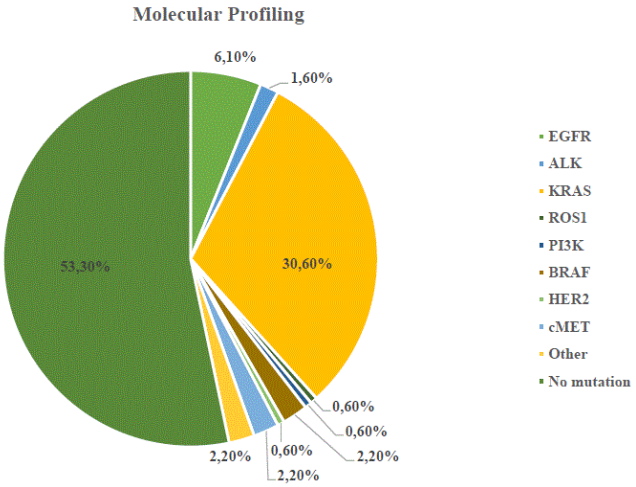
Supplementary data



Supplementary Figure 1. Detail of oncogenic addictions. Results of the driver mutations in routine on 180 patients tested

Supplementary Table 1. Biological characteristics at nivolumab initiation

	N=259
Lymphocyte count	
< 1G/l	34 (23.3%)
≥ 1G/l	112 (76.7%)
MD	113
Neutrophil count	
≥ 7G/l	37 (22.6%)
< 7G/l	127 (77.4%)
MD	95
Eosinophil count	
≥ 0.5 G/l	13 (11.9%)
< 0.5 G/l	96 (88.1%)
MD	150
LDH level	
≥ 500 UI/l	5 (14.3%)
< 500 UI/l	30 (85.7%)
Missing data	224
Albuminemia	
< 30 g/l	18 (19.1%)
≥ 30 g/l	76 (80.9%)
MD	165

MD: Missing data

Supplementary Table 2. Toxicity data

Type of toxicity	Number of patients (n, %)	Highest grade	Number of side effects ≥ grade 3	IRAEs (n)	Suspension of treatment (n)
Digestive	20 (7.7%)	3	8	6	8
Hepatic cytolysis	7 (2.7%)	3	4	-	4
Respiratory	6(2.3%)	4	3	4	3
Cutaneous	26(10.0%)	4	2	1	2
Renal	7(2.7%)	4	5	2	6
Dysthyroidism	35 (13.5%)	3	2	29	2
Asthenia	20 (7.7%)	4	6	-	5
Other	31	4	7	10	11

IRAEs: Immune relative adverse events

Supplementary Table 3. Analysis of factors influencing OS

			Univariate analysis		Multivariate analysis	
	Tested	Reference	HR (95% CI)	*p* value	HR (95% CI)	*p* value
Age	<70 years	≥70 years	1.16 [0.78-1.73]	0.46	-	-
Sex	Female	Male	1.04 [0.73-1.48]	0.83	-	-
PS	>1	≤1	1.19 [0.60-2.34]	0.62	-	-
Smoking status	Current smoker	Never/former smoker	0.81 [0.59-1.12]	0.20	-	-
Histology	Other	Adenocarcinoma	0.85 [0.62-1.19]	0.35	-	-
KRAS mutation	Positive	Negative	1.17[0.77-1.78]	0.46	-	-
Prior radiotherapy	Yes	No	1.70 [1.24-2.34]	<0.01	1.67 [1.21-2.30]	<0.01
Radiotherapy	>6 months	<6 months	0.19 [0.09-0.38]	<0.01	-	-
Best response to previous treatment(s)	No PD	PD	0.56 [0.38-0.82]	<0.01	0.56 [0.39-0.83]	<0.01
Type of response to last treatment before nivolumab	No PD	PD	0.75 [0.53-1.05]	0.09	-	-
Weight loss	>10%	≤10%	2.12 [1.39-3.22]	<0.01	-	-
Lymphocyte count	<1 G/l	≥1 G/l	2.66 [1.71-4.14]	<0.01	-	-
Neutrophil count	>7 G/l	<7 G/l	1.61[1.04-2.51]	0.03	-	-
Eosinophil count	≥0.5 G/l	<0.5 G/l	0.66 [0.30-1.45]	0.30		
Albuminemia	<30 g/l	≥30 g/l	2.72 [1.46-5.07]	<0.01	-	-
LDH level	≥500 U/l	<500 U/l	3.09 [1.00-9.51]	0.05		
IRAEs	Yes	No	0.42 [0.26-0.68]	<0.01	0.42 [0.26-0.70]	<0.01

PD: Progressive disease
IRAEs: Immune relative adverse events

Supplementary Table 4. Drugs used in 1st and 2nd line post nivolumab and detail of response

Drugs used	1st line (n=106)	Objective response (CR/PR/SD/PD/NE/MD)	2nd line (n=27)	Objective response (CR/PR/SD/PD/NE/MD)
Chemotherapy	83		17	
(n, %)	(78.3%)		(63%)	
Pemetrexed	5	0/1/4/0/0/0	-	-
Carboplatin/ paclitaxel	2	0/0/0/0/2/0	1	0/0/1/0/0/0
Carboplatin/ paclitaxel/ bevacizumab	2	0/1/0/0/1/0	-	-
Carboplatin/ gemcitabine/ bevacizumab	1	0/1/0/0/0/0	-	-
Gemcitabine	26	0/3/4/8/11/0	4	0/1/0/0/3/0
Carboplatin/ gemcitabine	2	0/0/1/0/1/0	-	-
Docetaxel	25	0/6/3/7/9/0	3	0/1/0/0/2/0
Paclitaxel	16	0/1/4/6/5/0	6	0/2/1/2/1/0
Paclitaxel/	1	0/1/0/0/0/0	-	-
bevacizumab				
Paclitaxel/ gemcitabine	1	0/0/1/0/0/0	-	-
Vinorelbine	2	0/0/1/1/0/0	2	0/0/0/0/2/0
Carboplatin/ etoposide	-	-	1	0/0/0/0/1/0
EGFR-TKIs	20 (18.9%)		9 (33.3%)	
Erlotinib	11	0/0/2/5/4/0	5	0/1/0/4/0/0
Gefitinib	2	0/0/0/1/1/0	3	0/0/0/0/3/0
Afatinib	4	0/0/2/2/0/0	-	-
Osimertinib	2	0/1/1/0/0/0	-	-
Not known	1	0/0/0/0/1/0	1	0/0/0/1/0/0
ALKis	3 (2.8%)		1 (3.7%)	
Crizotinib	3	0/0/2/1/0/0	-	-
Brigatinib	-	-	1	0/0/1/0/0/0

Response (n; %)	1st line post nivolumab (N=106)	2nd line post nivolumab (N=27)
ORR	15; 14.2%	5; 18.5%
PR	15; 14.2%	5; 18.5%
SD	25; 23.6%	3; 11.1%
DCR	40; 37.8%	8; 29.6%
PD	31; 29.2%	7; 26.0%
NE	35; 33.0%	12; 44.4%

CR: Complete response; PR: partial response; SD: Stable disease; PD: Progressive disease; NE: Not evaluable; MD: Missing data; EGFR-TKIs: EGFR tyrosine kinase inhibitors; ALKis: ALK inhibitors