

L'onco-gynécologie à l'ESMO 2024

Dr Clément Dubourd
Service d'oncologie médicale
CHU de Besançon



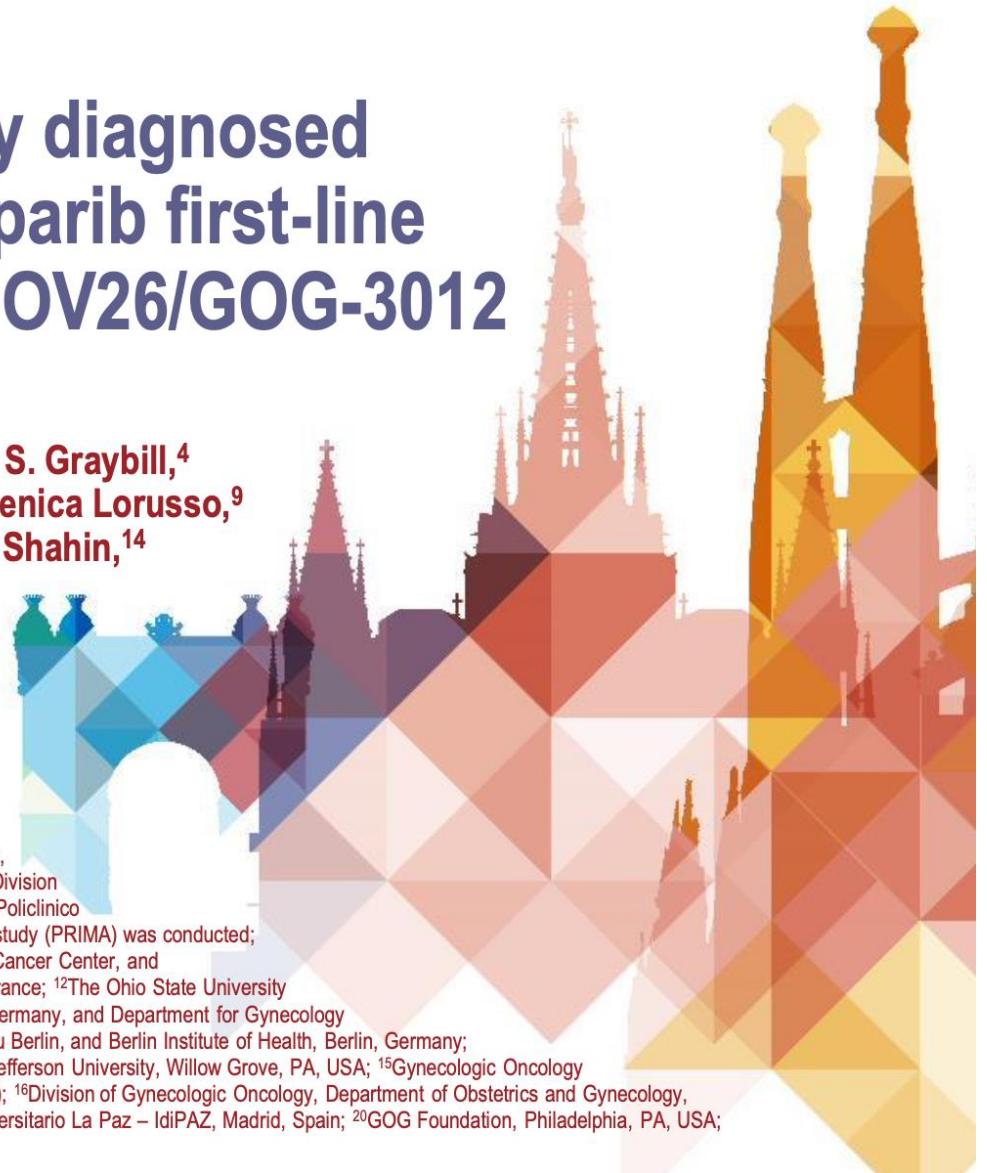
OVAIRE

Final overall survival in patients with newly diagnosed advanced ovarian cancer treated with niraparib first-line maintenance: results from PRIMA/ENGOT-OV26/GOG-3012

Presentation LBA29

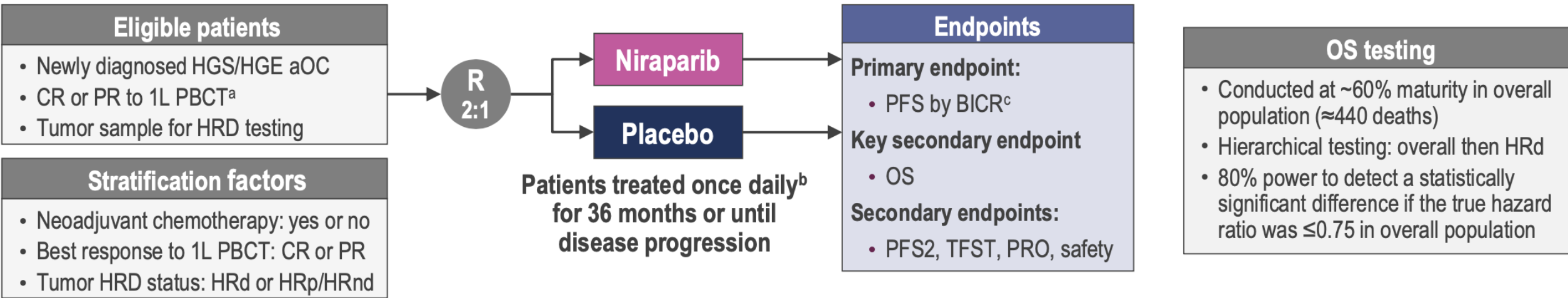
Antonio González-Martín,¹ Bhavana Pothuri,² Maria Pilar Barretina-Ginesta,³ Whitney S. Graybill,⁴ Ignace Vergote,⁵ Colleen C. McCormick,⁶ Mansoor R. Mirza,⁷ Richard G. Moore,⁸ Domenica Lorusso,⁹ Roisin E. O’Cearbhaill,¹⁰ Gilles Freyer,¹¹ David. M. O’Malley,¹² Florian Heitz,¹³ Mark S. Shahin,¹⁴ Ilan Bruchim,¹⁵ William H. Bradley,¹⁶ Natalie Compton,¹⁷ Izabela A. Malinowska,¹⁸ Andrés Redondo,¹⁹ Bradley J. Monk²⁰

¹Medical Oncology Department, Translational Oncology Group, CIMA, Universidad de Navarra, Cancer Center Clínica Universidad de Navarra, and Grupo Español de Investigación en Cáncer ginecológico (GEICO), Madrid, Spain; ²Gynecologic Oncology Group (GOG) Foundation and Departments of Obstetrics/Gynecology and Medicine, Division of Gynecologic Oncology, Laura & Isaac Perlmutter Cancer Center, NYU Langone Health, New York, NY, USA; ³Medical Oncology Department, Institut Català d’Oncologia, Girona Biomedical Research Institute (IDIBGI-CERCA), Girona University, Girona, Spain, and GEICO, Spain; ⁴Division of Gynecologic Oncology, Medical University of South Carolina, Charleston, SC, USA; ⁵University Hospitals Leuven, Leuven Cancer Institute, and Belgium and Luxembourg Gynaecological Oncology Group (BGOG), Leuven, Belgium; ⁶Legacy Medical Group Gynecologic Oncology, Portland, OR, USA, when the analysis was conducted; present affiliation, Johns Hopkins Hospital, Baltimore, MD, USA; ⁷Department of Oncology, Rigshospitalet, Copenhagen University Hospital, Copenhagen, and Nordic Society of Gynaecologic Oncology-Clinical Trial Unit, Copenhagen, Denmark; ⁸Division of Gynecologic Oncology, Wilmut Cancer Institute, Department of Obstetrics and Gynecology, University of Rochester, Rochester, NY, USA; ⁹Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Catholic University of Sacred Heart, and Multicenter Italian Trials in Ovarian Cancer (MITO), Rome, Italy, when the study (PRIMA) was conducted; present affiliation, Humanitas San Pio X, Milan, Humanitas University, Pieve Emanuele (Milan), Italy; ¹⁰Department of Medicine, Memorial Sloan Kettering Cancer Center, and Weill Cornell Medical College, New York, NY, USA, and GOG Foundation; ¹¹Centre Hospitalier Lyon-Sud Hospices Civils de Lyon, Oullins-Pierre-Bénite, France; ¹²The Ohio State University and James Comprehensive Cancer Center, Columbus, OH, USA; ¹³Department of Gynecology and Gynecologic Oncology, Kliniken Essen-Mitte, Essen, Germany, and Department for Gynecology with the Center for the Oncologic Surgery Charité Campus Virchow-Klinikum, Charité – Universitätsmedizin Berlin, corporate member of Freie Universität zu Berlin, and Berlin Institute of Health, Berlin, Germany; ¹⁴Hanjani Institute for Gynecologic Oncology, Abington Hospital–Jefferson Health, Asplundh Cancer Pavilion, Sidney Kimmel Medical College of Thomas Jefferson University, Willow Grove, PA, USA; ¹⁵Gynecologic Oncology Department, Hillel Yaffe Medical Center, Hadera, Israel, Technion Institute of Technology, Haifa, Israel and Israeli Society of Gynecologic Oncology (ISGO); ¹⁶Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Medical College of Wisconsin, Milwaukee, WI, USA; ¹⁷Compton Statistical Consulting Limited, Westerham, UK; ¹⁸GSK, Waltham, MA, USA; ¹⁹Hospital Universitario La Paz – IdiPAZ, Madrid, Spain; ²⁰GOG Foundation, Philadelphia, PA, USA;



PRIMA

Design et caractéristiques de la population



Key risk characteristics of PRIMA population^{1,2}

Disease stage	Residual disease	Tumor HRD/BRCA status
35.1% stage IV disease at diagnosis	>99% stage III disease at diagnosis with residual disease after primary debulking surgery	50.9% HRd
Initial treatment		30.4% HRd/BRCAm
66.7% received neoadjuvant chemotherapy	47.5% postoperative visible residual disease or no debulking surgery	34.0% HRp
30.6% achieved partial response to 1L PBCT		

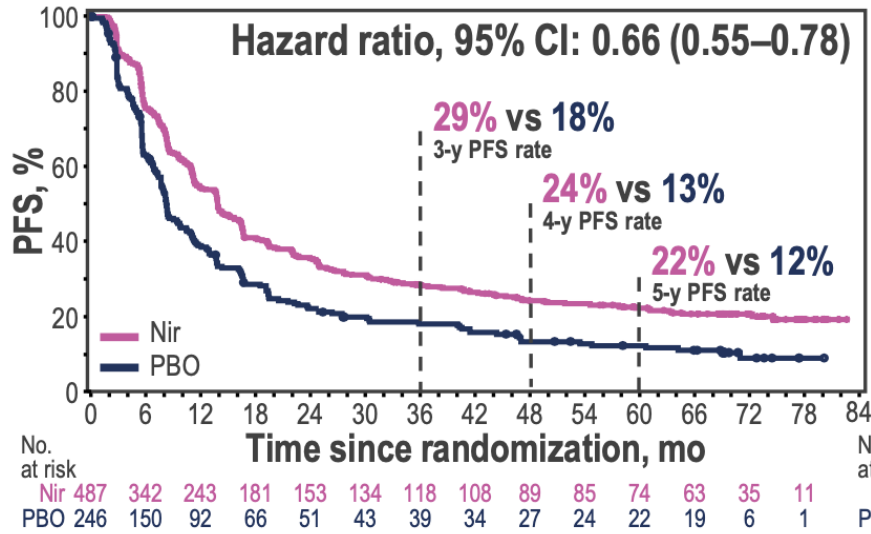
PRIMA

Survie sans progression à 6 ans



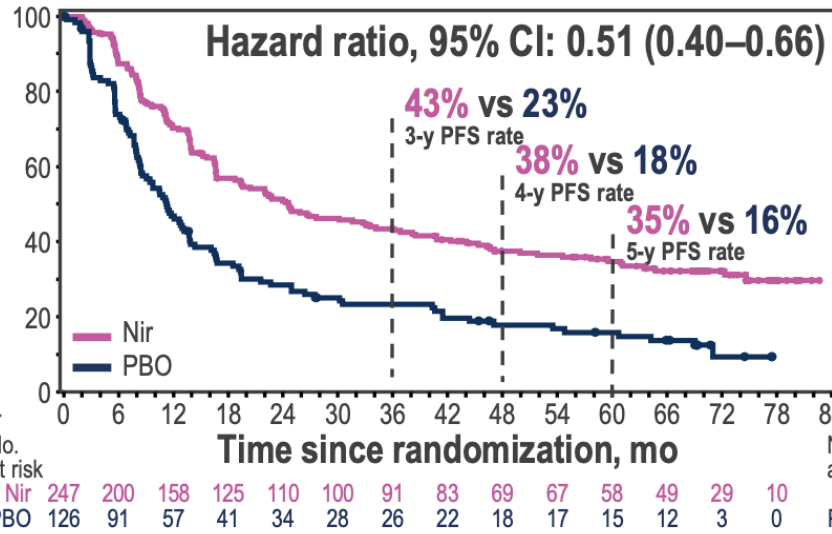
Overall population

Hazard ratio, 95% CI: 0.66 (0.55–0.78)



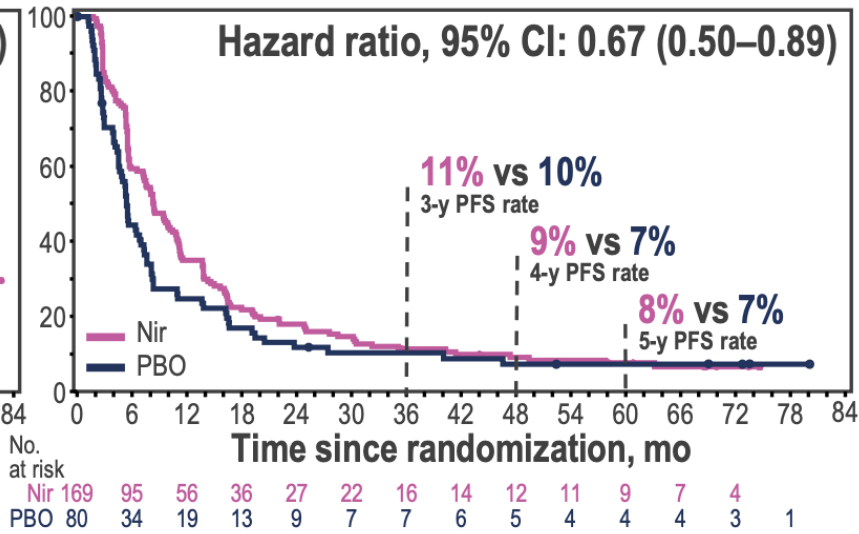
HRd

Hazard ratio, 95% CI: 0.51 (0.40–0.66)



HRp

Hazard ratio, 95% CI: 0.67 (0.50–0.89)



No. at risk

	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84
Nir	487	342	243	181	153	134	118	108	89	85	74	63	35	11	
PBO	246	150	92	66	51	43	39	34	27	24	22	19	6	1	

No. at risk

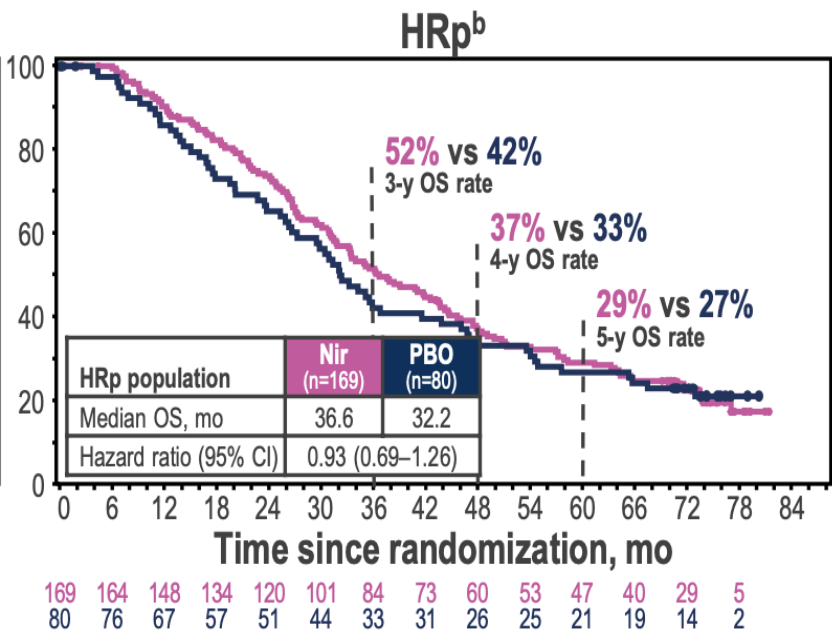
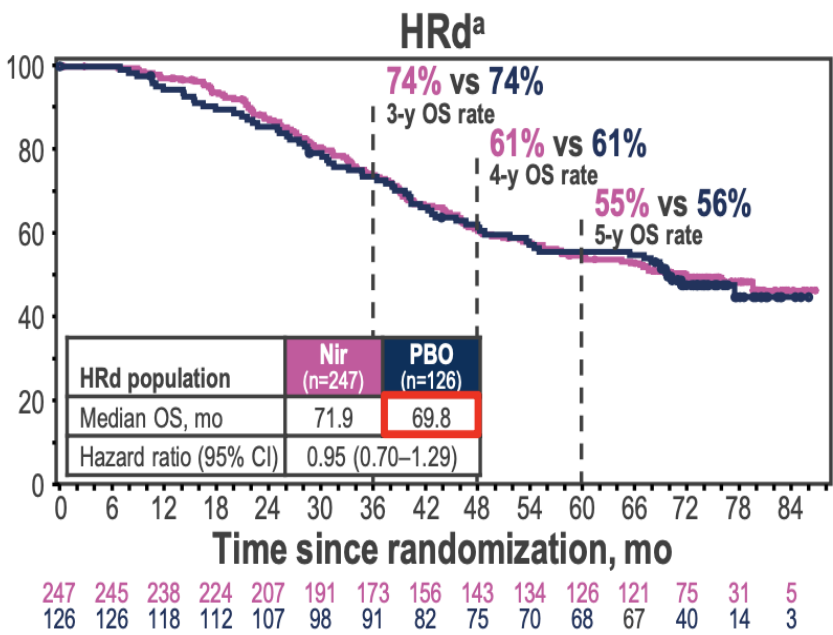
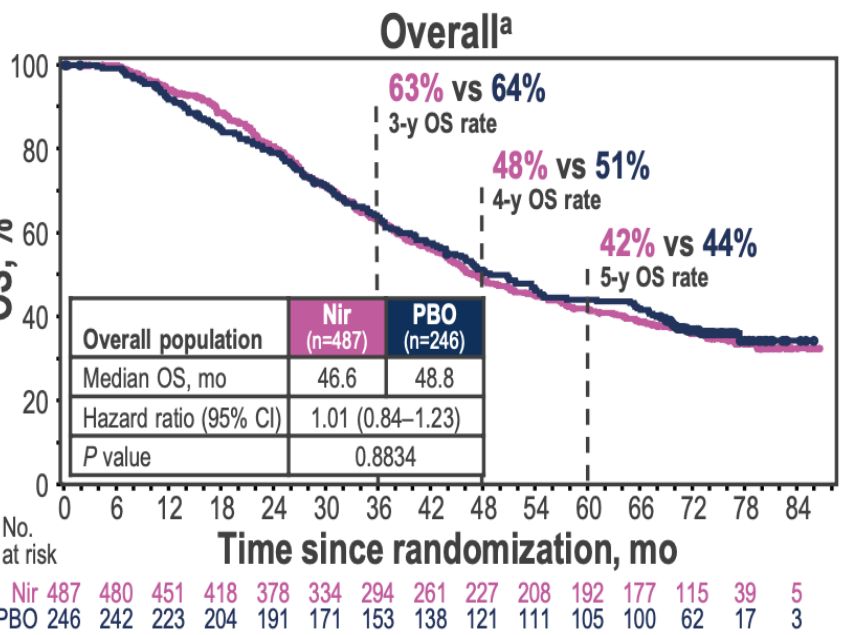
	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84
Nir	247	200	158	125	110	100	91	83	69	67	58	49	29	10	
PBO	126	91	57	41	34	28	26	22	18	17	15	12	3	0	

No. at risk

	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84
Nir	169	95	56	36	27	22	16	14	12	11	9	7	4		
PBO	80	34	19	13	9	7	7	6	5	4	4	4	3	1	

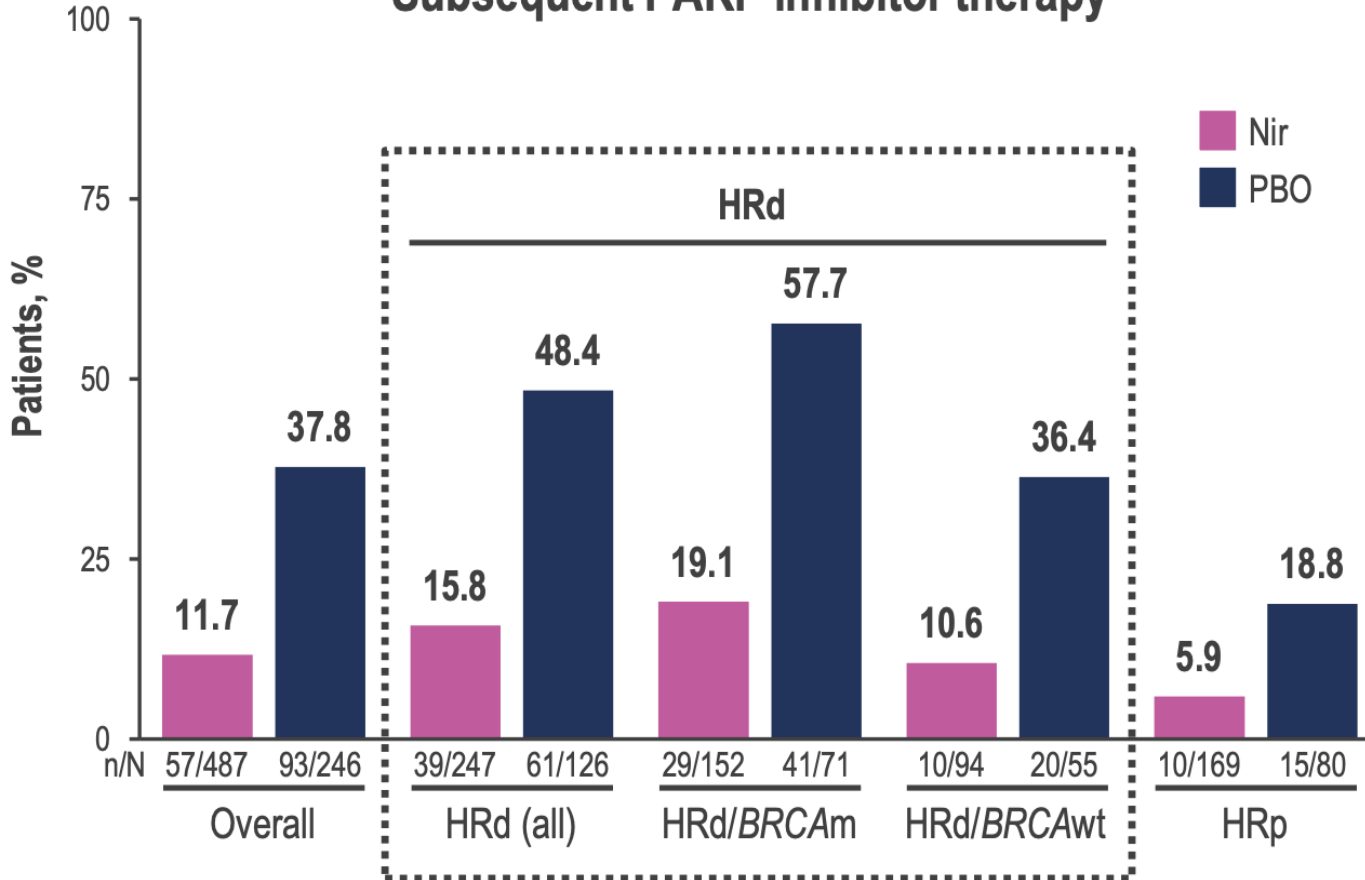
PRIMA

Survie globale (maturité 62,5%)



PRIMA Discussion

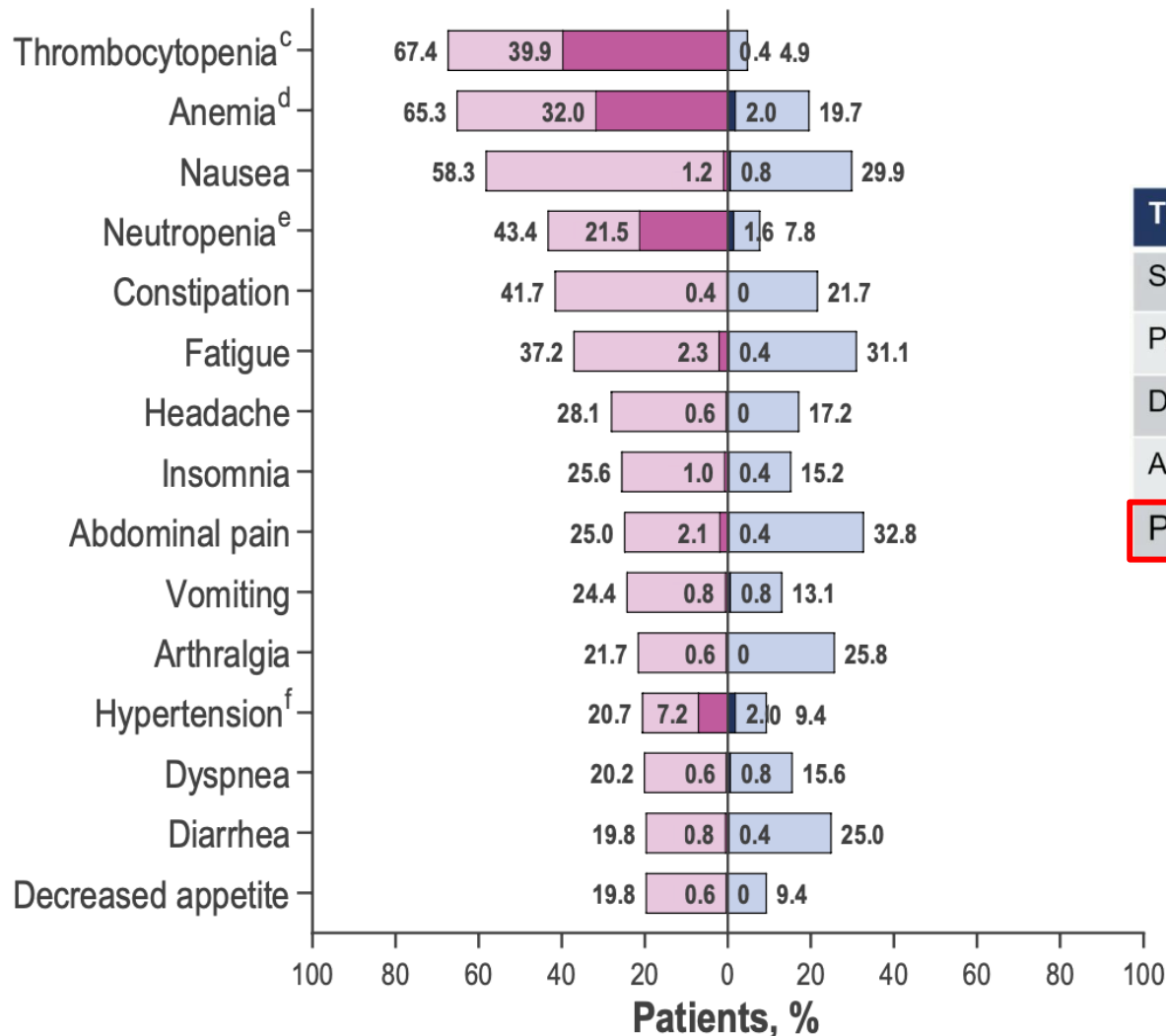
Subsequent PARP inhibitor therapy^a



- Comment expliquer l'absence de bénéfice en survie globale ?
 - La molécule ?
 - La population ? Résidu ?
 - L'usage ultérieur de iPARP ?
 - La durée de maintenance du Niraparib ?
 - Traitements de maintenance ?

PRIMA Tolérance

TEAEs reported in $\geq 20\%$ of patients^b



Incidence de SMD/LAM

Trial	Follow up	PARPi [%]	Placebo [%]
SOLO1 (Olaparib)	~ 7 years	1.5	0.8
PAOLA (Olaparib)	~ 5 years	1.7	2.2
DUO-O (Olaparib)	~ 2.8 years	0.8	0.1
ATHENA (Rucaparib)		0.9 [ESMO 2024]	0 [2022]
PRIMA (Niraparib)	~ 7 years	2.3	1.6

Monk BJ et al Ann Oncol. Published online Sept 14, 2024. doi:10.1016/j.annonc.2024.08.2241
Annals of Oncology (2024) 35 (suppl_2): 1-72. 10.1016/annonc/annonc1623

ATHENA-COMBO



ATHENA-COMBO (GOG-3020/ENGOT-ov45), A PHASE 3, RANDOMIZED TRIAL COMPARING RUCAPARIB + NIVOLUMAB COMBINATION THERAPY VS RUCAPARIB MONOTHERAPY AS MAINTENANCE TREATMENT IN PATIENTS WITH NEWLY DIAGNOSED OVARIAN CANCER

Bradley J. Monk,^{1a} Ana Oaknin,² David M. O'Malley,³ Michelle K. Wilson,⁴ Domenica Lorusso,⁵ Shannon N. Westin,⁶ Amit Oza,⁷ Flora Zagouri,⁸ Thomas J. Herzog,⁹ Olga Mikheeva,¹⁰ Christine Parkinson,¹¹ Robert L. Coleman,¹² Myong Cheol Lim,¹³ Anita Chudecka-Glaz,¹⁴ Ramez N. Eskander,¹⁵ Ilan Bruchim,¹⁶ Sharad Ghamande,¹⁷ Darrin Despain,¹⁸ Keiichi Fujiwara,¹⁹ Rebecca S. Kristeleit²⁰

¹GOG Foundation, University of Arizona College of Medicine, Creighton University School of Medicine, Phoenix, AZ, USA; ²Medical Oncology Service, Vall d'Hebron Institute of Oncology, Vall d'Hebron Barcelona Hospital Campus, Barcelona, Spain; ³Division of Gynecologic Oncology, The Ohio State University, James Cancer Center, Columbus, OH, USA; ⁴Department of Cancer and Blood, Auckland City Hospital, Auckland, New Zealand; ⁵Fondazione Policlinico Universitario Gemelli IRCCS, and Humanitas San Pio X, Milan, Italy; ⁶The University of Texas MD Anderson Cancer Center, Houston, TX, USA; ⁷Division of Medical Oncology and Hematology, Princess Margaret Hospital Cancer Centre, Toronto, Ontario, Canada; ⁸Department of Clinical Therapeutics, Alexandra Hospital, National and Kapodistrian University of Athens, Athens, Greece; ⁹University of Cincinnati, Cincinnati, OH, USA; ¹⁰Limited Liability Company MedPomosch, Saint Petersburg, Russian Federation; ¹¹Cambridge University Hospitals NHS Foundation Trust, Cambridge, UK; ¹²US Oncology Research, The Woodlands, TX, USA; ¹³Gynecologic Oncology, National Cancer Center Korea, Goyang-si, Gyeonggi-do, Republic of Korea; ¹⁴Department of Gynecological Surgery and Gynecological Oncology of Adults and Adolescents, Pomeranian Medical University, Szczecin, Poland; ¹⁵Department of Obstetrics, Gynecology and Reproductive Sciences, University of California San Diego, La Jolla, CA, USA; ¹⁶Gynecologic Oncology Department, Hillel Yaffe Medical Center affiliated with the Technion, Institute of Technology, Hadera, Israel; ¹⁷Georgia Cancer Center at Augusta University, Augusta, GA, USA; ¹⁸pharma&, New York City, NY, USA; ¹⁹Department of Gynecologic Oncology, Saitama Medical University International Medical Center, Hidaka, Saitama, Japan; ²⁰Department of Oncology, Guy's and St Thomas' NHS Foundation Trust, London, UK

^aAffiliation at the time of the study. Current affiliation: Florida Cancer Specialists & Research Institute, West Palm Beach, FL, USA



ATHENA-COMBO

Design

Key Patient Eligibility



- Newly diagnosed, stage III–IV, advanced, high-grade 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; complete resection permitted)
- ECOG PS 0 or 1
- No prior frontline maintenance treatment for ovarian cancer

Randomization 4:4:1:1



Arm A (n≈400)
rucaparib 600 mg BID PO + nivolumab 480 mg IV

Arm B (n≈400)
rucaparib 600 mg BID PO + placebo IV

Arm C (n≈100)
 placebo PO + nivolumab 480 mg IV

Arm D (n≈100)
 placebo PO + placebo IV

Randomization Stratification Factors

- Tumor HRD test status^a
- Disease status post-chemotherapy
- Timing of surgery

Treatment for 24 months,^b with a 4-week lead-in of rucaparib; study drugs could be discontinued independently

Study Analyses



ATHENA-COMBO
Arm A (n≈400)
rucaparib 600 mg BID PO + nivolumab 480 mg IV

Arm B (n≈400)
rucaparib 600 mg BID PO + placebo IV

ATHENA-MONO
Arm B (n≈400)
rucaparib 600 mg BID PO + placebo IV

Arm D (n≈100)
 placebo PO + placebo IV

Primary endpoint: Investigator-assessed PFS in the ITT population

- ATHENA-MONO : mPFS de 20,2 mois avec le RUCAPARIB vs 9,2 mois avec le placebo (HR = 0.52 ; 95% CI [0,40-0,68])

ATHENA-COMBO

Caractéristiques de la population

Characteristic (ITT population)	Rucaparib + Nivolumab (n = 436)	Rucaparib + Placebo (n = 427)
Age, years, median (range)	61 (25–83)	61 (30–83)
Race, n (%)		
White	325 (74.5)	328 (76.8)
Asian	81 (18.6)	80 (18.7)
Black or African American	8 (1.8)	5 (1.2)
Other ^a	22 (5.0)	14 (3.3)
ECOG PS,^b n (%)		
0	298 (68.3)	295 (69.1)
1	138 (31.7)	131 (30.7)
FIGO stage, n (%)		
III	320 (73.4)	323 (75.6)
IV	116 (26.6)	104 (24.4)
Type of cancer, n (%)		
Epithelial ovarian	340 (78.0)	336 (78.7)
Fallopian tube	63 (14.4)	50 (11.7)
Primary peritoneal	33 (7.6)	41 (9.6)
Timing of surgery, n (%)		
Primary surgery	215 (49.3)	209 (48.9)
Interval debulking	221 (50.7)	218 (51.1)

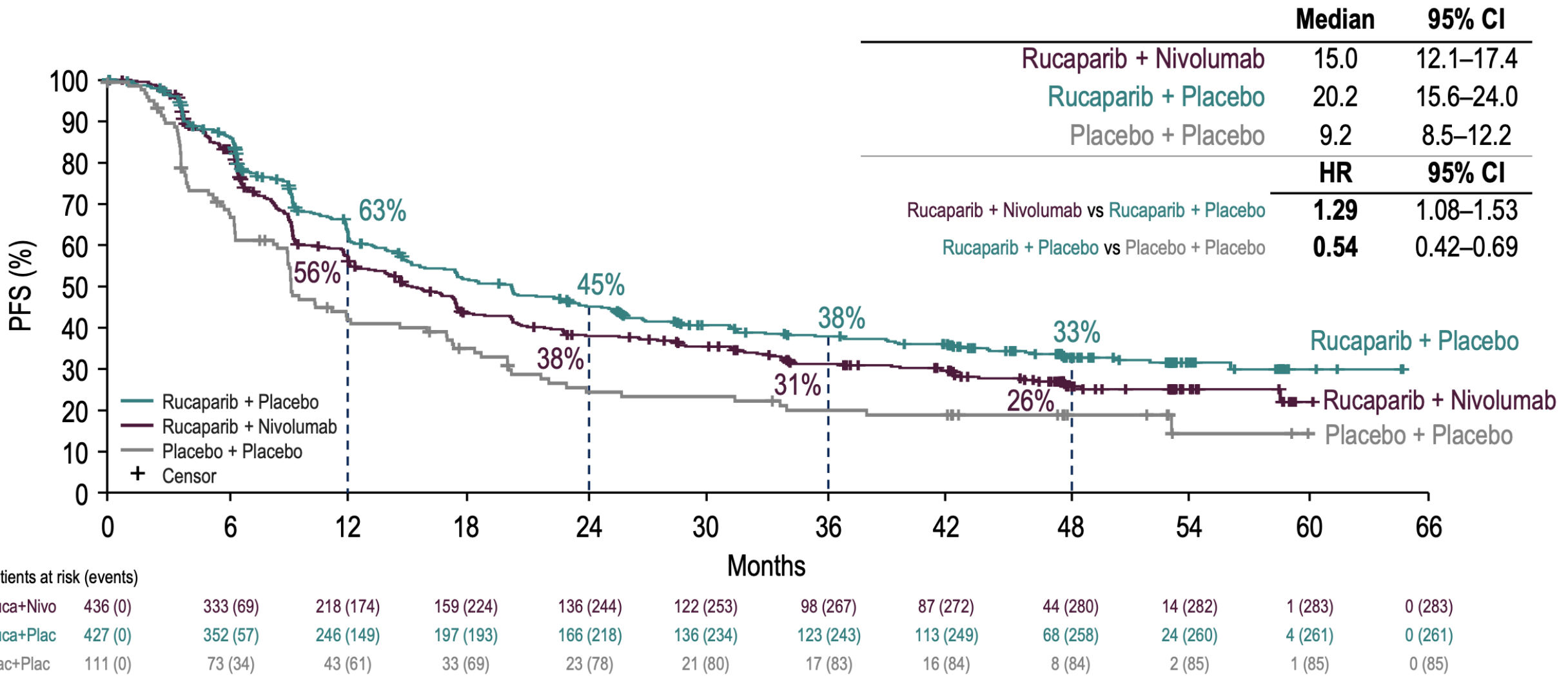
ATHENA-COMBO

Caractéristiques de la population

Characteristic (ITT population), n (%)	Rucaparib + Nivolumab (n = 436)	Rucaparib + Placebo (n = 427)
Disease status post-chemotherapy		
No residual disease	327 (75.0)	322 (75.4)
Residual disease	109 (25.0)	105 (24.6)
Best response to radiologic chemotherapy^a		
CR	71 (16.3)	73 (17.1)
PR	78 (17.9)	76 (17.8)
No disease post-surgery	244 (56.0)	225 (52.7)
HRD status		
<i>BRCA</i> ^{mut}	94 (21.6)	91 (21.3)
<i>BRCA</i> ^{wt} / <i>LOH</i> ^{high}	99 (22.7)	94 (22.0)
<i>BRCA</i> ^{wt} / <i>LOH</i> ^{low}	188 (43.1)	189 (44.3)
<i>BRCA</i> ^{wt} / <i>LOH</i> ^{indeterminate}	55 (12.6)	53 (12.4)
PD-L1 expression^b		
≥5%	69 (15.8)	72 (16.9)
≥1%	199 (45.6)	197 (46.1)
Measurable disease at baseline	39 (8.9)	41 (9.6)

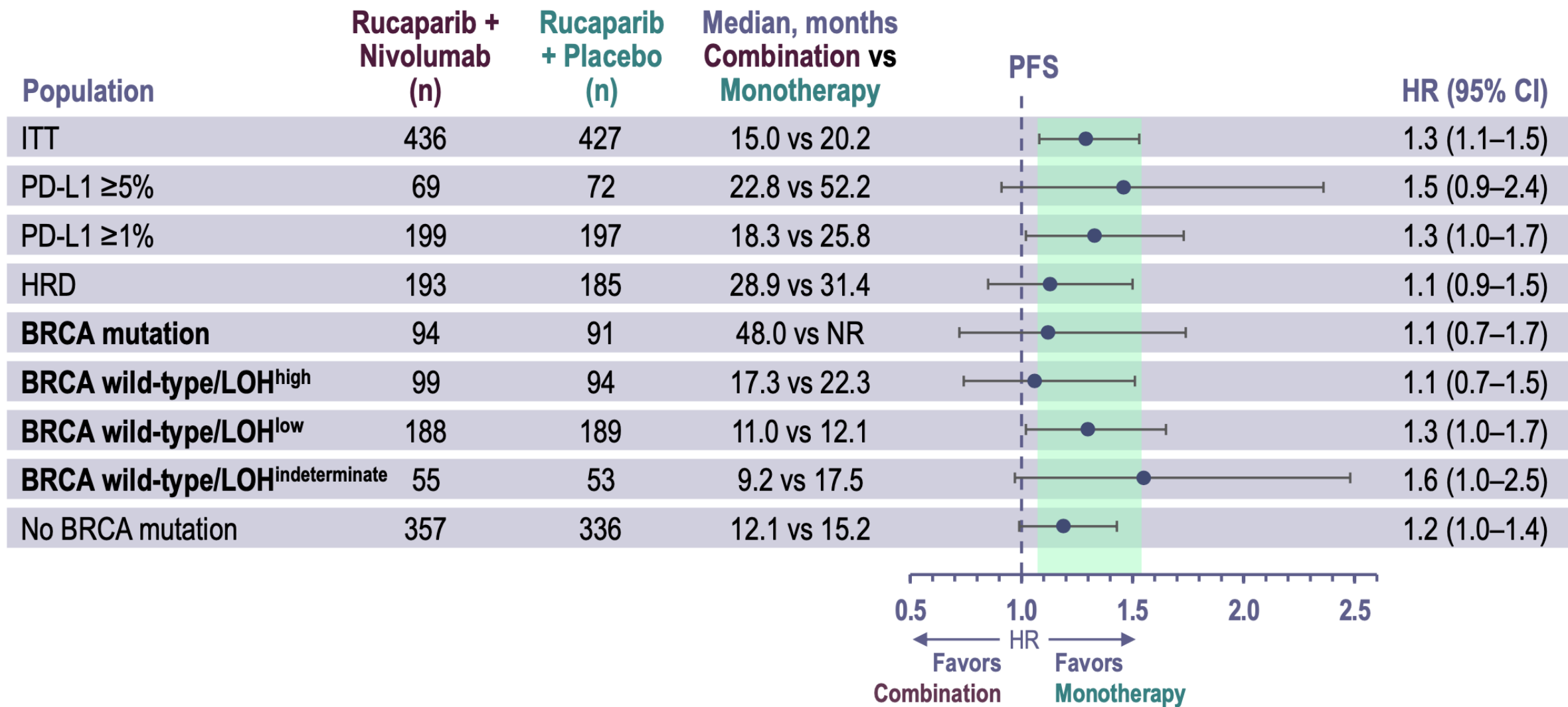
ATHENA-COMBO

Survie sans progression



ATHENA-COMBO

Survie sans progression selon biomarqueurs



ATHENA-COMBO

Tolérance

Adverse Event, n (%)	Rucaparib + Nivolumab (n = 410)	Rucaparib + Placebo (n = 448)
Any-grade TEAE	407 (99.3)	435 (97.1)
Grade ≥3 TEAE	306 (74.6)	286 (63.8)
Oral drug treatment interruption and/or dose reduction due to TEAE	321 (78.3)	283 (63.2)
Discontinued oral study drug due to TEAE	104 (25.4)	66 (14.7)
Discontinued IV study drug due to TEAE	145 (35.4)	43 (9.6)
Discontinued oral and IV study drugs due to TEAE	63 (15.4)	19 (4.2)
Deaths ^a due to TEAE (excluding disease progression)	9 (2.2)	4 (0.9)
MDS/AML	4 (0.98)	4 (0.89)

	Rucaparib + Nivolumab (n = 436)	Rucaparib + Placebo (n = 427)
Treatment received, n (%)		
Yes	410 (94.0)	425 (99.5)
No ^a	26 (6.0)	2 (0.5)
Reason for discontinuation, n (%)^b		
Disease progression	180 (43.9)	182 (42.8)
Adverse event	86 (21.0)	54 (12.7)
Completed protocol durations of study drug	103 (25.1)	147 (34.6)
Other ^c	41 (10.0)	42 (9.9)

Cancers ovariens et immunothérapie...



Stade	Étude	Bras expérimental	Bras contrôle	N	PFS
Rechute platine résistante	JAVELIN 200 <i>Pujade-Lauraine et al, Lancet Oncology 2021</i>	Caelyx + Avelumab	Caelyx	556	0,78 (0,59-1,24)
		Avelumab seul			1,68 (1,32-2,60)
	NINJA <i>Hamanishi et al, JCO 2021</i>	Nivolumab	Caelyx ou Gemcitabine	316	1,50 (1,20-1,90)
Rechute platine sensible	ATALANTE <i>Kurtz et al, JCO 2023</i>	Platine doublet + Bevacizumab + Atezolizumab et Bevacizumab et Atezolizumab maintenance	Platine + Bevacizumab et Bevacizumab maintenance	614	0,83 (0,69-0,93)
	ANITA <i>Gonzalez Martin et al, Int J Gyne Cancer 2021</i>	Platine doublet + Atezolizumab et Atezolizumab + Niraparib maintenance	Platine doublet et Niraparib maintenance	417	0,89 (0,71-1,10)
1 ^e ligne	JAVELIN 100 <i>Lederman et al, SGO 2020</i>	CT et Avelumab maintenance	Platine + Paclitaxel	951	1,43 (1,05-1,95)
		CT + Avelumab et Avelumab maintenance			1,14 (0,83-1,56)
	Imagyn 050 <i>Moore et al, JCO 2021</i>	Platine + Bevacizumab + Atezolizumab et Bevacizumab + Atezolizumab maintenance	Platine + Bevacizumab et Bevacizumab maintenance	1301	0,92 (0,79-1,07)
	DUO-O <i>Harter et al, JCO 2023</i>	Platine + Bevacizumab + Durvalumab	Platine + Bevacizumab	1130	0,87 (0,71-1,04)
		Platine + Bevacizumab + Olaparib + Durvalumab			0,63 (0,52-0,76)
	ATHENA-COMBO <i>Monk et al, ESMO 2024</i>	Platine et Rucaparib et Nivolumab entretien	Platine et Rucaparib entretien	863	1,29 (1,08-1,53)

COL DE L'UTÉRUS

KEYNOTE-A18

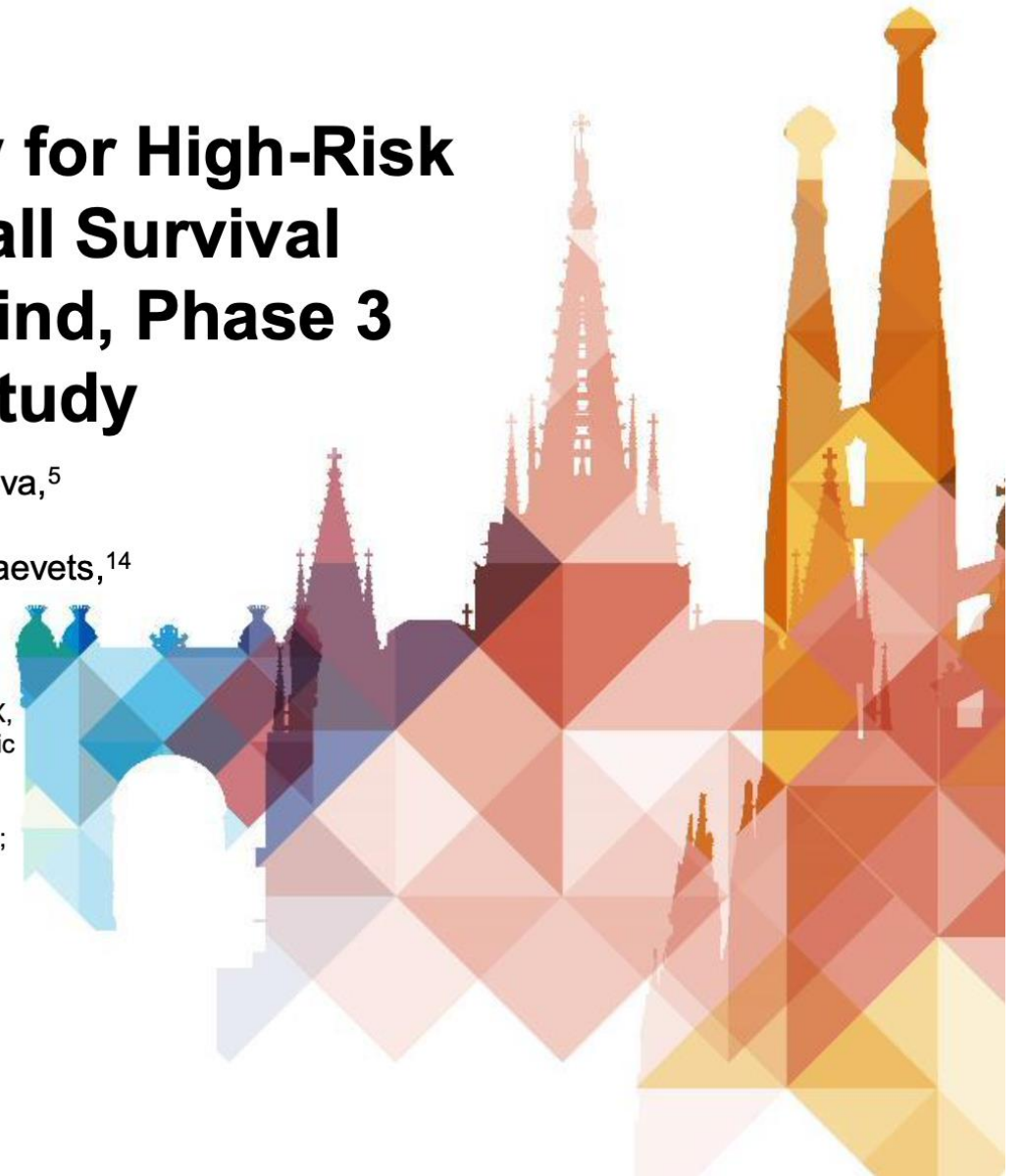


Pembrolizumab Plus Chemoradiotherapy for High-Risk Locally Advanced Cervical Cancer: Overall Survival Results from the Randomized, Double-Blind, Phase 3 ENGOT-cx11/GOG-3047/KEYNOTE-A18 Study

Domenica Lorusso,¹ Yang Xiang,² Kosei Hasegawa,³ Giovanni Scambia,⁴ Manuel Leiva,⁵ Pier Ramos-Elias,⁶ Alejandro Acevedo,⁷ Marketa Bednarikova,⁸ Andrea Gomes,⁹ Fernando Contreras Mejía,¹⁰ Ari Reiss,¹¹ Flora Zagouri,¹² Jung-Yun Lee,¹³ Valeriya Saevets,¹⁴ Peng Liu,¹⁵ Karin Yamada,¹⁵ Martina Puglisi,¹⁵ Sandro Pignata,^{16*} Linda R. Duska,^{17*} on behalf of the ENGOT-cx11/GOG-3047/KEYNOTE-A18 investigators

¹Gynaecology Oncology Unit, Fondazione Policlinico Universitario A Gemelli IRCCS, Rome and Humanitas San Pio X, Milan, Italy; ²Department of Obstetrics and Gynecology, National Clinical Research Center for Obstetric & Gynecologic Diseases, Peking Union Medical College Hospital, Beijing, China; ³Saitama Medical University International Medical Center, Hidaka, Saitama, Japan; ⁴Scientific Directorate, Fondazione Policlinico Universitario Agostino Gemelli IRCCS and Catholic University of the Sacred Heart, Rome, Italy; ⁵Instituto Peruano de Oncología y Radioterapia, Lima, Perú; ⁶Integra Cancer Institute, Edificio Integra Medical Center, Guatemala City, Guatemala; ⁷Oncocentro, Viña Del Mar, Chile; ⁸University Hospital Brno and Faculty of Medicine, Masaryk University, Brno, Czech Republic; ⁹Liga Norte Riograndense Contra o Cancer, Natal, Rio Grande do Norte, Brazil; ¹⁰Instituto Nacional de Cancerología, Bogota, Colombia; ¹¹Rambam Medical Center, Gyneco-oncology Unit, Haifa, Israel; ¹²Alexandra General Hospital, Athens, Greece; ¹³Yonsei Cancer Center and Severance Hospital, Yonsei University College of Medicine, Seoul, Korea; ¹⁴Chelyabinsk Regional Clinical Center Oncology and Nuclear Medicine, Chelyabinsk, Russia; ¹⁵Merck & Co., Inc., Rahway, NJ, USA; ¹⁶Department of Urology and Gynecology, Istituto Nazionale Tumori IRCCS Fondazione G. Pascale, Napoli, Italy; ¹⁷University of Virginia School of Medicine, Charlottesville, VA, USA.

*Drs. Pignata and Duska contributed equally to this presentation.



KEYNOTE-A18

Design

Key Eligibility Criteria

- FIGO 2014 stage IB2-IIB (node-positive disease) or FIGO 2014 stage III-IVA (either node-positive or node-negative disease)
- RECIST 1.1 measurable or non-measurable disease
- Treatment naïve

Stratification Factors

- Planned EBRT type (IMRT or VMAT vs non-IMRT or non-VMAT)
- Stage at screening (stage IB2-IIB N+ vs III-IVA)
- Planned total radiotherapy dose (<70 Gy vs ≥70 Gy [EQD2])

R
1:1
N = 1060

Cisplatin 40 mg/m² QW for 5 cycles^a + EBRT followed by brachytherapy
+
Pembrolizumab 200 mg Q3W for 5 cycles

Pembrolizumab 400 mg Q6W for 15 cycles

Cisplatin 40 mg/m² QW for 5 cycles^a + EBRT followed by brachytherapy
+
Placebo Q3W for 5 cycles

Placebo Q6W for 15 cycles

End Points

- Primary: PFS (per RECIST v1.1) by investigator or histopathologic confirmation and OS
- Secondary: 24-month PFS, 36-month OS, ORR, patient-reported HRQoL, and safety

^aA 6th cycle was allowed per investigator discretion. ENGOT-cx11/GOG-3047/KEYNOTE-A18 ClinicalTrials.gov identifier, NCT04221945.

KEYNOTE-A18

Caractéristiques de la population

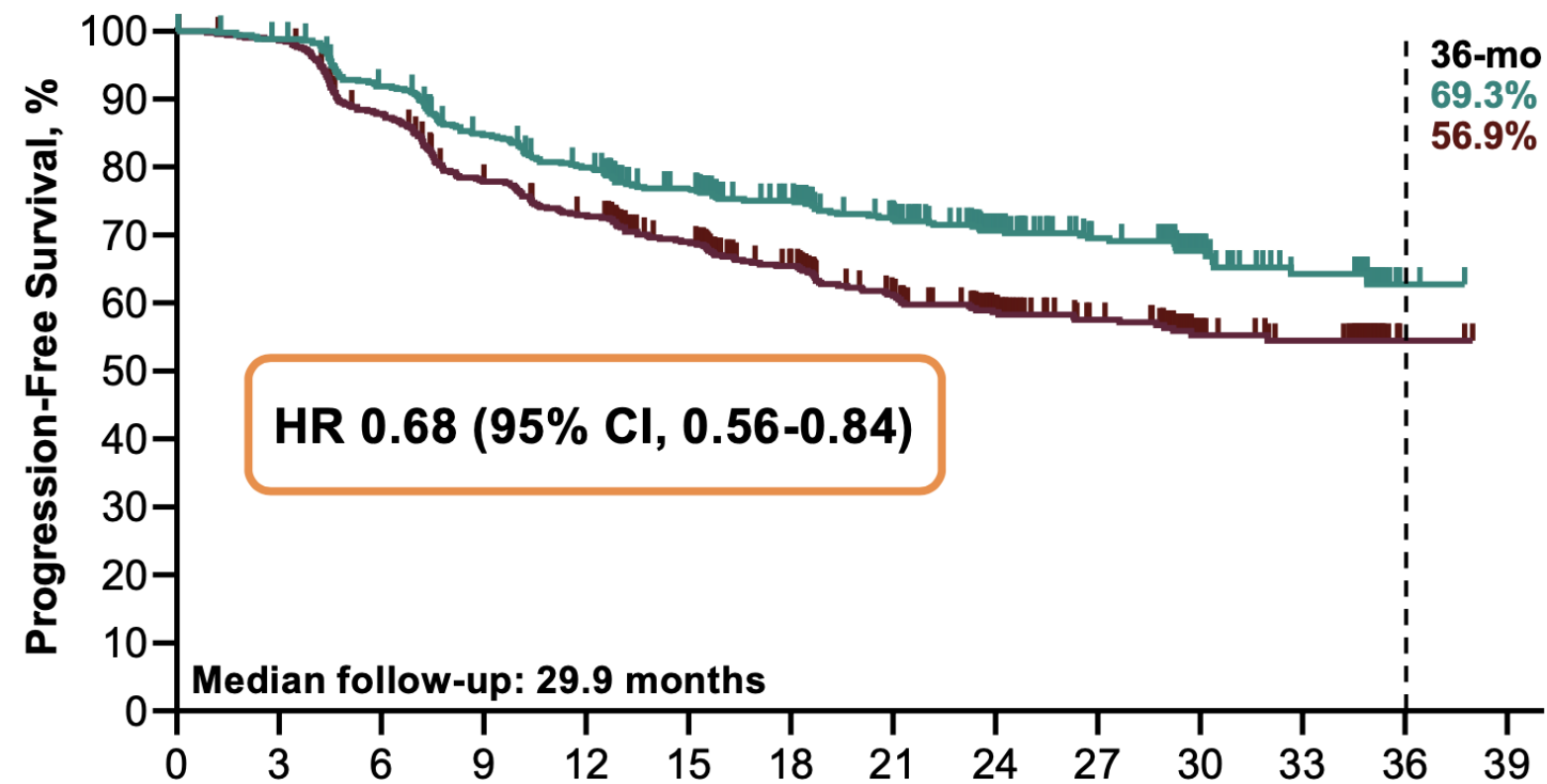
	Pembro Arm (N = 529)	Placebo Arm (N = 531)
Age, median (range)	49 y (22-87)	50 y (22-78)
Race ^a		
White	254 (48.0%)	264 (49.7%)
Asian	156 (29.5%)	148 (27.9%)
Multiple	78 (14.7%)	86 (16.2%)
American Indian or Alaska Native	24 (4.5%)	22 (4.1%)
Black or African American	14 (2.6%)	8 (1.5%)
Native Hawaiian or Other Pacific Islander	2 (0.4%)	1 (0.2%)
PD-L1 CPS		
<1	22 (4.2%)	28 (5.3%)
≥1	502 (94.9%)	498 (93.8%)
Missing	5 (0.9%)	5 (0.9%)
ECOG PS 1	149 (28.2%)	133 (25.0%)
Squamous cell carcinoma	434 (82.0%)	451 (84.9%)

134	Pembro Arm (N = 529)	Placebo Arm (N = 531)
Stage at screening (FIGO 2014 criteria)		
IB2-IIB	233 (44.0%)	226 (42.6%)
III-IVA	296 (56.0%)	305 (57.4%)
Lymph node involvement ^b		
Positive pelvic only	327 (62.2%)	324 (61.0%)
Positive para-aortic only	14 (2.6%)	10 (1.9%)
Positive pelvic and para-aortic	104 (19.7%)	104 (19.6%)
No positive pelvic or para-aortic	84 (15.9%)	93 (17.5%)
Planned type of EBRT		
IMRT or VMAT	469 (88.7%)	470 (88.5%)
Non-IMRT and non-VMAT	60 (11.3%)	61 (11.5%)
Planned total radiotherapy dose (EQD2)		
<70 Gy	47 (8.9)	46 (8.7)
≥70 Gy	482 (91.1)	485 (91.3)

^a3 patients (0.3%) had missing information for race, 1 (0.2%) in the pembro arm and 2 (0.4%) in the placebo arm. ^bPer protocol, a positive lymph node is defined as ≥1.5 cm shortest dimension by MRI or CT. Data cutoff date: January 8, 2024.

KEYNOTE-A18

Survie sans progression actualisée



	Pts w/ Event	Median, mo (95% CI)
Pembro Arm	29.3%	NR (NR-NR)
Placebo Arm	39.5%	NR (32.0-NR)

No. at risk

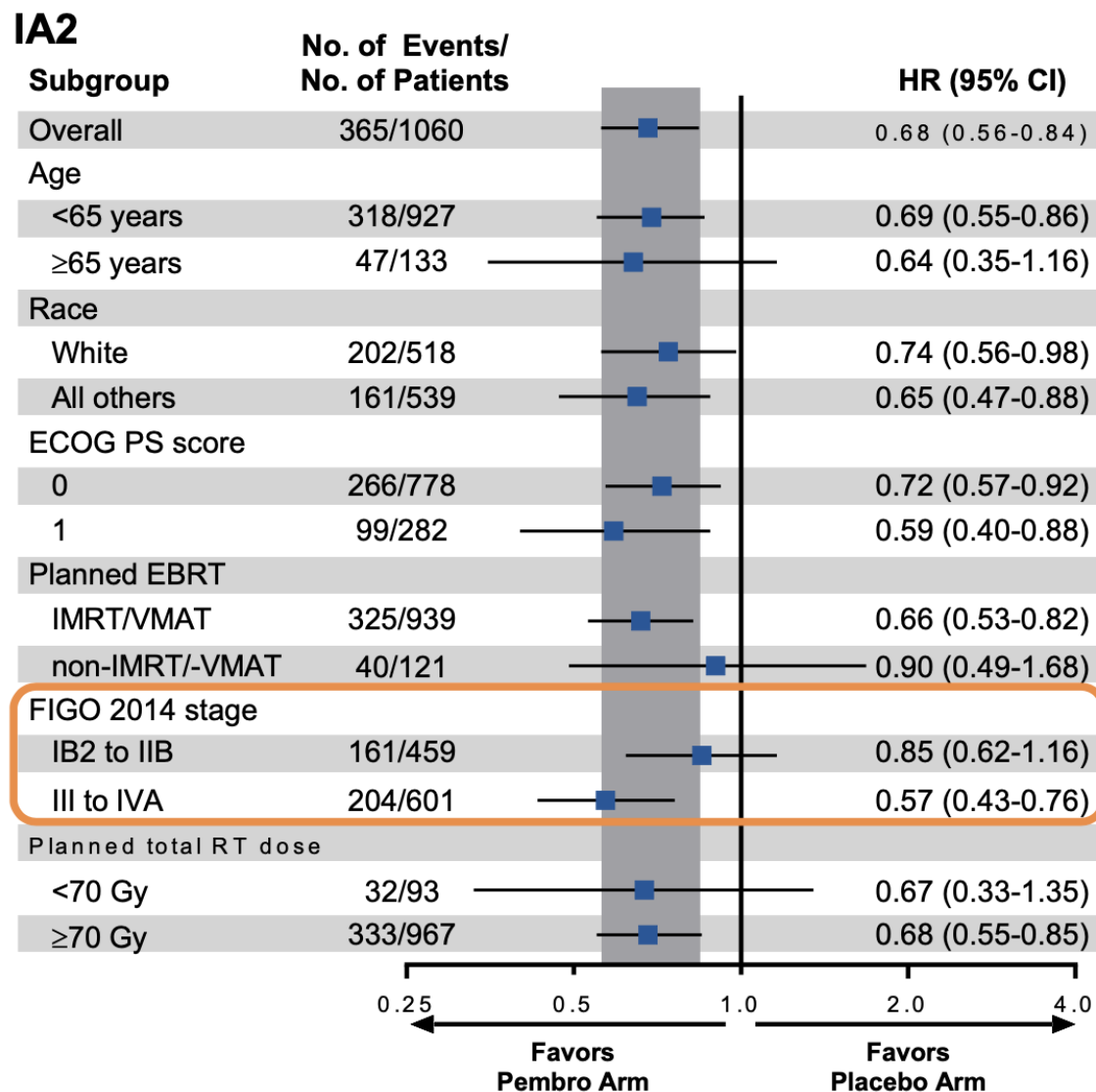
Time, months

529	515	474	430	402	353	317	280	217	179	86	69	2	0
531	513	452	395	366	325	283	241	178	148	78	69	2	0

Response assessed per RECIST v1.1 by investigator review or histopathologic confirmation. Since the success criterion of the PFS hypothesis was met at IA1, no formal testing of PFS was performed at IA2. Data cutoff date: January 8, 2024.

KEYNOTE-A18

Survie sans progression actualisée (sous-groupes)



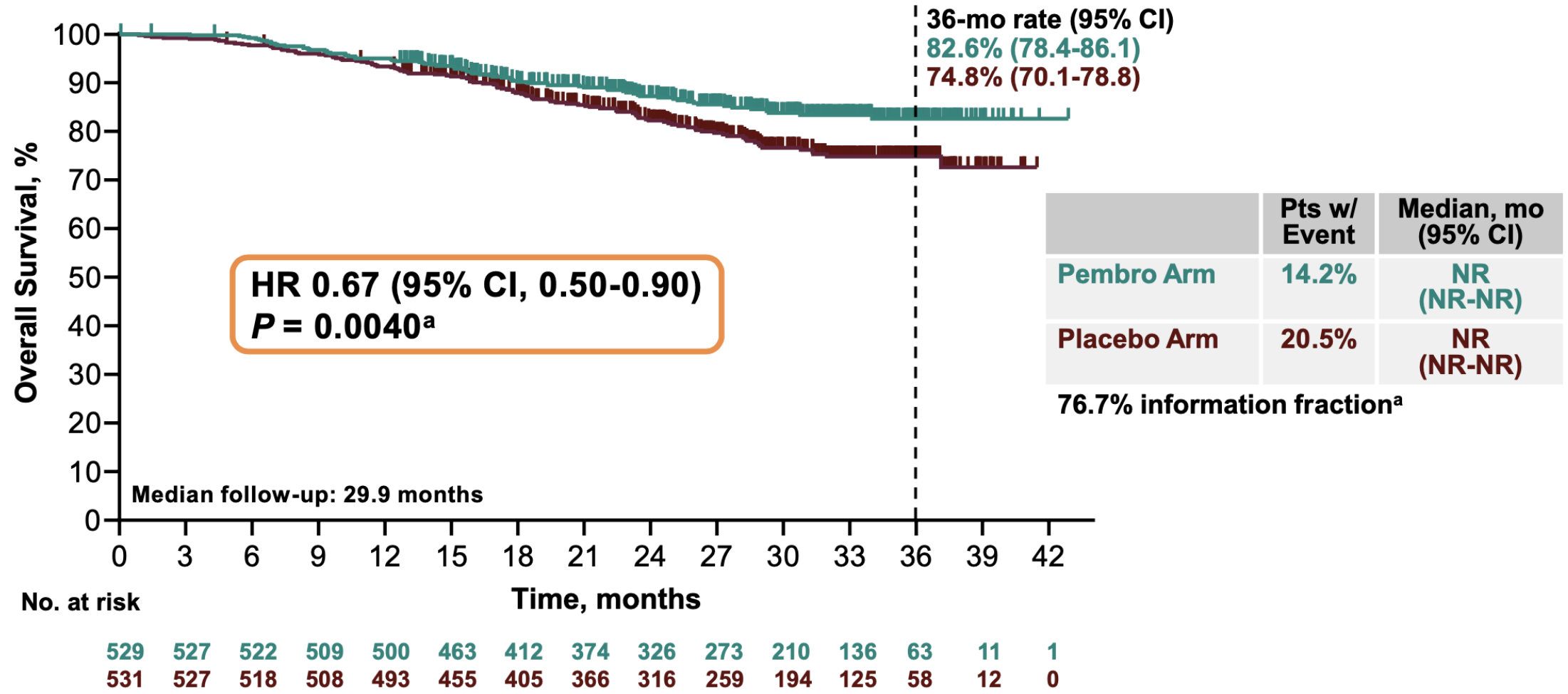
Data cutoff date: January 8, 2024.

Lorusso D, et al. *Lancet*. 2024;403(10434):1341-1350.

Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592

KEYNOTE-A18

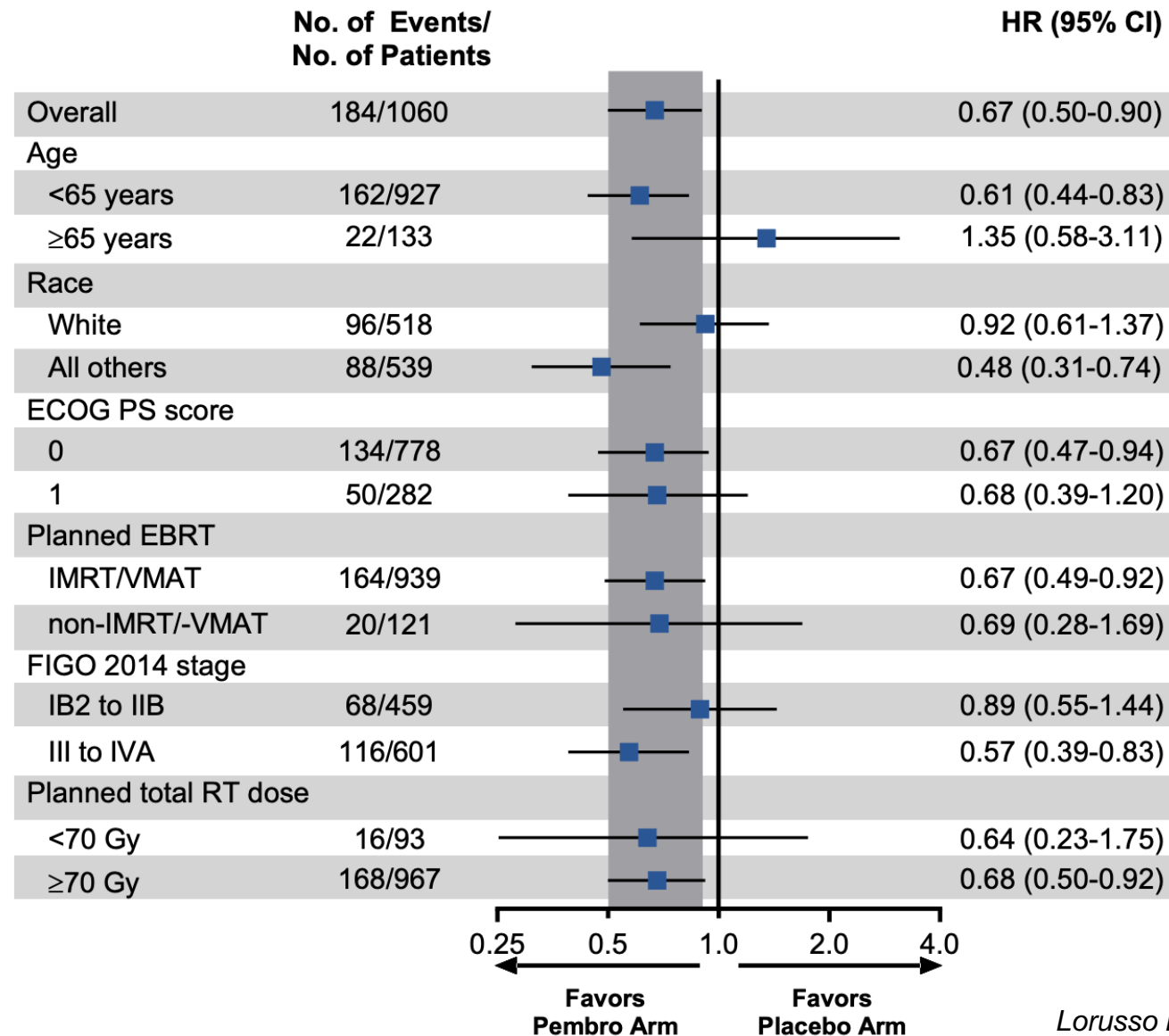
Survie globale



^aWith 184 of the 240 deaths expected at the final analysis (76.7% information fraction), the observed $P = 0.0040$ (1-sided) crossed the prespecified nominal boundary of 0.01026 (1-sided) at this planned second interim analysis. At this time, 66 patients had received immunotherapy as post-progression treatment, including 15/138 patients (10.9%) in the pembro arm and 51/193 patients (26.4%) in the placebo arm; of those, 10 (7.2%) and 41 (21.2%), respectively, had received pembro. Data cutoff date: January 8, 2024.

KEYNOTE-A18

Survie globale (sous-groupes)



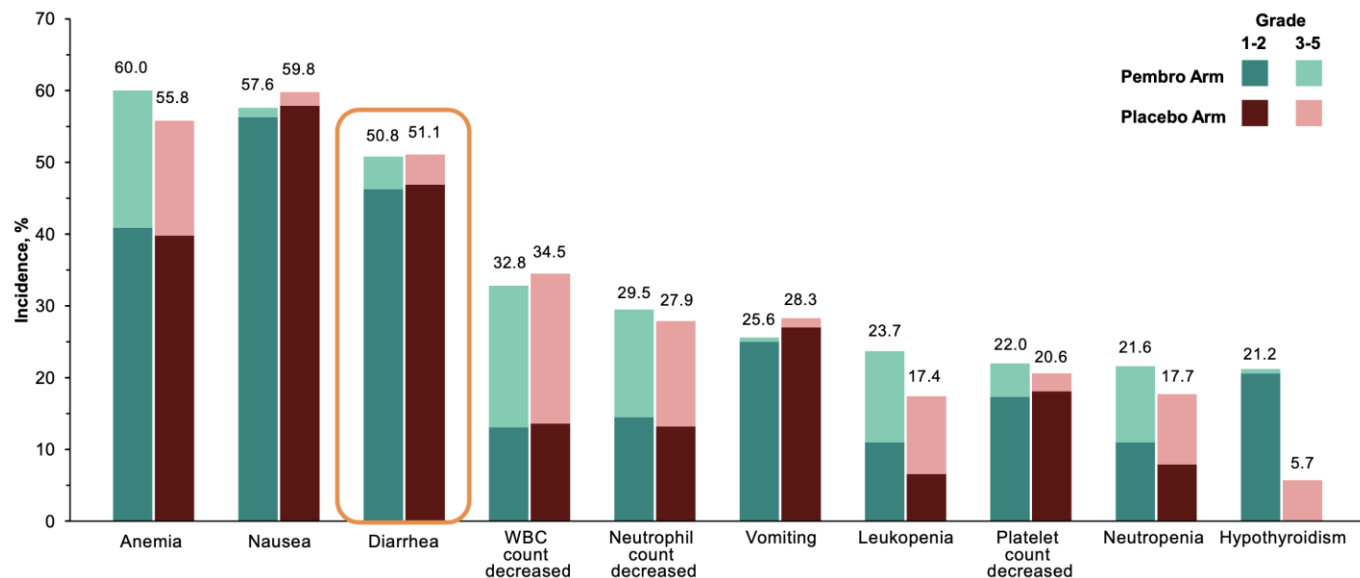
KEYNOTE-A18

Tolérance

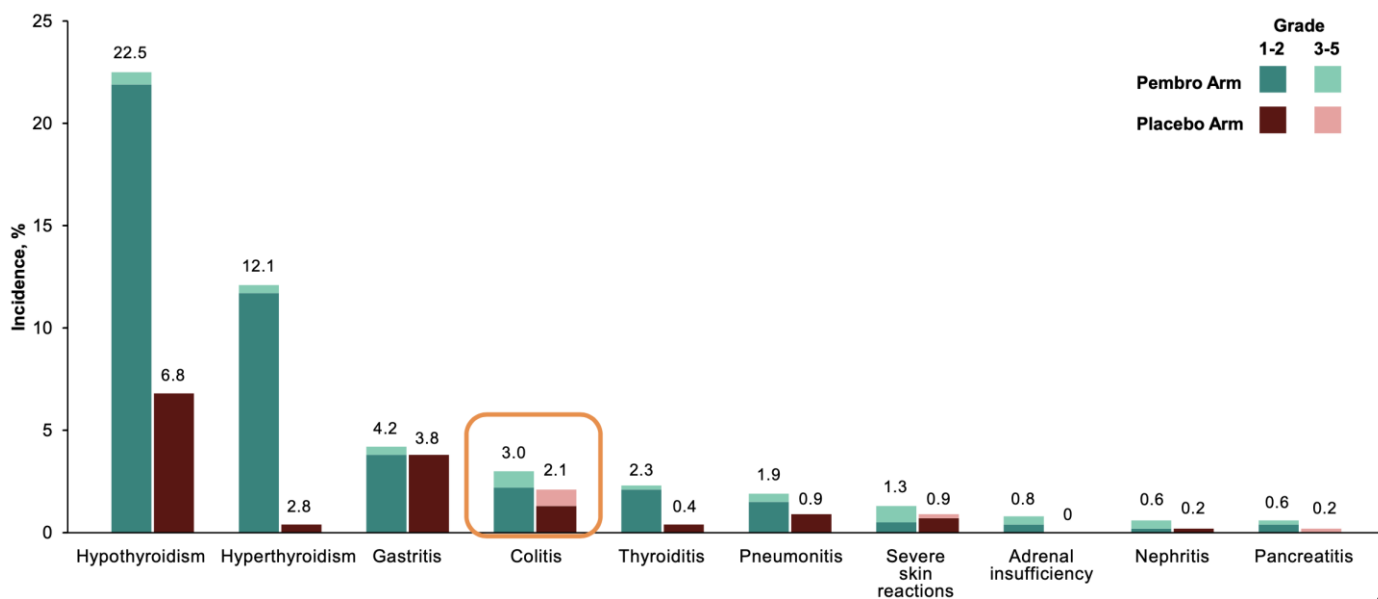
	All-Cause AEs		Treatment-Related AEs ^a		Immune-Mediated AEs ^b	
	Pembro Arm (N = 528)	Placebo Arm (N = 530)	Pembro Arm (N = 528)	Placebo Arm (N = 530)	Pembro Arm (N = 528)	Placebo Arm (N = 530)
Any grade	528 (100.0%)	526 (99.2%)	512 (97.0%)	513 (96.8%)	206 (39.0%)	90 (17.0%)
Grade ≥3	413 (78.2%)	371 (70.0%)	365 (69.1%)	325 (61.3%)	25 (4.7%)	7 (1.3%)
Serious	172 (32.6%)	151 (28.5%)	102 (19.3%)	71 (13.4%)	20 (3.8%)	6 (1.1%)
Led to death	5 (0.9%)	7 (1.3%)	2 (0.4%) ^c	2 (0.4%) ^d	1 (0.2%) ^e	0
Led to discontinuation						
Any treatment	109 (20.6%)	79 (14.9%)	99 (18.8%)	69 (13.0%)	16 (3.0%)	4 (0.8%)
All treatment	1 (0.2%)	2 (0.4%)	0	1 (0.2%)	0	0

KEYNOTE-A18

Tolérance



AE ≥ 20 %



Immune-mediated AE ≥ 3 patients

KEYNOTE-A18

Discussion

→ **Nouveau standard** de traitement
chez les patientes atteintes d'un
cancer du col utérin localement
avancé à haut risque
Surtout chez les stades les plus avancés (III-IVA) ?

ENDOMÈTRE

ENGOT-EN11/GOG-3053/KEYNOTE-B21: A Phase 3 Study of Pembrolizumab or Placebo in Combination With Adjuvant Chemotherapy With or Without Radiotherapy in Patients With Newly Diagnosed, High-Risk Endometrial Cancer

Toon Van Gorp,¹ Lukáš Rob,² Weiguo Lv,³ Floor Backes,⁴ Firat Ortaç,⁵ Kosei Hasegawa,⁶ Sakari Hietanen,⁷ Antonella Savarese,⁸ Annouschka Laenen,⁹ Yong Man Kim,¹⁰ Lubomir Bodnar,¹¹ Maria-Pilar Barretina-Ginesta,¹² Lucy Gilbert,¹³ Bhavana Pothuri,¹⁴ Xiaojun Chen,¹⁵ Jasmine Lichfield,¹⁶ Wei Wang,¹⁷ Robert Orlowski,¹⁸ Alain Lortholary,¹⁹ Brian Slomovitz²⁰

¹University Hospital Leuven, Leuven Cancer Institute, Leuven, Belgium; and BGOG; ²3rd Faculty Medicine Charles University and Faculty Hospital Kralovske Vinohrady, Prague, Czech Republic; and CEEGOG; ³Zhejiang University, Hangzhou, Zhejiang, China; ⁴Ohio State University and James Cancer Hospital, Columbus, OH, USA; and GOG; ⁵Ankara University School of Medicine, Ankara, Turkey; and TRSGO; ⁶Saitama Medical University, Hidaka, Saitama Prefecture, Japan; ⁷Turku University Hospital and University of Turku, Turku, Finland; TYKS Cancer Centre, FICAN West, Organization of EU Cancer Institutes, Finland; and NSGO-CTU; ⁸IRCCS - Istituto Nazionale Tumori Regina Elena, Rome, Italy; and MITO; ⁹Leuven Biostatistics and Statistical Bioinformatics Center, KU Leuven, Leuven, Belgium; and BGOG; ¹⁰Asan Medical Center, University of Ulsan, Seoul, Republic of Korea; ¹¹Mazovia Regional Hospital, Siedlce Oncology Center, Siedlce, Poland; and ENGOT groups – PGOG; ¹²Catalan Institute of Oncology and Girona Biomedical Research Institute, Medical School University of Girona, Girona, Spain; and GEICO; ¹³McGill University Health Centre; Research-Institute, McGill University Health Centre; and Gerald Bronfman Department of Oncology, McGill University, Montreal, Quebec, Canada; ¹⁴Obstetrics and Gynecology and Medicine, Gynecologic Oncology, Perlmutter Cancer Center, NYU Langone Health, New York, New York, USA; and GOG; ¹⁵Obstetrics and Gynecology Hospital of Fudan University, Shanghai, China; and SGOG; ¹⁶MSD, UK; ¹⁷MSD, China; ¹⁸Merck & Co., Inc., Rahway, NJ, USA; ¹⁹Centre Catherine de Sienne, Hôpital Privé du Confluent, Nantes, France; and GINECO; ²⁰Mount Sinai Medical Center, Miami Beach, FL, USA; and GOG Foundation

KEYNOTE-B21

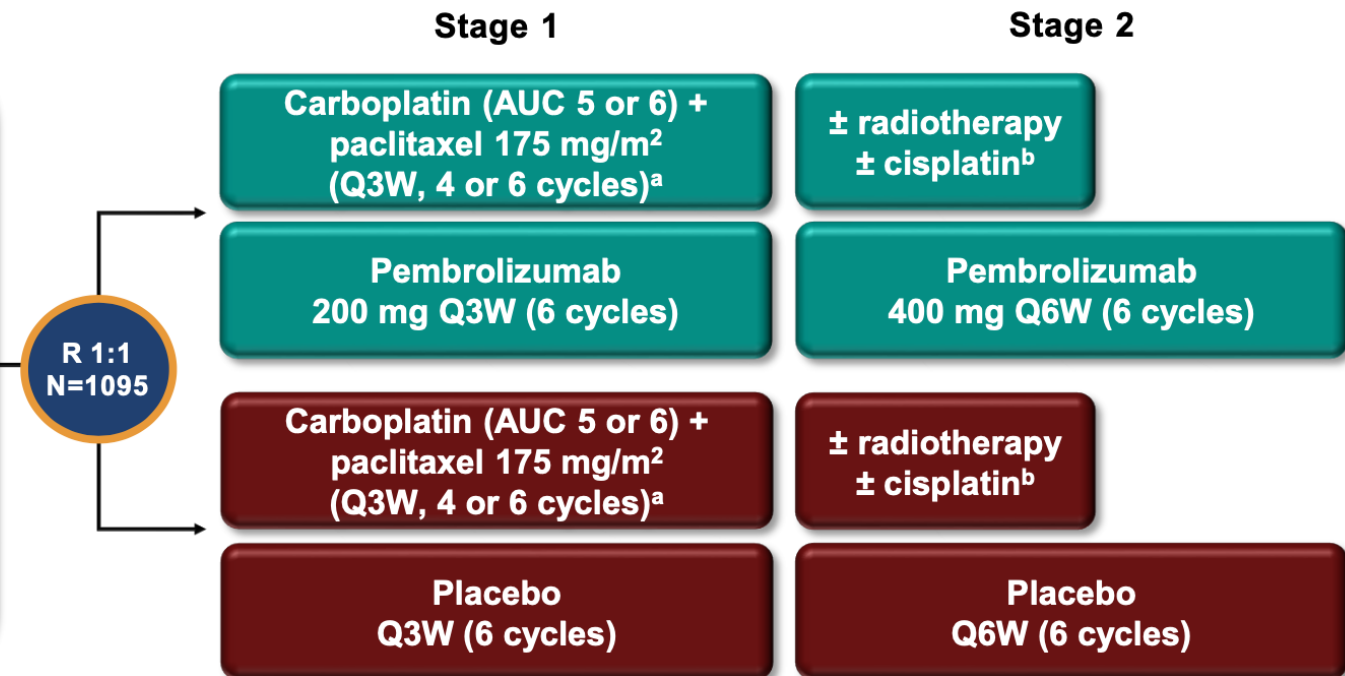
Design

Key Eligibility Criteria

- Newly diagnosed EC or carcinosarcoma
- Curative surgery with no residual disease
- At high risk for recurrence:
 - FIGO (2009) surgical stage I/II, non-endometrioid with myometrial invasion
 - FIGO (2009) surgical stage I/II of any histology with known aberrant p53 expression or *TP53* mutation with myometrial invasion
 - FIGO (2009) surgical stage III/IVA of any histology
- No prior radiation or systemic therapy (including neoadjuvant) for EC

Stratification Factors

- **MMR status (pMMR vs dMMR)**, and within pMMR stratum:
 - Planned radiation (chemo-EBRT vs EBRT vs no EBRT)
 - Histology (endometrioid vs non-endometrioid)
 - FIGO (2009) surgical stage (I/II vs III/IVA)



Dual primary endpoints

- DFS as assessed radiographically by the investigator or by histopathologic confirmation
- OS

^aChemotherapy was administered for 4 cycles in patients planned to receive chemoradiotherapy and 6 cycles for all other patients, including those planned for radiotherapy without radiosensitizing cisplatin.

^bRadiotherapy was optional at the discretion of the investigator, and cisplatin may have been given with EBRT as radiosensitizer; radiotherapy was started within 6 weeks after completion of carboplatin and paclitaxel (radiation may have been initiated during Stage 1 or Stage 2 depending on the number of cycles of chemotherapy that were administered).

KEYNOTE-B21

Caractéristiques de la population

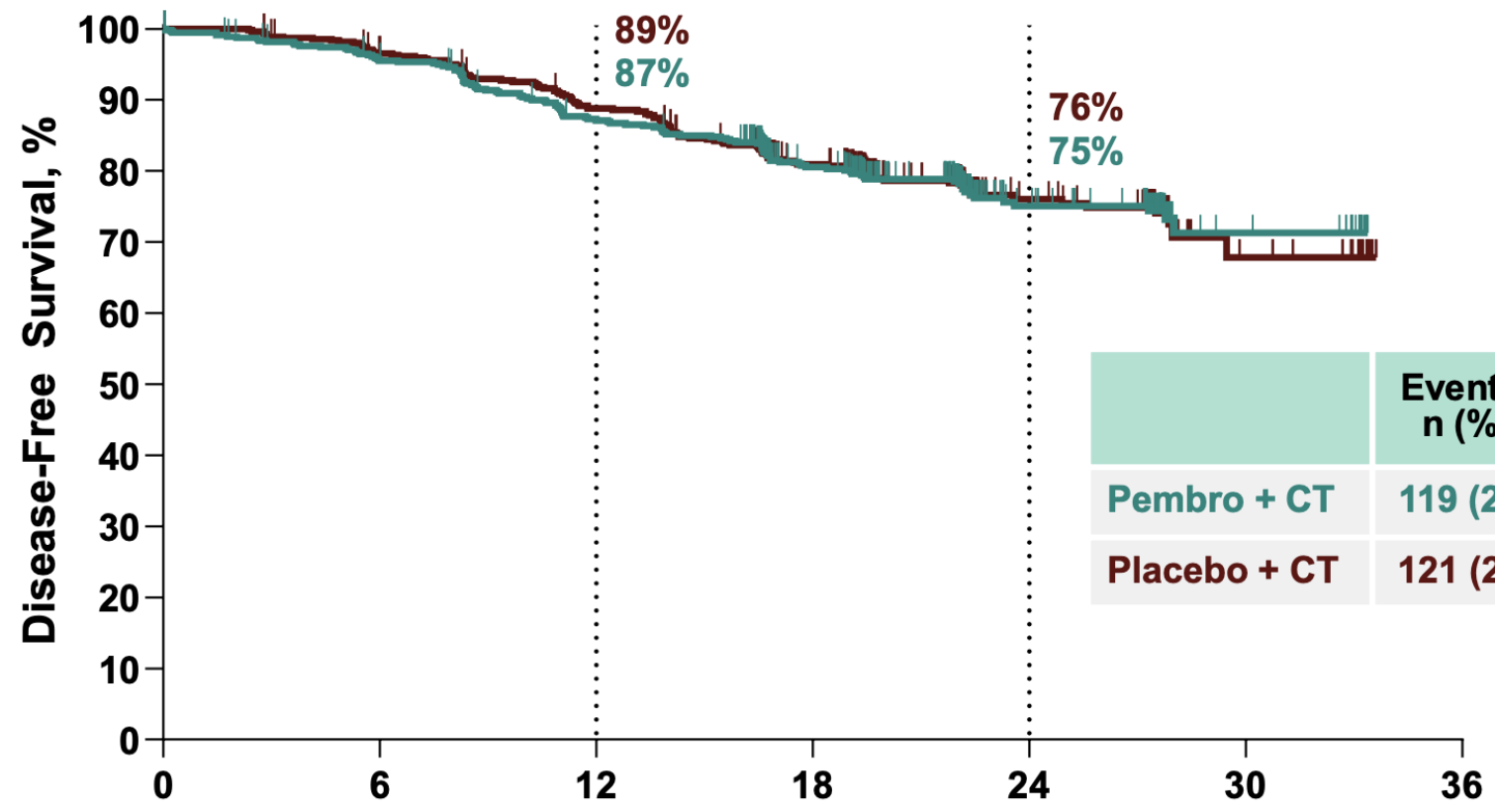
Characteristic	Pembro + Chemo (n = 545)	Placebo + Chemo (n = 550)
Age, median (range), y	62 (29–95)	62 (27–89)
ECOG PS 0	409 (75%)	416 (76%)
Race		
White	315 (58%)	362 (66%)
Asian	189 (35%)	157 (29%)
Multiple	23 (4%)	10 (2%)
Black or African American	11 (2%)	13 (2%)
American Indian or Alaska Native	2 (<1%)	3 (<1%)
Missing	5 (<1%)	5 (<1%)
Lymph node dissection	483 (89%)	502 (91%)
Lymph node status		
Lymph node involvement	223 (41%)	250 (45%)
No lymph node involvement	300 (55%)	284 (52%)
Not evaluable	22 (4%)	16 (3%)
MMR status at study entry		
dMMR	141 (26%)	140 (25%)
pMMR	404 (74%)	410 (75%)

Characteristic	Pembro + Chemo (n = 545)	Placebo + Chemo (n = 550)
FIGO 2009 stage at study entry		
IA/B	146 (27%)	144 (26%)
II	40 (7%)	41 (7%)
IIIA	109 (20%)	94 (17%)
IIIB	20 (4%)	19 (3%)
IIIC1	144 (26%)	169 (31%)
IIIC2	78 (14%)	81 (15%)
IVA/B ^a	8 (1%)	2 (<1%)
Planned radiation therapy at study entry		
EBRT ^b with cisplatin	94 (17%)	95 (17%)
EBRT ^b without cisplatin	256 (47%)	246 (45%)
Brachytherapy only	49 (9%)	52 (9%)
No EBRT or brachytherapy	146 (27%)	157 (29%)
Histology subtype		
Endometrioid	297 (54%)	297 (54%)
Non-endometrioid	248 (46%)	253 (46%)

^a3 patients with stage IVB were randomized, including 2 in the pembro + chemo group and 1 in the placebo + chemo group. ^bWith or without brachytherapy. Data cutoff date: March 4, 2024.

KEYNOTE-B21

Survie sans progression



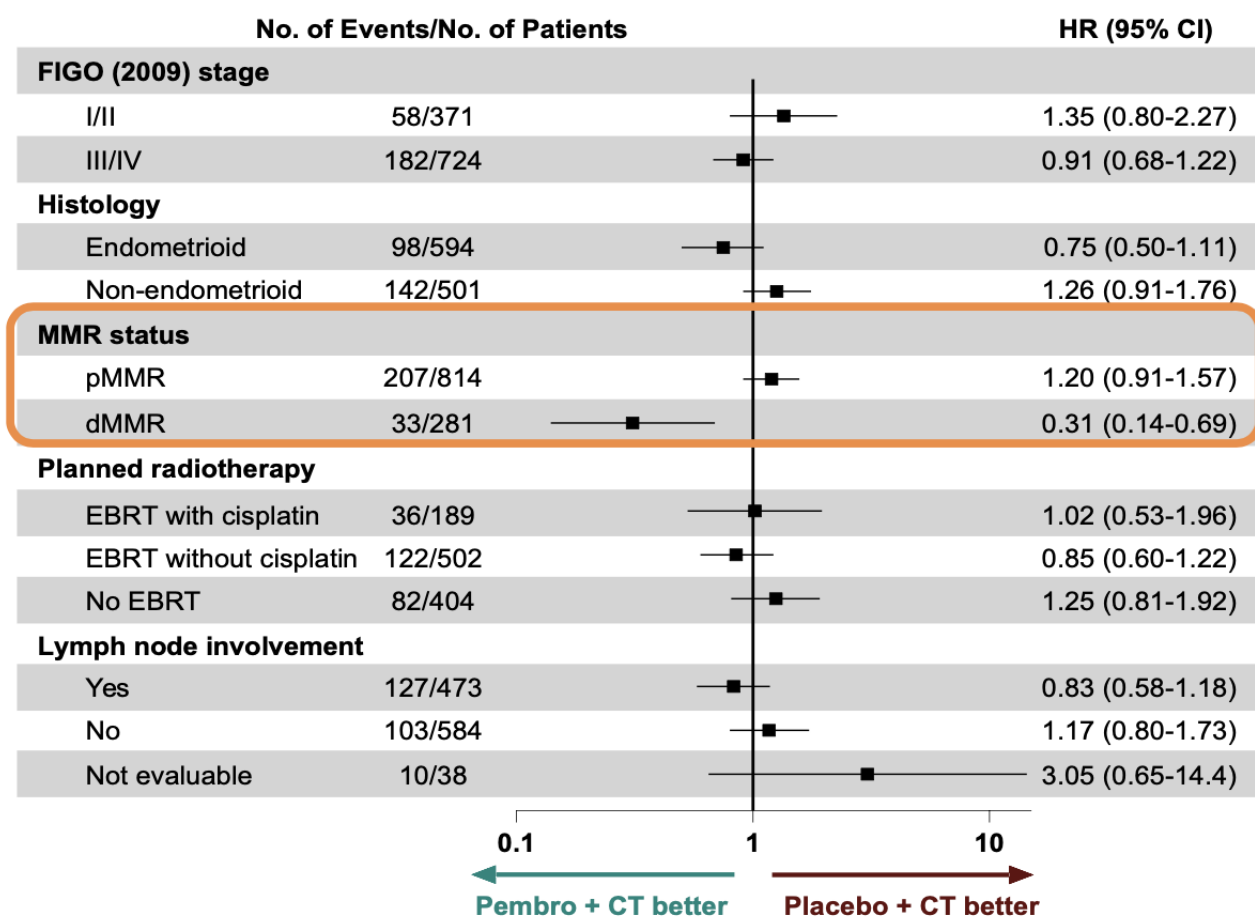
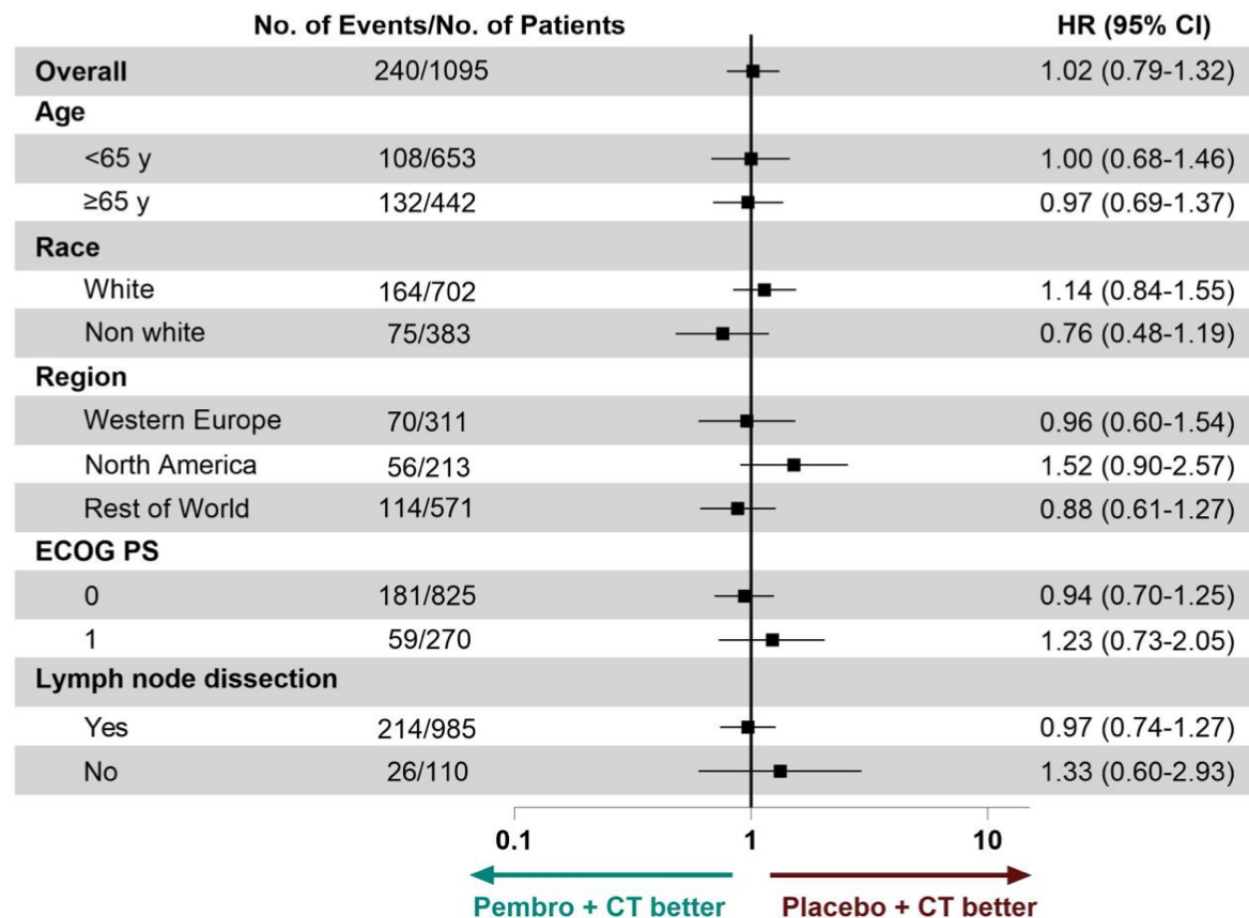
	Events, n (%)	Median (95% CI), mo	HR (95% CI)	P value
Pembro + CT	119 (22)	NR (NR–NR)	1.02 (0.79–1.32)	0.570
Placebo + CT	121 (22)	NR (NR–NR)		

No. at risk		Time from Randomization, months						
		0	6	12	18	24	30	36
Pembro + CT	545	505	452	347	134	27	0	
Placebo + CT	550	515	470	358	132	23	0	

^aDFS was defined as the time from randomization to local or distant recurrence of EC (assessed radiographically by the investigator or by histopathologic confirmation) or death from any cause. Data cutoff date: March 4, 2024.

KEYNOTE-B21

Survie sans progression (sous-groupes)



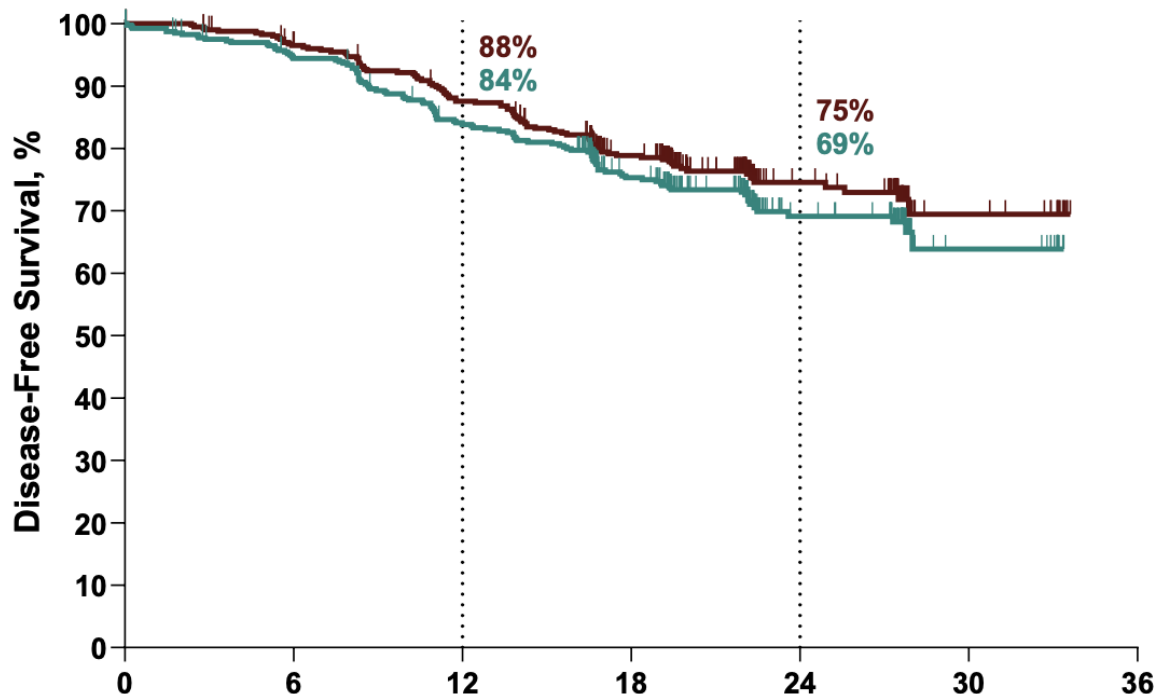
KEYNOTE-B21

Survie sans progression (pMMR vs dMMR)



pMMR Subgroup

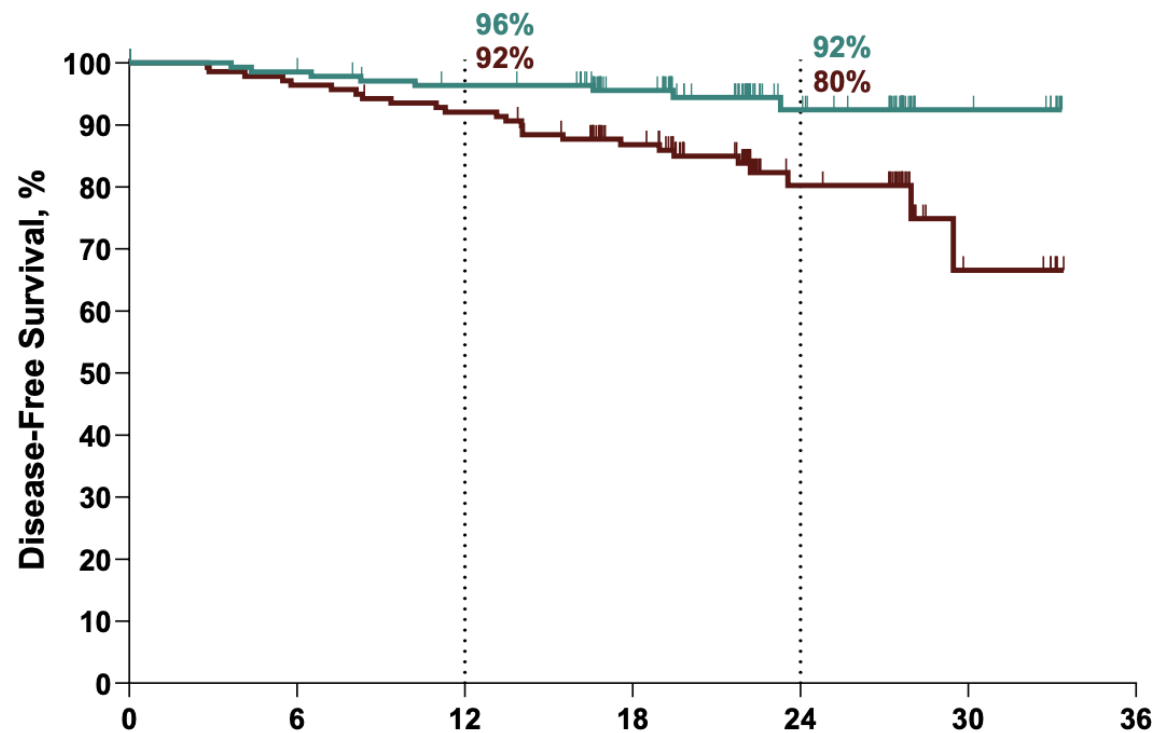
	Events, n (%)	Median (95% CI), mo	HR (95% CI)
Pembro + CT	111 (27)	NR (NR–NR)	1.20 (0.91–1.57)
Placebo + CT	96 (23)	NR (NR–NR)	



No. at risk	0	6	12	18	24	30	36
Pembro + CT	404	369	323	244	88	17	0
Placebo + CT	410	381	343	259	94	16	0

dMMR Subgroup

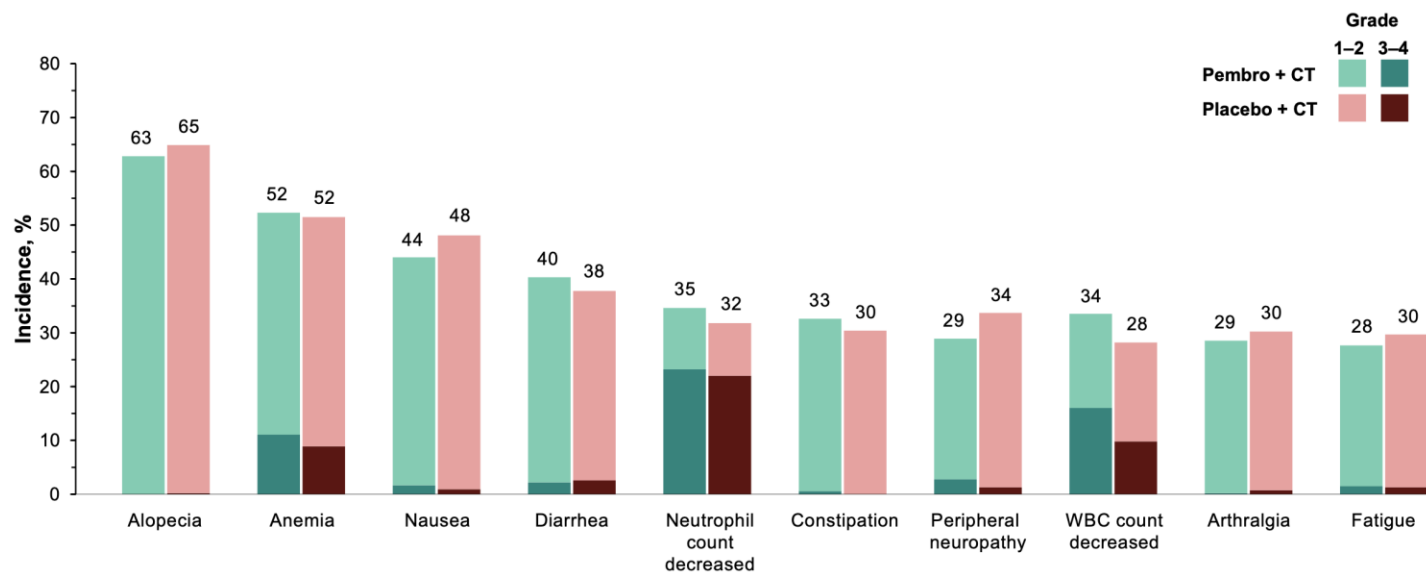
	Events, n (%)	Median (95% CI), mo	HR (95% CI)
Pembro + CT	8 (6)	NR (NR–NR)	0.31 (0.14–0.69)
Placebo + CT	25 (18)	NR (29.5–NR)	



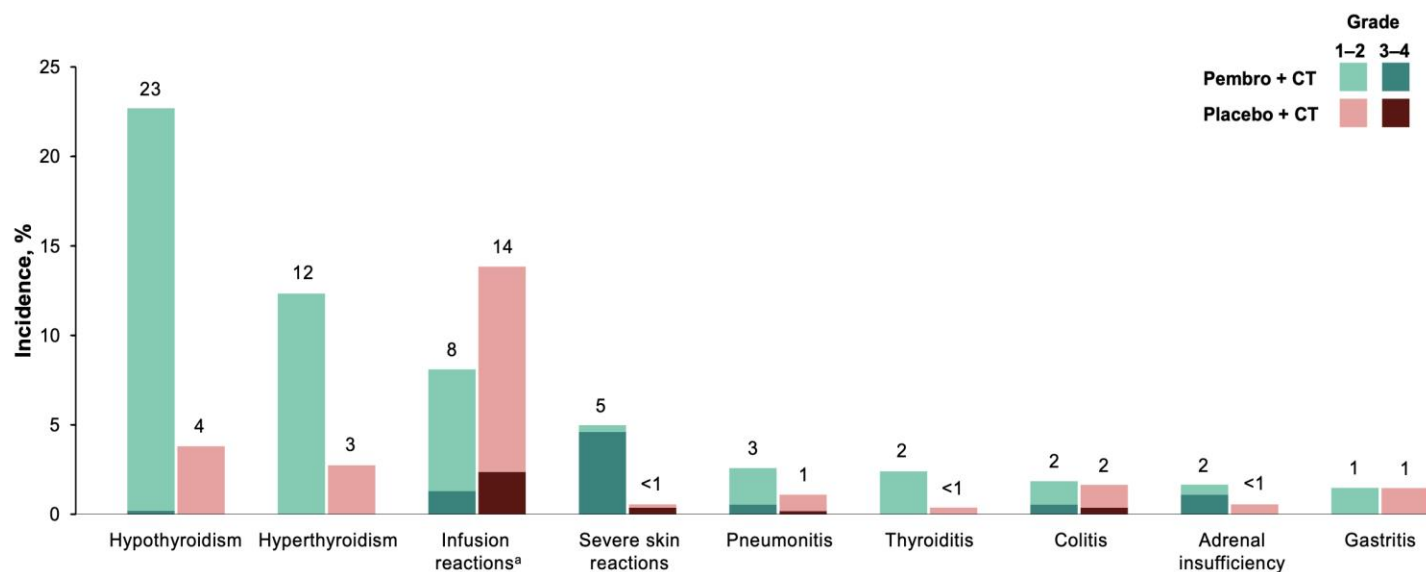
No. at risk	0	6	12	18	24	30	36
Pembro + CT	141	136	129	103	46	10	0
Placebo + CT	140	134	127	99	38	7	0

KEYNOTE-B21

Tolérance



AE ≥ 25 %



Immune-mediated AE ≥ 1 %

KEYNOTE-B21

Discussion

- Une **étude négative** mais importante et utile
 - L'intérêt de l'immunothérapie en phase précoce (néoadjuvant/adjuvant...)
 - L'intérêt d'inclure dans les essais les patientes en les stratifiant selon leur groupe moléculaire (**études RAINBO**)

BARCELONA
2024

ESMO

congress

TUMEURS TROPHOBLASTIQUES

TROPHAMET



Avelumab + methotrexate to eradicate low-risk gestational trophoblastic tumors in 1st-line setting: TROPHAMET trial.

Benoit YOU ^{1,2,3,4} ; **Jean-Pierre LOTZ** ^{1,5} ; **Pierre DESCARGUES** ^{1,6} ; **Florence JOLY** ^{4,7} ; **Thibault DE LA MOTTE ROUGE** ^{4,8} ; **Coriolan LEBRETON** ^{4,9} ; **Laurence GLADIEFF** ^{4,10} ; **Philippe FOLLANA** ^{4,11} ; **Mathieu JAMELOT** ^{1,5} ; **Jérôme MASSARDIER** ^{1,12} ; **Touria HAJRI** ¹ ; **Marine ALVES-FERREIRA** ¹³ ; **Sylvie BIN** ¹³ ; **Carole LANGLOIS-JACQUES** ¹⁴ ; **Maxime BONJOUR** ¹⁴ ; **Adeline ROUX** ¹³ ; **Christophe DESAUW** ¹⁵ ; **Magali PROVANSAL** ¹⁶ ; **Vérane SCHWIERTZ** ¹⁷ ; **Francois GOLFIER** ^{1,2,6} ; **Pierre-Adrien BOLZE** ^{1,2,6}



1. Centre de Référence des Maladies Trophoblastiques ; French Gestational Trophoblastic Center, Lyon, France; 2. Univ Lyon ; Université Claude Bernard Lyon; 2 Faculté de médecine Lyon-Sud ; EA 3738 CICLY ; Lyon ; France ; 3. Medical Oncology ; Institut de Cancérologie des Hospices Civils de Lyon (IC-HCL) ; CITOHL ; EPSILYON; Hospices Civils de Lyon, Lyon, France; 4. GINECO, Paris, France; 5. Hôpital Tenon, Pôle Onco-Hématologie Hôpitaux Universitaires de l'Est Parisien, APHP, Université Pierre et Marie Curie, Paris, France; 6. Service de Chirurgie Gynécologique et Oncologique, Obstétrique, Centre Hospitalier Lyon Sud, Hospices Civils de Lyon ; Pierre Bénite, France; 7. Clinical Research Department, Centre François Baclesse, 3 avenue du Général Harris, F-14076 Caen cedex 05, France; 8. Centre Eugene Marquis, Rennes, France; 9. Institut Bergonié, Bordeaux, France; 10. Département d'oncologie médicale ; Institut Claudius Regaud ; IUCT-ONCOPOLE ; Toulouse ; France; 11. Centre Antoine Lacassagne, Nice, France; 12. Service de Gynécologie Obstétrique, Unité de Diagnostic Anténatal, Hôpital Femme Mère Enfant, Hospices Civils de Lyon ; Bron, France; 13. Service Recherche et Epidémiologie Cliniques - Pôle de Santé Publique , Hospices Civils de Lyon, Lyon, France; 14. Biostatistiques - Pôle de Santé Publique , Hospices Civils de Lyon, Lyon, France; 15. CHU Lille – Hôpital HURIEZ, Lille, France; 16. Institut Paoli-Calmettes, Marseille, France; 17. URCC, HCL; Lyon, France

TROPHAMET

Rationnel

- Tumeurs trophoblastiques gestationnelles (TTG) = **tumeurs rares** se développant pendant la **grossesse à partir du placenta** (1/10 000 grossesse, patientes jeunes)
- **80 %** des TTG diagnostiquées sont des tumeurs de **bas risque = FIGO ≤ 6**
- Taux d'hCG élevé tant que la maladie reste active.
- Standard = **monochimiothérapie jusque normalisation des hCG**
 - METHOTREXATE
 - ACTINOMYCINE D
- Guérison de 70 % des patientes en 1^e ligne

- Forte expression du PD-L1 dans les TTG
- Essai de phase II TROPHIMMUN : **guérison > 50 %** chez des patientes résistantes à la chimiothérapie

TROPHAMET

Population

- Femmes ≥ 18 ans
- ECOG (performance status) ≤ 2
- TTG de bas risque (FIGO ≤ 6) avec indication d'un traitement par MTX en L1
- Absence de traitement antérieur ni de contre-indication aux IO
- Fonctions hématologiques, rénale, hépatique adéquates

TROPHAMET

Design et méthodologie

- **SAFETY** phase I ↔ Effets indésirables, doses limites toxiques
- **EFFICACY** phase II ↔ Taux de normalisation des hCG permettant un arrêt des traitements

- **SAFETY** phase I ↔ A confirmer avec 6 patientes
- **EFFICACY** phase II ↔ Taux de normalisation des hCG $\geq 90\%$ nécessitant un recrutement de 26 patientes avec 22 patientes à guérir

	cycle 1														cycle 2 to N													
	semaine 1							semaine 2							semaine 1							semaine 2						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Méthotrexate IM (1 mg/kg)	■		■		■		■								■		■		■		■							
Folinic acid (10 mg)		■		■		■										■		■		■								
Avelumab IV	■														■													

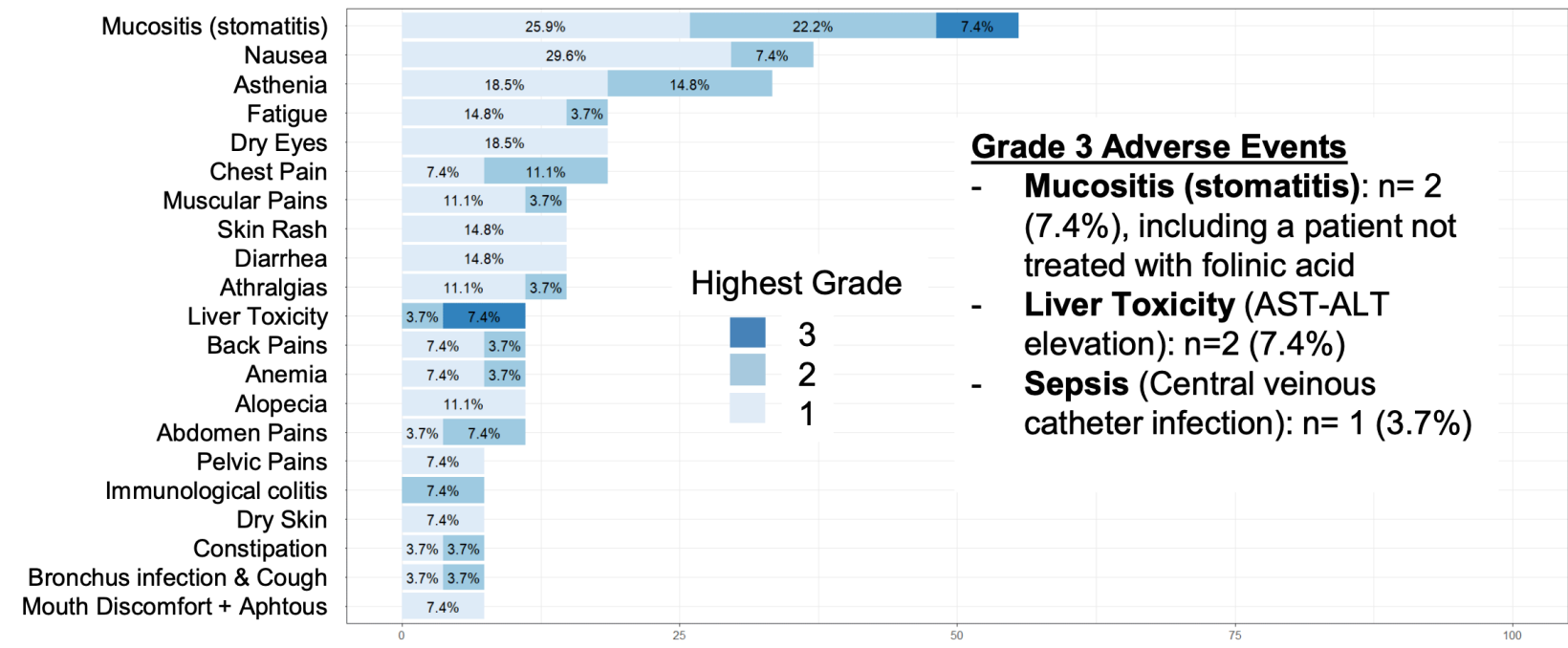
→ Administration jusqu'à normalisation des hCG puis 3 cycles de consolidation

TROPHAMET

Caractéristiques de la population

	Total	N= 26 (100%)
Age	Median (range), years	34.5 (20.0-50.0)
Disease stage	Stage I	11 (42%)
	Stage II	1 (4%)
	Stage III	14 (54%)
FIGO score	FIGO 1-2	8 (31%)
	FIGO 3-4	8 (31%)
	FIGO 5-6	10 (38%)
Pathology	Post complete mole	20 (77%)
	Post twin pregnancy & complete mole	1 (4%)
	Invasive mole	4 (15%)
	Choriocarcinoma	1 (4%)

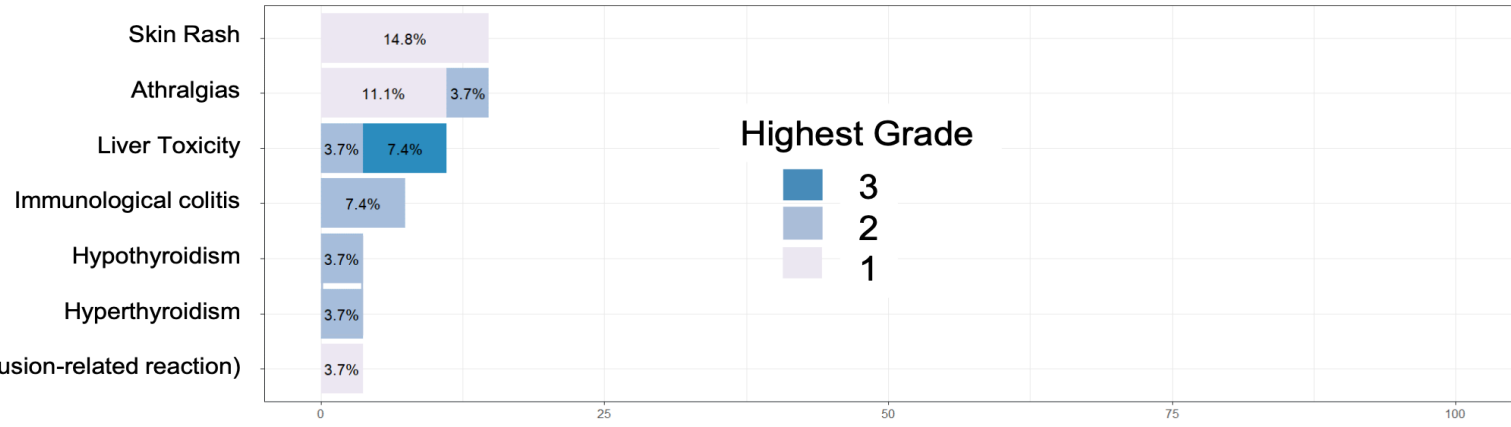
TROPHAMET Tolérance



Grade 3 Adverse Events

- **Mucositis (stomatitis):** n= 2 (7.4%), including a patient not treated with folinic acid
- **Liver Toxicity** (AST-ALT elevation): n=2 (7.4%)
- **Sepsis** (Central venous catheter infection): n= 1 (3.7%)

AE ≥ 5 %



Immune-mediated AE

% of patients presenting the adverse event at least one time

TROPHAMET

Efficacité



- Normalisation des hCG chez **96,2 % (25/26)** des patientes (95% CI [85,8-97,3])
 → Médiane de **3,32 mois** avant normalisation des hCG.
 → Nombre de cycles médians : 8 MTX (3-21) ; 8 Avelumab (2-21)
- Absence de récurrence malgré 24,8 mois de suivi
- Aucun décès dans la population étudiée

	% de normalisation des hCG	
Stade	I (11/11)	100
	II (1/1)	100
	III (13/14)	92,8
FIGO	1-2 (8/8)	100
	3-4 (8/8)	100
	5-6 (9/10)	90,0

BARCELONA
2024

ESMO

congress

ANTICORPS DROGUES CONJUGUÉS

ADCs et cancer de l'ovaire

Cible	Anticorps	Payload	Linker	Ratio	ORR (%)	DOR (mois)	Référence
FR α	Mirvetuximab Soravtansine (PICOLLO trial)	DM4 (anti-tubuline)	Cleavable		51,9	8,25	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>
	Rinatabart sesutecan	Exatecan (iTopo1)	Hydrophilic protease-cleavable	8,0	18,2-50	NR	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>
HER2	IBI354 (Trastuzumab)	NT3 (iTopo1)	Cleaveable	8,0	40-52,5	NR	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>
TROP2	Sacituzumab Tirumotecan (MK-2870)	KL610023 (iTopo1)	Pyrimidine-thiol	7,4	40	5,3	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>
	Datopotamab Deruxtecan	Deruxtecan (iTopo1)	Cleavable tetrapeptide-based linker	4	42,9	5,7	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>
Claudin 6	TORL-1-23	vc-MMAE		4	30-50	22-30	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>

ADCs et cancer du col/endomètre

Cible	Anticorps	Payload	Linker	Ratio	ORR (%)	DOR (mois)	Référence
FR α	Rinatabart sesutecan	Exatecan (iTopo1)	hydrophilic protease-cleavable	8,0	30,8	8,12	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>
TROP2	Sacituzumab Tirumotecan (MK-2870)	KL610023 (iTopo1)	Pyrimidine-thiol	7,4	34,1	5,7	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>
	Sacituzumab Tirumotecan + Pembrolizumab				57,9	NR	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>
	Datopotamab Deruxtecan	Deruxtecan (iTopo1)	Cleavable tetrapeptide-based linker	4	27,5	16,4	<i>Annals of Oncology (2024) 35 (suppl_2): S544-S595. 10.1016/annonc/annonc1592</i>