

CDK4/6 INHIBITORS + ET IN HR+, HER2- EARLY BREAST CANCER

THIS PRESENTATION WAS COMMISSIONED BY LILLY MEDICAL AND IS INTENDED TO BE USED BY
HCPs FOR MEDICAL, SCIENTIFIC, AND EDUCATIONAL PURPOSES



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Trials of FDA-Approved CDK4/6i in HR+, HER2- Early Breast Cancer

- monarchE
 - NATALEE
-



Learning Objectives

After reviewing this educational slide deck on key concepts in high-risk HR+, HER2- EBC, HCPs will be able to:

Address Unmet Need:

Understand the critical unmet need in the treatment of high-risk HR+, HER2- EBC, and explore strategies to address these gaps in practice

Identify Patients With High-Risk:

Learn to accurately identify patients with HR+, HER2- EBC who are at high risk of disease recurrence

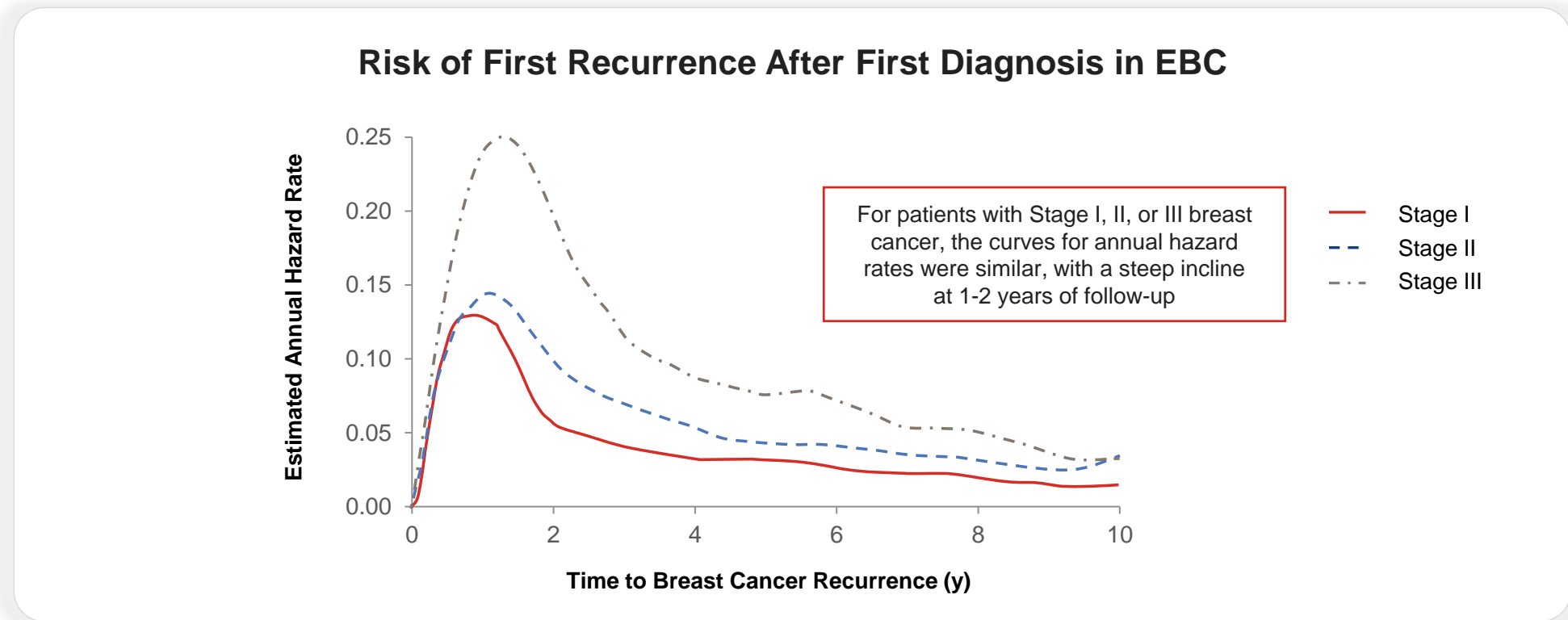
Incorporate Emerging Data Into Clinical Practice:

Gain practical insights into ongoing clinical trials involving CDK4/6i combined with ET for HR+, HER2- EBC

UNMET NEED IN HIGH-RISK, HR+, HER2- EARLY BREAST CANCER



Risk of Recurrence Peaks Within 1-3 Years After Diagnosis in Patients With EBC

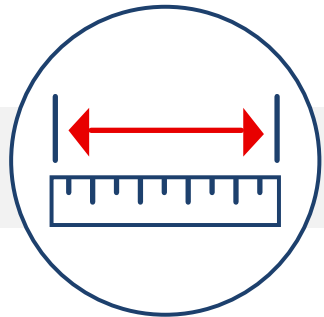


These data highlighted the **need for additional therapies** during the time when breast cancer recurrence peaks

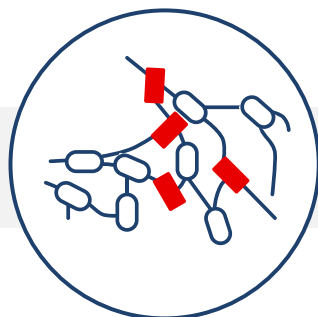
Identification of Patients With HR+, HER2- EBC at High Risk of Disease Recurrence

Not all patients with EBC will experience recurrence. It is important to identify patients with HR+, HER2- EBC at high risk of recurrence and their **appropriate treatment** while still in the **adjuvant setting**¹

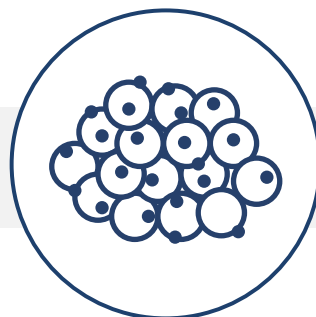
Clinical and Pathological Factors That Influence Risk of Recurrence Include^{2,3}:



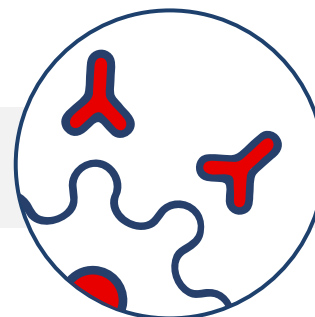
Tumor size



Lymph node involvement



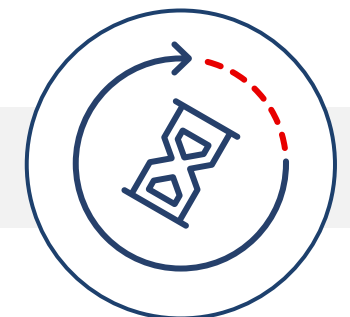
Tumor grade



PR and ER expression;
HER2 status



Other biomarkers
(eg, Ki-67)



Age

Recurrence Risk in Patients With Node-Positive, High-Risk, HR+, HER2- EBC vs Early TNBC

N+ High-Risk

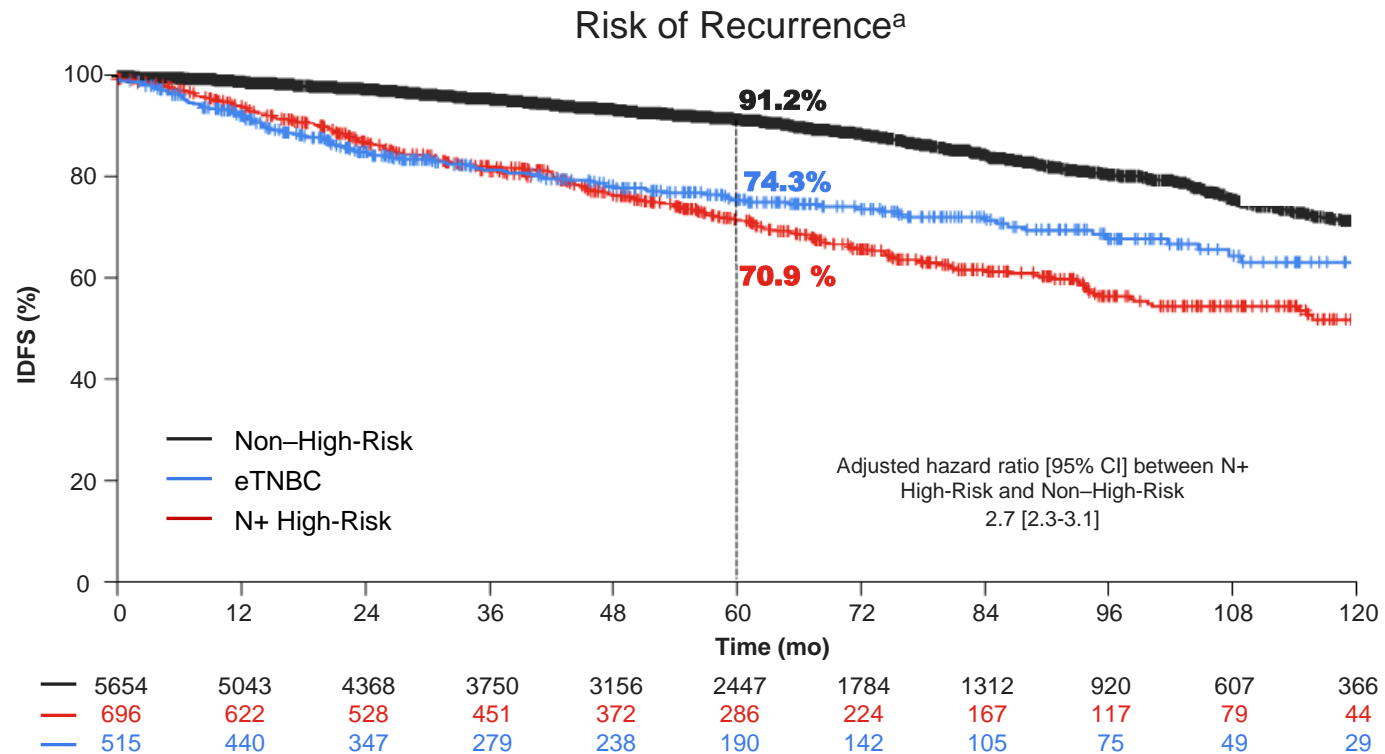
N1/N1mi high-risk:
1-3 ALN;
Grade 3 or tumor ≥5 cm

OR

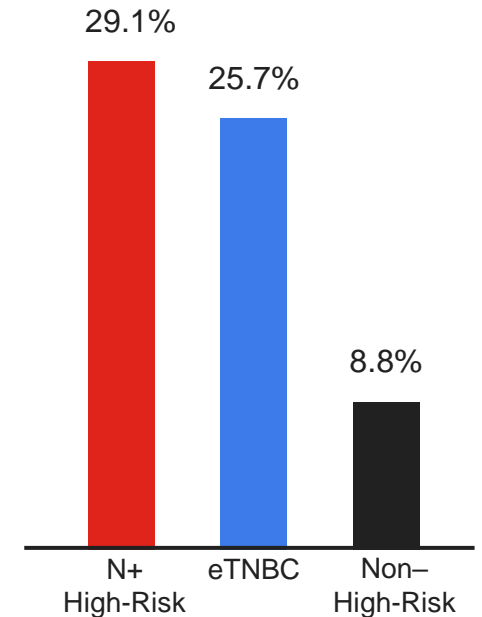
4+ ALN
(N2, N3)

Non-High-Risk

Patients not meeting
N+ high-risk criteria



5Y Recurrence Risk



^aBased on US Flatiron RW data.

ALN=axillary lymph node; EBC=early breast cancer; eTNBC=early triple-negative breast cancer; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; IDFS=invasive disease-free survival; mo=month; N=node; N1mi=micrometastases; N1=1-3 ALN; N2=4-9 ALN; N3=10+ ALN; RW=real-world; TNBC=triple-negative breast cancer; y=year.
Rugo HS, et al. Presented at: ESMO Breast Cancer Conference 2025. Poster 215P.

Mortality Risk in Patients With Node-Positive, High-Risk, HR+, HER2- EBC vs Early TNBC

N+ High-Risk

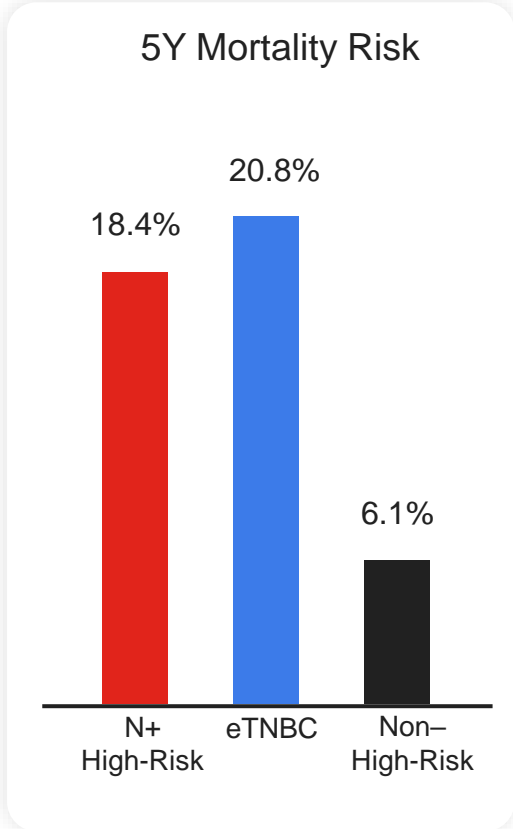
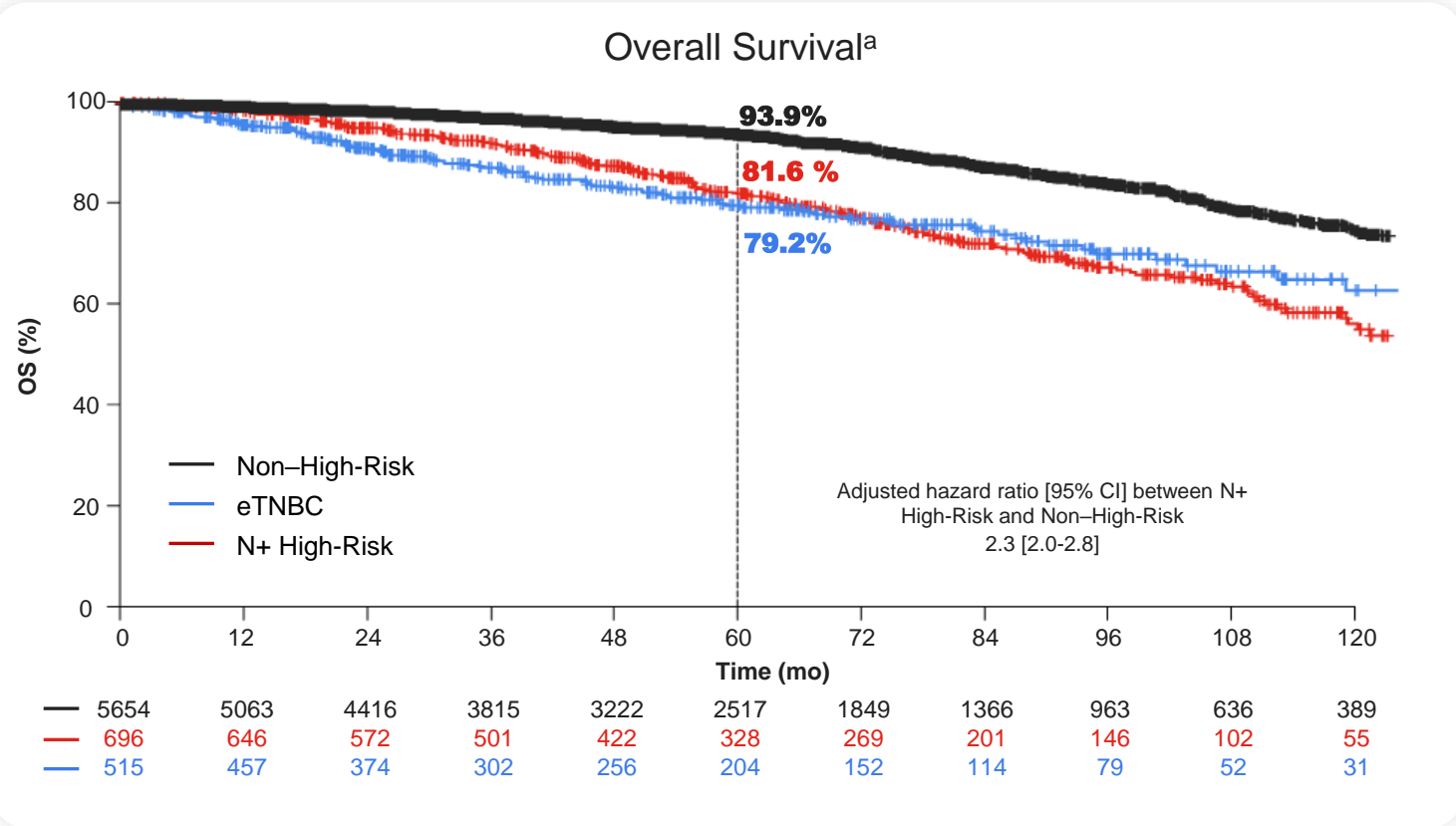
N1/N1mi high-risk:
1-3 ALN;
Grade 3 or tumor ≥5 cm

OR

4+ ALN
(N2, N3)

Non-High-Risk

Patients not meeting
N+ high-risk criteria



^aBased on US Flatiron RW data.

ALN=axillary lymph node; EBC=early breast cancer; eTNBC=early triple-negative breast cancer; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; mo=month; N=node; N1mi=micrometastases; N1=1-3 ALN; N2=4-9 ALN; N3=10+ ALN; OS=overall survival; RW=real-world; TNBC=triple-negative breast cancer; y=year
Rugo HS, et al. Presented at: ESMO Breast Cancer Conference 2025. Poster 215P.



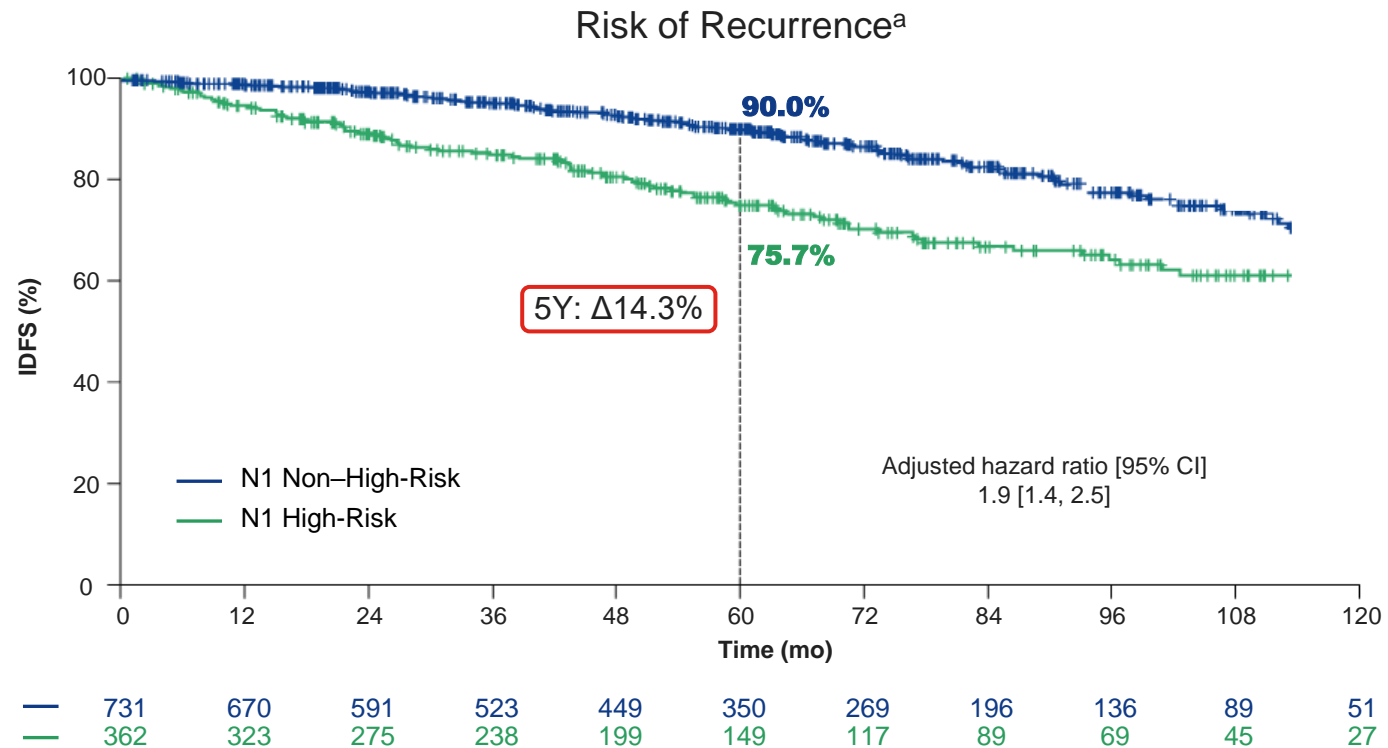
Recurrence Risk in Patients With N1/N1mi High-Risk, HR+, HER2- EBC vs N1/N1mi Non-High-Risk at 5Y

N1 High-Risk

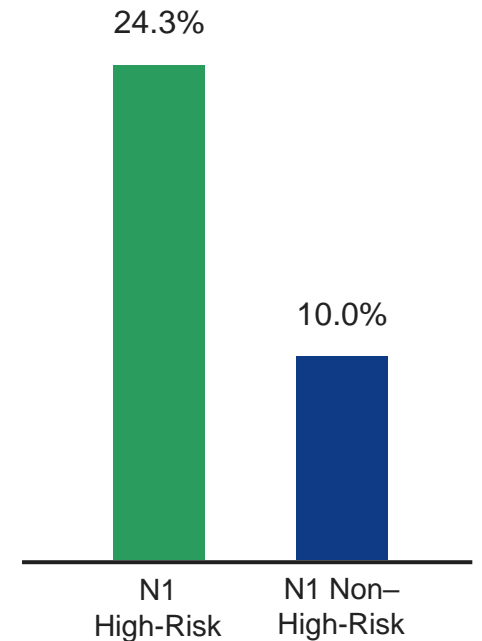
N1/N1mi high-risk:
1-3 ALN;
Grade 3 or tumor ≥5 cm

N1 Non-High-Risk

N1/N1mi:
1-3 ALN +
Grade <3, tumor <5 cm,
and Ki-67<20%



5Y Recurrence Risk



^aBased on US Flatiron RW data.

ALN=axillary lymph node; EBC=early breast cancer; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; IDFS=invasive disease-free survival; mo=month; N=node; N1mi= micrometastases; N1=1-3 ALN; RW=real-world; y=year.
Rugo HS, et al. Presented at: ESMO Breast Cancer Conference 2025. Poster 215P.

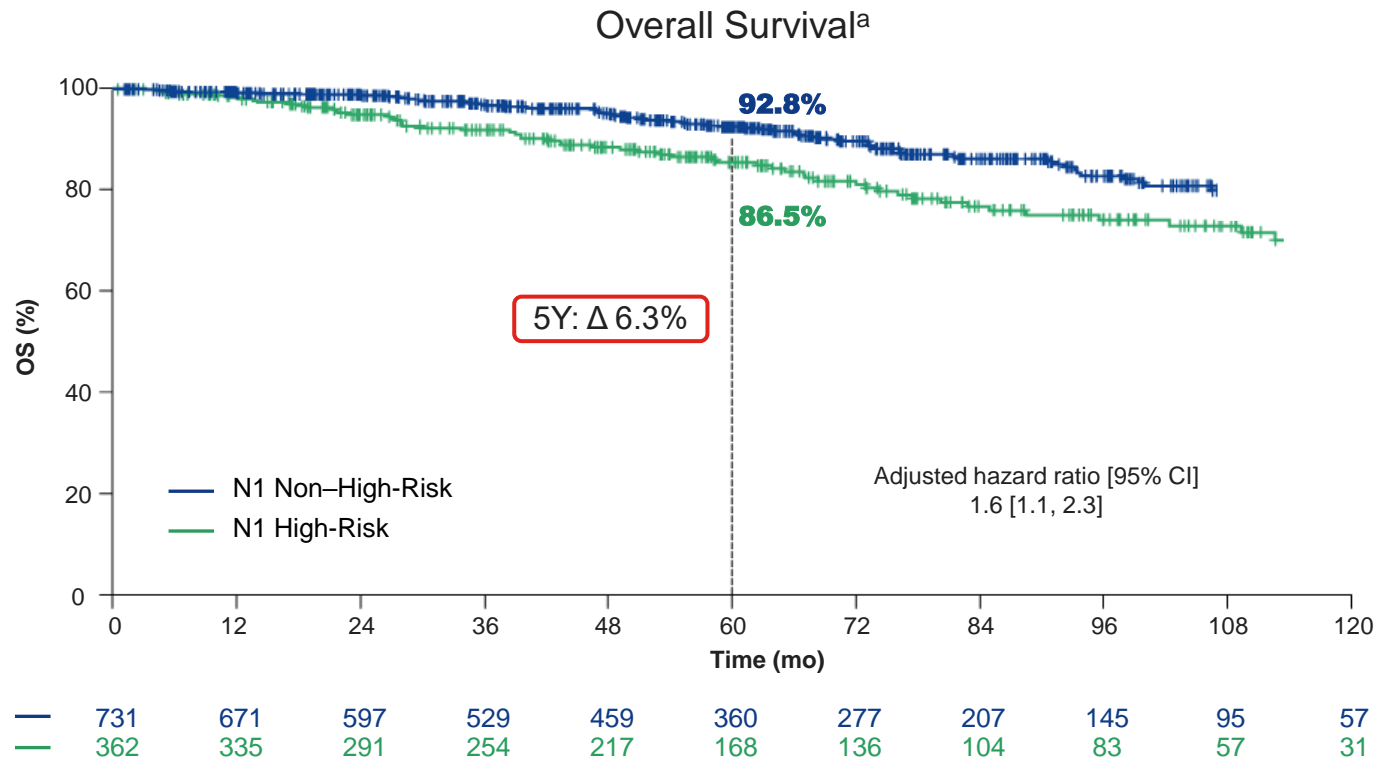
Mortality Risk in Patients With N1/N1mi High-Risk, HR+, HER2- EBC vs N1/N1mi Non-High-Risk at 5Y

N1 High-Risk

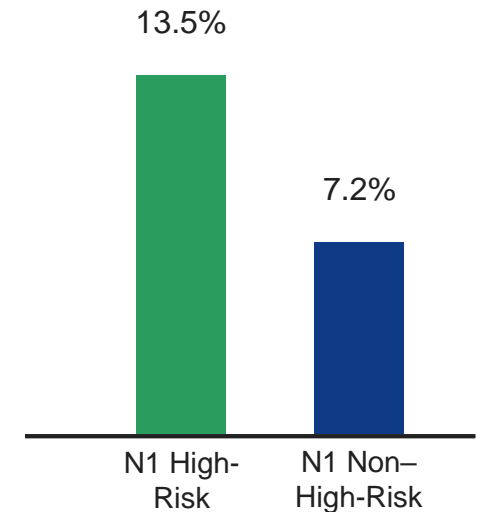
N1/N1mi high-risk:
1-3 ALN;
Grade 3 or tumor ≥5 cm

N1 Non-High-Risk

N1/N1mi:
1-3 ALN +
Grade <3, tumor <5 cm,
and Ki-67<20%



5Y Mortality Risk



^aBased on US Flatiron RW data.

ALN=axillary lymph node; EBC=early breast cancer; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; mo=month; N=node; N1mi= micrometastases; N1=1-3 ALN; OS=overall survival; RW=real-world; y=year.

Rugo HS, et al. Presented at: ESMO Breast Cancer Conference 2025. Poster 215P.

Patients With High-Risk, Node-Positive EBC and Risk of Being Undertreated

HR+, HER2- EBC: N+ High-Risk

N1/N1mi High-Risk:
1-3 ALN + Grade 3 or tumor \geq 5 cm

OR

\geq 4 ALN (N2, N3)

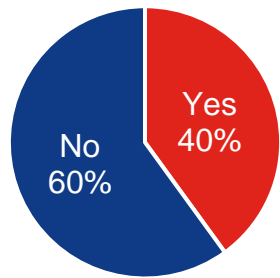
Methods

January 2023-March 2024

- Patients initiating adjuvant oral ET
- Multivariable logistic regression to identify factors associated with CDK4/6i utilization

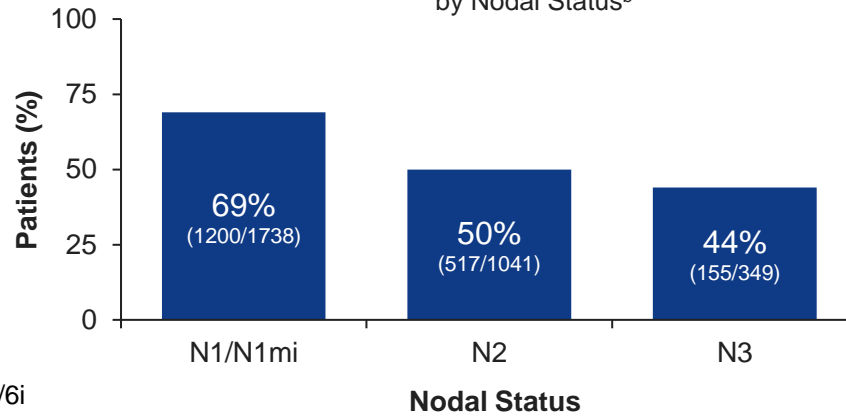
Adjuvant CDK4/6i Use in US in Patients With Node-Positive High-Risk EBC^a

Node-Positive High-Risk EBC (N=3170)

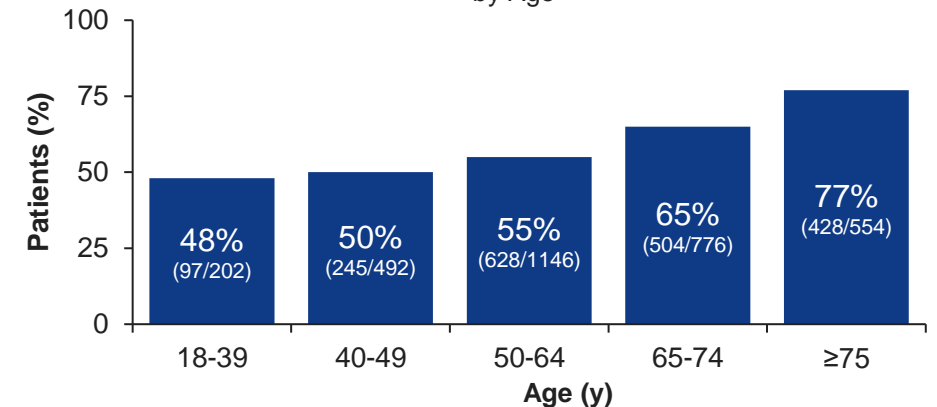


- Received CDK4/6i
- Eligible, but did not receive CDK4/6i

Patients Who Did Not Receive a CDK4/6i by Nodal Status^b



Patients Who Did Not Receive a CDK4/6i by Age



N+ High-Risk:



3 of 5 eligible patients did not receive a CDK4/6i



>2 of 3 eligible patients with N1/N1mi high-risk disease did not receive a CDK4/6i



70% eligible patients \geq 65 years did not receive a CDK4/6i

^aBased on US Flatiron RW data. ^bN1/N1mi was high-risk with Grade 3 and/or tumor size \geq 5 cm.

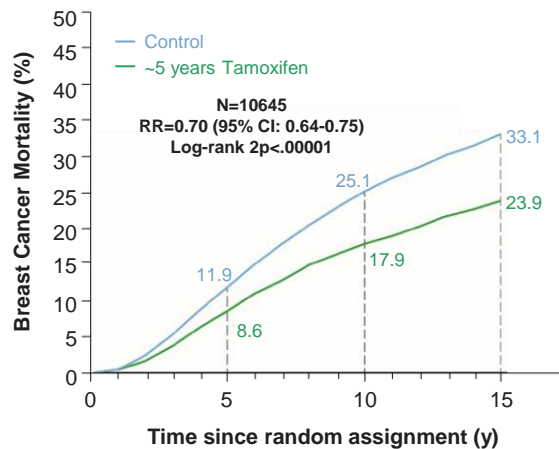
ALN=axillary lymph node; CDK4/6i=cyclin-dependent kinase 4/6 inhibitor; EBC=early breast cancer; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; N=node; N1mi=micrometastases; N1=1-3 ALN; N2=4-9 ALN; N3=10+ ALN; RW=real-world; US=United States; y=year. Sandoval-Leon A, et al. Presented at Miami Breast Cancer Conference (MBCC) 2025. Poster 42.

Improving Overall Survival in HR+ EBC: Challenges

Overall survival (OS) is a clinically meaningful measure of both efficacy and safety and is considered the gold standard for establishing the clinical benefit of cancer treatments

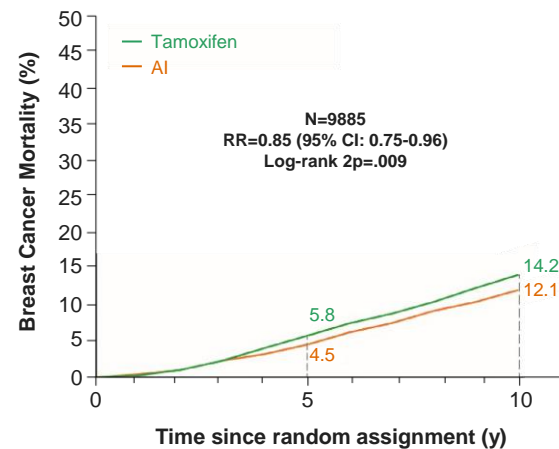
It has taken meta-analyses with large patient numbers to demonstrate improvement in breast cancer-specific mortality in HR+ EBC; changes in treatment standards have been based on reductions in the risk of recurrence and incremental improvements in mortality rates at 10-15 years¹⁻⁴

Tamoxifen vs No Treatment¹



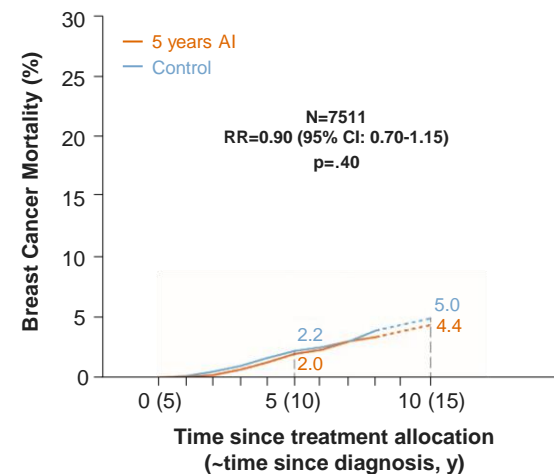
Δ at 15 years: 9.2%

AI vs Tamoxifen²



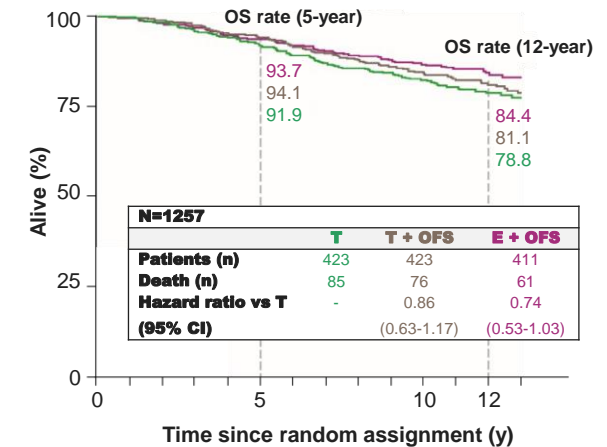
Δ at 10 years: 2.1%

5-Y ET vs Extended AI³



Δ at 15 years: 0.6%

Exemestane + OFS vs Tamoxifen⁴



Δ at 12 years: 5.6%

AI=aromatase inhibitor; E=exemestane; EBC=early breast cancer; ET=endocrine therapy; HR=hormone receptor; OFS=ovarian function suppression; OS=overall survival; RR=rate ratio; T=tamoxifen; y=year.

1. Early Breast Cancer Trialists' Collaborative Group. *Lancet*. 2011;378(9793):771-784. 2. Early Breast Cancer Trialists' Collaborative Group. *Lancet*. 2015;386(10001):1341-1352.

3. Early Breast Cancer Trialists' Collaborative Group. *Lancet*. 2025;406(10503):603-614. 4. Francis PA. *J Clin Oncol*. 2023;41(7):1370-1375.



HR+, HER2- EBC and Risk of Recurrence: Summary

Patients with N1 high-risk (N1 + Grade 3 or tumor ≥ 5 cm) have a 5-year risk of recurrence and death that is ~2 fold higher than patients with N1 and lower-risk features¹

In patients meeting node-positive high-risk EBC criteria on standard ET in real-world US practice:
~1:3 patients are at risk of recurrence at 5 years¹

These risks are similar to early TNBC, considered the most aggressive breast cancer subtype¹

Proper identification of patients at high risk of recurrent disease is vital for optimal escalation of therapy while in the adjuvant setting²

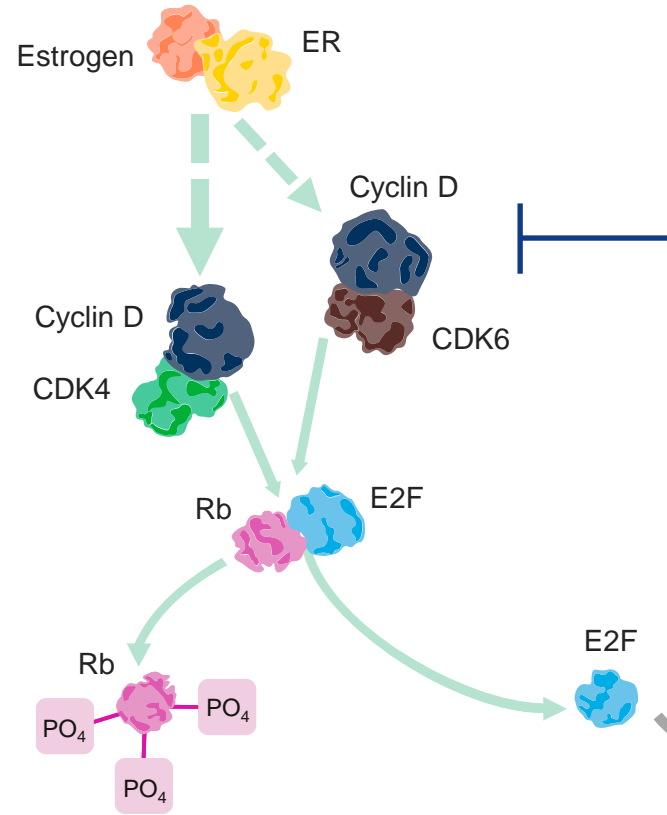
THE USE OF CDK4/6i IN HR+, HER2- EARLY BREAST CANCER



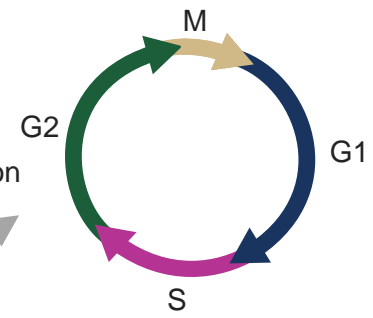
CDK4/6i in Breast Cancer: Mechanism of Action

Activation of CDK4 and CDK6 through the **cyclin D1-CDK4/6-Rb pathway** leads to cellular proliferation¹

This pathway is deregulated in most tumors^{1,2}



- CDK4/6i are small molecule inhibitors that target the cyclin-D1-CDK4/6-Rb pathway^{1,3}
- Sustained inhibition of CDK4/6 induces cell cycle arrest and prevents Rb phosphorylation, resulting in senescence and apoptosis^{3,4}
- CDK4/6i are recommended as a treatment option for patients with HR+, HER2- MBC¹



CDK4/6i are now a treatment option in the EBC setting in combination with adjuvant ET¹



CDK4/6i in HR+, HER2- EBC: Trial Designs

	monarchE ^{a,1-3}	NATALEE ^{a,4-6}
CDK4/6i	Abemaciclib	Ribociclib
Design	Phase 3, randomized, open-label	Phase 3, randomized, open-label
Sample size	5637	5101
Study population	Stages IB-III Node-positive, high-risk N1/N1mi + Grade 3 and/or tumor ≥5 cm, N2/N3	Stage II-III Node-positive and N0 (Select higher-risk Stage IIA N0)
CDK4/6i dose	Abemaciclib 150 mg BID + ET (Continuous dosing)	Ribociclib 400 mg QD (3 wk on/1 wk off) + NSAI (Continuous dosing)
ET partner	Physician's choice (Tamoxifen or AI) ^b	NSAI (Letrozole or anastrozole) ^c
Duration of CDK4/6i treatment	2 years	3 years
First results reported	2020	2023
Primary endpoint	IDFS	

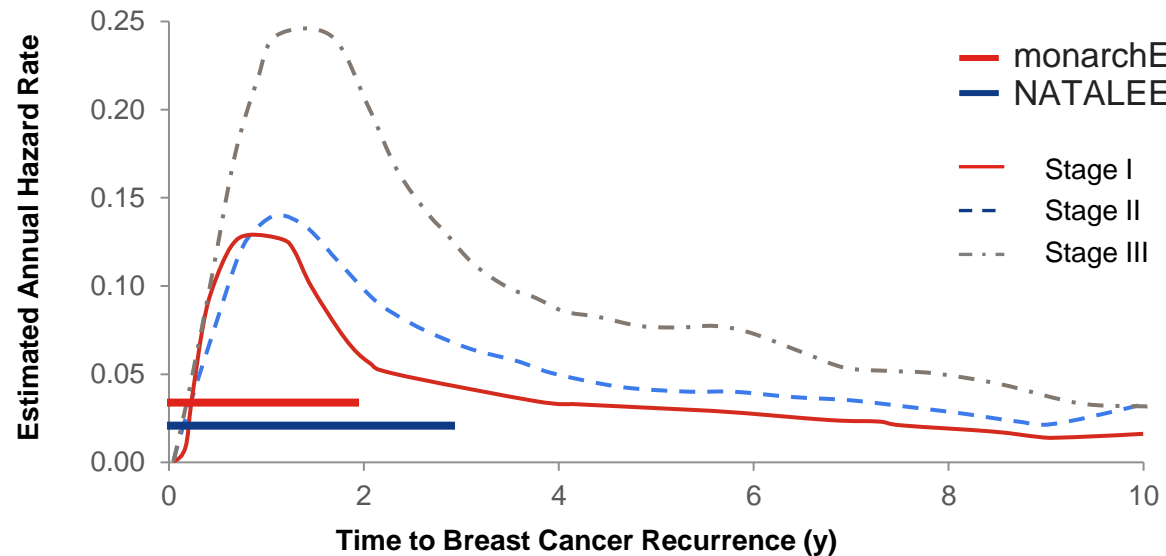
Note: The table above is not intended as a head-to-head trial comparison. Cross-trial comparison of efficacy, tolerability, and safety cannot be made. Two Phase 3 trials that evaluated palbociclib (PENELOPE-B⁷ and PALLAS⁸) in EBC did not meet statistical significance improvement in IDFS and are not shown above.

These trials were conducted in patients with HR+, HER2- EBC who had an increased risk of recurrence.
The trials differed in **study design, patient populations, and treatment durations**

^aTrial met statistical significance. ^bWith or without ovarian suppression per standard practice. ^cNSAI was investigator choice; men and premenopausal women also received LHRH agonists as per standard of care. AI=aromatase inhibitor; BID=twice daily; CDK4/6i=cyclin-dependent kinase 4/6 inhibitor; EBC=early breast cancer; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; IDFS=invasive disease-free survival; LHRH=luteinizing hormone-releasing hormone; N=node; N1mi= micrometastases; N1=1-3 ALN; N2=4-9 ALN; N3=10+ ALN; NSAI=nonsteroidal aromatase inhibitor; QD=once daily; wk=week.
1. <https://www.clinicaltrials.gov/ct2/show/NCT03155997>. (Accessed April 4, 2024). 2. Rastogi P, et al. Oral presentation at: SABCS 2020. Abstract GS1-01. 3. Johnston SRD, et al. *J Clin Oncol*. 2020;38(34):3987-3998.
4. <https://clinicaltrials.gov/study/NCT03701334>. (Accessed March 4, 2024). 5. Slamon DJ, et al. Oral presentation at: ASCO 2023. Abstract LBA500.
6. Slamon D, et al. *N Engl J Med*. 2024;390(12):1080-1091. 7. <https://www.clinicaltrials.gov/ct2/show/NCT01864746>. (Accessed April 24, 2023).
8. <https://www.clinicaltrials.gov/ct2/show/NCT02513394>. (Accessed April 3, 2024).

CDK4/6i in HR+, HER2- EBC: Duration of Treatment

Risk of First Recurrence After First Diagnosis in EBC¹



CDK4/6i trials in EBC have focused on **2-3 years** of adjuvant treatment, during the time when **recurrence peaks**^{2,3}

	monarchE ²	NATALEE ³
CDK4/6i	Abemaciclib	Ribociclib
Duration of CDK4/6i treatment	2 years	3 years

Note: The table above is not intended for comparison as the information is not from any head-to-head trials. Cross-trial comparison of efficacy, tolerability, and safety cannot be made.

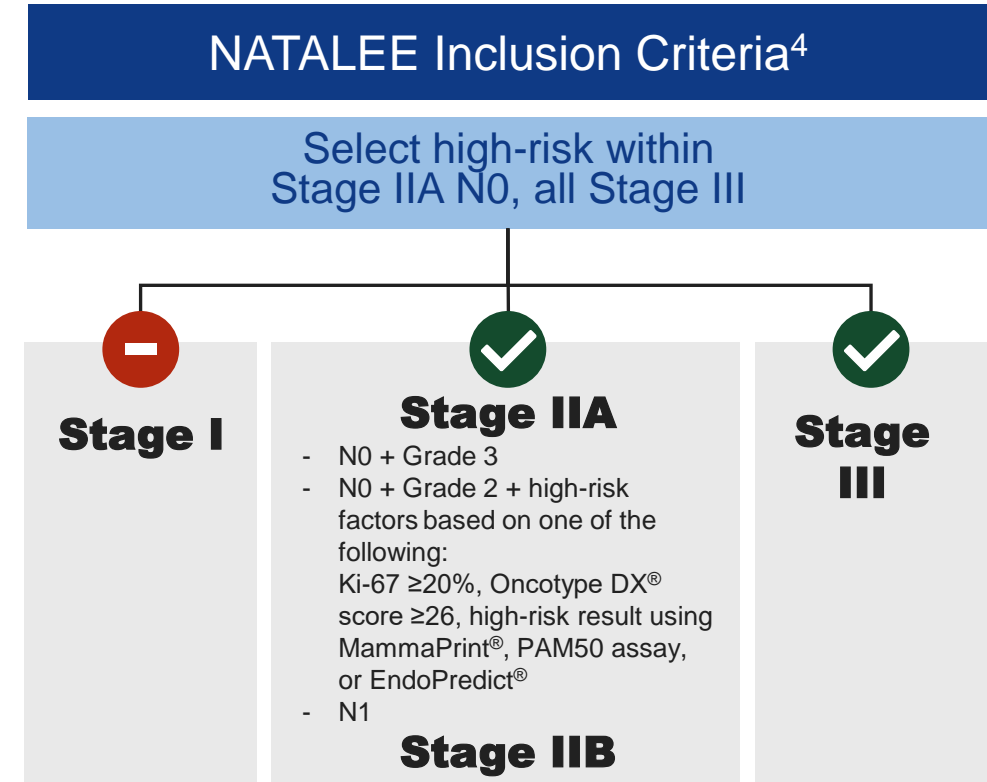
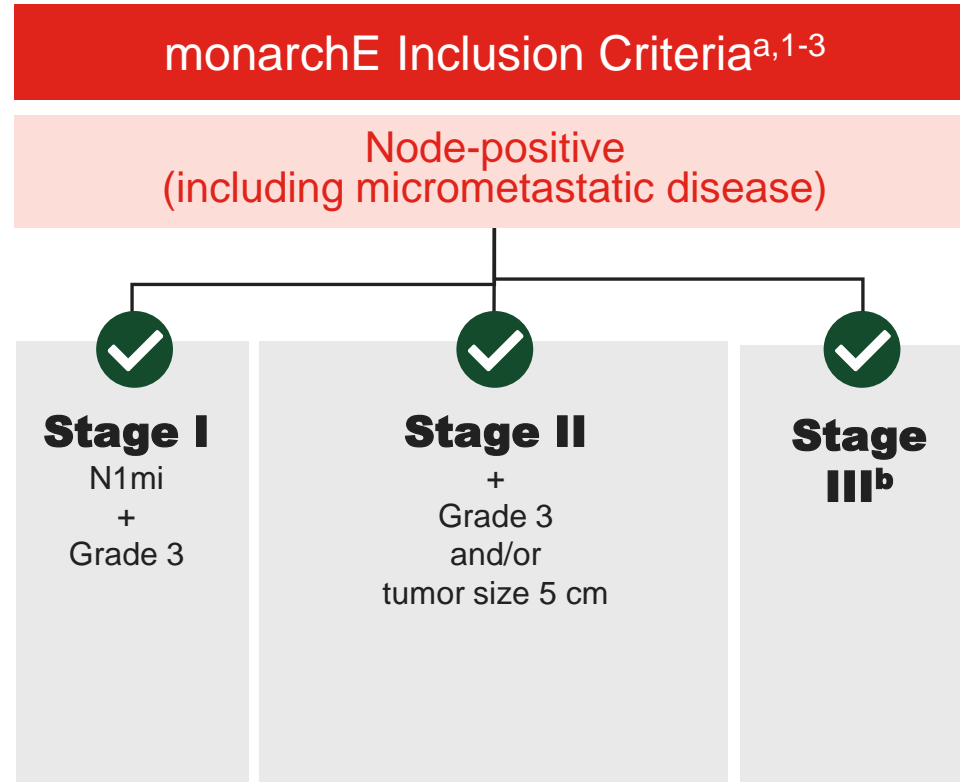
CDK4/6i=cyclin-dependent kinase 4/6 inhibitor; EBC=early breast cancer; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; y=year.

1. Cheng L, et al. *Cancer Epidemiol Biomarkers Prev.* 2012;21(5):800-809. 2. <https://clinicaltrials.gov/study/NCT03155997>. (Accessed July 16, 2024).

3. <https://clinicaltrials.gov/study/NCT03701334>. (Accessed July 16, 2024).

High-Risk Criteria: monarchE and NATALEE

The criteria for defining and including patients with high-risk, HR+, HER2- EBC varied across adjuvant trials



Note: This table is not intended as a head-to-head trial comparison. Cross-trial comparison of efficacy, tolerability, and safety cannot be made. All the product/company names mentioned herein are trademarks of their respective owners.
^aPatients in monarchE were required to have at least 1 positive ALN. In monarchE, AJCC stage was derived based on pathological tumor size and number of positive lymph nodes following primary surgery.⁵ Cytological evaluation of lymph node status was used where patients received NAC. ^bStage IIIB T4N1 can be included if Grade 3 and/or tumor ≥5 cm.
 AJCC=American Joint Committee on Cancer; ALN=axillary lymph node; EBC=early breast cancer; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; N=node; N1=1-3 ALN; NAC=neoadjuvant chemotherapy; T=tumor.
 1. Johnston SRD, et al. *J Clin Oncol.* 2020;38(34):3987-3998. 2. Rastogi P, et al. *J Clin Oncol.* 2024;42(9):987-93; 3. Abemaciclib [US PI]. Indianapolis, IN, USA: Eli Lilly USA LLC, 2025.
 4. Slamon DJ, et al. *Ther Adv Med Oncol.* 2023;15:17588359231178125. 5. Amin MB, et al. *AJCC Cancer Staging Manual.* 8th ed. New York: Springer, 2017.

TRIALS OF FDA-APPROVED CDK4/6i IN HR+, HER2- EARLY BREAST CANCER

- monarchE
- NATALEE



Abemaciclib in EBC: FDA Prescribing Information

Abemaciclib Indication in EBC

Abemaciclib is indicated in combination with endocrine therapy (tamoxifen or an aromatase inhibitor) for the adjuvant treatment of adult patients with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative, node-positive, early breast cancer at high risk of recurrence.

Warnings and Precautions

The FDA label carries warnings for diarrhea, neutropenia, ILD/pneumonitis, hepatotoxicity, venous thromboembolism, and embryo-fetal toxicity.

Blood count and liver function monitoring are recommended before treatment initiation, in the early treatment cycles, and as clinically indicated.

Abemaciclib in EBC: Guideline Recommendations

National Comprehensive Cancer Network® (NCCN®) Recommendation¹

For the treatment of HR+, HER2-, node-positive, high-risk EBC, the NCCN recommends consideration of 2 years of abemaciclib in combination with ET as an **NCCN Category 1, Preferred** treatment option.^a

American Society of Clinical Oncology® (ASCO®) Recommendation^{2,3}

Abemaciclib for 2 years plus ET for ≥5 years may be offered to patients meeting the criteria of the ITT monarchE population with resected, HR+, HER2-, node-positive EBC at high risk of recurrence.^b

The panel promotes the use of abemaciclib primarily in those who would have been eligible for monarchE based on that trial's eligibility criteria.

(Evidence quality: **High**; strength of recommendation: **Strong**)

^aBased on NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Breast Cancer Version 5.2025. High risk is defined as ≥4 positive ALNs (confirmed preoperatively and/or at surgery), or 1-3 positive ALNs with either Grade 3 disease or tumor size ≥5 cm (on preoperative imaging and/or at surgery). VTE risk should be considered when combining abemaciclib with tamoxifen. Category 1 is based upon high-level evidence (≥1 randomized Phase 3 trials or high-quality, robust meta-analyses), there is uniform NCCN® consensus (≥85% support of the Panel) that the intervention is appropriate. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.

^bBased on the ASCO 2024 Rapid Recommendation Update. High risk of recurrence is defined as having ≥4 positive ALNs or 1-3 positive ALNs with at least one of the following: Grade 3 disease, tumor size ≥5 cm, or Ki-67 ≥20%.

ALN=axillary lymph node; EBC=early breast cancer; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; ITT=intention-to-treat; VTE=venous thromboembolism.

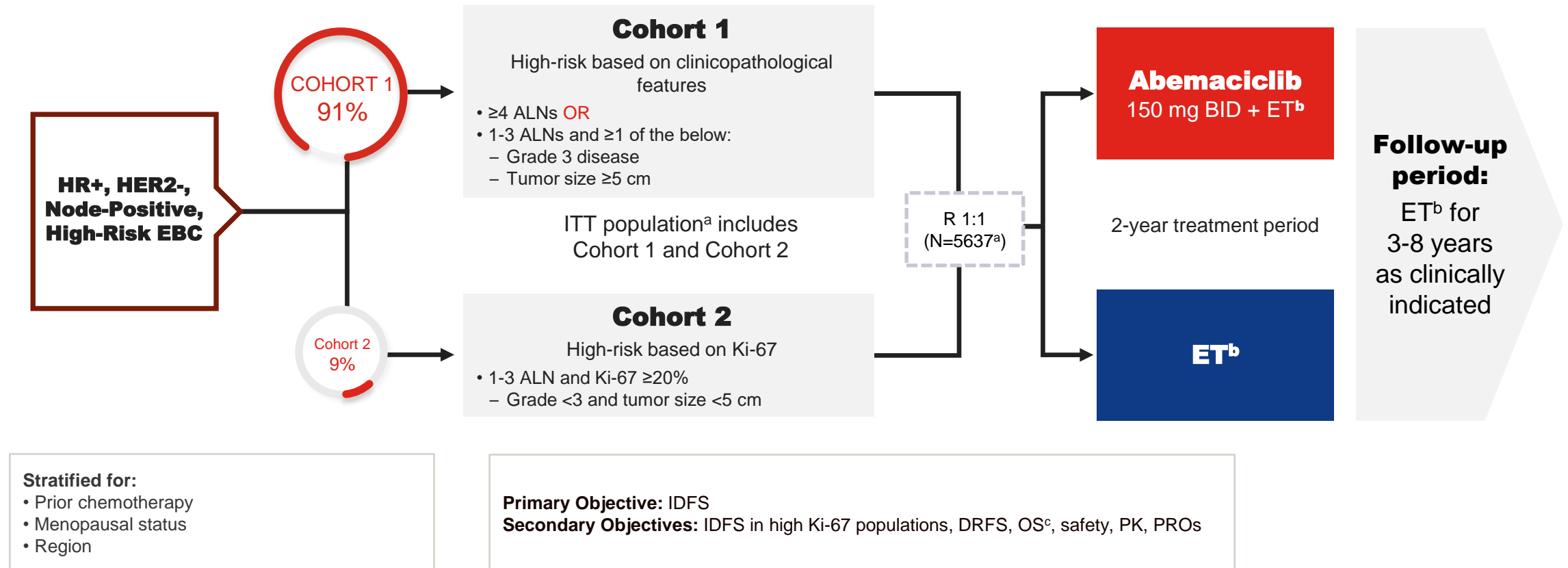
1. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Breast Cancer V.5.2025. © National Comprehensive Cancer Network, Inc. 2025. All rights reserved.

Accessed October 16, 2025. To view the most recent and complete version of the guideline, go online to NCCN.org. 2. Freedman RA, et al. *J Clin Oncol*. 2024;42(18):2233-2235. 3. Caswell-Jin JL, et al.

JCO Oncol Pract. 2025;21(3):287-291.

monarchE: Study Design¹⁻⁵

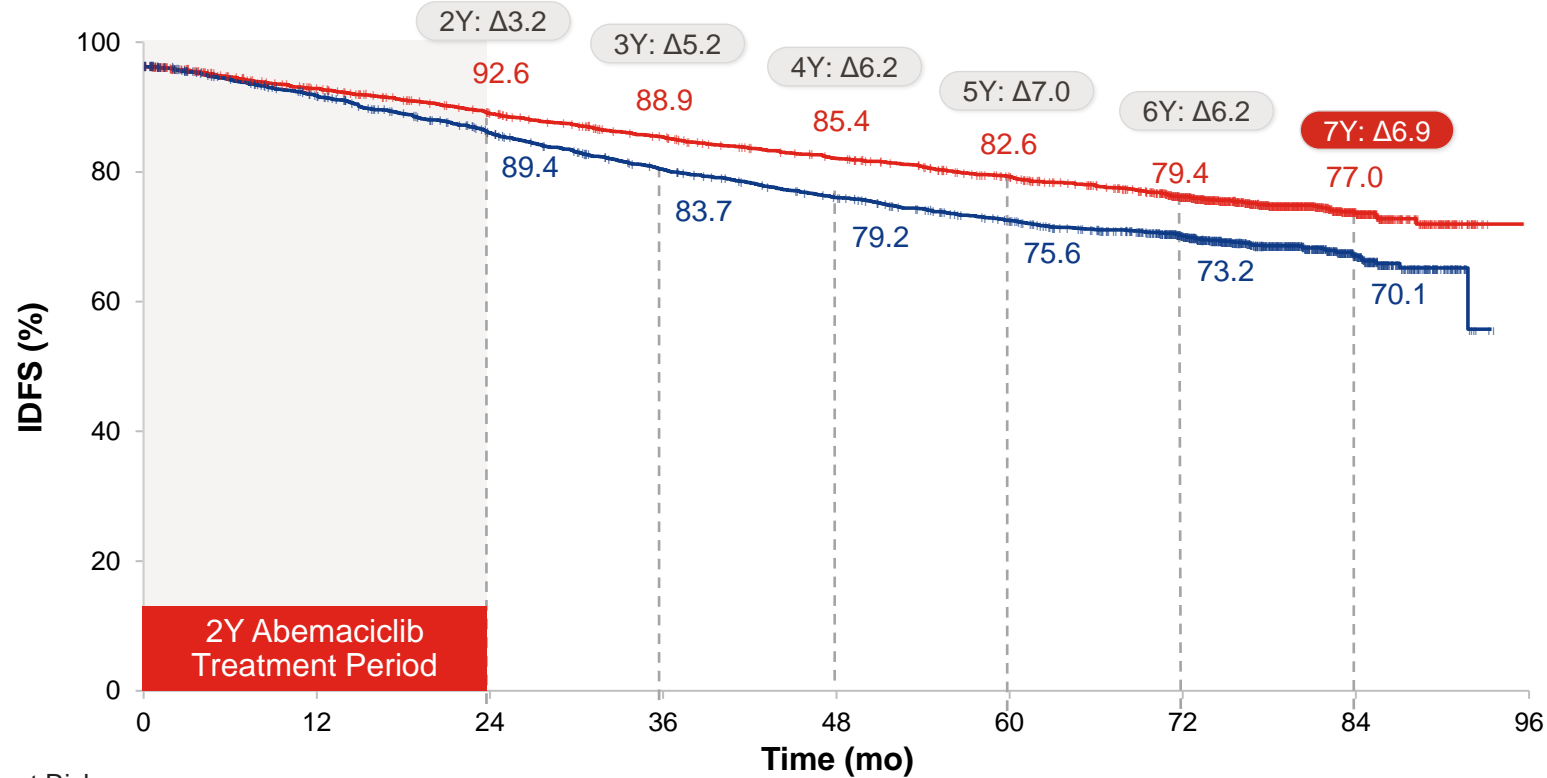
Phase 3, open-label study of abemaciclib in addition to ET in patients with high-risk, node-positive, HR+, HER2- EBC



^aRecruitment from July 2017 to August 2019. Data for the monarchE Cohort 1 population that forms the basis of multiple global approvals is in the supplement. ^bET of physician's choice (eg, AI, tamoxifen, GnRH). ^cAfter the primary IDFS analysis, following consultation with regulators, the target number of OS events was increased from 390 to 650, to ensure a minimum follow-up of ≥5 years and enable a more mature survival dataset.⁶ AI=aromatase inhibitor; ALN=axillary lymph node; BID=twice daily; DRFS=distant relapse-free survival; EBC=early breast cancer; ET=endocrine therapy; GnRH=gonadotropin-releasing hormone; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; IDFS=invasive disease-free survival; ITT=intention-to-treat; LHRH=luteinizing hormone-releasing hormone; OS=overall survival; PK=pharmacokinetics; PRO=patient-reported outcome; R=randomization.

1. ClinicalTrials.gov. Accessed April 24, 2023. <https://www.clinicaltrials.gov/ct2/show/NCT03155997> 2. Harbeck N, et al. *Ann Oncol*. 2021;32(12):1571-1581. 3. Johnston SRD, et al. *Lancet Oncol*. 2023;24(1):77-90. 4. Rastogi P, et al. *J Clin Oncol*. 2024;42(9):987-993. 5. Abemaciclib [US PI]. Indianapolis, IN, USA: Eli Lilly USA LLC, 2025. 6. Johnston S, et al. Presented at: ESMO 2025. LBA13.

monarchE Cohort 1: IDFS^{1,2}



No. at Risk		0	12	24	36	48	60	72	84	96
Abemaciclib + ET	2555	2322	2188	2068	1966	1863	1609	368	0	0
ET alone	2565	2328	2143	1977	1851	1730	1485	362	0	0

27.4%
REDUCTION IN THE RISK OF DEVELOPING AN IDFS EVENT

Hazard ratio=0.726
(95% CI: 0.648-0.815),
nominal p<.0001

# IDFS Events	Abemaciclib + ET	ET Alone
	512	678



monarchE Cohort 1: IDFS for Key Prespecified Subgroups^{a,1,2}

Cohort 1

6.3Y mF/U



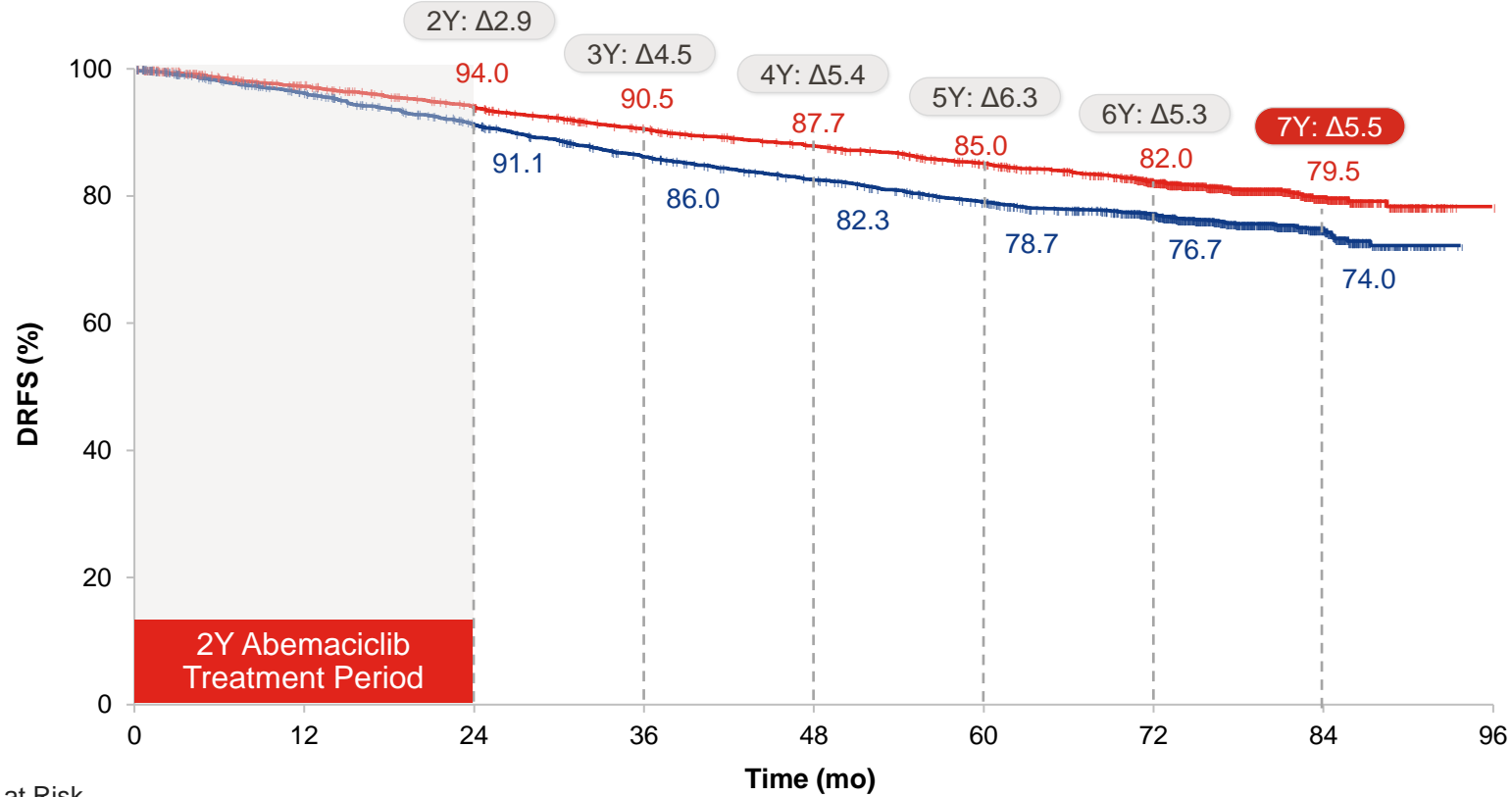
^aRegion of enrollment, race, and progesterone status data not shown.

AI=aromatase inhibitor; ECOG PS=Eastern Cooperative Oncology Group performance status; ET=endocrine therapy; IDFS=invasive disease-free survival; mF/U=median follow-up; y=year.

1. Johnston S, et al. Presented at: ESMO 2025. LBA13. 2. Johnston S, et al. *Ann Oncol*. Published online October 17, 2025. doi:10.1016/j.annonc.2025.10.005.



monarchE Cohort 1: DRFS^{1,2}



No. at Risk		0	12	24	36	48	60	72	84	96
Abemaciclib + ET	2555	2339	2212	2095	2007	1906	1651	1651	381	0
ET alone	2565	2345	2177	2021	1910	1789	1540	1540	379	0

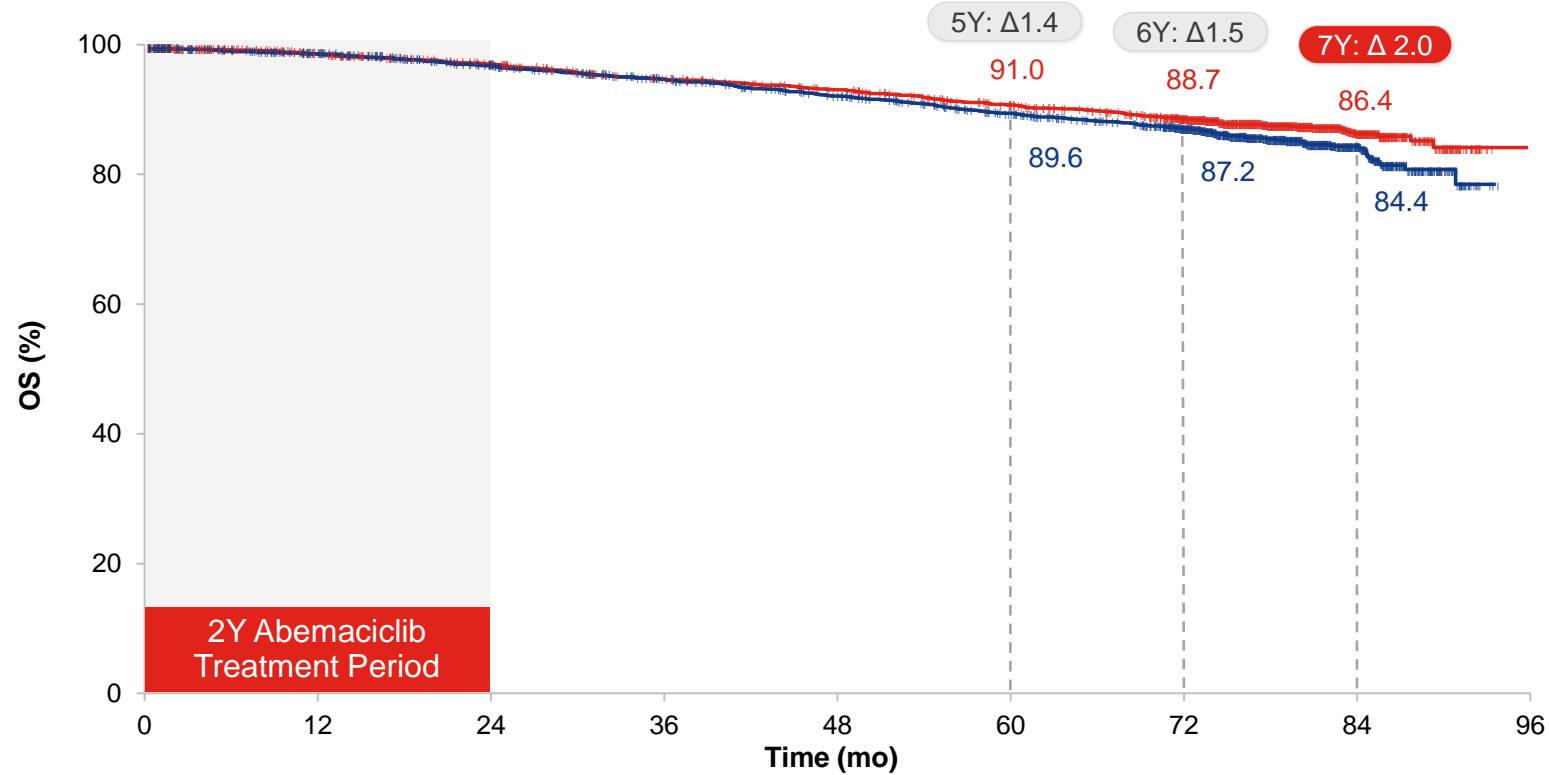
26.4%
REDUCTION IN THE RISK OF DEVELOPING A DRFS EVENT

Hazard ratio=0.736
(95% CI: 0.651-0.832),
p<.0001

# DRFS Events	Abemaciclib + ET	ET Alone
	448	589



monarchE Cohort 1: OS^{1,2}



No. at Risk		0	12	24	36	48	60	72	84	96
Abemaciclib + ET	2555	2381	2290	2186	2123	2030	1798	423	0	0
ET alone	2565	2416	2305	2211	2117	2005	1753	431	0	0

16.5%

REDUCTION IN THE RISK OF DEATH

Hazard ratio=0.835
(95% CI: 0.713-0.977),
p<.0239

# OS Events	Abemaciclib + ET	ET Alone
286	344	



monarchE: Treatment-Emergent AEs

AEs in Either Arm (≥20%), %	Abemaciclib + ET (n=2791)		ET Only (n=2800)	
	Any Grade	Grade 3/4	Any Grade	Grade 3/4
Diarrhea ^a	83.6	7.8	8.7	0.2
Neutropenia	45.9	19.6	5.6	0.9
Fatigue ^b	40.8	2.9	18.0	0.1
Leukopenia	37.7	11.4	6.6	0.4
Abdominal pain ^b	35.7	1.4	9.9	0.3
Nausea	29.6	0.5	9.0	0.1
Arthralgia ^b	26.5	0.3	37.9	1.0
Anemia	24.5	2.1	3.9	0.4
Hot flush ^b	15.4	0.1	23.0	0.4

^aOne Grade 5 event of diarrhea. ^bPatient has a maximum CTCAE Grade of 3.
 AE=adverse event; CTCAE=Common Terminology Criteria for Adverse Events; ET=endocrine therapy; ITT=intention-to-treat; mF/U=median follow-up; mo=month.
 Johnston SRD, et al. *Lancet Oncol.* 2023;24(1):77-90.

monarchE: SAEs and Fatal AEs^{1,2}

SAEs and Fatal AEs in LTFU	Abemaciclib + ET (n=2791)		ET Only (n=2800)	
	On Therapy ^a	Post-Discontinuation ^b	On Therapy ^a	Post-Discontinuation ^b
≥1 SAE LTFU, regardless of causality ^c	NA	197 (7.5)	NA	213 (8.1)
Deaths due to AE by SOC and PT ^d	15 (0.5)	44 (1.6)	11 (0.4)	30 (1.1)
Infections and infestations	3 (0.1)	13 (0.5)	5 (0.2)	5 (0.2)
COVID-19	3 (0.1)	6 (0.2)	1 (<0.1)	2 (0.1)
Second primary neoplasm	0 (0)	13 (0.5)	1 (<0.1)	7 (0.3)
Cardiac disorders	5 (0.2)	6 (0.2)	0 (0)	9 (0.3)

- Safety was consistent with prior analyses, as all treated patients completed treatment ≥4 years ago
- No relevant differences in treatment arms in causes of deaths due to AEs

^aDuring 2-year treatment period or within 30 days of study treatment discontinuation. ^b>30 days after study treatment discontinuation. ^cAll SAEs up to 5 years from randomization collected regardless of causality. ^dAll deaths not due to breast cancer in LTFU collected regardless of causality. Deaths due to unknown cause are excluded. Included SOC and PTs reported in ≥5 patients in either arm.

AE=adverse event; ET=endocrine therapy; ITT=intention-to-treat; LTFU=long-term follow-up; mF/U=median follow-up; N/A=not applicable; PT=primary therapy; SAE=serious adverse event; SOC=standard of care; y=year.

1. Johnston S, et al. Presented at: ESMO 2025. LBA13. 2. Johnston S, et al. *Ann Oncol*. Published online October 17, 2025. doi:10.1016/j.annonc.2025.10.005.

monarchE: Discontinuation Rates and Treatment Completion

100%
of monarchE
patients are off
abemaciclib
treatment¹

~80% have been followed for $\geq 2Y$ since treatment with abemaciclib²

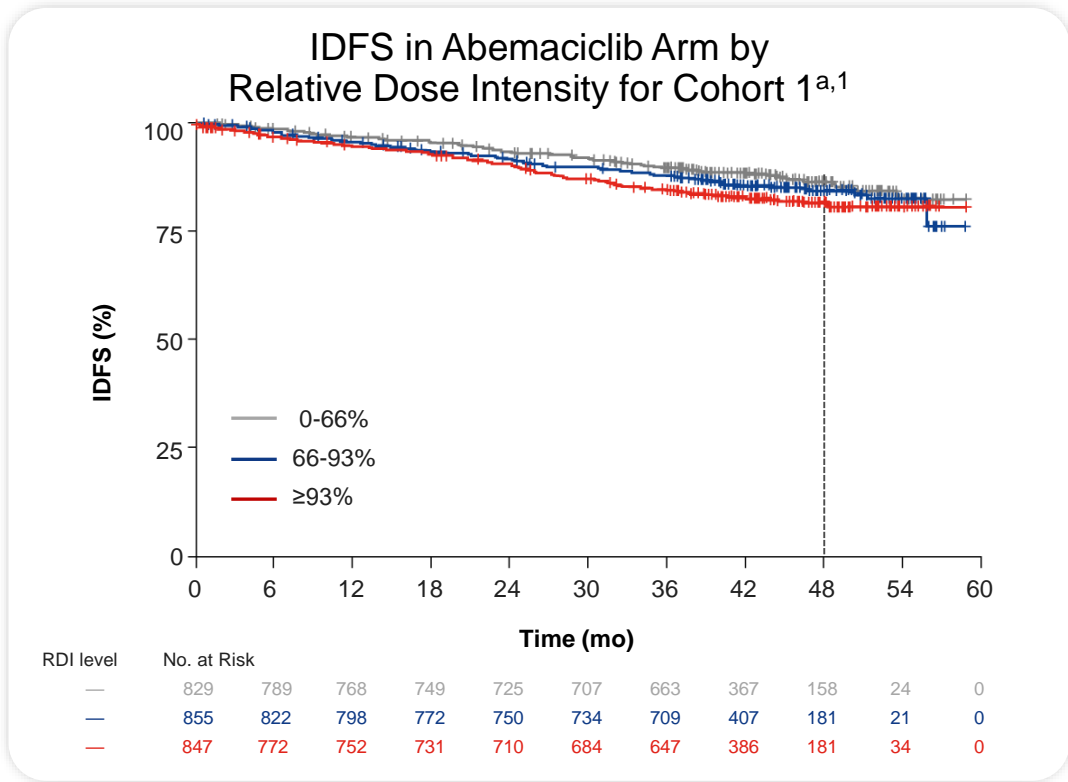
Abemaciclib dose adjustments due to AEs

- Dose holds: 61.7%^{1,4}
- Dose reductions: 43.6%^{1,4}
- Discontinuations: 18.5% (8.9% after dose reduction)^{3,4}

AE=adverse event; ITT=intention-to-treat; mF/U=median follow-up; y=year.

1. Johnston SRD, et al. *Lancet Oncol.* 2023;24(1):77-90. 2. Rastogi P, et al. *J Clin Oncol.* 2024;42(9):987-993. 3. Rugo HS, et al. *Ann Oncol.* 2022;33(6):616-627. 4. Johnston S, et al. *Ann Oncol.* Published online October 17, 2025. doi:10.1016/j.annonc.2025.10.005.

monarchE Cohort 1: Dose Reductions



Abemaciclib Exposure by the Number of Dose Reductions in ITT

	No Dose Reduction n=1570	1 Dose Reduction n=832	2 Dose Reductions n=389
Treatment Duration, mo			
Median (Q1-Q3)	23.7 (14.9-23.8)	23.7 (20.6-23.8)	23.7 (13.2-23.8)
>3 mo, %	86	95	94
>6 mo, %	81	90	86

Abemaciclib Recommended Dose²
150 mg BID
 1st dose reduction:
 100 mg BID
 2nd dose reduction:
 50 mg BID

In EBC, abemaciclib efficacy was not shown to be compromised by dose reductions^{a,1}

^aRDI was defined as the average daily dose of abemaciclib received by each patient over the treatment duration relative to the full dose (150 mg BID). To explore the impact of dose adjustments on abemaciclib efficacy, patients treated with abemaciclib were classified into 3 equal-sized subgroups according to their RDI. IDFS rates were estimated within each subgroup. BID=twice daily; EBC=early breast cancer; IDFS=invasive disease-free survival; ITT=intention-to-treat; mF/U=median follow-up; mo=month; Q=quartile; RDI=relative dose intensity.
 1. Goetz MP, et al. *NPJ Breast Cancer*. 2024;10(1):34. 2. Abemaciclib [US PI]. Indianapolis, IN, USA: Eli Lilly USA LLC, 2025.



monarchE: Efficacy Summary

Treatment benefit at 6.3 years median follow-up^{1,2}

	IDFS	DRFS	OS
Relative risk reduction	27.4%	26.4%	16.5%
Absolute benefit at 7Y	6.9%	5.5%	2.0%

monarchE: Safety Summary^a

Safety Data¹

100%

100% of patients are off abemaciclib treatment^b

AEs were mainly low grade, and generally manageable with comedication and/or dose adjustments^{1,2}

Most frequent AEs: any grade (Grade ≥ 3)²

Diarrhea
83.6% (7.8%)

Neutropenia
45.9% (19.6%)

Fatigue
40.8% (2.9%)

Serious AEs occurred in 15.5% of patients in the abemaciclib arm vs 9.1% in the ET only arm¹

^aLatest available safety data. ^bIncludes patients (0.8%) who were randomized but never treated.
AE=adverse event; ET=endocrine therapy; ITT=intention-to-treat.

1. Johnston SRD, et al. *Lancet Oncol.* 2023;24(1):77-90. 2. Rugo HS, et al. *Ann Oncol.* 2022;33(6):616-627.

Ribociclib in EBC: FDA Prescribing Information

Ribociclib Indication in EBC

Ribociclib is indicated in combination with an aromatase inhibitor for the adjuvant treatment of adults with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative Stage II and III early breast cancer at high risk of recurrence.

Warning and Precautions

The FDA label carries warnings for ILD/pneumonitis, severe cutaneous adverse reactions, QT interval prolongation, increased QT prolongation with concomitant use of tamoxifen, liver toxicity, neutropenia, and embryo-fetal toxicity. ECG, electrolytes, liver function tests, and blood counts should be performed before treatment initiation, in the early treatment cycles, and as clinically indicated.

Ribociclib in EBC: Guideline Recommendations

NCCN Recommendation¹

For the treatment of HR+, HER2- EBC with any lymph node involvement (excluding microscopic nodal involvement), or if no nodal involvement either tumor size >5 cm, or if tumor size 2-5 cm, either Grade 2 (and high genomic risk or Ki-67 \geq 20%), or Grade 3, the NCCN recommends consideration of 3 years of ribociclib with AI as an **NCCN Category 1, Preferred** treatment option.^a

ASCO Recommendation^{2,3}

The Panel recommends, based on the Phase 3 NATALEE trial, that adjuvant ribociclib (400 mg once daily, 3 weeks on followed by 1 week off) for 3 years plus ET may be offered to patients with anatomic Stage II or III breast cancer who would have met criteria for study entry and have a high risk of recurrence.

(Evidence quality: **High**; strength of recommendation: **Conditional**)

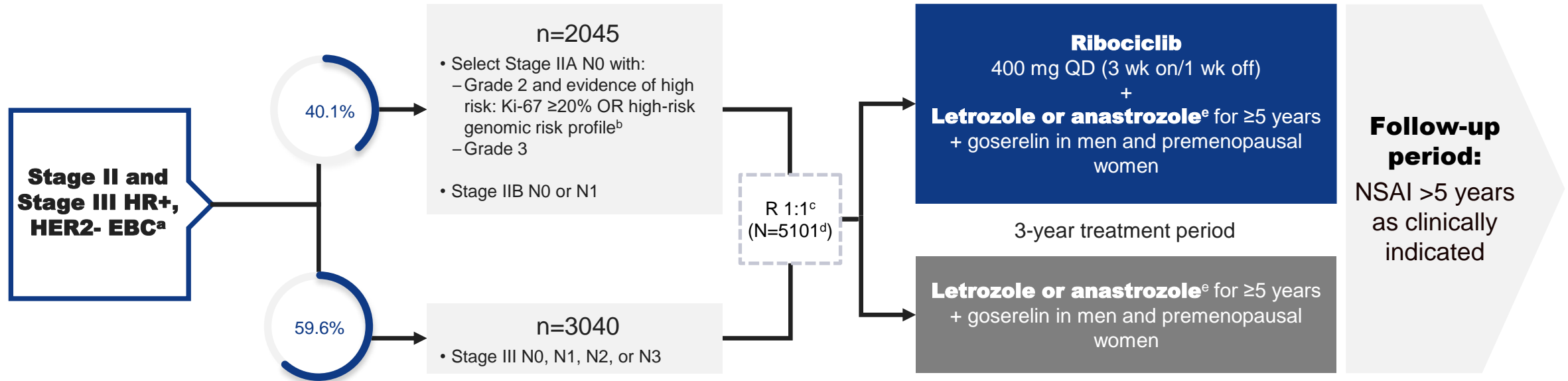
^aBased on NCCN Guidelines[®] for Breast Cancer Version 5.2025. Category 1 is based upon high-level evidence (\geq 1 randomized Phase 3 trials or high-quality, robust meta-analyses), there is uniform NCCN[®] consensus (\geq 85% support of the Panel) that the intervention is appropriate. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.

AI=aromatase inhibitor; ASCO=American Society of Clinical Oncology; EBC=early breast cancer; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; NCCN=National Comprehensive Cancer Network.

1. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines[®]) for Breast Cancer V.5.2025. © National Comprehensive Cancer Network, Inc. 2025. All rights reserved. Accessed October 16, 2025. To view the most recent and complete version of the guideline, go online to NCCN.org. 2. Freedman RA, et al. *J Clin Oncol*. 2024;42(18):2233-2235. 3. Caswell-Jin JL, et al. *JCO Oncol Pract*. 2025;21(3):287-291.

NATALEE: Study Design¹⁻⁴

Phase 3, open-label study of ribociclib in addition to ET in patients with HR+, HER2- EBC



Prior treatment:

Patients could have received up to 12 months of neoadjuvant or adjuvant ET to random assignment

Stratified for:

- Anatomical stage: II vs. III
- Menopausal status: men and premenopausal women vs. postmenopausal women
- Prior (neo)adjuvant chemotherapy: yes vs. no
- Geographic location: North America/Western Europe/Oceania vs rest of world

Primary Objective: IDFS using STEEP criteria^f

Secondary Objectives: RFS, DDFS, OS, PROs, safety and tolerability, PK

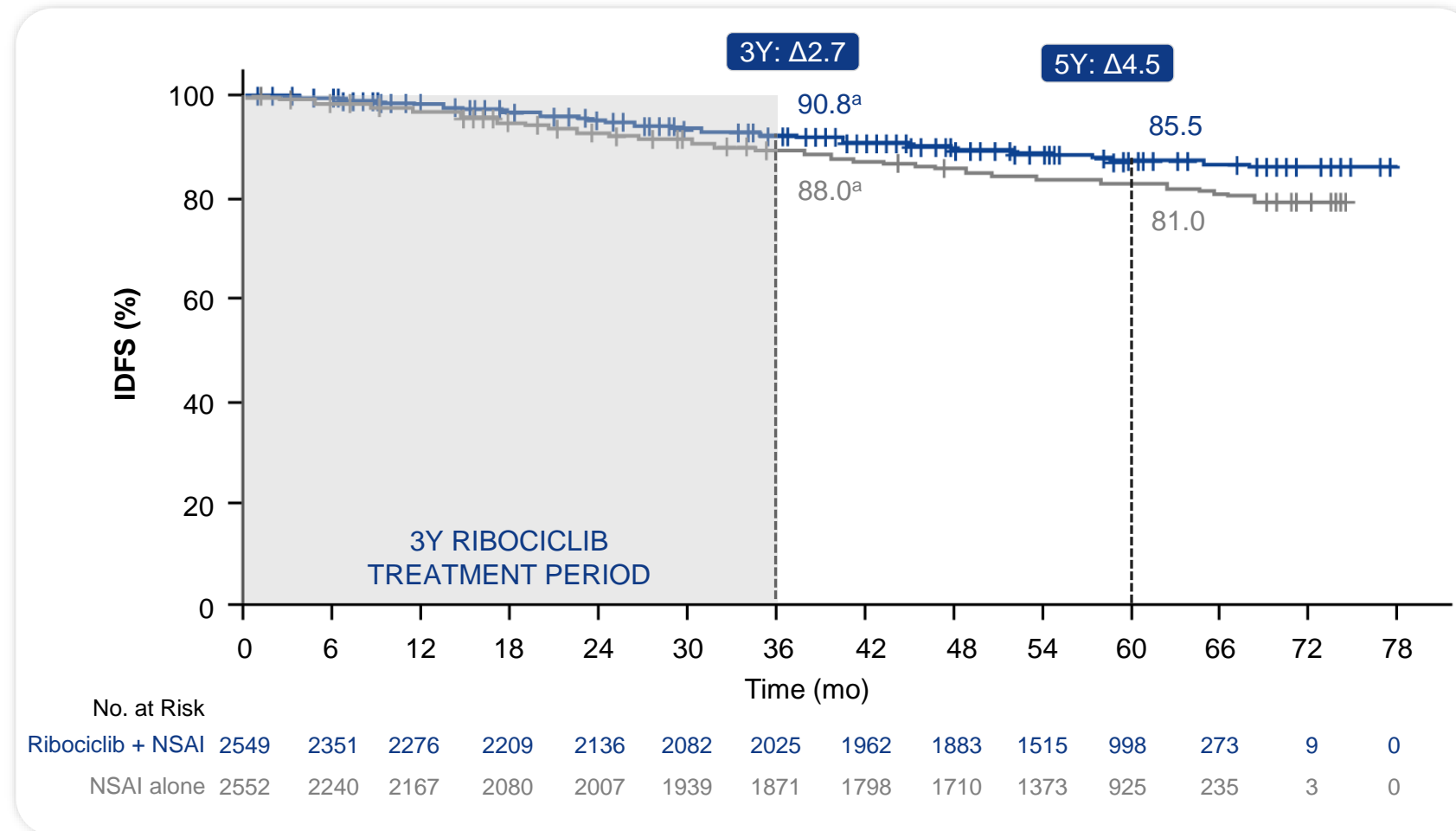
Exploratory Endpoints: Locoregional RFS, gene expression and alterations in tumor ctDNA/ctRNA samples

All the product/company names mentioned herein are trademarks of their respective owners.

^aEnrollment of patients with Stage II disease was capped at 40%. Fourteen patients had Stage I disease and 2 had missing data. ^bHigh genomic risk was based on one of the following assays: Oncotype DX score of ≥26, Prosigna PAM50, Mammprint, or Endopredict. ^cOpen-label design. ^dBetween January 10, 2019, and April 20, 2021. ^eDepending on the investigator. ^fThe primary endpoint was met at the second interim efficacy analysis with a medium follow-up of 27.7 months. ctDNA=circulating tumor DNA; ctRNA=circulating tumor RNA; DDFS=distant disease-free survival; EBC=early breast cancer; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor; IDFS=invasive disease-free survival; N=node; NSAI=nonsteroidal aromatase inhibitor; OS=overall survival; PK=pharmacokinetics; PRO=patient-reported outcome; QD=once daily; R=randomization; RFS=recurrence-free survival; STEEP=Standardized Definitions for Efficacy Endpoints; wk=week.

1. <https://www.clinicaltrials.gov/ct2/show/NCT03701334>. (Accessed March 4, 2024). 2. Slamon D, et al. *N Engl J Med*. 2024;390(12):1080-1091. 3. Ribociclib [US PI]. East Hanover, NJ, USA: Novartis Pharmaceuticals Corporation, 2025. 4. Hortobagyi G, et al. Oral presentation at: SABCS 2023. Abstract GS03-03.

NATALEE: IDFS



28.4%

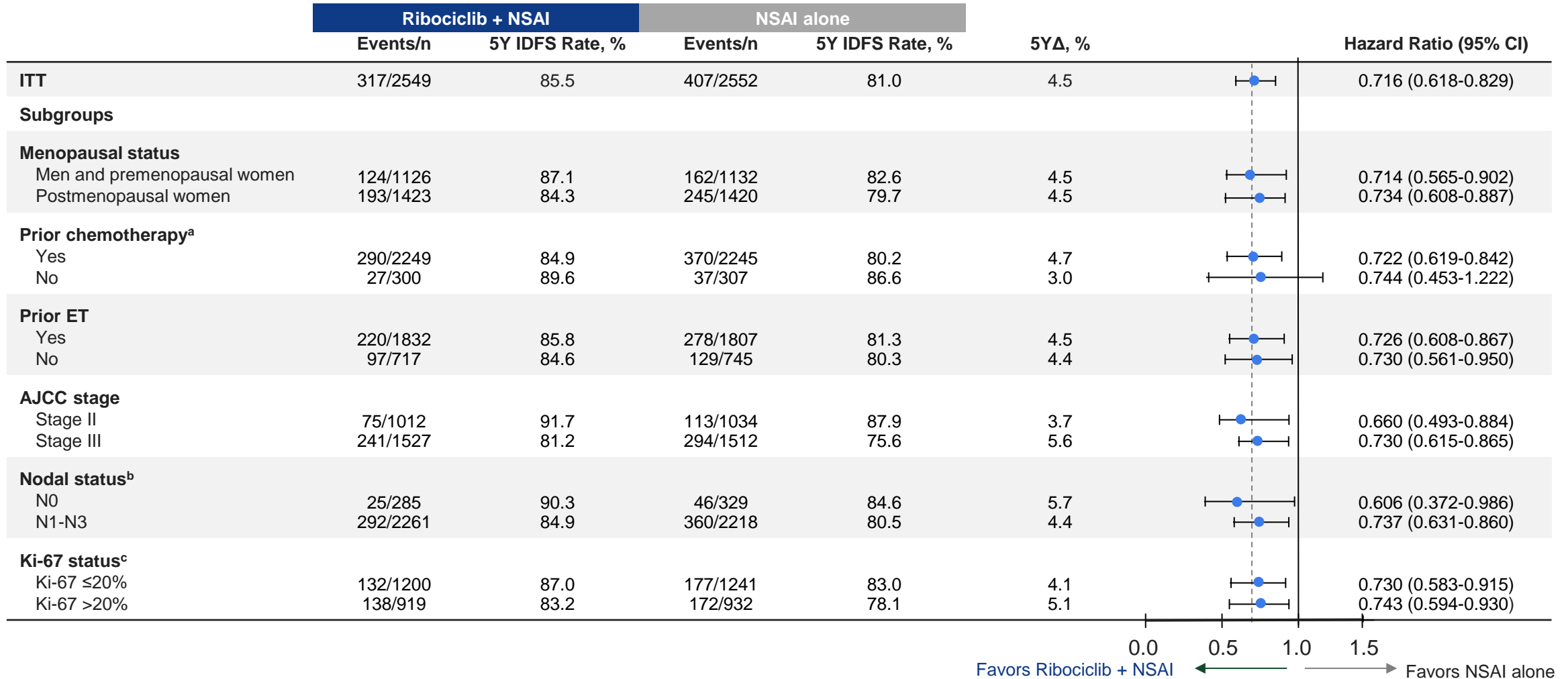
REDUCTION IN THE RISK OF
DEVELOPING AN IDFS EVENT

Hazard ratio=0.716
(95% CI: 0.618-0.829)
nominal 1-sided p<.0001

# IDFS Events	Ribociclib + NSA	NSAI alone
	317	407

^aThe difference between percentages does not equal 2.7 due to rounding.
IDFS=invasive disease-free survival; ITT=intention-to-treat; mF/U=median follow-up; mo=month; NSA=nonsteroidal aromatase inhibitor; y=year.
Crown J, et al. *ESMO Open*. 2025;10(11):105858.

NATALEE: IDFS for Key Prespecified Subgroups

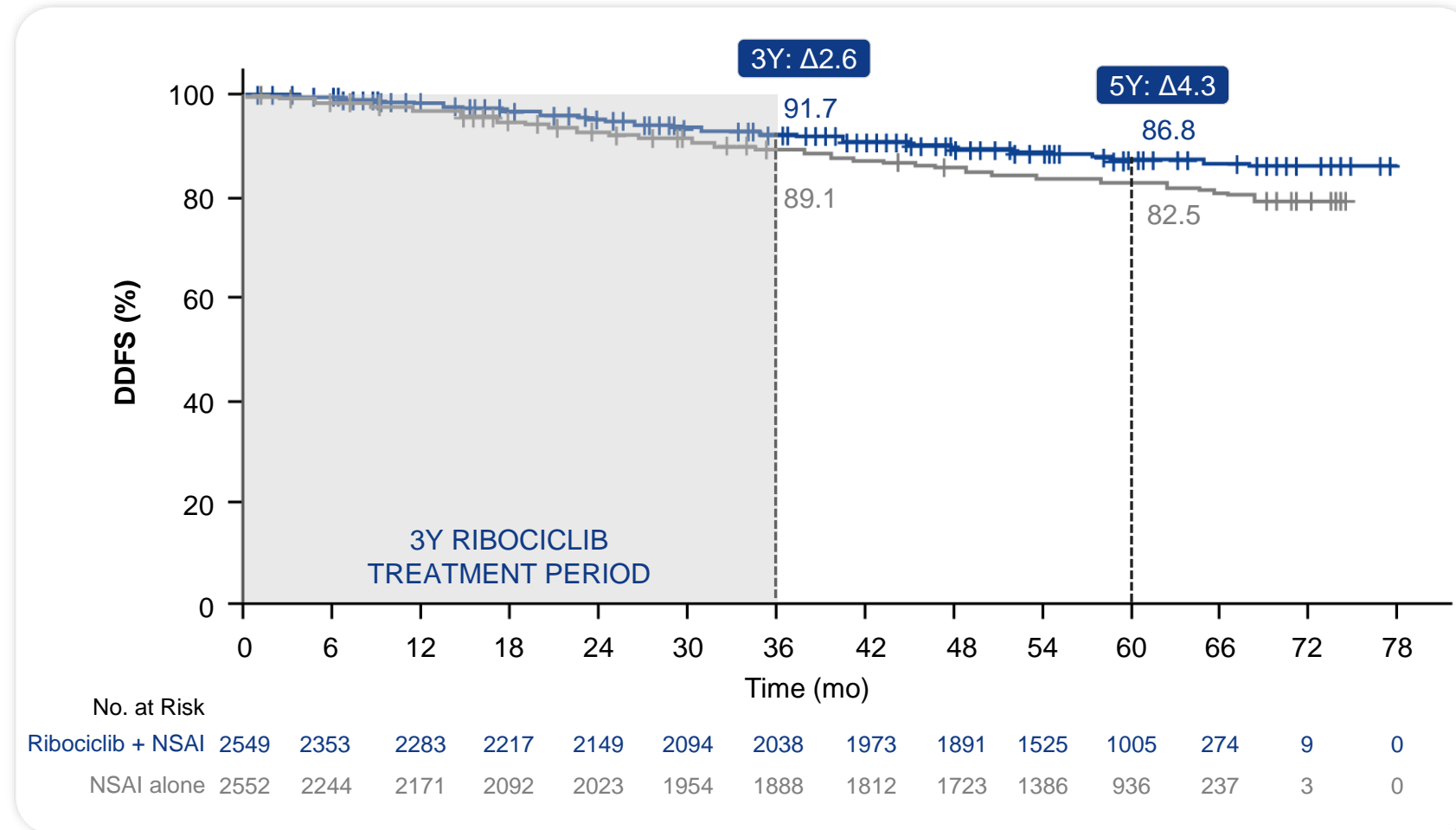


^aIncludes neoadjuvant and adjuvant chemotherapy. ^bNodal status classification according to AJCC staging. Nodal status is from the most advanced stage derived per surgical specimen or at diagnosis.

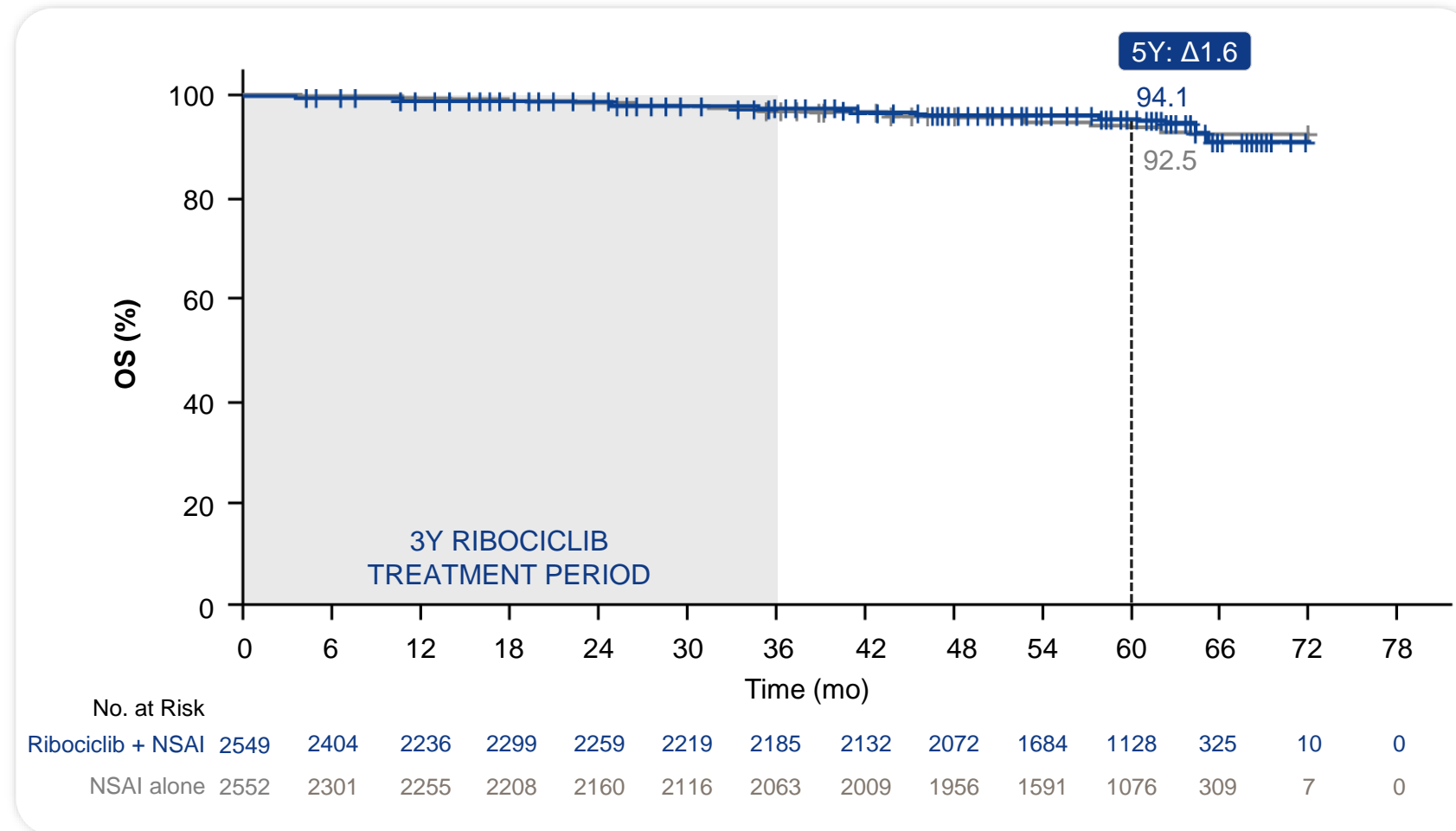
^cFrom archival tumor tissue.

AJCC=American Joint Committee on Cancer; ET=endocrine therapy; IDFS=invasive disease-free survival; ITT=intention-to-treat; mF/U=median follow-up; N=node; NSAI=nonsteroidal aromatase inhibitor. Crown J, et al. *ESMO Open*. 2025;10(11):105858.

NATALEE: DDFS



NATALEE: OS



Hazard ratio=0.800
(95% CI: 0.637-1.003)
nominal 1-sided p=.026

# OS Events	Ribociclib + NSAID	NSAID alone
138	162	

NATALEE: Treatment-Emergent AEs

AEs of Special Interest in Either Arm (≥15%), % ¹	Ribociclib + NSAI (n=2526)		NSAI Alone (n=2441)	
	Any Grade	Grade 3/4	Any Grade	Grade 3/4
Neutropenia ^a	62.8	44.4	4.5	0.9
Arthralgia	38.8	1.0	44.4	1.3
Nausea	23.5	0.2	7.9	<0.1
Headache	22.9	0.4	17.2	0.2
Fatigue	22.8	0.8	13.5	0.2
Alanine aminotransferase increase	19.7	7.7	5.7	0.7
Aspartate aminotransferase increase	17.2	4.6	5.9	0.6

12.9 months after the 4-year exploratory analysis²:

- 5 new deaths due to AEs occurred; however, these deaths were not considered treatment-related^{2,3}
 - 3 patients in the ribociclib + NSAI arm (brain hemorrhage, myocardial infarction, gastric adenocarcinoma)
 - 2 patients in the NSAI-alone arm (rectal adenocarcinoma, aortic aneurysm rupture)
- The proportion of patients who developed secondary primary malignancies was similar in the 2 treatment arms (ribociclib + NSAI, 67 patients [2.7%]; NSAI alone: 74 patients [3.0%])³

^aIncludes neutropenia and neutrophil count decreased.

AE=adverse event; ITT=intention-to-treat; MedDRA=Medical Dictionary for Regulatory Activities; mF/U=median follow-up; mo=month; NSAI=nonsteroidal aromatase inhibitor.

1. Fasching PA, et al. *JAMA Oncol.* 2025;11(11):1364-1372. 2. Crown J, et al. *ESMO Open.* 2025;10(11):105858.

3. Crown J, et al. Oral presentation at: *ESMO* 2025. Abstract LBA14.

NATALEE: Discontinuation Rates and Treatment Completion

100%
of NATALEE
patients are off
ribociclib
treatment¹

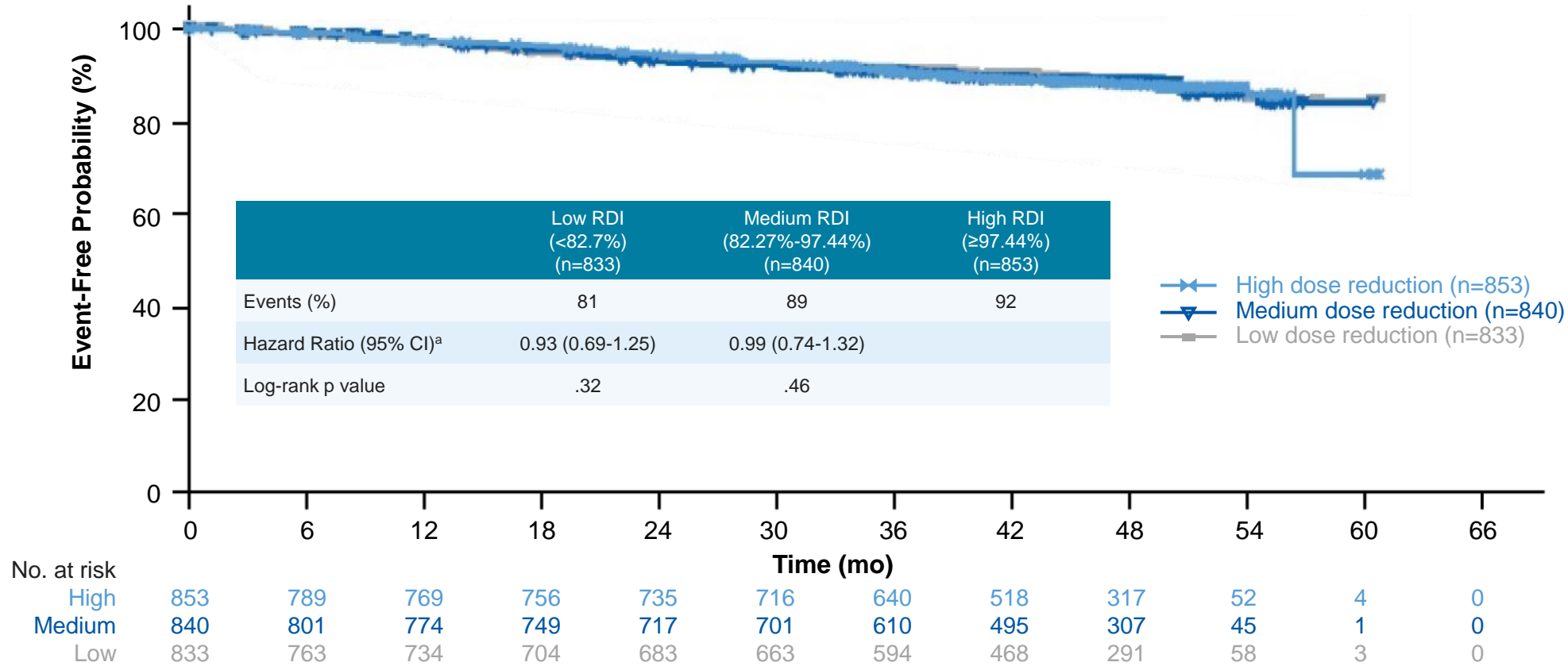
62.8% of patients completed the 3Y treatment with ribociclib¹

Ribociclib dose adjustments due to AEs

- Dose reductions: 23.0%
- Discontinuations: 20.0%

NATALEE: Dose Reduction

Invasive Disease-Free Survival by Relative Dose Intensity¹



Ribociclib
Recommended Dose²
400 mg QD
1st dose reduction:
200 mg QD

^aHigh RDI group was used as reference group to calculate hazard ratio and p value.

IDFS=invasive disease-free survival; ITT=intention-to-treat; mF/U=median follow-up; mo=month; QD=once daily; RDI=relative dose intensity.

1. Hamilton E, et al. Poster presentation at SABCS 2024. Abstract P1-11-16. 2. Ribociclib [US PI]. East Hanover, NJ, USA: Novartis Pharmaceuticals Corporation, 2025.



NATALEE: Efficacy Summary

Treatment benefit at 55.4 months median follow-up

	IDFS	DDFS ^a	OS ^b
Relative risk reduction	28.4%	29.1%	NR
Absolute benefit at 5Y	4.5%	4.3%	1.6%

^aDDFS is reported for 55.5-mo mF/U. ^bOS is reported for 56.5-mo mF/U.
 DDFS=distant disease-free survival; IDFS=invasive disease-free survival; ITT=intention-to-treat; mF/U=median follow-up; NR=not reported; OS=overall survival; Y=year.
 Crown J, et al. *ESMO Open*. 2025;10(11):105858.

NATALEE: Safety Summary

Safety Data¹



100% of patients are off ribociclib treatment

AEs of special interest were mainly low grade, except for neutropenia, and the safety profile of ribociclib + NSAI remained stable with additional follow-up^{1,2}

Most frequent AEs of special interest: any grade (Grade ≥ 3)¹

Neutropenia
62.8% (44.4%)

Arthralgia
38.8% (1.0%)

ALT Increase
19.7% (7.7%)

AST Increase
17.2% (4.6%)

The most frequent reason for discontinuation of ribociclib due to AEs was liver-related AEs¹

Summary

CDK4/6i + ET in HR+, HER2- EBC

1

Patients with high-risk, HR+, HER2- EBC may benefit from additional treatments to reduce their risk of disease recurrence¹⁻³

2

Understanding features associated with node-positive and node-negative, high-risk, HR+, HER2- EBC will help identify patients who could benefit from a CDK4/6i in the adjuvant setting⁴⁻⁶

3

Two CDK4/6i are approved for patients with high-risk, HR+, HER2- EBC, offering a potential for improved clinical outcomes^{7,8}

CDK4/6i=cyclin-dependent kinases 4/6 inhibitor; EBC=early breast cancer; ET=endocrine therapy; HER2=human epidermal growth factor receptor 2; HR=hormone receptor.

1. Burstein HJ, et al. *J Clin Oncol*. 2019;37(5):423-438. 2. Sheffield KM, et al. *Future Oncol*. 2022;18(21):2667-2682. 3. Caswell-Jin JL, et al. *JAMA*. 2024;331(3):233-241.

4. Colleoni M, et al. *J Clin Oncol*. 2016;34(9):927-935. 5. <https://www.clinicaltrials.gov/ct2/show/NCT03155997>. (Accessed April 4, 2023).

6. <https://www.clinicaltrials.gov/ct2/show/NCT03701334>. (Accessed March 4, 2024). 7. Ribociclib [US PI]. East Hanover, NJ, USA: Novartis Pharmaceuticals Corporation, 2025.

8. Abemaciclib [US PI]. Indianapolis, IN, USA: Eli Lilly USA LLC, 2025.



CDK4/6i USPI Links

Abemaciclib



<https://e.lilly/3w30f5X>

Ribociclib



<https://e.lilly/3HlnDZ9>