Imlunestrant With or Without Abemaciclib in **Advanced Breast** Cancer (ABC): Safety Analyses From the Phase III **EMBER-3 Trial**

Joyce O'Shaughnessy¹, François-Clément Bidard², Patrick Neven³, Monica Lis Casalnuovo⁴, Philippe Aftimos⁵, Cristina Saura⁶, Nadia Harbeck⁷, Lisa A. Carey⁸, Giuseppe Curigliano^{9,10}, J. A. Garcia-Saenz¹¹, Maria Fernandez Abad¹², Larissa de Paula¹³, Yeon Hee Park¹⁴, Ozgur Ozyilkan¹⁵, Maria Munoz¹⁶, Sabrina Formentini¹⁶, Emily Barrett¹⁶, Shanshan Cao¹⁶, Aarti Chawla¹⁶, Komal L. Jhaveri¹⁷

¹Texas Oncology, Baylor University Medical Center, TX, USA; ²Department of Medical Oncology and Siric, Institute Curie, Paris; 3Department of Oncology, Universitaire Ziekenhuizen Leuven, Leuven, Belgium; ⁴Hospital María Curie, Buenos Aires, Argentina; ⁵Institut Jules Bordet, Hôpital Universitaire de Bruxelles (HUB), Brussels, Belgium; ⁶Vall d'Hebron University Hospital, Vall d'Hebron Institute of Oncology (VHIO), Barcelona, Spain; ⁷Breast Center, Department of Obstetrics and Gynecology and CCC Munich, LMU University Hospital, Munich, Germany; 8University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; 9University of Milano, Milan, Italy; 10European Institute of Oncology, IRCCS, Milan, Italy; ¹¹Hospital Clinico Universitario San Carlos, Madrid, Spain; ¹²Hospital Universitario Ramón y Cajal, Madrid, Spain; ¹³Núcleo de Pesquisa do Instituto Brasileiro de Controle do Câncer (IBCC Oncologia), São Paulo, Brazil; ¹⁴Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea; ¹⁵Baskent University, Adana, Turkey; ¹⁶Eli Lilly and Company, Indianapolis, IN, USA; ¹⁷Memorial Sloan Kettering Cancer Center, NY, USA

Study was sponsored by Eli Lilly and Company

OBJECTIVES

- To characterize the incidence, timing, duration, and management of the most common TEAEs of imlunestrant monotherapy and in combination with abemaciclib in the EMBER-3 trial
- To assess the safety profile of imlunestrant in different age groups

CONCLUSIONS

- **Imlunestrant monotherapy** had a favorable safety profile, with generally low grade and manageable side effects
- The incidence and severity of AEs in the imlunestrant+abemaciclib arm were consistent with the known safety profile of abemaciclib+fulvestrant and manageable with supportive medications and dose adjustments
- The most frequent TEAEs in both imlunestrant arms were generally low grade, reversible, occurred early in treatment, and resulted in few treatment discontinuations
- Incidence of VTE, ILD, dyslipidemia, bradycardia, and photopsia were relatively low or not observed in both imlunestrant arms
- In general, the safety profiles of imlunestrant monotherapy and imlunestrant+abemaciclib were consistent across age groups, with numerical differences in select TEAEs

BACKGROUND

- Imlunestrant is a next-generation, brain-penetrant, oral SERD and pure ER antagonist that delivers continuous ER inhibition¹
- In EMBER-3, at the primary outcome analysis²:

Response (QR) Code are

for personal use only and

ASCO® or the author of

Scan the QR code for a lis

presented at the congres

of all Lilly content

Other company and

product names are

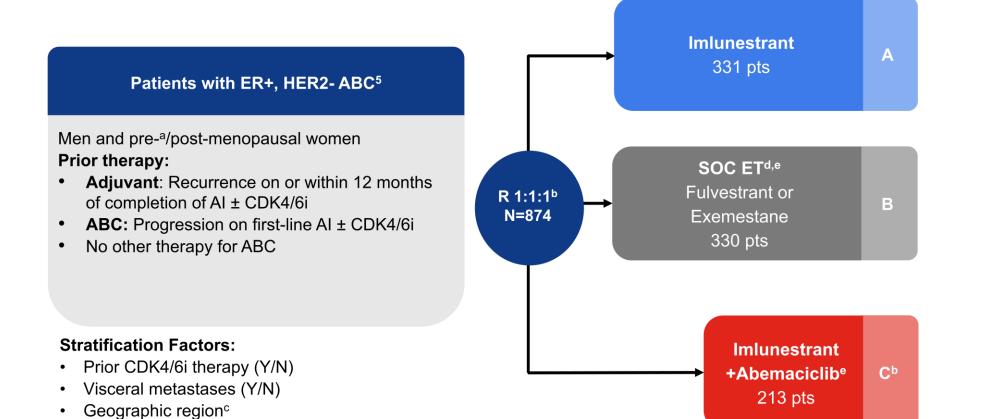
trademarks of their

respective owners.

may not be reproduced without permission fron

- Imlunestrant alone significantly improved PFS vs SOC ET (fulvestrant or exemestane) in patients with ESR1m (5.5 vs 3.8 months; HR=0.62; 95% CI: 0.46-0.82; p<0.001) while imlunestrant+abemaciclib significantly improved PFS vs **imlunestrant** alone in all patients (9.4 vs 5.5 months; HR=0.57; 95% CI: 0.44–0.73; p<0.001) regardless of *ESR1*m status
- Imlunestrant demonstrated favorable safety, with generally lowgrade and manageable AEs:
 - In the **imlunestrant arm**, fatigue, diarrhea, and nausea were most frequently reported
 - In the imlunestrant+abemaciclib arm, diarrhea, nausea, and neutropenia were most frequently reported and incidences were similar to those previously reported for abemaciclib+fulvestrant^{3,4}

STUDY DESIGN AND METHODS



Imlunestrant (400 mg QD). Exemestane (25 mg QD). Fulvestrant (500mg IM on days 1 and 15 of cycle 1 and on day 1 of subsequent 28-day cycles). Abemaciclib (150 mg BID). Enrolled October 2021 to November 2023 across 195 sites in 22 countries. ^a A GnRH agonist was required in men and premenopausal women; ^b Arm C enrolled with Protocol Amendment A (at which point 122 pts had been randomized across Arms A and B); ^c East Asia vs United States/European Union vs others; d Investigator's choice; e Labeled dose

RESULTS

- Safety population: All pts who received at least one dose of any study drug
- TEAEs were assessed for severity per CTCAE v5.0 at baseline and at every visit throughout the study
- Labs were assessed at baseline, at every cycle, and approximately 30 days after discontinuation of study therapy

| Dose Adjustment | Imlunestrant Dose | | |
|-----------------|-------------------|--|--|
| 1 | 200 mg QD | | |
| Dose Adjustment | Abemaciclib Dose | | |
| 1 | 100 mg BID | | |
| 2 | 50 mg BID | | |

Pts receiving **imlunestrant+abemaciclib** could discontinue either drug and continue the other and still be considered on study treatment

Summary of Select TEAEs

| | Diarrhea | lmlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|--------|---|---------------|-----------------|---|
| | Any grade | 21 | 12 | 86 |
| | G1 AE | 18 | 9 | 50 |
| | G2 AE | 3 | 3 | 28 |
| % pts | G≥3 AE | <1 | 0 | 8 |
| | Pts with >1 occurrences of AE | 5 | 1 | 34 |
| | Pts with >1 occurrences of G≥3 AE | 0 | 0 | <1 |
| | Dose interruption/reduction/discontinuation | <1/0/0 | 0/0/0 | 19 ^a /18 ^b /<1 ^{c,d} |
| | Antidiarrheal medicatione | 10 | 7 | 68 |
| Madian | Time to onset (Q1-Q3) | 30 (15–129) | 52 (17–132) | 5 (2–17) |
| Median | Duration of G2 AE (range) | 3 (1–28) | 5 (1–55) | 13 (1–87) |
| days | Duration of G≥3 AE (range) | 8 (8–8) | _ | 9 (1–47) |

^a 14 (6.7%) pts had only abemaciclib interrupted and 3 (1.4%) pts had only imlunestrant interrupted; ^b 29 (14%) pts had only abemaciclib reduced; ^c Pts who discontinued both drugs; ^d One (0.5%) more pt discontinued only abemaciclib. ^e Proportion of total safety population treated.

| | Nausea | lmlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|--------|---|---------------|-----------------|---------------------|
| | Any grade | 17 | 13 | 49 |
| | G1 AE | 14 | 8 | 31 |
| | G2 AE | 3 | 5 | 15 |
| 0/ nto | G≥3 AE | <1 | 0 | 2 |
| % pts | Pts with >1 occurrences of AE | 2 | 1 | 14 |
| | Pts with >1 occurrences of G≥3 AE | 0 | 0 | <1 |
| | Dose interruption/reduction/discontinuation | 0/<1/0 | 0/0/0 | 6a/5b/0c,d |
| | Antiemetic medication ^e | 10 | 10 | 21 |
| Modion | Time to onset (Q1-Q3) | 20 (4–56) | 57 (10–147) | 15 (3–48) |
| Median | Duration of G2 AE (range) | 16 (4–89) | 10 (1–90) | 19 (2–266) |
| days | Duration of G≥3 AE (range) | 24 (24–24) | _ | 7 (6–13) |

^a One (0.5%) pt each had either imlunestrant or abemaciclib interrupted; ^b Two (1%) pts had imlunestrant reduced and 5 (2.4%) pts had abemaciclib reduced; ^c Pts who discontinued both drugs; ^d One (0.5%) more pt discontinued only abemaciclib; ^e Proportion of total safety

| | Fatigue ^a | Imlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|--------|---|---------------|------------------|---|
| | Any grade | 23 | 13 | 39 |
| | G1 AE | 17 | 9 | 20 |
| | G2 AE | 5 | 3 | 14 |
| % pts | G≥3 AE | <1 | <1 | 5 |
| | Pts with >1 occurrences of AE | 2 | <1 | 8 |
| | Pts with >1 occurrences of G≥3 AE | 0 | 0 | 0 |
| | Dose interruption/reduction/discontinuation | <1/<1/<1 | <1/0/0 | 3 ^b /4 ^c /<1 ^{d,e} |
| Modion | Time to onset (Q1-Q3) | 42 (14–86) | 29 (13–124) | 16 (3–49) |
| Median | Duration of G2 AE (range) | 43 (7–529) | 98 (9–232) | 28 (4–428) |
| days | Duration of G≥3 AE (range) | 7 (7–7) | N/A ^f | 15 (3–72) |

a Includes both asthenia and fatigue; b Three (1.4%) pts had only abemaciclib interrupted; c One (0.5%) pt had only imlunestrant reduced and 7 (3.4%) pts had only abemaciclib reduced; d Pts who discontinued both drugs; e One (0.5%) more pt discontinued only abemaciclib; f Not available due to missing end date.

| Ele | vated Transaminases ^a | Imlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|--------|---|---------------|-----------------|--|
| | Any grade | 16 | 15 | 20 |
| | G1 AE | 11 | 9 | 12 |
| | G2 AE | 3 | 5 | 3 |
| % pts | G≥3 AE | 1 | 1 | 5 |
| | Pts with >1 occurrences of AE | 8 | 9 | 12 |
| | Pts with >1 occurrences of G≥3 AE | <1 | <1 | 2 |
| | Dose interruption/reduction/discontinuation | 2/1/1 | <1/0/0 | 3 ^b /2 ^c /2 ^{d,e} |
| Madian | Time to onset (Q1-Q3) | 58 (16–197) | 43 (15–185) | 66 (29–195) |
| Median | Duration of G2 AE (range) | 27 (11–97) | 29 (5–86) | 19 (3–82) |
| days | Duration of G≥3 AE (range) | 5 (4–27) | 2 (2–2) | 9 (2–58) |

^a Includes increased ALT, AST, and hepatic enzymes, drug induced liver injury, hypertransaminaesemia, and hepatotoxicity; ^b All 6 (2.9%) pts had both study drugs interrupted; ^c All 5 (2.4%) pts had both study drugs reduced; ^d Pts who discontinued both drugs; ^e One additional pt (0.5%) each discontinued only one of the study drugs and continued the other.

endocrine therapy; TEAE, treatment-emergent adverse event; ULN, upper limit of normal; VTE, venous thromboembolism

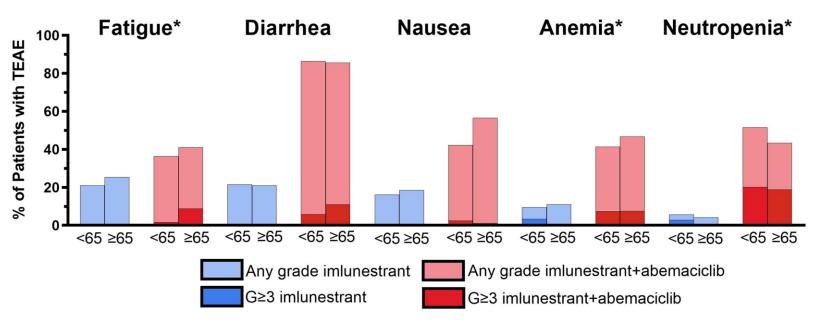
ABBREVIATIONS

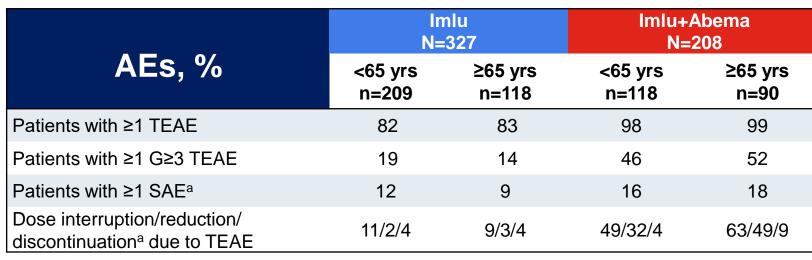
PD, progressive disease; PFS, progression-free survival; pts, patients; Q, quartile; QD, once daily; R, randomized; SAE, serious adverse event; SERD, selective estrogen receptor degrader; SOC ET, standard of care

 The majority of clinically relevant TEAEs were G1, single occurrences that occurred early in treatment and led to few discontinuations across all arms

- In the imlunestrant arm few dose adjustments were required
- Similar antidiarrheal and antiemetic use in imlunestrant and **SOC ET** arms
- In the imlunestrant+ abemaciclib arm clinically relevant TEAEs were well managed with dose adjustments and concomitant medications
- In the imlunestrant+ abemaciclib arm, characteristics of clinically relevant TEAEs were similar to prior experiences with abemaciclib⁶
- Three pts in imlunestrant arm had post-baseline ALT/AST increases >3×ULN and total bilirubin increases >2×ULN. All 3 pts had alkaline phosphatase >3×ULN and other risk factors for elevated laboratory values

Safety by Age





* Consolidated terms; a Deaths were included as SAEs and discontinuations due to AE.

In the **imlunestrant+abemaciclib** arm, consistent with previous abemaciclib experience⁷, patients aged ≥65 years had:

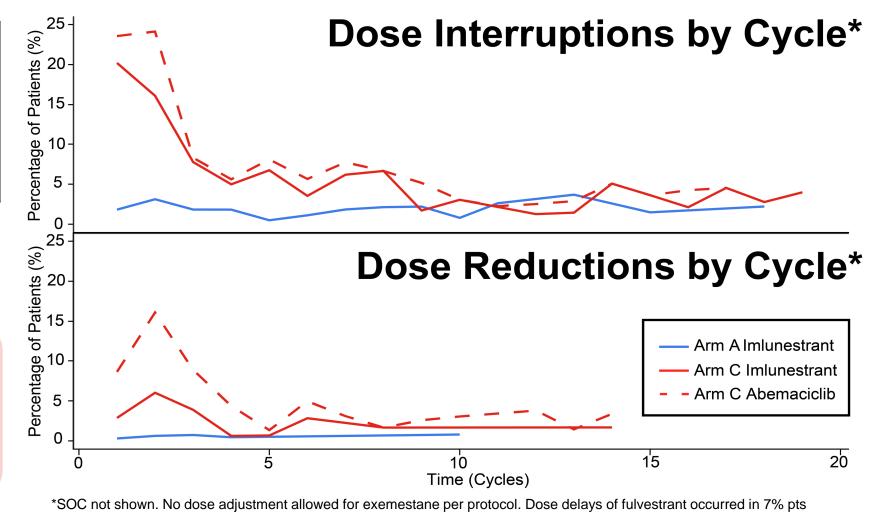
- higher incidence of fatigue, nausea, anemia, and G≥3 diarrhea
- lower incidence of neutropenia
- higher rates of dose adjustments

Dose Modifications Due to TEAEs

| Patients, % | lmlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|---|---------------|-----------------|---------------------|
| Discontinuations | 80 | 87 | 64 |
| Discontinuations due to PD | 73 | 80 | 54 |
| Discontinuations due to TEAE ^a | 4 | 1 | 6 ^b |
| Dose adjustments due to TEAE | 10 | 7 | 61 |
| Dose interruptions/delays | 10 | 7 | 55 ^c |
| Dose reductions | 2 | 0 | 39 ^d |

Dose delays of fulvestrant occurred in 7% pts. ^a Dose discontinuations include fatal AEs; ^b One (0.5%) more pt discontinued only imlunestrant and 6 (2.9%) more pts discontinued only abemaciclib. c 92 (44.2%) pts had both drugs interrupted, 20 (9.6%) pts had only abemaciclib interrupted, and 3 (1.4%) pts had only imlunestrant interrupted; d 30 (14.4%) pts had both drugs dose reduced, 48 (23.1%) pts had only abemaciclib reduced, and 4 (1.9%) pts had only imlunestrant reduced.

- Frequency of discontinuations due to AEs were low. Few dose reductions occurred with imlunestrant monotherapy
- In the **imlunestrant+abemaciclib** arm most dose adjustment occurred in the first few months of treatment
- Dose adjustments due to AEs on abemaciclib for the imlunestrant+abemaciclib **arm** were similar to prior experiences with **abemaciclib**^{3,4}



Incidence of TEAEs of Interest

| TEAE, | Imlu+Abema N=208 | | | |
|---|---------------------|-----|--|--|
| Consolidated terms, % | Any Grade | G≥3 | | |
| Neutropeniaª | 48 | 20 | | |
| Neutropenia ^a Infection ^b | 31 | 4 | | |
| ILDc | 2 | 0 | | |
| VTEd | 3 | <1 | | |

^a Includes both neutropenia and neutrophil count decreased; ^b Includes all infections and infestations system organ class; ^c Includes Interstitial lung disease, pneumonitis, pulmonary fibrosis, and pulmonary toxicity; ^d Includes central venous catheterization, deep vein thrombosis, pelvic venous thrombosis, peripheral vein thrombosis, portal vein thrombosis, pulmonary embolism, and superficial vein thrombosis.

| TEAE, % | lmlu N=327 | | SOC ET N=324 | | Imlu+Abema N=208 | |
|---|---------------|-----|------------------|-----|---------------------|-----|
| | Any Grade | G≥3 | Any Grade | G≥3 | Any Grade | G≥3 |
| Bradycardia ^a | 2 | 0 | 0 | 0 | 1 | 0 |
| Photopsia | 0 | 0 | 0 | 0 | 0 | 0 |
| Dyslipidemia ^b | 7 | <1 | 9 | 0 | 8 | 0 |
| Pts receiving lipid-modifying agents ^c | 6 | | 4 | | 2 | |

^a Includes bradycardia and sinus bradycardia; ^b Includes dyslipidaemia, hypercholesterolaemia, hyperlipidaemia, hypertriglyceridaemia, and low-density lipoprotein increased; ^c Patients who started lipid-modifying agents while on study treatment.

- Incidence of VTE, ILD, dyslipidemia, bradycardia, and photopsia were relatively low or not observed in both imlunestrant arms
- The use of lipid-modifying agents was generally similar between the imlunestrant and SOC ET arms

REFERENCES

ACKNOWLEDGMENTS

Copyright ©2025 Eli Lilly and Company. All rights reserved.

ABC, advanced breast cancer; Abema, abemaciclib; AE, adverse event; AI, aromatase inhibitor; ALT, alanine aminotransferase; AST, aspartate aminotransferase; BID, twice daily; CDK4/6i, cyclin-dependent kinase 4/6 . Bhagwat et al. Cancer Res. 2025; 85(4):777-90 inhibitor: CI, confidence interval: CTCAE, Common Terminology Criteria for Adverse Events: ER, estrogen receptor: ESR1m, ESR1 mutation; G, grade: GnRH, gonadotropin-releasing hormone: HER2-, human epidermal 2. Jhaveri et al. N Engl J Med. 2025; 392(12):1189-202 growth factor receptor 2-negative; HR, hazard ratio; ILD, interstitial lung disease; IM, intramuscular; Imlu, imlunestrant; med, median; N, number of patients in total safety population; n, number of patients in specified category; 3. Sledge et al. *J Clin Oncol.* 2017; 35(25):2875-84 4. Kalinsky et al. *J Clin Oncol.* 2025; 43(9):1101-12

5. Jhaveri et al. Presented at SABCS 2024. Abstract 3617 6. Rugo et al. Oncologist. 2021; 26(1):e53-65 7. Goetz et al. Breast Cancer Res Treat. 2021; 186(2):417-28 We would like to thank the support staff who contributed to this study. We are very grateful for the time and efforts of the EMBER-3 Steering Committee. We thank the 874 clinical trial participants and their families/caregivers from 195 sites in 22 countries for participating in this trial. Medical writing support was provided by Preethi Govindarajan of Syneos Health.

American Society of Clinical Oncology (ASCO) 61st Annual Meeting; Chicago, USA; May 30 - June 3, 2025 joyce.oshaughnessy@usoncology.com

Imlunestrant With or Without Abemaciclib in Advanced Breast Cancer (ABC): Safety Analyses From the Phase III EMBER-3 Trial

Joyce O'Shaughnessy¹, François-Clément Bidard², Patrick Neven³, Monica Lis Casalnuovo⁴, Philippe Aftimos⁵, Cristina Saura⁶, Nadia Harbeck⁷, Lisa A. Carey⁸, Giuseppe Curigliano^{9,10}, J. A. Garcia-Saenz¹¹, Maria Fernandez Abad¹², Larissa de Paula¹³, Yeon Hee Park¹⁴, Ozgur Ozyilkan¹⁵, Maria Munoz¹⁶, Sabrina Formentini¹⁶, Emily Barrett¹⁶, Shanshan Cao¹⁶, Aarti Chawla¹⁶, Komal L. Jhaveri¹⁷

¹Texas Oncology, Baylor University Medical Center, TX, USA; ²Department of Medical Oncology and Siric, Institute Curie, Paris; ³Department of Oncology, Universitaire Ziekenhuizen Leuven, Leuven, Belgium; ⁴Hospital María Curie, Buenos Aires, Argentina; ⁵Institut Jules Bordet, Hôpital Universitaire de Bruxelles (HUB), Brussels, Belgium; ⁶Vall d'Hebron University Hospital, Vall d'Hebron Institute of Oncology (VHIO), Barcelona, Spain; ¹Breast Center, Department of Obstetrics and Gynecology and CCC Munich, LMU University Hospital, Munich, Germany; ⁶University of North Carolina at Chapel Hill, NC, USA; ⁶University of Milano, Milan, Italy; ¹⁰European Institute of Oncology, IRCCS, Milan, Italy; ¹¹Hospital Clinico Universitario San Carlos, Madrid, Spain; ¹²Hospital Universitario Ramón y Cajal, Madrid, Spain; ¹³Núcleo de Pesquisa do Instituto Brasileiro de Controle do Câncer (IBCC Oncologia), São Paulo, Brazil; ¹⁴Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea; ¹⁵Baskent University, Adana, Turkey; ¹⁶Eli Lilly and Company, Indianapolis, IN, USA; ¹¬Memorial Sloan Kettering Cancer Center, NY, USA

Background and Objectives

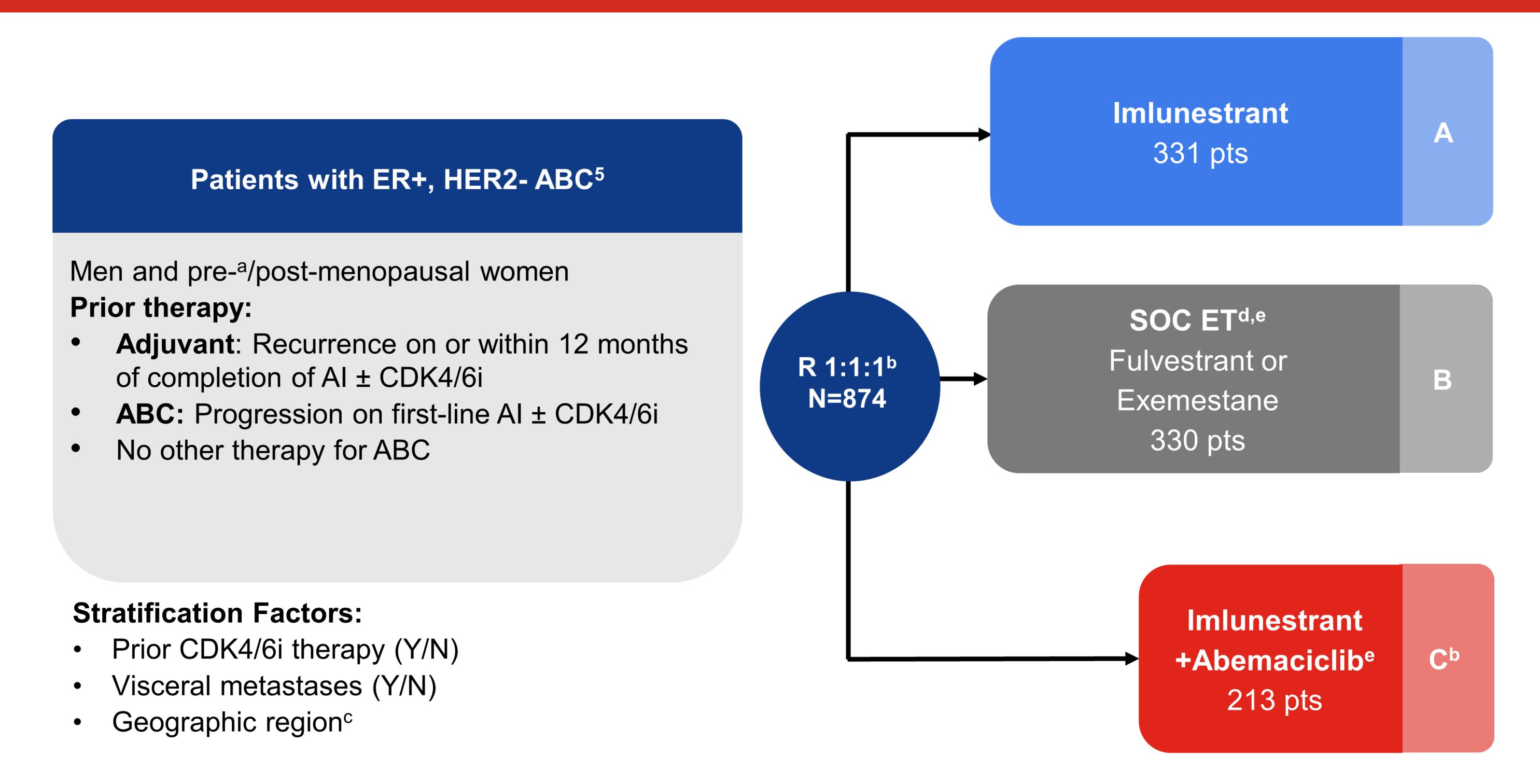
Background

- Imlunestrant is a next-generation, brain-penetrant, oral SERD and pure ER antagonist that delivers continuous ER inhibition¹
- ❖ In EMBER-3, at the primary outcome analysis²:
 - Imlunestrant alone significantly improved PFS vs SOC ET (fulvestrant or exemestane) in patients with *ESR1*m (5.5 vs 3.8 months; HR=0.62; 95% CI: 0.46–0.82; p<0.001) while imlunestrant+abemaciclib significantly improved PFS vs imlunestrant alone in all patients (9.4 vs 5.5 months; HR=0.57; 95% CI: 0.44–0.73; p<0.001) regardless of *ESR1*m status
 - Imlunestrant demonstrated favorable safety, with generally low-grade and manageable AEs:
 - In the imlunestrant arm, fatigue, diarrhea, and nausea were most frequently reported
 - In the **imlunestrant+abemaciclib arm**, diarrhea, nausea, and neutropenia were most frequently reported and incidences were similar to those previously reported for abemaciclib+fulvestrant^{3,4}

Objectives

- To characterize the incidence, timing, duration, and management of the most common TEAEs of **imlunestrant monotherapy** and in **combination with abemaciclib** in the EMBER-3 trial
- To assess the safety profile of **imlunestrant** in different age groups

Methods – Study Design



Imlunestrant (400 mg QD). Exemestane (25 mg QD). Fulvestrant (500mg IM on days 1 and 15 of cycle 1 and on day 1 of subsequent 28-day cycles). Abemaciclib (150 mg BID). Enrolled October 2021 to November 2023 across 195 sites in 22 countries. ^a A GnRH agonist was required in men and premenopausal women; ^b Arm C enrolled with Protocol Amendment A (at which point 122 pts had been randomized across Arms A and B); ^c East Asia vs United States/European Union vs others; ^d Investigator's choice; ^e Labeled dose

Methods – Study Design

- Safety population: all patients who received at least one dose of any study drug
- •TEAEs were assessed for severity per **CTCAE v5.0** at baseline and at every visit throughout the study
- Labs were assessed at baseline, at every cycle, and approximately 30 days after discontinuation of study therapy

| Dose Adjustment | Imlunestrant Dose |
|-----------------|-------------------|
| 1 | 200 mg QD |

| Dose Adjustment | Abemaciclib Dose |
|-----------------|------------------|
| 1 | 100 mg BID |
| 2 | 50 mg BID |

Patients receiving **imlunestrant+abemaciclib** could discontinue either drug and continue the other per investigator's decision

Summary of Diarrhea

| | Diarrhea | Imlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|---------|---|---------------|-----------------|---|
| | Any grade | 21 | 12 | 86 |
| | G1 AE | 18 | 9 | 50 |
| | G2 AE | 3 | 3 | 28 |
| 0/ 1010 | G≥3 AE | <1 | 0 | 8 |
| % pts | Pts with >1 occurrences of AE | 5 | 1 | 34 |
| | Pts with >1 occurrences of G≥3 AE | 0 | 0 | <1 |
| | Dose interruption/reduction/discontinuation | <1/0/0 | 0/0/0 | 19 ^a /18 ^b /<1 ^{c,d} |
| | Antidiarrheal medication ^e | 10 | 7 | 68 |
| | Time to onset (Q1-Q3) | 30 (15–129) | 52 (17–132) | 5 (2–17) |
| Median | Duration of G2 AE (range) | 3 (1–28) | 5 (1–55) | 13 (1–87) |
| days | Duration of G≥3 AE (range) | 8 (8–8) | | 9 (1–47) |

- In both imlunestrant arms, the majority of events were G1 and occurred in the first month
- Diarrhea in the imlunestrant+abemaciclib arm was comparable to that observed previously with abemaciclib⁶ and was well
 managed with dose adjustments and antidiarrheals

^a 14 (6.7%) pts had only abemaciclib interrupted and 3 (1.4%) pts had only imlunestrant interrupted; ^b 29 (14%) pts had only abemaciclib reduced; ^c Pts who discontinued both drugs; ^d One (0.5%) more pt discontinued only abemaciclib. ^e Proportion of total safety population treated.

Summary of Nausea

| | Nausea | lmlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|----------------|---|---------------|-----------------|---------------------|
| | Any grade | 17 | 13 | 49 |
| | G1 AE | 14 | 8 | 31 |
| | G2 AE | 3 | 5 | 15 |
| 0/ pto | G≥3 AE | <1 | 0 | 2 |
| % pts | Pts with >1 occurrences of AE | 2 | 1 | 14 |
| | Pts with >1 occurrences of G≥3 AE | 0 | 0 | <1 |
| | Dose interruption/reduction/discontinuation | 0/<1/0 | 0/0/0 | 6a/5b/0c,d |
| | Antiemetic medication ^e | 10 | 10 | 21 |
| Madian | Time to onset (Q1-Q3) | 20 (4–56) | 57 (10–147) | 15 (3–48) |
| Median days | Duration of G2 AE (range) | 16 (4–89) | 10 (1–90) | 19 (2–266) |
| | Duration of G≥3 AE (range) | 24 (24–24) | | 7 (6–13) |

- The majority of events across all arms were G1, single occurrences that occurred early in treatment
- Nausea was well managed with few dose adjustments and did not lead to treatment discontinuations in any arm
- Antiemetic use was the same in the imlunestrant and SOC ET arms

^a One (0.5%) pt each had either imlunestrant or abemaciclib interrupted; ^b Two (1%) pts had imlunestrant reduced and 5 (2.4%) pts had abemaciclib reduced; ^c Pts who discontinued both drugs; ^d One (0.5%) more pt discontinued only abemaciclib; ^e Proportion of total safety population treated.

Summary of Fatigue

| | Fatigue ^a | Imlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|----------------|---|---------------|------------------|---|
| Any grade | | 23 | 13 | 39 |
| | G1 AE | 17 | 9 | 20 |
| | G2 AE | 5 | 3 | 14 |
| % pts | G≥3 AE | <1 | <1 | 5 |
| | Pts with >1 occurrences of AE | 2 | <1 | 8 |
| | Pts with >1 occurrences of G≥3 AE | 0 | 0 | 0 |
| | Dose interruption/reduction/discontinuation | <1/<1 | <1/0/0 | 3 ^b /4 ^c /<1 ^{d,e} |
| Median days | Time to onset (Q1-Q3) | 42 (14–86) | 29 (13–124) | 16 (3–49) |
| | Duration of G2 AE (range) | 43 (7–529) | 98 (9–232) | 28 (4–428) |
| | Duration of G≥3 AE (range) | 7 (7–7) | N/A ^f | 15 (3–72) |

- Across all arms, the majority of events were low grade, single occurrences, and did not lead to treatment discontinuations
- There were few dose interruptions or reductions due to fatigue

^a Includes both asthenia and fatigue; ^b Three (1.4%) pts had only abemaciclib interrupted; ^c One (0.5%) pt had only imlunestrant reduced and 7 (3.4%) pts had only abemaciclib reduced; ^d Pts who discontinued both drugs; ^e One (0.5%) more pt discontinued only abemaciclib; ^f Not available due to missing end date.

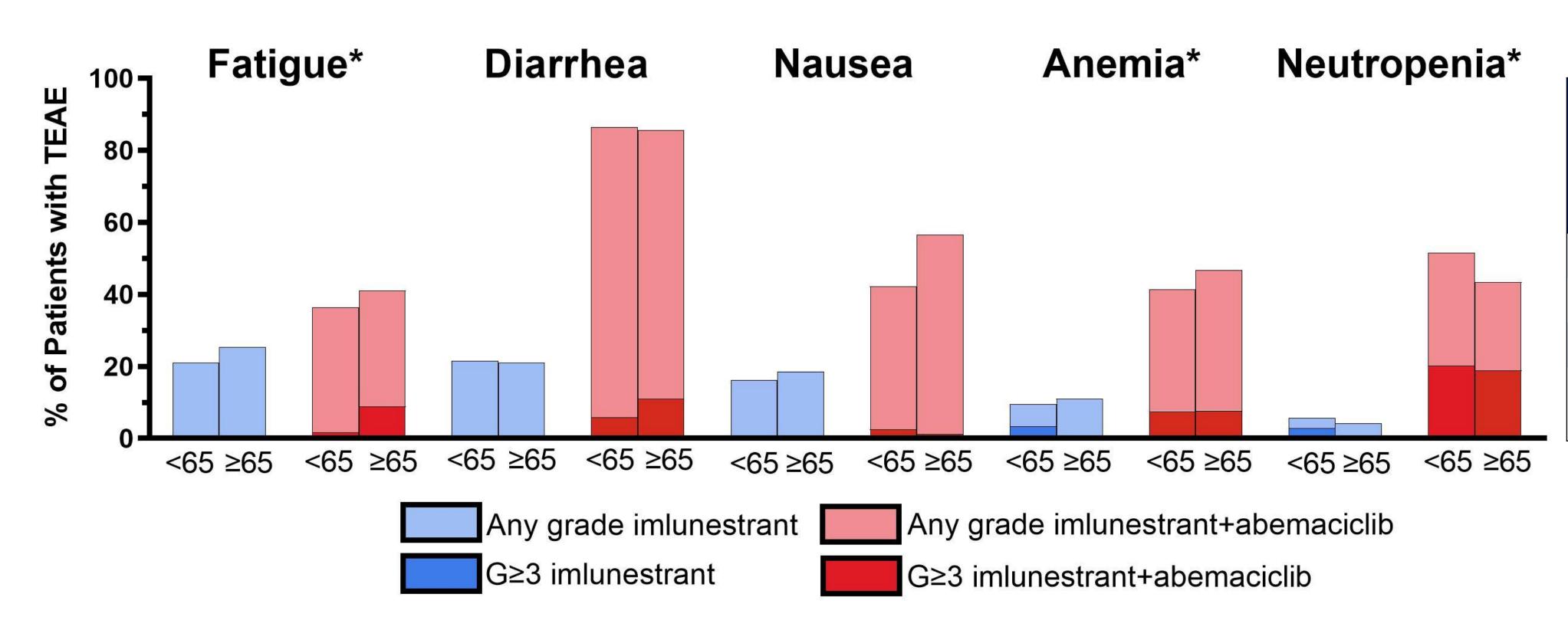
Summary of Transaminase Elevations

| | Elevated Transaminases ^a | Imlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|----------------|---|---------------|-----------------|---|
| | Any grade | 16 | 15 | 20 |
| | G1 AE | 11 | 9 | 12 |
| | G2 AE | 3 | 5 | 3 |
| % pts | G≥3 AE | 1 | 1 | 5 |
| - - | Pts with >1 occurrences of AE | 8 | 9 | 12 |
| | Pts with >1 occurrences of G≥3 AE | <1 | <1 | 2 |
| | Dose interruption/reduction/discontinuation | 2/1/1 | <1/0/0 | 3 ^b /2 ^c /2 ^d ,e |
| Median days | Time to onset (Q1-Q3) | 58 (16–197) | 43 (15–185) | 66 (29–195) |
| | Duration of G2 AE (range) | 27 (11–97) | 29 (5–86) | 19 (3–82) |
| | Duration of G≥3 AE (range) | 5 (4–27) | 2 (2–2) | 9 (2–58) |

- Most transaminase elevations were low grade, reversible, and required few dose adjustments or discontinuations
- Three pts in the imlunestrant arm had post-baseline ALT/AST increases >3xULN and total bilirubin increases >2xULN. All 3 patients had alkaline phosphatase >3xULN and other risk factors for elevated laboratory values

a Includes increased ALT, AST, and hepatic enzymes, drug induced liver injury, hypertransaminaesemia, and hepatotoxicity; bAll 6 (2.9%) pts had both study drugs interrupted; cAll 5 (2.4%) pts had both study drugs reduced; both drugs; cOne additional pt (0.5%) each discontinued only one of the study drugs and continued the other.

Safety by Age



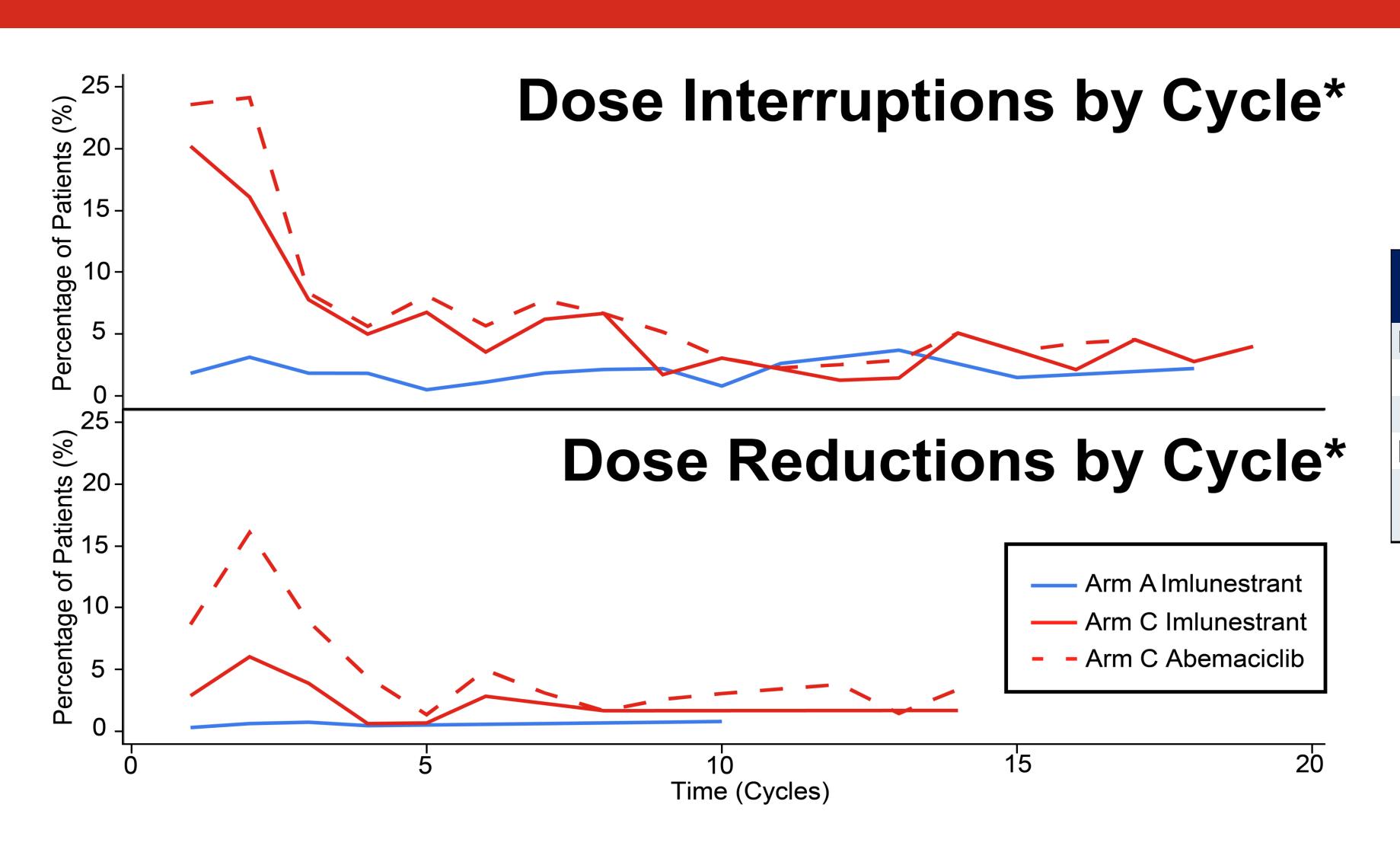
| | | nlu 327 | lmlu+Abema N=208 | | |
|--|------------------|------------------|---------------------|-----------------|--|
| AEs, % | <65 yrs n=209 | ≥65 yrs n=118 | <65 yrs n=118 | ≥65 yrs n=90 | |
| Patients with ≥1 TEAE | 82 | 83 | 98 | 99 | |
| Patients with ≥1 G≥3 TEAE | 19 | 14 | 46 | 52 | |
| Patients with ≥1 SAE ^a | 12 | 9 | 16 | 18 | |
| Dose interruption/reduction/discontinuationa due to TEAE | 11/2/4 | 9/3/4 | 49/32/4 | 63/49/9 | |

In the **imlunestrant+abemaciclib** arm, consistent with previous abemaciclib experience⁷, patients aged ≥65 years had:

- higher incidence of fatigue, nausea, anemia, and G≥3 diarrhea
- lower incidence of neutropenia
- higher rates of dose adjustments

^{*} Consolidated terms; a Deaths were included as SAEs and discontinuations due to AE.

Dose Discontinuations and Dose Adjustments due to TEAEs



| Patients, % | Imlu N=327 | SOC ET N=324 | Imlu+Abema N=208 |
|---|---------------|-----------------|---------------------|
| Discontinuations | 80 | 87 | 64 |
| Discontinuations due to PD | 73 | 80 | 54 |
| Discontinuations due to TEAE ^a | 4 | 1 | 6 b |
| Dose adjustments due to TEAE | 10 | 7 | 61 |
| Dose interruptions/delays | 10 | 7 | 55 ^c |
| Dose reductions | 2 | 0 | 39 ^d |

- Frequency of discontinuations due to AEs were low. Few dose reductions occurred with imlunestrant monotherapy
- In the imlunestrant+abemaciclib arm most dose adjustment occurred in the first few months of treatment
- Dose adjustments due to AEs on abemaciclib for the imlunestrant+abemaciclib arm were similar to prior experiences with abemaciclib^{3,4}

^{*} SOC ET not shown. No dose adjustment allowed for exemestane per protocol. Dose delays of fulvestrant occurred in 7% pts. ^a Dose discontinuations include fatal AEs; ^b One (0.5%) more pt discontinued only imlunestrant and 6 (2.9%) more pts discontinued only abemaciclib. ^c 92 (44.2%) pts had both drugs interrupted, 20 (9.6%) pts had only abemaciclib interrupted, and 3 (1.4%) pts had only imlunestrant reduced.

Incidence of TEAEs of Interest

| TEAE, Consolidated terms, % | Imlu+Abema N=208 | | |
|-----------------------------|---------------------|------------|--|
| | Any Grade | G≥3 | |
| Neutropeniaa | 48 | 20 | |
| Infection ^b | 31 | 4 | |
| ILDc | 2 | 0 | |
| VTEd | 3 | <1 | |

^aIncludes both neutropenia and neutrophil count decreased; ^bIncludes all infections and infestations system organ class; ^cIncludes Interstitial lung disease, pneumonitis, pulmonary fibrosis, and pulmonary toxicity; ^dIncludes central venous catheterization, deep vein thrombosis, pelvic venous thrombosis, peripheral vein thrombosis, portal vein thrombosis, pulmonary embolism, and superficial vein thrombosis.

| TEAE, % | Imlu N=327 | | SOC ET N=324 | | Imlu+Abema N=208 | |
|---|---------------|-----|-----------------|-----|---------------------|-----|
| | Any Grade | G≥3 | Any Grade | G≥3 | Any Grade | G≥3 |
| Bradycardia ^a | 2 | 0 | 0 | 0 | 1 | 0 |
| Photopsia | 0 | 0 | 0 | 0 | 0 | 0 |
| Dyslipidemia ^b | 7 | <1 | 9 | 0 | 8 | 0 |
| Pts receiving lipid-modifying agents ^c | 6 | | 4 | | 2 | |

^a Includes bradycardia and sinus bradycardia; ^b Includes dyslipidaemia, hypercholesterolaemia, hyperlipidaemia, hypertriglyceridaemia, and low-density lipoprotein increased;

- Incidence of VTE, ILD, dyslipidemia, bradycardia, and photopsia were relatively low or not observed in both imlunestrant arms
- The use of lipid-modifying agents was generally similar between the imlunestrant and SOC ET arms

^c Patients who started lipid-modifying agents while on study treatment.

Conclusions

- * Imlunestrant monotherapy had a favorable safety profile, with generally low grade and manageable side effects
- The incidence and severity of AEs in the **imlunestrant+abemaciclib** arm were consistent with the known safety profile of abemaciclib+fulvestrant and manageable with supportive medications and dose adjustments
- The most frequent TEAEs in both imlunestrant arms were generally low grade, reversible, occurred early in treatment, and resulted in few treatment discontinuations
- Incidence of VTE, ILD, dyslipidemia, bradycardia, and photopsia were relatively low or not observed in both imlunestrant arms
- In general, the safety profiles of imlunestrant monotherapy and imlunestrant+abemaciclib were consistent across age groups, with numerical differences in select TEAEs

ABBREVIATIONS

ABC, advanced breast cancer; Abema, abemaciclib; AE, adverse event; AI, aromatase inhibitor; ALT, alanine aminotransferase; AST, aspartate aminotransferase; BID, twice daily; CDK4/6i, cyclin-dependent kinase 4/6 inhibitor; CI, confidence interval; CTCAE, Common Terminology Criteria for Adverse Events; ER, estrogen receptor; *ESR1*m, *ESR1* mutation; G, grade; GnRH, gonadotropin-releasing hormone; HER2-, human epidermal growth factor receptor 2-negative; HR, hazard ratio; ILD, interstitial lung disease; IM, intramuscular; Imlu, imlunestrant; med, median; N, number of patients in total safety population; n, number of patients in specified category; PD, progressive disease; PFS, progression-free survival; pts, patients; Q, quartile; QD, once daily; R, randomized; SAE, serious adverse event; SERD, selective estrogen receptor degrader; SOC ET, standard of care endocrine therapy; TEAE, treatment-emergent adverse event; ULN, upper limit of normal; VTE, venous thromboembolism

REFERENCES

- 1. Bhagwat et al. Cancer Res. 2025; 85(4):777-90
- 2. Jhaveri et al. N Engl J Med. 2025; 392(12):1189-202
- 3. Sledge et al. *J Clin Oncol.* 2017; 35(25):2875-84
- 4. Kalinsky et al. *J Clin Oncol*. 2025; 43(9):1101-12
- 5. Jhaveri et al. Presented at SABCS 2024. Abstract 3617
- 6. Rugo et al. Oncologist. 2021; 26(1):e53-65
- 7. Goetz et al. *Breast Cancer Res Treat.* 2021; 186(2):417-28

ACKNOWLEDGEMENTS

- We would like to thank the support staff who contributed to this study.
- We are very grateful for the time and efforts of the EMBER-3
 Steering Committee.
- We thank the 874 clinical trial participants and their families/caregivers from 195 sites in 22 countries for participating in this trial.
- Medical writing support was provided by Preethi Govindarajan of Syneos Health.