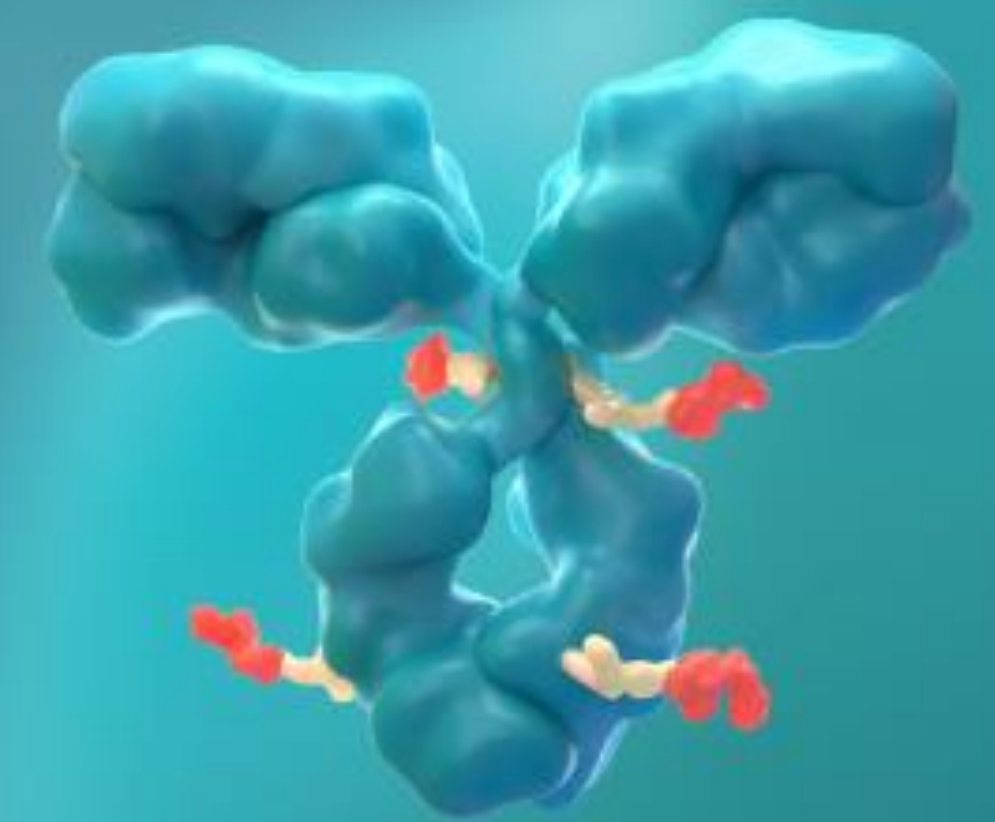




The Changing Landscape of Second-Line Therapies for Recurrent Cervical Cancer

Leslie Randall, MD

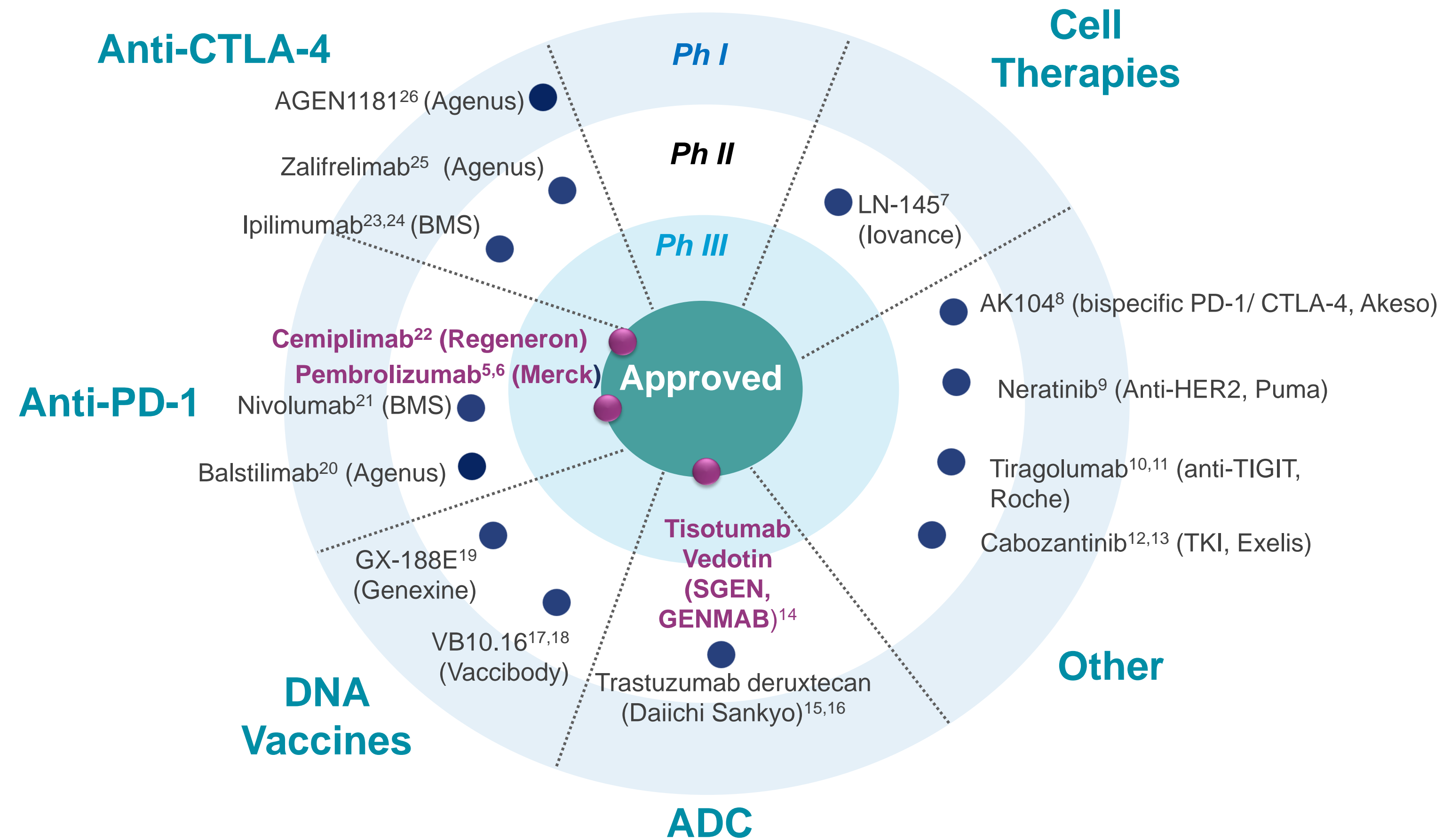
Ana Oaknin, MD, PhD



Current Treatment Regimen for 2L+ R/M CC

Regimen 1-4	ORR (%)	PFS (months)	OS (months)
Paclitaxel	32	NS	7.3
Cisplatin	23	NS	NS
Irinotecan	21-24	NS	NS
Topotecan	12.5-18	2.1-3.5	4.66-7.0
Capecitabine	2-15.4	2.9-4.1	5.9-9.3
Vinorelbine	7.1-13.7	NS	NS
Pemetrexed	13.9-15	2.5-3.1	7.4-8.8
Bevacizumab	10.9	3.4	7.29
Gemcitabine	4.50	2.1	6.5

Spectrum of Therapies in Different Stages of Development in 2L+ R/M CC



ADC, antibody-drug conjugates; CC, cervical cancer; CPS, combined positive score; CTLA, cytotoxic T-lymphocyte-associated protein; dMMR, DNA mismatch repair; FDA, federal drug administration; GOG, gynecological oncology group; ; MSI, microsatellite instability; NS, not stated; ORR, objective response rate; OS, overall survival; PARPi, poly (ADP-ribose) polymerase inhibitors; PD-1, programmed cell death protein 1; PD-L1, programmed death ligand 1; Ph, phase; PFS, progression-free survival; R/M, recurrent/metastatic; TIGIT, T-cell immunoreceptor with Ig and ITIM domain; TKI, tyrosine kinase inhibitor; TMB-H, tumor mutational burden-high; 2L, second-line.

1. Boussios S et al. *Crit Rev Oncol Hematol*. 2016;108:164-174; 2. US FDA Press Release. <https://www.fda.gov/drugs/resources-information-approved-drugs/fda-approves-pembrolizumab-combination-first-line-treatment-cervical-cancer#:~:text=On%20October%2013%2C2021%2C%20the,by%20an%20FDA%2Dapproved%20test>. Published October 13, 2021. Accessed September 25, 2023; 3. Le DT. *J Clin Oncol*. 2020;38(1):11-19; 4. Scatchard K et al. *Cochrane Database Syst Rev* ;2012(10): CD006469. 5. Gennigens C et al. *ESMO Open*. 2022;7(5):100579. 6. *ClinicalTrials.gov*. Accessed October 17, 2023. <https://clinicaltrials.gov/study/NCT03635567>. 7. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT03108495>. 8. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT04380805>. 9. *ClinicalTrials.gov*. Accessed October 09, 2023. <https://clinicaltrials.gov/study/NCT01953926>. 10. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT04300647>. 11. Kim TW et al. *JAMA Oncol*. 2023;e233867. 12. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT04205799>. 13. CABOMETYX® (cabozantinib) Prescribing Information. Alameda, CA: Exelixis, Inc., September 2023. 14. US FDA. FDA grants accelerated approval to tisotumab vedotin-tftv for recurrent or metastatic cervical cancer. Updated September 21, 2021. Accessed October 9, 2023. <https://www.fda.gov/drugs/resources-information-approved-drugs/fda-grants-accelerated-approval-tisotumab-vedotin-tftv-recurrent-or-metastatic-cervical-cancer>. 15. *ClinicalTrials.gov*. Accessed October 09, 2023. <https://clinicaltrials.gov/study/NCT04482309>. 16. Indini A et al. *Int J Mol Sci*. 2021;22(9):4774. 17. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT04405349>. 18. Nykode Therapeutics Press Release. <https://nykode.com/wp-content/uploads/2023/04/230418-Nykode-VB10.16-Data-Update-PR-FINAL.pdf>. Published April 18, 2023. Accessed October 17, 2023. 19. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT03444376>. 20. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT04943627>. 21. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT01693783>. 22. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT03257267>. 23. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT01693783>. 24. YERVOY® (ipilimumab) Prescribing Information. Princeton, NJ: Bristol-Myers Squibb Company, February 2023. 25. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT03495882>. 26. *ClinicalTrials.gov*. Accessed September 25, 2023. <https://clinicaltrials.gov/study/NCT03860272>.

EMPOWER-Cervical 1/GOG-3016/ENGOT-cx9: Study Design

An open-label, randomized, phase 3 clinical trial of REGN2810 versus investigator's choice of chemotherapy in recurrent or metastatic cervical carcinoma^{1,2}

Key Eligibility Criteria

- Recurrent and metastatic cervical cancer resistant to platinum-based chemotherapy ≥2nd line
- ECOG PS ≤1

N=608: 477 SCC, 131 AC

Randomised 1:1

Stratified by:

- Histology (SCC/AC)
- Geographic region
- Prior bevacizumab (Y/N)
- ECOG PS (0 vs 1)

Previous anti-PD-1 or anti-PD-L1 therapy was not permitted

**Cemiplimab 350 mg
Q3W IV**

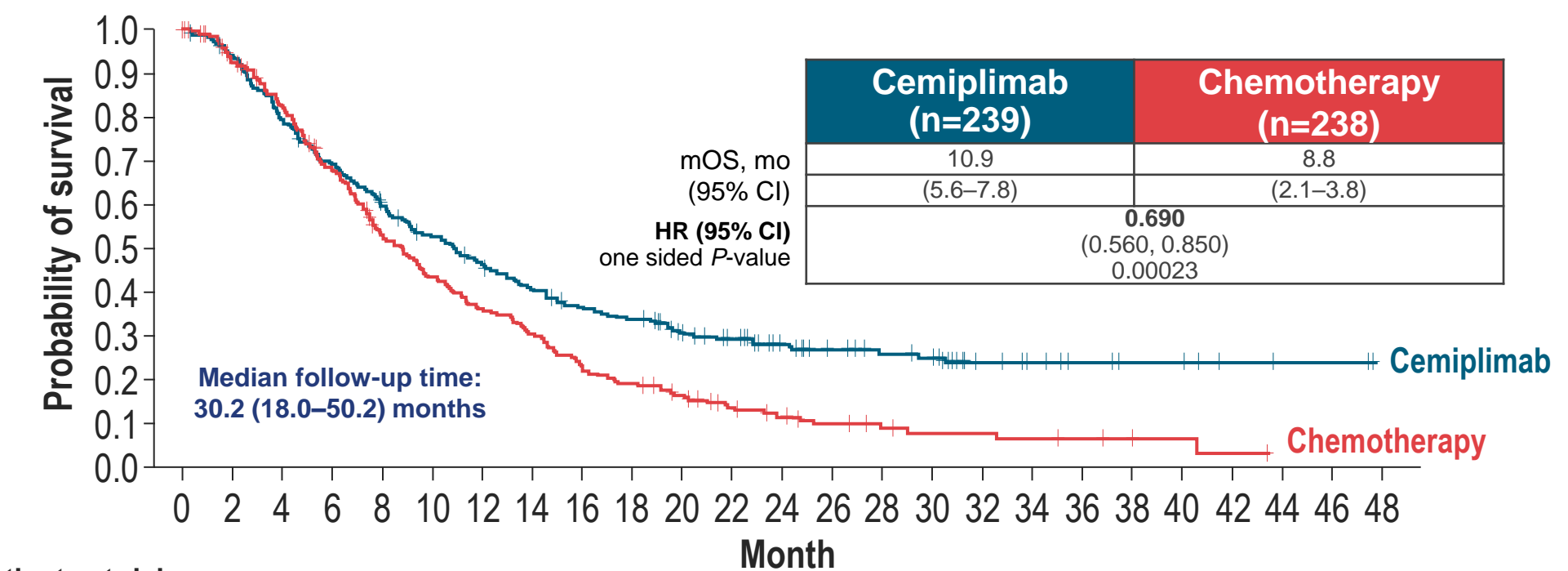
Investigator's choice chemotherapy

Options:

- Pemetrexed 500 mg/m² Q3W IV
- Gemcitabine 1,000 mg/m² IV on Days 1 and 8 and every 21 days
- Topotecan 1 mg/m² daily IV for 5 days, every 21 days
- Irinotecan 100 mg/m² IV weekly x 4, followed by 10–14 days rest
- Vinorelbine 30 mg/m² IV on Days 1 and 8 and every 21 days

Treat up to 96 weeks with option for re-treatment
Tumour imaging conducted on Day 42 (±7 days) of cycles 1–4, 6, 8, 10, 12, 14, and 16^a

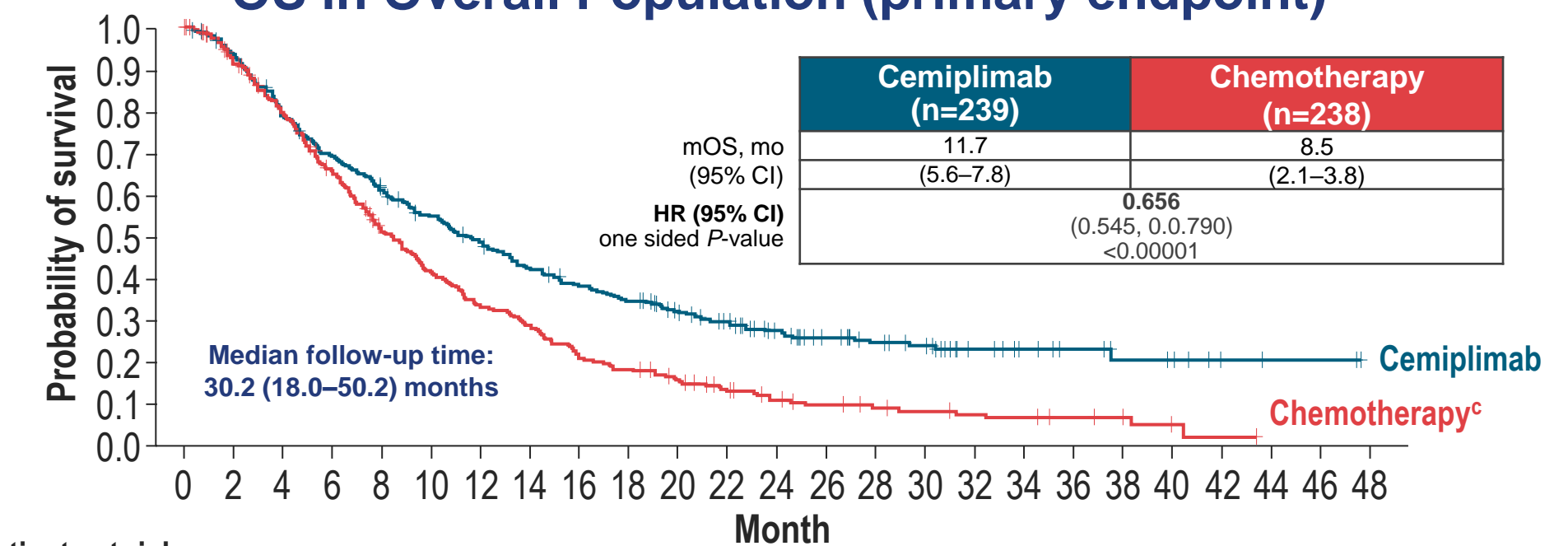
OS in Squamous Cell Histology (primary endpoint)^{3,b}



Patients at risk

Month	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
Cemiplimab	239	223	188	163	140	120	105	91	80	74	60	53	43	35	30	28	17	14	8	6	6	3	2	2	0
Chemotherapy	238	209	182	149	113	92	77	65	50	41	32	22	16	12	9	7	7	6	5	3	2	1	0	0	0

OS in Overall Population (primary endpoint)^{3,b}



Patients at risk

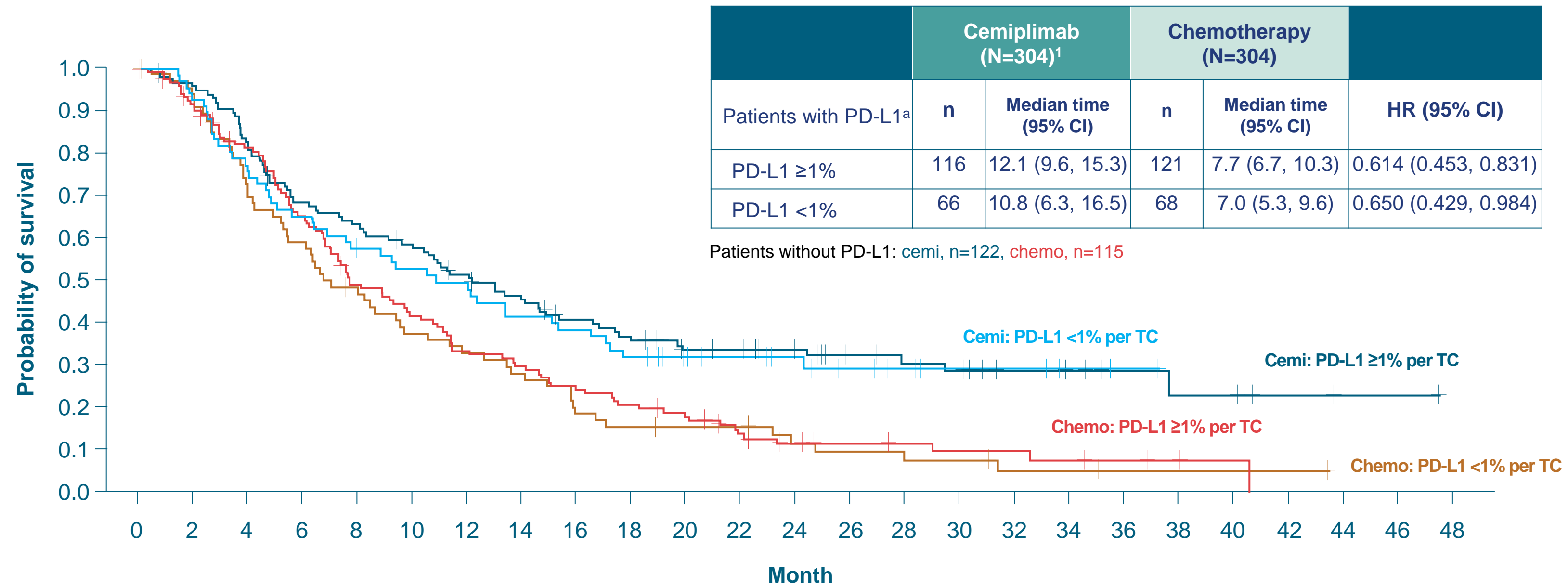
Month	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
Cemiplimab	304	281	236	206	181	158	140	121	108	97	81	69	55	45	37	33	22	18	11	8	7	3	2	2	0
Chemotherapy	304	264	224	183	140	113	92	79	60	50	40	30	21	17	14	12	10	9	7	5	2	1	0	0	0

^aTo account for differences in drug administration schedules, one cycle is defined as 6 weeks. ^bKaplan–Meier curves of overall survival in the full analysis set. Data cutoff date: January 4, 2022. ^c8/304 chemotherapy patients crossed over to IO, 7 due to PD, 1 due to patient choice.

AC, adenocarcinoma; CI, confidence interval; ECOG, Eastern Cooperative Oncology Group; HR, hazard ratio; IC, investigator's choice; IDMC, independent data monitoring committee; IO, immunotherapy; IV, intravenous; mo, months; mOS, median overall survival; ORR, objective response rate; OS, overall survival; PD, progressive disease; PD-1, programmed cell death protein 1; PD-L1, programmed death ligand 1; PS, performance status; SCC, squamous cell carcinoma/adenocarcinoma; Q3W, every 3 weeks; Y/N, yes/no.

1. Tewari KS et al. *N Engl J Med* 2022;386:544-55. 2. Tewari K et al. *N Engl J Med* 2022;386:544-55. [Supplementary Appendix]. 3. Oaknin A et al. Presented at ESMO Congress 2022.

EMPOWER-Cervical 1/GOG-3016/ENGOT-cx9: Overall Survival Regardless of PD-L1 Status



Patients 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
Cemi: PD-L1 ≥1% per TC	116	110	93	77	71	63	55	48	41	36	30	29	25	20	17	16	10	9	5	4	4	2	1	1	0
Cemi: PD-L1 <1% per TC	66	61	49	43	36	33	30	26	24	20	16	14	12	9	7	5	5	3	1	0	0	0	0	0	0
Chemo: PD-L1 ≥1% per TC	121	107	92	73	54	46	37	33	27	23	19	13	9	7	6	5	5	4	3	2	1	0	0	0	0
Chemo: PD-L1 <1% per TC	68	60	46	39	30	24	21	18	12	10	9	9	6	5	4	4	2	2	1	1	1	1	0	0	0

EMPOWER-Cervical 1/GOG-3016/ENGOT-cx9: PFS and Safety Summary

mPFS in Overall Population and Squamous Cell carcinoma

	Cemiplimab	IC chemotherapy ²
mPFS Overall population	2.8 mon (95% CI, 2.6 – 3.9)	2.9 mon (95% CI, 2.7 – 3.4)
HR: 0.75; 95% CI, 0.63-0.89 P<0.001		
mPFS Squamous-cell carcinoma	2.8 mon (95% CI, 2.6 – 4.0)	2.9 mon (95% CI, 2.7 – 3.9)

TEAEs

n (%)	Cemiplimab (n=300) ¹	Chemotherapy (n=290)
Median duration of exposure (range), weeks ¹	15.2 (1.4–107.7)	10.1 (1.1–91.1)
Any treatment-emergent adverse events (TEAEs)		
Overall	269 (89.7)	266 (91.7)
Led to discontinuation	27 (9.0)	15 (5.2)
Led to death	5 (1.7)	2 (0.7)
Any treatment-related AEs		
Overall	172 (57.3)	237 (81.7)
Led to discontinuation	17 (5.7)	10 (3.4)
Led to death	0	2 (0.7)
Any treatment-emergent AEs of special interest (AESI)		
Overall	36 (12.0)	N/A
Led to discontinuation	12 (4.0)	N/A
Led to death	0	N/A

TEAEs in ≥10% Patients

TEAEs in ≥10% of patients, n (%) ¹	Cemiplimab (n=300)		Chemotherapy (n=290)	
	Any grade	Grade 3–5	Any grade	Grade 3–5
Anemia	76 (25.3)	36 (12.0)	128 (44.1)	79 (27.2)
Nausea	57 (19.0)	2 (0.7)	99 (34.1)	6 (2.1)
Vomiting	50 (16.7)	3 (1.0)	68 (23.4)	7 (2.4)
Pyrexia	39 (13.0)	1 (0.3)	62 (21.4)	0
Constipation	45 (15.0)	0	58 (20.0)	1 (0.3)
Decreased appetite	46 (15.3)	1 (0.3)	46 (15.9)	2 (0.7)
Fatigue	51 (17.0)	4 (1.3)	45 (15.5)	4 (1.4)
Neutropenia	6 (2.0)	3 (1.0)	45 (15.5)	27 (9.3)
Asthenia	35 (11.7)	7 (2.3)	44 (15.2)	3 (1.0)
Diarrhea	34 (11.3)	3 (1.0)	39 (13.4)	4 (1.4)
Urinary tract infection	35 (11.7)	15 (5.0)	25 (8.6)	8 (2.8)
Abdominal pain	30 (10.0)	3 (1.0)	33 (11.4)	3 (1.0)
Arthralgia	33 (11.0)	1 (0.3)	8 (2.8)	0
Back pain	32 (10.7)	4 (1.3)	28 (9.7)	2 (0.7)

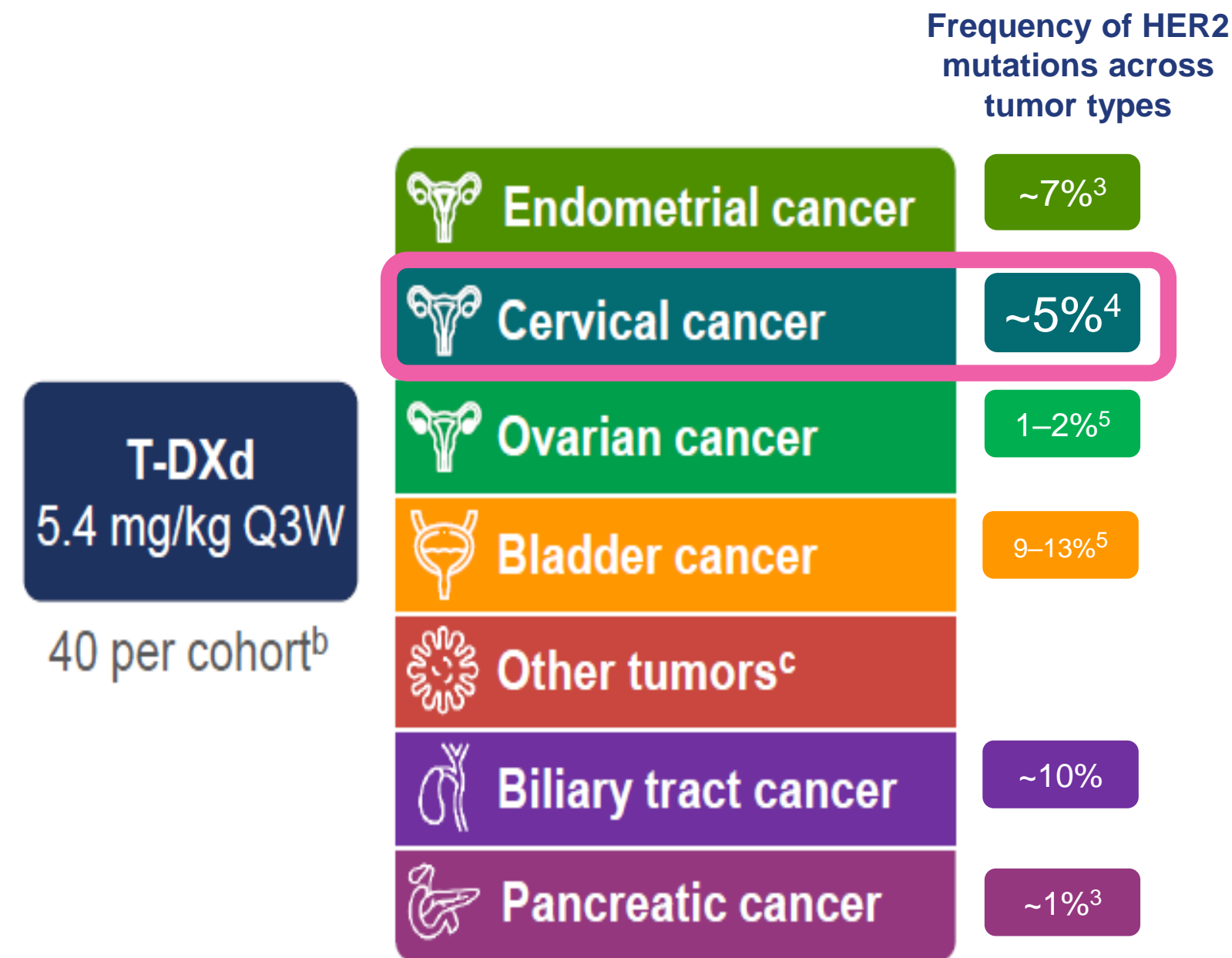
Cemiplimab was approved by EMA and JAPAN for the 2L treatment of recurrent or metastatic cervical cancer that has progressed on or after platinum-based therapy, regardless of PD-L1 expression status or tumor histology²

DESTINY-PanTumor02: Study Design

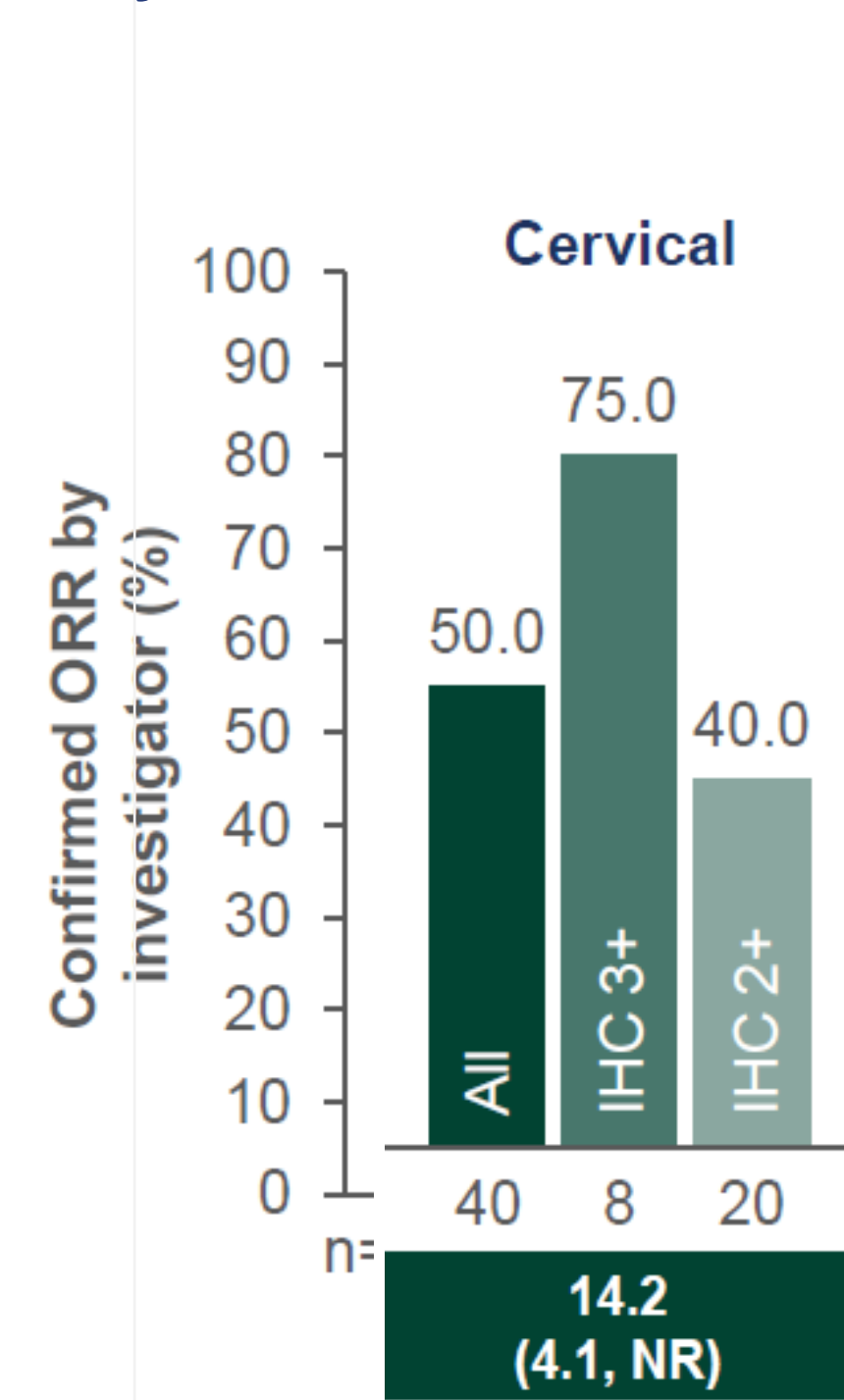
A phase 2, multicenter, open-label study to evaluate the efficacy and safety of trastuzumab deruxtecan for the treatment of selected HER2 expressing tumors^{1,2}

Key Eligibility Criteria

- Advanced solid tumors not eligible for curative therapy
- 2L+ patient population
- HER2 expression (IHC 3+ or 2+)
- Local test or central test by HercepTest if local test not feasible (ASCO/CAP gastric cancer scoring)
- Prior HER-targeting therapy allowed
- ECOG/WHO PS ≤1



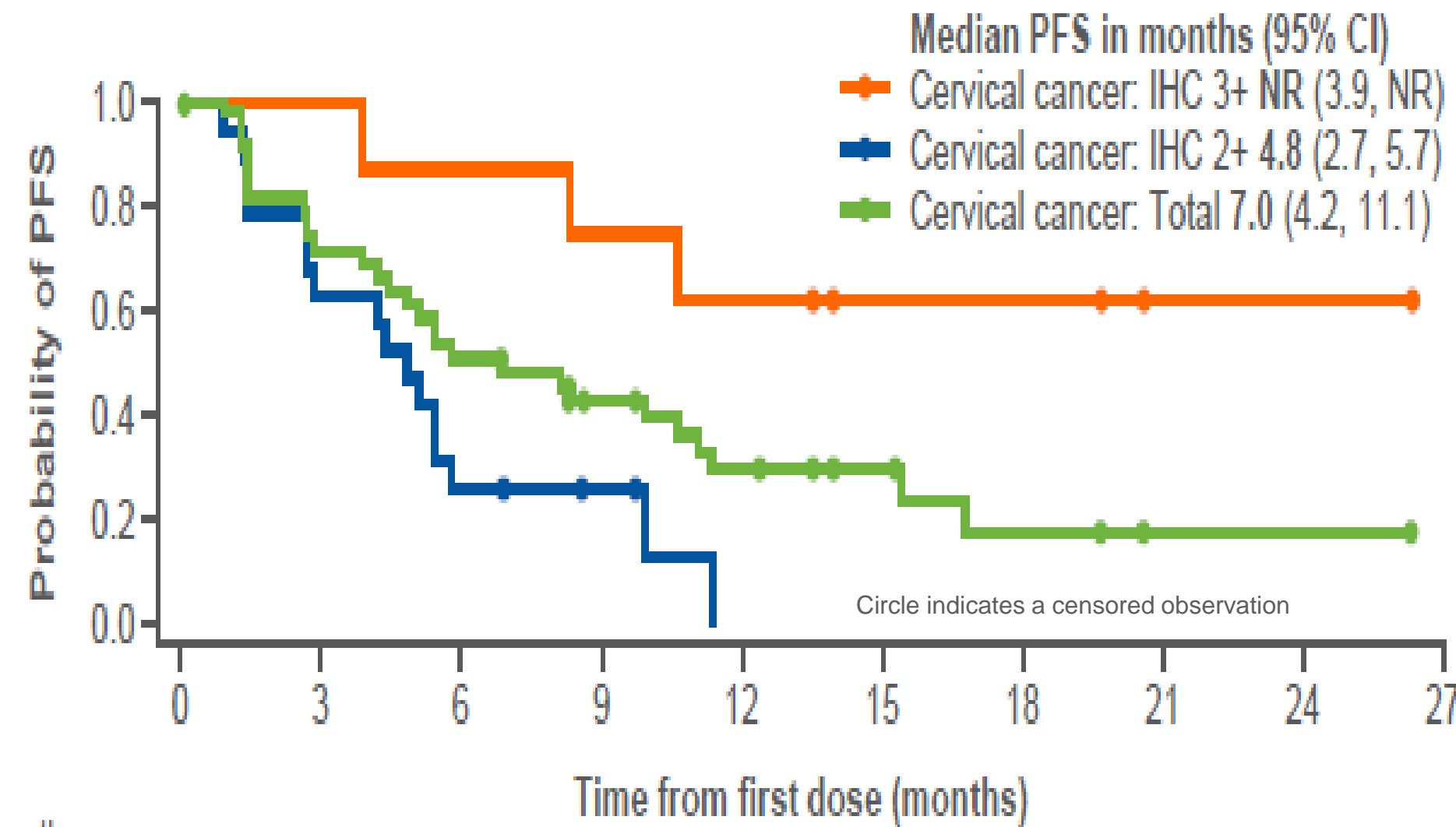
ORR by HER2 status in Cervical Cancer



All patients were HER2-positive per local determination

DESTINY-PanTumor02:

PFS by HER2 status in Cervical Cancer



Number at risk, month	0	3	6	9	12	15	18	21	24	27
Cervical cancer: IHC 3+	8	8	7	6	5	3	3	1	1	0
Cervical cancer: IHC 2+	20	12	5	3	0					
Cervical cancer: Total	40	28	20	14	9	6	3	1	1	0

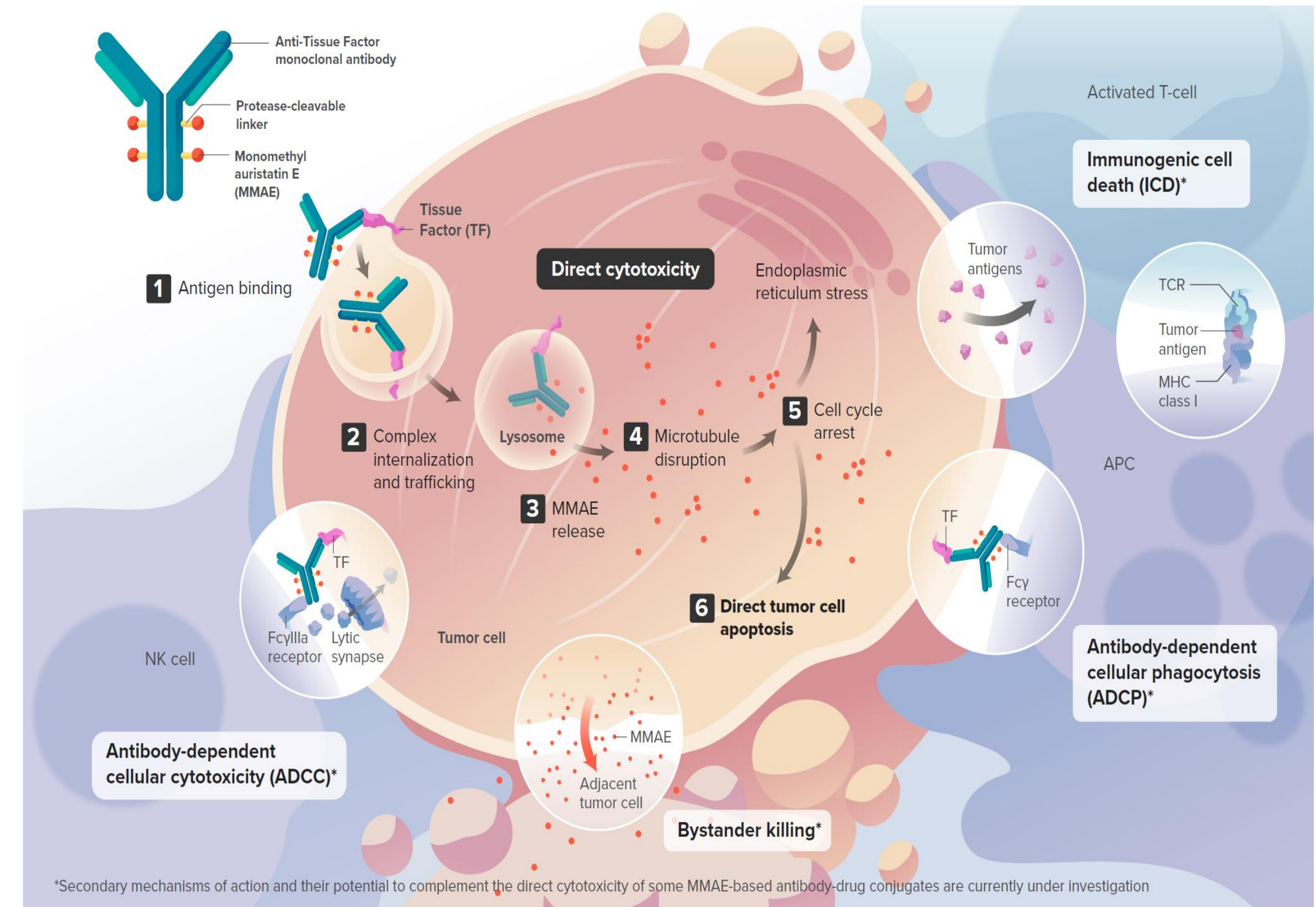
TEAEs	All patients (N=267); n (%)
Any drug-related TEAEs	226 (84.6)
Drug-related TEAEs Grade ≥3	109 (40.8)
Serious drug-related TEAEs	36 (13.5)
Drug-related TEAEs associated with dose discontinuations	23 (8.6)
Drug-related TEAEs associated with dose interruptions	54 (20.2)
Drug-related TEAEs associated with dose reductions	54 (20.2)
Drug-related TEAEs associated with deaths	4 (1.5) ^a

Most common TEAEs	Any Grade	Grade ≥3
Nausea	55.1	3.7
Fatigue	40.1	7.1
Neutropenia	32.6	19.1
Anemia	27.7	10.9
Diarrhea	25.8	3.7
Vomiting	24.7	1.5
Decreased appetite	17.6	1.5
Thrombocytopenia	17.2	5.6
Alopecia	16.9	
Increased transaminases	10.1	0.4
Leukopenia	10.1	2.6

ILD/pneumonitis adjudicated as T-DXd related, n (%)	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Any grade
All patients (N=267)	7 (2.6)	17 (6.4)	1 (0.4)	0	3 (1.1)	28 (10.5)

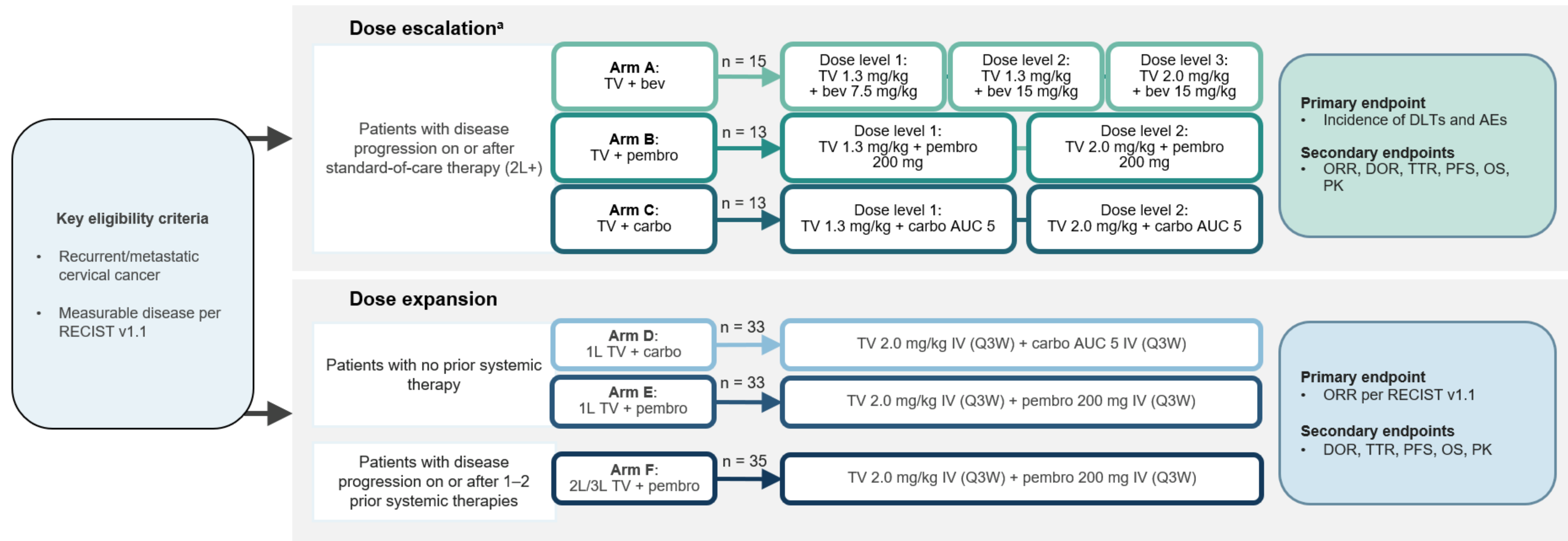
Tisotumab Vedotin: Mechanism of Action

- Tisotumab vedotin is an **ADC directed to tissue factor (TF)** and covalently linked to the microtubule-disrupting agent **MMAE** via a **protease-cleavable linker**¹
- **TF is highly prevalent in cervical cancer and other solid tumors and is associated with cancer pathophysiology and poor prognosis**²⁻⁴
 - TF is co-opted by tumor cells to promote tumor growth, angiogenesis, and metastasis⁵
 - In normal physiology, TF's primary role is to initiate the coagulation cascade after vascular injury⁵
- Tisotumab vedotin has **multiple anti-tumor effects**⁶



InnovaTV 205: Study Design

A phase 1b/2 open-label trial of tisotumab vedotin monotherapy and in combination with other agents in subjects with recurrent or stage IVB cervical cancer

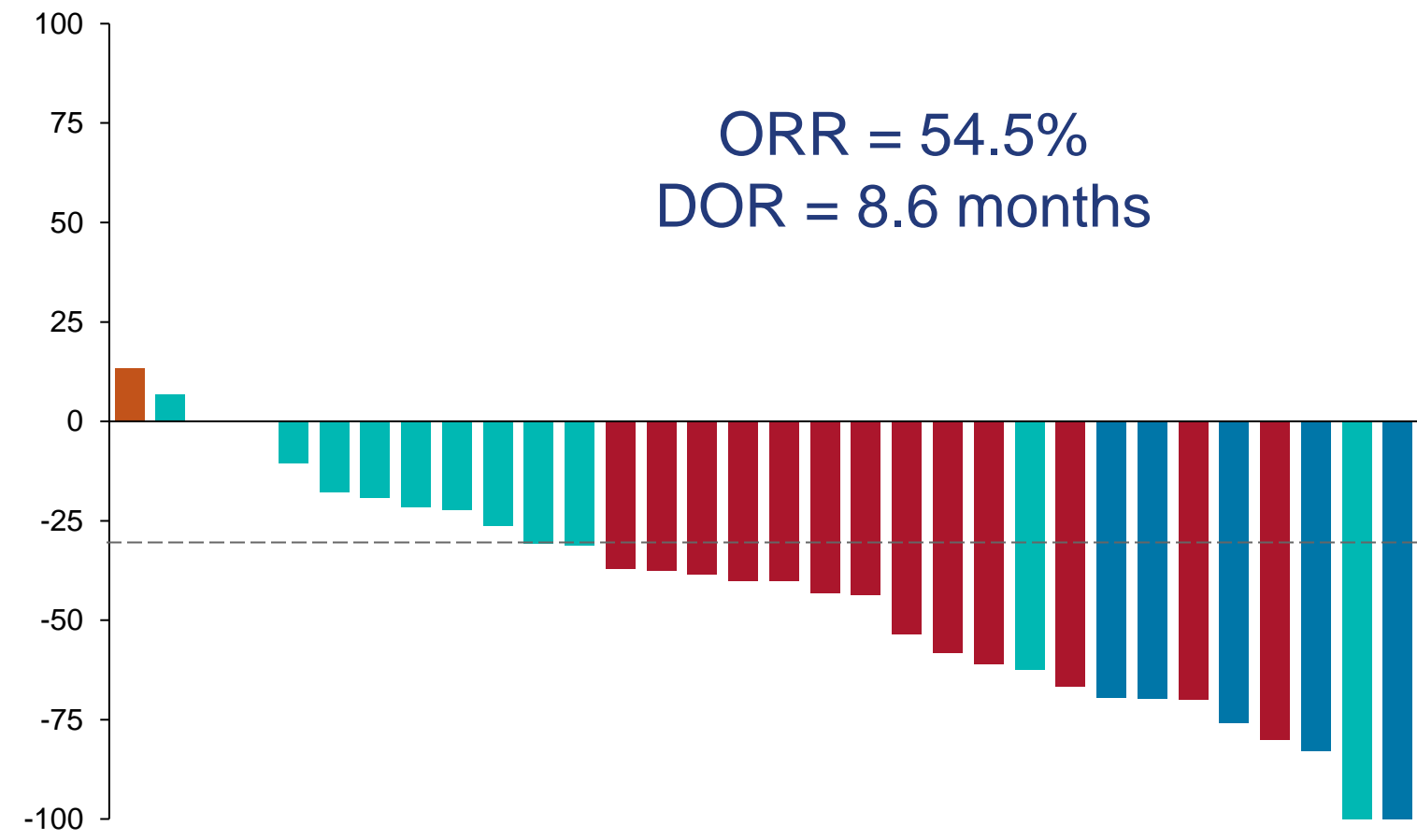


^aTV + bev arm followed a 3 + 3 dose escalation design. TV + pembro and TV + carbo Arms followed a 6 + 6 dose escalation design. Drugs were administered IV on day 1 of each 21-day cycle. Patients were treated for ≥1 cycle to evaluate DLTs and 2 cycles to evaluate RP2D.

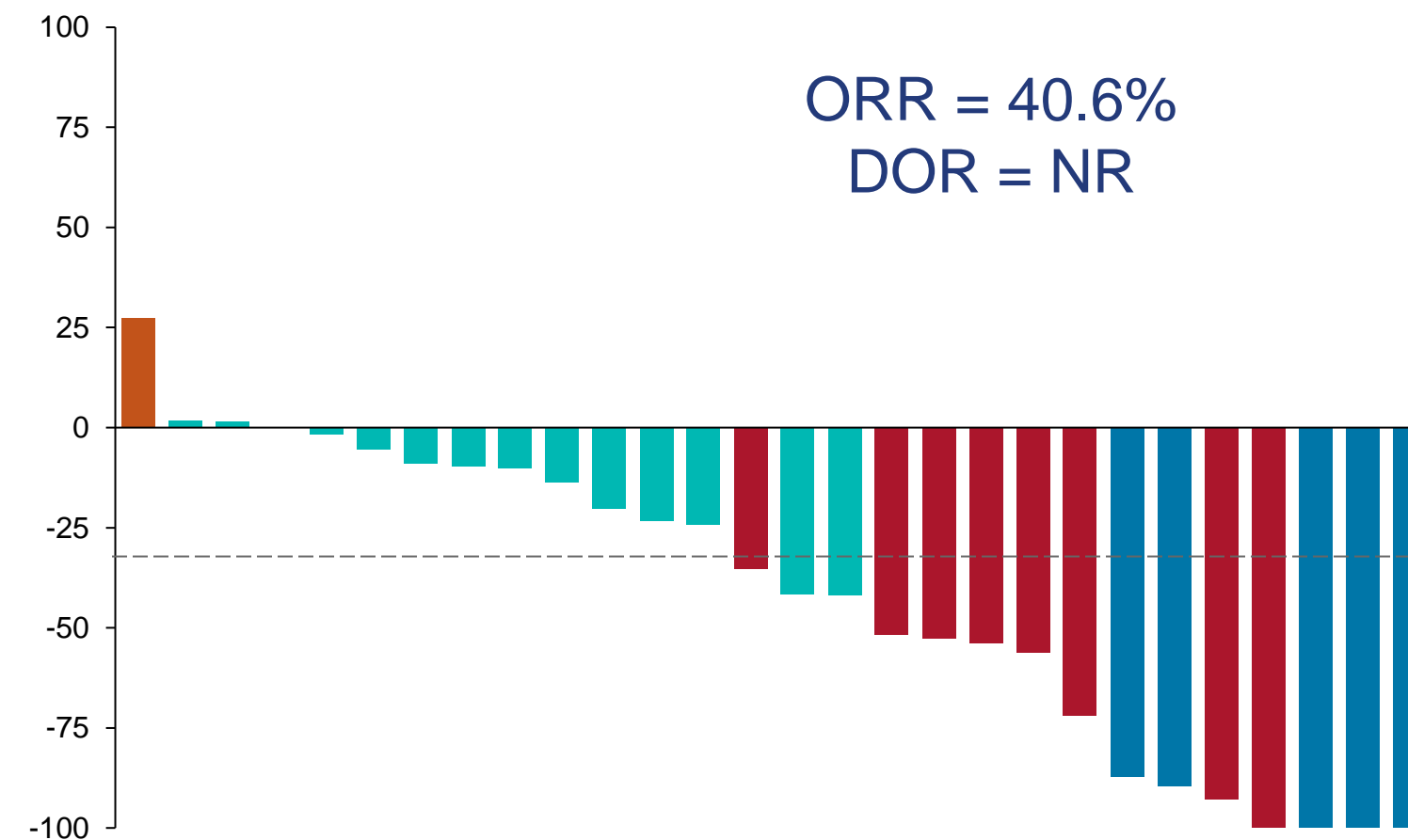
AE, adverse events; AUC, area under the concentration-time curve; bev, bevacizumab; carbo, carboplatin; DLT, dose-limiting toxicity; IV, intravenously; PK, pharmacokinetics; ORR, objective response rate; OS, overall survival; pembro, pembrolizumab; Q3W, every 3 weeks; Progression-free survival; RECIST, Response Evaluation Criteria in Solid Tumors; RP2D, recommended phase 2 dose; TTR, time to response; TV, tisotumab vedotin; 1L, first-line; 2L, second-line; 3L, third-line. Vergote I, et al. *J Clin Oncol.* 2023;JCO2300720.

InnovaTV 205: Best Reduction in Target Lesion Size

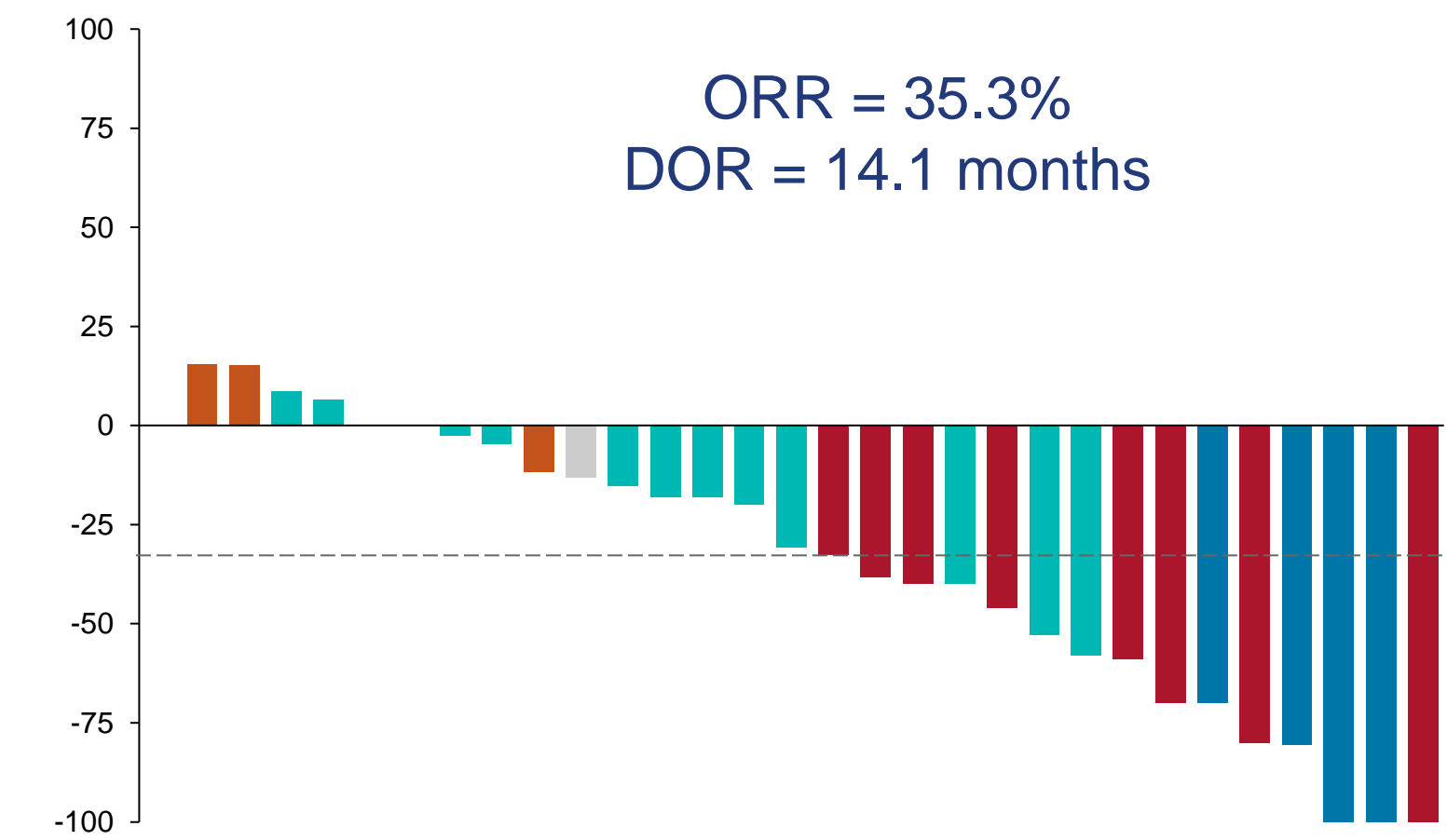
1L TV + Carbo
N=33^a



1L TV + Pembro
N=32^b

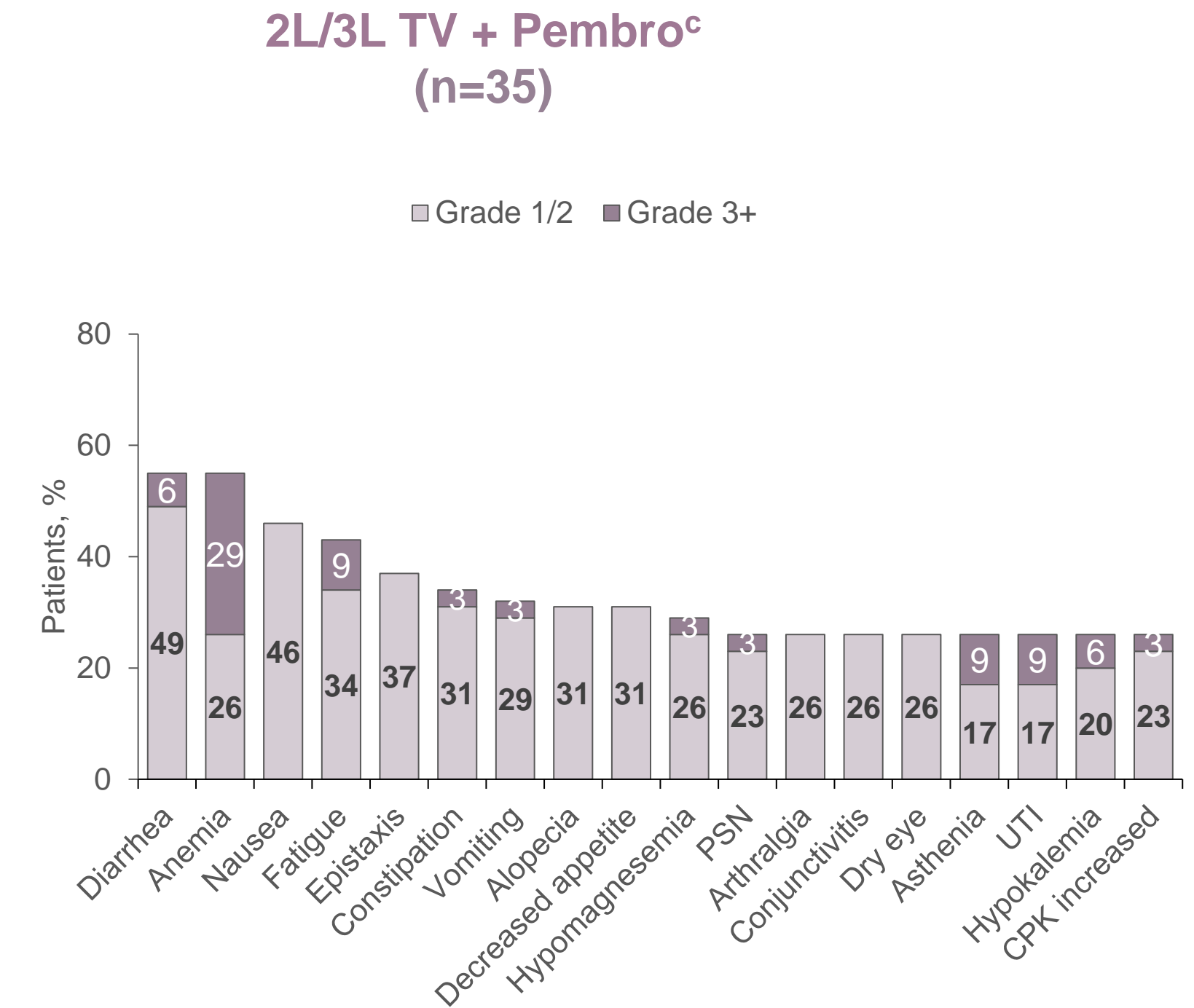
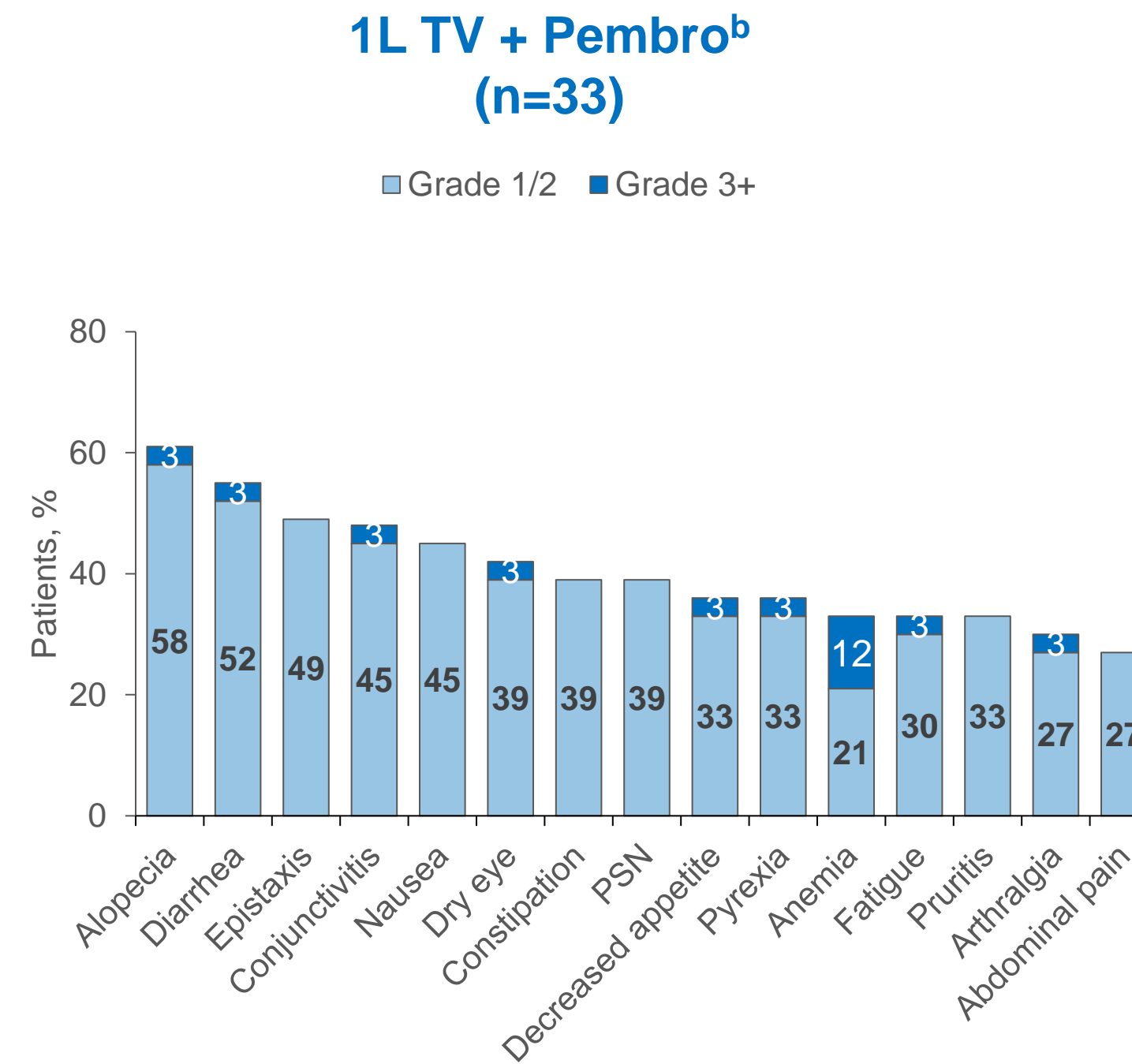
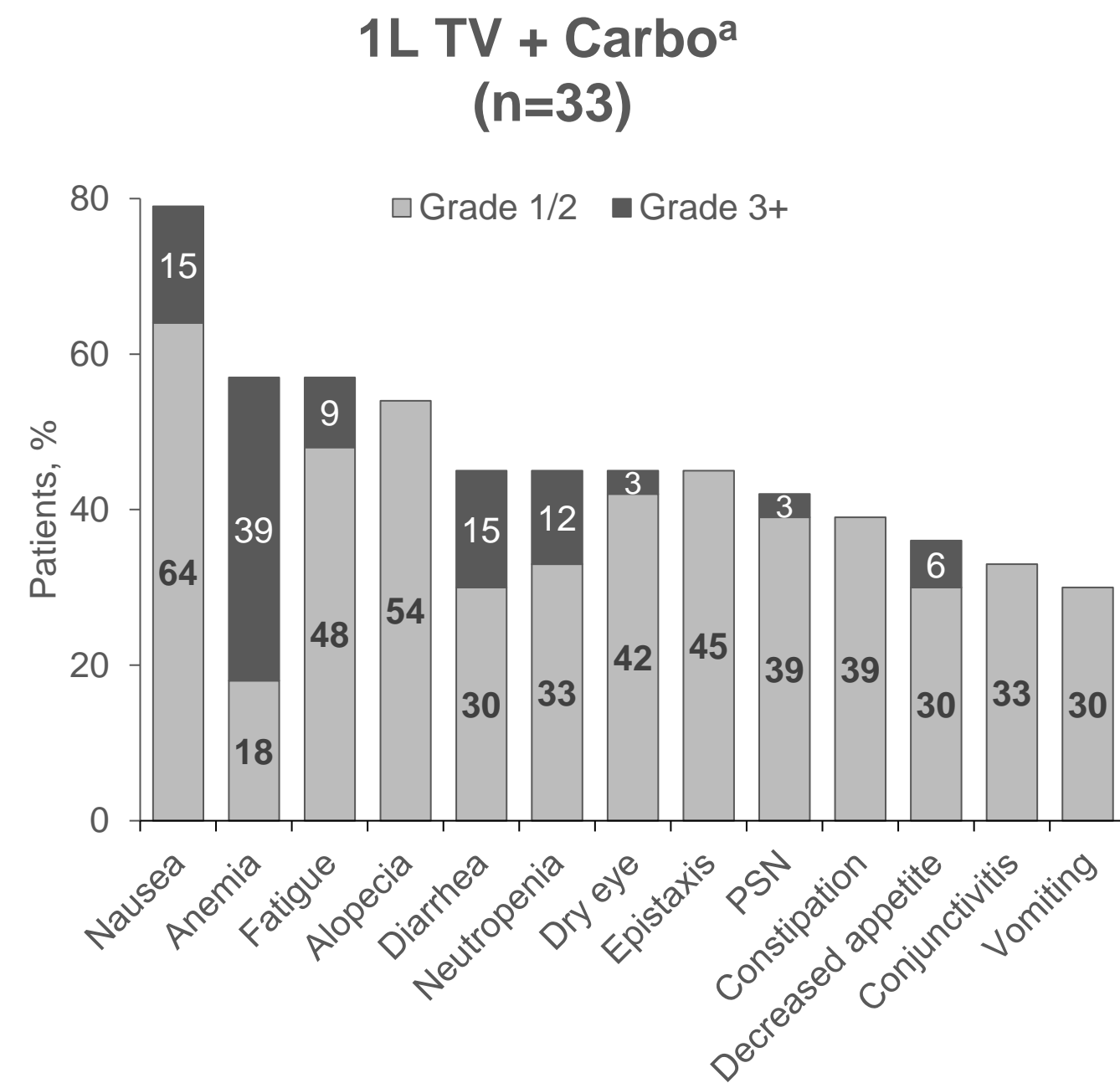


2L/3L TV + Pembro
N=34^c



■ Complete response
 ■ Partial response
 ■ Stable disease
 ■ Progressive disease
 ■ Not evaluable

InnovaTV 205: Safety Summary of Common AEs Reported in >25% Patients



- Most TEAEs were grade 1 or 2
- Observed safety profile was generally consistent with those known for each individual agent
- There was a single grade 5 event with 1L TV + pembro considered by the investigator to be related to trial treatment (due to disseminated intravascular coagulation)
- Immune-mediated AEs observed with TV + pembro were consistent with known safety profile of checkpoint inhibitors

InnovaTV 301 (ENGOT cx-12/GOG 3057): Study Design

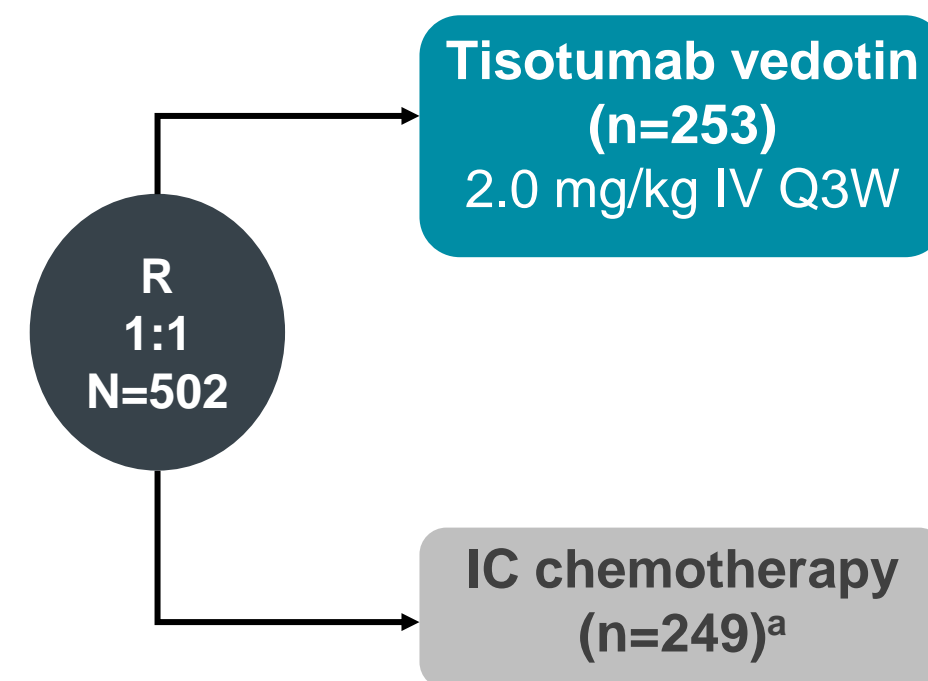
A randomized, open-label, phase 3 confirmatory trial of tisetumab vedotin vs investigator's choice chemotherapy in 2L/3L recurrent or metastatic cervical cancer¹

Key Eligibility Criteria²

- Recurrent or metastatic cervical cancer
- Disease progression on or after chemotherapy doublet ± bevacizumab and an anti-PD-(L)1 agent, if eligible and available
- ≤2 prior lines
- Measurable disease per RECIST v1.1
- ECOG PS 0-1

Stratification Factors

- ECOG PS (0 vs 1)
- Prior bevacizumab (yes vs no)
- Prior anti-PD-(L)1 therapy (yes vs no)
- Geographic region (US, Europe, Other)



IC Chemotherapy

- Topotecan
- Vinorelbine
- Gemcitabine
- Irinotecan
- Pemetrexed

Previous anti-PD-1 or anti-PD-L1 therapy was permitted

Primary endpoint: OS^b

Secondary endpoints: PFS^c, ORR^c, Safety

Baseline Patient and Disease Characteristics

	Tisetumab Vedotin (N=253)	IC Chemotherapy (N=249)
Number of prior r/m systemic regimens, n(%)		
1	159 (62.8)	149 (59.8)
2	93 (36.8)	100 (40.2)
Unknown	1 (0.4)	0
Prior bevacizumab, n (%)	164 (64.8)	157 (63.1)
Prior anti-PD-(L)1 therapy, n (%)	71 (28.1)	67 (26.9)
Prior radiation therapy for cervical cancer, n (%)	205 (81.0)	203 (81.5)

Baseline patient demographics were balanced across both arms

Data presented herein are a planned interim analysis

End of treatment visit occurred 30 days after the last dose of treatment. Survival follow-up occurred every 60 days after the last dose of treatment.

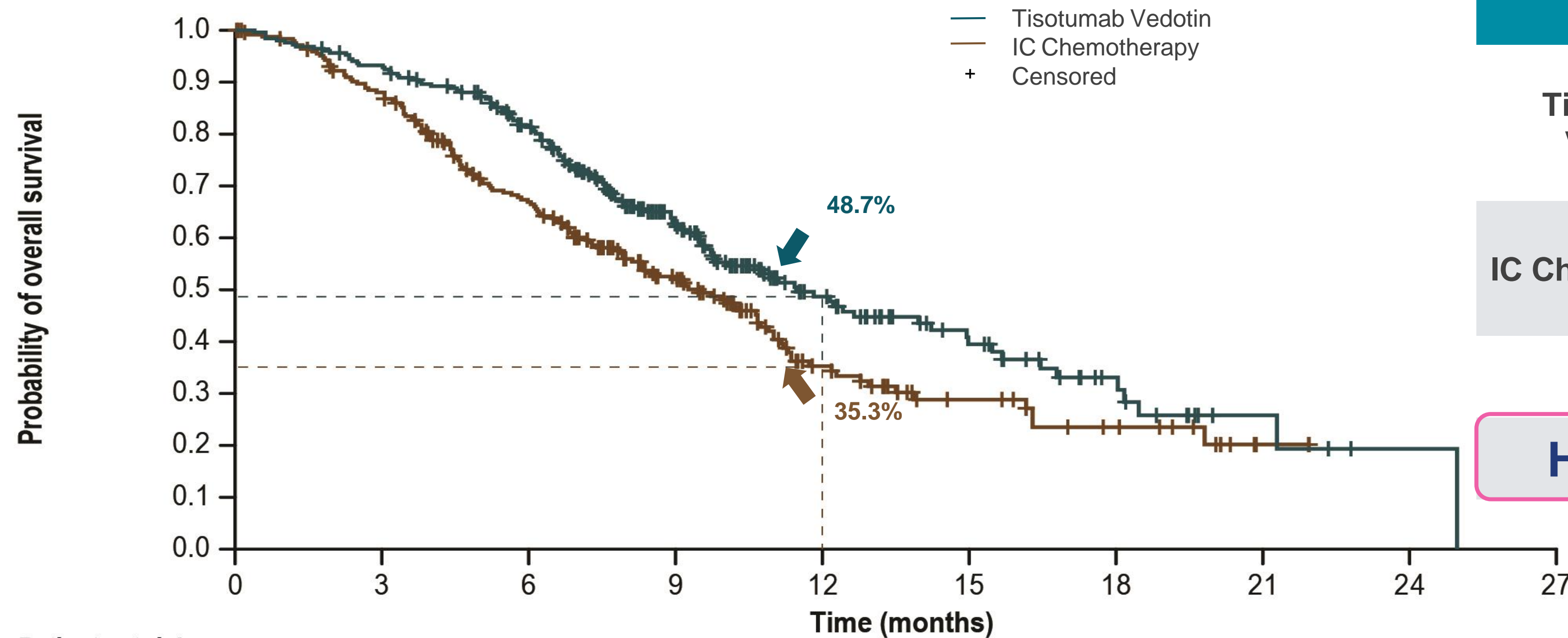
^aChemotherapy regimens were given at the following doses: topotecan 1 or 1.25 mg/m² IV on Days 1 to 5 of a 21-day cycle; vinorelbine 30 mg/m² IV on Days 1 and 8 of a 21-day cycle; gemcitabine 1000 mg/m² IV on Days 1 and 8 of a 21-day cycle; irinotecan 100 or 125 mg/m² IV weekly for 28 days every 42 days; pemetrexed 500 mg/m² on Day 1 of a 21-day cycle; ^bOS was defined as the time from the date of randomization to the date of death due to any cause; ^cAssessed by investigator.

ECOG PS, eastern cooperative oncology group performance status; IC, investigator's choice; IV, intravenous; ORR, objective response rate; OS, overall survival; PD-L1, programmed death-ligand 1; PFS, progression-free survival; Q3W, every 3 weeks; RECIST, response evaluation criteria in solid tumors; 2L, second-line; 3L, third-line.

Vergote I. Presented at ESMO 2023: Presidential Symposium (Oral Presentation) LBA9.

InnovaTV 301 (ENGOT cx-12/GOG 3057): Overall Survival

Overall Survival (Primary endpoint)



Patients at risk		0	3	6	9	12	15	18	21	24	27
Tisotumab vedotin	253	234	191	109	52	29	14	4	1	0	0
IC Chemotherapy	249	212	150	87	37	19	11	1	0	0	0

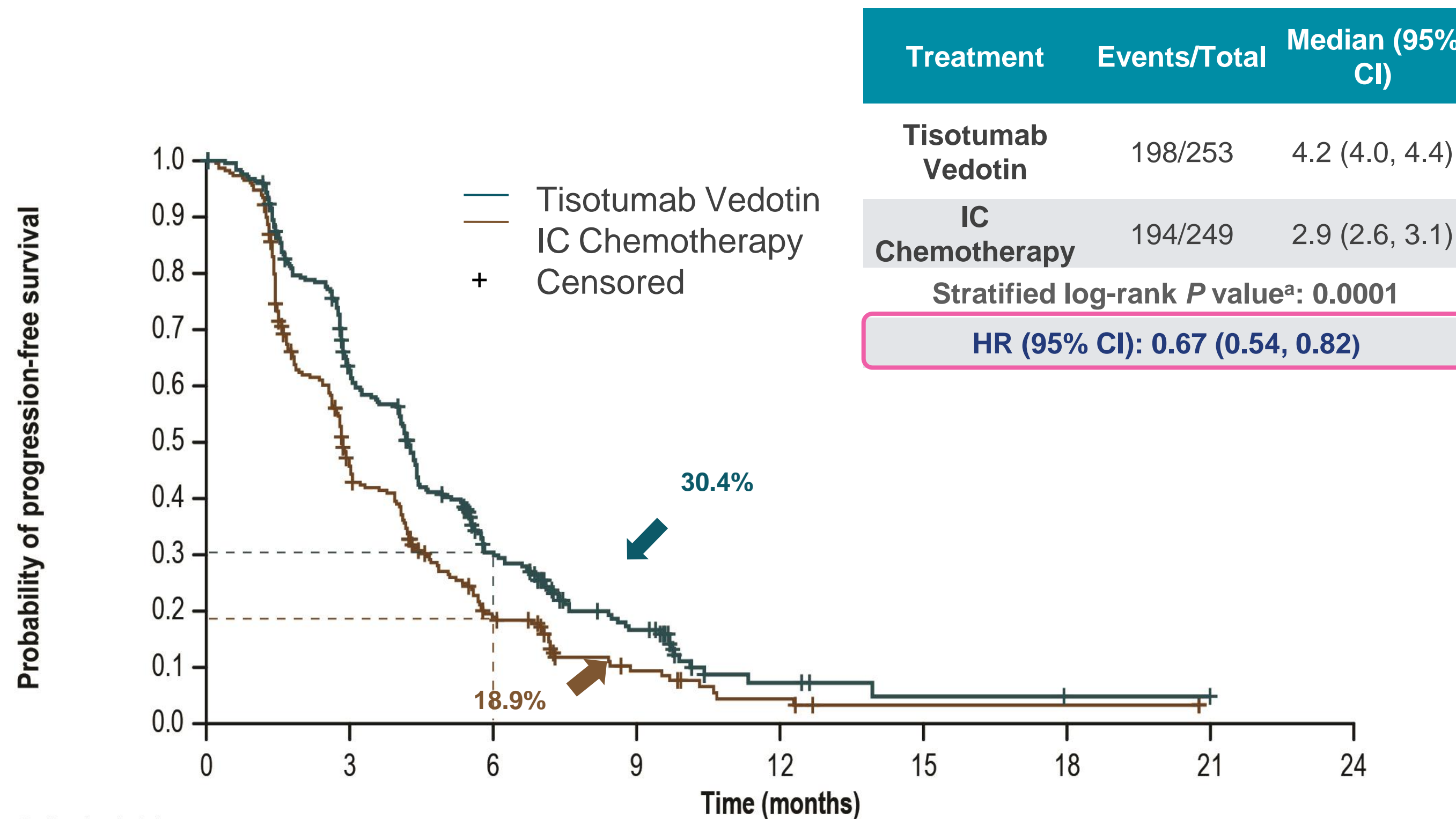
Treatment	Events/Total	Median (95% CI)
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Tisotumab Vedotin	123/253	11.5 (9.8, 14.9)
IC Chemotherapy	140/249	9.5 (7.9, 10.7)

Stratified log-rank *P* value^a: 0.0038

HR (95% CI): 0.70 (0.54, 0.89)

InnovaTV 301 (ENGOT cx-12/GOG 3057): PFS Per Investigator



Treatment	Events/Total	Median (95% CI)
Tisotumab Vedotin	198/253	4.2 (4.0, 4.4)
IC Chemotherapy	194/249	2.9 (2.6, 3.1)

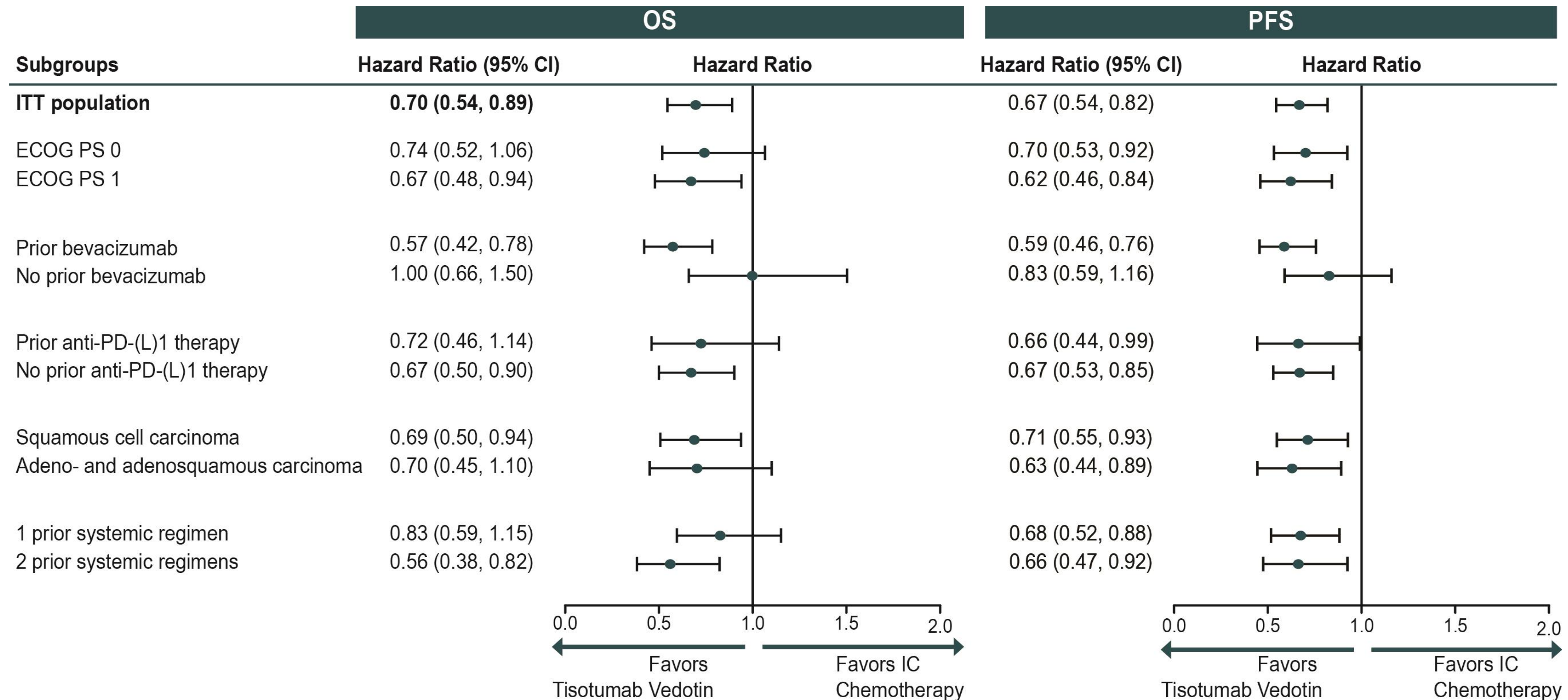
Stratified log-rank *P* value^a: 0.0001

HR (95% CI): 0.67 (0.54, 0.82)

Patients at risk		0	3	6	9	12	15	18	21	24
Tisotumab vedotin	253	148	62	25	5	2	1	0	0	0
IC Chemotherapy	249	96	34	11	4	1	1	0	0	0

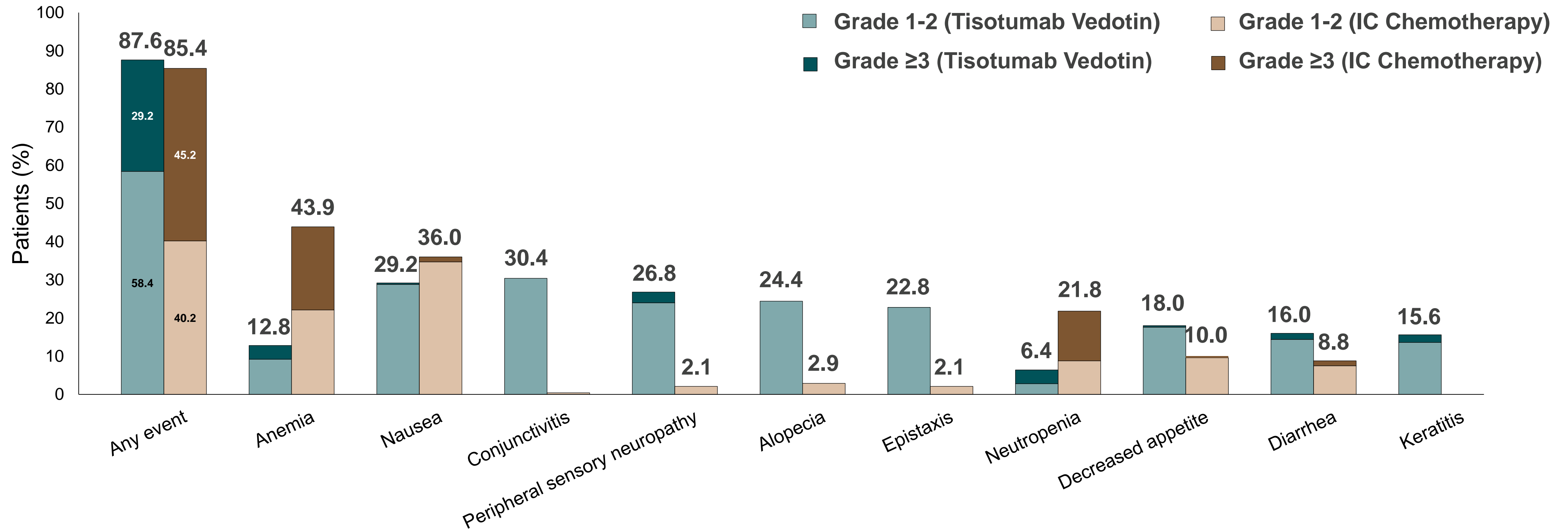
	Tisotumab Vedotin (N=253)	IC Chemotherapy
ORR, % (95% CI)	17.8 (13.3 - 23.1)	5.2 (2.8-8.8)
Odds ratio (95% CI) <i>P</i> value	4.0 (2.1-7.6) <i>P</i> < 0.0001	
Best Overall Response, n (%)		
CR	6 (2.4)	0
PR	39 (15.4)	13 (5.2)
SD	147 (58.1)	132 (53.0)
PD	46 (18.2)	74 (29.7)
Not evaluable/Not available	15 (5.9)	30 (12.0)
DCR^b, % (95% CI)	75.9 (70.1-81.0)	58.2 (51.8-64.4)
Median DOR (95% CI)	5.3 (4.2-8.3)	5.7 (2.8-NR)

InnovaTV 301 (ENGOT cx-12/GOG 3057): Key Subgroups – OS and PFS



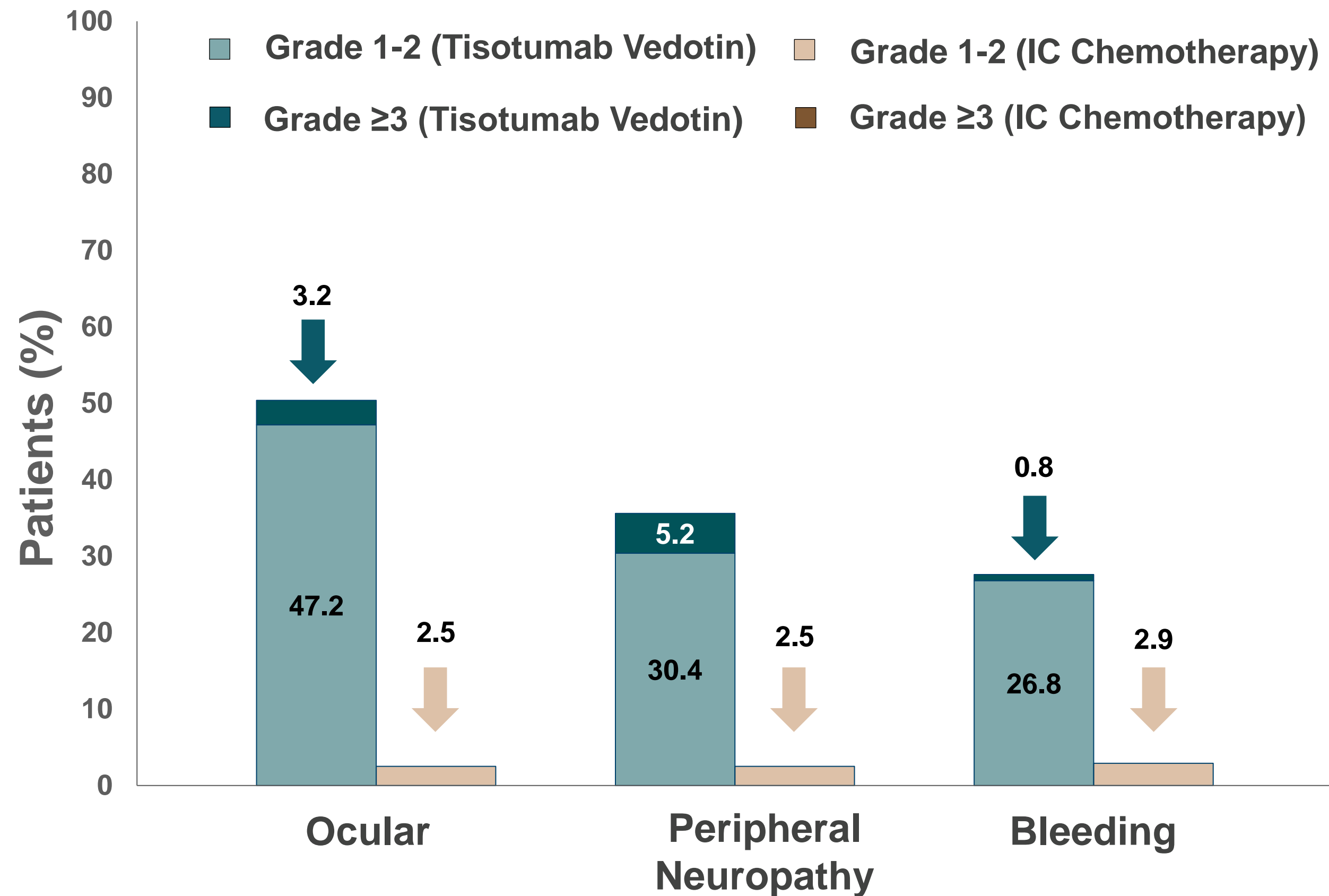
OS and PFS benefit was generally consistent across key subgroups

Most Common Treatment-Related Adverse Events



- Grade 5 TRAEs occurred in 2 (0.8%) and 1 (0.4%) patients in the Tisotumab vedotin and IC chemotherapy arms, respectively^{a,b}
- Median relative dose intensity was 96.1% and 90.0% in the Tisotumab vedotin and IC chemotherapy arms, respectively

Adverse Events of Special Interest for Tisotumab Vedotin^a



Three most common preferred terms for each AESI

Ocular Conjunctivitis (30.4%), keratitis (15.6%), dry eye (13.2%)

Peripheral neuropathy Peripheral sensory neuropathy (26.8%), paresthesia (2.8%), muscular weakness (2.4%), peripheral sensorimotor neuropathy (2.4%)

Bleeding Epistaxis (22.8%), hematuria (3.2%), vaginal hemorrhage (3.2%)

- There were no grade 4 or 5 AESIs
- **Dose discontinuation due to ocular and peripheral neuropathy events occurred in 5.6% of patients for each**