Recombinant COVID-19 Protein Vaccine

Efficacy Outcomes from pivotal clinical trials

2019nCoV-302 Trial[1] | Adults 18–84 years

Phase 3, randomized, observer-blinded, *placebo-controlled* trial

15,187 adults from *33 sites* in the *UK*

Predominantly *alpha (B.1.1.7) variant*

28 SEPT 2020 – 20 NOV 2020

Efficacy*

89.7%

95% CI: 80.2–94.6

Efficacy of NVX-CoV2373 against 1st occurrence of lab-confirmed symptomatic Covid-19 with onset at least 7 days after the 2nd dose

Non-B.1.1.7 variants

96.4%

95% CI: 73.8–99.4

Post-hoc analysis of 1^0 endpoint; efficacy against non-B.1.1.7 strains (n=29)

B.1.1.7 variant

86.3%

95% CI: 71.3–93.5

Post-hoc analysis of 1^0 endpoint; efficacy against B.1.1.7 strains (n=66)

Limitations

- **Rare adverse events** could not be ruled out
- **Short observation period** post dose 2
- **Lack of sequencing data on viral isolates**; S-gene target failure used as proxy for B.1.1.7 variant
- **Limited racial diversity** (5.7% non-White participants)

PREVENT-19 Trial[2] | Adults ≥18 years

Phase 3, randomized, observer-blinded, *placebo-controlled* trial

29,949 adults from *113 sites* in the *US* and *6* in *Mexico*

Predominantly *alpha (B.1.1.7); beta (B.1.351)* and *gamma (P.1) variants*

27 DEC 2020 – 18 FEB 2021 and followed through *19 APR 2021*

Efficacy¥

90.4%

95% CI: 82.9–94.6

Efficacy of NVX-CoV2373 against RT-PCR-confirmed Covid-19 occurring at least 7 days after the 2nd dose

Moderate-to-severe COVID ¥

100%

95% CI: 87.0–100.0

Efficacy of NVX-CoV2373 against RT-PCR confirmed symptomatic moderate or severe COVID-19 occurring at least 7 days after the 2nd dose

Hospitalization[3]†

100%

95% CI: 28.8–100.0

4 hospitalizations among the 77 events analyzed for the 1^0 endpoint; 0 among vaccine recipients and 4 among placebo recipients

Limitations

- **Limited follow-up** (~3 months)
- **Low enrollment of adults ≥65 years** due to EUA vaccine availability
- **Imbalance in unblinding requests** early in the trial

PREVENT-19 Trial — Pediatric Expansion[4] | Adolescents 12–17 years

Phase 3, randomized, observer-blinded, *placebo-controlled* trial

2,247 adolescents from *73 sites* in the *USA*

Predominantly *delta variant*

26 APR 2021 – 05 JUN 2021 and followed through *27 SEPT 2021*

Efficacy£

79.5%

95% CI: 46.8–92.1

Efficacy of NVX-CoV2373 against lab confirmed symptomatic COVID-19 at least 7 days after 2nd vaccination due to any SARS-CoV2 variant

Delta variant

82%

95% CI: 32.4–95.2

Efficacy of NVX-CoV2373 against lab confirmed symptomatic COVID-19 at least 7 days after 2nd vaccination due to delta variant

Limitations

- **Short study duration**
- **Blinded crossover design** reduced placebo-controlled follow-up
- **Low case accrual** in each group
- **Exclusion of baseline seropositive participants** affected generalizability

*Among per-protocol population (n= 14,039); ¥Among per-protocol population (n= 25,452); †Post hoc analysis period was 25 JAN 2021 to 30 APR 2021; per-protocol population analyzed; £ Among per protocol population (n=1799)

Note: NVX-CoV2373 comprises 5 µg of full-length, prefusion-stabilized SARS-CoV-2 recombinant spike protein with 50 µg of Matrix-M™ adjuvant.

ABBREVIATIONS: CI, confidence interval; COVID-19, coronavirus disease 2019; d, day; EUA, emergency use authorization; FAS, full analysis set; PP, per protocol; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2; UK, United Kingdom; US, United States; VOC, variant of concern; VOI, variant of interest.

REFERENCES: 1. Heath PT, et al. *N Engl J Med*. 2021;385(13):1172–1183; 2. Dunkle LM, et al. *N Engl J Med.* 2022;386(6):531–543; 3. Marchese AM, et al. *Vaccine*. 2023;41(22):3461–3466; 4. Áñez G, et al. *JAMA Netw Open*. 2023;6(4):e239135.