

CPNCP avanzado sin mutaciones driver

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- Pembrolizumab plus chemotherapy (PEM + CT) versus pembrolizumab (PEM) as first-line therapy for advanced NSCLC with PD-L1 tumor proportion score (TPS) $\geq 50\%$: Open-label, phase III, randomized trial (PAULIEN).
- KEYMAKER-U01 substudy 01A: Investigational agents + pembrolizumab (pembro) and chemotherapy (chemo) in untreated stage IV non-small cell lung cancer (NSCLC).



PAPEL DE LOS ANTIANGIOGÉNICOS EN LA QUIMIO- INMUNOTERAPIA



Phase III study of Ivonescimab plus chemotherapy versus tislelizumab plus chemotherapy as first-line treatment for advanced squamous NSCLC (HARMONi-6)

Study Design

A multicenter, randomized, double-blind, parallel-controlled phase III study

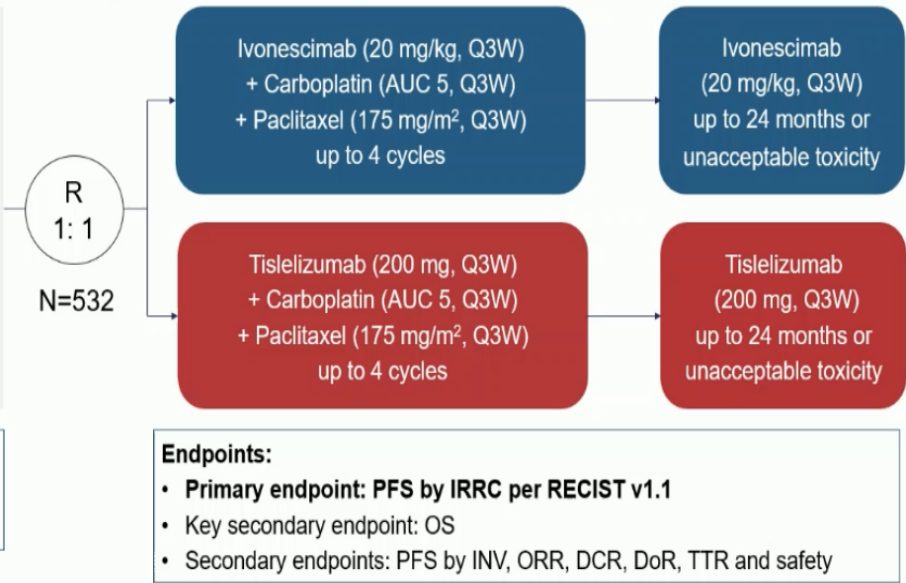
Key Eligibility Criteria

- Pathologically confirmed sq-NSCLC
- Stage IIIB-IV
- No prior systemic therapy
- No EGFR mutations or ALK rearrangements
- ECOG PS 0 or 1

Stratification Factors:

- Stage: IIIB/IIIC vs. IV
- PD-L1 TPS: ≥1% vs. <1%

Data cutoff date: February 28, 2025



Baseline Characteristics

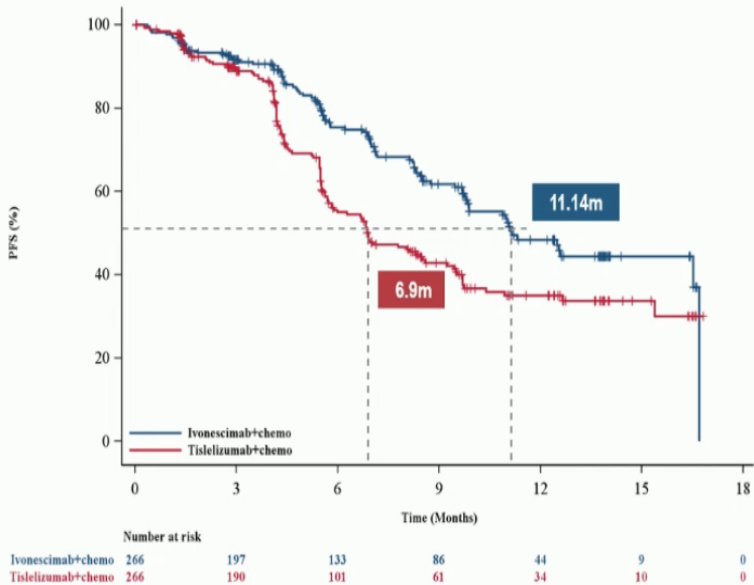
Characteristics, n(%)		Ivonescimab + chemo (N=266)	Tislelizumab + chemo (N=266)
Age, years	< 65	135 (50.8)	139 (52.3)
	≥ 65	131 (49.2)	127 (47.7)
Sex	Male	256 (96.2)	238 (89.5)
	Female	10 (3.8)	28 (10.5)
ECOG PS*	0	42 (15.8)	42 (15.8)
	1	224 (84.2)	222 (83.5)
Smoking history	Never	21 (7.9)	37 (13.9)
	Current/Former	245 (92.1)	229 (86.1)
Disease stage	IIIB/IIIC	21 (7.9)	20 (7.5)
	IV	245 (92.1)	246 (92.5)
Tumor characteristics	Central type	178 (66.9)	158 (59.4)
	Major blood vessel encasement	49 (18.4)	44 (16.5)
	With cavity	24 (9.0)	23 (8.6)
	With hemoptysis history	86 (32.3)	79 (29.7)
PD-L1 TPS	<1%	105 (39.5)	105 (39.5)
	≥ 1%	161 (60.5)	161 (60.5)
	1-49%	112 (42.1)	99 (37.2)
	≥ 50%	49 (18.4)	62 (23.3)
Metastases sites	≥3 metastatic sites	42 (15.8)	39 (14.7)
	Liver metastases	28 (10.5)	45 (16.9)
	Brain metastases	9 (3.4)	17 (6.4)



Phase III study of Ivonescimab plus chemotherapy versus tislelizumab plus chemotherapy as first-line treatment for advanced squamous NSCLC (HARMONi-6)

Primary endpoint: PFS by IRRC

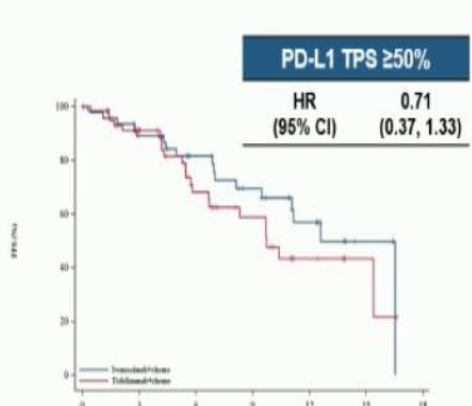
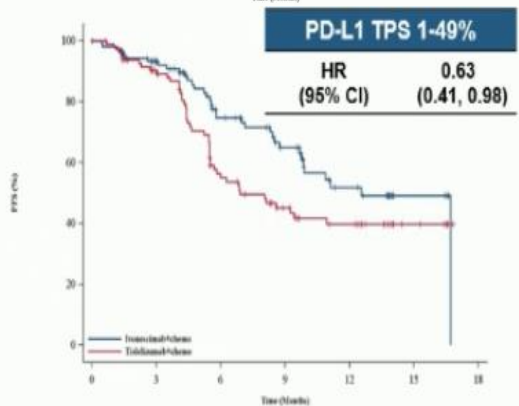
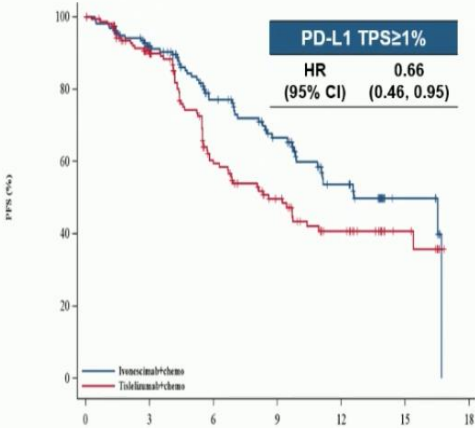
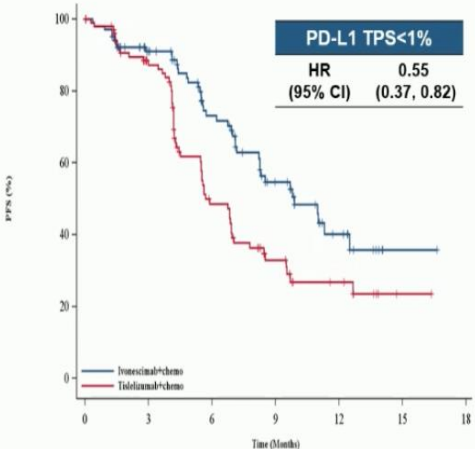
Ivonescimab+chemo demonstrated a statistically significant improvement in PFS vs. tislelizumab+chemo with HR=0.60, representing a 4.2 months improvement in mPFS.



	Ivonescimab + chemo (N=266)	Tislelizumab + chemo (N=266)
mPFS, months (95% CI)	11.14 (9.86, NE)	6.90 (5.82, 8.57)
Stratified HR (95% CI)	0.60 (0.46, 0.78)	
p-value	<0.0001	

Median Follow-up: 10.28 months

Consistent PFS benefit by investigator-assessment: HR = 0.64 (95% CI: 0.50, 0.84)

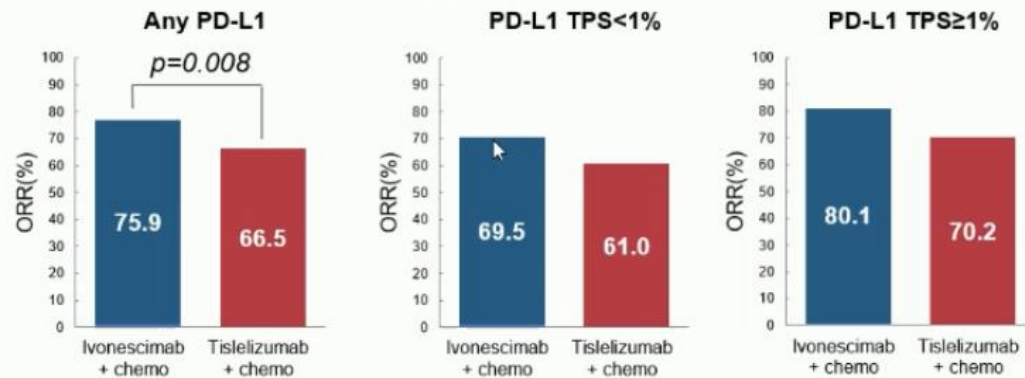


Phase III study of Ivonescimab plus chemotherapy versus tislelizumab plus chemotherapy as first-line treatment for advanced squamous NSCLC (HARMONi-6)

ORR and DoR by IRRC

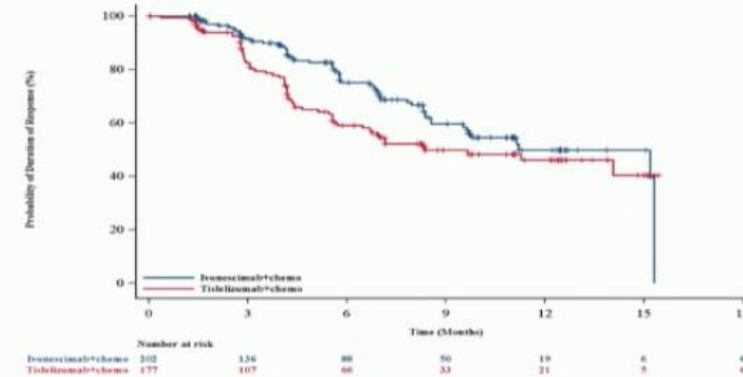
Tumor response was higher and more durable in the ivonescimab arm.

ORR by IRRC



	Ivonescimab + chemo (N=266)	Tislelizumab + chemo (N=266)
BOR, n (%)		
CR	1 (0.4)	0
PR	201 (75.6)	177 (66.5)
SD	39 (14.7)	60 (22.6)
PD	6 (2.3)	15 (5.6)

DoR by IRRC



	Ivonescimab + chemo (N=202)	Tislelizumab + chemo (N=177)
mDoR, months (95% CI)	11.20 (8.54, NE)	8.38 (5.72, NE)
p-value	0.0219	

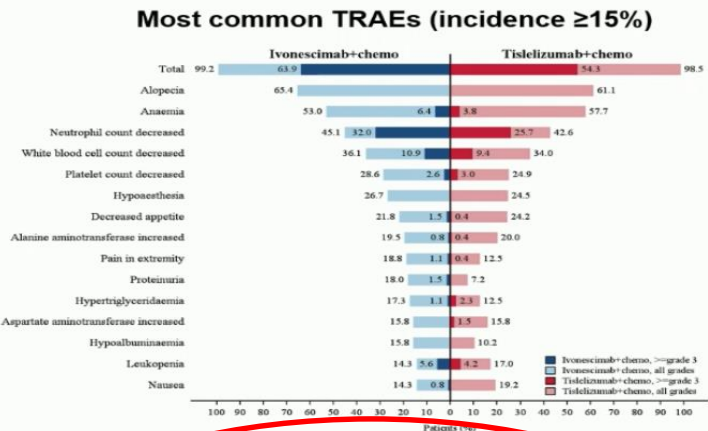


Phase III study of Ivonescimab plus chemotherapy versus tislelizumab plus chemotherapy as first-line treatment for advanced squamous NSCLC (HARMONi-6)

Safety Summary

Ivonescimab plus chemotherapy showed a manageable safety profile in sq-NSCLC.

	Ivonescimab + chemo (N=266)	Tislelizumab + chemo (N=265)
TRAE	264 (99.2)	261 (98.5)
Grade ≥ 3 TRAE	170 (63.9)	144 (54.3)
Serious TRAE	86 (32.3)	80 (30.2)
Leading to ivonescimab or tislelizumab discontinuation	9 (3.4)	11 (4.2)
Leading to death	8 (3.0)	10 (3.8)



Immune-related AEs	Ivonescimab + chemo (N=266)	Tislelizumab + chemo (N=265)
Any grade	73 (27.4)	67 (25.3)
Grade ≥3 irAE	24 (9.0)	27 (10.2)
Serious irAE	23 (8.6)	26 (9.8)
Leading to ivonescimab or tislelizumab discontinuation	3 (1.1)	6 (2.3)
Leading to death	0	1 (0.4)

Possibly VEGF-Related AEs#	Ivonescimab + chemo (N=266)		Tislelizumab + chemo (N=265)	
	Any Grade	Grade ≥3	Any Grade	Grade ≥3
Any	123 (46.2)	20 (7.5)	60 (22.6)	6 (2.3)
Proteinuria	72 (27.1)	6 (2.3)	29 (10.9)	0
Haemorrhage	57 (21.4)	5 (1.9)	25 (9.4)	2 (0.8)
Hypertension	27 (10.2)	8 (3.0)	12 (4.5)	3 (1.1)
Arterial thromboembolism	3 (1.1)	3 (1.1)	0	0
Venous thromboembolism	2 (0.8)	0	3 (1.1)	1 (0.4)
Fistula	1 (0.4)	0	0	0

#AE terms were grouped terms.

Final analysis of first-line serplulimab plus chemotherapy with or without HLX-04 in advanced nonsquamous NSCLC: the ASTRUM-002 phase 3 study

A randomized, double-blind, multicenter phase 3 study (NCT03952403)

Key inclusion criteria:

- Aged 18–75 years;
- ECOG PS of 0 or 1;
- Histologically/cytologically diagnosed with stage IIIB, IIIC, or IV nsqNSCLC that cannot be treated with surgery or radiotherapy;
- No *EGFR* sensitizing mutations or *ALK* or *ROS1* gene rearrangements;
- No prior systemic treatment for nsqNSCLC

Stratification factors:

- PD-L1 expression level (negative vs. positive vs. not evaluable);
- Smoking history (yes vs. no);
- Brain metastasis (yes vs. no).

R
1:1:1

Induction therapy^a

(up to 4 cycles)

Group A

Serplulimab + HLX04 +
carboplatin + pemetrexed

Group B

Serplulimab + HLX04
placebo + carboplatin +
pemetrexed

Group C

Serplulimab placebo +
HLX04 placebo +
carboplatin + pemetrexed

Maintenance therapy^a

(until loss of clinical benefit or 2 years of treatment)

Group A

Serplulimab + HLX04 + pemetrexed

Group B

Serplulimab + HLX04 placebo + pemetrexed

Group C

Serplulimab placebo +
HLX04 placebo +
pemetrexed

PD
Allowed to
switch to
serplulimab +
HLX04

Primary endpoint

BICR-assessed PFS per
RECIST version 1.1

Secondary endpoints

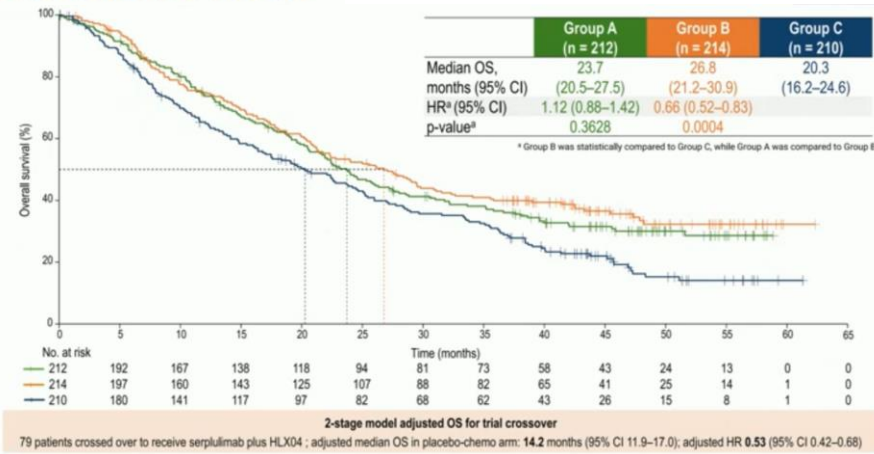
- OS
- PFS; ORR; DoR
- Safety
- PK; immunogenicity;
biomarkers; QoL

Intergroup comparison

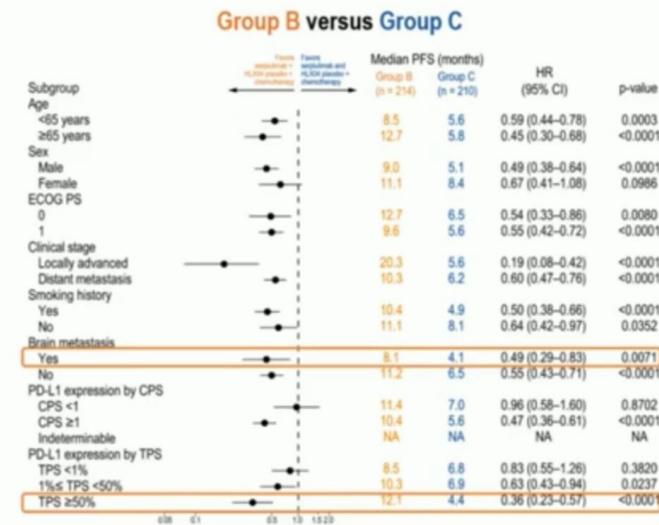
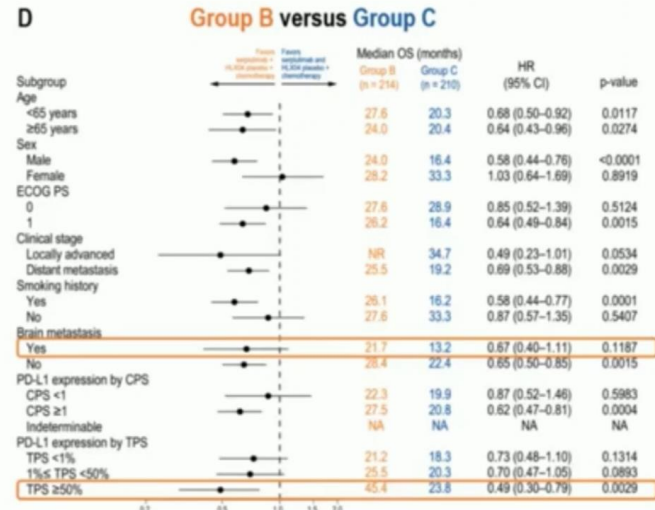
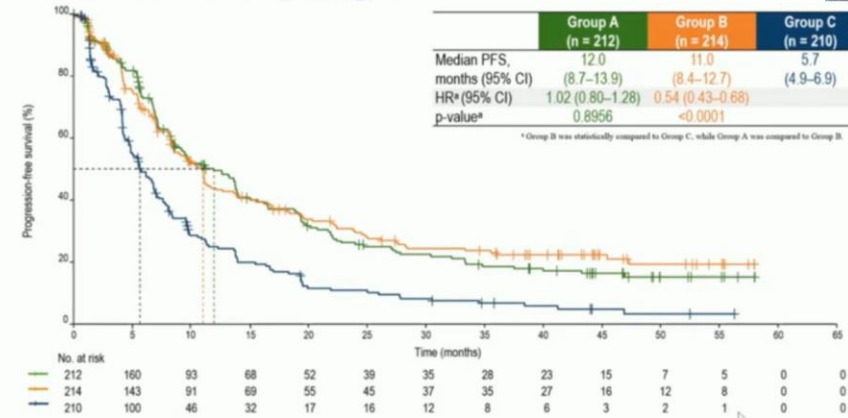
- Group A vs. Group B
- Group B vs. Group C



Overall survival



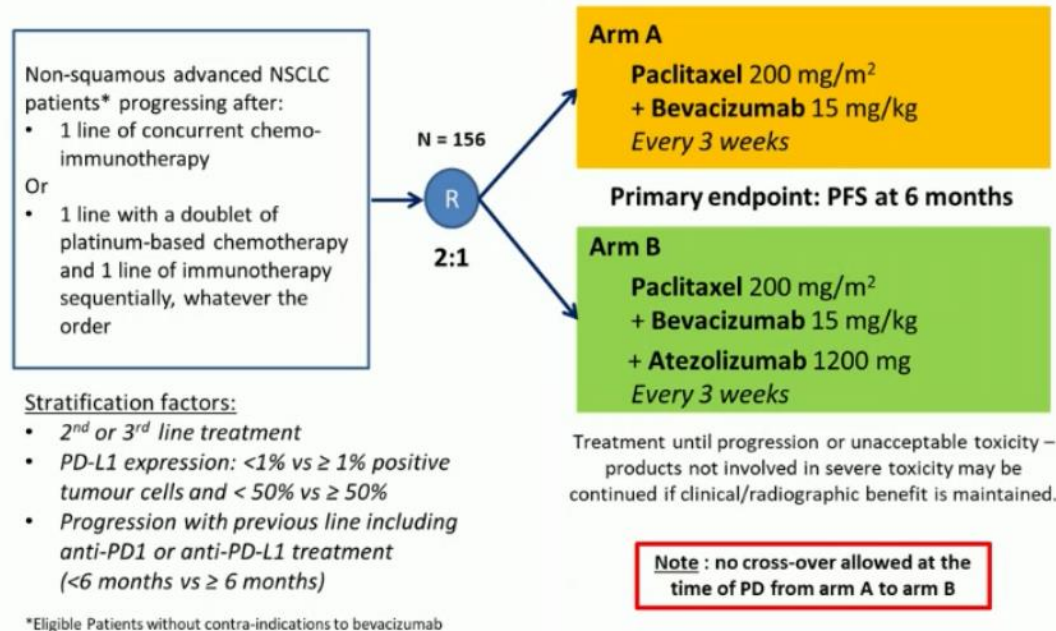
BICR-assessed progression-free survival



Paclitaxel-bevacizumab +/- atezolizumab in advanced non-squamous NSCLC progressing after chemo-immunotherapy

Trial design

- Open-label, randomized (2:1), non-comparative, multicenter phase II trial



- Primary endpoint : progression-free survival (PFS) rate at 6 months, assessed by independent review committee (IRC).
- Secondary endpoints : PFS by investigators, objective response rate (ORR), overall survival (OS), safety and quality of life.



Paclitaxel-bevacizumab +/- atezolizumab in advanced non-squamous NSCLC progressing after chemo-immunotherapy

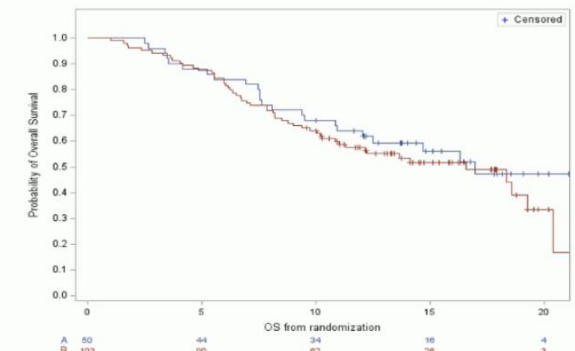
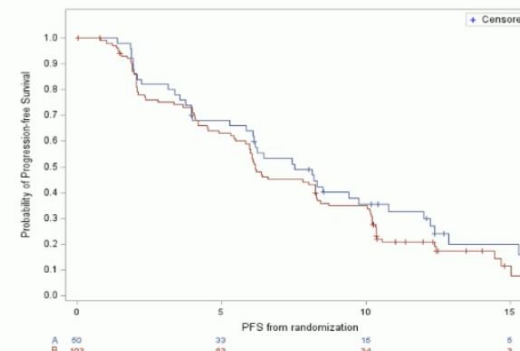
Primary endpoint: 6-month PFS rate by IRC in eligible pts

In eligible patients	A: paclitaxel + bevacizumab (N=50)	B: paclitaxel + bevacizumab + atezolizumab (N=103)
	6-month PFS rate: % [95% CI]	6-month PFS rate: % [95% CI]
By IRC	52.0% [38.2-65.9]	40.8% [31.3-50.3]
By Investigators	52.0% [38.2-65.9]	42.7% [33.2-52.3]

Reminder: NON COMPARATIVE trial design

Secondary endpoints :

- **ORR similar in both arms:** 42.0% in arm A, and 41.7% in arm B; **DCR:** 82.0% in arm A, and 76.7% in arm B.
- **Median PFS [95% CI]:** 7.5 [5.8-9.8] months in arm A, and 6.2 [5.5-8.2] months in arm B.
- **Median OS [95% CI]:** 17.0 [10.9-NR] months in arm A, and 16.6 [10.8-19.3] months in arm B.



INMUNOTERAPIA: NUEVAS DIANAS Y COMBINACIONES

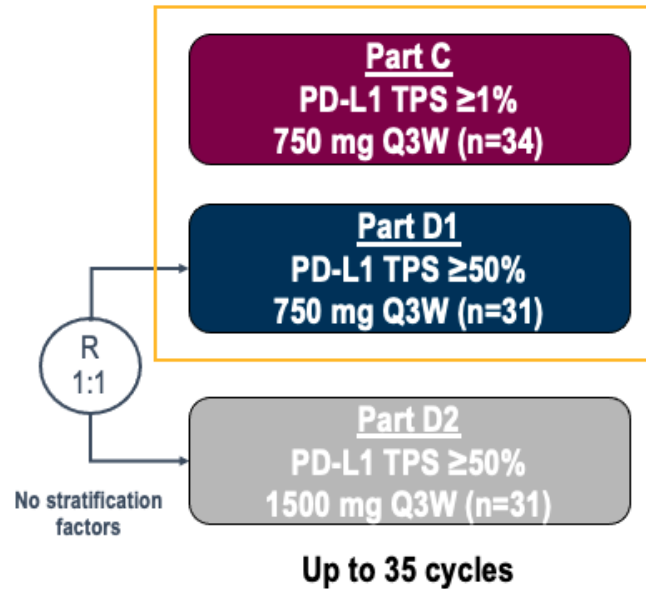


Efficacy and safety of rilvegostomig for checkpoint inhibitor naive metastatic NSCLC: ARTEMIDE-01

CPI-naïve, PD-L1 TPS $\geq 1\%$ Stage IV NSCLC

- Up to 1 prior chemotherapy regimen for metastatic disease
- PD-L1 TPS per local test
- *EGFR/ALK* wild-type

Part A (dose escalation) and Part B (dose expansion) in CPI-resistant NSCLC not pictured

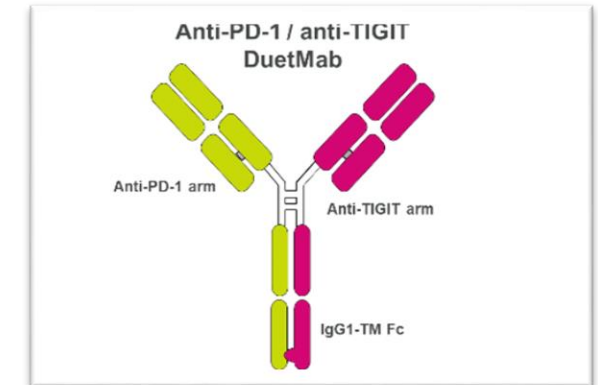


Primary endpoints

- ORR per investigator per RECIST v1.1
- Safety

Key secondary endpoints

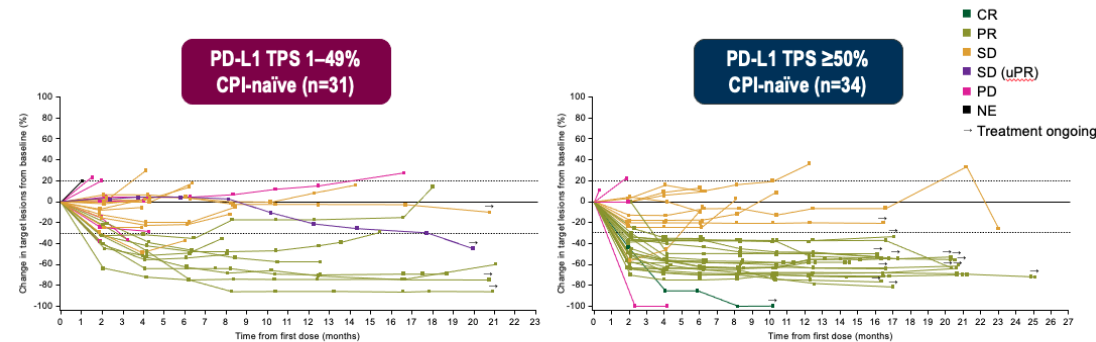
- DoR
- PFS



	Parts C + D1 PD-L1 TPS 1-49% (n=31)	Parts C + D1 PD-L1 TPS $\geq 50\%$ (n=34)
Median age, years (range)	67.0 (41-79)	67.0 (48-78)
Female, n (%)	8 (25.8)	9 (26.5)
Asian / White / Other, n (%)	21 (67.7) / 7 (22.6) / 3 (9.7)	24 (70.6) / 8 (23.5) / 2 (5.9)
ECOG PS 1, n (%)	21 (67.7)	20 (58.8)
Squamous histology, n (%)	15 (48.4)	8 (23.5)
Never smoker, n (%)	5 (16.1)	1 (2.9)
Prior chemotherapy, n (%)	13 (41.9)	3 (8.8)
Brain metastases, n (%)	5 (16.1)	9 (26.5)
Liver metastases, n (%)	6 (19.4)	2 (5.9)
Bone metastases, n (%)	5 (16.1)	9 (26.5)
Median duration of follow-up, months (range)	19.1 (1.0-28.7)	19.2 (4.8-31.4)

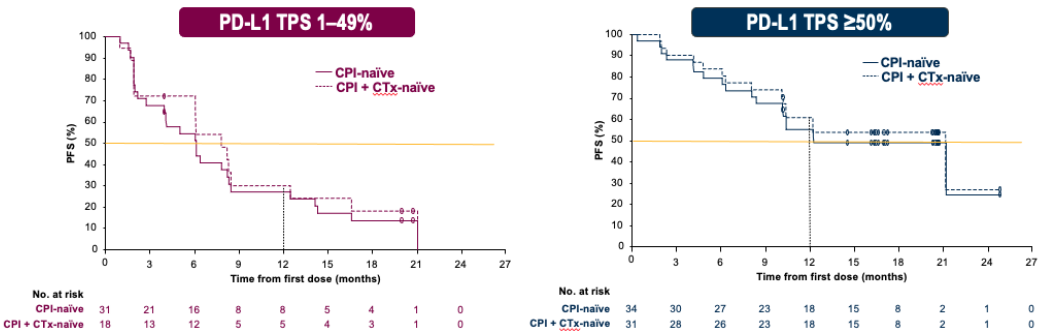
Efficacy and safety of rilvegostomig for checkpoint inhibitor naive metastatic NSCLC: ARTEMIDE-01

ARTEMIDE-01: ORR and DoR



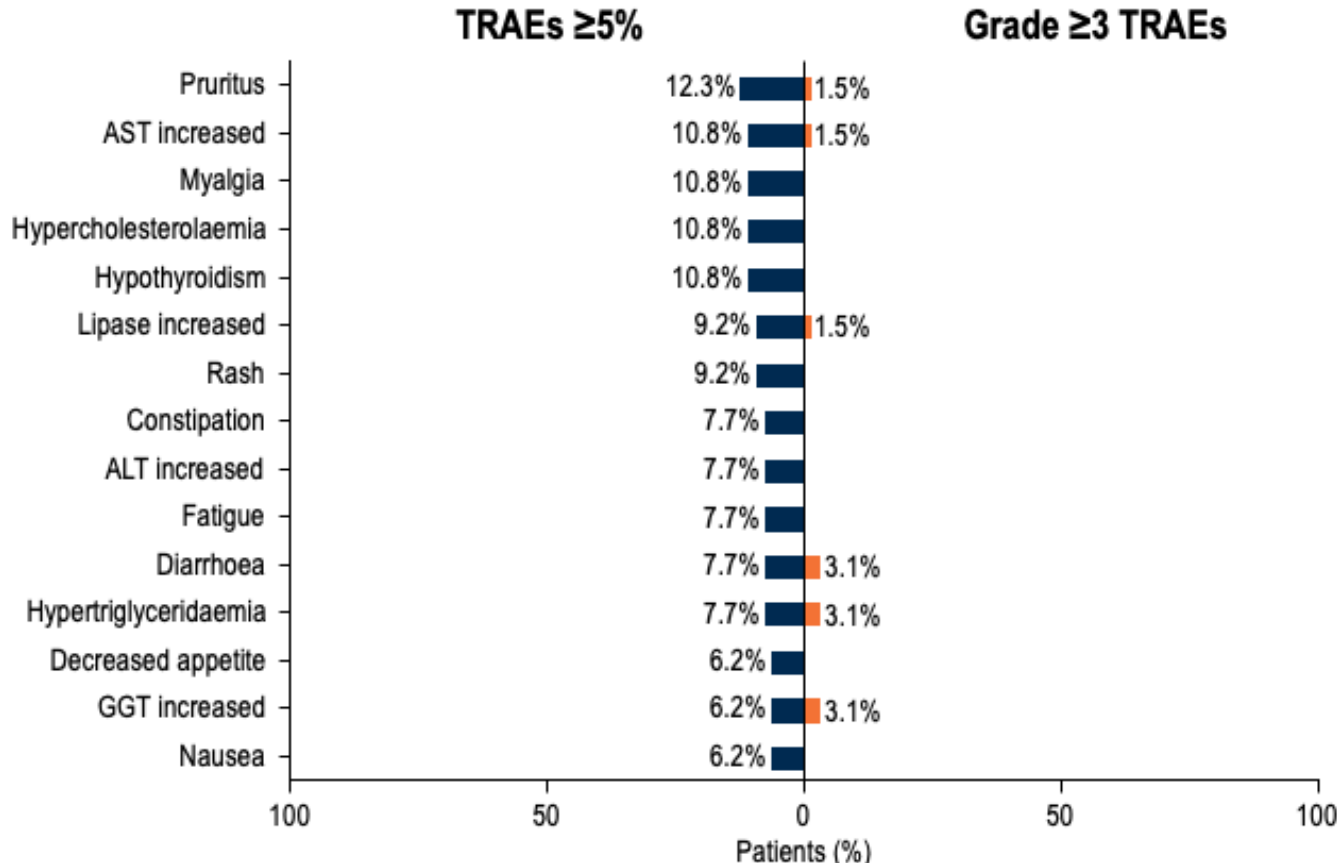
	PD-L1 TPS 1-49%		PD-L1 TPS ≥50%	
	CPI-naïve (n=31)	CPI + CTx-naïve (n=18)	CPI-naïve (n=34)	CPI + CTx-naïve (n=31)
ORR, % (95% CI)	29.0 (14.2-48.0)	44.4 (21.5-69.2)	61.8 (43.6-77.8)	67.7 (48.6-83.3)
Median DoR, months (range)	9.9 (4.1-NC)	8.5 (4.1-NC)	NR (10.3-NC)	NR (10.3-NC)

ARTEMIDE-01: PFS in CPI-naïve and CPI + CTx-naïve patients



	PD-L1 TPS 1-49%		PD-L1 TPS ≥50%	
	CPI-naïve (n=31)	CPI + CTx-naïve (n=18)	CPI-naïve (n=34)	CPI + CTx-naïve (n=31)
Median PFS, months (95% CI)	6.1 (2.7-8.3)	7.8 (1.9-12.5)	12.3 (8.4-NC)	21.2 (10.2-NC)
12-month PFS, % (95% CI)	27.2 (12.9-43.6)	30.1 (11.1-52.0)	55.5 (37.3-70.3)	60.8 (41.4-75.6)

Efficacy and safety of rilvegostomig for checkpoint inhibitor naive metastatic NSCLC: ARTEMIDE-01



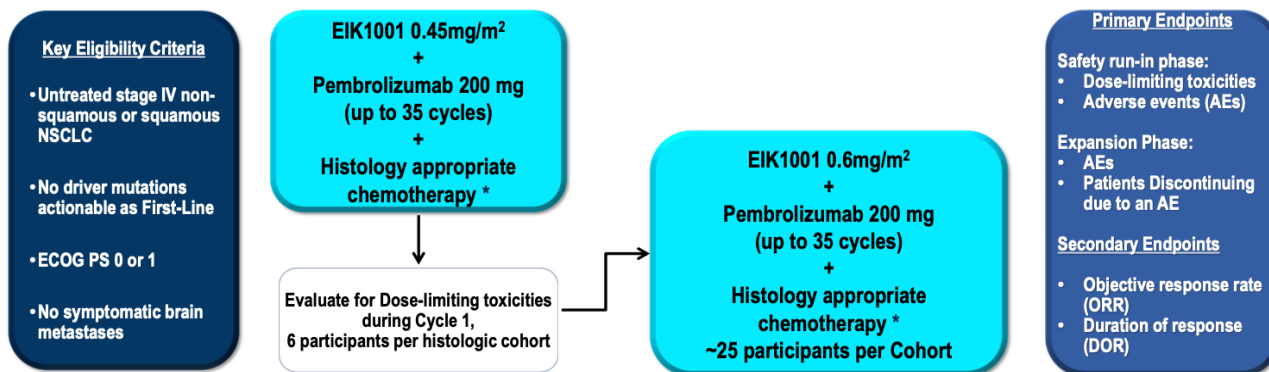
Favourable safety profile

- Nearly all AEs were low-grade, manageable and reversible, with low incidences of pruritus and skin rash.
- No Grade 4 or 5 TRAEs were reported.
- Overall, only four Grade 3 imAEs (6.2%) were reported.
- There was a low rate of treatment-related rilvegostomig discontinuations (3.1%).



TeLuRide-005: phase 2 study of EIK1001, a toll-like receptor 7/8 co-agonist with pembrolizumab + chemotherapy as first line therapy in stage 4 NSCLC

Study Design: TeLuRide-005



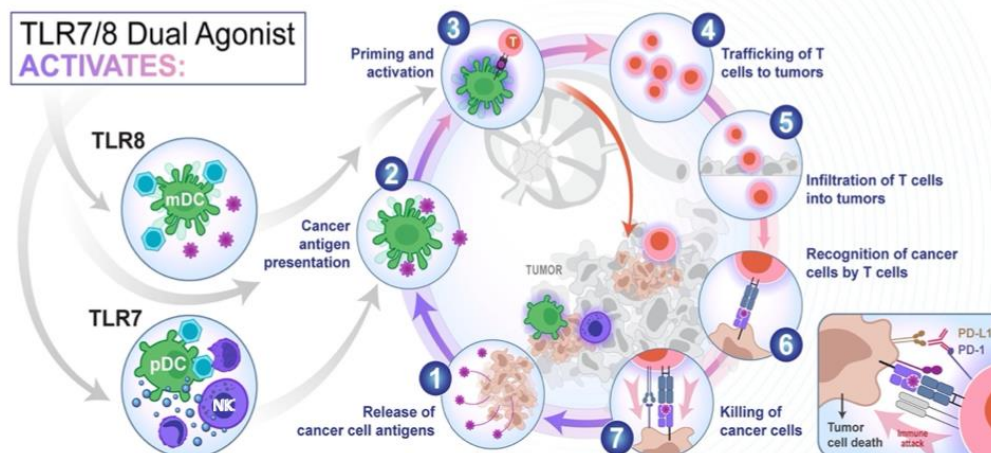
EIK1001 IV weekly x 8 cycles, then every 3 weeks + Pembrolizumab every 3 weeks, plus

* **Cohort A Non-squamous:** pemetrexed 500 mg/m² + carboplatin AUC 5 every 3 weeks x 4 Cycles + optional pemetrexed maintenance

* **Cohort B Squamous:** paclitaxel 200 mg/m² + carboplatin AUC 6 every 3 weeks X 4 Cycles

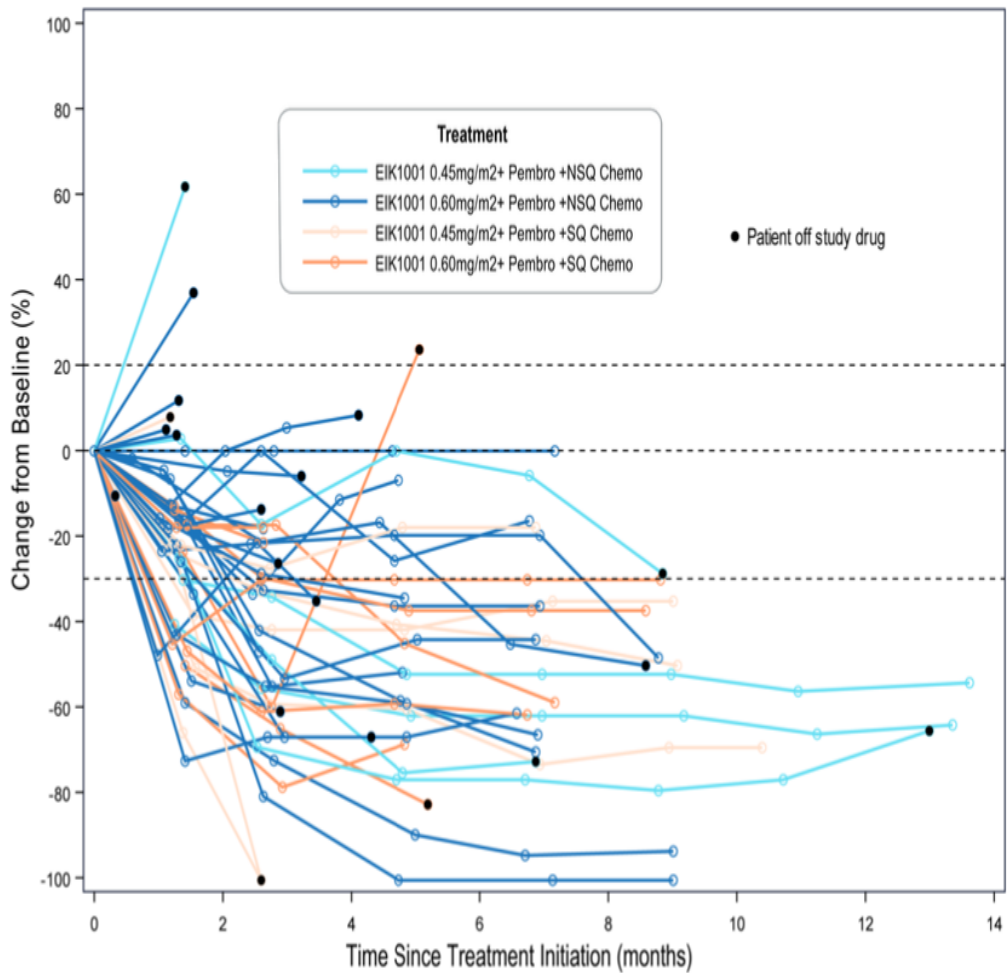
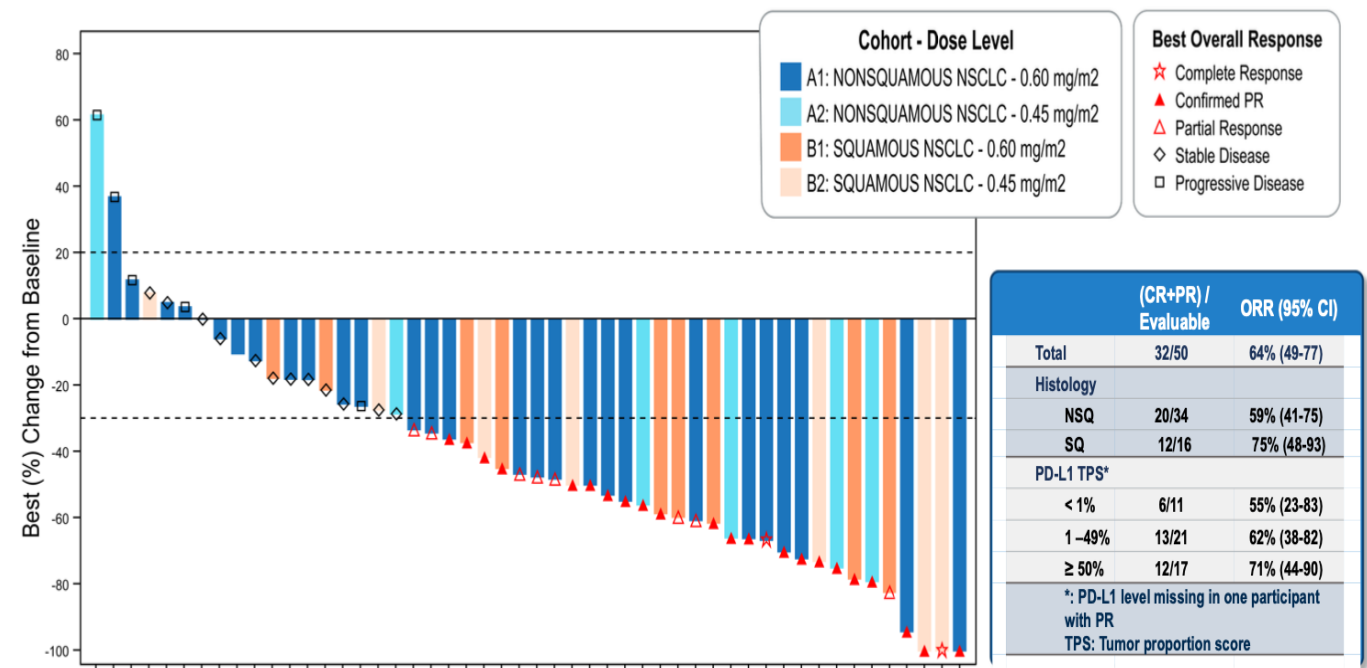
EIK1001:

- Is an IV small molecule, TLR7/8 receptor co-agonist, targeting plasmacytoid and myeloid dendritic cells
- Was well tolerated in phase 1 studies, with clinical response seen in heavily pre-treated participants
- **Study Rationale:** Adding EIK1001 to standard pembrolizumab+chemotherapy may further improve outcomes for NSCLC participants via a complementary mechanism to checkpoint inhibition.



All Treated Participants	Total N=59
Age (years)	
Mean (SD)	67 (10)
Median (Range)	68 (23 -83)
Gender (M/F)	75% / 25%
Squamous (SQ) NSCLC	20 (34%)
Non-Squamous (NSQ) NSCLC	39 (66%)
Smoking Status	
Previous	64%
Current	26%
Never	10%
PDL-1 TPS status	
≥ 50%	36%
1 - 49%	41%
< 1%	22%
Missing	1%

TeLuRide-005: Best Percentage Change in Target Lesions



TeLuRide-005: phase 2 study of ELK1001, a toll-like receptor 7/8 co-agonist with pembrolizumab + chemotherapy as first line therapy in stage 4 NSCLC

Adverse Event Summary:

- Total TEAEs: 94.9%;
- Grade 3 AEs: 71.2%;
- SAEs: 42.4%;
- Leading to Death: 6.8% (none treatment related)
- Leading to treatment discontinuation: 3.4%;
- Cytokine Release Syndrome: 7/59 (11.9%);
 - Grade 1: 5/59 (8.5%);
 - Grade 2: 2/59 (3.4%)

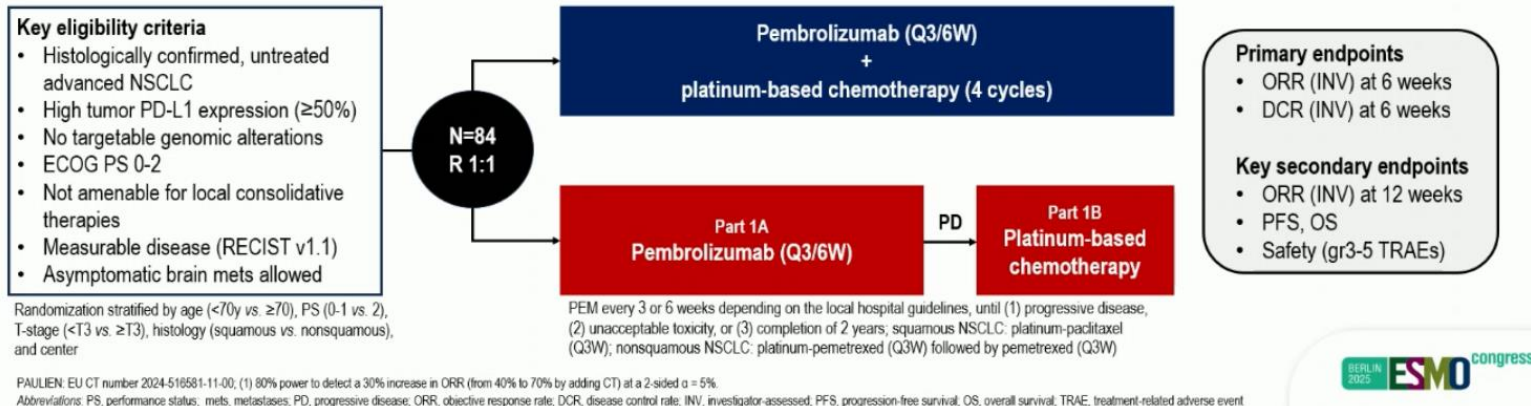
- Frequency of Adverse Events were similar across both the run-in and expansion phases and across both histologies
- Safety events were predominantly related to standard of care chemotherapy / pembrolizumab

Adverse Events (>20%)		Total N = 59
Fatigue	36 (61.0%)	
Nausea	27 (45.8%)	
Neutropenia	25 (42.4%)	
Anemia	24 (40.7%)	
Constipation	20 (33.9%)	
Diarrhea	19 (32.2%)	
Dizziness	19 (30.5%)	
Thrombocytopenia	18 (29.1%)	
Dyspnea	15 (25.4%)	
Decreased appetite	14 (23.7%)	
Headache	14 (23.7%)	
Hypotension	14 (23.7%)	
Pyrexia	14 (23.7%)	
Vomiting	13 (22.0%)	
Weight decreased	13 (22.0%)	
Hypokalaemia	12 (20.3%)	

Pembrolizumab plus chemotherapy vs pembrolizumab as first-line therapy for advanced NSCLC with PDL1 (TPS) $\geq$ 50%: open-label, phase 3, randomized trial (PAULIEN)

Study rationale and design

- Pembrolizumab (PEM) is the standard first-line therapy for advanced NSCLC with high tumor PD-L1 expression (TPS $\geq$ 50%) and no targetable genomic alterations.
- However, in those cases where an urgent tumor response is needed, chemotherapy (CT) is often added to PEM, though its benefit is unclear.
- PAULIEN is a multicenter (eight Dutch sites), open-label, phase III, randomized controlled, superiority trial comparing **PEM + CT** with **PEM** to assess **tumor responses at 6 weeks**.
- Hypothesis: adding CT to PEM will result in a 30% increase¹ in objective tumor response (ORR) at 6 weeks.

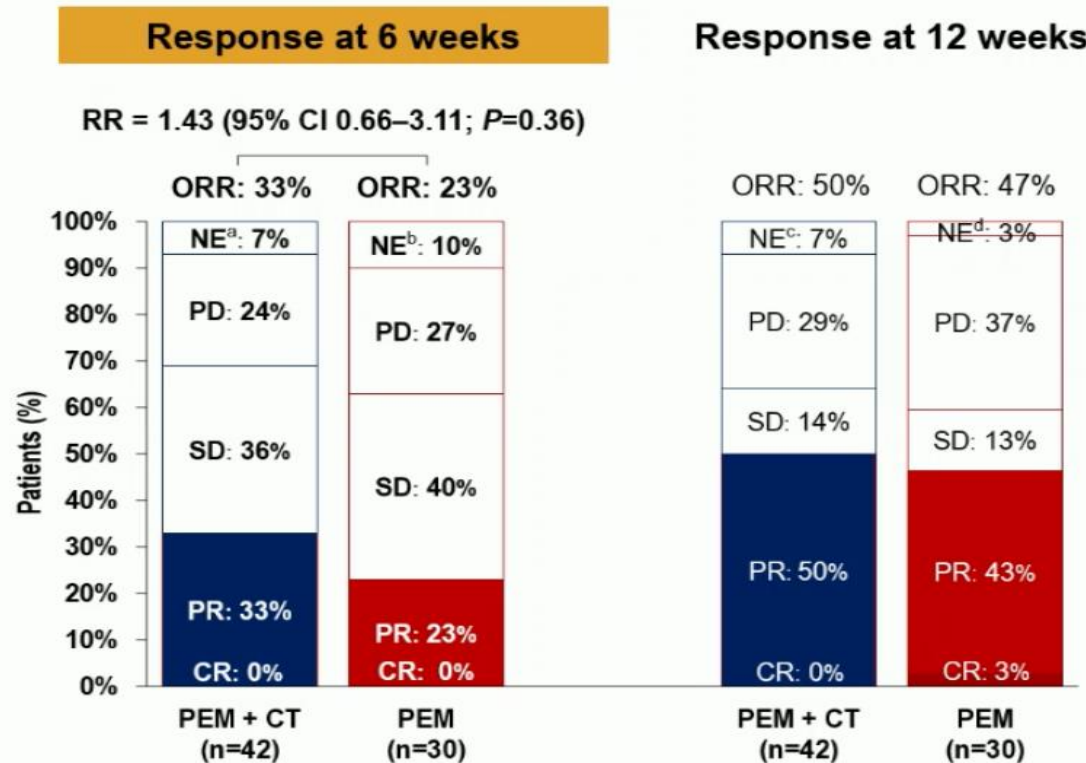


n (%)	PEM + CT (N=42)	PEM N=30)
Age, <70 years	26 (62)	20 (67)
Sex, male	25 (60)	12 (40)
Smoking status		
Current or former	40 (95)	29 (97)
Never	2 (5)	1 (3)
Performance status		
0-1	37 (88)	26 (87)
2	5 (12)	4 (13)
Histology, nonsquamous	36 (86)	30 (100)
T-stage, $\geq$T3	19 (45)	15 (50)
Baseline SLD ($\geq$90 mm)	14 (33)	11 (37)
Stage III disease	3 (7)	1 (3)

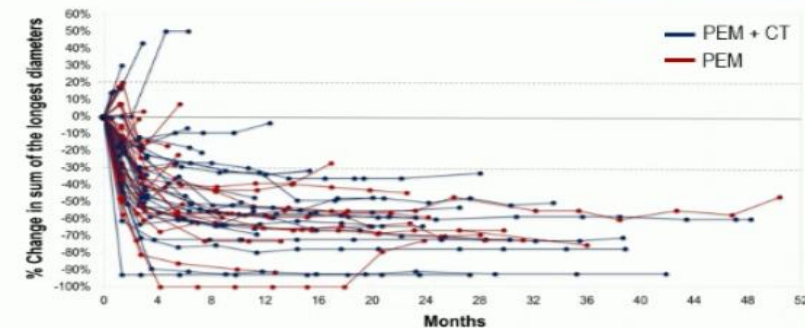
Abbreviations: PEM, pembrolizumab; CT, chemotherapy; SLD, sum of the longest diameters

Pembrolizumab plus chemotherapy vs pembrolizumab as first-line therapy for advanced NSCLC with PDL1 (TPS) $\geq$ 50%: open-label, phase 3, randomized trial (PAULIEN)

Investigator-assessed ORR and DCR at 6 weeks



Response, n (%; 95% CI)	PEM + CT (N=42)	PEM (N=30)
ORR at 6 weeks	14 (33%, 21–48)	7 (23%, 12–41)
DCR at 6 weeks	29 (69%, 54–81)	19 (63%, 46–78)
ORR at 12 weeks	21 (50%, 36–64)	14 (47%, 30–64)
DCR at 12 weeks	27 (64%, 49–77)	18 (60%, 42–75)
Best overall response, n (%)		
CR	0 (0)	1 (3)
PR	25 (60)	14 (47)
SD	4 (10)	5 (17)
PD	10 (24)	9 (30)
NE	3 (7)	1 (3)
Duration of response		
Responders, n (%)	25 (60)	15 (50)
Median, months (IQR)	11.3 (3.7–28.5)	14.1 (4.4–26.4)
Time to response		
Median, weeks (IQR)	6.0 (5.6–12.6)	11.3 (5.9–12.0)



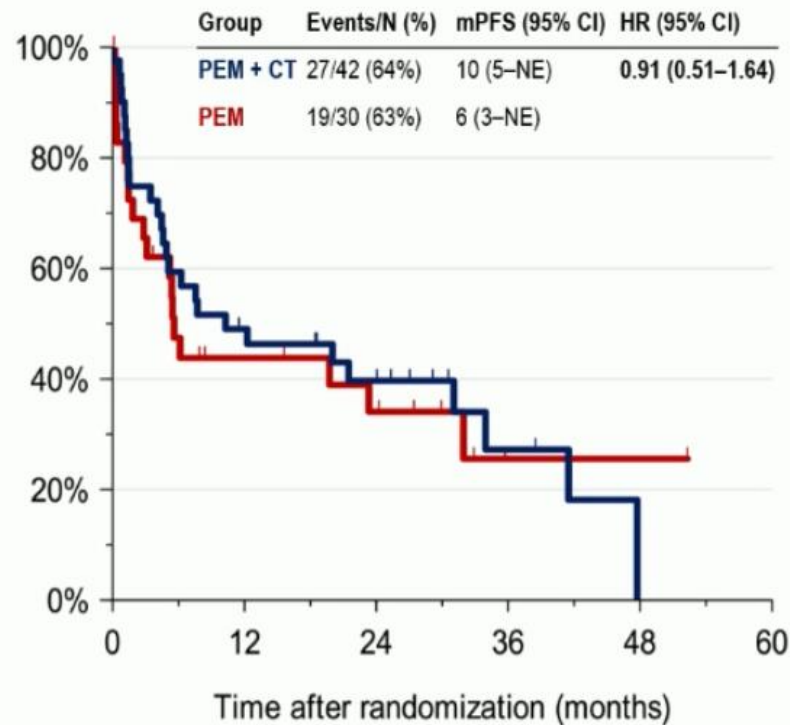
Objective response defined as complete response (CR) or partial response (PR). Disease control defined as CR, PR, or stable disease (SD). Clinical disease progression was classified as progressive disease (PD). (a,c) 3 pts not evaluable (NE) (1 logistical issue, 1 not eligible, 1 withdrawal); (b) 3 pts NE (2 logistical issue, 1 withdrawal); (d) 1 pt NE (withdrawal). Abbreviations: PEM, pembrolizumab; CT, chemotherapy; ORR, objective response rate; DCR, disease control rate; PD, progressive disease; RR, relative risk.



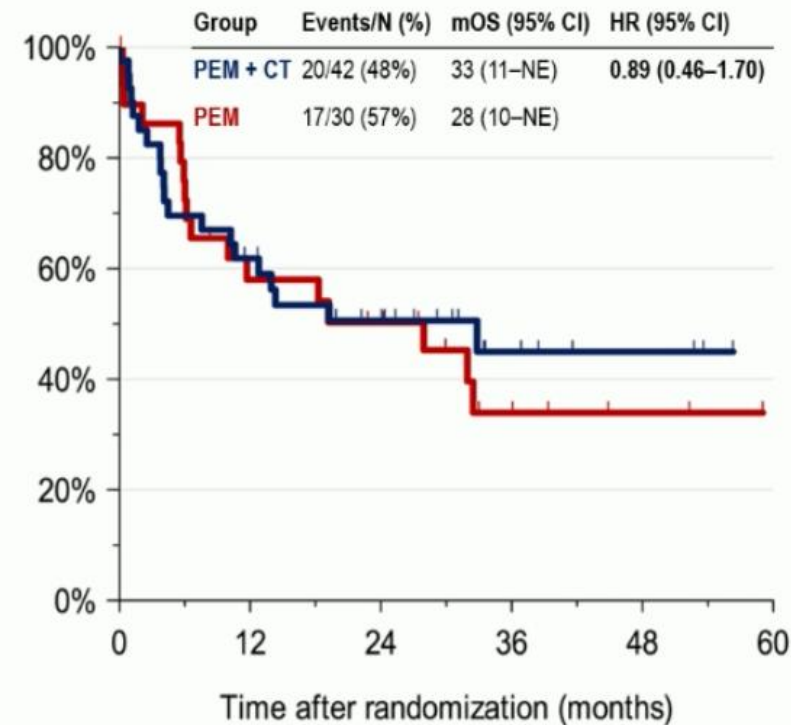
Pembrolizumab plus chemotherapy vs pembrolizumab as first-line therapy for advanced NSCLC with PDL1 (TPS) $\geq$ 50%: open-label, phase 3, randomized trial (PAULIEN)

Progression-free survival and overall survival

Progression-free survival

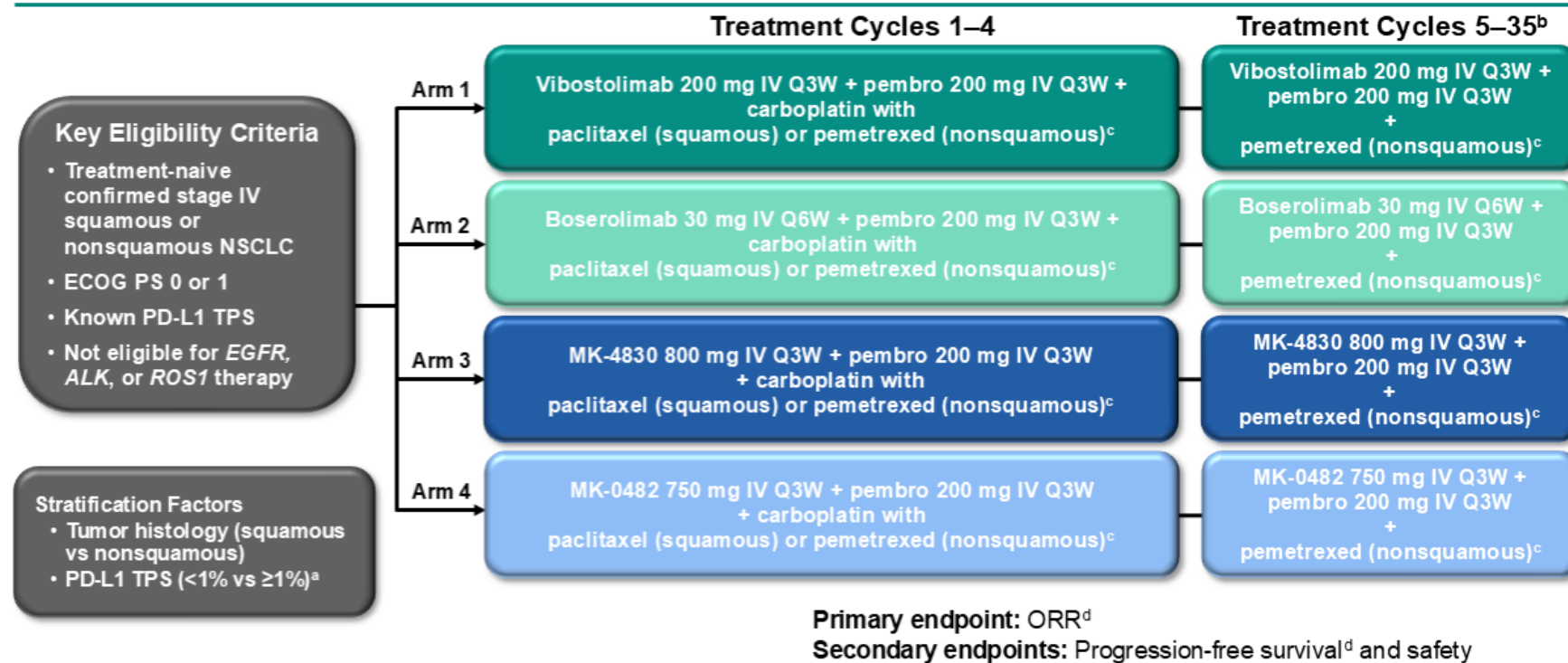


Overall survival



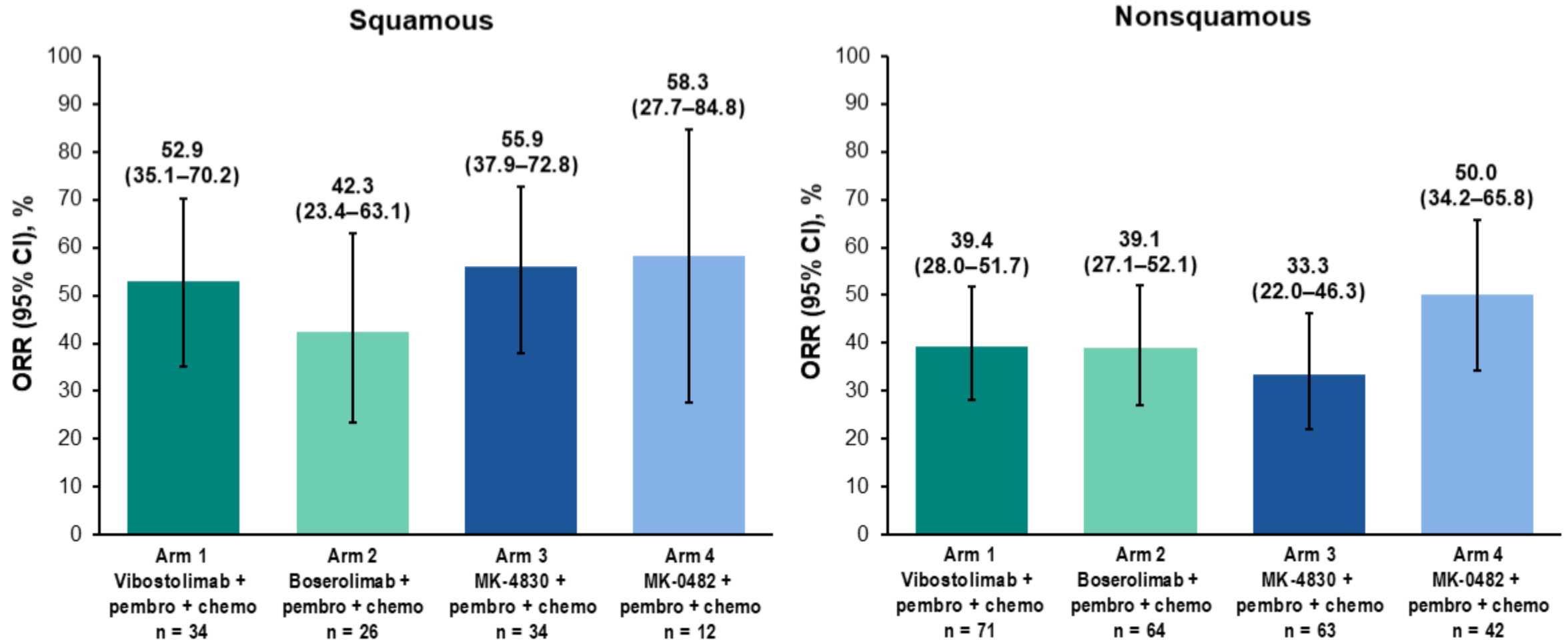
KEYMAKER-U01 substudy 01: investigational agents + pembrolizumab and chemotherapy in untreated stage IV NSCLC

KEYMAKER-U01 Substudy 01A Design



- Vibostolimab, a TIGIT antagonist mAb (arm 1)
- Boserolimab, a CD27 agonist mAb (arm 2)
- MK-4830, an ILT4 antagonist mAb (arm 3)
- MK-0482, an ILT3 antagonist mAb (arm 4)

Efficacy: Investigator-Assessed ORR per RECIST v1.1

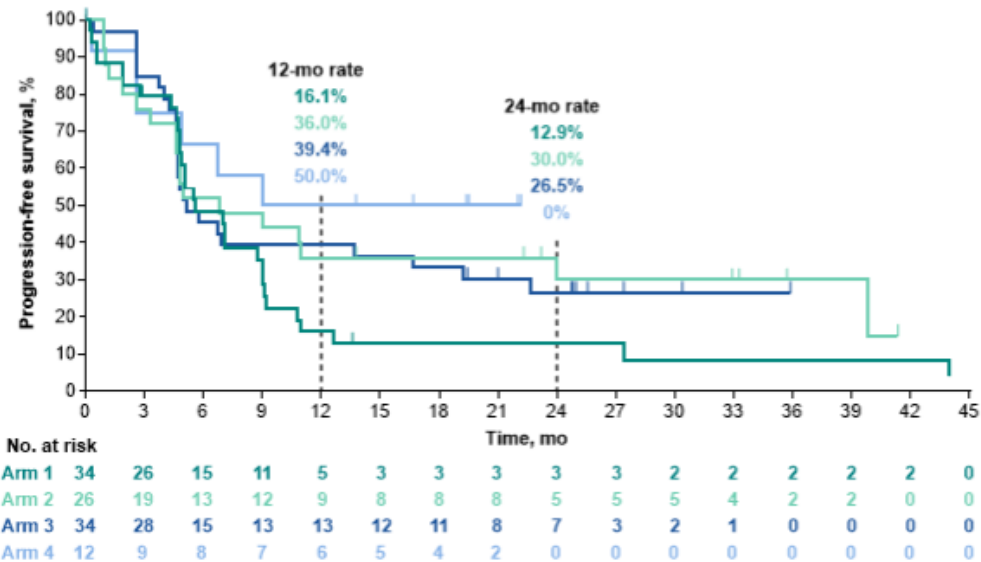


KEYMAKER-U01 substudy 01: investigational agents + pembrolizumab and chemotherapy in untreated stage IV NSCLC

Efficacy: Investigator-Assessed PFS per RECIST v1.1

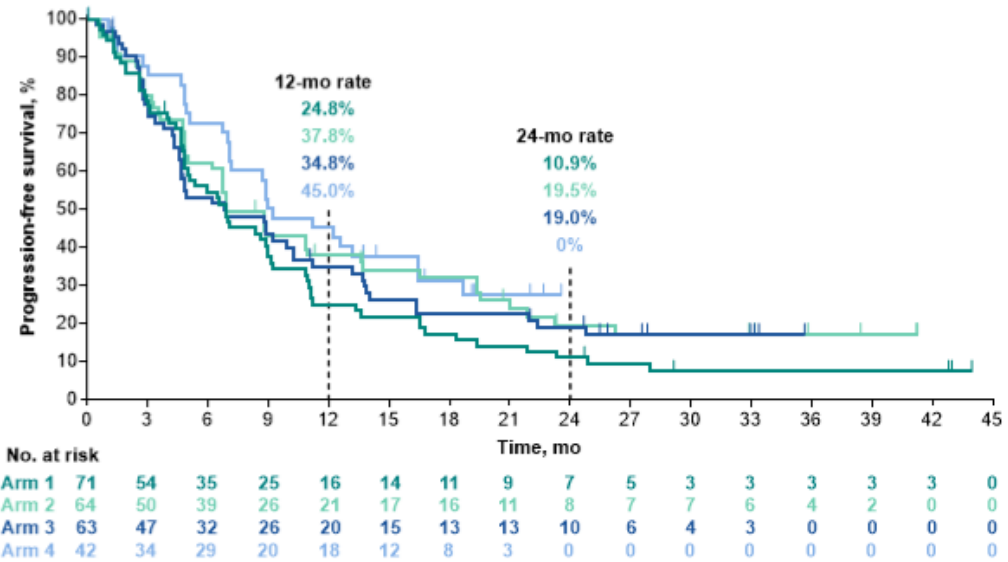
Squamous

	Events/N	Median (95% CI), mo
Arm 1: vibostolimab + pembro + chemo	30/34	5.6 (4.8–9.0)
Arm 2: boserolimab + pembro + chemo	18/26	6.8 (4.6–24.0)
Arm 3: MK-4830 + pembro + chemo	24/34	5.2 (4.7–16.7)
Arm 4: MK-0482 + pembro + chemo	6/12	NR (2.6–NE)



Nonsquamous

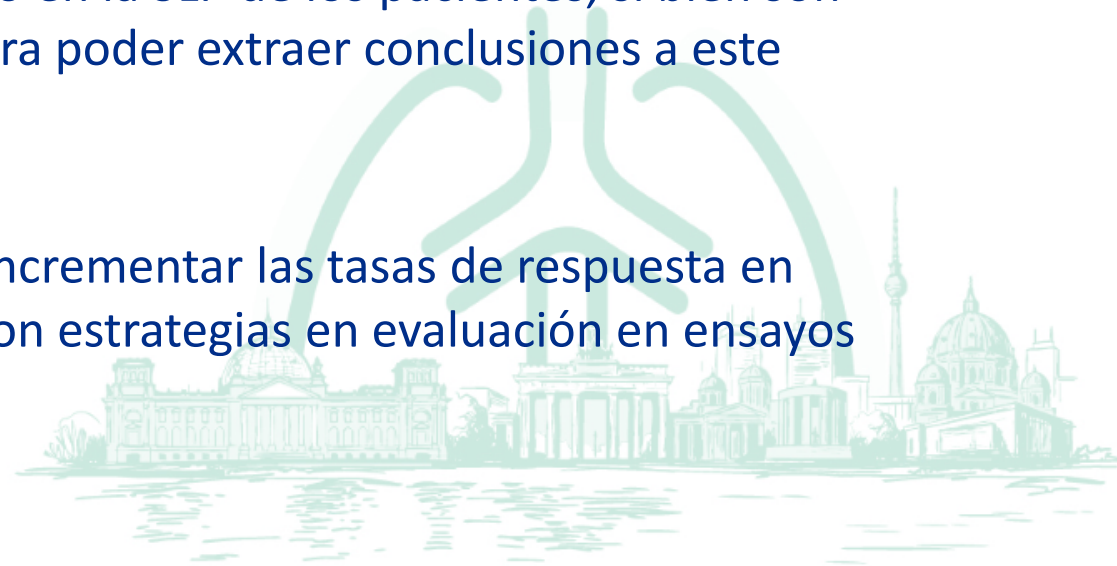
	Events/N	Median (95% CI), mo
Arm 1: vibostolimab + pembro + chemo	61/71	6.9 (4.8–9.0)
Arm 2: boserolimab + pembro + chemo	49/64	6.9 (5.0–11.0)
Arm 3: MK-4830 + pembro + chemo	50/63	6.8 (4.6–10.3)
Arm 4: MK-0482 + pembro + chemo	28/42	9.2 (7.1–16.4)



[illegible]

CONCLUSIONES

- Ivonescimab + quimioterapia presenta un beneficio en SLP frente a quimioterapia + tislelizumab en CPNCP avanzado histología escamosa, sin datos maduros aún en supervivencia global.
- La estrategia de añadir una terapia antiangiogénica a la inmuno-quimioterapia no han demostrado beneficio en la supervivencia de los pacientes ni en primera ni en segunda línea.
- La adición de quimioterapia a pembrolizumab en altos expresores no parece aumentar las tasas de respuesta en las 6 y 12 primeras semanas, ni tener impacto en la SLP de los pacientes, si bien son necesarios estudios más amplios y de más seguimiento para poder extraer conclusiones a este respecto.
- Nuevos fármacos como rilvegostomig o EIK1001 parecen incrementar las tasas de respuesta en pacientes no tratados previamente con inmunoterapia y son estrategias en evaluación en ensayos prospectivos fase 3.



MUCHAS GRACIAS

