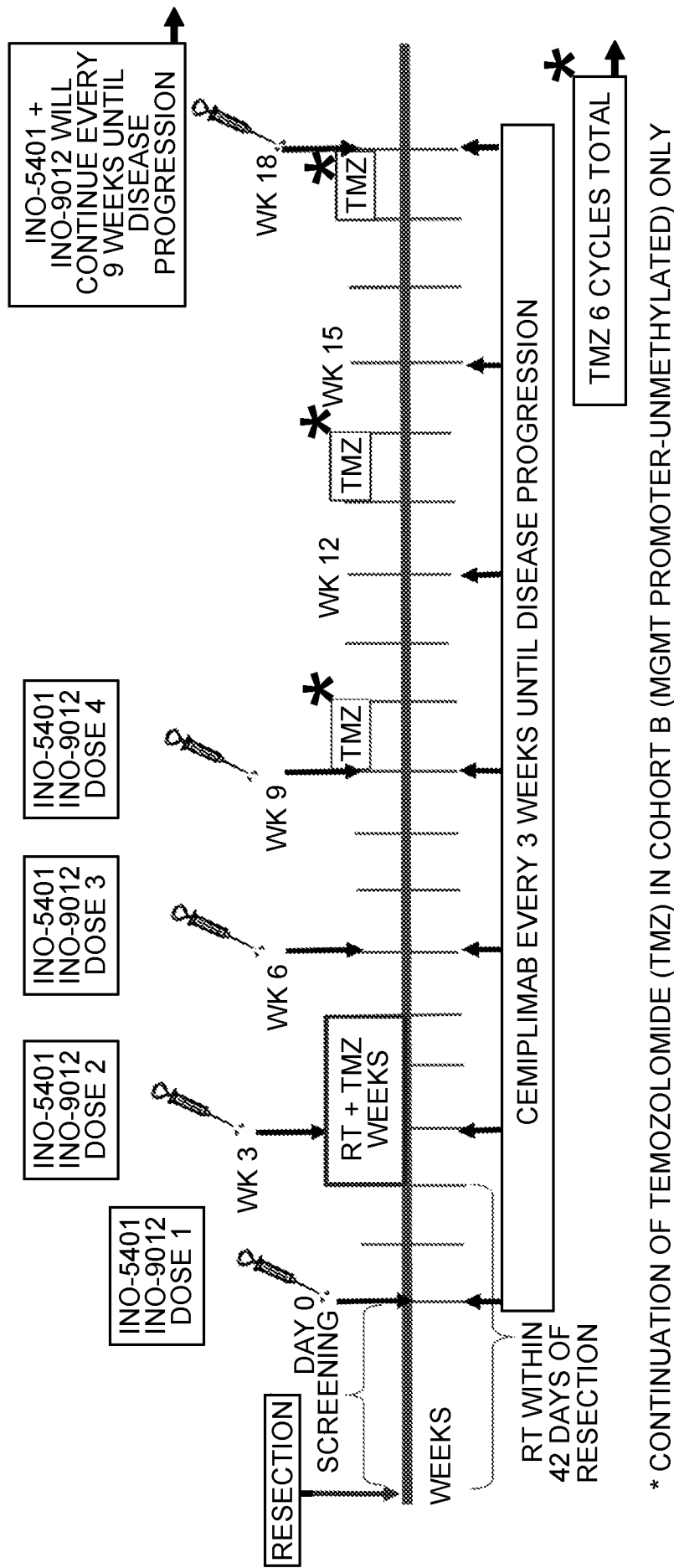


Figure 1

STUDY SCHEMA



* CONTINUATION OF TEMOZOLOMIDE (TMZ) IN COHORT B (MGMT PROMOTER-UNMETHYLATED) ONLY

Figure 2
Study Population Demographics

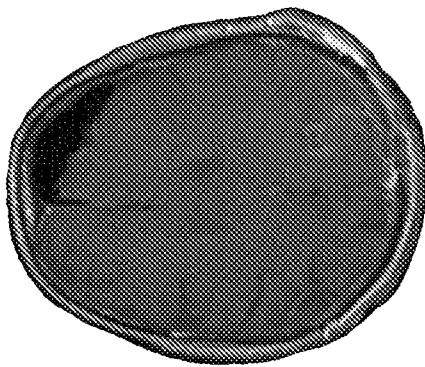
	Cohort A (n=32)	Cohort B (n=20)
Age ≤65 years (%)	25 (78)	13 (65)
Age ≥65 years (%)	7 (22)	7 (35)
Median Age in Years (range)	59 (19-71)	63 (33-78)
Female Sex (%)	11 (34)	7 (35)
Male Sex (%)	21 (66)	13 (65)
Karnofsky Performance Score 90-100 (%)	23 (72)	17 (85)
Karnofsky Performance Score 70-80 (%)	9 (28)	3 (15)
Median Time on Study from First Dose (Days; range)	541 (113-722)	557 (40-750)
Median Exposure* (Dosing cycles; range) of INO-5401	6 (1-14)	7.5 (1-13)
Median Exposure* (Dosing cycles; range) of cemiplimab	10 (1-34)	17 (1-29)
Subjects of dexamethasone at Day 0 (N, %)	14 (44)	5 (25)
Discontinued Therapy to Date (N)**	28	13

* INO-5401 is given Q3 weeks x 4 and then Q9 weeks; cemiplimab is given Q3 weeks

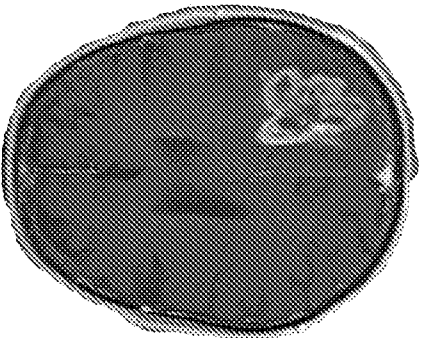
** The majority of subjects who discontinued have discontinued therapy for progressive disease. 11 subjects continue therapy as of date of analysis.

Figure 3
 REPRESENTATIVE MRI IMAGES FROM TWO PATIENTS

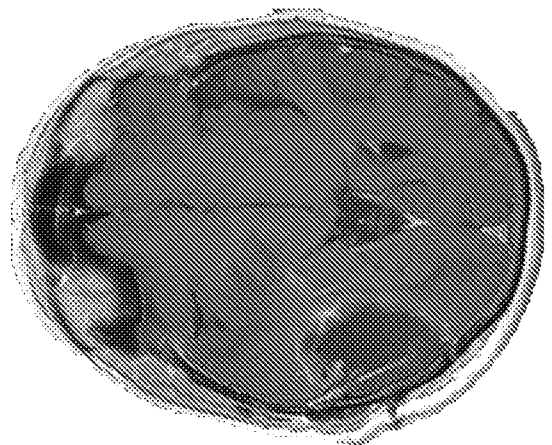
BASELINE



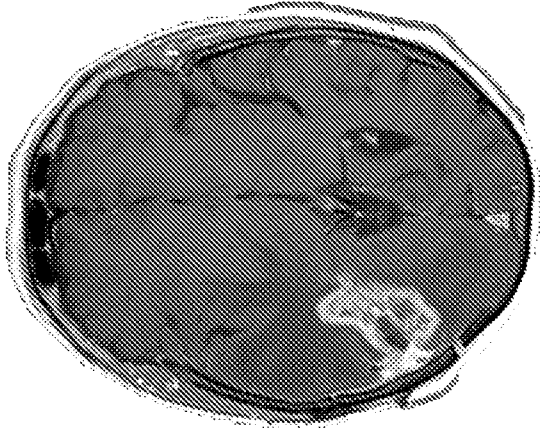
WEEK 9



BASELINE



WEEK 9



WEEK 21

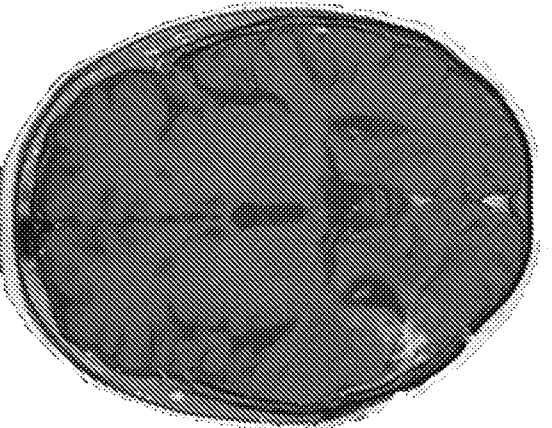


Figure 4
Immunogenicity by ELISpot

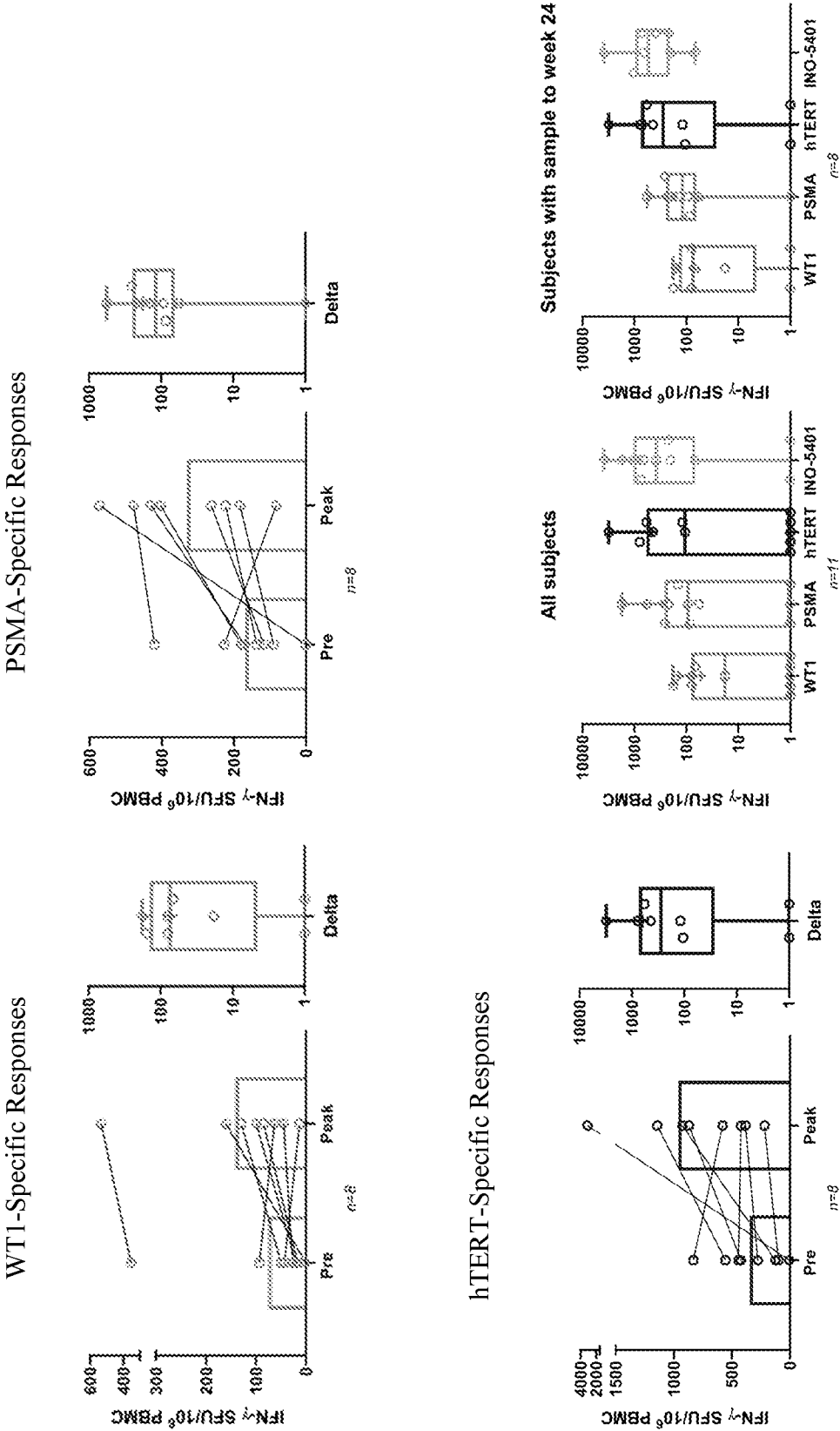


Figure 5A

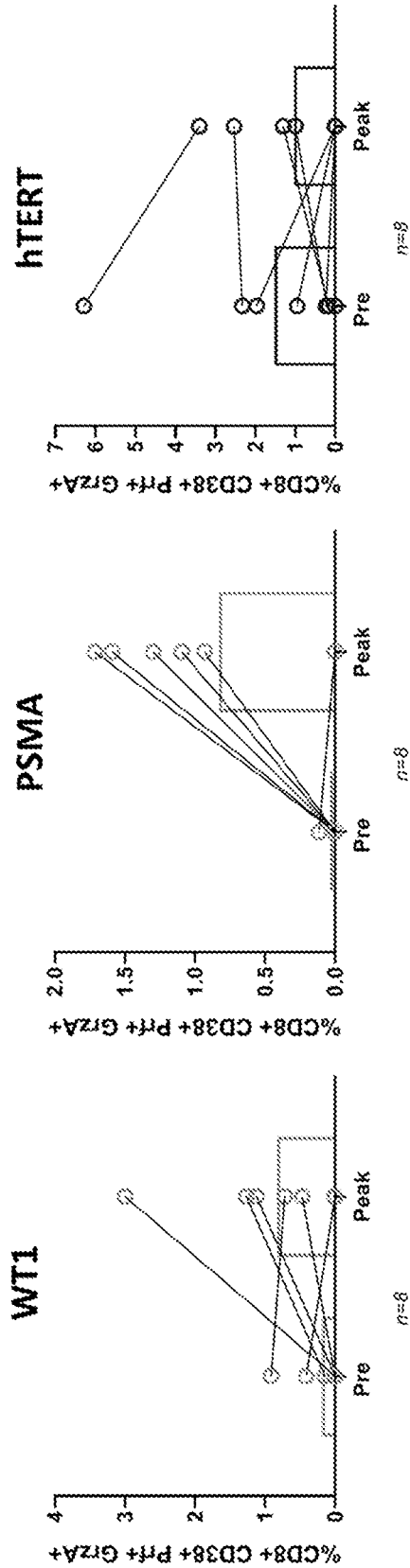


Figure 5B

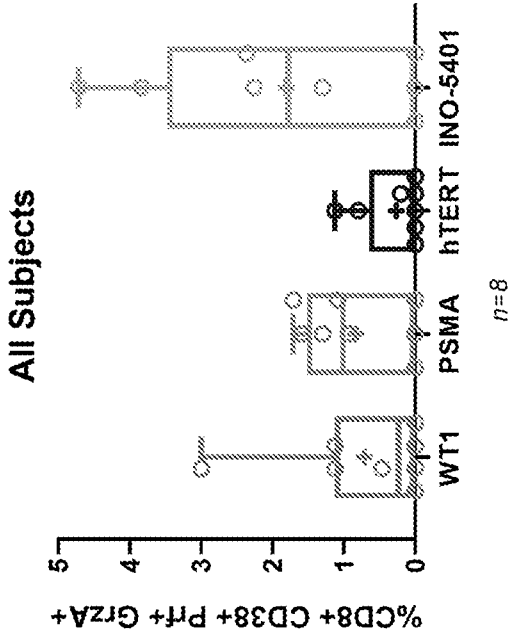


Figure 5C

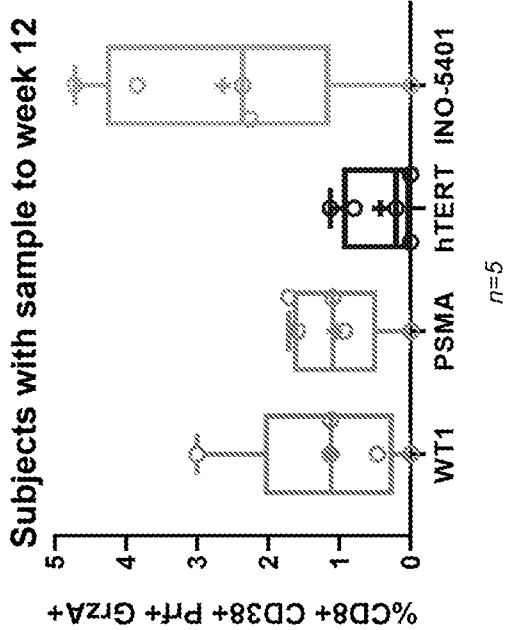


Figure 6 - Confirmed PFS (Cohort A)

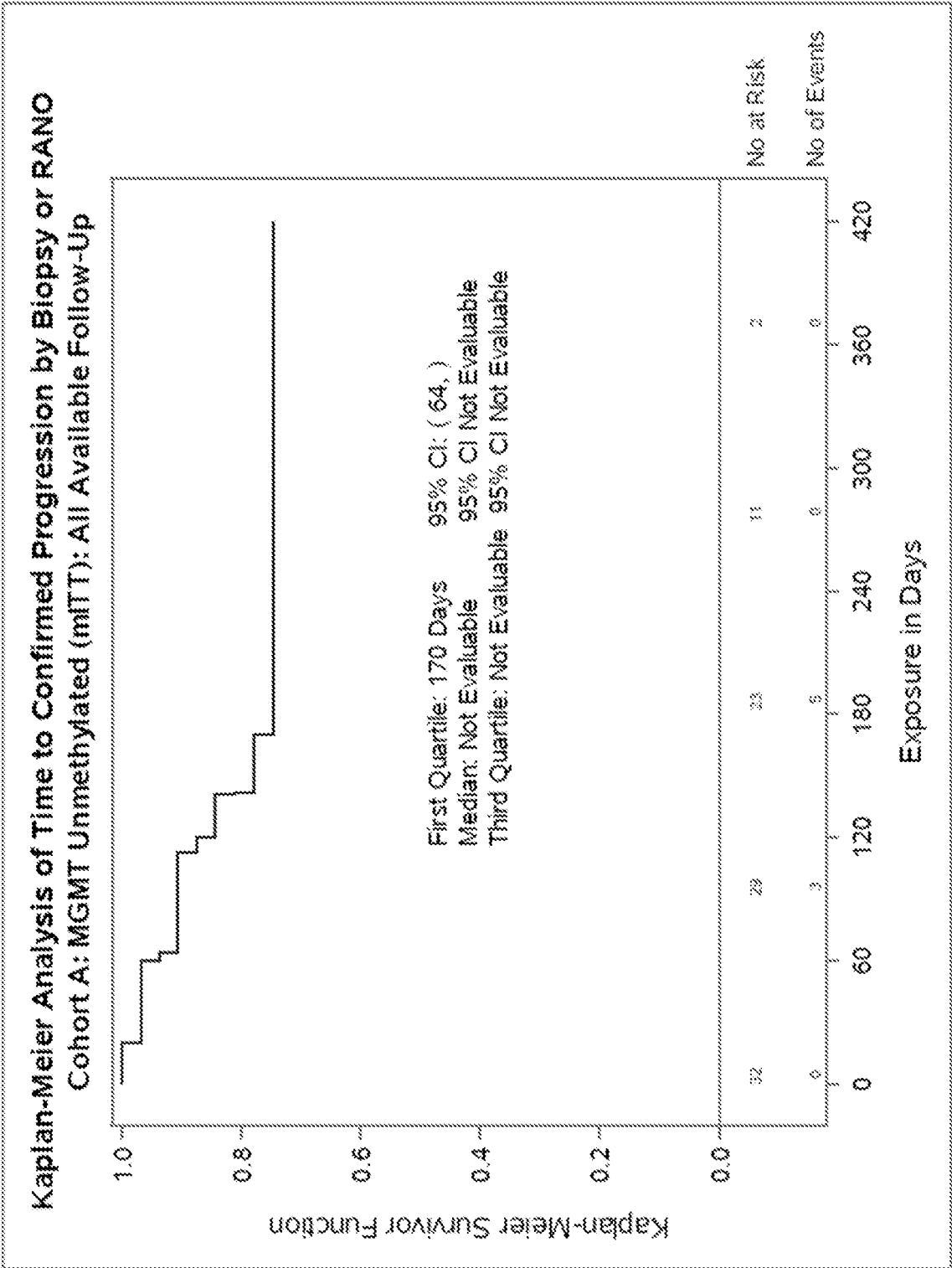


Figure 7 – Confirmed PFS (Cohort B)

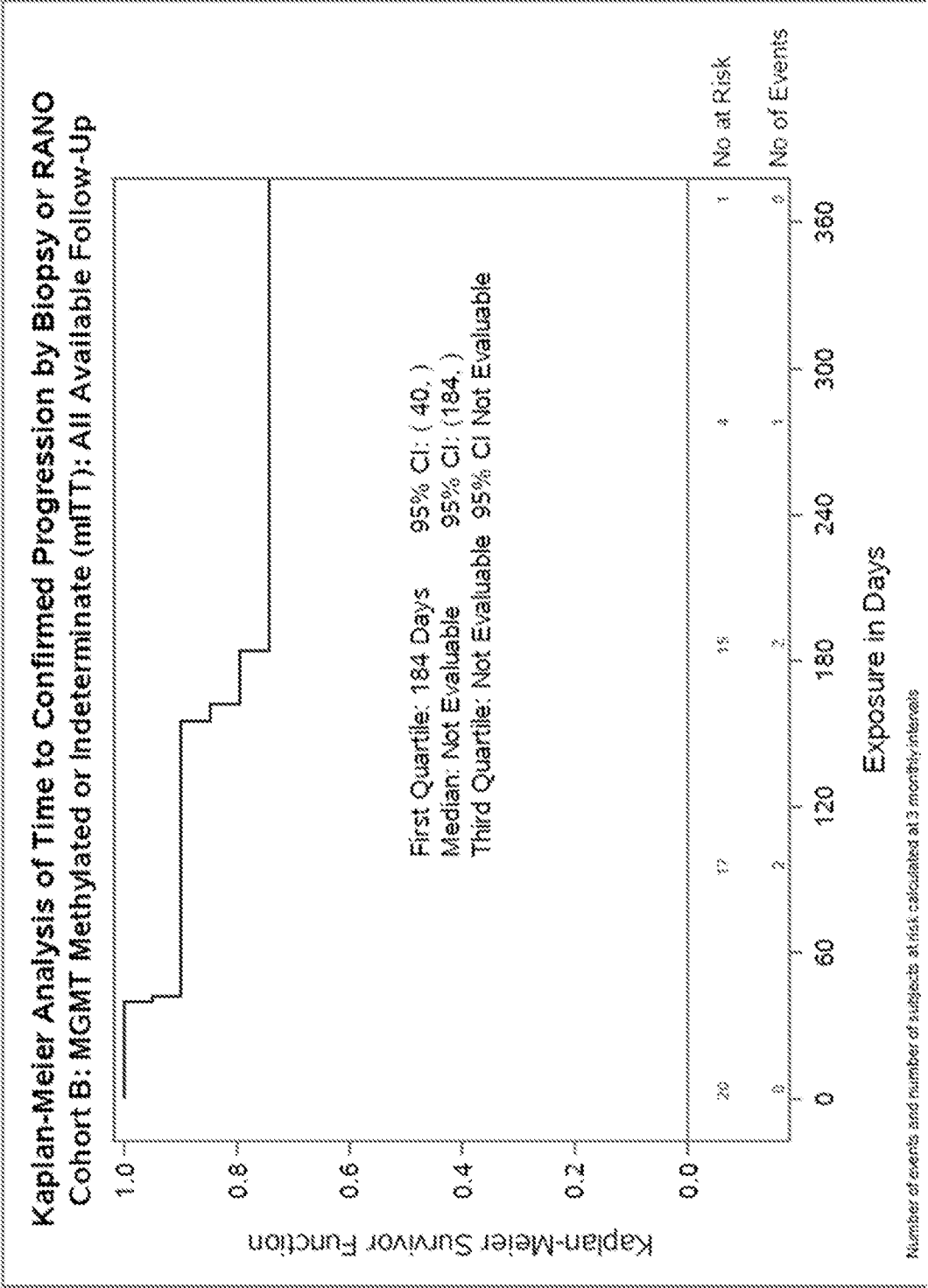


Figure 8 – Confirmed PFS (Cohort A + B)

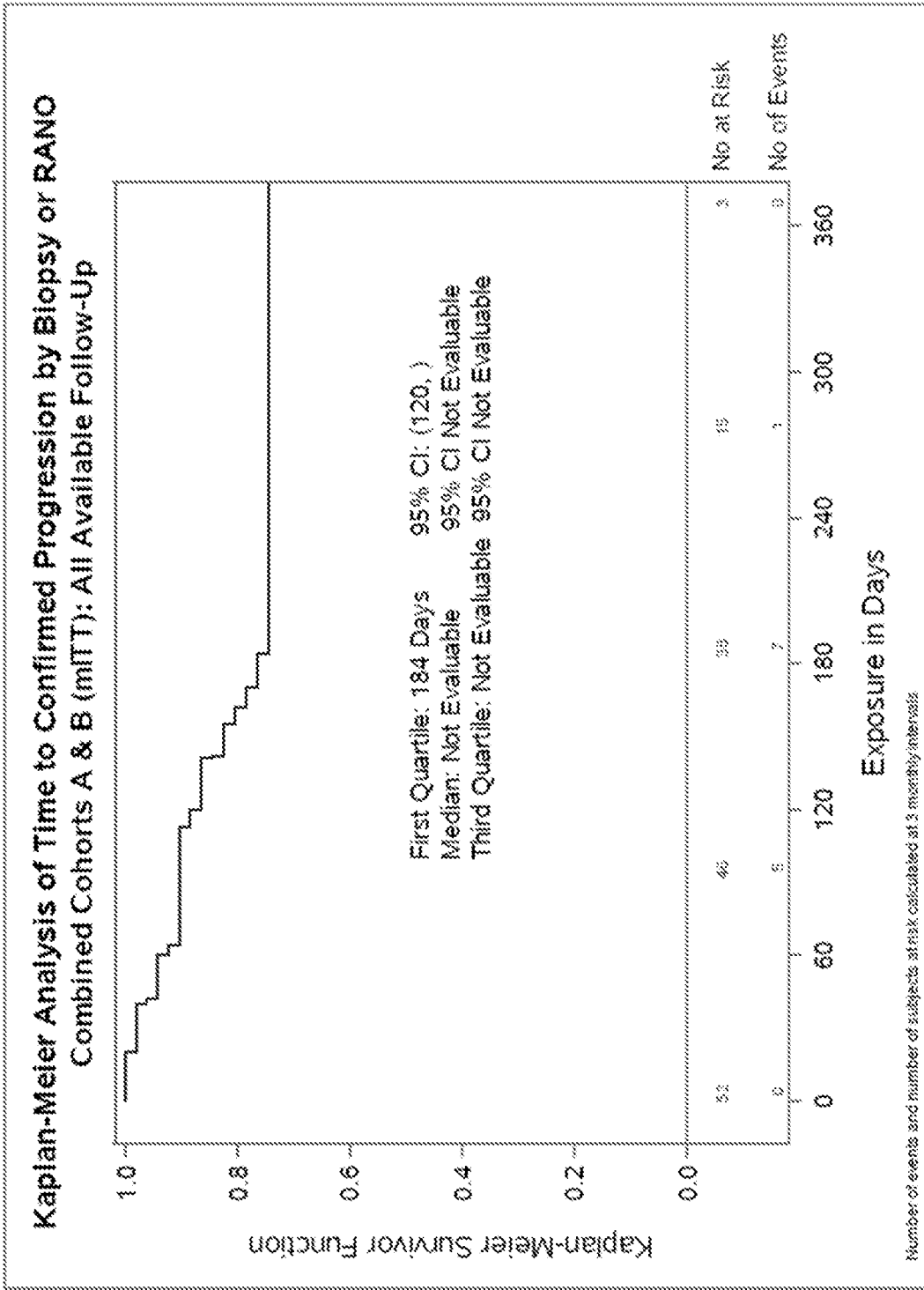


Figure 9

Cohort	N Total Subjects	N Event-free Subjects	PFS6 (%)	95% CI Lower Bound	95% CI Upper Bound
Cohort A (MGMT Unmethylated)	32	24	75.00	56.60	88.54
Cohort B (MGMT Methylated)	20	16	80.00	56.34	94.27
Both Cohorts Combined	52	40	76.92	63.16	87.47

Figure 10A

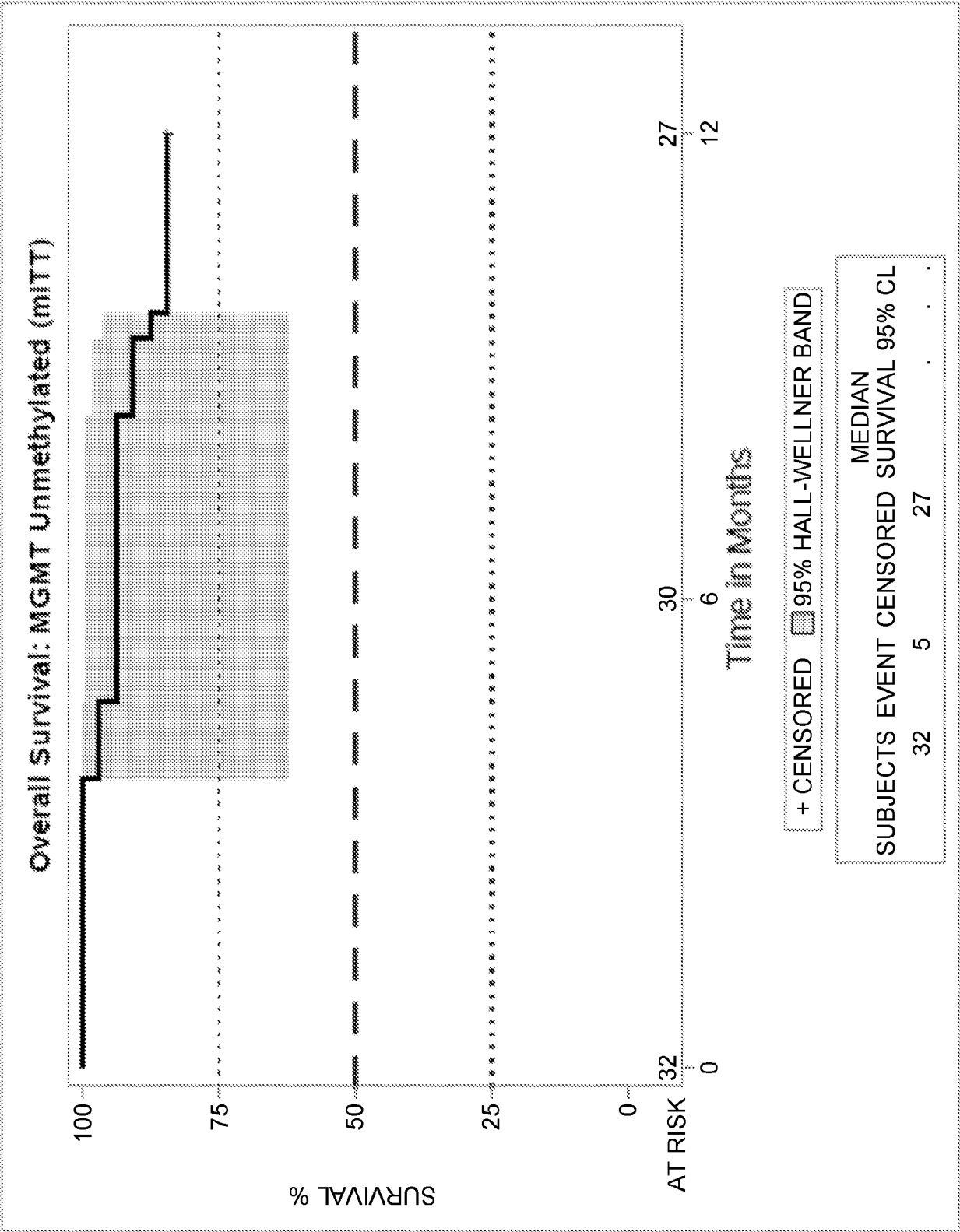


Figure 10B

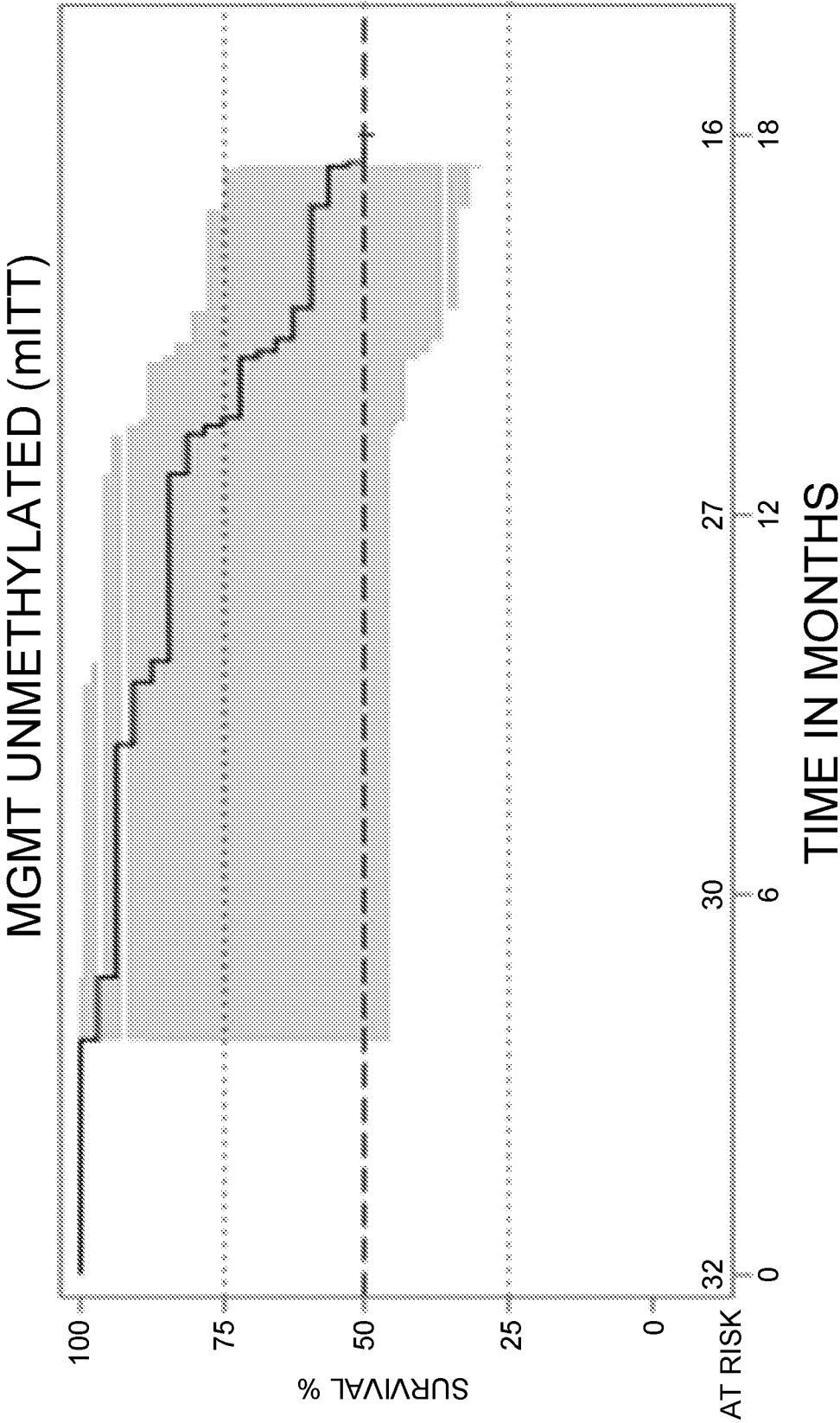


Figure 11A

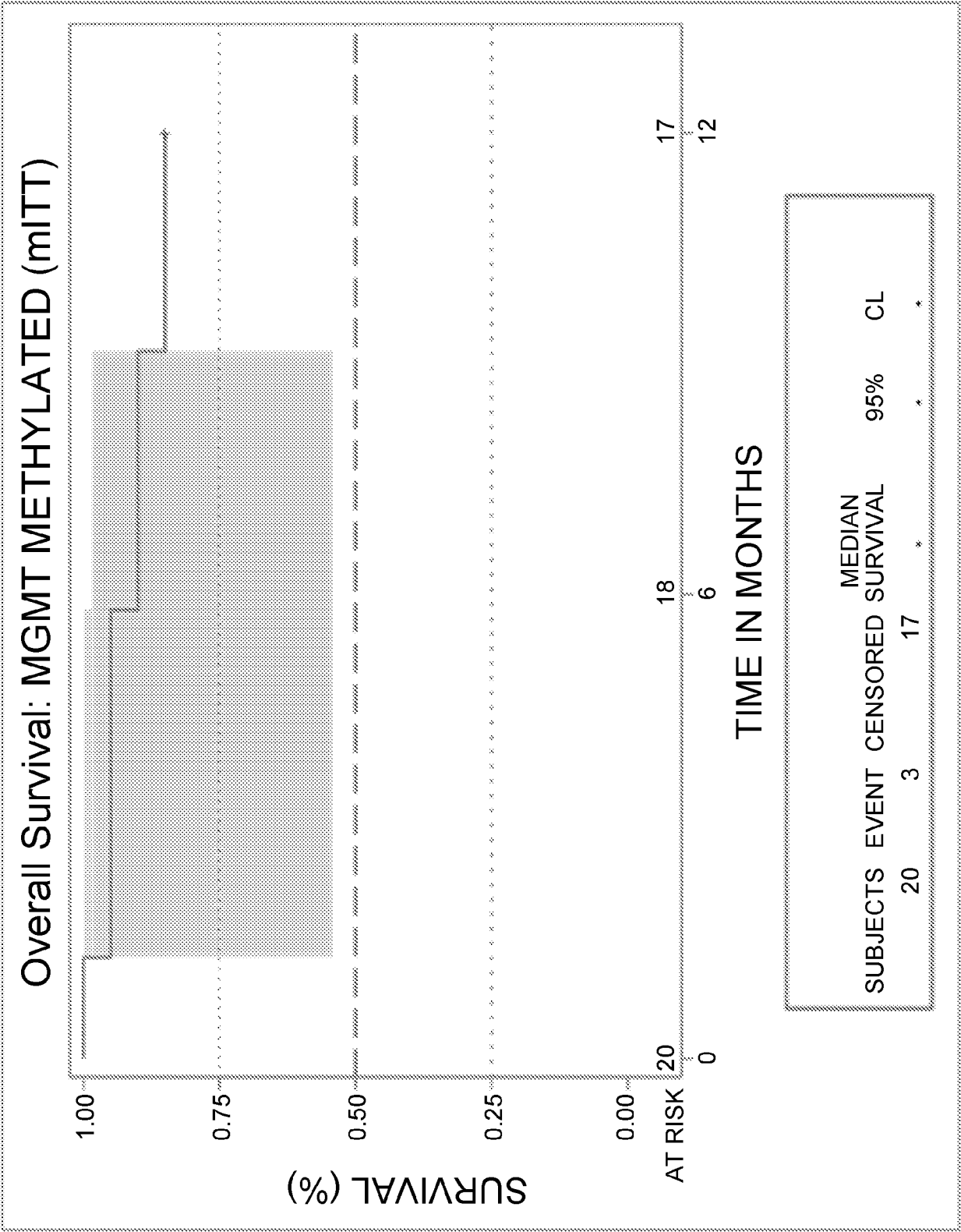


Figure 11B

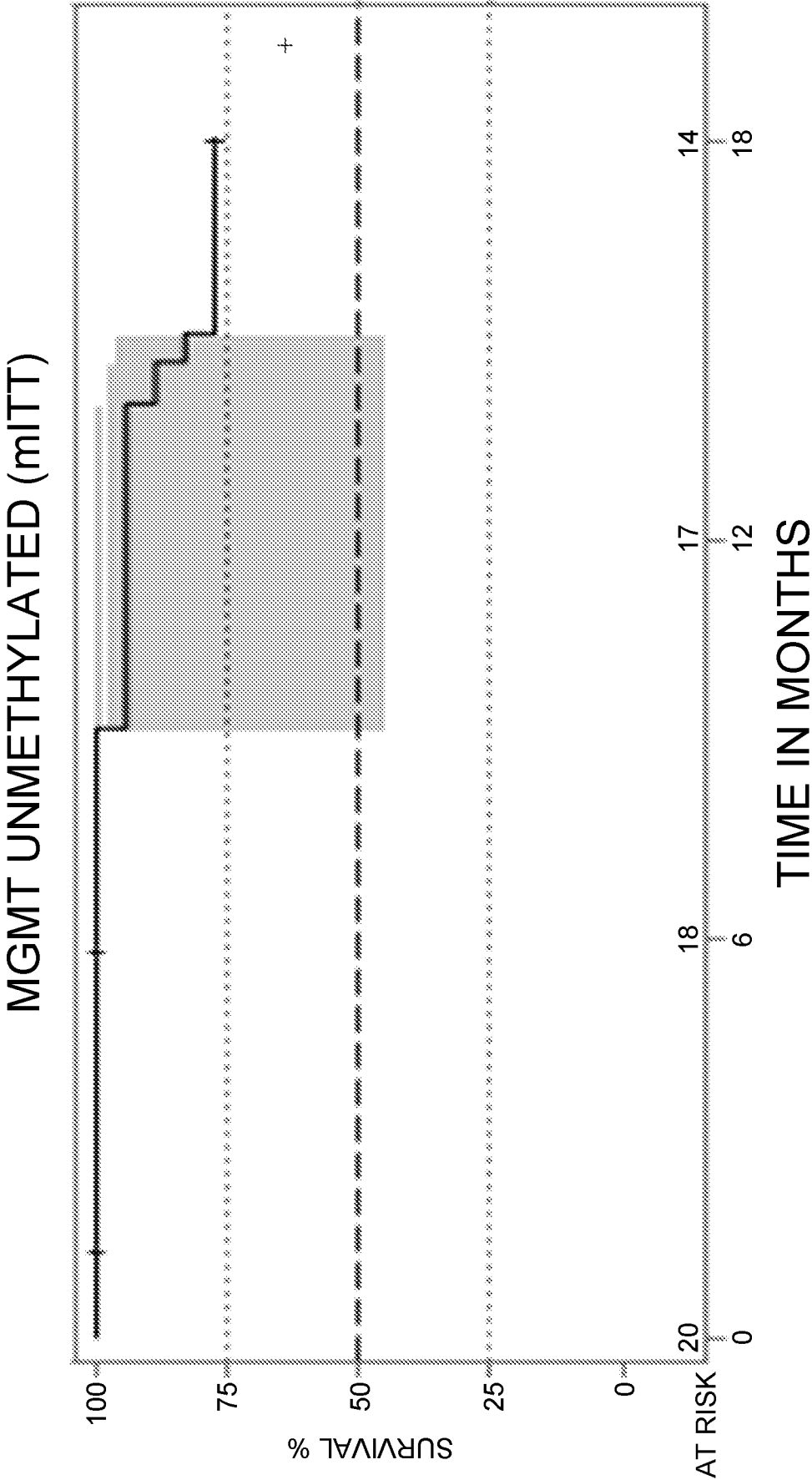


Figure 12 OVERALL SURVIVAL: MGMT UNMETHYLATED & METHYLATED (MITT)

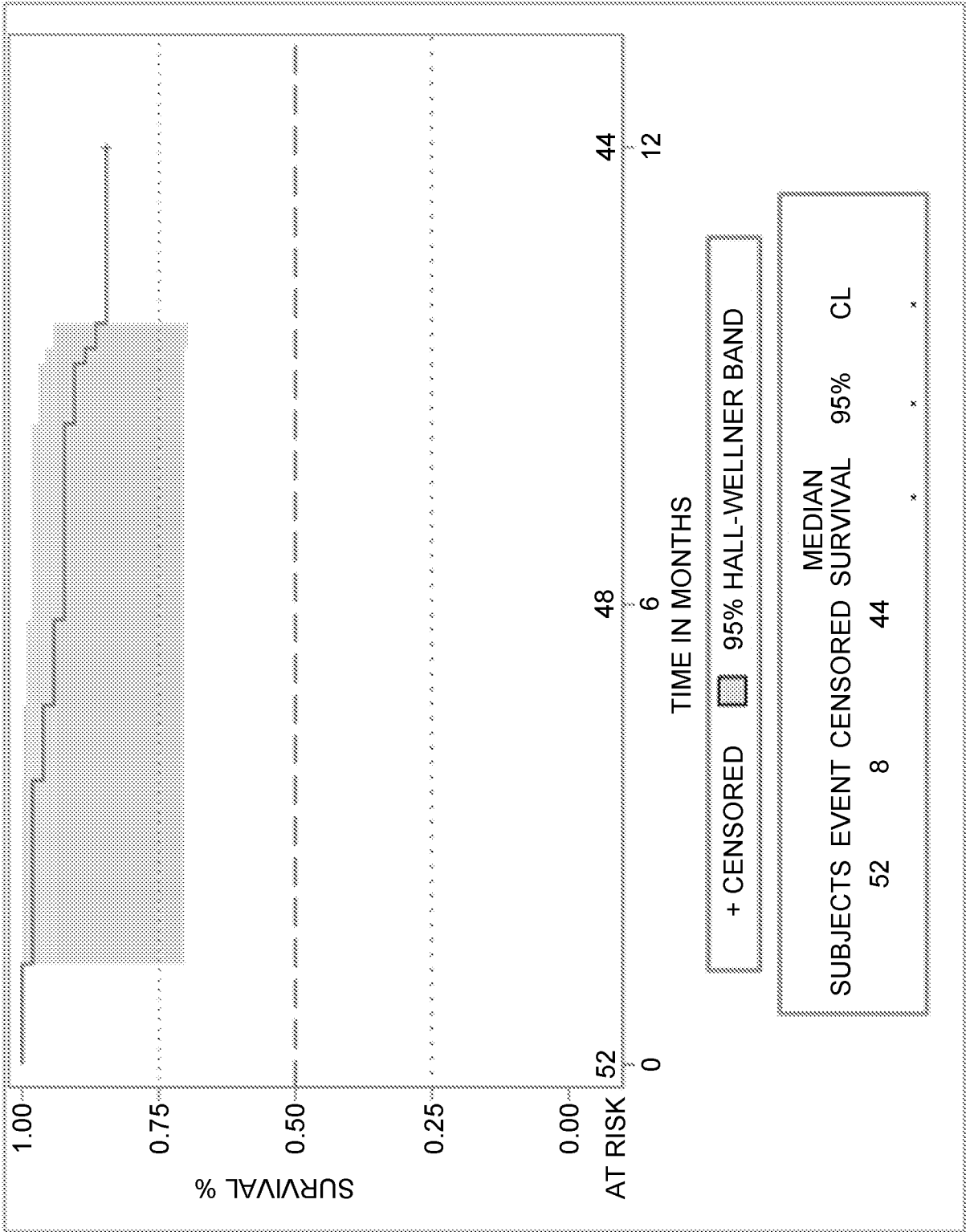


Figure 13 Interim Overall Survival at 18 Months

Median OS; unmethylated (Cohort A)	17.9 mo (14.5-NR)	
Median OS; methylated (Cohort B)	NR (18.4-NR)	
Overall Survival at 12 Months	n Alive/N Total	OS12 (95% CI)
MGMT Unmethylated (Cohort A)	27/32	84.4 (67.2-94.7)
MGMT Methylated (Cohort B)	17*/20	85.0 (62.1-96.8)
Combined	44/52	84.6 (71.9-93.1)
Overall Survival at 18 Months	n Alive/N Total	OS18 (95% CI)
MGMT Unmethylated (Cohort A)	16/32	50 (31.9-68.1)
MGMT Methylated (Cohort B)	14/20*	70 (45.7-88.1)
Combined	30/52	57.7 (14.5-71.3)

* Two patients in Cohort B withdrew consent for additional follow-up at Week 3 and are included in the denominator

NR: not reached

Figure 14 NCI CTCAE ≥ 3 Adverse Events Reported in More than One Subject

System Organ Class Preferred Term	Unmethylated MGMT (Cohort A) (N=32) n(%)	Methylated MGMT (Cohort B) (N=20) n(%)	Combined Unmethylated/ Methylated MGMT (N=52) n(%)
Blood and lymphatic system disorders			
Anaemia	1 (3.1)	1 (5.0)	2 (3.8)
Gastrointestinal disorders			
Diarrhoea	2 (6.3)	0 (0.0)	2 (3.8)
Infections and infestations			
Pneumonia	2 (6.3)	0 (0.0)	2 (3.8)
Investigations			
Amylase increased	1 (3.1)	1 (5.0)	2 (3.8)
Alanine aminotransferase increased	2 (6.3)	2 (10.0)	4 (7.7)
Lipase increased	1 (3.1)	2 (10.0)	3 (5.8)
Lymphocyte count decreased	4 (12.5)	2 (10.0)	6 (11.5)
Neutrophil count decreased	0 (0.0)	3 (15.0)	3 (5.8)
Platelet count decreased	2 (6.3)	4 (20.0)	6 (11.5)
White blood cell count decreased	0 (0.0)	3 (15.0)	3 (5.8)
Metabolism and nutrition disorders			
Hyponatraemia	2 (6.3)	0 (0.0)	2 (3.8)
Musculoskeletal and connective tissue disorders			
Muscular weakness	2 (6.3)	0	2 (3.8)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Tumour inflammation	3 (9.4)	1 (5.0)	4 (7.7)
Nervous system disorders			
Hemiparesis	1 (3.1)	1 (5.0)	2 (3.8)
Seizure	4 (12.5)	0 (0.0)	4 (7.7)
Respiratory, thoracic and mediastinal disorders			
Pneumonitis	2 (6.3)	0 (0.0)	2 (3.8)
Pulmonary embolism	2 (6.3)	1 (5.0)	3 (5.8)
Skin and subcutaneous tissue disorders			
Rash maculo-papular	2 (6.3)	0 (0.0)	2 (3.8)

Note: MGMT = O6-methylguanine methyltransferase. TEAE = Treatment-emergent adverse event. Adverse events are coded using Medical Dictionary for Regulatory Activities (MedDRA) version 22. If a subject experienced more than one event in a given system organ class, that subject is counted once for that system organ class. If a subject experienced more than one event with a given preferred term, that subject is counted only once for that preferred term by highest severity grade.

Figure 15 Immune-Related Adverse Events

System Organ Class Preferred Term	Unmethylated MGMT (Cohort A) (N=32)	Methylated MGMT (Cohort B) (N=20)	Combined Unmethylated/ Methylated MGMT (N=52)
Cardiac disorders			
Myocarditis		1	1
Endocrine disorders			
Diabetes insipidus	0	1	1
Immune-related hypothyroidism	2	0	2
Gastrointestinal disorders			
Diarrhoea	3	1	4
Immune-mediated enterocolitis	1	0	1
Pancreatitis	0	1	1
General disorders and administration site conditions			
Fatigue		1	1
Influenza like illness	1	1	2
Night sweats	0	1	1
Pyrexia	2	2	4
Hepatobiliary disorders			
Immune-mediated hepatitis*	3	0	3
Immune system disorders			
Hypersensitivity	1	0	1
Myasthenia gravis	0	1	1
Investigations			
Alanine aminotransferase increased	4	1	5
Amylase increased	1	0	1
Aspartate aminotransferase increased	4	0	1
Increased alkaline phosphatase	1	0	1
Lipase increased	0	1	1
Transaminitis	1	0	1
Musculoskeletal and connective tissue disorders			
Arthralgia*	4	0	4
Eosinophilic fasciitis	0	1	1
Muscular weakness	0	1	1
Myositis	0	1	1
Nervous system disorders			
Brain Oedema	2	0	2
Encephalitis autoimmune	0	1	1
Headache	0	1	1
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			

Figure 15 Immune-Related Adverse Events - continued

Tumour inflammation	4	1	5
Renal and urinary disorders			
Acute kidney injury	1	1	2
Autoimmune nephritis*	3	0	3
Haematuria	0	1	1
Respiratory, thoracic and mediastinal disorders			
Pneumonitis	3	0	3
Skin and subcutaneous tissue disorders			
Pruritus	1	1	2
Rash	0	1	1
Rash erythematous	1	0	1
Rash maculo-papular	2	0	2
Rash papular	1	0	1
Urticaria	1	0	1

*Subject experienced same event more than one time.

Arthralgia: 2 events reported for one subject

Autoimmune nephritis: 3 events reported for one subject

Immune-mediated hepatitis: 2 events reported for one subject

Figure 16A

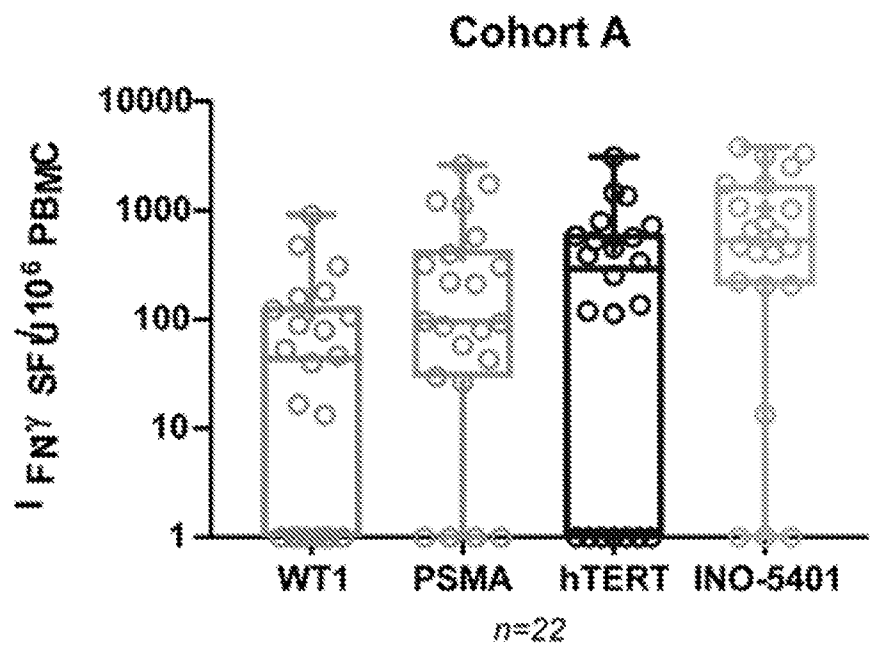


Figure 16B

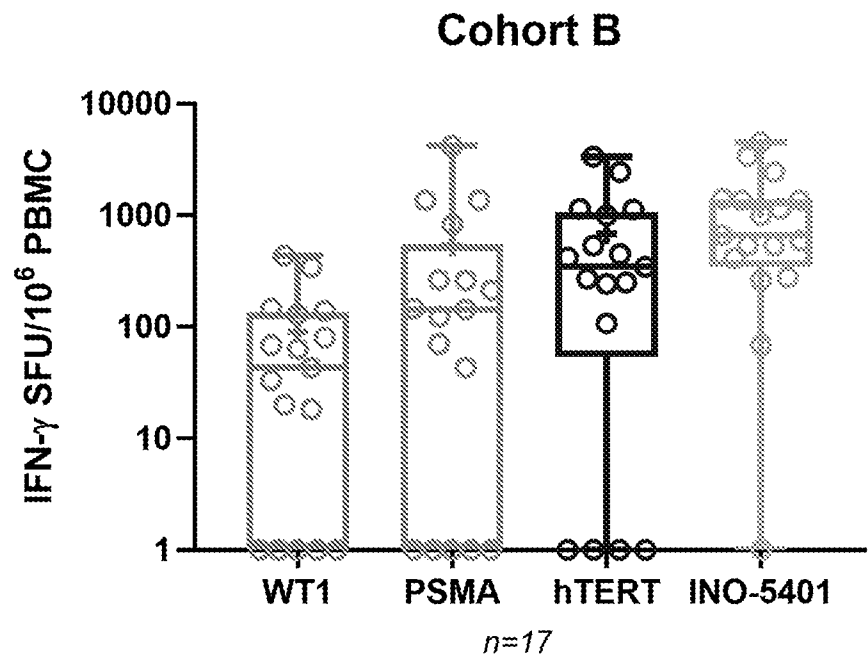


Figure 17A

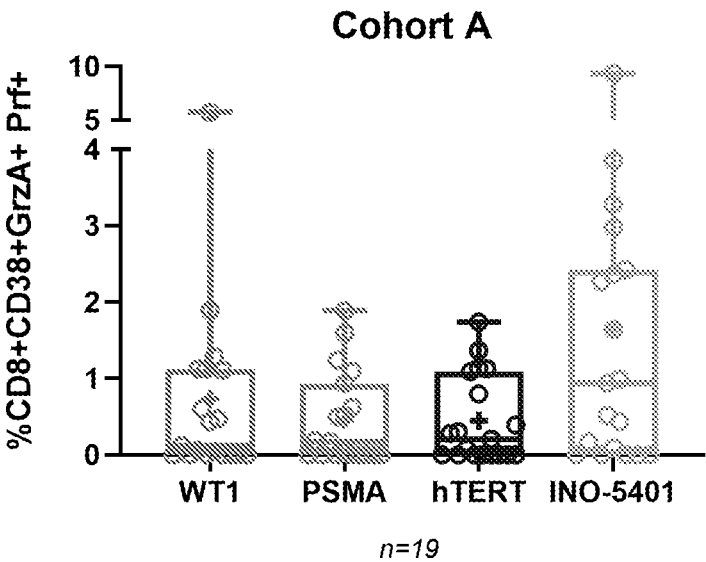


Figure 17B

