

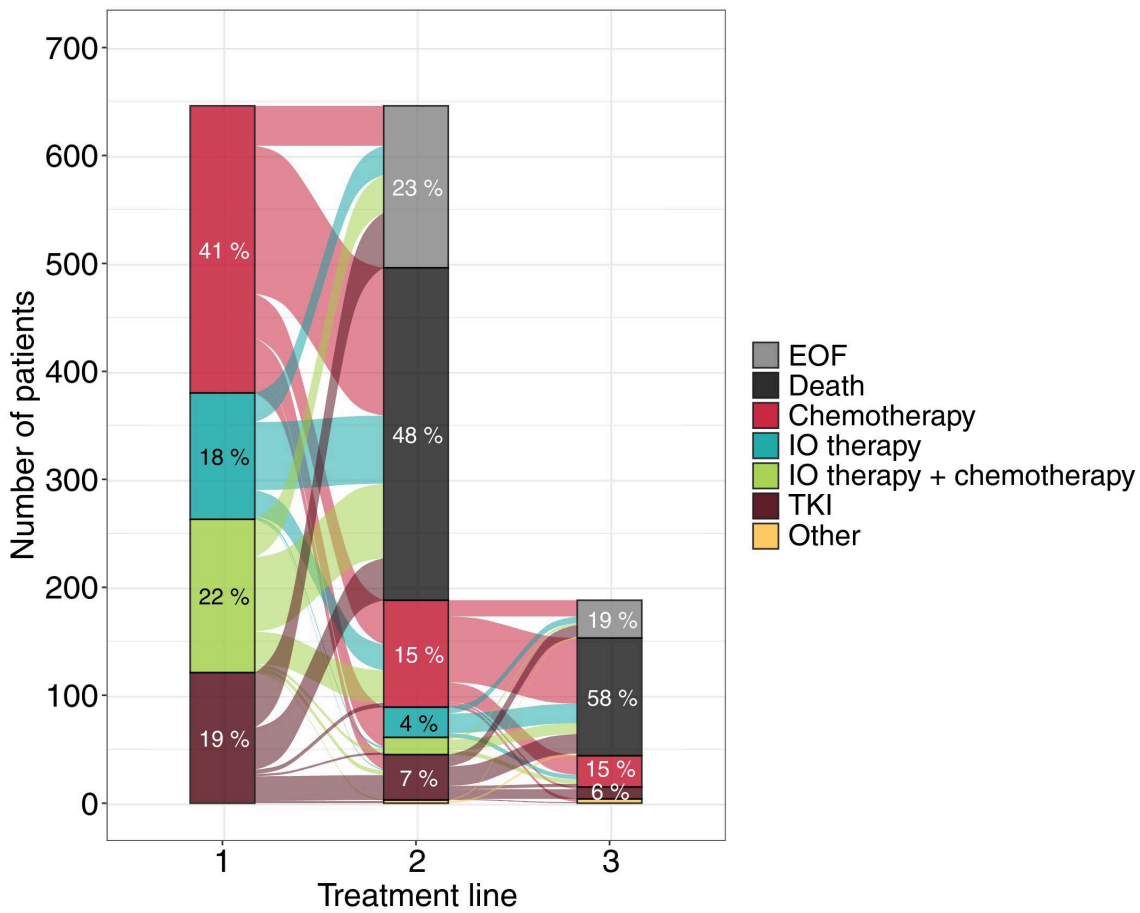
1 **Supplementary material has been published as submitted. It has not been copyedited, or typeset by**

2 **Acta Oncologica**

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4 **SUPPLEMENTAL DATA:**

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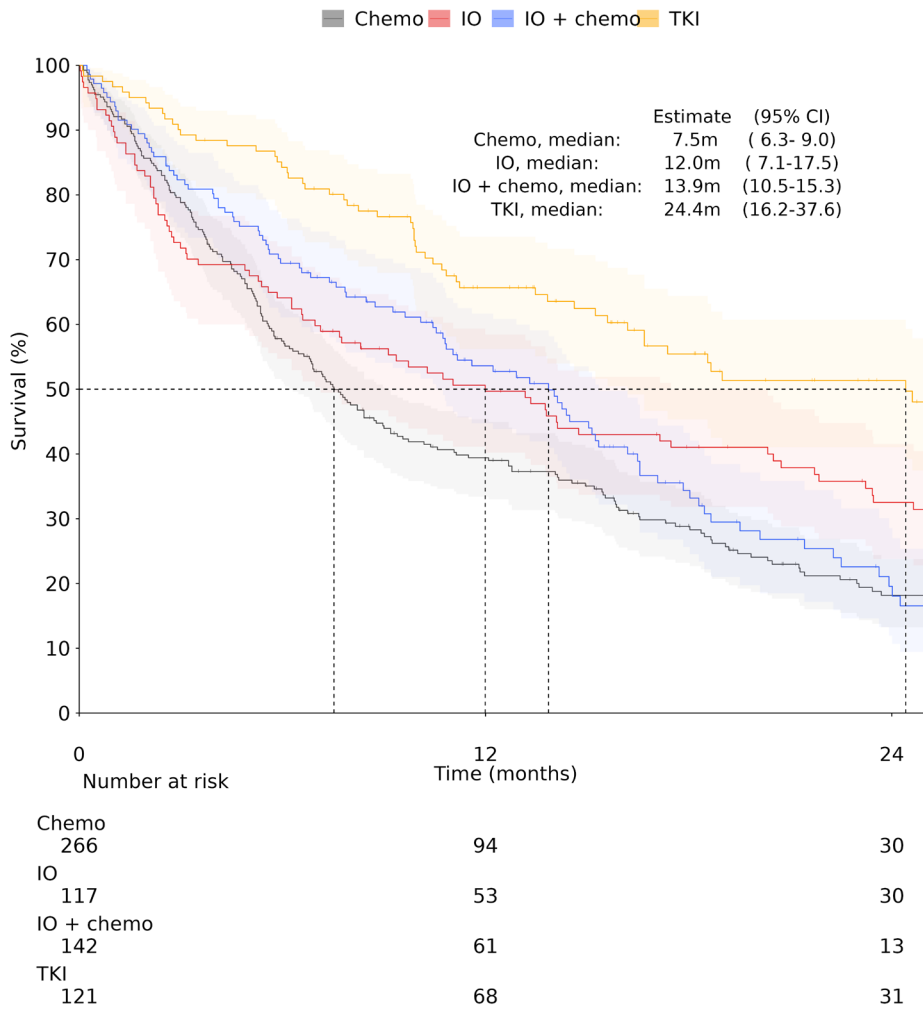


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7 **Supplementary Figure 1. Sankey plot of treatment lines for overall mNSCLC cohort.**

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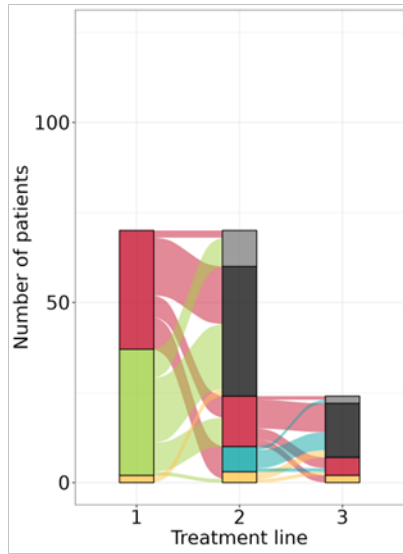
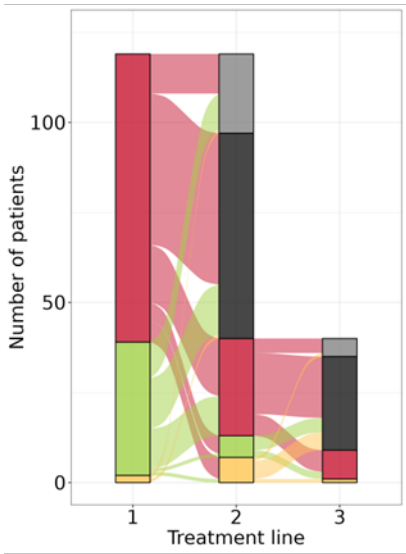
11 **Supplementary Figure 2.** Overall survival from start of 1L stratified by treatment. Shaded areas represent

12 95% CI.

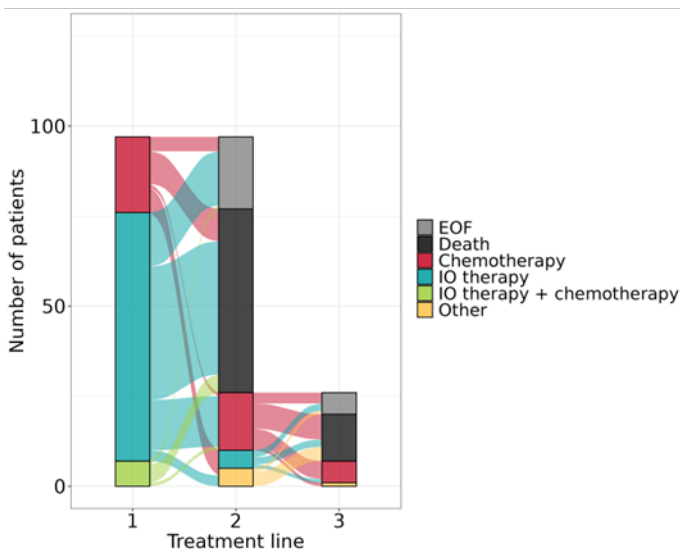
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A. PD-L1 <1%

B. PD-L1 1-49%



C. PD-L1 50-100%

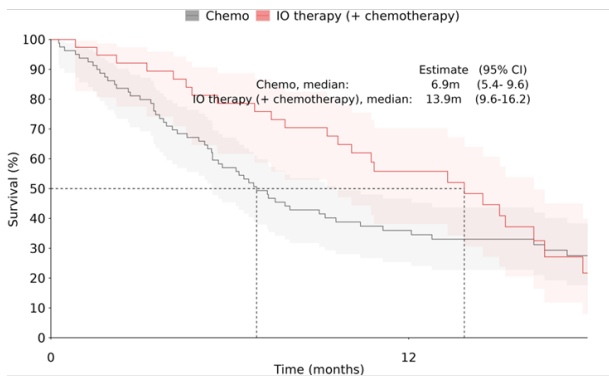


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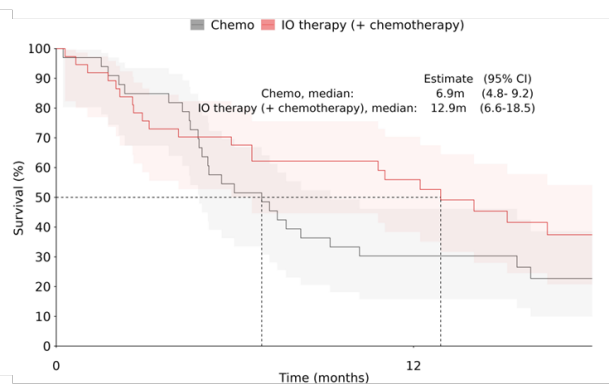
15 **Supplementary Figure 3.** Sankey plot of treatment lines for non-SqC patients stratified by PD-L1 status. A)

16 PD-L1 <1%, B) PD-L1 1-49% and C) PD-L1 50-100%.

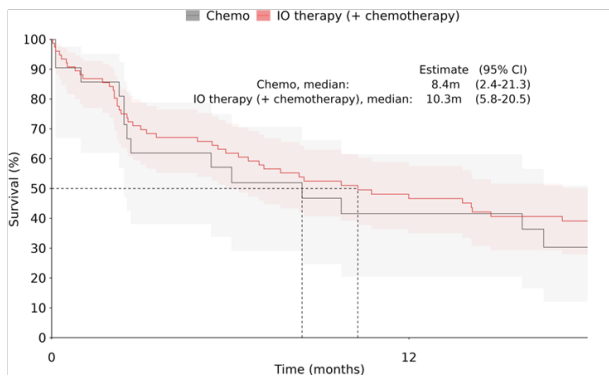
A. PD-L1 <1%



B. PD-L1 1-49%



C. PD-L1 50-100%



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18 **Supplementary Figure 4.** Overall survival from start of IL stratified by IL treatment (chemotherapy alone  
19 versus immunotherapy or chemo-immunotherapy), for non-SqC patients stratified by PD-L1 expression  
20 level:

21 (A) PD-L1 < 1%, (B) PD-L1 1-49%, and (C) PD-L1 ≥ 50%. Median OS (months) with 95% CI is shown for  
22 each group

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25 *Supplementary Table 1. SNOMED morphology codes for NSCLC identification and histology definition.*

<b>Histological subgroup</b>	<b>Histology</b>	<b>SNOMED morphology codes</b>
Squamous cell carcinoma (SqC)	Squamous cell carcinoma	M80703
		M80706*
Non-squamous cell (Non-SqC)	Adenocarcinoma	M81403
		M81406*
	Other Non-SqC	M80123
		M85603
		M80103
		M80106*

26 \*if no records of other cancer (ICD-10 code C\* other than C34\*, C45\*, and C76\*-80\*)

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28 *Supplementary Table 2. Distribution of first-line treatment types across CCI groups.*

<b>CCI group</b>	<b>Treatment group</b>	<b>N</b>	<b>%</b>
<b>0</b>	<b>Chemotherapy</b>	99	35
	<b>IO-therapy</b>	44	15
	<b>IO therapy + chemotherapy</b>	68	24
	<b>TKI</b>	74	26
<b>1</b>	<b>Chemotherapy</b>	103	46
	<b>IO-therapy</b>	42	19
	<b>IO therapy + chemotherapy</b>	46	21
	<b>TKI</b>	32	14
<b>2</b>	<b>Chemotherapy</b>	41	44
	<b>IO-therapy</b>	22	24
	<b>IO therapy + chemotherapy</b>	19	20
	<b>TKI</b>	11	12
<b>3+</b>	<b>Chemotherapy</b>	23	51
	<b>IO-therapy</b>	9	20
	<b>IO therapy + chemotherapy</b>	9	20
	<b>TKI</b>	4	9

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30 **Supplementary Table 3.** Outcomes from start of 1L treatment for non-SqC patients by PD-L1 expression.

<b>PD-L1 expression</b>	<b>Treatment group</b>	<b>TTNT, months, median (95% CI)</b>	<b>OS, months, median (95% CI)</b>
<b>&lt;1%</b>	<b>Overall</b>	6.1 (4.9 - 6.5)	9.2 (6.8 -12.1)
	<b>Chemotherapy</b>	5.2 (3.8 - 6.2)	6.9 (5.4 - 9.6)
	<b>IO therapy +/- chemotherapy</b>	7.4 (6.1 - 13.8)	13.9 (9.6 - 16.2)
<b>1-49%</b>	<b>Overall</b>	6.5 (4.4 - 9.7)	8.7 (5.9 - 15.1)
	<b>Chemotherapy</b>	4.5 (3.0 - 5.9)	6.9 (4.8 - 9.2)
	<b>IO therapy +/- chemotherapy</b>	11.6 (6.5 - 15.1)	12.9 (6.6 - 18.5)
<b>50-100%</b>	<b>Overall</b>	5.7 (3.0 -7.9)	9.7 (6.0 -15.8)
	<b>Chemotherapy</b>	2.8 (1.5 - 5.4)	8.4 (2.4 - 21.3)
	<b>IO therapy +/- chemotherapy</b>	7.3 (3.2 - 10.3)	10.3 (5.8 - 20.5)

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