

Supplemental Table 1:

Overview of total cycles of IT nivolumab received by dose level, patient accession number and outcome of patients.

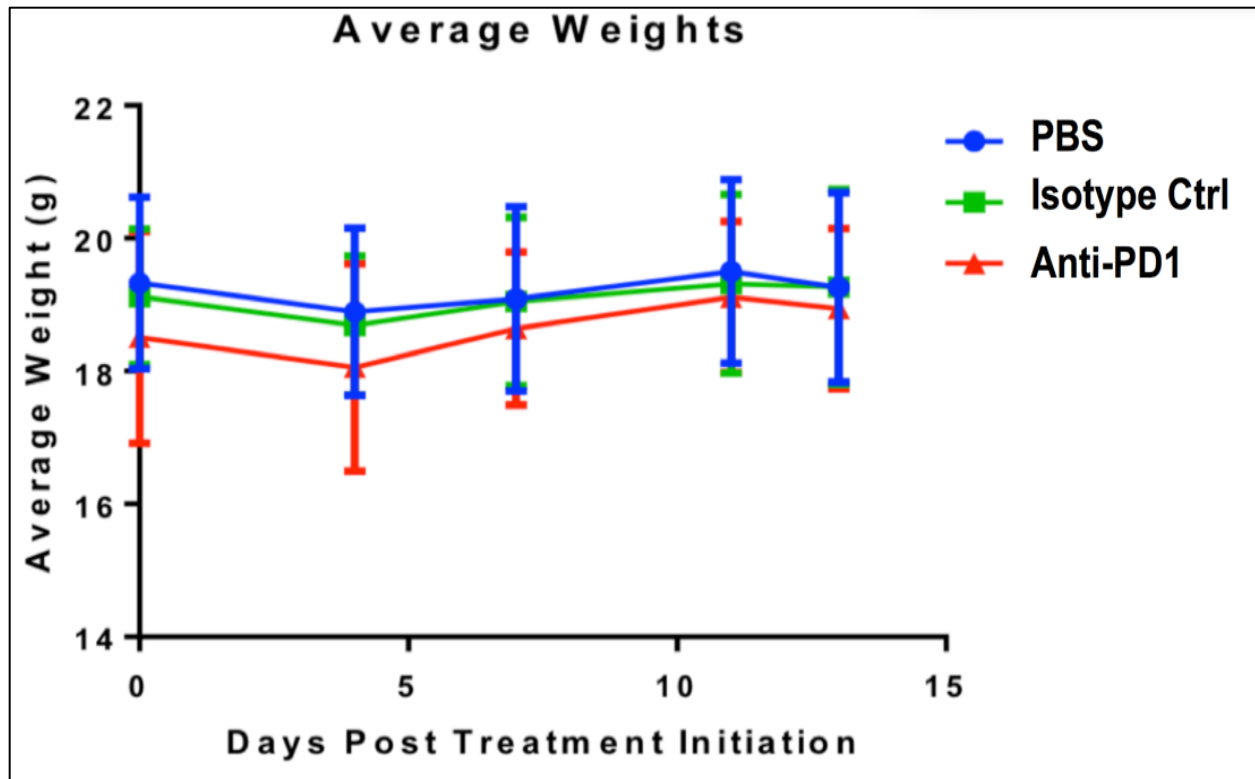
Patient Accession #	Dose Level of IT nivolumab (in mg)	Cycles received	Status
1	5	74	On treatment
3	5	2	Died
4	10	2	Died
5	10	26	Alive and in follow up
6	10	22	Alive and in follow up
7	20	5	Died
8	20	2	Died
9	20	8	Alive and in follow up
10	20	4	Died
11	20	2	Died
12	20	7	Died
13*	20	2	Died
14*	20	5	Died
16*	20	30	Alive and in follow up
17*	20	3	Died
18*	20	17	Died
19*	20	11	Died
20*	20	3	Died
22*	20	3	Died
24	50	9	Died
25	50	19	On treatment
26	50	7	Died
27	50	3	Died
28	50	11	On treatment
30	50	9	On treatment

* patients treated in the initial expansion cohort of 20mg IT nivolumab

Supplemental Table 2:

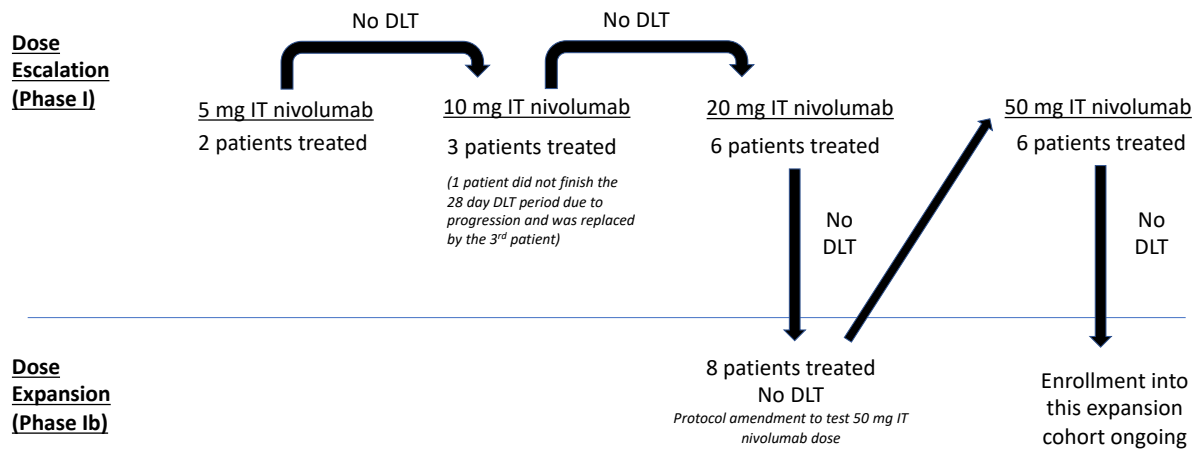
Breakdown and description of the toxicities of IT nivolumab by IT nivolumab dose level as well as for the individual patient.

IT nivolumab Dose	Patient Accession #	Adverse Event	Cycle #	Grade 1	Grade 2
5 mg	1	Paresthesia	11	1	
		Dysphasia	19		1
20 mg	8	Neck pain	1		1
	10	Nausea	1	1	
	20	Dizziness	1	1	
		Nausea	1	1	
	24	Nausea	1	1	
50 mg	20	Pruritus	1	1	
	25	Dizziness	1	1	
		Paresthesia	1	1	
		Vomiting	1	1	
		Nausea	16	1	
	26	Anorexia	1	1	
		Dizziness	1	1	
		Nausea	1	1	
		Vomiting	1	1	
	27	Nausea	1	1	
		Dizziness	1	1	
	30	Visual Changes	1	1	



Supplemental Figure 1: Safety evaluation of IT anti-PD1 in C57BL/6 mice.

Forty-five mice were divided into three volume matched (6.5 μ l) treatment groups 1). IT PBS; 2). IT isotype control; 3). IT mouse anti-PD1 (13 μ g). Line graph plotting the average weight of animals in the three IT treatment groups. No mice displayed morbidity/significant weight change during 14-day observation period.



Supplemental Figure 2: Enrollment of patients

The study consisted of 2 parts: a phase I dose escalation portion and a phase Ib dose expansion cohort at the recommended dose. This graph details the patients enrolled on each dose level and phase of the clinical trial. A total of 25 patients were treated.