

Inside the Issue: Optimizing the Management of Metastatic Urothelial Bladder Cancer

A CME/MOC-Accredited Live Webinar

Thursday, June 29, 2023

5:00 PM – 6:00 PM ET

Faculty

Terence Friedlander, MD

Petros Grivas, MD, PhD

Moderator

Neil Love, MD

Faculty



Terence Friedlander, MD

Professor of Medicine and Robert and Virginia
O'Reilly Family Endowed Chair
Chief, Division of Hematology/Oncology
Zuckerberg San Francisco General Hospital
Helen Diller Family Comprehensive Cancer Center
University of California, San Francisco
San Francisco, California



Moderator

Neil Love, MD
Research To Practice



Petros Grivas, MD, PhD

Professor, Department of Medicine
Division of Oncology
Clinical Director, Genitourinary Cancers Program
University of Washington
Professor, Clinical Research Division
Fred Hutchinson Cancer Center
Seattle, Washington

Commercial Support

This activity is supported by educational grants from Astellas and Seagen Inc, Gilead Sciences Inc, and Merck.

Dr Love — Disclosures

Dr Love is president and CEO of Research To Practice. Research To Practice receives funds in the form of educational grants to develop CME activities from the following companies: AbbVie Inc, Adaptive Biotechnologies Corporation, ADC Therapeutics, Agios Pharmaceuticals Inc, Alexion Pharmaceuticals, Amgen Inc, Array BioPharma Inc, a subsidiary of Pfizer Inc, Astellas, AstraZeneca Pharmaceuticals LP, Aveo Pharmaceuticals, Bayer HealthCare Pharmaceuticals, BeiGene Ltd, BeyondSpring Pharmaceuticals Inc, Blueprint Medicines, Boehringer Ingelheim Pharmaceuticals Inc, Bristol Myers Squibb, Celgene Corporation, Clovis Oncology, Coherus BioSciences, CTI BioPharma Corp, Daiichi Sankyo Inc, Eisai Inc, Elevation Oncology Inc, EMD Serono Inc, Epizyme Inc, Exact Sciences Corporation, Exelixis Inc, Five Prime Therapeutics Inc, Foundation Medicine, G1 Therapeutics Inc, Genentech, a member of the Roche Group, Genmab US Inc, Gilead Sciences Inc, Grail Inc, GSK, Halozyme Inc, Helsinn Healthcare SA, ImmunoGen Inc, Incyte Corporation, Ipsen Biopharmaceuticals Inc, Janssen Biotech Inc, administered by Janssen Scientific Affairs LLC, Jazz Pharmaceuticals Inc, Karyopharm Therapeutics, Kite, A Gilead Company, Kronos Bio Inc, Lilly, Loxo Oncology Inc, a wholly owned subsidiary of Eli Lilly & Company, MEI Pharma Inc, Merck, Mersana Therapeutics Inc, Mirati Therapeutics Inc, Natera Inc, Novartis, Novartis Pharmaceuticals Corporation on behalf of Advanced Accelerator Applications, Novocure Inc, Oncopeptides, Pfizer Inc, Pharmacyclics LLC, an AbbVie Company, Puma Biotechnology Inc, Regeneron Pharmaceuticals Inc, Sanofi, Seagen Inc, Servier Pharmaceuticals LLC, SpringWorks Therapeutics Inc, Stemline Therapeutics Inc, Sumitomo Dainippon Pharma Oncology Inc, Taiho Oncology Inc, Takeda Pharmaceuticals USA Inc, TerSera Therapeutics LLC, Tesaro, A GSK Company, TG Therapeutics Inc, Turning Point Therapeutics Inc, Verastem Inc, and Zymeworks Inc.

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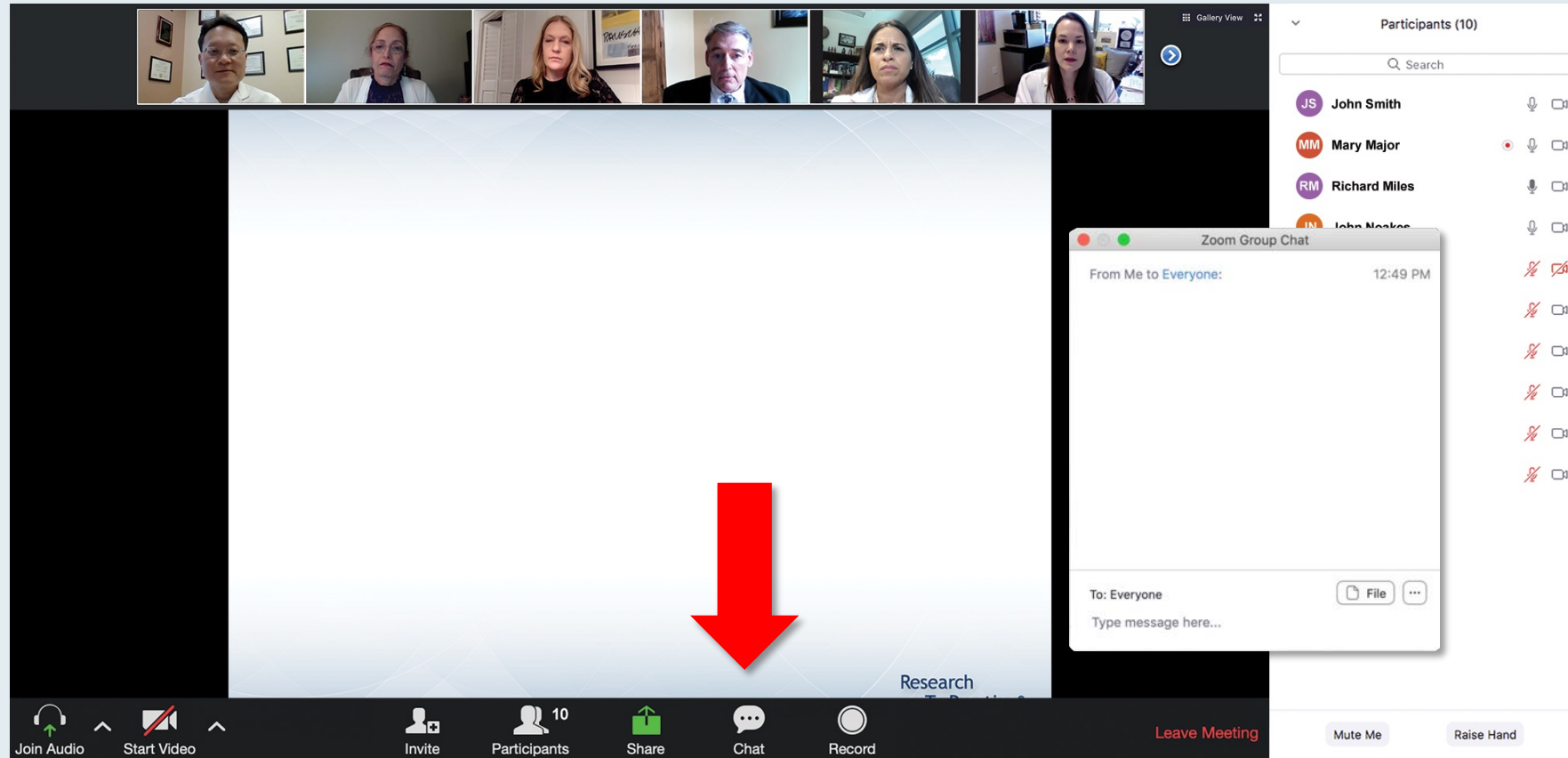
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Consulting Agreement	Merck
Contracted Research	Bristol Myers Squibb, Roche Laboratories Inc, Seagen Inc, Trishula Therapeutics Inc
Data and Safety Monitoring Board/Committee	AstraZeneca Pharmaceuticals LP

Dr Grivas — Disclosures

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Contracted Research	Acrivon Therapeutics Inc, Bavarian Nordic, Bristol Myers Squibb, Clovis Oncology, Debiopharm, G1 Therapeutics Inc, Gilead Sciences Inc, GSK, Merck KGaA, Merck Sharp & Dohme LLC, Mirati Therapeutics Inc, Pfizer Inc, QED Therapeutics
Data and Safety Monitoring Board/Committee	Bristol Myers Squibb

We Encourage Clinicians in Practice to Submit Questions



Feel free to submit questions now before the program begins and throughout the program.

Familiarizing Yourself with the Zoom Interface

Expand chat submission box

The screenshot shows a Zoom meeting interface. At the top, there are video thumbnails for participants: RTP Coordinat..., Kirsten Miller, RTP Mike Rivera, and Lisa Suarez. Below the thumbnails is a slide titled "Meet The Professor Program Participating Faculty" featuring six faculty members with their photos and titles:

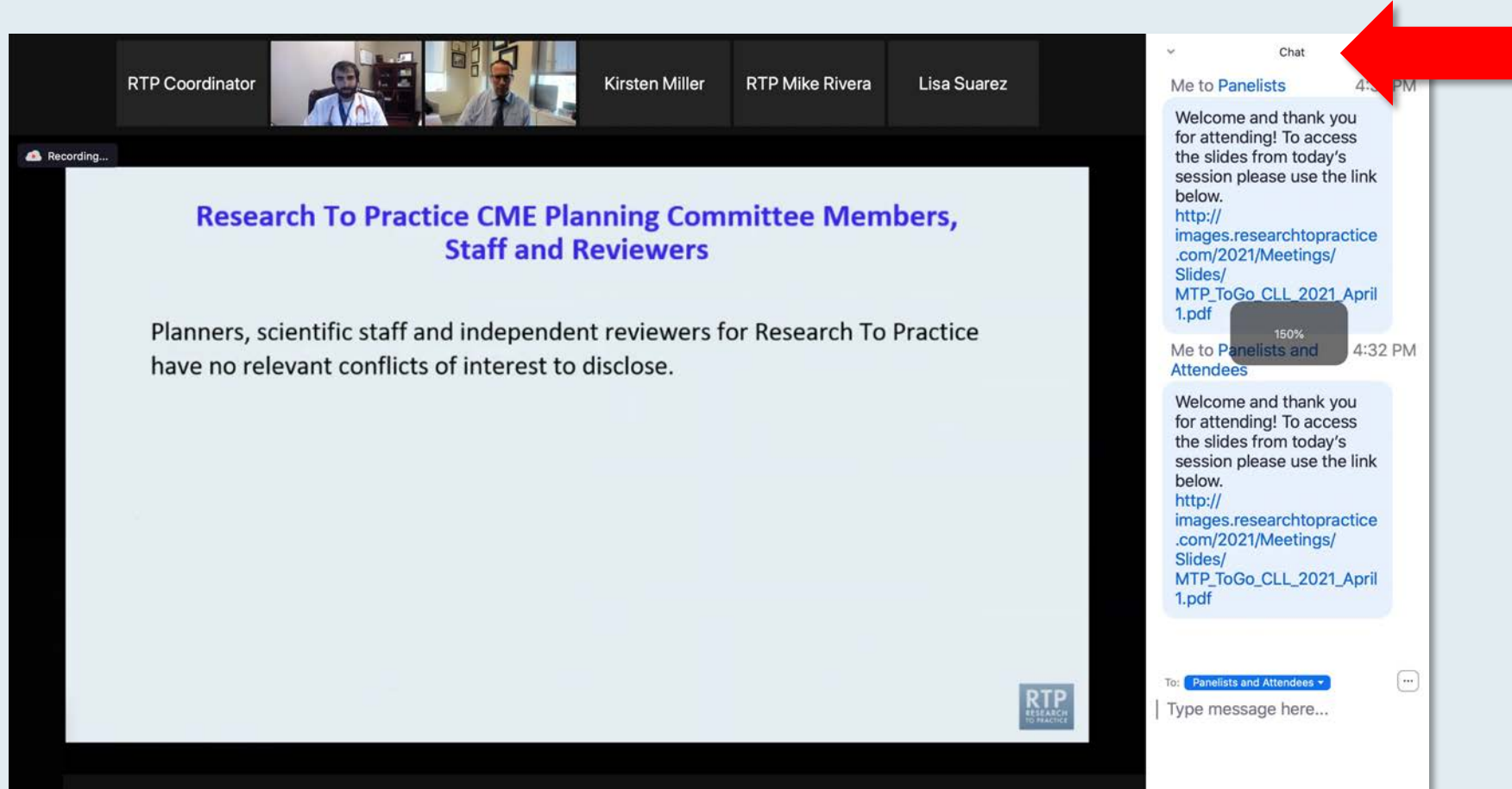
- Nancy L Bartlett, MD**
Professor of Medicine
Koman Chair in Medical Oncology
Washington University School of Medicine
St Louis, Missouri
- Jonathan W Friedberg, MD, MMSc**
Samuel E Durand Professor of Medicine
Director, James P Wilmot Cancer Institute
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- Carla Casulo, MD**
Associate Professor of Medicine
Division of Hematology/Oncology
Director, Hematology/Oncology Fellowship Program
University of Rochester
Wilmot Cancer Institute
Rochester, New York
- Brian T Hill, MD, PhD**
Director, Lymphoid Malignancy Program
Cleveland Clinic Taussig Cancer Institute
Cleveland, Ohio
- Christopher R Flowers, MD, MS**
Chair, Professor
Department of Lymphoma/Myeloma
The University of Texas MD Anderson Cancer Center
Houston, Texas
- Brad S Kahl, MD**
Professor of Medicine
Washington University School of Medicine
Director, Lymphoma Program
Siteman Cancer Center
St Louis, Missouri

On the right side of the interface is a chat window. It shows two messages from "Me to Panelists" and "Me to Panelists and Attendees" at 4:31 PM and 4:32 PM respectively. The messages contain a welcome message and a link to a PDF file. At the bottom of the chat window, there is a "To:" dropdown menu set to "Panelists and Attendees" and a text input field labeled "Type message here...". A red arrow points to the white line above the text input field, indicating where to drag to expand the submission box.

Drag the white line above the submission box up to create more space for your message.

Familiarizing Yourself with the Zoom Interface

Increase chat font size



**Press Command (for Mac) or Control (for PC) and the + symbol.
You may do this as many times as you need for readability.**

Clinicians in the Audience, Please Complete the Pre- and Postmeeting Surveys

The screenshot shows a Zoom meeting window. At the top, a row of seven participant video thumbnails is visible. The main content area on the left displays a presentation slide with the following text:
Meet The Profe
Optimizing the Selection and
of Therapy for Patients with
Gastrointestinal Ca

Wednesday, August 25,
5:00 PM – 6:00 PM E

Faculty
Wells A Messersmith,

Moderator
Neil Love, MD

The RTP Research to Practice logo is in the bottom right corner of the slide. A 'Quick Survey' pop-up window is centered over the slide, listing several treatment options with radio buttons for selection. To the right of the main window, a 'Participants (10)' sidebar lists the names and initials of the attendees: John Smith, Mary Major, Richard Miles, John Noakes, Alice Suarez, Jane Perez, Robert Stiles, Juan Fernandez, Ashok Kumar, and Jeremy Smith. The bottom toolbar includes icons for Join Audio, Start Video, Invite, Participants, Share, Chat, Record, and a red 'Leave Meeting' button.

Quick Survey

- ☐ Ceritinib +/- dexamethasone
- ☐ Pomalidomide +/- dexamethasone
- ☐ Ceritinib + pomalidomide +/- dexamethasone
- ☐ Elotuzumab + lenalidomide +/- dexamethasone
- ☐ Elotuzumab + pomalidomide +/- dexamethasone
- ☐ Daratumumab + lenalidomide +/- dexamethasone
- ☐ Daratumumab + pomalidomide +/- dexamethasone
- ☐ Daratumumab + bortezomib +/- dexamethasone
- ☐ Isaxozim + Rd
- ☐ Other

Participants (10)

- JS John Smith
- MM Mary Major
- RM Richard Miles
- JN John Noakes
- AS Alice Suarez
- JP Jane Perez
- RS Robert Stiles
- JF Juan Fernandez
- AK Ashok Kumar
- JS Jeremy Smith

The screenshot shows the same Zoom meeting window. The presentation slide now displays a poll question:
Regulatory and reimbursement issues aside, which treatment would you recommend for a 65-year-old patient with clear cell renal cell carcinoma (ccRCC) if follow-up 3 years later is found to have asymptomatic (PS 0)?

Below the question is a numbered list of eight options. A 'Quick Poll' pop-up window is open on the right side of the slide, showing the same list of options with radio buttons. The 'Participants (10)' sidebar remains on the right. The bottom toolbar is identical to the previous screenshot.

Regulatory and reimbursement issues aside, which treatment would you recommend for a 65-year-old patient with clear cell renal cell carcinoma (ccRCC) if follow-up 3 years later is found to have asymptomatic (PS 0)?

1. Nivolumab/ipilimumab
2. Avelumab/axitinib
3. Pembrolizumab/axitinib
4. Pembrolizumab/lenvatinib
5. Nivolumab/cabozantinib
6. Tyrosine kinase inhibitor (TKI) monotherapy
7. Anti-PD-1/PD-L1 monotherapy
8. Other

Quick Poll

- ☐ Nivolumab/ipilimumab
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WITH DR NEIL LOVE

Managing Metastatic Urothelial Bladder Cancer



DR SCOTT TAGAWA

WEILL CORNELL MEDICINE SANDRA AND
EDWARD MEYER CANCER CENTER



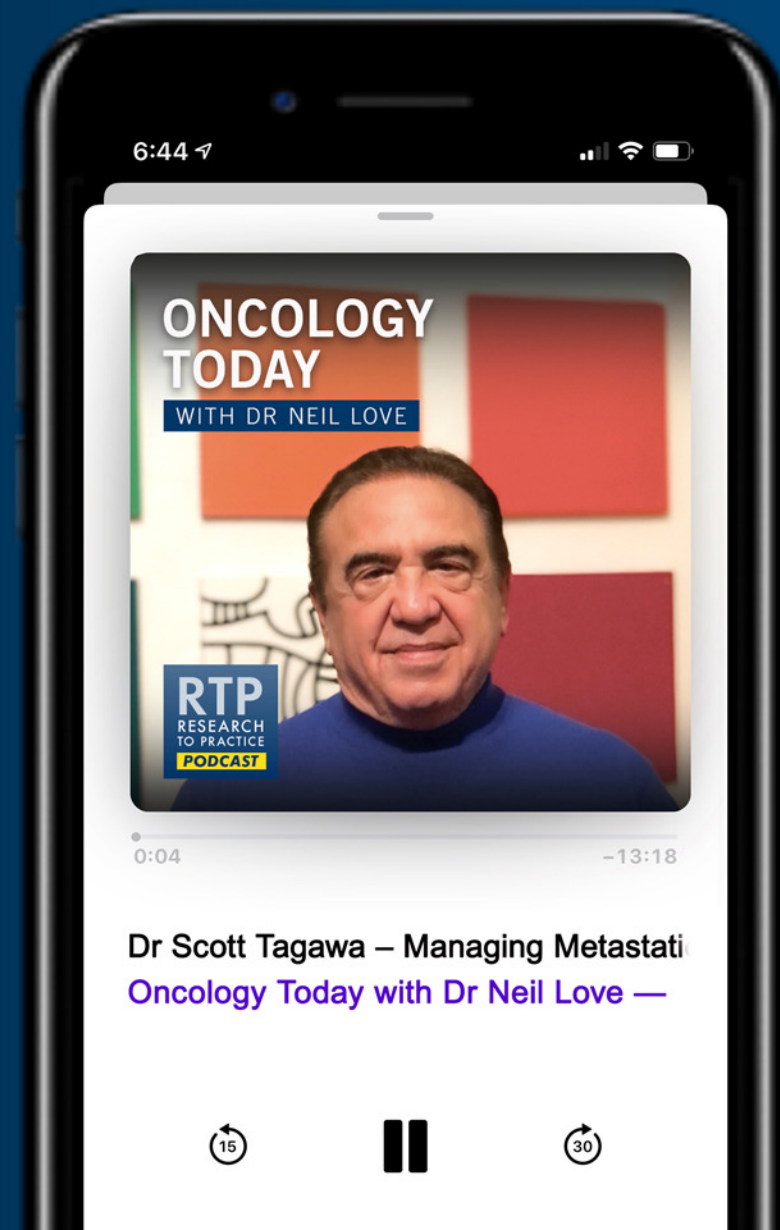
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What I Tell My Patients: Faculty Physicians and Nurses Discuss Patient Education About New Treatments and Clinical Trials

*Part 3 of a 3-Part Complimentary NCPD Webinar Series
in Partnership with the 2023 ONS Congress*

Chronic Lymphocytic Leukemia

**Thursday, July 6, 2023
5:00 PM – 6:00 PM ET**

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Jennifer Woyach, MD**

Moderator

Neil Love, MD

Inside the Issue: Novel Agents, Approaches and Strategies in the Management of Higher-Risk Myelodysplastic Syndromes

A CME/MOC-Accredited Live Webinar

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Year in Review: Clinical Investigator Perspectives on the Most Relevant New Data Sets and Advances in Oncology

A Multitumor CME/MOC-Accredited Live Webinar Series

Melanoma and Nonmelanoma Skin Cancers

**Thursday, July 13, 2023
5:00 PM – 6:00 PM ET**

Faculty

Omid Hamid, MD

Evan J Lipson, MD

Moderator

Neil Love, MD

Inside the Issue: Integrating Bispecific Antibodies into the Management of Multiple Myeloma — Patient Selection and Toxicity Management

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Hans Lee, MD

Saad Zafar Usmani, MD, MBA

Moderator

Neil Love, MD

Inside the Issue: Current and Future Management of ER-Positive Metastatic Breast Cancer After Disease Progression on a CDK4/6 Inhibitor

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Erika Hamilton, MD

Moderator

Neil Love, MD

Meet The Professor
**Optimizing the Management of
Soft Tissue Sarcoma and Related
Connective Tissue Disorders**

**Tuesday, July 25, 2023
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Richard F Riedel, MD

Moderator

Neil Love, MD

Thank you for joining us!

CME and MOC credit information will be emailed to each participant within 5 business days.

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Professor, Department of Medicine
Division of Oncology
Clinical Director, Genitourinary Cancers Program
University of Washington
Professor, Clinical Research Division
Fred Hutchinson Cancer Center
Seattle, Washington

Survey Participants



Shilpa Gupta, MD

Associate Professor
Director, Genitourinary Oncology Program
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Cleveland, Ohio



Elizabeth R Plimack, MD, MS

Professor, Medical Oncology
Deputy Director, Fox Chase Cancer Center
Temple Health
Philadelphia, Pennsylvania



Daniel P Petrylak, MD

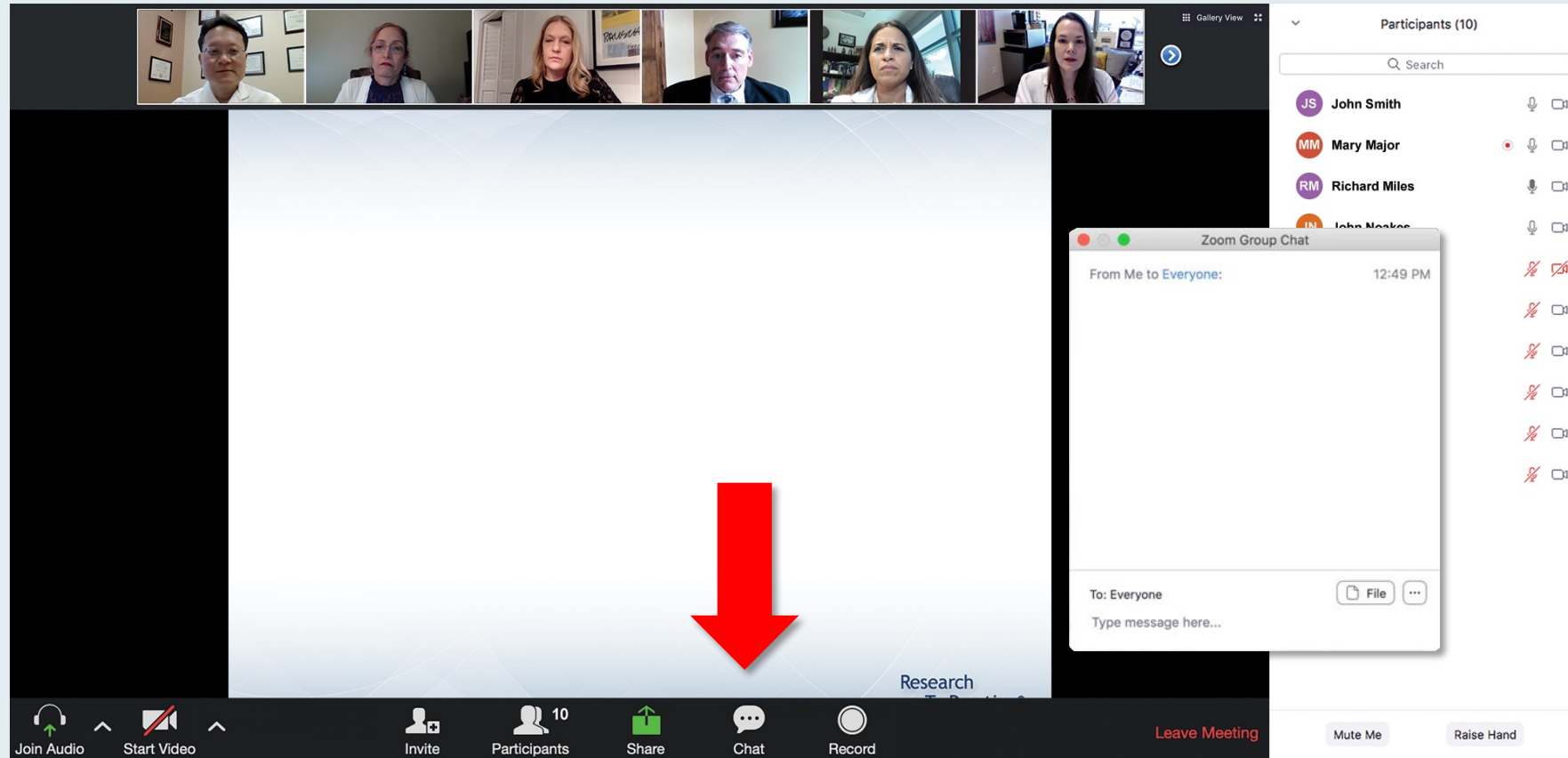
Professor of Internal Medicine (Medical Oncology)
and Urology
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Guru P Sonpavde, MD

Director of Genitourinary Medical
Oncology and Phase I Clinical Research
Christopher K Glanz Chair for Bladder
Cancer Research
AdventHealth Cancer Institute
Professor of Medicine
University of Central Florida
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Wells A Messersmith, MD
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Overlaid on the slide is a "Quick Survey" form with the following options:

- ☐ Certizomab +/- dexamethasone
- ☐ Pomalidomide +/- dexamethasone
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- ☐ Elotuzumab + lenalidomide +/- dexamethasone
- ☐ Elotuzumab + pomalidomide +/- dexamethasone
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- ☐ Daratumumab + pomalidomide +/- dexamethasone
- ☐ Daratumumab + bortezomib +/- dexamethasone
- ☐ Isaxomab + Rd
- Other

A "Submit" button is at the bottom of the survey. To the right of the main content is a "Participants (10)" list showing names and status icons. The bottom toolbar includes icons for Join Audio, Start Video, Invite, Participants, Share, Chat, Record, and a "Leave Meeting" button.

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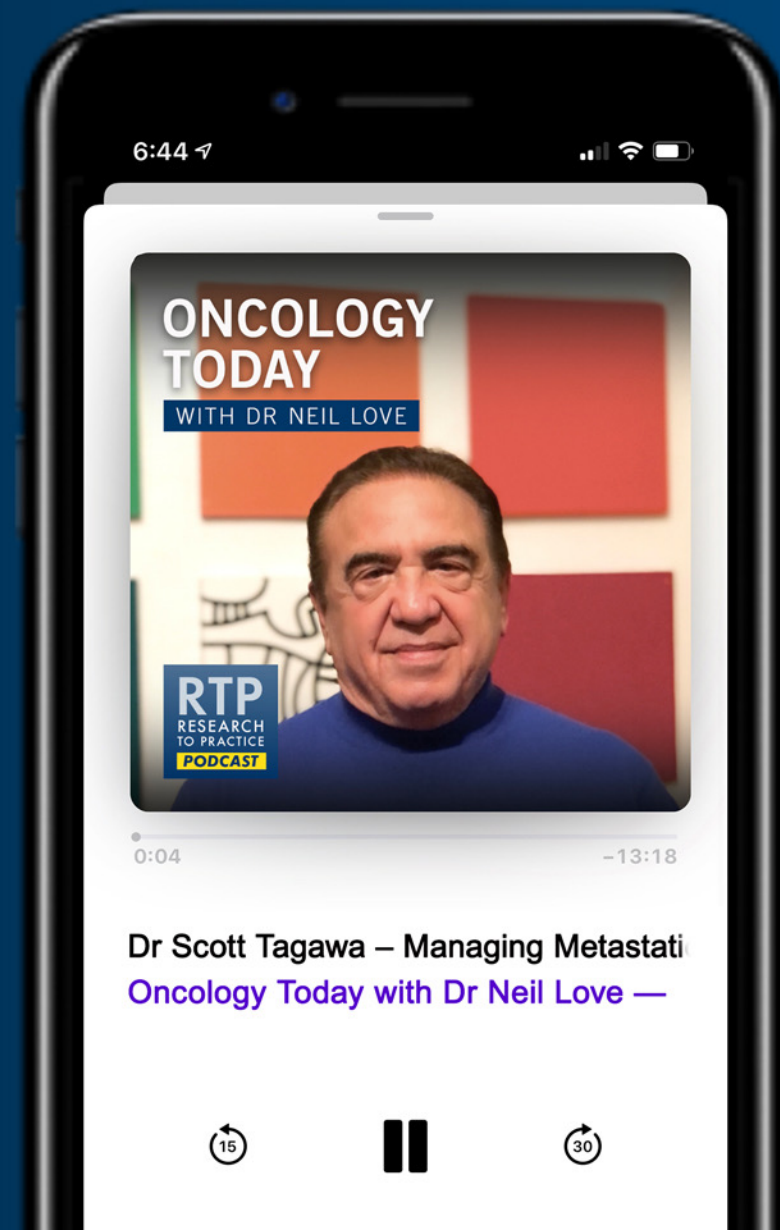
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Data and Safety Monitoring Board/Committee	Bristol Myers Squibb

Immunotherapy-Based Strategies for Metastatic Urothelial Bladder Cancer (mUBC)

Terence Friedlander, MD

Clinical Professor
Helen Diller Family Comprehensive Cancer Center
University of California, San Francisco
Chief of Hematology-Oncology
Zuckerberg San Francisco General Hospital
San Francisco, California

Available data, ongoing investigation and role of novel strategies in metastatic urothelial Ca

Petros Grivas, MD PhD

*Professor, Dept. of Medicine, Division of Medical Oncology
Clinical Director, Genitourinary Cancers Program
University of Washington*

*Professor, Clinical Research Division
Fred Hutchinson Cancer Center*

Twitter: [@PGrivasMDPhD](https://twitter.com/PGrivasMDPhD)



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Key Data Sets

Terence Friedlander, MD

- Balar AV et al. Efficacy and safety of pembrolizumab in metastatic urothelial carcinoma: Results from KEYNOTE-045 and KEYNOTE-052 after up to 5 years of follow-up. *Ann Oncol* 2023 March;34(3):289-99.
- Powles T et al. Pembrolizumab alone or combined with chemotherapy versus chemotherapy as first-line therapy for advanced urothelial carcinoma (KEYNOTE-361): A randomised, open-label, phase 3 trial. *Lancet Oncol* 2021 July;22(7):931-45.
- Swami U et al. Utilization of systemic therapy for treatment of advanced urothelial carcinoma: Lessons from real world experience. *Cancer Treat Res Commun* 2021;27:100325.
- Powles T et al. Avelumab maintenance therapy for advanced or metastatic urothelial carcinoma. *N Engl J Med* 2020 September 24;383(13):1218-30.
- Powles T et al. Avelumab first-line maintenance for advanced urothelial carcinoma: Results from the JAVELIN Bladder 100 trial after ≥ 2 years of follow-Up. *J Clin Oncol* 2023 April 18;[Online ahead of print].
- Gupta S et al. Study EV-103 dose escalation/cohort A: Long-term outcome of enfortumab vedotin + pembrolizumab in first-line (1L) cisplatin-ineligible locally advanced or metastatic urothelial carcinoma (la/mUC) with nearly 4 years of follow-up. ASCO 2023;Abstract 4505.

Key Data Sets

Terence Friedlander, MD (continued)

- Friedlander TW et al. Enfortumab vedotin (EV) with or without pembrolizumab (P) in patients (pts) who are cisplatin-ineligible with previously untreated locally advanced or metastatic urothelial cancer (la/mUC): Additional 3-month follow-up on cohort K data. ASCO 2023;Abstract 4568.
- Tagawa ST et al. Updated outcomes in TROPHY-U-01 cohort 1, a phase 2 study of sacituzumab govitecan (SG) in patients (pts) with metastatic urothelial cancer (mUC) that progressed after platinum (PT)-based chemotherapy and a checkpoint inhibitor (CPI). ASCO 2023;Abstract 526.
- Grivas P et al. TROPHY-U-01 Cohort 3: Sacituzumab govitecan (SG) in combination with pembrolizumab (Pembro) in patients (pts) with metastatic urothelial cancer (mUC) who progressed after platinum (PLT)-based regimens. Genitourinary Cancers Symposium 2022;Abstract 434.
- Siefker-Radtke AO et al. Erdafitinib (ERDA) vs ERDA plus cetrelimab (ERDA + CET) for patients (pts) with metastatic urothelial carcinoma (mUC) and fibroblast growth factor receptor alterations (FGFRa): Final results from the phase 2 Norse study. ASCO 2023;Abstract 4504.

Key Data Sets

Petros Grivas, MD, PhD

- Necchi A et al. Erdafitinib (ERDA) in patients (pts) with locally advanced or metastatic urothelial carcinoma (mUC): Subgroup analyses of long-term efficacy outcomes of a pivotal phase II trial (BLC2001). ESMO 2020;Abstract 750P.
- Loriot Y et al. Phase 3 THOR study: Results of erdafitinib (erda) versus chemotherapy (chemo) in patients (pts) with advanced or metastatic urothelial cancer (mUC) with select fibroblast growth factor receptor alterations (FGFRalt). ASCO 2023;Abstract LBA4619.
- Yu EY et al. Enfortumab vedotin after PD-1 or PD-L1 inhibitors in cisplatin-ineligible patients with advanced urothelial carcinoma (EV-201): A multicentre, single-arm, phase 2 trial. *Lancet Oncol* 2021;22(6);872-82.
- Rosenberg JE et al. Long-term outcomes in EV-301: 24-month findings from the phase 3 trial of enfortumab vedotin versus chemotherapy in patients with previously treated advanced urothelial carcinoma. ASCO 2022;Abstract 4516.
- Tagawa ST et al. Updated outcomes in TROPHY-U-01 cohort 1, a phase 2 study of sacituzumab govitecan in patients with metastatic urothelial cancer that progressed after platinum (PT)-based chemotherapy and a checkpoint inhibitor. Genitourinary Cancers Symposium 2023; Abstract 526.

Key Data Sets

Petros Grivas, MD, PhD (continued)

- Loriot Y et al. Safety analysis by UGT1A1 status of TROPHY-U-01 cohort 1, a phase 2 study of sacituzumab govitecan (SG) in patients (pts) with metastatic urothelial cancer (mUC) who progressed after platinum (PT)-based chemotherapy and a checkpoint inhibitor (CPI). ASCO 2023;Abstract 4514
- Petrylak DP et al. TROPHY-U-01 cohort 2, a phase 2 study of sacituzumab govitecan in platinum-ineligible patients with metastatic urothelial cancer who progressed after prior checkpoint inhibitor therapy. Genitourinary Cancers Symposium 2023;Abstract 520.
- Grivas P et al. Primary analysis of TROPHY-U-01 cohort 3, a phase 2 study of sacituzumab govitecan (SG) in combination with pembrolizumab (Pembro) in patients (pts) with metastatic urothelial cancer (mUC) that progressed after platinum (PT)-based therapy. Genitourinary Cancers Symposium 2023;Abstract 518.
- Sheng X et al. RC48-ADC for metastatic urothelial carcinoma with HER2-positive: Combined analysis of RC48-C005 and RC48-C009 trials. ASCO 2022;Abstract 4520.
- Xu Y et al. A phase II study of RC48-ADC in HER2-negative patients with locally advanced or metastatic urothelial carcinoma. ASCO 2022;Abstract 4519.

Agenda

INTRODUCTION

MODULE 1: First-Line Treatment of Metastatic Urothelial Bladder Cancer

MODULE 2: Second-Line Therapy and Beyond

- **Enfortumab vedotin**
- **Sacituzumab govitecan**
- **Erdafitinib**
- **HER2-targeted treatment**
- **Other novel strategies**

Agenda

INTRODUCTION

MODULE 1: First-Line Treatment of Metastatic Urothelial Bladder Cancer

MODULE 2: Second-Line Therapy and Beyond

- Enfortumab vedotin
- Sacituzumab govitecan
- Erdafitinib
- HER2-targeted treatment
- Other novel strategies

Distant Metastasis-Free Survival Results From the Randomized, Phase 2 mRNA-4157-P201/KEYNOTE-942 Trial

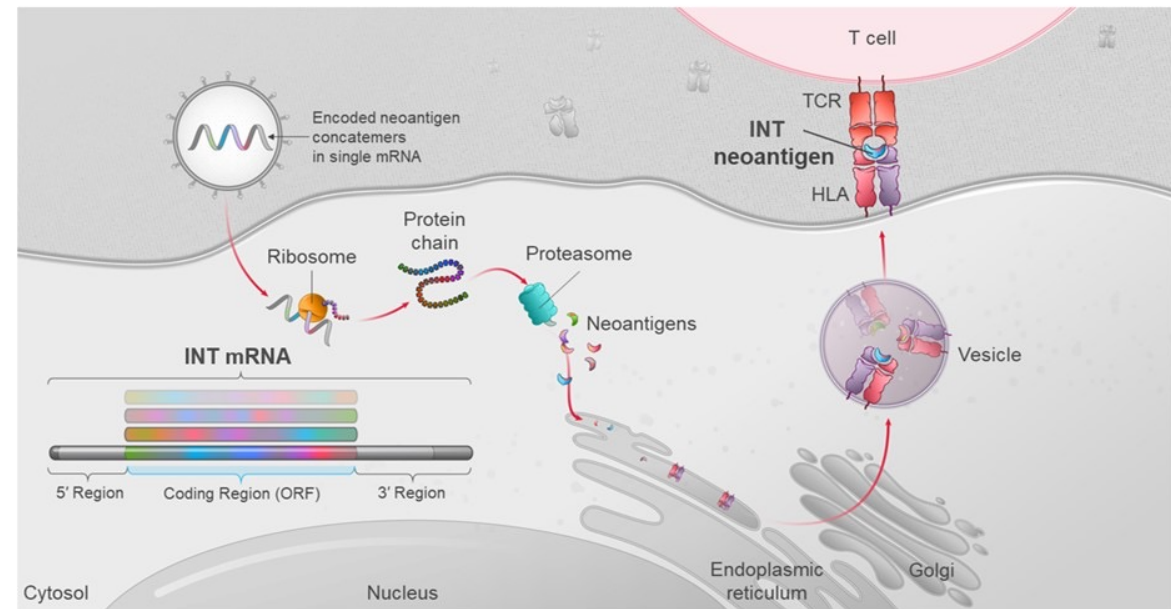
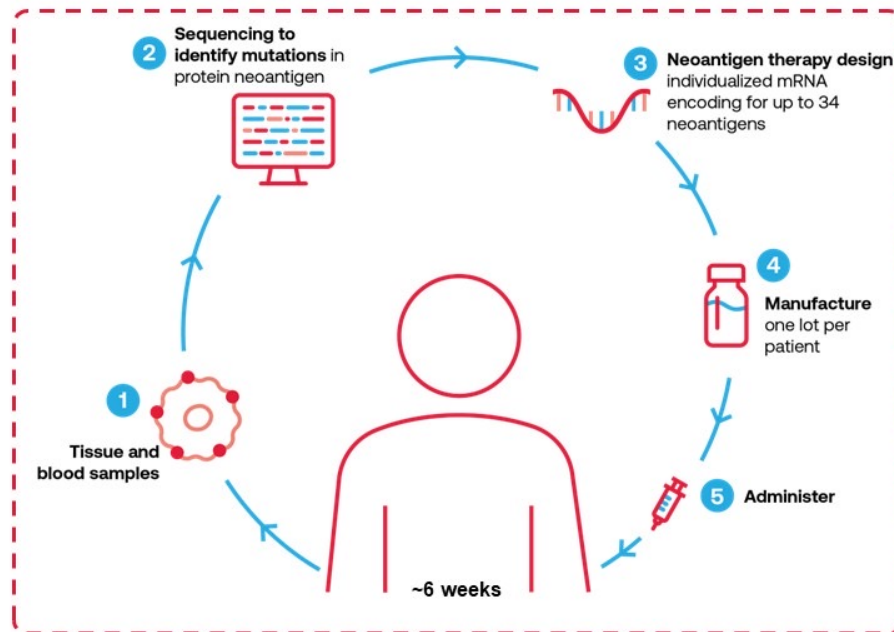
Adnan Khattak,^{1,2} Jeffrey S. Weber,³ Tarek Meniawy,⁴ Matthew H. Taylor,⁵ George Ansstas,⁶ Kevin B. Kim,⁷ Meredith McKean,⁸ Georgina V. Long,⁹ Ryan J. Sullivan,¹⁰ Mark B. Faries,¹¹ Thuy Tran,¹² C. Lance Cowey,¹³ Theresa M. Medina,¹⁴ Jennifer M. Segar,¹⁵ Victoria Atkinson,¹⁶ Geoffrey T. Gibney,¹⁷ Jason J. Luke,¹⁸ Elizabeth I. Buchbinder,¹⁹ Robert S. Meehan,²⁰ Matteo S. Carlino,^{9,21} Moderna Author's Group²⁰

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Sponsored by Moderna, Inc., in collaboration with Merck Sharp & Dohme LLC, a subsidiary of Merck & Co., Inc., Rahway, NJ, USA.

mRNA-4157 (V940) Mechanism of Action

- mRNA-4157 (V940) is **an individualized neoantigen therapy** designed to target an individual patient's unique tumor mutations and encodes up to 34 neoantigens^{1,2}
- Therapies targeting neoantigens can increase endogenous **neoantigen T-cell responses** and **induce epitope spreading** to novel antigens with the ability **to drive antitumor responses** and **maintain memory** with cytolytic properties, potentially **producing long-term disease control** for patients³⁻⁷



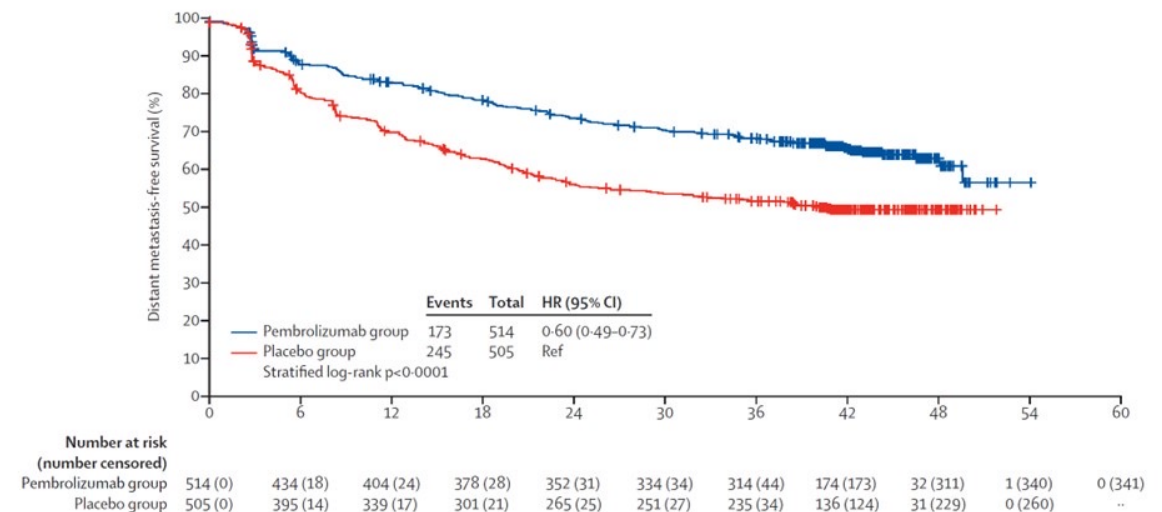
HLA, human leukocyte antigen; INT, individualized neoantigen therapy; ORF, open reading frame.

1. Burris HA, et al. *J Clin Oncol*. 2019;37(suppl 15). Abstract 2523. 2. Zhong S, et al. *Cancer Res*. 80(suppl 16). Abstract 6539. 3. Wirth TC, Kühnel F. *Front Immunol*. 2017;8:1848. 4. Ott PA, et al. *Nature*. 2017;547:217-221. 5. Hu Z, et al. *Nat Med*. 2021;27:515-525. 6. Ott PA, et al. *Cell*. 2020;183:347-362. 7. Palmer CD, et al. *Nat Med*. 2022;28:1619-1629.

Adjuvant ICI Therapy and DMFS in High-risk Melanoma

- Both **RFS** and **DMFS** have been evaluated as surrogates for overall survival. **DMFS** captures patients whose **relapse is associated with a worse prognosis** and who may need further systemic treatment¹
- The **KEYNOTE-054** study showed that the **3.5-year DMFS** was **significantly higher for patients receiving pembrolizumab** (65.3%) versus placebo (49.4%) in the ITT population ($P < 0.0001$)²
- These analyses suggest an **unmet clinical need with high metastasis rates** even with effective adjuvant melanoma therapy
- mRNA-4157 (V940) + pembrolizumab significantly improved RFS** versus pembrolizumab monotherapy (HR = 0.561 [95% CI, 0.309, 1.017; $P = 0.0266$])³
- Here, we report **the first DMFS results** from the **mRNA-4157-P201/KEYNOTE-942** study

KEYNOTE-054: DMFS



Reprinted from *Lancet Oncology*, Volume No. 22, Eggermont AMM, et al, Adjuvant pembrolizumab versus placebo in resected stage III melanoma (EORTC 1325-MG/KEYNOTE-054): distant metastasis-free survival results from a double-blind, randomised, controlled, phase 3 trial, Pages No. 643–654, Copyright 2021, with permission from Elsevier.

1. Amabile S, et al. *J Clin Med*. 2021;10:5475. 2. Eggermont AMM, et al. *Lancet Oncol*. 2021;22:643-654. 3. Khattak A, et al. Presented at the American Association for Cancer Research® (AACR) Annual Meeting; April 14-19, 2023; Orlando, FL, USA. Oral presentation CT001.

ASCO Clinical Guidance – Drug Shortages

Clinical Guidance



ASCO established a Drug Shortages Advisory Group to assist in the development of the below clinical guidance. View [Advisory Group membership and disclosures](#). ASCO is proud to have collaborated with the Society of Gynecologic Oncology (SGO) to develop the general guidance below, adapted from their [communiqué](#) on carboplatin and cisplatin shortages. ASCO also endorses SGO's gynecologic cancer-specific guidance.

The statements below reflect the American Society of Clinical Oncology's position on the prioritization of antineoplastic agents in limited supply for first intervention; decisions should be based on specific goals of the therapy where evidence-based medicine has shown survival outcome and life-extending benefit in both early and advanced stages. For ethical guidance, please visit our [Ethical Principles and Implementation Strategies page](#).

ASCO Clinical Guidance – Drug Shortages (Continued)

Effective immediately, ASCO recommends the following:

1. **Re-prioritize non-essential use of antineoplastic agents in limited supply.** If an alternative agent, intervention, or sequence with comparable efficacy and safety is available, then the limited agent should not be ordered.
2. **Increase the interval between cycles and/or reduce the total treatment dose when clinically acceptable.** Where nationally recognized guidelines (e.g., ASCO, NCCN, etc.) state a range for cycle duration, default to the longer end of that range (e.g. if platinum is recommended every 3 to 4 weeks, default to every 4). Where guidelines indicate a range of dosing, default to the lowest therapeutically proper dose.
3. **Minimize or omit** the limited agent for recurrent agent-resistant cancers.
4. **Minimize waste by optimizing vial size, dose rounding, and using multi-use vials.**
5. **Institutions should establish a working multidisciplinary utilization committee** to monitor drug shortages, **provide and communicate internal policies on utilization**, and act as an independent arbiter to **promote equitable use of drugs in short supply**.

ASCO Clinical Guidance – Drug Shortages (Continued)

Effective immediately, ASCO recommends the following:

6. **Select an evidence-based alternative regimen** if adequate supplies are unavailable and **consider a second opinion consultation** with oncology/hematology colleagues to discuss disease site-specific options.
7. Providers should **offer counseling referrals (if available) to patients affected by shortage-related distress.**
8. **Clinicians should have support services available for shortage-related distress.**
 - Institutions should communicate to clinical staff about measures being taken to address drug shortages and resources available to help oncology care teams manage distress.
 - Drug shortages impact clinicians, members of oncology care teams and multidisciplinary allocation committees, and the inability of the care teams to provide optimal treatment may cause psychological or moral distress requiring support
 - Institutions, practices, clinician societies, and others, should provide or offer referrals for support services such as peer to peer, counseling, discussion forums, or any other services addressing the distress or challenges inherent in providing care in the setting of drug shortages. Of note, ASCO member services also include the [ASCO Safe Haven](#) clinician support program, and several national resources focused on moral distress can be found [here](#).

ASCO Urothelial Cancer Guidance

“The American Society of Clinical Oncology offers the following clinical guidance on treatment alternatives during shortages of antineoplastic agents. Decisions should be based on specific goals of the therapy where evidence-based medicine has shown survival outcomes and life-extending benefits in both early and advanced stages. For more information on ASCO’s general principles during drug shortages, please visit ASCO’s Clinical Guidance page. For further consideration of ethical guidance, please visit ASCO’s Ethical Principles and Implementation Strategies page.

Disclaimer: Disease site-specific guidance for clinical management during drug shortages is provided by the American Society of Clinical Oncology, Inc. (“ASCO”) for voluntary, informational use in the context of limited carboplatin or cisplatin availability. This and other guidance on ASCO’s website (together “Guidance”) is not a comprehensive or definitive guide to treatment options. New evidence may emerge between the time information is developed and when it is published or read and should only be used in conjunction with independent professional medical judgement. Guidance is based on expert opinion of the Drug Shortages Advisory Group and non-systematic review of relevant literature. It is not medical or pharmacologic advice and is not intended as a statement of the standard of care. ASCO does not endorse third-party drugs, devices, services, or therapies and assumes no responsibility for any harm arising from or related to the use of this information.”

ASCO Urothelial Cancer Guidance

3. First-Line Systemic Therapy for Locally Advanced or Metastatic Disease (Stage IV)

A. Cisplatin eligible

Recommended options:

- Gemcitabine and cisplatin followed by avelumab maintenance therapy
- ddMVAC with growth factor support followed by avelumab maintenance therapy

ALTERNATIVES:

- Enfortumab vedotin and pembrolizumab (EV/pembro)
- Pembrolizumab

B. Cisplatin ineligible

Recommended options:

- Gemcitabine and carboplatin followed by avelumab maintenance therapy
- Enfortumab vedotin and pembrolizumab (EV/pembro)

ALTERNATIVES:

- Pembrolizumab
- Gemcitabine
- Gemcitabine + paclitaxel
- Ifosfamide, doxorubicin, and gemcitabine are options for patients with good kidney function and good performance status

Agenda

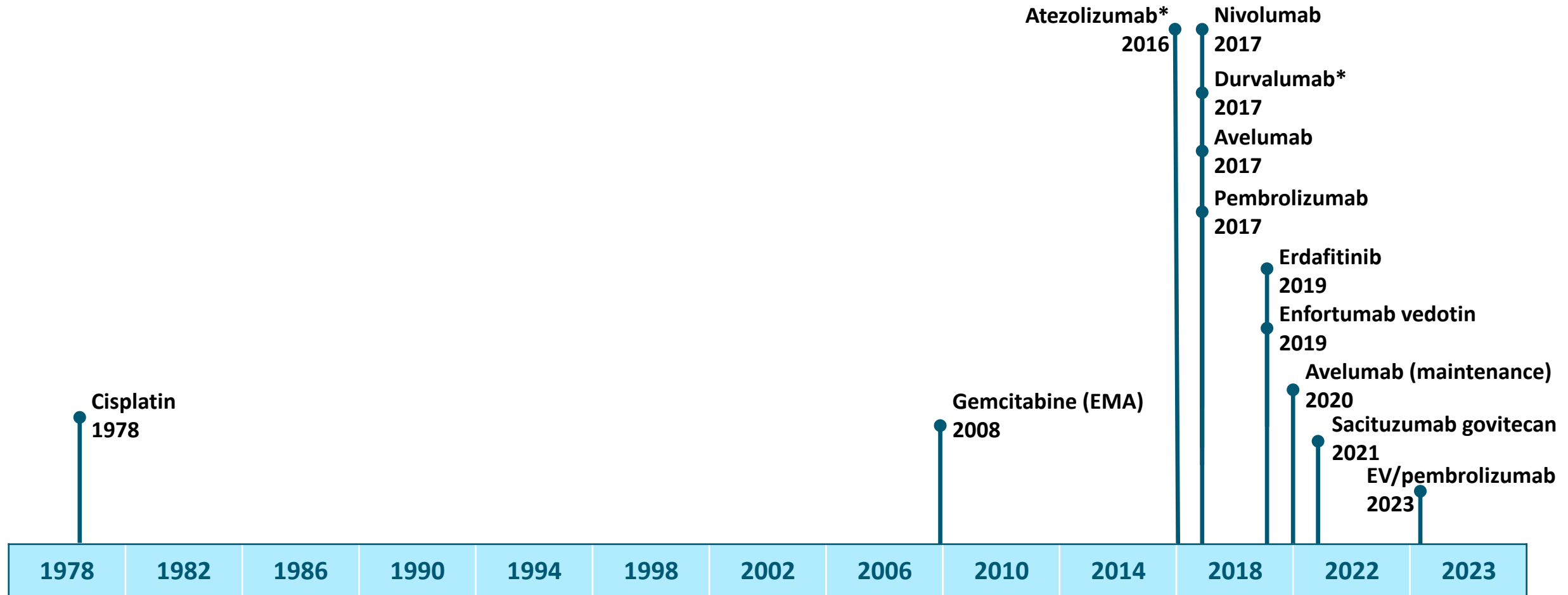
INTRODUCTION

MODULE 1: First-Line Treatment of Metastatic Urothelial Bladder Cancer

MODULE 2: Second-Line Therapy and Beyond

- Enfortumab vedotin
- Sacituzumab govitecan
- Erdafitinib
- HER2-targeted treatment
- Other novel strategies

The Treatment Landscape for Locally Advanced/ Metastatic Urothelial Carcinoma Has Evolved Rapidly



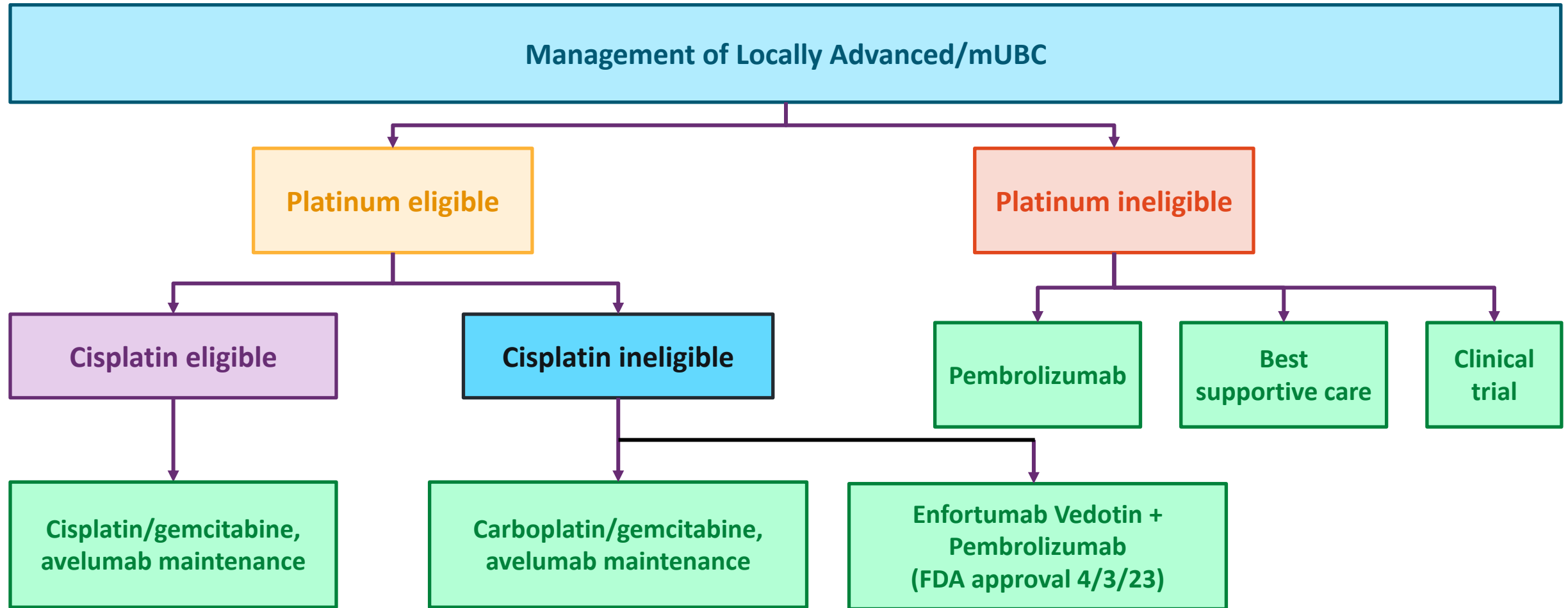
*Not FDA approved; indication withdrawn.

Cisplatin PI. www.ema.europa.eu/en/medicines/human/referrals/gemzar. Rhea. Clin Med Insights Oncol. 2021;15:11795549211044963. Nivolumab PI. Avelumab PI. Pembrolizumab PI.

Erdafitinib PI. Enfortumab vedotin PI. Avelumab PI. Sacituzumab govitecan PI.

Courtesy of Terence Friedlander, MD

Frontline Management of Locally Advanced/Metastatic Urothelial Carcinoma



Who is eligible for platinum chemotherapy?

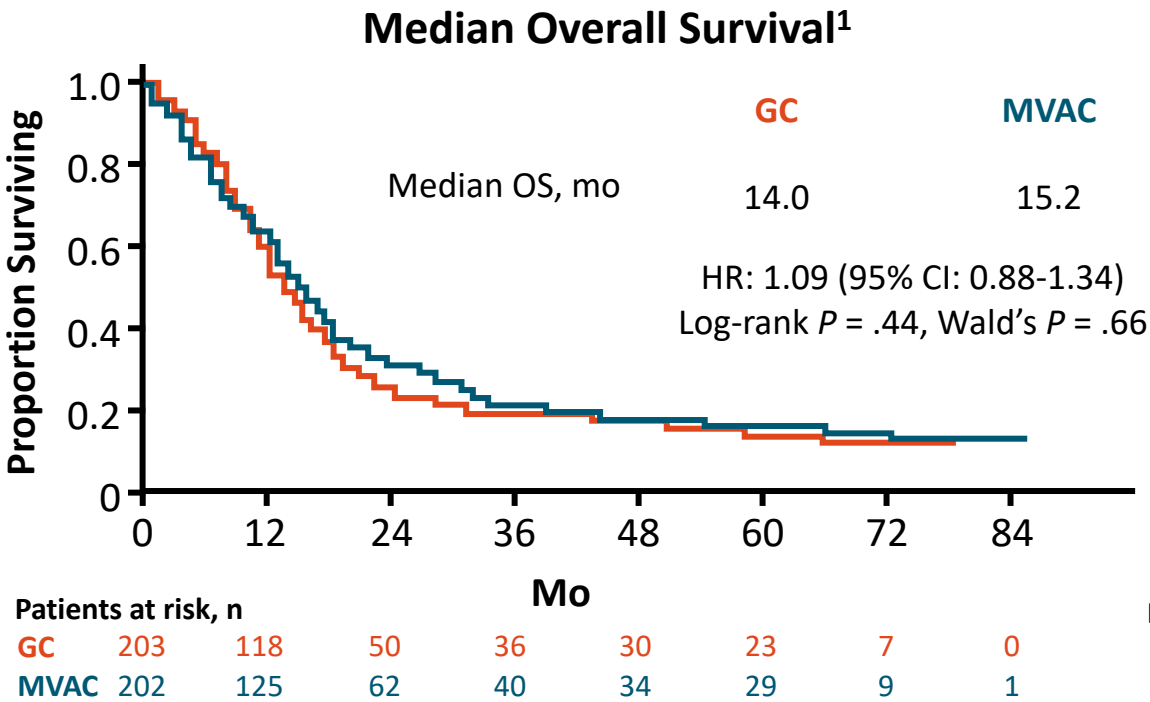
- Approximately **30% to 50%** of patients are ineligible for cisplatin due to impairment in renal function and performance status¹
- **Working Group cisplatin-unfit criteria include**²
 - ECOG PS ≥ 2
 - Creatinine clearance < 60 mL/min
 - Grade ≥ 2 peripheral neuropathy or hearing loss
 - NYHA Class III/IV heart failure

Who is ineligible for (even) carboplatin-based chemotherapy?

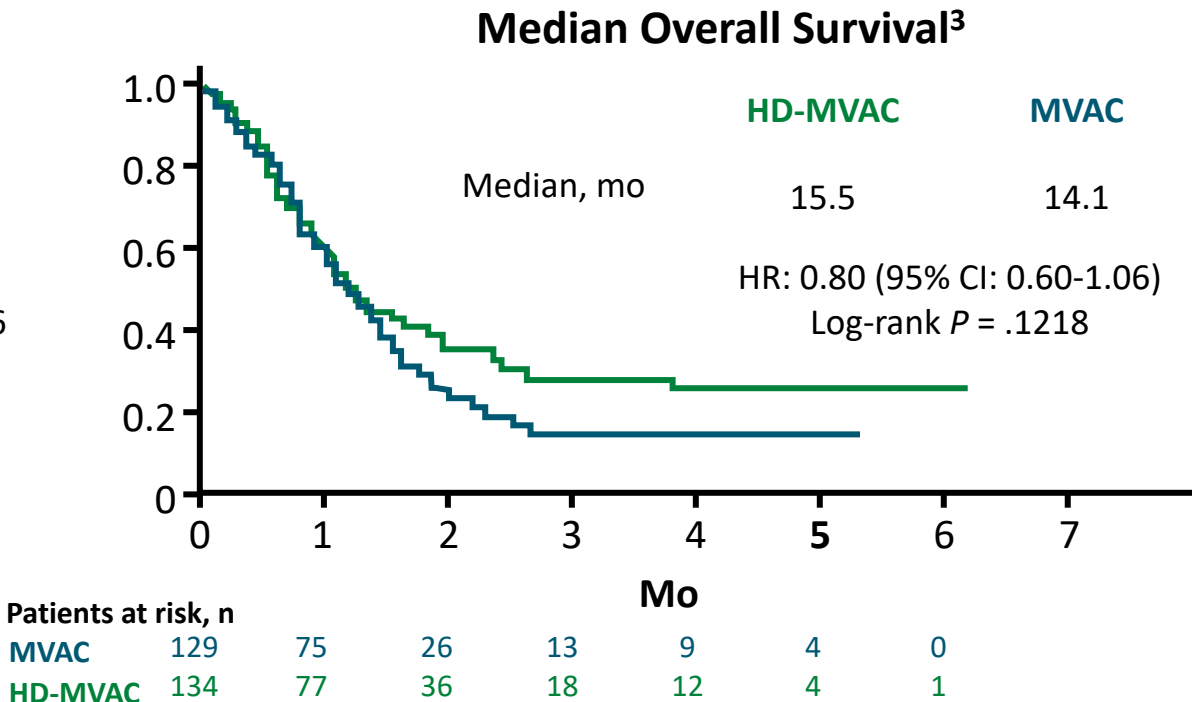
- Survey of 60 medical oncologists:

What threshold ECOG PS should be used to define "platinum-ineligibility"?	ECOG PS > / = 3	# Responses 41/60 (68.3%)
What threshold Cr Cl should be used for "platinum-ineligibility"?	< 30 ml/min	# Responses 41/60 (68.3%)
What grade of peripheral neuropathy would you consider for "platinum-ineligibility"?	> / = Grade 2	# Responses 32/60 (53.3%)
What class of Heart Failure do you consider to define "platinum-ineligibility"?	NYHA Class III	# Responses 48/60 (80%)
In a patient with ECOG PS 2, what Cr Cl cut-off would you use to define "platinum-ineligibility" differently of what is used for "cisplatin-ineligibility"?	< 30 ml/min	# Responses 29/60 (48.3%)

Frontline Cisplatin Regimens: Gem/Cis or ddMVAC



ORR ²		Toxic Death Rate ²	
GC	49%	GC	1%
MVAC	46%	MVAC	3%



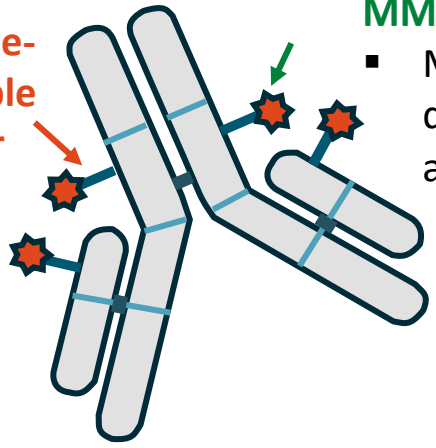
ORR ³		Toxic Death Rate ³	
HD-MVAC	62%	HD-MVAC	3%
MVAC	50%	MVAC	4%

1. von der Maase. J Clin Oncol. 2005;23:4602. 2. von der Maase H. J Clin Oncol. 2000;18:3068.

3. Sternberg. J Clin Oncol. 2001;19:2638.

Enfortumab Vedotin: First Approved ADC in mUBC

Enfortumab Vedotin



The diagram illustrates the structure of Enfortumab Vedotin, an antibody-drug conjugate (ADC). It features a Y-shaped antibody structure labeled 'Fully Humanized Antibody'. Attached to the antibody are several star-shaped molecules labeled 'MMAE Payload'. A red arrow points to the connection between the antibody and the payload, labeled 'Protease-Cleavable Linker'.

- MMAE Payload**
 - Microtubule-disrupting agent
- Fully Humanized Antibody**
 - Targets nectin-4, a transmembrane cell adhesion molecule highly expressed in mUBC

- **FDA approval:** for adults with locally advanced or mUBC who have previously received a PD-1 or PD-L1 inhibitor, and a platinum-containing CT or are ineligible for cisplatin-containing chemotherapy and have previously received ≥ 1 prior lines of therapy. **Accelerated approval:** in combination with pembrolizumab for the treatment of adult patients with locally advanced or metastatic urothelial cancer who are not eligible for cisplatin-containing chemotherapy

- EV 301- Randomized Phase III trial comparing EV to taxane/vinflunine chemotherapy
- Significant OS benefit
 - Median OS 12.91 vs 8.94 mo (HR: 0.70 (95% CI: 0.58-0.85; $P = .00015$))
- FDA approved in 2nd/3rd line mUBC in 2019

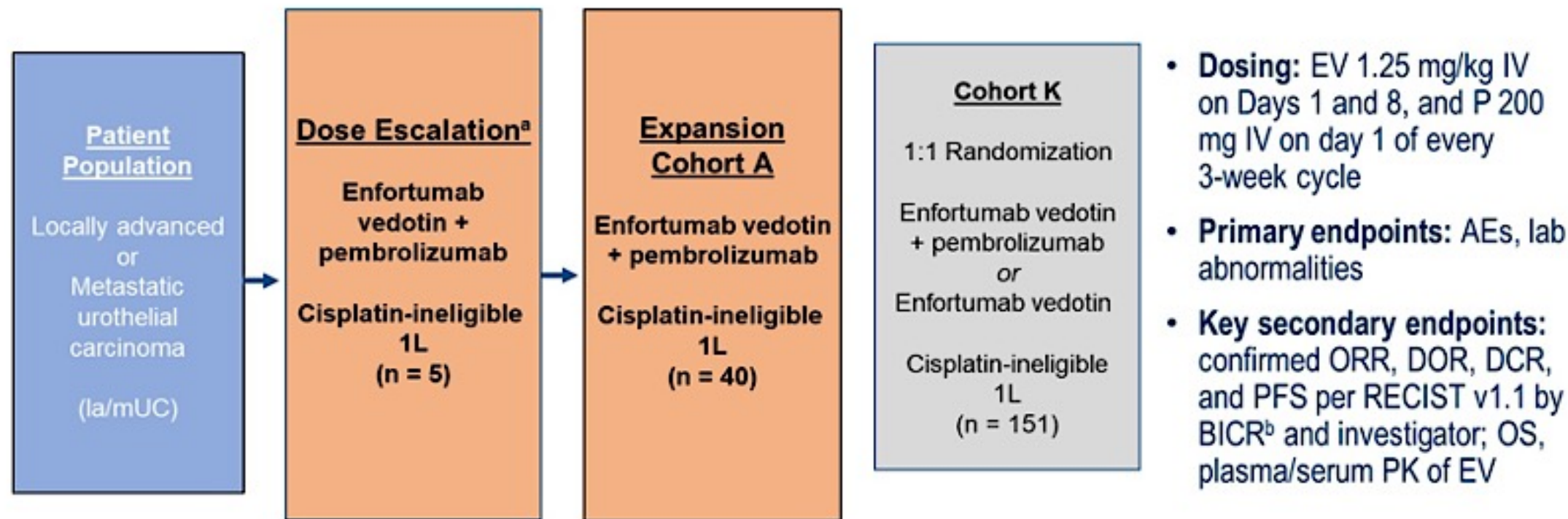
Study EV-103 Dose Escalation/Cohort A: Long-term Outcome of Enfortumab Vedotin + Pembrolizumab in First-line (1L) Cisplatin-ineligible Locally Advanced or Metastatic Urothelial Carcinoma (la/mUC) with Nearly 4 Years of Follow-up

Shilpa Gupta, MD¹; Jonathan E. Rosenberg, MD²; Rana R. McKay, MD³; Thomas W. Flaig, MD⁴; Daniel Peter Petrylak, MD⁵; Christopher J. Hoimes, DO⁶; Terence W. Friedlander, MD⁷; Mehmet Asim Bilen, MD⁸; Sandy Srinivas, MD⁹; Earle Burgess, MD¹⁰; Jaime R. Merchan, MD¹¹; Scott Tagawa, MD¹²; Jason Brown, MD¹³; Yao Yu, PhD¹⁴; Anne-Sophie Carret, MD¹⁴; Heidi S. Wirtz, PharmD, PhD¹⁴; Maria Guseva, MD, PharmD¹⁵; Blanca Homet Moreno, MD, PhD¹⁶; Matthew I. Milowsky, MD¹⁷

¹Taussig Cancer Institute, Cleveland Clinic Foundation, Cleveland, OH, USA; ²Memorial Sloan Kettering Cancer Center and Weill Cornell Medical College, New York, NY, USA; ³University of California San Diego, San Diego, CA, USA; ⁴University of Colorado Comprehensive Cancer Center, Aurora, CO, USA; ⁵Yale Cancer Center, New Haven, CT, USA; ⁶Duke Cancer Institute, Duke University, Durham, NC, USA; ⁷University of California San Francisco Medical Center, San Francisco, CA, USA; ⁸Winship Cancer Institute of Emory University, Atlanta, GA, USA; ⁹Stanford University Medical Center, Stanford, CA, USA; ¹⁰Atrium Health Levine Cancer Institute, Charlotte, NC, USA; ¹¹University of Miami, Miami, FL, USA; ¹²Weill Cornell Medical Center, New York, NY, USA; ¹³University Hospitals Cleveland Medical Center, Cleveland, OH, USA; ¹⁴Seagen Inc, Bothell, WA, USA; ¹⁵Astellas Pharma, Northbrook, IL, USA; ¹⁶Merck & Co., Inc., Rahway, NJ, USA; ¹⁷University of North Carolina, Lineberger Comprehensive Cancer Center, Chapel Hill, NC, USA

EV-103 Study Design: EV/Pembrolizumab Cohorts

EV-103 is an open-label, multiple cohort, phase 1b/2 study



AE = adverse events; BICR = blinded independent central review; DCR = disease control rate; DOR = duration of response; EV = enfortumab vedotin; ORR = objective response rate; OS = overall survival; P = pembro; PFS = progression-free survival; PK = pharmacokinetics; 1L = first-line

Exploratory endpoints: biomarkers of activity including baseline PD-L1 status and Nectin-4 expression; **Dose Escalation/Cohort A** completed enrollment in Jan 2019; **Data cutoff** was 16 Sep 2022

^aPatients assigned to EV 1.25 mg/kg + pembro and for whom study treatment was administered as 1L therapy

^bThe efficacy endpoints per RECIST v1.1 by BICR are presented for the first time herein. Results by investigator assessment have been previously published (Hoimes CJ, et al. JCO 2022).

EV-103 Dose Escalation Cohort A: Long-Term Efficacy Outcomes

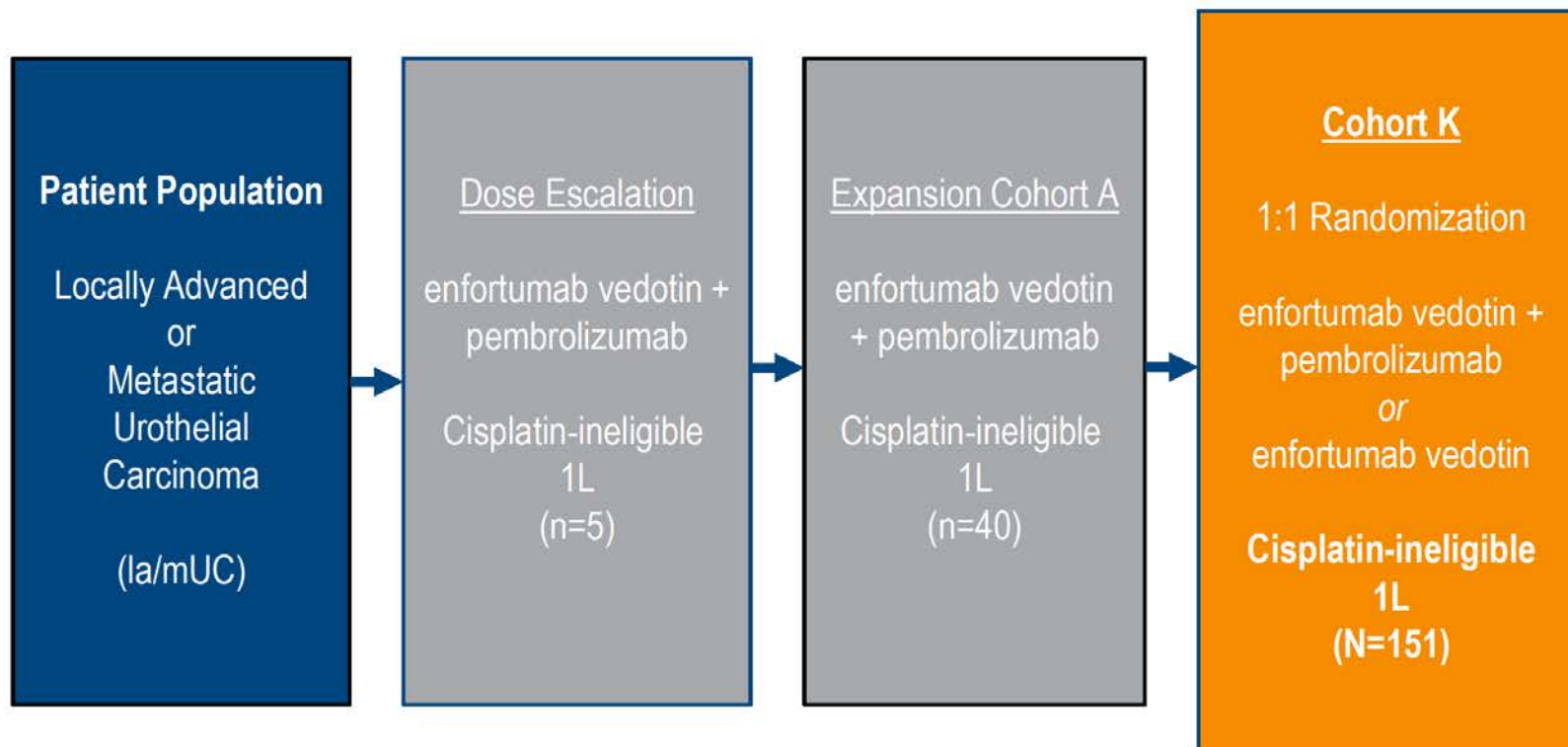
ORR by BICR		Dose Escalation + Cohort A (N = 45)
Objective Response Rate, n (%)		33 (73.3)
95% CI ^a for ORR		58.1-85.4
Best Overall Response, n (%)		
Complete response		7 (15.6)
Partial response		26 (57.8)
Stable disease		5 (11.1)
Progressive disease		5 (11.1)
No assessment ^b		2 (4.4)
Disease Control Rate, n (%)		38 (84.4)
95% CI ^a for DCR		70.5-93.5
Concordance rate of BOR between BICR and INV ^c assessment		95.3%

BICR = blinded independent central review; BOR = best overall response; CI = confidence interval; DCR = disease control rate; INV = investigator; ORR = objective response rate
^aCI was computed using the Clopper-Pearson method (Clopper 1934)
^bPatients had no response assessment post-baseline
^cORR per INV assessment was 33/45 (73.3%)

- Median duration of response was 22.1 months
- Median overall survival was 26.1 months

EV-103 Cohort K

Part of an open-label, multiple cohort, phase 1b/2 study in patients with urothelial carcinoma



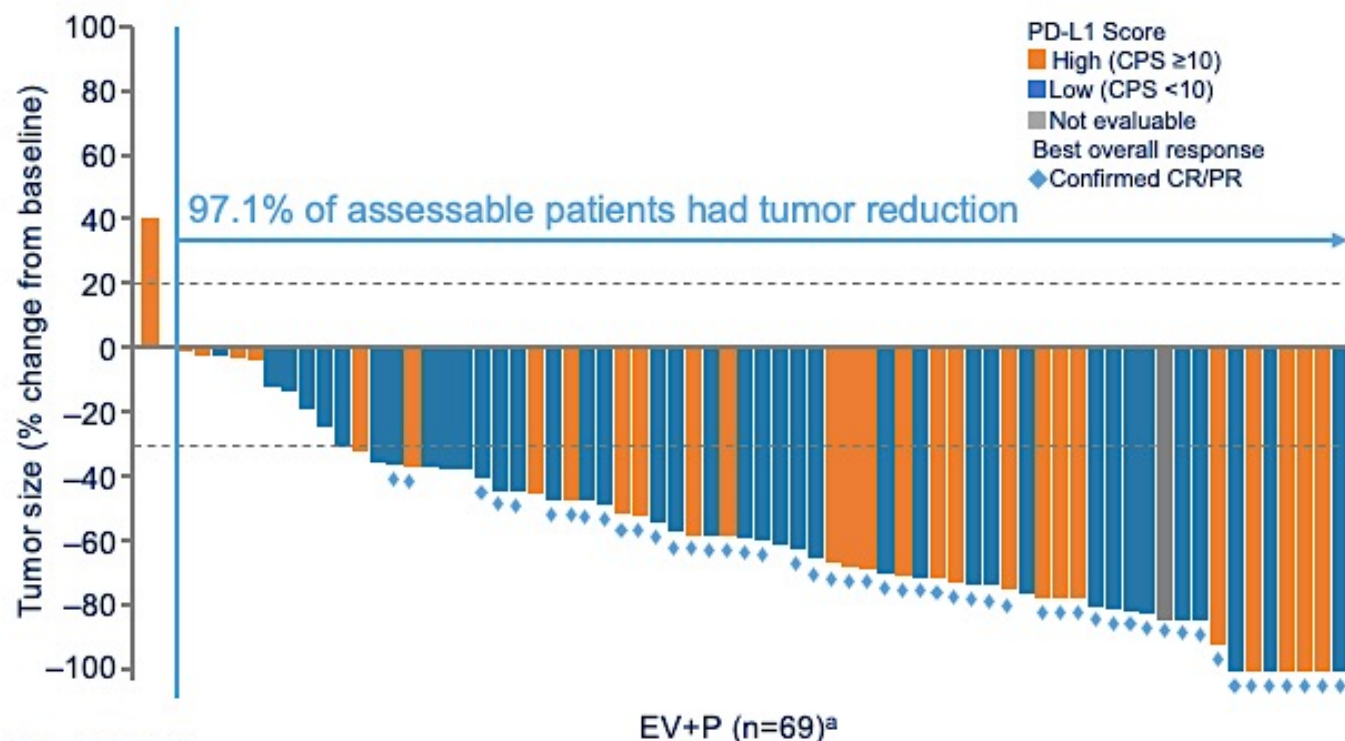
- **Dosing:** EV 1.25 mg/kg IV on days 1 and 8, and P 200 mg IV on day 1 of every 3-week cycle
- **Primary endpoint:** confirmed ORR by RECIST v1.1 per BICR
- **Key secondary endpoints:** confirmed ORR per RECIST v1.1 by investigator, DOR, DCR, PFS, OS, safety/ tolerability, and lab abnormalities

Statistical considerations

- The sample size was based on precision of the estimate for ORR characterized by 95% CIs
- No formal statistical comparisons between the 2 treatment arms

Stratification factors: Liver metastases (present/absent) and ECOG PS (0 or 1/2); **Exploratory endpoints:** pharmacokinetics, antitherapeutic antibody, biomarkers of activity including baseline PD-L1 status and Nectin-4 expression, progression-free survival on subsequent therapy by investigator, patient reported outcomes; **Cohort K** completed enrollment on 11 Oct 2021; **Data cutoff was 10 Jun 2022**

EV-103 Cohort K: Efficacy and Safety



Data cutoff: 10 Jun 2022.

^aOf 76 patients in the EV+P arm, seven patients were not assessable due to non-measurable disease (n=4), post-baseline assessment that was not evaluable (n=2), and lack of post-baseline assessment (n=1).

^bThere were no formal statistical comparisons between treatment arms.

	EV+P ^b (n=76)	EV mono ^b (n=73)
cORR, n (%) (95% CI)	49 (64.5) (52.7-75.1)	33 (45.2) (33.5-57.3)
Median time to objective response (range), mo	2.07 (1.1-6.6)	2.07 (1.9-15.4)
Median number of treatment cycles (range)	11.0 (1-29)	8.0 (1-33)

EV+P

- 42/49 (85.7%) of responses observed at first assessment (week 9 \pm 1 week)
- Most common AEs were fatigue, peripheral sensory neuropathy, alopecia, and maculopapular rash

EV mono

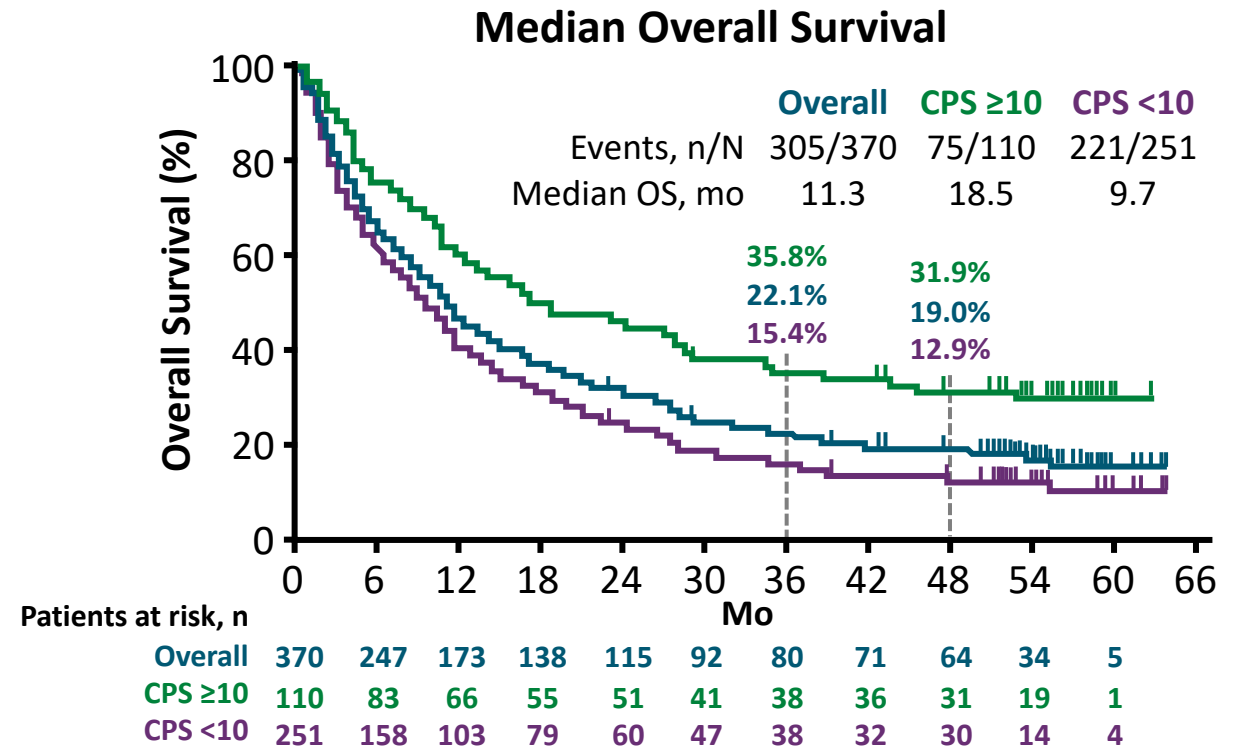
- Activity is consistent with prior results in 2L+ 1a/mUC
- Safety profile consistent with previous studies

KEYNOTE-052: Single-Agent Pembrolizumab in Locally Advanced mUBC

- Multisite, single-arm, open-label phase II trial
- Patients with locally advanced/metastatic urothelial cancer with measurable disease; no prior systemic chemotherapy and cisplatin-ineligible; ECOG PS 0-2 (N = 370)
- **Primary endpoint:** confirmed ORR per RECIST v1.1 by IRR
- **Secondary endpoints:** PFS, DoR per RECIST v1.1 by IRR, OS, safety
- Endpoints analyzed in full population and subgroups with PD-L1 CPS* ≥ 10 and CPS* < 10

* Defined as number of PD-L1–staining cells divided by total number of viable tumor cells x100.

Balar. Ann Oncol. 2023;34:289.

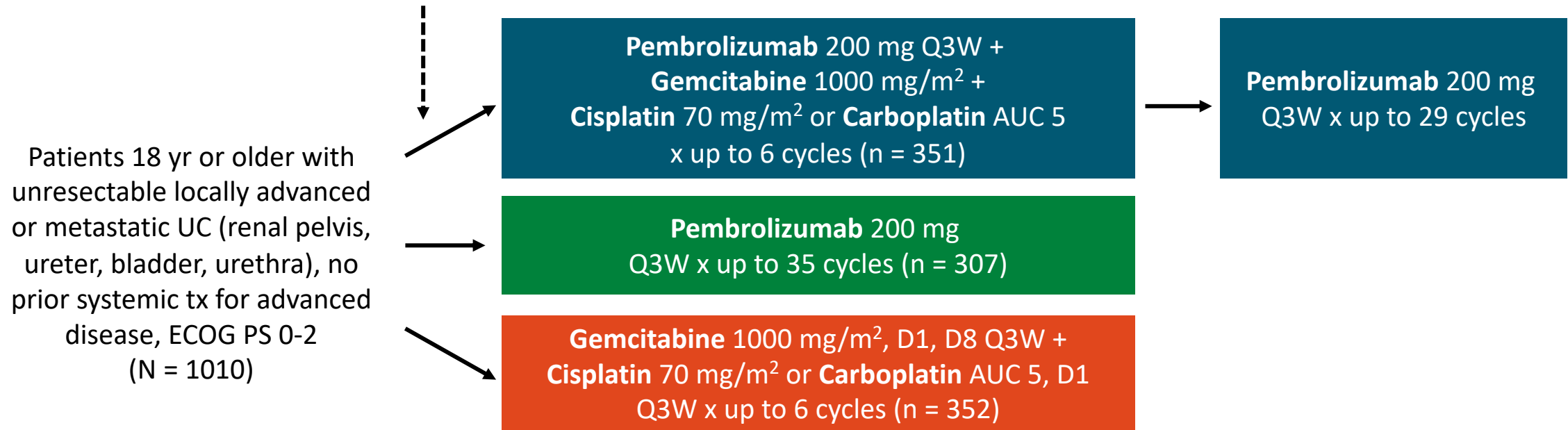


Response, n (%)	Pembrolizumab		
	All (N = 370)	CPS ≥ 10 (n = 110)	CPS < 10 (n = 251)
ORR	107 (28.9)	52 (47.3)	52 (20.7)
▪ CR	35 (9.5)	23 (20.9)	10 (4.0)

KEYNOTE-361: First-Line Pembrolizumab, Chemotherapy, or Both in Advanced Urothelial Carcinoma

- Randomized, open-label, phase III trial

Stratified by PD-L1 CPS (≥ 10 vs < 10) and choice of platinum*



- Primary endpoints:** PFS (BICR), OS
- Secondary endpoints:** ORR, DCR, DoR (BICR); safety

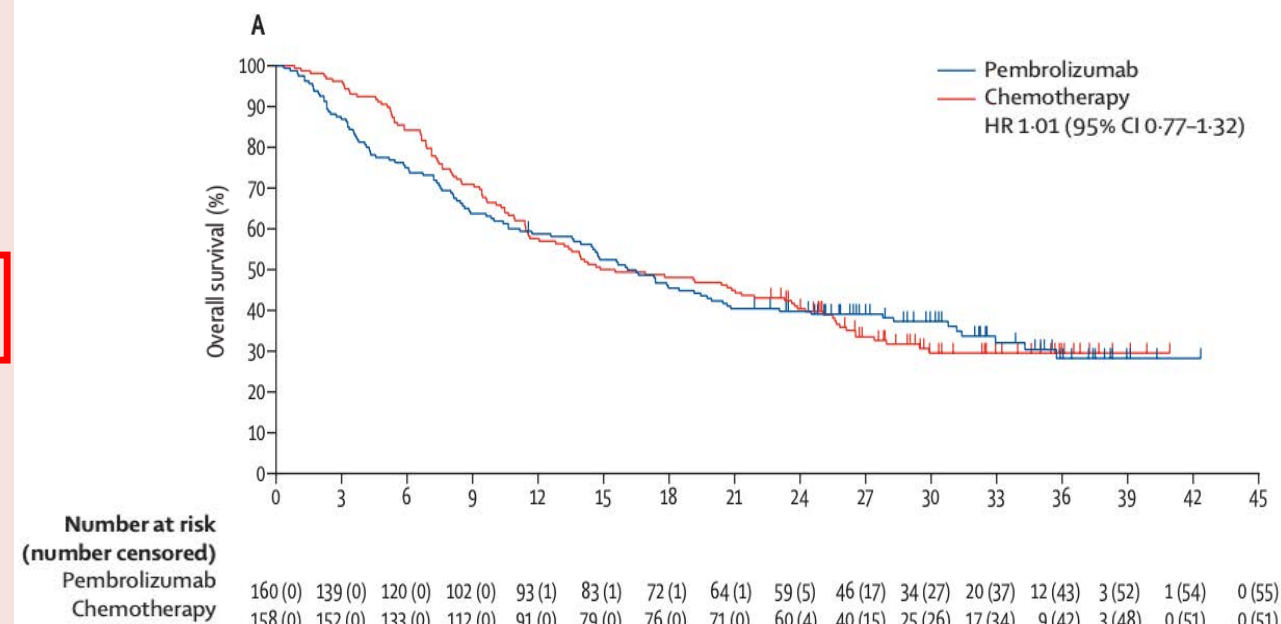
* Per PD-L1 pharmDx IHC assay. CPS = no. of PD-L1–staining tumor cells, lymphocytes, and macrophages divided by total no. viable tumor cells, multiplied by 100.

Median follow-up: 31.7 mo







KEYNOTE-361: Comparing Pembrolizumab to Chemotherapy in Advanced Urothelial Carcinoma

	Pembrolizumab group (n=307)	Chemotherapy group (n=352)
Proportion of patients with a complete or partial response	93 (30.3%, 25.2–35.8)	158 (44.9%, 39.6–50.2)
Chosen to receive cisplatin	46/137 (33.6%, 25.7–42.1)	76/156 (48.7%, 40.6–56.8)
Chosen to receive carboplatin	47/170 (27.6%, 21.1–35.0)	82/196 (41.8%, 34.8–49.1)
Best overall response		
Complete response	34 (11%)	43 (12%)
Partial response	59 (19%)	115 (33%)
Stable disease	52 (17%)	109 (31%)
Progressive disease	118 (38%)	39 (11%)
Non-complete response or non-progressive disease	8 (3%)	16 (5%)
Not evaluable or assessed*	36 (12%)	30 (9%)
Median duration of complete or partial response, months	28.2 (13.5–not evaluable)	6.2 (5.8–6.5)
Estimated ongoing responses at 12 months	65% (54–74)	24% (17–31)
Estimated ongoing responses at 18 months	54% (43–64)	19% (13–26)

Overall Survival (Pembrolizumab vs Chemotherapy)









In general, what is your preferred first-line treatment regimen for a 65-year-old patient with metastatic urothelial bladder cancer (UBC) and a PS of 0 who has received no prior systemic therapy?
 Does PD-L1 level affect your treatment decision?
 How long would you continue treatment?

	Preferred treatment	Affected by PD-L1?	Duration
 Dr Friedlander	Cisplatin/gemcitabine → avelumab	No	2 years
 Dr Grivas	Cisplatin/gemcitabine → avelumab	No	4-6 cycles, avelumab until PD/toxicity
 Dr Gupta	Cisplatin/gemcitabine → avelumab	No	2 years
 Dr Petrylak	Cisplatin/gemcitabine → avelumab	No	4-6 cycles
 Dr Plimack	Dose-dense MVAC → pembrolizumab	No	Chemo x 4, pembro x 2 years
 Dr Sonpavde	Cisplatin/gemcitabine → avelumab	No	Until PD/toxicity*







* Stop after 1 year if complete remission; PD = progressive disease; MVAC = methotrexate/vinblastine/doxorubicin/cisplatin

In general, what is your preferred first-line treatment regimen for an 80-year-old patient with metastatic UBC who has received no prior systemic therapy and is not a candidate for cisplatin?
 Does PD-L1 level affect your treatment decision?
 How long would you continue treatment?

	Preferred treatment	Affected by PD-L1?	Duration
 Dr Friedlander	Pembrolizumab/EV	No	EV until toxicity, pembrolizumab 2 years
 Dr Grivas	Pembrolizumab/EV	No	EV until toxicity, pembrolizumab 2 years
 Dr Gupta	Carboplatin/gemcitabine → avelumab	No	2 years
 Dr Petrylak	Carboplatin/gemcitabine → avelumab	No	4-6 cycles
 Dr Plimack	Pembrolizumab/EV	No	Until toxicity or PD
 Dr Sonpavde	Pembrolizumab/EV	No	Until PD/toxicity

EV = enfortumab vedotin; PD = progressive disease

In general, what is your preferred first-line treatment regimen for an 80-year-old patient with de novo metastatic UBC who has received no prior systemic therapy and is not a candidate for cisplatin or carboplatin? Does PD-L1 level affect your treatment decision? How long would you continue treatment?

	Preferred treatment	Affected by PD-L1?	Duration
 Dr Friedlander	Pembrolizumab	No	2 years
 Dr Grivas	Pembrolizumab	No	2 years
 Dr Gupta	Pembrolizumab	No	2 years
 Dr Petrylak	Enfortumab vedotin/ pembrolizumab	No	10 cycles
 Dr Plimack	Enfortumab vedotin/ pembrolizumab	No	Until toxicity or PD
 Dr Sonpavde	Pembrolizumab	Yes	Until PD/toxicity*

* Stop after 1 year if complete remission; PD = progressive disease

Agenda

INTRODUCTION

MODULE 1: First-Line Treatment of Metastatic Urothelial Bladder Cancer

MODULE 2: Second-Line Therapy and Beyond

- Enfortumab vedotin
- Sacituzumab govitecan
- Erdafitinib
- HER2-targeted treatment
- Other novel strategies

Advanced Urothelial Ca Treatment Algorithm

Disease State	Setting	Preferred Option	Other Options
Metastatic, no prior chemotherapy	Cisplatin-eligible	Cisplatin/gemcitabine f/b avelumab maintenance	<i>aMVAC f/b avelumab maintenance</i>
Metastatic, no prior chemotherapy	Cisplatin-ineligible	Gemcitabine/Carboplatin (in fit patients) f/b avelumab maintenance OR Pembrolizumab/Enfortumab-vedotin	<i>Pembrolizumab</i> <i>Single agent chemotherapy</i>
Metastatic, prior platinum chemotherapy or relapse within 1 year of perioperative cisplatin-based therapy		Pembrolizumab OR Erdafitinib (tumors with FGFR2/3 activating mutation or fusion) OR Enfortumab-vedotin (cisplatin-unfit pts)	<i>Avelumab</i> <i>Nivolumab</i>
Metastatic, prior chemotherapy & immunotherapy		Enfortumab-vedotin OR Sacituzumab-govitecan OR Erdafitinib (tumors with FGFR2/3 activating mutation or fusion)	<i>Taxane (US)</i> <i>Vinflunine (EU)</i>

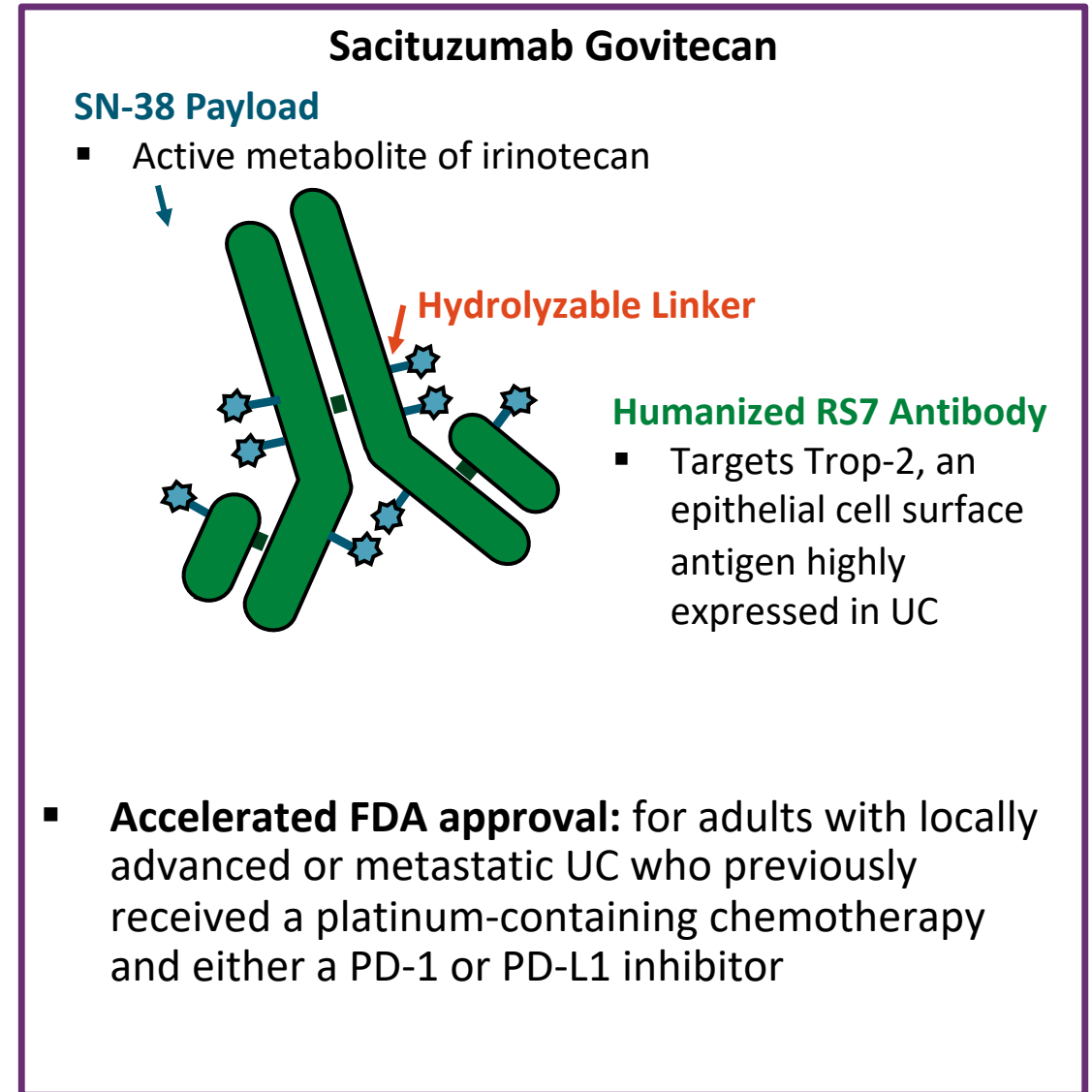
Clinical trials are critical throughout disease spectrum & treatment settings!

Petros Grivas

Courtesy of Petros Grivas, MD, PhD

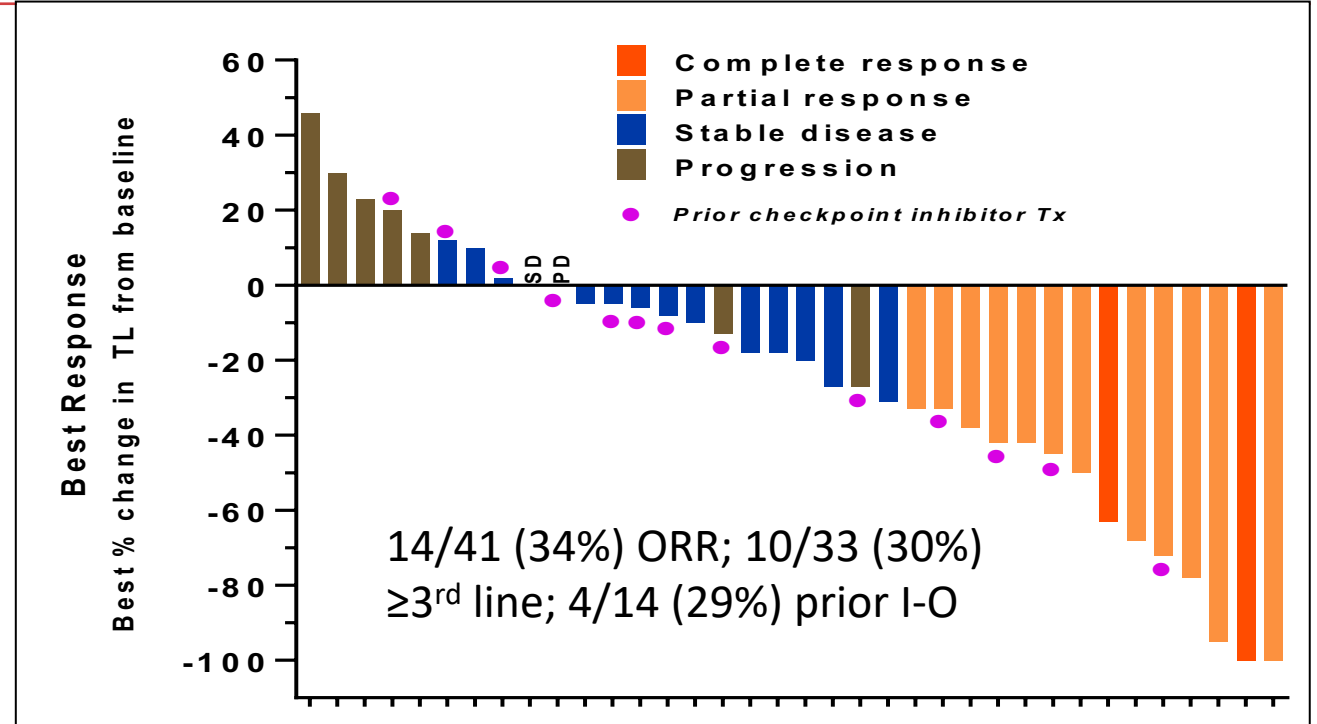
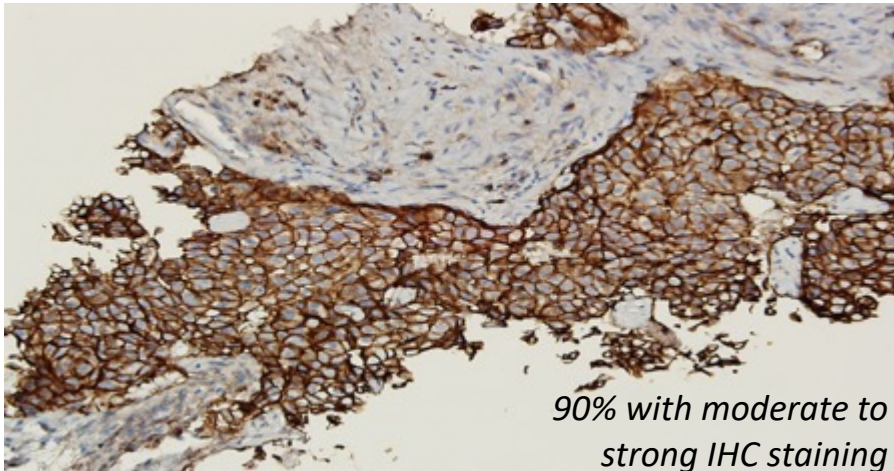
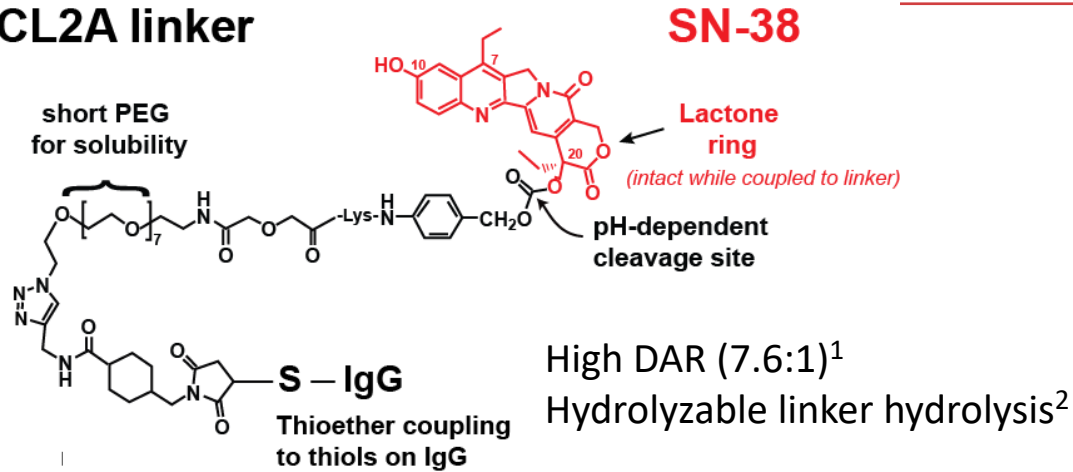
What is on the horizon?

- Sacituzumab Govitecan
 - Accelerated approval as monotherapy in later line mUBC
 - TROPHY-U-01 cohort A
 - N=113
 - 28% ORR, DOR 6.1 mo, mPFS 5.4 mo, mOS 10.9 mo
 - Is there synergy with PD-1 immunotherapy?



Sacituzumab govitecan

CL2A linker



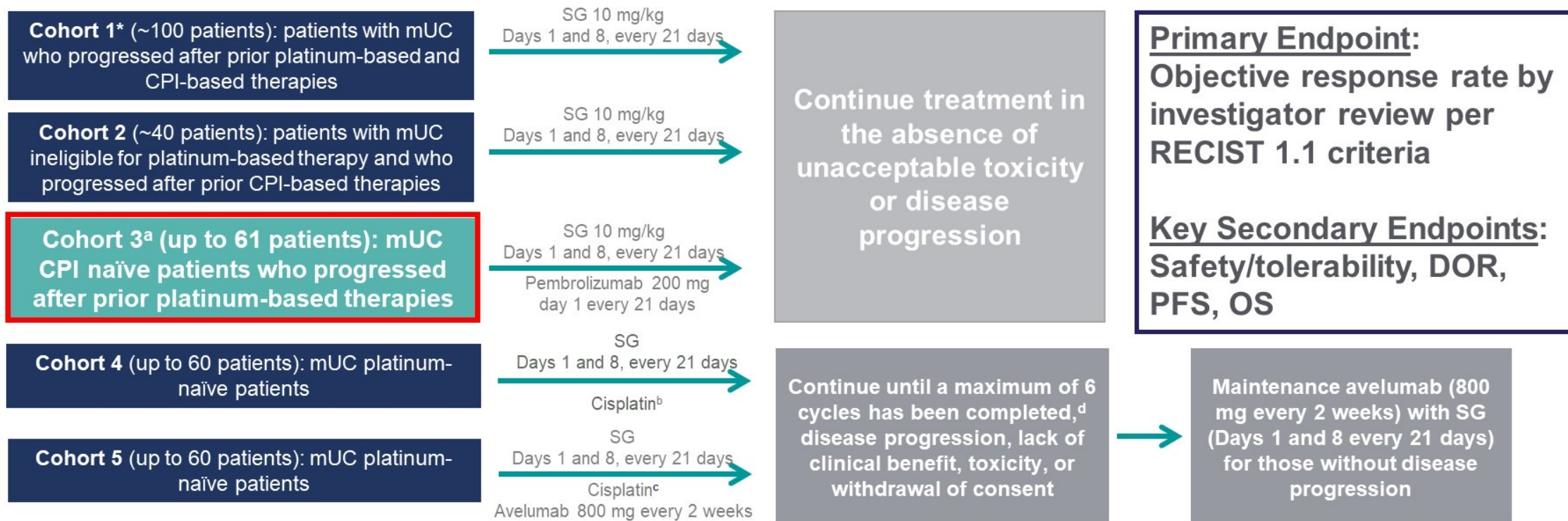
- Final 14/45 (31%) ORR
- Median PFS 7.3 months
- Median OS 18.9 months

1. Cardillo TM, et al. Bioconjug Chem 2015; 26:919-31
2. Govindan SV, et al. Mol Cancer Ther 2013; 12:968-78

Courtesy of Petros Grivas, MD, PhD

Tagawa S, et al. Ann Oncol (2017) 28 (suppl_5):v295-v329
Tagawa S, et al. J Clin Oncol 37, no. 7_suppl (March 1, 2019) 354-354

TROPHY-U-01 Is a Registrational, Open-Label, Multicohort Phase 2 Trial in Patients With mUC



Key Inclusion Criteria: Age ≥18 years, ECOG of 0/1, creatinine clearance (CrCl) ≥30 mL/min,^{b,c} adequate hepatic function

Key Exclusion Criteria: Immunodeficiency, active Hepatitis B or C, active secondary malignancy, or active brain metastases

***Accelerated FDA approval for treatment of patients with locally advanced or mUC who previously received platinum-containing chemotherapy and PD-1/L1 inhibitor¹**

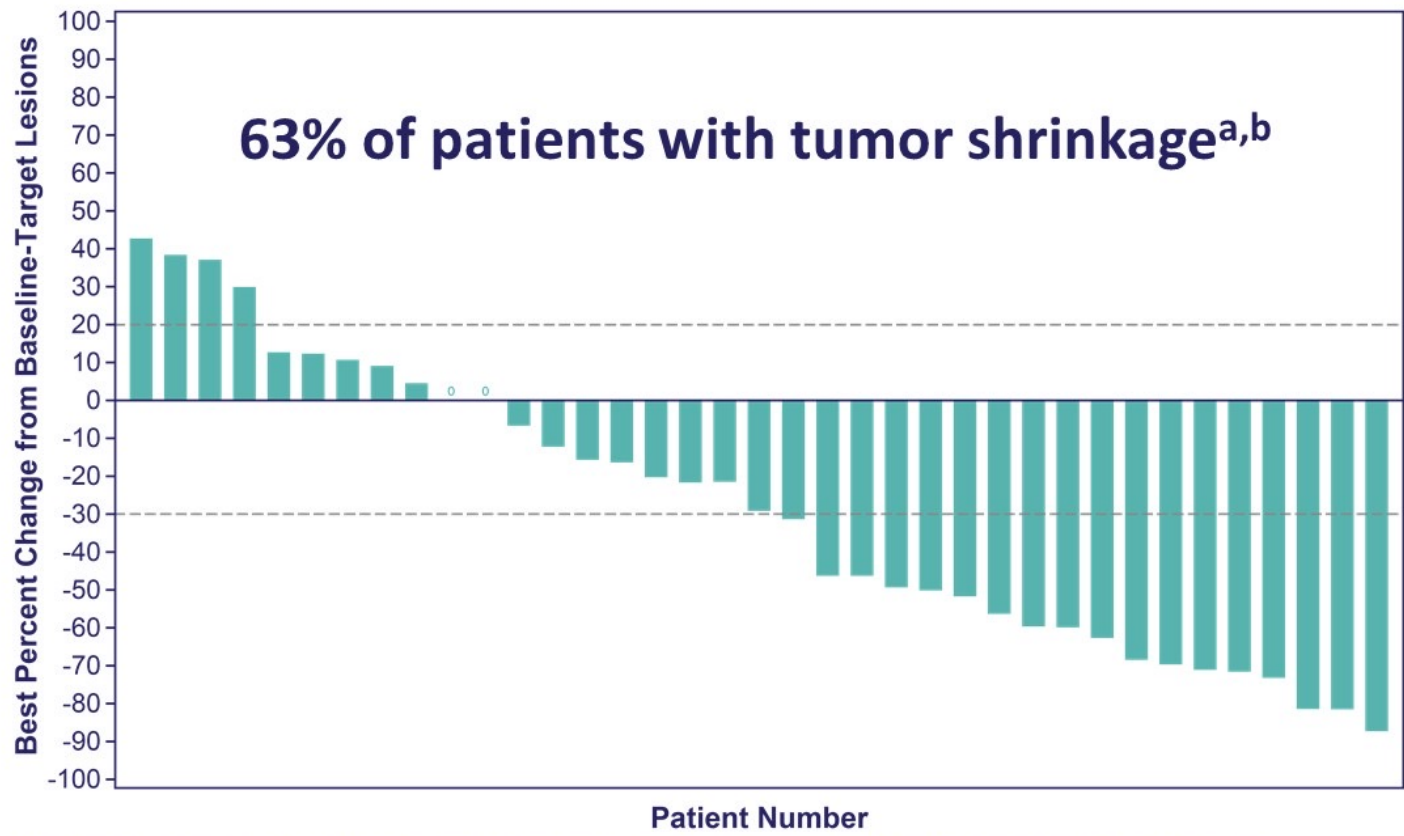
^aExclusions for Cohort 3 only: active autoimmune disease or history of interstitial lung disease. ^bIn patients with CrCl ≥60 mL/min; ^cIn patients with creatinine clearance 50–60 mL/min. ^dFor patients who have not progressed, maintenance therapy will begin with infusions of avelumab (800 mg every 2 weeks beginning cycle 1, day 1 and every 2 weeks thereafter) followed by SG on days 1 and 8 every 21 days.

CBR, clinical benefit rate; CPI, checkpoint inhibitor; CrCl, creatinine clearance; DOR, duration of response; ECOG PS, Eastern Cooperative Oncology Group performance status; mUC, metastatic urothelial cancer; NR, not reached; ORR, objective response rate; OS, overall survival; PFS, progression-free survival; RECIST, Response Evaluation Criteria in Solid Tumors; SG, sacituzumab govitecan.

1. TRODELVY™ (sacituzumab govitecan-hziy). Prescribing Information. Immunomedics, Inc.; April 2021; EudraCT Number: 2018-001167-23; ClinicalTrials.gov Number: NCT03547973. IMMU-132-06 study.

Overall Response and Best % Change From Baseline in Tumor Size

- Median follow-up: 5.8 months (data cutoff date: 2021-09-24)
- Median time to response: 2 months (1.3–2.8; n=14)
- Median DOR not yet reached: N/A (2.80-N/A)
- Median PFS (95% CI), 5.5 months (1.7–NR); median OS, not reached



^aResponses assessed by investigator in the intent-to-treat population. ^bPatients without post-baseline assessments are not shown here.
CI, confidence interval; CR, complete response; DOR, duration of response; ORR, objective response rate; PD, progressive disease; PR, partial response; SD, stable disease

	Cohort 3 ^a (N=41)
Objective response rate (CR + PR), n (%) [95%CI]	14 (34) [20.1-50.6]
Objective response rate (CR + PR), evaluable patients, n (%)	14 (38)
Best overall response, n (%)	
CR	1 (2)
PR	13 (32)
SD	11 (27)
SD ≥ 6 months	4 (10)
PD	12 (29)
Not assessed	4 (10)
Clinical Benefit Rate (CR + PR + SD), n (%) [95%CI]	25 (61) [44.5-75.8]

How would you generally sequence the following agents for a patient with metastatic UBC who is eligible to receive both?



Dr Friedlander

Enfortumab vedotin → sacituzumab govitecan



Dr Grivas

Enfortumab vedotin → sacituzumab govitecan



Dr Gupta

Enfortumab vedotin → sacituzumab govitecan



Dr Petrylak

Enfortumab vedotin → sacituzumab govitecan



Dr Plimack

Enfortumab vedotin → sacituzumab govitecan



Dr Sonpavde

Enfortumab vedotin → sacituzumab govitecan

What would be your next line of therapy for a 65-year-old patient with metastatic UBC and a PS of 0 who experiences disease progression on your preferred first-line treatment?



Dr Friedlander

Enfortumab vedotin +/- pembrolizumab



Dr Grivas

Enfortumab vedotin



Dr Gupta

Enfortumab vedotin



Dr Petrylak

Enfortumab vedotin/pembrolizumab



Dr Plimack

Enfortumab vedotin



Dr Sonpavde

Enfortumab vedotin/pembrolizumab

What would be your most likely next line of therapy for an 80-year-old patient with metastatic UBC who has received no prior systemic therapy, is not a candidate for cisplatin or carboplatin and experienced disease progression on your preferred first-line treatment?



Dr Friedlander

Enfortumab vedotin



Dr Grivas

Enfortumab vedotin



Dr Gupta

Enfortumab vedotin



Dr Petrylak

Carboplatin/gemcitabine



Dr Plimack

Gemcitabine



Dr Sonpavde

Enfortumab vedotin

A 65-year-old patient receives neoadjuvant cisplatin/gemcitabine followed by cystectomy and then adjuvant nivolumab for FGFR wild-type UBC but develops disease recurrence in the liver 9 months after starting nivolumab. Regulatory and reimbursement issues aside, what would you likely recommend?



Dr Friedlander

Pembrolizumab +/- enfortumab vedotin



Dr Grivas

Enfortumab vedotin



Dr Gupta

Enfortumab vedotin



Dr Petrylak

Enfortumab vedotin



Dr Plimack

Enfortumab vedotin



Dr Sonpavde

Pembrolizumab/enfortumab vedotin

Based on available data and your clinical experience, approximately what proportion of patients who are receiving enfortumab vedotin for metastatic UBC will require a dose reduction due to toxicity?



Dr Friedlander

50%



Dr Grivas

90%



Dr Gupta

80%



Dr Petrylak

30%



Dr Plimack

50%



Dr Sonpavde

35%

What would be your next line of therapy for an 80-year-old patient with metastatic UBC who is not a candidate for cisplatin and experienced disease progression on your preferred first-line treatment?



Dr Friedlander

Sacituzumab govitecan



Dr Grivas

Carboplatin/gemcitabine



Dr Gupta

Enfortumab vedotin



Dr Petrylak

Enfortumab vedotin/pembrolizumab



Dr Plimack

Gemcitabine



Dr Sonpavde

Carboplatin/gemcitabine

Based on available data and your clinical experience, approximately what proportion of patients who are receiving sacituzumab govitecan for metastatic UBC will require a dose reduction due to toxicity?



Dr Friedlander

30%



Dr Grivas

45%



Dr Gupta

70%



Dr Petrylak

20%



Dr Plimack

60%



Dr Sonpavde

25%

In general, when you administer sacituzumab govitecan for metastatic UBC, do you preemptively prescribe growth factors for the prevention of treatment-related neutropenia?



Dr Friedlander

Yes



Dr Grivas

Yes



Dr Gupta

Yes



Dr Petrylak

Yes



Dr Plimack

No



Dr Sonpavde

Yes

A patient who is experiencing a good response to sacituzumab govitecan for metastatic UBC is found to have an absolute neutrophil count of $900/\text{mm}^3$ without fever. What would be your treatment approach?



Dr Friedlander

Hold sacituzumab govitecan (SG) until counts return to normal, and restart at the same dose



Dr Grivas

Hold SG until counts return to normal and start G-CSF if not already started; if already on G-CSF, SG at reduced dose



Dr Gupta

Hold SG until counts return to normal, and restart at a reduced dose



Dr Petrylak

Continue SG at a reduced dose



Dr Plimack







Hold SG until counts return to normal, and restart at a reduced dose



Dr Sonpavde

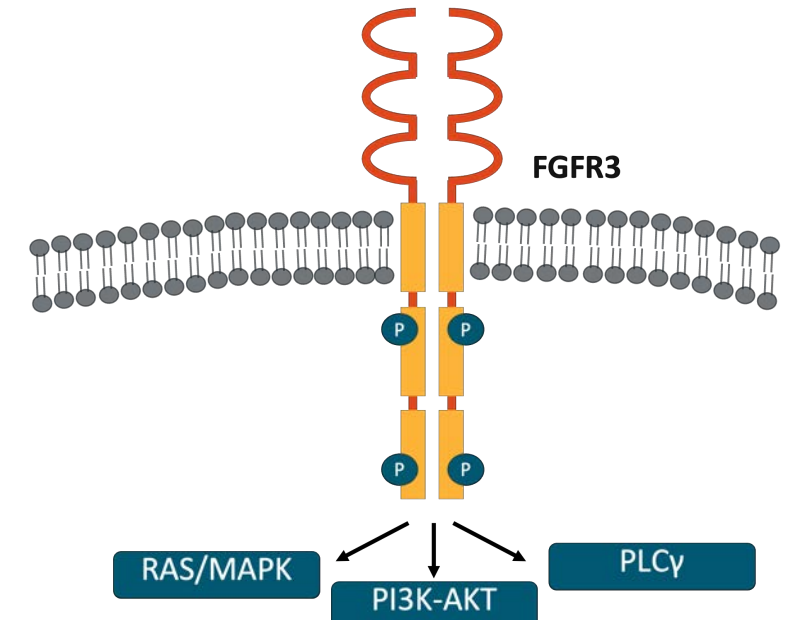
Hold SG until counts return to normal, and restart at the same dose

In general, when you administer sacituzumab govitecan for metastatic UBC, do you preemptively initiate medication for ...?

		Nausea and vomiting	Diarrhea
	Dr Friedlander	Yes	Yes
	Dr Grivas	Yes	No
	Dr Gupta	Yes	Yes
	Dr Petrylak	Yes	Yes
	Dr Plimack	Yes	No
	Dr Sonpavde	Yes	No

What else is on the horizon?

- FGFR3 mutations present in ~20% of mUBC
- Erdafitinib is an approved pan-FGFR inhibitor: Phase III THOR study
- Is there synergy with PD-1 immunotherapy?



	Erda n=136	Chemo n=130
OS, median (95% CI), mo	12.1	7.8
Hazard ratio (95% CI)	0.64 (0.47-0.88), p=0.0050	
PFS, median (95% CI), mo	5.6	2.7
Hazard ratio (95% CI)	0.58 (0.44-0.78), p=0.0002	
ORR, %	46	12
Relative risk (95% CI)	3.94 (2.37-6.57), p<0.001	

Courtesy of Terence Friedlander, MD

How would you generally sequence the following agents for a patient with metastatic UBC who is eligible to receive all 3?



Dr Friedlander

Enfortumab vedotin → erdafitinib → sacituzumab govitecan



Dr Grivas

Erdafitinib → enfortumab vedotin → sacituzumab govitecan



Dr Gupta

Enfortumab vedotin → erdafitinib → sacituzumab govitecan



Dr Petrylak

Enfortumab vedotin → sacituzumab govitecan → erdafitinib



Dr Plimack

Enfortumab vedotin → erdafitinib → sacituzumab govitecan



Dr Sonpavde

Erdafitinib → enfortumab vedotin → sacituzumab govitecan

A 65-year-old patient receives neoadjuvant chemotherapy followed by cystectomy and then adjuvant nivolumab for UBC with an FGFR mutation but develops disease recurrence in the liver 9 months after starting nivolumab. Regulatory and reimbursement issues aside, what would you likely recommend?



Dr Friedlander

Erdafitinib



Dr Grivas

Erdafitinib



Dr Gupta

Enfortumab vedotin



Dr Petrylak

Enfortumab vedotin



Dr Plimack

Enfortumab vedotin



Dr Sonpavde

Erdafitinib

Based on available data and your clinical experience, approximately what proportion of patients who are receiving erdafitinib for metastatic UBC will require a dose reduction due to toxicity?



Dr Friedlander

75%



Dr Grivas

90%



Dr Gupta

75% to 80%



Dr Petrylak

60%



Dr Plimack

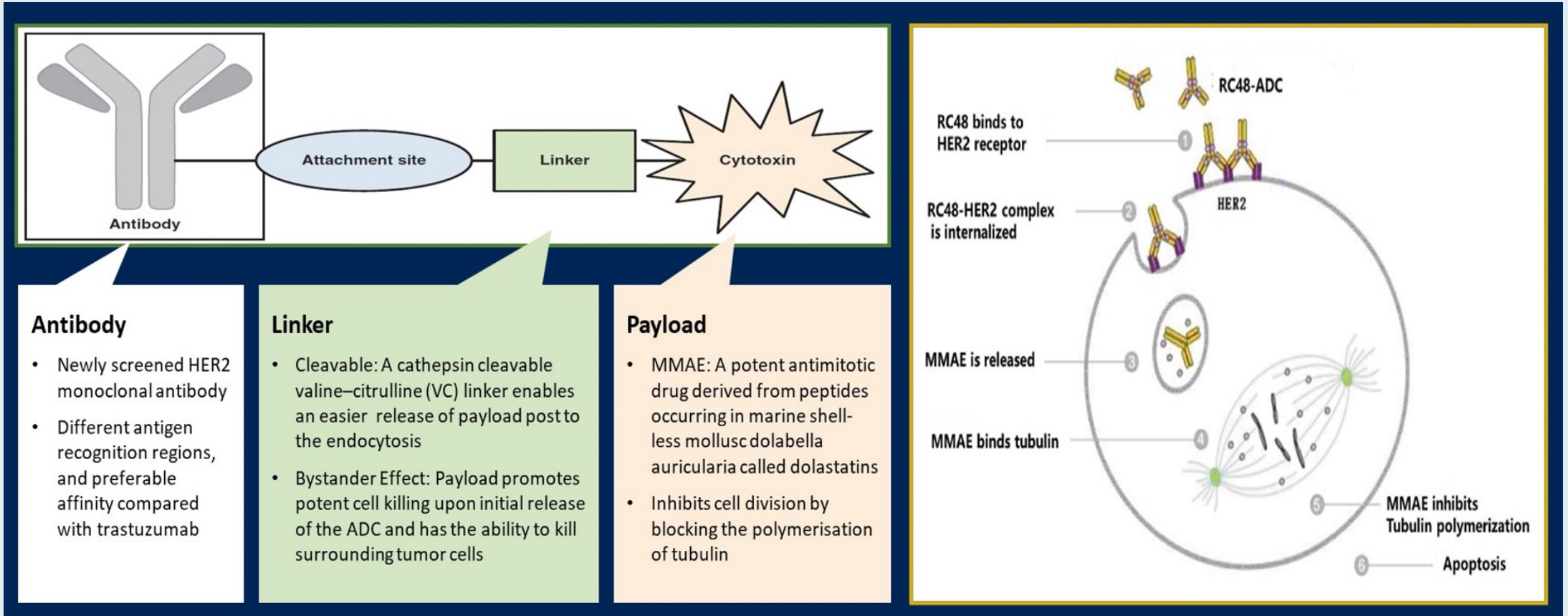
80%



Dr Sonpavde

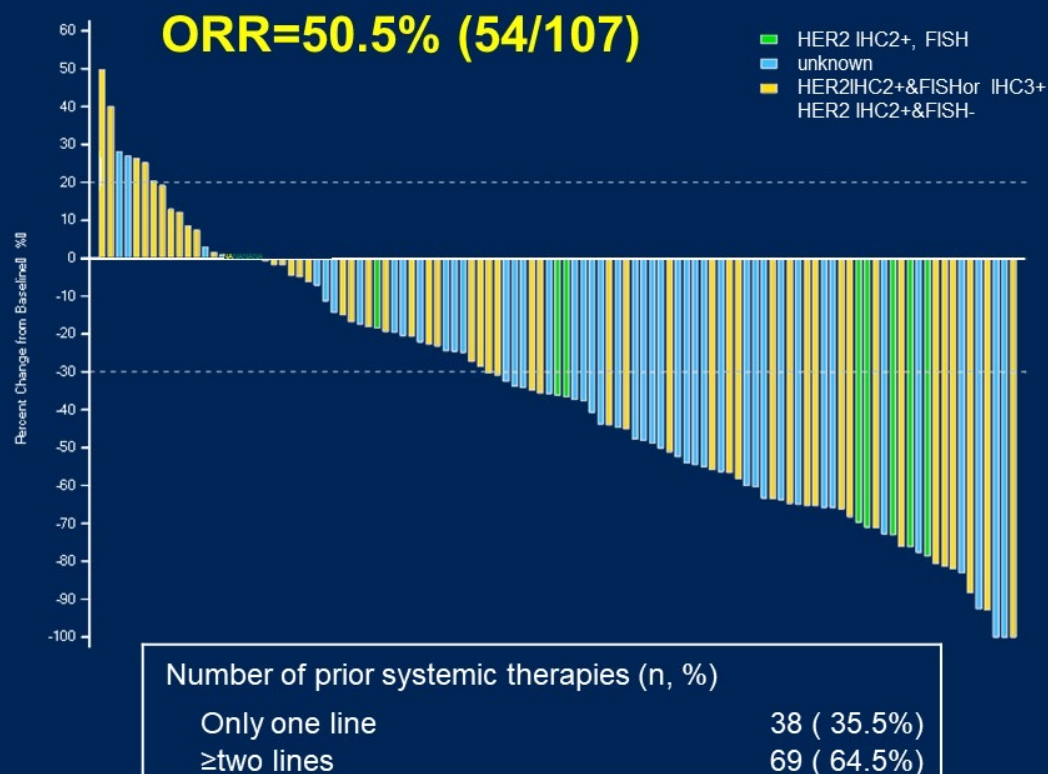
50%

Disitamab Vedotin (RC48-ADC) Structure and Mechanisms of Action



RC48 active in HER2 2-3+ mUC (#4520 – Sheng et al)

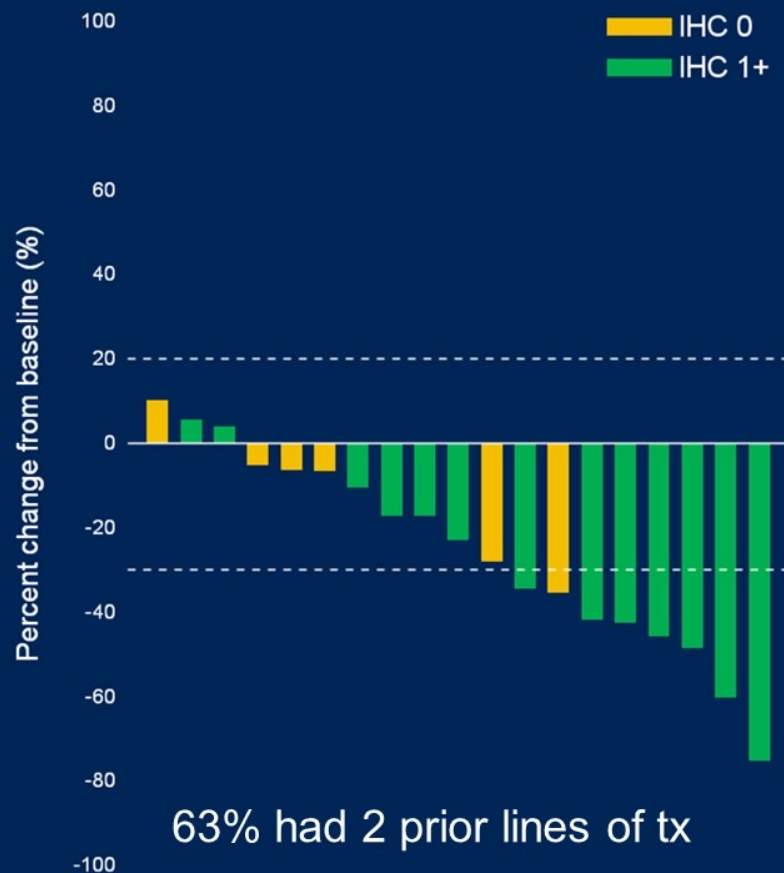
Target Lesion Change from Baseline



Subgroup Analysis for cORR

Subgroups	cORR (% , 95% CI)
<i>HER2 status</i>	
IHC2+FISH+ or IHC3+ (n=45)	62.2% (46.5%, 76.2%)
IHC2+FISH- (n=53)	39.6% (26.5%, 54.0%)
<i>Metastasis site</i>	
Visceral Metastasis (n=97)	51.5% (41.2%, 61.8%)
Metastasis to Liver (n=48)	52.1% (37.2%, 66.7%)
<i>Prior therapies</i>	
Post PD1/PDL1 Treatments (n=27)	55.6% (35.3%, 74.5%)
Post 1 line of Chemotherapy (n=38)	50.0% (33.4%, 66.6%)
Post ≥2 Lines of Chemotherapy (n=69)	50.7% (38.4%, 63.0%)

RC48 active in HER2 1+ mUC (#4519 – Xu et al)



Confirmed ORR

n (%)	5 (26.3%)
95%CI	9.1%, 51.2%

Subgroups

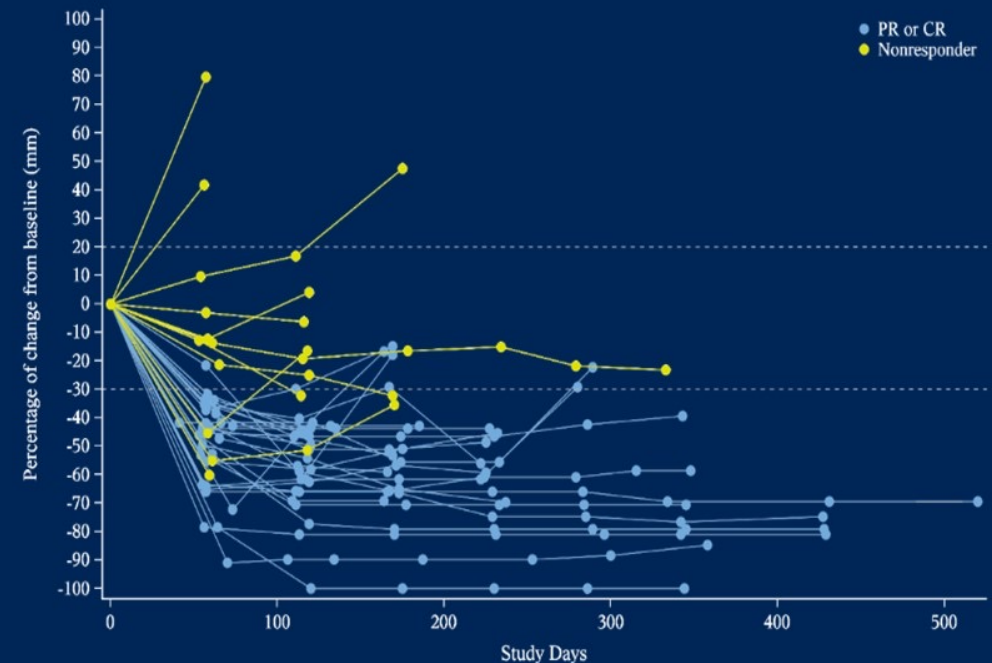
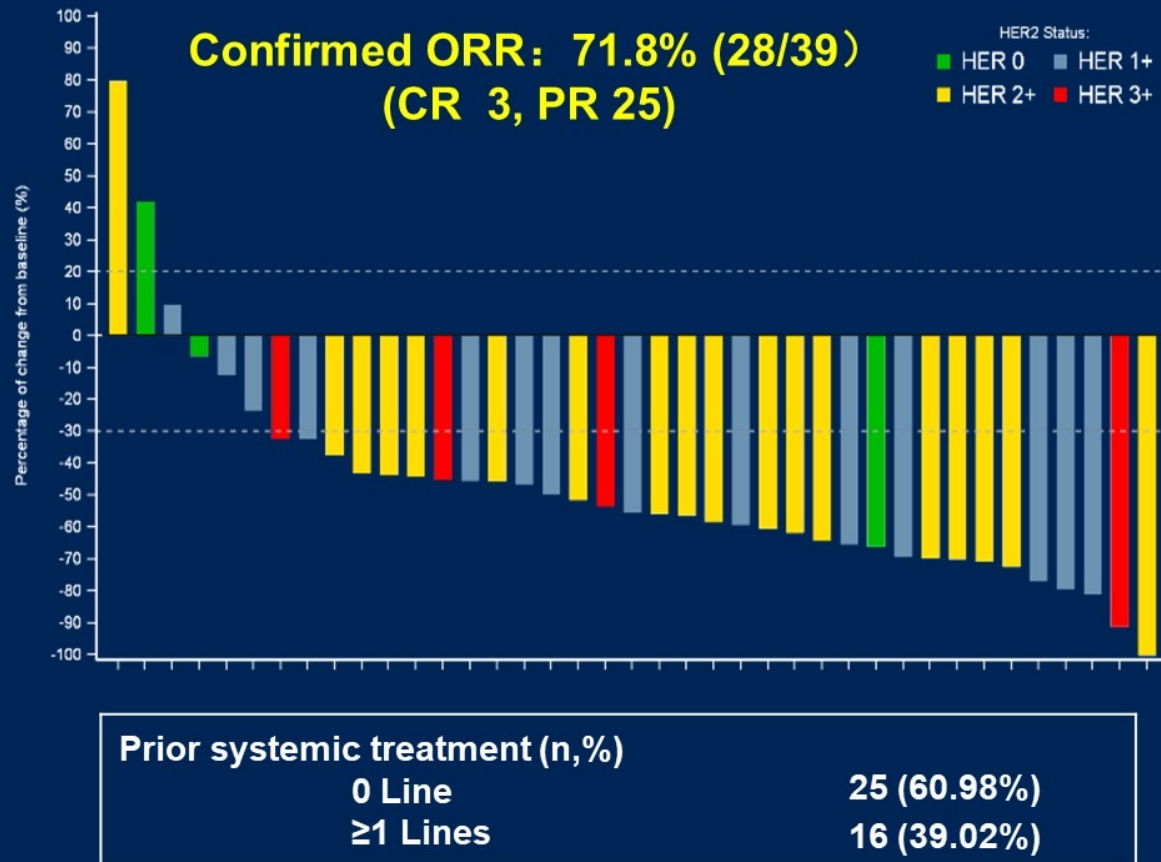
cORR (% , 95% CI)

IHC 0 (n=6)	0
IHC 1+ (n=13)	38.5 (13.9, 68.4)

RC48 AEs somewhat distinct from other ADCs

Adverse Event	RC48	Enfortumab Vedotin	Trastuzumab Deruxtecan
Neuropathy	+	+	-
↑ AST	+	-/+	-
↓ neutrophils	+	-/+	+
Rash	-/+	+	-
↑ glucose	+	+	-
Diarrhea	-	-	+
Pneumonitis	-	-	+

RC48 + Toripalimab (#4520 – Sheng et al)



Is there something special about MMAE?

Regimen	Payload	N	Population	HER2	ORR
Enfortumab vedotin + Pembrolizumab	MMAE (tubulin)	43	Cis-ineligible, tx naive	All	73%
Disitamab vedotin + Toripalimab	MMAE (tubulin)	39	60% tx naive	All	72%
Trastuzumab deruxtecan + Nivolumab	Dxd (Topo I)	26	Progressed despite prior platinum	2+ or 3+	36%
Sacitizumab govitecan + Pembrolizumab	SN38 (Topo I)	41	Progressed despite prior platinum	All	34%

Friedlander, ASCO 2021; Sheng, ASCO 2022;
Galsky GU ASCO 2022; Grivas GU ASCO 2022

Regulatory and reimbursement issues aside, which agent or regimen would you be most likely to use for a patient with HER2-positive metastatic UBC?



Dr Friedlander

**Trastuzumab/chemotherapy, disitamab vedotin,
trastuzumab deruxtecan**



Dr Grivas

Disitamab vedotin



Dr Gupta

Trastuzumab deruxtecan or disitamab vedotin



Dr Petrylak

Trastuzumab



Dr Plimack

Disitamab vedotin



Dr Sonpavde

Disitamab vedotin

Have you offered or would you offer HER2-targeted therapy to your patients with HER2-positive metastatic UBC outside of a protocol setting?



Dr Friedlander

I have – trastuzumab deruxtecan



Dr Grivas

I have not but would for the right patient



Dr Gupta

I have not and would not



Dr Petrylak

I have – trastuzumab



Dr Plimack

I have not and would not



Dr Sonpavde

I have not and would not

Regulatory and reimbursement issues aside, in which line of therapy would you generally offer targeted treatment to a patient with HER2-positive metastatic UBC?



Dr Friedlander

Third line



Dr Grivas

Beyond third line



Dr Gupta

Beyond third line



Dr Petrylak

Third line



Dr Plimack

Beyond third line



Dr Sonpavde

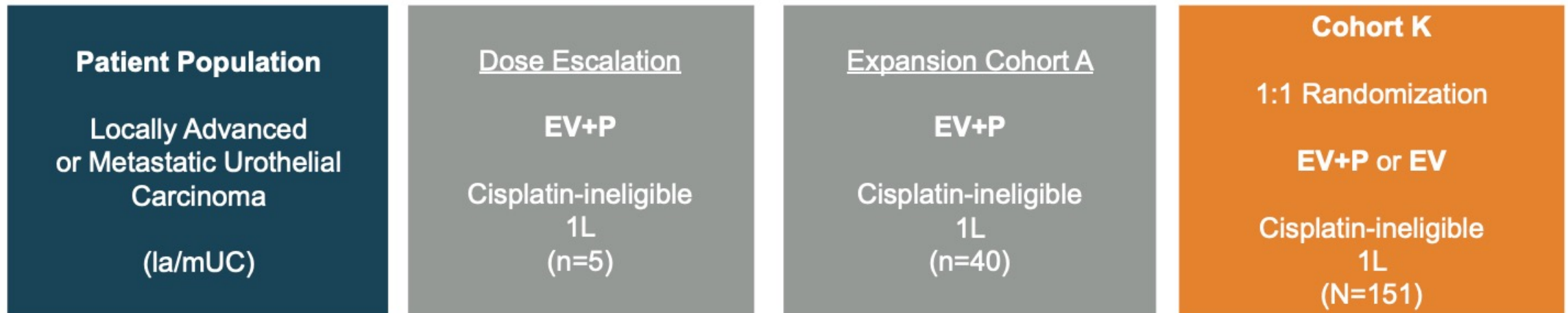
Second line

APPENDIX

EV-103 Cohort K: First-Line Enfortumab Vedotin + Pembrolizumab in Cisplatin-Ineligible mUC

EV-103 Cohort K

Part of an open-label, multiple cohort, phase 1b/2 study in patients with urothelial carcinoma



Stratification factors: Liver metastases (present/absent) and ECOG PS (0 or 1/2);

Exploratory endpoints: pharmacokinetics, antitherapeutic antibody, biomarkers of activity including baseline PD-L1 status and Nectin-4 expression, progression-free survival on subsequent therapy by investigator, patient reported outcomes

EV-103 Cohort K: First-Line Enfortumab Vedotin + Pembrolizumab in Cisplatin-Ineligible mUC

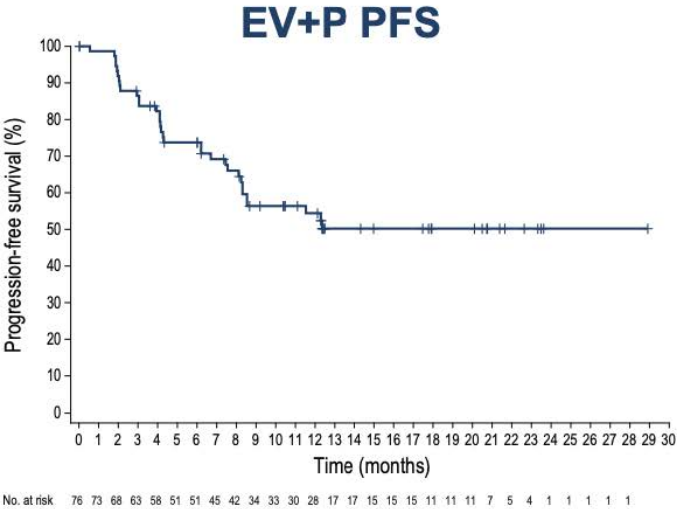
Overall Response Rate by BICR

EV+P: 64.5% confirmed ORR with rapid response

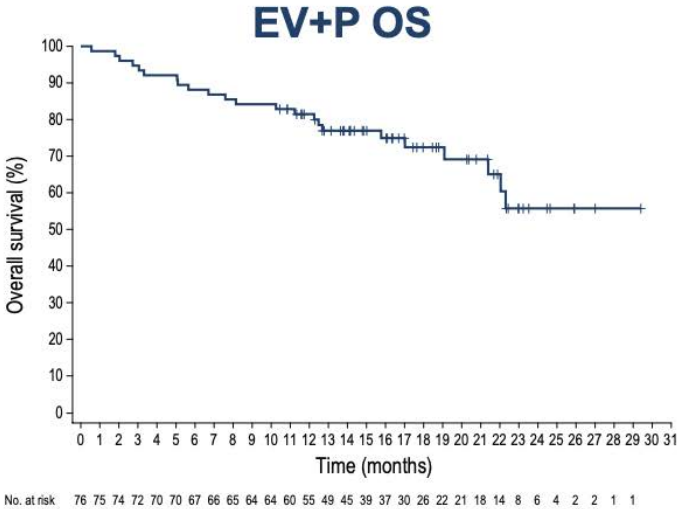
	EV+P (N=76)	EV Mono (N=73)
Confirmed ORR, n (%) (95% CI)	49 (64.5) (52.7, 75.1)	33 (45.2) (33.5, 57.3)
Best overall response, n (%)		
Complete response	8 (10.5)	4 (5.5)
Partial response	41 (53.9)	29 (39.7)
Stable disease	17 (22.4)	25 (34.2)
Progressive disease	6 (7.9)	7 (9.6)
Not evaluable	3 (3.9)	5 (6.8)
No Assessment	1 (1.3)	3 (4.1)
Median time to objective response, mos (range)	2.07 (1.1, 6.6)	2.07 (1.9, 15.4)
Median number of treatment cycles (range)	12.0 (1, 34)	8.0 (1, 33)

Progression-Free Survival per BICR and Overall Survival

Median PFS and OS for EV+P were not reached



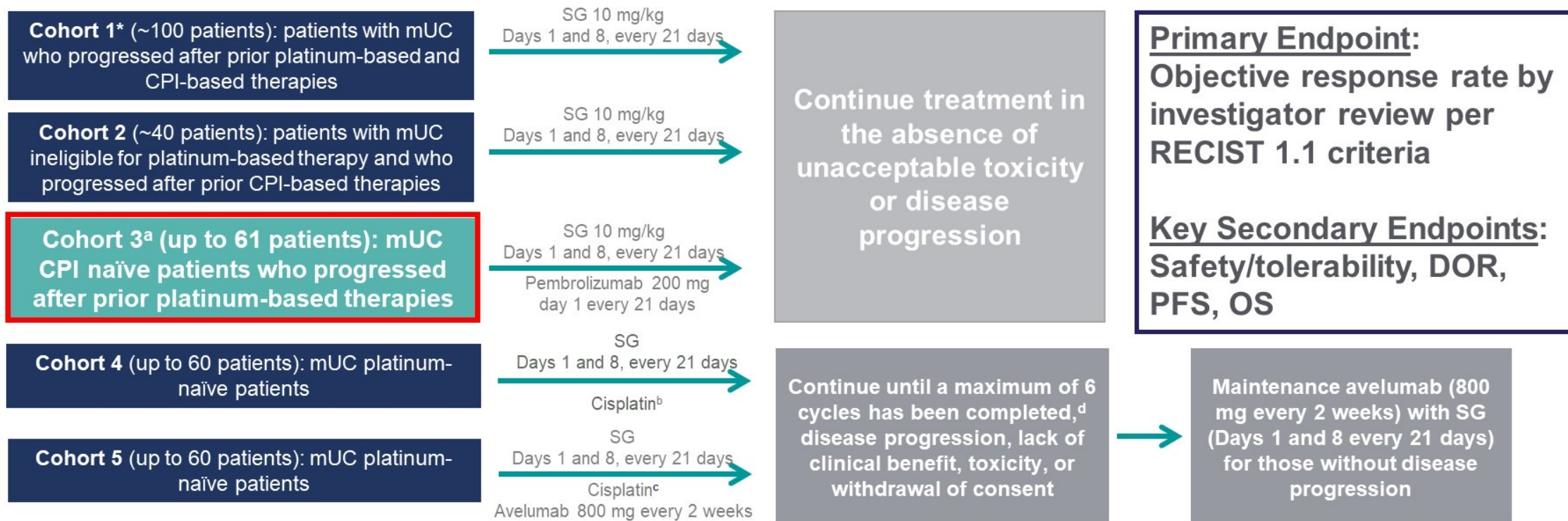
	EV+P (N=76)	EV Mono (N=73)
PFS events, n	33	37
mPFS (95% CI), mos	— (8.31, —)	8.2 (6.05, 15.28)
PFS at 12 mos, %	54.5	40.3



	EV+P (N=76)	EV Mono (N=73)
OS events, n	23	30
mOS (95% CI), mos	— (21.39, —)	21.7 (15.47, —)
OS at 12 mos, %	81.5	69.7
Median follow-up time, mos	17.6	18.2

No new safety signals

TROPHY-U-01 Is a Registrational, Open-Label, Multicohort Phase 2 Trial in Patients With mUC



Key Inclusion Criteria: Age ≥18 years, ECOG of 0/1, creatinine clearance (CrCl) ≥30 mL/min,^{b,c} adequate hepatic function

Key Exclusion Criteria: Immunodeficiency, active Hepatitis B or C, active secondary malignancy, or active brain metastases

***Accelerated FDA approval for treatment of patients with locally advanced or mUC who previously received platinum-containing chemotherapy and PD-1/L1 inhibitor¹**

^aExclusions for Cohort 3 only: active autoimmune disease or history of interstitial lung disease. ^bIn patients with CrCl ≥60 mL/min; ^cIn patients with creatinine clearance 50–60 mL/min. ^dFor patients who have not progressed, maintenance therapy will begin with infusions of avelumab (800 mg every 2 weeks beginning cycle 1, day 1 and every 2 weeks thereafter) followed by SG on days 1 and 8 every 21 days.

CBR, clinical benefit rate; CPI, checkpoint inhibitor; CrCl, creatinine clearance; DOR, duration of response; ECOG PS, Eastern Cooperative Oncology Group performance status; mUC, metastatic urothelial cancer; NR, not reached; ORR, objective response rate; OS, overall survival; PFS, progression-free survival; RECIST, Response Evaluation Criteria in Solid Tumors; SG, sacituzumab govitecan.

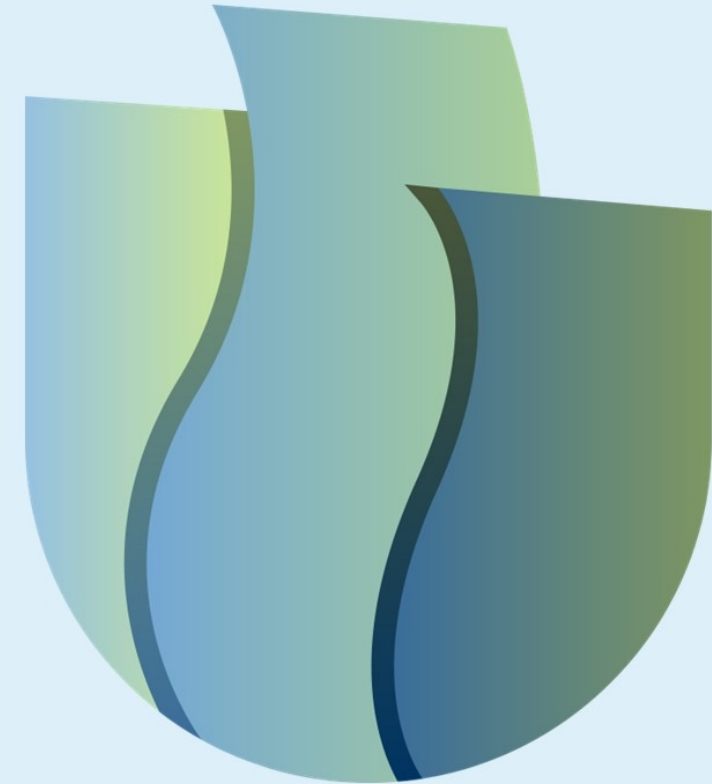
1. TRODELVY™ (sacituzumab govitecan-hziy). Prescribing Information. Immunomedics, Inc.; April 2021; EudraCT Number: 2018-001167-23; ClinicalTrials.gov Number: NCT03547973. IMMU-132-06 study.

TROPHY U-01 Cohort 3

- Modest increase in ORR with addition of pembrolizumab
- Some long-term responders
 - Would this be seen with pembrolizumab monotherapy?
- More data needed to better understand interaction of SG and immunotherapy
- TROPiCS 04 Phase III monotherapy study of SG vs chemotherapy underway

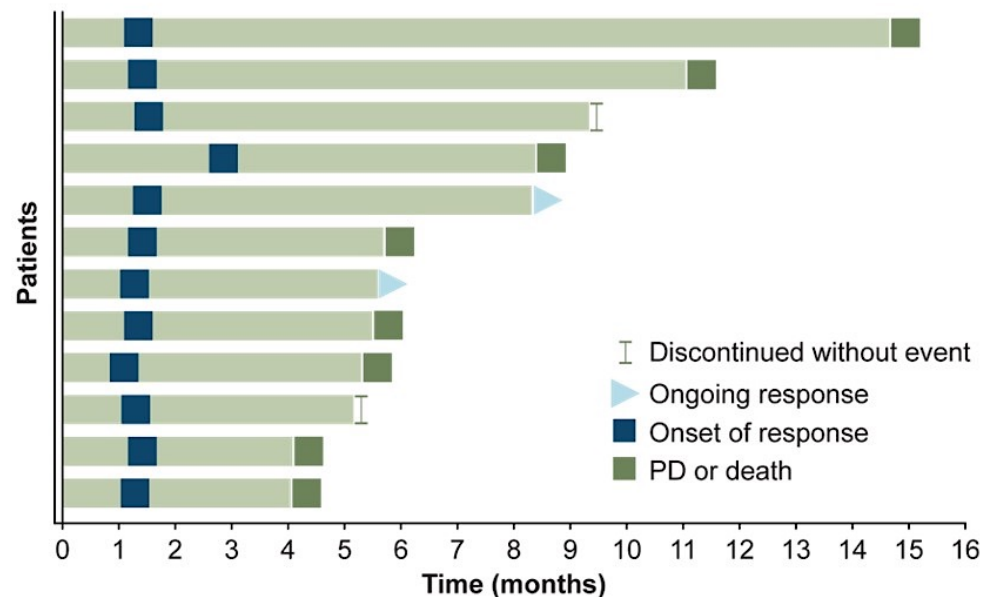
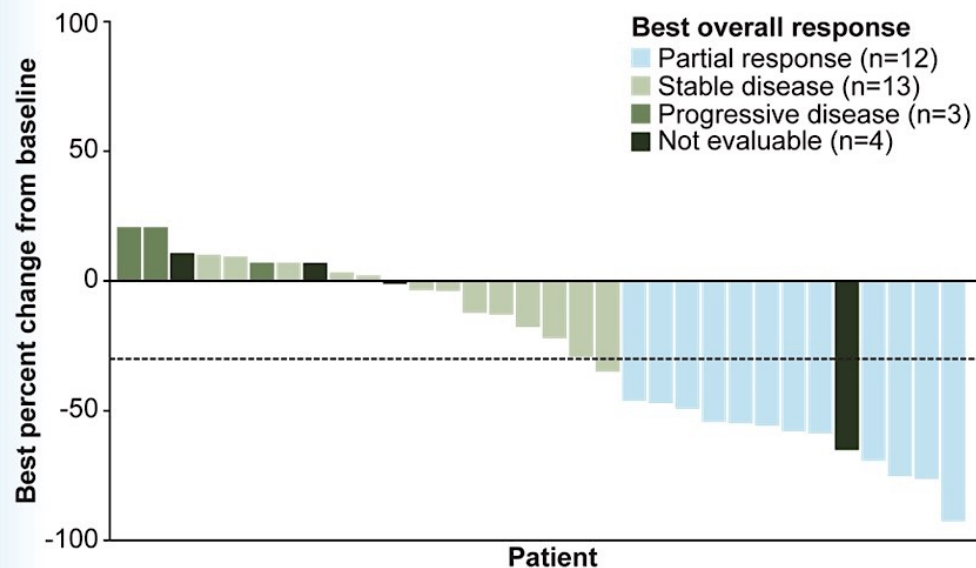
TROPHY-U-01 Cohort 2, a Phase 2 Study of Sacituzumab Govitecan in Platinum-Ineligible Patients With Metastatic Urothelial Cancer who Progressed After Prior Checkpoint Inhibitor Therapy

Daniel P. Petrylak,¹ Scott T. Tagawa,² Rohit K. Jain,³ Manojkumar Bupathi,⁴ Arjun Balar,⁵ Arash Rezazadeh Kalebasty,⁶ Saby George,⁷ Phillip Palmbos,⁸ Luke Nordquist,⁹ Nancy Davis,¹⁰ Chethan Ramamurthy,¹¹ Cora N. Sternberg,² Yohann Loriot,¹² Neeraj Agarwal,¹³ Chandler Park,⁶ Julia Tonelli,¹⁴ Morganna Vance,¹⁴ Huafeng Zhou,¹⁴ and Petros Grivas¹⁵



¹Yale School of Medicine, New Haven, CT, USA; ²Weill Cornell Medical College of Cornell University, New York, NY, USA;
³H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL, USA; ⁴Rocky Mountain Cancer Centers, Littleton, CO, USA;
⁵New York University Langone Medical Center, New York, NY, USA; ⁶Norton Cancer Institute, Louisville, KY, USA;
⁷Roswell Park Comprehensive Cancer Center, Buffalo, New York, USA; ⁸University of Michigan, Ann Arbor, MI, USA;
⁹Urology Cancer Center, Omaha, NE, USA; ¹⁰Vanderbilt-Ingram Cancer Center, Nashville, TN, USA;
¹¹University of Texas Health Science Center at San Antonio, San Antonio, TX, USA;
¹²Institut de Cancérologie Gustave Roussy, Université Paris-Saclay, Villejuif, France;
¹³Huntsman Cancer Institute, Salt Lake City, UT, USA; ¹⁴Gilead Sciences, Inc, Foster City, CA, USA;
and ¹⁵University of Washington, Fred Hutchinson Cancer Center, Seattle, WA, USA

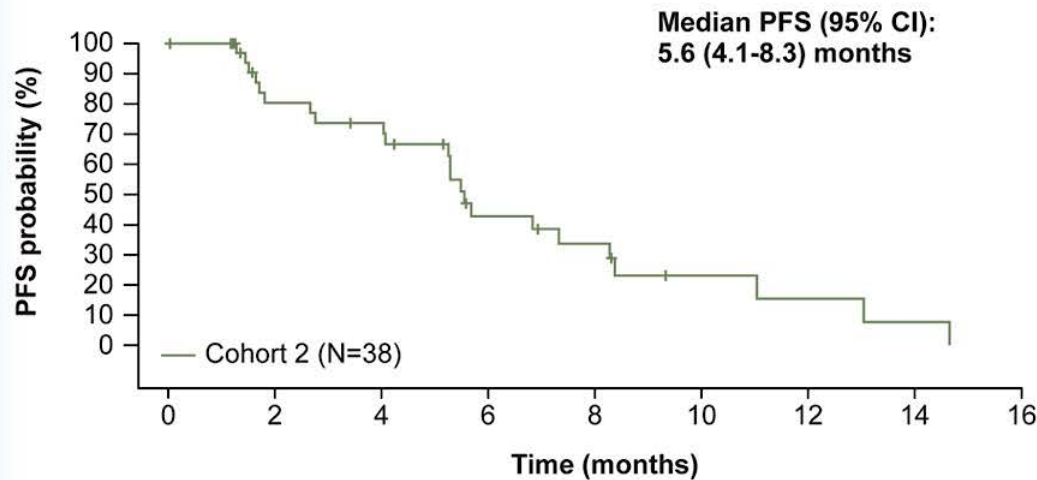
TROPHY U-01 Cohort 2: Best Change in Target Lesions and Response Assessment from Start of Treatment to Disease Progression



- 69% of assessed patients (22/32) experienced target lesion reduction
- 2 patients had an ongoing response at data cutoff

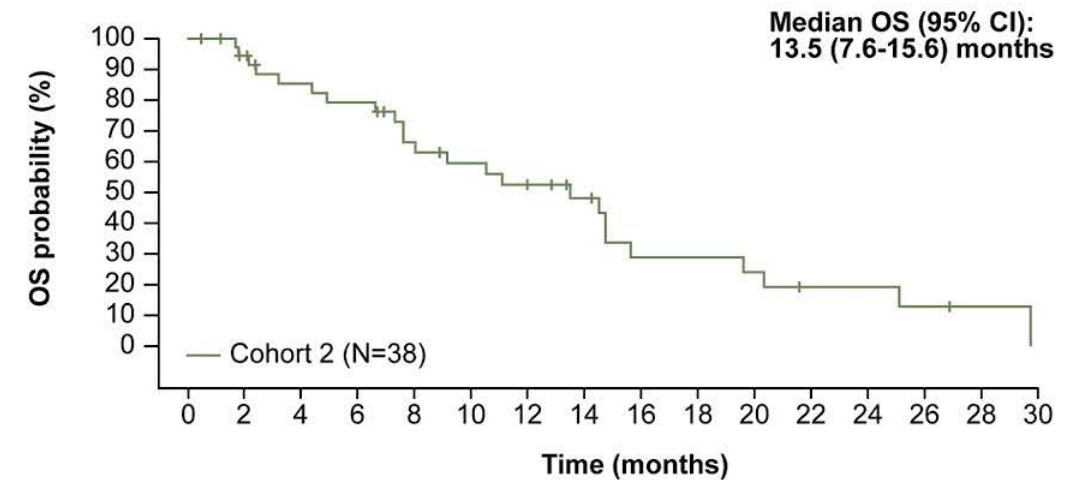
^aPatients with missing percent change from baseline are not reported.
PD, progressive disease.

TROPHY U-01 Cohort 2: Progression-Free Survival and Overall Survival



No. of patients still at risk

Cohort 2 38 24 21 10 7 3 2 1 0



No. of patients still at risk

Cohort 2 38 33 28 26 20 17 14 11 6 6 5 3 3 2 1 0

- Median follow-up was 9.3 months
- Median PFS was 5.6 months (95% CI, 4.1-8.3)
- Median OS was 13.5 months (95% CI, 7.6-15.6)

OS, overall survival; PFS, progression-free survival.

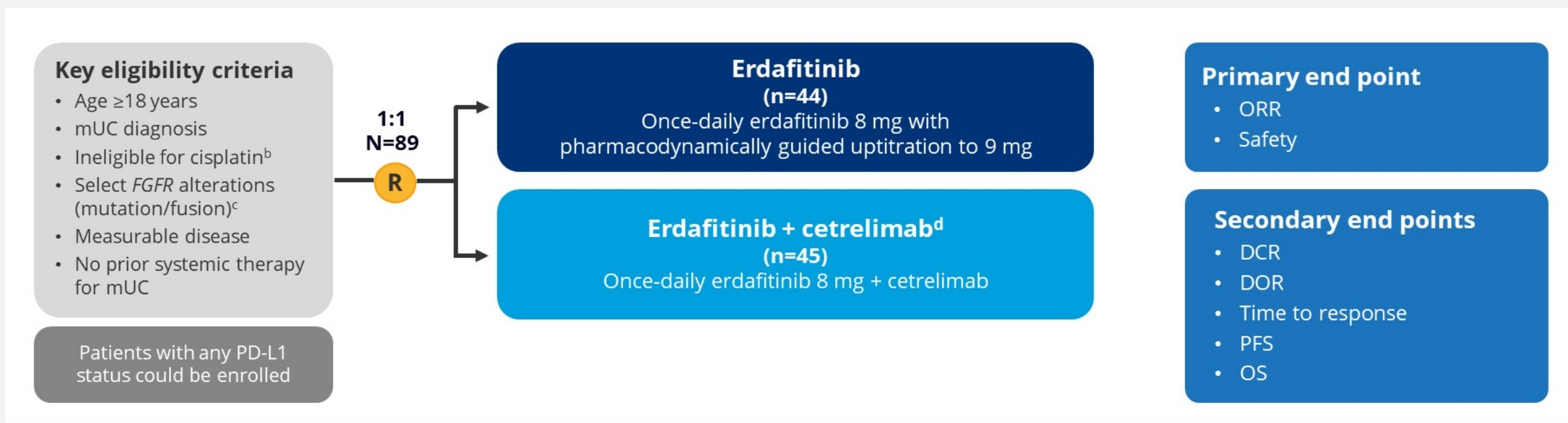
TROPHY U-01 Cohort 2: Updated Safety Outcomes

TRAEs Occurring in >20% of Patients, n (%)	Cohort 2 (N=38)	
	All Grade	Grade ≥3
Diarrhea	24 (63)	6 (16)
Alopecia	19 (50)	0
Nausea	18 (47)	0
Neutropenia	17 (45)	13 (34)
Fatigue	16 (42)	7 (18)
Anemia	14 (37)	8 (21)
Leukopenia	13 (34)	7 (18)
Decreased appetite	10 (26)	0

- 26 (68%) patients had grade ≥3 TRAEs
 - The most common were neutropenia (34%), anemia (21%), leukopenia (18%), fatigue (18%), diarrhea (16%)
- 3 (8%) patients had treatment-related febrile neutropenia (2 with grade 3; 1 with grade 4)
- 14 (37%) patients had SG dose reduction due to TRAEs
- 7 (18%) patients discontinued treatment due to TRAEs
- No treatment-related death occurred
- G-CSF was received by 7 (18%) patients for primary prophylaxis and 10 (26%) patients for secondary prophylaxis

G-CSF, granulocyte colony-stimulating factor; SG, sacituzumab govitecan; TRAE, treatment-related adverse event.

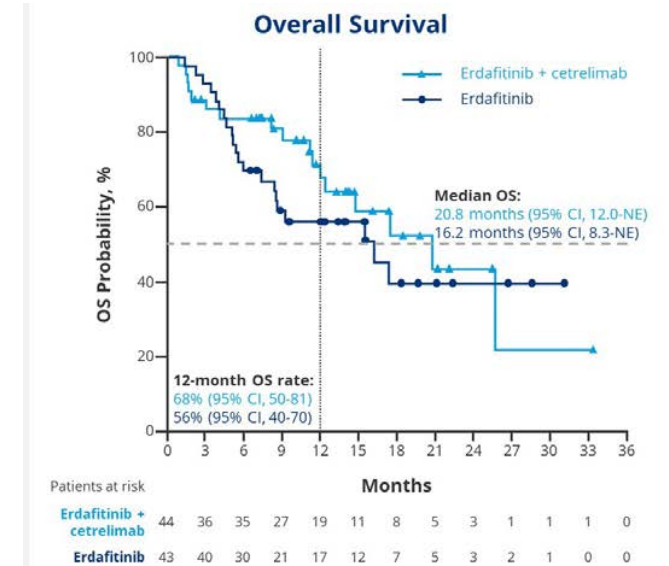
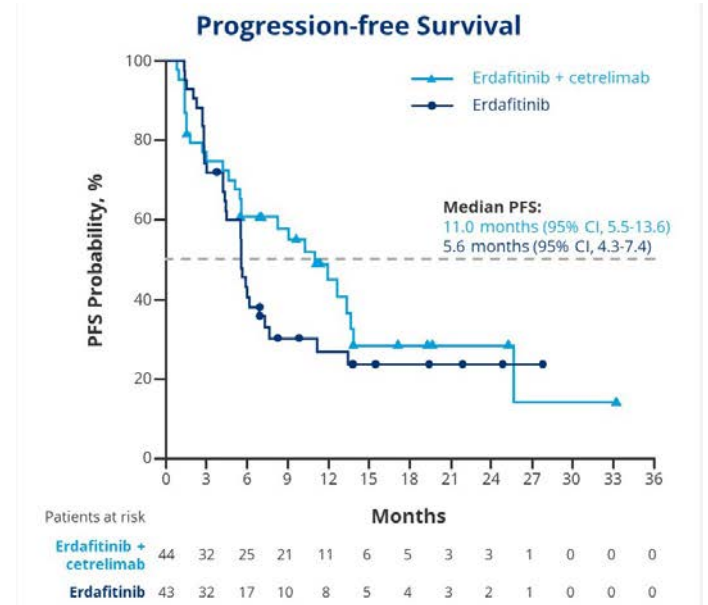
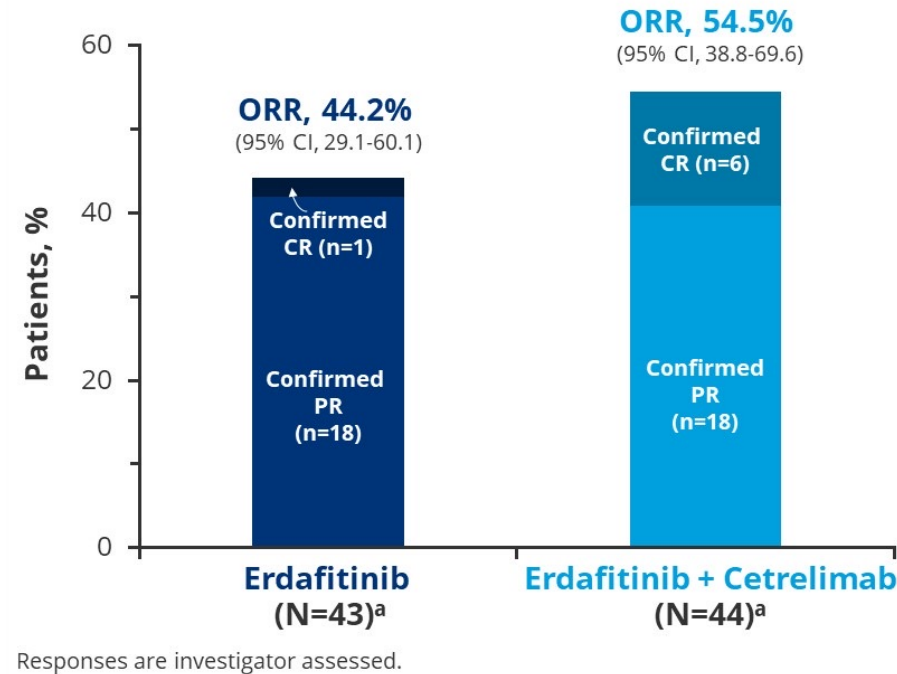
NORSE Phase 2 Study Design^a



- Molecular eligibility was determined by central or local testing; a total of 1430 patients underwent central molecular screening^c
- **No formal statistical comparisons** between arms were prespecified

NORSE Trial: Erdafitinib +/- Pembrolizumab

- Increase in ORR
- Better PFS/OS
- Is this additive or synergistic?
- No new safety signals



Courtesy of Terence Friedlander, MD

Phase 3 THOR: Results of Erdafitinib vs Chemo in Advanced or Metastatic Urothelial Cancer With Fibroblast Growth Factor Receptor Alterations

THOR is a phase 3, randomized, open-label ongoing study of erdafitinib vs chemotherapy (vinflunine or docetaxel) or pembrolizumab in patients with metastatic or unresectable UC and selected FGFR alterations who have progressed on or after 1 prior line of therapy

- Locally advanced or metastatic UC
- Prior systemic therapy (tx) that included anti-PD-(L)1 agent, and ≤ 2 prior lines of tx
- Prespecified *FGFR2/3* alterations (mutations and fusions)
- ECOG PS 0-2

**Prior
anti-PD-(L)1
therapy**
(N = 266)

R
1:1

Erdafitinib
8 mg/day

Chemotherapy
Docetaxel 75 mg/m²
Q3W, or vinflunine
320 mg/m² Q3W

Primary Endpoint:

- OS

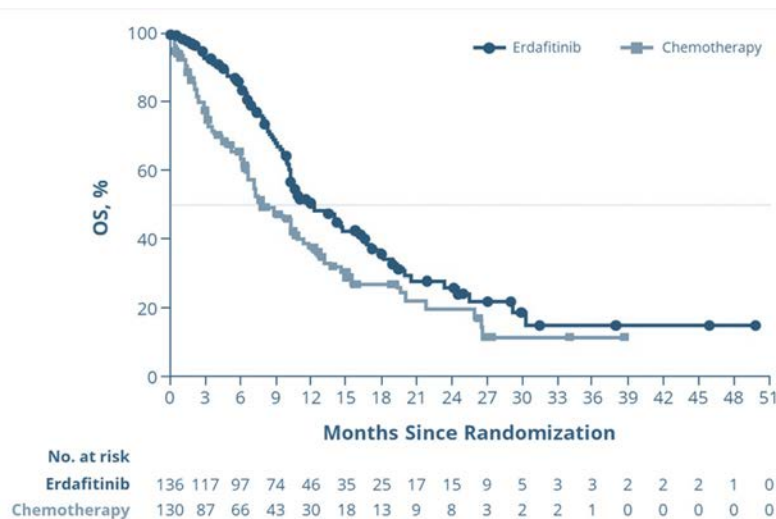
Secondary Endpoints:

- PFS
- ORR and DOR
- QOL
- Safety and pharmacokinetics

Phase 3 THOR: Results of Erdafitinib vs Chemo in Advanced or Metastatic Urothelial Cancer With Fibroblast Growth Factor Receptor Alterations

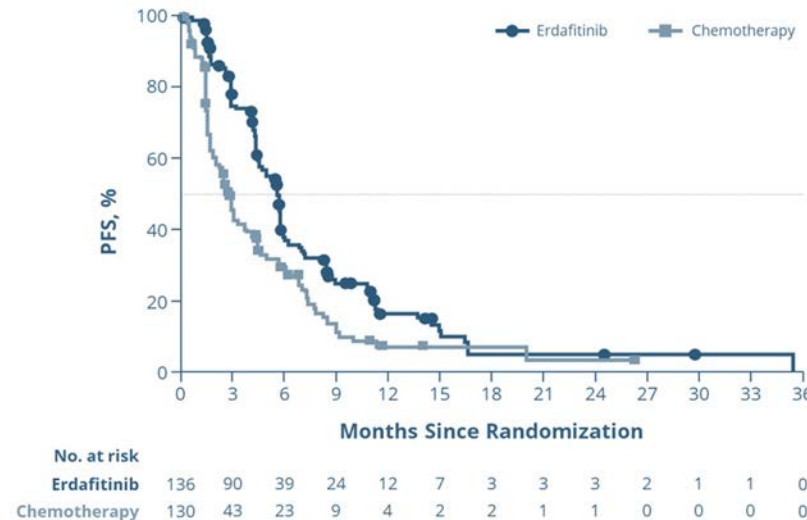
Prior treatment with PD-(L)1, Erdafitinib significantly improved OS, PFS, and ORR vs investigator's choice of chemo.

OS



Erdafitinib reduced the risk of death by 36% vs chemotherapy
HR: 0.64 (95% CI: 0.47, 0.88; $P = .005$)

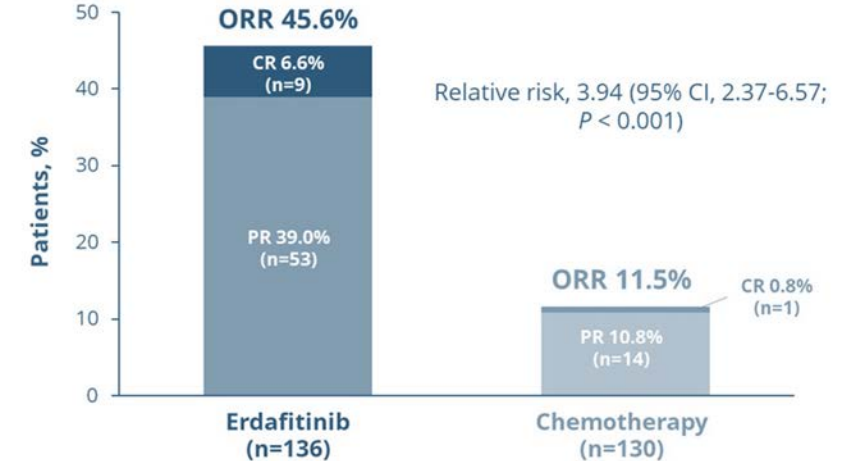
PFS



Median PFS was 5.6 versus 2.7

Erdafitinib reduced the risk of progression or death by 42% versus chemotherapy
HR: 0.58 (95% CI: 0.44, 0.78; $P = .0002$)

ORR



Phase 3 THOR: Results of Erdafitinib vs Chemo in Advanced or Metastatic Urothelial Cancer With Fibroblast Growth Factor Receptor Alterations

Erdafitinib toxicity was consistent with known safety profile

Patients with AEs, n (%)	Erdafitinib (n=135)	
	Any grade	Grade 3-4
≥1 treatment-related AE	131 (97.0)	62 (45.9)
Hyperphosphatemia	106 (78.5)	7 (5.2)
Diarrhea	74 (54.8)	4 (3.0)
Stomatitis	62 (45.9)	11 (8.1)
Dry mouth	52 (38.5)	0
PPE syndrome	41 (30.4)	13 (9.6)
Onycholysis	31 (23.0)	8 (5.9)
Patients who discontinued study treatment, n (%)		
Discontinuation due to treatment-related AEs	11 (8.1%)	

Patients with AEs, n (%)	Chemotherapy (n=112)	
	Any grade	Grade 3-4
≥1 treatment-related AE	97 (86.6)	52 (46.4)
Anemia	31 (27.7)	7 (6.3)
Alopecia	24 (21.4)	0
Nausea	22 (19.6)	2 (1.8)
Neutropenia	21 (18.8)	15 (13.4)
Leukopenia	13 (11.6)	9 (8.0)
Febrile neutropenia	9 (8.0)	10 (8.9)
Patients who discontinued study treatment, n (%)		
Discontinuation due to treatment-related AEs	15 (13.4)	

- 18 patients (13.3%) treatment-related serious AEs
- 1 treatment-related death occurred

- 27 patients (24.1%) treatment-related serious AEs
- 6 treatment-related deaths occurred

What I Tell My Patients: Faculty Physicians and Nurses Discuss Patient Education About New Treatments and Clinical Trials

*Part 3 of a 3-Part Complimentary NCPD Webinar Series
in Partnership with the 2023 ONS Congress*

Chronic Lymphocytic Leukemia

**Thursday, July 6, 2023
5:00 PM – 6:00 PM ET**

Faculty

**Kristen E Battiato, AGNP-C
Jennifer Woyach, MD**

Moderator

Neil Love, MD

Thank you for joining us!

Please take a moment to complete the survey currently up on Zoom. Your feedback is very important to us. The survey will remain open up to 5 minutes after the meeting ends.

CME and MOC credit information will be emailed to each participant within 5 business days.