

**Supplement Table 1 Individual treatments and oncologic outcomes for cohort with anorectal melanoma (*n* = 24)**

	Extent of disease at diagnosis	Initial surgical therapy	Initial systemic therapy	Time to recurrence	Site of first recurrence	Therapy after recurrence <sup>2</sup>	Outcome	Time to death (months) <sup>1</sup>
1	Local	WE	None	Unknown	-	-	Dead-unknown	1.0
2	Local	Biopsy alone	None	Never disease free	-	-	Dead-unknown	12.3
3	Local	WE + SLNB	None	No recurrence	-	-	Dead-other	13.9
4	Local	WE	None	7.7	Distant (Lungs)	Patient opted for hospice	DOD	14.7
5	Local	WE	XRT	14.7	Distant (Liver)	Patient opted for hospice	DOD	16.0
6	Local	WE + SLNB	None	7.9	Nodal (Perirectal)	Temozolomide	DOD	16.4

7	Local	Biopsy alone	Cisplatin XRT	+ Never disease free	Local	APR, cisplatin + XRT	DOD	18.8
8	Local	APR	None	2.3	Distant (Brain)	XRT + pembrolizumab	DOD	19.5
9	Local	WE	None	10.4	Local	Temozolomide	Dead- unknow n	23.1
10	Local	WE	None	17.2	Nodal (Inguinal)	Repeat CLND, XRT + interferon	WE, DOD + unknown	23.9
11	Local	WE	Interferon	29.0	Distant (Liver)	None	DOD	33.9
12	Local	WE + SLNB	Temozolomi de + interferon	31.4	Local	Nivolumab + ipilimumab	DOD	55.0
13	Nodal	Biopsy alone	None- patient preference	Never disease free	-	-	Unkno wn	-
14	Nodal	WE + SLNB	Ipilimumab	Unknown	-	-	Dead-	5.1

							unknown	
							n	
15	Nodal	APR	Interferon	7.5	Distant (Lungs)	None	Dead- unknown	18.3
							n	
16	Nodal	WE + SLNB	Ipilimumab	6.1	Nodal (Inguinal)	Dasatinib + pembrolizumab	DOD	19.9
17	Nodal	Biopsy alone + XRT	Nivolumab	No recurrence	-	-	Alive, NED	21.4 <sup>3</sup>
18	Nodal	WE + CLND	Interferon	11.9	Distant (Lungs)	Temozolomide + interferon	DOD	35.1
19	Nodal	Biopsy alone XRT	Cisplatin	+ Never disease free	-	Temozolomide + XRT	DOD	39.8
20	Nodal	WE + SLNB	None	41.6	Local	Temozolomide + ipilimumab	DOD	52.4
21	Distant	WE	Temozolomi de	Never + disease	-	-	DOD	6.8
			ipilimumab	free				
22	Distant	Biopsy alone	Nivolumab	Never	-	-	DOD	9.2

			+	disease				
			ipilimumab	free				
23	Distant	WE	Pembrolizu mab	Never disease free	-	-	Dead- unknow n	11.5
24	Distant	Biopsy alone	Temozolomi de	Never + disease	-	-	DOD	13.5
			ipilimumab	free				

<sup>1</sup> Time reported as time from diagnosis to event; <sup>2</sup> Second line therapy reported if patient never free of disease; <sup>3</sup> Time of last follow-up recorded as patient is alive. WE: Wide excision; APR: Abdominoperineal resection; SLNB: Sentinel lymph node biopsy; CLND: Completion lymph node dissection; XRT: Radiation therapy; DOD: Died of disease; NED: No evidence of disease.