







# Dostarlimab in Combination with Chemotherapy for the Treatment of Primary Advanced or Recurrent Endometrial Cancer: a Placebo-Controlled Randomized Phase 3 Trial (ENGOT-EN6-NSGO/GOG-3031/RUBY)

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Dr Mirza reports consulting or advisory role at AstraZeneca, Biocad, GSK, Karyopharm, Merck, Roche, Zailab; speakers' bureau fees from AstraZeneca and GSK; research funding (to institution) from Apexigen, AstraZeneca, Deciphera (trial chair), GSK, and Ultimovacs; and personal financial interest in Karyopharm (stocks/shares, member of Board of Directors).

Other authors: Dr Chase reports speaker bureau fees and/or advisory roles from GSK, AstraZeneca, Clovis, and Genentech/Roche and consulting fees from GSK, AstraZeneca, Clovis, and Genentech/Roche. Dr Slomovitz reports advisory fees from AstraZeneca, Clovis, Genentech, GSK, GOG Foundation, Merck, Myriad, Jazz Pharma, Onconova, Nuvation Bio, EQRX, Regeneron, Eisai, and Incyte and Board of Director member for GOG Foundation and HOW: Hearing Ovarian Cancer Whispers. Dr dePont Christensen reports direct consulting payment from Nordic Society for Gynecologic Oncology for the RUBY P1 Primary manuscript; consulting fees from Karyopharm; payment for advisory board DMC participation from the Swiss GO Trial Group (MATAO trial); and stock options from Y-mAbs Therapeutics. **Dr Novak** reports honoraria from Sofmedica, AstraZeneca, and MSD; support for attending meetings from Sofmedica and Preglem; participation on a data safety monitoring board or advisory board from AstraZeneca and Richter Gedeon; leadership role as the President of Hungarian Society of Gynecologic Oncology; stock options from Richter Gedeon; and receipt of equipment, materials, drugs, medical writing, gifts or other services from AstraZeneca. Dr Black reports institutional grant fees from GSK; fees for being a Member of GOG Partners Investigational Council; and medical director/owner of Trials365, LLC. Dr Gilbert reports institutional grants from Alkermes, AstraZeneca, Clovis, Esperas, IMV, ImmunoGen Inc, Karyopharm, Merck Sharp & Dohme, Mersana, Novocure GmbH, OncoQuest Pharmaceuticals, Pfizer, Roche, and Tesaro; consulting fees from Merck; and honoraria from Alkermes, AstraZeneca, Eisai, Eisai-Merck, and GSK. Dr Valabrega reports consulting/advisory fees from Amgen, AstraZeneca, Clovis Oncology, GSK, PharmaMar, Roche, and Tesaro. Dr Hanker reports consulting/advisory fees from Amgen, AstraZeneca, Clovis Oncology, Eisai, GSK, Intuitive Surgery, Janssen, MSD, Novartis, Pfizer, PharmaMar, Roche, and Tesaro. Dr Stuckey reports royalties as an UptoDate reviewer. Dr Boere reports institutional research grant from GSK and institutional advisory board meeting fees from AstraZeneca and GSK. Dr Monk reports consulting fees from VBL, US Oncology Research, Sorrento, Regeneron, Puma, Pfizer, Myriad, Novocure, Novartis, Mersana, Macrogenics, Iovance, Karyopharm, ImmunoGen, Gradalis, GOG Foundation, Genmab/Seagen, EMD Merck, Elevar, Bayer, Aravive, Amgen, Akeso Bio, and Agenus and speakers' bureau honoraria from TESARO/GSK, Roche/Genentech, Merck, Easai, Clovis, and AstraZeneca. Dr Coleman reports grants or contracts from AstraZeneca, Clovis, Genelux, Genmab, Merck, Immunogen, and Roche/Genentech; consulting fees from AbbVie, Agenus, Alkermes, AstraZeneca, Clovis, Deciphera, Genelux, Genmab, GSK, Immunogen, and Roche/Genentech; consulting fees from AbbVie, Agenus, Alkermes, AstraZeneca, Clovis, Deciphera, Genelux, Genmab, GSK, Immunogen, and Roche/Genentech; consulting fees from AbbVie, Agenus, Alkermes, AstraZeneca, Clovis, Deciphera, Genelux, Genmab, Merck, Immunogen, and Roche/Genentech; consulting fees from AbbVie, Agenus, Alkermes, AstraZeneca, Clovis, Deciphera, Genelux, Genmab, Merck, Immunogen, and Roche/Genentech; consulting fees from AbbVie, Agenus, Alkermes, AstraZeneca, Clovis, Deciphera, Genelux, Genmab, Merck, Immunogen, and Roche/Genentech; consulting fees from AbbVie, Agenus, Alkermes, AstraZeneca, Clovis, Deciphera, Genelux, Genmab, GSK, Immunogen, and Consulting fees from AbbVie, Agenus, Alkermes, AstraZeneca, Clovis, Deciphera, Genelux, Genmab, GSK, Immunogen, Alkermes, AstraZeneca, Clovis, Deciphera, Genelux, Genel Novocure, Merck, OncoQuest, Onxerna, Regeneron, and Roche/Genentech; honoraria from AstraZeneca, Clovis, Merck, and Roche/Genentech; and participation on a data safety monitoring board or advisory board from Eisai/BMS and VBL Therapeutics. Dr Powell reports consulting/advisory fees from GSK, Tesaro, Merck, Eisai, Seagen, Clovis Oncology, and AstraZeneca. Dr Gill, Dr Gold, Dr Landrum, and Dr Sharma have nothing to disclose. Dr Stevens and Dr He are employees of GSK.

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#### Unlabeled/Investigational Uses

I will be discussing the investigational use of dostarlimab plus carboplatin/paclitaxel in primary advanced or recurrent endometrial cancer





### Acknowledgments

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Anthoula Koliadi Gabriel Lindahl					text key codes are for personal use only and may not be reproduced without written permission of the authors.  Scan for slides						Pennington Joshua Trinidad Angeles Secord Floor Backes Sudarshan Sharma Helen Eshed Rachel Miller	

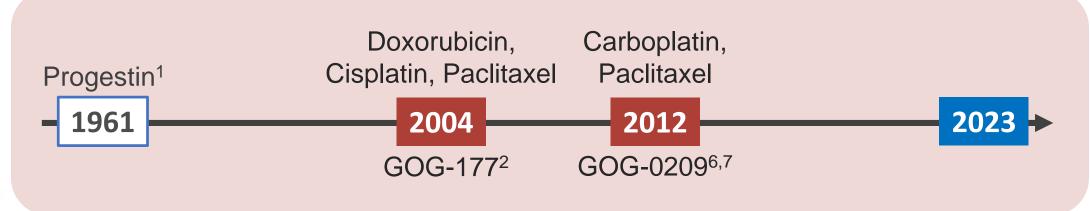
This study (ENGOT-EN6-NSGO/GOG-3031/RUBY; NCT03981796) was funded by GSK (Waltham, MA, USA). Writing and editorial support, under the direction of the authors, was funded by GSK (Waltham, MA, USA) and were provided by Shannon Morgan-Pelosi, PhD, and Mary Wiggin of Ashfield MedComms, an Inizio Company.

ENGOT-EN6-NSGO/GOG-3031/RUBY presented by Mansoor R Mirza



# Background

- Carboplatin/paclitaxel (CP) is standard of care for first-line treatment of primary advanced or recurrent EC; however long-term outcomes remain poor, with median OS <3 years<sup>1,2</sup>
- Anti–PD-1 based therapy has transformed the management of EC postplatinum chemotherapy<sup>3-5</sup>
- Advances in first-line systemic treatment are urgently needed









# Study Rationale

#### **Dostarlimab**

- Durable activity in both dMMR/MSI-H and MMRp/MSS previously treated EC<sup>1</sup>
- dMMR/MSI-H EC is associated with:
  - High TMB/TILs<sup>2</sup>
  - Higher response rate to anti–PD-1<sup>1</sup>

#### Chemotherapy

- Enhances immunogenic cell-death<sup>3,4</sup>
- Reduces immunosuppression in TME<sup>3,4</sup>
- Broad clinical activity when combined with anti–PD-1 in several cancers<sup>5–8</sup>

#### **Study Hypothesis**

Dostarlimab + CP will improve outcomes in the <u>dMMR/MSI-H</u> and <u>OVERALL</u> primary advanced or recurrent EC patient populations vs CP alone







### ENGOT-EN6-NSGO/GOG-3031/RUBY (NCT03981796)

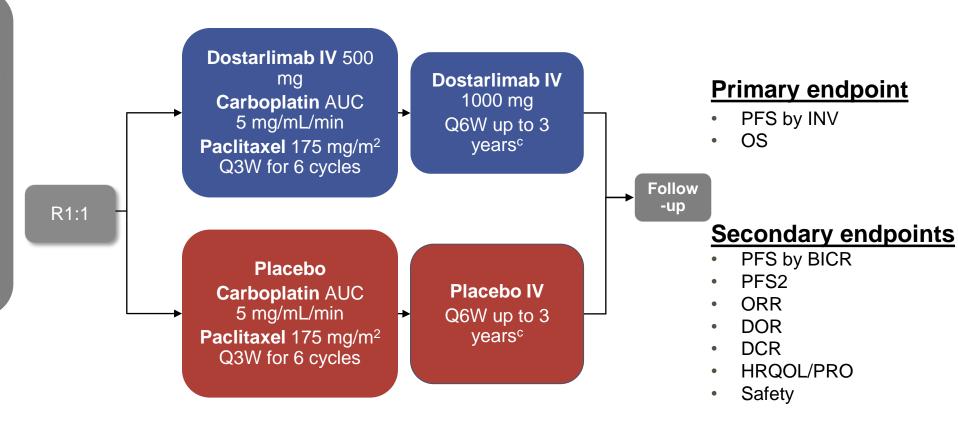
Phase 3, randomized, double-blind, multicenter study of dostarlimab plus carboplatin-paclitaxel versus placebo plus carboplatin/paclitaxel in patients with primary advanced or recurrent EC

#### **Eligible patients**

- Histologically/cytologically proven advanced or recurrent EC
- Stage III/IV disease or first recurrent EC with low potential for cure by radiation therapy or surgery alone or in combination
  - Carcinosarcoma, clear cell, serous, or mixed histology permitted<sup>a</sup>
- Naïve to systemic therapy or systemic anticancer therapy and had a recurrence or PD ≥6 months after completing treatment
- ECOG PS 0-1
- Adequate organ function

#### Stratification

- MMR/MSI status<sup>b</sup>
- Prior external pelvic radiotherapy
- Disease status





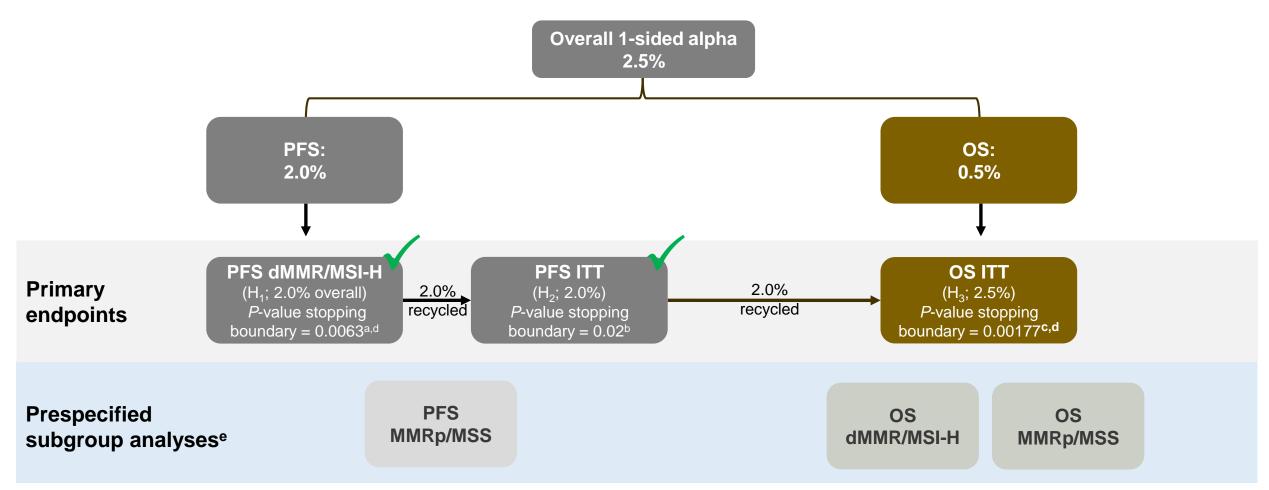
On-study imaging assessments are to be performed Q6W (±7 days) from the randomization date until Week 25 (Cycle 8), followed by Q9W (±7 days) until Week 52. Subsequent tumor imaging is to be performed every 12 weeks (±7 days) until radiographic PD is documented by Investigator assessment per RECIST v1.1 followed by one additional imaging 4-6 weeks later, or subsequent anticancer therapy is started, whichever occurs first. Thereafter, scans may be performed per standard of care.

<sup>a</sup>Mixed histology containing at least 10% carcinosarcoma, clear cell, or serous histology. <sup>b</sup>Patients were randomized based on either local or central MMR/MSI testing results. Central testing was used with local results were not available. For local determination of MMR/MSI status, IHC, next generation sequencing, and polymerase chain reaction assays were accepted. For central determination of MMR/MSI status IHC per Ventana MMR RxDx panel was used. <sup>c</sup>Treatment ends after 3 years, PD, toxicity, withdrawal of consent, investigator's decision, or death, whichever occurs first. Continued treatment with dostarlimab or placebo beyond 3 years may be considered following discussion between the Sponsor and the Investigator. AUC, area under the plasma or serum concentration-time curve; BICR, blinded independent central review; DCR, disease control rate; DOR, duration of response, EC, endometrial cancer; IV, administered intravenously; INV, investigator assessment; MMR, mismatch repair; MSI, microsatellite instability; ORR, overall response rate; OS, overall survival; PFS, progression-free survival; PFO, patient-reported outcome.





### Statistical Testing and Multiplicity Control Strategy





Multiplicity control strategy is based on the graphical method (Maurer, 2013)

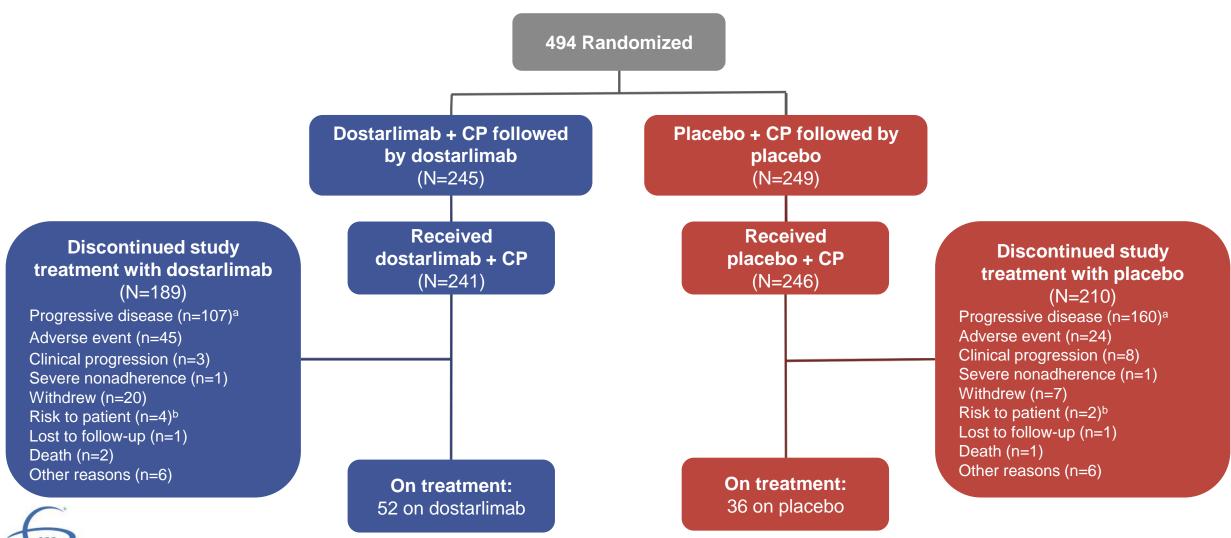
<sup>a</sup> Hypothesis for PFS dMMR/MSI (H<sub>1</sub>) was tested at the IA with 0.63% alpha spent from the overall alpha level (2.0%) initially allocated. <sup>b</sup> Since null hypothesis (H<sub>01</sub>) for H<sub>1</sub> was rejected at IA, the 2.0% alpha for (H<sub>1</sub>) was recycled to hypothesis testing of PFS ITT (H<sub>2</sub>). H<sub>2</sub> was tested at alpha level (2.0%)= 2.0% recycled + 0% initially allocated. <sup>c</sup> Since both null hypotheses (H<sub>01</sub> and H<sub>02</sub>) were rejected, 2.0% alpha for the family of hypothesis testing of PFS was recycled to testing of OS (H<sub>3</sub>). H<sub>3</sub> was tested at alpha level (2.5%)= 2.0% recycled + 0.5% initially allocated. <sup>d</sup>Stopping boundaries and alpha spent at IA were adjusted based on the actual number of events/information fraction observed based on the prespecified alpha spending function at the time of analysis; *P*-value stopping boundary (IA)= 0.0063 for PFS dMMR/MSI-H; *P*-value stopping boundary (IA)=0.00177 for OS ITT. <sup>e</sup>Not formally tested.

dMMR, mismatch repair deficient; FA, final analysis; H, hypothesis; IA, interim analysis; ITT, intent to treat; MMRp, mismatch repair proficient; MSI-H, microsatellite instability-high; MSS, microsatellite





### **Patient Disposition**



Data cutoff date: September 28, 2022.

<sup>a</sup>Progressive disease according to RECIST v1.1 by the investigator, sponsor, or both. <sup>b</sup>Risk to patient as judged by the investigator, sponsor, or both. CP, carboplatin/paclitaxel.





### Patient Population and Baseline Characteristics

	dMMR	/MSI-H	Overall				
Variable, n (%)	Dostarlimab + CP (N=53)	Placebo + CP (N=65)	Dostarlimab + CP (N=245)	Placebo + CP (N=249)			
MMR/MSI status							
dMMR/MSI-H	53 (100)	65 (100)	53 (21.6)	65 (26.1)			
MMRp/MSS	<del></del>	<del>_</del>	192 (78.4)	184 (73.9)			
Prior external pelvic radiation							
Yes	8 (15.1)	13 (20.0)	41 (16.7)	45 (18.1)			
No	45 (84.9)	52 (80.0)	204 (83.3)	204 (81.9)			
Disease status							
Primary stage III	10 (18.9)	14 (21.5)	45 (18.4)	47 (18.9)			
Primary stage IV	16 (30.2)	19 (29.2)	83 (33.9)	83 (33.3)			
Recurrent	27 (50.9)	32 (49.2)	117 (47.8)	119 (47.8)			





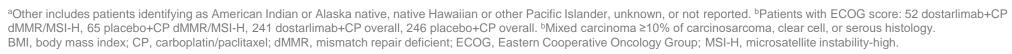


#### **Baseline Characteristics**

	dMMR	/MSI-H	Overall				
Variable, n (%)	Dostarlimab + CP (N=53)	Placebo + CP (N=65)	Dostarlimab + CP (N=245)	Placebo + CP (N=249)			
Age		(32.33)		(			
Median age, yr (range)	61 (45–81)	66 (39–85)	64 (41–81)	65 (28–85)			
≥65	23 (43.4)	35 (53.8)	118 (48.2)	135 (54.2)			
Race	Race						
White	44 (83.0)	56 (86.2)	189 (77.1)	191 (76.7)			
Black	4 (7.5)	6 (9.2)	28 (11.4)	31 (12.4)			
Asian	2 (3.8)	0	7 (2.9)	8 (3.2)			
Other <sup>a</sup>	3 (5.7)	3 (4.6)	21 (8.6)	19 (7.6)			
ECOG <sup>b</sup>							
0	28 (53.8)	39 (60.0)	145 (60.2)	160 (65.0)			
1	24 (46.2)	26 (40.0)	96 (39.8)	86 (35.0)			
ВМІ							
Median BMI (range)	30.6 (20.1-54.4)	35.5 (17.9-58.1)	30.8 (17.6-60.6)	32.8 (17.7-68.0)			
Measurable disease at baseline							
Yes	49 (92.5)	58 (89.2)	212 (86.5)	219 (88.0)			
No	4 (7.5)	7 (10.8)	33 (13.5)	30 (12.0)			

	dMMR	MSI-H	Overall				
Variable, n (%)	Dostarlimab + CP (N=53)	Placebo + CP (N=65)	Dostarlimab + CP (N=245)	Placebo + CP (N=249)			
Prior Anticancer Trea	atment						
Yes	7 (13.2)	10 (15.4)	48 (19.6)	52 (20.9)			
Carboplatin/ paclitaxel	4 (7.5)	6 (9.2)	36 (14.7)	39 (15.7)			
Histology type							
Carcinosarcoma	4 (7.5)	1 (1.5)	25 (10.2)	19 (7.6)			
Endometrioid	44 (83.0)	56 (86.2)	134 (54.7)	136 (54.6)			
Mixed carcinomab	2 (3.8)	4 (6.2)	10 (4.1)	9 (3.6)			
Serous adenocarcinoma	1 (1.9)	1 (1.5)	50 (20.4)	52 (20.9)			
Clear cell adenocarcinoma	0	0	8 (3.3)	9 (3.6)			
Mucinous adenocarcinoma	0	0	0	1 (0.4)			
Undifferentiated carcinoma	0	0	1 (0.4)	2 (0.8)			
Other	2 (3.8)	3 (4.6)	17 (6.9)	21 (8.4)			

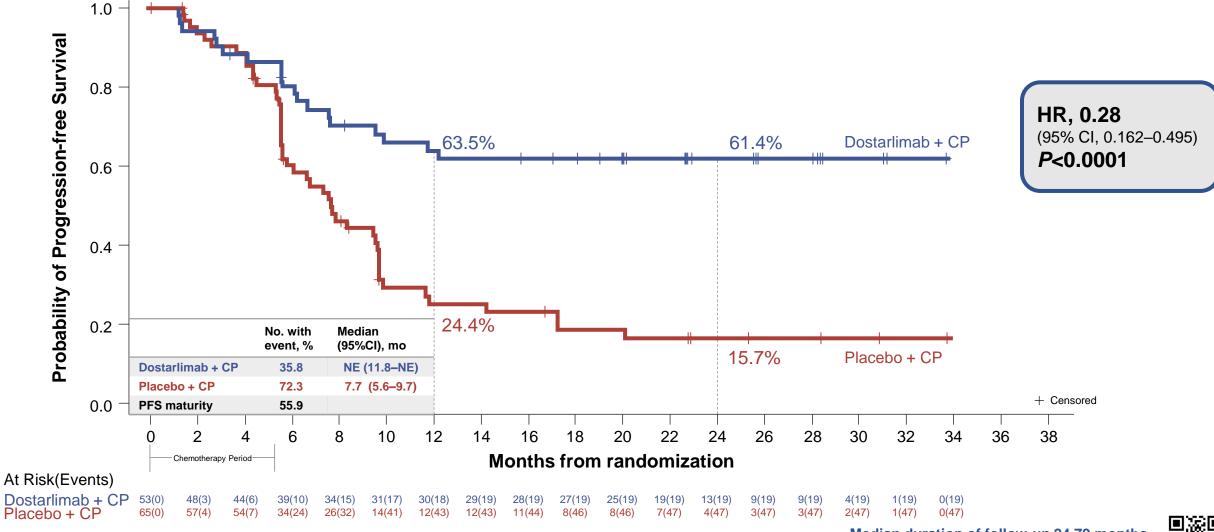








## Primary Endpoint: PFS in dMMR/MSI-H Population

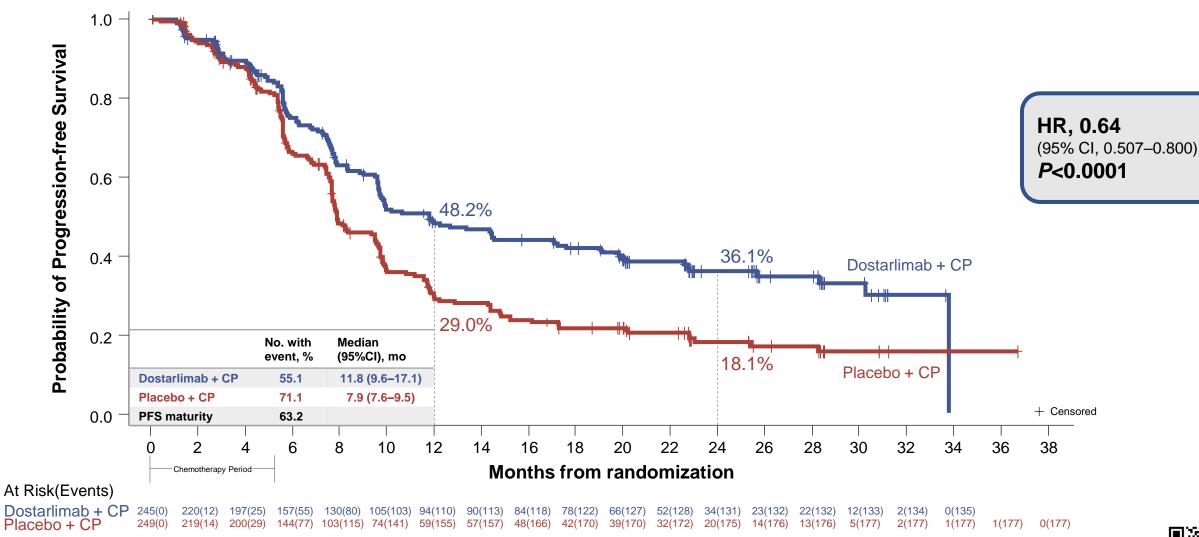


Median duration of follow-up 24.79 months.



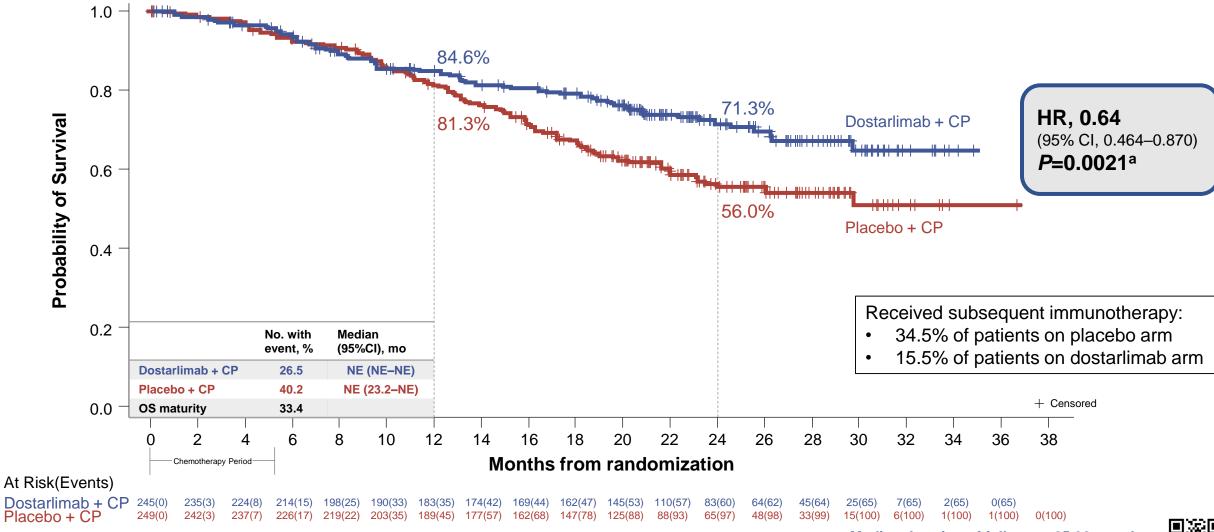


### Primary Endpoint: PFS in Overall Population





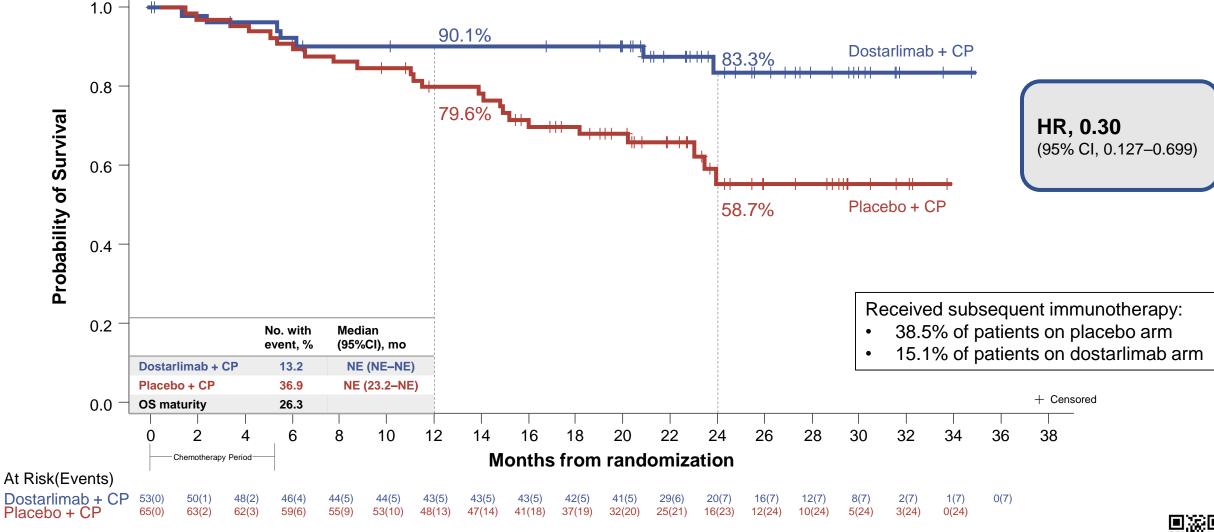
### Primary Endpoint: OS in Overall Population (33% maturity)







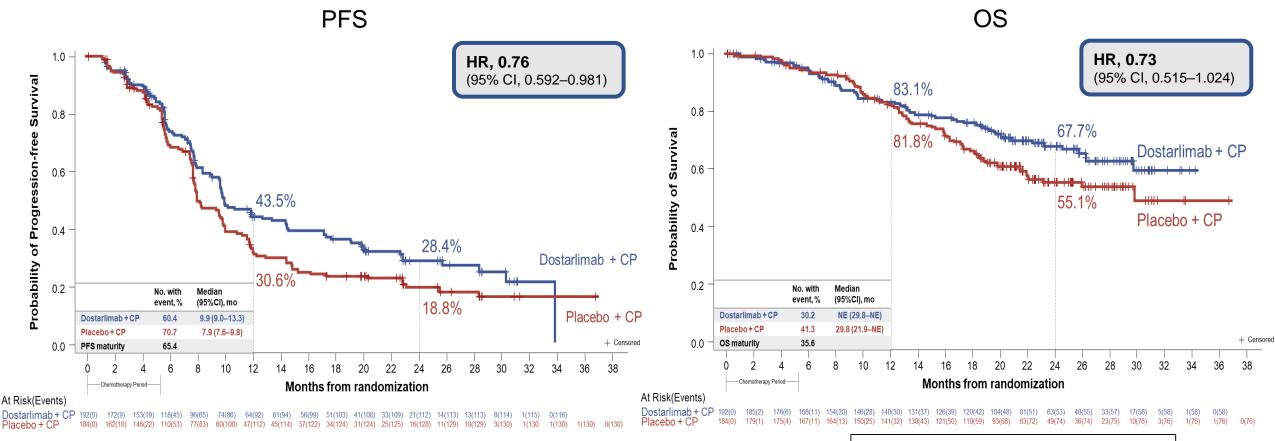
## OS in dMMR/MSI-H Population







## PFS and OS in MMRp/MSS Population



Received subsequent immunotherapy:

- 33.2% of patients on placebo arm
- 15.6% of patients on dostarlimab arm





1.0

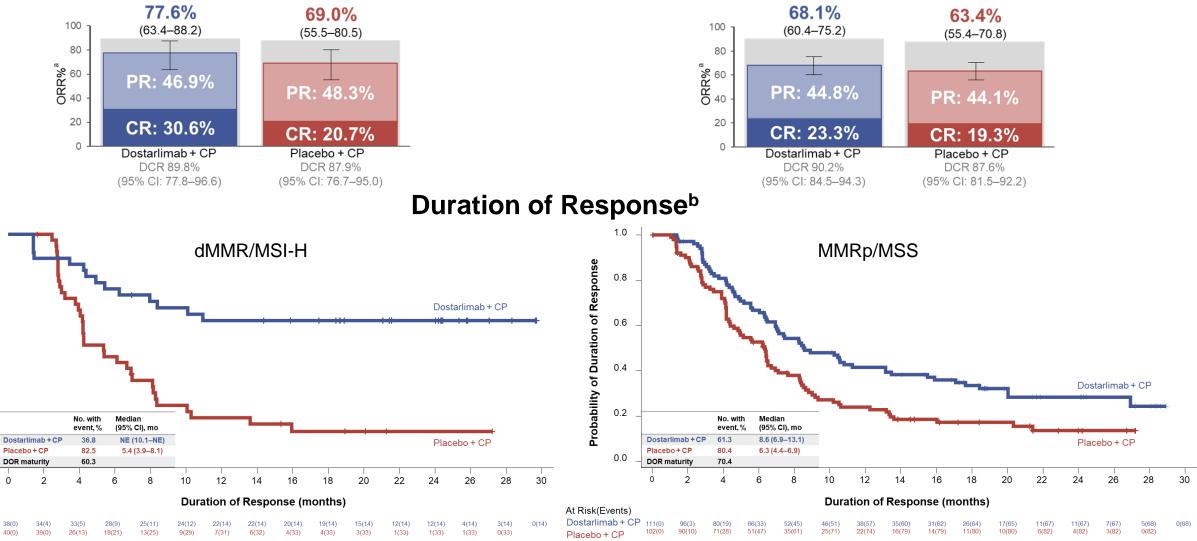
0.8

0.6

Probability of Duration of Response

At Risk(Events)

### Objective Response Rate and Duration Of Response









## Safety Summary

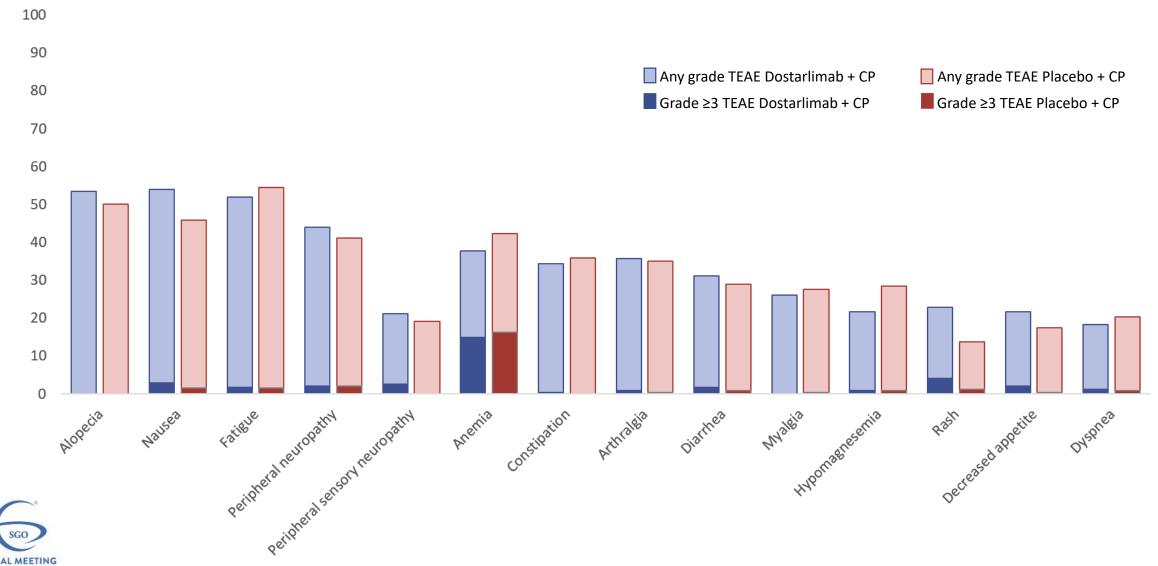
Parameter, n (%)	Dostarlimab + CP (N=241)	Placebo + CP (N=246)
Any TEAE	241 (100)	246 (100)
Any grade ≥3 TEAE	170 (70.5)	147 (59.8)
Serious TEAE	91 (37.8)	68 (27.6)
Any treatment-related irAE	92 (38.2)	38 (15.4)
Any TEAE leading to discontinuation of dostarlimab or placebo	42 (17.4)	23 (9.3)
Any TEAE leading to discontinuation of carboplatin	24 (10.0)	19 (7.7)
Any TEAE leading to discontinuation of paclitaxel	24 (10.0)	23 (9.3)
Any TEAE leading to death	5 (2.1) <sup>a</sup>	0
Any TEAE related to dostarlimab leading to death	2 (0.8) <sup>b</sup>	—
Median duration of overall treatment (range), weeks	43.0 (3.0–150.9)	36.0 (2.1–165.1)







#### TEAEs in ≥20% of Either Arm

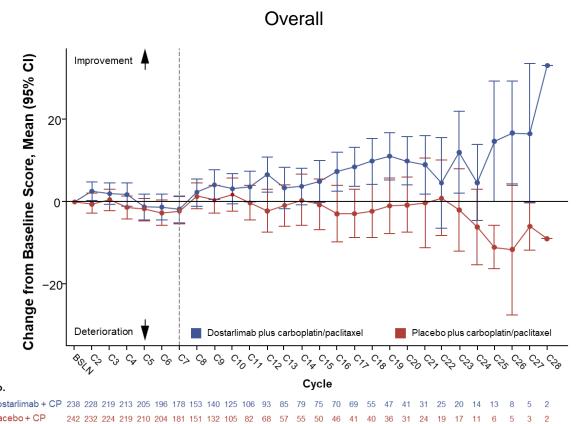


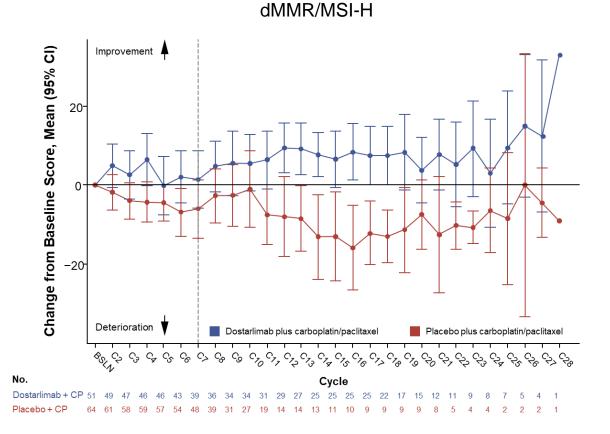




## Patient-Reported Outcomes

#### EORTC QLQ-C30 Global Quality of Life Score











### Conclusions

- Dostarlimab + CP demonstrated statistically significant and clinically meaningful PFS benefit with an early OS trend in the overall population
  - Substantial, unprecedented benefit in dMMR/MSI-H patients
  - Clinically meaningful long-term benefit observed in MMRp/MSS patients
- Safety profile for dostarlimab + CP was manageable and generally consistent with that of the individual drugs
- Dostarlimab plus carboplatin/paclitaxel represents a new standard of care for patients with primary advanced or recurrent endometrial cancer







#### ORIGINAL ARTICLE

# Dostarlimab for Primary Advanced or Recurrent Endometrial Cancer

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Shadi Stevens, M.D., Eleftherios Zografos, M.D., Robert L. Coleman, M.D.,
and Matthew A. Powell, M.D., for the RUBY investigators



