

# Pfizer and BioNTech COVID-19 vaccine



This year has demonstrated how quickly vaccines can enter clinical testing following inception. [There are currently over 50 vaccines in different phases of I-III of clinical trials.](#)

As of 16<sup>th</sup> November, three vaccines in phase III testing have released press statements that provide preliminary evidence of at least 90% efficacy against COVID-19. This week we shall give a daily summary of the three vaccines and provide published (and pre-print) evidence that describes the immunogenicity profile of the vaccine.

BNT162b1 is an mRNA based vaccine, co-developed by Pfizer and BioNTech [was the first COVID-19 vaccine to release preliminary analysis that suggests >90% efficacy against COVID-19 infection in SARS-CoV-2-naïve adults.](#) This vaccine induces a robust antibody and cellular immunity in both younger ([Sabin et al, Pre-print](#)) and elderly adults ([Mulligan et al., 2020](#)). Read our summary [RNA-based vaccine BNT162b1 induces robust IgG and T cell immunity for more details.](#) As of 8th of November 38955 out of 43538 enrolled participants received two of their scheduled vaccine doses. In addition to measuring efficacy in SARS-CoV-2 naïve adults, researchers will also *evaluate the potential for the vaccine candidate to protect against COVID-19 in SARS-CoV-2 exposed individuals, as well as vaccine prevention against severe COVID-19 disease.* Final analysis of the trial results is expected to occur after 164 confirmed COVID-19 cases have been accrued. According to Pfizer and

BioNTech, they project that they will globally produce up to 50 million vaccine doses in 2020 and up to 1.3 billion doses in 2021.

Based on the press release there is hope that an efficacious COVID-19 vaccine is on the horizon, however how long immunity lasts, what type of COVID-19 (mild vs severe cases) it protects against and whether it is efficacious in SARS-CoV-2 exposed individuals still needs to be determined.

Press-release: [PFIZER AND BIONTECH ANNOUNCE VACCINE CANDIDATE AGAINST COVID-19 ACHIEVED SUCCESS IN FIRST INTERIM ANALYSIS FROM PHASE 3 STUDY.](#)

Also read: [What Pfizer's landmark COVID vaccine results mean for the pandemic](#)

*Summary by Cheleka AM Mpande*