

# Does the Pfizer Vaccine Prevent COVID?

## The EUA Document Results Comparing Vaccinated with Non-Vaccinated Individuals

7 Days after 2nd Injection there were fewer cases of COVID but The Difference in the number of cases wasn't statistically significant.  $p=NS$

Table 6. Final Analysis of Efficacy of BNT162b2 Against Confirmed COVID-19 From 7 Days After Dose 2 in Participants Without Evidence of Prior SARS-CoV-2 Infection - Evaluable Efficacy Population

Pre-specified Age Group	BNT162b2		Placebo		Vaccine Efficacy % (95% CI)	Predefined Success Criterion*
	Surveillance Time <sup>c</sup> (n2 <sup>d</sup> )	Cases n1 <sup>b</sup>	Surveillance Time <sup>c</sup> (n2 <sup>d</sup> )	Cases n1 <sup>b</sup>		
All participants	2.214 (17411)	8	2.222 (17511)	162	95.0 (90.3, 97.6) <sup>e</sup>	Yes
16 to 55 years	1.234 (9897)	5	1.239 (9955)	114	95.6 (89.4, 98.6) <sup>f</sup>	NA
> 55 years and older	0.980 (7500)	3	0.983 (7543)	48	93.7 (80.6, 98.8) <sup>f</sup>	NA

\*Success criterion: the posterior probability that true vaccine efficacy > 30% conditioning on the available data is >99.5% at the final analysis

<sup>a</sup> N = number of participants in the specified group.

<sup>b</sup> n1 = Number of participants meeting the endpoint definition.

<sup>c</sup> Total surveillance time in 1000 person-years for the given endpoint across all participants within each group at risk for the endpoint. Time period for COVID-19 case accrual is from 7 days after Dose 2 to the end of the surveillance period.

<sup>d</sup> n2 = Number of participants at risk for the endpoint.

<sup>e</sup> Credible interval for VE was calculated using a beta-binomial model with prior beta (0.700102, 1) adjusted for surveillance time.

<sup>f</sup> Confidence interval (CI) for VE is derived based on the Clopper and Pearson method adjusted to the surveillance time.



	Observed	Expected	Marginal Row Totals
Pfizer	17403 (17326.25) [0.34]	17249 (17325.75) [0.34]	34652
Nothing	17349 (17425.75) [0.34]	17502 (17425.25) [0.34]	34851
Marginal Column Totals	34752	34751	69503 (Grand Total)

The chi-square statistic is 1.3561. The p-value is .244218. Not significant at  $p < .05$ .

The chi-square statistic with Yates correction is 1.3385. The p-value is .247304. Not significant at  $p < .05$ .

Absolute Risk Reduction (ARR) = 0.93% minus 0.05% = 0.88%