



# Immunotherapy Rechallenge After Nivolumab Treatment in Advanced Non-Small Cell Lung Cancer in the French Real-World Setting

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## Disclosure Information

### **Matteo Giaj Levra**

Consultant- BMS, Astra Zeneca, MSD, Roche, Novartis

Speaker's bureau- BMS, MSD, Astra Zeneca

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## Background and Context

- Nivolumab has been shown to be an effective treatment for locally advanced and metastatic NSCLC previously treated with platinum-based doublet chemotherapy.<sup>1,2</sup>
- Data on post-nivolumab immunotherapy rechallenge in real-world clinical practice are limited.
- In France, the national hospital database (PMSI) has been used to collect such information.
- A retrospective cohort of all NSCLC patients in the PMSI database (ICD code: C34\*), who had received at least one line of platinum-based chemotherapy and started nivolumab in 2015 or 2016 were followed until December 2017 with a minimum of 12 months follow-up.
- Nivolumab treatment was considered discontinued if no nivolumab treatment was documented for  $\geq 6$  weeks ( $\geq 3$  infusions were missed).
- Immunotherapy (IO) retreatment was classified as '**immunotherapy resumption**' (a second cycle of immunotherapy with no chemotherapy between cycles) and '**immunotherapy rechallenge**' (a second cycle of immunotherapy following standard chemotherapy).

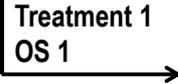
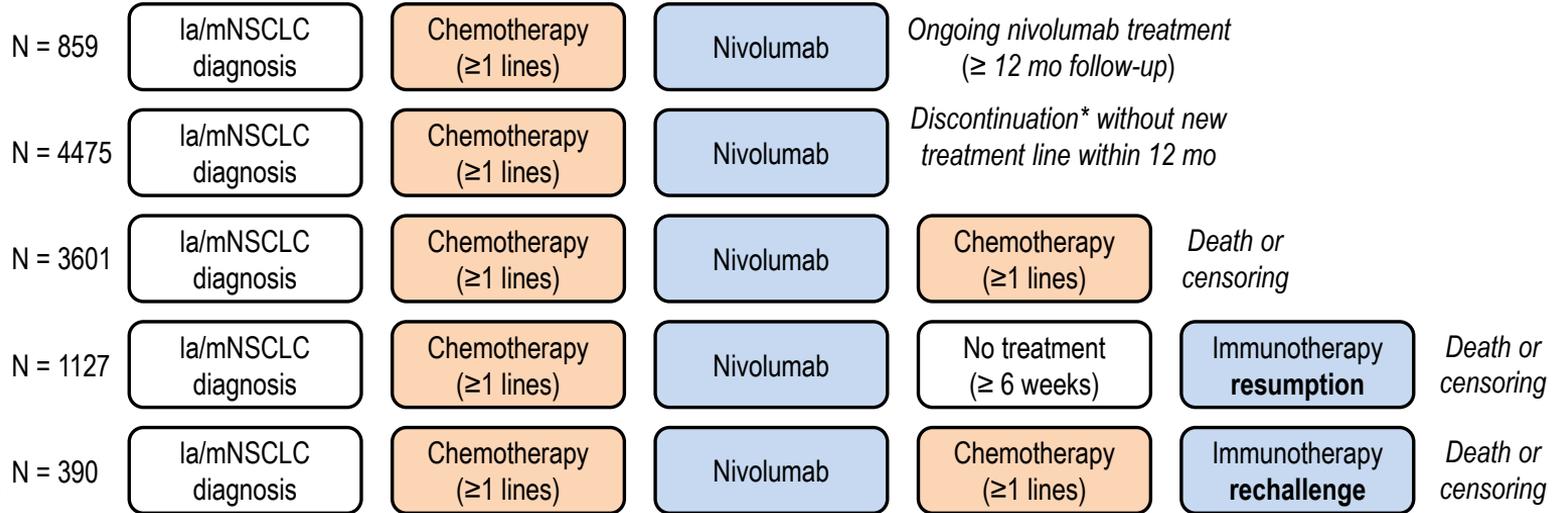
<sup>1</sup>Brahmer et al. *N Engl J Med* 2015, **373**(2):123-135; <sup>2</sup>Borghaei et al. *N Engl J Med* 2015, **373**(17):1627-1639,





## Patients and treatment sequences

**10,452** adult patients with locally advanced or metastatic NSCLC treated at least once with nivolumab after prior chemotherapy



\*Discontinuation was defined as no new treatment for ≥6 weeks after the previous treatment or death.  
\*\*1511 patients treated with nivolumab and 6 with pembrolizumab



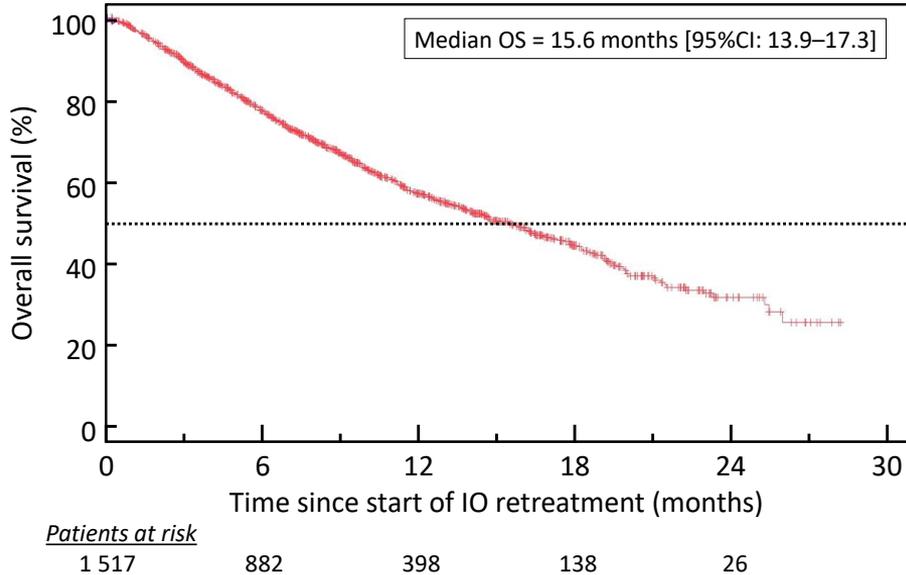
## Characteristics of patients retreated with immunotherapy (IO)

Characteristics	All patients retreated with IO N = 1 517	IO resumption N = 1 127	IO re-challenge N = 390
<b>Gender (men)</b>	1 057 (69.7%)	769 (68.2%)	288 (73.8%)
<b>Age (mean ± SD; years)</b>	63.5 ± 9.7	63.8 ± 9.6	62.7 ± 9.9
<b>Comorbidities at inclusion</b>			
Hypertension	297 (19.6%)	220 (19.5%)	77 (19.7%)
Diabetes	138 (9.1%)	104 (9.2%)	34 (8.7%)
COPD	222 (14.6%)	171 (15.2%)	51 (13.1%)
<b>Cerebral metastases</b>	254 (16.7%)	188 (16.7%)	66 (16.9%)
<b>Duration of first nivolumab treatment</b>			
Median	3.5 months	3.8 months	2.8 months
<3 months	695 (45.8%)	485 (43.0%)	210 (53.8%)
3 – 6 months	390 (25.7%)	296 (26.3%)	94 (24.1%)
≥6 months	432 (28.5%)	346 (30.7%)	86 (22.1%)

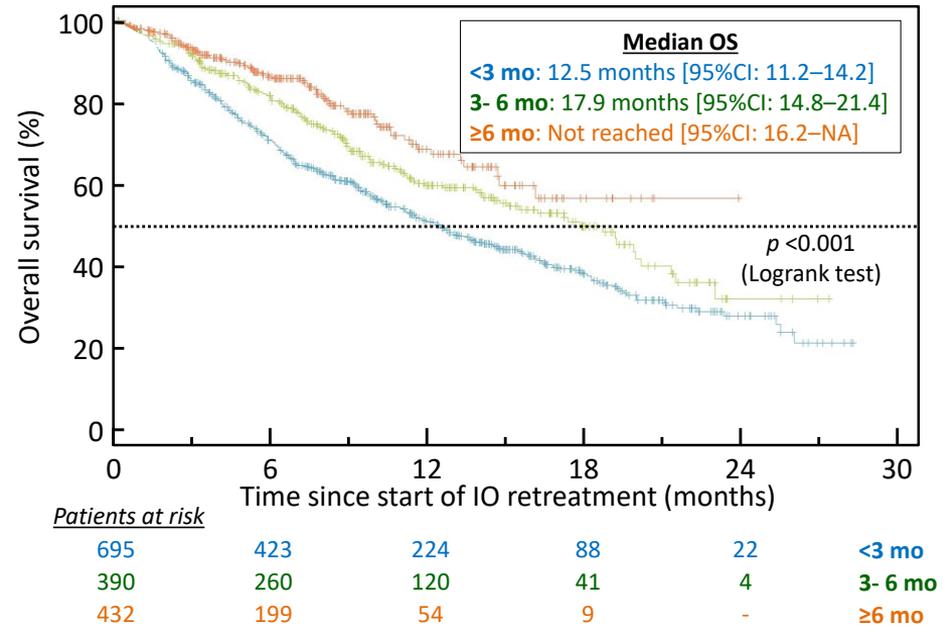


# Overall survival (OS2) in all patients retreated with IO

All IO retreated patients



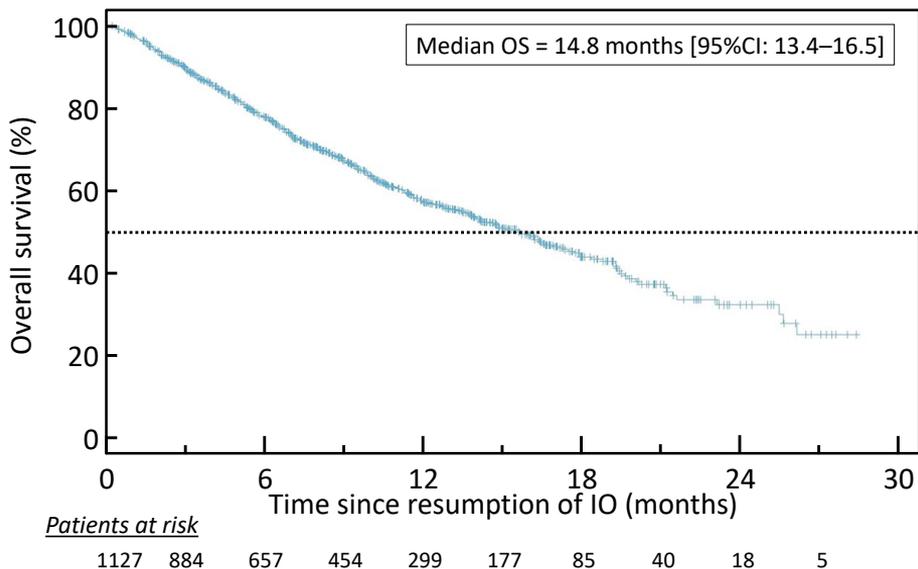
According to initial IO treatment duration



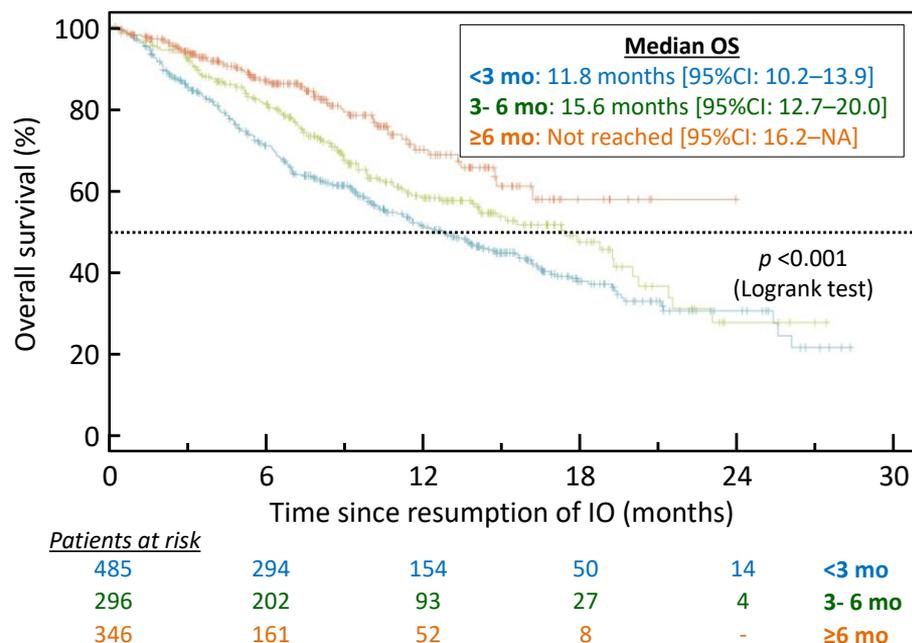


## Overall survival (OS2) in IO resumption patients

### All IO resuming patients



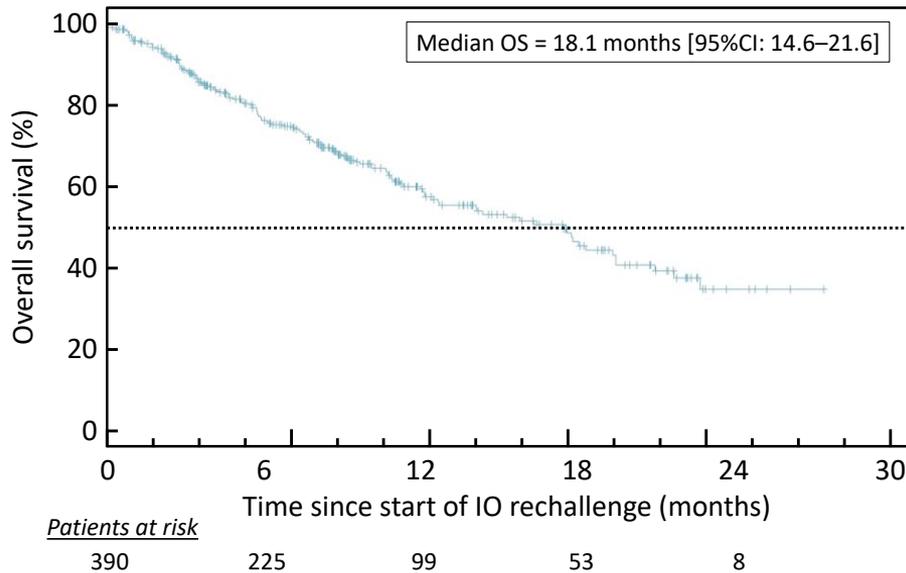
### According to initial IO treatment duration



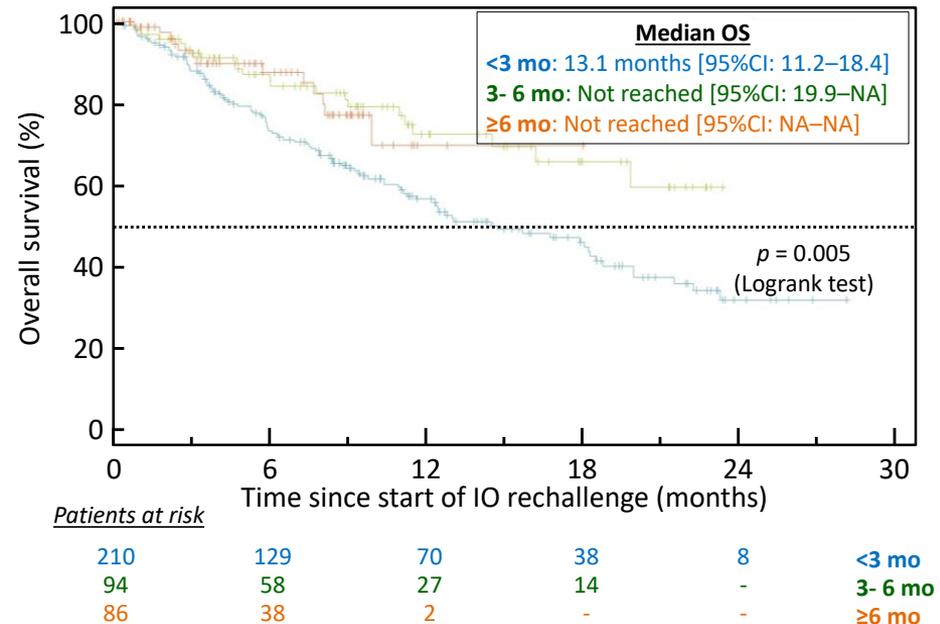


## Overall survival (OS2) in IO rechallenge patients

### All IO rechallenged patients



### According to initial IO treatment duration





## Conclusions

- A majority of patients (**53%**; 5118/9593) with locally advanced or metastatic NSCLC who discontinued nivolumab received a subsequent systemic therapy.
- Around **30%** (1517/5118) of these patients were retreated with immunotherapy, either as a resumption or as a rechallenge following chemotherapy.
- Median overall survival during the second course of immunotherapy (OS2) suggests good outcomes (>15 months) and was longer in patients with a first nivolumab treatment duration with nivolumab of  $\geq 3$  months.
- *Limitations of the approach include notably the absence of reasons for changing treatment.*
- *These results should be considered exploratory in the absence of a comparison with another effective therapy.*
- *This exploration of immunotherapy retreatment through a nationwide database analysis is complementary to other prospective cohort studies dedicated to immunotherapy rechallenge.*





## Back-up

### Overall survival (OS) of patients receiving CT only as subsequent therapy (N=3601)

