

Table S1 Further patient characteristics

	Atezolizumab (N=33), n (%)	Pre-atezolizumab (N=37), n (%)	P value
CRP, mg/dL			
Median [range]	1.4 [0.1–20.4]	1.6 [0.1–30.9]	0.69
<1	15 (45.5)	12 (32.4)	
≥1	17 (51.5)	25 (67.6)	
n.a.	1 (3.0)	0	
Uric acid, mg/dL]			
Median [range]	4.7 [1.8–10.7]	4.4 [1.9–11.4]	0.51
<4.0	9 (27.3)	13 (35.1)	
4.0–5.9	15 (45.4)	17 (45.9)	
≥6	9 (27.3)	7 (18.9)	
LDH, U/L			
Median [range]	342 [177–969]	362 [203–14,620]	0.14
<250	10 (30.3)	5 (13.5)	
≥250	23 (69.7)	32 (86.5)	
BMI, kg/m²			
Median [range]	24.1 [15.2–39.5]	24.8 [17.1–41.5]	0.81
<20	4 (12.1)	3 (8.1)	
20–24.9	14 (42.4)	17 (45.9)	
≥25	15 (45.5)	17 (45.9)	

CRP, C reactive protein; n.a., not available; LDH, lactate dehydrogenase; BMI, body mass index.

Table S2 Comparison of female and male patient characteristics in the atezolizumab group

	Female (N=17)	Male (N=16)	P value
Age, years			
Median [range]	68.2 [60.4–80.9]	68.5 [52.5–74.9]	0.44
<65	5 (29.4)	5 (31.3)	
65–74	9 (52.9)	11 (68.8)	
≥75	3 (17.6)	0	
ECOG status			
0–1	9 (52.9)	14 (87.5)	0.06
≥2	8 (47.1)	2 (12.5)	
Sites of metastasis at diagnosis			
Brain	7 (41.2)	6 (37.5)	1.00
Liver	5 (29.4)	5 (31.1)	0.71
Bone	4 (23.5)	5 (31.3)	1.00
Adrenal	4 (23.5)	3 (18.8)	1.00
Smoking status			
Never	4 (23.5)	2 (12.5)	0.66
Ex or active	13 (76.5)	14 (87.5)	
CRP, mg/dL			
Median [range]	0.8 [0.1–14.2]	1.8 [0.1–20.4]	0.43
<1	5 (29.4)	5 (31.3)	
≥1	11 (64.7)	11 (68.7)	
n.a.	1 (5.9)	0	
Uric acid, mg/dL			
Median [range]	4.4 [1.8–10.7]	5.1 [2.4–9.9]	0.77
<4.0	5 (29.4)	4 (25.0)	
4.0–5.9	8 (47.1)	7 (43.8)	
≥6	4 (23.5)	5 (31.3)	
LDH, U/L			
Median [range]	286 [177–724]	365 [193–969]	0.07
<250	7 (41.2)	3 (18.8)	
≥250	10 (58.8)	13 (81.3)	
BMI, kg/m²			
Median [range]	23.2 [15.8–39.5]	24.9 [15.2–34.4]	0.66
<20	2 (11.8)	2 (12.5)	
20–24.9	8 (47.1)	6 (37.5)	
≥25	7 (41.2)	8 (50.0)	

CRP, C reactive protein; LDH, lactate dehydrogenase; BMI, body mass index.

Table S3 Comparison of key patient characteristics of non-responder and responder

	Non-responder (N=6)	Responder (N=6)
Sex, n (%)		
Male	3 (50.0)	3 (50.0)
Female	3 (50.0)	3 (50.0)
Age, years, median [range]	65.1 [52.5–74.8]	64.5 [56.8–78.2]
BMI, kg/m ² , median [range]	26.8 [19.1–30.0]	25.0 [22.4–33.2]
Liver function, median [range]		
Bilirubin, mg/dL	0.4 [0.2–0.6]	0.3 [0.2–0.8]
ALT, U/L	24 [6–78]	24 [14–37]
AST, U/L	37 [16–96]	26 [15–31]
Kidney function		
eGFR, mL/min	97 [40–102]	88 [61–100]
Comorbidities, n (%)		
Cardiac [†]	1 (16.7)	0
COPD	0	1 (16.7)
Diabetes	1 (16.7)	1 (16.7)
Secondary malignancy	2 (33.3)	1 (16.7)
Comedication, n (%)		
Pantoprazole	6 (100.0)	6 (100.0)
ACEi/ARB	3 (50.0)	1 (16.7)
Statin	1 (16.7)	1 (16.7)
β-blocker	2 (33.3)	1 (16.7)
SGLT2i	1 (16.7)	1 (16.7)
DOAC	2 (33.3)	2 (33.3)

[†], cardiac includes reduced left ventricular ejection fraction, atrial fibrillation, or coronary artery disease. BMI, body mass index; ALT, alanine aminotransferase; AST, aspartate aminotransferase; COPD, chronic obstructive pulmonary disease; ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin II receptor blocker; SGLT2i, sodium-glucose cotransporter-2 inhibitor; DOAC, direct oral anticoagulant.

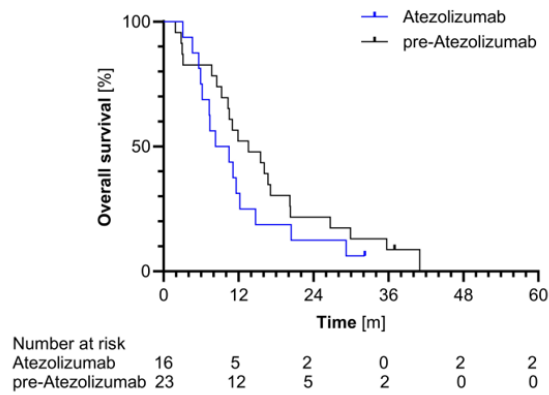


Figure S1 OS of atezolizumab versus pre-atezolizumab cohort. Kaplan-Meier graph of OS in male patients only. OS, overall survival.

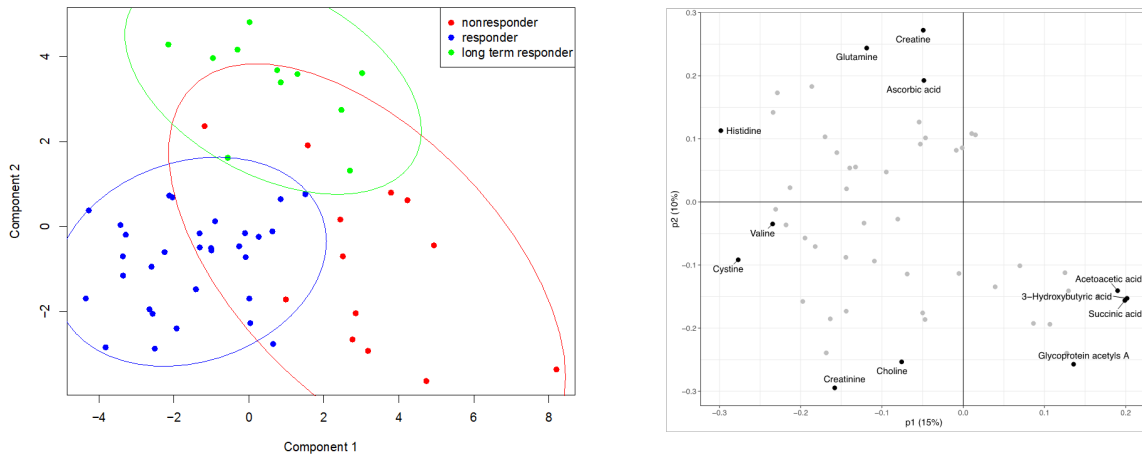


Figure S2 PLS-DA for responder groups. PLS-DA, partial least squares discriminant analysis

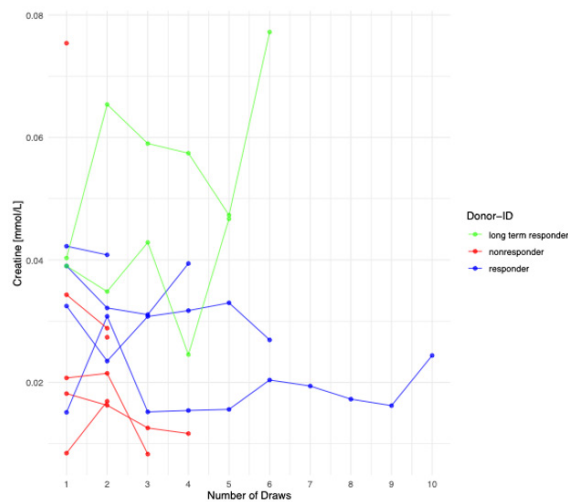


Figure S3 Longitudinal measurements of creatine concentration by NMR measurement over time. NMR, nuclear magnetic resonance. Data presentation in the figure is limited to n=10, excluding 9 subsequent data points. Furthermore, due to implausible values at the first draw for one non-responder, only data from the second draw are included for this individual