SARS-COV 2 Vaccine Tracker

Table of vaccines with Phase 3 clinical trials

(These are only interim analysis of vaccines with **PHASE 3 TRIALS AS OF MARCH 1, 2021**.
Data may change depending on the results of further studies.)

	BNT162b2 (BioNTech and Pfizer)	**mRNA-1273** (NIAID and Moderna)	**ChAdOx1 nCoV-19** (University of Oxford and Astra Zeneca)	**Gam-COVID-Vac** (N F Gamaleya National Research Centre for Epidemiology and Microbiology)	**CoronaVac** (Sinovac Life Sciences, Beijing, China)
CHARACTERISTIC OF THE VACCINE AND TRIAL					
Type of vaccine	mRNA	mRNA	Non-replicating viral vector	Non-replicating Adenovirus viral vector with 2 vector types (rAD26-S, rAD5-S)	Inactivated virus (Aluminum hydroxide adjuvant)
Current phase of clinical trial	Phase 3	Phase 3	Phase 3	Phase 3	Phase 3
Start date of clinical trial	April 29, 2020	July 27, 2020	May 28, 2020	September 7, 2020	July 2, 2020
FDA EUA approval (US or UK)	YES	YES	YES	NO	NO
Philippine FDA EUA approval	YES	NONE	YES	Submitted January 7, 2021	YES
VACCINE DOSING, STORAGE AND EFFICACY					
Dose and frequency	2 doses (30ug), 21 days apart	2 doses (100ug), 28 days apart	2 doses (5×10^{10} viral particles per dose), 6 to 12 weeks apart	2 doses (10^{11} viral particles per dose), rAD26-S on day 0 rAD5-S on day 21	2 doses (3 µg/0.5 mL, equivalent to 600 SU per dose) 28 days apart[1]
Storage Requirements	• -70^0C, protected from light up to expiration date • 2^0C to 8^0C for 5 days,	• -25^0C to -15^0C up to expiration • 2^0C to 8^0C for 30 days	• -20^0C for 2 years • 2^0C to 8^0C for 3 months	• -20^0C for 6 months • 2^0C to 8^0C	• 2C-8C; protect from light
Vaccine efficacy[3] ***prevention of symptomatic COVID19***	95% 7 days after the 2nd dose (95% CI: 90.3 to 97.6)	94.1% 14 days after the 2nd dose (95% CI: 89.3 to 96.8%)	70.4% 14 days after the 2nd dose (95% CI: 54.8 to 80.6)	91.6% 21 days after the 1st dose (95% CI: 85·6 to 95·2)	***(these results were based on the Brazil trial for healthcare workers)*** 50.65%[2] 14 days after the 2nd dose (95% CI: 35.94 to 61.98)

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ADVERSE EVENTS					
Adverse events ***most of these are mild in severity and transient***	**Local Reaction:** • Pain on injection site **Systemic Reactions:** • Fatigue • Headache • Fever • Lymphadenopathy **Serious Adverse Events:** • Shoulder injury related to vaccine administration • Right axillary lymphadenopathy • Paroxysmal arrhythmia • Right leg paresthesia.	**Local Reaction:** • pain after injection • erythema and swelling at injection site • axillary swelling/ tenderness **Systemic Reaction:** • fever, chills • headache, nausea/ vomiting • fatigue, myalgia • arthralgia **Serious Adverse Events:** *(the incidence of these events were not significantly different compared to the placebo arm)* • atrial fibrillation, myocardial infarction, congestive heart failure, hypertension • pneumonia, pulmonary embolism, • cerebrovascular accident, seizure, subdural hematoma, syncope • upper abdominal pain, cholecystitis, appendicitis, colitis, • nephrolithiasis, acute kidney injury • arthritis; deep vein thrombosis, • hiatal hernia, facial swelling	**Local Reaction:** • Injection site pain and tenderness **Systemic Reactions:** • Myalgia • Fatigue • Headache • Malaise • Chills	**Local Reaction:** • Pain on injection site **Systemic Reactions:** • Hyperthermia • Swelling • Hyperthermia • Headache • Asthenia • Muscle and joint pain • Diarrhea • Rhinorrhea • Loss of appetite • Pain in the oropharynx • Malaise • Sore throat • Nasal congestion • Colds, sneezing • Cough	**Local Reactions:** • pain • swelling, induration • pruritus • erythema • burn at injection site **Systemic Reactions:** • headache, nausea • fever, fatigue, myalgia • diarrhea • arthralgia • cough, chills • loss of appetite, • rhinorrhea, sore throat, nasal congestion • abdominal pain, vomiting, • hypersensitivity, abnormal skin and mucosa • dizziness, drowsiness • muscle spasms • eyelid edema, nose bleed/epistaxis, • abdominal distension, constipation, • hyposmia, ocular congestion • hot flashes, hiccup, • conjunctival congestion
REFERENCES					
Citation	Polack FP, et al. (2020) The New England Journal of Medicine	Baden LR,et al. (2020). New England Journal of Medicine	Voysey M., et al. (2020) Lancet	Logunov DY, et al. (2021) Lancet	Food and Health Bureau (2021) Report on Evaluation of Safety, Efficacy and Quality of CoronaVac COVID-19 Vaccine (Vero Cell) Inactivated.
Website link	https://www.nejm.org/doi/10.1056/NEJMoa2034577	https://www.nejm.org/doi/full/10.1056/NEJMoa2035389	https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32623-4/fulltext	https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00234-8/fulltext#seccestitle150	https://www.fhb.gov.hk/download/our_work/health/201200/e_evaluation_report_CoronaVac.pdf

[1]Subgroup analysis based on dosing interval: dosing less than 21 days, Vaccine efficacy (VE) was 49.12% (95% CI: 33.01 – 61.36) and dosing interval of 21 days or more, VE was 62.32% (95% CI: 13.91, 83.51), indicating better VE for a dosing interval of more than 21 days. The results supported the immunogenicity findings in the Phase 1/ 2 clinical studies of a dosing interval of 28 day.
[2]Vaccine efficacy is based on 14-day dosing interval

[3]Other outcomes/ Secondary outcomes:
BNT162b2:

- Vaccine efficacy against severe COVID19 occurrence >/= 7 days after 2nd dose: 75% (CI 52.6, 99.5

mRNA-1273:

- Vaccine efficacy against severe COVID19 starting 14 days after the 2nd dose: 100%
- Vaccine efficacy against severe COVID19 after the 1st dose: 95.2 (CI 1.2 - 97.4); 3)
- Vaccine efficacy against severe Covid-19 after the second injection regardless of prior SARS-CoV-2 infection, adjudicated: 93.6% (CI 88.6 - 96.5)

ChAdOx1 nCoV-19

- After 1st dose
  - Hospitalization: 16 cases in control, none in vaccine group
  - Severe disease: 2 in control, none in vaccine group
- After 2nd dose
  - Hospitalization: 5 cases in control, none in vaccine group
  - Severe disease: 1 in control, none in vaccine group

Gam-COVID-Vac:

- Vaccine efficacy against moderate or severe COVID-19 was 100% (94·4–100·0)

CoronaVac (these results were based on the Brazil trial for healthcare workers):

Vaccine efficacy based on WHO COVID-19 Clinical Progression Scale Classification Score:

- Score 3 (mild cases that need some type of assistance) or above: 83.7% (95% CI: 57.99, 93.67)
- Score 4 (moderate-severe cases) or above: 100.0% (95% CI: 56.37, 100)
- Severe cases: 100.0% (95% CI: 16.93, 100)