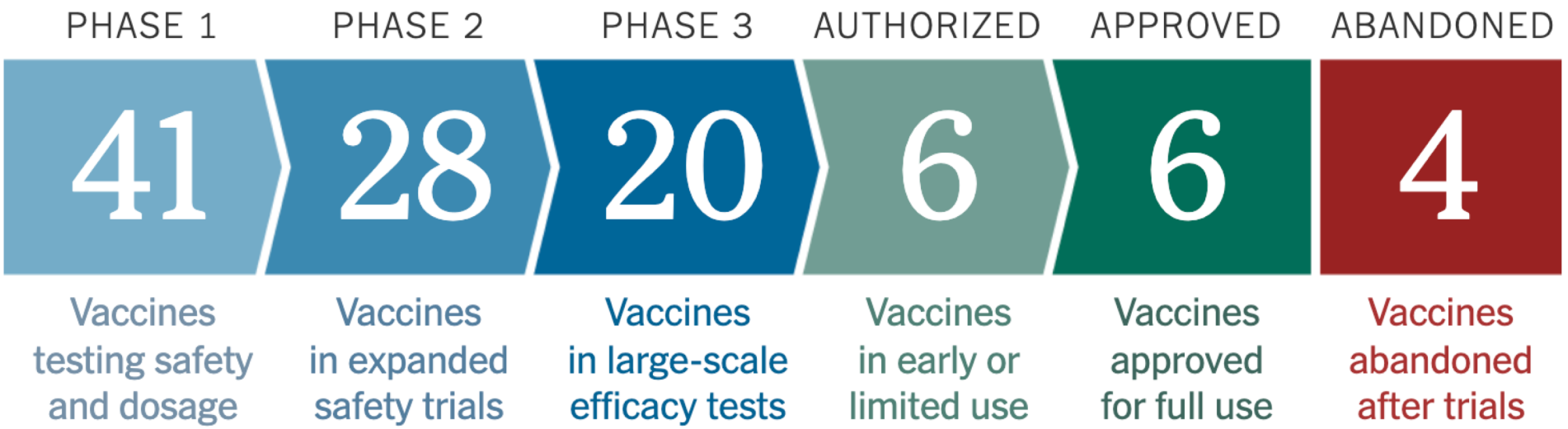
# Coronavirus Vaccine Tracker

By Carl Zimmer, Jonathan Corum and Sui-Lee Wee Updated March 1, 2021




The New York Times

| Developer | How It Works | Phase | Status |
|---|---|---|---|
| Pfizer-BioNTech | mRNA | 2 3 | Approved in several countries.<br>Emergency use in U.S., E.U., other countries. |
| Moderna | mRNA | 3 | Approved in Switzerland.<br>Emergency use in U.S., U.K., E.U., others. |
| Gamaleya | Ad26, Ad5 | 3 | Early use in Russia.<br>Emergency use in other countries. |
| Oxford-AstraZeneca | ChAdOx1 | 2 3 | Emergency use in U.K., E.U., other countries. |
| CanSino | Ad5 | 3 | Approved in China.<br>Emergency use in other countries. |
| Johnson & Johnson | Ad26 | 3 | Emergency use in U.S., Bahrain. |
| Vector Institute | Protein | 3 | Early use in Russia. |
| Novavax | Protein | 3 | |
| Sinopharm | Inactivated | 3 | Approved in China, U.A.E., Bahrain.<br>Emergency use in Egypt, other coutries. |
| Sinovac | Inactivated | 3 | Approved in China.<br>Emergency use in Brazil, other countries. |
| Sinopharm-Wuhan | Inactivated | 3 | Limited use in China, U.A.E. |
| Bharat Biotech | Inactivated | 3 | Emergency use in India. |

**PHASE 3** **EMERGENCY USE IN U.S., BAHRAIN**

Johnson & Johnson

Beth Israel Lahey Health
Beth Israel Deaconess Medical Center

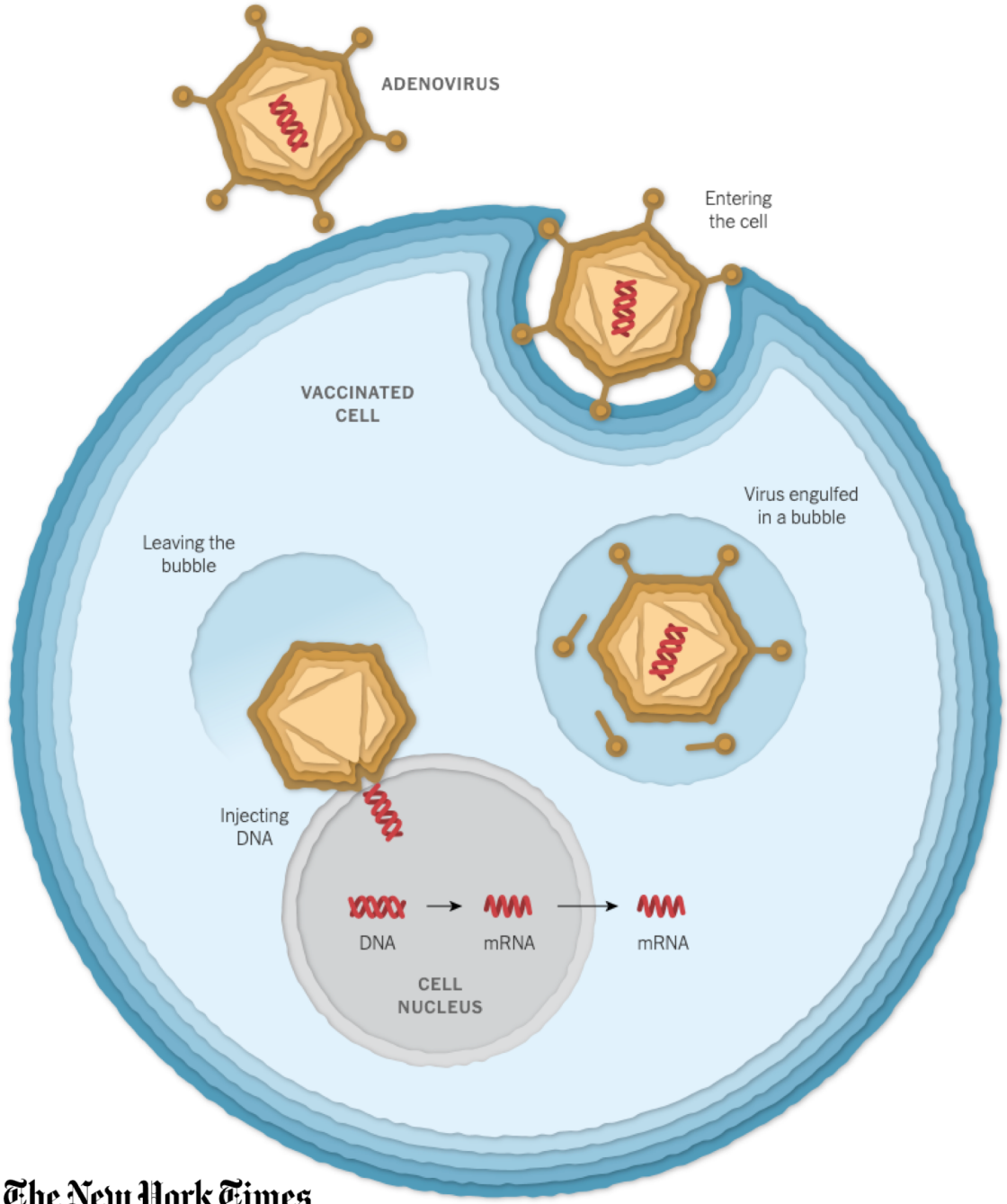
VACCINE NAME: Ad26.COV2.S

EFFICACY: 72% in United States, 64% in South Africa, 61% in Latin America

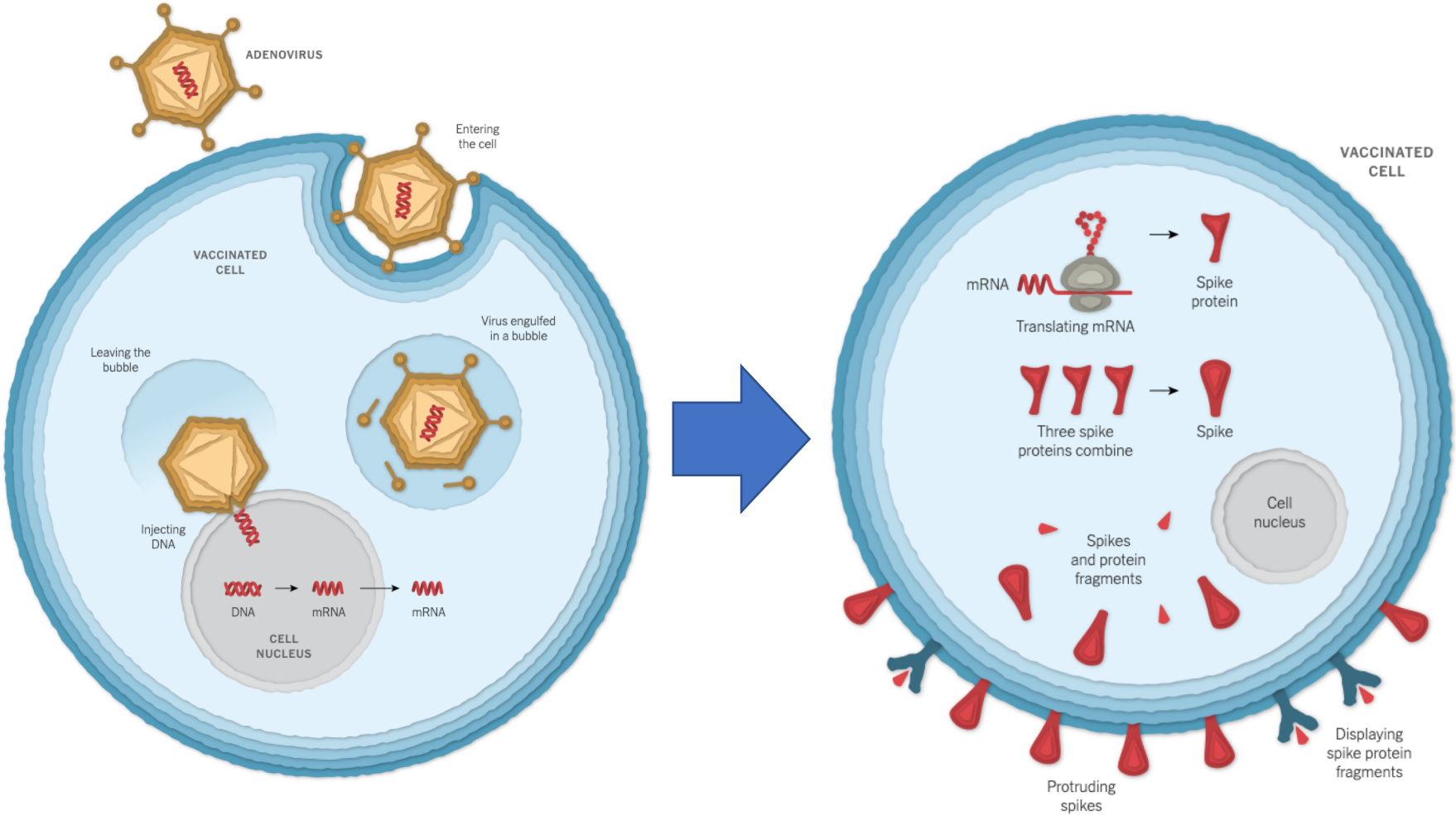
DOSE: 1 dose

TYPE: Muscle injection

STORAGE: Up to two years frozen at –4° F (–20° C), and up to three months refrigerated at 36–46° F (2–8° C).

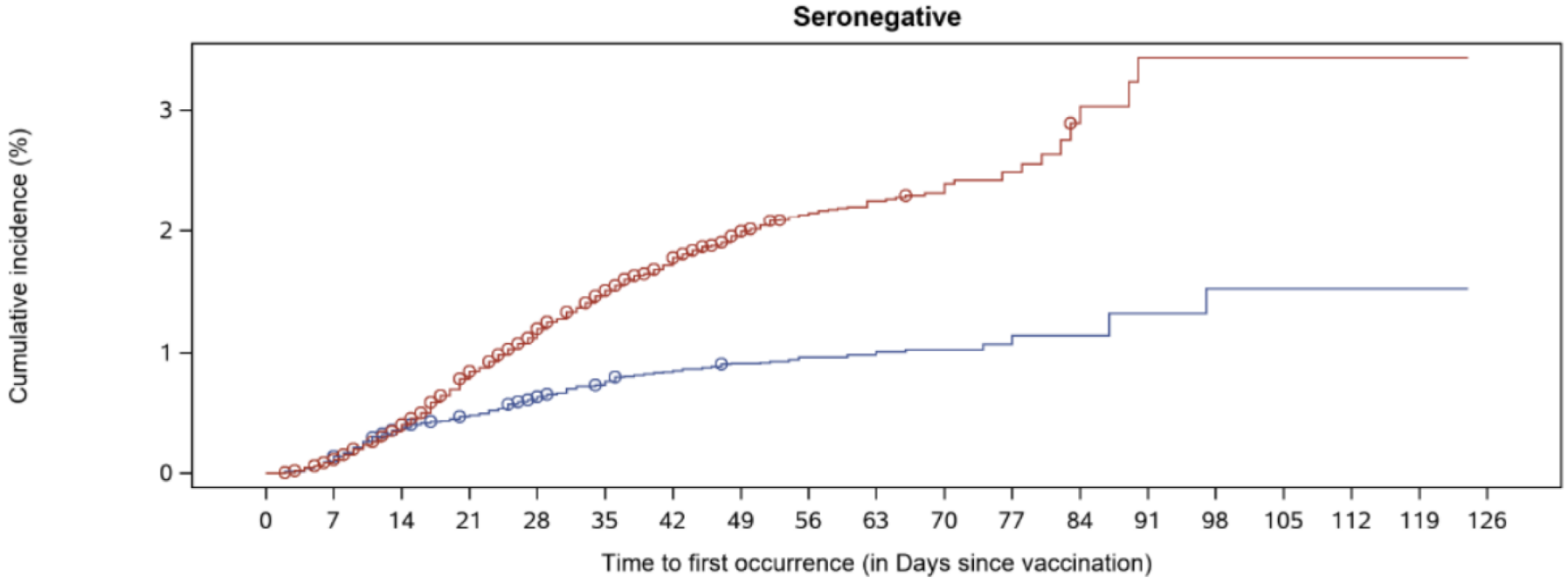



The New York Times




The New York Times

**Figure 1. Cumulative Incidence Curve of Centrally Confirmed Moderate to Severe/Critical COVID-19 Cases With Onset at Least 1 Day After Vaccination, Full Analysis Set**




| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Participants at risk | | | | | | | | | | | | | | | | | | | |
| Ad26 5c10 vp | 19744 | 19725 | 19669 | 19642 | 19612 | 19578 | 18541 | 14909 | 10930 | 7831 | 3998 | 1468 | 713 | 484 | 483 | 482 | 142 | 31 | 0 |
| Placebo | 19822 | 19804 | 19745 | 19652 | 19579 | 19488 | 18411 | 14814 | 10823 | 7740 | 3876 | 1439 | 708 | 485 | 482 | 480 | 133 | 27 | 0 |
| Number of cases | | | | | | | | | | | | | | | | | | | |
| Ad26 5e10 vp | 0 | 27 | 76 | 96 | 126 | 151 | 168 | 178 | 184 | 188 | 189 | 191 | 191 | 192 | 193 | 193 | 193 | 193 | 193 |
| Placebo | 0 | 22 | 81 | 168 | 237 | 299 | 351 | 387 | 407 | 416 | 423 | 425 | 430 | 432 | 432 | 432 | 432 | 432 | 432 |

Ad26 5e10 vp — Placebo

**Table 15. Vaccine Efficacy Against Centrally Confirmed COVID-19[a] With Onset at Least 14 or at Least 28 Days After Vaccination, Per-Protocol Set, Study 3001**

| | Onset at Least 14 Days | | | Onset at Least 28 Days | | |
|---|---|---|---|---|---|---|
| | Ad26.COV2.S Cases (N) Person-yrs | Placebo Cases (N) Person-yrs | VE% (95% CI) | Ad26.COV2.S Cases (N) Person-yrs | Placebo Cases (N) Person-yrs | VE% (95% CI) |
| Symptomatic COVID-19, any severity[a] | 117 (19514) 3116.5 | 351 (19544) 3095.9 | 66.9% (59.1, 73.4) | 66 (19306) 3102.0 | 195 (19178) 3070.5 | 66.5% (55.5, 75.1) |

**Table 16. Vaccine Efficacy Against Adjudicated Severe/Critical COVID-19 With Onset at Least 14 or at Least 28 Days After Vaccination, Per-Protocol Set, Study 3001**

| | Onset at Least 14 Days | | | Onset at Least 28 Days | | |
|---|---|---|---|---|---|---|
| | Ad26.COV2.S Cases (N) Person-yrs | Placebo Cases (N) Person-yrs | VE% (95% CI) | Ad26.COV2.S Cases (N) Person-yrs | Placebo Cases (N) Person-yrs | VE% (95% CI) |
| Centrally confirmed cases[a] | | | | | | |
| Overall | 14 (19514) 3125.1 | 60 (19544) 3122.0 | 76.7% (54.6, 89.1)[b] | 5 (19306) 3106.2 | 34 (19178) 3082.6 | 85.4% (54.2, 96.9)[b] |
| 18-59 years | 8 (12750) 2114.3 | 41 (12782) 2115.1 | 80.5% (57.8, 92.1) | 2 (12617) 2101.0 | 24 (12527) 2086.7 | 91.7% (66.7, 99.1) |
| ≥60 | 6 (6764) 1010.7 | 19 (6762) 1006.9 | 68.5% (18.1, 89.7) | 3 (6689) 1005.1 | 10 (6651) 995.9 | 70.3% (-15.5, 94.7) |

**Table 17. Vaccine Efficacy of First Occurrence COVID-19 Requiring Medical Intervention Based on MRU, With Onset at Least 14 or at Least 28 Days After Vaccination, Per-Protocol Set, Study 3001**

| | Onset at Least 14 Days | | | Onset at Least 28 Days | | |
|---|---|---|---|---|---|---|
| | Ad26.COV2.S Cases (N) Person-yrs | Placebo Cases (N) Person-yrs | VE% (95% CI) | Ad26.COV2.S Cases (N) Person-yrs | Placebo Cases (N) Person-yrs | VE%[a] (95% CI) |
| Centrally Confirmed | 2 (19514) 3126.9 | 8 (19544) 3126.1 | 75.0% (-25.3, 97.4) | 0 (19306) 3106.4 | 5 (19178) 3084.4 | |
| Any positive PCR | 2 (19514) 3125.9 | 14 (19544) 3125.8 | 85.7% (37.8, 98.4) | 0 (19306) 3106.4 | 7 (19178) 3084.4 | 100% (31.1, 100.0) |

**Table 19. COVID-19 Related Deaths**

| Arm | Study Day[c] | Age | Comorbidity |
|---|---|---|---|
| Placebo | 15 | 63 | Obesity, Hypertension |
| Placebo | 18[a] | 52 | Obesity, Diabetes |
| Placebo | 31 | 54 | Obesity, Hypertension, Diabetes, Heart failure |
| Placebo | 38 | 49 | Obesity, Hypertension |
| Placebo | 39 | 68 | Obesity |
| Placebo | 49[b] | 60 | Obesity |
| Placebo | 55 | 60 | Asthma |

[a] Participant with positive SARS-CoV-2 PCR at baseline

[b] Reported after the primary analysis cutoff date of January 22, 2021

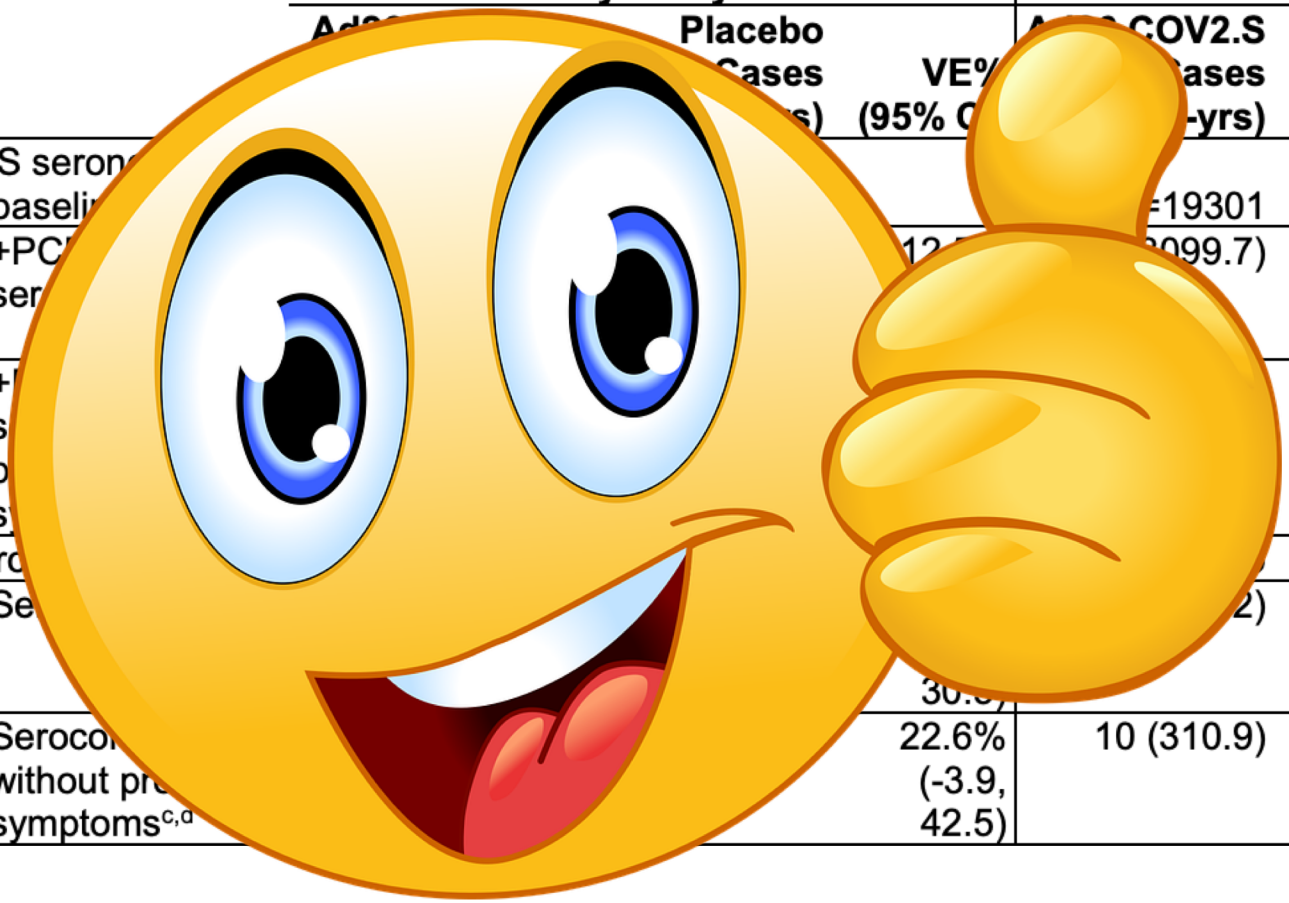
[c] Study day of death

**Table 20. Vaccine Efficacy Against Asymptomatic SARS-CoV-2 Infections, Full Analysis Set**

| | Day 1-Day 29 | | | After Day 29[e] | | |
|---|---|---|---|---|---|---|
| | Ad26.COV2.S No. of Cases (Person-yrs) | Placebo No. of Cases (Person-yrs) | VE% (95% CI) | Ad26.COV2.S No. of Cases (Person-yrs) | Placebo No. of Cases (Person-yrs | VE% (95% CI) |
| FAS seronegative at baseline | N=19739 | N=19809 | | N=19301 | N=19162 | |
| +PCR and/or serology[b] | 159 (1561.3) | 182 (1564.1) | 12.5% (-8.9, 29.7) | 22 (3099.7) | 54 (3064.2 | 59.7% (32.8; 76.6) |
| +PCR and/or serology without previous symptoms[b,d] | 87 (1556.2) | 109 (1559.3) | 20.0% (-7.0, 40.4) | 10 (3098.0) | 38 (3061.5 | 74.0% (46.8; 88.4) |
| Serology risk set[a] | N=14084 | N=14019 | | N=1346 | N=1304 | |
| Seroconverted[c] | 153 (1114.3) | 175 (1108.2) | 13.1% (-8.6, 30.5) | 18 (312.2) | 50 (298.8 | 65.5% (39.9; 81.1) |
| Seroconverted without previous symptoms[c,d] | 84 (1109.4) | 108 (1103.7) | 22.6% (-3.9, 42.5) | 10 (310.9) | 37 (296.6 | 74.2% (47.1; 88.6) |

**Table 20. Vaccine Efficacy Against Asymptomatic SARS-CoV-2 Infections, Full Analysis Set**

| | Day 1-Day 29 | | | After Day 29[e] | | |
|---|---|---|---|---|---|---|
| | Ad26.COV2.S No. of Cases (Person-yrs) | Placebo No. of Cases (Person-yrs) | VE% (95% CI) | Ad26.COV2.S No. of Cases (Person-yrs) | Placebo No. of Cases (Person-yrs) | VE% (95% CI) |
| FAS seron… at baseli… | | | | =19301 | N=19162 | |
| +PC… ser… | | | 12.… | 099.7) | 54 (3064.2 | 59.7% (32.8; 76.6) |
| +… s… p… s… | | | | | 38 (3061.5 | 74.0% (46.8; 88.4) |
| Sero… | | | | | N=1304 | |
| Se… | | | | 2) | 50 (298.8 | 65.5% (39.9; 81.1) |
| | | | 30.… | | | |
| Seroco… without pr… symptoms[c,d] | | | 22.6% (-3.9, 42.5) | 10 (310.9) | 37 (296.6 | 74.2% (47.1; 88.6) |



PHASE 3 | EMERGENCY USE IN U.S., BAHRAIN

Johnson & Johnson | Beth Israel Lahey Health, Beth Israel Deaconess Medical Center

VACCINE NAME: Ad26.COV2.S
EFFICACY: 72% in United States, 64% in South Africa, 61% in Latin America
DOSE: 1 dose
TYPE: Muscle injection
STORAGE: Up to two years frozen at −4° F (−20° C), and up to three months refrigerated at 36–46° F (2–8° C).

In August, the federal government agreed to pay Johnson & Johnson $1 billion for 100 million doses if the vaccine is approved, but the company may fall short of expectations for its initial delivery. The European Union reached a similar deal on Oct. 8 for 200 million doses, and COVAX, an international collaboration to deliver the vaccine equitably across the world, secured 500 million doses. The company is aiming for production of a billion doses in 2021.

On Nov. 16, Johnson & Johnson announced that they were also launching a second Phase 3 trial to observe the effects of two doses of their vaccine, instead of just one. The results are expected in spring. In February, the company also launched a trial for pregnant women.

## Call Details

**When:**
Tuesday, March 2, 2021,
2:00 PM – 3:00 PM ET

**Webinar Link:**
https://www.zoomgov.com/j/1603748312?pwd=anlmUURkSEtmdzBLSmNOV0pJSzZUQT09

**Passcode:** 893944

**Dial In:**
US: +1 669 254 5252
or +1 646 828 7666
or +1 551 285 1373
or +1 669 216 1590

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

# What Clinicians Need to Know About Johnson & Johnson's Janssen COVID-19 Vaccine

## Overview

This COCA Call will give clinicians an overview of the J&J Janssen COVID-19 vaccine. Clinicians will learn about vaccine characteristics and administration, vaccinating special populations, and contraindications. They will also get answers to a number of clinical questions CDC has received about this new vaccine.

| Company | Platform | Dose | Non-clinical results | Number of people who got vaccine | Protection from hospitalization due to COVID-19 | Protection from severe disease from COVID-19 (may not be hospitalized) | Efficacy against milder disease from COVID-19 |
|---|---|---|---|---|---|---|---|
| moderna | mRNA-1273 mRNA in lipid nanoparticle | 2 | Neutralizing Abs; Strong Th1 CD4+, CD8+; protection from challenge (macaques) | ~15,000 | 97% (1 in vaccine arm after 1st dose hospitalized) | 97% (30 cases in placebo arm; 0 in vaccine reported but 1 severe per FDA) | 94.1% |
| Pfizer | BNT162b2 mRNA in lipid nanoparticle | 2 | Neutralizing Abs; Strong Th1 CD4+, CD8+; protection from challenge (macaques) | ~18,600 | 100% | 100% (9 cases in placebo arm; 0 in vaccine- 1 initially severe but not) | 95% |
| Johnson&Johnson | JNJ-78436725 Non-replicating human adenovirus/DNA | 1 | Neutralizing Abs; Strong Th1 CD4+ > Th2; CD8+; challenge protection (macaque) | ~22,000 US, Latin America, S. Africa | 100% | 85% across 3 sites (89% in South Africa – 95% of strains 501Y.V2) | 72% US; 66% Latin America; 57% S. Africa (95% B1.351) |
| AstraZeneca | AZD 1222 Non-replicating Chimp Adenovirus-DNA | 2 | Neutralizing Abs; Strong Th1 CD4+ > Th2; CD8+; protection from challenge (macaques) | ~8588 | 100% | 100% (15 in placebo – all hospitalized; 0 in vaccine) | 70% overall; 76% 1 dose; S. Africa trial halted for mild |
| NOVAVAX Creating Tomorrow's Vaccines Today | NVX-CoV2373 Spike protein/RBD + Matrix M adjuvant | 2 | Neutralizing Abs; Strong Th1 CD4 > Th2; challenge protection (macaques) | ~9700 (Phase 3 UK; 2b SA) | 100% | 100% (but only 1 severe in placebo; 0 in vaccine) | 89.3% UK; 60% S. Africa (94% B.1.351) |
| Sputnik V | Ad26 and Ad5 adenovirus/DNA | 2 | NAbs; IFN-γ secretion PMBCs, cellular response | ~14964 | 100% | 100% (20 in placebo; 0 vaccine) | 91.6% |