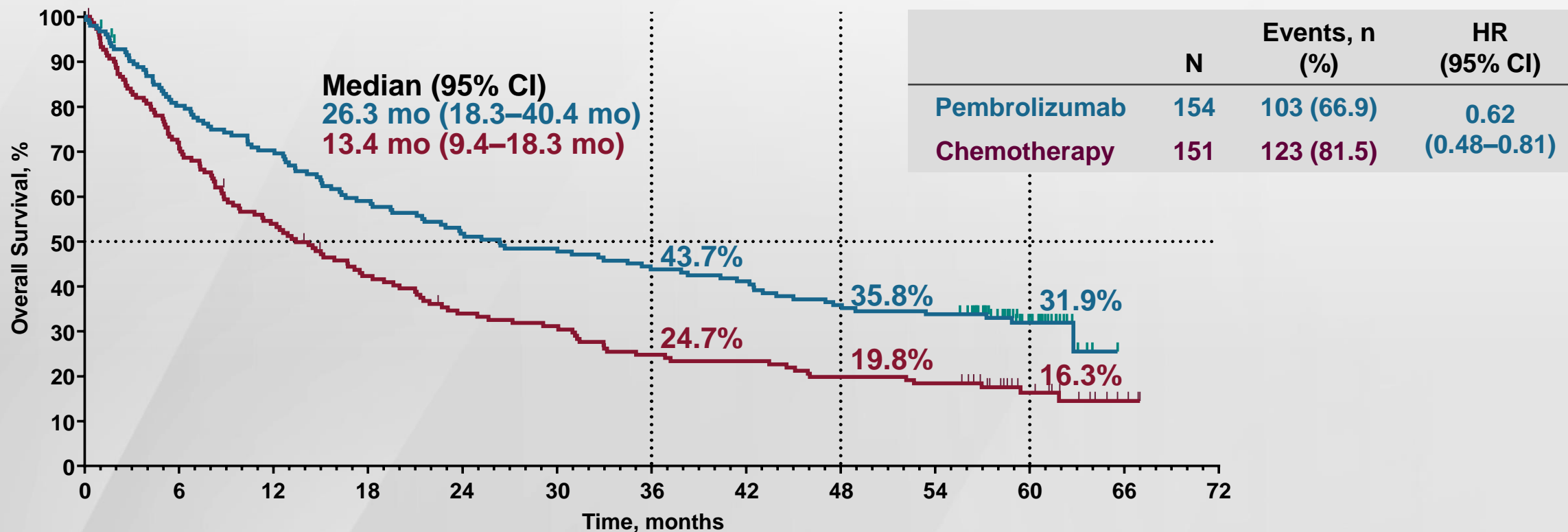


Markers for Immunotherapy

- **PD-L1**
 - Defined as percentage of tumor cells expressing the PD-L1 protein
 - $\geq 50\%$; 1%-49%; or $< 1\%$
- **TMB** (tumor mutational burden)
 - Defined as number of mutations (Mt) per DNA megabases (MB)
 - Predictive biomarker of durable clinical benefit from ICIs
 - TMB ≥ 10 Mt/MB
- **dMMR** (DNA mismatch repair deficient) and **MSI-High** (microsatellite instability)
 - Solid tumor-agnostic marker across metastatic cancers

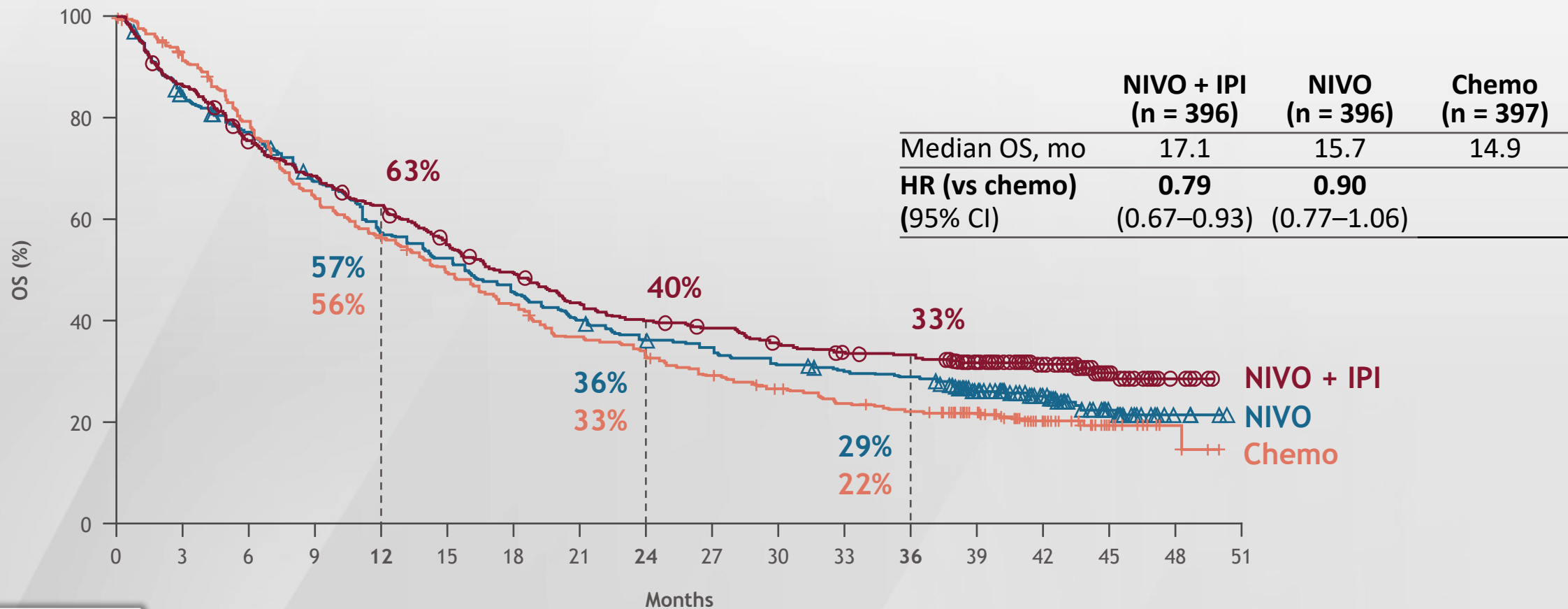
KEYNOTE-024 5-Year OS Update



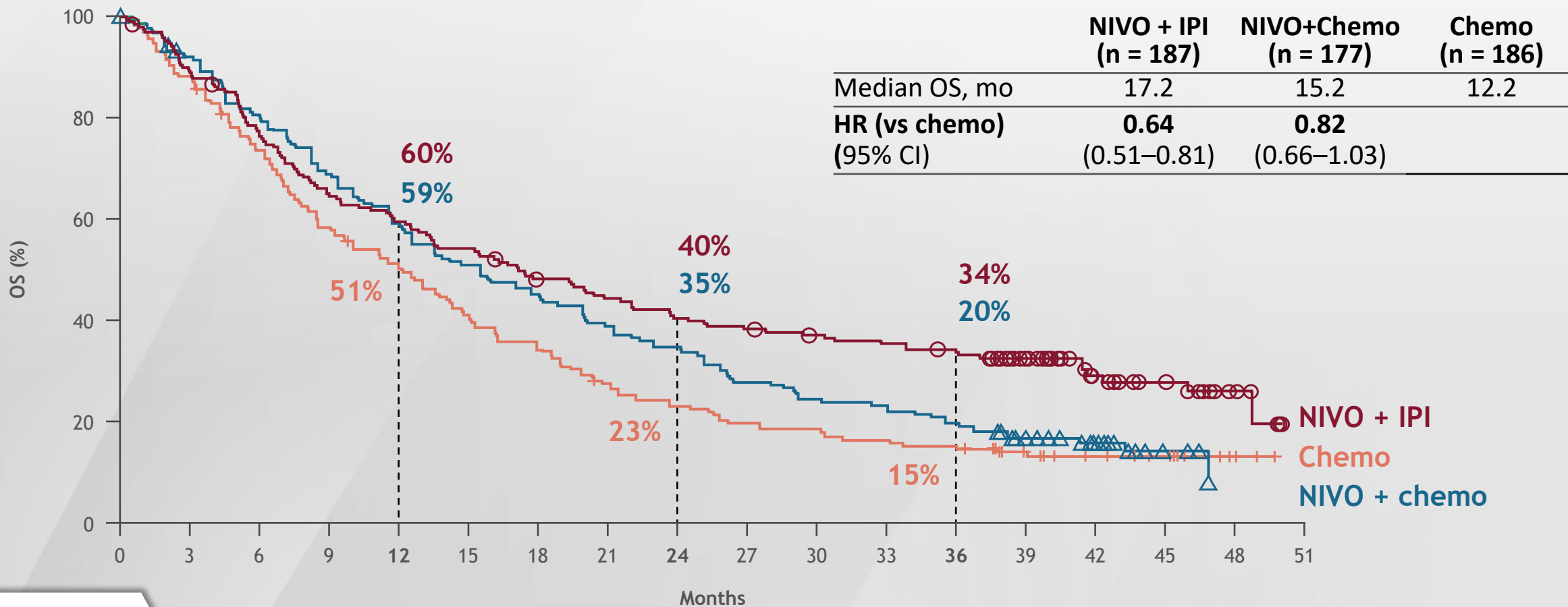
IO Approach in NSCLC

PD-L1 \geq 50%	PD-L1 1%-49%
IO monotherapy: <ul style="list-style-type: none">• Older, more frail patients• Lower performance status• Lower metastatic burden• Significant comorbidities	IO monotherapy: <ul style="list-style-type: none">• Older, more frail patients• Minimal metastases• Significant comorbidities• Patients who are chemo-averse
IO + chemotherapy combination: <ul style="list-style-type: none">• Younger, healthier patients• Higher performance status• Higher metastatic burden• Aggressive tumors• Greater symptomatology	IO + chemotherapy combination: <ul style="list-style-type: none">• Majority of patients

CheckMate 227 3-Year OS (PD-L1 $\geq 1\%$)



CheckMate 227 3-Year OS (PD-L1 <1%)



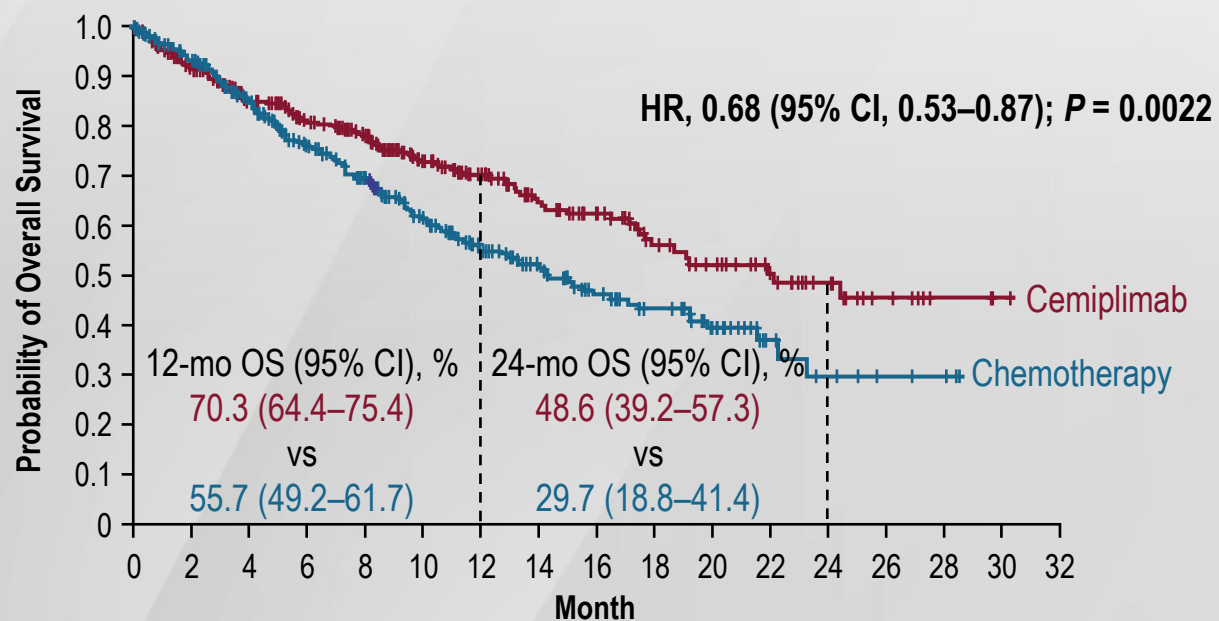
KEYNOTE-598 OS and PFS

Outcome	Pembrolizumab + Ipilimumab (n = 284)	Pembrolizumab + Placebo (n = 284)	HR (95% CI)
Median OS, months	21.4	21.9	1.08 (0.85-1.37; <i>P</i> = 0.74)
Median PFS, months	8.2	8.4	1.06 (0.86-1.30; <i>P</i> = 0.72)

EMPOWER-LUNG 1: Overall Survival

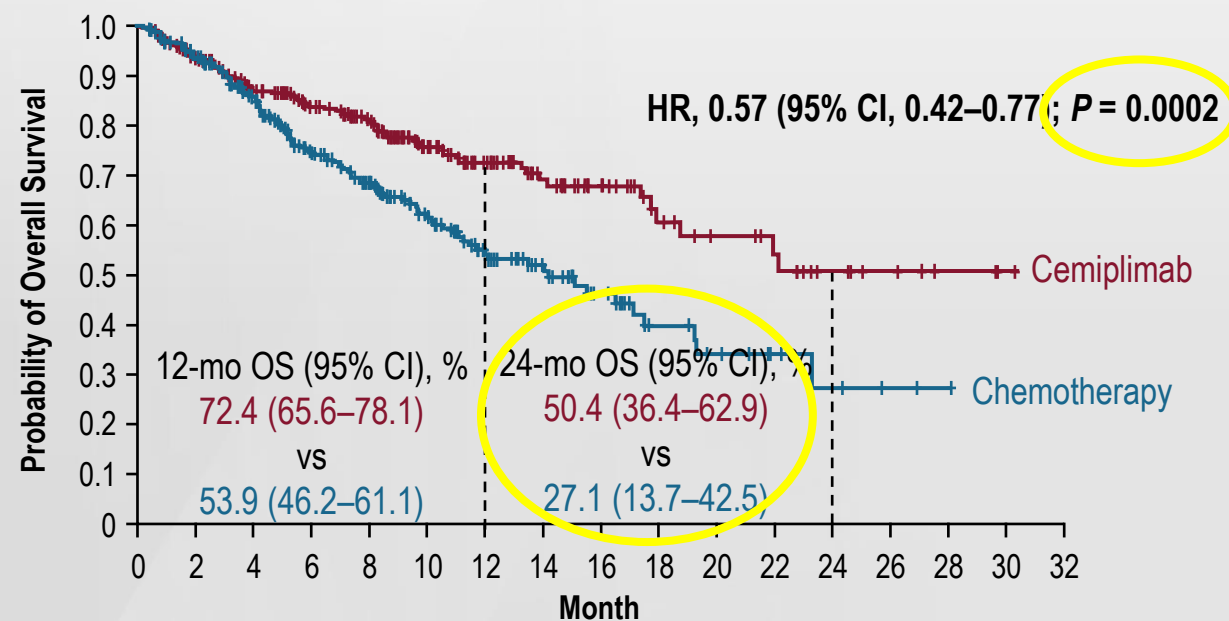
ITT

	No. of Patients	Median OS (95% CI) mo
Cemiplimab	356	22.1 (95% CI, 17.7–NE)
Chemotherapy	354	14.3 (95% CI, 11.7–19.2)

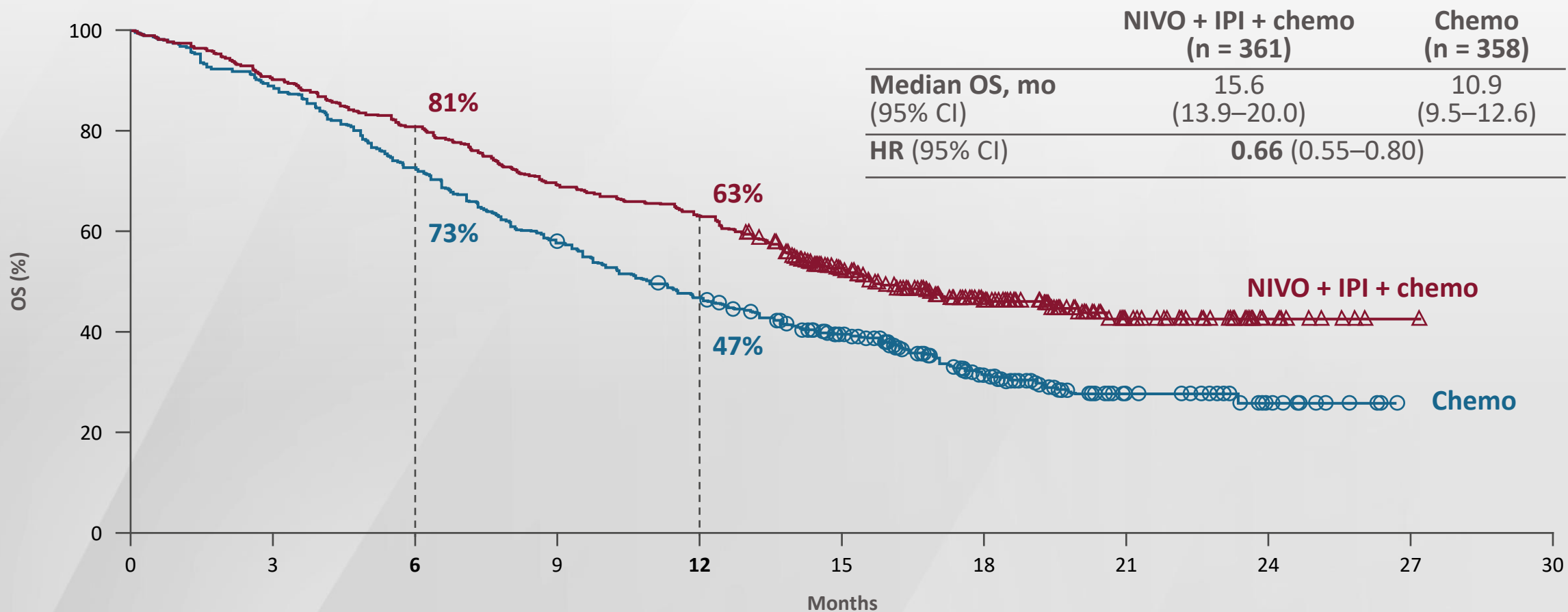


PD-L1 $\geq 50\%$ ITT

	No. of Patients	Median OS (95% CI) mo
Cemiplimab	283	Not reached (95% CI, 17.9–NE)
Chemotherapy	280	14.2 (95% CI, 11.2–17.5)



CheckMate 9LA 1-Year Overall Survival



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