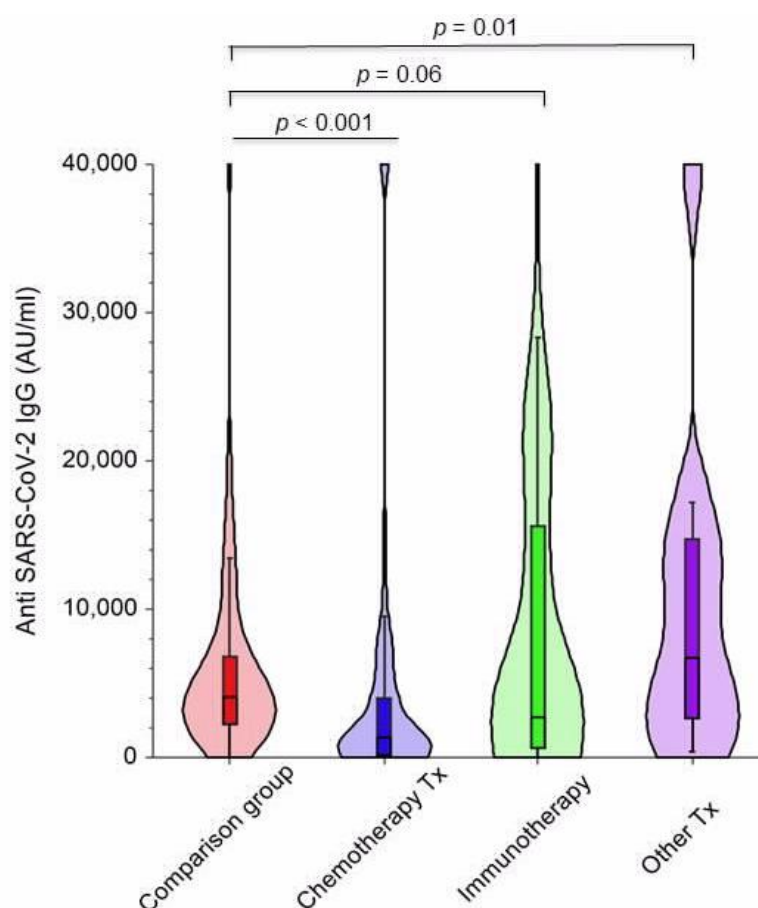


Article

# Efficacy of the mRNA-Based BNT162b2 COVID-19 Vaccine in Patients with Solid Malignancies Treated with Anti-Neoplastic Drugs

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## Supplementary Materials



**Figure S1.** SARS-CoV-2 IgG antibodies titer. Violin graphs and box plots of the distribution of anti-SARS-CoV-2 antibody levels (AU/ml). The median and quartiles are presented as horizontal lines within the box plot. Chemotherapy treated and comparison non-cancer groups (unmatched). The median antibody levels are significantly lower in the chemotherapy treated group, 1361 AU/ml vs. 4100 AU/ml in the comparison group, ( $p < 0.001$ ). The lower IgG values, as apparent from the wider bottom distribution, are more frequent in this group. The Immunotherapy and Other treatment group antibody levels, were not significantly different than the non-cancer comparison group ( $p = 0.06$ ,  $p = 0.01$ ), respectively.

Table S1. SARS-CoV 2 IgG Titer Values by Cancer Type.

Cancer type	Number (n)	Cancer Participants (n = 140)			IgG, mean (IQR)
		Seronegative (<50 AU/ml) n (%)	Borderline (50–150 AU/ml) n (%)	Seropositive (>150 AU/ml) n (%)	
GI	41	4 (9.8)	3 (7.3)	34 (82.9)	4343 (217–5532)
Lung	27	2 (7.4)	0	25 (92.6)	8029 (570–10598)
Breast	30	4 (13.3)	1 (3.3)	25 (83.3)	8387 (888–13132)
Pancreas	7	2 (28.6)	1 (14.3)	4 (57.1)	1494 (44–1742)
Urinary	13	1 (7.7)	0	12 (92.3)	3524 (538–5426)
Sarcoma	1	1 (100)	0	0	0.7
Head & Neck	2	0	1 (50)	1 (50)	1721
Melanoma	7	0	0	7 (100)	10708 (1489–20791)
Skin-non Melanoma	3	0	0	3 (100)	2622
Gynecological	9	0	0	9 (100)	10777 (2448–16564)

**Table S2.** Participants' Characteristics stratified according to three IgG antibodies categories.

Characteristic	Cancer Patients				Non-Cancer Participants			
	All	Seronegative (<50 AU/ml)	Borderline (50–150 AU/ml)	Seropositive (>150 AU/ml)	All	Seronegative (<50 AU/ml)	Borderline (50–150 AU/ml)	Seropositive (>150 AU/ml)
Number (n)	140	14	6	120	215	1	2	212
Age, mean years (SD)	65.3 (13.4)	66.8 (19.2)	66 (13.3)	65 (12.8)	62.5 (13)	69	67.82	62.7 (12.9)
Male, (%)	76 (54%)	8 (57)	4 (66.6)	64(53.3)	80 (37.2)	1	2 (100)	77 (36.3)
Time from 2nd COVID-19 vaccine, median days (IQR)	35 (23.5–45)	35 (33–36)	35 (25–40)	36 (23–47)	51 (43–62)	62	39,28	51 (43–62)
Type of Cancer, n (%)								
Gastrointestinal	48 (34.2)	6	4	38				
Breast	30 (21.4)	4	1	25				
Lung	27 (19.3)	2	0	25				
Urinary	13 (9.3)	1	0	12				
Gynecological	9 (6.4)	0	0	9				
Other types	13 (9.3)	1	1	11				
Treatment, n (%)								
Chemotherapy	73 (52)	12	4	57				
Not Chemotherapy	67 (48)	2	2	63				
Immunotherapy	43 (30.7)	1	2	40				
Treatment type, n (%)								
Metastatic Treatment	109	8	5	96				
Adjuvant Treatment	23	2	0	21				
Neo-Adjuvant Treatment	8	4	1	3				

**Table S3.** SARS-CoV-2 mRNA Vaccine Response after the second dose among chemotherapy and non-chemotherapy treated cancer patients.

Characteristic	Chemotherapy Treated Patients	Non-Chemotherapy Treated Patients	Statistical Test	<i>p</i>
Number (n)	73	67		
Time from 2nd COVID-19 vaccine, mean days (min–max)	35.8 (9–72)	34.3 (7–64)	Mann-Whitney	0.66
Seronegative , n(%)	17 (23.3)	3 (4.5)	Fisher	0
IgG, median (IQR)	1361 (162.4–4030)	5088 (890–14925)	Mann-Whitney	<0.001