

Post-ASCO 2023 en sénologie

Dr Elise deluche
MCU-PH
Oncologie Médicale
Chu de limoges

Liens d'intérêts

- Advisory Boards : Novartis, Pfizer, GSK, Lilly, MSD
- Congrès : Pfizer, Amgen, Roche, Novartis, GSK
- Honoraires: AstraZeneca-Daiichi, Lilly, Novartis, Pfizer, Fresubin, GSK, MSD, BMS, MENARINI - STEMLINE

Ribociclib and endocrine therapy as adjuvant treatment in patients with HR+/HER2- early breast cancer: primary results from the Phase III NATALEE trial

Dennis Slamon,¹ Daniil Stroyakovskiy,² Denise A. Yardley,³ Chiun-Sheng Huang,⁴ Peter A. Fasching,⁵ John Crown,⁶ Aditya Bardia,⁷ Stephen Chia,⁸ Seock-Ah Im,⁹ Miguel Martin,¹⁰ Sherene Loi,¹¹ Binghe Xu,¹² Sara Hurvitz,¹³ Carlos Barrios,¹⁴ Michael Untch,¹⁵ Rebecca Moroos,¹⁶ Frances Visco,¹⁷ Rodrigo Fresco,¹⁸ Tetiana Taran,¹⁹ Gabriel N. Hortobagyi²⁰

¹David Geffen School of Medicine at UCLA, Los Angeles, CA; ²Moscow City Oncology Hospital No. 62 of Moscow Healthcare Department, Moscow Oblast, Russia; ³Sarah Cannon Research Institute, Tennessee Oncology, Nashville, TN; ⁴National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei City, Taiwan; ⁵University Hospital Erlangen Comprehensive Cancer Center Erlangen-EMN, Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany; ⁶St. Vincent's University Hospital, Dublin, Ireland; ⁷Massachusetts General Hospital Cancer Center, Harvard Medical School, Boston, MA; ⁸British Columbia Cancer Agency, Vancouver, BC, Canada; ⁹Cancer Research Institute, Seoul National University Hospital, Seoul National University College of Medicine, Seoul, Republic of Korea; ¹⁰Instituto de Investigación Sanitaria Gregorio Marañón, Centro de Investigación Biomédica en Red de Cáncer, Grupo Español de Investigación en Cáncer de Mama, Universidad Complutense, Madrid, Spain; ¹¹Peter MacCallum Cancer Centre, Melbourne, VIC, Australia; ¹²Department of Medical Oncology Cancer Hospital, Chinese Academy of Medical Sciences (CAMS), and Peking Union Medical College (PUMC), Beijing, China; ¹³University of California, Los Angeles, Jonsson Comprehensive Cancer Center, Los Angeles, CA; ¹⁴Latin American Cooperative Oncology Group (LACOG), Porto Alegre, Brazil; ¹⁵Interdisciplinary Breast Cancer Center, Helios Klinikum Berlin-Buch, Berlin, Germany; ¹⁶Orlando Health Cancer Institute, Orlando, FL; ¹⁷National Breast Cancer Coalition, Washington DC; ¹⁸TRIO - Translational Research in Oncology, Montevideo, Uruguay; ¹⁹Novartis Pharma AG, Basel, Switzerland; ²⁰Department of Breast Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX

NATALEE study design^{1,2}

- Adult patients with HR+/HER2- EBC
- Prior ET allowed up to 12 mo
- **Anatomical stage IIA^a**
 - **N0** with:
 - Grade 2 and evidence of high risk:
 - Ki-67 ≥ 20%
 - Oncotype DX Breast Recurrence Score ≥ 26 or
 - High risk via genomic risk profiling
 - Grade 3
 - **N1**
- **Anatomical stage IIB^a**
 - N0 or N1
- **Anatomical stage III**
 - N0, N1, N2, or N3

N = 5101^b

R 1:1^c

Ribociclib

400 mg/day
3 weeks on/1 week off
for 3 y

NSAI

Letrozole or
anastrozole^d for ≥ 5 y
+ **goserelin** in men
and premenopausal
women

NSAI

Letrozole or
anastrozole^d for ≥ 5 y
+ **goserelin** in men
and premenopausal
women

Primary End Point

- iDFS using STEEP criteria

Secondary End Points

- Recurrence-free survival
- Distant disease-free survival
- OS
- PROs
- Safety and tolerability
- PK

Exploratory End Points

- Locoregional recurrence-free survival
- Gene expression and alterations in tumor ctDNA/ctRNA samples

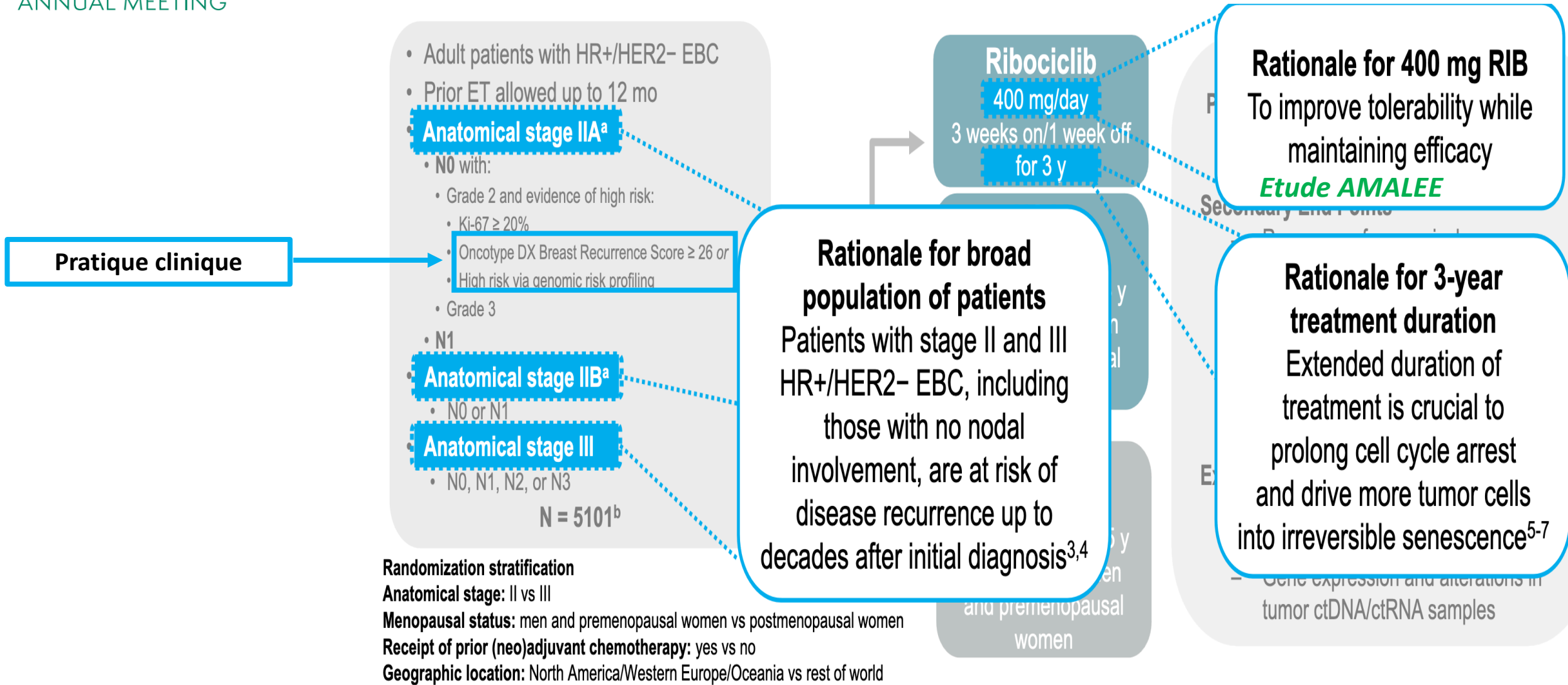
Randomization stratification

Anatomical stage: II vs III

Menopausal status: men and premenopausal women vs postmenopausal women

Receipt of prior (neo)adjuvant chemotherapy: yes vs no

Geographic location: North America/Western Europe/Oceania vs rest of world



Baseline characteristics

Parameter	RIB + NSAI n = 2549	NSAI Alone n = 2552	All Patients N = 5101
Age, median (min-max), years	52 (24-90)	52 (24-89)	52 (24-90)
Menopausal status, n (%)			
Men ^a and premenopausal women	1126 (44)	1132 (44)	2258 (44)
Postmenopausal women	1423 (56)	1420 (56)	2843 (56)
Anatomical stage,^{b,c} n (%)			
Stage IIA	479 (19)	521 (20)	1000 (20)
Stage IIB	532 (21)	513 (20)	1045 (20)
Stage III	1528 (60)	1512 (59)	3040 (60)
Nodal status at diagnosis, n (%)			
NX	272 (11)	264 (10)	536 (11)
N0	694 (27)	737 (29)	1431 (28)
N1	1050 (41)	1049 (41)	2099 (41)
N2/N3	483 (19)	467 (18)	950 (19)
Prior ET, n (%)^d			
Yes	1824 (72)	1801 (71)	3625 (71)
Prior (neo)adjuvant CT, n (%)			
Yes	2249 (88)	2245 (88)	4494 (88)
ECOG PS, n (%)			
0	2106 (83)	2132 (84)	4238 (83)
1	440 (17)	418 (16)	858 (17)

CT, chemotherapy; ECOG PS, Eastern Cooperative Oncology Group performance status; ET, endocrine therapy; N0, no nodal involvement; N1, 1-3 axillary lymph nodes; N2, 4-9 axillary lymph nodes; N3, ≥ 10 axillary lymph nodes or infra- or supraclavicular lymph nodes; NSAI, nonsteroidal aromatase inhibitor; NX, regional nodes were not assessed; OFS, ovarian function suppression; RIB, ribociclib.

^a In the RIB + NSAI arm, there were 11 men (0.4%); in the NSAI alone arm, there were 9 men (0.4%). ^b A total of 14 patients with stage I disease were included: 9 (0.4%) in the RIB + NSAI arm and 5 (0.2%) in the NSAI alone arm. ^c Stage is derived using TNM from surgery for patients having not received (neo)adjuvant treatment or as worst stage derived using TNM at diagnosis and TNM from surgery for patients having received (neo)adjuvant treatment. ^d Prior OFS was received by 670 patients (26.3%) in the RIB + NSAI arm and 620 (24.3%) in the NSAI alone arm.

AJCC anatomical staging ¹	TN (M0)	NATALEE ^{2,3}	monarchE ⁴
Stage IA	T1N0		
Stage IB	T0N1mi		
	T1N1mi		G3 or Ki67 \geq 20%
Stage IIA	T0N1		
	T1N1		G3 or Ki67 \geq 20%
Stage IIB	T2N0	G3, or G2 with Ki-67 \geq 20% or high genomic risk ^c	
	T2N1		G3 or Ki67 \geq 20%
Stage IIIA	T3N0		
	T0N2		
	T1N2		
	T2N2		
Stage IIIB	T3N1		
	T3N2		
	T4N0		
Stage IIIC	T4N1		
	T4N2		
	Any TN3		

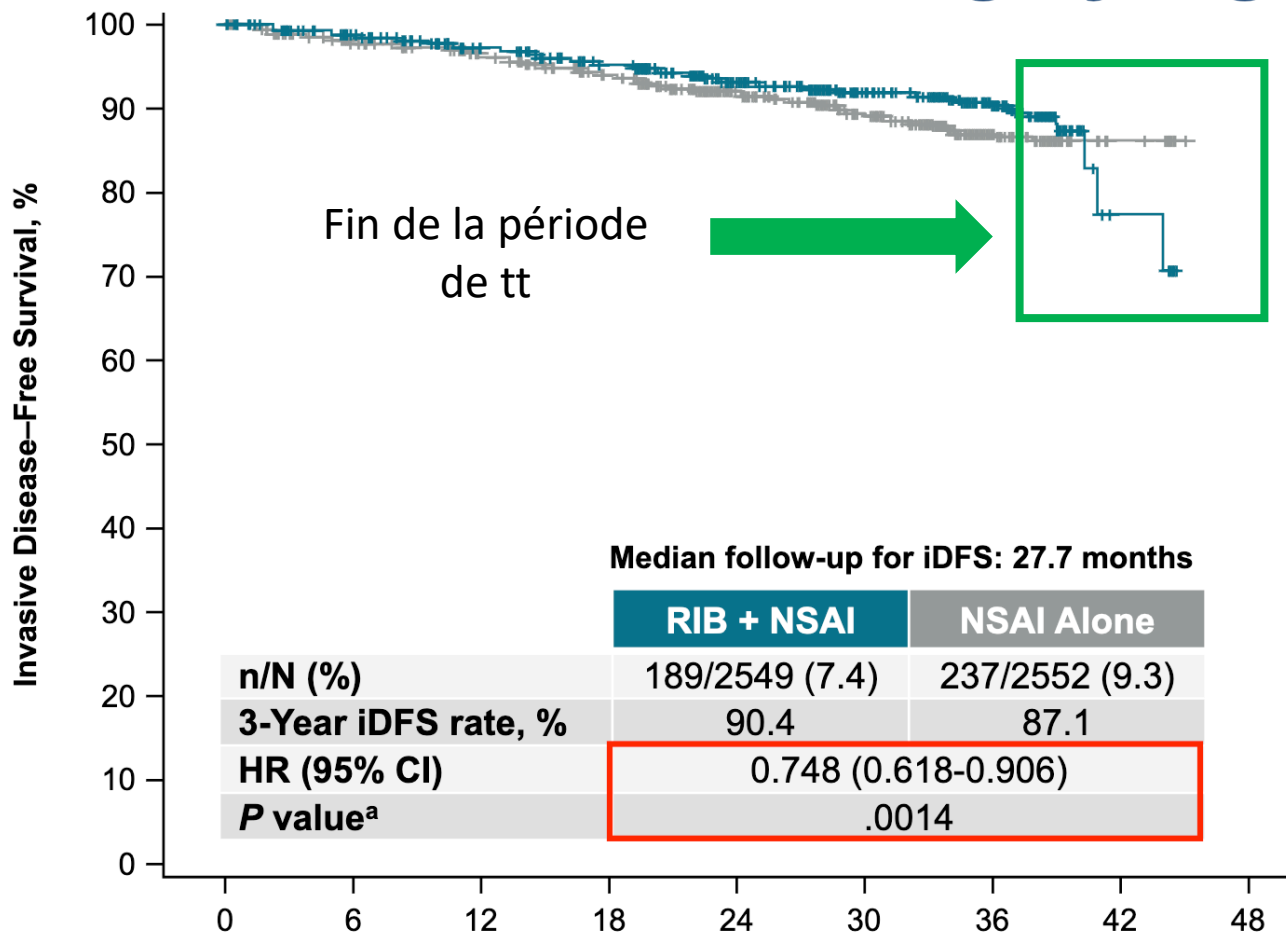
- Pre- and postmenopausal women
- Men

Choice of therapy will depend on approval, access, risk, long-term efficacy, safety profile, and patient preference

Not to forget:
gBRCA testing in patients eligible for olaparib (Olympia)

AJCC, American Joint Committee on Cancer; G, grade; M, metastasis; N0, no nodal involvement; N1mi, nodal micrometastases; N1, 1-3 axillary lymph nodes; N2, 4-9 axillary lymph nodes; N3, \geq 10 axillary lymph nodes; R, recurrence; RS, Recurrence Score; T, tumor; T0, no evidence of primary tumor; T1, tumor is 2cm or less; T2, Tumor is more than 2cm but less than 5cm; T3, tumor is more than 5cm; T4, tumor of any size growing into adjacent structures.
^a Including stage IIIA (N1/N2), IIIB (N0/N1/N2), or IIIC (N3). ^b Capped at 40% (\approx 2000 patients). Simplified inclusion criteria are used in the illustration. ^c High risk as determined by Oncotype DX, PAM50, or similar assay.
References: 1. Amin MB, Edge SB, Greene FL, et al, eds. *AJCC Cancer Staging Manual*. 8th ed. New York, NY: Springer; 2017:587-636. 2. Slamon DJ, et al. *J Clin Oncol*. 2019;37(suppl 15) [abstract 501]. 3. Clinical study protocol. V4.0. Novartis Pharmaceuticals Corp; August 27, 2020; ⁴<https://clinicaltrials.gov/ct2/show/NCT03155997>
⁵ <https://clinicaltrials.gov/ct2/show/NCT011012301C>

Ribociclib achieved highly significant iDFS benefit



Median follow-up for iDFS: 27.7 months

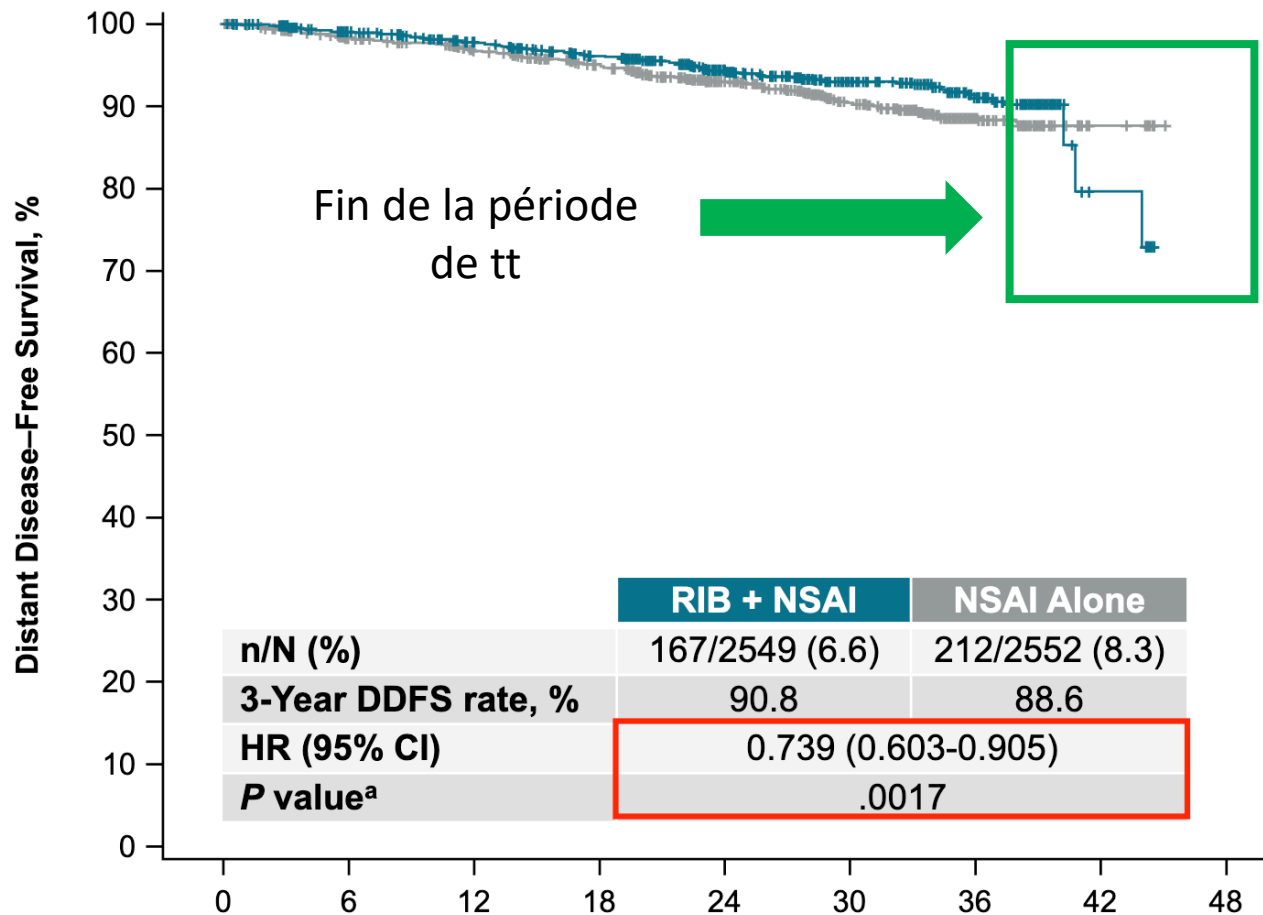
	RIB + NSA	NSAI Alone
n/N (%)	189/2549 (7.4)	237/2552 (9.3)
3-Year iDFS rate, %	90.4	87.1
HR (95% CI)	0.748 (0.618-0.906)	
P value ^a	.0014	

No. at risk	Months									
	0	6	12	18	24	30	36	42	48	
RIB + NSA	2549	2350	2274	2193	1718	1111	311	12	0	
NSAI alone	2552	2240	2166	2071	1631	1067	286	13	0	

- Based on the **P value of .0014**, the IDMC concluded that the results met the criteria to demonstrate statistically significant and clinically superior efficacy
P < 0.025
- Absolute iDFS benefit with RIB + NSA at 3 years was 3.3%
- Risk of invasive disease was reduced by **25.2%** with RIB + NSA vs NSA alone
- Ongoing patients will remain on treatment and follow-up will continue as prespecified

iDFS, invasive disease-free survival; IDMC, Independent Data Monitoring Committee; HR, hazard ratio; NSA, nonsteroidal aromatase inhibitor; RIB, ribociclib.
^a One-sided P value.

Consistent improvement in DDFS with ribociclib

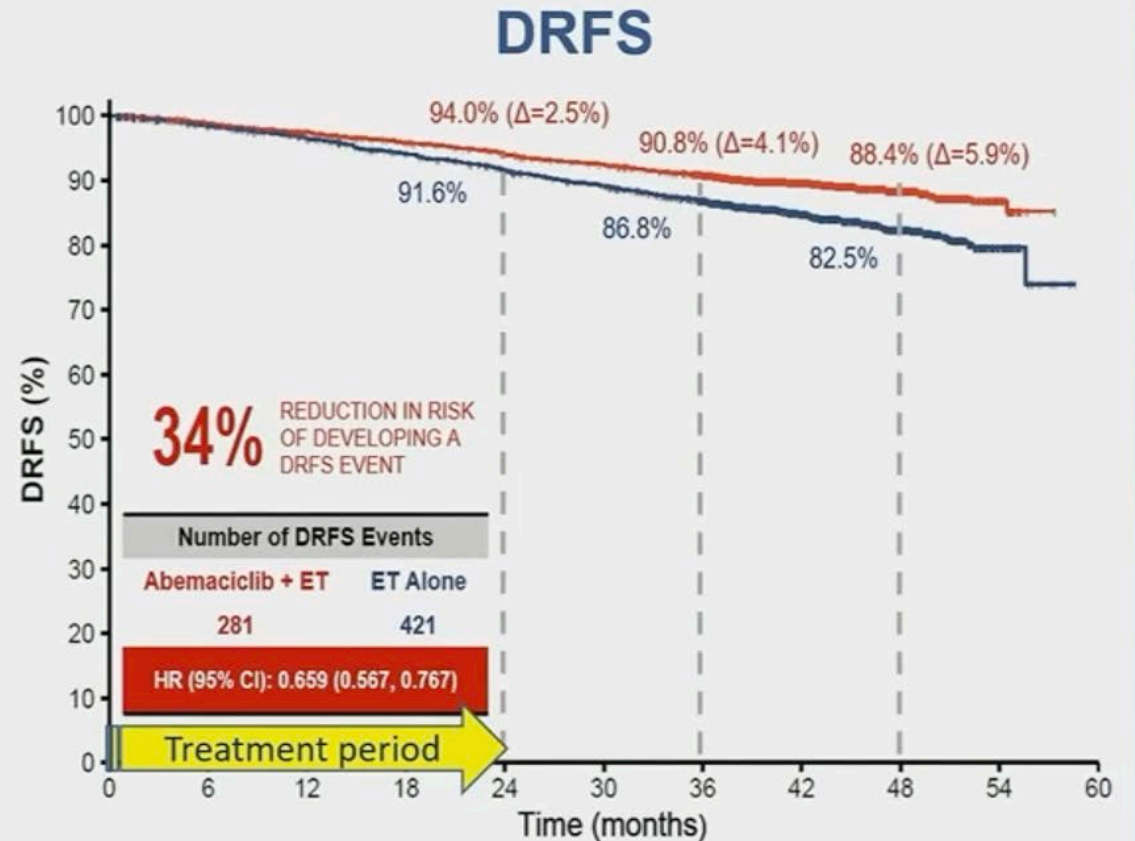
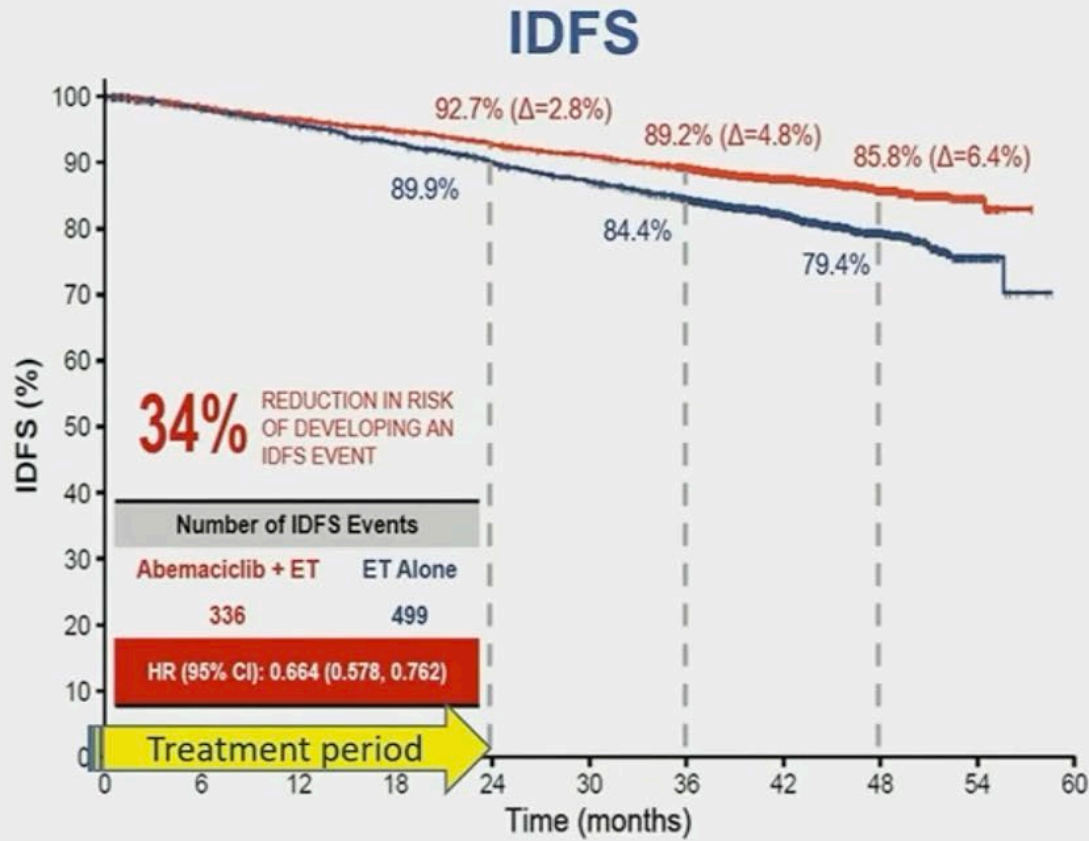


- Distant disease-free survival is defined as the time from date of randomization to date of first event of distant recurrence, death (any cause), or second primary non-breast invasive cancer^b
- The one-sided nominal *P* value was .0017
- Absolute distant disease-free survival benefit with RIB + NSAI at 3 years was 2.2%
- Risk of distant disease was reduced by 26.1% with RIB + NSAI vs NSAI alone

No. at risk	Months								
	0	6	12	18	24	30	36	42	48
RIB + NSAI	2549	2352	2280	2199	1729	1119	311	12	0
NSAI alone	2552	2244	2168	2080	1643	1076	288	13	0

DDFS, distant disease-free survival; ET, endocrine therapy; HR, hazard ratio; NSAI, nonsteroidal aromatase inhibitor; RIB, ribociclib. ^a One-sided *P* value. ^b Excluding basal and squamous cell carcinomas of the skin.

monarchE: IDFS and DRFS Benefit Persist and Deepen Beyond Completion of 2-Year Abemaciclib Treatment Period³



Number at risk

Abemaciclib + ET	2808	2620	2548	2478	2407	2345	2214	1229	521	79	0
ET Alone	2829	2652	2572	2474	2374	2281	2103	1201	512	82	0

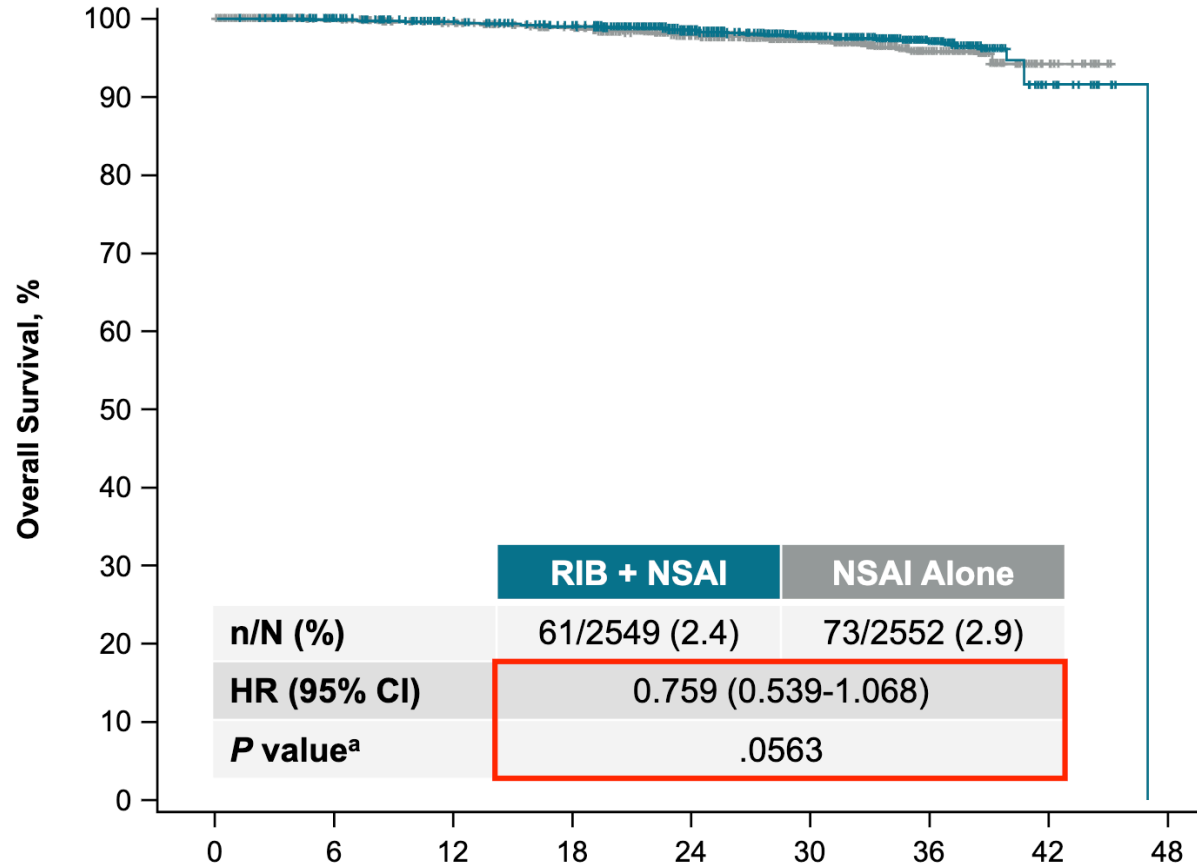
Number at risk

Abemaciclib + ET	2808	2629	2567	2500	2434	2374	2244	1251	535	81	0
ET Alone	2829	2659	2589	2499	2410	2327	2151	1231	526	85	0

*From ITT analysis

³Johnston SRD et al. 2023 The Lancet Oncol;24(01):77-90

Ribociclib showed a trend for improved OS



- Median follow-up for OS was 30.4 months
- Additional follow-up for OS is planned

No. at risk	Months									
	0	6	12	18	24	30	36	42	48	
RIB + NSAI	2549	2405	2337	2303	1905	1338	451	21	0	
NSAI alone	2552	2303	2256	2209	1823	1273	385	22	0	

HR, hazard ratio; NSAI, nonsteroidal aromatase inhibitor; OS, overall survival; RIB, ribociclib.
^a One-sided nominal P value.

Median follow-up of 34.0 months (minimum, 21 months)

78% des patients sont encore sous traitement

57 % sous ribociclib

19% d'arrêt du RIB pour tox

Uniquement 4% d'arrêt de l'HT

monarchE¹: 6% (180/2794) early discontinuations in abemaciclib arm due to AE

PenelopeB²: 5% (33/628) early discontinuations in palbociclib arm due to AE

Ribociclib at the 400-mg dose was safe and well tolerated

AEsIs, %	RIB + NSAI n = 2524		NSAI Alone n = 2444	
	Any Grade	Grade ≥ 3	Any Grade	Grade ≥ 3
Neutropenia ^a	62.1	43.8	4.5	0.8
Febrile neutropenia	0.3	0.3	0	0
Liver-related AEs ^b	25.4	8.3	10.6	1.5
QT interval prolongation ^c	5.2	1.0	1.2	0.5
ECG QT prolonged	4.2	0.2	0.7	0
ILD pneumonitis ^d	1.5	0	0.8	0.1
Other clinically relevant AEs, %				
Arthralgia	36.5	1.0	42.5	1.3
Nausea	23.0	0.2	7.5	0.04
Headache	22.0	0.4	16.5	0.2
Fatigue	21.9	0.7	12.7	0.2
Diarrhea	14.2	0.6	5.4	0.1
VTE	1.4	0.6	0.6	0.2

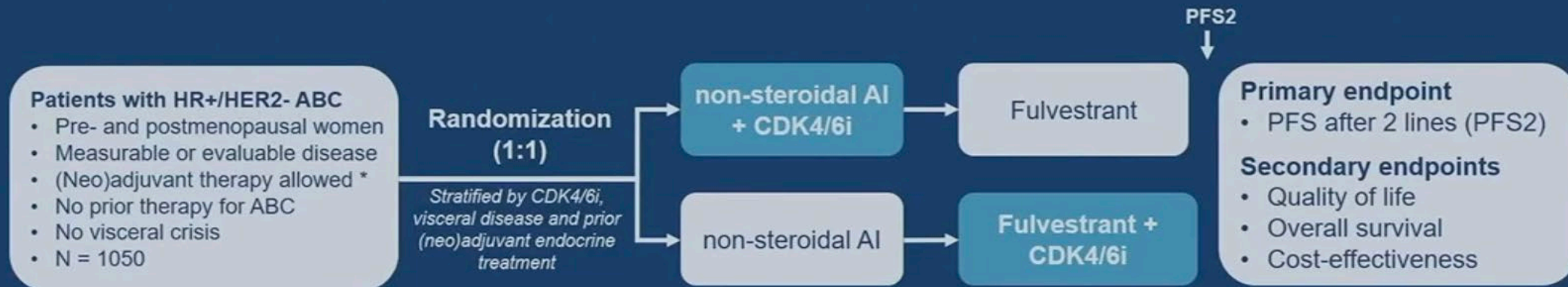
- The most frequent all-grade AEs (RIB + NSAI vs NSAI alone) leading to discontinuation were:
 - Liver-related AEs: 8.9% vs 0.1%
 - Arthralgia: 1.3% vs 1.9%
- Most of the AE discontinuations of RIB occurred early in treatment
 - Median time of these discontinuations was 4 months

Conclusion

- Etude positive mais il faut attendre les résultats au long cours
- Confirme intérêt des CDK4/6 en adjuvant
- Toxicités acceptables mais voir les données de qualité de vie
- Quid du positionnement par rapport à l'abémaciclib ?
 - **Avis favorable au remboursement « en association avec une hormonothérapie chez les patients adultes en traitement adjuvant du cancer du sein précoce RH+/HER2-, avec atteinte ganglionnaire et haut risque de rechute » juin 2023**
 - **Indication :**
 - ≥4 ganglions lymphatiques axillaires ipsilatéraux positif,
 - ou 1 à 3 ganglion(s) lymphatique(s) axillaire(s) ipsilatéral(aux) positif(s) avec au moins un des 2 critères suivants : grade histologique 3 ou taille de la tumeur primaire ≥5 cm.
 - **Choix entre les 2 inhibiteurs de CDK sera à discuter en fonction des caractéristiques des patientes, le profil de tolérance, l'ampleur du bénéfice attendu, la durée du traitement (2 contre 3 ans) et le coût.**

Primary outcome of the phase 3 SONIA trial (BOOG 2017-03)

Gabe Sonke, Annemiek van Ommen - Nijhof, Noor Wortelboer, Vincent van der Noort, Astrid Swinkels, Hedwig Blommestein, Aart Beeker, Karin Beelen, Lianne Hamming, Joan Heijns, Aafke Honkoop, Paul de Jong, Quirine van Rossum - Schornagel, Christa van Schaik - van de Mheen, Jolien Tol, Cathrien Tromp - van Driel, Suzan Vrijaldenhoven, Elise van Leeuwen - Stok, Inge Konings, Agnes Jager



- Tumor assessments every 12 weeks
- PFS locally assessed per RECIST v1.1
- Primary analysis planned after 574 PFS2 events
 - 89% power to detect superiority according to ESMO MCBS (HR lower limit CI ≤ 0.65 and $\Delta \geq 3$ months) with two-sided $\alpha=5\%$ ¹

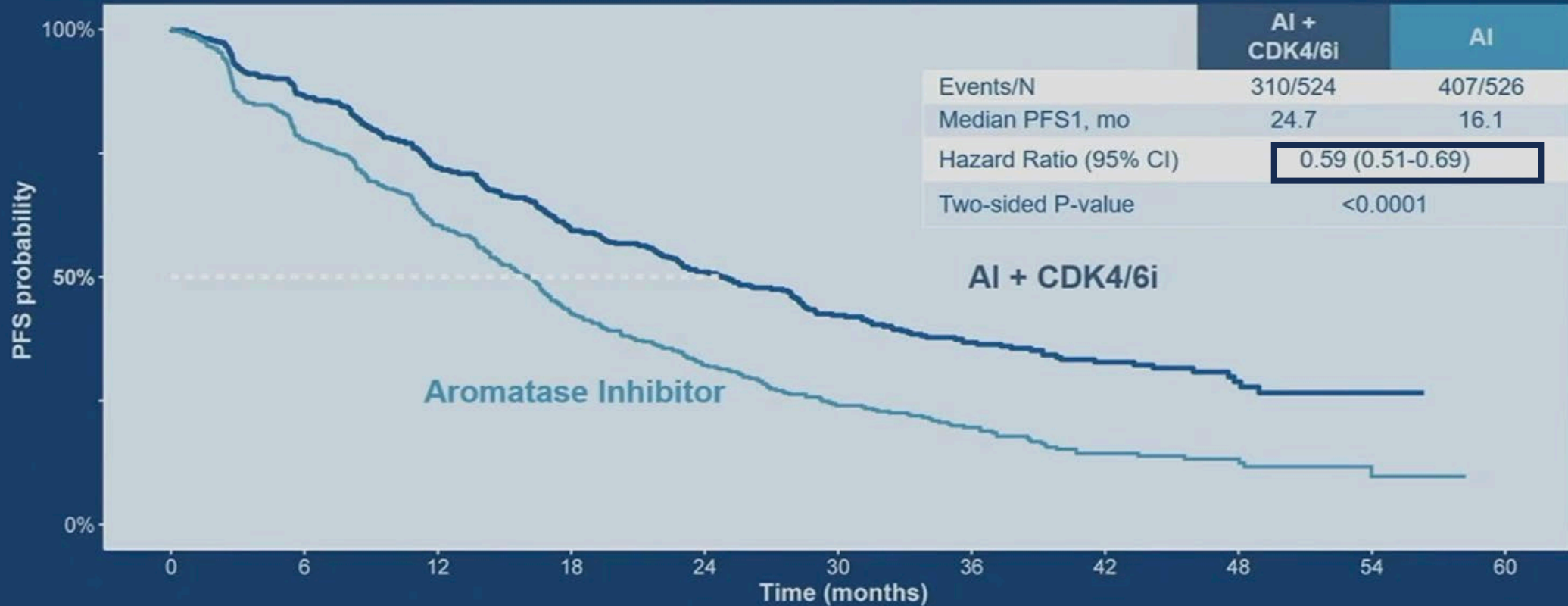
HR+, hormone receptor positive; HER2-, HER2 negative; ABC, advanced breast cancer; AI, aromatase inhibitor; PFS, progression-free survival
* disease-free interval after non-steroidal aromatase inhibitor >12 months. ClinicalTrials.gov (NCT03425838)
1. Cherny NI, et al. Ann Oncol 2017

Baseline characteristics



		First-line CDK4/6i N=524	Second-line CDK4/6i N=526
Median age, years (range)		64 (24-88)	63 (25-87)
WHO PS, n (%)	0	257 (49)	257 (49)
	≥1	267 (51)	269 (51)
Menopausal status, n (%)	Pre- / perimenopausal	69 (13)	76 (14)
	Postmenopausal	455 (87)	450 (86)
Disease-free interval, n (%)	Newly diagnosed	182 (35)	182 (35)
	≤24 months	96 (18)	98 (19)
	>24 months	246 (47)	246 (47)
Prior (neo)adjuvant therapy, n (%)	Chemotherapy	212 (40)	210 (40)
	Endocrine therapy	258 (49)	254 (48)
Metastatic site, n (%)	Visceral disease	291 (56)	292 (56)
	Bone-only disease	91 (17)	91 (17)
Measurable disease, n (%)		315 (60)	312 (59)
Type of CDK4/6i, n (%)	Palbociclib	479 (91)	479 (91)
	Ribociclib	42 (8)	44 (8)
	Abemaciclib	3 (1)	3 (1)

Progression-free survival in first line



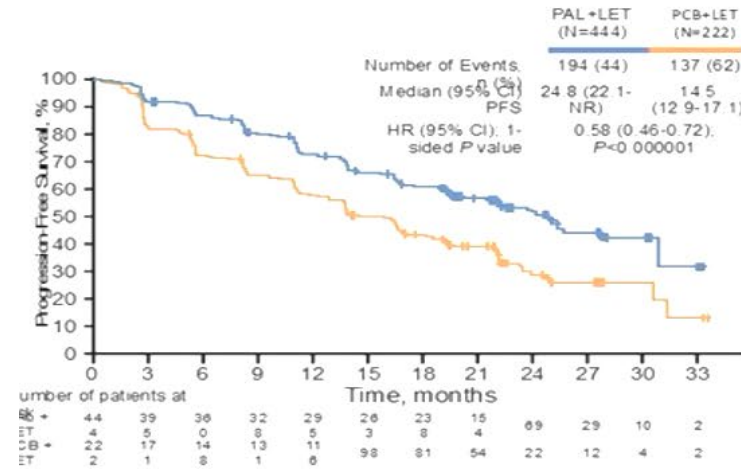
	0	6	12	18	24	30	36	42	48	54	60
AI + CDK4/6i	524 (0)	451 (3)	374 (4)	285 (30)	202 (76)	137 (110)	101 (129)	63 (158)	27 (189)	4 (210)	0 (214)
AI	526 (0)	406 (2)	315 (4)	203 (25)	128 (54)	84 (68)	57 (81)	31 (93)	17 (105)	5 (114)	0 (119)

Numbers at risk (censored)

First line AI combination trials Primary endpoint PFS

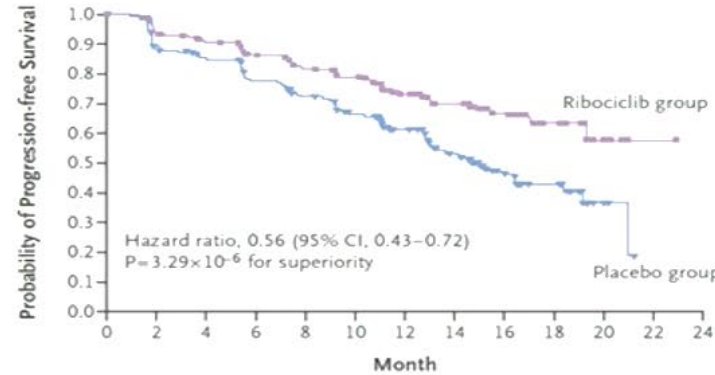
PALOMA2 palbociclib

HR 0.58, p<0.001



MONALEESA2 ribociclib

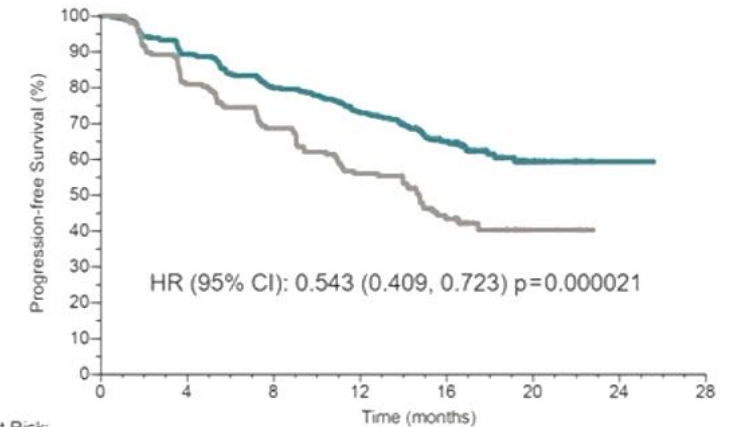
HR 0.56, p<0.001



No. at Risk	0	2	4	6	8	10	12	14	16	18	20	22	24
Ribociclib	334	294	277	257	240	226	164	119	68	20	6	1	0
Placebo	334	279	264	237	217	192	143	88	44	23	5	0	0

MONARCH3 abemaciclib

HR 0.54, p<0.001

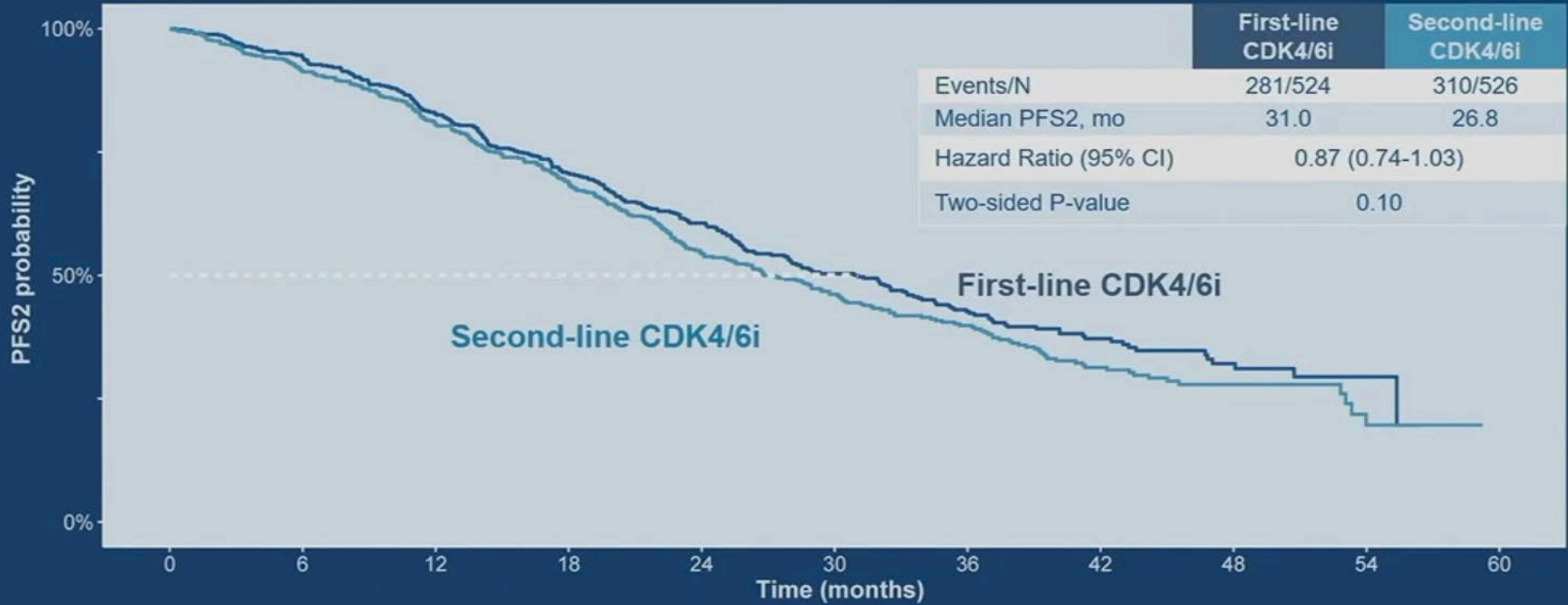


Patients at Risk:	0	4	8	12	16	20	24	28
abemaciclib arm	328	271	234	205	125	25	1	0
placebo arm	165	127	105	82	45	7	0	0

All inhibitors similar efficacy in PFS primary
First line AI plus CDK4/6 inhibitor is the standard of care

Primary endpoint: PFS2

SONIA

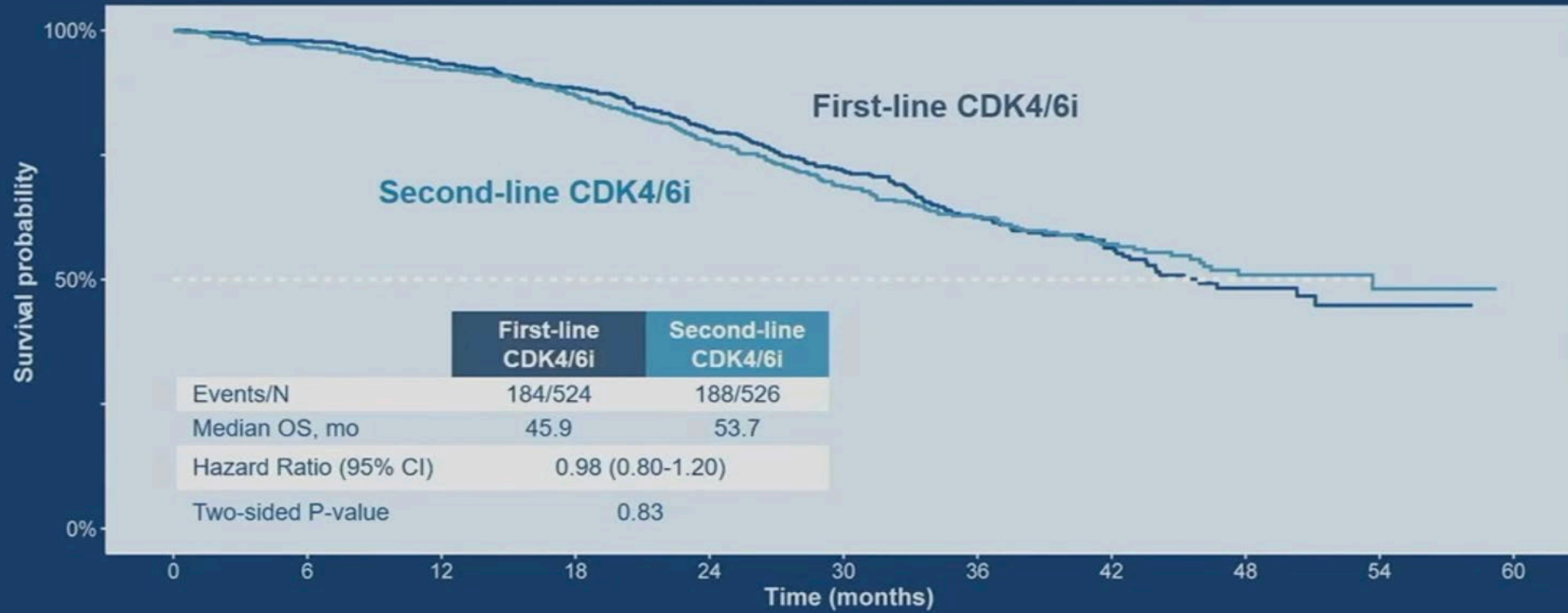


	0	6	12	18	24	30	36	42	48	54	60
First-line	524 (0)	491 (3)	429 (5)	339 (34)	244 (84)	167 (123)	118 (148)	69 (184)	31 (215)	5 (239)	0 (243)
Second-line	526 (0)	478 (2)	418 (6)	330 (35)	225 (76)	164 (105)	115 (133)	65 (161)	30 (190)	9 (207)	0 (216)

Numbers at risk (censored)

Overall survival

SONIA



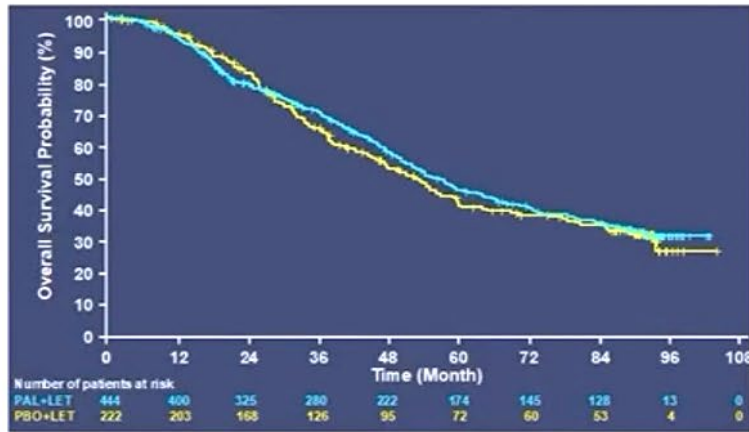
	0	6	12	18	24	30	36	42	48	54	60
First-line	524 (0)	510 (3)	485 (4)	427 (37)	324 (103)	240 (157)	171 (197)	104 (250)	42 (300)	7 (333)	0 (340)
Second-line	526 (0)	506 (2)	483 (2)	426 (32)	328 (89)	242 (139)	175 (186)	112 (236)	52 (287)	16 (322)	0 (338)

Numbers at risk (censored)

First line AI combination trials Secondary endpoint OS

PALOMA2 palbociclib

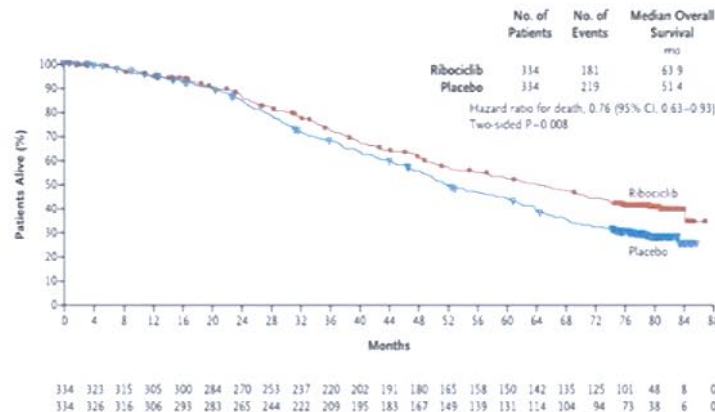
HR 0.96, p=0.3



Finn *et al* ASCO 2022

MONALEESA2 ribociclib

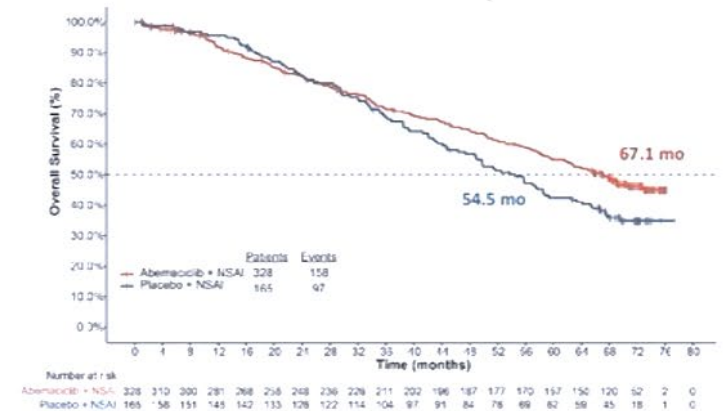
HR 0.76, p=0.008



Hortobagyi *et al* NEJM 2022

MONARCH3 abemaciclib

HR 0.754, p=0.03 NS



Goetz *et al* ESMO 2022

Quality of life



- Quality of life was assessed using validated questionnaires
- Up to 11 timepoints
- FACT-B and EQ-5D-5L
- Completion rate 87% for FACT-B in both arms
- FACT-B subscores and cost-effectiveness analyses will follow

No difference in FACT-B total score between the study arms (p=0.4)

Conclusion

Etude de stratégie importante

L'administration d'un iCDK 4/6 en première ligne, par rapport à sa prescription en deuxième ligne

- N'améliore pas la survie sans progression SSP2
- N'améliore pas la survie globale
- N'améliore pas la qualité de vie

Conclusion de l'auteur :

- Augmente la durée de prescription de l'iCDK 4/6 de 16,5 mois
- Augmente l'incidence des toxicités de grade 3-4 de 42 %
- Augmente le prix du traitement par patient de 200 000 dollars

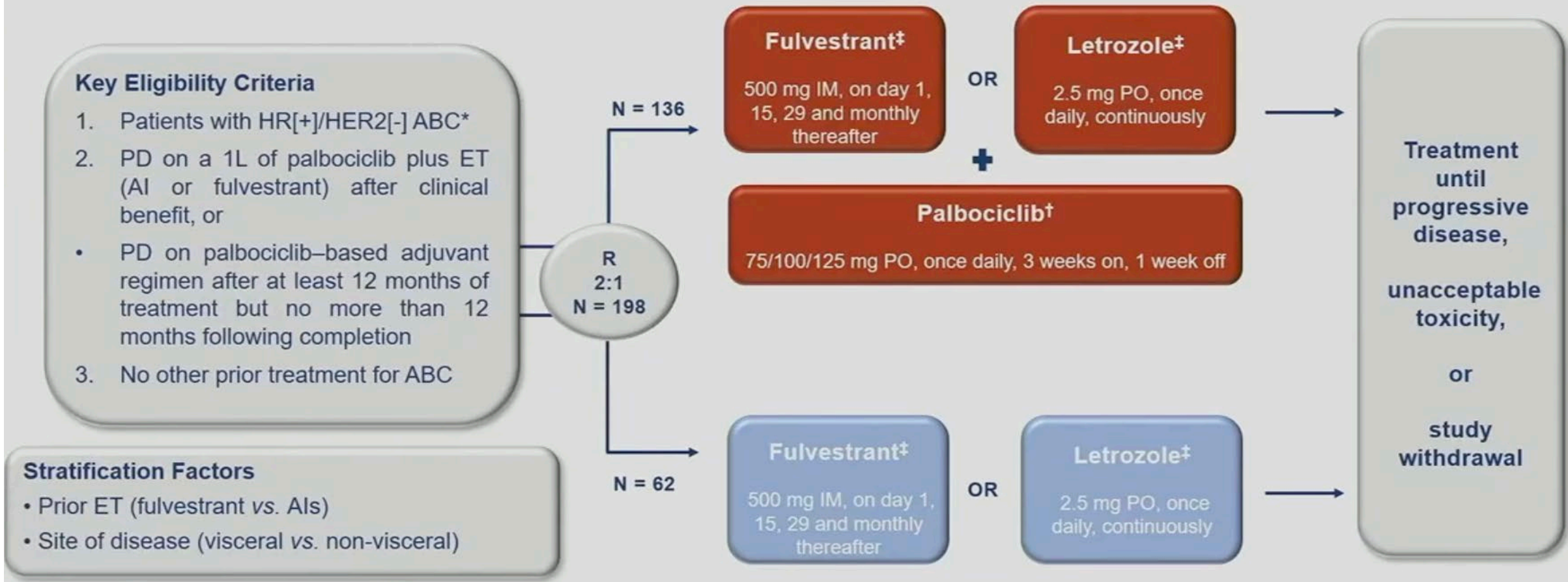
Remise de l'intérêt des iCDK4/6 en 1^{ère} ligne ou de l'intérêt du Palbociclib en 1^{ère} ligne ?

Second-line endocrine therapy with or without palbociclib maintenance in patients with HR[+]/HER2[-] advanced breast cancer: PALMIRA trial

Antonio Llombart-Cussac¹, Catherine Harper-Wynne², Antonia Perelló³, Audrey Hennequin⁴, Adela Fernández⁵, Marco Colleoni⁶, Vicente Carañana⁷, Vanesa Quiroga⁸, Jacques Medioni⁹, Vega Iranzo¹⁰, Duncan Wheatley¹¹, Sonia del Barco Berrón¹², Antonio Antón¹³, Erion Dobi¹⁴, Manuel Ruiz¹⁵, Daniel Alcalá-López¹⁶, Jhudit Pérez-Escuredo¹⁷, Miguel Sampayo-Cordero¹⁸, José Manuel Pérez-García¹⁹, Javier Cortés²⁰

1. Medica Scientia Innovation Research (MEDSIR), Barcelona, Spain and Ridgewood, New Jersey, US. Hospital Arnau de Vilanova; FISABIO, Valencia, Spain. Universidad Católica de Valencia, Valencia, Spain; 2. Maidstone Hospital - Kent Oncology Centre, Maidstone, United Kingdom; 3. Hospital Universitari Son Espases, Palma de Mallorca, Spain; 4. Centre Georges François Leclerc, Dijon, France; 5. Institut Català d'Oncologia L'Hospitalet (ICO), Barcelona, Spain; 6. IEO, Instituto Europeo di Oncologia, IRCCS; Milan, Italy; 7. Hospital Arnau de Vilanova de Valencia, Valencia, Spain; 8. Institut Català d'Oncologia Badalona (ICO), Barcelona, Spain; 9. Hopital Europeen Georges Pompidou, Paris, France. University Paris Cite; 10. Consorci Hospital General Universitari de València, Valencia, Spain; Universitat de Valencia, Valencia, Spain; 11. Royal Cornwall Hospital NHS Trust, Cornwall, United Kingdom; 12. Institut Català d'Oncologia Girona (ICO), Girona, Spain; 13. Hospital Universitario Miguel Servet, Zaragoza, Spain; 14. Hôpital Jean Minjoz, Doubs, France; 15. Hospital Universitario Virgen del Rocío, Sevilla, Spain; 16. Medica Scientia Innovation Research (MEDSIR), Barcelona, Spain and Ridgewood, New Jersey, US; 17. Medica Scientia Innovation Research (MEDSIR), Barcelona, Spain and Ridgewood, New Jersey, US; 18. Medica Scientia Innovation Research (MEDSIR), Barcelona, Spain and Ridgewood, New Jersey, US; 19. International Breast Cancer Center (IBCC), Pangaea Oncology, Quiron Group, Barcelona, Spain. Medica Scientia Innovation Research (MEDSIR), Barcelona, Spain and Ridgewood, New Jersey, US; 20. International Breast Cancer Center (IBCC), Pangaea Oncology, Quiron Group, Barcelona, Spain. Medica Scientia Innovation Research (MEDSIR), Barcelona, Spain and Ridgewood, New Jersey, US. Universidad Europea de Madrid, Madrid, Spain.

PALMIRA Study Design (NCT03809988)



1L: First-line; ABC: Advanced breast cancer; AI: Aromatase inhibitors; ET: Endocrine therapy; HER2[-]: Human Epidermal Growth Factor Receptor 2-negative; HR[+]: Hormone receptor-positive; IM: Intramuscular injection; PO: oral administration; PD: Progressive disease; R: Randomization.
 *If pre-menopausal, ovarian function suppression method required.
 †Palbociclib dose could be reduced until 75 mg. If a dose reduction below 75 mg is required, treatment must be discontinued.
 ‡Administration of endocrine therapy was chosen depending on the prior administered agent.

Study Endpoints

Primary Endpoint

- Investigator-assessed progression-free survival (PFS) determined by RECIST v.1.1

Secondary Endpoints

- Objective response rate (ORR), clinical benefit rate (CBR), overall survival (OS), duration of response (DoR), time to response (TTR), and time to progression (TTP)
- ORR, DoR, TTR, CBR, TTP, OS, and PFS by prior endocrine therapy, site of disease, and HER2 expression status
- Overall change from baseline in patient reported global quality of life (QoL), functioning, symptoms and general health status
- Time to deterioration in global QoL
- Time to deterioration in pain
- Time to first chemotherapy
- Safety and tolerability

Exploratory Endpoints

- Molecular subtypes
- Predictive biomarkers

Baseline Characteristics (ITT population)

Baseline characteristics, n (%)	ET + Palbociclib (N = 136)	ET (N = 62)
Age in years, Median (Min; Max)	59 (33; 85)	61 (34; 83)
Menopausal status		
Premenopausal	18 (13.2%)	6 (9.7%)
Postmenopausal	118 (86.8%)	56 (90.3%)
ECOG PS score		
0	90 (66.2%)	31 (50.0%)
1*	45 (33.1%)	31 (50.0%)
Measurable disease at baseline		
Yes	94 (69.1%)	44 (71.0%)
No	42 (30.9%)	18 (29.0%)
Visceral involvement		
Yes	84 (61.8%)	37 (59.7%)
No	52 (38.2%)	25 (40.3%)

ECOG PS: Eastern Cooperative Oncology Group performance status; ITT: Intention to treat.

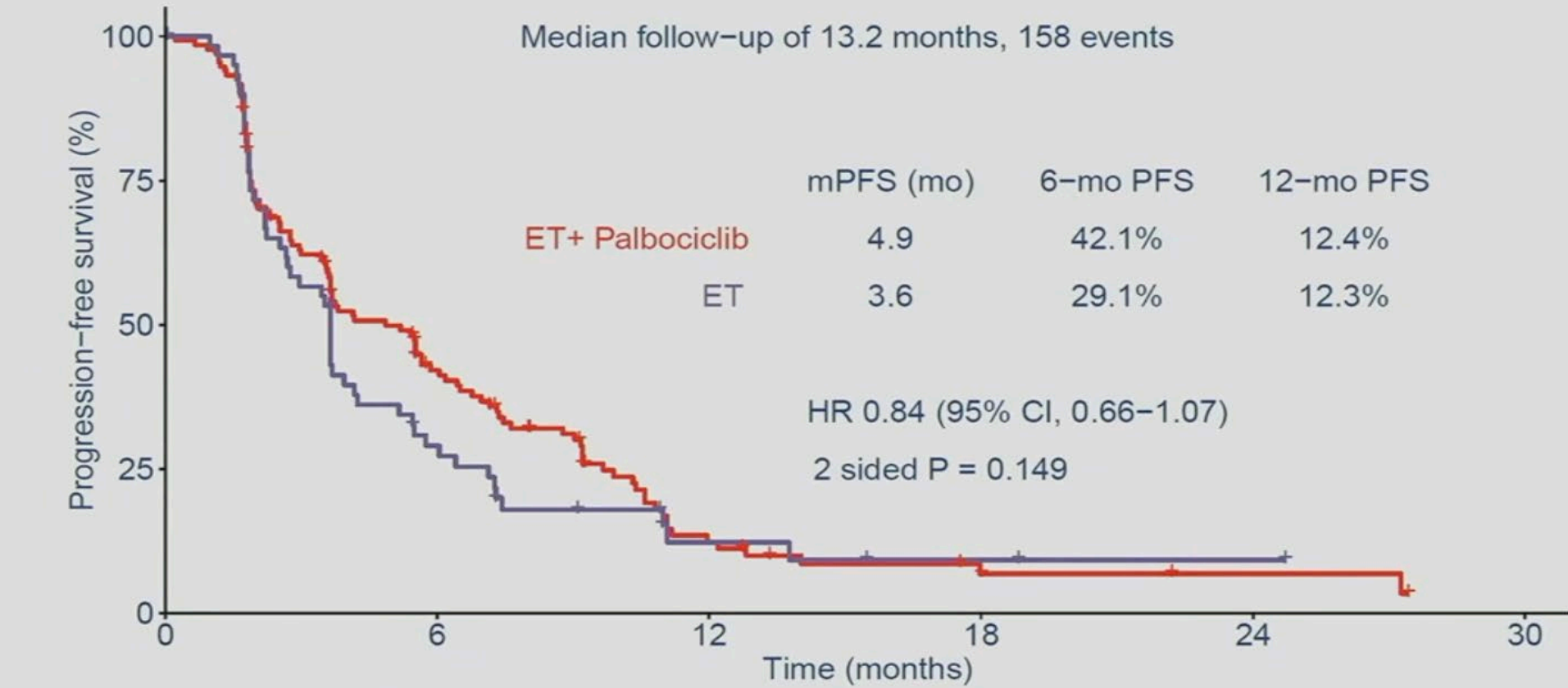
*One patient in ET + Palbociclib group had ECOG 2.

Baseline Characteristics cont. (ITT population)

Baseline characteristics, n (%)	ET + Palbociclib (N = 136)	ET (N = 62)
Number of metastatic sites		
<3	92 (67.6%)	38 (61.3%)
≥3	44 (32.4%)	24 (38.7%)
Prior endocrine therapy used in combination with palbociclib		
Fulvestrant	16 (11.8%)	4 (6.5%)
Aromatase Inhibitor	120 (88.2%)	58 (93.5%)
Duration of first-line palbociclib (6-12; ≥12 months)		
6-12 months	18 (13.2%)	10 (16.1%)
≥ 12 months	118 (86.8%)	52 (83.9%)
Last dose of first-line palbociclib		
125 mg	83 (53.2%)	33 (61.0%)
100 mg	45 (43.5%)	27 (33.1%)
75 mg	8 (3.2%)	2 (5.9%)

ITT: Intention to treat.

Primary Objective: Investigator-assessed PFS (ITT Population)

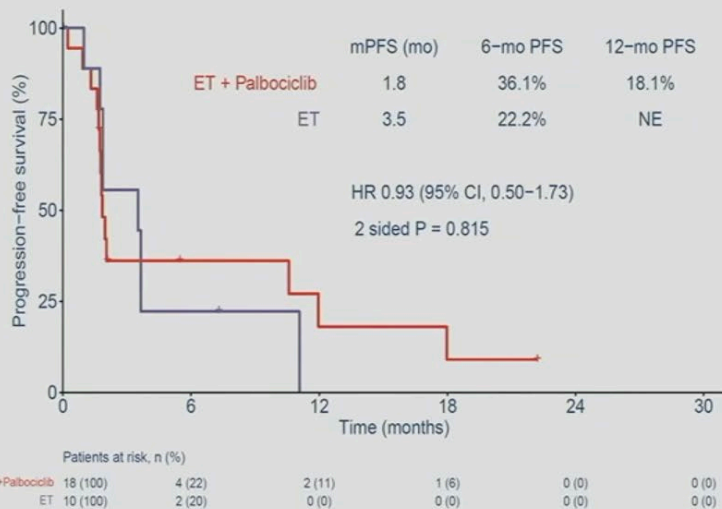


Patients at risk, n (%)		0	6	12	18	24	30
ET+Palbociclib	136 (100)	47 (35)	11 (8)	4 (3)	2 (1)	0 (0)	0 (0)
ET	62 (100)	16 (26)	4 (6)	2 (3)	1 (2)	0 (0)	0 (0)

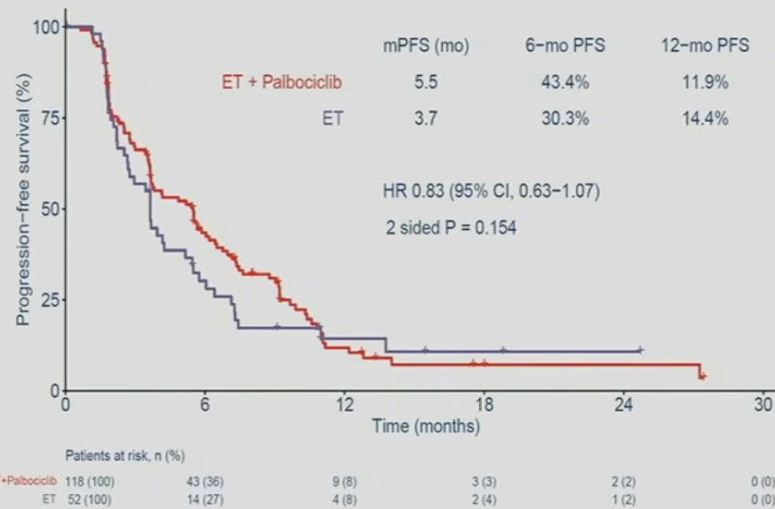
CI: Confidence interval; HR: Hazard ratio; ITT: Intention to treat; mo: Months; mPFS: Median progression-free survival; PFS: Progression-free survival.

PFS by prior duration of palbociclib treatment (ITT Population)

6-12 months (N = 28)

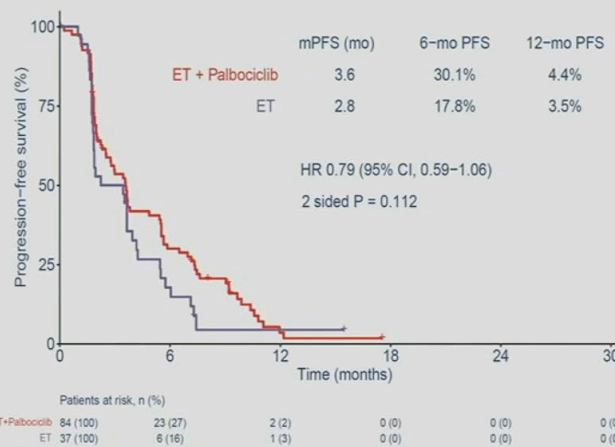


≥ 12 months (N = 170)

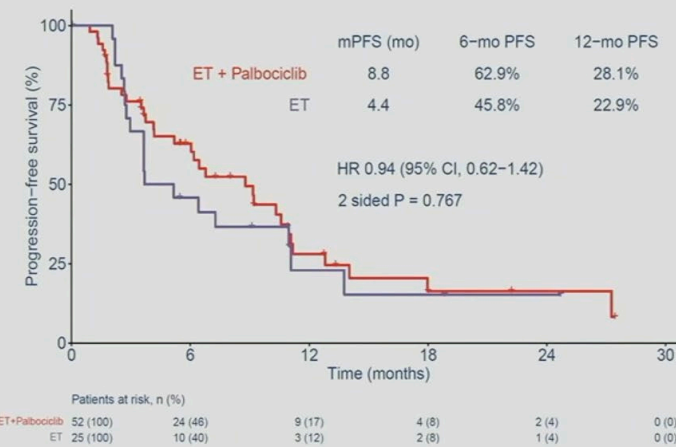


PFS by Visceral Disease (ITT Population)

Visceral involvement (N = 121)



Without visceral involvement (N = 77)



Conclusion

- Etude de stratégie importante +++
- Pas de poursuite du CDK4/6 systématique
- Rôle du palbociclib ?

	MAINTAIN	PACE	PALMIRA
Patients (n)	120	166	198
1 st line CDK4/6i	Palbociclib (84%)	Palbociclib (90%)	Palbociclib (100%)
% 1 st line CDK4/6i >12mo	67%	75%	86%
Endocrine therapy	Fulvestrant (83%) or exemestane	Fulvestrant (100%)	Fulvestrant (90%) or letrozole
'Continuation' CDK4/6i	Ribociclib	Palbociclib	Palbociclib
PFS ET only	2.8mo	4.8mo	3.6mo
PFS Fulv + CDK4/6i	5.3mo	4.6mo	4.9mo

Malinsky JCO 2023; Mayer SABCS 2022; Llombart-Cussac ASCO 2023

- Intérêt du fulvestrant ? Place des nouveaux SERDS ?