

Supplementary Table S1: Univariate and multivariate OS analysis

	Univariate			Multivariate		
	HR	95% CI	P	HR	95% CI	P
Age						
< 69	1		0.007	1		0.14
69 - <79	4.0	0.8 – 21.1		3.3	0.6 – 18.1	
>= 79	6.9	1.6 – 30.7		5.0	0.9 – 25.3	
Sex						
Male	1			1		
Female	3.0	1.3 – 7.1	0.006	2.5	1.1 – 6.1	0.03
CCI						
<5	1		0.02	1		0.41
5 or more	3.1	1.1 – 8.4		5.1	1.1 – 23.7	
Site of Primary SCC						
Head and neck	1		0.91			
Other	1.0	0.4 – 2.5				
Disease extent			0.98			
Locoregional	1					
metastatic	1.0	0.4 – 2.4				
Visceral Mets			0.57			
No	1					
Yes	0.7	0.2 – 2.2				
Significant Immunosuppression			0.30			
No	1					
Yes	1.7	0.6 – 5.2				
Previous Radiotherapy			0.85			
No	1					
Yes	0.9	0.4 – 2.2				
Previous Surgery for advanced disease			0.37			
No	1					
Yes	0.7	0.3 – 1.6				
Elevated LDH			0.73			
no	1					
yes	1.1	0.4 – 3.2				
Immunotherapy agent			0.10			
Cemiplimab	1					
Other agents	2.1	0.8 – 5.4				
Antibiotics						
No	1		0.39			
Yes	0.53	0.1 – 2.3				