

2022 ASCO<sup>®</sup>  
ANNUAL MEETING

# Lung Cancer

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## **Disclosure of Conflicts of Interest**

Maggie Byrne, MD, MS has no relevant financial relationships to disclose.

# Outline

## Metastatic NSCLC without targetable genomic alterations

### 1<sup>st</sup> line

Abstract 9000, Pooled analysis of 12 randomized studies comparing IO vs Chemo-IO in PD L1 TPS  $\geq$  50%

Abstract 9003, A phase II study (TACTI-002), investigating eftilagimod alpha (soluble LAG-3 protein) and pembrolizumab

### 2<sup>nd</sup> line

Abstract 9004, LUNG MAP 1800 A Randomized phase II study of Ramucirumab and Pembrolizumab vs SoC therapy

Abstract 9005, COSMIC study: Non-randomized study, Cabozantinib and Cabozantinib with Atezolizumab

## Metastatic NSCLC with genomic alterations

### KRAS

Abstract 9002: KRYSTAL-1: Activity and safety of Adagrasib (MRTX849) in KRAS G12C

### EGFR Exon 19 del & L858R

Abstract 9006, Amivantamab and Lazertinib

Abstract 9013, Osimertinib + Teliso-V

### EGFR Exon 20 insertion

Abstract 9007, CLN-081

### MET Ex14 Skip alteration

Abstract 9008, Amivantamab

## Small cell lung cancer

### 1<sup>st</sup> line

Abstract LBA8507, SKYSCRAPER-02, A phase III study Atezo + Carbo + VP-16 +/- Tiragolumab (Anti TIGIT)

### $\geq$ 2<sup>nd</sup> line

Abstract 8516, 8517, 8518

# Outcomes of anti-PD-(L)1 therapy with or without chemotherapy (chemo) for first-line (1L) treatment of advanced non-small cell lung cancer (NSCLC) with PD-L1 score $\geq 50\%$ : FDA Pooled Analysis

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PRESENTED BY:

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# Clinical trials of first-line Chemo-IO and IO regimens included in FDA pooled analysis



Chemo-IO Trials		IO-only Trials	
Trial	Investigational Regimen	Trial	Investigational Regimen
KEYNOTE-021*	<b>Pembrolizumab</b> + Chemo**	<u>CheckMate 026</u>	<b>Nivolumab**</b>
KEYNOTE-189	<b>Pembrolizumab</b> + Chemo**	KEYNOTE-024	<b>Pembrolizumab**</b>
KEYNOTE-407	<b>Pembrolizumab</b> + Chemo**	KEYNOTE-042	<b>Pembrolizumab**</b>
IMpower150	<b>Atezolizumab</b> + Bevacizumab + Chemo***	IMpower110	<b>Atezolizumab**</b>
IMpower130	<b>Atezolizumab</b> + Chemo**	<u>CheckMate 227</u>	<b>Nivolumab + Ipilimumab**</b>
CheckMate-9LA	<b>Nivolumab + Ipilimumab</b> + Chemo**	EMPOWER-Lung 1	<u>Cemiplimab**</u>

Abbreviations: Chemo-IO=platinum-based doublet chemotherapy immunotherapy; IO=immunotherapy.

\* Cohort G

\*\* Control arms: Platinum-based doublet chemotherapy

\*\*\* Control arm in IMpower150: Bevacizumab plus platinum-based doublet chemotherapy

# Study Design

## Pooled Analysis Population

- Advanced NSCLC
- PD-L1 TPS  $\geq 50\%$ 
  - Excluded staining by tumor-infiltrating immune cells
- No sensitizing *EGFR* mutations or *ALK* alterations
- Clinical trial supported FDA approval of IO-based regimen

**Chemo-IO**

**IO-only**

## Exploratory Primary Outcome measure

- OS

## Other exploratory outcome measures

- PFS
- ORR

## Sub-group analyses

- Age (yrs):  $<65$  vs  $65-75$  vs  $\geq 75$
- ECOG PS:  $0$  vs.  $\geq 1$
- Smoking history: *Never* vs. *Ever*

Abbreviations: *ALK*=anaplastic lymphoma kinase gene; Chemo-IO= platinum-based doublet chemotherapy plus immunotherapy; ECOG PS=Eastern Cooperative Oncology Group Performance Status; *EGFR*=epidermal growth factor receptor gene; FDA=U.S. Food and Drug Administration; IO=immunotherapy; NSCLC=non-small-cell lung cancer; ORR=objective response rate; OS=overall survival; PD-L1=programmed death ligand-1; PFS=progression-free survival; TPS=tumor proportion score; yrs=years.

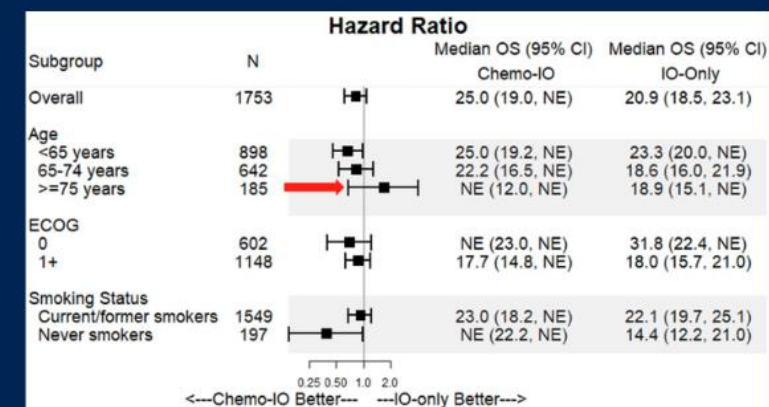
# Exploratory OS, PFS, and ORR: NSCLC PD-L1 ≥50%



	Chemo-IO (N=455)	IO-alone (N=1,298)
OS		
Median, months (95% CI)	25.0 (19.0, NE)	20.9 (18.5, 23.1)
HR (95% CI)	0.82 (0.62, 1.08)	
PFS		
Median, months (95% CI)	9.6 (8.4, 11.1)	7.1 (6.3, 8.3)
HR (95% CI)	0.69 (0.55, 0.87)	
ORR		
% (95% CI)	61 (56, 66)	43 (41, 46)
Odds ratio	1.2 (1.1, 1.3)	

Abbreviations: Chemo-IO=platinum-based doublet chemotherapy plus immunotherapy; CI=confidence interval; HR=hazards ratio; IO=immunotherapy; N=number; NSCLC=non-small-cell lung cancer; NE=not estimable; ORR=objective response rate; OS=overall survival; PD-L1=programmed death ligand-1; PFS=progression-free survival.

## OS in NSCLC PD-L1 ≥50% in selected subgroups



# A Phase II study (TACTI-002) in 1<sup>st</sup> line metastatic non-small cell lung cancer (NSCLC) investigating efitilagimod alpha (soluble LAG-3 protein) and pembrolizumab: updated results from a PD-L1 unselected population

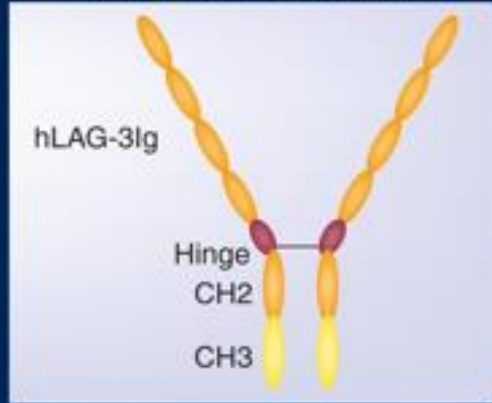
E Felip<sup>1</sup>, M Majem<sup>2</sup>, B Doger<sup>3</sup>, T Clay<sup>4</sup>, E Carcereny<sup>5</sup>, I Bondarenko<sup>6</sup>, J Peguero<sup>7</sup>, M Cobo Dols<sup>8</sup>, M Forster<sup>9</sup>, G Ursol<sup>10</sup>, E Kalinka<sup>11</sup>, G Garcia Ledo<sup>12</sup>, L Vila Martinez<sup>13</sup>, MG Krebs<sup>14</sup>, W Iams<sup>15</sup>, B Campos Balea<sup>16</sup>, C Mueller<sup>17</sup>, and F Triebel<sup>18</sup>

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# Eftilagimod alpha (efti) – soluble LAG-3

STRUCTURE OF EFTI<sup>4</sup>

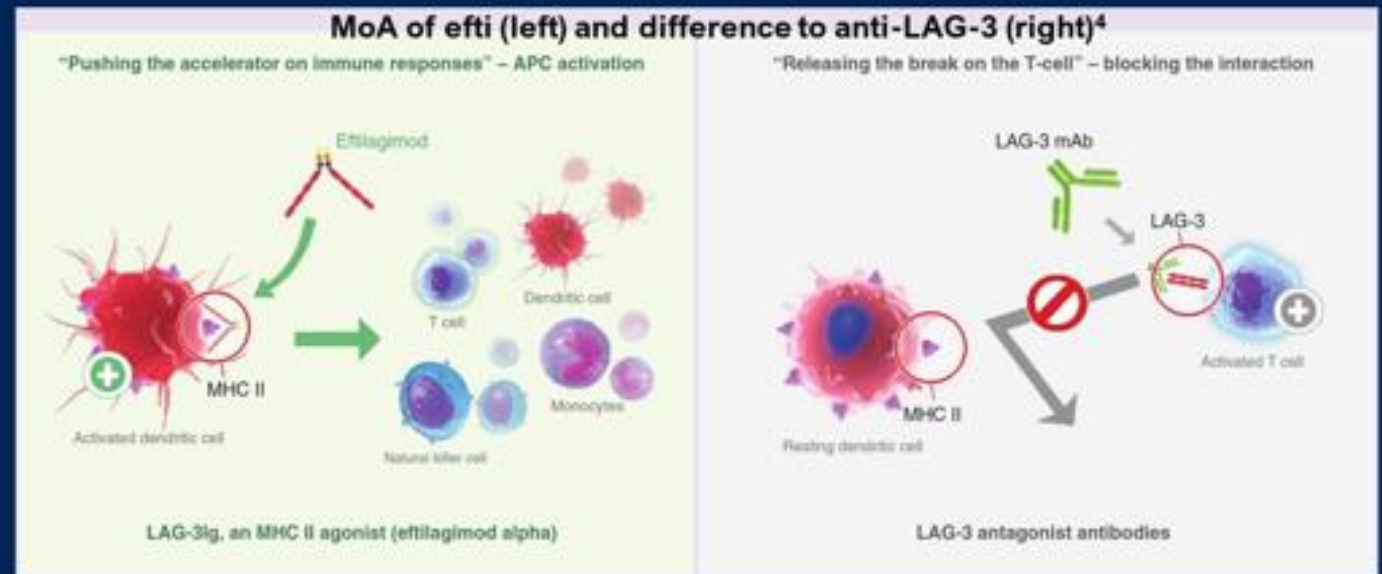


- **MoA:** efti (figure, left) is a **soluble LAG-3 protein** (LAG-3 domains fused to human IgG backbone) **targeting a subset of MHC class II molecules** to mediate antigen presenting cells (APCs) and CD8 T-cell activation (figure below left).
- **Difference to Anti-LAG-3:** Efti does not bind to the LAG-3 on the T cell (figure, below right).
- **Rationale:** efti activates APCs, leading to an increase in activated T cells, potentially reducing the number of non-responders to PD-1/PD-L1 antagonists.

- In preclinical models, the antitumor activity of PD-1 antagonists was synergistically enhanced when combined with efti<sup>1</sup>.
- Recommended phase II dose of 30 mg efti s.c. every two weeks was determined in phase I studies<sup>2,3</sup>.

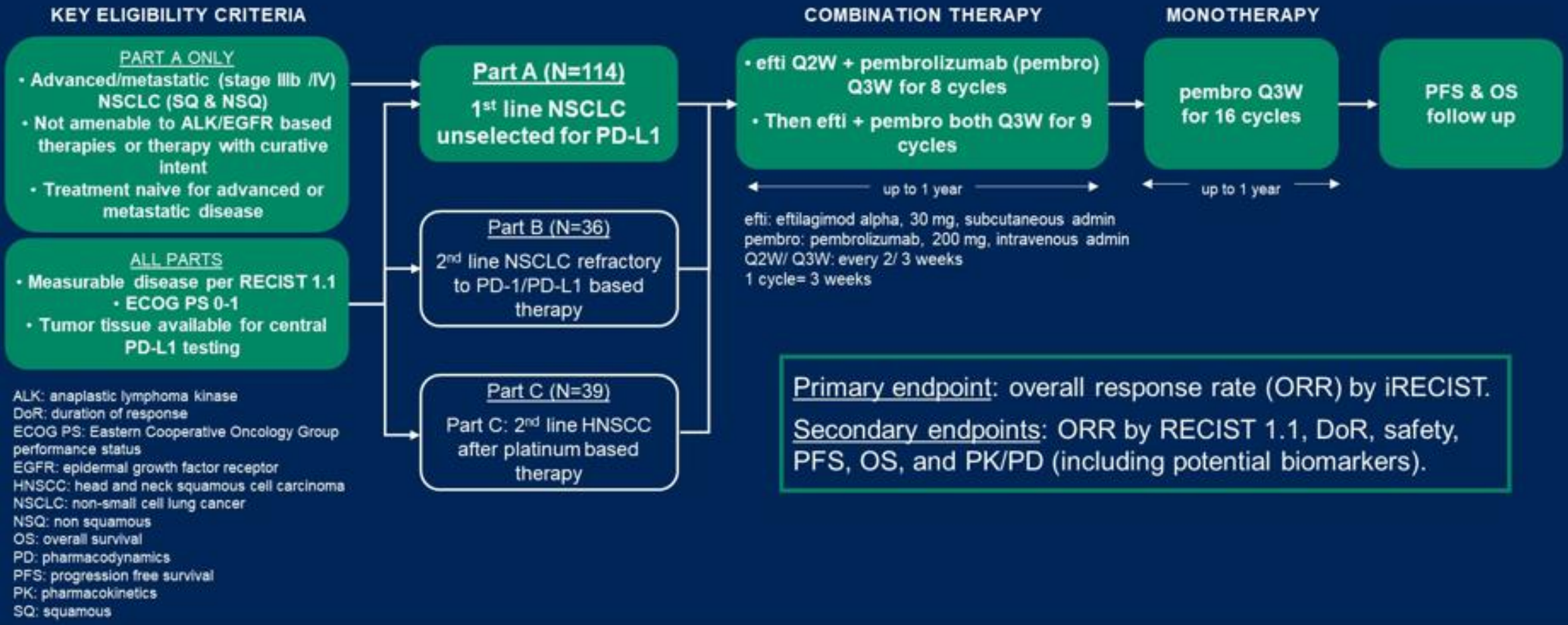
MoA: mechanism of action  
 PD-1/PD-L1: programmed death-(ligand) 1  
 s.c.: subcutaneous

<sup>1</sup> Internal data, Immutep, not yet published.  
<sup>2</sup> Brignone C, Clin Cancer Res. 2009;15: 6225- 6231.  
<sup>3</sup> Atkinson V, J Immunoth Cancer. 2020; 8(2):e001681.  
<sup>4</sup> Dirix L, Triebel F. Future Oncol. 2019;15(17):1963-1973.



# Trial Design – TACTI-002

TACTI-002 is a Phase II, multinational, open label trial with patients from 3 indications unselected for PD-L1.



# Efficacy – ORR<sup>1</sup> by PD-L1 status & tumor type – TACTI-002

Tumor Response by central PD-L1 status (iRECIST, unconfirmed)<sup>2</sup>, N=87

Tumor Response, N=87	PD-L1 <1%, n (%), N=32	PD-L1 1-49%, n (%), N=36	PD-L1 ≥50%, n (%), N=19	PD-L1 ≥1% n (%), N=55	PD-L1 <50% n (%), N=68
ORR	9 (28.1)	15 (41.7)	10 (52.6)	25 (45.5)	24 (35.3)
[95% CI] <sup>4</sup>	[13.8-46.8]	[25.5-59.2]	[28.9-75.6]	[32.0-59.5]	[24.1-47.8]
DCR	22 (68.8)	28 (77.8)	15 (79.0)	43 (78.2)	50 (73.5)
[95% CI] <sup>4</sup>	[50.0-83.9]	[60.9-89.9]	[54.4-94.0]	[65.0-88.2]	[61.4-83.5]

Tumor Response by central & local PD-L1 status (iRECIST, unconfirmed)<sup>3</sup>, N=108

Tumor response, N=108	PD-L1 <1%, n (%), N=37	PD-L1 1-49%, n (%), N=40	PD-L1 ≥50%, n (%), N=31	PD-L1 ≥1% n (%), N=71	PD-L1 <50% n (%), N=77
ORR	9 (24.3)	16 (40.0)	16 (51.6)	32 (45.1)	25 (32.5)
[95% CI] <sup>4</sup>	[11.8-41.2]	[24.9-56.7]	[33.1-69.9]	[33.2-57.3]	[22.2-44.1]
DCR	26 (70.3)	30 (75.0)	24 (77.4)	54 (76.1)	56 (72.7)
[95% CI] <sup>4</sup>	[53.2-84.1]	[58.8-87.3]	[58.9-90.4]	[64.5-85.4]	[61.4-82.3]

- ORR (iRECIST) by PD-L1 (central only):
  - 28.1% in PD-L1 negative
  - 41.7% in PD-L1 1-49%
  - 52.6% in PD-L1 ≥50%
  - 45.5% in PD-L1 ≥1%
- DCR (iRECIST) with a range of 68.8-78.9% across all PD-L1 subgroups.
- ORR (iRECIST) of 35.0% [95% CI: 20.1-51.7] in squamous and 38.9% in non-squamous [95% CI: 27.6-51.1] tumors.

<sup>1</sup> iRECIST, unconfirmed

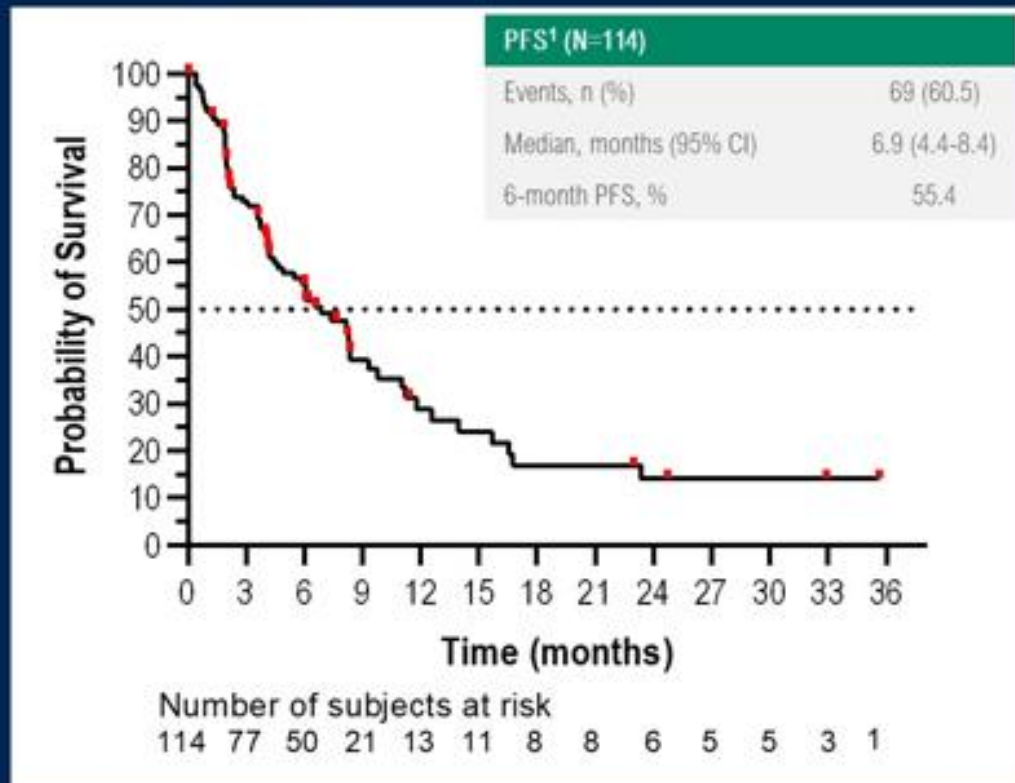
<sup>2</sup> Central assessment of PD-L1 TPS using Dako PD-L1 IHC 22C3 pharmDx for 87 patients.

<sup>3</sup> Central assessment as per footnote 1 for 87 patients. For 21 patients, local assessment was used due to non-evaluable central assessment results.

<sup>4</sup> 95% CIs calculated using Clopper-Pearson method.

# Efficacy – Interim Progression Free Survival<sup>1</sup> (PFS) – TACTI-002

## PFS<sup>1</sup> ITT (N=114)

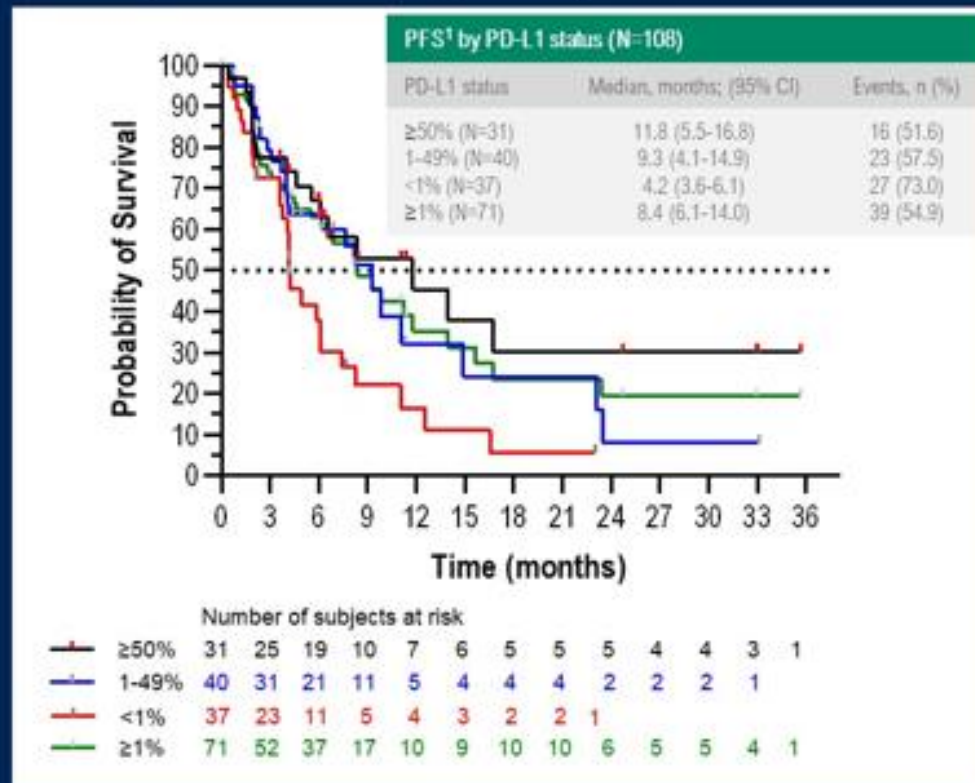


- Interim median PFS<sup>1</sup> in the ITT (unselected for PD-L1) was 6.9 (95% CI: 4.4.-8.4) months.

<sup>1</sup>by iRECIST.

<sup>2</sup>central (N=87) & local (N=21) as previously described on slide 9.

## PFS<sup>1</sup> by PD-L1 status<sup>2</sup> (N=108)



- Interim median PFS<sup>1</sup> in PD-L1 ≥1% was 8.4 (95% CI: 6.1-14.0) months and 11.8 (5.5-16.8) months in PD-L1 ≥50%.

Data cut-off date: April 15, 2022

## Overall survival from a phase II randomized study of ramucirumab plus pembrolizumab versus standard of care for advanced non-small cell lung cancer previously treated with immunotherapy—Lung-MAP non-matched sub-study S1800A

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<sup>1</sup>Cedars-Sinai Medical Center, Los Angeles, CA; <sup>2</sup>SWOG Statistics and Data Management Center & Fred Hutchinson Cancer Research Center, Seattle, WA; <sup>3</sup>Dartmouth-Hitchcock Norris Cotton Cancer Center, Lebanon, NH/Alliance for Clinical Trials in Cancer; <sup>4</sup>University of Pittsburgh Medical Center (UPMC) Hillman Cancer Center; <sup>5</sup>Missouri Baptist Medical Center, St. Louis, MO/Heartland NCORP; <sup>6</sup>IHA Hematology Oncology Consultants-Ann Arbor/Michigan CRC NCORP; <sup>7</sup>Novant Health Cancer Institute - Mount Airy/Southeast Clinical Oncology Research Consortium NCORP); <sup>8</sup>UC Davis Comprehensive Cancer Center, Sacramento, CA; <sup>9</sup>Yale University, New Haven, CT

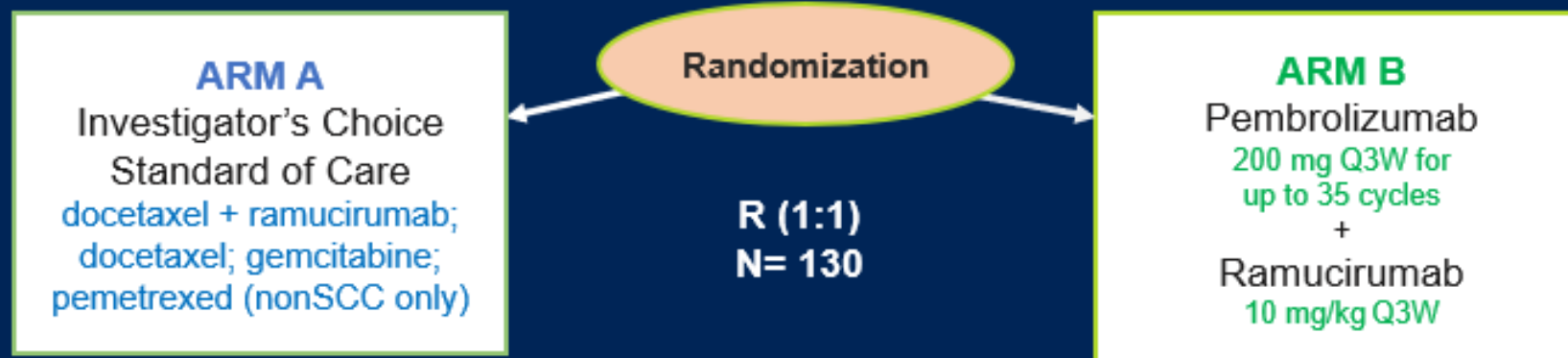
# S1800A Schema—Randomized Phase II trial

NCT03971474

**Stratified by** 1) PD-L1 expression, 2) histology, 3) intent to receive ramucirumab in standard of care arm

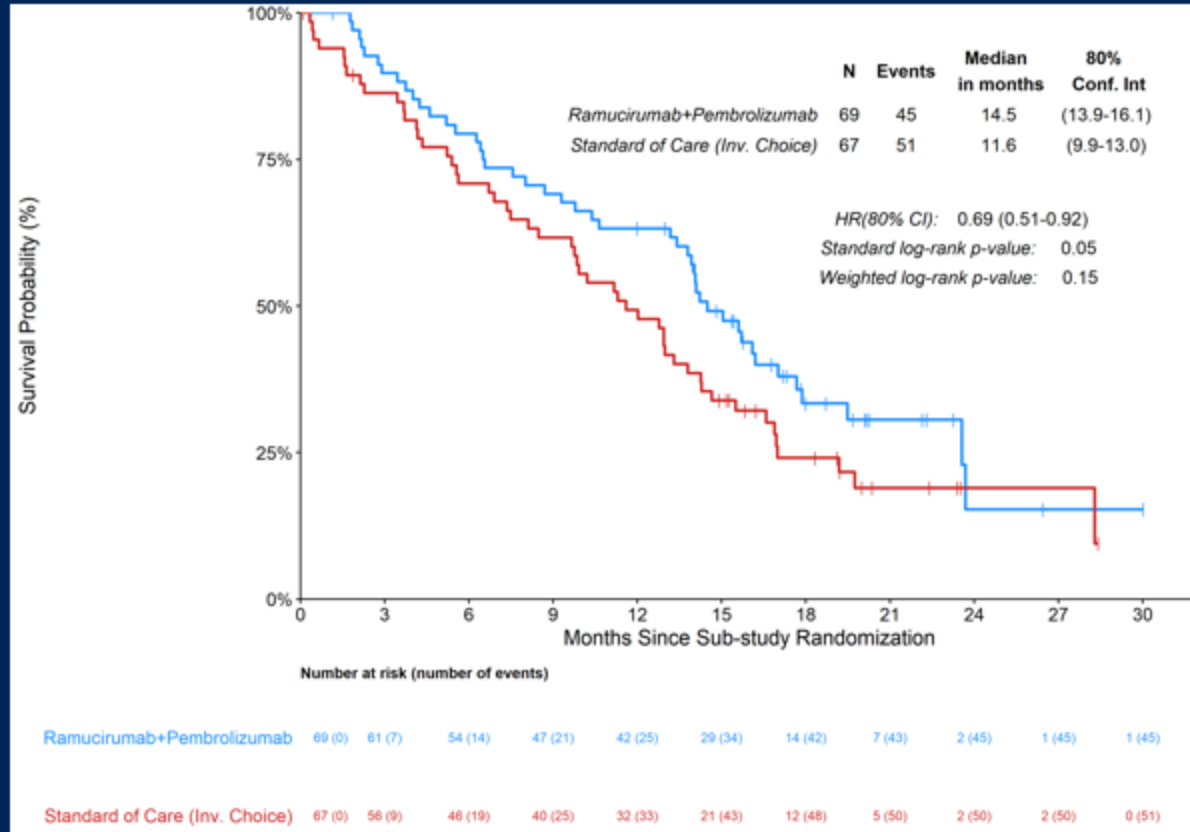
**Primary endpoint:** OS

**Secondary endpoints:** RR, DCR, DoR, PFS, Toxicities



**Key eligibility:** 1) Previously received both PD-1 or PD-L1 inhibitor therapy and platinum-based doublet chemotherapy either sequentially or combined, with PD on at least 84 days after initiation of ICI and platinum-based doublet therapy; 2) ECOG 0-1; 3) all patients met eligibility to receive ramucirumab

# Overall survival

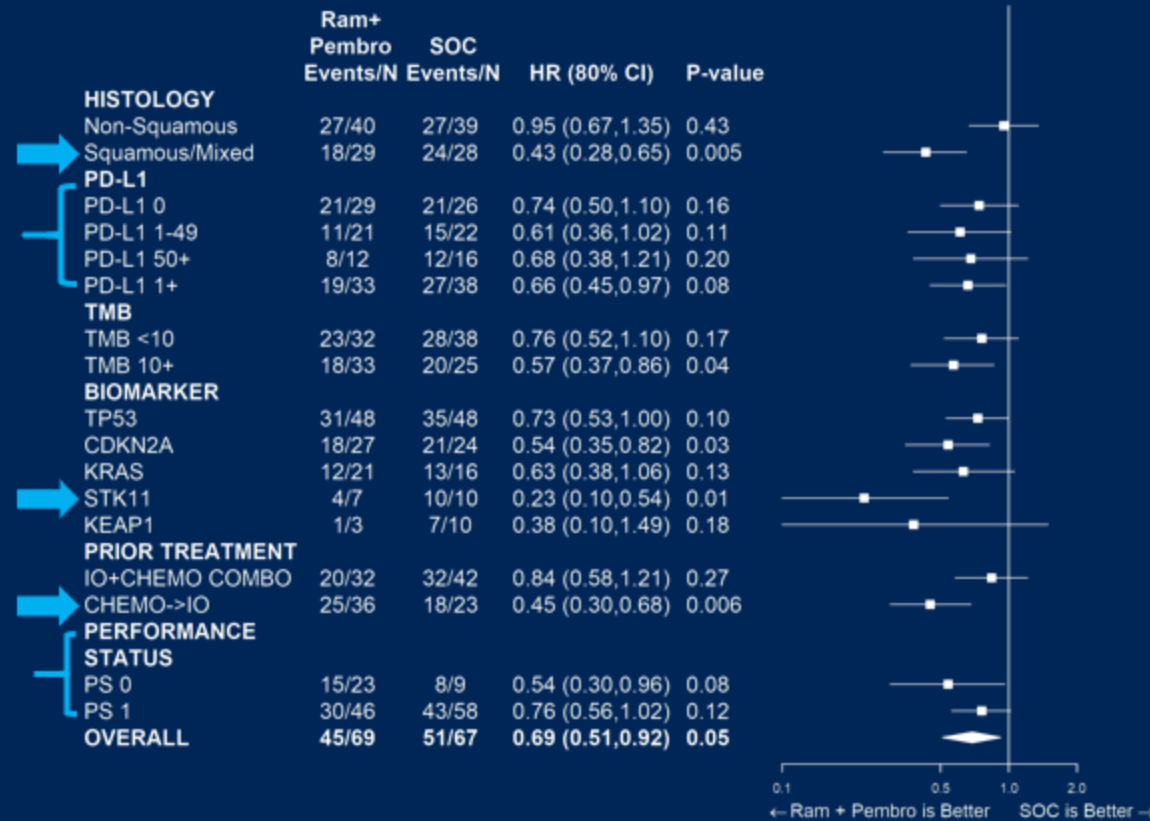


- Median OS for RP 14.5 months v. SOC 11.6 months
- HR= 0.69; SLR p-value 0.05

**Standard of care therapy received:**

- Docetaxel + Ramucirumab (n = 45)
- Docetaxel (n = 3)
- Gemcitabine (n = 12)
- Pemetrexed (n = 1)
- No treatment (n = 6)

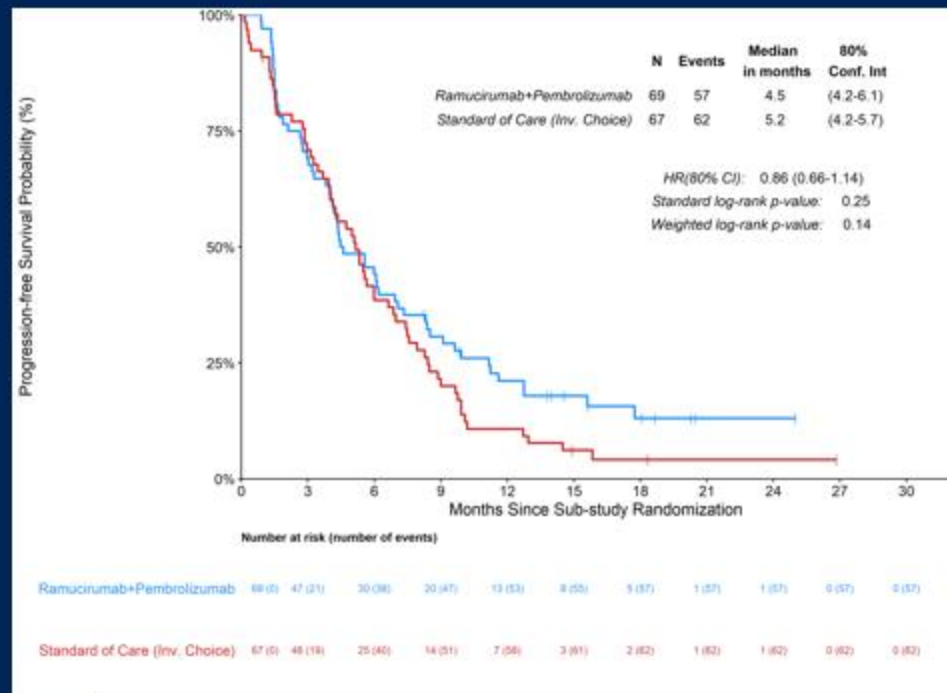
# Overall survival—subgroup analysis



- All subgroup HRs < 1
- HRs by PD-L1 does not appear to vary
- Pronounced benefit in SCC/mixed histology
- Benefit seen with PS 0 and 1
- Co-mutations did not affect OS improvement



# Progression free survival with subgroup analysis



	Ram+ Pembro	SOC	HR (80% CI)	P-value
<b>HISTOLOGY</b>				
Non-Squamous	34/40	34/39	0.95 (0.69, 1.29)	0.41
Squamous/Mixed	23/29	28/28	0.55 (0.38, 0.80)	0.02
<b>PD-L1</b>				
PD-L1 0	27/29	25/26	0.84 (0.58, 1.22)	0.28
PD-L1 1-49	16/21	22/22	0.53 (0.34, 0.81)	0.03
PD-L1 50+	8/12	12/16	0.86 (0.48, 1.55)	0.37
PD-L1 1+	24/33	34/38	0.67 (0.48, 0.95)	0.07
<b>TMB</b>				
TMB <10	29/32	36/38	0.91 (0.66, 1.26)	0.36
TMB 10+	24/33	23/25	0.61 (0.42, 0.89)	0.05
<b>BIOMARKER</b>				
TP53	39/48	43/48	0.80 (0.60, 1.06)	0.16
CDKN2A	22/27	24/24	0.49 (0.33, 0.74)	0.01
KRAS	16/21	15/16	0.65 (0.41, 1.04)	0.12
STK11	5/7	10/10	0.41 (0.19, 0.90)	0.07
KEAP1	2/3	10/10	0.42 (0.15, 1.15)	0.14
<b>PRIOR TREATMENT</b>				
IO+CHEMO COMBO	26/32	40/42	0.88 (0.64, 1.23)	0.31
CHEMO->IO	31/36	21/23	0.63 (0.44, 0.90)	0.05
<b>PERFORMANCE STATUS</b>				
PS 0	21/23	8/9	0.79 (0.46, 1.35)	0.28
PS 1	36/46	54/58	0.71 (0.54, 0.94)	0.06
<b>OVERALL</b>	<b>57/69</b>	<b>62/67</b>	<b>0.86 (0.66, 1.14)</b>	<b>0.25</b>

# **Cabozantinib Plus Atezolizumab or Cabozantinib Alone in Patients With Advanced Non-Small Cell Lung Cancer Previously Treated With an Immune Checkpoint Inhibitor: COSMIC-021 Study Cohorts 7 and 20**

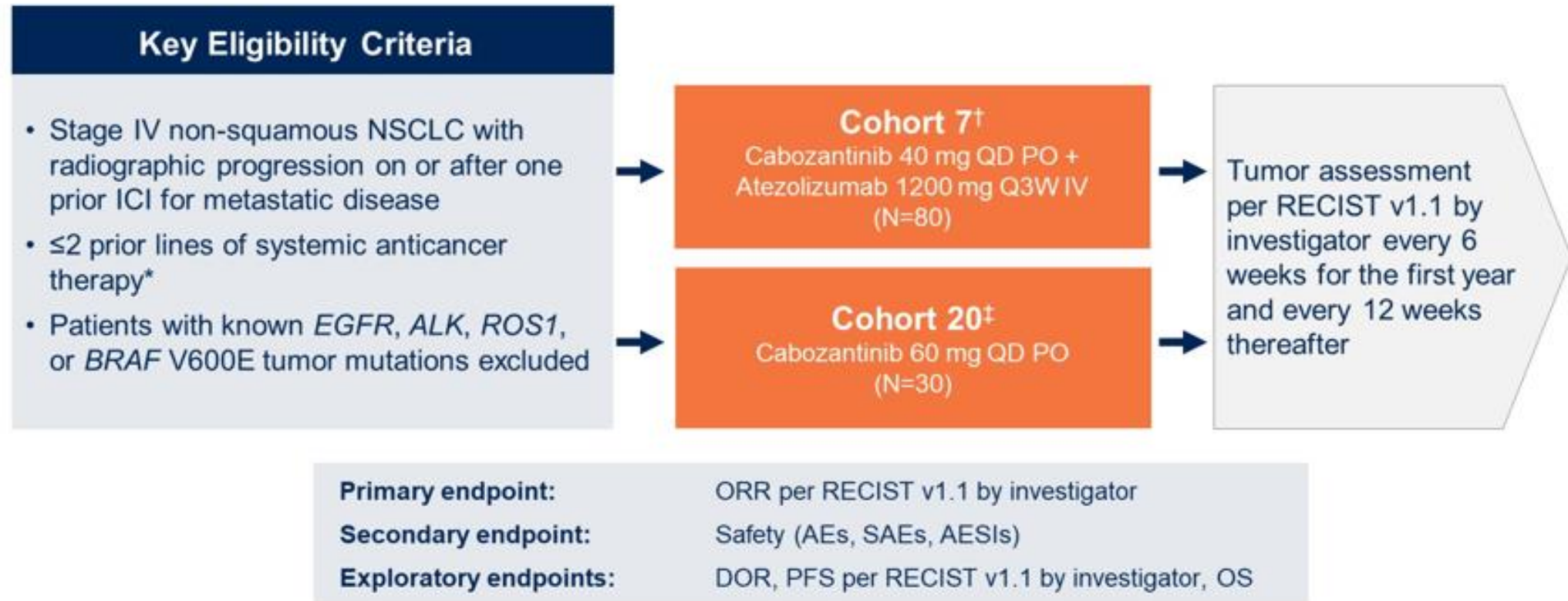
Joel W. Neal,<sup>1</sup> Armando Santoro,<sup>2</sup> Santiago Viteri,<sup>3\*</sup> Santiago Ponce Aix,<sup>4</sup> Bruno Fang,<sup>5</sup> Farah Louise Lim,<sup>6</sup> Ryan Gertzler,<sup>7</sup> Jerome Goldschmidt,<sup>8</sup> Polina Khrizman,<sup>9</sup> Erminia Massarelli,<sup>10</sup> Shiven Patel,<sup>11</sup> Sonam Puri,<sup>11</sup> Ramu Sudhagani,<sup>12</sup> Christian Scheffold,<sup>12</sup> Dominic Curran,<sup>12</sup> Enriqueta Felip<sup>13</sup>

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Abstract 9005

# COSMIC-021 Study Design for NSCLC Cohorts



\*Prior treatment with platinum-based chemotherapy was not required. <sup>†</sup>Patients were initially enrolled to cohort 7 (n=35). Following an initial assessment of clinical activity, subsequent patients were randomized between cohorts 7 and 20. <sup>‡</sup>Patients in cohort 20 may receive combination therapy after radiographic disease progression per RECIST v1.1 by the investigator.  
SAEs, serious adverse events; AESIs, adverse events of special interest

# Efficacy Summary

	Cabozantinib + Atezolizumab (N=81)				Cabozantinib (N=31)*
	All patients (N=81)	PD-L1 <1% (n=19)	PD-L1 ≥1% (n=41)	PD-L1 unknown (n=21)	
ORR, n (%)	15 (19)	2 (11)	8 (20)	5 (24)	2 (6)
Best overall response, n (%)					
Complete response	0	0	0	0	0
Partial response	15 (19)	2 (11)	8 (20)	5 (24)	2 (6)
Stable disease	50 (62)	12 (63)	25 (61)	13 (62)	18 (58)
Progressive disease	13 (16)	3 (16)	8 (20)	2 (10)	6 (19)
Missing / not evaluable	3 (4)	2 (11)	0	1 (5)	5 (16)
Disease control rate, n (%)	65 (80)	14 (74)	33 (80)	18 (86)	20 (65)
PFS, mo (95% CI)	4.5 (3.5–5.6)	4.0 (2.6–5.6)	4.7 (2.7–5.6)	5.4 (2.9–10.9)	3.4 (1.4–5.6)
Median DOR, mo (95% CI)	5.8 (4.2–6.9)	3.4 (2.6–NE)	6.5 (3.5–NE)	6.2 (4.2–NE)	10.6 (6.3–NE)†
OS, mo (95% CI)	13.8 (7.2–15.7)	6.8 (5.1–15.4)	10.4 (5.9–17.1)	17.4 (9.4–NE)	9.4 (4.5–11.7)

\*Eight patients in the cabozantinib alone cohort were crossed over to receive cabozantinib plus atezolizumab after experiencing disease progression; the efficacy data of these patients are not reported in this presentation except for OS. †The DOR of the 2 responders was 6.3 and 14.8 months.

# Safety Summary

	Cabozantinib + Atezolizumab (N=81)	Cabozantinib* (N=31)
Patients on study treatment at data cut-off, n (%)	6 (7)	2 (6)
Duration of exposure, median (range), months		
Cabozantinib + Atezolizumab <sup>†</sup>	5.2 (0.3–28.8)	4.8 (0.7–19.4)
Cabozantinib	5.2 (0.3–28.8)	4.8 (0.7–19.4)
Atezolizumab	4.6 (0–28.0)	1.6 (0–11.8)
AEs leading to cabozantinib dose reductions, n (%)	32 (40)	18 (58)
AEs leading to cabozantinib dose hold, n (%)	60 (74)	25 (81)
AEs leading to atezolizumab dose delay, n (%)	41 (51)	2 (6)
Discontinuation due to TRAEs, n (%)		
Cabozantinib	11 (14)	3 (10)
Atezolizumab	8 (10)	1 (3)
Either	13 (16)	3 (10)
Both	5 (6)	1 (3)

\*Includes the 8 patients who crossed over to receive cabozantinib + atezolizumab therapy after experiencing disease progression. In patients who were treated with cabozantinib only (n=23), the duration of exposure was 3.5 months (range, 0.7–16.4) and rates of AEs leading to cabozantinib dose reductions and holds, and discontinuation due to TRAEs were similar to all patients.

<sup>†</sup>The duration between the day of the first dose of any study treatment and the day of discontinuation of the last component of study treatment.

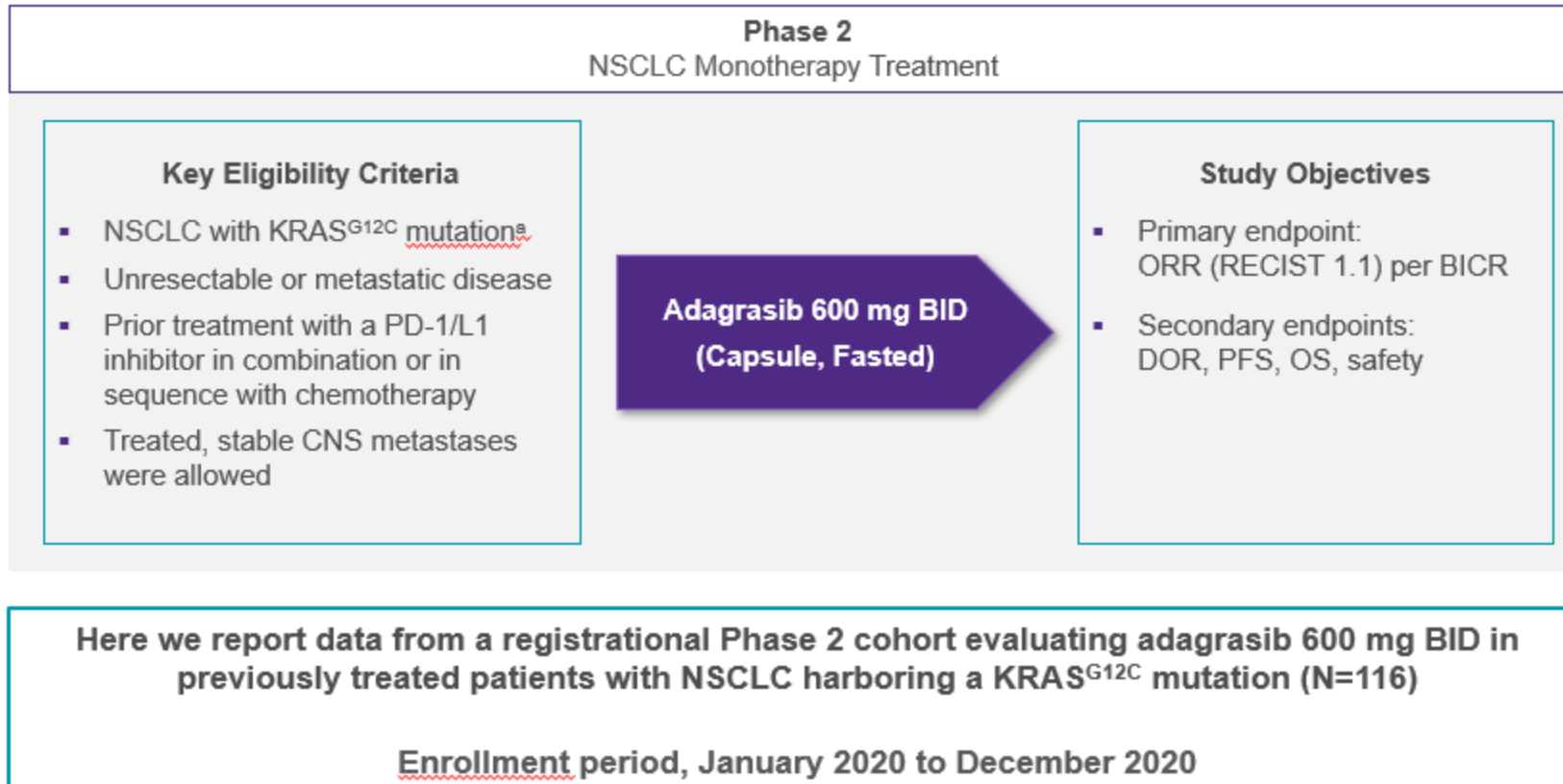
Adagrasib in Non-Small-Cell Lung Cancer  
Harboring a KRAS<sup>G12C</sup> Mutation

Pasi A. Jänne, M.D., Ph.D., Gregory J. Riely, M.D., Ph.D.,  
Shirish M. Gadgeel, M.D., Rebecca S. Heist, M.D., M.P.H.,  
Sai-Hong Ignatius Ou, M.D., Ph.D., Jose M. Pacheco, M.D., Melissa L. Johnson, M.D.,  
Joshua K. Sabari, M.D., Konstantinos Leventakos, M.D., Ph.D.,  
Edwin Yau, M.D., Ph.D., Lyudmila Bazhenova, M.D., Marcelo V. Negrao, M.D.,  
Nathan A. Pennell, M.D., Ph.D., Jun Zhang, M.D., Ph.D., Kenna Anderes, Ph.D.,  
Hina Der-Torossian, M.D., Tian Khoth, Ph.D., Karen Velastegui, B.Sc.,  
Xiaohong Yan, Ph.D., James G. Christensen, Ph.D., Richard C. Chao, M.D.,  
and Alexander I. Spira, M.D., Ph.D.

# KRYSTAL-1: Activity and Safety of Adagrasib (MRTX849) in Patients with Advanced/Metastatic Non-Small Cell Lung Cancer Harboring a KRAS<sup>G12C</sup> Mutation

Alexander I. Spira<sup>1</sup>, Gregory J. Riely<sup>2</sup>, Shirish M. Gadgeel<sup>3</sup>, Rebecca S. Heist<sup>4</sup>, Sai-Hong Ignatius Ou<sup>5</sup>, Jose M. Pacheco<sup>6</sup>, Melissa L. Johnson<sup>7</sup>, Joshua K. Sabari<sup>8</sup>, Konstantinos Leventakos<sup>9</sup>, Edwin Yau<sup>10</sup>, Lyudmila Bazhenova<sup>11</sup>, Marcelo V. Negrao<sup>12</sup>, Nathan A. Pennell<sup>13</sup>, Jun Zhang<sup>14</sup>, Karen Velastegui<sup>15</sup>, James G. Christensen<sup>15</sup>, Xiaohong Yan<sup>15</sup>, Kenna Anderes<sup>15</sup>, Richard C. Chao<sup>15</sup>, Pasi A. Jänne<sup>16</sup>

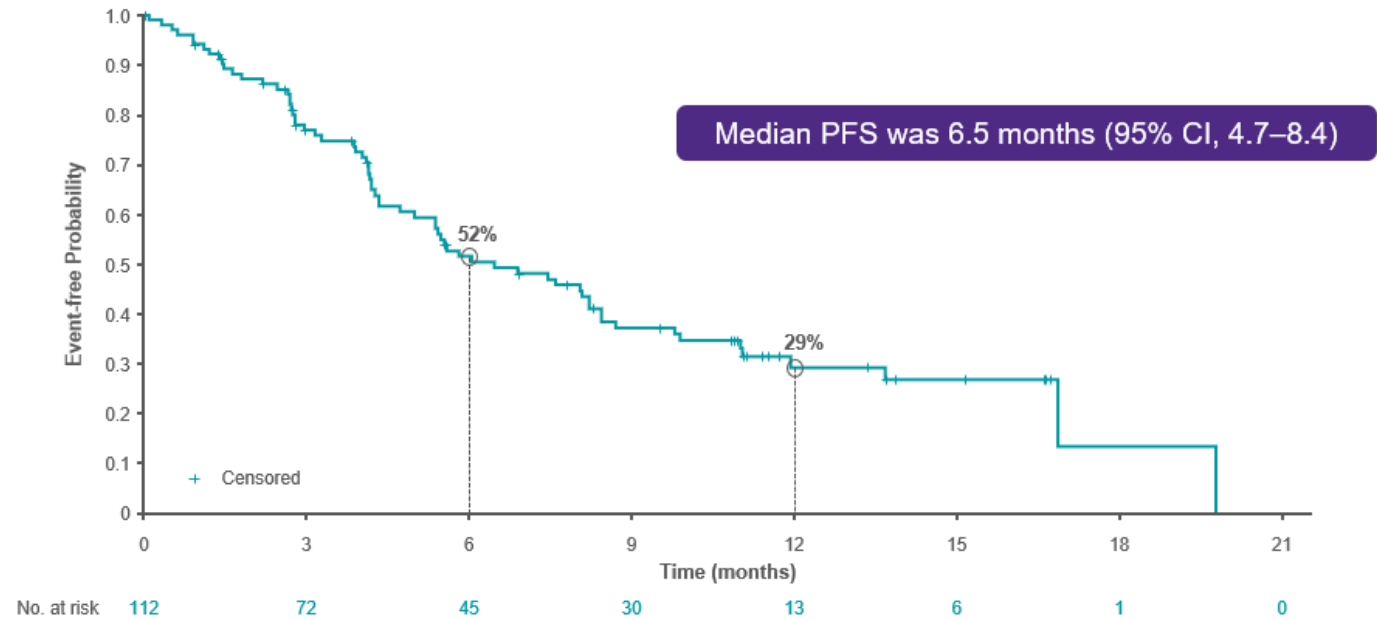
## KRYSTAL-1 (849-001) Phase 2 Cohort A Study Design



<sup>a</sup>KRAS<sup>G12C</sup> mutation detected in tumor tissue by sponsor-approved local laboratory testing  
ClinicalTrials.gov. NCT03785249

# KRYSTAL-1: Efficacy outcomes

Efficacy Outcome	Adagrasib Monotherapy (n=112) <sup>a</sup>
Objective response rate, n (%)	48 (43%)
Best overall response, n (%)	
Complete response	1 (1%)
Partial response	47 (42%)
Stable disease	41 (37%)
Progressive disease	6 (5%)
Not evaluable	17 (15%)
Disease control rate, n (%)	89 (80%)





# Treatment-Related Adverse Events

Adagrasib Monotherapy (N=116) Capsule, Fasted		
TRAEs, n (%)	Any Grade	Grades 3–4
Any TRAEs	113 (97%)	50 (43%)
<b>Most frequent TRAEs<sup>a</sup>, n (%)</b>		
Diarrhea	73 (63%)	1 (<1%)
Nausea	72 (62%)	5 (4%)
Vomiting	55 (47%)	1 (<1%)
Fatigue	47 (41%)	5 (4%)
ALT increase	32 (28%)	5 (4%)
Blood creatinine increase	30 (26%)	1 (<1%)
AST increase	29 (25%)	4 (3%)
Decreased appetite	28 (24%)	4 (3%)

- Grade 1–2 TRAEs occurred in 53% of patients
- There were 2 grade 5 TRAEs (cardiac failure [n=1] and pulmonary hemorrhage [n=1])
- TRAEs led to dose reduction in 60/116 (52%) patients<sup>b</sup> and to dose interruption in 71/116 (61%) patients
- TRAEs led to discontinuation of study drug in 8/116 (7%) patients

<sup>a</sup>Occurring in >20% of patients (any grade), TRAEs occurring in >15% and <20% of patients were anemia (21 [18%]), amylase increase (20 [17%]) and QT prolongation (19 [16%]);

<sup>b</sup>Percentage of patients who experienced dose reductions: 400 mg BID (33%), 600 mg QD (11%), 200 mg BID/400 mg QD (14%)

Data as of October 15, 2021 (median follow-up: 12.9 months)

# KRYSTAL-1 Trial – activity of adagrasib in patients with active brain metastases

## Activity of Adagrasib (MRTX849) in Patients with KRAS<sup>G12C</sup>-Mutated NSCLC and Active, Untreated CNS Metastases in the KRYSTAL-1 Trial

Joshua K. Sabari,<sup>1</sup> Alexander I. Spira,<sup>2</sup> Rebecca S. Helst,<sup>3</sup> Pasi A. Jänne,<sup>4</sup> Jose M. Pacheco,<sup>5</sup> Jared Weiss,<sup>6</sup> Shirish M. Gadgil,<sup>7</sup> Hiram Der-Torossian,<sup>8</sup> Karen Velastegui,<sup>9</sup> Thian Kheoh,<sup>8</sup> James G. Christensen,<sup>8</sup> Marcelo V. Negrao<sup>9</sup>

<sup>1</sup>Perlmutter Cancer Center, New York University Langone Health, New York, NY; <sup>2</sup>Virginia Cancer Specialists, Fairfax, VA; <sup>3</sup>US Oncology Research, The Woodlands, TX; <sup>4</sup>NEXT Oncology, VA; <sup>5</sup>Massachusetts General Hospital, Boston, MA; <sup>6</sup>Dana-Farber Cancer Institute, Boston, MA; <sup>7</sup>Division of Medical Oncology, Department of Medicine, University of Colorado Anschutz Medical Campus, Aurora, CO; <sup>8</sup>Prebeger Comprehensive Cancer Center, University of North Carolina-Chapel Hill, Chapel Hill, NC; <sup>9</sup>Henry Ford Cancer Institute, Detroit, MI; <sup>10</sup>Miral Therapeutics, Inc., San Diego, CA; <sup>11</sup>Department of Thoracic/Head & Neck Medical Oncology, MD Anderson Cancer Center, University of Texas, Houston, TX

### Key Eligibility Criteria

- Solid tumors with KRAS<sup>G12C</sup> mutation<sup>a</sup>
- Unresectable or metastatic disease
- Active, untreated CNS metastases<sup>b</sup>
  - Asymptomatic, neurologically stable brain lesions, including focal leptomeningeal disease, and cerebellar metastases, but excluding brainstem (midbrain, pons, and medulla) metastases

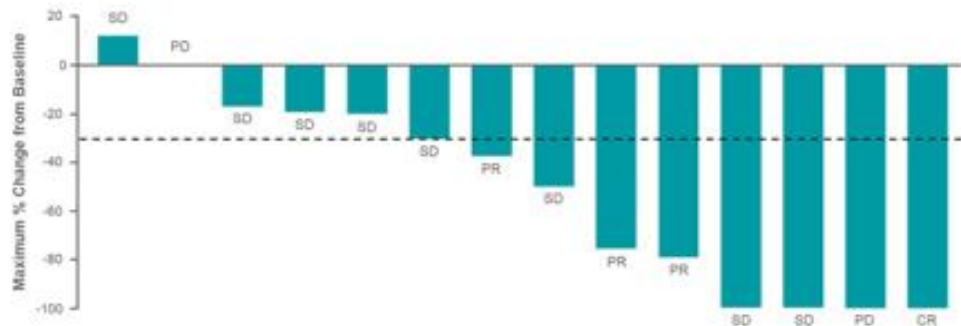
Adagrasib 600 mg BID  
(Capsule, Fasted)

### Study Objectives

- Safety
- Intracranial and systemic activity via BICR (mRANO-BM,<sup>c</sup> RECIST 1.1)
- Adagrasib concentration in CSF (measured when feasible)

## Key Findings:

- Intracranial ORR 32% (6 of 19 patients), DCR 84% (16 of 19 patients)
- Systemic ORR 37%
- Most responses were concordant
- Median intracranial DOR not reached, PFS 4.2 months
- No new safety signals



# Summary:

## Efficacy KRAS G12C inhibitor: Adagrasib vs. Sotorasib

Parameter	Adagrasib (KRYSTAL-1)	Sotorasib (CodeBreakK100) <sup>1</sup>
<b>N=</b>	116 (112 for efficacy)	126 (124 for efficacy)
<b>Prior Platinum Chemo + IO</b>	<b>98%</b>	<b>81%</b>
<b>ORR</b>	<b>43%</b> (95% CI 33.5-52.6)	<b>37.1%</b> (95% CI 28.6-46.2)
<b>DCR</b>	<b>80%</b> (95% CI 70.8-86.5)	<b>80.6%</b> (95% CI 72.6-87.2)
<b>TTR, median (range)</b>	<b>1.4 mo</b> (0.9-7.2)	<b>1.4 mo</b> (1.2-10.1)
<b>DOR, median</b>	<b>8.5 mo</b> (95% CI 6.2-13.8)	<b>11.1 mo</b> (95% CI 6.9-NE)
<b>PFS, median</b>	<b>6.5 mo</b> (95% CI 4.7-8.4)	<b>6.8 mo</b> (95% CI 5.1-8.2)
<b>OS, median</b>	<b>12.6 mo</b> (95% CI 9.2-19.2)	<b>12.5 mo<sup>2</sup></b> (95% CI 10.0-NE)
<b>Follow-up, median</b>	12.9 mo	15.3 mo <sup>2</sup>

1= Skoulidis et al. N Engl J Med. 2021 Jun 24;384(25):2371-2381; 2=Pooled phase 1/2 of 174 pts with median f/u 24.9 mo, median OS 12.5 mo (95% CI 10.0-17.8), 1-year OS 50.8%, 2-year OS 32.5% (Dy G et al. AACR 2022)

# **Amivantamab and lazertinib in patients with EGFR-mutant non-small cell lung cancer (NSCLC) after progression on osimertinib and platinum-based chemotherapy: Updated results from CHRYSALIS-2**

Catherine A. Shu,<sup>1</sup> Koichi Goto,<sup>2</sup> Yuichiro Ohe,<sup>3</sup> Benjamin Besse,<sup>4</sup> Se-Hoon Lee,<sup>5</sup> Yongsheng Wang,<sup>6</sup> Frank Griesinger,<sup>7</sup> James Chih-Hsin Yang,<sup>8</sup> Enriqueta Felip,<sup>9</sup> Rachel E. Sanborn,<sup>10</sup> Reyes Bernabe Caro,<sup>11</sup> Joshua C. Curtin,<sup>12</sup> Jun Chen,<sup>12</sup> Janine Mahoney,<sup>12</sup> Leonardo Trani,<sup>12</sup> Joshua M. Bauml,<sup>12</sup> Meena Thayu,<sup>12</sup> Roland E. Knoblauch,<sup>12</sup> Byoung Chul Cho<sup>13</sup>

<sup>1</sup>Columbia University Medical Center, New York, NY, USA; <sup>2</sup>National Cancer Center Hospital East, Kashiwa, Japan; <sup>3</sup>National Cancer Center Hospital, Tokyo, Japan; <sup>4</sup>Paris-Saclay University, Institut Gustave Roussy, Villejuif, France; <sup>5</sup>Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea; <sup>6</sup>Institute of Clinical Trial Center and Cancer Center, West China Hospital, Sichuan University, Chengdu, China; <sup>7</sup>Pius-Hospital, University of Oldenburg, Oldenburg, Germany; <sup>8</sup>National Taiwan University Cancer Center, Taipei, Taiwan; <sup>9</sup>Vall d'Hebron University Hospital and Vall d'Hebron Institute of Oncology, Barcelona, Spain; <sup>10</sup>Earle A. Chiles Research Institute, Providence Cancer Institute, Portland, OR, USA; <sup>11</sup>Hospital Universitario Virgen Del Rocio, Seville, Spain; <sup>12</sup>Janssen R&D, Spring House, PA, USA; <sup>13</sup>Yonsei Cancer Center, Yonsei University College of Medicine, Seoul, Republic of Korea

# CHRYSALIS-2 (ClinicalTrials.gov Identifier: NCT04077463) Study Design

## Dose Expansion Cohorts

RP2CD: Lazertinib 240 mg PO +  
Amivantamab 1050 mg (1400 mg for ≥80 kg) IV

**Cohort A:** EGFR ex19del or L858R  
Post-osimertinib and platinum-based chemotherapy (n=162)

**Cohort B:** EGFR ex20ins  
Post-standard of care and platinum-based chemotherapy

**Cohort C:** Uncommon EGFR mutations  
Treatment naïve or post-1<sup>st</sup> or 2<sup>nd</sup> generation EGFR TKI

**Cohort D:** EGFR ex19del or L858R  
Post-osimertinib, chemotherapy naïve, biomarker validation

## Endpoints

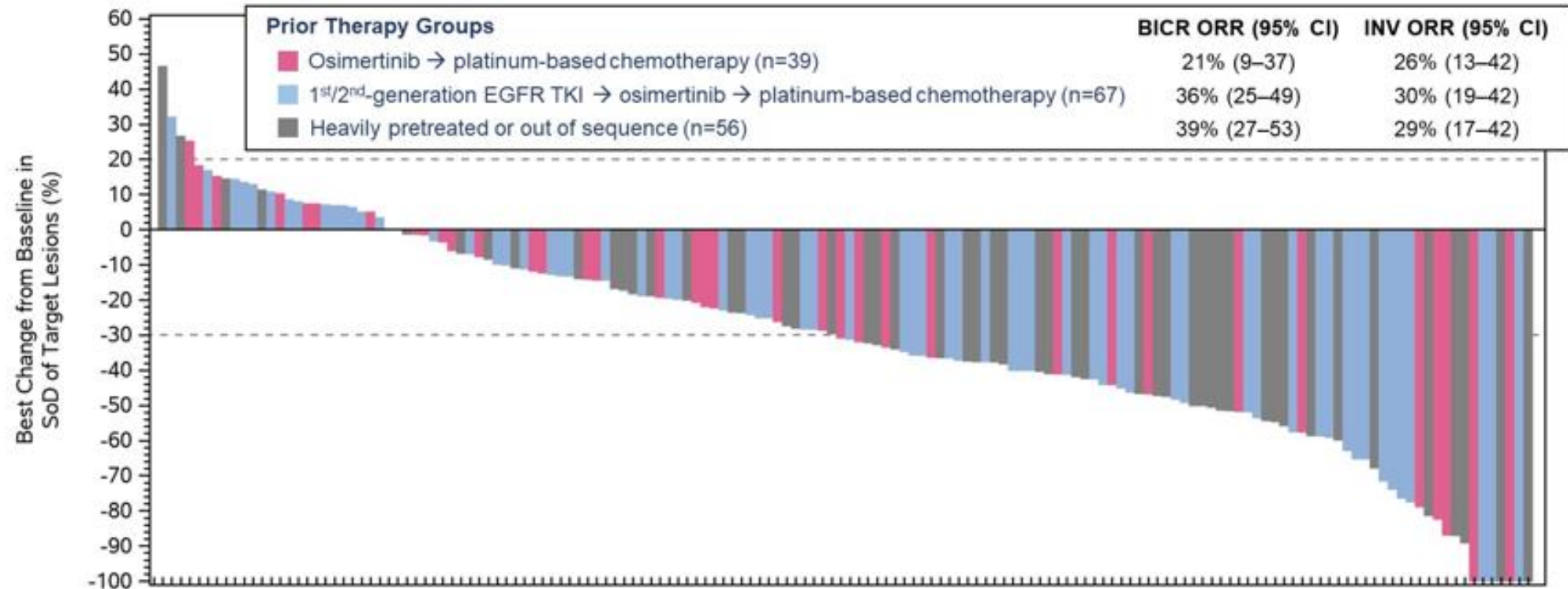
- Overall response rate (primary)
- Duration of response
- Clinical benefit rate<sup>a</sup>
- Progression-free survival
- Overall survival
- Adverse events

Here we present updated **safety** and **efficacy** results  
of the **amivantamab and lazertinib combination** from **fully enrolled Cohort A**

<sup>a</sup>Percentage of patients with confirmed response or durable stable disease (duration of ≥11 weeks).

EGFR, epidermal growth factor receptor; ex19del, exon 19 deletion; ex20ins, exon 20 insertion; IV, intravenous; PO, per oral; RP2CD, recommended phase 2 combination dose; TKI, tyrosine kinase inhibitor.

## Best Antitumor Response and ORR by Prior Therapy Group



- 10 efficacy-evaluable patients did not have any evaluable post-baseline target lesion measurements

BICR, blinded independent central review; CI, confidence interval; EGFR, epidermal growth factor receptor; INV, investigator-assessed; ORR, overall response rate; SoD, sum of diameters; TKI, tyrosine kinase inhibitor.

# Safety Profile of Amivantamab + Lazertinib

TEAEs (≥15%) by Preferred Term, n (%)	n=162	
	All grade	Grade ≥3
<b>EGFR-related</b>		
Rash	71 (44)	4 (2)
Dermatitis acneiform	55 (34)	8 (5)
Paronychia	84 (52)	6 (4)
Stomatitis	63 (39)	2 (1)
Diarrhea	36 (22)	1 (1)
Pruritus	30 (19)	1 (1)
<b>MET-related</b>		
Hypoalbuminemia	70 (43)	11 (7)
Peripheral edema	43 (27)	2 (1)
<b>Other</b>		
Infusion related reaction	108 (67)	13 (8)
Increased ALT	46 (28)	5 (3)
Nausea	40 (25)	3 (2)
Decreased appetite	39 (24)	1 (1)
Constipation	38 (23)	0
Asthenia	37 (23)	7 (4)
Dry skin	37 (23)	0
Vomiting	36 (22)	1 (1)
Increased AST	35 (22)	3 (2)
Dyspnea	33 (20)	13 (8)
Thrombocytopenia	33 (20)	2 (1)
Fatigue	32 (20)	4 (2)
Headache	29 (18)	2 (1)
Anemia	27 (17)	4 (2)
Hypocalcemia	26 (16)	1 (1)

- Individual AEs were mostly grade 1-2
- Dose interruptions, reductions, and discontinuations of both amivantamab and lazertinib due to toxicity were seen in 57 (35%), 15 (9%), and 12 (7%) patients, respectively
- Pneumonitis/ILD was seen in 11 (7%) patients, of which 6 (4%) were grade ≥3 (no grade 5)
- Cumulative grouped rash-related AEs<sup>a</sup> occurred in 129 (80%) patients, with 17 grade ≥3 (10%)
- Safety profile consistent with what was previously reported; no new safety signals identified

<sup>a</sup>Rash-related terms include rash, dermatitis acneiform, acne, dermatitis, drug eruption, erythema, erythema multiforme, folliculitis, macule, papule, pustule, rash erythematous, rash macular, rash maculo-papular, rash pustular, rash papular, rash pruritic, rash vesicular, skin exfoliation, and skin lesion.

AE, adverse events; ALT, alanine aminotransferase; AST, aspartate aminotransferase; EGFR, epidermal growth factor receptor; TEAE, treatment-emergent adverse events.

## Abstract 9013

### Phase 1/1b study of telisotuzumab vedotin (Teliso-V) + osimertinib (Osi), after failure on prior Osi, in patients with advanced, c-Met overexpressing, *EGFR*-mutated non-small cell lung cancer (NSCLC)

Presenter: Jonathan W. Goldman

#### Methods:

Metastatic *EGFR*-mutated,

c-Met overexpression

Progressed on prior Osimertinib

#### Treatment:

Teliso-V (IV Q2W) + Osi (oral; 80 mg QD).

Teliso-V + Osi is well tolerated with an ORR of 58% (67% at 1.9 mg/kg) in pts with c-Met OE NSCLC who progressed on prior Osi. Clinical trial information: NCT02099058.

		N	ORR,* n (%) [95% CI]
Dose	1.6 mg/kg	7	3 (43) [10, 82]
	1.9 mg/kg	12	8 (67) [35, 90]
	Total	19	11 (58) [34, 80]
c-Met level	High (≥50%, 3+ staining)	10	5 (50) [19, 81]
	Intermediate (25–49%, 3+ staining)	8	5 (63) [25, 92]
	Total	18 <sup>†</sup>	10 (56) [31, 79]
<i>EGFR</i> mutation	L858R	9	5 (56) [21, 86]
	Del19	9	6 (67) [30, 93]
	Total	19 <sup>‡</sup>	11 (58) [34, 80]

\*RECIST v1.1; data not mature for duration of response and progression-free survival. <sup>†</sup>c-Met IHC score < 25% 3+, n = 1. <sup>‡</sup>G719S mutation, n = 1.





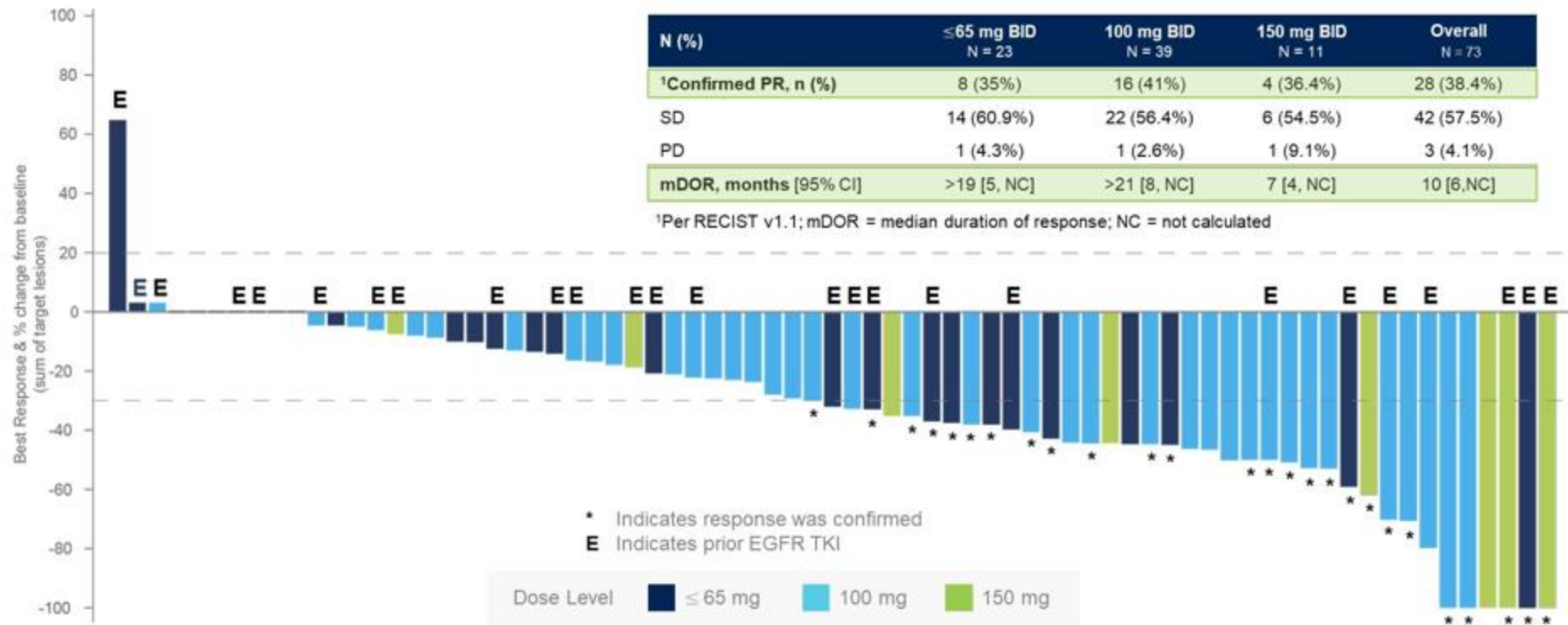
# Phase 1/2a Study of CLN-081 in NSCLC Patients with EGFR Exon 20 Insertion (ex20ins) Mutations

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Helena Yu<sup>1</sup>, Daniel Shao-Weng Tan<sup>2</sup>, Egbert F. Smit<sup>3</sup>, Alexander I. Spira<sup>4</sup>, Ross A. Soo<sup>5</sup>, Danny Nguyen<sup>6</sup>, Victor Ho-FunLee<sup>7</sup>, James Chih-Hsin Yang<sup>8</sup>, Vamsidhar Velcheti<sup>9</sup>, John M. Wrangle<sup>10</sup>, Mark A. Socinski<sup>11</sup>, Marianna Koczywas<sup>12</sup>, David Witter<sup>13</sup>, Asher Page<sup>13</sup>, Leigh Zawal<sup>13</sup>, John E. Janik<sup>13</sup>, Zofia Piotrowska<sup>14</sup>

<sup>1</sup>Memorial Sloan Kettering Cancer Center; <sup>2</sup>National Cancer Centre Singapore; <sup>3</sup>The Netherlands Cancer Institute; <sup>4</sup>Virginia Health Specialists; <sup>5</sup>National University Hospital; <sup>6</sup>City of Hope National Medical Center; <sup>7</sup>Queen Mary Hospital, The University of Hong Kong; <sup>8</sup>National Taiwan University Hospital and National Taiwan University Cancer Center; <sup>9</sup>Cleveland Clinic Foundation; <sup>10</sup>Johns Hopkins University School of Medicine; <sup>11</sup>AdventHealth Cancer Institute; <sup>12</sup>Department of Medical Oncology and Therapeutics Research, City of Hope; <sup>13</sup>Cullinan Oncology, LLC; <sup>14</sup>Massachusetts General Hospital

## CLN-081-001: Best percentage change from baseline in target lesion dimensions and confirmed response by dose level



## Key comparisons: *EGFR ex20ins* trials

	Amivantamab <sup>1</sup>	Mobocertinib <sup>2</sup>	CLN-081 <sup>3</sup>
<b>Study</b>	CHRYSALIS Phase I expansion (n=81)	Pit-Pre-treated Phase II (n=114) EXCLAIM Phase II (n=96)	Phase I (n=39)
<b>Drug</b>	Bispecific IgG antibody	Pyrimidine-based small molecule	Pyrimidine-based small molecule
<b>Dose</b>	1050 mg / 1400 mg (if > 80 kg)	160 mg OD	100 mg/150 mg BID
<b>Schedule</b>	Intravenous, q1wk C1, q2wk C2	Oral, Daily	Oral, Twice daily
<b>Efficacy</b>	ORR 40% (29-51) PFS 8.3 m (6.5-10.9) DoR 11.1 m (6.9-NR)	ORR 28% (20-37) PFS 7.3 m (5.5-9.2) DoR 17.5 m (7.4-20.3)	ORR 38.4% PFS 10 m (6-12) DoR 10 m (6-NR)
<b>Toxicity (at RP2D)</b>	83% G1-2 rash (4% G3) 63% G1-2 Infusion reactions (3% G3) 44% G1-2 paronychia (1%G3) 24% G1-2 hypoalbumin (3% G3) 9% G1-2 diarrhoea (4% G3) 18% peripheral edema (2% G3)  13% dose reductions	45% G1-2 rash/ 18% acneiform/ 14% maculopapular; (2% G3) 38% G1-2 paronychia (1% G3) 23% G1-2 Creatinine rise (2% G3) 70% G1-2 diarrhoea (21% G3) 18% G1-2 anaemia (1% G3)  25% dose reductions	82% G1-2 rash (no G3) 36% G1-2 diarrhoea 31% G1-2 paronychia 3% G3 anaemia/ AST elevation  13% dose reductions
<b>Potential liabilities</b>	? CNS activity Infusion reactions 93% C1 Long term <i>i.v.</i> infusion	CNS activity (38% intracranial PD in all patients who progressed) ? Long term chronic AE	? Long term chronic AE ? CNS activity

<sup>1</sup>Park K et al, JCO 2021; <sup>2</sup>Zhou C et al, JAMA Onc 2021; <sup>3</sup>Yu et al. ASCO 2022

PRESENTED BY:

Dr Daniel SW Tan, National Cancer Centre Singapore

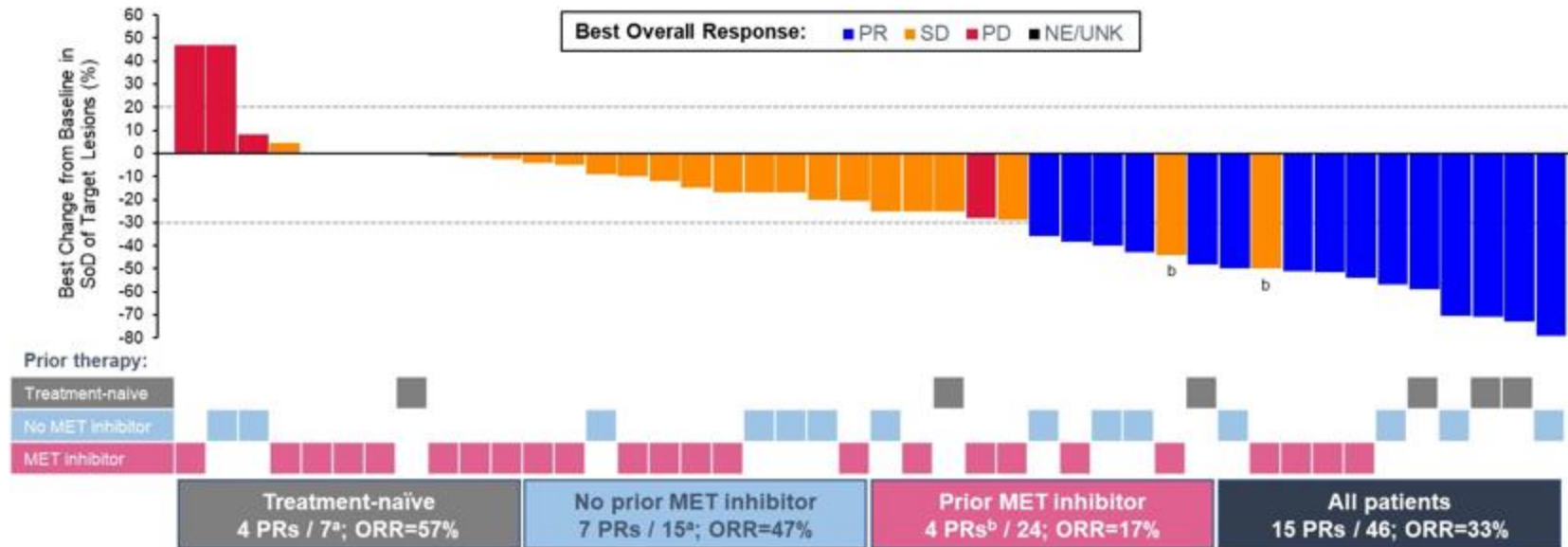
# Amivantamab in NSCLC patients with MET exon 14 skipping mutation: Updated results from the CHRYSALIS study

Matthew G. Krebs,<sup>1</sup> Alexander I. Spira,<sup>2</sup> Byoung Chul Cho,<sup>3</sup> Benjamin Besse,<sup>4</sup> Jonathan W. Goldman,<sup>5</sup> Pasi A. Jänne,<sup>6</sup> Zhiyong Ma,<sup>7</sup> Aaron S. Mansfield,<sup>8</sup> Anna Minchom,<sup>9</sup> Sai-Hong Ignatius Ou,<sup>10</sup> Ravi Salgia,<sup>11</sup> Zhijie Wang,<sup>12</sup> Casilda Llacer Perez,<sup>13</sup> Grace Gao,<sup>14</sup> Joshua C. Curtin,<sup>14</sup> Amy Roshak,<sup>14</sup> Robert W. Schnepf,<sup>14</sup> Meena Thayu,<sup>14</sup> Roland E. Knoblauch,<sup>14</sup> Chee Khoon Lee<sup>15</sup>

<sup>1</sup>Division of Cancer Sciences, The University of Manchester and The Christie NHS Foundation Trust, Manchester, UK; <sup>2</sup>Virginia Cancer Specialists Research Institute, US Oncology Research, Fairfax VA; <sup>3</sup>Yonsei Cancer Center, Yonsei University College of Medicine, Seoul, Republic of Korea; <sup>4</sup>Institut Gustave Roussy, Villejuif, France; <sup>5</sup>David Geffen School of Medicine at UCLA, Los Angeles, CA; <sup>6</sup>Dana Farber Cancer Institute, Boston, MA; <sup>7</sup>Henan Cancer Hospital, Zhengzhou, China; <sup>8</sup>Mayo Clinic, Rochester, MN; <sup>9</sup>Drug Development Unit, Royal Marsden/Institute of Cancer Research, Sutton, UK; <sup>10</sup>University of California Irvine, Orange, CA; <sup>11</sup>City of Hope, Duarte, CA; <sup>12</sup>Cancer Hospital Chinese Academy of Medical Sciences, Beijing, China; <sup>13</sup>Medical Oncology Intercenter Unit, Regional and Virgen de la Victoria University Hospitals, IBIMA, Málaga, Spain; <sup>14</sup>Janssen R&D, Spring House, PA; <sup>15</sup>St George Hospital, Kogarah, Australia

# Antitumor Activity of Amivantamab Monotherapy

- A total of 46 patients were efficacy evaluable



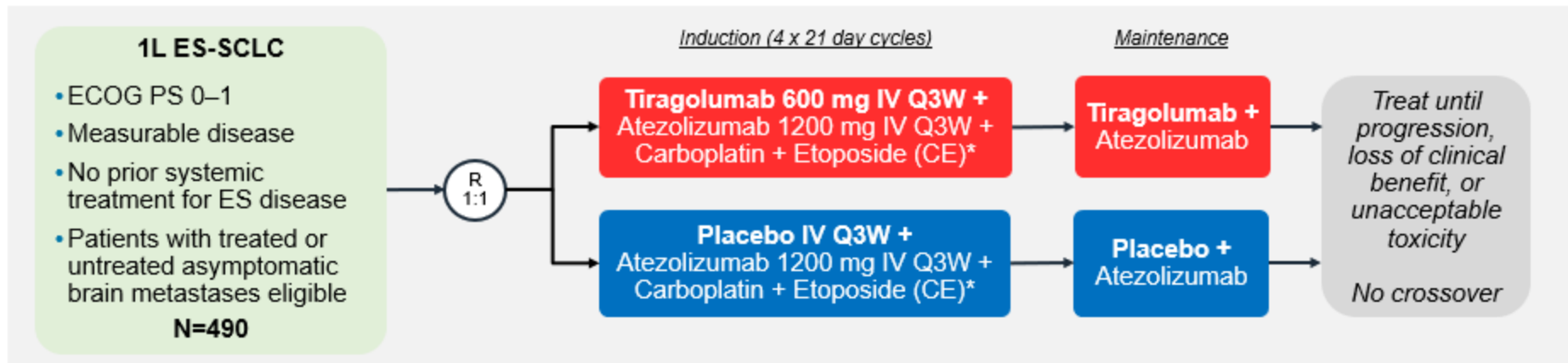
<sup>a</sup>Two patients discontinued prior to completing their second postbaseline disease assessment (1 in treatment naive group and 1 in no prior MET inhibitor group). <sup>b</sup>Two additional patients had a best timepoint response of PR but did not confirm. NE/UNK, not evaluable/unknown; ORR, overall response rate; PD, progressive disease; PR, partial response; SD, stable disease; SoD, sum of diameters; TKI, tyrosine kinase inhibitor.

## **SKYSCRAPER-02: Primary results of a phase III, randomized, double-blind, placebo-controlled study of atezolizumab + carboplatin + etoposide with or without tiragolumab in patients with untreated extensive-stage small cell lung cancer**

Charles M. Rudin,<sup>1</sup> Stephen V. Liu,<sup>2</sup> Shun Lu,<sup>3</sup> Ross A. Soo,<sup>4</sup> Min Hee Hong,<sup>5</sup> Jong-Seok Lee,<sup>6</sup> Maciej Bryl,<sup>7</sup> Daphne Dumoulin,<sup>8</sup> Achim Rittmeyer,<sup>9</sup> Chao-Hua Chiu,<sup>10</sup> Ozgur Ozyilkan,<sup>11</sup> Alejandro Navarro,<sup>12</sup> Silvia Novello,<sup>13</sup> Yuichi Ozawa,<sup>14</sup> Anthony Lee,<sup>15</sup> Meilin Huang,<sup>15</sup> Xiaohui Wen,<sup>15</sup> Tien Hoang,<sup>15</sup> Raymond Meng,<sup>15</sup> Martin Reck<sup>16</sup>

1. Memorial Sloan Kettering Cancer Center, New York, NY, USA; 2. Georgetown University, Washington, DC, USA; 3. Shanghai Chest Hospital, School of Medicine, Shanghai JiaoTong University, Shanghai, China; 4. National University Cancer Institute, Singapore; 5. Yonsei Cancer Center, Severance Hospital, Seoul, South Korea; 6. Seoul National University Bundang Hospital, Seongnam, South Korea; 7. Wielkopolskie Centrum Pulmonologii i Torakochirurgii w Poznaniu, Poznań, Poland; 8. Erasmus MC, Rotterdam, The Netherlands; 9. Lungenfachklinik Immenhausen, Immenhausen, Germany; 10. Taipei Veterans General Hospital, Taipei, Taiwan; 11. Adana Baskent University Hospital, Ankara, Turkey; 12. Hospital Univ Vall d'Hebron, Barcelona, Spain; 13. University of Turin, AOU San Luigi Orbassano (TO), Turin, Italy; 14. Wakayama Medical University Hospital, Wakayama, Japan; 15. Genentech, Inc., South San Francisco, USA; 16. Airway Research Center North, German Center for Lung Research, LungenClinic Grosshansdorf, Hamburg, Germany

# SKYSCRAPER-02: randomized, double-blind, placebo-controlled study of tiragolumab + atezolizumab + chemotherapy in patients with untreated ES-SCLC



## Stratification Factors:

- ECOG PS (0 vs. 1)
- Brain metastases (Yes vs. No)
- LDH ( $\leq$  ULN vs.  $>$  ULN)

## Co-Primary Endpoints:

- OS and investigator-assessed PFS in **Primary Analysis Set** (all randomized patients without presence or history of brain metastases at baseline)

## Secondary Endpoints:

- PFS and OS in **Full Analysis Set** (all randomized patients)
- Confirmed objective response rate
- Duration of response
- Safety
- Pharmacokinetics
- PROs

## Primary analysis

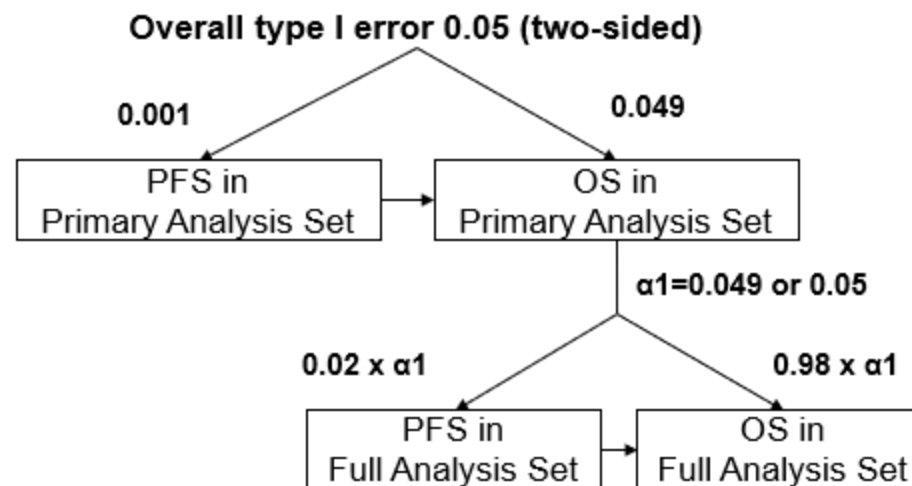
- Cut-off date of 6 February 2022
- Median follow-up of 14.3 months (Primary Analysis Set)

# Analysis sets and statistical analysis plan

**Primary analysis set:** all randomized patients without presence or history of brain metastases at baseline

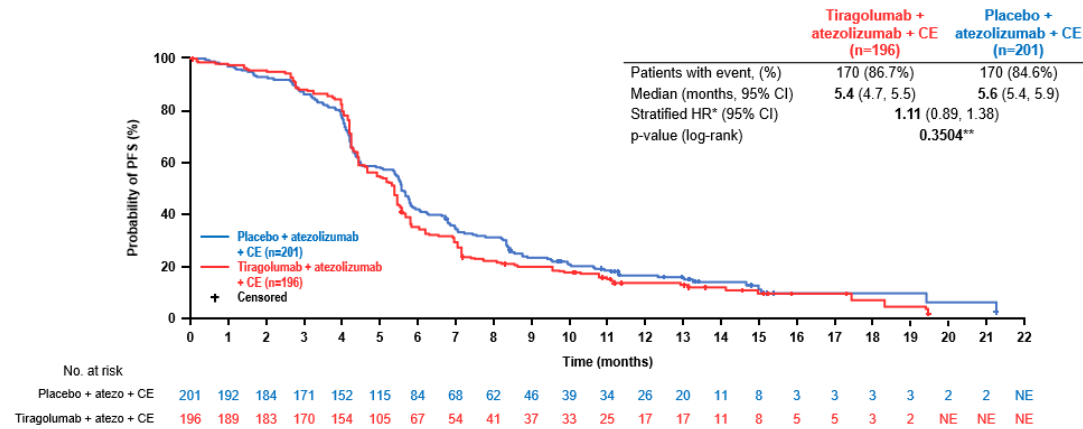
**Full analysis set:** all randomized patients, including those with treated or untreated brain metastases

	Tiragolumab + atezolizumab + CE	Placebo + atezolizumab + CE	Total
Primary Analysis Set	196	201	397
Full Analysis Set	243	247	490

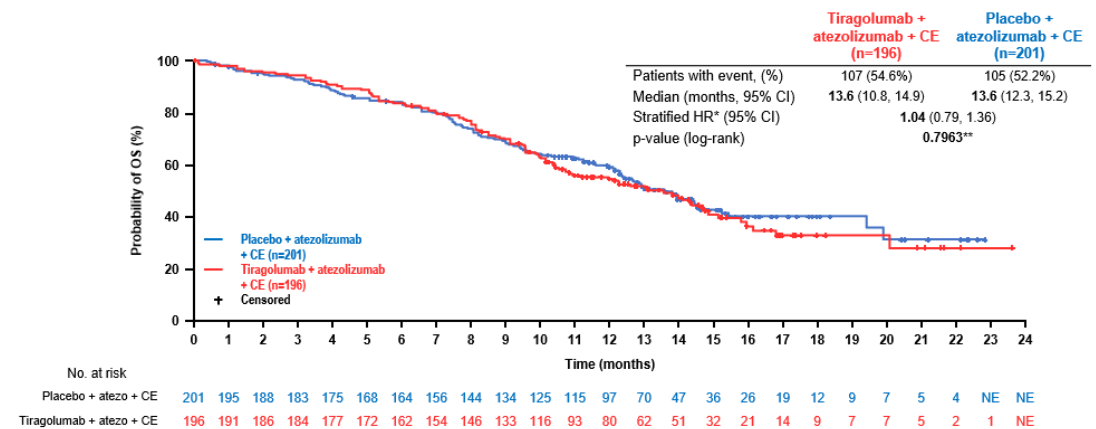




## PFS: Primary Analysis Set

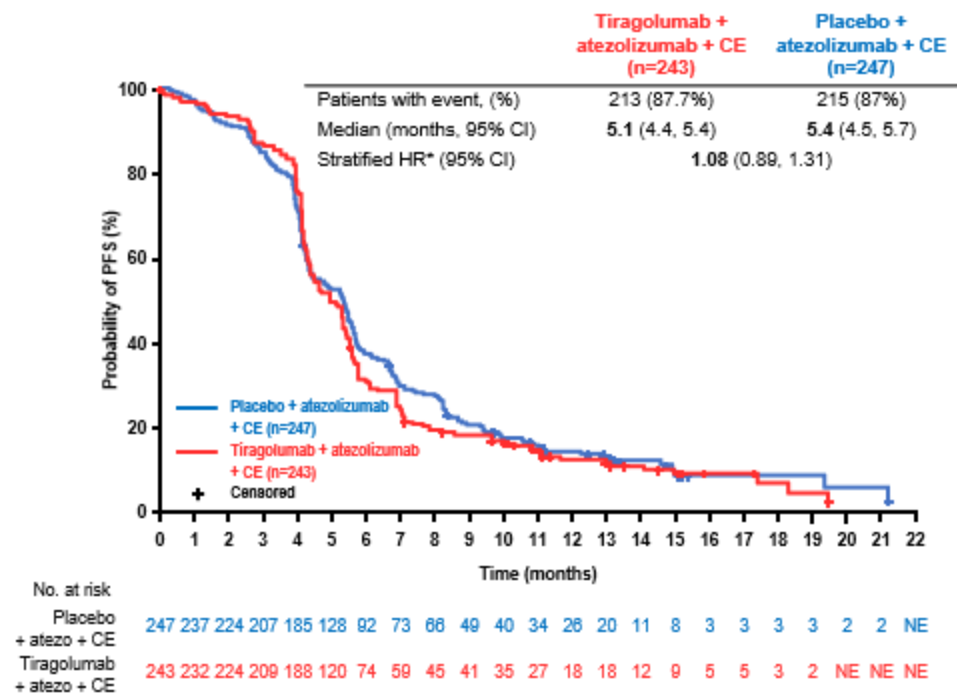


## Interim OS: Primary Analysis Set

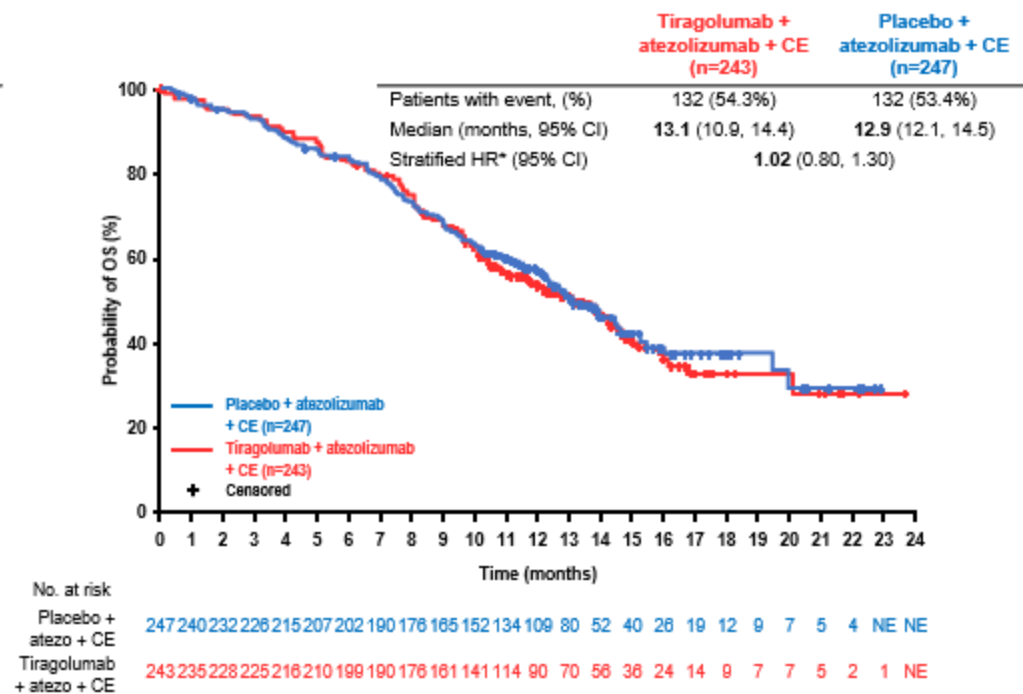


# PFS and OS: Full Analysis Set

## PFS in the Full Analysis Set



## Interim OS in the Full Analysis Set



\*Stratification factors are: ECOG, LDH  
Data cut-off: 6 February 2022 (median follow-up: 13.9 months)

# Extensive Stage Small Cell Lung Cancer

- 8516
  - Sintilimab plus anlotinib as second or further-line therapy
- 8517
  - Primary analysis from the phase II study of continuous talazoparib plus intermittent low-dose temozolomide
- 8518
  - Targeting genomic instability in extrapulmonary small cell neuroendocrine cancers: A phase II study with ATR inhibitor (berzosertib) and topotecan

Gentzler, R., et al. ASCO Annual Meeting 2022.  
Goldman, J., et al. ASCO Annual Meeting, 2022.  
Takahashi, N., et al. ASCO Annual Meeting, 2022.

Questions:

