CT244

Taletrectinib in TKI-Pretreated Patients With ROS1+ Non-Small Cell Lung Cancer: Updated Data From TRUST-I and TRUST-II

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Background

- Taletrectinib is a next-generation, CNS-active, selective ROS1 TKI approved in the US, Japan, and China for the treatment of patients with locally advanced or metastatic ROS1+ NSCLC[1–5]
- In the Phase 2 TRUST-I (NCT04395677) and TRUST-II (NCT04919811) studies, taletrectinib demonstrated robust efficacy, including IC activity and efficacy against G2032R mutations, with a manageable safety profile in TKI-naïve and TKI-pretreated patients with ROS1+ NSCLC[6–8]
- Here we report updated efficacy data in TKI-pretreated patients from TRUST-I and TRUST-II, and updated data from an integrated safety analysis

Abbreviations

ALT, alanine aminotransferase; AST, aspartate aminotransferase; BOR, best overall response; c, confirmed; CI, confidence interval; CNS, central nervous system; CR, complete response; DOR, duration of response; ECOG PS, Eastern Cooperative Oncology Group performance status; IC, intracranial; IRC, independent review committee; (m)RECIST v1.1, (modified) Response Evaluation Criteria in Solid Tumors version 1.1; NE, not evaluable; NR, not reached; NSCLC, non-small cell lung cancer; ORR, objective response rate; OS, overall survival; PD, progressive disease; PFS, progression-free survival; PR, partial response; QD, once daily; ROS1, ROS proto-oncogene 1; SD, stable disease; TEAE, treatment-emergent adverse event; TKI, tyrosine kinase inhibitor; US, United States

References

1. Katayama R, et al. *Nat Commun* 2019;10:3604
2. Nagasaka M, et al. *Future Oncol* 2023;19:123–135
3. IBTROZI® (taletrectinib). Prescribing Information. Nuvation Bio Inc. 2025
4. Nippon Kayaku. IBTROZI® Capsules 200mg (taletrectinib) has been approved in Japan. Accessed March 27, 2026; https://www.nipponkayaku.co.jp/english/news/detail.php?n=20250919_6G5AI1Y7
5. Nuvation Bio. Nuvation Bio Receives Approval from China's NMPA for Taletrectinib. Accessed March 27, 2026; https://investors.nuvationbio.com/news/news-details/2025/Nuvation-Bio-Receives-Approval-from-Chinas-National-Medical-Products-Administration-for-Taletrectinib-for-Patients-with-Advanced-ROS1-positive-Non-Small-Cell-Lung-Cancer
6. Pérol M, et al. *J Clin Oncol* 2025;43:1920–1929
7. Li W, et al. *J Thorac Oncol* 2025;20(Suppl 1):S500
8. Liu G, et al. *J Thorac Oncol* 2025;20(Suppl 1):S56

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Methods

- The study designs of TRUST-I and TRUST-II have been previously reported[6]
- The efficacy populations reported here include TKI-pretreated patients from TRUST-I and TRUST-II with ≥1 measurable lesion at baseline per RECIST v1.1 by IRC who started treatment on taletrectinib 600 mg QD
- The safety population includes TKI-naïve and TKI-pretreated patients with ROS1+ NSCLC from Phase 1 and Phase 2 studies who received ≥1 dose of taletrectinib 600 mg QD

Efficacy in TKI-Pretreated Patients

Demographics and Baseline Characteristics for TKI-Pretreated Patients[a]

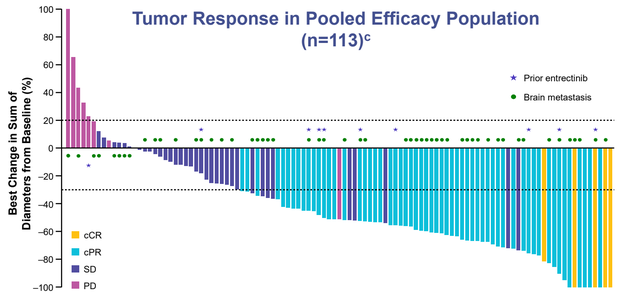
Baseline Characteristics	TRUST-I (n=67)	TRUST-II (n=50)	Pooled Efficacy Population (N=113)[b]
Median age, years (range)	51.0 (31–77)	55.5 (27–79)	53 (27–79)
Female, n (%)	41 (61.2)	27 (54.0)	67 (59.3)
Asian, n (%)	67 (100)	23 (46.0)	88 (77.9)
Stage IV disease, n (%)	65 (97.0)	49 (98.0)	110 (97.3)
ECOG PS 1, n (%)	48 (71.6)	26 (52.0)	73 (64.6)
Never smoker, n (%)	50 (74.6)	30 (60.0)	78 (69.0)
Prior chemotherapy, n (%)	23 (34.3)	19 (38.0)	42 (37.2)
Brain metastases,[c] n (%)	28 (41.8)	28 (56.0)	55 (48.7)
Prior crizotinib / entrectinib, n (%)	67 (100) / 0	40 (80.0) / 10 (20.0)	103 (91.2) / 10 (8.8)[d]

[a]Patients from TRUST-I and the registrational cohort 2 of TRUST-II who received one prior TKI. [b]Includes patients with ≥1 measurable baseline lesion per RECIST v1.1 by IRC. [c]Assessed by IRC per mRECIST v1.1. [d]Two patients were enrolled following crizotinib intolerance and 111 patients were enrolled following PD on a prior TKI.

Tumor Response in TKI-Pretreated Patients

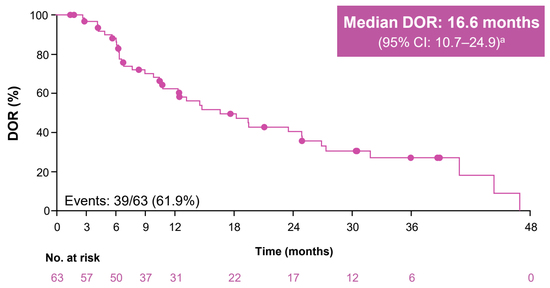
Efficacy[a]	TRUST-I (n=66)	TRUST-II (n=47)	Pooled Efficacy Population (N=113)
cORR, % (95% CI)	**51.5** (38.9–64.0)[b]	**61.7** (46.4–75.5)	**55.8** (46.1–65.1)
Prior chemotherapy	(n=23) **43.5** (23.2–65.5)	(n=19) **78.9** (54.4–94.0)	(n=42) **59.5** (43.3–74.4)

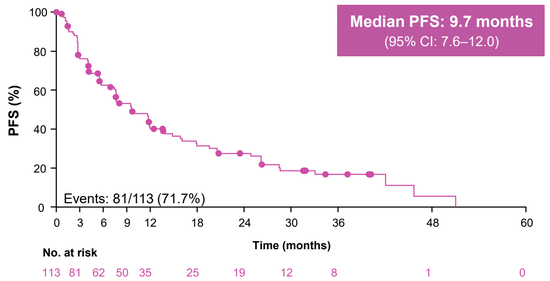
IC efficacy data are shown in the **Supplement**



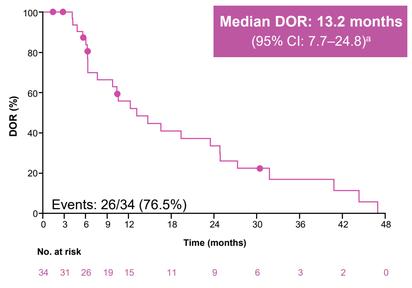
Data cutoff: August 31, 2025. [a]Assessed in patients with ≥1 measurable baseline lesion per RECIST v1.1 by IRC. [b]Responses were observed in 8/12 patients from TRUST-I with G2032R mutations (ORR 66.7% [95% CI: 34.9–90.1]). [c]One patient had a change of 136.5%, which is truncated at 100%. Six patients with cBOR of NE are not shown in the figure.

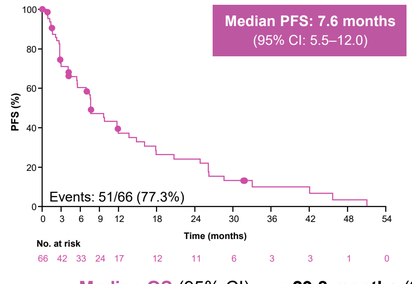
Pooled (N=113) — Median follow-up: 35.8 months



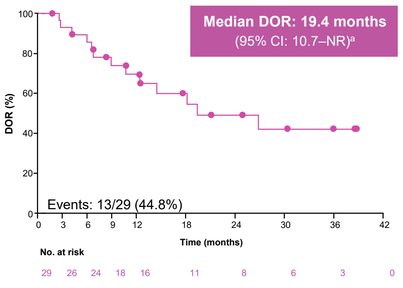


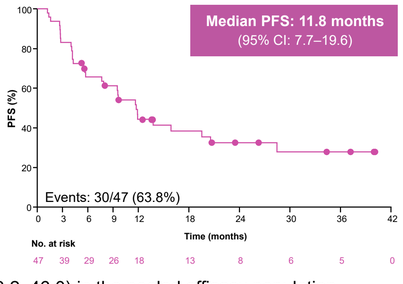
TRUST-I (n=66) — Median follow-up: 45.2 months





TRUST-II (n=47) — Median follow-up: 30.5 months





Data cutoff: August 31, 2025. [a]DOR reported only for patients with a CR or PR.

Median OS (95% CI) was **29.8 months** (23.2–46.0) in the pooled efficacy population, **25.6 months** (19.2–31.9) in TRUST-I, and **NR** (23.2–NR) in TRUST-II (**Supplement**)

Integrated Safety Analysis (N=363)

- As of August 31, 2025, the integrated safety population included 363 TKI-naïve and TKI-pretreated patients with ROS1+ NSCLC from Phase 1 and Phase 2 studies who received ≥1 dose of taletrectinib 600 mg QD (**Supplement**)
- With longer follow-up, no new safety signals were identified, and safety was consistent between the integrated safety population and TKI-pretreated patients (**Supplement**)
- The most common (any-grade) TEAEs were increased AST, increased ALT, diarrhea, nausea, and vomiting (**Supplement**)
- TEAEs led to dose interruptions in 42.7% of patients, dose reductions in 31.3%, and treatment discontinuations in 8.5%

Conclusions

- With ~3 years of follow-up in the pooled analysis of TRUST-I and TRUST-II, taletrectinib maintained durable responses in TKI-pretreated patients with ROS1+ NSCLC
- With longer follow-up, taletrectinib demonstrated a manageable safety profile, with no new safety signals
- These data support taletrectinib as an effective and tolerable treatment option for patients with ROS1+ NSCLC after prior TKI therapy

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IC Efficacy in TKI-Pretreated Patients

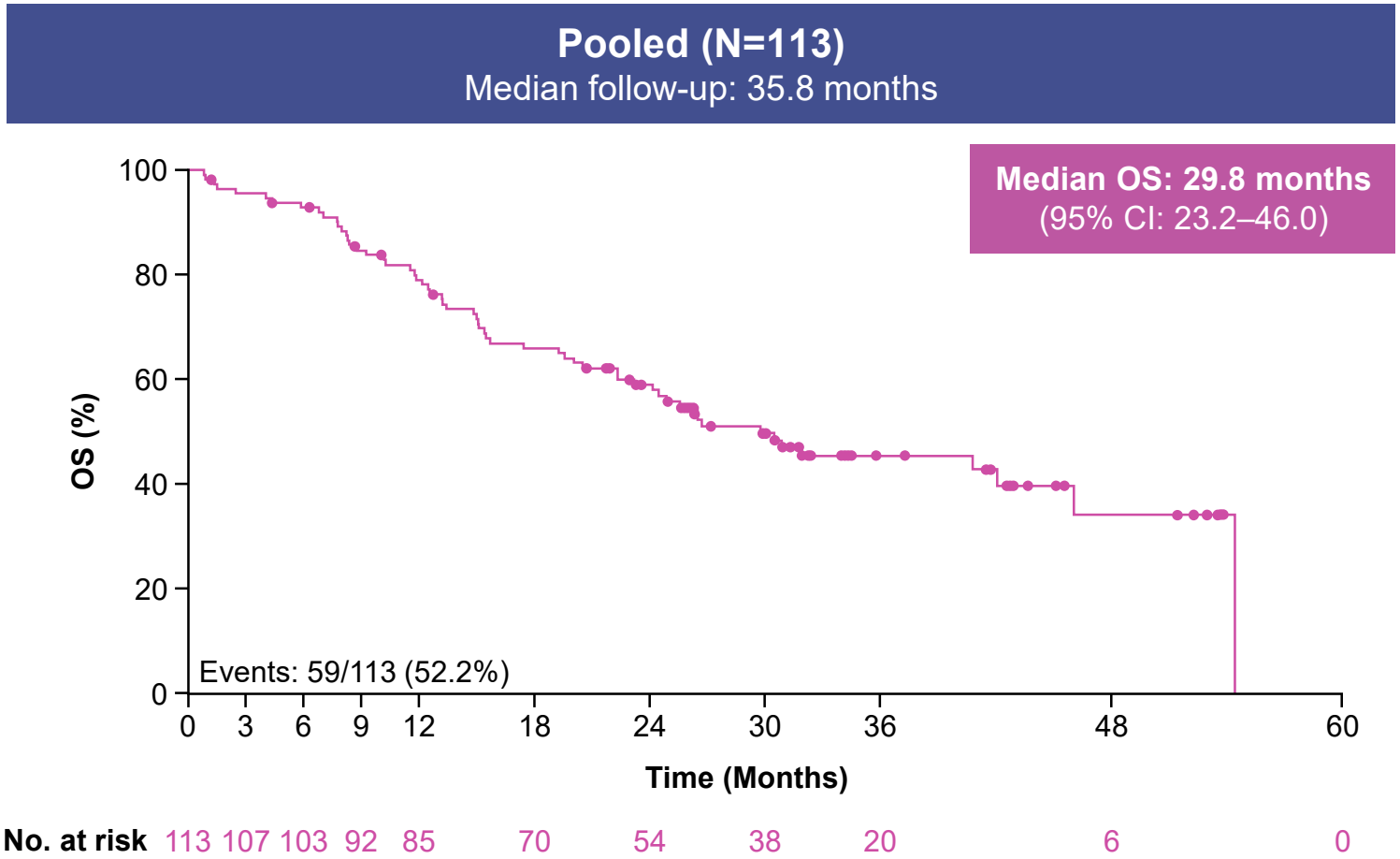
IC Efficacy[a]	TRUST-I (n=16)	TRUST-II (n=16)	Pooled Efficacy Population (n=32)
IC-cORR, % (95% CI)	**75.0** (47.6–92.7)	**56.3** (29.9–80.3)	**65.6** (46.8–81.4)

Data cutoff: August 31, 2025.

[a]Assessed by IRC per mRECIST v1.1 in patients with ≥1 measurable baseline brain metastasis. Among these, eight patients from TRUST-I and 12 from TRUST-II had been previously treated with IC radiotherapy.

c, confirmed; CI, confidence interval; IC, intracranial; IRC, independent review committee; mRECIST v1.1, modified Response Evaluation Criteria in Solid Tumors version 1.1; ORR, objective response rate; TKI, tyrosine kinase inhibitor.

OS in TKI-Pretreated Patients From the Pooled Efficacy Analysis

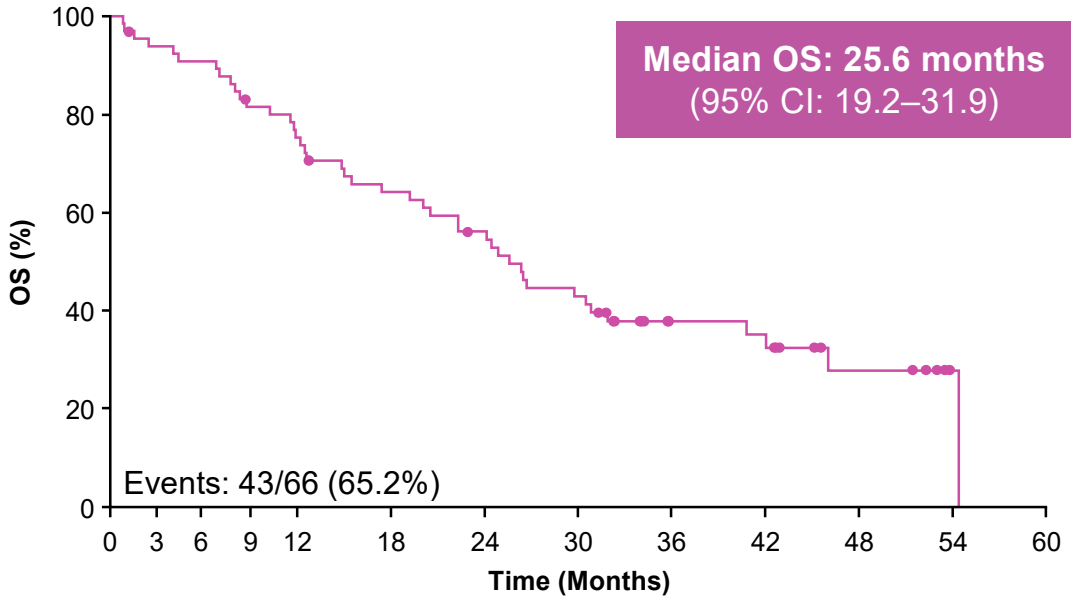


Data cutoff: August 31, 2025.

CI, confidence interval; OS, overall survival; TKI, tyrosine kinase inhibitor.

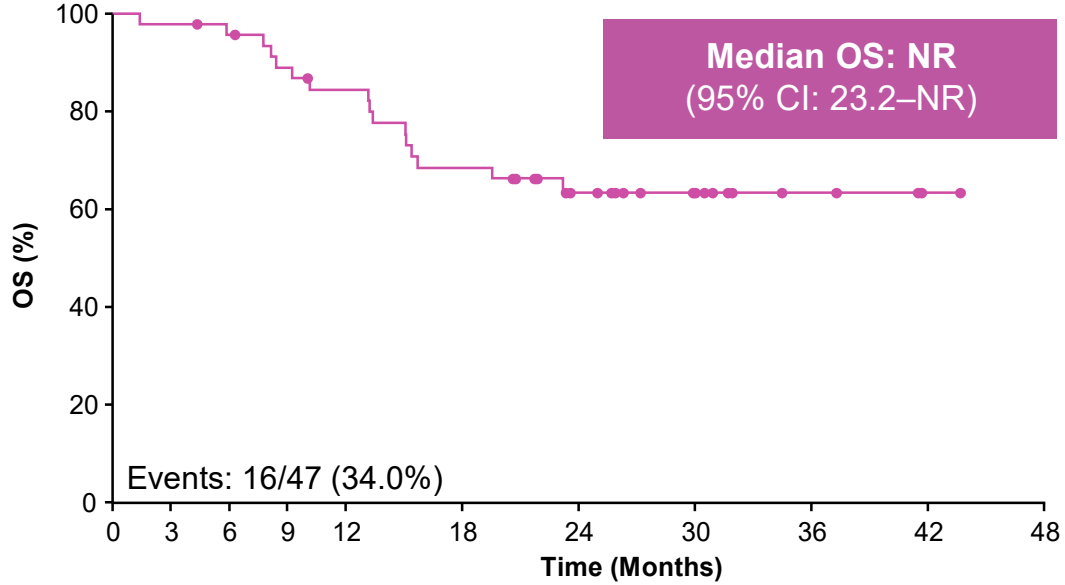
OS in TKI-Pretreated Patients From TRUST-I and TRUST-II

TRUST-I (n=66)
Median follow-up: 45.2 months



No. at risk	66	61	59	52	48	40	34	26	14	13	6	1	0

TRUST-II (n=47)
Median follow-up: 30.5 months



No. at risk	47	46	44	40	37	30	20	12	6	1

Data cutoff: August 31, 2025.
CI, confidence interval; NR, not reached; OS, overall survival; TKI, tyrosine kinase inhibitor.

Integrated Safety Population (N=363)[a]

Baseline Characteristics	Integrated Safety Population (N=363)
Median age, years (range)	56.0 (26–83)
Female, n (%)	206 (56.7)
Stage IV disease, n (%)	341 (93.9)
ECOG PS 1, n (%)	244 (67.2)

Most Frequent TEAEs (≥20% of Patients), n (%)	Integrated Safety Population (N=363)		TKI-Pretreated (n=182)[b]	
	Any Grade	Grade ≥3	Any Grade	Grade ≥3
AST increased	261 (71.9)	30 (8.3)	120 (65.9)	11 (6.0)
ALT increased	248 (68.3)	40 (11.0)	116 (63.7)	16 (8.8)
Diarrhea	234 (64.5)	9 (2.5)	116 (63.7)	3 (1.6)
Nausea	174 (47.9)	5 (1.4)	91 (50.0)	2 (1.1)
Vomiting	164 (45.2)	5 (1.4)	83 (45.6)	2 (1.1)
Anemia	139 (38.3)	15 (4.1)	56 (30.8)	7 (3.8)
Dizziness	78 (21.5)	1 (0.3)	26 (14.3)	0
Electrocardiogram QT prolonged	76 (20.9)	13 (3.6)	30 (16.5)	5 (2.7)
Constipation	74 (20.4)	0	32 (17.6)	0
Blood creatinine increased	73 (20.1)	0	29 (15.9)	0

Data cutoff: August 31, 2025.

[a]The integrated safety population includes TKI-naïve and TKI-pretreated patients with ROS1+ NSCLC who received ≥1 dose of taletrectinib 600 mg QD from Phase 2 trials (TRUST-I and TRUST-II) and a Phase 1 trial (J102). [b]Patients may have received ≥1 prior TKI.

ALT, alanine aminotransferase; AST, aspartate aminotransferase; ECOG PS, Eastern Cooperative Oncology Group performance status; NSCLC, non-small cell lung cancer; QD, once daily; ROS1, ROS proto-oncogene 1; TEAE, treatment-emergent adverse event; TKI, tyrosine kinase inhibitor.