Trastuzumab deruxtecan (T-DXd) vs trastuzumab emtansine (T-DM1) in patients with high-risk human epidermal growth factor receptor 2–positive (HER2+) primary breast cancer with residual invasive disease after neoadjuvant therapy: Interim analysis of DESTINY-Breast05

Charles E Geyer Jr,[a,b] Yeon Hee Park, Zhiming Shao, Chiun-Sheng Huang, Carlos Barrios, Jame Abraham, Aleix Prat, Naoki Niikura, Michael Untch, Seock-Ah Im, Wei Li, Huiping Li, Yongsheng Wang, Herui Yao, Sung-Bae Kim, Elton Mathias, Yuta Sato, Wenjing Lu, Hanan Abdel-Monem, Sibylle Loibl

On behalf of the DESTINY-Breast05 investigators

[a]NSABP Foundation, Pittsburgh, PA, USA
[b]University of Pittsburgh Hillman Cancer Center, Pittsburgh, PA, USA

Saturday, October 18, 2025
Presentation LBA1

Charles Geyer

Trastuzumab deruxtecan (T-DXd) vs trastuzumab emtansine (T-DM1) in patients (pts) with high-risk human epidermal growth factor receptor 2–positive (HER2+) primary breast cancer (BC) with residual invasive disease after neoadjuvant therapy (tx): Inter...

Declaration of interests

Dr Geyer reports:

- Grants or contracts from Daiichi Sankyo and AstraZeneca, Roche/Genentech, Exact Sciences
- Meeting and/or travel support from Exact Sciences
- Honoraria/Travel Expenses: Exact Sciences, Merck
- Support for this presentation from Daiichi Sankyo and AstraZeneca

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Background

- HER2-targeted therapies have greatly improved outcomes for patients with HER2+ eBC[1,2]
- **In the KATHERINE trial,** adjuvant **T-DM1 significantly improved IDFS and OS relative to trastuzumab in patients with HER2+ eBC and residual invasive disease following NAT** (HR for IDFS, 0.50; 95% CI, 0.39-0.64; *P* < 0.001; HR for OS, 0.66; 95% CI, 0.51-0.87; *P* = 0.003)[3,4]
  - However, **subsets of patients presenting with advanced locoregional disease or positive nodal status after NAT had 3-year IDFS rates of 76% and 83%, with 7-year IDFS rates of 67% and 72%, respectively**[4,5]
  - Furthermore, **adjuvant T-DM1 did not reduce CNS recurrences relative to trastuzumab**[5]
- Therefore, an **unmet medical need remained even with adjuvant T-DM1 for these high-risk patients** in the post-neoadjuvant setting[3,4]
- **Early phase studies in heavily pretreated HER2+ mBC had demonstrated remarkable activity of T-DXd,**[6] and **DESTINY-Breast03 demonstrated superiority of T-DXd relative to T-DM1 in the 2L metastatic setting**[7]

DESTINY-Breast05 is a global, multicenter, randomized, open-label, phase 3 trial to assess efficacy and safety of adjuvant T-DXd vs T-DM1 in high-risk patients with HER2+ eBC and residual invasive disease following neoadjuvant therapy

2L, second line; eBC, early breast cancer; CNS, central nervous system; HER2, human epidermal growth factor receptor 2; HR, hazard ratio; IDFS, invasive disease–free survival; mBC, metastatic breast cancer; NAT, neoadjuvant therapy; OS, overall survival; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.

1. Loibl S et al. *ESMO Open*. 2025;10(suppl 4):105112. 2. Early Breast Cancer Trialists' Collaborative group (EBCTCG). *Lancet Oncol*. 2021;22(8):1139-1150. 3. von Minckwitz G et al. *N Engl J Med*. 2019;380(7):617-628. 4. Geyer CE et al. *N Engl J Med*. 2025;392(2):249-257. 5. Mamounas EP et al. *Ann Oncol*. 2021;32(8):1002-1014. 6. Modi S et al, *N Engl J Med*. 2020; 382:610-621, 2020. 7. Hurvitz SA et al. *Lancet*. 2023;401(10371):105-117.

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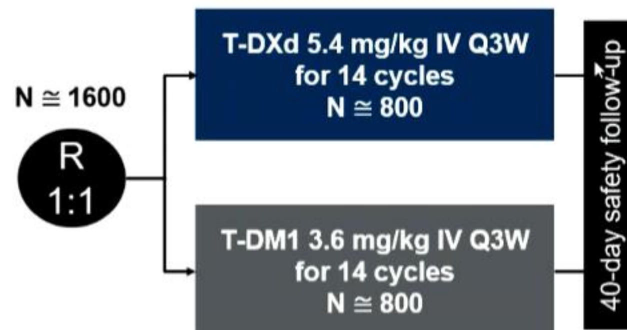
DESTINY-Breast05 study design

A global, multicenter, randomized, open-label, phase 3 trial (NCT04622319)

Key Eligibility Criteria

- **Residual invasive disease in the breast and/or axillary lymph nodes** after neoadjuvant chemotherapy with HER2-directed therapy (NAT)[a]
- **High-risk defined as presentation prior to NAT with:**
  - **Inoperable eBC (cT4,N0-3,**M0 **or cT1-3,N2-3,**M0)
    OR
  - **Operable eBC (cT1-3,N0-1,**M0**) with axillary node–positive disease (ypN1-3) after NAT**
- **Centrally confirmed HER2+** (IHC 3+ or ISH+) eBC
- ECOG PS 0 or 1



Primary endpoint
- IDFS

Key secondary endpoint
- DFS

Other secondary endpoints
- OS
- DRFI
- BMFI
- Safety

Stratification factors
- Extent of disease at presentation (inoperable, operable)
- HER2-targeted NAT (single, dual)
- Hormone receptor status (positive, negative)
- Post-NAT pathologic nodal status (positive, negative)

BMFI, brain metastasis–free interval; CT, computed tomography; eBC, early breast cancer; DCO, data cutoff; DFS, disease-free survival; DRFI, distant recurrence–free interval; ECOG PS, Eastern Cooperative Oncology Group performance status; ET, endocrine therapy; HER2, human epidermal growth factor receptor 2; IDFS, invasive disease–free survival; IHC, immunohistochemistry; ILD, interstitial lung disease; ISH, in situ hybridization; IV, intravenous; NAT, neoadjuvant therapy; OS, overall survival; Q3W, every 3 weeks; R, randomization; RT, radiotherapy; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
[a]NAT is defined as ≥16 weeks' NAT with ≥9 weeks trastuzumab ± pertuzumab and ≥9 weeks taxane-based chemotherapy.

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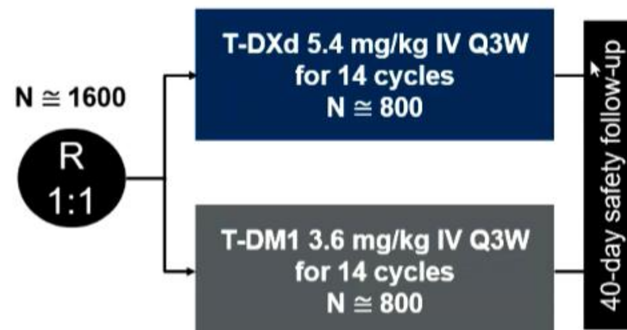

Primary endpoint
- IDFS

Key secondary endpoint
- DFS

Other secondary endpoints
- OS
- DRFI
- BMFI
- Safety

- **Concomitant adjuvant ET was allowed per local practices**
- **If administered, RT could be initiated concurrent with study therapy or completed prior to initiation of study therapy (sequential) per investigator**
- **ILD monitoring program for patients treated with RT**
  - All patients had baseline non-contrast, low dose (LD) chest CT during screening
  - All RT patients (concurrent and sequential) had LD chest CT 6 weeks after start of study therapy, then every 12 weeks while on therapy, and at 40-day follow-up
  - Sequential RT patients had additional LD chest CT after completion of RT prior to start of study therapy

BMFI, brain metastasis–free interval; CT, computed tomography; eBC, early breast cancer; DCO, data cutoff; DFS, disease-free survival; DRFI, distant recurrence–free interval; ECOG PS, Eastern Cooperative Oncology Group performance status; ET, endocrine therapy; HER2, human epidermal growth factor receptor 2; IDFS, invasive disease–free survival; IHC, immunohistochemistry; ILD, interstitial lung disease; ISH, in situ hybridization; IV, intravenous; NAT, neoadjuvant therapy; OS, overall survival; Q3W, every 3 weeks; R, randomization; RT, radiotherapy; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
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Study status and statistical analysis

1600 randomized patients would provide **~80% power with ~207 IDFS** events to demonstrate a statistically significant difference in IDFS **assuming a HR of 0.675, corresponding to an improvement of 3-year IDFS rate from 83.0% projected in the T-DM1 arm to 88.2% in the T-DXd arm**

Study status

- First patient in – Dec 2020
- Last patient randomized – Feb 2024
- Last patient final treatment – Feb 2025
- 481 locations

Statistical analysis

Interim analysis of IDFS planned at ~70% of the 207 target events

Interim analysis timeline
- **DCO: 2 July 2025**
- **Events as of DCO: 153 (74% IF)**

Multiple testing procedure[a]

IDFS (alpha = 5%) → DFS (alpha = 5%)

[a]Separate Lan-DeMets alpha-spending functions with O'Brien–Fleming boundaries were used to allocate alpha between interim and final analyses for IDFS and DFS under the hierarchical testing strategy

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DCO, data cutoff; DFS, disease-free survival; HR, hazard ratio; IDFS, invasive disease–free survival; IF, information fraction.

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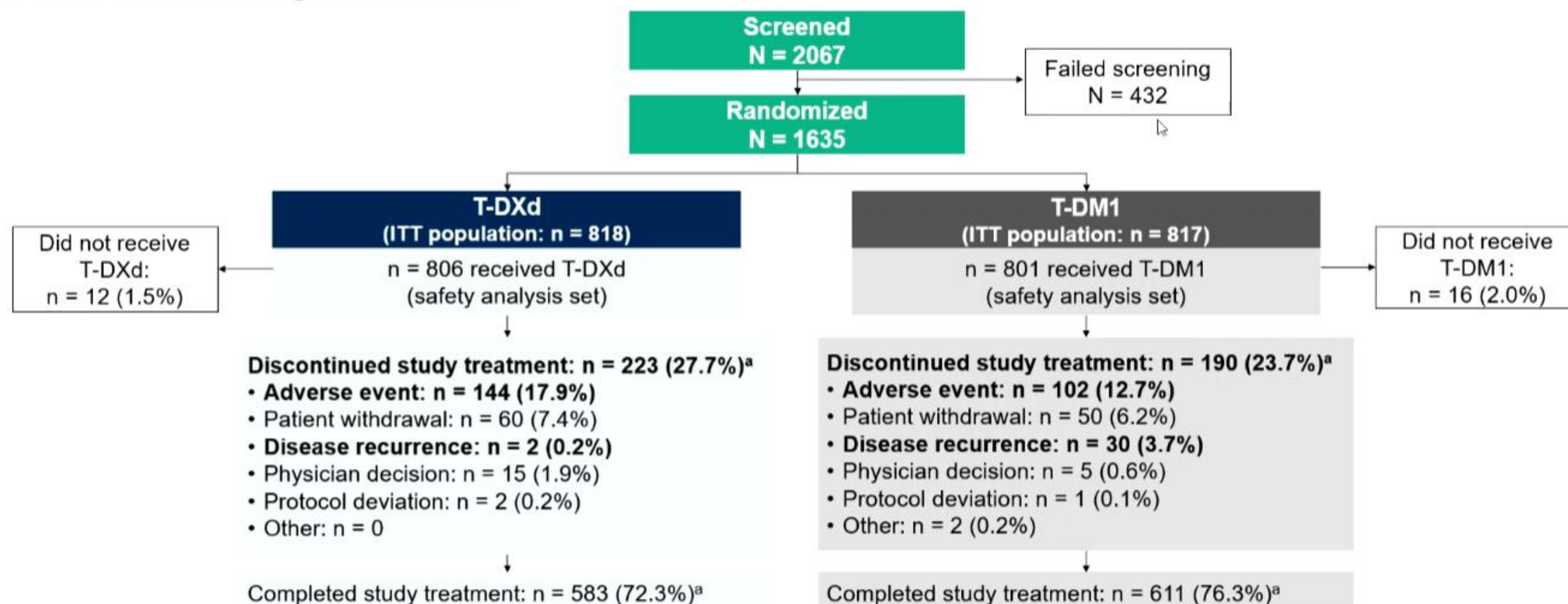
Patient disposition



Median study duration: 29.9 months (range, 0.3-53.4 months) with T-DXd and 29.7 months (range, 0.1-54.4 months) with T-DM1

ITT, intention-to-treat; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
[a]Calculated using the number of patients in the safety analysis set as a denominator.

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Baseline demographics and clinical characteristics

	T-DXd n = 818	T-DM1 n = 817
Age, median (range), years	50.3 (24-78)	50.6 (21-83)
<65	735 (89.9)	736 (90.1)
≥65	83 (10.1)	81 (9.9)
Female sex, n (%)	814 (99.5)	814 (99.6)
Race		
White	301 (36.8)	333 (40.8)
Black or African American	22 (2.7)	13 (1.6)
Asian	**399 (48.8)**	**386 (47.2)**
Other	96 (11.7)	85 (10.4)
Region, n (%)		
Asia	**392 (47.9)**	**380 (46.5)**
Europe	222 (27.1)	223 (27.3)
North America + Australia	57 (7.0)	72 (8.8)
Rest of world[a]	147 (18.0)	142 (17.4)
ECOG PS score, n (%)		
0	656 (80.2)	652 (79.8)
1	162 (19.8)	165 (20.2)
HER2 expression,[b] n (%)		
IHC 3+	**676 (82.6)**	**670 (82.0)**
IHC 2+ and ISH+	129 (15.8)	133 (16.3)
IHC 2+ and ISH−	2 (0.2)	0
IHC 1+ and ISH+	11 (1.3)	14 (1.7)
Hormone receptor status,[c] n (%)		
Positive	**581 (71.0)**	**583 (71.4)**
Negative	237 (29.0)	234 (28.6)

ECOG PS, Eastern Cooperative Oncology Group performance status; HER2, human epidermal growth factor receptor 2; IHC, immunohistochemistry; ISH, in situ hybridization; NAT, neoadjuvant therapy; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
[a]Included regions: Argentina, Brazil, Chile, Czech Republic, Israel, Mexico, Peru, Poland, Romania, Russian Federation. [b]Centrally confirmed. [c]As reported in electronic data capture.

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Positive	**581 (71.0)**	**583 (71.4)**
Negative	237 (29.0)	234 (28.6)

	T-DXd n = 818	T-DM1 n = 817
Operative status at disease presentation,[c] n (%)		
Operable (cT1-3, N0-1, M0)	387 (47.3)	393 (48.1)
Inoperable (cT4, N0-3, M0 or cT1-3, N2-3, M0)	**431 (52.7)**	**424 (51.9)**
Post-NAT pathologic nodal status,[c] n (%)		
Positive	**660 (80.7)**	**658 (80.5)**
Negative	158 (19.3)	159 (19.5)
Neoadjuvant HER2-targeted therapy, n (%)		
Trastuzumab alone	176 (21.5)	171 (20.9)
Trastuzumab + pertuzumab	**637 (77.9)**	**641 (78.5)**
Trastuzumab + other HER2-targeted therapy	3 (0.4)	3 (0.4)
Trastuzumab + pertuzumab + other HER2-targeted therapy	2 (0.2)	2 (0.2)
Neoadjuvant chemotherapy, n (%)		
Taxanes	818 (100)	817 (100)
Platinum compounds	386 (47.2)	392 (48.0)
Anthracycline	**423 (51.7)**	**399 (48.8)**
Radiotherapy treatment, n (%)		
Adjuvant radiotherapy	**764 (93.4)**	**759 (92.9)**
Concurrent	438 (53.5)	480 (58.8)
Sequential	326 (39.9)	279 (34.1)
No radiotherapy	54 (6.6)	58 (7.1)

ECOG PS, Eastern Cooperative Oncology Group performance status; HER2, human epidermal growth factor receptor 2; IHC, immunohistochemistry; ISH, in situ hybridization; NAT, neoadjuvant therapy; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
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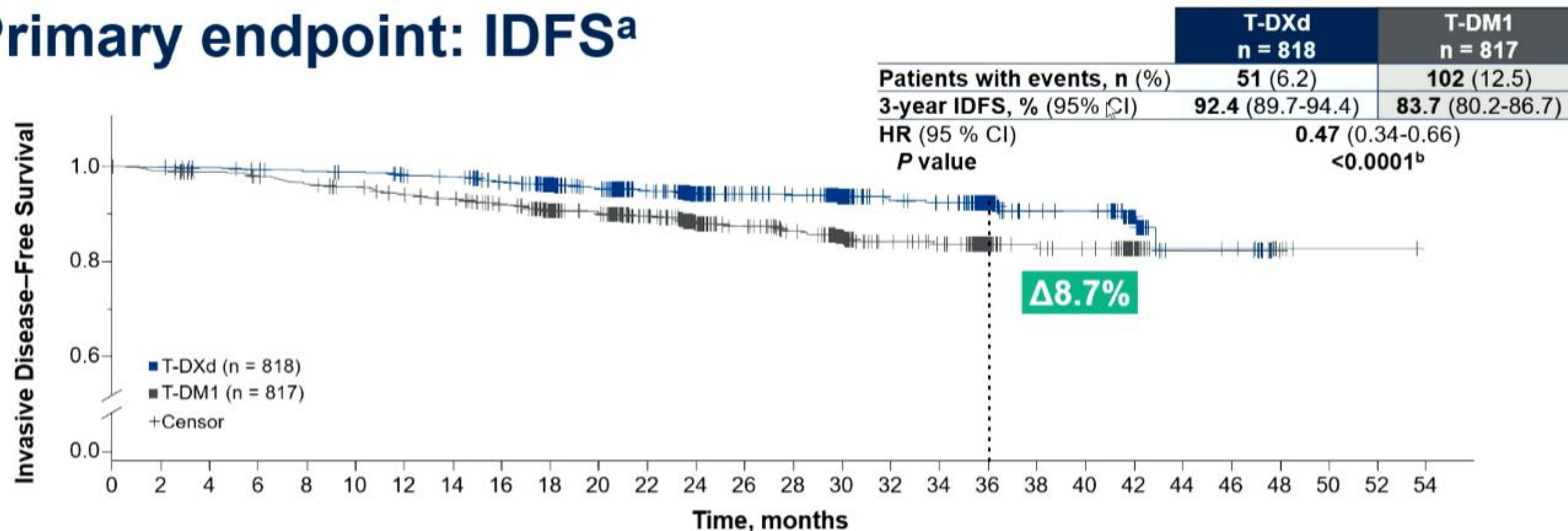
Primary endpoint: IDFS[a]

	T-DXd n = 818	T-DM1 n = 817
Patients with events, n (%)	**51** (6.2)	**102** (12.5)
3-year IDFS, % (95% CI)	**92.4** (89.7-94.4)	**83.7** (80.2-86.7)
HR (95 % CI)	**0.47** (0.34-0.66)	
***P* value**	**<0.0001[b]**	



Number at Risk:

	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54
T-DXd	818	788	781	776	771	768	758	753	731	684	634	544	440	380	370	275	218	212	129	92	90	46	14	14	0	0	0	0
T-DM1	817	781	769	760	745	734	719	708	687	632	599	527	417	355	337	233	186	177	120	84	79	38	14	13	4	1	1	0

53% reduction in the risk of invasive disease recurrence or death for T-DXd compared with T-DM1

HR, hazard ratio; IDFS, invasive disease–free survival; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.

Efficacy stopping boundary, *P* = 0.0183.

[a]IDFS is defined as the time from randomization until the date of first occurrence of one of the following events: recurrence of ipsilateral invasive breast tumor, recurrence of ipsilateral locoregional invasive breast cancer, contralateral invasive breast cancer, a distant disease recurrence, or death from any cause. [b]Two-sided *P* value from stratified log-rank test. Hazard ratio and 95% CI from stratified Cox proportional hazards model with stratification factor of operative status at disease presentation.

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BERLIN AUDITORIUM - HUB 27

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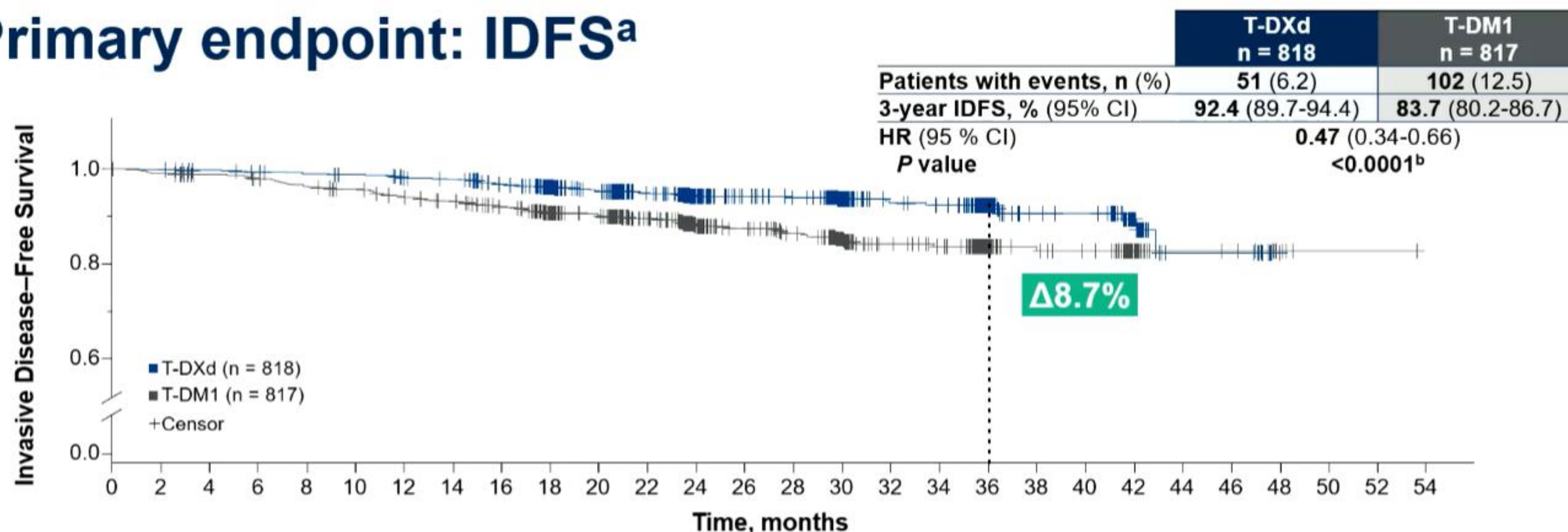
***P* value**	**<0.0001[b]**	



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16:30 - 18:15 Presidential Symposium I

CHAIRS: GIUSEPPE CURIGLIANO, BRIGETTE MA

Primary endpoint subgroup analysis: IDFS

	No. events/patients		3-year IDFS, % (95% CI)		
	T-DXd	T-DM1	T-DXd n = 818	T-DM1 n = 817	HR (95% CI)[b]
All patients	**51/818**	**102/817**	**92.4 (89.7-94.4)**	**83.7 (80.2-86.7)**	**0.47 (0.34-0.66)**
Age					
<65 years	46/735	87/736	92.1 (89.2-94.3)	84.1 (80.2-87.2)	0.50 (0.35-0.71)
≥65 years	5/83	15/81	94.9 (87.0-98.1)	79.2 (67.9-87.0)	0.31 (0.11-0.86)
Race					
Asian	19/399	34/386	95.1 (91.9-97.0)	89.5 (85.3-92.6)	0.53 (0.30-0.93)
Non-Asian	32/419	68/431	89.5 (84.5-93.0)	77.9 (72.1-82.7)	0.44 (0.29-0.67)
Region					
Asia	19/392	33/380	95.0 (91.9-97.0)	89.7 (85.4-92.7)	0.55 (0.31-0.96)
Europe	13/222	30/223	93.1 (86.9-96.4)	82.9 (75.8-88.1)	0.40 (0.21-0.77)
North America + Australia	5/57	10/72	85.8 (63.9-94.9)	80.7 (65.3-89.7)	0.56 (0.19-1.63)
Rest of world	14/147	29/142	85.1 (73.6-91.8)	69.2 (56.3-79.0)	0.43 (0.23-0.81)
Hormone receptor status					
Postive	33/581	59/583	93.5 (90.6-95.6)	86.8 (82.9-89.9)	0.54 (0.35-0.82)
Negative	18/237	43/234	89.4 (82.0-93.9)	75.6 (67.6-81.9)	0.37 (0.22-0.65)
Disease status at presentation before NAT					
Operable (cT1-3, N0-1, M0)	21/387	34/393	92.8 (88.0-95.7)	88.4 (83.8-91.8)	0.58 (0.34-1.01)
Inoperable (cT4, N0-3, M0 or cT1-3, N2-3, M0)	30/431	68/424	92.0 (88.5-94.5)	79.4 (73.9-83.8)	0.41 (0.27-0.63)
Post-NAT pathologic nodal status					
Positive[a]	40/660	87/658	92.5 (89.3-94.8)	82.5 (78.4-85.9)	0.43 (0.29-0.62)
Negative[a]	11/158	15/159	91.6 (85.3-95.3)	88.3 (80.6-93.0)	0.73 (0.33-1.59)
HER2-targeted NAT					
Single	13/176	27/171	87.5 (77.6-93.3)	77.9 (67.7-85.2)	0.43 (0.22-0.84)
Dual	38/642	75/646	93.6 (90.9-95.5)	85.2 (81.4-88.2)	0.48 (0.33-0.71)
Radiotherapy treatment					
Sequential radiotherapy	15/326	34/279	93.8 (88.4-96.7)	83.2 (76.4-88.2)	0.35 (0.19-0.64)
Concurrent radiotherapy	30/438	57/480	92.8 (89.7-95.0)	85.1 (80.6-88.6)	0.55 (0.35-0.85)
No radiotherapy	6/54	11/58	81.0 (61.0-91.4)	73.4 (56.4-84.6)	0.57 (0.21-1.55)

Forest plot axis: 0.0, 0.5, 1.0, 1.5, 2.0 — Favors T-DXd ← → Favors T-DM1

HER2, human epidermal growth factor receptor 2; HR, hazard ratio; IDFS, invasive disease–free survival; NAT, neoadjuvant therapy; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
[a]Positive pathologic nodal status defined as ypN1-3 and negative pathologic nodal status defined as ypN0. [b]From unstratified Cox proportional hazards model.

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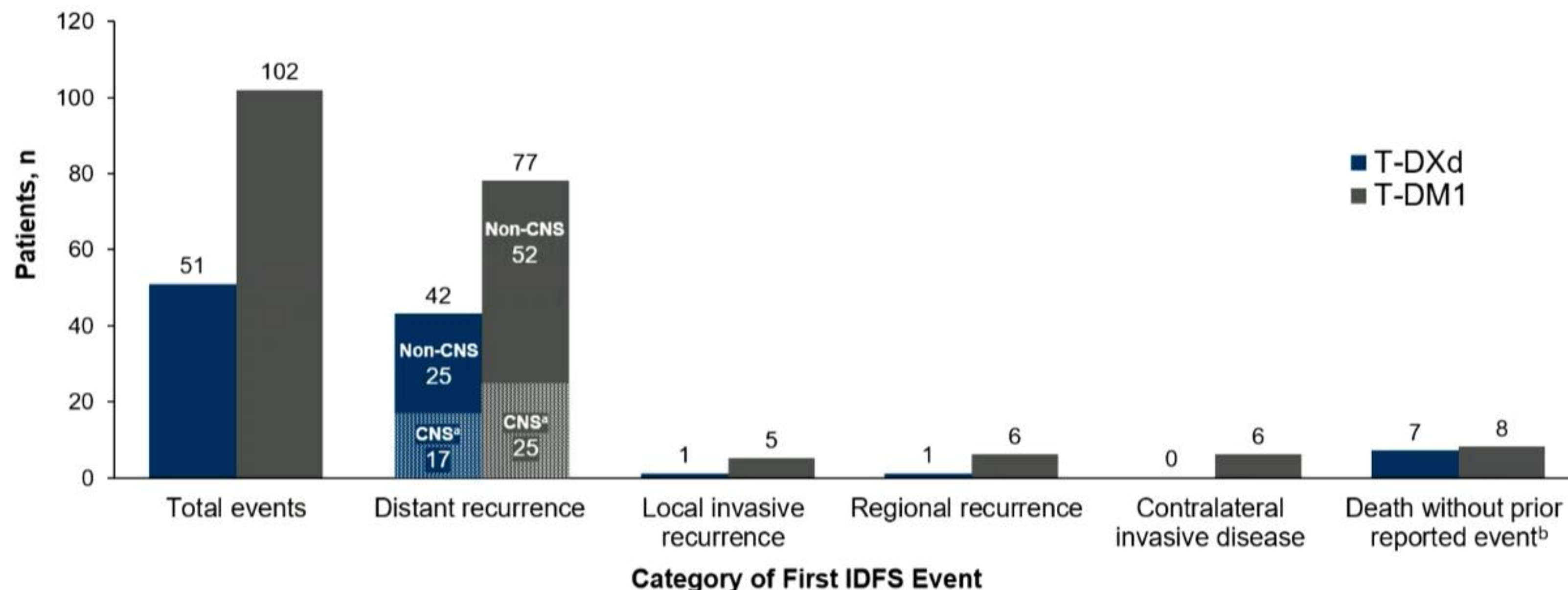
Categories of first IDFS events



Lower distant and locoregional recurrences were observed with T-DXd vs T-DM1, including CNS recurrences

IDFS, invasive disease–free survival; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
Participants who experienced multiple types of IDFS events within 61 days of their first event are reported in the category according to the following hierarchy: distant recurrence CNS, distant recurrence non-CNS, local invasive recurrence, regional recurrence, contralateral breast cancer, and death without a previous event.
[a]CNS as sole site for distant recurrence or one of multiple distance recurrent sites [b]Causes of death in the T-DXd arm were 2 drug-related ILD, unrelated respiratory tract infection, acute respiratory failure (outside AE reporting period), acute respiratory distress syndrome (outside AE reporting period), and 2 disease progression, and in the T-DM1 arm were drug-related sepsis, unrelated ovarian cancer, unrelated aneurysm, unrelated pneumothorax, unrelated leiomyosarcoma, self-inflicted gun wound, and 2 disease progression.

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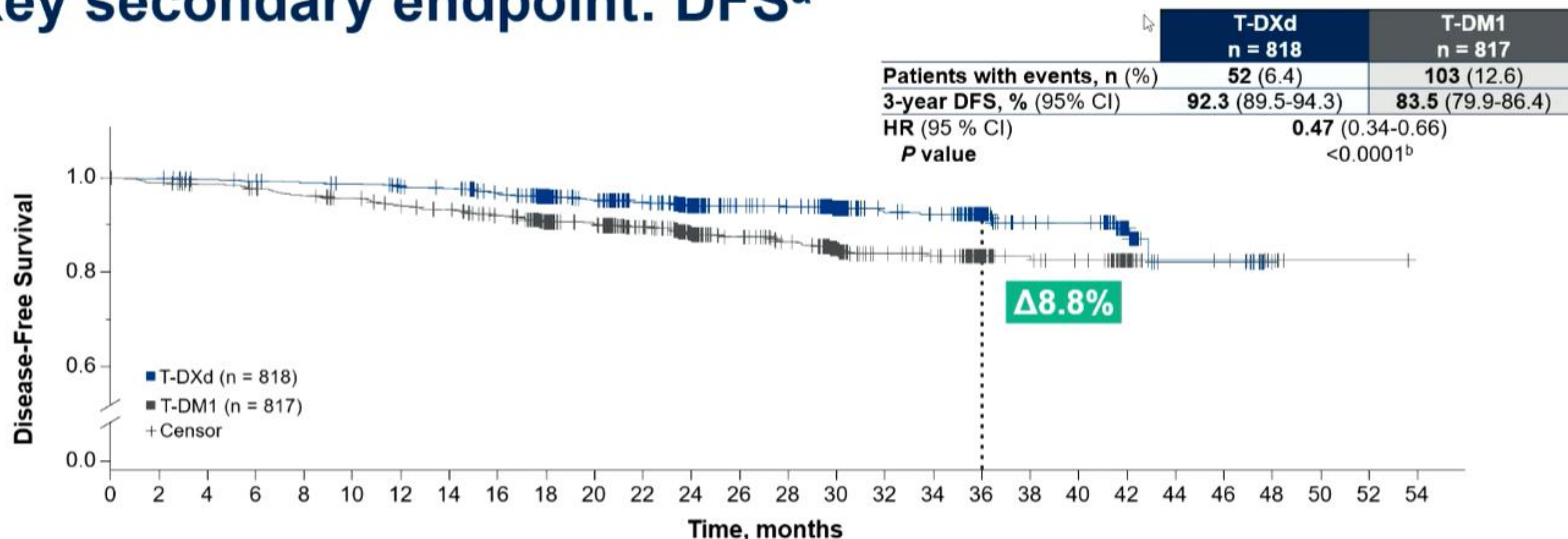
Key secondary endpoint: DFS[a]



	T-DXd n = 818	T-DM1 n = 817
Patients with events, n (%)	**52** (6.4)	**103** (12.6)
3-year DFS, % (95% CI)	**92.3** (89.5-94.3)	**83.5** (79.9-86.4)
HR (95 % CI)	**0.47** (0.34-0.66)	
P value	<0.0001[b]	

Number at Risk:

	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54
T-DXd	818	788	781	776	771	768	758	753	731	683	633	543	440	380	370	275	218	212	129	92	90	46	14	14	0	0	0	0
T-DM1	817	779	767	757	743	733	718	707	686	631	598	526	416	354	336	233	186	177	120	84	79	38	14	13	4	1	1	0

DFS, disease-free survival; HR, hazard ratio; INV, investigator assessment; STEEP, Standardized Definitions for Efficacy End Points in adjuvant breast cancer trials; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
Efficacy stopping boundary, *P* = 0.0144.
[a]DFS defined as the time between randomization and the date of the first occurrence of an IDFS event per STEEP criteria, including second primary non-breast cancer event or contralateral or ipsilateral ductal carcinoma in situ. [b]Two-sided *P* value from stratified log-rank test. Hazard ratio and 95% CI from stratified Cox proportional hazards model with stratification factor of operative status at disease presentation.

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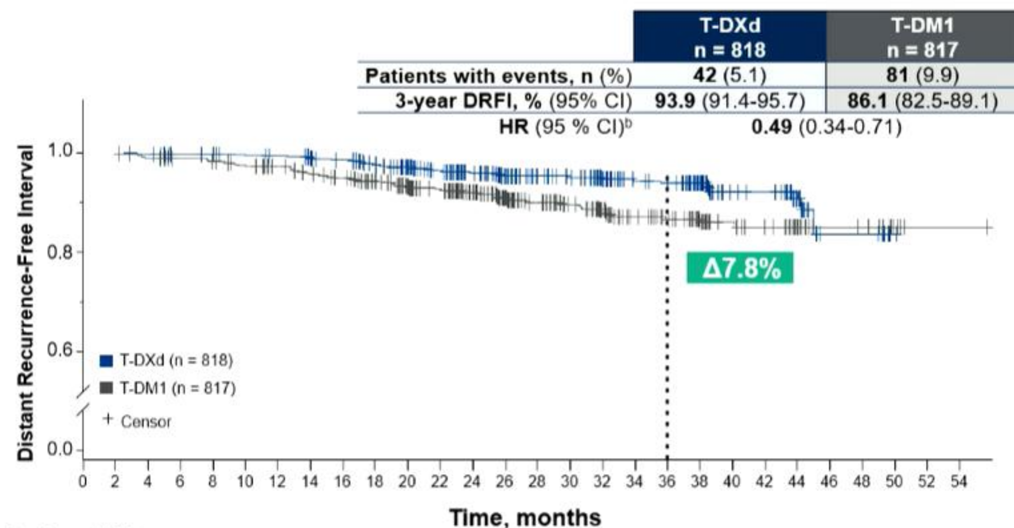
Secondary endpoints: DRFI[a], BMFI, and OS



	T-DXd n = 818	T-DM1 n = 817
Patients with events, n (%)	**42** (5.1)	**81** (9.9)
3-year DRFI, % (95% CI)	**93.9** (91.4-95.7)	**86.1** (82.5-89.1)
HR (95 % CI)[b]	**0.49** (0.34-0.71)	

Number at Risk:

T-DXd	818	786	778	774	770	767	757	753	731	684	635	545	442	382	372	276	219	213	129	92	90	46	14	14	0	0	0	0
T-DM1	817	780	769	761	746	739	724	713	694	639	606	533	424	362	345	240	192	182	121	84	79	38	14	13	4	1	1	0

	T-DXd n = 818	T-DM1 n = 817
BMFI		
Patients with recurrence in CNS, n (%)	**17** (2.1)	**26** (3.2)
3-year BMFI rate, % (95% CI)	**97.6** (96.2-98.5)	**95.8** (93.6-97.2)
HR (95% CI)[b]	**0.64** (0.35-1.17)	
OS (2.9% maturity)		
Patient deaths, n (%)	**18** (2.2)	**29** (3.5)
Survival at 3 years % (95% CI)	**97.4** (95.8-98.4)	**95.7** (93.5-97.2)
HR (95% CI)[b]	**0.61** (0.34-1.10)	

BMFI, brain metastasis–free interval; DRFI, distant recurrence–free interval; HR, hazard ratio; OS, overall survival; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
[a]DRFI is defined as the time between randomization and the date of distant breast cancer recurrence. [b]HR and 95% CI from stratified Cox proportional hazards model with stratification factor of operative status at disease presentation.

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Study treatment exposure

	T-DXd n = 806[a]	T-DM1 n = 801[a]
Median study treatment duration, months	**9.8**	**9.7**
Number of cycles, n (%)		
≥4 cycles	737 (91.4)	747 (93.3)
≥7 cycles	670 (83.1)	704 (87.9)
≥11 cycles	612 (75.9)	649 (81.0)
14 cycles	**583 (72.3)**	**611 (76.3)**

- **More than 72% of patients completed the planned 14 cycles of therapy in both arms**
- **Patients discontinuing study prior to 14 cycles were allowed to receive additional HER2-targeted therapy as per SOC to complete up to 14 cycles of HER2-targeted adjuvant therapy**

HER2, human epidermal growth factor receptor 2; SOC, standard of care; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
[a]All patients who received at least 1 dose of study treatment.

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Overall safety summary

TEAEs, n (%)	T-DXd n = 806[a]	T-DM1 n = 801[a]
Any grade	802 (99.5)	788 (98.4)
Grade ≥3	**408 (50.6)**	**416 (51.9)**
Serious	**140 (17.4)**	**109 (13.6)**
Associated with drug discontinuation	**144 (17.9)**	**103 (12.9)**
Drug-related ILD/pneumonitis[b]	**87 (10.8)**	**20 (2.5)**
Associated with drug interruptions	400 (49.6)	329 (41.1)
Associated with dose reductions	**213 (26.4)**	**213 (26.6)**
Associated with deaths	**3 (0.4)**	**5 (0.6)**

- **In the T-DXd arm, causes of death (n = 3) were 2 ILD/pneumonitis[c] and respiratory tract infection (adjudicated as not ILD)**
- **In the T-DM1 arm, causes of death (n = 5) were leiomyosarcoma of the uterus, aneurysm, non-neutropenic sepsis, ovarian cancer, and traumatic pneumothorax**

ILD, interstitial lung disease; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan; TEAE, treatment-related adverse event.
[a]All patients who received at least 1 dose of study treatment. [b]Investigator-assessed as drug-related ILD and pneumonitis per preferred term. [c]Investigator assessed and adjudication committee confirmed.

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16:30 - 18:15 Presidential Symposium I

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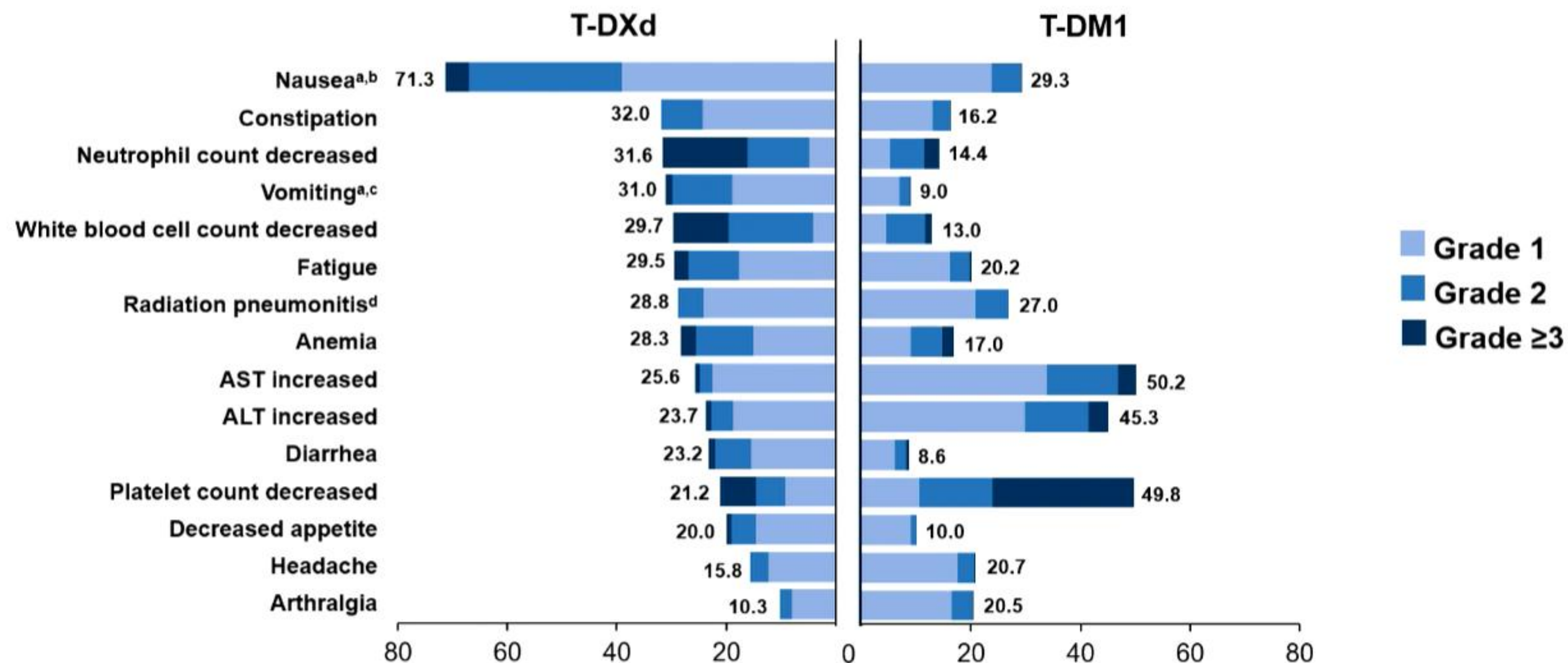
TEAEs in ≥20% of patients (either arm)



ALT, alanine aminotransferase; AST, aspartate aminotransferase; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan; TEAE, treatment-emergent adverse event.
[a]Prophylactic antiemetics were recommended but not mandatory. [b]In the T-DXd and T-DM1 arms: 39.1% and 23.7% grade 1, 27.8% and 5.5% grade 2, and 4.5% and 0.1% grade 3 events, respectively. [c]In the T-DXd and T-DM1 arms: 19.0% and 6.9% grade 1, 10.9% and 2.0% grade 2, and 1.1% and 0.1% grade 3 events. [d]In the T-DXd and T-DM1 arms: 24.2% and 20.8% grade 1, 4.6% and 6.1% grade 2 events.

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Adverse events of special interest: ILD/pneumonitis and LV dysfunction

n (%)	Adjudicated Drug-related ILD					
	Any grade	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
T-DXd (n = 806)[a]	77 (9.6)	16 (2.0)	52 (6.5)	7 (0.9)	0	2 (0.2)
T-DM1 (n = 801)[a]	13 (1.6)	8 (1.0)	5 (0.6)	0	0	0

Adjuvant radiotherapy timing (sequential or concurrent) showed no differences in adjudicated drug-related ILD

Similar distributions of any grade adjudicated drug-related ILD events were observed with sequential and concurrent radiotherapy in both treatment arms (T-DXd: 10.7% and 9.6.% vs T-DM1: 2.6% and 1.0%, respectively)

n (%)	LV dysfunction					
	Any grade	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
T-DXd (n = 806)[a]	23 (2.9)	1 (0.1)	20 (2.5)	2 (0.2)	0	0
T-DM1 (n = 801)[a]	14 (1.7)	0	11 (1.4)	3 (0.4)	0	0

CT, computed tomography; ILD, interstitial lung disease; LV, left ventricular; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
[a]All patients who received at least 1 dose of study treatment

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Conclusions

- DESTINY-Breast05 demonstrated **a statistically significant and clinically meaningful improvement in IDFS and DFS with T-DXd vs T-DM1 in high-risk[a] patients with HER2+ eBC and residual invasive disease after NAT**
- **IDFS benefit was consistent across all prespecified subgroups**
- **Benefit in DRFI with T-DXd was also observed**
- **CNS metastases and deaths were numerically fewer with T-DXd vs T-DM1**
- The overall **safety profile** of T-DXd was **manageable with no new signals**
  - >72% of patients completed treatment and was comparable in both arms
  - **Adjudicated drug-related ILD was reported in 9.6% of patients receiving T-DXd, with the majority being grade 1 or 2 and reversible**, suggesting that the risk is manageable with appropriate monitoring and timely intervention

IDFS Benefit T-DXd versus T-DM1

53% reduction in the risk of invasive disease recurrence or death

3-year IDFS rate
92.4% versus 83.7%
HR 0.47
***P* value <0.0001**

Adjuvant T-DXd demonstrated superior efficacy with manageable safety in patients with high-risk HER2+ eBC and residual invasive disease after NAT, representing a potential new standard of care in this post-neoadjuvant setting

DFS, disease-free survival; eBC, early breast cancer; HER2, human epidermal growth factor receptor 2; HR, hazard ratio; IDFS, invasive disease–free survival; ILD, interstitial lung disease; NAT, neoadjuvant therapy; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan.
[a]Defined as cT4, N0-3, M0 or cT1-3, N2-3, M0 at presentation (before NAT) or cT1-3, N0-1, M0, with axillary node–positive disease (ypN1-3) following NAT.

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