Meet The Professor Optimizing the Management of Ovarian Cancer

Thursday, August 25, 2022 5:00 PM – 6:00 PM ET

Faculty Richard T Penson, MD, MRCP



Commercial Support

This activity is supported by educational grants from AstraZeneca Pharmaceuticals LP, GlaxoSmithKline, Merck, and Mersana Therapeutics Inc.



Dr Love — Disclosures

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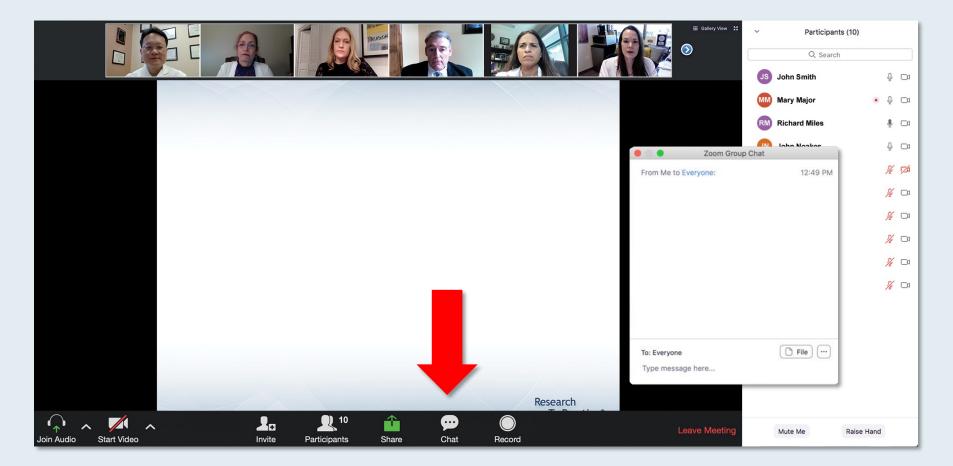


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We Encourage Clinicians in Practice to Submit Questions

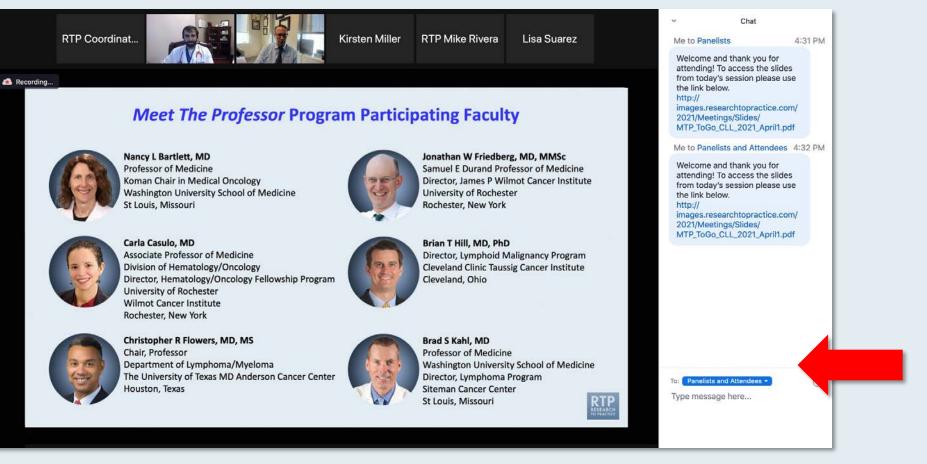


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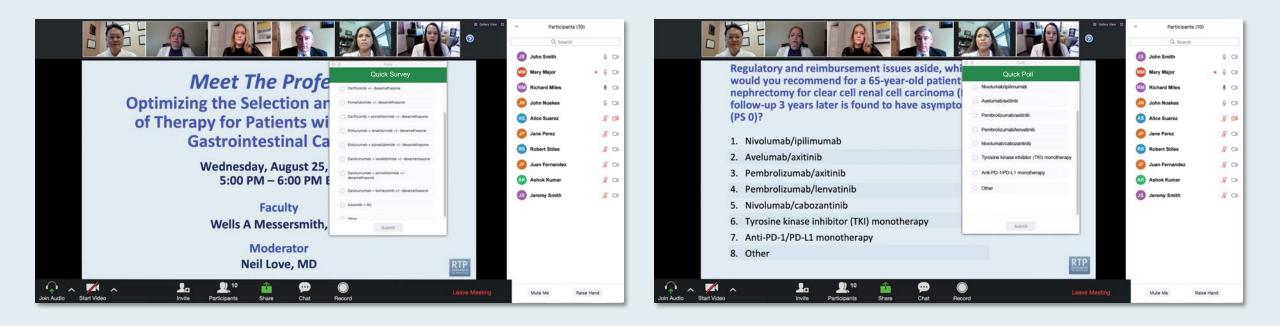
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ONCOLOGY TODAY WITH DR NEIL LOVE

Updates on Ovarian Cancer from SGO 2022



DR DAVID O'MALLEY THE OHIO STATE UNIVERSITY AND THE JAMES CANCER CENTER









Dr David O'Malley – Updates on Ovaria Oncology Today with Dr Neil Love —

(15) (30)

Meet The Professor Current and Future Management of Non-Small Cell Lung Cancer with an EGFR Mutation

Wednesday, August 31, 2022 5:00 PM – 6:00 PM ET

Faculty Lecia V Sequist, MD, MPH



Meet The Professor Optimizing the Management of HER2-Positive Breast Cancer

> Thursday, September 1, 2022 5:00 PM – 6:00 PM ET

> > Faculty Mark D Pegram, MD



Exploring Current Considerations and Promising Investigational Approaches for Patients with Myelodysplastic Syndromes

A CME/MOC-Accredited Virtual Event

Thursday, September 8, 2022 5:00 PM – 6:00 PM ET Faculty Guillermo Garcia-Manero, MD Gail J Roboz, MD David Sallman, MD



Challenging Cases from the Community: Investigators Provide Perspectives on the Optimal Management of Diffuse Large B-Cell Lymphoma

A CME/MOC-Accredited Virtual Event

Tuesday, September 13, 2022 5:00 PM – 6:00 PM ET

Faculty Sonali M Smith, MD *Additional faculty to be announced*



Current Paradigm and Future Directions for Immunotherapy in the Treatment of Metastatic Non-Small Cell Lung Cancer

A CME/MOC-Accredited Virtual Event

Tuesday, September 27, 2022 5:00 PM – 6:00 PM ET

Faculty *Faculty to be announced*



Thank you for joining us!

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



Meet The Professor Optimizing the Management of Ovarian Cancer

Richard T Penson, MD, MRCP

Associate Professor of Medicine Harvard Medical School Clinical Director, Medical Gynecologic Oncology Massachusetts General Hospital Boston, Massachusetts



Meet The Professor Program Participating Faculty



Ramez N Eskander, MD

Associate Clinical Professor of Obstetrics, Gynecology and Reproductive Sciences UC San Diego Health La Jolla, California



Stephanie Lheureux, MD, PhD

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Ursula Matulonis, MD Chief, Division of Gynecologic Oncology Brock-Wilson Family Chair Dana-Farber Cancer Institute Professor of Medicine Harvard Medical School Boston, Massachusetts



Meet The Professor Program Participating Faculty



Richard T Penson, MD, MRCP Associate Professor of Medicine Harvard Medical School Clinical Director, Medical Gynecologic Oncology Massachusetts General Hospital Boston, Massachusetts



MODERATOR

Neil Love, MD Research To Practice

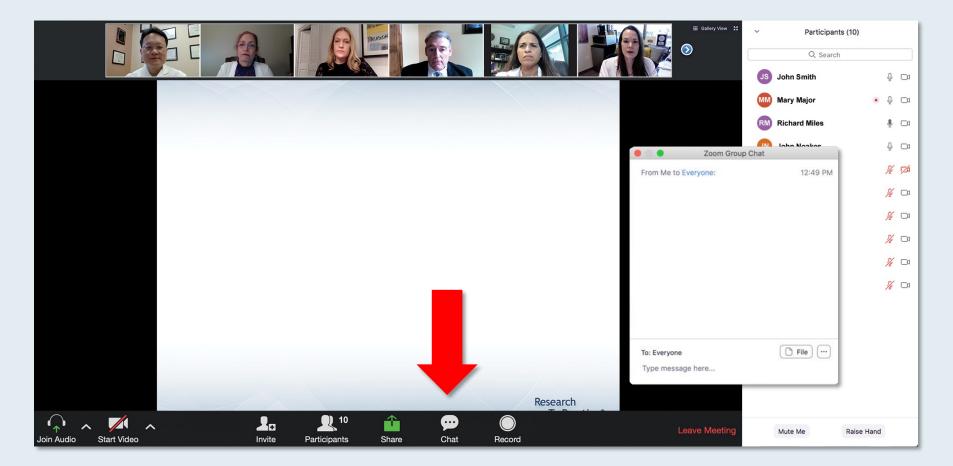


Shannon N Westin, MD, MPH

Associate Professor Director, Early Drug Development Department of Gynecologic Oncology and Reproductive Medicine The University of Texas MD Anderson Cancer Center Houston, Texas



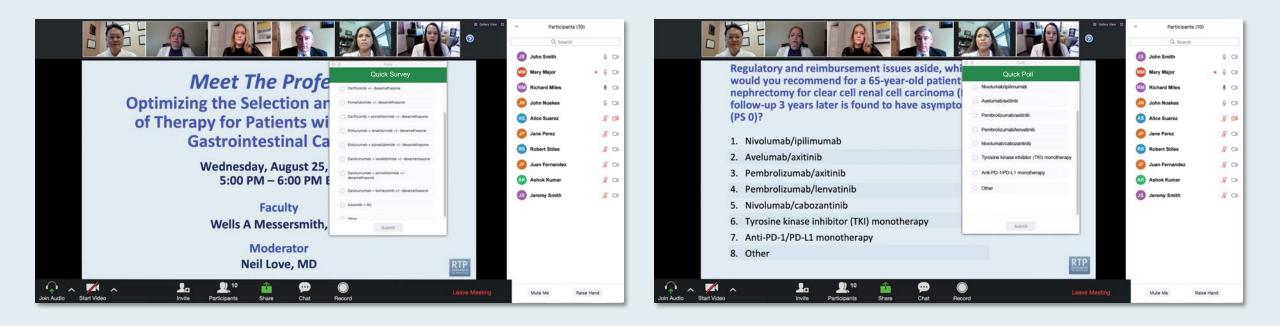
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Meet The Professor with Dr Penson

Introduction: Journal Club with Dr Penson – Part 1

MODULE 1: Case Presentations

MODULE 2: Faculty Survey

MODULE 3: Journal Club with Dr Penson – Part 2

MODULE 4: Appendix of Key Publications



Meet The Professor with Dr Penson

Introduction: Journal Club with Dr Penson – Part 1

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Select Antibody-Drug Conjugates in Oncology

Multiple Myeloma: Belantamab mafodotin

Hodgkin Lymphoma: Brentuximab vedotin

Diffuse Large B-Cell Lymphoma: Polatuzumab vedotin, loncastuximab tesirine

Breast Cancer: Sacituzumab govitecan, trastuzumab deruxtecan (T-DXd), trastuzumab emtansine (T-DM1)

Bladder Cancer: Enfortumab vedotin, sacituzumab govitecan, disitamab vedotin

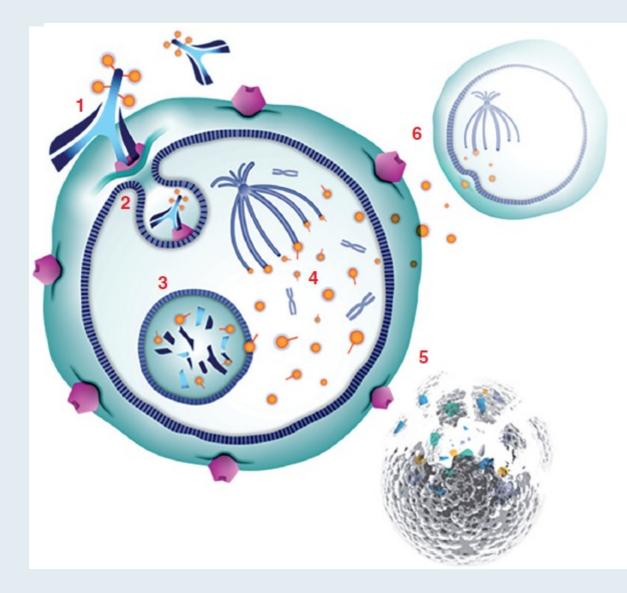
Lung Cancer: T-DXd, patritumab deruxtecan, datopotamab deruxtecan

Cervical Cancer: Tisotumab vedotin

Ovarian Cancer: Mirvetuximab soravtansine, upifitamab rilsodotin



Mirvetuximab Soravtansine: Mechanism of Action



(1) Mirvetuximab soravtansine binds with high affinity to FRα expressed on the tumor cell surface

(2) The antibody-drug conjugate (ADC)/receptor complex becomes internalized via antigenmediated endocytosis

(3) Lysosomal processing releases active DM4 catabolites from the ADC molecule

(4) These maytansinoid derivatives inhibit tubulin polymerization and microtubule assembly

(5) The potent antimitotic effects result in cell-cycle arrest and apoptosis

(6) Active metabolites can also diffuse into neighboring cells and induce further cell death — in other words, bystander killing



Mirvetuximab Soravtansine (MIRV) in Patients with Platinum-Resistant Ovarian Cancer with High Folate Receptor Alpha (FRα) Expression: Characterization of Antitumor Activity in the SORAYA Study

Matulonis UA et al. ASCO 2022;Abstract 5512.



MIRASOL Phase III Study Schema

MIRAS[®]L

Enrollment and Key Eligibility

- Platinum-resistant disease (PFI ≤ 6 mo)
 - 1° platinum refractory disease excluded (primary PFI < 3 mo)
- Prior bevacizumab and PARPi allowed
- 1-3 prior lines of therapy
- Patients with BRCA mutations allowed
- FRα-high by PS2+ scoring (≥75% PS2+)

Statistical Assumptions

- 430 patients/ 330 events for PFS by INV
- α=0.05 (two-sided)
- Power=90%; HR=0.7; control arm mPFS 3.5 mo

Mirvetuximab Soravtansine 6 mg/kg AIBW (calculated using adjusted ideal body weight) intravenously once every 3 weeks

> 1:1 Randomization STRATIFICATION FACTORS Investigator's Choice (IC) Chemotherapy (Paclitaxel, PLD, Topotecan) Prior Therapies (1 vs 2 vs 3)

Investigator's Choice (IC) Chemotherapy Paclitaxel, PLD,⁺ or Topotecan Paclitaxel: 80 mg/m2 weekly; PLD: 40 mg/m² every 4 weeks; Topotecan: 4 mg/m² on days 1, 8, and 15 every four weeks; or 1.25 mg/m² on days 1-5 every 3 weeks



Moore KN et al. SGO 2022; Abstract 297.

PHASE 1 DOSE-ESCALATION STUDY OF STRO-002, AN ANTI-FOLATE-RECEPTOR ALPHA ANTIBODY DRUG CONJUGATE, IN PATIENTS WITH ADVANCED, PROGRESSIVE, PLATINUM-RESISTANT/-REFRACTORY EPITHELIAL OVARIAN CANCER

R. Wendel Naumann,¹ Fadi S. Braiteh,² Lainie P. Martin,³ Erika Hamilton,⁴ John P. Diaz,⁵ Sami Diab,⁶ Russell J. Schilder,⁷ John W. Moroney,⁸ Denise Uyar,⁹ David M. O'Malley,¹⁰ Richard T. Penson,¹¹ Clifford DiLea,¹² Michael Palumbo,¹³ Venita DeAlmeida,¹³ Shannon Matheny,¹³ Lin Lu,¹³ Craig J. Berman,¹³ Arturo Molina¹³

Abstract 5550

¹Levine Cancer Institute, Atrium Health, Charlotte, NC; ²Comprehensive Cancer Centers of Nevada, Las Vegas, NV; ³University of Pennsylvania, Abramson Cancer Center, Philadelphia, PA; ⁴Sarah Cannon Research Institute, Tennessee Oncology PLLC, Nashville, TN; ⁵Miami Cancer Institute at Baptist Health, Miami, FL; ⁶Rocky Mountain Cancer Center, Aurora, CO; ⁷Sidney Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA; ⁸University of Chicago, Chicago, IL; ⁹Medical College of Wisconsin, Milwaukee, WI; ¹⁰Ohio State University, Wexner Medical Center, Columbus, OH; ¹¹Massachusetts General Hospital, Boston, MA; ¹²Aclairo Pharmaceutical Development Group, Vienna, VA; ¹³Sutro Biopharma, Inc., South San Francisco, CA

R. Wendel Naumann

2021 ASCO

ANNUAL MEETING

Levine Cancer Institute, Atrium Health, Charlotte, NC

June 4-8, 2021



Baseline Characteristics and TEAEs

Baseline characteristics

Baseline characteristic	All patients (N = 39)
Age, median (range), years	61 (48–79)
Time since diagnosis, median (range), years	3.9 (0.7–17.0)
No. of prior lines of therapy, median (range)	6 (1–11)
Previous therapies, n (%)	
Platinum	39 (100)
≥ 3 prior platinum regimens	18 (46)
Taxanes	38 (97)
Bevacizumab	32 (82)
Poly (ADP-ribose) polymerase inhibitors	23 (59)
Checkpoint inhibitors	8 (21)
Experimental therapy	14 (36)

 The novel FRα-targeting ADC STRO-002 exhibited a generally well-tolerated safety profile in heavily pretreated patients with progressive EOC

Most frequent TEAEs > 25% by grade^a

All safety-evaluable patients, n (%)	Grade 1	Grade 2	Grade 3	Grade 4	Overall (N = 39)
Fatigue	7 (18)	19 (49)	4 (10)	0	30 (77)
Nausea	15 (39)	11 (28)	0	0	26 (67)
Constipation	12 (31)	13 (33)	0	0	25 (64)
Neutropeniab	0	0	8 (21)	17 (44)	25 (64)
Decreased appetite	10 (26)	10 (26)	0	0	20 (51)
Arthralgia	7 (18)	7 (18)	5 (13)	0	19 (49)
Neuropathy	3 (8)	13 (33)	3 (8)	0	19 (49)
Abdominal pain	7 (18)	6 (15)	3 (8)	0	16 (41)
Vomiting	8 (21)	7 (18)	0	0	15 (39)
AST increased	10 (26)	3 (8)	2 (5)	0	15 (39)
Diarrhea	8 (21)	3 (8)	1 (3)	0	12 (31)
Dizziness	9 (23)	3 (8)	0	0	12 (31)
Dry eye	4 (10)	8 (21)	0	0	12 (31)
Anemia	3 (8)	6 (15)	2 (5)	0	11 (28)
Pyrexia	8 (21)	3 (8)	0	0	11 (28)
Headache	7 (18)	3 (8)	0	0	10 (26)
Insomnia	6 (15)	4 (10)	0	0	10 (26)

^aTwo grade 5 events were reported as unrelated to study drug by investigator assessment, 1 death not otherwise specified and 1 acute gastrointestinal bleed. ^bNeutropenia included the following preferred terms: neutropenia, febrile neutropenia, and neutrophil count decreased. ^cNeuropathy included the following preferred terms: neuropathy peripheral and peripheral sensory neuropathy. ADP, adenosine diphosphate; AST, aspartate aminotransferase.

TEAE = treatment-emergent adverse event

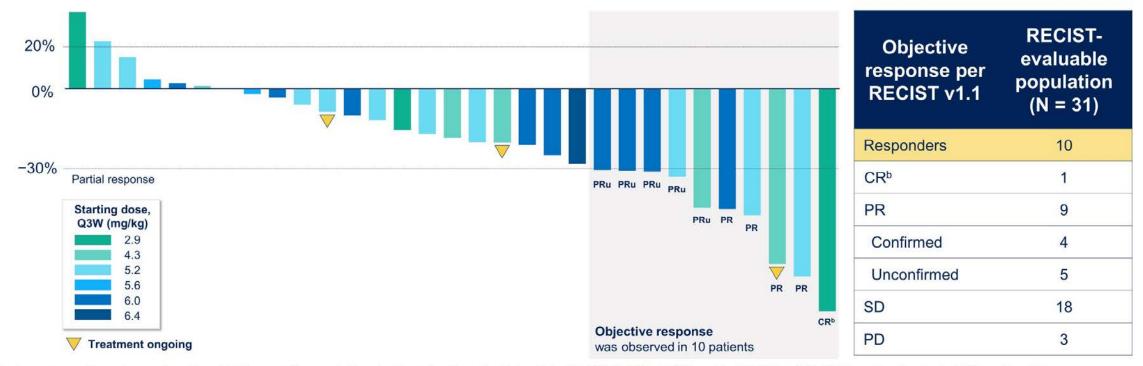


Naumann RW et al. ASCO 2021; Abstract 5550.

Efficacy

• STRO-002 exhibited clinical efficacy as demonstrated by objective responses: 1 CR, 4 PR, and 5 PRu

Maximum change^a in tumor target lesions in RECIST-evaluable patients treated with STRO-002 ≥ 2.9 mg/kg Q3W (N = 31)



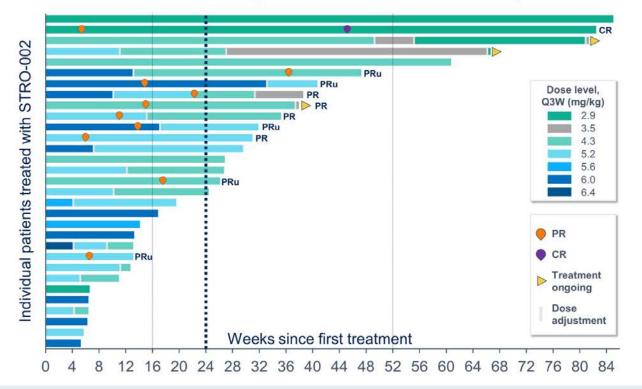
^aMaximum percentage change from baseline in sum of longest diameter in evaluable patients treated with STRO-002 at ≥ 2.9 mg/kg Q3W (N = 31). ^bCR in patient treated at 2.9 mg/kg with resolution of peritoneal disease. CR, complete response; PD, progressive disease; PR, partial response; PRu, unconfirmed partial response; SD, stable disease. Data cutoff was April 23, 2021.



Disease Control Rate and Progression-Free Survival

- Disease control rate was 61% and 55% at ≥ 16 and 24 weeks, respectively
- Median PFS was 7.2 months (95% CI, 4.5–10.8)

Treatment duration^a and response in RECIST-evaluable patients treated with STRO-002 ≥ 2.9 mg/kg Q3W (N = 31)



Disease control rate (DCR, weeks)	RECIST-evaluable population, n (%)
≥ 52 weeks	5 (16)
≥ 24 weeks	17 (55)
≥ 16 weeks	19 (61)

12 weeks were treated at the

2.9 to 5.2 mg/kg dose levels

JOURNAL CLUB REPRESEARCH

Naumann RW et al. ASCO 2021; Abstract 5550.

Updated Results From the Phase 1b Expansion Study of Upifitamab Rilsodotin (UpRi; XMT-1536), a NaPi2bdirected Dolaflexin Antibody Drug Conjugate (ADC) in Ovarian Cancer

<u>Richardson, Debra L</u>¹; Hamilton, Erika P²; Barve, Minal³; Anderson, Charles K⁴; Taylor, Sara K⁵; Lakhani, Nehal⁶; Buscema, Joseph⁷; Tolcher, Anthony W⁸; Zarwan, Corrine⁹; Werner, Theresa L¹⁰; Hays, John L¹¹; Richards, Paul¹²; Arend, Rebecca¹³; Edenfield, Jeffery¹⁴; Putiri, Emily¹⁵; Bernardo, Patricia¹⁵; Burger, Robert A¹⁵; Matulonis, Ursula A¹⁶

¹Stephenson Cancer Center, University of Oklahoma Health Sciences Center and the Sarah Cannon Research Institute, Oklahoma City, OK; ²Sarah Cannon Research Institute/Tennessee Oncology, Nashville, TN; ³Mary Crowley Cancer Research, Dallas, TX; ⁴Willamette Valley Cancer Institute and Research Center, Eugene, OR; ⁵BC Cancer - Kelowna BC, Canada; ⁶START Midwest, Grand Rapids, MI; ⁷Arizona Oncology, Tucson, AZ; ⁸NEXT Oncology, San Antonio, TX; ⁹Lahey Clinic, Burlington, MA; ¹⁰Huntsman Cancer Institute, University of Utah,

Salt Lake City, UT; ¹¹Arthur James Cancer Hospital, Ohio State University, Columbus, OH; ¹²US Oncology, Oncology and Hematology Assoc. of Southwest VA, Salem, VA; ¹³University of Alabama at Birmingham, Birmingham, AL; ¹⁴Prisma Health Cancer Institute, Greenville, SC; ¹⁵Mersana Therapeutics, Inc, Cambridge, MA; ¹⁶Dana-Farber Cancer Institute, Boston, MA

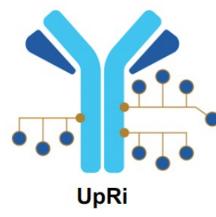


SGO 2022; Abstract 76.





Upifitamab Rilsodotin (UpRi): First-in-Class ADC Targeting NaPi2b

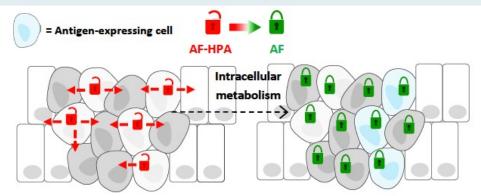


Antibody: Humanized monoclonal anti-NaPi2b¹

Linker: Polymer scaffold; cleavable ester linker²

Payload: AF-HPA (DolaLock-controlled bystander effect)¹

Drug-to-Antibody Ratio: ~10



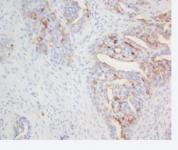
Upon ADC internalization into tumor cells and efficient release of payload, AF-HPA payload is metabolized to AF that remains highly potent but loses the ability to cross the cell membrane, locking it in the tumor, controlling the bystander effect, and consequently limiting impact on adjacent healthy cells^{2,3}

NaPi2b Is a Sodium-Dependent Phosphate Transporter Broadly Expressed in Ovarian Cancer With Limited Expression

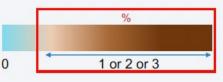


- NaPi2b expressed by tumor cells in two-thirds of patients with high-grade serous ovarian cancer²
- NaPi2b is a lineage antigen (not an oncogene)¹

in Healthy Tissues⁴



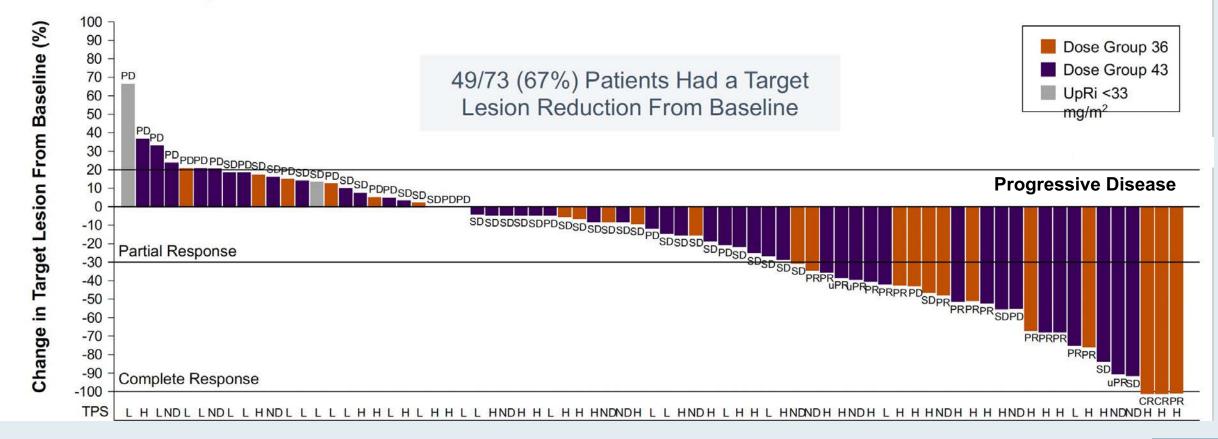
NaPi2b IHC assay in development – an optimal diagnostic assay would be robust, predictive, reproducible, easily able to distinguish a wide range of expression using TPS scoring method²





Best Response by UpRi Dose Group

Similar Tumor Reduction in Both Dose Groups: Two-thirds of Patients Had Reductions in Target Tumor Lesions by RECIST 1.1





Confirmed ORR by UpRiDose Group and NaPi2b Level and Duration of Response (DoR)

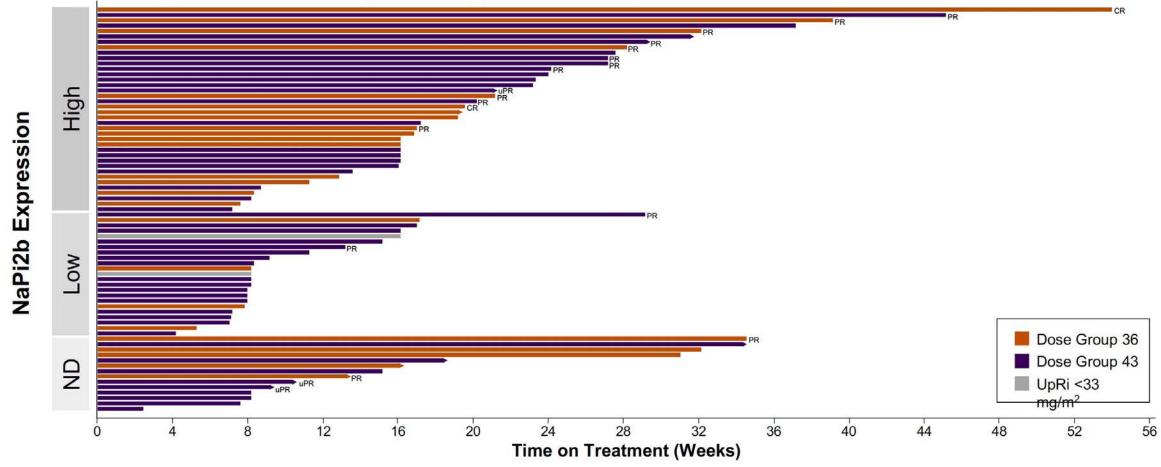
		All Dose Levels	Dose Group 36	Dose Group 43
	Ν	38	16	22
	ORR, n (%)	13 (34)	7 (44)	6 (27)
NaPi2b-High (TPS ≥75)	CR, n (%)	2 (5)	2 (13)	0
(110 = 10)	PR, n (%)	11 (29)	5 (31)	6 (27)
	DCR, n (%)	33 (87)	12 (75)	21 (95)
	Ν	75	25	48
	ORR, n (%)	17 (23)	9 (36)	8 (17)
All NaPi2b Levels	CR, n (%)	2 (3)	2 (8)	0
	PR, n (%)	15 (20)	7 (28)	8 (17)
	DCR, n (%)	54 (72)	18 (72)	35 (73)

- Median DoR in patients (all dose levels) with NaPi2b-high ovarian cancer (n=13): 5 months
- No obvious difference in median DoR observed between Dose Groups 36 and 43



Time on UpRi Study in Evaluable Patients

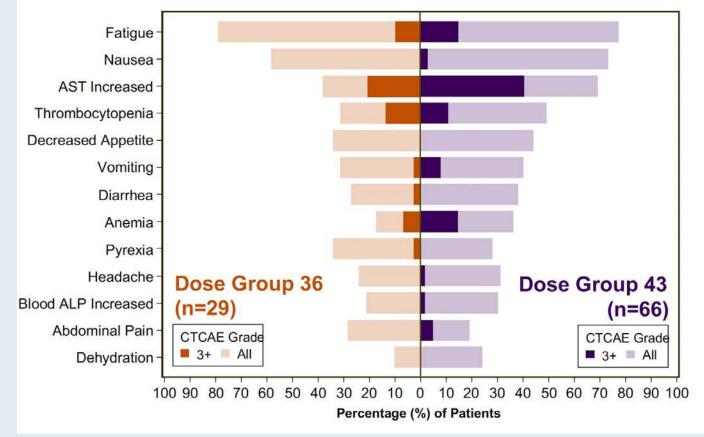
Trend to Longer Time on Study With High NaPi2b Expression





TRAEs by UpRi Dose Group

Dose Group 36 Had a More Favorable Safety Profile Compared to Dose Group 43



TRAEs ≥20%

- No severe ocular toxicity, neutropenia, or peripheral neuropathy in either dose group
- 4 (14%) patients had treatment-related SAEs in Dose Group 36 vs 18 (27%) in Dose Group 43
- Lower frequencies and lower grade pneumonitis occurred in Dose Group 36 (with no Grade 3+) vs Dose Group 43^a



Ongoing UPLIFT (ENGOT-OV67/GOG-3048) Study Schema

Patient Population: HGSOC^a progressing after standard treatments; measurable disease per RECIST v1.1; ECOG PS 0 or 1; enrolling regardless of NaPi2b expression

Key Inclusion Criteria

- Platinum-resistant ovarian cancer (PROC)
- 1–4 prior lines of therapy
- Grade ≤2 peripheral neuropathy
- Archival or fresh tissue required for biomarker evaluation

Key Exclusion Criteria

- 1–2 prior lines bevacizumab-naive
- Primary platinum-refractory disease

UpRi 36 mg/m² up to max 80 mg; IV Q4W

Primary Endpoint

Confirmed ORR in NaPi2b-high (N = ~100)

Secondary Endpoint

 Confirmed ORR in overall population (N = up to ~180 including 100 NaPi2b-high)

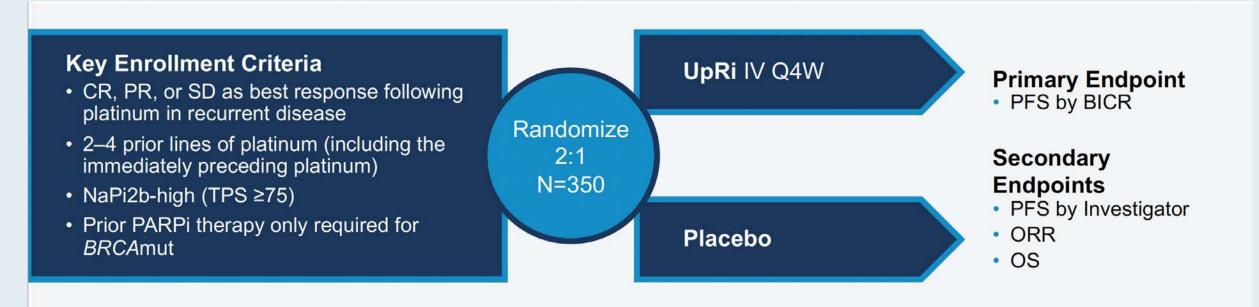
Other Secondary Endpoints

- DoR
- Safety

Prospectively-defined retrospective analysis to validate NaPi2b biomarker cutoff



Ongoing UP-NEXT Phase III (ENGOT-OV71-NSGO-CTU/GOG-3049) Study Schema



Informed by FDA Feedback and CHMP Scientific Advice; Plans to Initiate in 2022



Richardson DL et al. SGO 2022; Abstract 76.

Meet The Professor with Dr Penson

MODULE 1: Case Presentations

- Dr Chen: 76-year-old woman with Stage IIIB BRCA WT HGSOC, s/p neo/adjuvant carboplatin/paclitaxel, and severe thrombocytopenia on maintenance niraparib
- Dr Chase: 38-year-old woman with Stage IIC BRCA WT HGSOC s/p surgery and carboplatin/paclitaxel LOH-negative
- Dr DiSilvestro: 62-year-old woman with Stage IIIC HGSOC and a gBRCA1 mutation receives IV/IP paclitaxel/cisplatin
- Dr ElSahwi: 60-year-old woman with BRCA WT, HRD-negative peritoneal cancer s/p neo/adjuvant carboplatin/paclitaxel presents with altered mental status and a cerebellar metastasis
- Dr Chase: 72-year-old woman with multiregimen-recurrent endometrioid ovarian adenocarcinoma with a gPALB2 mutation develops breast cancer during maintenance niraparib
- Dr Bank: 76-year-old woman with Stage IV ovarian cancer goes for debulking surgery after carboplatin/paclitaxel and maintenance niraparib
- Dr Rudolph: 69-year-old woman with Stage IV BRCA WT, HRD-negative HGSOC develops anemia on maintenance olaparib/bevacizumab
- Dr DiSilvestro: 57-year-old woman (s/p donor nephrectomy) with Stage IIIA HGSOC, gBRCA1 mutant
- Dr ElSahwi: 59-year-old woman with primary peritoneal cancer, gBRCA1 mutant, develops a small pelvic recurrence after neo/adjuvant chemotherapy and surgery
- Dr Chen: 53-year-old woman with locally recurrent ovarian cancer (BRCA WT) develops lymphedema on maintenance bevacizumab/niraparib



Case Presentation: 76-year-old woman with Stage IIIB BRCA WT HGSOC, s/p neo/adjuvant carboplatin/paclitaxel, and severe thrombocytopenia on maintenance niraparib



Dr Gigi Chen (Pleasant Hill, California)



Ovarian cancer 1L PARPi maintenance trials: design and populations

Trial	PARP inhibitor	Duration	BRCA status	R0 at PDS allowed	% PDS	CR/PR to platinum
SOLO1 ^{1,2}	Olaparib	2 years	BRCAmt only	Yes	62.9	Yes
PRIMA ³	Niraparib	3 years	All comers	No if Stage III	33	Yes
PRIME ⁴	Niraparib	3 years	All comers	Yes	53.1	Yes
PAOLA1⁵	Olaparib (w/bevacizumab)	2 years	All comers	Yes	50.7	Yes
	Veliparib (w/chemo)	36 total cycles	All comers	Yes	67.5	No (tx starts with chemo)
ATHENA-MONO ⁷	Rucaparib	2 years	All comers	Yes	48.9	Yes

¹Moore et al., *N Engl J Med* 2018; ²Banerjee et al., 2020 ESMO Congress; ³Gonzalez-Martin et al., *N Engl J Med* 2019; ⁴Li et al., 2022 SGO Annual Meeting; ⁵Ray-Coquard et al., *N Engl J Med* 2019; ⁶Coleman et al., *N Engl J Med* 2019; ⁷Monk et al., 2022 ASCO Annual Meeting



Liu N. ASCO 2022; Highlights of the Day: Gynecologic Cancers.

Trials of 1L PARPi maintenance in ovarian cancer

Trial	PARP inhibitor	Duration	All comers	BRCAmt	BRCAwt overall	BRCAwt – HRD	BRCAwt – HRP	HRD assay
ATHENA-MONO ¹	Rucaparib	2 years	HR 0.52 20.2 vs 9.2 mos	HR 0.40 NR vs 14.7 mos		HR 0.58 95%Cl 0.33-1.01 20.3 vs 9.2 mos	HR 0.65 95%Cl 0.45-0.95 12.1 vs 9.1 mos	Foundation One CDx
SOL01 ^{2,3}	Olaparib	2 years	-	HR 0.33 56.0 vs 13.8 mos	-		-	-
PRIMA ⁴	Niraparib	3 years	HR 0.62 13.8 vs 8.2 mos	HR 0.40 22.1 vs 10.9 mos		HR 0.50 19.6 vs 8.2 mos	HR 0.68 8.1 vs 5.4 mos	Myriad MyChoice
PRIME ⁵	Niraparib	3 years	HR 0.45 24.8 vs 8.3 mos	HR 0.40 NR vs 10.8 mos	HR 0.48* 19.3 vs 8.3 mos	HR 0.58 24.8 vs 11.1 mos	HR 0.41 14.0 vs 5.5 mos	Not published
PAOLA16	Olaparib (w/bevacizumab)	2 years	HR 0.59 22.1 vs 16.6 mos	HR 0.31 37.2 vs 21.7 mos	HR 0.71 18.9 vs 16.0 mos	HR 0.43 28.1 vs 16.6 mos	HR 0.92 (NS) 18.9 vs 16.0 mos	Myriad MyChoice
VELIA ⁷	Veliparib (w/chemo)	36 total cycles	HR 0.68 23.5 vs 17.3 mos	HR 0.44 34.7 vs 22.0 mos	HR 0.80 18.2 vs 15.1 mos	HR 0.74 (NS) 15.0 vs 11.5 mos	HR 0.81 (NS) 18.2 vs 15.1 mos	Myriad MyChoice

*does not exclude pts with sBRCAmt tumors

¹Monk et al., 2022 ASCO Annual Meeting; ²Moore et al., *N Engl J Med* 2018; ³Banerjee et al., 2020 ESMO Congress; ⁴Gonzalez-Martin et al., *N Engl J Med* 2019; ⁵Li et al., 2022 SGO Annual Meeting; ⁶Ray-Coquard et al., *N Engl J Med* 2019; ⁷Coleman et al., *N Engl J Med* 2019

Liu N. ASCO 2022; Highlights of the Day: Gynecologic Cancers.

A Randomized, Phase III Trial to Evaluate original **Rucaparib Monotherapy as Maintenance Treatment in Patients With Newly Diagnosed Ovarian Cancer (ATHENA-MONO/GOG-3020/** ENGOT-ov45)

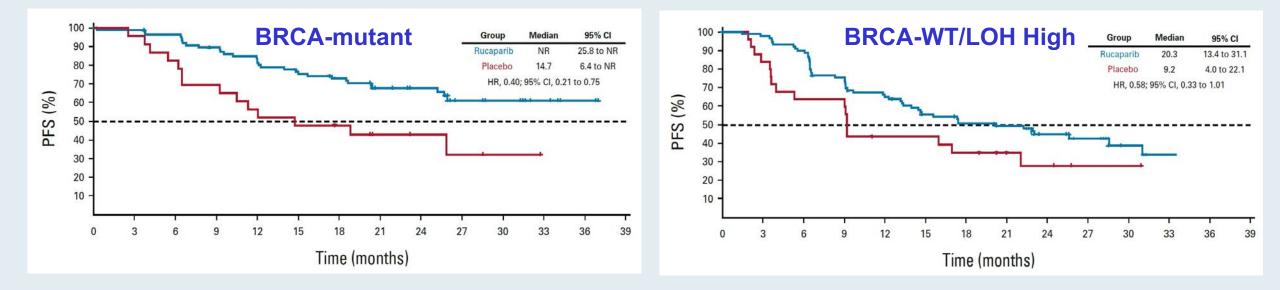
reports

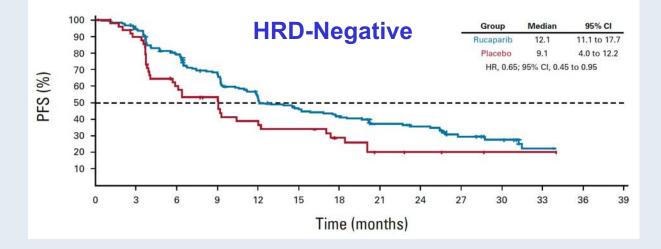
Bradley J. Monk, MD¹; Christine Parkinson, MD²; Myong Cheol Lim, MD, PhD³; David M. O'Malley, MD⁴; Ana Oaknin, MD, PhD⁵; Michelle K. Wilson, MD⁶; Robert L. Coleman, MD⁷; Domenica Lorusso, MD, PhD⁸; Paul Bessette, MD⁹; Sharad Ghamande, MD¹⁰; Athina Christopoulou, MD, PhD¹¹; Diane Provencher, MD¹²; Emily Prendergast, MD¹³; Fuat Demirkiran, MD¹⁴; Olga Mikheeva, MD¹⁵; Oladapo Yeku, MD, PhD¹⁶; Anita Chudecka-Glaz, MD, PhD¹⁷; Michael Schenker, MD, PhD¹⁸; Ramey D. Littell, MD¹⁹; Tamar Safra, MD²⁰; Hung-Hsueh Chou, MD^{21,22}; Mark A. Morgan, MD²³; Vít Drochýtek, MD²⁴; Joyce N. Barlin, MD²⁵; Toon Van Gorp, MD²⁶; Fred Ueland, MD²⁷; Gabriel Lindahl, MD^{28,29}; Charles Anderson, MD³⁰; Dearbhaile C. Collins, MBBCh, MA, PhD³¹; Kathleen Moore, MD³²; Frederik Marme, MD, PhD³³; Shannon N. Westin, MD, MPH³⁴; Iain A. McNeish, MD, PhD³⁵; Danny Shih, BA³⁶; Kevin K. Lin, PhD³⁷; Sandra Goble, MS³⁸; Stephanie Hume, PhD³⁹; Keiichi Fujiwara, MD, PhD⁴⁰; and Rebecca S. Kristeleit, MD, PhD⁴¹

J Clin Oncol 2022;[Online ahead of print].



ATHENA-MONO: Investigator-Assessed PFS







Monk BJ et al. J Clin Oncol 2022;[Online ahead of print].

Case Presentation: 38-year-old woman with Stage IIC BRCA WT HGSOC s/p surgery and carboplatin/paclitaxel – LOHnegative



Dr Dana Chase (Phoenix, Arizona)



Case Presentation: 62-year-old woman with Stage IIIC HGSOC and a gBRCA1 mutation receives IV/IP paclitaxel/cisplatin



Dr Paul DiSilvestro (Providence, Rhode Island)



Case Presentation: 60-year-old woman with BRCA WT, HRDnegative peritoneal cancer s/p neo/adjuvant carboplatin/paclitaxel presents with altered mental status and a cerebellar metastasis



Dr Karim ElSahwi (Neptune City, New Jersey)







Case Presentation: 72-year-old woman with multiregimenrecurrent endometrioid ovarian adenocarcinoma with a gPALB2 mutation develops breast cancer during maintenance niraparib



Dr Dana Chase (Phoenix, Arizona)

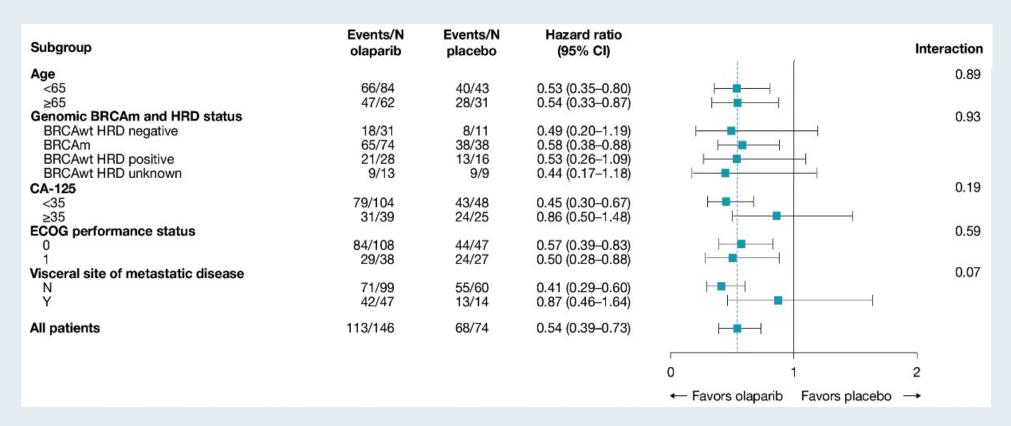


OReO/ENGOT Ov-38 Trial: Impact of Maintenance Olaparib Rechallenge According to Ovarian Cancer Patient Prognosis — An Exploratory Joint Analysis of the BRCA and Non-BRCA Cohorts

Selle F et al. ASCO 2022;Abstract 5558.



OReO: Post-hoc Analysis of Progression-Free Survival According to Patient Characteristics and Prognostic Factors



- Olaparib rechallenge was effective regardless of prognostic subgroup
- CA-125 levels and the presence of visceral disease at baseline were the best predictors of patient outcome



Case Presentation: 76-year-old woman with Stage IV ovarian cancer goes for debulking surgery after carboplatin/paclitaxel and maintenance niraparib



Dr Bruce Bank (Rolling Meadows, Illinois)



Case Presentation: 69-year-old woman with Stage IV BRCA WT, HRD-negative HGSOC develops anemia on maintenance olaparib/bevacizumab



Dr Priya Rudolph (Athens, Georgia)



Case Presentation: 57-year-old woman (s/p donor nephrectomy) with Stage IIIA HGSOC, gBRCA1 mutant



Dr Paul DiSilvestro (Providence, Rhode Island)

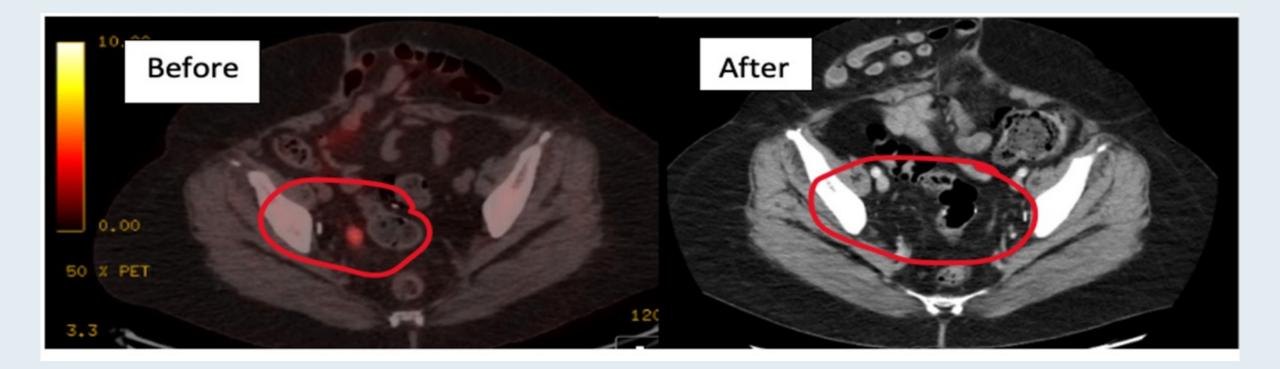


Case Presentation: 59-year-old woman with primary peritoneal cancer, gBRCA1 mutant, develops a small pelvic recurrence after neo/adjuvant chemotherapy and surgery



Dr Karim ElSahwi (Neptune City, New Jersey)







Case Presentation: 53-year-old woman with locally recurrent ovarian cancer (BRCA WT) develops lymphedema on maintenance bevacizumab/niraparib



Dr Gigi Chen (Pleasant Hill, California)



Meet The Professor with Dr Penson

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MODULE 4: Appendix of Key Publications

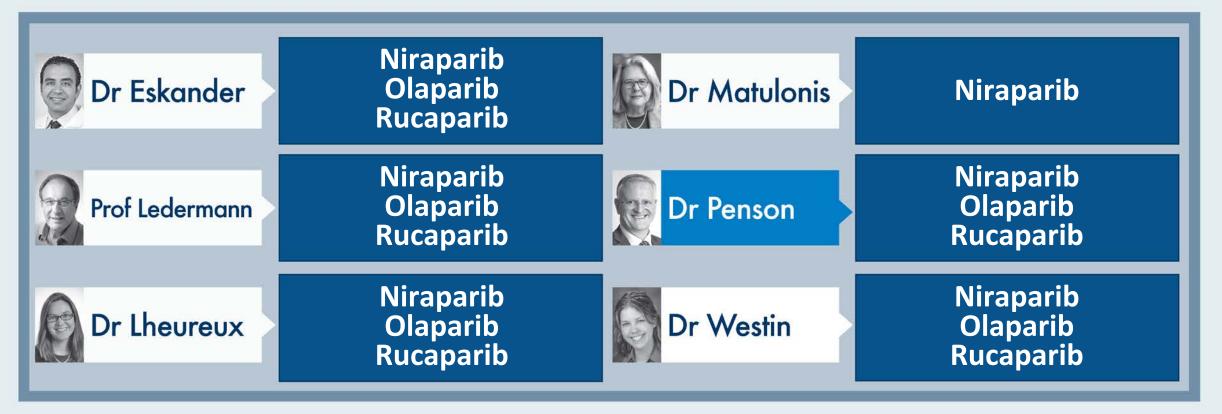


A patient presenting with ovarian cancer with extensive intra-abdominal disease (clinical Stage IIIC) receives neoadjuvant carboplatin/paclitaxel/ bevacizumab with good response and proceeds to surgery with R0 resection. Regulatory and reimbursement issues aside, what would be your preferred approach to maintenance therapy if genetic testing revealed a germline BRCA mutation?



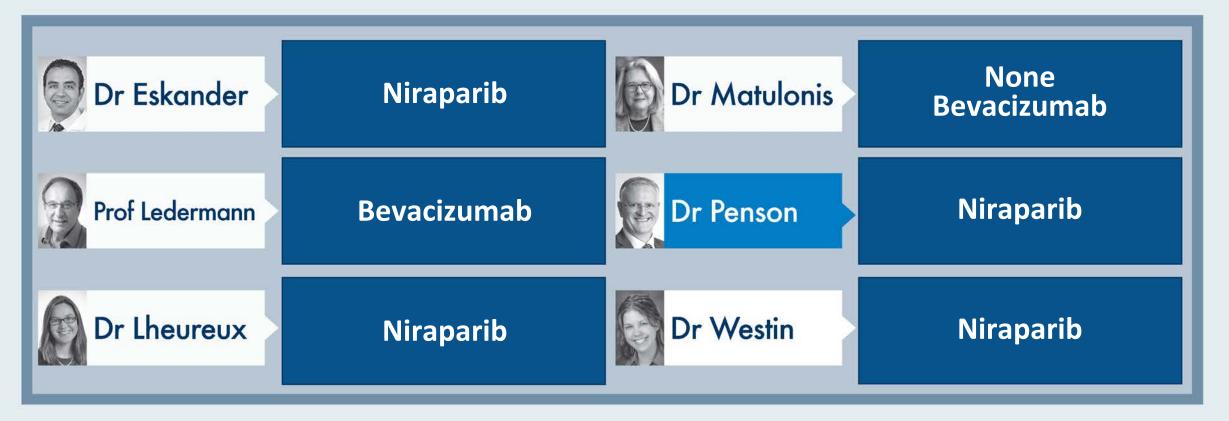


A patient presenting with ovarian cancer with extensive intra-abdominal disease (clinical Stage IIIC) receives neoadjuvant carboplatin/paclitaxel/ bevacizumab with good response and proceeds to surgery with R0 resection. Genetic testing revealed a germline BRCA mutation. Beyond your preferred approach, which other approaches to maintenance therapy do you believe are acceptable in this situation?





A patient presenting with Stage IIIC ovarian cancer undergoes R0 resection and receives adjuvant carboplatin/paclitaxel with good response. Regulatory and reimbursement issues aside, what would you most likely recommend as maintenance therapy if genetic testing revealed <u>BRCA wild type, HR proficient (eg, LOH low)</u>?





A patient presenting with Stage IIIC ovarian cancer undergoes R0 resection and receives adjuvant carboplatin/paclitaxel with good response. Regulatory and reimbursement issues aside, what would you most likely recommend as maintenance therapy if genetic testing revealed a germline PALB2 mutation?





A patient presenting with Stage IIIC ovarian cancer undergoes R0 resection and receives adjuvant carboplatin/paclitaxel with good response. Regulatory and reimbursement issues aside, what would you most likely recommend as maintenance therapy if genetic testing revealed a <u>somatic BRCA mutation</u>?





A patient presenting with Stage IIIC ovarian cancer undergoes R0 resection and receives adjuvant carboplatin/paclitaxel with good response. Regulatory and reimbursement issues aside, what would you most likely recommend as maintenance therapy if genetic testing revealed <u>BRCA wild type, HR deficient (eg, LOH high)</u>?





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Phase II Study of Olaparib plus Durvalumab with or without Bevacizumab (MEDIOLA): Final Analysis of Overall Survival in Patients with Non-Germline BRCA-Mutated Platinum-Sensitive Relapsed Ovarian Cancer

Banerjee S et al. ESMO 2022;Abstract 529MO.

Mini Oral Session 2: Gynaecological Cancers September 11, 2022



Abstract 5559 Poster 438

ASCO 2022

BRCA reversion mutations mediated by MMEJ as a mechanism of resistance to PARP inhibitors

Natalia Lukashchuk,¹ Joshua Armenia,¹ Luis Tobalina,¹ T. Hedley Carr,¹ Tsveta Milenkova,² Ying L. Liu,³ Richard T. Penson,⁴ Mark E. Robson,⁵ Elizabeth A. Harrington¹



SGO 2022; Abstract 25.

Final overall survival results from SOLO3: Phase III trial assessing olaparib monotherapy versus non-platinum chemotherapy in heavily pre-treated patients with germline *BRCA1-* and/or *BRCA2-*mutated platinum-sensitive relapsed ovarian cancer

Richard T Penson MD,¹ Ricardo Villalobos Valencia MD,² Nicoletta Colombo MD,³ Charles A Leath III MD,⁴ Mariusz Bidzinski MD,⁵ Jae-Weon Kim MD,⁶ Joo-Hyun Nam MD,⁷ Radoslaw Madry MD,⁸ Carlos Hernández MD,⁹ Paulo Mora MD,¹⁰ Sang Young Ryu MD,¹¹ Tsveta Milenkova MD,¹² Elizabeth S Lowe MD,¹³ Natalia Lukashchuk PhD,¹² John McNamara MSc,¹² Giovanni Scambia MD¹⁴

¹Massachusetts General Hospital, Boston, MA, USA; ²Centro Medico Dalinde, Mexico City, Mexico; ³University of Milan-Bicocca and IEO European Institute of Oncology IRCCS, Milan, Italy; ⁴O'Neal Comprehensive Cancer Center, University of Alabama, Birmingham, AL, USA; ⁵Faculty of Medicine and Health Sciences, Jan Kochanowski University, Kielce, Poland; ⁶Seoul National University Hospital, Seoul, South Korea; ⁷Asan Medical Center, Seoul, South Korea; ⁸Uniwersytet Medyczny im. K. Marcinkowskiego w Poznaniu and Szpital Kliniczny Przemienienia Pańskiego, Poznań, Poland; ⁹Oaxaca Site Management Organization, Oaxaca de Juarez, Mexico; ¹⁰Instituto COI de Educação e Pesquisa, Rio de Janeiro, Brazil; ¹¹Korea Institute of Radiological and Medical Sciences, Seoul, South Korea; ¹²AstraZeneca, Cambridge, UK; ¹³AstraZeneca, Gaithersburg, MD, USA; ¹⁴Università Cattolica del Sacro Cuore-Fondazione Policlinico A. Gemelli, IRCCS, Rome, Italy

ClinicalTrials.gov identifier: NCT02282020. This study was sponsored by AstraZeneca and is part of an alliance between AstraZeneca and Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA







ctDNA BRCA Reversion Mutations Detected at Baseline

BRCA reversion mutations in ctDNA* detected in 6/170 evaluable patients (3.5%) at baseline

K1638* Y1716fs G2168* S599fs PALB2 L2092fs E2198fs TR2 **BRC** repeats binding domain DNA binding region domain 3421aa PALB2 V2066fs G2168L S599 G602delinsTerR RAD51 binding RAD51 binding K1638F L2092 Y2094del K2196 T2199del Reversion mutation[†] 11633 S1743del K2188 F2234del H2147 D2202del 11633 S1770delinsT

BRCA2 protein

Original mutation[†]

- All BRCA reversion mutations identified at study baseline were in the BRCA2 gene[‡]
- Patients had single or multiple reversion mutations with an allelic frequency of 0.2–8%

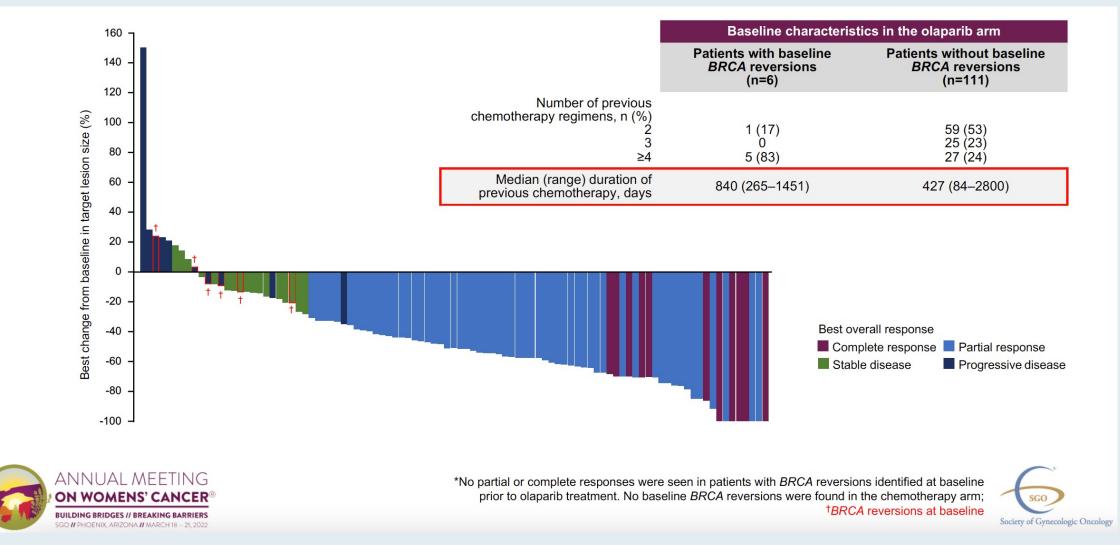


*Data from targeted ctDNA sequencing; †Each color represents an individual patient; ‡Reversion mutations can happen in both *BRCA1* and *BRCA2*





Best Response to Olaparib in Patients with BRCA Reversions Identified at Baseline – Stable or Progressive Disease*





Penson RT et al. SGO 2022; Abstract 25.



Efficacy and safety of olaparib according to age in *BRCA1/2*-mutated patients with recurrent platinum-sensitive ovarian cancer: Analysis of the phase III SOLO2/ENGOT-Ov21 study

Fabian Trillsch ^{a,*}, Sven Mahner ^a, Beyhan Ataseven ^{a,b}, Rebecca Asher ^c, Nanda Aryal ^c, Coraline Dubot ^d, Andrew Clamp ^e, Richard T. Penson ^f, Amit Oza ^g, Amnon Amit ^h, Tomasz Huzarski ⁱ, Antonio Casado ^j, Giovanni Scambia ^k, Michael Friedlander ¹, Nicoletta Colombo ^m, Keiichi Fujiwara ⁿ, Gabe S. Sonke ^o, Hannelore Denys ^p, Elizabeth S. Lowe ^q, Chee K. Lee ^c, Eric Pujade-Lauraine ^r







An update on the safety of olaparib for treating ovarian cancer

Kelsi Cottrell, Caroline L. Clark & Richard T. Penson



A First-in-Human Study of AO-176, a Highly Differentiated Anti-CD47 Antibody, in Patients with Advanced Solid Tumors

Burris HA et al. ASCO 2021;Abstract 2516.



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Optimal Biomarker Evaluation and Front-Line Management



Ovarian cancer 1L PARPi maintenance trials: design and populations

Trial	PARP inhibitor	Duration	BRCA status	R0 at PDS allowed	% PDS	CR/PR to platinum
SOLO1 ^{1,2}	Olaparib	2 years	BRCAmt only	Yes	62.9	Yes
PRIMA ³	Niraparib	3 years	All comers	No if Stage III	33	Yes
PRIME ⁴	Niraparib	3 years	All comers	Yes	53.1	Yes
PAOLA1⁵	Olaparib (w/bevacizumab)	2 years	All comers	Yes	50.7	Yes
	Veliparib (w/chemo)	36 total cycles	All comers	Yes	67.5	No (tx starts with chemo)
ATHENA-MONO ⁷	Rucaparib	2 years	All comers	Yes	48.9	Yes

¹Moore et al., *N Engl J Med* 2018; ²Banerjee et al., 2020 ESMO Congress; ³Gonzalez-Martin et al., *N Engl J Med* 2019; ⁴Li et al., 2022 SGO Annual Meeting; ⁵Ray-Coquard et al., *N Engl J Med* 2019; ⁶Coleman et al., *N Engl J Med* 2019; ⁷Monk et al., 2022 ASCO Annual Meeting



Liu N. ASCO 2022; Highlights of the Day: Gynecologic Cancers.

Trials of 1L PARPi maintenance in ovarian cancer

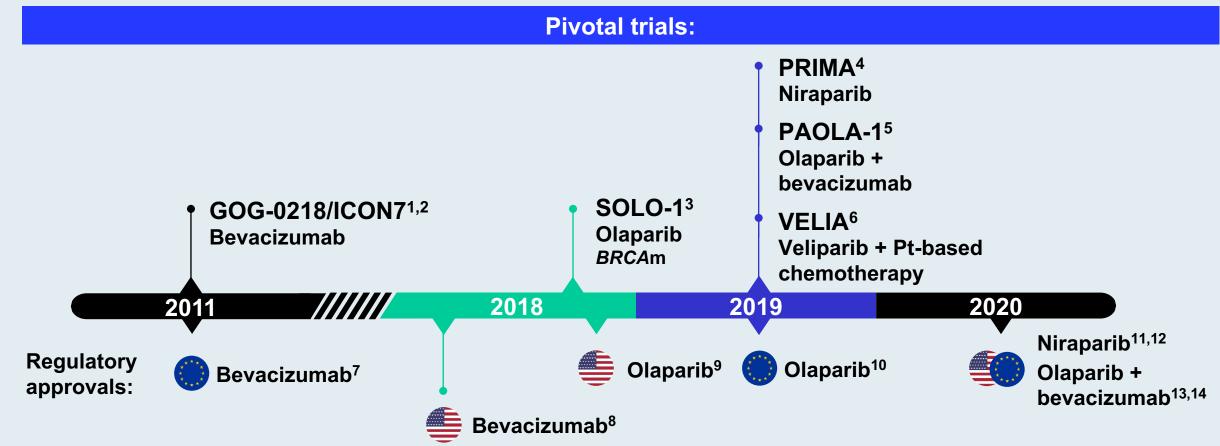
Trial	PARP inhibitor	Duration	All comers	BRCAmt	BRCAwt overall	BRCAwt – HRD	BRCAwt – HRP	HRD assay
ATHENA-MONO ¹	Rucaparib	2 years	HR 0.52 20.2 vs 9.2 mos	HR 0.40 NR vs 14.7 mos	-	HR 0.58 95%Cl 0.33-1.01 20.3 vs 9.2 mos	HR 0.65 95%Cl 0.45-0.95 12.1 vs 9.1 mos	Foundation One CDx
SOL01 ^{2,3}	Olaparib	2 years	-	HR 0.33 56.0 vs 13.8 mos	-		-	-
PRIMA ⁴	Niraparib	3 years	HR 0.62 13.8 vs 8.2 mos	HR 0.40 22.1 vs 10.9 mos	-	HR 0.50 19.6 vs 8.2 mos	HR 0.68 8.1 vs 5.4 mos	Myriad MyChoice
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PAOLA16	Olaparib (w/bevacizumab)	2 years	HR 0.59 22.1 vs 16.6 mos	HR 0.31 37.2 vs 21.7 mos	HR 0.71 18.9 vs 16.0 mos	HR 0.43 28.1 vs 16.6 mos	HR 0.92 (NS) 18.9 vs 16.0 mos	Myriad MyChoice
VELIA ⁷	Veliparib (w/chemo)	36 total cycles	HR 0.68 23.5 vs 17.3 mos	HR 0.44 34.7 vs 22.0 mos	HR 0.80 18.2 vs 15.1 mos	HR 0.74 (NS) 15.0 vs 11.5 mos	HR 0.81 (NS) 18.2 vs 15.1 mos	Myriad MyChoice

*does not exclude pts with sBRCAmt tumors

¹Monk et al., 2022 ASCO Annual Meeting; ²Moore et al., *N Engl J Med* 2018; ³Banerjee et al., 2020 ESMO Congress; ⁴Gonzalez-Martin et al., *N Engl J Med* 2019; ⁵Li et al., 2022 SGO Annual Meeting; ⁶Ray-Coquard et al., *N Engl J Med* 2019; ⁷Coleman et al., *N Engl J Med* 2019

Liu N. ASCO 2022; Highlights of the Day: Gynecologic Cancers.

Pivotal Trials and Regulatory Milestones in First-Line Maintenance Therapy for Advanced Ovarian Cancer



Dates shown indicate the year of the publication of the pivotal studies and regulatory approvals for these compounds.

BRCAm, breast cancer gene mutant; GOG, Gynecologic Oncology Group; Pt, platinum.

1. Burger RA et al. *N Engl J Med.* 2011;365(26):2473-2483. 2. Perren TJ et al. *N Engl J Med.* 2011;365(26):2484-2496. 3. Moore K et al. *N Engl J Med.* 2018;379(26):2495-2505. 4. González-Martín A et al. *N Engl J Med.* 2019;381(25):2391-2402. . Ray-Coquard I et al. *N Engl J Med.* 2019;381(25):2416-2428. 6. Coleman RL et al. *N Engl J Med.* 2019;381(25):2403-2415. 7. European Medicines Agency. Published September 22, 2011. Accessed June 7, 2021. 8. F. Hoffmann-La Roche Ltd. Published June 13, 2018. Accessed June 7, 2021. 9. US Food and Drug Administration. Published December 26, 2018. Accessed June 7, 2021. 10. European Medicines Agency. Published April 26, 2019. Accessed June 7, 2021. 11. GlaxoSmithKline. Published April 29, 2020. Accessed June 7, 2021. 12. GlaxoSmithKline. Published October 29, 2020. Accessed June 7, 2021. 13. US Food and Drug Administration. Published May 11, 2020. Accessed June 7, 2021. 14. European Medicines Agency. Published September 17, 2020. Accessed June 7, 2021.



Courtesy of Kathleen Moore, MD

Phase III First-Line PARP Inhibitor Maintenance Trials

Study design	SOLO-1 ¹ (N = 391)	PAOLA-1 ² (N = 612)	PRIMA ³ (N = 620)	VELIA ⁴ (N = 1,140)
Treatment arms vs placebo	Olaparib (n=260)	Bevacizumab ± olaparib	Niraparib	Veliparib
Patient population	BRCA mutation	All comers	All comers	All comers
Treatment duration	24 mo	15 mo for bev 24 mo for olaparib	36 mo or until PD	24 mo
Median PFS	56 mo vs 14 mo HR: 0.33	22.1 mo vs 16.6 mo HR: 0.59	22.1 mo vs 10.9 mo HR 0.40	23.5 mo vs 17.3 mo HR: 0.68

bev = bevacizumab; PD = disease progression

¹ Banerjee et al. *Lancet Oncol* 2021;22(12):1721-31; ² Ray-Coquard et al. SGO 2020;Abstract 33; ³ González-Martín A et al. ASCO 2021;Abstract 5518; ⁴ Aghajanian C et al. *Gyn Oncol* 2021;162(2):375-81.

Phase 2 OVARIO Study of Niraparib + Bevacizumab Therapy in Advanced Ovarian Cancer Following Frontline Platinum-Based Chemotherapy with Bevacizumab

Melissa M. Hardesty,¹ Thomas Krivak,² Gail S. Wright,³ Erika Hamilton,⁴ Evelyn L. Fleming,⁵ Jimmy Belotte,⁶ Erika Keeton,⁶ Ping Wang,⁶ Aine Clements,⁷ Heidi J. Gray,⁸ Gottfried E. Konecny,⁹ Richard G. Moore,¹⁰ Debra L. Richardson¹¹



¹Alaska Women's Cancer Care, Anchorage, AK, USA; ²Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, The Western Pennsylvania Hospital, Pittsburgh, PA, USA; ³Florida Cancer Specialists and Research Institute, New Port Richey, FL, USA; ⁴Sarah Cannon Research Institute; Tennessee Oncology, Nashville, TN, USA; ⁵Division of Gynecologic Oncology, Norris Cotton Cancer Center, Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA; ⁶GlaxoSmithKline, Waltham, MA, USA; ⁷Department of Gynecologic Oncology, Riverside Methodist Hospital, Columbus, OH, USA; ⁸Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, University of Washington, Seattle, WA, USA; ⁹University of California Los Angeles, Los Angeles, CA, USA; ¹⁰Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Wilmot Cancer Institute, University of Rochester Medical Center, Rochester, NY, USA; ¹¹Division of Gynecologic Oncology, Stephenson Cancer Center, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA





Patients with newly diagnosed high-grade serous or endometrioid stage IIIB to IV epithelia ovarian, fallopian tube, or peritoneal cancer who achieved a CR, PR, or NED result after front-line platinum-based chemotherapy + bevacizumab

HRd at enrollment Starting niraparib dose, n (%) N=105 200 mg (<77 kg and/or platelet 82 (78) count <150,000/µL)

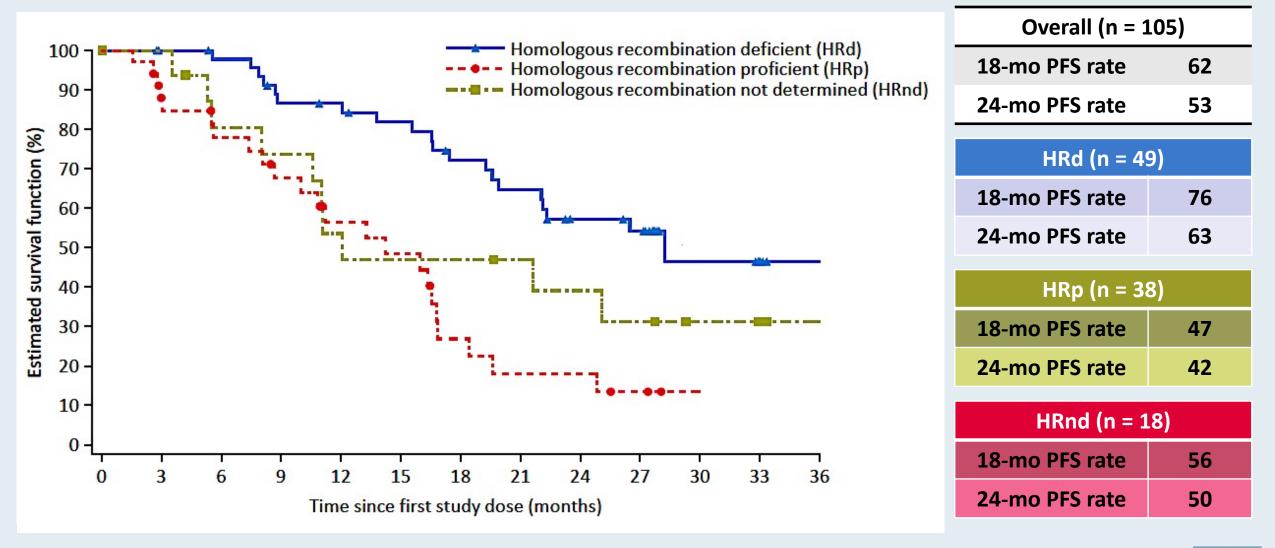
All patients underwent tissue testing for

300 mg (all others) 23 (22) Niraparib (200 or 300 mg QD) + bevacizumab (15 mg/kg Q3W)

Endpoint assessment					
Primary endpoint	PFS rate at 18 months (PFS18)				
Secondary endpoints	 PFS Overall survival RECIST or CA-125 PFS Time to first subsequent therapy Time to second subsequent therapy Safety and tolerability Patient-reported outcome 				
Exploratory endpoints	PFS rate at 6 months (PFS6) and 12 months (PFS12)				
Statistical analysis plan	 Efficacy: PFS18 and PFS24 will be estimated by frequency analysis, with corresponding 95% exact CI will be reported The time to event endpoints (PFS, TFST, TSST) will be analyzed using Kaplan-Meier methodology Progression will be assessed by RECIST v1.1 per investigator 				



OVARIO: PFS by Homologous Recombination Deficiency Status





Hardesty et al. SGO 2022; Abstract 40.

OVARIO: Treatment-Related Adverse Events (TRAEs)

	N=105			TRAEs in ≥20% of patients (N=105)			
Parameter, n (%)	Related	Related		Related to niraparib or bevacizumab			
	to nira or	to nira		Preferred term, n (%)	Any Grade	Grade ≥3	
	bev			Thrombocytopenia ^a	74 (70)	41 (39)	
Any TRAE	105 (100)	104 <mark>(</mark> 99)	96 (91)	Fatigue	<mark>60 (</mark> 57)	9 (9)	
Any Grade ≥3 TRAE	84 <mark>(</mark> 80)	81 (77)	54 (51)	Anemia ^b	55 <mark>(</mark> 52)	36 (34)	
Any serious TRAE	21 (20)	19 (18)	7 (7)	Nausea	55 <mark>(</mark> 52)	1 (1)	
TRAE leading to	42 (40)	32 (30)	23 (22)	Hypertension ^c	53 <mark>(</mark> 50)	28 (27)	
treatment discontinuation	42 (40)	52 (50)	23 (22)	Proteinuria	41 (39)	5 (5)	
TRAE leading to dose reduction	78 (74)	77 (73)	27 (26)	Headache	32 (30)	<mark>6 (6)</mark>	
TRAE leading to				Neutropenia ^d	28 (27)	13 (12)	
treatment interruption	93 (88)	90 (86)	58 (55)	Leukopenia ^e	24 (23)	0	



Efficacy and Safety of Niraparib as Maintenance Treatment in Patients with Newly Diagnosed Advanced Ovarian Cancer Using an Individualized Starting Dose (PRIME Study): A Randomized, Double-blind, Placebocontrolled, Phase 3 Trial

Ning Li^{*}, Jianqing Zhu, Rutie Yin, Jing Wang, Lingya Pan, Beihua Kong, Hong Zheng, Jihong Liu, Xiaohua Wu, Li Wang, Yi Huang, Ke Wang, Dongling Zou, Hongqin Zhao, Chunyan Wang, Weiguo Lu, An Lin, Ge Lou, Guiling Li, Pengpeng Qu, Hongying Yang, Xiaoa Zhen, Wenzhao Hang, Jianmei Hou, Lingying Wu^{*}

* National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China



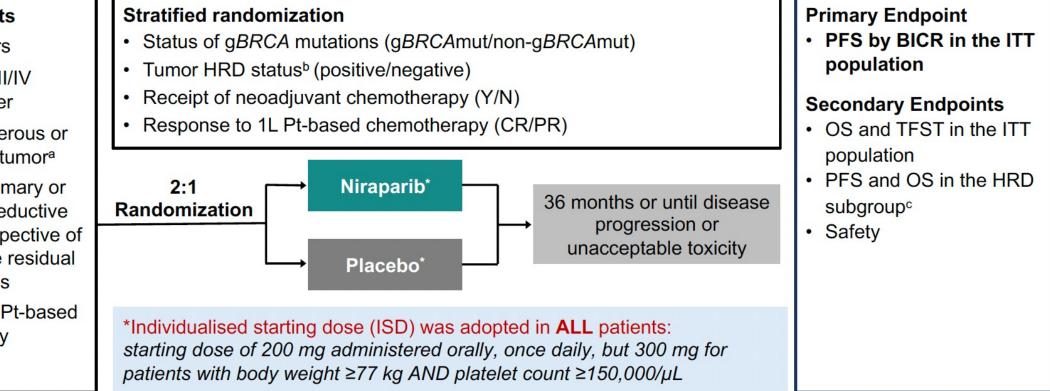
PRIME: Study Design

PRIME is a randomized, double-blind, placebo-controlled phase III trial (NCT03709316).

Schema

Eligible Patients

- Age ≥18 years
- FIGO stage III/IV
 ovarian cancer
- High-grade serous or endometroid tumor^a
- Receipt of primary or interval cytoreductive surgery, irrespective of postoperative residual disease status
- CR/PR to 1L Pt-based chemotherapy





PRIME: Demographics and Baseline Characteristics

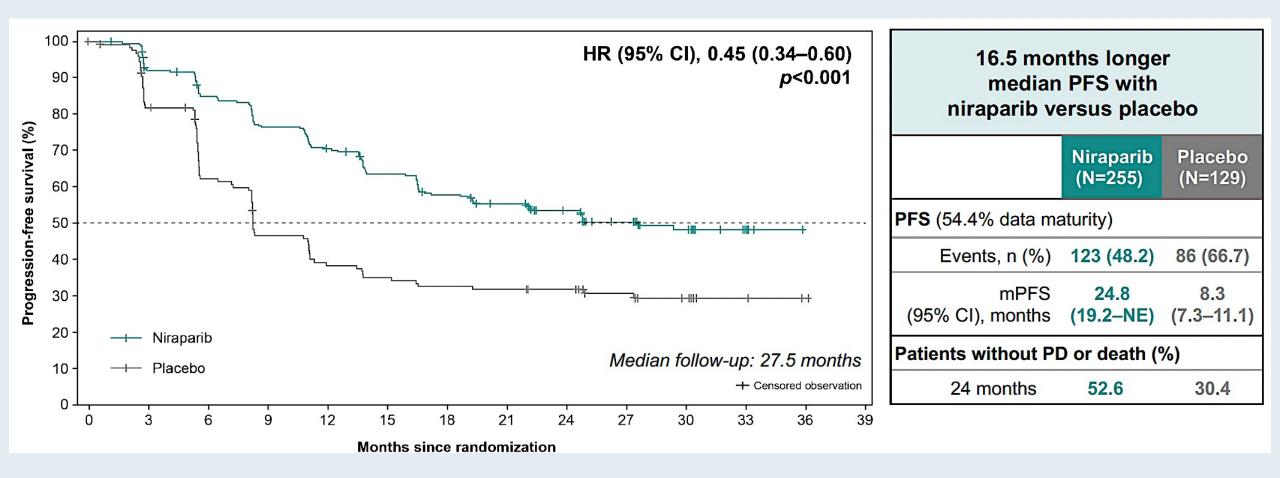
Characteristic	Niraparib (N=255)	Placebo (N=129)
Median age (range), years	53.0 (32–77)	54.0 (33–77)
Median weight (range), kg	59.0 (39.5–100.0)	57.0 (37.0–97.0)
ECOG performance status, n (%)		
0	98 (38.4)	52 (40.3)
1	157 (61.6)	77 (59.7)
FIGO stage, n (%)		
III	182 (71.4)	94 (72.9)
IV	73 (28.6)	35 (27.1)
Primary tumor location, n (%)		
Ovary	229 (89.8)	117 (90.7)
Fallopian tube	19 (7.5)	9 (7.0)
Peritoneum	7 (2.7)	3 (2.3)
Histologic subtype, n (%)		
Serous ovarian cancer	253 (99.2)	128 (99.2)
Endometrioid carcinoma	2 (0.8)	0
Other	0	1 (0.8)

Characteristic	Niraparib (N=255)	Placebo (N=129)
Neoadjuvant chemotherapy, n (%)		
Yes	121 (47.5)	59 <mark>(</mark> 45.7)
No	134 (52.5)	70 (54.3)
Response to Pt-based CT, n (%)		
CR	212 (83.1)	103 (79.8)
PR	43 (16.9)	26 (20.2)
gBRCA mutation status, n (%)		
g <i>BRCA</i> mut	85 (33.3)	40 (31.0)
Non-gBRCAmut	170 (66.7)	89 (69.0)
Homologous recombination ^a , n (%)		
Deficient	170 (66.7)	87 (67.4)
Proficient	85 (33.3)	42 (32.6)
Postoperative residual disease status, n (%)		
Optimal (R0/R1)	193 (75.7)	105 (81.4)
Suboptimal (R2) or missing	52 (24.3)	24 (18.6)

• The niraparib and placebo groups were well-balanced.



PRIME: PFS (by Blinded Independent Central Review) in the ITT Population





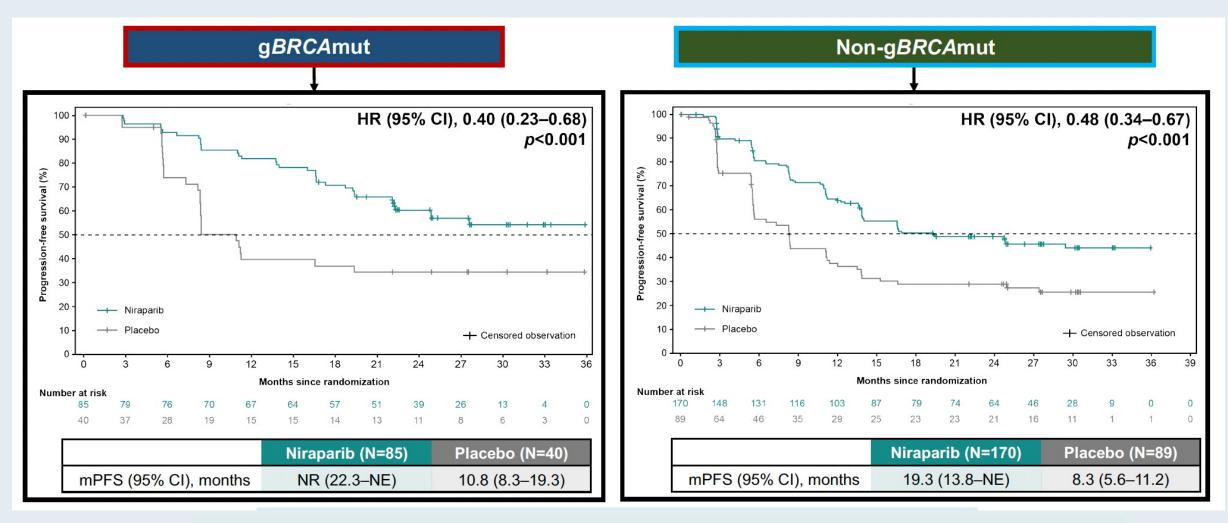
Li et al. SGO 2022;Abstract LBA5.

PRIME: PFS Benefit in Prespecified Subgroups

Subgroup	Events/pa	tients (%)	Hazard ratio for PFS (95% CI)	
	Niraparib	Placebo		
Overall	123/255 (48.2)	86/129 (66.7)	=	0.45 (0.34–0.60)
Age				
<65 years	108/229 (47.2)	73/114 (64.0)	┠═┤│	0.47 (0.34–0.63)
≥65 years	15/26 (57.7)	13/15 (86.7)	┠──■──┤│	0.24 (0.09-0.66)
Neoadjuvant chemotherapy				
Yes	62/121 (51.2)	46/59 (78.0)	┝═┤│	0.32 (0.21–0.48)
No	61/134 (45.5)	40/70 (57.1)	┝╼╢	0.63 (0.42–0.94)
Response to Pt-based chemotherapy				
Complete response	98/212 (46.2)	66/103 (64.1)	⊦=1	0.45 (0.32-0.61)
Partial response	25/43 (58.1)	20/26 (76.9)	┝╼╌╢	0.45 (0.23-0.86)
gBRCA mutation status				
gBRCAmut	35/85 (41.2)	25/40 (62.5)	┝╼┤│	0.40 (0.23–0.68)
Non-gBRCAmut	88/170 (51.8)	61/89 (68.5)	┠═┤│	0.48 (0.34–0.67)
Homologous recombination				
Deficient	75/170 (44.1)	57/87 (65.5)	┠═┤│	0.48 (0.34–0.68)
Proficient	48/85 (56.5)	29/42 (69.0)	┝╼┤│	0.41 (0.25–0.65)
Postoperative residual disease status				
Optimal	94/193 (48.7)	71/105 (67.6)	⊦=┤	0.44 (0.32–0.61)
Suboptimal or missing	29/62 (46.8)	15/24 (62.5)	┝╼┥	0.43 (0.21–0.87)



PRIME: PFS Benefit by Germline BRCA Mutation Status

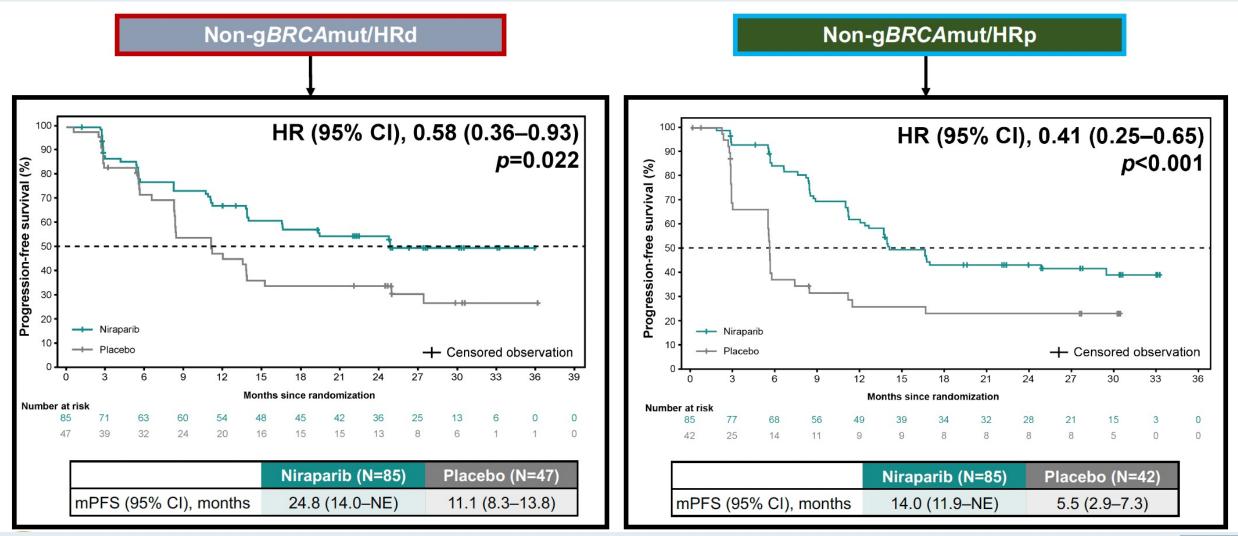


- Median PFS has not been yet reached for the gBRCAmut population.
- The benefit of niraparib in the non-gBRCAmut population is confirmed.



Li et al. SGO 2022;Abstract LBA5.

PRIME: PFS Benefit in Non-gBRCAmut Subgroups





PRIME and PRIMA Trials: Safety Overview

- IS	PR	IME	P	RIMA ¹
TEAEs, n (%)	Niraparib (N=255)	Placebo (N=129)	Niraparib (N=484)	Plac (N=2
Any TEAEs	253 (99.2)	121 (93.8)	478 (98.8)	224 (
Treatment-related	249 (97.6)	111 (86.0)	466 (96.3)	168 (6
Grade≥3 TEAEs	139 (54.5)	23 (17.8)	341 (70.5)	46 (1
Treatment-related	125 (49.0)	9 (7.0)	316 (65.3)	16 (6
Serious TEAEs	48 (18.8)	11 (8.5)	156 (32.2)	32 (1
Treatment-related	38 (14.9)	5 (3.9)	118 (24.4)	6 (2
TEAEs leading to treatment interruption	160 (62.7)	25 (19.4)	385 (79.5)	44 (1
TEAEs leading to dose reduction ^b	103 (40.4)	8 (6.2)	343 (70.9)	20 (8
TEAEs leading to discontinuation	17 (6.7)	7 (5.4)	58 (12.0)	6 (2
TEAEs leading to death	1 (0.4)	0	2 (0.4)	1 (0



A Randomized, Phase III Trial to Evaluate original **Rucaparib Monotherapy as Maintenance Treatment in Patients With Newly Diagnosed Ovarian Cancer (ATHENA-MONO/GOG-3020/** ENGOT-ov45)

reports

Bradley J. Monk, MD¹; Christine Parkinson, MD²; Myong Cheol Lim, MD, PhD³; David M. O'Malley, MD⁴; Ana Oaknin, MD, PhD⁵; Michelle K. Wilson, MD⁶; Robert L. Coleman, MD⁷; Domenica Lorusso, MD, PhD⁸; Paul Bessette, MD⁹; Sharad Ghamande, MD¹⁰; Athina Christopoulou, MD, PhD¹¹; Diane Provencher, MD¹²; Emily Prendergast, MD¹³; Fuat Demirkiran, MD¹⁴; Olga Mikheeva, MD¹⁵; Oladapo Yeku, MD, PhD¹⁶; Anita Chudecka-Glaz, MD, PhD¹⁷; Michael Schenker, MD, PhD¹⁸; Ramey D. Littell, MD¹⁹; Tamar Safra, MD²⁰; Hung-Hsueh Chou, MD^{21,22}; Mark A. Morgan, MD²³; Vít Drochýtek, MD²⁴; Joyce N. Barlin, MD²⁵; Toon Van Gorp, MD²⁶; Fred Ueland, MD²⁷; Gabriel Lindahl, MD^{28,29}; Charles Anderson, MD³⁰; Dearbhaile C. Collins, MBBCh, MA, PhD³¹; Kathleen Moore, MD³²; Frederik Marme, MD, PhD³³; Shannon N. Westin, MD, MPH³⁴; Iain A. McNeish, MD, PhD³⁵; Danny Shih, BA³⁶; Kevin K. Lin, PhD³⁷; Sandra Goble, MS³⁸; Stephanie Hume, PhD³⁹; Keiichi Fujiwara, MD, PhD⁴⁰; and Rebecca S. Kristeleit, MD, PhD⁴¹

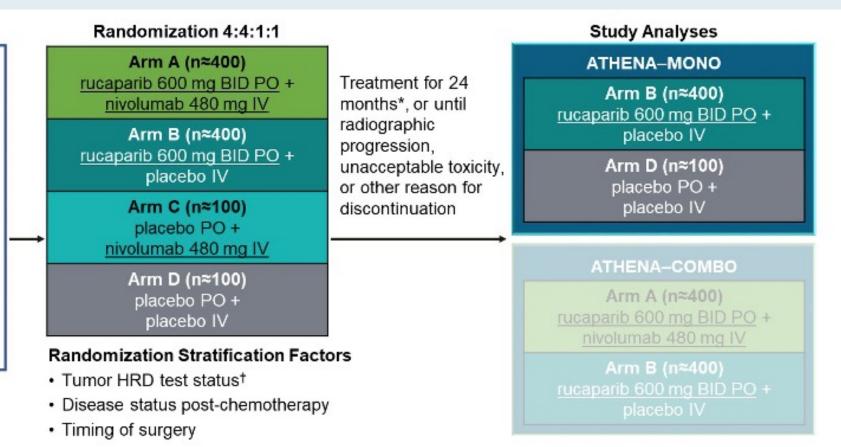
J Clin Oncol 2022;[Online ahead of print].



ATHENA-MONO Study Schema

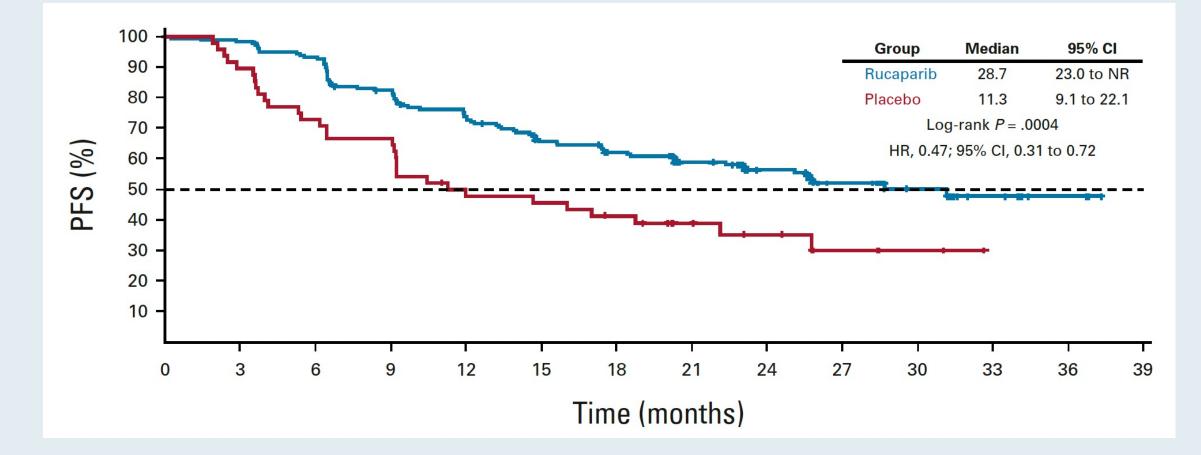
Key Patient Eligibility

- Newly diagnosed, stage III–IV, highgrade epithelial ovarian, fallopian tube, or primary peritoneal cancer
- Completed frontline platinum-doublet chemotherapy and surgery
 - Achieved investigator-assessed CR or PR
 - Received cytoreductive surgery (primary or interval; R0/complete resection permitted)
- · ECOG PS 0 or 1
- No prior treatment for ovarian cancer, including any maintenance treatment, other than frontline platinum regimen



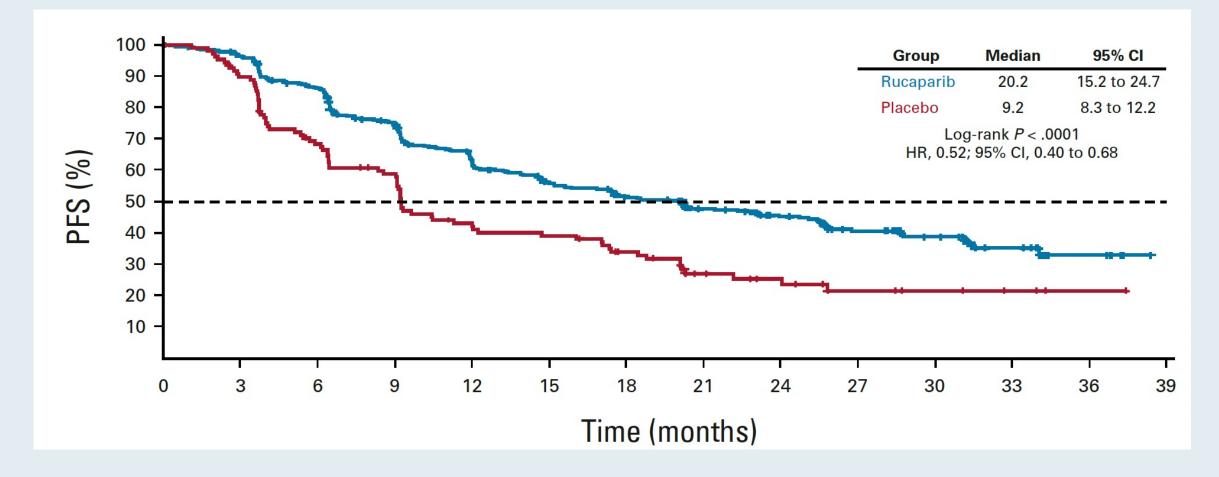


ATHENA-MONO: Investigator-Assessed PFS in the HRD Population (N = 234)



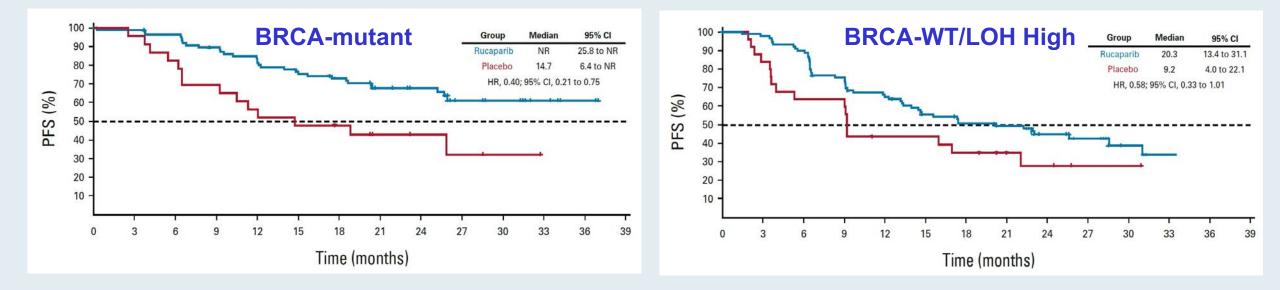


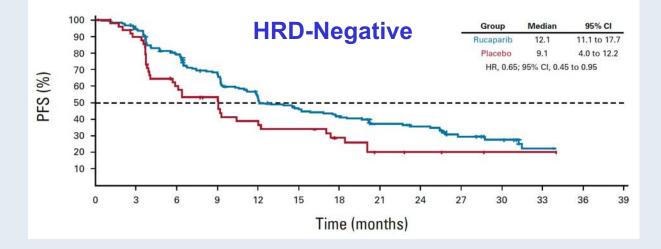
ATHENA-MONO: Investigator-Assessed PFS in the ITT Population (N = 538)





ATHENA-MONO: Investigator-Assessed PFS







ATHENA-MONO: Investigator-Confirmed ORR

	HRD Pop	oulation	ITT Pop	ulation
Response	Rucaparib (n $=$ 17)	Placebo (n $=$ 5)	Rucaparib ($n = 41$)	Placebo ($n = 11$)
Confirmed ORR per RECIST				
No.	10	1	20	1
% (95% CI)	58.8 (32.9 to 81.6)	20.0 (0.5 to 71.6)	48.8 (32.9 to 64.9)	9.1 (0.2 to 41.3)
CR, No. (%)	0	0	1 (2.4)	0
PR, No. (%)	10 (58.8)	1 (20.0)	19 (46.3)	1 (9.1)
Stable disease, No. (%)	6 (35.3)	2 (40.0)	10 (24.4)	4 (36.4)
Progressive disease, No. (%)	1 (5.9)	2 (40.0)	10 (24.4)	6 (54.5)
Not evaluable, No. (%)	0	0	1 (2.4)	0

ORR = objective response rate



ATHENA-MONO: Common Treatment-Emergent Adverse Events

	Rucaparib ($n = 425$)		Placebo (n = 110)	
TEAE	Any Grade	Grade \geq 3	Any Grade	Grade \geq 3
At least one TEAE, No. (%)	411 (96.7)	257 (60.5)	102 (92.7)	25 (22.7)
Nausea	239 (56.2)	8 (1.9)	33 (30.0)	0
Asthenia/fatigue	237 (55.8)	21 (4.9)	41 (37.3)	1 (0.9)
Anemia/decreased hemoglobin	198 (46.6)	122 (28.7)	10 (9.1)	0
Increased ALT/AST	181 (42.6)	45 (10.6)	9 (8.2)	1 (0.9)
Neutropenia/neutrophil count decreased	118 (27.8)	62 (14.6)	8 (7.3)	1 (0.9)
Abdominal pain	106 (24.9)	2 (0.5)	31 (28.2)	2 (1.8)
Diarrhea	102 (24.0)	6 (1.4)	23 (20.9)	1 (0.9)
Thrombocytopenia/platelet count decreased	101 (23.8)	30 (7.1)	1 (0.9)	0
Vomiting	100 (23.5)	6 (1.4)	13 (11.8)	0
Dysgeusia	90 (21.2)	1 (0.2)	6 (5.5)	0
Arthralgia	86 (20.2)	1 (0.2)	25 (22.7)	0
Headache	85 (20.0)	2 (0.5)	16 (14.5)	0



Monk BJ et al. J Clin Oncol 2022;[Online ahead of print].

FDA Advises Manufacturer Not to Submit First-Line Maintenance sNDA for Rucaparib Until OS Survival Data from the ATHENA-MONO Trial Are More Mature June 17, 2022

"In consultation with the FDA, [the manufacturer of rucaparib] recently was advised not to file a supplemental new drug application based on data from a cohort of the Phase III ATHENA study until the study's overall survival data mature.

In the 8-K, [the manufacturer] said the FDA has accepted a request for a pre-NDA meeting and noted that the ATHENA-MONO portion of the Phase III study has met its primary endpoint of progression-free survival compared to placebo. OS is a secondary endpoint for ATHENA-MONO and the data are approximately 25% mature at present. [The manufacturer] said the FDA urged it to hold off filing for supplemental approval until the OS data reach 50% maturity, and indicated an advisory committee review would likely be necessary if the data were filed earlier than that point.

In a statement to *Scrip*, the firm said that although it cannot anticipate the outcome of the pre-NDA meeting, 'we are encouraged that the FDA is willing to have a dialogue.' [They] estimate the ATHENA-MONO OS data will reach 50% maturity in approximately two years."

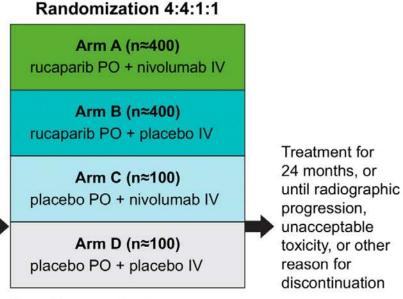
https://scrip.pharmaintelligence.informa.com/SC146575/Clovis-Withdraws-Rubraca-Ovarian-Cancer-Indication-Due-To-Survival-Imbalance?vid=Pharma



ATHENA-MONO and ATHENA-COMBO Study Design

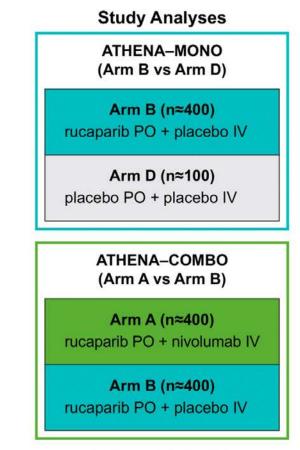
Key Patient Eligibility

- Newly diagnosed, stage III/IV, high-grade epithelial ovarian, fallopian tube, or primary peritoneal cancer
- Completed frontline platinum-doublet chemotherapy and surgery
 - Achieved investigator-assessed CR or PR without disease progression or rise in CA-125 at any time during frontline platinum-doublet chemotherapy
 - Received cytoreductive surgery (R0 permitted), either prior to chemotherapy or following neoadjuvant chemotherapy, with sufficient tissue available for analysis
- ECOG PS 0 or 1
- No prior treatment for ovarian cancer, including any maintenance treatment, other than frontline platinum regimen



Stratification Factors

- Centrally assessed tumor status (BRCA mutation, BRCA wild-type/high LOH, BRCA wild-type/low LOH, BRCA wild-type/LOH indeterminate)
- Response to frontline platinum doublet (no residual disease vs residual disease)
- · Timing of surgery (primary vs interval debulking)

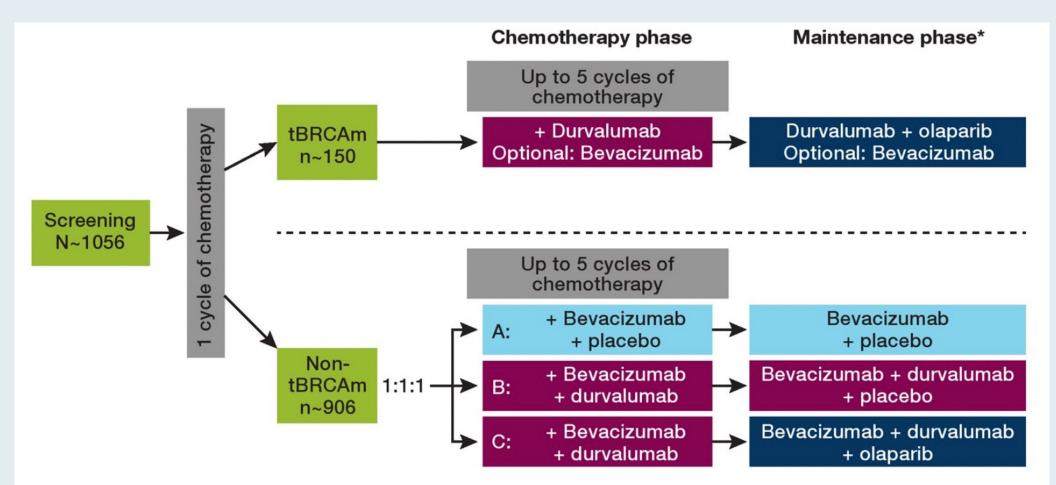


Primary Endpoint Investigator-assessed PFS per RECIST v1.



Monk BJ et al. Int J Gynecol Cancer 2021;31(12):1589-94.

DUO-O Study Design in Newly Diagnosed Advanced Ovarian Cancer



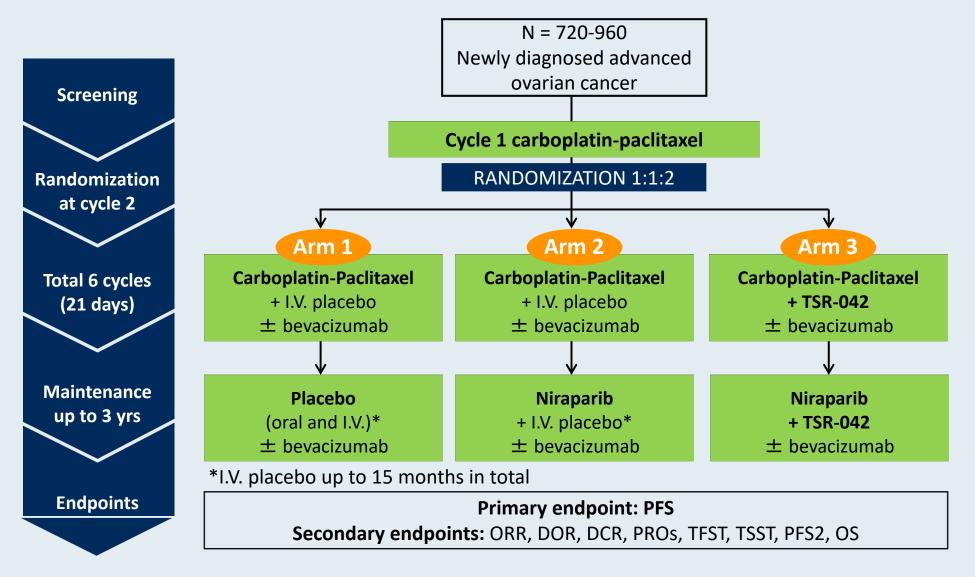
*Olaparib administered for a maximum of 24 months after chemotherapy. Durvalumab and bevacizumab administered for a maximum of 15 months

Estimated completion date: July 2023

Harter P et al. ASCO 2019; Abstract TPS5598; www.clinicaltrials.gov (NCT03737643) Accessed July 2022.



FIRST Phase III Trial of Dostarlimab (TSR-042) for Newly Diagnosed Ovarian Cancer





www.clinicaltrials.gov/ct2/show/NCT03602859

Courtesy of Ursula Matulonis, MD

Current Treatment Paradigm for Recurrent Disease

Ongoing Research with PARP Inhibitors for Newly Diagnosed and Relapsed Disease



Eligibility and Dosing in Pivotal Studies of PARP Inhibitors for Recurrent, Platinum-Sensitive Ovarian Cancer

	NOVA ¹ (niraparib)	SOLO-2 ² (olaparib)	ARIEL3 ³ (rucaparib)
BRCA status	With or without gBRCA mutation	gBRCA mutation (Study 19: +/- gBRCA mutation)	With or without gBRCA mutation
HRD testing	Yes	No	Yes
Tumor assessment schedule	Every 8 wk to C14 → every 12 wk	Every 12 wk until wk 72 → every 24 wk	Every 8 wk to C14 → every 12 wk
Dosing/formulation	300 mg qd	300 mg BID	600 mg BID
No. of prior lines of chemo	2 or more	2 or more	2 or more

¹ Mirza MR et al. *N Engl J Med* 2016;375(22):2154-64; ² Pujade-Lauraine E et al. *Lancet* 2017;18(9):1274-84; ³ Coleman RL et al. *Lancet* 2017;390(10106):1949-61.



Progression-Free Survival with PARP Inhibitors for Recurrent, Platinum-Sensitive Ovarian Cancer

	PARPi	Control	HR
NOVA ¹⁻² — niraparib			
gBRCA mutation	21.0 mo	5.5 mo	0.27
No gBRCA mutation, HRD+	12.9 mo	3.8 mo	0.38
No gBRCA mutation	9.3 mo	3.9 mo	0.45
SOLO-2 ³⁻⁴ — olaparib			
gBRCA mutation	19.1 mo	5.5 mo	0.30
Overall survival	51.7 mo	38.8 mo	0.74
ARIEL3 ⁵⁻⁶ — rucaparib			
ITT (all comers)	10.8 mo	5.4 mo	0.36
g or sBRCA mutation	16.6 mo	5.4 mo	0.23
HRD+	13.6 mo	5.4 mo	0.32
BRCA ^{wT} /high LOH	13.6 mo	5.4 mo	0.32
BRCA ^{WT} /low LOH	6.7 mo	5.4 mo	0.58

¹ Mirza MR et al. *N Engl J Med* 2016;375(22):2154-64; ² Del Campo JM et al. *J Clin Oncol* 2019;37(32):2968-73. ³ Poveda A et al. *Lancet Oncol* 2021;22(5):620-31. ⁴ Pujade-Lauraine E et al. *Lancet* 2017;18(9):1274-84; ⁵ Coleman RL et al. *Lancet* 2017;390(10106):1949-61; ⁶ Ledermann JA et al. *Lancet Oncol* 2020;21(5):710-22.



Lancet Oncol 2022;23(4):465-78.



Rucaparib versus standard-of-care chemotherapy in patients 🐪 🖲 with relapsed ovarian cancer and a deleterious BRCA1 or BRCA2 mutation (ARIEL4): an international, open-label, randomised, phase 3 trial

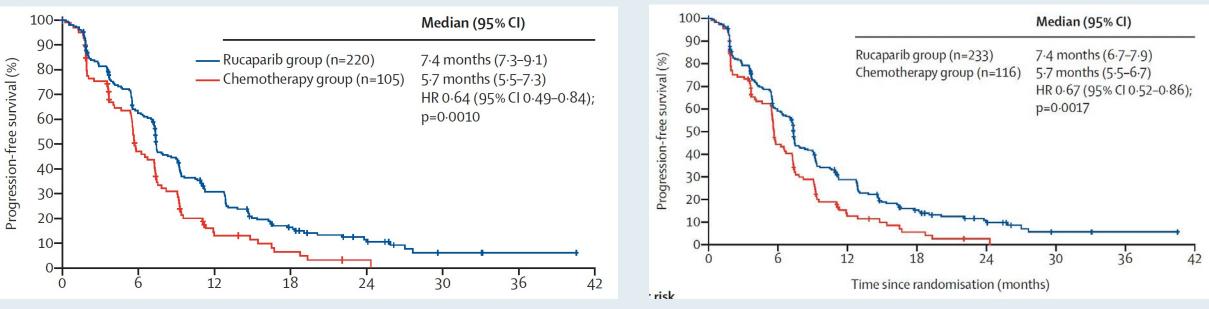


Rebecca Kristeleit, Alla Lisyanskaya, Alexander Fedenko, Mikhail Dvorkin, Andreia Cristina de Melo, Yaroslav Shparyk, Irina Rakhmatullina, Igor Bondarenko, Nicoletta Colombo, Valentyn Svintsitskiy, Luciano Biela, Marina Nechaeva, Domenica Lorusso, Giovanni Scambia, David Cibula, Róbert Póka, Ana Oaknin, Tamar Safra, Beata Mackowiak-Matejczyk, Ling Ma, Daleen Thomas, Kevin K Lin, Karen McLachlan, Sandra Goble, Amit M Oza



ARIEL4: Progression-Free Survival in the Efficacy and ITT Populations

Efficacy population (BRCA1 or BRCA2 mutations with reversion mutations)



Intent to treat population



ARIEL4: Overall Response Rate and Duration of Response

	Efficacy population		ITT population			
Endpoint	Rucaparib (n = 220)	Chemotherapy (n = 105)	<i>p</i> -value	Rucaparib (n = 233)	Chemotherapy (n = 116)	<i>p</i> -value
ORR	40%	32%	0.13	38%	30%	0.13
DoR, median	9.4 mo	7.2 mo		9.4 mo	7.2 mo	

ORR = overall response rate; DoR = duration of response



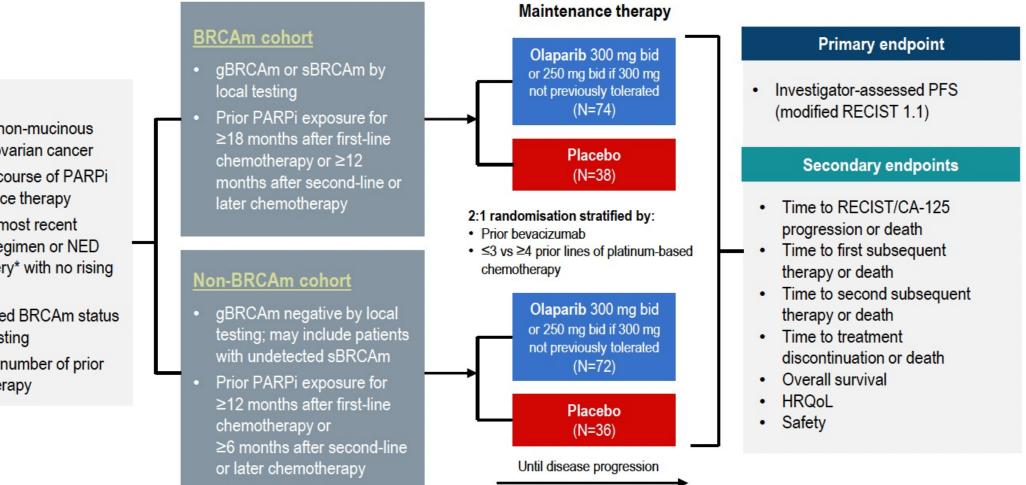
Kristeleit et al. *Lancet Oncol* 2022;23(4):465-78.

Abstract LBA33 Maintenance olaparib rechallenge in patients with ovarian carcinoma previously treated with a PARP inhibitor: Phase IIIb OReO/ENGOT Ov-38 trial

Eric Pujade-Lauraine,¹ Frédéric Selle,² Giovanni Scambia,³ Bernard Asselain,⁴ Frederik Marmé,⁵ Kristina Lindemann,⁶ Nicoletta Colombo,⁷ Radoslaw Madry,⁸ Rosalind Glasspool,⁹ Coraline Dubot,¹⁰ Ana Oaknin,¹¹ Claudio Zamagni,¹² Florian Heitz,¹³ Laurence Gladieff,¹⁴ Maria Jesús Rubio-Pérez,¹⁵ Paolo Scollo,¹⁶ Christopher Blakeley,¹⁷ Bob Shaw,¹⁷ Isabelle Ray-Coquard,¹⁸ Andrés Redondo¹⁹



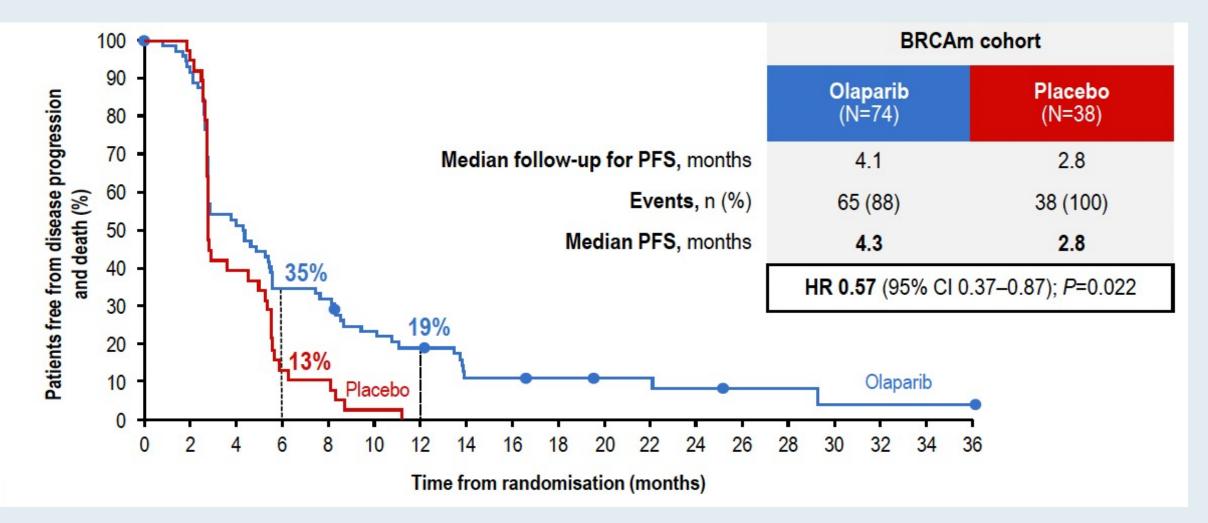
OReO Phase IIIB Study Schema



Patients

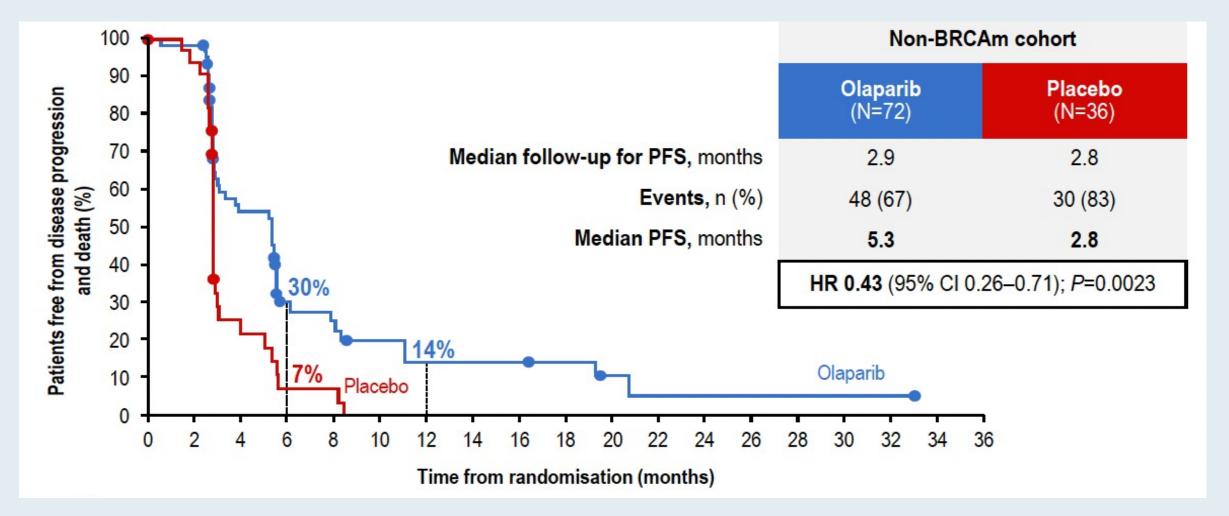
- Relapsed non-mucinous epithelial ovarian cancer
- One prior course of PARPi maintenance therapy
- CR/PR to most recent platinum regimen or NED after surgery* with no rising CA-125
- Documented BRCAm status by local testing
- No limit to number of prior • lines of therapy

OReO: Progression-Free Survival in the BRCAm Cohort



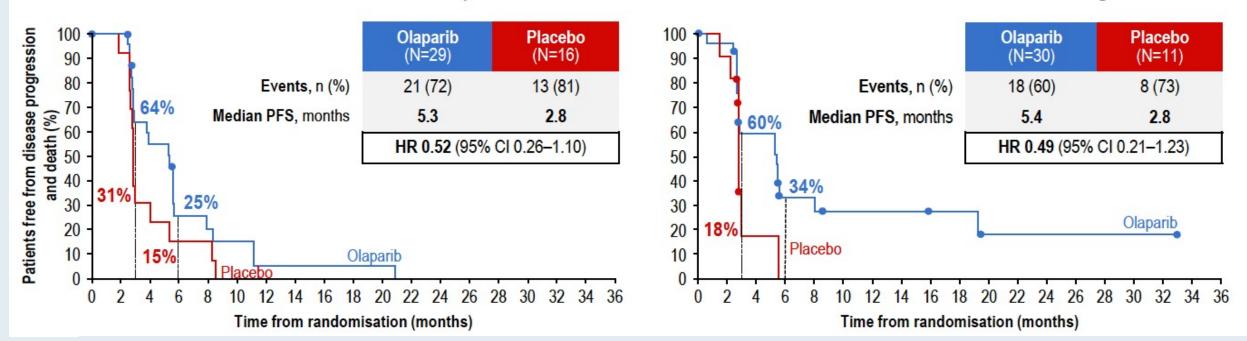


OReO: Progression-Free Survival in the Non-BRCAm Cohort





OReO: Progression-Free Survival in the Non-BRCAm Cohort by Homologous Recombination Deficiency (HRD) Status



Non-BRCAm cohort: HRD-negative



Pujade-Lauraine E et al. ESMO 2021;Abstract LBA33.

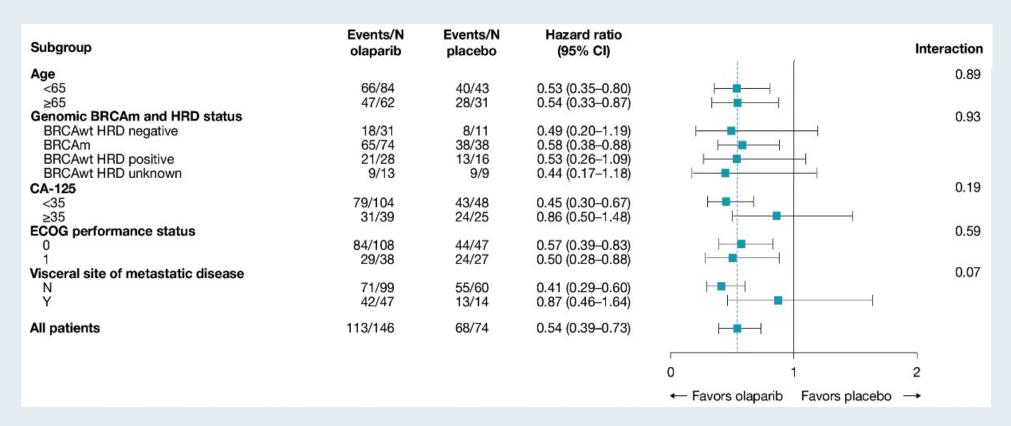
Non-BRCAm cohort: HRD-positive

OReO/ENGOT Ov-38 Trial: Impact of Maintenance Olaparib Rechallenge According to Ovarian Cancer Patient Prognosis — An Exploratory Joint Analysis of the BRCA and Non-BRCA Cohorts

Selle F et al. ASCO 2022;Abstract 5558.



OReO: Post-hoc Analysis of Progression-Free Survival According to Patient Characteristics and Prognostic Factors



- Olaparib rechallenge was effective regardless of prognostic subgroup
- CA-125 levels and the presence of visceral disease at baseline were the best predictors of patient outcome



Research

JAMA Oncol 2019;5(8):1141-9.

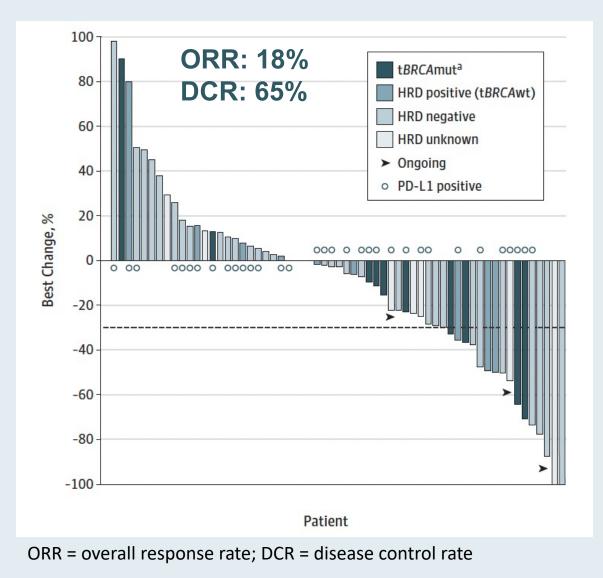
JAMA Oncology | Original Investigation

Single-Arm Phases 1 and 2 Trial of Niraparib in Combination With Pembrolizumab in Patients With Recurrent Platinum-Resistant Ovarian Carcinoma

Panagiotis A. Konstantinopoulos, MD, PhD; Steven Waggoner, MD; Gregory A. Vidal, MD; Monica Mita, MD; John W. Moroney, MD; Robert Holloway, MD; Linda Van Le, MD; Jasgit C. Sachdev, MD; Eloise Chapman-Davis, MD; Gerardo Colon-Otero, MD; Richard T. Penson, MD; Ursula A. Matulonis, MD; Young Bae Kim, MD; Kathleen N. Moore, MD; Elizabeth M. Swisher, MD; Anniina Färkkilä, MD; Alan D'Andrea, MD; Erica Stringer-Reasor, MD; Jing Wang, PhD; Nathan Buerstatte, MPH; Sujata Arora, MS; Julie R. Graham, PhD; Dmitri Bobilev, MD; Bruce J. Dezube, MD; Pamela Munster, MD



TOPACIO/KEYNOTE-162: Antitumor Activity of Niraparib in Combination with Pembrolizumab





Konstantinopoulos PA et al. JAMA Oncol 2019;5(8):1141-9.



Abstract 814MO.

Phase II study of olaparib plus durvalumab and bevacizumab (MEDIOLA): initial results in patients with non-germline BRCA-mutated platinum sensitive relapsed ovarian cancer

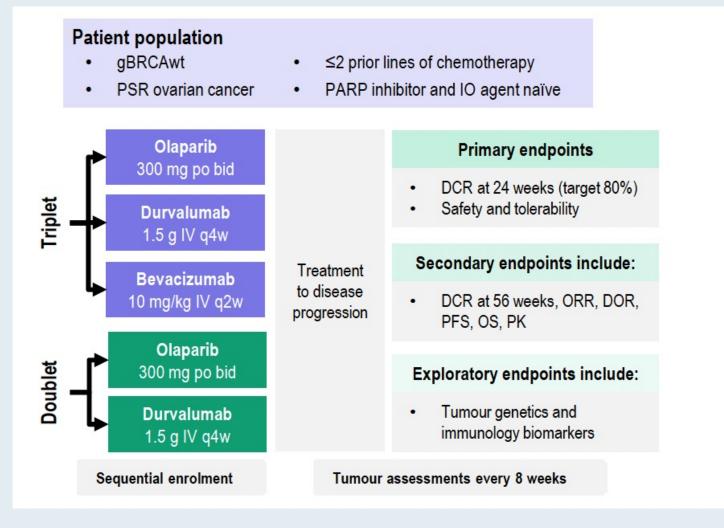
<u>Yvette Drew</u>,¹ Richard Penson,² David M O'Malley,³ Jae-Weon Kim,⁴ Stefan Zimmermann,⁵ Patricia Roxburgh,⁶ Joohyuk Sohn,⁷ Salomon M Stemmer,⁸ Sara Bastian,⁹ Michelle Ferguson,¹⁰ Benoit You,¹¹ Susan Domchek,¹² Haiyan Gao,¹³ Helen K Angell,¹³ Kassondra Meyer,¹⁴ Laura Opincar,¹⁴ Lone Ottesen,¹³ Susana Banerjee¹⁵

¹Northern Centre for Cancer Care, Newcastle upon Tyne Hospitals NHS Foundation Trust, and Newcastle University, Newcastle upon Tyne, UK; ²Massachusetts General Hospital, Boston, MA, USA; ³The Ohio State University – James Comprehensive Cancer Center, Columbus, OH, USA; ⁴Seoul National University Hospital, Seoul, Republic of Korea; ⁵Lausanne University Hospital, University of Lausanne, Lausanne, Switzerland; ⁶Beatson West of Scotland Cancer Centre, and Institute of Cancer Sciences, University of Glasgow, Glasgow, UK, ⁷Yonsei Cancer Centre, Yonsei University, Sinchon-dong, Republic of Korea; ⁸Rabin Medical Center-Beilinson Campus, Petach Tikva and Tel-Aviv University, Tel-Aviv, Israel; ⁹Kantonsspital Graubuenden, Chur, Switzerland; ¹⁰NHS Tayside, Dundee, UK; ¹¹Institut de Cancérologie des Hospices Civils de Lyon, CITOHL, GINECO, Université Claude Bernard Lyon 1, Lyon, France; ¹²Basser Center for BRCA University of Pennsylvania, Philadelphia, PA, USA; ¹³AstraZeneca, Cambridge, UK; ¹⁴AstraZeneca, Gaithersburg, MD, USA; ¹⁵The Royal Marsden NHS Foundation Trust and Institute of Cancer Research, London, UK

ClinicalTrials.gov identifier: NCT02734004 This study was sponsored by AstraZeneca



MEDIOLA gBRCA Wild Type Study Schema

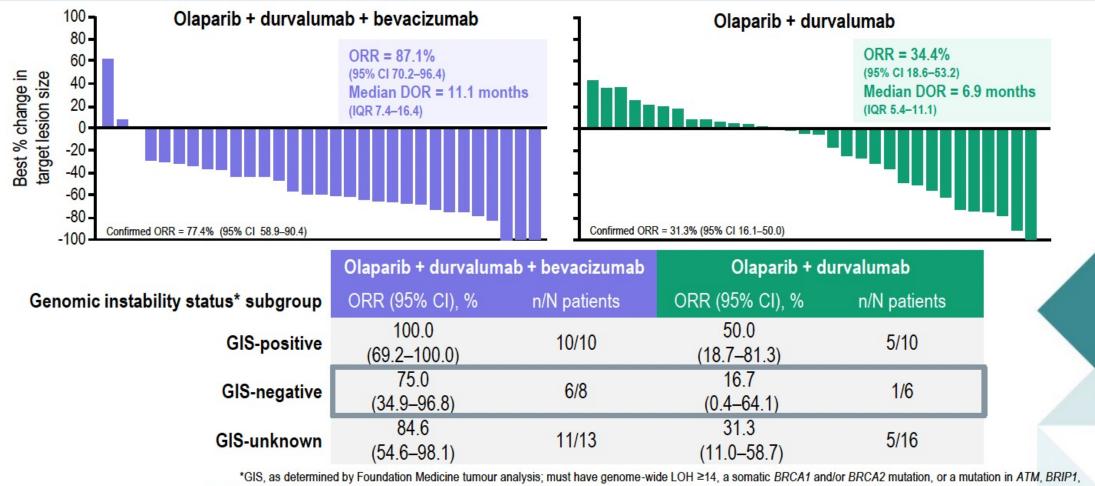


	Olap + durva + bev (N=31)	Olap + durva (N=32)
Median age, years	64.0	68.5
Age group (years), n (%)		
<50	3 (9.7)	4 (12.5)
≥50–<65	14 (45.2)	8 (25.0)
≥65	14 (45.2)	20 (62.5)
Race, n (%)		
White	20 (64.5)	24 (75.0)
Asian	10 (32.3)	3 (9.4)
Other	1 (3.2)	5 (15.6)
Platinum sensitivity, n (%	%)	
>6–12 months	18 (58.1)	14 (43.8)
>12 months	13 (41.9)	18 (56.3)
Number of prior lines of	chemotherapy, n (%)	
1 prior line	20 (64.5)	23 (71.9)
2 prior lines	11 (35.5)	9 (28.1)
Enrolment completed	January 2019	February 2019
Patients on study treatm	nent at DCO, n (%) (13 Februar	y 2020)

Olap; durva; bev 13 (41.9); 13 (41.9); 12 (38.7) 7 (21.9); 6 (18.8); NA



MEDIOLA gBRCA Wild Type: Antitumor Activity



PALB2, RAD51C, BARD1, CDK12, CHEK1, CHEK2, FANCL, PPP2R2A, RAD51B, RAD51D or RAD54L to be considered positive. At the time of the DCO, the prespecified cut-off for genome-wide LOH of 14% was used¹; GIS, genomic instability status; IQR, interquartile range; LOH, loss of heterozygosity. ¹Swisher et al. Lancet Oncol 2017;18:75–87





Phase II study of olaparib + durvalumab (MEDIOLA): Updated results in the germline BRCA-mutated platinum-sensitive relapsed ovarian cancer cohort

Yvette Drew,¹ Bella Kaufman,² Susana Banerjee,³ Alain Lortholary,⁴ Sook Hee Hong,⁵ Yeon Hee Park,⁶ Stefan Zimmermann,⁷ Patricia Roxburgh,⁸ Michelle Ferguson,⁹ Ricardo H Alvarez,¹⁰ Susan Domchek,¹¹ Christopher Gresty,¹² Helen K Angell,¹² Vidalba Rocher Ros,¹³ Kassondra Meyer,¹³ Mark Lanasa,¹³ Pia Herbolsheimer,¹³ Maja de Jonge¹⁴

¹Northern Centre for Cancer Care, Newcastle upon Tyne Hospitals NHS Foundation Trust Newcastle upon Tyne, UK; ²Chaim Sheba Medical Center, Tel Hashomer, Israel; ³The Royal Marsden Hospital, London, UK; ⁴Centre Catherine de Sienne, Nantes, France; ⁵Seoul St Mary's Hospital, Catholic University of Korea, Seoul, South Korea; ⁶Samsung Medical Center, Seoul, Republic of Korea; ⁷Lausanne University Hospital, University of Lausanne, Lausanne, Switzerland; ⁸University of Glasgow and Beatson West of Scotland Cancer Centre, Glasgow, UK; ⁹NHS Tayside, Dundee, UK; ¹⁰Cancer Treatment Centers of America-Atlanta and Augusta University, Augusta, GA, USA; ¹¹Basser Center for BRCA University of Pennsylvania, Philadelphia, PA, USA; ¹²AstraZeneca, Cambridge, UK**;** ¹³AstraZeneca, Gaithersburg, MD, USA and ¹⁴Erasmus MC Daniel den Hoed Cancer Center, Rotterdam, Netherlands



MEDIOLA mBRCA Cohort Study Schema

- MEDIOLA is a multi-cohort, Phase I/II study
- The design of the BRCAm ovarian cohort is presented below; other ovarian cancer cohorts are ongoing

N=34*

- Platinum-sensitive relapsed ovarian cancer[†]
- Germline mutation in
 BRCA1 or BRCA2
- ≥1 previous platinumbased therapy
- PARP inhibitor and immunotherapy naïve

Olaparib monotherapy 300 mg bid PO for 4 weeks

then

Olaparib 300 mg bid PO plus durvalumab IV 1.5 g every 4 weeks

Treatment until disease progression or intolerable toxicity

Primary endpoints

- Disease control rate at 12 weeks
- Safety and tolerability

Secondary endpoints

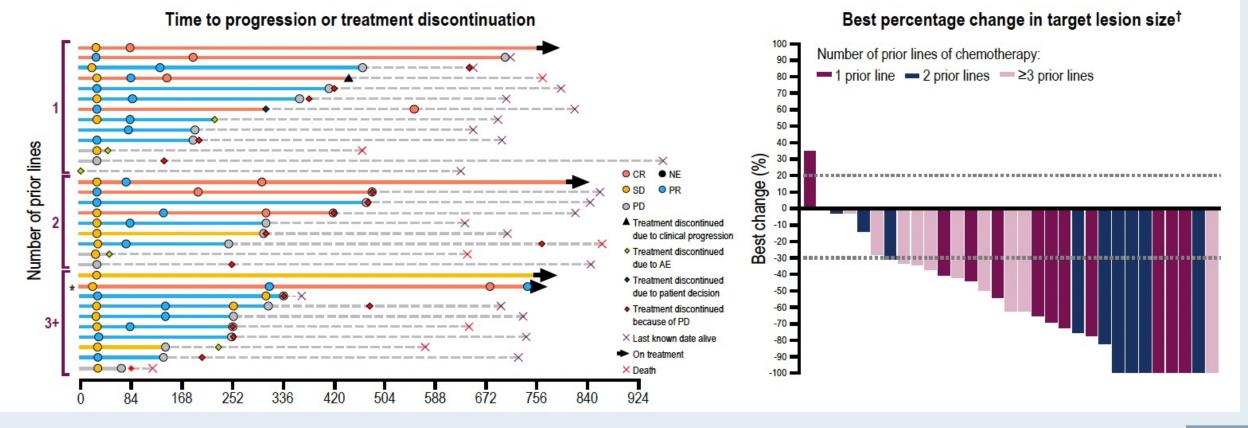
- Disease control rate at 28 weeks
- Objective response rate
- Duration of response
- Progression-free survival
- Overall survival
- PD-L1 expression in tumour samples



MEDIOLA mBRCA Cohort: Efficacy

 DCR at 12 weeks: 81.3% (90% CI 66.3, 91.5) DCR at 28 weeks: 65.6% (90% CI 49.6, 79.4) Unconfirmed ORR: 71.9% (95% CI 53.3, 86.3) mPFS: 11.1 months (95% CI 8.2, 15.6)

Greater clinical activity was seen in earlier- versus later-line patients



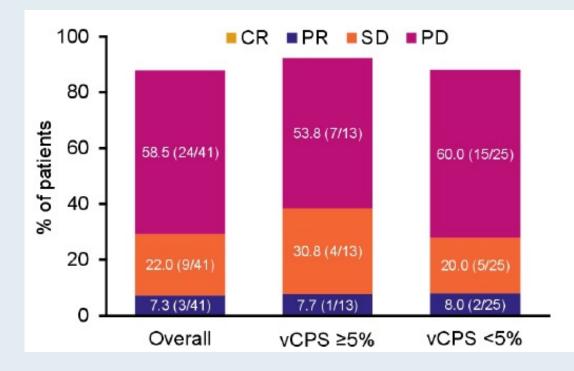


MOONSTONE/GOG-3032: Interim Analysis of a Phase 2 Study of Niraparib + Dostarlimab in Patients (pts) with Platinum-Resistant Ovarian Cancer (PROC)

Randall LM et al. ASCO 2022;Abstract 5573.



MOONSTONE: Efficacy Summary of Niraparib with Dostarlimab for Platinum-Resistant Ovarian Cancer



	Overall	PD-L1 status		
Efficacy, n (%)	N=41	vCPS ≥5%	vCPS <5%	
[95% Cl]*		n=13	n=25	
ORR (CR + PR)	3 (7.3)	1 (7.7)	2 (8.0)	
	[1.5–19.9]	[0.2–36.0]	[1.0–26.0]	
DCR (CR + PR + SD)	12 (29.3)	5 (38.5)	7 (28.0)	
	[16.1–45.5]	[13.9–68.4]	[12.1–49.4]	
Median PFS, months (95% CI)	2.1	2.2 (1.6–not	2.1	
	(2.0–2.2)	evaluable)	(1.8–2.2)	



MOONSTONE: Select Treatment-Related Adverse Events in >10% of Patients

Adverse event n (%)	Related to either niraparib or dostarlimab	Related to niraparib	Related to dostarlimab
Nausea	23 (56.1)	21 (51.2)	11 (26.8)
Fatigue	14 (34.1)	13 (31.7)	13 (31.7)
Vomiting	13 (31.7)	13 (31.7)	7 (17.1)
Anemia	13 (31.7)	13 (31.7)	7 (17.1)
Platelet count decreased	11 (26.8)	11 (26.8)	0 (0)
Thrombocytopenia	8 (19.5)	8 (19.5)	0 (0)



An Open-Label Phase 2 Study of Dostarlimab, Bevacizumab, and Niraparib Combination in Patients with Platinum-Resistant Ovarian Cancer: Cohort A of the OPAL Trial

Joyce F. Liu,¹ Stéphanie Gaillard,² Andrea E. Wahner Hendrickson,³ John W. Moroney,⁴ Oladapo Yeku,⁵ Elisabeth Diver,⁶ Camille Gunderson,⁷ Rebecca Arend,⁸ Elena Ratner,⁹ Vivek Samnotra,¹⁰ Divya Gupta,¹⁰ Lena Evilevitch,¹⁰ Zebin Wang,¹⁰ Ping Wang,¹⁰ Joseph Tang,¹⁰ Emeline Bacqué,¹⁰ Xiaohong Liu,¹⁰ Gottfried E. Konecny¹¹

Poster #23

¹Dana-Farber Cancer Institute, Boston, MA, USA; ²Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD, USA; ³Mayo Clinic Rochester, Rochester, NY, USA; ⁴University of Chicago Medicine Comprehensive Cancer Center, Chicago, IL, USA; ⁵Massachusetts General Cancer Center, Boston, MA, USA; ⁶Stanford Women's Cancer Center, Palo Alto, CA, USA; ⁷University of Oklahoma Stephenson Cancer Center, Oklahoma City, OK, USA; ⁸The University of Alabama at Birmingham, UAB Comprehensive Cancer Center, Birmingham, AL, USA; ⁹Yale University, New Haven, CT, USA; ¹⁰GlaxoSmithKline, Waltham, MA, USA; ¹¹Ronald Reagan UCLA Medical Center, Los Angeles, CA, USA.

SGO VIRTUAL ANNUAL MEETING 2021 ON WOMEN'S CANCER®

Abstract 10415





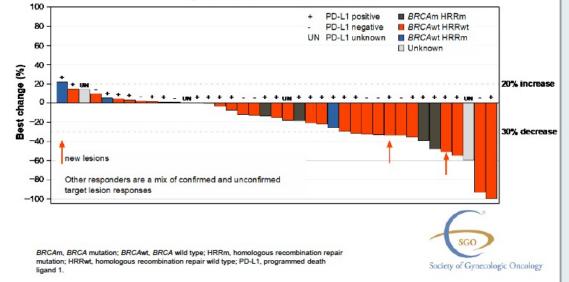
Antitumor Activity

- Antitumor activity was assessed in the response-evaluable population (n=39)
 - 2 patients in the safety population did not have a postbaseline scan and were excluded from the responseevaluable population
- Response data required that patients with a best response of complete response or partial response had a confirmation scan ≥4 weeks after the first scan in which a response was observed

SGO	VIRTUAL ANNUAL MEETING
2021	ON WOMEN'S CANCER®

Antitumor Activity per RECIST v1.1			
Response-evaluableVariable, n (%)population (n=39)			
Complete response	0		
Partial response	7 (17.9)		
Stable disease	23 (59.0)		
Progressive disease	8 (20.5)		
Inconclusive	1 (2.6)		
ORR (90% CI), %	17.9 (8.7–31.1)		
DCR (90% CI), %	76.9 (63.2–87.4)		

Best Percent Change from Baseline Sum of Target Lesions by HRR and PD-L1 Status



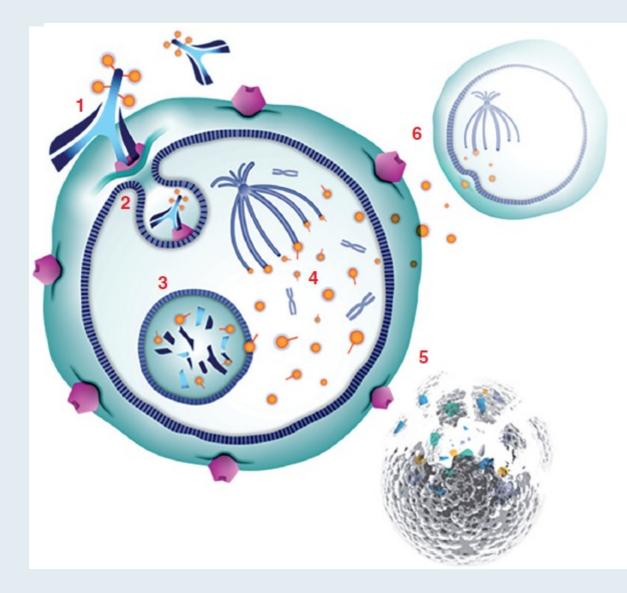


Liu JF et al. SGO 2021; Abstract 10415.

Novel Investigational Agents and Strategies



Mirvetuximab Soravtansine: Mechanism of Action



(1) Mirvetuximab soravtansine binds with high affinity to FRα expressed on the tumor cell surface

(2) The antibody-drug conjugate (ADC)/receptor complex becomes internalized via antigenmediated endocytosis

(3) Lysosomal processing releases active DM4 catabolites from the ADC molecule

(4) These maytansinoid derivatives inhibit tubulin polymerization and microtubule assembly

(5) The potent antimitotic effects result in cell-cycle arrest and apoptosis

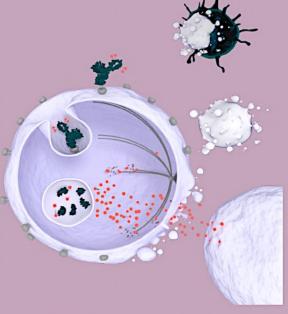
(6) Active metabolites can also diffuse into neighboring cells and induce further cell death — in other words, bystander killing



Efficacy and Safety of Mirvetuximab Soravtansine in Patients With Platinum-Resistant Ovarian Cancer With High Folate Receptor Alpha Expression: Results From the SORAYA Study

Ursula A. Matulonis,¹ Domenica Lorusso,² Ana Oaknin,³ Sandro Pignata,⁴ Hannelore Denys,⁵ Nicoletta Colombo,⁶ Toon Van Gorp,⁷ Jason A. Konner,⁸ Margarita Romeo Marin,⁹ Philipp Harter,¹⁰ Conleth G. Murphy,¹¹ Jiuzhou Wang,¹² Elizabeth Noble,¹² Brooke Esteves,¹² Michael Method,¹² Robert L. Coleman¹³

¹Dana-Farber Cancer Institute, Boston, MA, USA; ²Fondazione Policlinico Universitario A. Gemelli, IRCCS and Catholic University of Sacred Heart, Rome, Italy; ³Gynaecologic Cancer Programme, Vall d'Hebron Institute of Oncology (VHIO), Hospital Universitari Vall d'Hebron, Vall d'Hebron Barcelona Hospital Campus, Barcelona, Spain; ⁴Istituto Nazionale Tumori di Napoli Fondazione G Pascale IRCCS, Naples, Italy; ⁵Ghent University Hospital, Ghent, Belgium; ⁶European Institute of Oncology IRCCS, Milan, Italy and University of Milan-Bicocca, Milan, Italy; ⁷University Hospital Leuven, Leuven Cancer Institute, Leuven, Belgium; ⁸Memorial Sloan Kettering Cancer Center, New York, NY, USA; ⁹Institut Català d'Oncologia, Badalona, Spain; ¹⁰Ev. Kliniken Essen-Mitte, Essen, Germany; ¹¹Bon Secours Hospital and Cancer Trials, Cork, Ireland; ¹²ImmunoGen, Inc., Waltham, MA, USA; ¹³US Oncology Research, Texas Oncology, The Woodlands, TX, USA



S^{*}RAYA

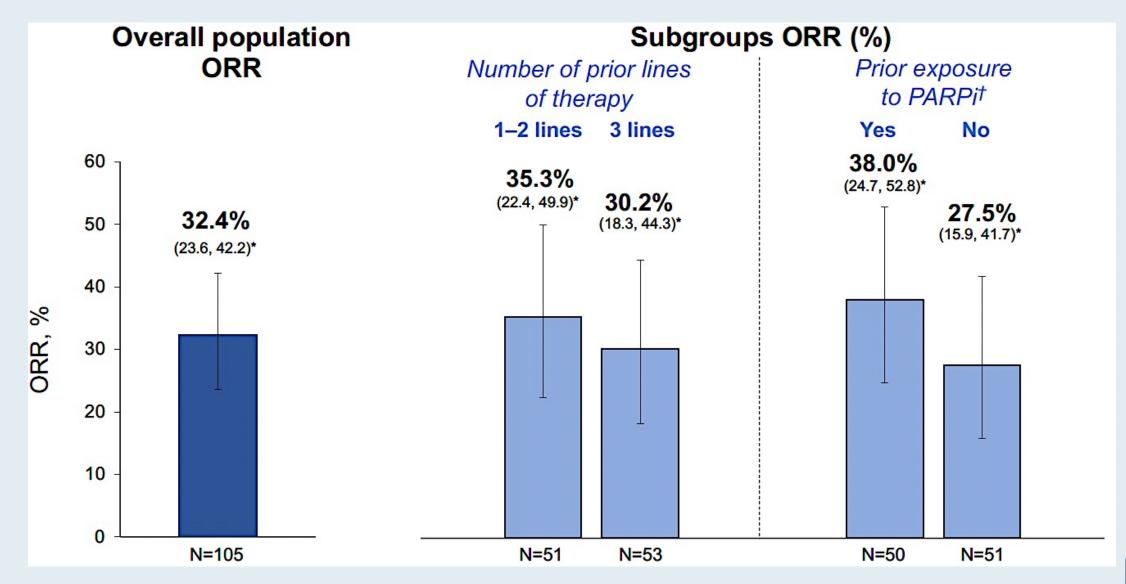


SGO 2022; Abstract LBA4.





SORAYA: Investigator-Assessed Objective Response Rate by Prior Therapy





Matulonis UA et al. SGO 2022; Abstract LBA4.

SORAYA: Treatment-Related Adverse Events (≥10%)

TRAEs, n (%)	All Grades	Grade 3	Grade 4
Patients with any event	9 <mark>1 (</mark> 86)	29 (27)	1 (1)
Blurred vision	43 (41)	6 (6)	0 (0)
Keratopathy*†	38 (36)	8 (8)	1 (1)
Nausea	<mark>31 (</mark> 29)	0 (0)	0 (0)
Dry eye	24 (23)	2 (2)	0 (0)
Fatigue	24 (23)	1 (1)	0 (0)
Diarrhea	23 (22)	2 (2)	0 (0)
Asthenia	16 (15)	1 (1)	0 (0)
Photophobia	15 (14)	0 (0)	0 (0)
Peripheral neuropathy	13 (12)	0 (0)	0 (0)
Decreased appetite	13 (12)	1 (1)	0 (0)
Vomiting	12 (11)	0 (0)	0 (0)
Neutropenia	11 (10)	1 (1)	0 (0)

- Most adverse events (AEs) were lowgrade, reversible ocular and GI events
- Serious Grade ≥3 treatment-related AEs (TRAEs) were reported in 8% of patients
- TRAEs led to dose delay in 32% and dose reduction in 19%
- 7 patients (7%) discontinued treatment due to TRAEs
- 1 death was recorded as possibly related to study drug
 - Respiratory failure
 - Autopsy: No evidence of drug reaction; lung metastases



Matulonis UA et al. SGO 2022; Abstract LBA4.

Unique Events Associated with Mirvetuximab Soravtansine: Keratopathy and Blurred Vision

Events developed in 50/106 (47%) patients: mostly low grade

Keratopathy

n=7

Both n=31

n=12 Blurred vision

Proactive supportive care

- Lubricating artificial tears
- Corticosteroid eye drops

Predictable

- Median time to onset: cycle 2 (~1.5 months)

Manageable with dose modifications, if needed

- 22% of patients (23/106) had dose delay and/or reduction

Reversible

At data cutoff: >80% of Grade 2-3 events had resolved to
 Grade 0-1

9 patients still receiving mirvetuximab soravtansine or being followed up for resolution

<1% discontinuation due to ocular events

– 1 of 106 patients discontinued due to Grade 4 keratopathy,
 which resolved within 15 days

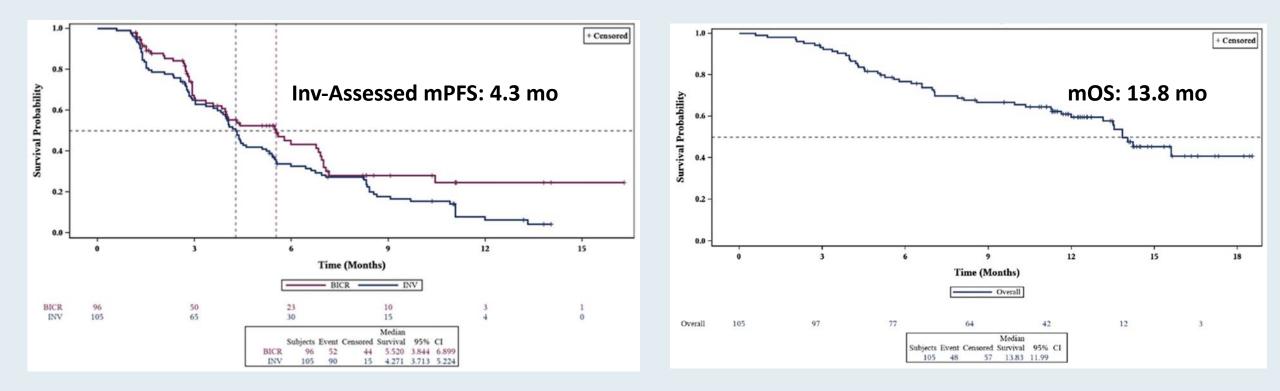


Mirvetuximab Soravtansine (MIRV) in Patients with Platinum-Resistant Ovarian Cancer with High Folate Receptor Alpha (FRα) Expression: Characterization of Antitumor Activity in the SORAYA Study

Matulonis UA et al. ASCO 2022;Abstract 5512.



SORAYA: Overall Response Rate in the BRCA Mutation-Positive Subgroup





Matulonis UA et al. ASCO 2022; Abstract 5512.

SORAYA: Overall Response Rate in the BRCA Mutation-Positive Subgroups

	<i>BRCAmt</i> with prior PARPi (n=16)	<i>BRCAmt</i> without prior PARPi (n=4)	
Responders, n	6	3	
ORR	38%	75%	



Matulonis UA et al. ASCO 2022; Abstract 5512.

MIRASOL Phase III Study Schema

MIRAS[®]L

Enrollment and Key Eligibility

- Platinum-resistant disease (PFI ≤ 6 mo)
 - 1° platinum refractory disease excluded (primary PFI < 3 mo)
- Prior bevacizumab and PARPi allowed
- 1-3 prior lines of therapy
- Patients with BRCA mutations allowed
- FRα-high by PS2+ scoring (≥75% PS2+)

Statistical Assumptions

- 430 patients/ 330 events for PFS by INV
- α=0.05 (two-sided)
- Power=90%; HR=0.7; control arm mPFS 3.5 mo

Mirvetuximab Soravtansine 6 mg/kg AIBW (calculated using adjusted ideal body weight) intravenously once every 3 weeks

> 1:1 Randomization STRATIFICATION FACTORS Investigator's Choice (IC) Chemotherapy (Paclitaxel, PLD, Topotecan) Prior Therapies (1 vs 2 vs 3)

Investigator's Choice (IC) Chemotherapy Paclitaxel, PLD,⁺ or Topotecan Paclitaxel: 80 mg/m2 weekly; PLD: 40 mg/m² every 4 weeks; Topotecan: 4 mg/m² on days 1, 8, and 15 every four weeks; or 1.25 mg/m² on days 1-5 every 3 weeks



Moore KN et al. SGO 2022; Abstract 297.

PICCOLO Phase II Trial Schema

PICC¹

Enrollment and Key Eligibility

- Platinum-sensitive disease (PFI >6 mo)
- At least 2 prior lines of platinum-based therapy
 - Patients with documented platinum allergy require only 1 prior line of platinum
- FRα-high by IHC scoring (≥75% PS2+)
- Appropriate for single agent therapy as next line of therapy as determined by investigator

Statistical Assumptions

- N=75
- Null hypothesis: ORR is ≤ 28% tested using an optimal Simon's two-stage design w/o pause in enrollment

Mirvetuximab Soravtansine

6 mg/kg AIBW (calculated using adjusted ideal body weight) intravenously once every 3 weeks



Alvarez Secord A et al. SGO 2022; Abstract 300.

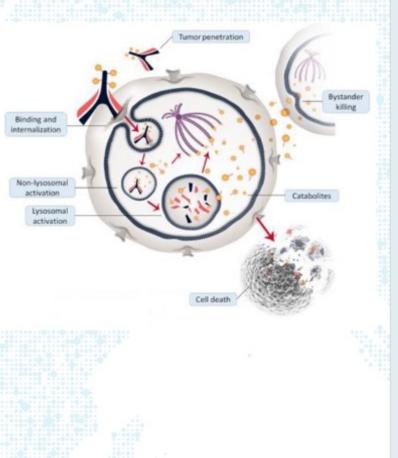
2021 ASCO ANNUAL MEETING

Abstract 5504

Mirvetuximab Soravtansine, a folate receptor alpha-targeting antibody drug conjugate, in combination with bevacizumab in patients with platinumagnostic ovarian cancer: final analysis

David M. O'Malley¹, Ana Oaknin², Ursula A. Matulonis³, Gina M. Mantia-Smaldone⁴, Peter Lim⁵, Cesar Castro⁶, Diane Provencher⁷, Sanaz Memarzadeh⁸, Patrick Zweidler-McKay⁹, Jiuzhou Wang⁹, Brooke Esteves⁹, Kathleen N. Moore¹⁰ Lucy Gilbert¹¹

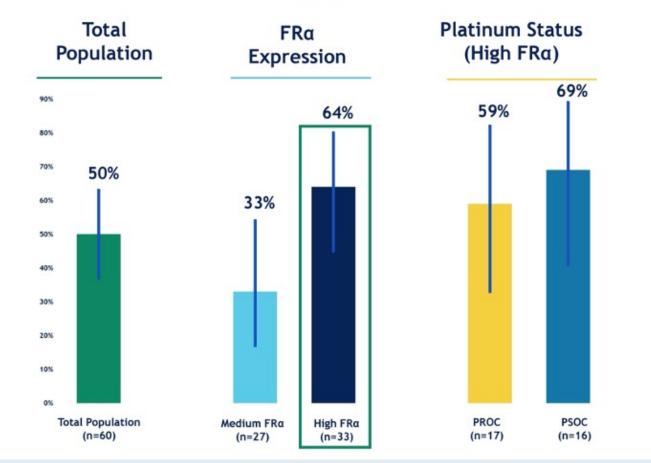
¹Ohio State University, Columbus, OH; ²Vall D'Hebron University Hospital, Vall D'Hebron Institute of Oncology (VHIO), Barcelona, Spain; ³Dana Farber Cancer Institute, Boston, MA; ⁴Fox Chase Cancer Center, Philadelphia, PA; ⁵The Center of Hope Renown Regional Medical Center, Reno, NV; ⁶Massachusetts General Hospital, Boston, MA; ⁷Institute du Cancer de Montreal, Montreal, Canada; ⁸Ronald Reagan UCLA Medical Center UCLA Medical Center, Santa Monica^{; 9}ImmunoGen, Inc., Waltham, MA; ¹⁰University of Oklahoma Health Sciences Center, Oklahoma City, OK/Sarah Cannon Research Institute, Nashville, TN; ¹¹McGill University Health Center-RI, Montreal, Canada





Confirmed ORR by FRa Expression and Platinum Status

ORR (%)



• 50% ORR (30/60) for overall cohort

64% ORR (21/33) in high FRα tumors
 59% ORR (10/17) in PROC subset
 69% ORR (11/16) in PSOC subset

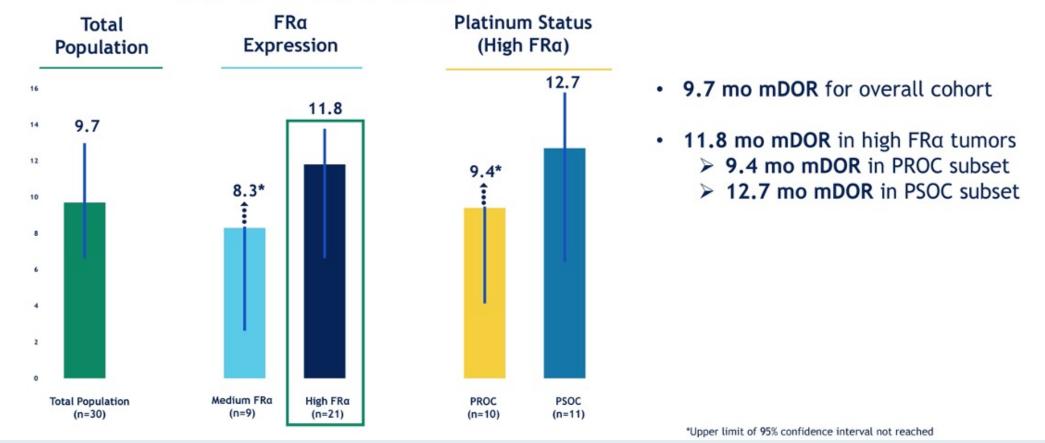
ORR = overall response rate; PROC = platinum-resistant ovarian cancer; PSOC = platinum-sensitive ovarian cancer



O'Malley DM et al. ASCO 2021; Abstract 5504.

Median Duration of Response (mDOR) by FRa Expression and Platinum Status

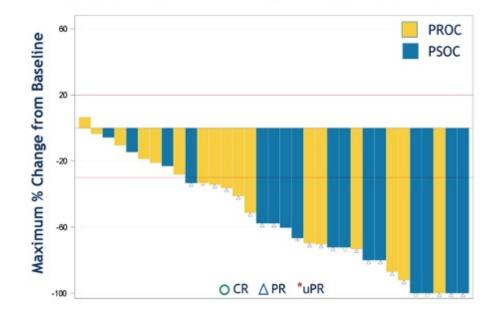
Median DOR (months)





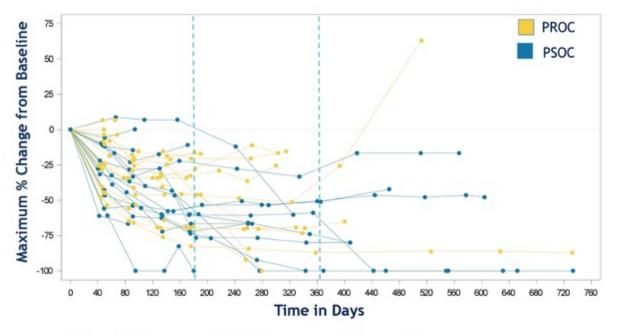
High FRa Tumors Showed a Deep Response and Durable Benefit

Maximum % Change from Baseline



 97% (32/33) of patients demonstrated tumor burden reduction

Percent Change and Duration from Baseline



- Rapid tumor shrinkage, with early responses
- Durable benefit in both PSOC and PROC



Updated Results From the Phase 1b Expansion Study of Upifitamab Rilsodotin (UpRi; XMT-1536), a NaPi2bdirected Dolaflexin Antibody Drug Conjugate (ADC) in Ovarian Cancer

<u>Richardson, Debra L</u>¹; Hamilton, Erika P²; Barve, Minal³; Anderson, Charles K⁴; Taylor, Sara K⁵; Lakhani, Nehal⁶; Buscema, Joseph⁷; Tolcher, Anthony W⁸; Zarwan, Corrine⁹; Werner, Theresa L¹⁰; Hays, John L¹¹; Richards, Paul¹²; Arend, Rebecca¹³; Edenfield, Jeffery¹⁴; Putiri, Emily¹⁵; Bernardo, Patricia¹⁵; Burger, Robert A¹⁵; Matulonis, Ursula A¹⁶

¹Stephenson Cancer Center, University of Oklahoma Health Sciences Center and the Sarah Cannon Research Institute, Oklahoma City, OK; ²Sarah Cannon Research Institute/Tennessee Oncology, Nashville, TN; ³Mary Crowley Cancer Research, Dallas, TX; ⁴Willamette Valley Cancer Institute and Research Center, Eugene, OR; ⁵BC Cancer - Kelowna BC, Canada; ⁶START Midwest, Grand Rapids, MI; ⁷Arizona Oncology, Tucson, AZ; ⁸NEXT Oncology, San Antonio, TX; ⁹Lahey Clinic, Burlington, MA; ¹⁰Huntsman Cancer Institute, University of Utah,

Salt Lake City, UT; ¹¹Arthur James Cancer Hospital, Ohio State University, Columbus, OH; ¹²US Oncology, Oncology and Hematology Assoc. of Southwest VA, Salem, VA; ¹³University of Alabama at Birmingham, Birmingham, AL; ¹⁴Prisma Health Cancer Institute, Greenville, SC; ¹⁵Mersana Therapeutics, Inc, Cambridge, MA; ¹⁶Dana-Farber Cancer Institute, Boston, MA

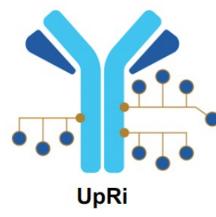


SGO 2022; Abstract 76.





Upifitamab Rilsodotin (UpRi): First-in-Class ADC Targeting NaPi2b

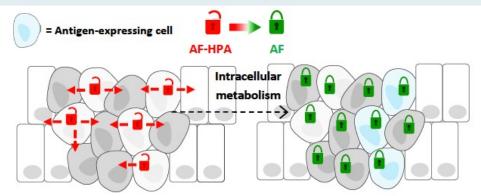


Antibody: Humanized monoclonal anti-NaPi2b¹

Linker: Polymer scaffold; cleavable ester linker²

Payload: AF-HPA (DolaLock-controlled bystander effect)¹

Drug-to-Antibody Ratio: ~10



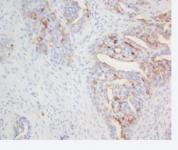
Upon ADC internalization into tumor cells and efficient release of payload, AF-HPA payload is metabolized to AF that remains highly potent but loses the ability to cross the cell membrane, locking it in the tumor, controlling the bystander effect, and consequently limiting impact on adjacent healthy cells^{2,3}

NaPi2b Is a Sodium-Dependent Phosphate Transporter Broadly Expressed in Ovarian Cancer With Limited Expression

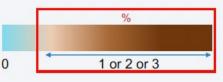


- NaPi2b expressed by tumor cells in two-thirds of patients with high-grade serous ovarian cancer²
- NaPi2b is a lineage antigen (not an oncogene)¹

in Healthy Tissues⁴



NaPi2b IHC assay in development – an optimal diagnostic assay would be robust, predictive, reproducible, easily able to distinguish a wide range of expression using TPS scoring method²





UpRi Phase Ib Study Schema

Patient Population: HGSOC^a progressing after standard treatments; measurable disease per RECIST v1.1; ECOG PS 0 or 1

Ovarian Cancer Cohort

- 1–3 prior lines in platinum-resistant
- 4 prior lines regardless of platinum status
- High-grade serous histology
- Archived tumor and fresh biopsy (if medically feasible) for NaPi2b
- Exclusion: Primary platinum-refractory disease

UpRi IV Q4W until disease progression or unacceptable toxicity

36 mg/m² cohort initiated in August 2019

43 mg/m² to a max of ~80 mg cohort initiated in December 2019

Primary Objectives

- Evaluate safety and tolerability of MTD or RP2D
- Assess preliminary efficacy (ORR, DCR)

Secondary Objectives

- Association of tumor NaPi2b expression and objective tumor response using an IHC assay with a broad dynamic range to distinguish tumors with high and low NaPi2b expression
- Further assessment of preliminary anti-neoplastic activity (DoR)

Assessment: Tumor imaging (MRI or CT) at baseline and every 2nd cycle; response assessed per RECIST v1.1



Expansion Cohort Experience Across a Range of Doses Allowed for Further Optimization of UpRi Profile

Updated Analysis of Phase 1b PROC Expansion Cohort to Evaluate Safety and ORR Based on UpRi Dose Levels^a

Dose Group 36 (33–38 mg/m²) (n=29)



12 patients at **36 mg/m²** starting dose (all BSA levels)

+

17 patients at ~80 mg starting dose with BSA ≥1.8 who received an <u>actual</u> dose of **33 to 38 mg/m**² Dose Group 43 (>38–43 mg/m²) (n=66)

39 patients at **43 mg/m²** starting dose with BSA <1.8

27 patients at ~80 mg starting dose with BSA ≥1.8 who received an <u>actual</u> dose of **>38 mg/m**²

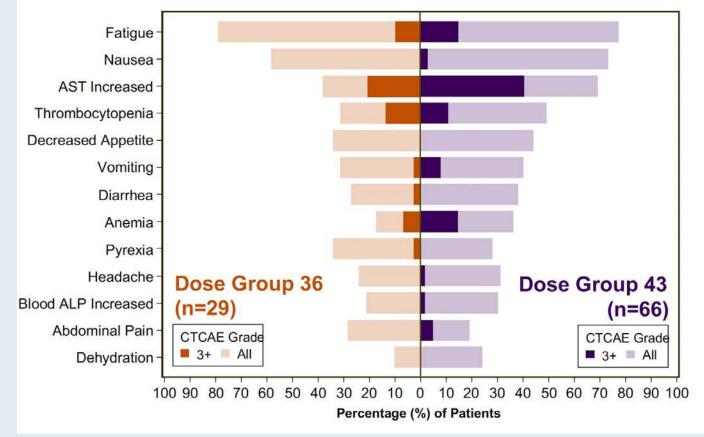
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Richardson DL et al. SGO 2022; Abstract 76.

TRAEs by UpRi Dose Group

Dose Group 36 Had a More Favorable Safety Profile Compared to Dose Group 43



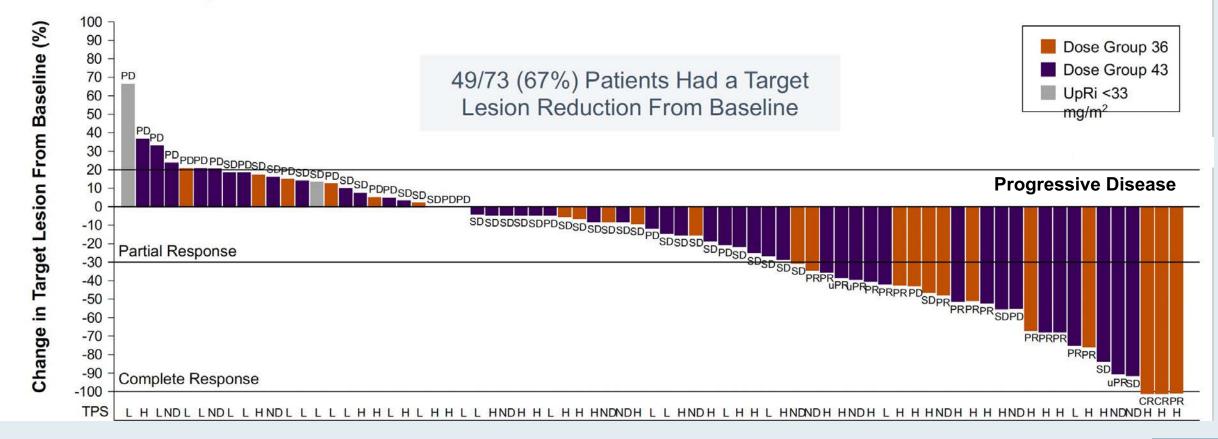
TRAEs ≥20%

- No severe ocular toxicity, neutropenia, or peripheral neuropathy in either dose group
- 4 (14%) patients had treatment-related SAEs in Dose Group 36 vs 18 (27%) in Dose Group 43
- Lower frequencies and lower grade pneumonitis occurred in Dose Group 36 (with no Grade 3+) vs Dose Group 43^a



Best Response by UpRi Dose Group

Similar Tumor Reduction in Both Dose Groups: Two-thirds of Patients Had Reductions in Target Tumor Lesions by RECIST 1.1





Confirmed ORR by UpRiDose Group and NaPi2b Level and Duration of Response (DoR)

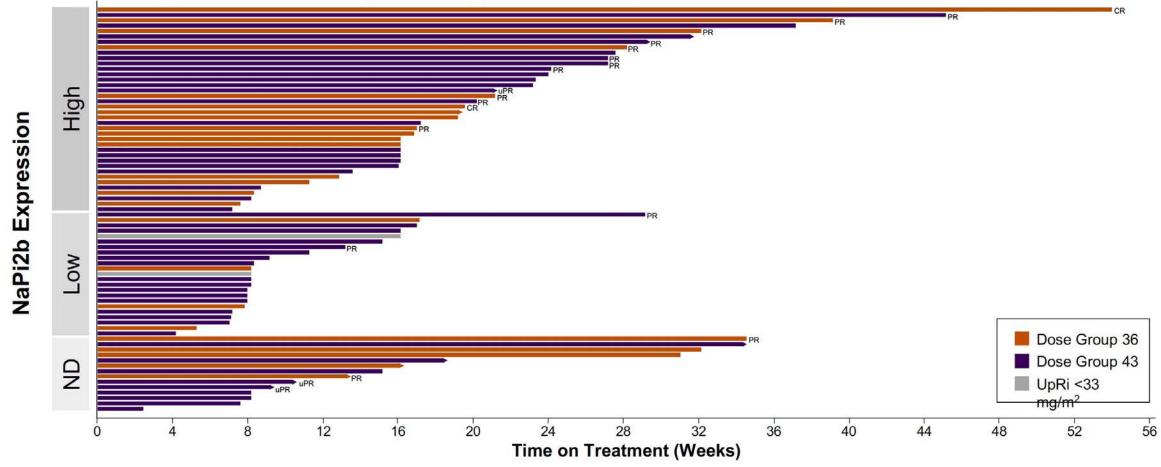
		All Dose Levels	Dose Group 36	Dose Group 43
NaPi2b-High (TPS ≥75)	Ν	38	16	22
	ORR, n (%)	13 (34)	7 (44)	6 (27)
	CR, n (%)	2 (5)	2 (13)	0
	PR, n (%)	11 (29)	5 (31)	6 (27)
	DCR, n (%)	33 (87)	12 (75)	21 (95)
All NaPi2b Levels	Ν	75	25	48
	ORR, n (%)	17 (23)	9 (36)	8 (17)
	CR, n (%)	2 (3)	2 (8)	0
	PR, n (%)	15 (20)	7 (28)	8 (17)
	DCR, n (%)	54 (72)	18 (72)	35 (73)

- Median DoR in patients (all dose levels) with NaPi2b-high ovarian cancer (n=13): 5 months
- No obvious difference in median DoR observed between Dose Groups 36 and 43



Time on UpRi Study in Evaluable Patients

Trend to Longer Time on Study With High NaPi2b Expression





Ongoing UPLIFT (ENGOT-OV67/GOG-3048) Study Schema

Patient Population: HGSOC^a progressing after standard treatments; measurable disease per RECIST v1.1; ECOG PS 0 or 1; enrolling regardless of NaPi2b expression

Key Inclusion Criteria

- Platinum-resistant ovarian cancer (PROC)
- 1–4 prior lines of therapy
- Grade ≤2 peripheral neuropathy
- Archival or fresh tissue required for biomarker evaluation

Key Exclusion Criteria

- 1–2 prior lines bevacizumab-naive
- Primary platinum-refractory disease

UpRi 36 mg/m² up to max 80 mg; IV Q4W

Primary Endpoint

Confirmed ORR in NaPi2b-high (N = ~100)

Secondary Endpoint

 Confirmed ORR in overall population (N = up to ~180 including 100 NaPi2b-high)

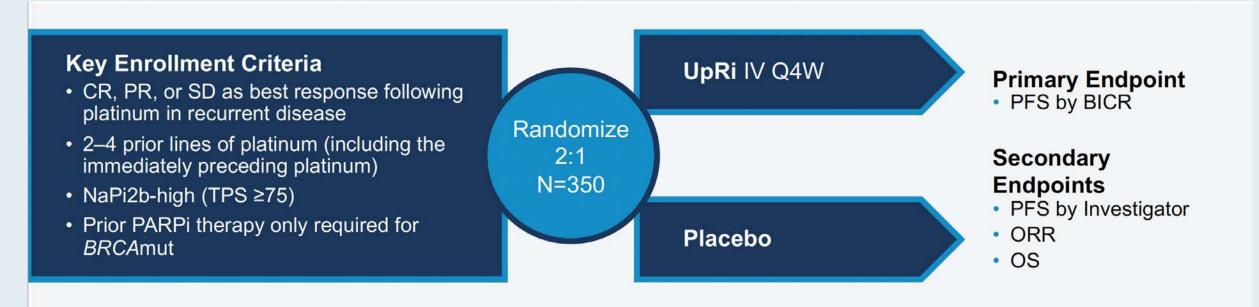
Other Secondary Endpoints

- DoR
- Safety

Prospectively-defined retrospective analysis to validate NaPi2b biomarker cutoff



Ongoing UP-NEXT Phase III (ENGOT-OV71-NSGO-CTU/GOG-3049) Study Schema

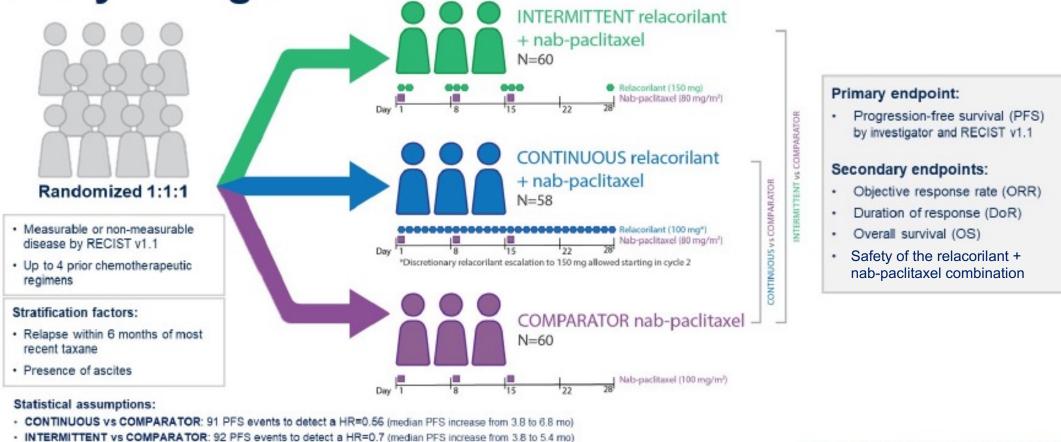


Informed by FDA Feedback and CHMP Scientific Advice; Plans to Initiate in 2022



Richardson DL et al. SGO 2022; Abstract 76.

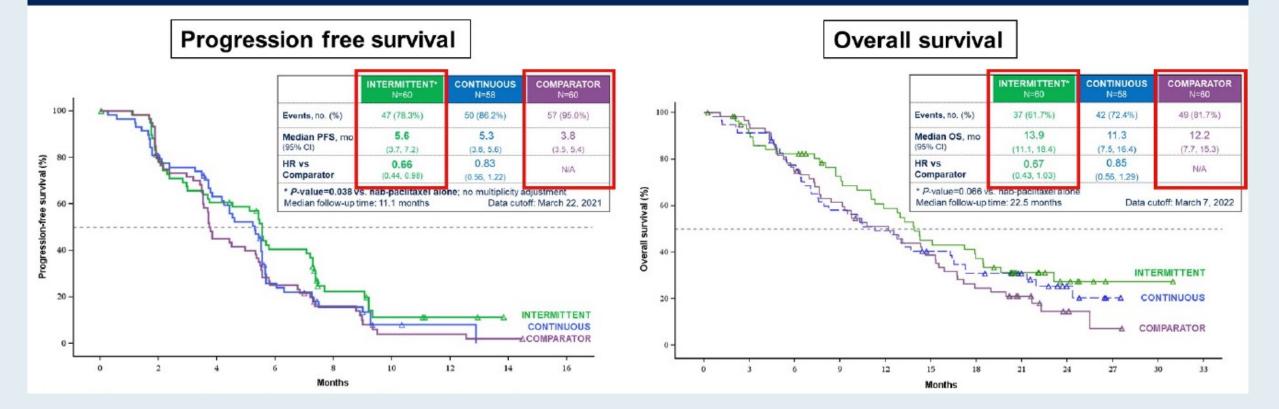
Relacorilant + Nab-paclitaxel Phase 2 Study Design



PFS analysis reported at ESMO 2021



Investigator assessed PFS and OS of relacorilant + nabpaclitaxel





Colombo N et al. ASCO 2022; Abstract LBA5503; Liu N. ASCO 2022; Highlights of the Day: Gynecologic Cancers.

Meet The Professor Current and Future Management of Non-Small Cell Lung Cancer with an EGFR Mutation

Wednesday, August 31, 2022 5:00 PM – 6:00 PM ET

Faculty Lecia V Sequist, MD, MPH

> Moderator Neil Love, MD



Thank you for joining us!

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

