Supplementary Tables

Supplementary Table 1. *mIHC staining workflow*

Staining order	Marker	Clone	Reference	Marker Dilution	Opal Pairing	Opal Dilution
1st	CD20	L26	Abcam ab9475	400X* * unknown concentration	Opal 620	100X
2nd	CD4	EP204	Cell Marque 104R-24	100 ng/ml	Opal 520	150X
3rd	CD8	C8/144B	Cell Signaling 70306S	125 ng/ml	Opal 540	200X
4th	FOXP3	236A/E7	ebioscience 14-4777-82	10 µg/ml	Opal 650	200X
5th	CD68	D4B9C	Cell signaling 76437S	584 ng/ml	Opal 690	100X
6th	Sox10	E6B6I	Cell signaling 69661S	250 ng/ml	Opal 570	50X

Supplementary Table 2. *myDC cell counts of individual patients after volume reduction (before IT injection)*

Patient	CD1c (BDCA-1)$^+$ myDC (x10^6)	CD141 (BDCA-3)$^+$ myDC (x10^6)	Total myDC (x10^6)
1	19,24	1,6	20,9
2	28,88	2,6	31,4
3	19,45	1,1	20,5
4	18,76	3,5	22,3
5	15,24	1,2	16,4
6	16,21	1,6	17,8
7	29,58	2,1	31,6
8	33,47	3,1	36,6
Median	19,34	1,85	21,57

***Supplementary Table 3**: Full list of adverse events according to Common Terminology Criteria for Adverse Events (CTCAE) v5.0*

Adverse Event (CTCAE v5.0)	1	2	3	4	5	Any Grade
Abdominal distension	1					1
Alopecia	1					1
Anemia	1					1
Anorexia	1					1
Arthralgia	2					2
Back pain		1				1
Chills	1					1
Constipation	1					1
Diverticulitis		1				1
Dry mouth	1					1
Dyspepsia	2					2
Dyspnea	1					1
Eczema		1				1
Edema limbs	1					1
Erythema multiforme	1					1
Fall		1				1
Fatigue	5	2				7
Fever	1					1
Headache	1					1
Herpes Simplex reactivation		1				1
Injection site reaction	5					5
Insomnia	1					1
Intracranial hemorrhage					1	1
Irregular menstruation	1					1
Lymphedema	1					1
Lymphocyte count decreased			1			1
Malaise	1					1
Muscle cramp	3					3
Muscle weakness lower limb	1					1
Nausea	2					2
Pain	2	3				5
Phlebitis		1				1
Platelet count increased	1					1
Stomach pain	1					1
Thromboembolic event	1					1
Thrush		1				1
Upper respiratory infection	1					1
Vomiting		1				1
Wheezing	1					1
Total	**42**	**13**	**2**		**1**	**58**

Supplementary Table 4 *Individual patient characteristics, responses, and survival.*

Patient	Driver Mutation	Disease stage	# IV treatments	# IT treatments	Response in injected lesion(s)	BOR (iRECIST)	PFS (weeks)	OS (weeks)
1	NRAS	IV-M1c	1	1	NE	NE	3+	11
2	TP53; MSH6; SMARCA4	IV-M1c	3	3	NE	NE	6	6
3	SMARCB1; SMARCA4	IV-M1a	6	6	PD	PD	6	37
4	NRAS	IV-M1a	17 + 2_a	4	CR	CR	75+	75+
5	NRAS	IV-M1c	11	9	CR/PD	SD	24	45.3
6	NRAS	IV-M1a	5	5	PD	PD	10	38.4
7	GNAQ	IV-M1c	24+1_a	12	CR/CR/CR	PR	55+	55+
8	MEK1	IV-M1a	12 + 6_a	2	CR	CR	54+	54+

BOR: best objective response, NE: not evaluable, PD: progressive disease, CR: complete remission, PR: partial response, SD: stable disease, +: censored (event not reached), ₐ These patients were electively switched to standard dosing of nivolumab 480 mg q4w until the planned end of study treatment to reduce travel burden since these patients were no longer receiving IT treatment after respectively 40 (patient 4), 49 (patient 7) and 24 weeks (patient 8).