Amivantamab in recurrent/metastatic head & neck squamous cell cancer after immune checkpoint inhibitor and chemotherapy

Pivotal results from the phase 1b/2 OrigAMI-4 study

Barbara Burtness[1], Kevin J Harrington[2], Dongmei Ji[3], Benoit Calderon[4], Sun Min Lim[5], Muh-Hwa Yang[6], Shau-Hsuan Li[7], Shigenori Kadowaki[8], Paul L Swiecicki[9], Jessica L Geiger[10], William Ince[11], Dennis Hahn[12], Ye Guo[13], Douglas Adkins[14], Joshua C Curtin[15], Kiichiro Toyoizumi[16], Mark S Wade[15], Emrullah Yilmaz[17], Priya Kim[15], Ari J Rosenberg[18]

[1]Yale Cancer Center, Yale School of Medicine, New Haven, CT, USA; [2]The Institute of Cancer Research/The Royal Marsden Hospital, London, UK; [3]Department of Head & Neck Tumors and Neuroendocrine Tumors, Fudan University Shanghai Cancer Center, Shanghai, China; [4]Institut Sainte Catherine, Avignon, France; [5]Division of Medical Oncology, Department of Internal Medicine, Yonsei Cancer Center, Severance Hospital, Yonsei University Health System, Seoul, Republic of Korea; [6]Division of Medical Oncology, Department of Oncology, Taipei Veterans General Hospital, Taipei, Taiwan; [7]Department of Hematology-Oncology, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan; [8]Department of Clinical Oncology, Aichi Cancer Center Hospital, Nagoya, Japan; [9]Division of Hematology/Oncology, Department of Internal Medicine, University of Michigan Rogel Cancer Center, Ann Arbor, MI, USA; [10]Department of Hematology and Medical Oncology, Taussig Cancer Institute, Cleveland Clinic, Cleveland, OH, USA; [11]Addenbrooke's Hospital, Cambridge, UK; [12]Department of Hematology, Oncology, Stem-Cell Transplantation, and Palliative Care, Klinikum Stuttgart, Stuttgart, Germany; [13]Department of Oncology, Shanghai East Hospital, School of Medicine, Tongji University, Shanghai, China; [14]Washington University School of Medicine, Robert Ebert and Greg Stubblefield Head and Neck Tumor Center, Alvin J Siteman Cancer Center, and Barnes-Jewish Hospital, St Louis, MO, USA; [15]Johnson & Johnson, Spring House, PA, USA; [16]Johnson & Johnson, Tokyo, Japan; [17]Johnson & Johnson, Raritan, NJ, USA; [18]Department of Medicine, Section of Hematology and Oncology, The University of Chicago, Chicago, IL, USA.

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

https://www.congresshub.com/Oncology/AM2026/Amivantamab/Burtness

Copies of this slide deck obtained through Quick Response (QR) Code are for personal use only and may not be reproduced without permission from ASCO® or the authors of these slides

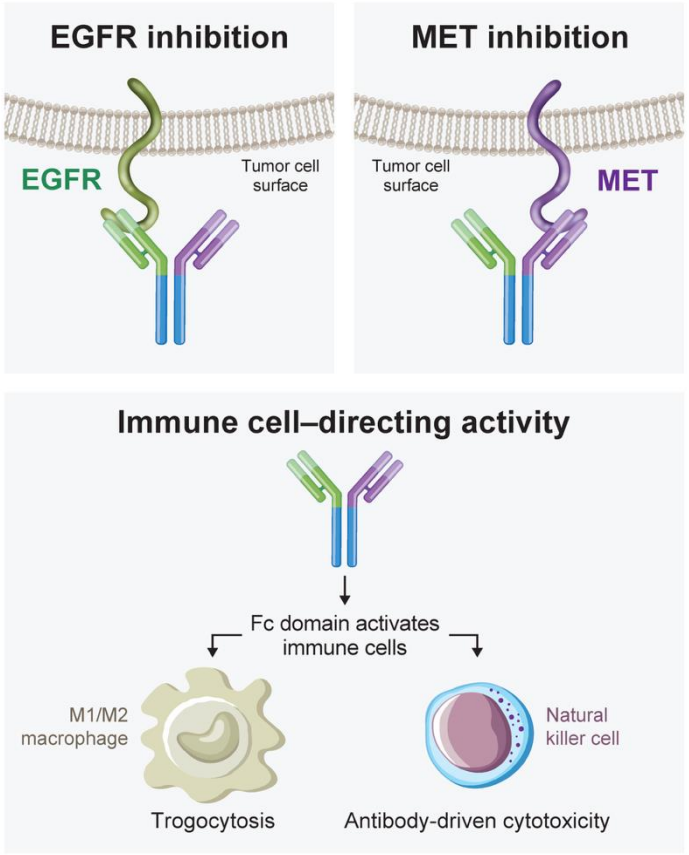
Distributed for academic purposes by Johnson & Johnson Innovative Medicine and is not for

Rationale for Dual Targeting EGFR and MET in HNSCC

- EGFR and MET are overexpressed in 80%–90% of HNSCC tumors[1–3]
  - MET is a compensatory escape and resistance pathway, limiting the efficacy of anti-EGFR agents[2]
- Single-agent cetuximab (anti-EGFR monoclonal antibody) after ICI and platinum-based chemotherapy has an ORR of 24% and median OS of 8.6 months[4]
- Amivantamab, an EGFR-MET bispecific antibody with immune cell–directing activity, has shown antitumor activity in R/M HNSCC and has received FDA Breakthrough Therapy Designation[5,6]

We evaluated subcutaneous amivantamab Q3W among R/M HNSCC[a] after ICI and platinum-based chemotherapy

Amivantamab's Mechanism of Action[7]



OrigAMI-4 (ClinicalTrials.gov Identifier: NCT06385080). Note: All cohorts of OrigAMI-4 will utilize the subcutaneous formulation of amivantamab, which is coformulated with recombinant human hyaluronidase PH20 and manually injected in the abdomen. [a]HPV+ oropharyngeal squamous cell cancer was exclusionary. HNSCC, head & neck squamous cell cancer; ICI, immune checkpoint inhibitor; R/M, recurrent and/or metastatic.

1. Hartmann S, et al. *Clin Cancer Res*. 2016;22(16):4005–4013. 2. Rothenberger NJ, et al. *Cancers (Basel)*. 2017;9(4):39. 3. Wise-Draper, et al. *Am Soc Clin Oncol Educ Book*. 2022;42:1–14. 4. Fayette J, et al. *Clin Cancer Res*. 2025;31(13):2617–2627. 5. Harrington KL, et al. *Oral Oncol*. 2025;171:107791. 6. Johnson & Johnson: RYBREVANT FASPRO™. https://www.jnj.com/media-center/press-releases/rybrevant-faspro-amivantamab-and-hyaluronidase-lpuj-receives-u-s-fda-breakthrough-therapy-designation-for-patients-with-advanced-head-and-neck-cancer. 7. Soo RA, et al. *Lung Cancer*. 2026;216:109405.

Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not for

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

OrigAMI-4 Study Design

Eligibility Criteria for Cohort 1

- Recurrent/metastatic (R/M) head & neck squamous cell cancer
- No prior anti-EGFR therapy
- ECOG PS score: 0 or 1

- p16 positive oropharyngeal cancer was excluded

***Subcutaneous** amivantamab is administered at 2400 mg (or 3360 mg if ≥80 kg) Q3W[a]*

Cohort 1: Amivantamab monotherapy[b]
Post–PD-(L)1 inhibitor and platinum-based chemotherapy[c]

Focus of this presentation

Cohort 2: Amivantamab plus pembrolizumab[b]
Treatment naïve in the R/M setting

Cohort 3: Amivantamab plus paclitaxel[b]
Post–PD-(L)1 inhibitor

Cohort 4: Amivantamab monotherapy[d]
Post–PD-(L)1 inhibitor and platinum-based chemotherapy[c]

Cohort 5: Amivantamab plus pembrolizumab with carboplatin[d]
Treatment naïve in the R/M setting

Cohort 6: Amivantamab plus pembrolizumab[b]
Treatment naïve in the locally advanced, perioperative setting

Endpoints

- Objective response rate (primary)
- Duration of response
- Clinical benefit rate[e]
- Progression-free survival
- Overall survival
- Safety

Responses were assessed by the investigator per RECIST v1.1 and confirmed via BICR

Treatment beyond progression was permitted for continued clinical benefit per investigator

- A sample size of 80 response-evaluable participants would provide >99% power to reject the null hypothesis (ORR ≤10%) assuming an ORR of 30% with a 2-sided alpha of 5%[f]

OrigAMI-4 (ClinicalTrials.gov Identifier: NCT06385080). Note: All cohorts of OrigAMI-4 will utilize the subcutaneous formulation of amivantamab, which is coformulated with recombinant human hyaluronidase PH20 and manually injected in the abdomen. [a]Each cycle is 21 days (3 weeks); Cycle 1: 1600 mg (or 2240 mg if ≥80 kg) on Day 1, 2400 mg (or 3360 mg if ≥80 kg) on Day 8 and Day 15; Cycle 2 (and thereafter): 2400 mg (or 3360 mg if ≥80 kg) on Day 1. [b]Participants with HPV+ oropharyngeal squamous cell cancer were excluded. [c]Eligible participants must have received an anti–PD-(L)1 and platinum-based chemotherapy in combination or as separate lines of therapy for R/M disease. A participant could have received 1 or both treatments in the locally advanced disease if progression was within 6 months. [d]Participants with HPV+ oropharyngeal squamous cell cancer were included. [e]Clinical benefit rate was defined as percentage of confirmed responders or durable stable disease (at the second disease assessment). [f]The INTERLINK-1 data, which showed an ORR of 24% with cetuximab, were not available at the time of protocol/study initiation.[1]

1. Fayette J, et al. *Clin Cancer Res*. 2025;31(13):2617–2627.

Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not for

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

Demographics and Baseline Characteristics

Characteristic, n (%)	N=102
Age, median (range), years	63 (30–81)
Male / female	79 (77) / 23 (23)
Race	
Asian	45 (44)
White	42 (41)
Other[a]	15 (15)
ECOG PS score 0 / 1	34 (33) / 68 (67)
Primary tumor location	
Oral cavity	48 (47)
Larynx	24 (24)
Hypopharynx	16 (16)
Oropharynx[b]	14 (14)

Characteristic, n (%)	N=102
Location of R/M at screening	
Locoregional and distant	50 (49)
Locoregional only	31 (30)
Distant only	21 (21)
Systemic therapy[c]	102 (100)
1 prior line	53 (52)
2 prior lines	49 (48)

- All participants received immune checkpoint inhibitor and platinum-based chemotherapy in prior lines[c]
- Amivantamab treatment was ongoing for 31% (32/102) of participants at data cutoff

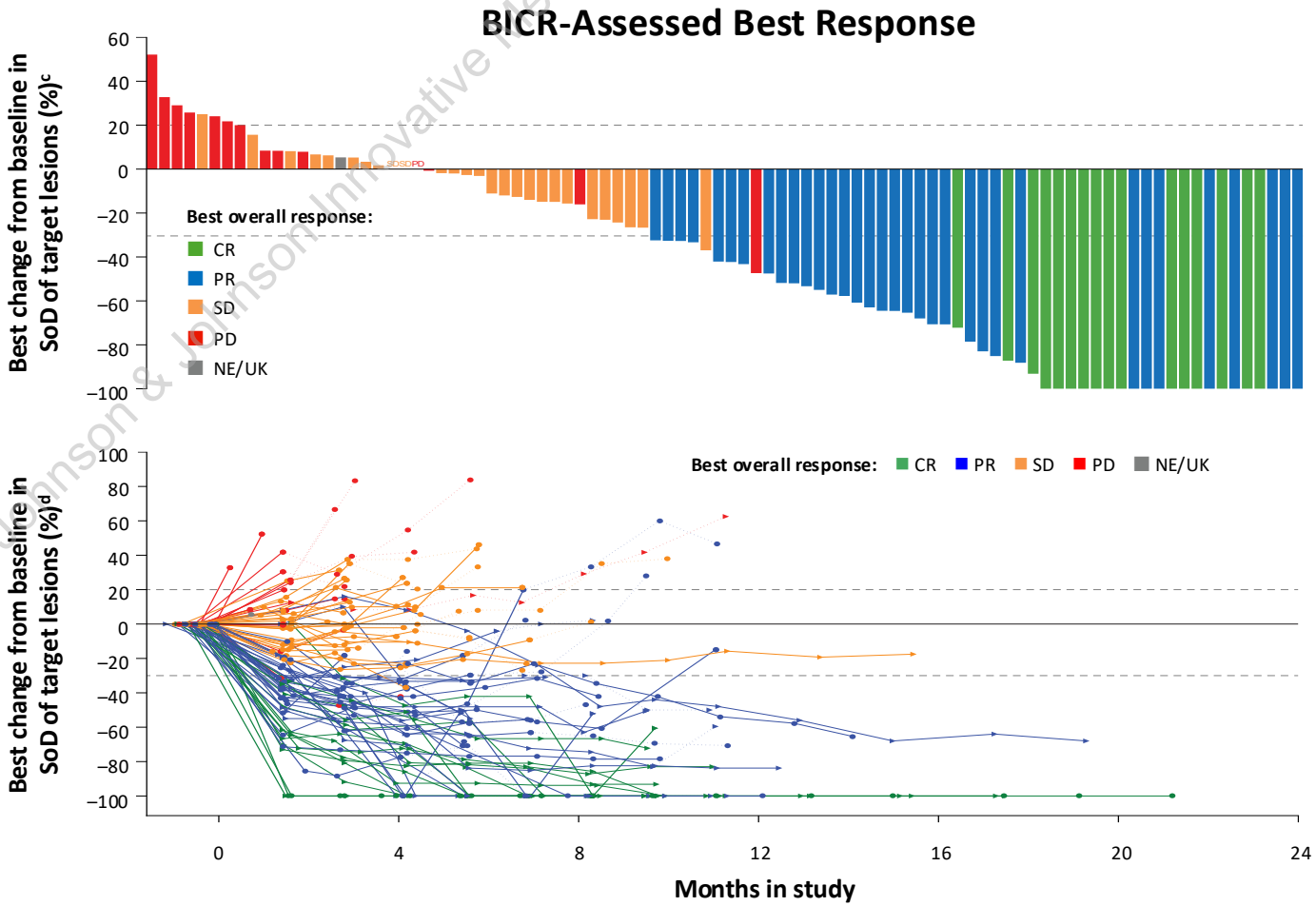
[a]Other includes Black or African American (n=1), not reported (n=11), and unknown (n=3). [b]Participants with HPV+ oropharyngeal squamous cell cancer were excluded. [c]Eligible participants must have received an anti–PD-(L)1 and platinum-based chemotherapy in combination or as separate lines of therapy for R/M disease. A participant could have received 1 or both treatments in the locally advanced disease if progression was within 6 months.
R/M, recurrence and/or metastasis.

Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not for

BICR-Assessed ORR and Best Response

BICR-assessed response	N=102
Confirmed ORR	**42%** (95% CI, 32–52)
Best response, n (%)	
CR	**15 (15)**
PR	28 (27)
SD[a]	36 (35)
PD	16 (16)
NE	7 (7)
Time to first response, weeks	6.6 (range, 5.6–36.9)
Clinical benefit rate[b]	63% (95% CI, 53–72)

- Investigator-assessed ORR (**47%**; 95% CI, 37–57) was consistent with the BICR results
  - Among participants with ≥1 post-baseline disease assessment, 84% experienced tumor shrinkage of target lesions



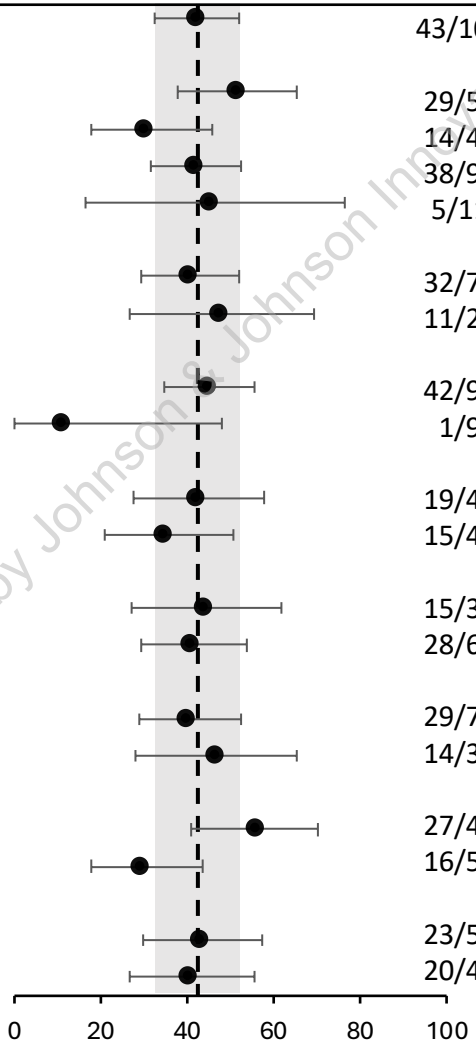
[a]Includes non-CR/non-PD with only non-target lesions at baseline and no evidence of disease with no target or non-target lesions at baseline. [b]Defined as percentage of participants achieving a response or durable SD (at second disease assessment).
[c]Ten participants (NE/UNK: n=6; PD: n=2; non-CR/PD: n=1; no evidence of disease: n=1) without postbaseline tumor assessments were not shown; all participants were included in the ORR analysis.
[d]Excludes participants without a postbaseline tumor assessment. Triangle indicates ongoing treatment; circle indicates completed/discontinued treatment; solid line indicates before PD; dotted line indicates after PD.

Distributed for scientific purposes by Janssen & Janssen Innovative Medicine and is not for

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

Consistent ORRs Across Prespecified Subgroups

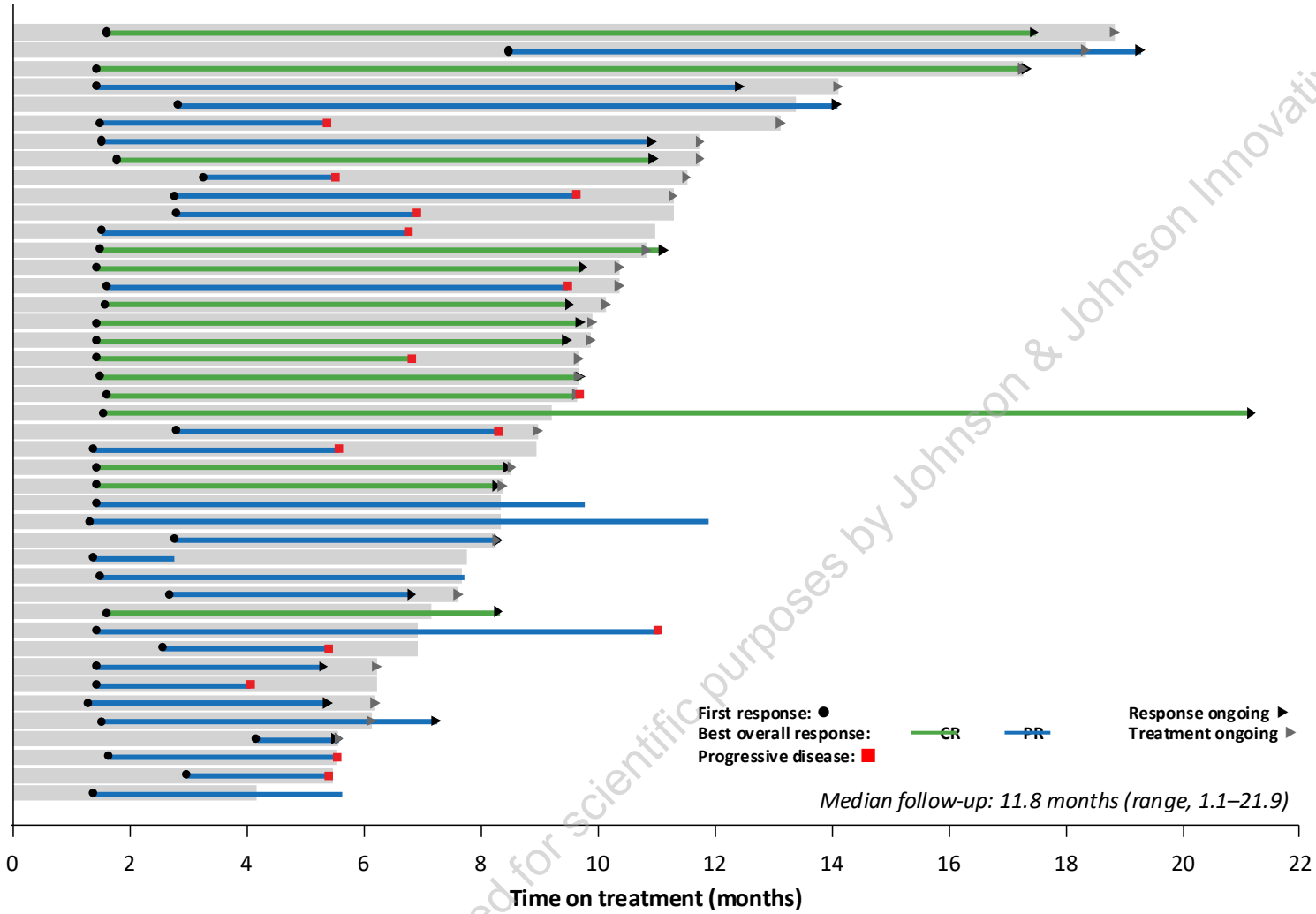
Subgroup	n/N	ORR (95% CI)
Overall	43/102	42 (32–52)
Age category		
<65 years	29/56	52 (38–65)
≥65 years	14/46	30 (18–46)
<75 years	38/91	42 (32–53)
≥75 years	5/11	45 (17–77)
Sex		
Male	32/79	41 (30–52)
Female	11/23	48 (27–69)
Weight category		
<80 kg	42/93	45 (35–56)
≥80 kg	1/9	11 (0.3–48)
Race		
Asian	19/45	42 (28–58)
Non-Asian	15/43	35 (21–51)
ECOG PS score		
0	15/34	44 (27–62)
1	28/68	41 (29–54)
History of smoking		
Yes	29/72	40 (29–53)
No	14/30	47 (28–66)
Primary tumor location		
Oral cavity	27/48	56 (41–71)
Non–oral cavity	16/54	30 (18–44)
Prior lines of therapy[a]		
1	23/53	43 (30–58)
2	20/49	41 (27–56)



[a]Prior lines of therapy was not a prespecified subgroup.

Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not fo

Duration of Response



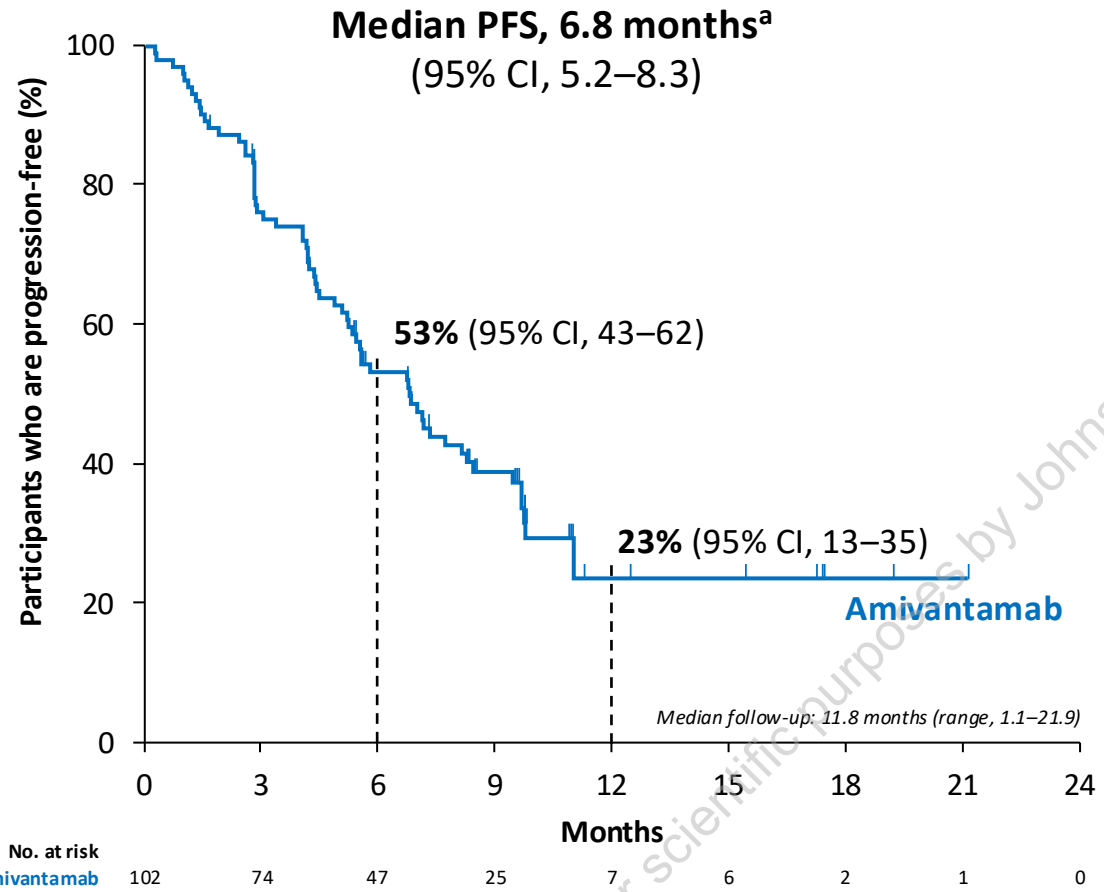
- Median DoR was not reached (95% CI, 6.9–NR) in the 43 confirmed responders
  - 56% of responders had a response duration ≥6 months
  - 63% of responses are ongoing
- Among the 15 CRs, 13 (87%) are ongoing

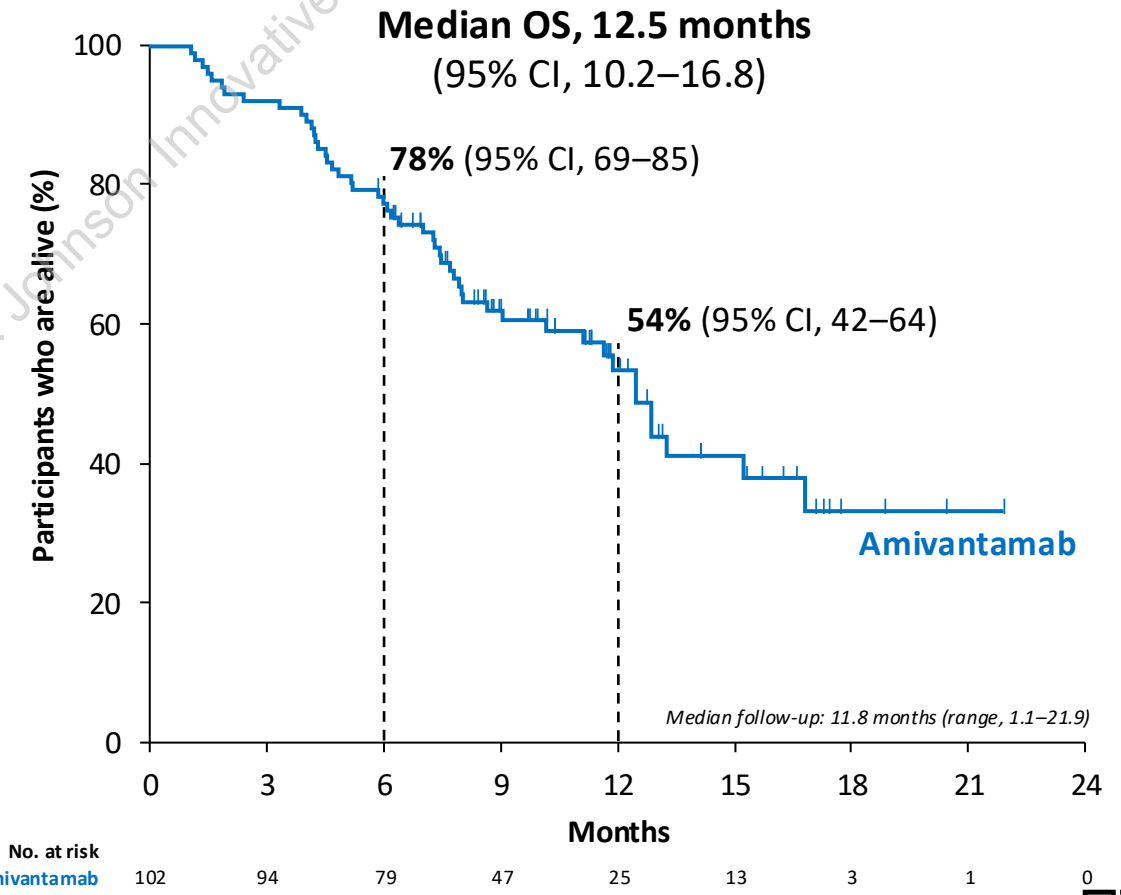
Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not fo

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

PFS and OS

54% of participants were alive at 1 year





[a]Assessed by investigator.

Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not for

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

Safety

- Median treatment duration was 5.9 months[a]
- Individual AEs were largely EGFR or MET related and mostly grade 1 or 2
- Administration-related reactions were reported in 15% (grade 1: 9%; grade 2: 6%)
- Treatment-related discontinuations were 8%
- No new safety signals; profile is consistent with prior reports of subcutaneous amivantamab[1]

Treatment-emergent AEs (≥20%) by preferred term, n (%)	N=102	
	All grades	Grade ≥3
Related to EGFR inhibition		
Rash	38 (37)	3 (3)
Dermatitis acneiform	35 (34)	6 (6)
Paronychia	35 (34)	2 (2)
Stomatitis	29 (28)	2 (2)
Related to MET inhibition		
Hypoalbuminemia	51 (50)	5 (5)
Peripheral edema	24 (24)	1 (1)
Other		
Fatigue	29 (28)	4 (4)
Hypocalcemia	25 (25)	1 (1)
Anemia	22 (22)	5 (5)

Note: One participant had treatment-related pneumonitis resulting in death. Five additional deaths due to AEs occurred, which were deemed unrelated to amivantamab.

[a]Range, 0.0–18.9 months.

1. Leighl NB, et al. *J Clin Oncol*. 2024;42(30):3593–3605.

Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not fo

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

Conclusions

- **Amivantamab** demonstrated a BICR-assessed ORR of **42%** in R/M HNSCC after ICI and platinum-based chemotherapy
  - **15% achieved a complete response**
  - Responses were durable (56% of responders had duration ≥6 months)
  - Median time to response was rapid (6.6 weeks)
- At a median follow-up of 11.8 months, median OS was 12.5 months and 54% were alive at 1 year
- Safety was consistent with prior subcutaneous amivantamab studies[1]: majority of AEs were grade 1 or 2, and no new safety signals were identified
  - Treatment-related discontinuations were low (8%)

Subcutaneous amivantamab Q3W demonstrated high, deep, and durable antitumor activity in R/M HNSCC after ICI and platinum-based chemotherapy

Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not fo

HNSCC, head & neck squamous cell cancer; ICI, immune checkpoint inhibitor; Q3W, every 3 weeks; R/M, recurrent and/or metastatic.

1. Leighl NB, et al. *J Clin Oncol*. 2024;42(30):3593–3605.

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

Now Published in *Journal of Clinical Oncology*

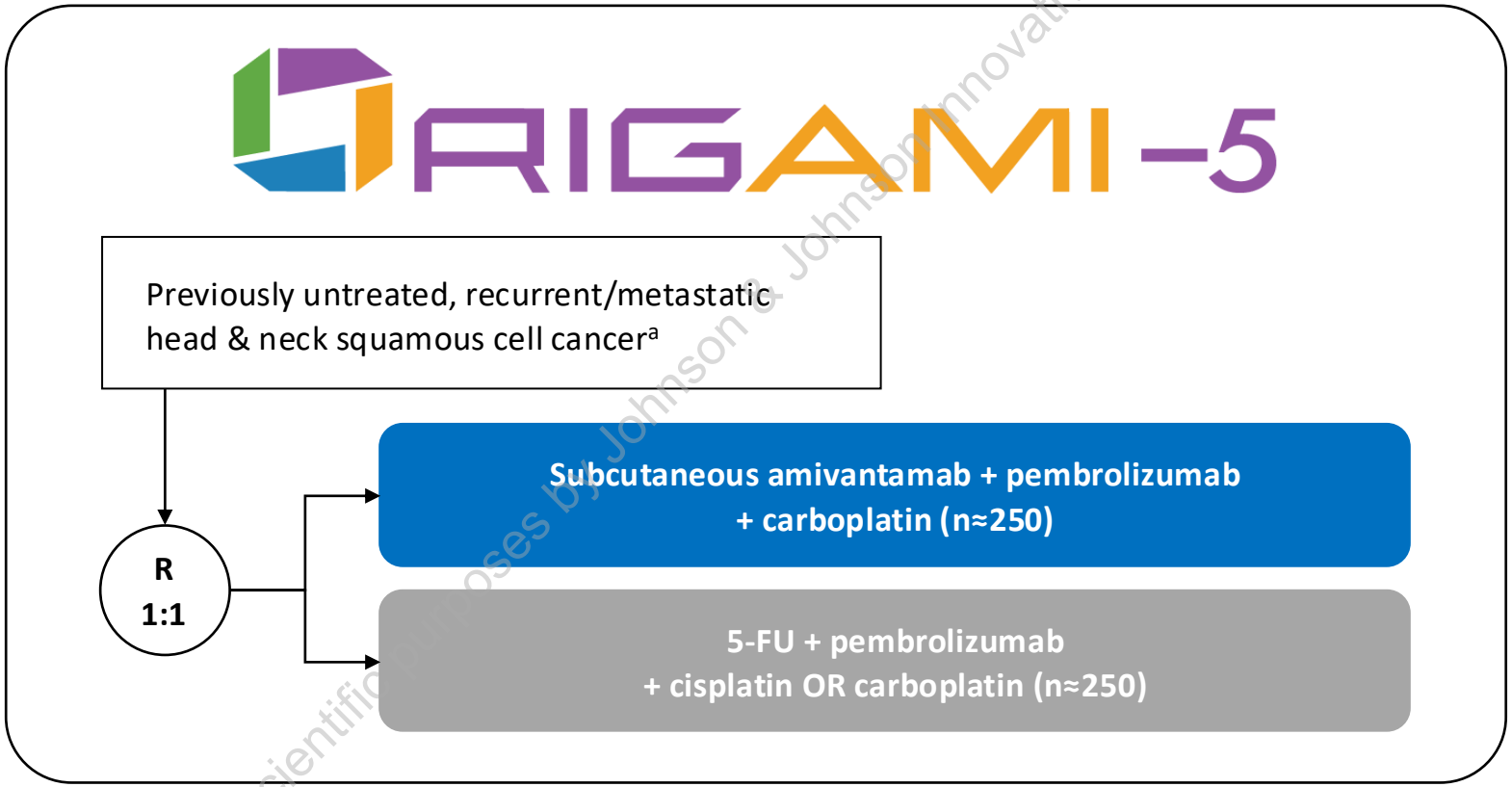
Amivantamab in recurrent/metastatic HNSCC after checkpoint inhibitor and chemotherapy: pivotal results from the phase 1b/2 OrigAMI-4 study

QR Code for *JCO* Manuscript

The results of OrigAMI-4 Cohort 1 have been submitted to the FDA for accelerated approval

tributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not fo

Evaluation of subcutaneous amivantamab plus pembrolizumab and carboplatin is ongoing in the first-line phase 3 OrigAMI-5 study



[a]No enrollment restriction based on combined positive score (CPS).

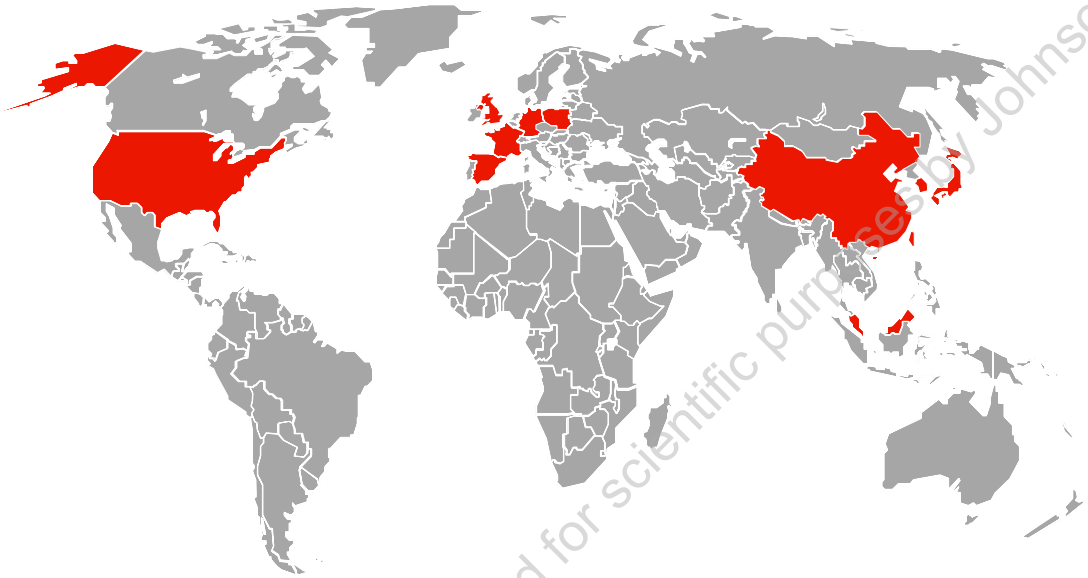
Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not for

Presented by B Burtness at the American Society of Clinical Oncology (ASCO) Annual Meeting; May 29–June 2, 2026; Chicago, IL, USA.

Acknowledgments

- Participants who were enrolled in the study and their families and caregivers
- Physicians and nurses who cared for participants and staff members who supported this clinical trial
- Staff members at the study sites and involved in data collection/analyses
- Medical writing assistance was provided by Lumanity Communications Inc. and funded by Johnson & Johnson

OrigAMI-4 is currently enrolling at 54 sites from 11 countries/regions



Copies of this slide deck obtained through Quick Response (QR) Code are for personal use only and may not be reproduced without permission from ASCO® or the authors of these slides.

Distributed for scientific purposes by Johnson & Johnson Innovative Medicine and is not for