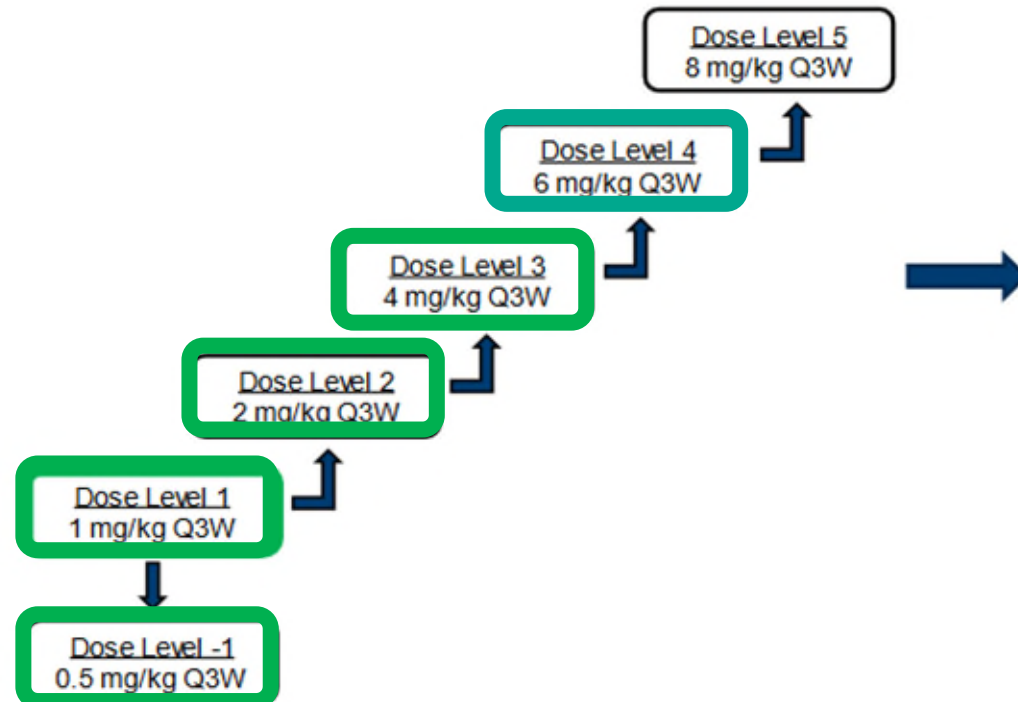
A Study of ADRX-0706 in Select Advanced Solid Tumors

ClinicalTrials.gov NCT06036121

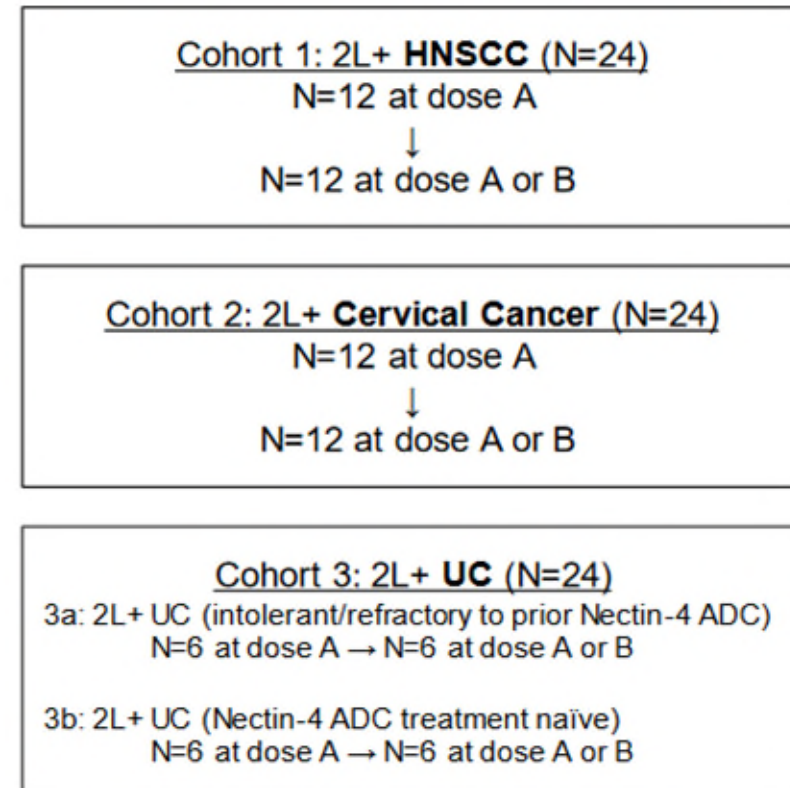
- Part A – **Dose Escalation** in patients with histologically confirmed select solid tumors
 - UC, HNSCC, breast, cervical, ovarian, NSCLC, pancreatic
- Part B - **Dose Expansion** in three disease-specific cohorts

Phase 1a: BOIN Dose Escalation (N= 30 to 42)

Select advanced solid tumors (urothelial, head and neck, breast, cervical, ovarian, non small cell lung, and pancreatic cancers)

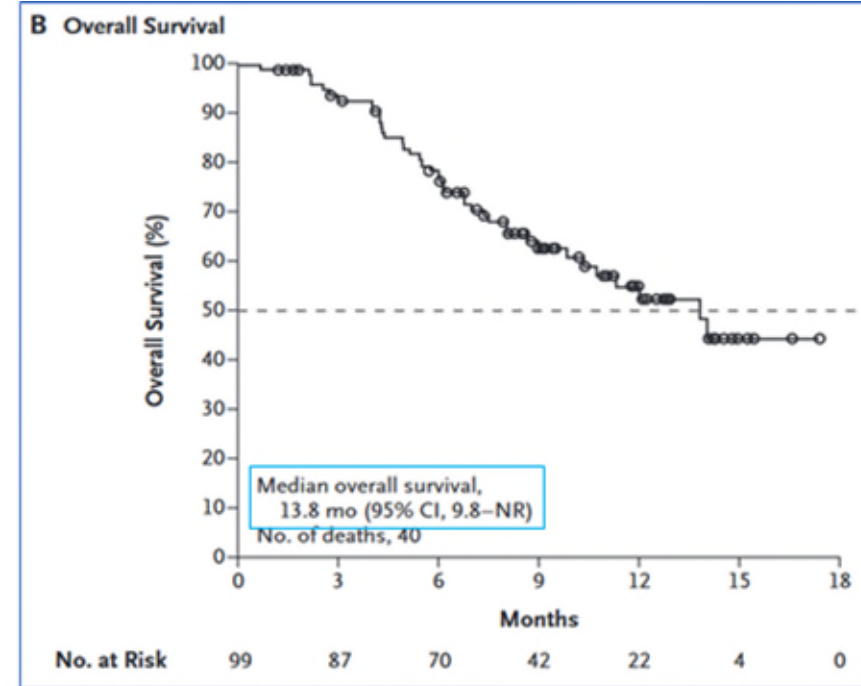
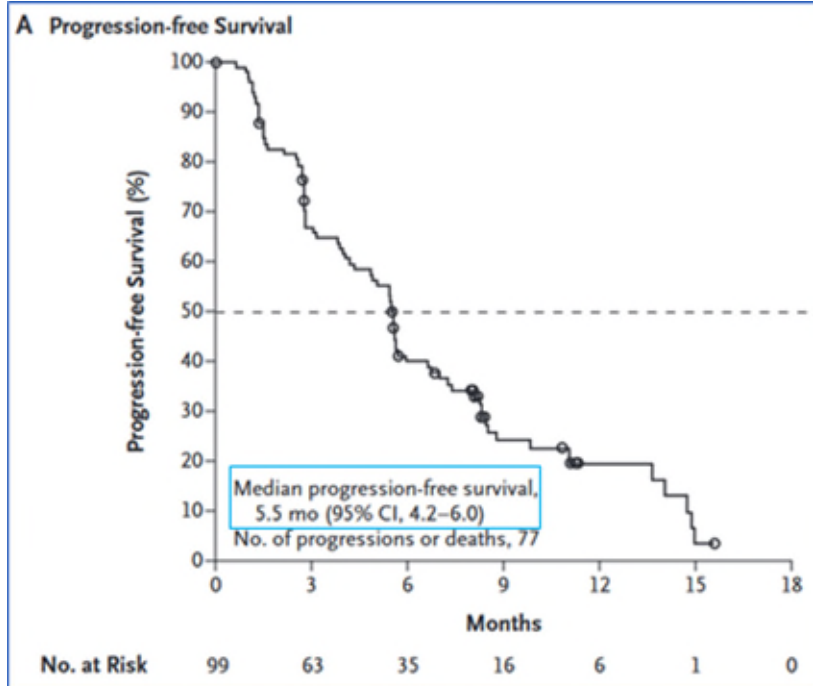


Phase 1b: Dose Expansion (N = 72)



Erdafitinib in Locally Advanced or Metastatic Urothelial Carcinoma

- *Activating mutations common (~86%) in low grade, early stage bladder tumors
- *TCGA: ~12% with mutations in MIBC
- *FGFR 3 mutations/fusions(~21%) in advanced UC, UTUC - high-grade, invasive
- *ERDAFITINIB: oral, potent pan FGFR inhibitor
 - 99 pts / 40% RR



LOXO-FG3-22001 : AN OPEN-LABEL, MULTICENTER STUDY OF LOXO-435 (LY3866288) IN ADVANCED SOLID TUMOR MALIGNANCIES WITH FGFR3 ALTERATIONS

STUDY DESIGN

PHASE 1A: DOSE ESCALATION

Cohort A: All Solid Tumors

LOXO-435 monotherapy in patients with advanced solid tumors with an alteration in *FGFR3* or its ligands deemed as a clinically or potentially clinically relevant alteration

Single Patient Acceleration

mTPI-2
Dose Escalation

Food Effect
Substudy¹

Moderate Renal
Insufficiency
Substudy²

GU ONCOLOGY PROGRAM: Meet the Team



John Shen, MD



Nicholaos Palaskas, MD, PhD

Alexandra Drakaki, MD, PhD



Lidia Lopez, NP



Adam Singer, MD, PhD



John Lee, MD, PhD

Regulatory
Soheila Abbassi
Michelle Poblete
Sarah Rosales

Coordinators(SM/WW)

Whitney Vuong
Sandy Hernandez
Rosa Vazquez
Chris Hannigan
Cynthia Avina
Annabel Liu

Coordinators Satellites

Glaucia Vazquez
Margarita Torres
Jacob Medina
Maria Mejia
Mashal Chhotani
Yuritzi Palma

Research Assistants

Parker Sundeen

Data Managers

Jaelyn Abad
Sam Xiong
Lucia Verdugo



Sometimes there is only one chance for
CURE

Let's Make a Change Together



Thank you