Table 1: Baseline patients' characteristics for the overall population and according to the receipt of diabetes medications. ECOG-PS: eastern cooperative oncology group-performance status; NSCLC: non-small cell lung cancer; BMI: body mass index; PD-1/PD-L1: programmed death-1/programmed death-ligand 1; DM: diabetes medications.

	Total	No DM	DM	
	N° (%) - 1395	1169 - N° (%)	226 - N° (%)	p-value
AGE, (years)				
Median	68	68	71	P < 0.0001
Range	21 – 91	21 – 91	22 – 88	
SEX				
Male	888 (63.7)	721 (61.7)	167 (73.9)	P = 0.0005
Female	507 (36.3)	448 (38.3)	59 (26.1)	
ECOG-PS				
0 – 1	1205 (86.4)	1011 (86.5)	194 (85.8)	P = 0.7963
≥ 2	190 (13.6)	158 (13.5)	32 (14.2)	
Primary Tumor				
NSCLC	763 (54.7)	625 (53.5)	138 (61.1)	
Melanoma	345 (24.7)	296 (25.3)	49 (21.7)	P = 0.0730
Renal cell carcinoma	209 (15.0)	185 (15.8)	24 (10.6)	
Others	78 (5.6)	63 (5.4)	15 (6.6)	
No. of metastatic sites				
≤ 2	726 (52.0)	593 (50.7)	133 (58.8)	P = 0.0253
> 2	669 (48.0)	576 (49.3)	93 (41.2)	
Treatment line of Immunotherapy				
First	519 (37.2)	422 (36.1)	97 (42.9)	P = 0.0522
Non-First	876 (62.8)	747 (63.9)	129 (57.1)	
BMI (kg/m^2)				
Median (range)	25.1 (13.6 – 50.8)	24.9 (13.6 – 50.8)	25.6 (16.4 – 43.2)	P = 0.0075
Underweight (≤ 18.5)	59 (4.2)	54 (4.6)	5 (2.2)	
Normal weight (18.5 - 25)	628 (45.0)	538 (46.0)	90 (39.8)	P = 0.0711
Overweight (25 -30)	508 (36.4)	415 (35.5)	93 (41.2)	
Obese (≥ 30)	200 (14.3)	162 (13.9)	38 (16.8)	
Baseline steroids				
No	1043 (74.8)	868 (74.3)	175 (77.4)	P = 0.3135
Yes	352 (25.1)	301 (25.7)	51 (22.6)	
Baseline systemic antibiotics				
No	1043 (74.8)	1076 (92.0)	199 (88.1)	P = 0.0502
Yes	352 (25.1)	93 (8.0)	27 (11.9)	
Metformin				
No	1248 (89.5)	-		-
Yes	147 (10.5)		147 (65.0)	
Other oral diabetes medications				
No	1270 (91.0)	-		-
Yes	125 (9.0)		125 (55.3)	
Insulin therapy				
No	1319 (94.6)	-		-
Yes	76 (5.4)		76 (33.6)	

Table 2: Fixed multivariable analyses for the risk of death and disease progression/death within the whole cohort. A centre-specific conditional interpretation by using frailty models was applied to correct all the 95%Cis. BMI: body mass index; NSCLC: non-small cell lung cancer; ECOG-PS: eastern cooperative oncology group performance status.

	Multivariate Analysis	
	Risk of death	**Risk of disease progression/death**
VARIABLE	**HR (95% CI)**	**HR (95%CI)**
Diabetes Medications		
No	1	1
Yes	**1.29 (1.07-1.56)**	**1.21 (1.03-1.43)**
BMI		
Continous	0.97 (0.96-0.99)	0.98 (0.97-0.99)
Age		
Continuous	0.99 (0.99-1.00)	0.99 (0.99-1.00)
Primary Tumour		
NSCLC	1	1
Melanoma	0.72 (0.56-0.93)	0.87 (0.68-1.10)
Kidney	0.55 (0.43-0.71)	0.74 (0.59-0.92)
Others	0.89 (0.64-1.23)	1.09 (0.82-1.44)
Sex		
Female	1	1
Male	1.14 (0.98-1.32)	1.13 (0.99-1.29)
Treatment line		
First	1	1
Non-first	1.24 (1.05-1.46)	1.24 (1.07-1.44)
N° of metastatic sites		
≤ 2	1	1
>2	1.57 (1.36-1.83)	1.41 (1.24-1.62)
ECOG PS		
0-1	1	1
≥2	2.32 (1.91-2.80)	1.92 (1.61-2.30)
Baseline corticosteroids		
No	1	1
Yes	1.64 (1.39-1.93)	1.51 (1.30-1.75)
Baseline antibiotics		
No	1	1
Yes	1.44 (1.15-1.81)	1.35 (1.09-1.68)