

Supplemental Material

Supplemental Table 1: Tumor Mutational burden according to individual KRAS mutation.

KRAS subtype	N	Median Tumor Mutational Burden	Range
G12A	24	8.5	0.9 – 35.9
G12C	143	8.2	0.9 – 35.9
G12D	52	5.7	0.9 – 17.4
G12V	50	7.5	0.9 – 22.5
Other	61	8.5	0.9 – 45.3

Supplemental Table 2: Multivariate Analysis of duration of platinum/pemetrexed chemotherapy in patients with *KRAS*-mutant NSCLC

Variable	HR (95% CI of HR)	p-Value
<i>TP53</i> (+ vs -)	1.01 (0.64 - 1.61)	0.9
<i>STK11</i> (+ vs -)	1.02 (0.64 - 1.61)	0.9
<i>KEAP1/NFE2L2</i> (+/-)	1.64 (1.04 - 2.59)	0.03
Bevacizumab use (yes vs. no)	0.66 (0.46 - 0.94)	0.02
Gender (male vs female)	1.23 (0.86 - 1.77)	0.25
Age at diagnosis	1.00 (0.98 - 1.02)	0.7
Smoking Status (former/current vs never)	1.30 (0.50 - 3.38)	0.5
KPS at diagnosis (KPS 80-100 vs <80)	0.83 (0.55 - 1.25)	0.38

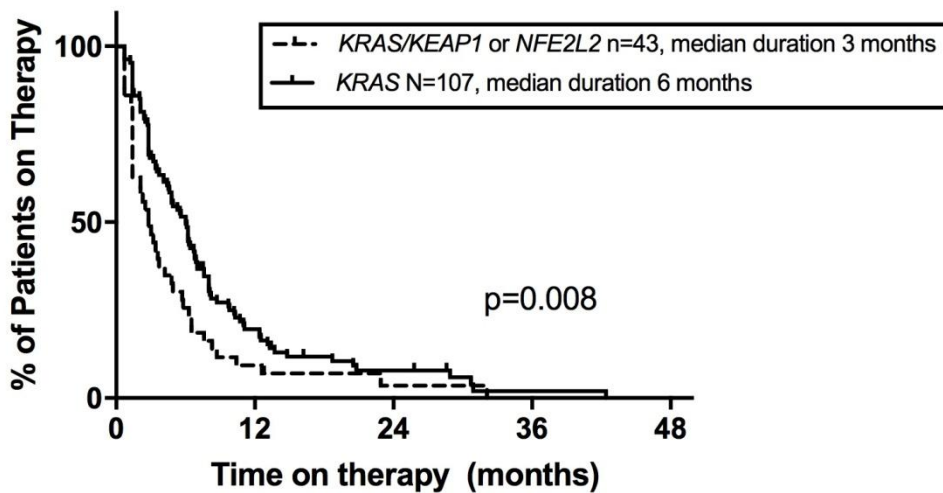
Supplemental Table 3: Multivariate Analysis of duration of immunotherapy in patients with *KRAS*-mutant NSCLC

Variable	HR (95% CI of HR)	p-Value
<i>TP53</i> (+ vs -)	1.18 (0.64 - 2.17)	0.6
<i>STK11</i> (+ vs -)	1.40 (0.75 - 2.63)	0.3
<i>KEAP1/NFE2L2</i> (+/-)	1.64 (0.89 - 3.00)	0.1
Gender (male vs female)	1.22 (0.68 - 2.21)	0.5
Age at diagnosis	0.82 (0.99 - 1.06)	0.1
Line of Therapy (3+ vs 1 or 2)	0.55 (0.24 - 1.26)	0.2
KPS at diagnosis (KPS 80-100 vs <80)	0.82 (0.41 - 1.63)	0.6

Supplemental Table 4: Multivariate Analysis of Overall Survival from start of Immunotherapy in patients with *KRAS*-mutant NSCLC

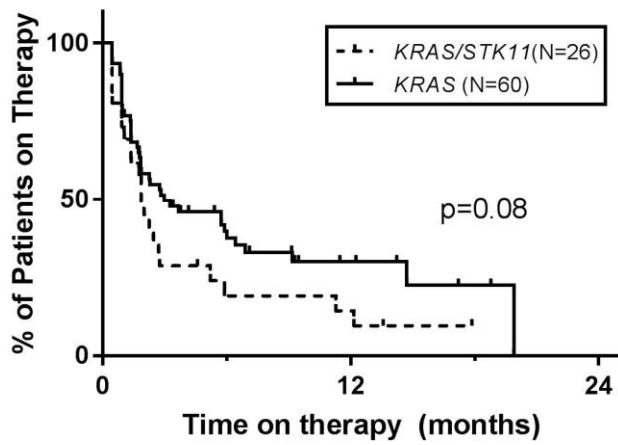
Variable	HR (95% CI of HR)	p-Value
<i>TP53</i> (+ vs -)	1.95 (0.90 - 4.21)	0.09
<i>STK11</i> (+ vs -)	1.35 (0.61 - 2.96)	0.46
<i>KEAP1/NFE2L2</i> (+/-)	3.54 (1.55 - 8.11)	0.003
Tumor mutation Burden	0.90 (0.83 - 0.99)	0.03
Gender (male vs female)	1.75 (0.79 - 3.89)	0.17
Age at diagnosis	1.05 (1.00 - 1.11)	0.05
Line of Therapy (3+ vs 1 or 2)	0.37 (0.12-1.18)	0.09
KPS at diagnosis (KPS 80-100 vs <80)	0.93 (0.36 – 2.43)	0.89

Supplemental Figure 1: Duration of platinum/pemetrexed +/- bevacizumab therapy in subset of patients receiving first line therapy for Stage IV disease by *KEAP1/NFE2L2* mutations.

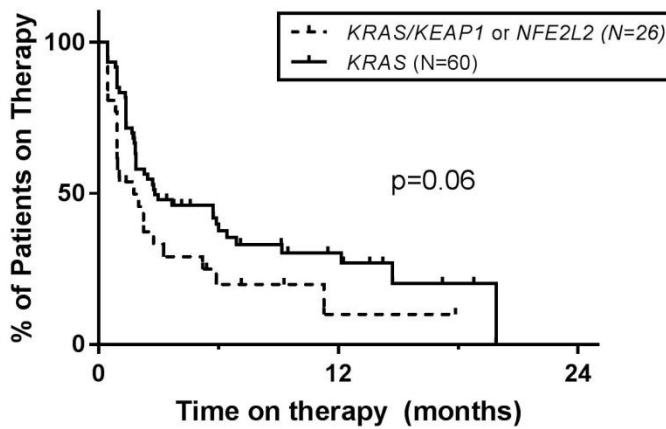


Supplemental Figure 2: Duration of immune checkpoint inhibitor for treatment of Stage IV disease by different co-occurring mutations (**A**, *STK11* **B**, *KEAP1* or *NFE2L2*, **C**, *TP53*)

A



B



C

