Summer Oncology Nursing Series A Complimentary NCPD-Accredited Virtual Curriculum Gynecologic Cancers Thursday, August 26, 2021

5:00 PM - 6:00 PM ET

### Faculty

Thomas J Herzog, MD Kimberly A Spickes, MNSc, RN, APRN, OCN, ACNP-BC



### Faculty



Thomas J Herzog, MD Paul and Carolyn Flory Professor Deputy Director, University of Cincinnati Cancer Center Vice-Chair, Quality and Safety Department of Obstetrics and Gynecology University of Cincinnati Medical Center Associate Director, GOG Partners Cincinnati, Ohio



Moderator Neil Love, MD Research To Practice Miami, Florida



Kimberly A Spickes, MNSc, RN, APRN, OCN, ACNP-BC Nurse Practitioner UAMS Division of Gynecologic Oncology University of Arkansas for Medical Sciences Little Rock, Arkansas



#### **Commercial Support**

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#### **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, Blueprint Medicines, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Clovis Oncology, Coherus BioSciences, Daiichi Sankyo Inc, Eisai Inc, Epizyme Inc, Exact Sciences Inc, Exelixis Inc, Five Prime Therapeutics Inc, Foundation Medicine, Genentech, a member of the Roche Group, Gilead Sciences Inc, GlaxoSmithKline, Grail Inc, 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, Lilly, Loxo Oncology Inc, a wholly owned subsidiary of Eli Lilly & Company, Merck, Novartis, Novocure Inc, Oncopeptides, Pfizer Inc, Pharmacyclics LLC, an AbbVie Company, Puma Biotechnology Inc, Regeneron Pharmaceuticals Inc, Sanofi Genzyme, Seagen Inc, Sumitomo Dainippon Pharma Oncology Inc, Taiho Oncology Inc, Takeda Oncology, Tesaro, A GSK Company, TG Therapeutics Inc, Turning Point Therapeutics Inc and Verastem Inc.



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Planners, scientific staff and independent reviewers for Research To Practice have no relevant conflicts of interest to disclose.



### **Dr Herzog — Disclosures**

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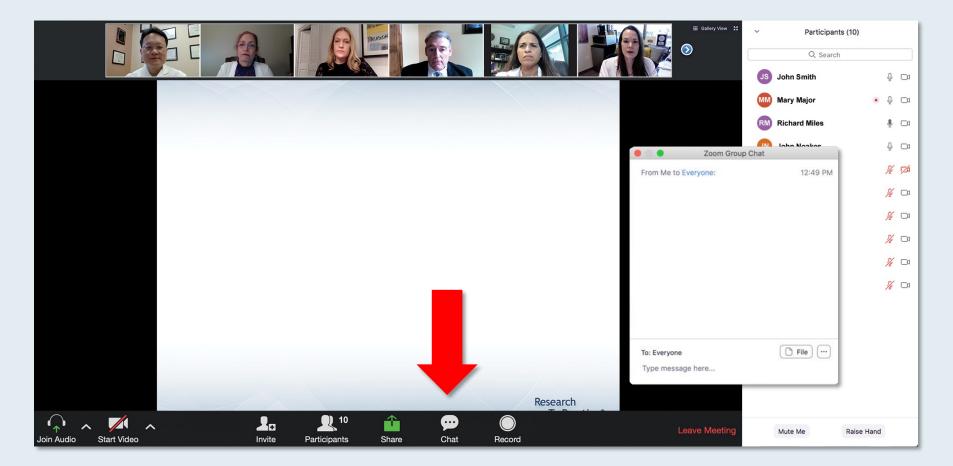


### Ms Spickes — Disclosures

No relevant conflicts of interest to disclose.



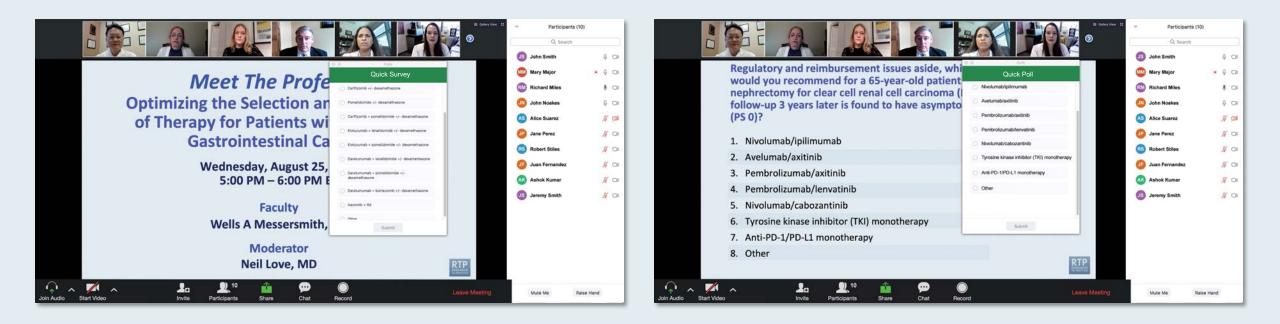
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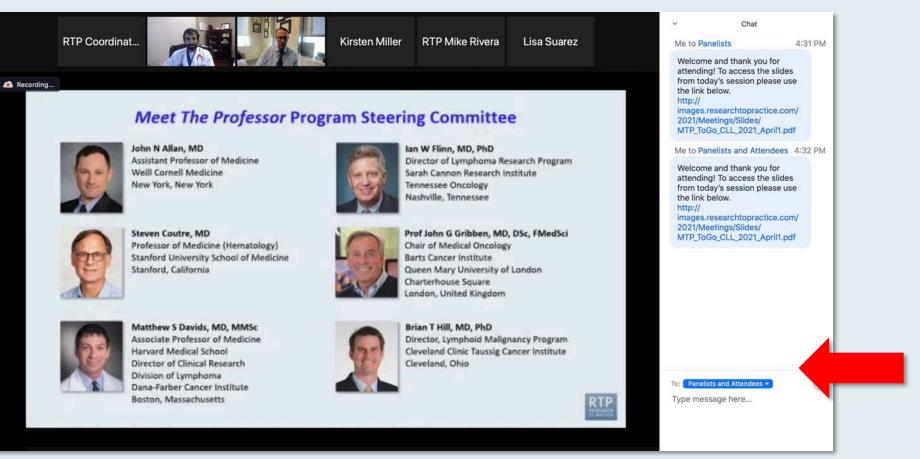


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# **ONCOLOGY TODAY** WITH DR NEIL LOVE

# PARP Inhibitors in Ovarian Cancer

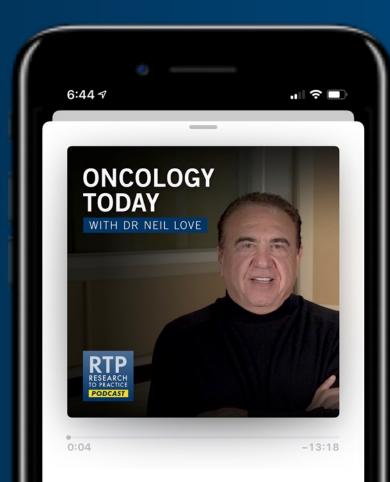


#### DR ANTONIO GONZÁLEZ-MARTÍN Clínica universidad de navarra









Dr Antonio González-Martín PARP Inhi Oncology Today with Dr Neil Love —

(15) (30)

# Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Chronic Lymphocytic Leukemia

A Virtual CME Satellite Symposium Series in Conjunction with the Society of Hematologic Oncology 2021 Annual Meeting

> Monday, August 30, 2021 5:00 PM - 6:00 PM ET

Faculty Jeff Sharman, MD Mitchell R Smith, MD, PhD Philip A Thompson, MB, BS



Fall Oncology Nursing Series A Complimentary NCPD-Accredited Virtual Curriculum Breast Cancer: Session 3 Tuesday, August 31, 2021 5:00 PM – 6:00 PM ET

> Faculty Carey K Anders, MD Jamie Carroll, APRN, MSN, CNP



# Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Non-Hodgkin Lymphoma

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Faculty Andrew M Evens, DO, MSc Ian W Flinn, MD, PhD Gilles Salles, MD, PhD



Meet The Professor Immunotherapy and Novel Agents in Gynecologic Cancers

> Wednesday, September 1, 2021 5:00 PM – 6:00 PM ET

> > Faculty Joyce F Liu, MD, MPH



Fall Oncology Nursing Series A Complimentary NCPD-Accredited Virtual Curriculum Prostate Cancer: Session 3 Thursday, September 2, 2021 5:00 PM – 6:00 PM ET

Faculty Mary-Ellen Taplin, MD Kathy D Burns, RN, MSN, AGACNP-BC, OCN



Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Acute Myeloid Leukemia and Myelodysplastic Syndromes

> A Virtual CME Satellite Symposium During the Society of Hematologic Oncology 2021 Annual Meeting

> > Wednesday, September 8, 2021 7:30 PM – 9:00 PM Central Time

### Faculty

Courtney D DiNardo, MD, MSCE Daniel A Pollyea, MD, MS David Sallman, MD Eunice S Wang, MD

Moderator

Neil Love, MD



### Thank you for joining us!

# NCPD credit information will be emailed to each participant shortly.



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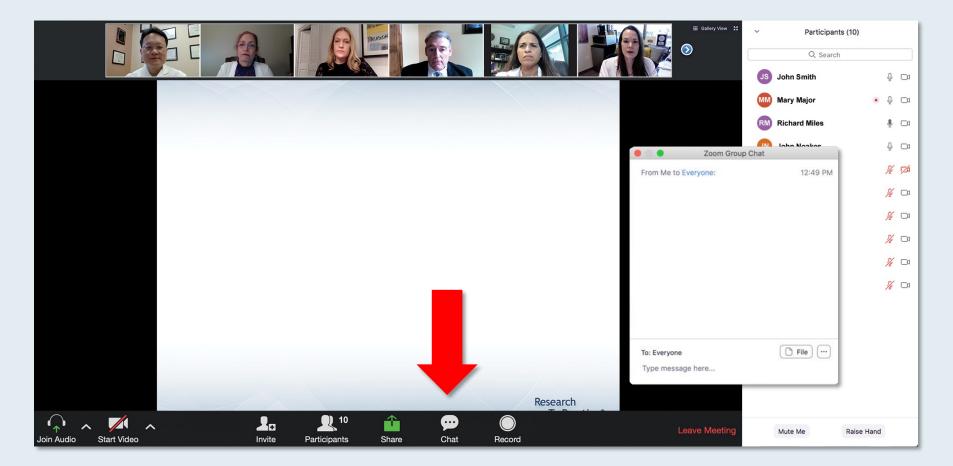
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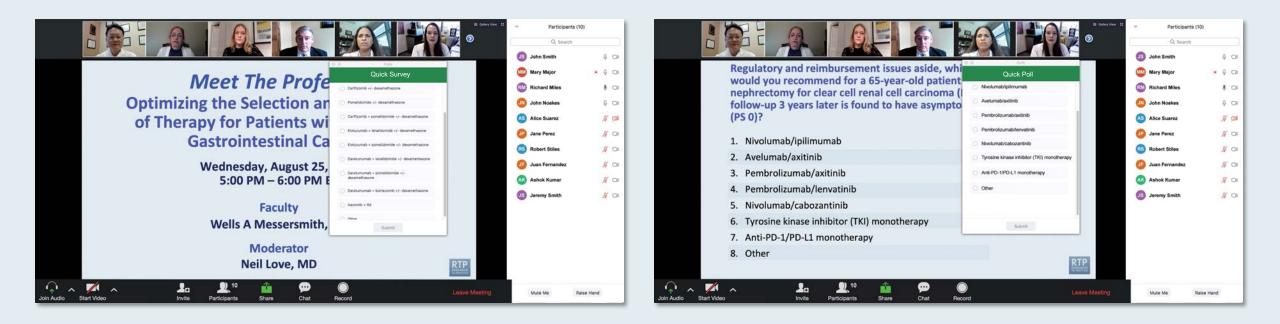
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Moderator

Neil Love, MD



### **Oncology Grand Rounds Nursing Webinar Series**

Monday	Tuesday	Wednesday	Thursday	Friday
19	20 Breast Ca 8:30 AM Lung Ca 5:00 PM	21 AML 12:00 PM CRC and GE Ca 4:45 PM	22 Prostate Ca 8:30 AM Lymphomas 5:00 PM	23
26	27 Multiple Myeloma 8:30 AM Gynecologic Ca 5:00 PM	28 Bladder Ca 12:00 PM	29 CLL 8:30 AM CAR-T 5:00 PM	30



**13<sup>th</sup> Annual Oncology Grand Rounds** A Complimentary NCPD Live Webinar Series Held During the 46<sup>th</sup> Annual ONS Congress **Gynecologic Cancers Tuesday, April 27, 2021** 5:00 PM - 6:30 PM ET **Oncology Nurse Practitioners Medical Oncologists Robert L Coleman, MD** Paula J Anastasia, MN, RN, AOCN **Thomas J Herzog, MD Courtney Arn, CNP** Krishnansu S Tewari, MD **Kimberly A Spickes, MNSc, RN, APRN, OCN, ACNP-BC Moderator** Neil Love, MD





Courtney R Arn, APRN-CNP

How was it different to take care of this patient versus another patient in the same oncologic setting? What unique biopsychosocial factors (eg, attitude, comorbidities, social support) were considered in the overall management of this case?



# **Research To Practice Education Platform**

### Oncology Nurse Practitioners Case Presentations

- Key patient-education issues
- Biopsychosocial considerations:
  - Family/loved ones
  - The bond that heals

Clinical Investigators Oncology Strategy

- New agents and regimens
- Predictive biomarkers
- Ongoing research and implications



### Agenda

#### **Module 1: Ovarian Cancer**

- Case 1: A 52-year-old woman with Stage IIIA2 ovarian cancer and a somatic BRCA2 mutation
- Case 2: A 59-year-old woman with ovarian cancer and a germline BRCA1 mutation

#### **Module 2: Endometrial Cancer**

- Case 3: A 68-year-old woman with recurrent endometrial cancer, MSI high
- Case 4: A 64-year-old woman with recurrent endometrial cancer

#### **Module 3: Cervical Cancer – Relapsed Disease**

• Case 5: A 45-year-old woman with recurrent cervical cancer, PD-L1 CPS 10



### **Oncology Nurse Practitioners**



Paula J Anastasia, MN, RN, AOCN GYN Oncology Advanced Practice Nurse University of California, Los Angeles Los Angeles, California



Kristen E Battiato, AGNP-C Advanced Practice Providers Memorial Sloan Kettering Cancer Center New York, New York



**Courtney Arn, CNP** The James Cancer Hospital and Solove Research Institute The Ohio State University Columbus, Ohio



Kathy D Burns, RN, MSN, AGACNP-BC, OCN GU Medical Oncology City of Hope Comprehensive Cancer Center Duarte, California



Monica Averia, MSN, AOCNP, NP-C Oncology Nurse Practitioner USC Norris Cancer Center Los Angeles, California



**Gretchen Santos Fulgencio, MSN, FNP-BC** University of California, San Francisco Berkeley, California



Lesley Camille Ballance, MSN, FNP-BC Sarah Cannon Center for Blood Cancer Tennessee Oncology Nashville, Tennessee



Ilene Galinsky, NP Senior Adult Leukemia Program Research Nurse Practitioner Dana-Farber Cancer Institute Boston, Massachusetts



## **Oncology Nurse Practitioners**



Jacklyn Gideon, MSN, AGPCNP-BC Advanced Practice Provider Lead Apheresis APP Hematopoietic Cellular Therapy Program Section of Hematology/Oncology The University of Chicago Medicine and Biological Sciences Chicago, Illinois



Kelly EH Goodwin, MSN, RN, ANP-BC Thoracic Cancer Center Massachusetts General Hospital Boston, Massachusetts



Charise Gleason, MSN, NP-C, AOCNP Advanced Practice Provider Chief Winship Cancer Institute of Emory University Adjunct Faculty, Nell Hodgson Woodruff School of Nursing Atlanta, Georgia



Allie Hershey, MSN, RN, ANP-BC, AOCNP Oncology Nurse Practitioner, Breast Oncology Susan F Smith Center for Women's Cancers Dana-Farber Cancer Institute Boston, Massachusetts



Sonia Glennie, ARNP, MSN, OCN Swedish Cancer Institute Center for Blood Disorders Seattle, Washington



Corinne Hoffman, MS, APRN-CNP, AOCNP Nurse Practitioner, Hematology The James Comprehensive Cancer Center The Ohio State University Wexner Medical Center Columbus, Ohio



## **Oncology Nurse Practitioners**



Robin Klebig, APRN, CNP, AOCNP Nurse Practitioner Assistant Professor of Medicine Division of Hematology Mayo Clinic Rochester, Minnesota



**Brenda Martone, MSN, NP-BC, AOCNP** Northwestern Medicine Northwestern Memorial Hospital Chicago, Illinois



Alli McClanahan, MSN, APRN, ANP-BC Nurse Practitioner Division of Hematology Mayo Clinic Rochester, Minnesota



Jessica Mitchell, APRN, CNP, MPH Assistant Professor of Oncology Mayo Clinic College of Medicine and Science Rochester, Minnesota



Mollie Moran, APRN-CNP, AOCNP The James Cancer Hospital and Solove Research Institute The Ohio State University Columbus, Ohio





Kelly Leonard, MSN, FNP-BC Family Nurse Practitioner Dana-Farber Cancer Institute Boston, Massachusetts



Patricia Mangan, RN, MSN, CRNP, APN, BC Nurse Lead, Hematologic Malignancies and Stem Cell Transplant Programs Abramson Cancer Center University of Pennsylvania Philadelphia, Pennsylvania

## **Oncology Nurse Practitioners**



**Tara Plues, APRN, MSN** Hematology and Medical Oncology Cleveland Clinic Cleveland, Ohio



Kimberly A Spickes, MNSc, RN, APRN, OCN, ACNP-BC Nurse Practitioner UAMS Division of Gynecologic Oncology University of Arkansas for Medical Sciences Little Rock, Arkansas



Tiffany A Richards, PhD, ANP-BC, AOCNP Nurse Practitioner Department of Lymphoma/Myeloma The University of Texas MD Anderson Cancer Center Houston, Texas



Ronald Stein, JD, MSN, NP-C, AOCNP Clinical Instructor of Medicine USC Norris Comprehensive Cancer Center Los Angeles, California



Victoria Sherry, DNP, CRNP, AOCNP Oncology Nurse Practitioner for Thoracic Malignancies Abramson Cancer Center Perelman Center for Advanced Medicine University of Pennsylvania Medical Center Faculty, University of Pennsylvania School of Nursing Philadelphia, Pennsylvania



**Elizabeth Zerante, MS, AGACNP-BC** APN Inpatient Hematopoietic Cellular Therapy Service University of Chicago Medicine Chicago, Illinois



# When was the last time someone asked you, "Why are you in oncology? Isn't it depressing?"

- 1. This week
- 2. This month
- 3. This year
- 4. Never



# 13<sup>th</sup> Annual Oncology Grand Rounds

**Gynecologic Cancers** Tuesday, April 27, 2021 5:00 PM – 6:30 PM ET







# Agenda

### Module 1: Ovarian Cancer

- Case 1: A 52-year-old woman with Stage IIIA2 ovarian cancer and a somatic BRCA2 mutation
- Case 2: A 59-year-old woman with ovarian cancer and a germline BRCA1 mutation

### **Module 2: Endometrial Cancer**

- Case 3: A 68-year-old woman with recurrent endometrial cancer, MSI high
- Case 4: A 64-year-old woman with recurrent endometrial cancer

### Module 3: Cervical Cancer – Relapsed Disease

• Case 5: A 45-year-old woman with recurrent cervical cancer, PD-L1 CPS 10



# Case Presentation – A 52-year-old woman with Stage IIIA2 ovarian cancer and a somatic BRCA2 mutation

- Past medical history of cerebral palsy and stroke, presents to the emergency room with pain and is diagnosed with ovarian cancer
- Surgery  $\rightarrow$  adjuvant chemotherapy x 6 cycles
- Maintenance olaparib
- Dose reduction to mitigate side effects



At a minimum, all patients with ovarian cancer should have the following assay(s) conducted at diagnosis regardless of family history of cancer.

- 1. BRCA germline testing
- 2. BRCA somatic testing
- 3. Multiplex germline testing
- 4. Multiplex somatic testing
- 5. Both 1 and 2
- 6. Both 3 and 4
- 7. I'm not sure



Bevacizumab can be particularly effective in patients with ovarian cancer who have ascites and/or pleural effusion...

- 1. Agree
- 2. Disagree
- 3. I'm not sure



In general, postoperative, postchemotherapy primary maintenance therapy with a PARP inhibitor is considered standard for patients with a germline or somatic BRCA mutation.

- 1. Agree
- 2. Disagree
- 3. I'm not sure



What was the duration of treatment with olaparib and niraparib in the Phase III trials evaluating maintenance therapy with PARP inhibitors after debulking surgery and first-line platinum-based chemotherapy?

- 1. 2 years for both
- 2. 3 years for both
- 3. 2 years for olaparib, 3 years for niraparib
- 4. 2 years for niraparib, 3 years for olaparib
- 5. I'm not sure



# Which of the following PARP inhibitors is approved to treat recurrent ovarian cancer?

- 1. Olaparib
- 2. Niraparib
- 3. Rucaparib
- 4. All of the above
- 5. I'm not sure



How was it different to take care of this patient versus another patient in the same oncologic setting? What unique biopsychosocial factors (eg, attitude, comorbidities, social support) were considered in the overall management of this case?

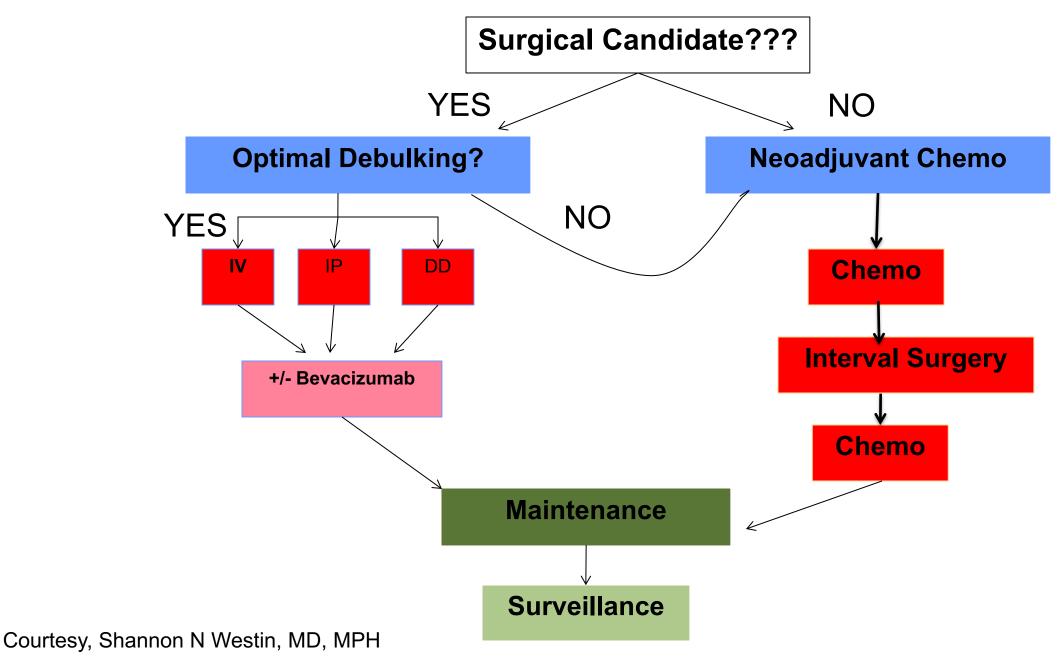


# Case Presentation – A 52-year-old woman with Stage IIIA2 ovarian cancer and a somatic BRCA2 mutation

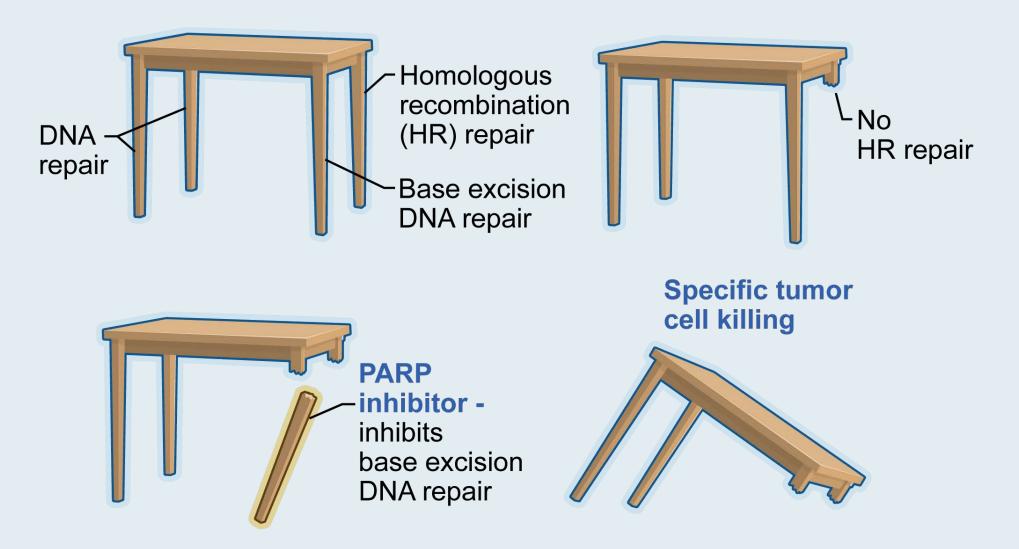
- Past medical history of cerebral palsy and stroke, presents to the emergency room with pain and is diagnosed with ovarian cancer
- Surgery  $\rightarrow$  adjuvant chemotherapy x 6 cycles
- Maintenance olaparib
- Dose reduction to mitigate side effects



# **New Advanced Ovarian Cancer**



## Mechanism of Cell Death from Synthetic Lethality Induced by PARP Inhibition





Courtesy of Jenny C Chang, MD

## Current FDA-Approved and Investigational PARP Inhibitors: Differences

PARP inhibitor	FDA approvals	PARP trapping potency	PARPi target selectivity (strength of binding)	Dose
Olaparib	Ovarian, breast, pancreatic, prostate	1	Potent PARP1 inhibitor, less selective	300 mg BID
Rucaparib	Ovarian, prostate	1	Potent PARP1 inhibitor, less selective	600 mg BID
Niraparib	Ovarian	~2	Selective inhibitor of PARP1 and 2	300 mg qd
Veliparib	None	<0.2	Potent PARP1 inhibitor, less selective	400 mg BID
Talazoparib	Breast	~100	Potent PARP1 inhibitor, less selective	1 mg qd



# **Phase III First-Line PARPi Maintenance Trials**

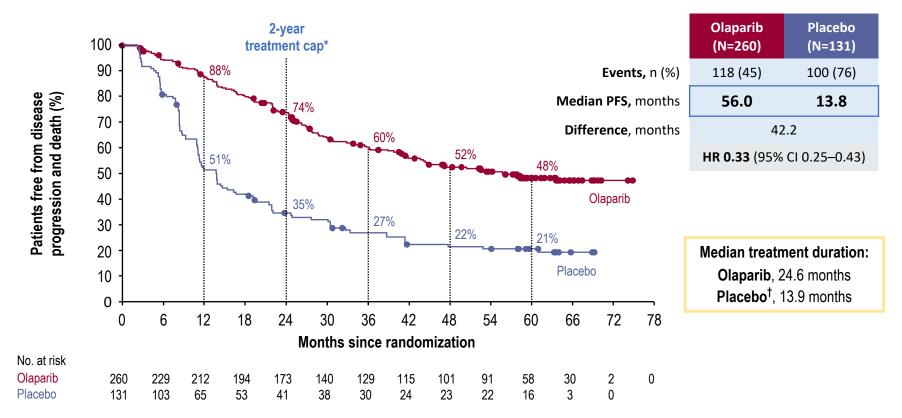
Study Design	SOLO-1 (N=451)	PAOLA-1 (N=612)	PRIMA (N=620)	VELIA (N=1140)
Treatment arms vs placebo	Olaparib (n=260)	Bevacizumab ± Olaparib	Niraparib	Veliparib
Patient Population	BRCA mutation	All comers	All comers	All comers
Treatment Duration	24 months	15 months for Bev 24 months for Olaparib	36 months or until PD	24 months

Burger RA, *N Engl J Med* 2011; Norquist B *Clin Cancer Res* 2018; *Bevacizumab* prescribing information; Moore K, NEJM 2018; Gonzalez-Martin NEJM 2019; Ray-Coquard NEJM 2019; Coleman NEJM 2019



Courtesy of Shannon N Westin, MD, MPH

# Phase 3 SOLO1: PFS at 5 Years of Follow-Up



\*13 patients, all in the olaparib arm, continued study treatment past 2 years; †n=130 (safety analysis set) Investigator-assessed by modified RECIST v1.1. DCO: 5 March 2020

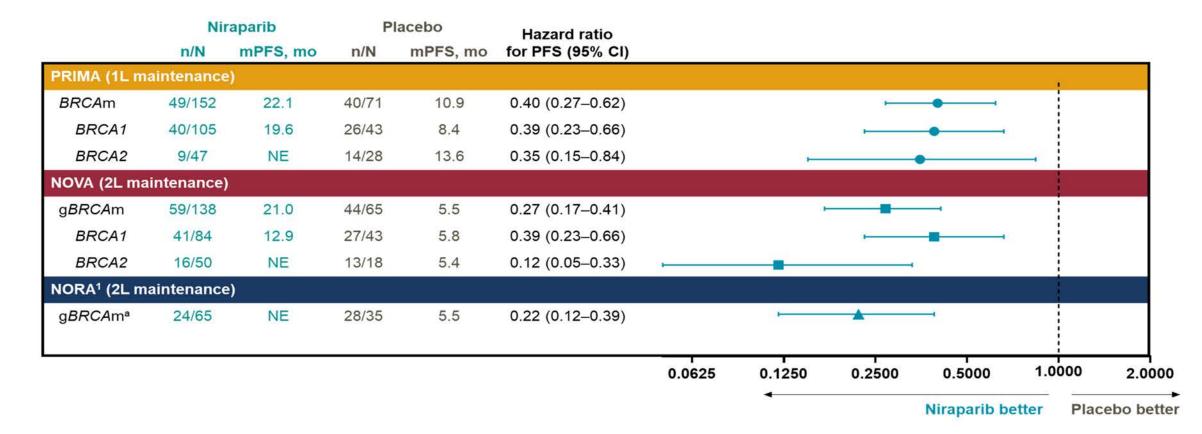
Median follow-up for PFS: olaparib, 4.8 y; placebo, 5.0 years.

Banerjee S, et al. ESMO 2020.

Courtesy of Michael J Birrer, MD, PhD

# ASCO 2021 UPDATE - PRIMA

### **Progression-Free Survival in Patients with BRCAm Ovarian Cancer**



PFS was measured by blinded independent central review. Horizontal lines represent 95% CIs

\*BRCA1 and BRCA2 data are not currently available.

1L, first-line; 2L, second-line; g, germline; m, mutated; mPFS, median progression-free survival; NE, not estimable; PFS, progression-free survival. Wu XH. et al. Ann Oncol 2021;32(4):512–521.

<sup>1</sup>Wu XH, et al. Ann Oncol 2021;32(4):512–5

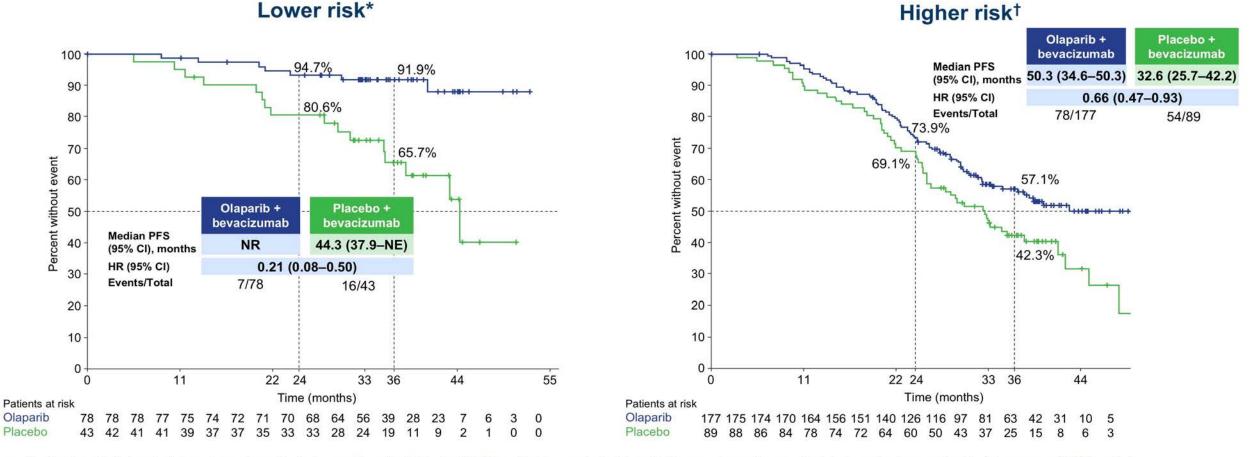


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Courtesy of Michael J Birrer, MD, PhD

# ASCO 2021 UPDATE – PAOLA-1 **PFS2 by FIGO stage and surgical outcome in** patients with HRD-positive tumors



The median time from the first cycle of chemotherapy to randomization was 7 months. \*Patients with HRD-positive tumors who had stage III disease and complete resection following upfront surgery (median follow-up overall: 37.0 months); Stage III patients with residual disease after upfront surgery or who received neoadjuvant chemotherapy, or HRD-positive stage IV patients (median follow-up overall: 37.5 months). NR, not reached; PFS2, second progression-free survival.

Courtesy of Michael J Birrer, MD, PhD

# **Tolerability of PARP Inhibitors**

- Fatigue: usually plateaus after two weeks
- Nausea: may require daily anti-emetics have used transdermal patch in a few patients
- Hematologic: monitor monthly, may consider weekly for 1<sup>st</sup> month. Hold dose for grade 2 hematologic events, Reduce dose in half if dose delay
- AML/MDS: refer patient to hematologist if blood counts do not return within 4 weeks. 2% study subjects were diagnosed



# **SOLO-1 Trial 5-Year Update: Safety Profile**

n (%)	Olaparib (n=260)	Placebo (n=130)		
Any AE	256 (98)	120 (92)		
Grade ≥3 AE	103 (40)	25 (19)		
Serious AE	55 (21)	17 (13)		
AE leading to dose interruption	136 (52)	22 (17)		
AE leading to dose reduction	75 (29)	4 (3)		
E leading to treatment discontinuation	30 (12)	4 (3)		
MDS/AML	3 (1)	0 (0)		
New primary malignancy	7 (3)	5 (4)		
No additional cases of MDS/AML reported; incidence remained <1.5%				
Follow-up for MDS/AML continued until death due to any cause				



Banerjee S et al. ESMO 2020; Abstract 811MO.

Α

## **Dose Adjustments for Adverse Events**

Olaparib dose reductions	Dose (tablet)	Niraparib dose reductions	Dose
Starting dose	300 mg BID	Starting dose	300 mg daily
First dose reduction	250 mg BID	First dose reduction	200 mg daily
Second dose reduction	200 mg BID	Second dose reduction	100 mg daily

Rucaparib dose reductions	Dose
Starting dose	600 mg twice daily
First dose reduction	500 mg twice daily
Second dose reduction	400 mg twice daily
Third dose reduction	300 mg twice daily



Courtesy, Shannon N Westin, MD, MPH

## Case Presentation – A 59-year-old woman with ovarian cancer and a germline BRCA1 mutation

- Patient and spouse are both nurses
- Patient has past medical history of breast cancer at 32 years of age
  - Unilateral mastectomy
  - Genetic testing not performed during or following treatment
- Surgery  $\rightarrow$  adjuvant chemotherapy
- Maintenance olaparib
- Dose reductions to mitigate neutropenia



How was it different to take care of this patient versus another patient in the same oncologic setting? What unique biopsychosocial factors (eg, attitude, comorbidities, social support) were considered in the overall management of this case?



## Agenda

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- Case 4: A 64-year-old woman with recurrent endometrial cancer

### **Module 3: Cervical Cancer – Relapsed Disease**

• Case 5: A 45-year-old woman with recurrent cervical cancer, PD-L1 CPS 10



# Checkpoint inhibitors are approved for and commonly used in cervical and endometrial cancer but not ovarian cancer.

- 1. Agree
- 2. Disagree
- 3. I'm not sure



# Case Presentation – A 68-year-old woman with recurrent endometrial cancer, MSI high

- Initially diagnosed with Stage IB, Grade I endometrial cancer and experienced disease recurrence 4 months after completing adjuvant brachytherapy
- Pembrolizumab x 33 cycles  $\rightarrow$  complete response



How was it different to take care of this patient versus another patient in the same oncologic setting? What unique biopsychosocial factors (eg, attitude, comorbidities, social support) were considered in the overall management of this case?



# **Case Presentation – A 64-year-old woman with recurrent endometrial cancer**

- Initially diagnosed with Stage IIIC papillary serous carcinoma of the endometrium
- History of high blood pressure and renal insufficiency
- Surgery and adjuvant chemotherapy  $\rightarrow$  bone metastases ~1 year later
- Radiation followed by chemotherapy  $\rightarrow$  progression ~2 months later
- Pembrolizumab plus lenvatinib (lower dose)



How was it different to take care of this patient versus another patient in the same oncologic setting? What unique biopsychosocial factors (eg, attitude, comorbidities, social support) were considered in the overall management of this case?



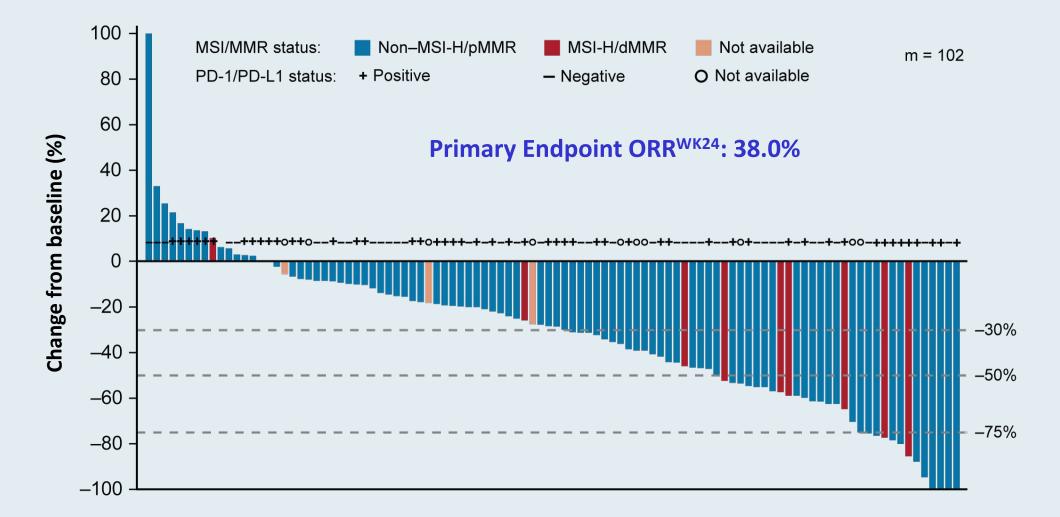
# Lenvatinib Plus Pembrolizumab in Patients With Advanced Endometrial Cancer

Vicky Makker, MD<sup>1</sup>; Matthew H. Taylor, MD<sup>2</sup>; Carol Aghajanian, MD<sup>1</sup>; Ana Oaknin, MD, PhD<sup>3</sup>; James Mier, MD<sup>4</sup>; Allen L. Cohn, MD<sup>5</sup>; Margarita Romeo, MD, PhD<sup>6</sup>; Raquel Bratos, MD<sup>7</sup>; Marcia S. Brose, MD, PhD<sup>8</sup>; Christopher DiSimone, MD<sup>9</sup>; Mark Messing, MD<sup>10</sup>; Daniel E. Stepan, MD<sup>11</sup>; Corina E. Dutcus, MD<sup>12</sup>; Jane Wu, PhD<sup>12</sup>; Emmett V. Schmidt, MD, PhD<sup>13</sup>; Robert Orlowski, MD<sup>13</sup>; Pallavi Sachdev, PhD<sup>12</sup>; Robert Shumaker, PhD<sup>11</sup>; and Antonio Casado Herraez, MD, PhD<sup>14</sup>

### J Clin Oncol 2020;38(26):2981-92



### **KEYNOTE-146:** Pembrolizumab/Lenvatinib in Advanced Endometrial Cancer That Is <u>Not</u> MSI High or dMMR After Disease Progression on Prior Systemic Therapy



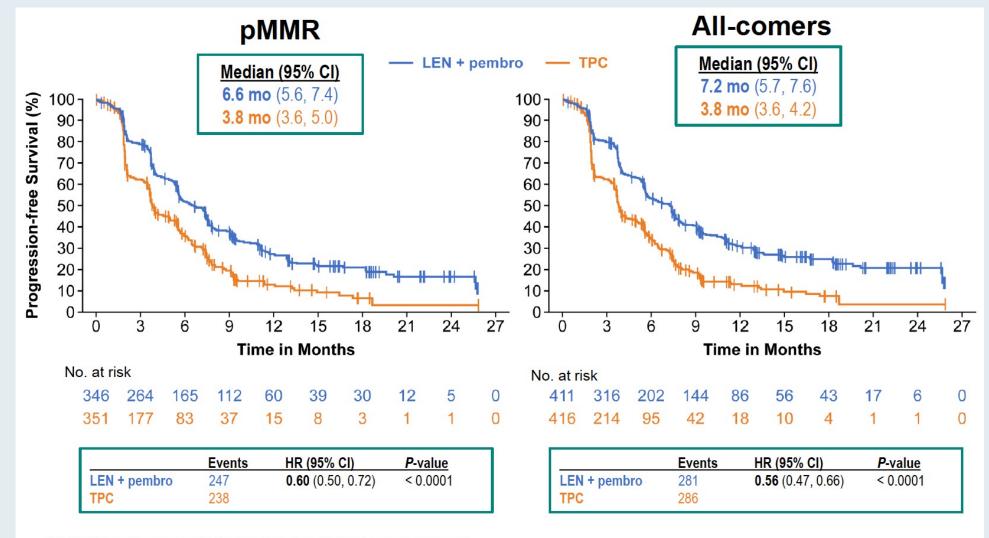


A Multicenter, Open-Label, Randomized, Phase III Study to Compare the Efficacy and Safety of Lenvatinib in Combination with Pembrolizumab versus Treatment of Physician's Choice in Patients with Advanced Endometrial Cancer: Study 309/KEYNOTE-775

Makker V et al. SGO 2021;Abstract 11512.





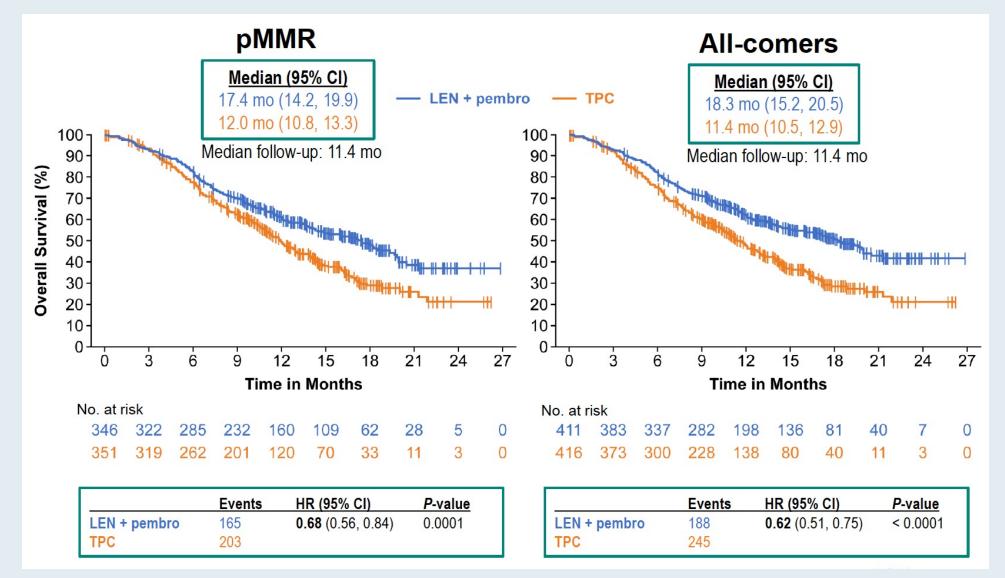


<sup>a</sup>By BICR per Response Evaluation Criteria in Solid Tumors version 1.1.



Makker V et al. SGO 2021; Abstract 11512.

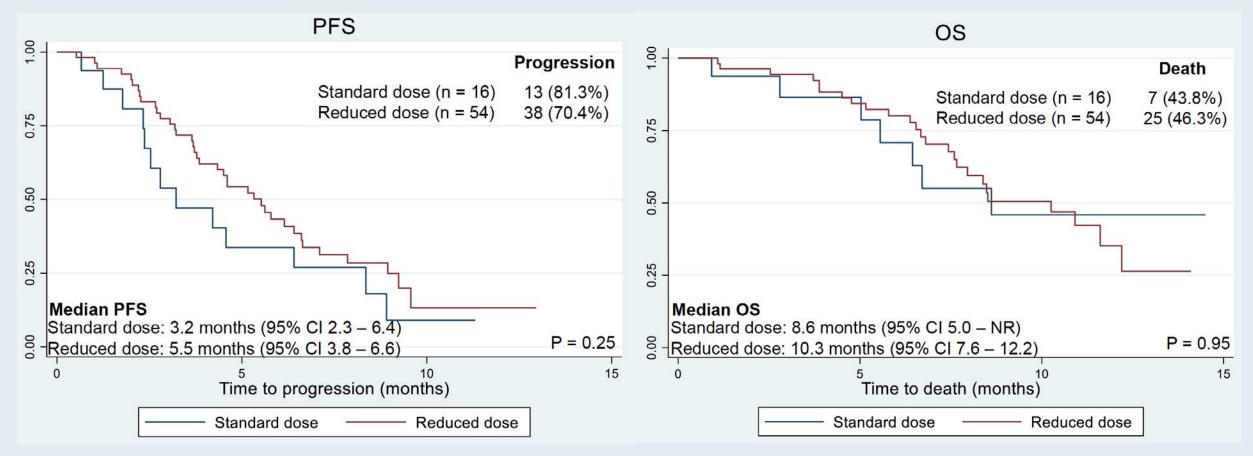
#### Study 309/KEYNOTE-775: Overall Survival





Makker V et al. SGO 2021; Abstract 11512.

#### **Retrospective Analysis of Reduced-Dose Lenvatinib (<20 mg) with Pembrolizumab at MD Anderson Cancer Center**



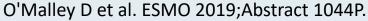
- Reduced starting dose of lenvatinib was associated with longer time to treatment toxicity and fewer dose de-escalations.
- "Published studies and these results may support using lenvatinib at a starting dose of 14 mg daily in clinical practice."



How JA et al. SGO 2021; Abstract 10775.

## **KEYNOTE-158: Best Percentage Change from Baseline in Target Lesion Size with Pembrolizumab Monotherapy in MSI-High Endometrial Cancer**





#### FDA Grants Accelerated Approval to Dostarlimab-gxly for dMMR Endometrial Cancer Press Release – April 22, 2021

"The Food and Drug Administration granted accelerated approval to dostarlimab-gxly for adult patients with mismatch repair deficient (dMMR) recurrent or advanced endometrial cancer, as determined by an FDA-approved test, that has progressed on or following a prior platinum-containing regimen.

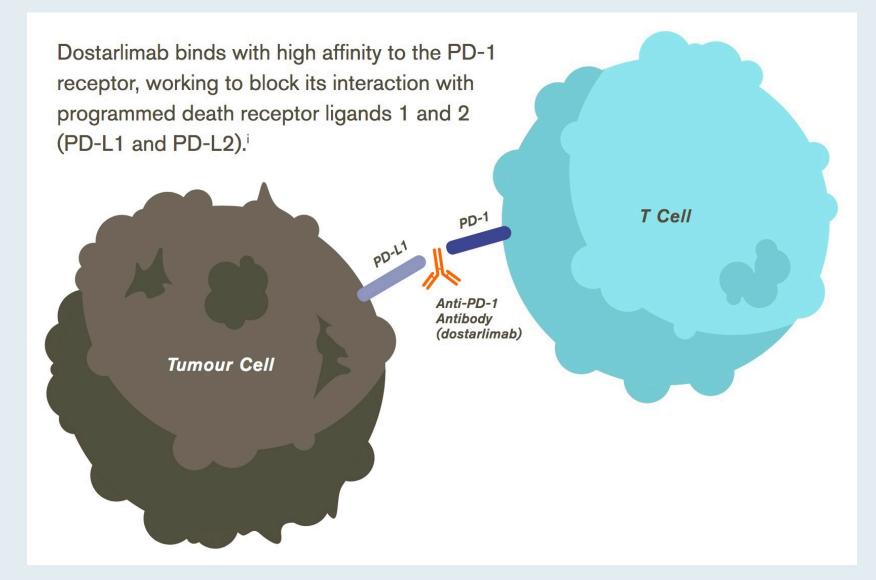
Efficacy was evaluated based on cohort (A1) in GARNET Trial (NCT02715284), a multicenter, multicohort, open-label trial in patients with advanced solid tumors. The efficacy population consisted of 71 patients with dMMR recurrent or advanced endometrial cancer who progressed on or after a platinum-containing regimen. Patients received dostarlimab-gxly, 500 mg intravenously, every 3 weeks for 4 doses followed by 1,000 mg intravenously every 6 weeks.

The main efficacy endpoints were overall response rate (ORR) and duration of response (DOR), as assessed by blinded independent central review (BICR) according to RECIST 1.1. Confirmed ORR was 42.3%. The complete response rate was 12.7% and partial response rate was 29.6%. Median DOR was not reached, with 93.3% of patients having durations ≥6 months (range: 2.6 to 22.4 months, ongoing at last assessment)."

https://www.fda.gov/drugs/drug-approvals-and-databases/fda-grants-accelerated-approval-dostarlimab-gxly-dmmrendometrial-cancer?utm\_medium=email&utm\_source=govdelivery



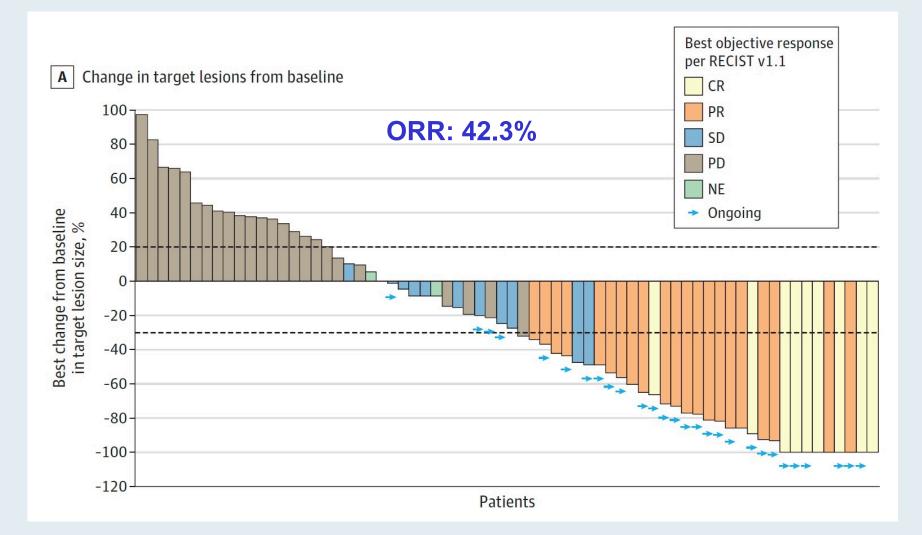
#### **Dostarlimab Mechanism of Action**





https://us.gsk.com/media/5875/dostarlimab-infographic\_approved-0422.pdf

#### GARNET: Dostarlimab for Recurrent or Advanced dMMR Endometrial Cancer — Best Percentage Change in Lesion Size





#### **GARNET Study of Dostarlimab: Immune-Related Secondary Endpoints**

(irRECIST by investigator assessment)			
	dMMR	MMRp	
Variable	N=110	N=144	
Follow-up, median (range),	16.5	13.7	
months	(0.03-30.6)	(0.03–33.1)	
irORR, n (%)	50 (45.5)	20 (13.9)	
irCR	7 (6.4)	3 (2.1)	
irPR	43 (39.1)	17 (11.8)	
irSD	20 (18.2)	41 (28.5)	
irPD	36 (32.7)	63 (43.8)	
NE	4 (3.6)	20 (13.9)	
irDCR, <sup>a</sup> n (%)	70 (63.6)	61 (42.4)	
irDOR, <sup>b</sup> months	NR	12.2	

<sup>a</sup>Includes CR, PR, and SD  $\geq$ 12 weeks; <sup>b</sup>Only includes responders.

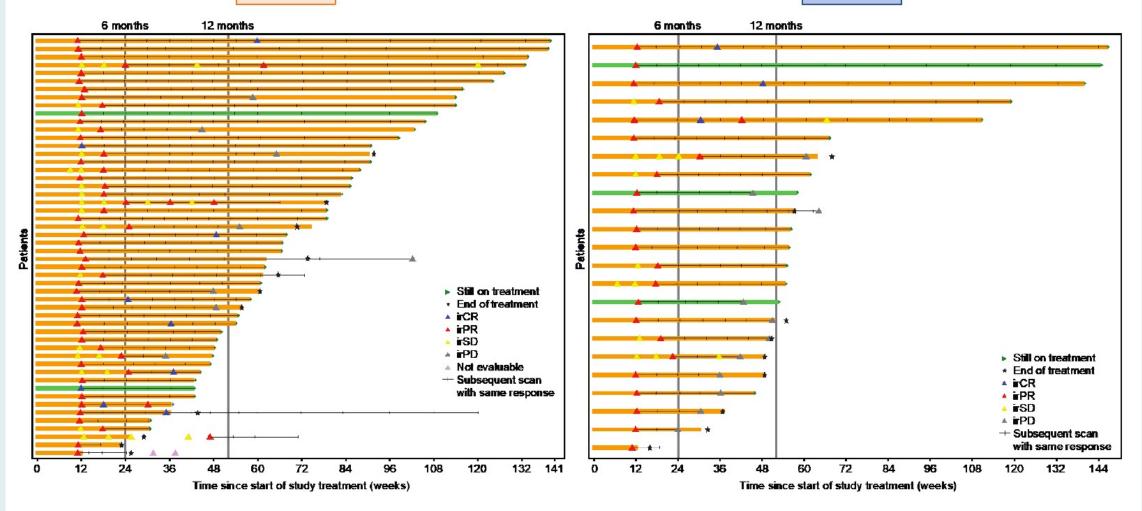


Pothuri B et al. SGO 2021;Abstract 10417.

#### **GARNET: Duration of Response with Dostarlimab**

dMMR

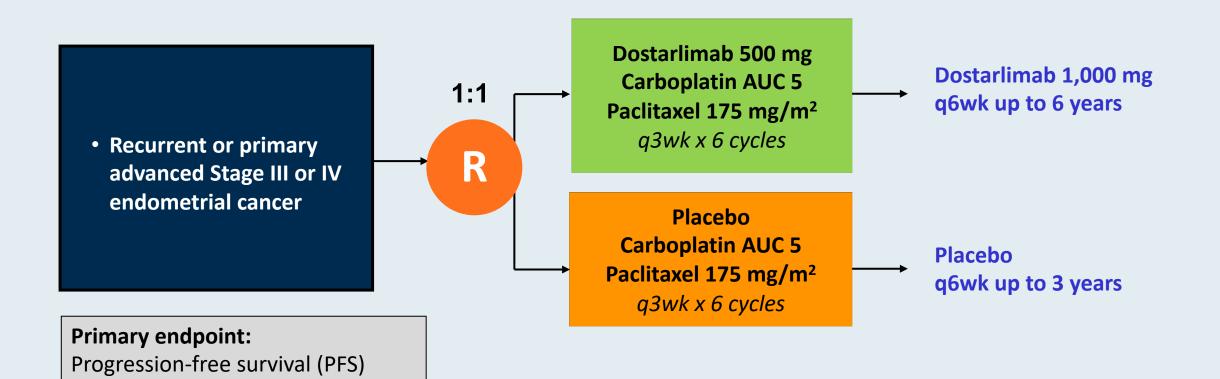






Pothuri B et al. SGO 2021; Abstract 10417.

#### **ENGOT-EN6/NSGO-RUBY** Phase III Schema of Dostarlimab





Mirza MR et al. ASCO 2020; Abstract TPS6107.

#### Agenda

#### **Module 1: Ovarian Cancer**

- Case 1: A 52-year-old woman with Stage IIIA2 ovarian cancer and a somatic BRCA2 mutation
- Case 2: A 59-year-old woman with ovarian cancer and a germline BRCA1 mutation

#### **Module 2: Endometrial Cancer**

- Case 3: A 68-year-old woman with recurrent endometrial cancer, MSI high
- Case 4: A 64-year-old woman with recurrent endometrial cancer

#### Module 3: Cervical Cancer – Relapsed Disease

• Case 5: A 45-year-old woman with recurrent cervical cancer, PD-L1 CPS 10



Currently, the combination of chemotherapy and an anti-PD-1/PD-L1 antibody is one of the standard first-line treatment options for patients with advanced...

- 1. Non-small cell lung cancer
- 2. Head and neck cancer
- 3. Cervical cancer
- 4. 1 and 2 only
- 5. 2 and 3 only
- 6. 1 and 3 only
- 7. All of the above
- 8. I'm not sure



#### Phase III KEYNOTE-826 Trial Met Dual Primary Endpoints of Overall Survival (OS) and Progression-Free Survival (PFS) in Patients With Persistent, Recurrent or Metastatic Cervical Cancer Press Release – June 22, 2021

The Phase 3 KEYNOTE-826 trial investigating pembrolizumab in combination with platinum-based chemotherapy (paclitaxel plus cisplatin or paclitaxel plus carboplatin) with or without bevacizumab, met its primary endpoints of overall survival (OS) and progression-free survival (PFS) for the first-line treatment of patients with persistent, recurrent or metastatic cervical cancer.

Based on an interim analysis conducted by an independent Data Monitoring Committee, pembrolizumab plus platinum-based chemotherapy with or without bevacizumab demonstrated statistically significant and clinically meaningful improvements in OS and PFS compared to the same platinum-based chemotherapy regimens with or without bevacizumab alone, regardless of PD-L1 status; pembrolizumab is the first anti-PD-1/PD-L1 therapy to demonstrate this. The safety profile of pembrolizumab in this trial was consistent with that observed in previously reported studies. Results will be presented at an upcoming medical meeting and will be submitted to regulatory authorities.

https://www.businesswire.com/news/home/20210622005214/en/Merck-Announces-Phase-3-KEYNOTE-826-Trial-Met-Dual-Primary-Endpoints-of-Overall-Survival-OS-and-Progression-Free-Survival-PFS-in-Patients-With-Persistent-Recurrent-or-Metastatic-Cervical-Cancer



## Pembrolizumab is approved as second-line treatment for metastatic cervical cancer...

- 1. In all patients
- 2. In patients with elevated PD-L1 levels
- 3. In combination with chemotherapy
- 4. All of the above
- 5. I'm not sure



## One of the most common autoimmune toxicities associated with checkpoint inhibitors is thyroid dysfunction.

- 1. Agree
- 2. Disagree
- 3. I'm not sure



Results from the Phase III EMPOWER-Cervical trial evaluating the anti-PD-1 antibody cemiplimab versus chemotherapy for patients with metastatic cervical cancer demonstrated...

- 1. No difference between the 2 study arms
- 2. Significant improvement in only PFS with cemiplimab
- 3. Significant improvement in both PFS and OS with cemiplimab
- 4. Significant improvement in only OS with cemiplimab
- 5. I'm not sure



## Case Presentation – A 45-year-old woman with recurrent cervical cancer, PD-L1 CPS 10

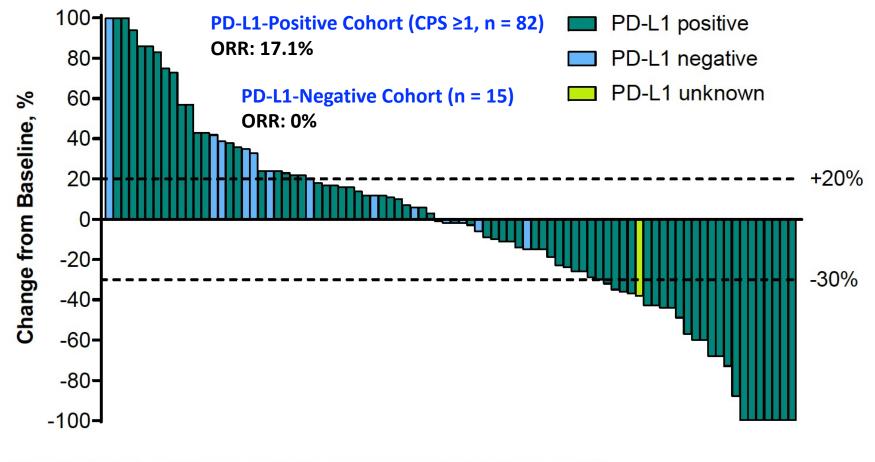
- 2015: Diagnosed with Stage IB1 adenocarcinoma of the cervix
  - Underwent surgery, declined radiation therapy  $\rightarrow$  lost to follow-up
- 2019: Disease recurrence in pelvis
  - Chemotherapy x 9  $\rightarrow$  again lost to follow-up for a couple of months
  - Chemotherapy x 3  $\rightarrow$  disease progression
- Pembrolizumab x 4 cycles  $\rightarrow$  disease progression
- Patient referred to hospice



How was it different to take care of this patient versus another patient in the same oncologic setting? What unique biopsychosocial factors (eg, attitude, comorbidities, social support) were considered in the overall management of this case?



#### Phase II KEYNOTE-158: Updated Results with Pembrolizumab for Previously Treated Advanced Cervical Cancer

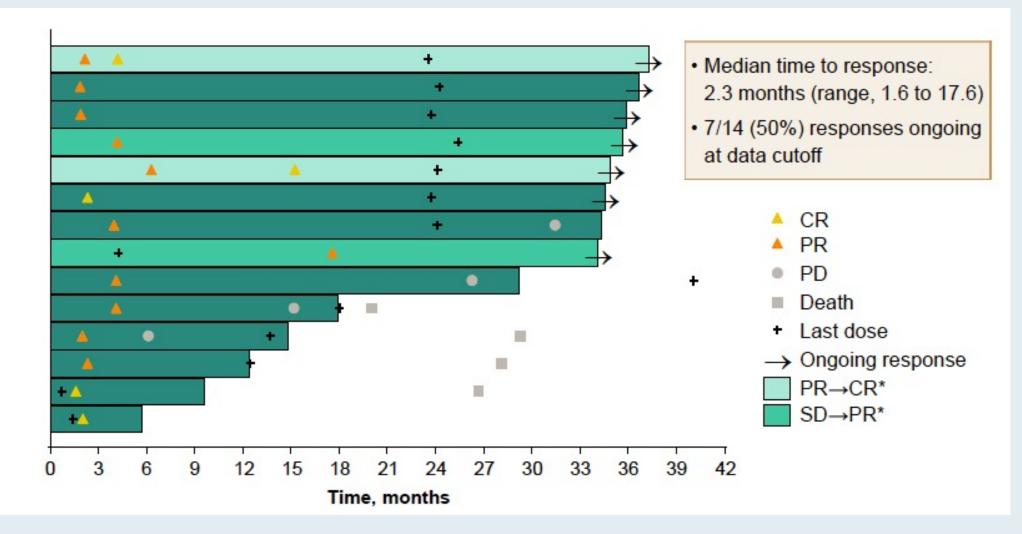


Includes patients with ≥1 evaluable post-baseline tumor assessment (n = 86). Data cutoff date: June 27, 2019.

**Combined Positive Score (CPS)** = PD-L1+ cells (tumor cells, lymphocytes, macrophages) / Total number of tumor cells x 100 Chung HC et al. SGO 2021;Abstract 10440.



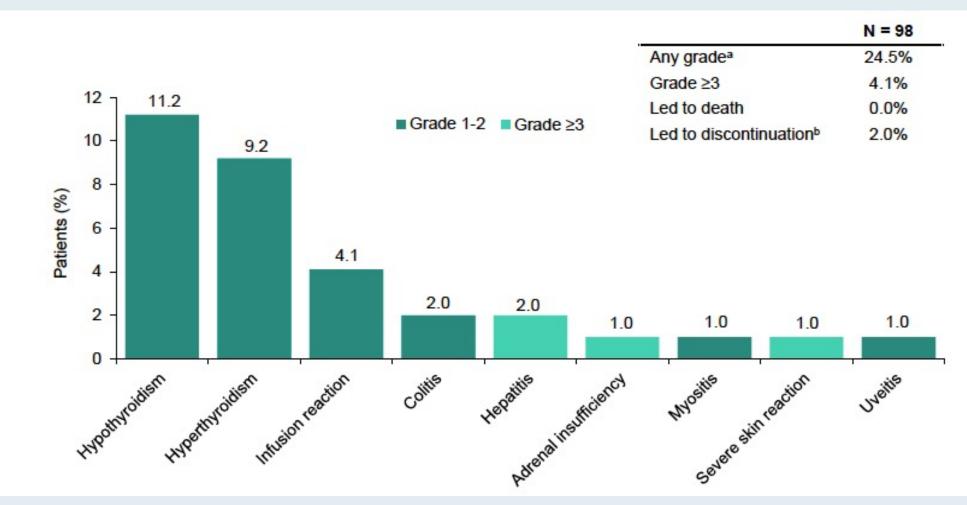
#### Phase II KEYNOTE-158: Time to Response and Duration of Response with Pembrolizumab





Chung HC et al. SGO 2021;Abstract 10440.

#### Phase II KEYNOTE-158: Immune-Mediated Adverse Events and Infusion Reactions



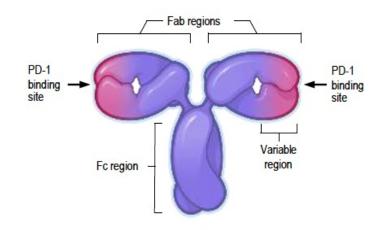
Includes events of any grade that occurred in  $\geq$ 1 patient



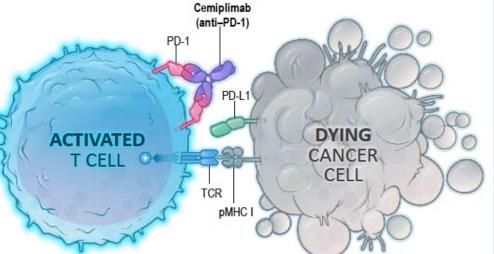
#### **CEMIPLIMAB: MECHANISM OF ACTION**



#### Cemiplimab Molecular Structure



### Cemiplimab Mechanism of Action



- High-affinity, human, hinge-stabilised IgG4 monoclonal antibody to the PD-1 receptor<sup>1</sup>
- Phase 1 R/M cervical cancer (n=23; includes Dose Escalation + Expansion Cohorts)<sup>2</sup>
  - Safety profile similar to that of other PD-1 inhibitors<sup>2</sup>
  - 17% ORR<sup>2</sup>

Ig, immunoglobin; Fc, fragment crystallizable; ORR, objective response rate; PD-1, programmed cell death-1; PD-L1, PD-ligand 1; pMHC I, peptide-bound major histocompatibility complex I; R/M, recurrent or metastatic; TCR, T-cell receptor. 1. Burova E et al. *Mol Cancer Ther.* 2017;16:861–870. 2. Rischin D et al. *Gynecol Oncol.* 2020;159:322–328.

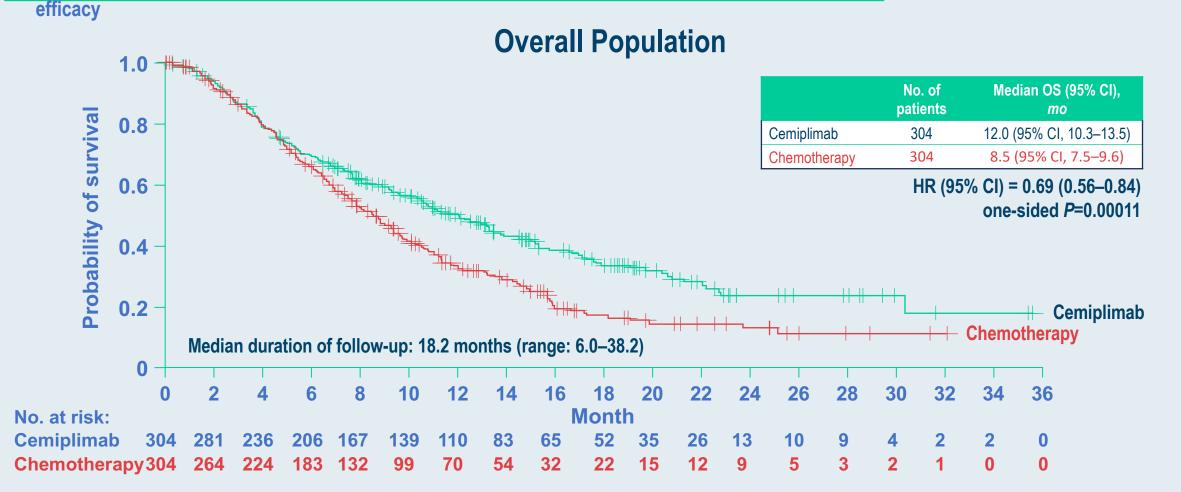
#### **ESMO VIRTUAL PLENARY**



#### **EMPOWER: OVERALL SURVIVAL**







#### ESMO VIRTUAL PLENARY

RTP RESEARCH TO PRACTICE

#### **EMPOWER: OBJECTIVE RESPONSE RATE**



	Overall population		
By investigator assessment	Cemiplimab (n=304)	Chemotherapy (n=304)	
Response			
Objective response rate (ORR:CR+PR)	50 (16.4)	19 (6.3)	
95% CI for ORR <sup>a</sup>	(12.5, 21.1)	(3.8, 9.6)	
Best overall tumour response, n (%)			
Complete response (CR) <sup>b</sup>	10 (3.3)	3 (1.0)	
Partial response (PR) <sup>b</sup>	40 (13.2)	16 (5.3)	
Stable disease (SD) <sup>c</sup>	125 (41.1)	148 (48.7)	
Progressive disease (PD)	105 (34.5)	88 (28.9)	
Not evaluable (NE)	24 (7.9)	49 (16.1)	
Stratified CMH test one-sided <i>P</i> -value <sup>d</sup>	0.00004		
Odds ratio (95% CI) <sup>d</sup>	2.984 (1.707, 5.215)		
KM estimated median DOR, months (95% CI) <sup>e</sup>	16.4 (12.4, NE)	6.9 (5.1, 7.7)	
Median observed time to response, months (range)	2.7 (1.2–11.4)	1.6 (1.2–9.0)	

#### ORR of SCC population

- Cemiplimab: 17.6% (95% CI: 13.0-23.0)
- Chemotherapy: 6.7% (95% CI: 3.9–10.7)

#### ORR of AC population

- Cemiplimab: 12.3% (95% CI: 5.5-22.8)
- Chemotherapy: 4.5% (95% CI: 0.9–12.7)



#### **ESMO VIRTUAL PLENARY**

#### **EMPOWER: ADVERSE EVENTS**



n (%), unless stated	Cemiplimab (n=300)		Chemotherapy (n=290)	
Median duration of exposure (range), weeks	15.2 (1.4–100.7)		10.1 (1.0–81.9)	
Treatment-emergent AEs, regardless of attribution	Any grade	Grade 3–5	Any grade	Grade 3–5
Overall	265 (88.3)	135 (45.0)	265 (91.4)	155 (53.4)
Led to discontinuation	26 (8.7)	20 (6.7)	15 (5.2)	11 (3.8)
Led to death	5 (1.7)	5 (1.7)	2 (0.7)	2 (0.7)
Treatment-related AEs				
Overall	170 (56.7)	44 (14.7)	236 (81.4)	117 (40.3)
Led to discontinuation	17 (5.7)	12 (4.0)	10 (3.4)	8 (2.8)
Led to death	0	0	2 (0.7)	2 (0.7)
Sponsor-identified immune-related AEs				
Overall	48 (16.0)	18 (6.0)	2 (0.7)	2 (0.7)
Led to discontinuation	15 (5.0)	11 (3.7)	2 (0.7)	2 (0.7)
Led to death	0	0	0	0

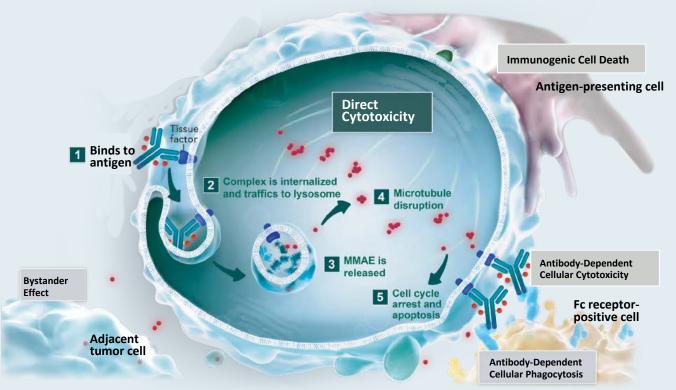
Treatment-emergent AEs in ≥15% of patients in either arm, n (%)	Cemiplimab (n=300)		Chemotherapy (n=290)	
	Any grade	Grade 3–5	Any grade	Grade 3–5
Overall	265 (88.3)	135 (45.0)	265 (91.4)	155 (53.4)
Anaemia	75 (25.0)	36 (12.0)	129 (44.5)	78 (26.9)
Nausea	55 (18.3)	1 (0.3)	97 (33.4)	6 (2.1)
Fatigue	50 (16.7)	4 (1.3)	45 (15.5)	4 (1.4)
Vomiting	48 (16.0)	2 (0.7)	68 (23.4)	7 (2.4)
Decreased appetite	45 (15.0)	1 (0.3)	46 (15.9)	2 (0.7)
Constipation	45 (15.0)	0	59 (20.3)	1 (0.3)
Pyrexia	35 (11.7)	1 (0.3)	61 (21.0)	0
Asthenia	33 (11.0)	7 (2.3)	44 (15.2)	3 (1.0)
Neutropenia	6 (2.0)	3 (1.0)	44 (15.2)	26 (9.0)

 There were no new immune-related AEs that are not well described for the PD-1/PD-L1 inhibitor class



#### **Mechanism of Action of Tisotumab Vedotin**

- Tissue factor (TF) is aberrantly expressed in a broad range of solid tumours, including cervical cancer,<sup>1,2</sup> and TF expression has been associated with higher tumour stage and grade, higher metastatic burden and poor prognosis<sup>2</sup>
- TF expression in cervical cancer makes TF a novel target for patients with cervical cancer
- ADC targets TF
  - Monoclonal Antibody targets TF
  - Payload: Microtubule disrupting MMAE
- Allowing for direct cytotoxicity and bystander killing, as well as antibody-dependent cellular cytotoxicity<sup>3,4</sup>



Förster Y, et al. *Clin Chim Acta*, 2006. 2. Cocco E, et al. *BMC Cancer*, 2011.
Breij EC, et al. *Cancer Res*, 2014. 4. De Goeij BE, et al. *Mol Cancer Ther*, 2015.

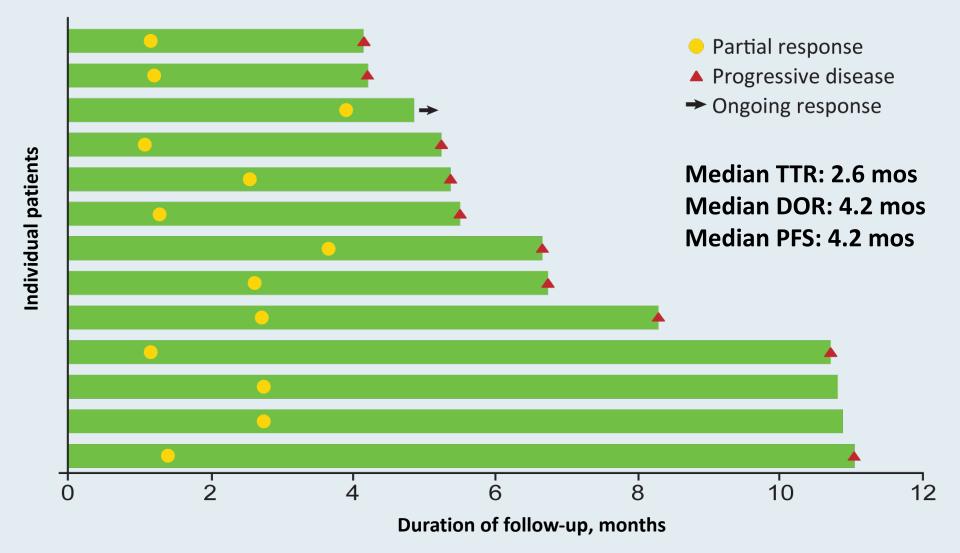


#### innovaTV 201: Best Overall Response to TV





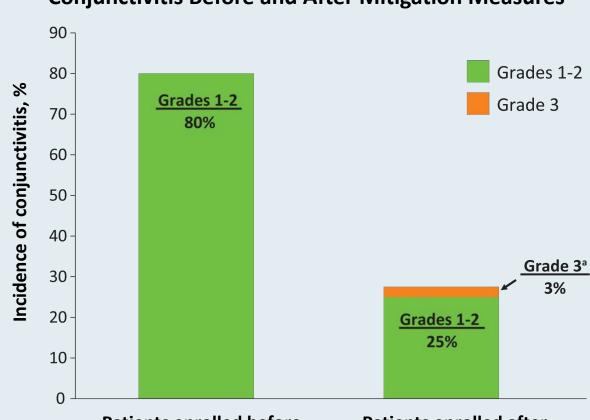
#### innovaTV 201: Time to Response and Duration of Response in Patients with a Confirmed PR to TV



Hong DS et al. Clin Cancer Res 2020;26:1220-8.

#### innovaTV 201: Treatment-Emergent Adverse Events

	N = 55		
Adverse events	All grade	Grade ≥3	
Fatigue	51%	9%	
Nausea	49%	5%	
Neuropathy	55%	11%	
Bleeding-related AEs	73%	5%	
Ocular AEs	65%	2%	
Conjunctivitis	42%	2%	
Dry eye	24%	0	
Ulcerative keratitis	7%	0	
Blepharitis	5%	0	
Keratitis	5%	0	



#### **Conjunctivitis Before and After Mitigation Measures**

### Patients enrolled beforePatients enrolled aftermitigation measures (n = 15)mitigation measures (n = 40)



Hong DS et al. Clin Cancer Res 2020;26:1220-8.

<sup>a</sup> One patient with grade 3 conjunctivitis after mitigation measures were implemented. No grade 3 events were observed before mitigation measures were implemented.

### Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Chronic Lymphocytic Leukemia

A Virtual CME Satellite Symposium Series in Conjunction with the Society of Hematologic Oncology 2021 Annual Meeting

> Monday, August 30, 2021 5:00 PM - 6:00 PM ET

Faculty Jeff Sharman, MD Mitchell R Smith, MD, PhD Philip A Thompson, MB, BS

> Moderator Neil Love, MD



### Thank you for joining us!

# NCPD credit information will be emailed to each participant shortly.

