



2026 World Conference on Lung Cancer

SEPTEMBER 12 – 15, 2026 | SEOUL, REPUBLIC OF KOREA

Single-Institution Retrospective Comparison of Neoadjuvant Nivolumab and Pembrolizumab in Resectable Stage II-III NSCLC

Kotomi Ogata, Shota Fukuda, Masaoki Ito, Akira Hamada, Hana Oiki, Mai Nishina

Shuta Ohara, Masaya Nishino, Masato Chiba, Tomoki Takemoto, Hideki Ujiie, Yasuhiro Tsutani

Division of Thoracic Surgery, Department of Surgery,

Kindai University Faculty of Medicine, Japan



Disclosure

Artificial Intelligence (AI) Use Disclaimer

I used ChatGPT for translation



Introduction

Background

The efficacy of perioperative immune checkpoint inhibitors (ICIs) for patients with resectable, locally advanced non-small cell lung cancer (NSCLC) has been demonstrated in several clinical trials.

However, few studies have directly compared treatment outcomes and prognosis between different ICI-based regimens.

Objective and Methods

- We compared the treatment outcomes and prognosis of neoadjuvant immunochemotherapy using the CheckMate 816 (CM816) and KEYNOTE-671 (KN671) regimens at our institution.
- The two groups were compared in terms of the incidence of immune-related adverse events (irAEs), pathological response, 2-year event-free survival (EFS), and overall survival (OS).



Patient

A total of **47 patients with NSCLC** who received at least one cycle of neoadjuvant ICI using either CM816 or KN671 regimen at our institution between **August 2018 and December 2025** were included.



Patient Characteristics

	CM816 (N=39)	KN671 (N=8)	<i>P</i> <i>value</i>	Chemo regimen	CM816	KN671
Age --median (IQR)	73 (58-78)	67 (45-68)	0.012	CDDP + PEM	2	2
Sex (Male/Female) --N(%)	31 (79.5)/8 (20.5)	7 (87.5)/1 (12.5)	1.000	CDDP + GEM	3	6
Smoking history --N(%)	37 (94.9)	8 (100.0)	1.000	CBDCA + PTX	21	-
PD-L1 TPS --N(%)				CBDCA + PEM	13	-
unknown	7 (18.0)	0 (0.0)	0.329			
<1%	5 (12.8)	3 (42.9)	0.089			
1-49%	13 (33.3)	1 (14.3)	0.413			
≥50%	14 (35.9)	3 (42.9)	1.000			
cStageIII --N(%)	29 (74.4)	7 (87.5)	0.659			
SUVmax (primary tumor) -- median(IQR)	15.4 (10.5-22.9)	14.7 (12.0-21.0)	0.532			
Completion of neoadjuvant ICI --N(%)	33 (84.6)	6 (75.0)	0.723			
Histology (Sq/Others) --N(%)	19 (48.7)/20 (51.3)	5 (62.5)/3 (37.5)	0.701			



Treatment-Related Adverse Events (TRAEs)

total

	CM816 (N=39)	KN671 (N=8)	P value
Any Grade --N(%)	36 (92.3)	8 (100.0)	1.000
≥Grade3 --N(%)	20 (51.3)	3 (37.5)	0.701

preoperative

	CM816 (N=39)	KN671 (N=8)	P value
Any Grade --N(%)	35 (89.7)	8 (100.0)	1.000
≥Grade3 --N(%)	20 (51.3)	4 (50.0)	1.000

POD1-90

	CM816 (N=39)	KN671 (N=8)	P value
AnyGrade --N(%)	12 (30.8)	1 (12.5)	0.413
≥Grade3 --N(%)	6 (15.4)	1 (12.5)	1.000



Treatment-Related Adverse Events (TRAEs)

>90POD

	CM816 (N=39)	KN671 (N=8)	P value
Any Grade --N(%)	4 (10.3)	6 (75.0)	0.001
Pneumonia	0 (0.0)	1 (12.5)	
Thrombocytopenia	0 (0.0)	1 (12.5)	
Endocrine-related irAEs	4 (10.3)	2 (25.0)	
Diarrhea	0 (0.0)	1 (12.5)	
Peripheral neuropathy	0 (0.0)	1 (12.5)	
≥Grade3 --N(%)	0 (0.0)	1 (12.5)	0.170
Gastrointestinal	0 (0.0)	1 (12.5)	

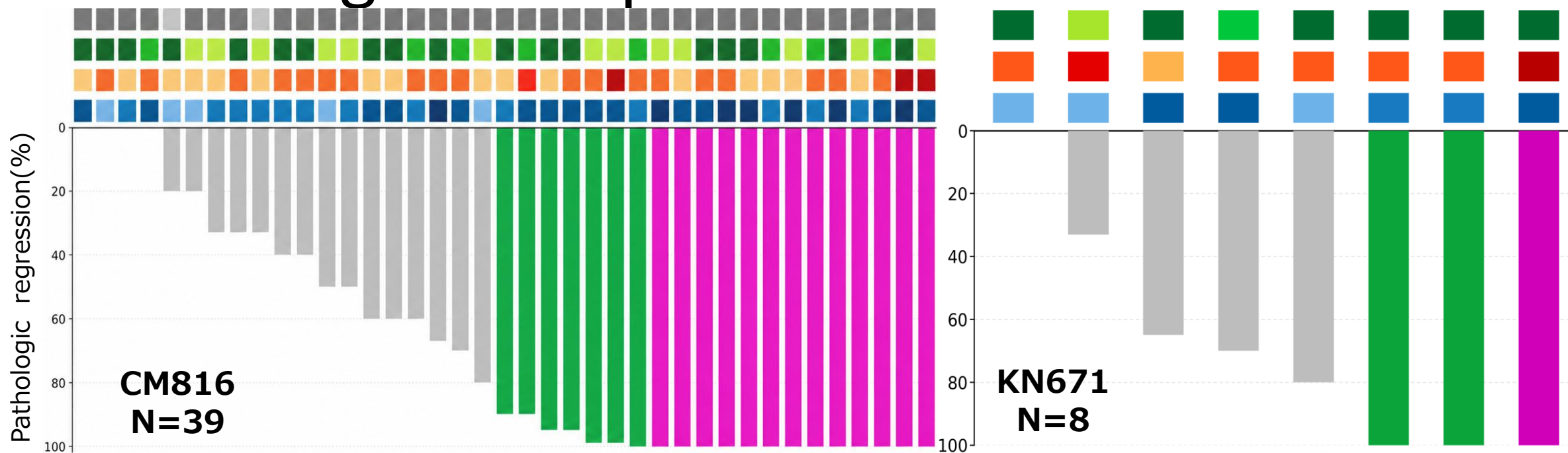


Immune-Related Adverse Events (irAEs)

	CM816 (N=39)	KN671 (N=8)	<i>P</i> <i>value</i>
Any Grade	14 (35.9)	4 (50.0)	0.692

	CM816 (N=39)	KN671 (N=8)	<i>P</i> <i>value</i>		CM816 (N=39)	KN671 (N=8)	<i>P</i> <i>value</i>
preoperative	4 (10.3)	2 (25.0)	0.267	POD1-90	7 (18.0)	0 (0.0)	0.329
Destructive thyroiditis	0 (0.0)	2 (25.0)		Hypothyroidism	2 (5.1)	0 (0.0)	
Hypothyroidism	1 (2.6)	0 (0.0)		Adrenal insufficiency	2 (5.1)	0 (0.0)	
CRS	1 (2.6)	0 (0.0)		Type 1 diabetes mellitus	1 (2.6)	0 (0.0)	
Arthritis	1 (2.6)	0 (0.0)		CRS	1 (2.6)	0 (0.0)	
Dermatitis	1 (2.6)	0 (0.0)		ILD	2 (5.1)	0 (0.0)	
The incidence of irAEs tended to be higher in the KN671 group.				>90POD	4 (10.3)	2 (25.0)	0.267
				Hypothyroidism	2 (5.1)	0 (0.0)	
				Adrenal insufficiency	2 (5.1)	2 (25.0)	

Pathological Response



Smoking status:

N status:

Histology:

PD-L1 TPS:

Response:

■ Former smoker

■ Never smoker

■ N0

■ N1

■ N2

■ Ad

■ Sq

■ LCC

■ NOS

■ <1%

■ 1–49%

■ ≥50%

■ Unknown

■ pCR

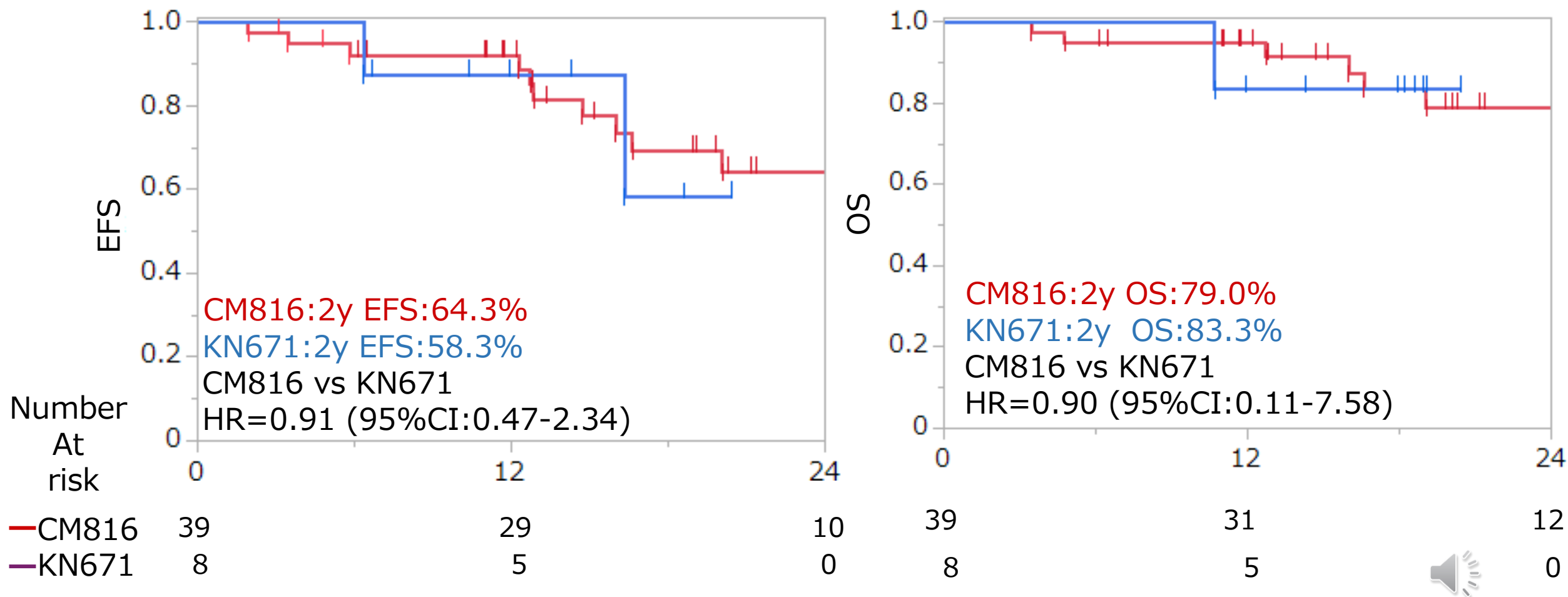
■ MPR

■ Non-MPR

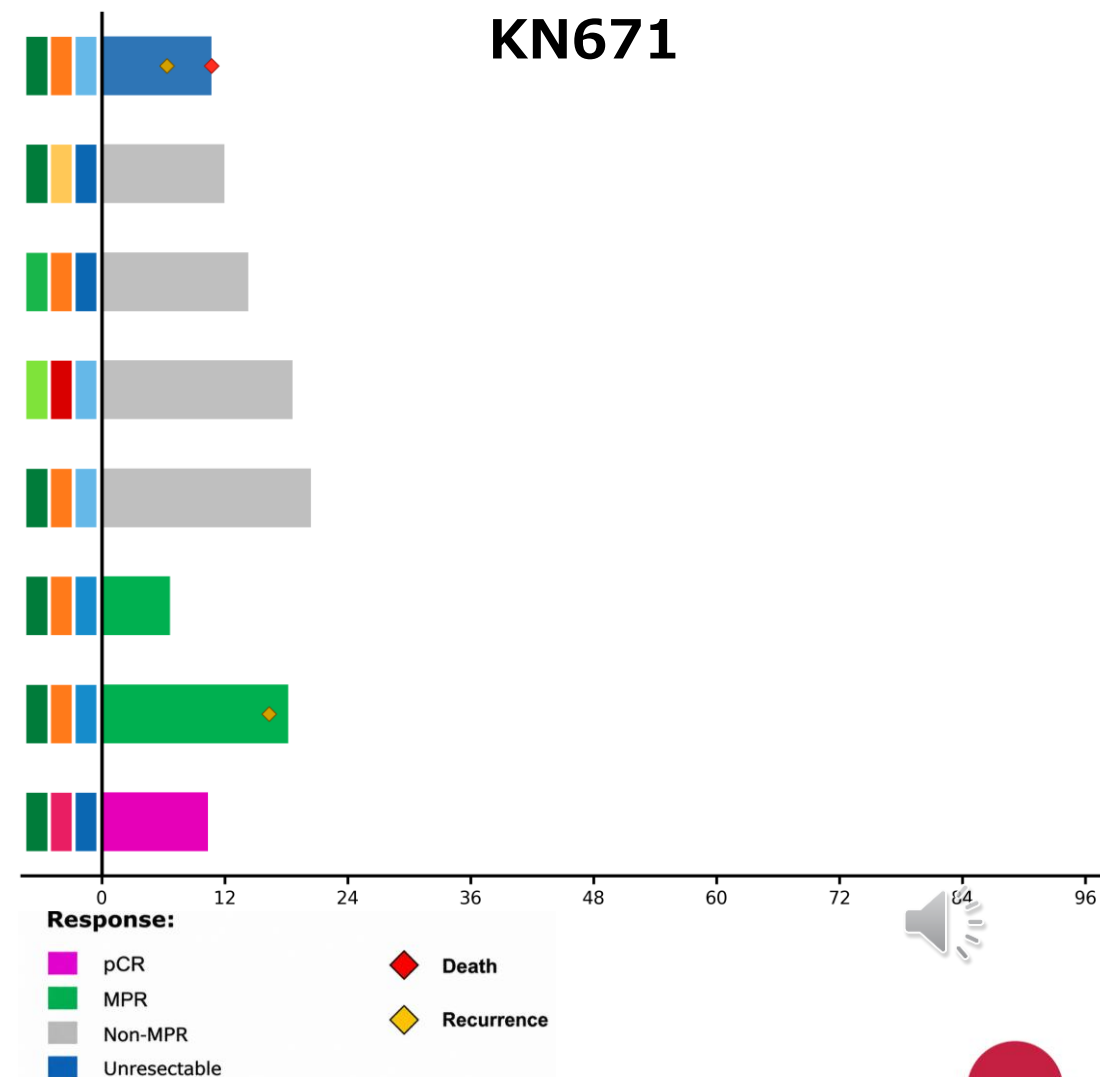
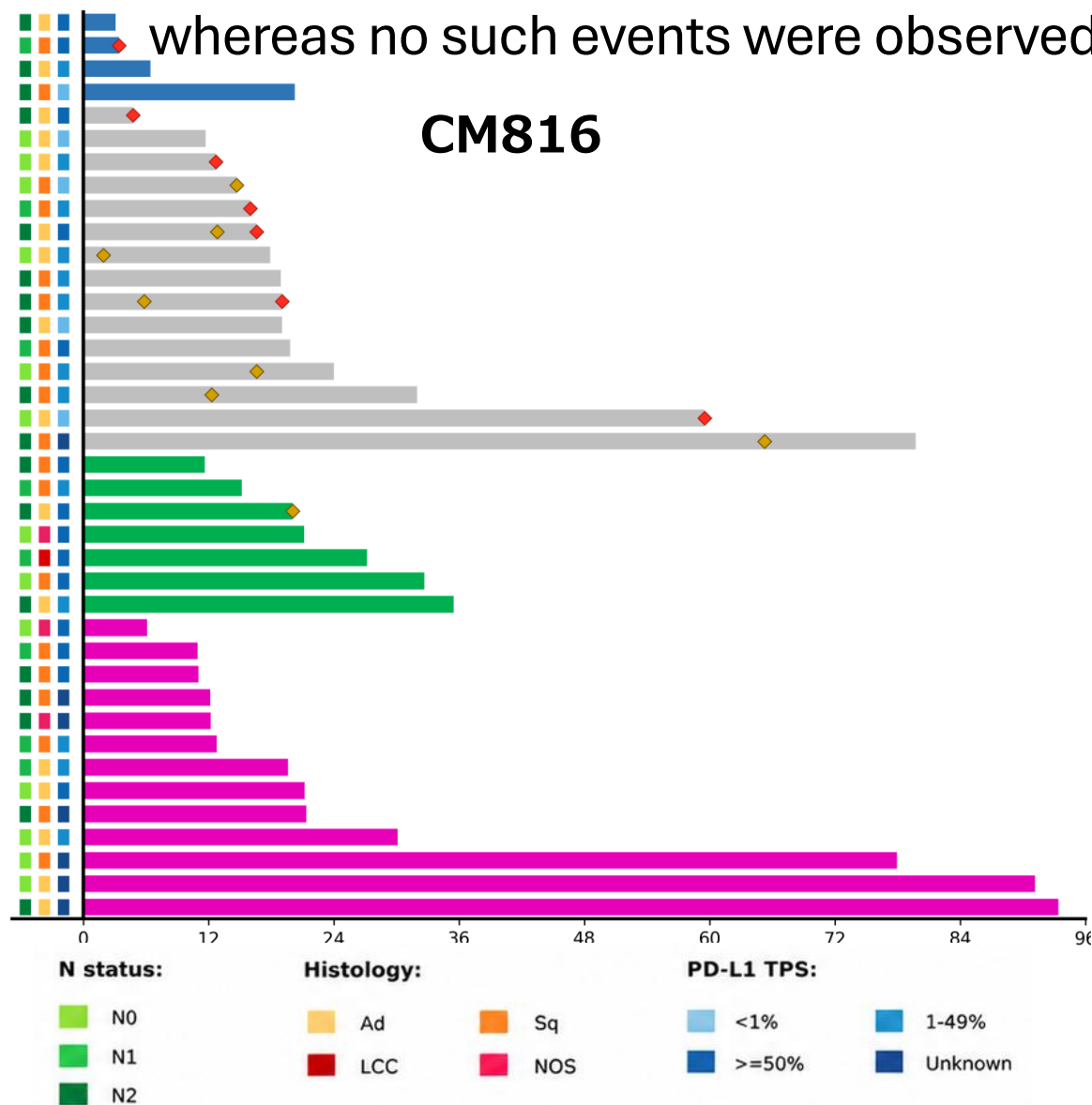
		CM816 (N=39)	KN671 (N=8)	<i>P</i> value
pCR	--N(%)	13 (33.3)	1 (12.5)	0.405
MPR	--N(%)	19 (48.7)	3 (37.5)	0.706
Non-MPR	--N(%)	15 (38.5)	4 (50.0)	0.697



Prognosis



Recurrence and death events were more frequent in unresectable and Non-MPR cases, whereas no such events were observed in patients who achieved pCR.



Discussion

	pCR rate	MPR rate	TRAE (Grade $\geq$ 3)	irAE incidence	2-year EFS	2-year OS
CheckMate 816 trial	24.0%	36.9%	33.5%	-	63.8%	82.7%
Present study CM816 group	33.3%	48.7%	51.3%	36.0%	64.3%	79.0%
KEYNOTE 671 trial	18.1%	30.2%	44.9%	25.3%	62.4%	80.9%
Present study KN671 group	12.5%	37.5%	37.5%	50.0%	58.3%	83.3%

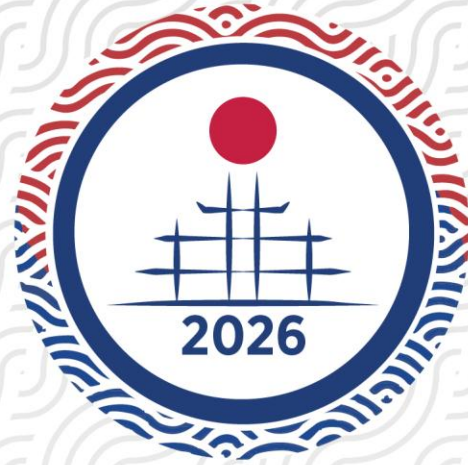
• The incidence of TRAEs and irAEs, 2-year EFS and OS, and pathological response were generally comparable between the CM816 and KN671 groups.

• In contrast, the incidence of TRAEs occurring >90 days after surgery was significantly higher in the KN671 group, possibly reflecting the effect of postoperative pembrolizumab therapy.

Conclusion

- In patients with resectable clinical stage II/III NSCLC receiving neoadjuvant immunochemotherapy, the CM816 regimen showed a potentially better pathological response, while EFS and OS were comparable to those with the KN671 regimen. The incidence of irAEs tended to be higher with the KN671 regimen.
- This study was a single-center retrospective analysis. The clinical significance of adding postoperative immunotherapy remains to be determined, and results from prospective trials, including the PIONEER trial, are awaited.





Thank You.●

