Pfizer Breast Cancer Data Updates

San Antonio Breast Cancer Symposium (SABCS) 2024

December 10-13, 2024
San Antonio, TX, USA

EM-DEU-plb-0145

Table of Contents

Palbociclib in Women Aged ≥70 Years as First-Line Treatment for Endocrine-Sensitive Hormone Receptor-Positive/Human Epidermal Growth Factor Receptor 2-Negative Locally Advanced or Metastatic Breast Cancer: Final Results of **PalomAGE**

Carola E, et al. SABCS 2024. Poster P2-07-17.

Pfizer-Sponsored Study

EM-DEU-plb-0145

PalomAGE: Study Design[1-5]

Real-world, noninterventional, prospective, French multicentered study

G8 Screening Tool

DIALOG G-CODE

Objective: To present the final results from **cohort A** on primary and selected secondary outcomes from PalomAGE, a RWD study designed to evaluate the safety, effectiveness, and tolerability/QoL outcomes of PAL plus ET in women ≥70 years with HR+/HER2- ABC

KEY ELIGIBILITY CRITERIA

- Women aged ≥70 years with HR+/HER2- ABC
- Patients who initiated PAL without prior CDK4/6i exposure between October 2018 to December 2020

N=816

Cohort A
ET sensitive, 1L treatment for ABC
(n=412)

Cohort B
ET resistant and/or in later lines for ABC treatment
(n=404)

Primary Outcome

- Cohort A: 18-month PAL discontinuation rate*

Secondary Outcomes

- TTF†
- AEs, per NCI-CTCAE v5.0
- rwPFS‡
- Geriatric Assessment per G8-screening tool[2,3,§]
- QoL per EORTC QLQ-C30 and QLQ-ELD14[4,5,‖]

Statistical Analyses

- Factors associated with TTF will be investigated by uni- and multivariate analyses, performed using Cox PH models (significance level was set at 5%)
- TTF and rwPFS were estimated using the KM method

*PAL discontinuation rate was defined by the proportion of patients who permanently discontinued PAL (±ET) for toxicities (NCI-CTCAE v5.0), patient's decision, disease progression, or death. †TTF was defined as the time from PAL initiation to its discontinuation. ‡rwPFS was defined as time from PAL initiation to the first progression or death from any cause. §The G8 screening tool was used to identify patients with G8 score ≤14/17 who should benefit from a GA and Geriatric Core Dataset (DIALOG G-CODE), a validated GA standardized tool of 7 geriatric domains: social environment, functional status, nutritional status, cognitive status, mobility, depressive mood, and comorbidities.[2,3] ‖QoL was assessed using the EORTC QLQ-C30 and QLQ-ELD14 (specifically designed to assess QoL in patients with cancer ≥70 years) questionnaires.[4,5]

1L=first-line; ABC=advanced breast cancer; AE=adverse event; CDK4/6i=cyclin-dependent kinase 4/6 inhibitor; EORTC QLQ=European Organization for Research and Treatment of Cancer Quality of Life Questionnaire; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; KM=Kaplan-Meier; NCI-CTCAE v5.0=National Cancer Institute Common Terminology Criteria for Adverse Events (version 5.1); PAL=palbociclib; QoL=quality of life; RWD=real-world data; rwPFS=real-world progression-free survival; TTF=time to treatment failure.

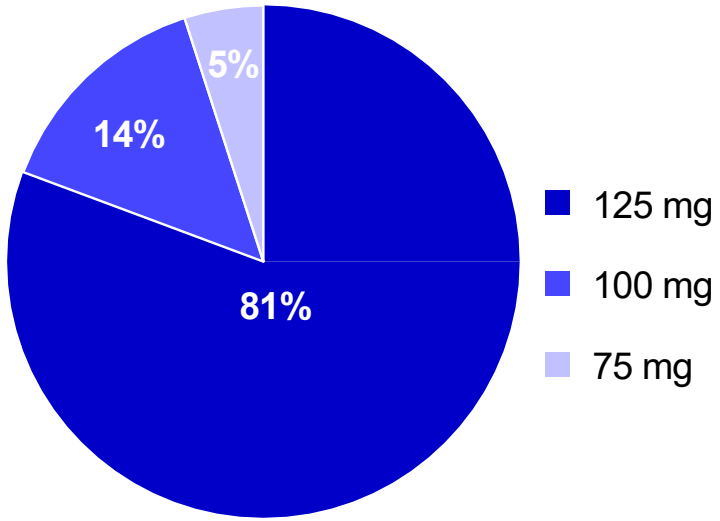
1. Carola E, et al. SABCS 2024. Poster P2-07-17.
2. Soubeyran P, et al. *PLoS One.* 2014;9(12):e115060.
3. Paillaud E, et al. *Eur J Cancer.* 2018;103:61-68.
4. Groenvold M, et al. *J Clin Epidemiol.* 1997;50(4):441-450.
5. Wheelwright S, et al. *Br J Cancer.* 2013;109(4):852-858.

PalomAGE: Cohort A—Study Population

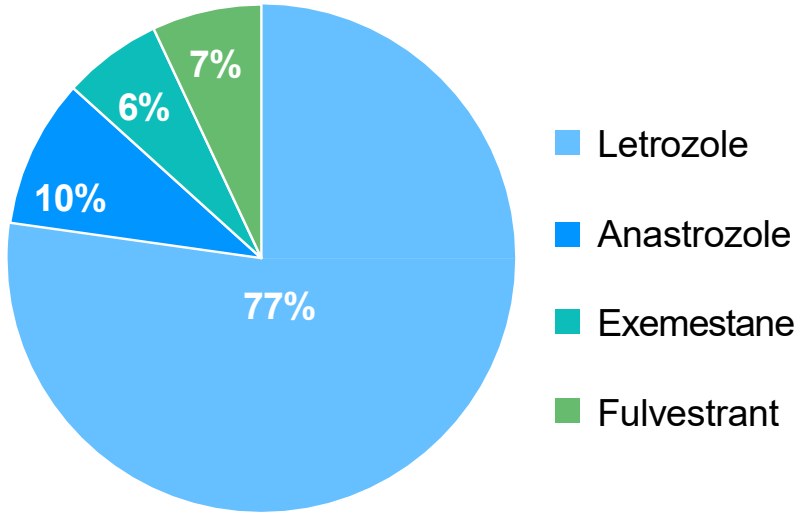
Among 816 patients included, 412 initiated PAL in **cohort A** (safety analysis set), with 382 (93%) receiving ≥1 cycle of PAL (full analysis set) evaluable for effectiveness outcomes.

Safety Analysis Set (N=412)

Palbociclib Initiation Dose



Concurrent Endocrine Therapy



- Patients initiating PAL at reduced dose (100 or 75 mg) were older, presented more often with ECOG PS ≥2, and had poorer geriatric scores (data not shown)

ECOG PS=Eastern Cooperative Oncology Group performance status; PAL=palbociclib.

Carola E, et al. SABCS 2024. Poster P2-07-17.

PalomAGE: Cohort A—Baseline Characteristics (1 of 2)

*Safety Analysis Set (N=412)**

Characteristics	Cohort A (N=412)
Age	
Median age, years (min-max)	78 (70–94)
Mean, years (SD)	79 (6)
≥80 years old, n (%)	183 (44)
ECOG PS, n (%)	
0-1	295 (72)
≥2	72 (17)
Not done/missing	45 (11)
Disease characteristics, n (%)	
De novo mBC	207 (50)
Location of metastasis, n (%)	
Visceral	172 (42)
Bone only	133 (32)
≥3 metastatic sites	38 (9)
G8 scores ≤14 (potentially frail), n (%) *Available N=405*†	280 (69)

*Main baseline characteristics are presented here, with a focus on factors associated with decreased TTF in uni- and multivariate analyses. †Available N is the number of patients with completed questionnaires.
ECOG PS=Eastern Cooperative Oncology Group performance status; G8=geriatric assessment score; mBC=metastatic breast cancer; SD=standard deviation; TTF=time to treatment failure.

Carola E, et al. SABCS 2024. Poster P2-07-17.

PalomAGE: Cohort A—Baseline Characteristics (2 of 2)

*Safety Analysis Set (N=412)**

Characteristics	Cohort A (N=412)
DIALOG G—CODE, n (%)	
Do you live alone? Yes, *Available N†=340*	154 (45)
Do you have a person able to provide you care and support? Yes, *Available N†=328*	273 (83)
ADLs alteration (≤5), *Available N†=363*	53 (15)
IADLs alteration (≤3), *Available N†=363*	104 (29)
Mobility, inability to perform the test (time ≥20 sec), *Available N†=279*	66 (24)
Nutritional status (Unintentional weight loss >10% in 6 months), *Available N†=320*	244 (76)
Cognitive status, *Available N†*	337
Threshold dementia (score <3)	66 (20)
Threshold deeper evaluation (score <4)	143 (42)
Depressive mood (mini GDS score ≥1/4), *Available N†=352*	167 (47)
Charlson comorbidities score ≥4, *Available N†=346*	296 (86)

*Main baseline characteristics are presented here, with a focus on factors associated with decreased TTF in uni- and multivariate analyses. †Available N is the number of patients with completed questionnaires.
ADL=activity of daily living; GDS=geriatric depression scale; IADL=instrumental activities of daily living; TTF=time to treatment failure.

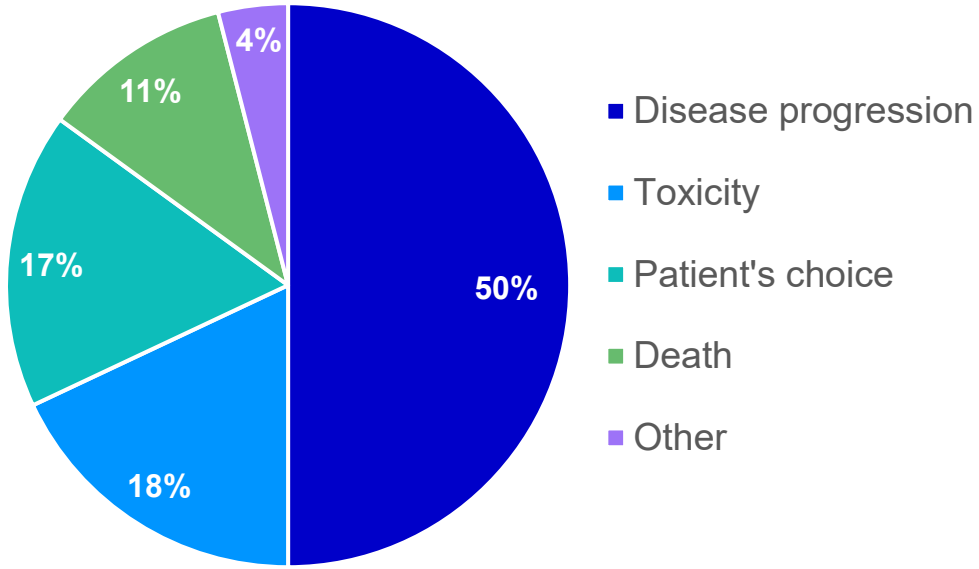
Carola E, et al. SABCS 2024. Poster P2-07-17.

PalomAGE: Cohort A—Discontinuation Rate

*Primary Outcome (FAS, N=382)**

- **The 18-month PAL discontinuation rate was 41% (n=158; 95% CI, 36-46)**
- **Median follow-up was 25.2 months (95% CI, 21.7-28.4)**

Reasons for Treatment Discontinuation Observed Among 158 Patients



*The FAS included patients who received at least 1 cycle of PAL.
CI=confidence interval; FAS=full analysis set; PAL=palbociclib.

Carola E, et al. SABCS 2024. Poster P2-07-17.

PalomAGE: Cohort A—Safety

Secondary Outcome

Incidence of AEs Related to Treatment (Preferred Term, SAF, N=412)*					
	Grade 1 n (%)	**Grade 2 n (%)**	**Grade 3-4 n (%)**	**Grade 5 n (%)**	**All n (%)**
Neutropenia	47 (11)	100 (24)	199 (48)	—	261 (63)
Asthenia	52 (13)	34 (8)	6 (2)	—	86 (21)
Anaemia	53 (13)	29 (7)	17 (4)	—	81 (20)
Thrombocytopenia	35 (9)	18 (4)	5 (1)	—	55 (13)
Alopecia	41 (10)	8 (2)	1 (0)	—	48 (12)
Interstitial lung disease	—	2 (1)	1 (0)	1 (0)	4 (1)
Cerebrovascular accident	—	—	1 (0)	1 (0)	1 (0)

- 81% of patients presented ≥1 AE related to treatment
  - 63% experienced any-grade neutropenia; febrile neutropenia was reported in 1% of patients
- **AEs led to palbociclib dose reduction in 35% of patients and permanent discontinuations in 11% of patients without any new safety signals**

*A patient is counted more than once in the grading analysis when experiencing different grades of the same event. "—" denotes no patients experienced the indicated AE.
AE=adverse event; SAF=safety analysis set.

Carola E, et al. SABCS 2024. Poster P2-07-17.

PalomAGE: Cohort A—TTF and rwPFS

Secondary Outcomes

TTF and rwPFS

- **Median TTF was 23.0 months (95% CI, 19.8-26.0)**
- **Median rwPFS was 30.4 months (95% CI, 25.7-NR):** 164 patients (43% of FAS) experienced disease progression or death
- At the end of the study, 94% of patients were still alive, and 39% continued PAL treatment

Factors Associated With TTF

- Per univariate analysis, the following baseline factors were associated with decreased TTF:
  - Higher age
  - Poorer ECOG PS score
  - ≥3 metastatic sites
  - G8 ≤14
  - IADLs ≤3
  - Absence of a person able to provide care and support (caregiver)
- According to the multivariate analysis, the risk of treatment failure was **significantly higher in patients with an impaired G8 score** and those **lacking a caregiver or support**

Results of Multivariate Analysis (FAS, N=303*)				
Variables	**N**	**HR**	**95% CI**	***P* value**
Under geriatric evaluation threshold (G8 score ≤14)				**<0.001**
No	94	1.00	Reference	
Yes	209	1.76	1.24-2.49	
Have a person able to provide care and support				**0.004**
Yes	255	1.00	Reference	
No	48	1.77	1.23-2.56	

Results should be interpreted with caution as analysis was not adjusted for potential differences in baseline patient characteristics (eg, starting dose, disease severity, etc)

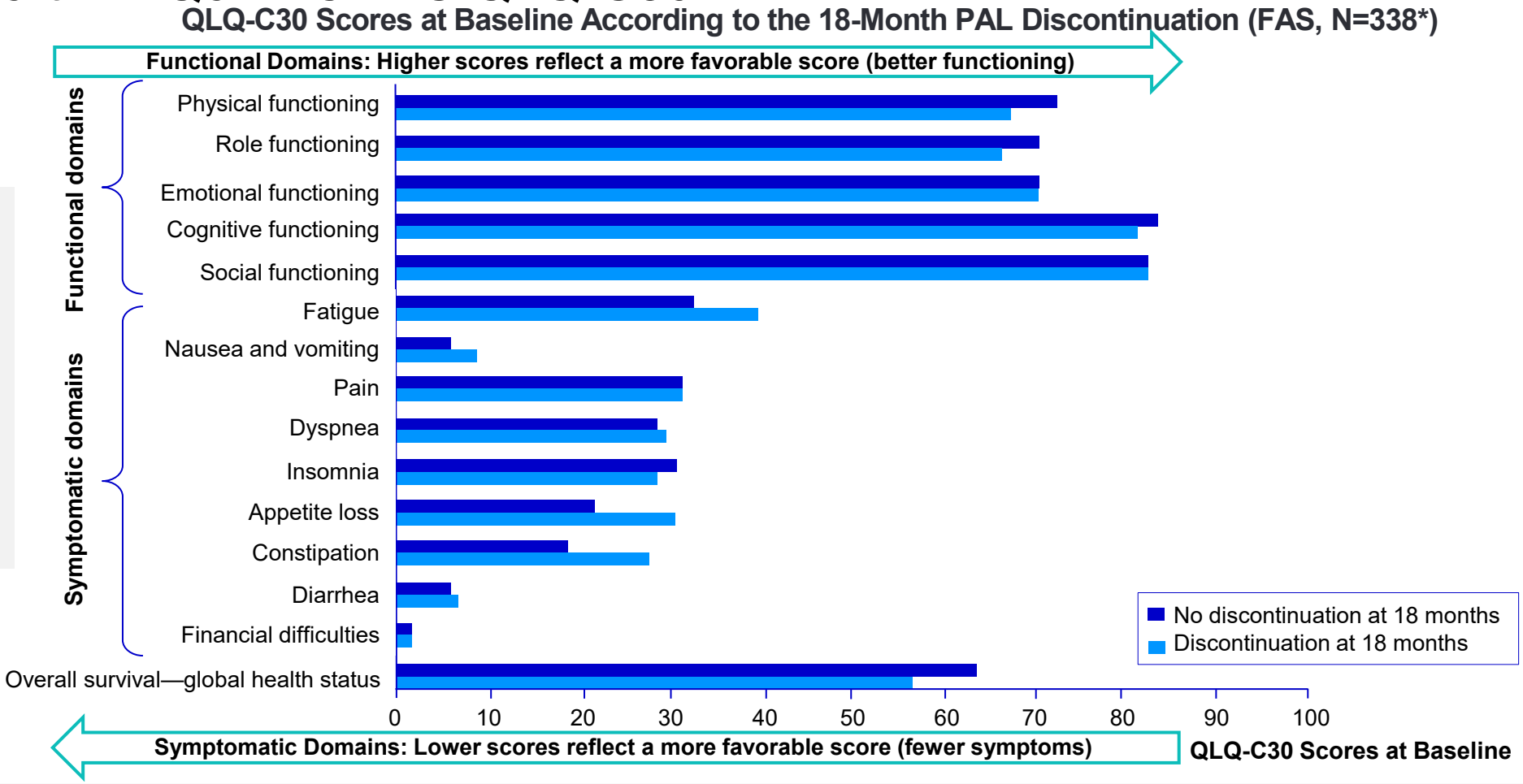
*Among the FAS, 79 patients have missing values for at least one variable included in the model and were excluded from the analysis.
The model was adjusted for age, and variables significant at the 10% level were considered as candidate variables for the multivariable analysis. A step-by-step manual process was used to construct the final model with a significance level set at 5%.
CI=confidence interval; ECOG PS=Eastern Cooperative Oncology Group performance status; FAS=full analysis set; G8=geriatric assessment score; HR=hazard ratio; IADL=instrumental activity of daily living; NR=not reached; PAL=palbociclib; rwPFS=real-world progression-free survival; TTF=time to treatment failure.

Carola E, et al. SABCS 2024. Poster P2-07-17.

PalomAGE: Cohort A—QoL EORTC QLQ-C30

Secondary Outcome

Among patients who fully completed all the items of the questionnaire at baseline and at 18 months (n=118), **all scores appeared to remain stable over time** (data not shown).



Results should be interpreted with caution as analysis was not adjusted for potential differences in baseline patient characteristics (eg, starting dose, disease severity).

*Due to missing data on the questionnaire, none of the QoL scores could be calculated for 41 patients, and 3 patients were not evaluable for discontinuation at 18 months (lost to follow-up).
EORTC QLQ=European Organization for Research and Treatment of Cancer Quality of Life Questionnaire; FAS=final analysis set; PAL=palbociclib; QoL=quality of life.

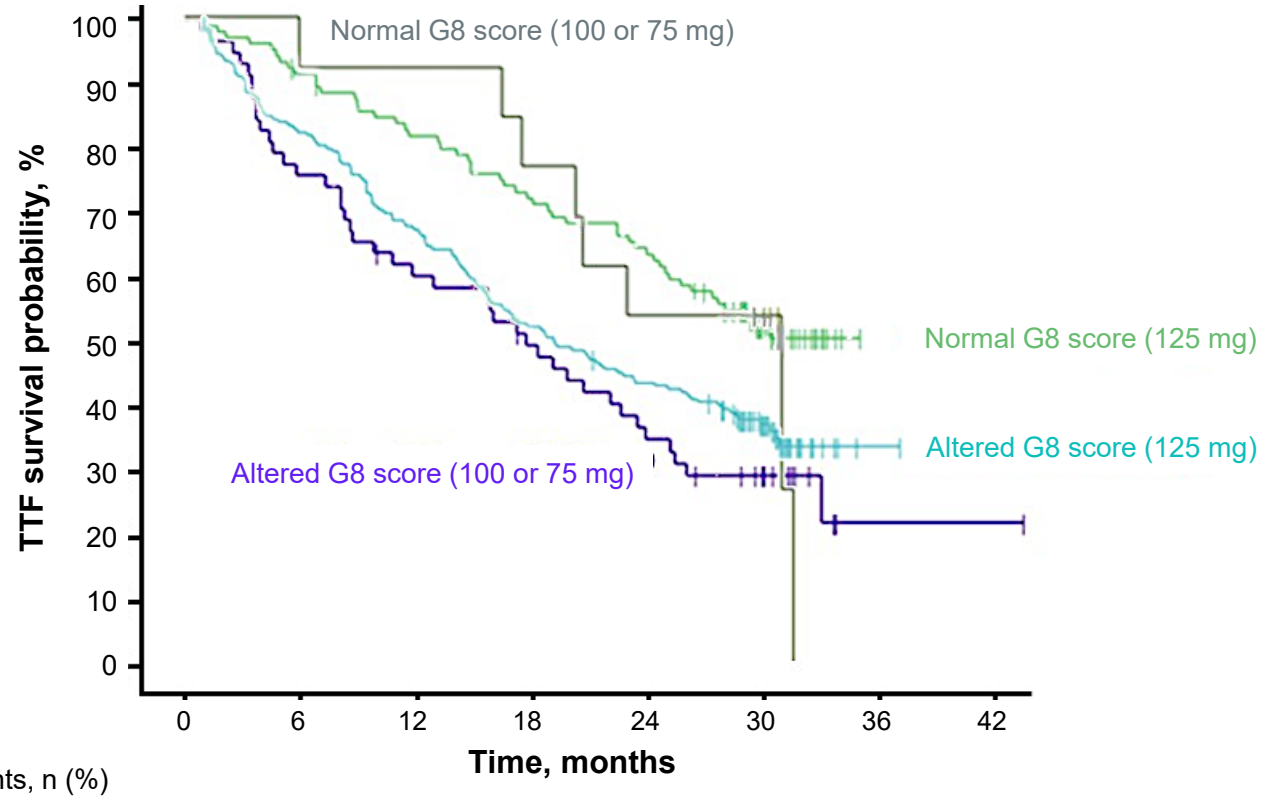
Carola E, et al. SABCS 2024. Poster P2-07-17.

PalomAGE: Cohort A—TTF by Geriatric Status and Initiation Dose

Exploratory Analyses

- Higher 18-month PAL discontinuation rate, shorter median TTF, and shorter median rwPFS were observed with a reduced dose of PAL at initiation without reaching statistical significance
- When examining patient subgroups based on geriatric status and the rate of permanent discontinuation, minimal variations were observed across the different initiation doses
- At a fixed initiation dose, patients with an impaired G8 score exhibited a **higher discontinuation rate (data not shown) at 18 months and a shorter TTF**

TTF Curve by Starting Dose Among Patients With Normal or Altered G8 Score (FAS, N=375*)†



Patients, n (%)								
Normal G8 score (125 mg)	106 (0)	96 (9)	85 (19)	75 (29)	67 (38)	34 (49)	0 (50)	0 (50)
Altered G8 score (125 mg)	198 (0)	163 (35)	133 (65)	103 (95)	85 (112)	47 (124)	1 (127)	0 (127)
Normal G8 score (100 or 75 mg)	13 (0)	13 (1)	12 (1)	10 (3)	7 (6)	5 (6)	0 (8)	0 (8)
Altered G8 score (100 or 75 mg)	58 (0)	44 (14)	34 (23)	27 (29)	19 (37)	12 (40)	1 (41)	1 (41)

Results should be interpreted with caution as analysis was not adjusted for potential differences in baseline patient characteristics (eg, starting dose, disease severity).

*In the effectiveness analysis, 7 patients have no information about G8 score at inclusion. †Normal G8 score defined as scores >14; altered scores defined as those ≤14.
FAS=full analysis set; G8=geriatric assessment score; PAL=palbociclib; rwPFS=real-world progression-free survival; TTF=time to treatment failure.

Carola E, et al. SABCS 2024. Poster P2-07-17.

PalomAGE: Authors' Conclusions and Study Limitations

Authors' Conclusions—Discussion

- PalomAGE shows that PAL plus ET is well tolerated when used as a 1L treatment for women ≥70 years with HR+/HER2- ABC without additional risk of AEs and with similar effectiveness to younger patients
- Importantly, this study highlights the necessity of tailoring treatment approaches according to geriatric assessments (G8 and DIALOG G-CODE) rather than relying solely on chronological age
- Frailty and social support may influence treatment continuation and patient outcomes
- As the landscape of cancer care evolves, integrating comprehensive geriatric assessments and support systems will be essential in optimizing treatment strategies for older and frail patients, enhancing their QoL and overall satisfaction with care

Limitations

- There is the potential for missing, inaccurate, or incomplete data
- Patient selection and the diagnostic or monitoring procedures used are those applied per the usual treatment paradigm of the treating physician rather than being dictated by a protocol
- Adverse events may be underreported in real-world studies
- No control arm, which limits contextualization to other treatments
- The findings from the PalomAGE study may not be generalized to other patients

Observational analyses are not intended for direct comparisons with clinical trials.
Observational analyses are designed to evaluate associations among variables and cannot establish causality.

1L=first-line; AE=adverse event; ET=endocrine therapy; G8=geriatric assessment; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; QoL=quality of life; PAL=palbociclib.

Carola E, et al. SABCS 2024. Poster P2-07-17.

Distance to Treating Oncologist as Potential Prognostic Real-World-Factor for Patients With HR+/HER2- Advanced Breast Cancer—Results From the Non-Interventional Study **PERFORM**

Lux MP, et al. SABCS 2024. Poster P4-07-20.

Pfizer-Sponsored Study

PERFORM: Study Design (IA3 Cohort)

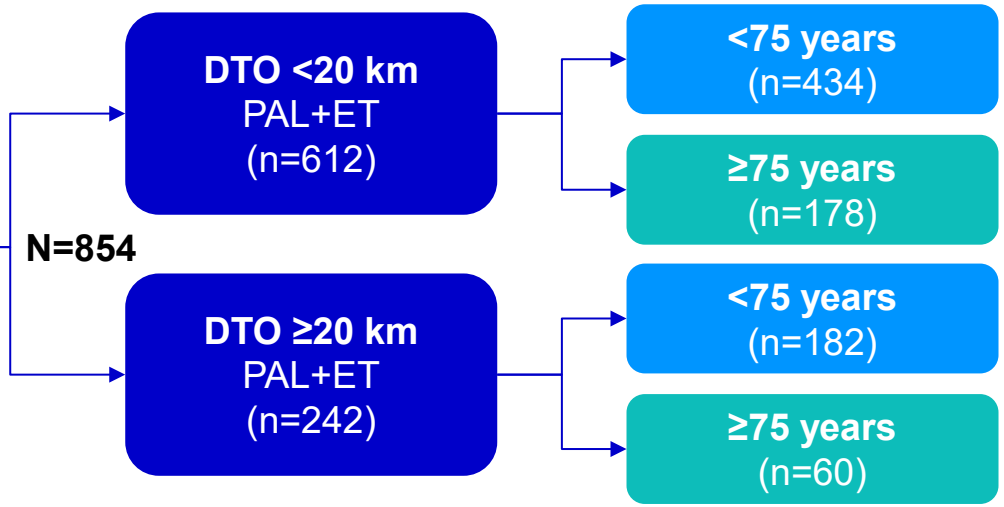
Real-world, prospective, noninterventional study conducted in ≈240 urban and rural study sites across Germany and Austria

Objective: To explore whether distance to treating oncologist (DTO) in patients with HR+/HER2- ABC influences toxicity, therapy management, and disease progression in the PERFORM study third interim analysis (IA3)*

KEY ELIGIBILITY CRITERIA

- Age ≥18 years, confirmed HR+/HER2- ABC
- 1L treatment with PAL + ET, per local label
- No prior treatment for advanced disease

IA3 Cohort
Exploratory, Subgroup Analysis



Primary Outcomes

- 1L rwPFS†

Secondary Outcomes

- Treatment patterns
- Effectiveness (including outcomes in second- and third-line treatment)
- Treatment expectation/satisfaction
- Potential impact of socioeconomic status on outcomes
- QoL
- Patterns of biomarker analyses and genetic testing[2]

Statistical Analyses

- rwPFS analyses are based on KM estimation
- Multivariable or other types of analyses controlling for potential confounders have not been done

*More than 1400 patients with HR+/HER2- ABC treated with palbociclib plus ET in the 1L setting are currently enrolled. Three years after the first patient enrollment, the IA3 was conducted with a data cutoff in September 2023. Demographics, disease characteristics, and socioeconomic information, including DTO, are documented at baseline. †rwPFS is defined as the start of 1L treatment to first progression or death, whichever comes first. Patients without tumor progression or death at the time of analysis are censored at their last date of last contact or at the start date of a 2L therapy, whichever comes first.
1L=first-line; ABC=advanced breast cancer; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; KM=Kaplan-Meier; PAL=palbociclib; QoL=quality of life; rwPFS=real-world progression-free survival.

1. Lux MP, et al. SABCS 2024. Poster P4-07-20.
2. Lux MP, et al. *Future Oncol*. 2022;18(36):3971-3982.

PERFORM: IA3—Patient and Socioeconomic Characteristics* (1 of 2)

Characteristics	DTO <20 km			DTO ≥20 km		
	Total (n=612)	<75 years (n=434)	≥75 years (n=178)	Total (n=242)	<75 years (n=182)	≥75 years (n=60)
Age at start of 1L treatment, years						
Median (Q1-Q3)	68.60 (59.04-76.83)	63.00 (55.78-69.34)	79.41 (77.56-81.97)	66.53 (58.18-74.70)	62.06 (55.81-68.09)	79.50 (77.74-82.32)
Sex, n (%)						
Female	607 (99.2)	431 (99.3)	176 (98.9)	240 (99.2)	181 (99.5)	59 (98.3)
Male	5 (0.8)	3 (0.7)	2 (1.1)	2 (0.8)	1 (0.5)	1 (1.7)
Menopausal status, n (%)						
Pre-/perimenopausal	45 (7.3)	45 (10.3)	0 (0.0)	19 (7.8)	19 (10.4)	0 (0.0)
Postmenopausal	562 (91.8)	386 (88.9)	176 (98.9)	221 (91.3)	162 (89.0)	59 (98.3)
ECOG PS, n (%)						
0	285 (46.6)	228 (52.5)	57 (32.0)	122 (50.4)	98 (53.8)	24 (40.0)
1	249 (40.7)	167 (38.5)	82 (46.1)	90 (37.2)	61 (33.5)	29 (48.3)
≥2	61 (10.0)	29 (6.7)	32 (18.0)	26 (10.7)	19 (10.4)	7 (11.7)
No assessment done/missing	17 (2.8)	10 (2.3)	7 (4.0)	4 (1.7)	4 (2.2)	0 (0.0)

*At inclusion by distance to treating oncologist and age.
1L=first-line; DTO=distance to treating oncologist; ECOG PS=Eastern Cooperative Oncology Group performance status; IA3=third interim analysis; Q=quartile.

Lux MP, et al. SABCS 2024. Poster P4-07-20.

PERFORM: IA3—Patient and Socioeconomic Characteristics* (2 of 2)

Characteristics	DTO <20 km			DTO ≥20 km		
	Total (n=612)	<75 years (n=434)	≥75 years (n=178)	Total (n=242)	<75 years (n=182)	≥75 years (n=60)
Occupation, n (%)						
Employed full-time	94 (15.4)	93 (21.4)	1 (0.6)	41 (16.9)	41 (22.5)	0 (0.0)
Employed part-time†	74 (12.1)	72 (16.6)	2 (1.1)	31 (12.8)	30 (16.5)	1 (1.7)
Not gainfully employed/retired	383 (62.6)	227 (52.3)	156 (87.6)	152 (62.8)	99 (54.4)	53 (88.3)
Missing/not derivable	61 (10.0)	42 (9.7)	19 (10.7)	18 (7.4)	12 (6.6)	6 (10.0)
No. of additional persons in household, n (%)						
0	250 (40.8)	148 (34.1)	102 (57.3)	72 (29.8)	47 (25.8)	25 (41.7)
≤3 other persons	314 (51.3)	248 (57.1)	66 (37.1)	147 (60.7)	116 (63.7)	31 (51.7)
>3 other persons	17 (2.8)	15 (3.5)	2 (1.1)	7 (2.9)	7 (3.8)	0 (0.0)
Missing/not derivable	31 (5.1)	23 (5.3)	8 (4.5)	16 (6.6)	12 (6.6)	4 (6.7)
No. of children, n (%)						
0	92 (15.0)	79 (18.2)	13 (7.3)	35 (14.5)	30 (16.5)	5 (8.3)
1 or 2	383 (62.6)	272 (62.7)	111 (62.4)	145 (59.9)	110 (60.4)	35 (58.3)
≥3	101 (16.5)	62 (14.3)	39 (21.9)	50 (20.7)	32 (17.6)	18 (30.0)
Missing	36 (5.9)	21 (4.8)	15 (8.4)	12 (5.0)	10 (5.5)	2 (3.3)

Lux MP, et al. SABCS 2024. Poster P4-07-20.

*At inclusion by distance to treating oncologist and age. †Including primary/secondary occupation.
DTO=distance to treating oncologist; IA3=third interim analysis.

PERFORM: IA3—Tumor Characteristics (1 of 2)*

Characteristics	DTO <20 km			DTO ≥20 km		
	Total (n=612)	<75 years (n=434)	≥75 years (n=178)	Total (n=242)	<75 years (n=182)	≥75 years (n=60)
Time since initial diagnosis, years						
Median (Q1-Q3)	3.46 (0.13-10.89)	3.28 (0.13-10.07)	4.00 (0.11-13.05)	2.36 (0.10-9.18)	2.97 (0.13-8.78)	0.16 (0.09-9.68)
Tumor stage, n (%)						
Locoregionally advanced	31 (5.1)	15 (3.5)	16 (9.0)	16 (6.6)	11 (6.0)	5 (8.3)
Metastatic	580 (94.8)	418 (96.3)	173 (91.0)	225 (93.0)	171 (94.0)	54 (90.0)
Missing	1 (0.2)	1 (0.2)	0 (0.0)	1 (0.4)	0 (0.0)	1 (1.7)
De novo ABC, n (%)						
Yes	223 (36.4)	153 (35.3)	70 (39.3)	102 (42.1)	67 (36.8)	35 (58.3)
No	389 (63.6)	281 (64.7)	108 (60.7)	140 (57.9)	115 (63.2)	25 (41.7)

- Tumor stages seem largely comparable among the subgroups, irrespective of age
- Patients with a DTO ≥20 km appear to be slightly more likely to present with de novo ABC than patients with a DTO <20 km (42.1% vs 36.4%)

*At inclusion by distance to treating oncologist and age.
ABC=advanced breast cancer; DTO=distance to treating oncologist; IA3=third interim analysis; Q=quartile.

Lux MP, et al. SABCS 2024. Poster P4-07-20.

PERFORM: IA3—Tumor Characteristics (2 of 2)*

Characteristics	DTO <20 km			DTO ≥20 km		
	Total (n=612)	<75 years (n=434)	≥75 years (n=178)	Total (n=242)	<75 years (n=182)	≥75 years (n=60)
No. of metastatic sites present, n (%)						
0†	46 (7.5)	27 (6.2)	19 (10.7)	26 (10.7)	18 (9.9)	8 (13.3)
1	378 (61.8)	269 (62.0)	109 (61.2)	139 (57.4)	104 (57.1)	35 (58.3)
2	114 (18.6)	78 (18.0)	36 (20.2)	54 (22.3)	42 (23.1)	12 (20.0)
3	57 (9.3)	46 (10.6)	11 (6.2)	15 (6.2)	12 (6.6)	3 (5.0)
≥4	17 (2.8)	14 (3.2)	3 (1.7)	8 (3.3)	6 (3.3)	2 (3.3)
Disease site, n (%)						
Visceral‡	286 (46.7)	209 (48.2)	77 (43.3)	106 (43.8)	78 (42.9)	28 (46.7)
Nonvisceral only§ (excl. bone only)	69 (11.3)	41 (9.4)	28 (15.7)	29 (12.0)	23 (12.6)	6 (10.0)
Bone only	211 (34.5)	157 (36.2)	54 (30.3)	81 (33.5)	63 (34.6)	18 (30.0)
No. metastases present at inclusion†	46 (7.5)	27 (6.2)	19 (10.7)	26 (10.7)	18 (9.9)	8 (13.3)

- Number of metastatic sites seem largely comparable among the subgroups, irrespective of age

*At inclusion by distance to treating oncologist and age. †Patients with locoregionally advanced disease or metastases, that were removed before inclusion (eg, radiation, surgery). ‡Visceral sites: all metastatic sites excluding nonvisceral sites and bone only (eg, lung, liver, pleura, peritoneum, brain). §Nonvisceral sites (excluding bone only): lymph nodes (distant, regional), skin, soft tissue.
DTO=distance to treating oncologist; IA3=third interim analysis.

Lux MP, et al. SABCS 2024. Poster P4-07-20.

PERFORM: IA3—Effectiveness[1]

rwPFS Rates

	DTO <20 km			DTO ≥20 km		
	Total (n=612)	<75 years (n=434)	≥75 years (n=178)	Total (n=242)	<75 years (n=182)	≥75 years (n=60)
1L rwPFS						
Events, n (%)	208 (34.0)	154 (35.5)	54 (30.3)	92 (38.0)	74 (40.7)	18 (30.0)
6-month rate, % (95% CI)	85.9 (82.8-88.4)	85.5 (81.8-88.6)	86.7 (80.6-90.9)	82.7 (77.2-86.9)	81.9 (75.4-86.9)	84.8 (72.8-91.8)
12-month rate, % (95% CI)	73.2 (69.2-76.7)	72.3 (67.6-76.5)	75.2 (67.7-81.2)	71.0 (64.4-76.6)	69.9 (62.2-76.3)	74.3 (60.2-84.0)
18-month rate, % (95% CI)	64.2 (59.8-68.3)	61.9 (56.5-66.8)	70.1 (61.9-76.8)	59.8 (52.2-66.6)	58.3 (49.5-66.1)	65.1 (48.7-77.4)
24-month rate, % (95% CI)	55.1 (49.7-60.1)	52.5 (45.9-58.7)	61.5 (52.0-69.7)	46.7 (37.1-55.7)	45.7 (35.6-55.2)	32.5 (2.0-72.5)

- The lowest 24-month PFS rate of 32.5% was observed in patients ≥75 years with DTO ≥20 km, while the overall 24-month PFS rate in the DTO subgroups <20 km and ≥20 km, amounted to 55.1% and 46.7%, respectively*
- Median follow-up time was 18.6 months[2]

Observational analyses are not intended for direct comparisons with clinical trials.
Observational analyses are designed to evaluate associations among variables and cannot establish causality.

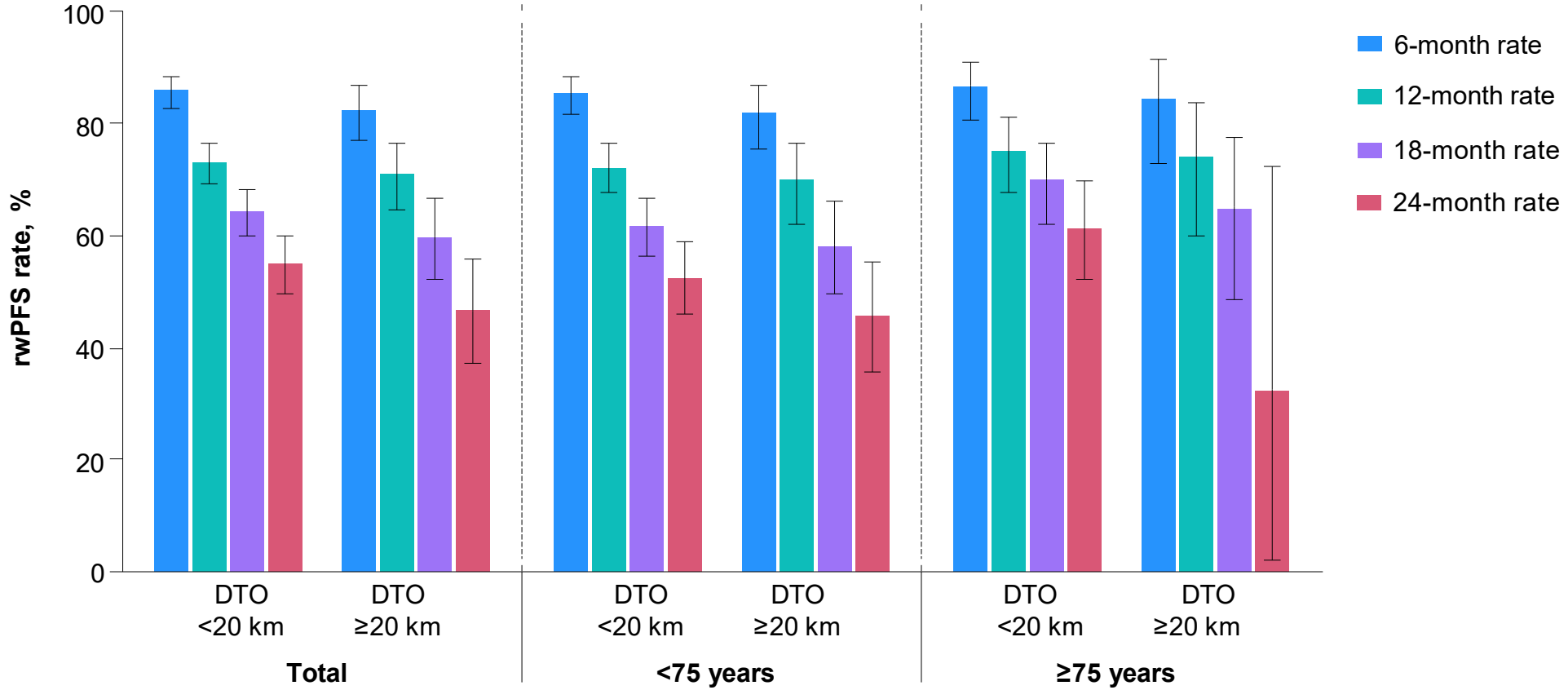
***This observation might be especially influenced by low sample size, limited follow-up time, and potential confounders and, therefore, requires further investigation.**

1L=first-line; CI=confidence interval; DTO=distance to treating oncologist; IA3=third interim analysis; rwPFS=real-world progression-free survival.

1. Lux MP, et al. SABCS 2024. Poster P4-07-20.
2. Pfeiler G, et al. ESMO 2024. Poster 356.

PERFORM: IA3—Effectiveness

rwPFS Rates of Age-Stratified Subgroups DTO <20 km and DTO ≥20 km



Observational analyses are not intended for direct comparisons with clinical trials.
Observational analyses are designed to evaluate associations among variables and cannot establish causality.

DTO=distance to treating oncologist; IA3=third interim analysis; rwPFS=real-world progression-free survival.

Lux MP, et al. SABCS 2024. Poster P4-07-20.

PERFORM: IA3—Reasons for End of 1L Treatment

	DTO <20 km			DTO ≥20 km		
	Total (n=612)	<75 years (n=434)	≥75 years (n=178)	Total (n=242)	<75 years (n=182)	≥75 years (n=60)
Reasons for end of 1L treatment, n (%)						
PD	172 (28.1)	133 (30.6)	39 (21.9)	75 (31.0)	61 (33.5)	14 (23.3)
SAE	36 (5.9)	21 (4.8)	15 (8.4)	14 (5.8)	8 (4.4)	6 (10.0)
Lost to follow-up	21 (3.4)	16 (3.7)	5 (2.8)	9 (3.7)	6 (3.3)	3 (5.0)
Withdrawal of informed consent	8 (1.3)	5 (1.2)	3 (1.7)	7 (2.9)	7 (3.8)	0 (0.0)
Other	23 (3.8)	17 (3.9)	6 (3.4)	10 (4.1)	7 (3.8)	3 (5.0)
Still under treatment	352 (57.5)	242 (55.8)	110 (61.8)	127 (52.5)	93 (51.1)	34 (56.7)

- 34.0% of patients in the DTO <20 km and 38.0% in the DTO ≥20 km subgroups experienced disease progression or death

1L=first-line; DTO=distance to treating oncologist; IA3=third interim analysis; PD=progressive disease; SAE=serious adverse event.

Lux MP, et al. SABCS 2024. Poster P4-07-20.

PERFORM: IA3—Safety (1 of 2)

Adverse Events and Therapy Modifications

	DTO <20 km			DTO ≥20 km		
	Total (n=612)	<75 years (n=434)	≥75 years (n=178)	Total (n=242)	<75 years (n=182)	≥75 years (n=60)
AEs, n (%)						
TEAE	519 (84.8)	361 (83.2)	158 (88.8)	209 (86.4)	158 (86.8)	51 (85)
Serious TEAE	168 (27.5)	112 (25.8)	56 (31.5)	65 (26.9)	46 (25.3)	19 (31.7)
Grade 1/2 TEAE	456 (74.5)	316 (72.8)	140 (78.7)	182 (75.2)	138 (75.8)	44 (73.3)
Grade 3/4 TEAE	303 (49.5)	206 (47.5)	97 (54.5)	121 (50)	86 (47.3)	35 (58.3)
TEAE leading to discontinuation of PAL	59 (9.6)	41 (9.4)	18 (10.1)	25 (10.3)	17 (9.3)	8 (13.3)
PAL-related AE	386 (63.1)	259 (59.7)	127 (71.3)	157 (64.9)	115 (63.2)	42 (70)
PAL-related SAE	20 (3.3)	13 (3.0)	7 (3.9)	7 (2.9)	4 (2.2)	3 (5.0)
PAL-related grade 3/4 AE	200 (32.7)	143 (32.9)	57 (32)	77 (31.8)	52 (28.6)	25 (41.7)
PAL-related AE leading to discontinuation of PAL	24 (3.9)	17 (3.9)	7 (3.9)	7 (2.9)	2 (1.1)	5 (8.3)

- A comparable relative frequency of AEs was observed for PERFORM patients, regardless of DTO

AE=adverse event; DTO=distance to treating oncologist; IA3=third interim analysis; PAL=palbociclib; SAE=serious adverse event; TEAE=treatment-emergent adverse event.

Lux MP, et al. SABCS 2024. Poster P4-07-20

PERFORM: IA3—Safety (2 of 2)

Adverse Events and Therapy Modifications

	DTO <20 km			DTO ≥20 km		
	Total (n=612)	<75 years (n=434)	≥75 years (n=178)	Total (n=242)	<75 years (n=182)	≥75 years (n=60)
Therapy modifications for palbociclib, n (%)*						
Yes	450 (73.5)	312 (71.9)	138 (77.5)	173 (71.5)	127 (69.8)	46 (76.7)
No	162 (26.5)	122 (28.1)	40 (22.5)	69 (28.5)	55 (30.2)	14 (23.3)
Yes, Dose modified	243 (39.7)	165 (38.0)	78 (43.8)	87 (36.0)	57 (31.3)	30 (50.0)

- Therapy modifications for PAL treatment occurred with a comparable frequency among subgroups with a DTO of <20 km or ≥20 km, respectively (73.5% vs 71.5%)
- In both subgroups, ≈10% of patients discontinued PAL-based therapy due to TEAEs
- 3.9% of patients with a DTO of <20 km and 2.9% of patients with a DTO of ≥20 km discontinued therapy due to PAL-related AEs

*Including dose modifications and interruptions within/between cycles or skipped cycles.
AE=adverse event; DTO=distance to treating oncologist; IA3=third interim analysis; PAL=palbociclib; TEAE=treatment-emergent adverse event.

Lux MP, et al. SABCS 2024. Poster P4-07-20.

PERFORM: IA3—Authors' Conclusions and Study Limitations

Conclusions

- These results generally support the use of PAL plus ET as a relevant 1L therapy option regardless of age and DTO in patients with HR+/HER2- ABC
- Moreover, these results indicate that the DTO (travel burden) might be a relevant real-world factor influencing outcome and warrants further analyses including patient-reported outcomes with longer follow-up as well as external validation

Limitations

- Results and conclusions are not necessarily transferable to other countries and healthcare systems
- Socioeconomic/demographic factors, such as DTO, are documented only at one time point (inclusion)
- Generally, further follow-up is needed
- When examining small subgroups of patients without controlling for other variables, it is crucial to acknowledge that factors such as age, a higher percentage of visceral metastases or recurrent disease, and other potentially confounding variables may significantly influence outcome and safety
- Therefore, all provided analyses must be regarded as purely descriptive and exploratory, as they do not allow causal conclusions
- Hypotheses derived from these results warrant further confirmatory investigation

Observational analyses are not intended for direct comparisons with clinical trials.
Observational analyses are designed to evaluate associations among variables and cannot establish causality.

1L=first-line; ABC=advanced breast cancer; DTO=distance to treating oncologist; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; IA3=third interim analysis; PAL=palbociclib.

Lux MP, et al. SABCS 2024. Poster P4-07-20.

Real-World Effectiveness of Overall Survival (OS) With Palbociclib (PAL) Plus Endocrine Therapy (ET) in Hormone Receptor-Positive (HR+)/Human Epidermal Growth Factor Receptor 2-Negative (HER2-) Advanced Breast Cancer (ABC) Patients in Japan (**P-BRIDGE study**)

Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

Pfizer-Sponsored Study

P-BRIDGE: Study Design

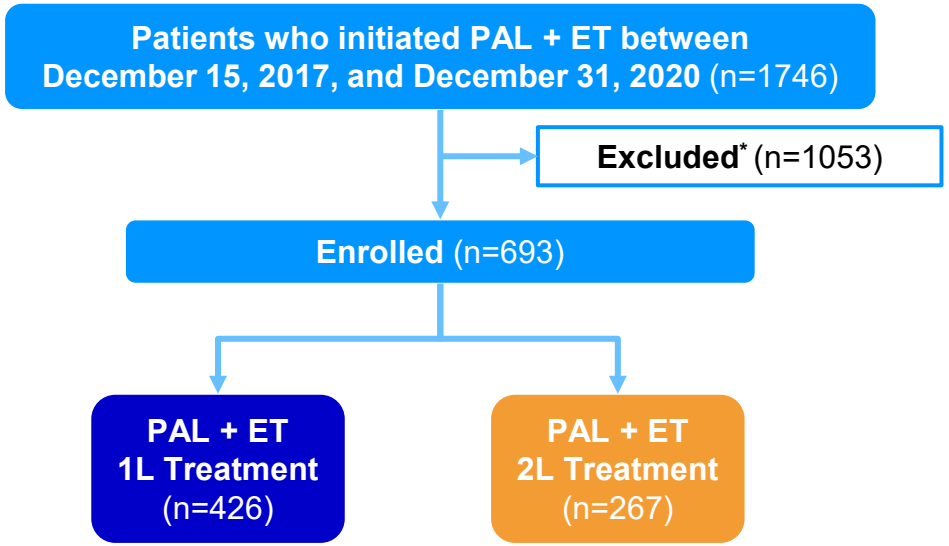
Multicenter, observational, real-world study conducted from 20 sites across Japan

Objective: To investigate the real-world OS stratified by subgroups in Japanese patients with HR+/HER2- ABC treated with 1L or 2L PAL plus ET in clinical practice.

KEY ELIGIBILITY CRITERIA

- Patients with HR+/HER2- ABC
- Received PAL+ ET as 1L or 2L treatment between December 15, 2017 (launch date of PAL in Japan), and December 31, 2020

Patient CONSORT diagram



Primary Endpoint
- rwPFS†

Secondary Endpoint
- OS‡

Statistical Analyses:
- OS was stratified by TFI, menopausal status, disease site, ECOG PS, prior (neo)adjuvant chemotherapy, and symptoms
- rwPFS and OS were assessed by KM curves and summarized by medians and 95% CIs

Additional eligibility criteria included:
- Patients with any medical records, regardless of PAL use, for >6 months from PAL initiation
- Patients with any medical records for <6 months from PAL initiation and who had specific events (death, disease progression, or treatment discontinuation of PAL due to AEs) in the available records

*Excluded patients either did not meet eligibility criteria (n=1019), declined to register (n=33), or had duplicate registration (n=1). †rwPFS was defined as the time from the start of PAL + ET to physician-documented disease progression or death due to any cause, whichever occurred first. ‡OS was defined as the time from start of PAL + ET treatment to death due to any cause.
1L=first-line; 2L=second-line; ABC=advanced breast cancer; AE=adverse event; CI=confidence interval; ECOG PS=Eastern Cooperative Oncology Group performance status; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; KM=Kaplan-Meier; OS=overall survival; PAL=palbociclib; rwPFS=real-world progression-free survival; TFI=treatment-free interval (defined as the time from the end of adjuvant therapy to the diagnosis date of recurrence).

Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

P-BRIDGE: Patient Baseline Characteristics (1 of 2)

Characteristics	1L treatment (n=426)	2L treatment (n=267)
Median age (range), years	60 (29-87)	60 (32-87)
Gender, n (%)		
Female	423 (99.3)	266 (99.6)
Male	3 (0.7)	1 (0.4)
Menopausal status, n (%)*		
Pre-/perimenopausal	85 (20.1)	69 (25.9)
Postmenopausal	302 (71.4)	180 (67.7)
Unknown	36 (8.5)	17 (6.4)
Disease stage at initial diagnosis, n (%)		
0	2 (0.5)	2 (0.7)
I	58 (13.6)	34 (12.7)
II	189 (44.4)	104 (39.0)
III	70 (16.4)	42 (15.7)
IV	99 (23.2)	72 (27.0)
Unknown	8 (1.9)	13 (4.9)
ECOG PS, n (%)		
0	269 (63.1)	153 (57.3)
1	67 (15.7)	63 (23.6)
≥2	12 (2.8)	3 (1.1)
Unknown	78 (18.3)	48 (18.0)

*Percentage of female patients.
1L=first-line; 2L=second-line; ECOG PS=Eastern Cooperative Oncology Group performance status.

Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

P-BRIDGE: Patient Baseline Characteristics (2 of 2)

Characteristics	1L treatment (n=426)	2L treatment (n=267)
Disease site, n (%)		
Visceral metastases	214 (50.2)	160 (59.9)
Liver metastases	72 (16.9)	73 (27.3)
Bone-only metastases	105 (24.6)	50 (18.7)
DFI, n (%)*		
<24 months	39 (9.2)	23 (8.6)
≥24 months	278 (65.3)	165 (61.8)
TFI, n (%)†		
<12 months	195 (45.8)	105 (39.3)
≥12 months	87 (20.4)	54 (20.2)
De novo metastatic disease/others‡	111 (26.1)	75 (28.1)
Prior chemotherapy for (neo)adjuvant, n (%)		
Yes	199 (51.7)	155 (66.5)
No	181 (47.0)	75 (32.2)
Prior hormone therapy for (neo)adjuvant, n (%)		
Yes	266 (69.1)	111 (47.6)
No	114 (29.6)	119 (51.1)
Prior AI for (neo)adjuvant, n (%)		
Yes	127 (43.6)	88 (50.0)
No	164 (56.4)	88 (50.0)

*Percentage of patients without stage IV disease. †Percentage calculated based on patients in 1L or 2L, respectively. ‡"Others" included patients who had surgery other than at stage IV and did not undergo adjuvant therapy.
1L=first-line; 2L=second-line; DFI=disease-free interval (defined as the time from the date of breast cancer surgery to the diagnosis date of recurrence); TFI=treatment-free interval (defined as the time from the end of adjuvant therapy to the diagnosis date of recurrence).

Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

P-BRIDGE: Real-World Treatment Patterns

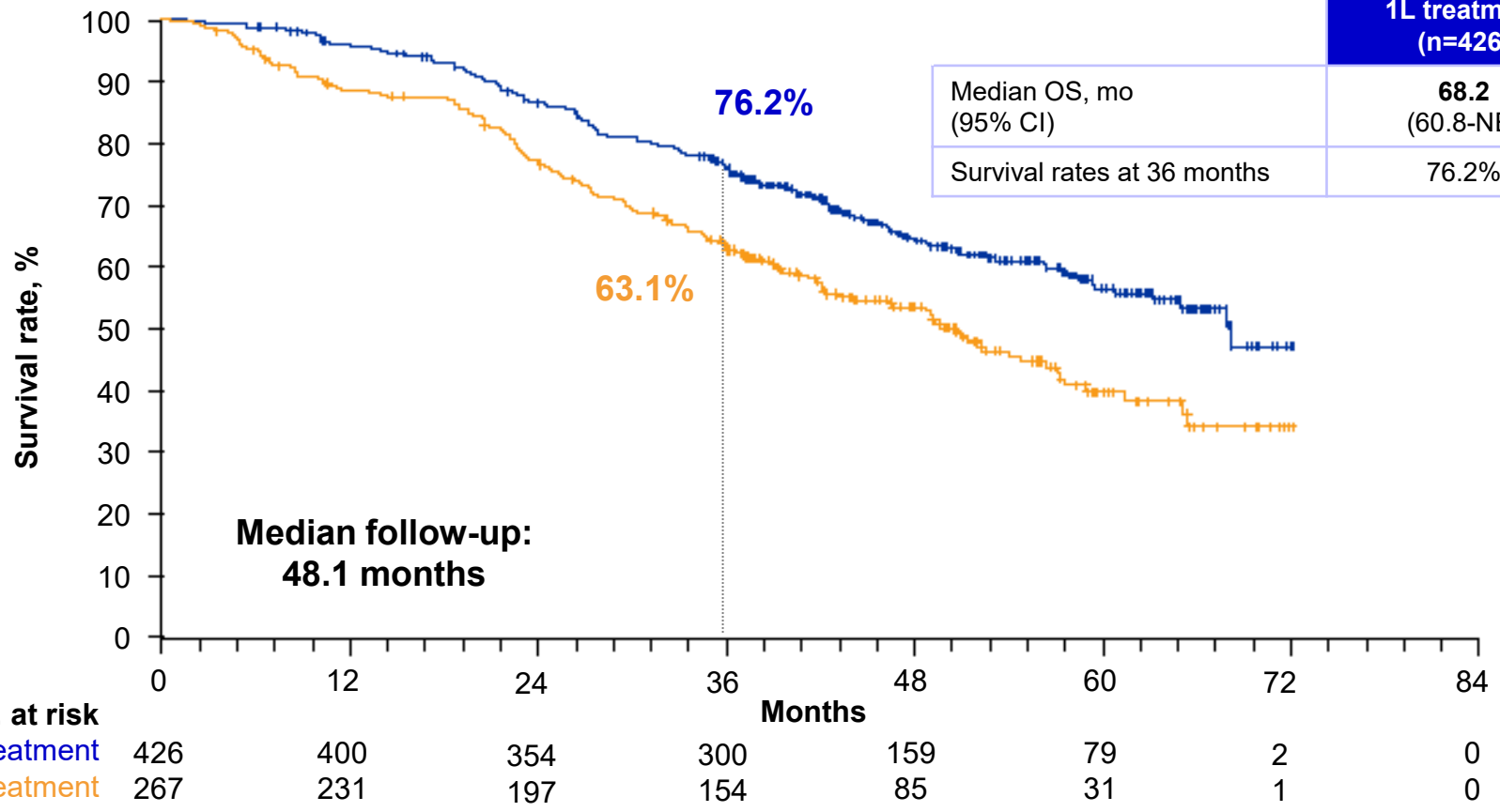
Characteristics	1L treatment (n=426)	2L treatment (n=267)
Initial dose of PAL, n (%)		
125 mg/day	385 (90.4)	233 (87.3)
100 mg/day	33 (7.7)	28 (10.5)
75 mg/day	8 (1.9)	5 (1.9)
Other	0	1 (0.4)
Status of PAL administration at data cutoff, n (%)*		
Ongoing	93 (21.8)	32 (12.0)
Discontinued	333 (78.2)	235 (88.0)
Reason for PAL discontinuation, n (%)†		
Disease progression	231 (69.4)	182 (77.4)
Adverse event	70 (21.0)	41 (17.4)
Other	39 (11.7)	17 (7.2)

Characteristics	1L treatment (n=426)	2L treatment (n=267)
PAL dose reduction, n (%)		
No	109 (25.6)	78 (29.2)
Yes	317 (74.4)	189 (70.8)
100 mg/day	106 (24.9)	71 (26.6)
75 mg/day	195 (45.8)	111 (41.6)
Other	16 (3.8)	7 (2.6)
Type of ET used with PAL, n (%)		
Fulvestrant	240 (56.3)	206 (77.2)
Letrozole	162 (38.0)	43 (16.1)
Anastrozole	17 (4.0)	13 (4.9)
Exemestane	2 (0.5)	3 (1.1)
Tamoxifen	7 (1.6)	3 (1.1)

*Data cutoff of February 16, 2024. †Percentages based on patients who discontinued PAL.
1L=first-line; 2L=second-line; ET=endocrine therapy; PAL=palbociclib.

Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

P-BRIDGE: Effectiveness—Overall Survival[1,2]



	1L treatment (n=426)	2L treatment (n=227)
Median OS, mo (95% CI)	**68.2** (60.8-NE)	**50.7** (42.2-57.2)
Survival rates at 36 months	76.2%	63.1%

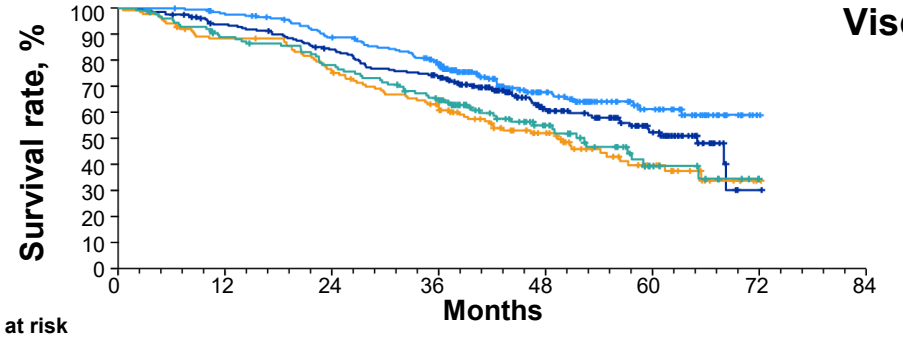
- The primary outcome of median rwPFS was 26.2 months (95% CI, 21.4-30.4) for the 1L treatment group and 14.9 months (95% CI, 11.7-18.3) for the 2L treatment group[2]

Observational analyses are not intended for direct comparisons with clinical trials.
Observational analyses are designed to evaluate associations among variables and cannot establish causality.

1L=first-line; 2L=second-line; CI=confidence interval; NE=not estimable; OS=overall survival; rwPFS=real-world progression-free survival.

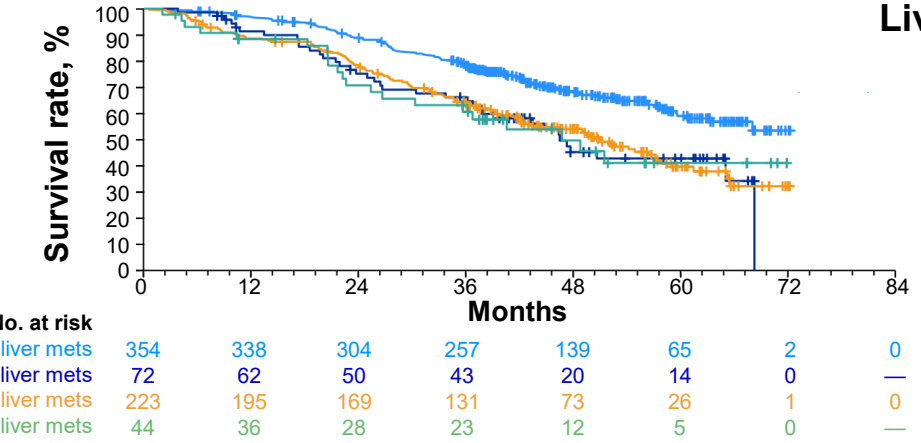
1. Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22. 2. Nakayama T, et al. *Ann Oncol.* 2024;35(suppl 2):S357-405. Abstract 359P.

P-BRIDGE: Effectiveness—Overall Survival by Subgroups (1 of 4)[1,2,*]



Visceral Metastases

	1L treatment (n=212)	1L treatment (n=214)	2L treatment (n=139)	2L treatment (n=128)
Visceral metastases	No	Yes	No	Yes
Median OS, mo (95% CI)	**NR** (63.2-NE)	**65.0** (56.3-NE)	**49.3** (38.8-57.2)	**52.3** (42.1-65.1)



Liver Metastases†

	1L treatment (n=354)	1L treatment (n=72)	2L treatment (n=223)	2L treatment (n=44)
Liver metastases	No	Yes	No	Yes
Median OS, mo (95% CI)	**NR** (63.2-NE)	**46.4** (37.2-NE)	**50.9** (42.2-57.2)	**46.7** (26.6-NE)

These data are subgroup analyses. Small patient numbers are a limitation of subgroup analyses. These analyses may not be powered to detect significant differences and were not designed to compare across subgroups. Any comparison between groups should be approached with caution.

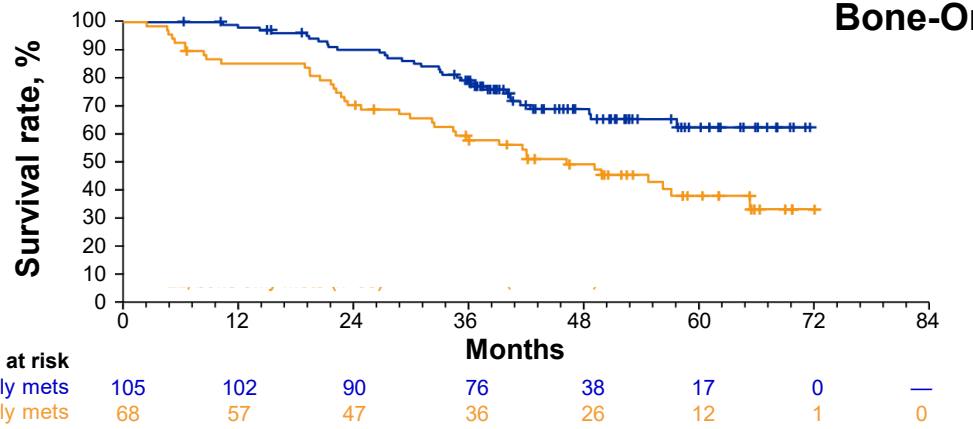
*TFI: median OS was not reached (NR) (95% CI, 56.3-NE) for patients with de novo metastases, NR (NE-NE) for those with a TFI ≥12 months, and 56.3 months (95% CI, 43.9-68.2) for patients with a TFI <12months.[2] Survival rate at 60 months was 60.0% (95% CI, 45.9%-71.6%) for patients with de novo metastatic disease, 72.9% (95% CI, 61.5%-81.4%) for those with a TFI ≥12 months, and 46.1% (95% CI, 37.4%-54.3%) for patients with a TFI <12 months.[2] †The prognosis of patients with liver metastases in the 1L treatment group was poor; therefore, it is crucial to consider the strategy of subsequent therapy in this population.[1] 1L=first-line; 2L=second-line; CI=confidence interval; NE=not estimable; NR=not reached; OS=overall survival; TFI=treatment-free interval.

1. Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.
2. Nakayama T et al. *Ann Oncol.* 2024;35(suppl 2):S357-405. Abstract 359P.

EM-DEU-plb-0145

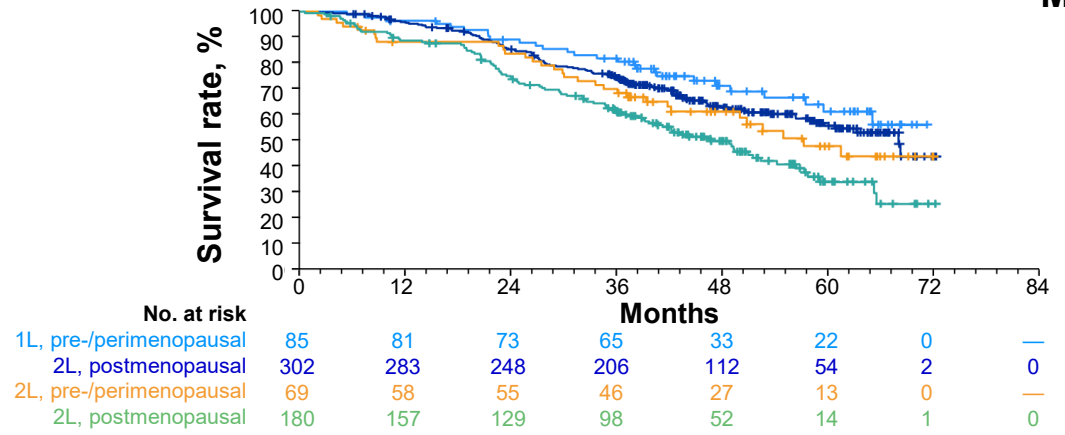
P-BRIDGE: Effectiveness—Overall Survival by Subgroups (2 of 4)

Bone-Only Metastases



	1L treatment (n=105)	1L treatment (n=68)
Median OS, mo (95% CI)	**NR** (57.8-NE)	**46.3** (32.5-65.4)

Menopausal Status



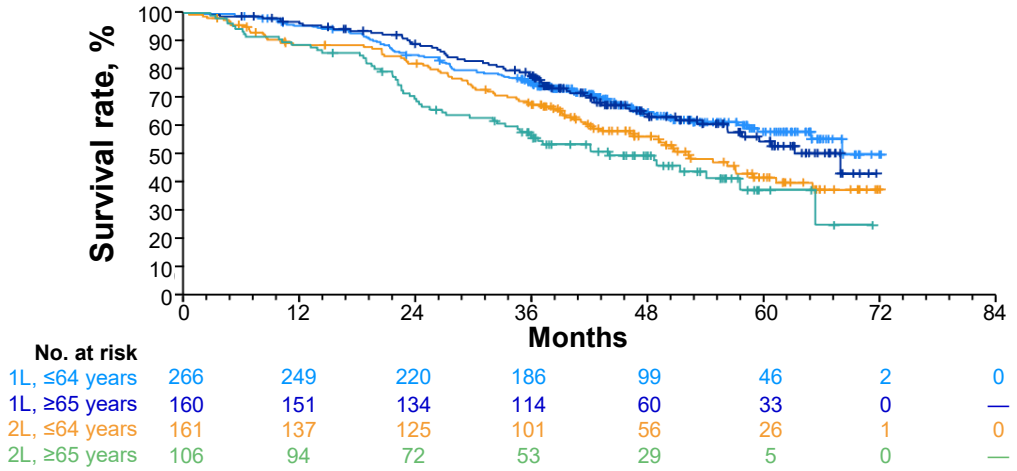
	1L treatment (n=85)	1L treatment (n=302)	2L treatment (n=69)	2L treatment (n=180)
Menopausal status	Pre/Peri	Post	Pre/Peri	Post
Median OS, mo (95% CI)	**NR** (59.4-NE)	**68.0** (58.5-NE)	**57.2** (42.1-NE)	**46.7** (39.2-54.1)

These data are subgroup analyses. Small patient numbers are a limitation of subgroup analyses. These analyses may not be powered to detect significant differences and were not designed to compare across subgroups. Any comparison between groups should be approached with caution.

1L=first-line; 2L=second-line; CI=confidence interval; NE=not estimable; NR=not reached; OS=overall survival; pre/peri=pre-/perimenopausal; post=postmenopausal.

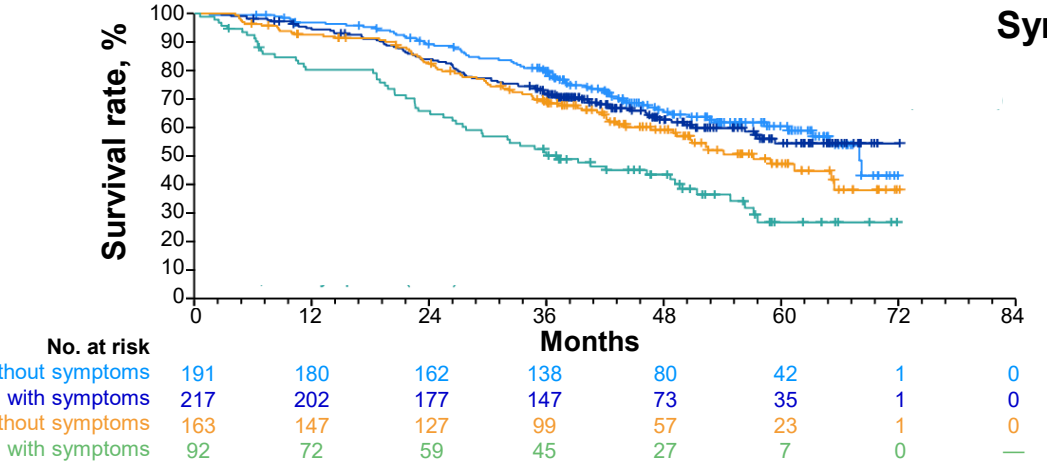
Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

P-BRIDGE: Effectiveness—Overall Survival by Subgroups (3 of 4)



Age

	1L treatment (n=266)	1L treatment (n=160)	2L treatment (n=161)	2L treatment (n=106)
Age, years	≤64	≥65	≤64	≥65
Median OS, mo (95% CI)	**68.2** (65.0-NE)	**68.0** (56.3-NE)	**52.3** (43.2-61.4)	**44.1** (33.3-57.6)



Symptoms*

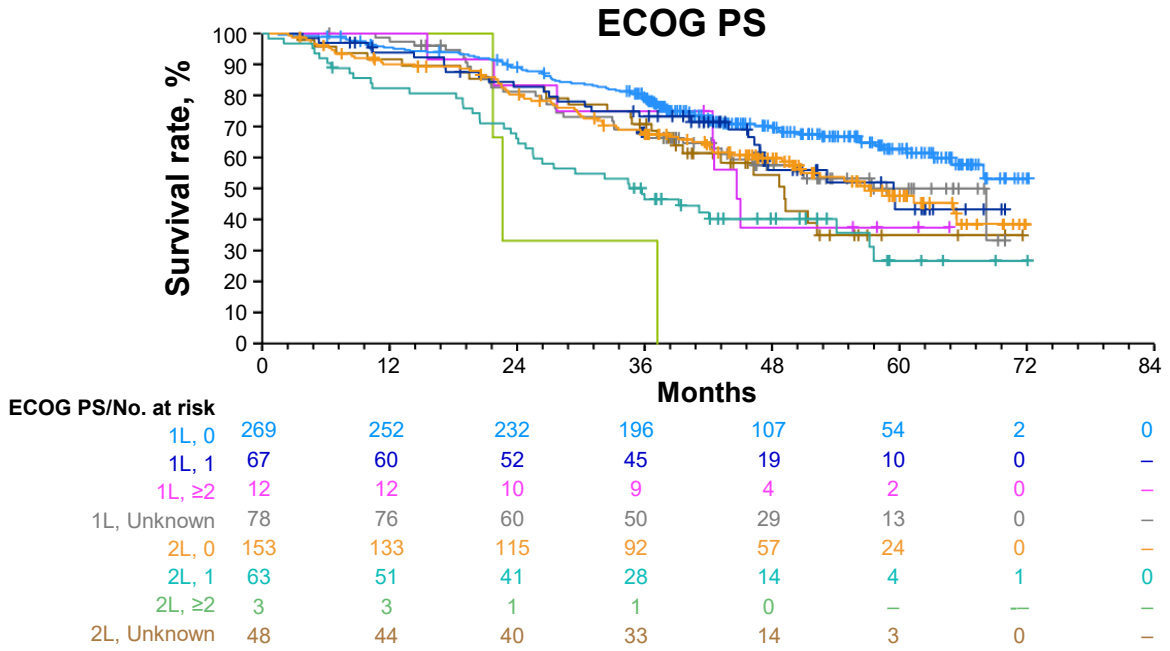
	1L treatment (n=354)	1L treatment (n=72)	2L treatment (n=223)	2L treatment (n=44)
Symptoms	No	Yes	No	Yes
Median OS, mo (95% CI)	**68.0** (60.8-NE)	**NR** (57.4-NE)	**57.2** (49.0-NE)	**37.2** (27.5-49.9)

These data are subgroup analyses. Small patient numbers are a limitation of subgroup analyses. These analyses may not be powered to detect significant differences and were not designed to compare across subgroups. Any comparison between groups should be approached with caution.

*Symptoms included bone pain, shortness of breath, coughing, headaches, dizziness, nausea, swelling around the neck and armpits, numbness in the limbs, abdominal bloating, and jaundice.
1L=first-line; 2L=second-line; CI=confidence interval; NE=not estimable; NR=not reached; OS=overall survival.

Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

P-BRIDGE: Effectiveness—Overall Survival by Subgroups (4 of 4)



	1L Treatment (n=269)	1L Treatment (n=67)	1L Treatment (n=12)	1L Treatment (n=78)	2L Treatment (n=153)	2L Treatment (n=63)	2L Treatment (n=3)	2L Treatment (n=48)
ECOG PS	0	1	≥2	Unknown	0	1	≥2	Unknown
Median OS, mo (95% CI)	**NR** (65.0-NE)	**59.4** (46.3-NE)	**44.7** (21.8-NE)	**57.4** (43.3-NE)	**57.2** (49.0-NE)	**35.8** (24.8-54.1)	**22.6** (21.7-NE)	**49.2** (38.8-NE)

These data are subgroup analyses. Small patient numbers are a limitation of subgroup analyses. These analyses may not be powered to detect significant differences and were not designed to compare across subgroups. Any comparison between groups should be approached with caution.

1L=first-line; 2L=second-line; CI=confidence interval; ECOG PS=Eastern Cooperative Oncology Group performance status; NE=not estimable; OS=overall survival.

Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

P-BRIDGE: Subsequent Therapy After 1L and 2L Palbociclib Treatment[1,2]

Subsequent therapies: In total, 295 patients after 1L PAL treatment and 208 patients after 2L PAL treatment received subsequent therapies

1L PAL treatment (n=426)

↓

2L treatment (n=295)

60.7% were treated with **endocrine-based therapies**, including ET + CDK4/6i (PAL or ABEMA; 23.1%), as the subsequent 2L therapy

2L PAL treatment (n=267)

↓

3L treatment (n=208)

61.1% were treated with **endocrine-based therapies**, including ET + CDK4/6i (15.3%), as the subsequent 3L therapy

1L=first-line; 2L=second-line; 3L=third-line; ABEMA=abemaciclib; CDK4/6i=cyclin-dependent kinase 4/6 inhibitor; ET=endocrine therapy; PAL=palbociclib.

1. Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.
2. Nakayama T et al. *Ann Oncol.* 2024;35(suppl 2):S357-405. Abstract 359P.

P-BRIDGE: Authors' Conclusions and Study Limitations

Conclusions

- The findings of this study in Japanese routine clinical practice further confirmed that the clinical benefits of PAL + ET are consistent regardless of patient characteristics in the real-world setting
- In all subgroups, except TF1 <12 months or liver metastases, median OS was >5 years with 1L PAL + ET, highlighting the use of PAL + ET as a standard 1L therapy for patients with ABC in the real-world setting

Limitations

- Short duration of follow-up and lack of a control arm may limit the interpretation of findings
- This is a chart review study; missing or erroneous data entry may have occurred
- Disease progression was not based on standard criteria (eg, RECIST) but instead was based on the individual treating physician's clinical assessment or interpretation of radiographic or pathologic results
- Findings may not be generalizable to patient populations in other countries
- At the feasibility assessment, study sites were chosen based on prescribing PAL to ≥10 patients in each 1L and 2L group; thus, it may not generalize to the hospitals where PAL is prescribed to <10 patients
- It should be noted that the PALOMA studies were randomized controlled trials, and RCT data cannot be directly compared to real-world studies

Observational analyses are not intended for direct comparisons with clinical trials.
Observational analyses are designed to evaluate associations among variables and cannot establish causality.

1L=first-line; 2L=second-line; ABC=advanced breast cancer; ET=endocrine therapy; OS=overall survival; PAL=palbociclib; RCT=randomized clinical trial; RECIST=Response Evaluation Criteria in Solid Tumors; TFI=treatment-free interval.

Tsuneizumi M, et al. SABCS 2024. Poster P4-07-22.

Primary results of the randomised phase IV trial comparing first-line ET plus palbociclib vs standard mono-chemotherapy in women with high risk HER2-/HR+ metastatic breast cancer and indication for chemotherapy – **PADMA study**

Loibl S, et al. SABCS 2024. Oral presentation LB1-03.

Clinical Research Collaboration

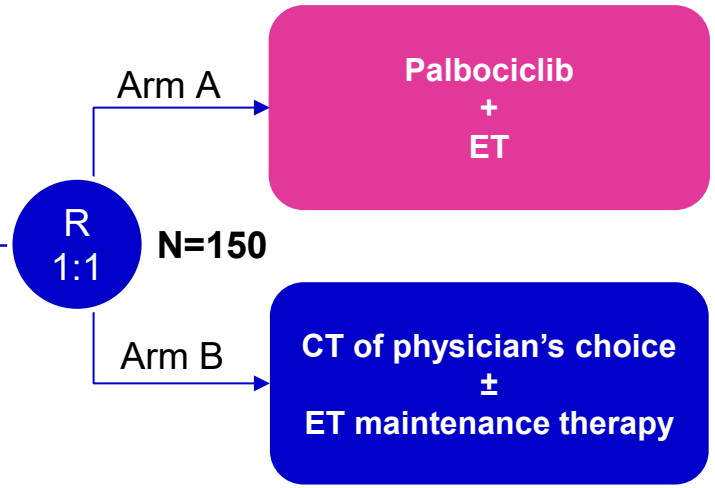
EM-DEU-plb-0145

PADMA: Study Design[1]

Prospective, randomized, open-label, multicenter, phase IV trial

Objective: To compare CDK4/6 inhibitor + ET with standard monochemotherapy ± maintenance ET as first-line therapy in patients with high-risk mBC and a chemotherapy indication.

PATIENT POPULATION
- HR+/HER2- mBC
- Female or male
- Indicated for monochemotherapy
- No prior treatment for metastatic/relapsed disease
- No asymptomatic bone-only, oligometastatic disease
- No uncontrolled/untreated CNS metastases
- Life expectancy >6 months



Stratification
- Endocrine resistant vs endocrine sensitive
- Symptomatic vs asymptomatic metastatic disease

ET with palbociclib: AI or fulvestrant ± GnRHa
ET maintenance: tamoxifen, AI or fulvestrant ± GnRHa
CT: paclitaxel, capecitabine, epirubicin, or vinorelbine

Primary Endpoint
- TTF: defined as time from randomization to discontinuation of treatment due to disease progression, treatment toxicity, patient's preference, or death

Secondary Endpoints
- PFS
- OS
- Safety, tolerability, treatment adherence
- TFST and further time-to-event endpoints
- Patient-reported QoL
- DMTI: call tracking/geofencing with passive collection of information about frequency and duration of phone calls/visits to study site, respectively

Due to slow accrual, the study was stopped in 12/2023 with 130 patients and 100 events without major loss of power with an accrual duration of 70 months and follow-up period of 8 months[4]

Data cutoff: August 1, 2024.

The PALOMA trials did not compare palbociclib+ET with monochemotherapy.[2,3]

Cross-trial comparisons are unreliable and likely to be confounded due to differences in study design and patient populations.

AI=aromatase inhibitor; CDK4/6=cyclin-dependent kinase 4/6; CNS=central nervous system; CT=chemotherapy; DMTI=Daily Monitoring of Treatment Impact; ET=endocrine therapy; FACT-B=Functional Assessment of Cancer Therapy—Breast; GnRHa=gonadotropin-releasing hormone agonists; HER=human epidermal growth factor receptor; HR=hormone receptor; mBC=metastatic breast cancer; OS=overall survival; PFS=progression-free survival; QoL=quality of life; R=randomization; TFST=time to first subsequent treatment; TTF=time to treatment failure.

1. Loibl S, et al. SABCS 2024. Oral presentation LB1-03
2. Finn RS, et al. *N Engl J Med.* 2016;375:1925-1936
3. Turner NC, et al. *N Engl J Med.* 2015;373:209-219 4. Data on file

PADMA: Baseline Characteristics

	Palbociclib+ET N=61	CT-based N=59	Overall N=120
Median age (range), years	63 (42.0-85.0)	62 (31.0-80.0)	62 (31.0-85.0)
Postmenopausal status, n (%)	54 (88.5)	52 (88.1)	106 (88.3)
Liver metastases, n (%)	28 (45.9)	22 (37.3)	50 (41.7)
Endocrine resistant, n (%)*	17 (27.9)	21 (35.6)	38 (31.7)
Metastasis at initial diagnosis, n (%)	20 (33.3)	24 (40.7)	44 (37.0)
Prior (neo)adjuvant CT, n (%)	29 (47.5)	25 (42.4)	54 (45.0)
HER2-low (IHC 1-2), n (%)†	41 (73.2)	30 (58.8)	71 (66.4)
Pathogenic variants (tissue), n (%)‡			
- *PIK3CA*	11 (18.0)	16 (27.1)	27 (22.5)
- *BRCA1/2*	3 (4.9)	4 (6.8)	7 (5.8)
- *ESR1*	1 (1.6)	1 (1.7)	2 (1.7)

*According to clean data; endocrine resistant=relapse on or within 12 months of end of adjuvant ET.
†From metastasis (N=47), otherwise if available from initial diagnosis (N=24).
‡Tested in 81 patients.
BRCA=breast cancer gene; CT=chemotherapy; *ESR1*=estrogen receptor 1; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; IHC=immunohistochemistry; *PIK3CA*=phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha.

Loibl S, et al. SABCS 2024. Oral presentation LB1-03.

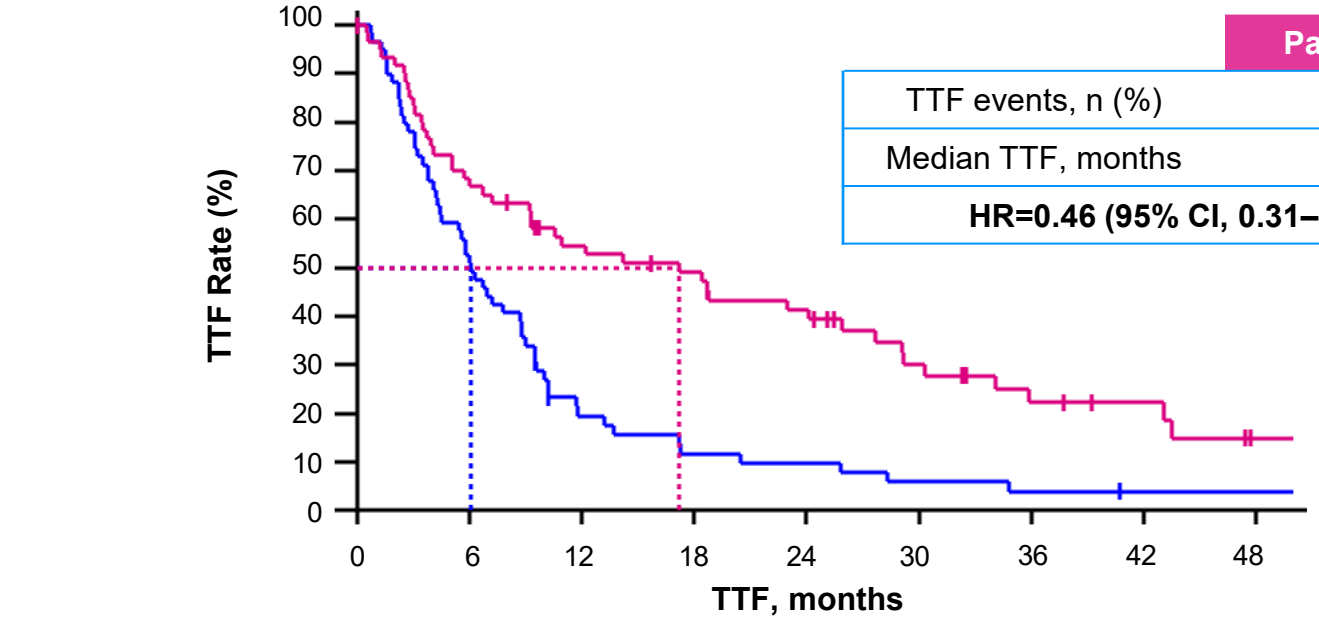
PADMA: Study Treatment

	Palbociclib + ET (n=62)*	CT based (n=58)
Type of treatment of physician's choice CT, n (%)		
Capecitabine	—	40 (69.0)
Paclitaxel	—	17 (29.3)
Vinorelbine	—	1 (1.7)
Received ET maintenance after CT, n (%)	—	13 (22.4)
Type of ET, n (%)†		
Aromatase inhibitor	48 (77.4)	9 (15.5)
Tamoxifen	—	3 (5.2)
Fulvestrant	14 (22.6)	1 (1.7)
Median duration palbociclib or CT (range), weeks	51.0 (1.0-322.0)	19.5 (2.0-122.0)

*One patient who was randomized to the CT-based arm received palbociclib + ET.
†Pre- or perimenopausal women receiving AI or fulvestrant required GnRH analogue or ovarian ablation.
AI=aromatase inhibitor; CT=chemotherapy; ET=endocrine therapy; GnRH=gonadotropin-releasing hormone.

Loibl S, et al. SABCS 2024. Oral presentation LB1-03.

PADMA: Effectiveness—Time to Treatment Failure (*Primary Endpoint*)



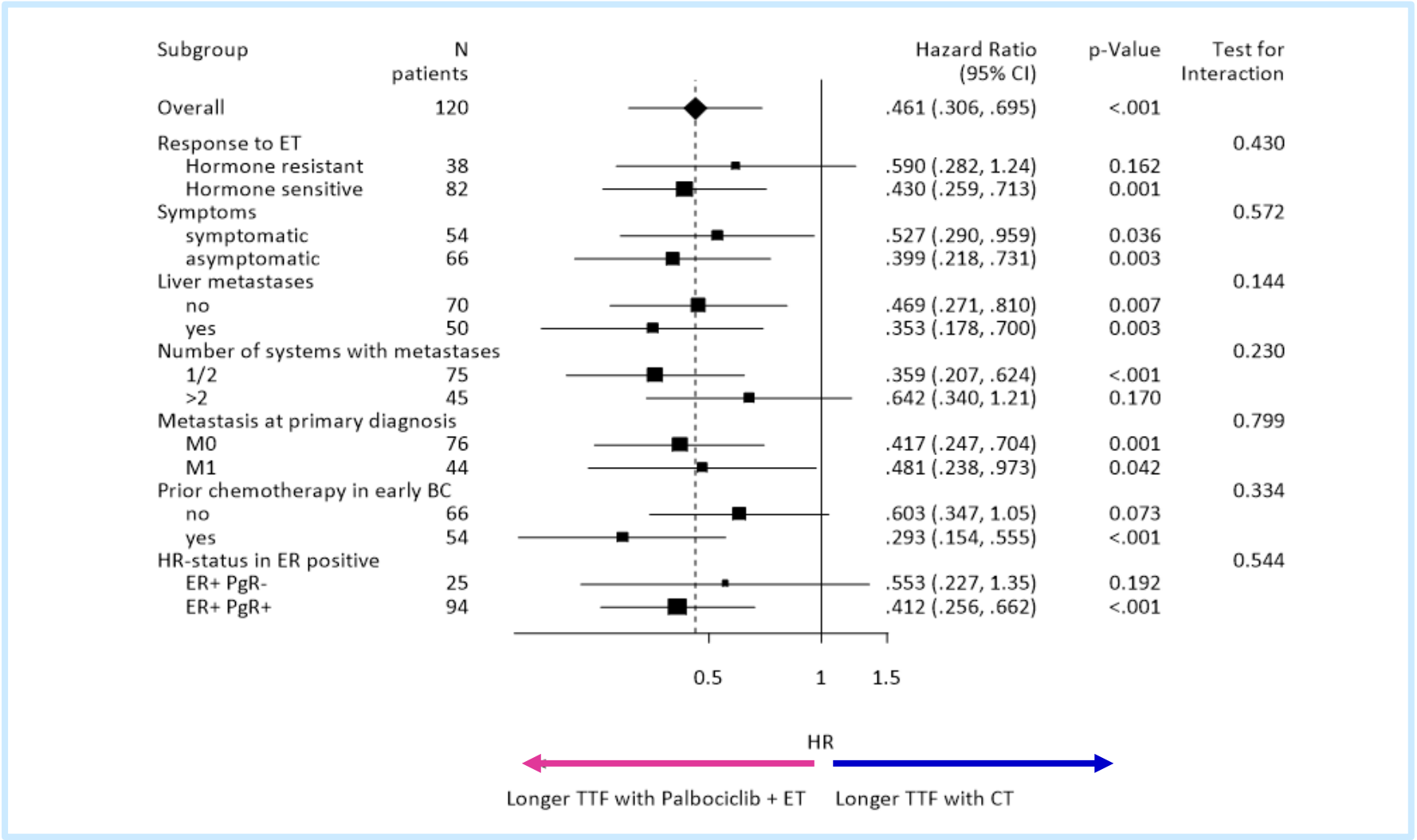
	Palbociclib + ET	CT
TTF events, n (%)	45 (73.8)	55 (93.2)
Median TTF, months	17.2	6.1
HR=0.46 (95% CI, 0.31–0.69), *P*<0.001 (log-rank)		

Median follow-up of 36.8 (range, 0-74.4) months

CI=confidence interval; CT=chemotherapy; ET=endocrine therapy; HR=hazard ratio; TTF=time to treatment failure.

Loibl S, et al. SABCS 2024. Oral presentation LB1-03.

PADMA: Effectiveness—Time to Treatment Failure (*Subgroup Analyses*)



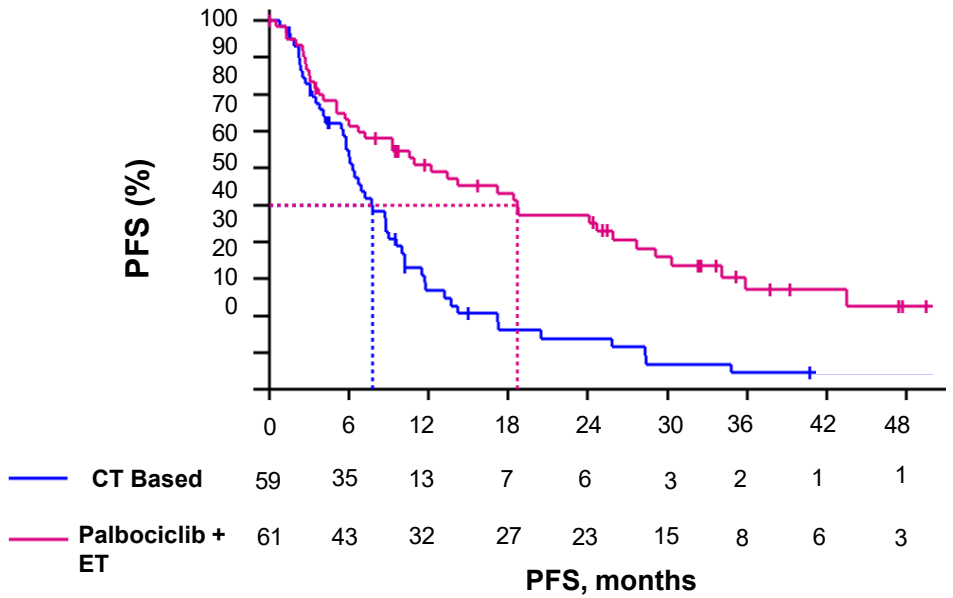
Small patient numbers can be a limitation of subgroup analyses. These analyses may not be powered to detect significant differences and were not designed to compare across subgroups. Any comparison between groups should be approached with caution.

BC=breast cancer; CI=confidence interval; CT=chemotherapy; ER=estrogen receptor; ET=endocrine therapy; HR=hormone receptor; PgR=progesterone receptor; TTF=time to treatment failure.

Loibl S, et al. SABCS 2024. Oral presentation LB1-03.

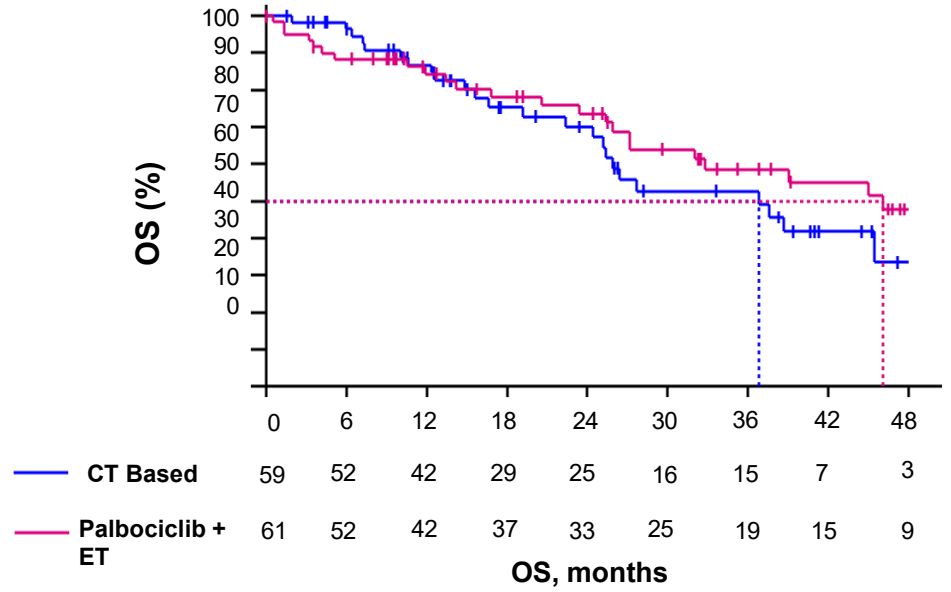
PADMA: Effectiveness—PFS and OS (*Secondary Endpoints*)

Progression-Free Survival



	Palbociclib + ET	CT
PFS events, n (%)	40 (65.6)	50 (84.7)
Median PFS, months	18.7	7.8
HR=0.45, (95% CI: 0.29-0.70), *P*<0.001 (log-rank)		

Overall Survival



	Palbociclib + ET	CT
OS events, n (%)	25 (41.0)	24 (40.7)
Median OS, months	46.1	36.8
Proportional hazard cannot be assumed		

CI=confidence interval; CT=chemotherapy; ET=endocrine therapy; HR=hazard ratio; OS=overall survival; PFS=progression-free survival.

Loibl S, et al. SABCS 2024. Oral presentation LB1-03.

PADMA: Safety—Treatment-Related Adverse Events (*Secondary Endpoint*)

	Palbociclib+ET (n=62)		CT based (n=58)	
	Any grade	Grades 3-4	Any grade	Grades 3-4
Any TRAE, n (%)	60 (96.8)	37 (59.7)	55 (94.8)	16 (27.6)
Any hematological TRAE, n (%)	60 (96.8)	34 (54.8)	34 (58.6)	4 (6.9)
Any nonhematological TRAE, n (%)	51 (82.3)	12 (19.4)	54 (93.1)	13 (22.4)
Treatment-related SAE, n (%)	7 (11.3)	5 (8.1)	6 (10.3)	6 (10.3)
Treatment-related death, n (%)	1 (1.6)	—	0 (0.0)	—

- Hematological toxicity significantly higher in the palbociclib + ET arm than the CT-based arm (96.8% vs 58.6%; *P*<0.001); comparable nonhematological toxicity
- One treatment-related death (septic shock; palbociclib + ET arm)

CT=chemotherapy; ET=endocrine therapy; SAE=serious adverse event; TRAE=treatment-related adverse event.

Loibl S, et al. SABCS 2024. Oral presentation LB1-03.

PADMA: Authors' Conclusions[1]

- The PADMA trial in high-risk* HR+/HER2- mBC met its primary endpoint (TTF) and showed a statistically significant and clinically meaningful improvement in TTF and PFS for palbociclib + ET over mono-CT (± ET maintenance) as first-line therapy
  - Median TTF: 17.2 vs 6.1 months; hazard ratio=0.46 (95% CI, 0.31-0.69), *P*<0.001
  - Median PFS: 18.7 vs 7.8 months; hazard ratio=0.45 (95% CI, 0.29-0.70), *P*<0.001
- After a median follow-up of 36.8 months, there was a numerical trend for an improved OS for palbociclib + ET: 46.1 vs 36.8 months
- No new safety signals were observed
- These results support existing international guidelines advocating the use of ET + CDK4/6i as standard first-line treatment for patients with HR+/HER2- mBC

The PALOMA trials did not compare palbociclib + ET with monochemotherapy.[2,3]
Cross-trial comparisons are unreliable and are likely to be confounded due to differences in study design and patient populations.

*Patients were considered high risk if they were candidates suitable for randomization for monochemothereapy treatment.
CDK4/6i=cyclin-dependent kinase 4/6 inhibitor; CI=confidence interval; CT=chemotherapy; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; mBC=metastatic breast cancer; OS=overall survival; PFS=progression-free survival; TTF=time to treatment failure.

1. Loibl S, et al. SABCS 2024. Oral presentation LB1-03
2. Finn RS, et al. *N Engl J Med.* 2016;375:1925-1936
3. Turner NC, et al. *N Engl J Med.* 2015;373:209-219

Comparative Overall Survival of CDK4/6 Inhibitors Plus an Aromatase Inhibitor in HR+/HER2- Metastatic Breast Cancer in the US Real-World Setting (**P-VERIFY**)*

Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

*Presented at an SABCS Poster Spotlight Session.

Pfizer-Sponsored Study

P-VERIFY: Study Background and Rationale

- The combination of a CDK4/6 inhibitor with endocrine therapy is a standard-of-care, 1L treatment for patients with HR+/HER2- mBC[1]
- Palbociclib was the first CDK4/6 inhibitor approved in the US in 2015, followed by ribociclib and abemaciclib in 2017[2-4]
  - OS was a secondary endpoint in all 3 pivotal 1L CDK4/6 inhibitor RCTs: **palbociclib + LET did not show a statistically significant OS difference in PALOMA-2[5];** abemaciclib + NSAI did not show a statistically significant OS difference in MONARCH-3[6]; ribociclib + LET demonstrated a statistically significant OS difference in MONALEESA-2[7]
- There are no CDK4/6 head-to-head RCTs. However, several RW studies have attempted to evaluate comparative effectiveness between the 3 CDK4/6 inhibitors[8-17]
  - Findings were inconsistent across these studies, limited by small sample sizes and short follow-up
  - Most did not show significant differences in rwPFS and/or OS among the CDK4/6 inhibitors
- Large-scale RW comparative studies with longer follow-up are needed to further elucidate the relative effectiveness of the 3 approved CDK4/6 inhibitors

1L=first-line; CDK4/6=cyclin-dependent kinase 4/6; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; LET=letrozole; mBC=metastatic breast cancer; NSAI=nonsteroidal aromatase inhibitor; OS=overall survival; RCT=randomized controlled trial; RW=real-world; rwPFS=real world progression-free survival.

1. Gradishar WJ, et al. *J Natl Compr Canc Netw.* 2023;21(6):594-608. 2. Kisqali (ribociclib). Prescribing information. Novartis; 2024. Accessed November 22, 2024. https://www.accessdata.fda.gov/drugsatfda_docs/label/2024/209092s019lbl.pdf. 3. Ibrance (palbociclib). Prescribing information. Pfizer; 2023. Accessed November 22, 2024. https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/212436s005s006lbl.pdf. 4. Verzenio (abemaciclib). Prescribing information. Lilly; 2023. Accessed November 22, 2024. https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/208716s010s011lbl.pdf. 5. Slamon DJ, et al. *J Clin Oncol.* 2024;42(9):994-1000. 6. Goetz MP, et al. *Ann Oncol*. 2024;35(8):718-727. 7. Hortobagyi GN, et al. *N Engl J Med.* 2022;386(10):942-950. 8. Cejuela M, et al. *Int J Mol Sci*. 2023;24(10):8448. 9. Kahraman S, et al. *Future Oncol*. 2023;19(10):727-736. 10. Buller W, et al. *J Oncol Pharm Pract*. 2023;29(8):1825-1835. 11. Vernieri C, et al. *J Clin Oncol.* 2024;42:1014. 12. Gehrchen ML, et al. *BJC Reports.* 2024;2(1):44. 13. Abdallah HMA, et al. *Ann Oncol.* 2023;34:S369-S370. 14. Thill M, et al. *Cancer Res.* 2024;84(suppl 9):PO1-04-12. 15. Al-Ziftawi NH, et al. *Front Oncol.* 2023;13:1203684. 16. Miron AI, et al. *Diagnostics (Basel).* 2023;13(11):1938. 17. Tang H, et al. *Cancers (Basel).* 2023;15(21):5164.

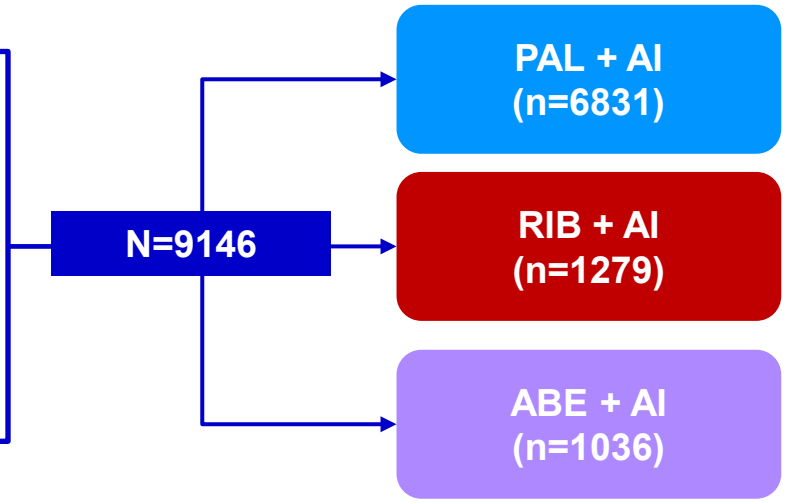
P-VERIFY: Study Design

Retrospective comparative effectiveness study[1]

Objective: To compare OS in patients receiving palbociclib, ribociclib, or abemaciclib in combination with an AI as 1L treatment for HR+/HER2- mBC in routine clinical practice in the US by use of the US nationwide Flatiron Health EHR deidentified longitudinal database*

Key Eligibility Criteria

- All eligible patients with HR+/HER2- mBC
- Initiated 1L treatment with a CDK4/6 inhibitor plus an AI between February 2015 and November 2023
- End of study May 2024 (data cutoff)



Primary Endpoint

OS, defined as the number of months from start of index treatment to death

Statistical Analyses

- Median, landmark rates, and 95% CIs for OS were estimated using the weighted Kaplan-Meier method
- Cox proportional hazards model was used to compute the hazard ratios and the corresponding 95% CI†
- Four methods for comparative analysis:
  - Unadjusted analysis
  - sIPTW method (primary analysis)
  - Multivariable Cox proportional hazards model (sensitivity analysis)
  - 1:1 exact matching (sensitivity analysis)
- Sub-analysis: Comparative analysis only including patients who initiated treatment 2017 and beyond

- Patients were followed from the start of index treatment (palbociclib + AI, ribociclib + AI, or abemaciclib + AI) to the end of May 2024 (data cutoff), death, or last medical activity, whichever came first
- Date of death was a consensus mortality endpoint based on EHR, Social Security Death Index, and obituary data, validated against the National Death Index
- Patients still alive were censored at the end of the study

***The study included patient-level data originating from ≈280 US cancer clinics (≈800 sites of care) and curated via technology-enabled abstraction.**
†Variables in the propensity score model included sex, age, race, practice type, ECOG performance status, disease stage at initial diagnosis, visceral metastasis, bone-only metastasis, number of disease sites, disease-free interval (from initial breast cancer diagnosis to mBC diagnosis).[2]

1L=first-line; ABE=abemaciclib; AI=aromatase inhibitor; CDK4/6=cyclin-dependent kinase 4/6; CI=confidence interval; EHR=electronic health record; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; mBC=metastatic breast cancer; OS=overall survival; PAL=palbociclib; RIB=ribociclib; sIPTW=stabilized inverse probability of treatment weighting.

1. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03. 2. Pfizer. Data on file.

P-VERIFY: Patient Characteristics After sIPTW (1 of 3)

- After sIPTW, baseline demographics and clinical characteristics were generally balanced between the 3 groups (standardized difference <0.1)

Characteristic	Cohort			Standardized difference		
	PAL + AI (n=6832)	RIB + AI (n=1274)	ABE + AI (n=1038)	RIB + AI vs PAL + AI	ABE + AI vs PAL + AI	ABE + AI vs RIB + AI
Age at mBC diagnosis, years						
Mean (SD)	65.0 (11.7)	64.6 (12.0)	64.7 (12.1)	–0.0297	–0.0198	0.0097
Median (IQR)	66.0 (17.0)	66.0 (17.0)	66.0 (17.0)			
Sex, n (%)						
Male	70 (1.0)	11 (0.9)	11 (1.1)	–0.0178	0.0068	0.0245
Female	6762 (99.0)	1263 (99.1)	1026 (98.9)			
Race, n (%)						
White	4272 (62.5)	797 (62.6)	654 (63.0)	0.0008	0.0093	0.0086
Black	638 (9.3)	117 (9.2)	94 (9.1)	–0.0063	–0.0081	–0.0018
Other	1922 (28.1)	360 (28.3)	290 (27.9)	0.0032	–0.0048	–0.0081
Practice type, n (%)						
Community	5782 (84.6)	1085 (85.2)	872 (84.0)	0.0154	–0.0169	–0.0323
Academic	1050 (15.4)	189 (14.8)	166 (16.0)			

The balance in these baseline characteristics was assessed using a standardized mean differences approach, with values ≥0.1 indicating a nonnegligible imbalance. ABE=abemaciclib; AI=aromatase inhibitor; IQR=interquartile range; mBC=metastatic breast cancer; PAL=palbociclib; RIB=ribociclib; SD=standard deviation; sIPTW=stabilized inverse probability of treatment weighting.

Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

P-VERIFY: Patient Characteristics After sIPTW (2 of 3)

- After sIPTW, baseline demographics and clinical characteristics were generally balanced between the 3 groups (standardized difference <0.1)

Characteristic	Cohort			Standardized difference		
	PAL + AI (n=6832)	RIB + AI (n=1274)	ABE + AI (n=1038)	RIB + AI vs PAL + AI	ABE + AI vs PAL + AI	ABE + AI vs RIB + AI
Disease stage at initial diagnosis, n (%)						
I	720 (10.5)	136 (10.7)	112 (10.8)	0.0052	0.0091	0.0039
II	1538 (22.5)	287 (22.5)	238 (22.9)	0.0005	0.0092	0.0088
III	731 (10.7)	136 (10.7)	110 (10.6)	–0.0003	–0.0044	–0.0041
IV	3473 (50.8)	645 (50.6)	523 (50.4)	–0.0046	–0.0096	–0.0050
Not documented	370 (5.4)	70 (5.5)	56 (5.4)	0.0027	–0.0023	–0.0051
ECOG PS, n (%)						
0	2444 (35.8)	457 (35.9)	369 (35.5)	0.0025	–0.0050	–0.0075
1	1806 (26.4)	329 (25.9)	275 (26.5)	–0.0133	0.0008	0.0141
2, 3, or 4	780 (11.4)	147 (11.5)	119 (11.5)	0.0032	0.0018	–0.0015
Not documented	1801 (26.4)	341 (26.7)	275 (26.5)	0.0082	0.0035	–0.0048
Disease free interval, n (%)*						
De novo mBC	3473 (50.8)	645 (50.6)	523 (50.4)	–0.0046	–0.0096	–0.0050
≤1 year	276 (4.0)	52 (4.1)	42 (4.1)	0.0014	0.0007	–0.0007
>1-5 years	1082 (15.8)	202 (15.8)	162 (15.6)	0.0000	–0.0065	–0.0065
>5 years	2001 (29.3)	376 (29.5)	311 (30.0)	0.0044	0.0154	0.0109

The balance in these baseline characteristics was assessed using a standardized mean differences approach, with values ≥0.1 indicating a nonnegligible imbalance. *Disease-free interval was defined as the interval from initial breast cancer diagnosis to mBC diagnosis. ABE=abemaciclib; AI=aromatase inhibitor; ECOG PS=Eastern Cooperative Oncology Group performance status; mBC=metastatic breast cancer; PAL=palbociclib; RIB=ribociclib; sIPTW=stabilized inverse probability of treatment weighting. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

P-VERIFY: Patient Characteristics After sIPTW (3 of 3)

- After sIPTW, baseline demographics and clinical characteristics were generally balanced between the 3 groups (standardized difference <0.1)

Characteristic	Cohort			Standardized difference		
	PAL + AI (n=6832)	RIB + AI (n=1274)	ABE + AI (n=1038)	RIB + AI vs PAL + AI	ABE + AI vs PAL + AI	ABE + AI vs RIB + AI
Visceral metastases, n (%)*						
No	4458 (65.3)	831 (65.2)	680 (65.5)	–0.0006	0.0060	0.0066
Yes	2374 (34.7)	443 (34.8)	358 (34.5)			
Bone-only metastases, n (%)						
No	3661 (53.6)	683 (53.6)	557 (53.7)	0.0004	0.0020	0.0016
Yes	3171 (46.4)	591 (46.4)	481 (46.3)			
Number of metastatic sites, n (%)†						
1	4010 (58.7)	745 (58.5)	611 (58.8)	–0.0040	0.0029	0.0069
2	1585 (23.2)	304 (23.9)	240 (23.1)	0.0158	–0.0025	–0.0183
≥3	615 (9.0)	111 (8.7)	92 (8.9)	–0.0112	–0.0036	0.0076
Not documented	622 (9.1)	114 (8.9)	95 (9.2)	–0.0055	0.0023	0.0078
Menopausal status at initial diagnosis, n (%)						
Premenopausal	1265 (18.5)	279 (21.9)	204 (19.6)	0.0849	0.0279	–0.0570
Postmenopausal	5138 (75.2)	919 (72.1)	762 (73.4)	–0.0702	–0.0415	0.0286
Not documented	359 (5.2)	65 (5.1)	61 (5.9)	–0.0066	0.0283	0.0349
NA (patient is male)	70 (1.0)	11 (0.9)	11 (1.1)	–0.0178	0.0068	0.0245

The balance in these baseline characteristics was assessed using a standardized mean differences approach, with values ≥0.1 indicating a nonnegligible imbalance. *Visceral metastases were defined as metastatic disease in the lung and/or liver; patients could have had other sites of metastases. No visceral metastasis was defined as no metastatic disease in the lung or liver. †Multiple metastases at the same site were counted as 1 site (eg, 3 bone metastases in a patient's spine were counted as 1 site only). ABE=abemaciclib; AI=aromatase inhibitor; NA=not applicable; PAL=palbociclib; RIB=ribociclib; sIPTW=stabilized inverse probability treatment weighting.

Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

P-VERIFY: Start of Index First-Line Treatment* and Median Follow-up (After sIPTW Adjustment)[1]

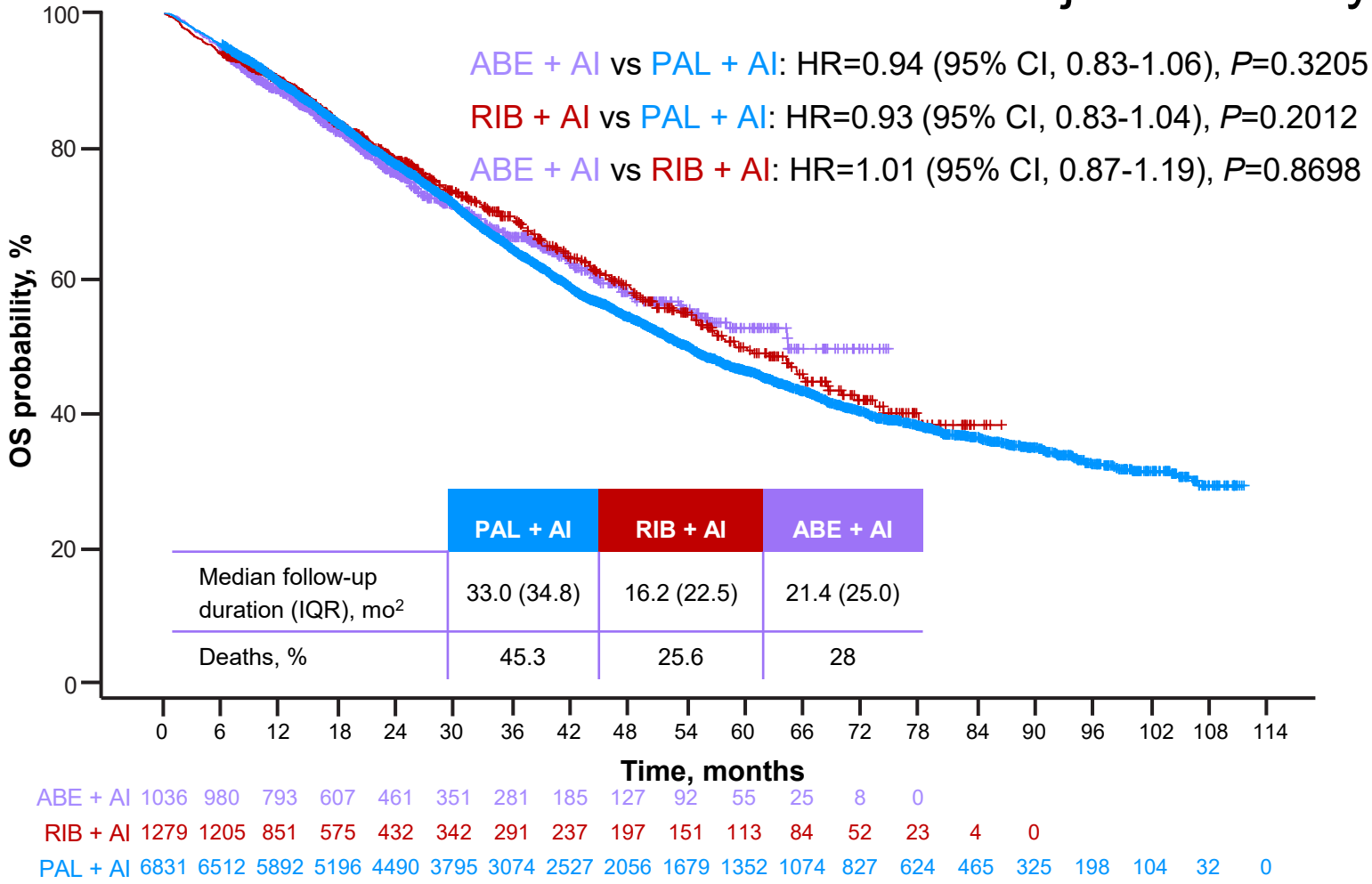
Characteristic	Cohort		
	PAL + AI (n=6832)	RIB + AI (n=1274)	ABE + AI (n=1038)
Year of index date, n (%)			
2015	440 (6.4)	0	0
2016	657 (9.6)	0	0
2017	713 (10.4)	70 (5.5)	0
2018	789 (11.6)	122 (9.6)	58 (5.6)
2019	870 (12.7)	102 (8.0)	125 (12.0)
2020	928 (13.6)	92 (7.2)	146 (14.0)
2021	1026 (15.0)	80 (6.3)	189 (18.2)
2022	870 (12.7)	226 (17.7)	247 (23.8)
2023	539 (7.9)	582 (45.7)	273 (26.3)
Median follow-up duration (IQR), months			
	33.0 (34.7)	15.7 (20.8)	21.5 (25.0)

*Start of index treatment (palbociclib + AI, ribociclib + AI, or abemaciclib + AI) as first-line therapy within 14 days before or 90 days after mBC diagnosis between February 2015 and November 2023 (index period).[2]

ABE=abemaciclib; AI=aromatase inhibitor; IQR=interquartile range; mBC=metastatic breast cancer; PAL=palbociclib; RIB=ribociclib; sIPTW=stabilized inverse probability of treatment weighting.

1. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03
2. Pfizer. Data on file.

P-VERIFY: Overall Survival in the Unadjusted Analysis



Landmark OS Analysis (based on Kaplan-Meier curve left)

Cohort	OS rates, %			Median OS, (95% CI), mo
	12 mo	24 mo	30 mo	
PAL + AI	89.6	77.4	71.4	54.4 (52.4-56.1)
RIB + AI	90.0	78.0	73.3	60.3 (54.7-68.5)
ABE + AI	88.4	76.1	71.5	NR (55.4-NE)

Due to the small numbers of patients at risk after month 30 in the ribociclib and abemaciclib cohorts, point estimates of OS beyond this time point, including the median OS, were not stable[1,2]

Observational retrospective analyses cannot establish causality between treatments and outcomes. Results are not intended to be compared with clinical trials and should be interpreted in the context of the totality of evidence.

ABE=abemaciclib; AI=aromatase inhibitor; CI=confidence interval; HR=hazard ratio; IQR=interquartile range; mo=month; NE=not estimable; NR=not reported; OS=overall survival; PAL=palbociclib; RIB=ribociclib.

1. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03. 2. Pfizer. Data on file.

EM-DEU-plb-0145

P-VERIFY: Overall Survival in the Unadjusted Analysis

Summary of Events

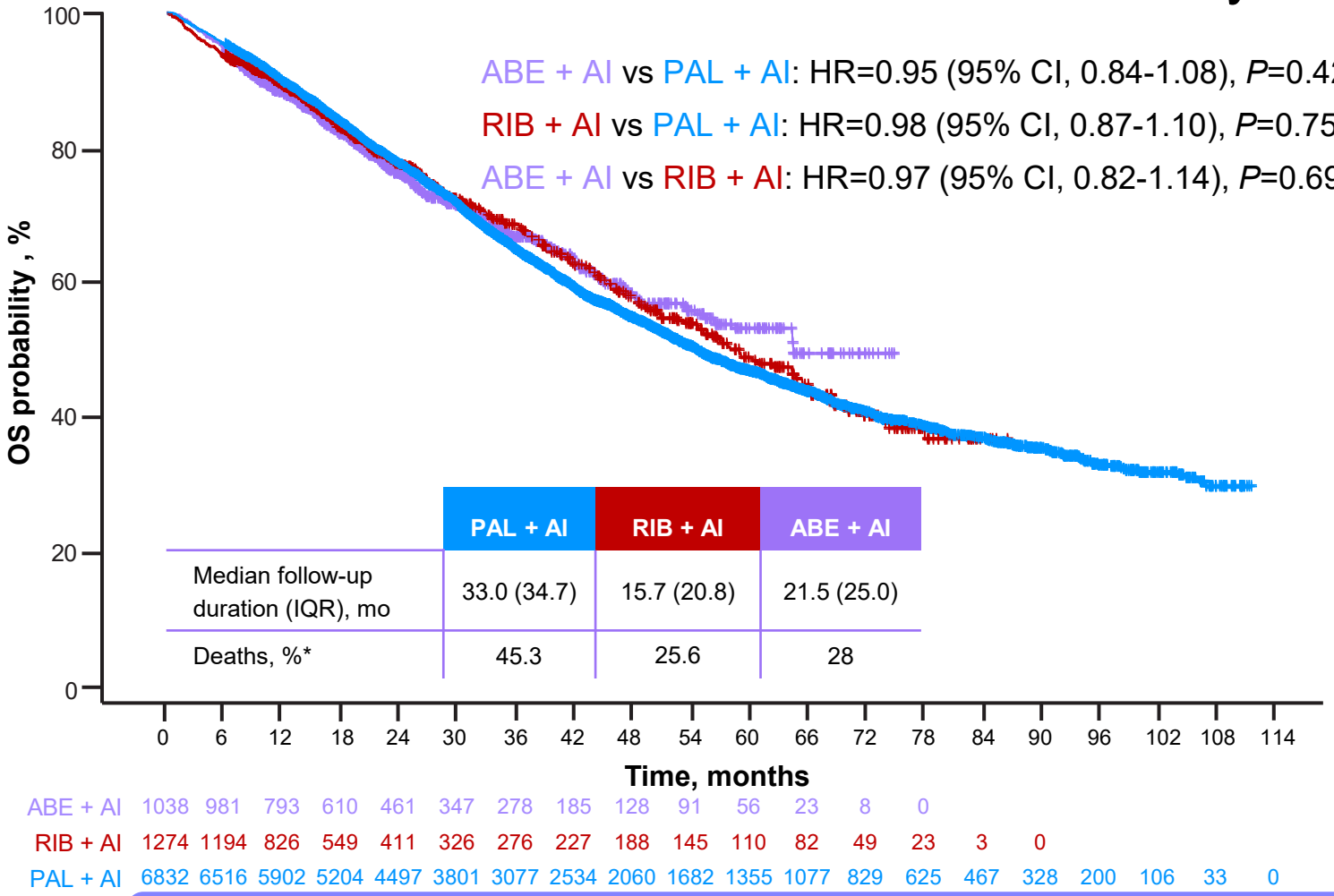
In the unadjusted analysis, a total of 3714 deaths were observed and a total of 5432 patients were censored at the end of the study (data cutoff)

Cohort	Total (No.)	Died		Censored	
		No.	%	No.	%
PAL + AI	6831	3096	45.3	3735	54.7
RIB + AI	1279	328	25.6	951	74.4
ABE + AI	1036	290	28.0	746	72.0
Total	**9146**	**3714**	**40.6**	**5432**	**59.4**

ABE=abemaciclib; AI=aromatase inhibitor; PAL=palbociclib; RIB=ribociclib.

Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

P-VERIFY: Overall Survival After sIPTW Analysis (*Primary Analysis*)



Landmark OS Analysis (based on Kaplan-Meier curve left)

Cohort	OS rates, %			Median OS, (95% CI), mo
	12 mo	24 mo	30 mo	
PAL + AI	89.7	77.5	71.4	54.6 (52.6-56.4)
RIB + AI	89.2	77.3	72.2	59.0 (50.9-66.1)
ABE + AI	88.2	76.1	71.5	64.5 (55.4-NE)

Due to the small numbers of patients at risk after month 30 in the ribociclib and abemaciclib cohorts, point estimates of OS beyond this time point, including the median OS, were not stable[1,2]

Observational retrospective analyses cannot establish causality between treatments and outcomes. Results are not intended to be compared with clinical trials and should be interpreted in the context of the totality of evidence.

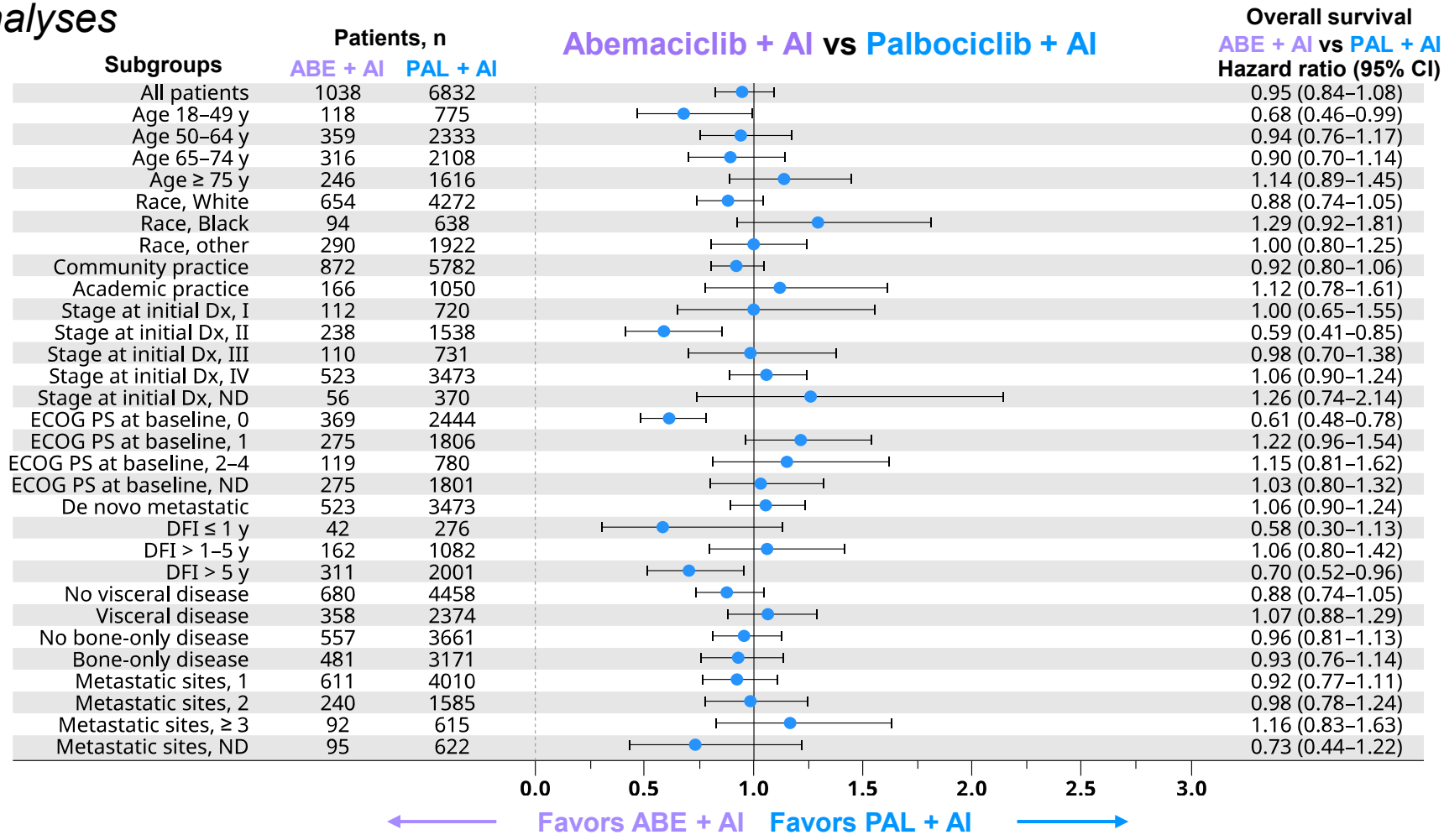
*Based on unadjusted analysis population. ABE=abemaciclib; AI=aromatase inhibitor; CI=confidence interval; HR=hazard ratio; mo=month; IQR=interquartile range; NE=not estimable; OS=overall survival; PAL=palbociclib; RIB=ribociclib; sIPTW=stabilized inverse probability treatment weighting.

1. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03. 2. Pfizer. Data on file.

P-VERIFY: Overall Survival After sIPTW Analysis by Subgroups (1 of 3)

Exploratory Analyses

Subgroups	Patients, n ABE + AI	Patients, n PAL + AI	Overall survival ABE + AI vs PAL + AI Hazard ratio (95% CI)
All patients	1038	6832	0.95 (0.84–1.08)
Age 18–49 y	118	775	0.68 (0.46–0.99)
Age 50–64 y	359	2333	0.94 (0.76–1.17)
Age 65–74 y	316	2108	0.90 (0.70–1.14)
Age ≥ 75 y	246	1616	1.14 (0.89–1.45)
Race, White	654	4272	0.88 (0.74–1.05)
Race, Black	94	638	1.29 (0.92–1.81)
Race, other	290	1922	1.00 (0.80–1.25)
Community practice	872	5782	0.92 (0.80–1.06)
Academic practice	166	1050	1.12 (0.78–1.61)
Stage at initial Dx, I	112	720	1.00 (0.65–1.55)
Stage at initial Dx, II	238	1538	0.59 (0.41–0.85)
Stage at initial Dx, III	110	731	0.98 (0.70–1.38)
Stage at initial Dx, IV	523	3473	1.06 (0.90–1.24)
Stage at initial Dx, ND	56	370	1.26 (0.74–2.14)
ECOG PS at baseline, 0	369	2444	0.61 (0.48–0.78)
ECOG PS at baseline, 1	275	1806	1.22 (0.96–1.54)
ECOG PS at baseline, 2–4	119	780	1.15 (0.81–1.62)
ECOG PS at baseline, ND	275	1801	1.03 (0.80–1.32)
De novo metastatic	523	3473	1.06 (0.90–1.24)
DFI ≤ 1 y	42	276	0.58 (0.30–1.13)
DFI > 1–5 y	162	1082	1.06 (0.80–1.42)
DFI > 5 y	311	2001	0.70 (0.52–0.96)
No visceral disease	680	4458	0.88 (0.74–1.05)
Visceral disease	358	2374	1.07 (0.88–1.29)
No bone-only disease	557	3661	0.96 (0.81–1.13)
Bone-only disease	481	3171	0.93 (0.76–1.14)
Metastatic sites, 1	611	4010	0.92 (0.77–1.11)
Metastatic sites, 2	240	1585	0.98 (0.78–1.24)
Metastatic sites, ≥ 3	92	615	1.16 (0.83–1.63)
Metastatic sites, ND	95	622	0.73 (0.44–1.22)



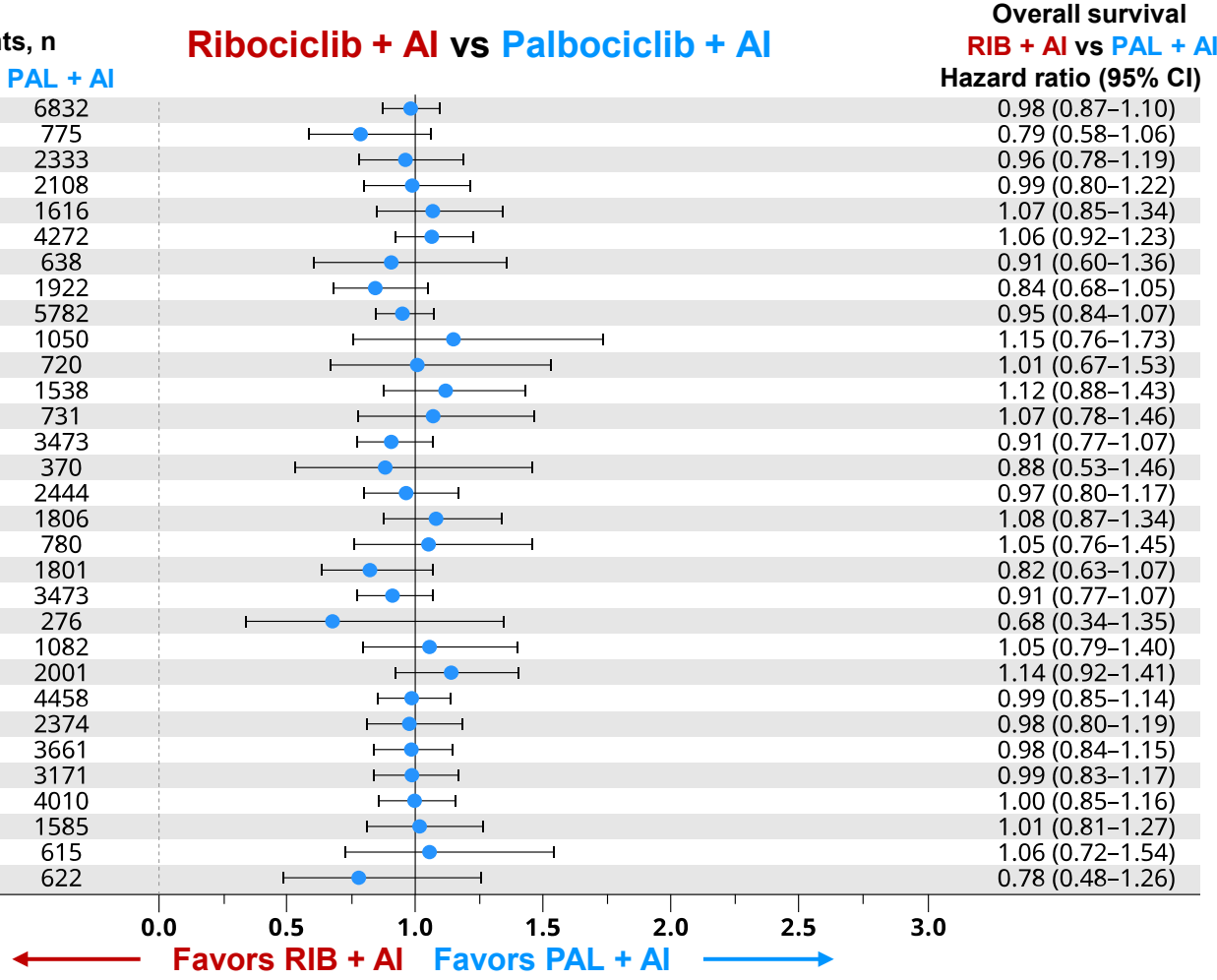
Observational retrospective analyses cannot establish causality between treatments and outcomes, and these analyses are not intended to demonstrate efficacy in particular subgroup. Small patient numbers is a limitation of this analysis. These results are not intended to be compared with clinical trials and should be interpreted in the context of the totality of evidence.

ABE=abemaciclib; AI=aromatase inhibitor; CI=confidence interval; DFI=disease-free interval; Dx=diagnosis; ECOG PS=Eastern Cooperative Oncology Group performance status; ND=not determined; PAL=palbociclib; sIPTW=stabilized inverse probability treatment weighting. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

P-VERIFY: Overall Survival After sIPTW Analysis by Subgroups (2 of 3)

Exploratory Analyses

Subgroups	Patients, n RIB + AI	Patients, n PAL + AI	Overall survival RIB + AI vs PAL + AI Hazard ratio (95% CI)
All patients	1274	6832	0.98 (0.87–1.10)
Age 18–49 y	148	775	0.79 (0.58–1.06)
Age 50–64 y	437	2333	0.96 (0.78–1.19)
Age 65–74 y	390	2108	0.99 (0.80–1.22)
Age ≥ 75 y	299	1616	1.07 (0.85–1.34)
Race, White	797	4272	1.06 (0.92–1.23)
Race, Black	117	638	0.91 (0.60–1.36)
Race, other	360	1922	0.84 (0.68–1.05)
Community practice	1085	5782	0.95 (0.84–1.07)
Academic practice	189	1050	1.15 (0.76–1.73)
Stage at initial Dx, I	136	720	1.01 (0.67–1.53)
Stage at initial Dx, II	287	1538	1.12 (0.88–1.43)
Stage at initial Dx, III	136	731	1.07 (0.78–1.46)
Stage at initial Dx, IV	645	3473	0.91 (0.77–1.07)
Stage at initial Dx, ND	70	370	0.88 (0.53–1.46)
ECOG PS at baseline, 0	457	2444	0.97 (0.80–1.17)
ECOG PS at baseline, 1	329	1806	1.08 (0.87–1.34)
ECOG PS at baseline, 2–4	147	780	1.05 (0.76–1.45)
ECOG PS at baseline, ND	341	1801	0.82 (0.63–1.07)
De novo metastatic	645	3473	0.91 (0.77–1.07)
DFI ≤ 1 y	52	276	0.68 (0.34–1.35)
DFI > 1–5 y	202	1082	1.05 (0.79–1.40)
DFI > 5 y	376	2001	1.14 (0.92–1.41)
No visceral disease	831	4458	0.99 (0.85–1.14)
Visceral disease	443	2374	0.98 (0.80–1.19)
No bone-only disease	683	3661	0.98 (0.84–1.15)
Bone-only disease	591	3171	0.99 (0.83–1.17)
Metastatic sites, 1	745	4010	1.00 (0.85–1.16)
Metastatic sites, 2	304	1585	1.01 (0.81–1.27)
Metastatic sites, ≥ 3	111	615	1.06 (0.72–1.54)
Metastatic sites, ND	114	622	0.78 (0.48–1.26)



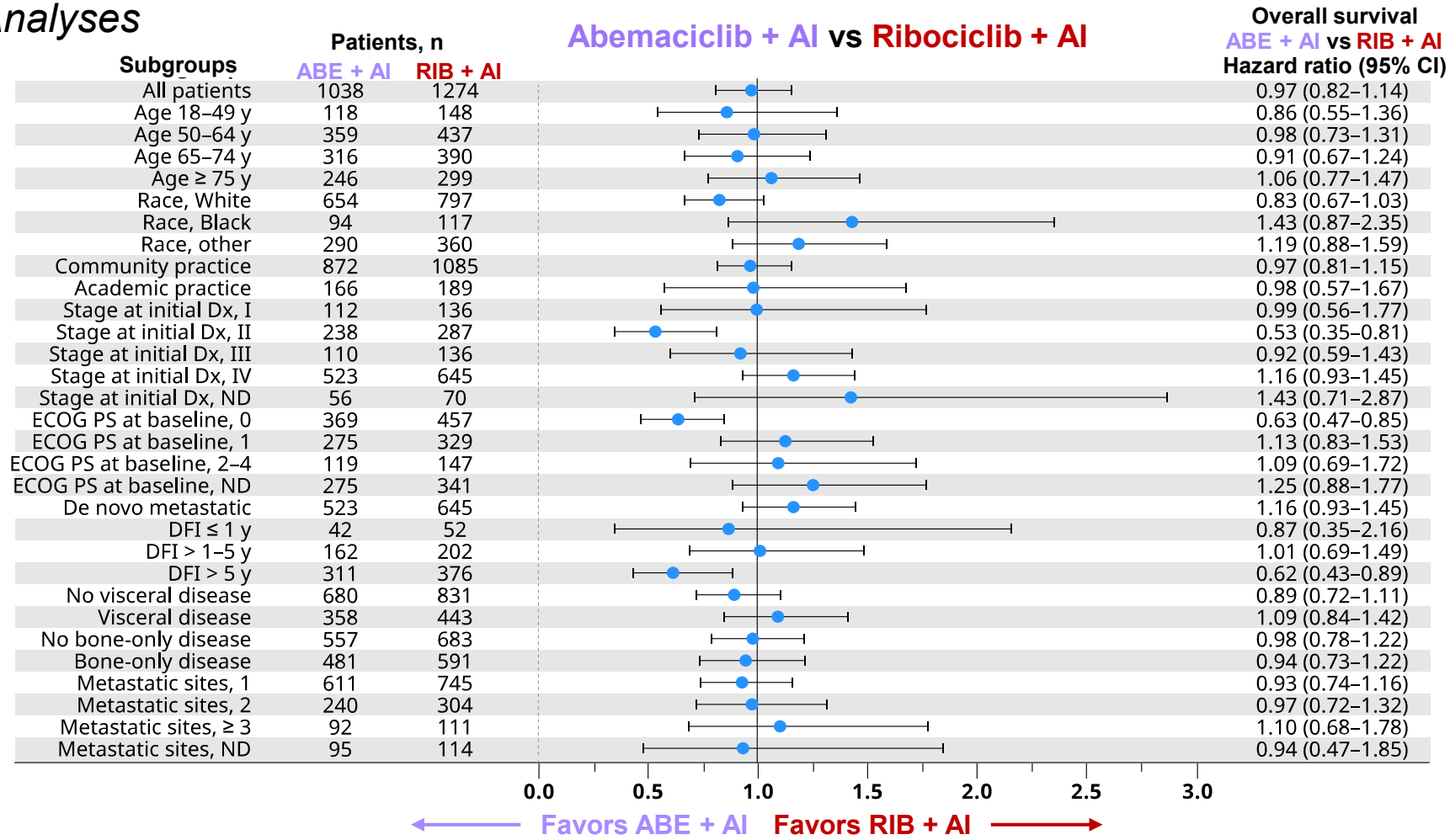
Observational retrospective analyses cannot establish causality between treatments and outcomes, and these analyses are not intended to demonstrate efficacy in particular subgroup. Small patient numbers is a limitation of this analysis. These results are not intended to be compared with clinical trials and should be interpreted in the context of the totality of evidence.

AI=aromatase inhibitor; CI=confidence interval; DFI=disease-free interval; Dx=diagnosis; ECOG PS=Eastern Cooperative Oncology Group performance status; ND=not determined; PAL=palbociclib; RIB=ribociclib; sIPTW=stabilized inverse probability treatment weighting. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

P-VERIFY: Overall Survival After sIPTW Analysis by Subgroups (3 of 3)

Exploratory Analyses

Subgroups	Patients, n ABE + AI	Patients, n RIB + AI	Overall survival ABE + AI vs RIB + AI Hazard ratio (95% CI)
All patients	1038	1274	0.97 (0.82–1.14)
Age 18–49 y	118	148	0.86 (0.55–1.36)
Age 50–64 y	359	437	0.98 (0.73–1.31)
Age 65–74 y	316	390	0.91 (0.67–1.24)
Age ≥ 75 y	246	299	1.06 (0.77–1.47)
Race, White	654	797	0.83 (0.67–1.03)
Race, Black	94	117	1.43 (0.87–2.35)
Race, other	290	360	1.19 (0.88–1.59)
Community practice	872	1085	0.97 (0.81–1.15)
Academic practice	166	189	0.98 (0.57–1.67)
Stage at initial Dx, I	112	136	0.99 (0.56–1.77)
Stage at initial Dx, II	238	287	0.53 (0.35–0.81)
Stage at initial Dx, III	110	136	0.92 (0.59–1.43)
Stage at initial Dx, IV	523	645	1.16 (0.93–1.45)
Stage at initial Dx, ND	56	70	1.43 (0.71–2.87)
ECOG PS at baseline, 0	369	457	0.63 (0.47–0.85)
ECOG PS at baseline, 1	275	329	1.13 (0.83–1.53)
ECOG PS at baseline, 2–4	119	147	1.09 (0.69–1.72)
ECOG PS at baseline, ND	275	341	1.25 (0.88–1.77)
De novo metastatic	523	645	1.16 (0.93–1.45)
DFI ≤ 1 y	42	52	0.87 (0.35–2.16)
DFI > 1–5 y	162	202	1.01 (0.69–1.49)
DFI > 5 y	311	376	0.62 (0.43–0.89)
No visceral disease	680	831	0.89 (0.72–1.11)
Visceral disease	358	443	1.09 (0.84–1.42)
No bone-only disease	557	683	0.98 (0.78–1.22)
Bone-only disease	481	591	0.94 (0.73–1.22)
Metastatic sites, 1	611	745	0.93 (0.74–1.16)
Metastatic sites, 2	240	304	0.97 (0.72–1.32)
Metastatic sites, ≥ 3	92	111	1.10 (0.68–1.78)
Metastatic sites, ND	95	114	0.94 (0.47–1.85)



Observational retrospective analyses cannot establish causality between treatments and outcomes, and these analyses are not intended to demonstrate efficacy in particular subgroup. Small patient numbers is a limitation of this analysis. These results are not intended to be compared with clinical trials and should be interpreted in the context of the totality of evidence.

ABE=abemaciclib; AI=aromatase inhibitor; CI=confidence interval; DFI=disease-free interval; Dx=diagnosis; ECOG PS=Eastern Cooperative Oncology Group performance status; ND=not determined; RIB=ribociclib; sIPTW=stabilized inverse probability treatment weighting. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

P-VERIFY: Overall Survival Results

Sensitivity Analyses

Multivariable Cox proportional hazards regression analysis showed no significant differences in OS between treatment groups.

Adjusted hazard ratios were as follows:

- **0.94** (95% CI, 0.84-1.06; *P*=0.3216) when comparing the **ribociclib group** versus the **palbociclib group**
- **0.94** (95% CI, 0.84-1.07; *P*=0.3603) when comparing the **abemaciclib group** versus the **palbociclib group**
- **1.00** (95% CI, 0.85-1.17; *P*=0.9851) when comparing the **abemaciclib group** versus the **ribociclib group**

After 1:1 exact matching, there were no significant differences in OS between treatment groups.

Adjusted hazard ratios were as follows:

- **0.99** (95% CI, 0.85-1.15; *P*=0.8519) when comparing the **ribociclib group** versus the **palbociclib group**
- **0.95** (95% CI, 0.80-1.13; *P*=0.5898) when comparing the **abemaciclib group** versus the **palbociclib group**
- **0.96** (95% CI, 0.75-1.24; *P*=0.7630) when comparing the **abemaciclib group** versus the **ribociclib group**

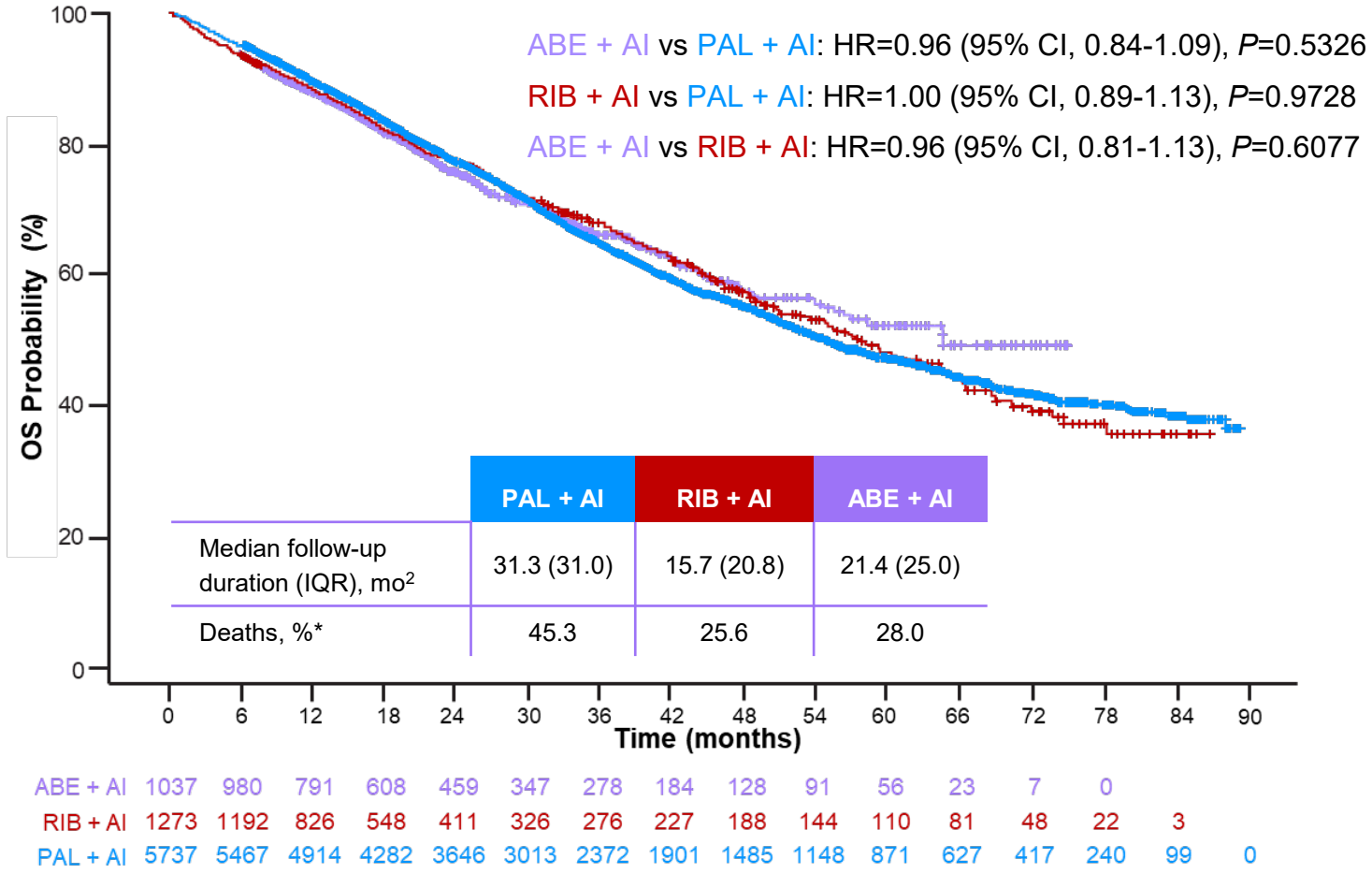
Observational retrospective analyses cannot establish causality between treatments and outcomes, and these analyses are not intended to demonstrate efficacy in particular subgroup. Small patient numbers is a limitation of this analysis. These results are not intended to be compared with clinical trials and should be interpreted with caution in the context of the totality of evidence.

CI=confidence interval; OS=overall survival.

Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

P-VERIFY: Overall Survival

Subanalysis of Patients Who Started Index Treatment in 2017 or Later



Landmark OS Analysis (based on Kaplan-Meier curve left)

Cohort	OS rates, %			Median OS, (95% CI), mo
	12 mo	24 mo	30 mo	
PAL + AI	89.6	77.4	71.3	55.1 (53.1-58.4)
RIB + AI	89.1	77.2	72.1	58.0 (50.9-65.4)
ABE + AI	88.1	76.1	71.5	64.5 (55.4-NE)

Due to the small numbers of patients at risk after month 30 in the ribociclib and abemaciclib cohorts, point estimates of OS beyond this time point, including the median OS, were not stable[1,2]

The results of the multivariable analyses and 1:1 exact matching analysis of this cohort also demonstrated no significant difference in OS[2]

Observational retrospective analyses cannot establish causality between treatments and outcomes, and these analyses are not intended to demonstrate efficacy in particular subgroup. Small patient numbers is a limitation of this analysis. These results are not intended to be compared with clinical trials and should be interpreted with caution in the context of the totality of evidence.

*Based on the unadjusted analysis population, irrespective of index treatment data. ABE=abemaciclib; AI=aromatase inhibitor; CI=confidence interval; HR=hazard ratio; IQR=interquartile range; NE=not estimable; OS=overall survival; PAL=palbociclib; RIB=ribociclib; sIPTW=stabilized inverse probability of treatment weighting. 1. Rugo HS, et al. SABCS 2024. Poster PS2-03. 2. Pfizer. Data on file.

P-VERIFY: Strengths and Limitations[1,2]

Strengths

- Strengths include the diversity of patients represented and the comprehensiveness of data collected in a US nationwide, longitudinal database
- In this database, EHR-derived data were validated using quality and performance assessment frameworks and date of death was a consensus mortality endpoint based on multiple sources and validated against the gold-standard National Death Index
- This study had a large sample size (N=9146), representing the largest real-world study conducted to date evaluating the comparative effectiveness of CDK4/6 inhibitors
- The consistency of findings across different comparative methods, including the unadjusted analysis, the primary analysis after sIPTW, and the sensitivity analysis using a multivariable regression model, contributed to the study's internal validity
- Findings remained consistent in the subanalysis of patients who started treatment in 2017 or later, when all CDK4/6 inhibitors were commercially available in the US

Limitations

- This study was a retrospective database analysis, which inherently carries the potential for treatment selection bias and inaccurate or incomplete data capture
- Although statistical methodologies were used to balance baseline characteristics between treatment groups, these methodologies cannot account for potential unmeasured confounders
- The statistical non-significant differences in OS between the 3 CDK4/6 inhibitors in the current analysis does not demonstrate noninferiority or equivalence, and a formal noninferiority or equivalence analysis would be needed to draw such conclusions
- The ribociclib and abemaciclib groups had small sample sizes and short follow-up times relative to the palbociclib group, which may cause point estimates to be unstable beyond 30 months of follow-up
- Results may not be generalizable to patient populations that were not represented in the Flatiron Health database

CDK4/6=cyclin-dependent kinase 4/6; EHR=electronic health record; OS=overall survival; sIPTW=stabilized inverse probability of treatment weighting

1. Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03. 2. Pfizer. Data on file.

P-VERIFY: Authors' Conclusions

- This study represents the largest RW comparative analysis conducted to date of OS between the CDK4/6 inhibitors in combination with an AI
- This study suggests that there are no significant OS differences between 1L palbociclib, ribociclib, or abemaciclib used in combination with an AI for patients with HR+/HER2- mBC in routine clinical practice in the US; however, further research is needed

1L=first-line; AI=aromatase inhibitor; CDK4/6=cyclin-dependent kinases 4/6; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; mBC=metastatic breast cancer; OS=overall survival; RW=real-world.

Rugo HS, et al. SABCS 2024. Poster Spotlight PS2-03.

Flatiron Health Electronic Health Records (EHRs) Database: Key Features

Size of database[1]

>4 million cancer patient records (>700k BC and 120k mBC patients)
75% community practice, 25% academic cancer centers[2]

Reflects experience across clinical settings[2,3]

>280 community care centers (≈800 sites of care) and 7 major academic cancer centers across the US

Single common dataset with a systematic approach to data extraction[1,4]

Comprises millions of records from EHRs in 1 consistent platform

- Flatiron Health has been featured in 1000+ publications and used in global regulatory submissions, including to the FDA, EMA, and PMDA[1,2]
- Validation of the mortality endpoint in Flatiron Health has been conducted[4]
- Publications using Flatiron Health can be found here: https://flatiron.com/publications/

BC=breast cancer; EHR=electronic health record; EMA=European Medicines Agency; FDA=United States Food and Drug Administration; mBC=metastatic breast cancer; PMDA=Pharmaceuticals and Medical Devices Agency. 1. Flatiron Health. https://flatiron.com/about-us/. Accessed November 7, 2024. 2. Flatiron Health. Data on file. 3. Rugo HS, et al. SABCS 2024. Poster PS2-03.
4. Curtis MD, et al. *Health Serv Res*. 2018;6:4460-4476.

Enhanced Data Abstraction from Flatiron Health Enabled A Comprehensive Patient Analysis for P-VERIFY Using the Full Flatiron Health Dataset[1]

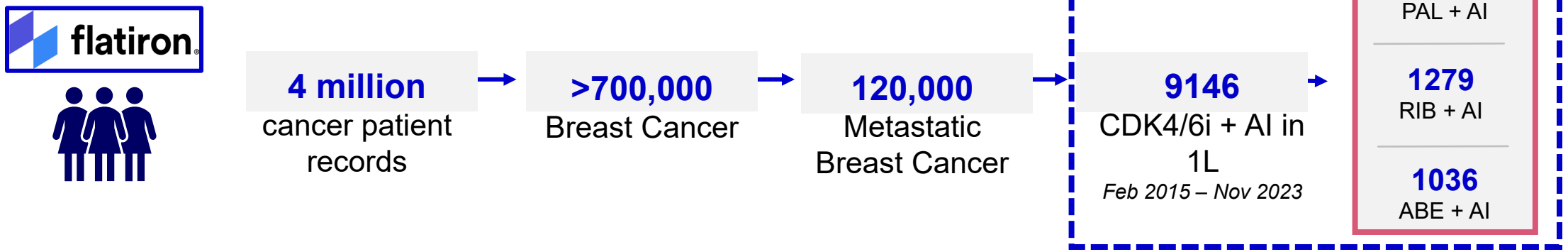
Previous Analyses (i.e. P-REALITY X)

- Based upon a **random subset** of all available patients in the Flatiron Health network of sites which met inclusion /exclusion criteria of the study
- This limitation was due to the **previous data technology abstraction process which, still required some level of manual chart review**
- **Time for data delivery:** ~ 9+ months

As of June 2024[2-4]

- Flatiron Health released a new dataset offering **advanced AI abstraction technology**
- **AI abstraction allows for ALL patients** to be accessible in near real time, with availability of similar clinical and demographic variables
- **Validation studies support data quality** in this newly released dataset

Dataset Overview



1L=first-line; ABE=abemaciclib; AI=aromatase inhibitor; AI=artificial intelligence; CDK4/6=cyclin-dependent kinase 4/6; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; MBC=metastatic breast cancer; PAL=palbociclib; RIB=ribociclib. 1. Pfizer. Data on File. 2. Castellanos EH, et al. *JCO Clin Cancer Inform.* 2024;8:e2300046. 3. Estevez M, et al. *Cancers (Basel).* 2022;14(13):3063. 4. Benedum CM, et al. *Cancers (Basel).* 2023;15(6):1853.

Additional Information

Additional SABCS 2024 Breast Cancer Studies

Title	Abstract ID
Liquid biopsy DNADX assay in advanced HR+/HER2-negative breast cancer after progression on CDK4/6 and aromatase inhibitors: a correlative analysis from the PACE phase II randomized trial	PS2-09
Molecular characterization of the NeoPalAna endocrine resistant (ET-R) cohort: Implications for CDK4/6 inhibitor (CDK4/6i) and ET resistance mechanisms in primary estrogen receptor positive (ER+) and HER2 negative (HER2-) breast cancer (BC)	PS12-03
Real-world effectiveness and economic outcomes of first-line CDK4/6 inhibitors in combination with AI for HR+/HER2- metastatic breast cancer in a US Medicare eligible population	P1-10-03
Thymidine kinase activity as a prognostic and predictive biomarker in the phase II PACE trial of CDK4/6 inhibition beyond progression	P2-07-25
A011801 (CompassHER2 RD): Postneoadjuvant T-DM1 + tucatinib/placebo in patients with residual HER2-positive invasive breast cancer	P2-10-19
Subtype by PAM50 changes after neoadjuvant endocrine therapy, from a phase III randomized, double-blind, neoadjuvant study of hormonal therapy plus palbociclib versus hormonal therapy plus placebo in women with operable, hormone sensitive and HER2-negative primary breast cancer	P4-04-28
CDK 4/6 inhibitor switching and associated dosing patterns in Swedish HR+/HER2- MBC patients	P4-07-26
Potential risk factors for health-related quality of life (HRQoL) in palbociclib (PAL) plus endocrine therapy (ET) and ET alone patients with HR+/HER2- advanced breast cancer (ABC): exploratory analysis from 6-month longitudinal study (JBCRG-26)	P4-10-03
Real-world palbociclib dose adjustments and outcomes in HR+/HER2- metastatic breast cancer: Flatiron database analysis (P-REALITY X)	P4-10-04
Real-world effectiveness of palbociclib plus an aromatase inhibitor in HR+/HER2- mBC patients living in disadvantaged neighborhoods	P4-12-04
Safety and preliminary efficacy of tucatinib and alpelisib in patients with HER2-positive PIK3CA-mutated metastatic breast cancer	P5-03-10

CDK4/6=cyclin-dependent kinase 4/6; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; PIK3CA=Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Alpha; MBC=metastatic breast cancer; SABCS=San Antonio Breast Cancer Symposium; T-DM1=trastuzumab emtansine.

References in speaker notes.

Geriatric Assessment: The G8 Questionnaire

Back

- Identifies older patients with cancer who could benefit from a comprehensive geriatric assessment[1]
- Healthcare professional-administered[1]
- **8 ITEMS including[1]:**
  - Appetite, weight loss, BMI
  - Mobility
  - Mood and cognition
  - Number of medications
  - Patient-related health
  - Age categories
- **Score <14 (total range 0–17) indicates patient should undergo full geriatric evaluation[1]**

Benefits: The G8 tool has been found predictive for chemotherapy-related toxicity and prognostic for survival in mostly solid tumors[2]

Limitations: Does not include social environment and biological variables.[1] However, sensitivity is ~87% which is in line with other clinical tools e.g. mammography[2]

	Items	Possible answers (score)
A	Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?	0 : severe decrease in food intake
		1 : moderate decrease in food intake
		2 : no decrease in food intake
B	Weight loss during the last 3 months	0 : weight loss > 3 kg
		1 : does not know
		2 : weight loss between 1 and 3 kgs
		3 : no weight loss
C	Mobility	0 : bed or chair bound
		1 : able to get out of bed/chair but does not go out
		2 : goes out
E	Neuropsychological problems	0 : severe dementia or depression
		1 : mild dementia or depression
		2 : no psychological problems
F	Body Mass Index (BMI (weight in kg) / (height in m²)	0 : BMI < 19
		1 : BMI = 19 to BMI < 21
		2 : BMI = 21 to BMI < 23
		3 : BMI = 23 and > 23
H	Takes more than 3 medications per day	0 : yes
		1 : no
P	In comparison with other people of the same age, how does the patient consider his/her health status?	0 : not as good
		0.5 : does not know
		1 : as good
		2 : better
	Age	0 : >85
		1 : 80-85
		2 : <80
	TOTAL SCORE	**0 – 17**

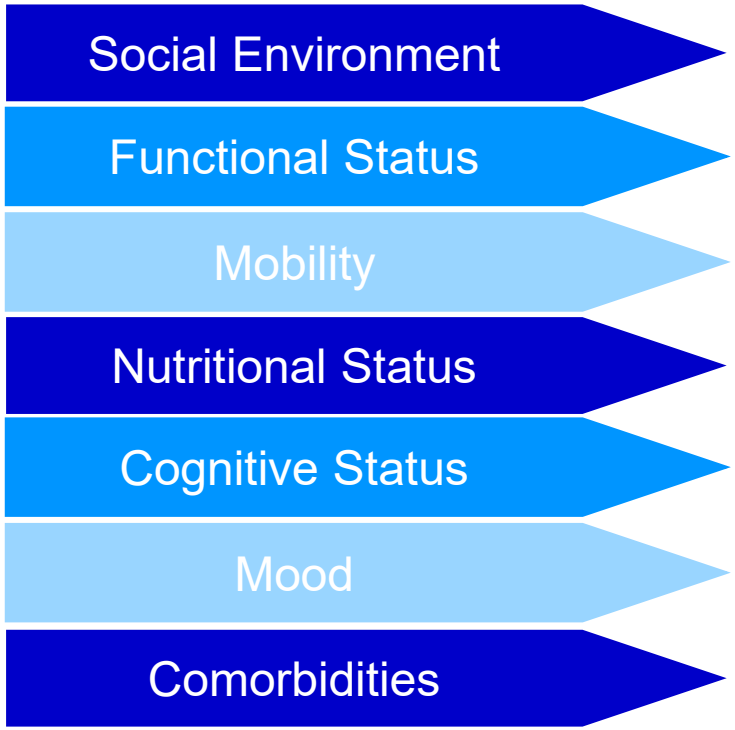
BMI=body mass index.

1. Bellera CA, et al. *Ann Oncol*. 2012;23:2166-2172. **2.** Kenis C, et al. *J Clin Oncol*. 2014;32:19-26.

Geriatric Assessment: The Geriatric COre DatasEt (G-CODE)

Back

- Defined by the French cooperative group DIALOG in order to give a minimal and standardized geriatric description of older patients included in clinical trials
- Physician-administered



7 GERIATRIC DOMAINS, 10 ITEMS

1. Do you live alone?
2. Do you have a person or caregiver able to provide care and support?
3. Activities of Daily Living (ADL; abnormal if <6/6)
4. Instrumental ADL (IADL; abnormal if <4/4)
5. Timed Up and Go test (TUG; abnormal if >20 seconds)

6–7. BMI (<21) and Weight loss (>10%) during the last 6 months

8. Mini-Cog™ (3 words and clock drawing tests; abnormal if <4/5)
9. Mini-Geriatric Depression Scale (Mini-GDS; abnormal if ≥1/4)
10. Updated Charlson comorbidity index score[2]

BMI=body mass index.

1. Paillaud E, et al. *Eur J Cancer*. 2018;103:61-68. **2.** Quan H, et al. *Am J Epidemiol*. 2011;173(6):676-682