AstraZeneca COVID-19 Vaccine (AZD1222)

ACIP COVID-19 Emergency Meeting
January 27, 2021

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VP Global Franchise Head, Infection
Forward-Looking Statements

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AGENDA

AZD1222 Adenoviral Platform, Clinical Development Plan & Phase I/II Data

US Phase III Study

Non-IND Phase III Efficacy and Safety Trials (Interim Analysis)

Vaccine Storage & Handling

Summary

Q&A
AstraZeneca committed to a partnership with Oxford University to ensure broad and equitable vaccine access globally, not for profit during the pandemic.

Vaccine immunogenicity, efficacy and safety were demonstrated in four Phase I-III non-IND trials in UK, Brazil & South Africa. Data from these trials supported MHRA (UK) Authorization for Temporary Supply.

Vaccine is supplied in 5 ml preservative free, non-latex multidose vials to be stored at 2-8°C for at least 6 months.

Phase III trial in the US is ongoing, enrollment is complete. This trial will be the primary basis for the EUA application with supporting data from the non-IND trials conducted outside the US.
AZD1222 Adenoviral Platform Clinical Development Plan & Phase I/II Data
AZD1222: The Technology

- Non-replicating chimp adenovirus-vectored vaccine expressing nCoV-19 spike
- Non-replicating due to E1 (and E3) gene deletion
- Chimp adenovirus avoids issues with pre-existing immunity to human adenoviruses
- Vaccine antigen encoded in the viral genome – not a structural part of the virion
- Induces strong B- and T-cell responses after a single vaccination
- Prior to April 2020, 12 Phase I studies, 330 subjects vaccinated
- Dose is $5 \times 10^{10}$ viral particles (vp) as an IM injection, 0.5 ml

DNA = deoxyribonucleic acid; IM = intramuscular.
AZD1222 Clinical Development Plan

- **23 April 2020**
  - Phase 1/2 N=1,077
  - (UK; Sponsor: University of Oxford)

- **28 May 2020**
  - Phase 2/3 N=12,330
  - (UK; Sponsor: University of Oxford)

- **28 August 2020**
  - Phase 3 N=32,459*
  - (USA, Chile, Peru, Sponsor: AstraZeneca)

- **23 June 2020**
  - Phase 3 N= 10,300
  - (Brazil; Sponsor: University of Oxford)

- **25 August 2020**
  - Phase 2/3 N=1,600
  - (India; Sponsor: SIIPL/ICMR)

- **30 October 2020**
  - Phase 1 N=360
  - (Kenya; Sponsor: University of Oxford)

- **24 June 2020**
  - Phase 1/2 N=2020
  - (South Africa; Sponsor: University of Oxford)

- **23 August 2020**
  - Phase 1/2 N=256
  - (Japan; Sponsor: AstraZeneca)

- **02 September 2020**
  - Phase 3 N=100
  - (Russian Federation; Sponsor: AstraZeneca)

*Participants enrolled by January 15, 2021.

1. Study NCT04324606. ClinicalTrials.gov website
2. Study NCT04400838. ClinicalTrials.gov website
3. Study NCT04536051. ClinicalTrials.gov website
4. Study NCT04444674. ClinicalTrials.gov website
5. Study NCT04516746. ClinicalTrials.gov website
6. Study NCT04540393 ClinicalTrials.gov website
7. AstraZeneca. Data on File
AZD1222 Induced Robust Antibody Responses At Levels In A Similar Range To Those Seen In Convalescent COVID-19 Patients In Phase I/II Study COV001

SARS-CoV-2 spike antibodies peaked one month after injection and were elevated after two doses in a similar range to convalescent sera.

Neutralizing activity against SARS-CoV-2 in 91% vaccines after a single dose and 100% after two doses in micro-neutralisation assay (IC80).
Robust Humoral Response In Older Adults Receiving AZD1222 In COV002

Neutralizing activity against the SARS-CoV-2 virus is boosted after a second dose in older adults

D0, D28, D42, D56

Normalised MNA80

18-55 yrs, SDSD
56-69 yrs, SD
56-69 yrs, SDSD
70+ yrs, SD
70+ yrs, SDSD

AZD1222 Induced A Robust Th1 Biased T-Cell Response In COV001 And COV002 Participants

Th1 cytokines were induced following stimulation with overlapping SARS-CoV-2 peptides

<table>
<thead>
<tr>
<th></th>
<th>CD4 IFNγ</th>
<th>CD4 IL-2</th>
<th>CD4 TNF</th>
<th>CD4 any Th1 response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AZD1222</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>53/17</td>
<td>53/16</td>
<td>53/17</td>
<td></td>
</tr>
<tr>
<td>D28 P1</td>
<td>53/16</td>
<td>53/17</td>
<td>53/16</td>
<td></td>
</tr>
<tr>
<td>D28 P2</td>
<td>53/17</td>
<td>53/16</td>
<td>53/16</td>
<td></td>
</tr>
</tbody>
</table>

| **Control**    |          |          |         |                      |
| Baseline       |          |          |         |                      |
| D28 P1         |          |          |         |                      |
| D28 P2         |          |          |         |                      |

Limited Th2 cytokines were induced following stimulation with overlapping SARS-CoV-2 peptides

<table>
<thead>
<tr>
<th></th>
<th>CD4 IL-13</th>
<th>CD4 IL-4</th>
<th>CD4 any Th2 response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AZD1222</strong></td>
<td></td>
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<tr>
<td>Baseline</td>
<td>53/17</td>
<td>53/16</td>
<td>53/17</td>
</tr>
<tr>
<td>D28 P1</td>
<td>53/16</td>
<td>53/17</td>
<td>53/16</td>
</tr>
<tr>
<td>D28 P2</td>
<td>53/17</td>
<td>53/16</td>
<td>53/16</td>
</tr>
</tbody>
</table>

| **Control**    |           |          |                      |
| Baseline       |           |          |                      |
| D28 P1         |           |          |                      |
| D28 P2         |           |          |                      |

D28 P1 = Day 28 post 1st Dose, D28 P2 = Day 28 post 2nd Dose. Boxplots display the median and 1st and 3rd quartiles. Th1 data result indicates percentage of CD69+ cells expressing IFNγ, IL-2, TNFα (or any Th1 cytokine) after stimulation with SARS-CoV-2 S1 peptide pool (similar results were seen with S2 peptide pool). Th2 data result indicates percentage of CD69+ cells expressing IL-4, IL-13 (or either Th2 cytokine). Background percentage was subtracted from the stimulated percentage prior to analysis. Stimulated percentages less than the background percentage were set to 0%.

Exploratory analysis, Unpublished results
AZD1222 Was Well Tolerated In Phase I/II Studies

Most AEs were mild to moderate in severity and majority resolved within 1 to 7 days

- Local and systemic reactions ~20% less frequent after the 2nd dose

AEs were similar in nature to those previously reported

- Injection site pain, feeling feverish, muscle ache and headache

Local and systemic reactions were more common in participants given AZD1222 than MenACWY

Less reactogenicity (local and systemic) in older adults

- >70 years about 30% fewer mild/moderate local reactions than <55 years
- >70 years about 20% fewer systemic reactions than <55 years
US Phase III Trial
D8110C00001
Design, Objectives, Diversity
Phase III Study D8110C00001 To Evaluate Safety And Efficacy Of AZD1222 In Over 30,000 Volunteers

Start: 28 August 2020

Randomized (2:1)
N >30,000

- Given by intra-muscular injection, 0.5 ml
- Study ongoing in the US, Chile and Peru (NCT04516746. ClinicalTrials.gov website)
- Subjects 18+ yo
- 25% subjects 65+ yo

AZD1222
5x10^{10} viral particles
2 IM doses
N=20,000

- Study enrollment diversity targets were selected in agreement with US Government/OWS recommendations.

Saline Placebo
2 IM doses
N=10,000

IM = intramuscular; yo = years old.
Phase III Study D8110C00001 Case Definition Of Symptomatic COVID-19 Disease

**Primary efficacy endpoint:** *Symptomatic illness*

- First case of SARS-CoV-2 RT-PCR-positive symptomatic illness occurring > 14 days post administration of study intervention. Participants included if they meet following criteria at any point from Day 1 (initial visit) through Day 14

Subjects will be counted as a case if they have: 1) One or more category A findings OR 2) Two or more category B symptoms

<table>
<thead>
<tr>
<th>Specificity (Pathogen Confirmation)</th>
<th>Category A: Lower respiratory tract involvement (one or more)</th>
<th>Category B: Systemic/ other symptoms (two or more)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARS-CoV-2 confirmed</td>
<td>• Pneumonia diagnosed by chest x-ray, or CT scan</td>
<td>• Fever $&gt; 37.8^\circ \text{C (100^\circ F)}$ or feverishness</td>
</tr>
<tr>
<td></td>
<td>• $O_2$ sat of $\leq 94%$ on room air or 2 percentage point drop from baseline</td>
<td>• New or worsening cough</td>
</tr>
<tr>
<td>Positive RT-PCR</td>
<td>• New or worsening dyspnea/ shortness of breath</td>
<td>• Myalgia/ muscle pain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fatigue that interferes with activities of daily living</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Vomiting or diarrhea</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Anosmia or ageusia</td>
</tr>
</tbody>
</table>

**Safety endpoint:**

- Occurrence of adverse events:
  1) Incidence of AEs for 28 days post each dose
  2) Incidence of AEs, MAAEs, and AESIs from Day 1 post treatment throughout study

AE = adverse event; AESI = adverse event of special interest; MAAE = medically attended adverse events. AstraZeneca Pharmaceuticals LP. Clinical Study Protocol (D8110C00001).
## Phase III Study D8110C00001 Diversity And Enrollment

<table>
<thead>
<tr>
<th>Race</th>
<th>Enrolled&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic/Latin</td>
<td>11.2%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>9.8%</td>
</tr>
<tr>
<td>Asian</td>
<td>5.3%</td>
</tr>
<tr>
<td>American Indian</td>
<td>1.8%</td>
</tr>
<tr>
<td>Hawaiian or Pacific Islander</td>
<td>0.4%</td>
</tr>
<tr>
<td>White</td>
<td>71.5%</td>
</tr>
</tbody>
</table>

<sup>a</sup>US enrollment only

<table>
<thead>
<tr>
<th>Age groups and comorbidities&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>65+ years old</td>
<td>23.6%</td>
</tr>
<tr>
<td>&lt;65 years old</td>
<td>76.4%</td>
</tr>
<tr>
<td>Has comorbidity</td>
<td>57.8%</td>
</tr>
<tr>
<td>No comorbidity</td>
<td>42.2%</td>
</tr>
</tbody>
</table>

<sup>b</sup>Comorbidities include: Chronic Kidney Disease, COPD, Heart Failure, Coronary Artery Disease, Diabetes, Asthma, High Blood Pressure, Liver Disease, BMI 30+.

32,459 participants enrolled; 26,327 received second dose by Jan 21, 2021
Phase III Study D8110C00001 Clinical Hold Summary

- Study was initiated on 28 Aug and paused by AstraZeneca on 6 Sep. Clinical hold was issued on 9 Sep and lifted on 23 Oct; study restarted on 28 Oct

- The study was paused due to an event of transverse myelitis reported in the Phase II/III study conducted by the University of Oxford in the UK

- **Information provided to FDA:**
  - Additional details on neurological events in studies sponsored by AstraZeneca and University of Oxford
  - Analyses of available clinical safety data from AZD1222 and ChAdOx-1 viral vector platform studies

- **Changes in study conduct implemented**
  - Updated risk language in Informed Consent Form (ICF) and Investigator Brochure (IB)
  - Protocol changes
  - Establishment of independent expert neurology panel
  - Accelerated/increased safety reporting
Non-IND Phase II/III Program Interim Results (Data Cut: November 4th)
Interim Analysis Provided For Regulatory Approval:
23,745 Participants Across Four Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Participants</th>
<th>Phase</th>
<th>Age Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK COV001</td>
<td>N=1,077</td>
<td>I/II</td>
<td>single-blinded, adults aged 18–55 yrs</td>
</tr>
<tr>
<td>UK COV002</td>
<td>N=12,390</td>
<td>II/III</td>
<td>single-blinded, ≥18 years (including elderly)</td>
</tr>
<tr>
<td>Brazil COV003</td>
<td>N=10,300</td>
<td>III</td>
<td>single-blinded, ≥18 years (including elderly)</td>
</tr>
<tr>
<td>S. Africa COV005</td>
<td>N=2,070</td>
<td>I/II</td>
<td>double-blinded, adults aged 18–65 yrs</td>
</tr>
</tbody>
</table>

**Primary endpoint:** Efficacy (number of virologically confirmed symptomatic cases of COVID-19 [NAAT positive])

- Global statistical analysis plan for pooling data developed
- Prespecified analyses that would contribute to assessment of efficacy

11,636
In UK/Brazil Phase 3 studies met inclusion criteria for the primary efficacy analysis
The median follow-up post-dose 1 and dose 2 was 132 and 63 days, respectively

23,745
In all 4 studies met inclusion criteria for the safety analysis
The median follow-up (AZD1222 group) post-dose 1 and dose 2 was 105 and 62 days, respectively

The cutoff date for inclusion in the analysis was November 4, 2020, and the data lock date was November 21, 2020
NAAT = nucleic acid amplification test.

In a diverse cohort (geographically and ethnically) pooled analysis demonstrated 70.4% (95.8% CI: 54.8% to 80.6%) efficacy at preventing symptomatic COVID-19

- Subgroup analysis with SD/SD demonstrated efficacy at preventing symptomatic COVID-19 of 62.1% (41.0% to 75.7%)

There were no hospitalizations or severe COVID-19 in vaccinated participants from 21 days after first dose
Across Four Studies, AZD1222 Exhibited A Favorable Safety Profile

Across all four studies, SAEs occurred in 168 participants (<1%) 79 of whom received AZD1222 (0.7%) and 89 of whom received MenACWY or saline control (0.8%)

There were 175 SAEs, of which 4 were considered possibly related to intervention (either the experimental vaccine or the control)

### AZD1222 group
- **Pyrexia**: 2 days after dose 1; treated with paracetamol and resolved the same day
- **Transverse myelitis**: 14 days after dose 2

### Control group
- **Autoimmune hemolytic anemia**: 10 days after MenACWY
- **Transverse myelitis**: 2 months after first control dose

### Solicited Adverse Events, the majority usually resolved within a few days of vaccination.
- Reactogenicity; the most frequently reported AEs were mild to moderate in severity including injection site tenderness (>60%); injection site pain, headache, fatigue (>50%); myalgia, malaise (>40%); pyrexia, chills (>30%); and arthralgia, nausea (>20%).
- Generally milder and reported less frequently after second dose and in older adults (≥65 years old)
Vaccine Storage And Handling
AZD1222 Storage And Administration

**Storage**

- Refrigerator
  - Store in refrigerator (2 to 8°C)
  - Shelf life = 6 months
  - Do not freeze
  - Keep vials in outer carton to protect from light

**Administration**

- Multi-dose Vial
  - After first puncture cumulatively store up to 6 hours at room temperature or up to 48 hours at 2-8°C with total storage time not to exceed 48 hours.
  - No dilution or reconstitution
Summary: AZD1222 offers a potential to address the Global COVID-19 Crisis

- AZD1222 induces robust immune responses against the SARS-CoV-2 S protein:
  - Spike Antibodies increased after a second dose with GMTs comparable to convalescent sera
  - Neutralizing Antibodies titers observed in all participants following 2nd dose
  - Strong Th-1 biased CD4+ T Cell response observed
- US Phase III study ongoing with 32,459 participants enrolled with co-morbidities, older adults and diverse backgrounds
  - 26,327 received second dose by Jan 21, 2021
- Efficacy and safety were demonstrated in four Phase I-III studies in UK, Brazil and South Africa
- AZD1222 has the potential to address the SARS-CoV-2 pandemic and has been authorized in 18 countries (under emergency use or full approval as of January 25, 2021)

GMT = geometric mean titer.
Thank You
to our collaborators, investigators and subjects:

- University of Oxford
- BARDA
- NIAID
- DoD
- The AstraZeneca Team
- Clinical trial sites personnel and investigators
- All our trial participants
Q&A
Phase II/III Program to evaluate safety and efficacy of AZD1222 in over 20,000 volunteers

**General selection criteria:**

**Key inclusion criteria:**
- Adults age ≥ 18 years
- Healthy or have medically-stable chronic diseases
- At increased-risk for exposure to SARS-CoV-2 and COVID-19

**Key exclusion criteria:**
- History of laboratory-confirmed COVID-19 infection

**Primary endpoints:**

**Efficacy endpoint:**
SARS-CoV-2 RT-PCR-positive symptomatic illness ≥ 15 days post second dose

**Safety endpoint:**
Occurrence of adverse events:
1) Incidence of AEs for 28 days post each dose
2) Incidence of AEs, MAAEs, and AESIs from Day 1 post treatment throughout study

**Experimental:**
AZD1222 5x10^10 viral particles

**Control:**
MENACWY OR Saline

AE = adverse event; AESI = adverse event of special interest.
### Efficacy Based On Symptomatic, Virologically-Confirmed COVID-19 Cases > 14 Days Post 2nd Dose

<table>
<thead>
<tr>
<th></th>
<th>Total number of cases</th>
<th>AZD1222 n/N (%)</th>
<th>Control n/N (%)</th>
<th>VE (95% CI) unless indicated</th>
</tr>
</thead>
<tbody>
<tr>
<td>All LD/SD and SD/SD recipients</td>
<td>131</td>
<td>30/5807 (0.5%)</td>
<td>101/5829 (1.7%)</td>
<td>70.4% (54.8%, 80.6%)(^a)</td>
</tr>
<tr>
<td><strong>COV002 (UK)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD/SD recipients</td>
<td>86</td>
<td>18/3744 (0.5%)</td>
<td>68/3804 (1.8%)</td>
<td>73.5% (55.5%, 84.2%)</td>
</tr>
<tr>
<td>SD/SD recipients</td>
<td>33</td>
<td>3/1367 (0.2%)</td>
<td>30/1374 (2.2%)</td>
<td>90.0% (67.4%, 97.0%)(^b,c)</td>
</tr>
<tr>
<td><strong>COV003 (Brazil) SD/SD</strong></td>
<td>53</td>
<td>15/2377 (0.6%)</td>
<td>38/2430 (1.6%)</td>
<td>60.3% (28.0%, 78.2%)</td>
</tr>
<tr>
<td><strong>All SD/SD recipients</strong></td>
<td>45</td>
<td>12/2063 (0.6%)</td>
<td>33/2025 (1.6%)</td>
<td>64.2% (30.7%, 81.5%)(^b)</td>
</tr>
</tbody>
</table>

\(^a\)95.8% CI used for primary analysis. \(^b\)Vaccine efficacy calculated from a reduced robust Poisson model that was not adjusted for age. All other models included an adjustment for age. \(^c\)P value for interaction term comparing LD/SD with SD/SD is P=0.010.

CI = confidence interval; LD = low dose (2.2×10^{10} vp); SD = standard dose (5×10^{10} vp); vp = virus particles.

Longer Dose Interval Was Associated With Increased Spike-Binding Antibody Responses in Participants Seronegative At Baseline

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Baseline GMT (95% CI)</th>
<th>28 days after dose 1 GMT (95% CI)</th>
<th>28 days after dose 2 GMT (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose interval</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;6 weeks</td>
<td>(N=481)</td>
<td>(N=479)</td>
<td>(N=443)</td>
</tr>
<tr>
<td></td>
<td>60.51</td>
<td>8734.08</td>
<td>22222.73</td>
</tr>
<tr>
<td></td>
<td>(54.1, 67.7)</td>
<td>(7883.1, 9676.9)</td>
<td>(20360.5, 24255.3)</td>
</tr>
<tr>
<td>6–8 weeks</td>
<td>(N=137)</td>
<td>(N=99)</td>
<td>(N=116)</td>
</tr>
<tr>
<td></td>
<td>58.02</td>
<td>7295.54</td>
<td>24363.10</td>
</tr>
<tr>
<td></td>
<td>(46.3, 72.6)</td>
<td>(5857.4, 9086.7)</td>
<td>(20088.5, 29547.3)</td>
</tr>
<tr>
<td>9–11 weeks</td>
<td>(N=110)</td>
<td>(N=87)</td>
<td>(N=106)</td>
</tr>
<tr>
<td></td>
<td>48.79</td>
<td>7492.98</td>
<td>34754.10</td>
</tr>
<tr>
<td></td>
<td>(39.6, 60.1)</td>
<td>(5885.1, 9540.2)</td>
<td>(30287.2, 39879.8)</td>
</tr>
<tr>
<td>≥12 weeks</td>
<td>(N=154)</td>
<td>(N=152)</td>
<td>(N=154)</td>
</tr>
<tr>
<td></td>
<td>52.98</td>
<td>8618.17</td>
<td>63181.59</td>
</tr>
<tr>
<td></td>
<td>(44.4, 63.2)</td>
<td>(7195.4, 10322.3)</td>
<td>(55180.1, 72343.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subgroup</th>
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<th>28 days after dose 2 GMT (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose interval</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;6 weeks</td>
<td>(N=3)</td>
<td>(N=3)</td>
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</tr>
<tr>
<td></td>
<td>50.92</td>
<td>7496.44</td>
<td>22121.36</td>
</tr>
<tr>
<td></td>
<td>(3.9, 669.2)</td>
<td>(1461.4, 38454.7)</td>
<td>(8547.7, 57250.2)</td>
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<tr>
<td>6–8 weeks</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9–11 weeks</td>
<td>(N=30)</td>
<td>(N=30)</td>
<td>(N=29)</td>
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<tr>
<td></td>
<td>64.09</td>
<td>4803.21</td>
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<tr>
<td></td>
<td>(40.4, 101.6)</td>
<td>(3255.7, 7086.4)</td>
<td>(24509.6, 55641.2)</td>
</tr>
<tr>
<td>≥12 weeks</td>
<td>(N=35)</td>
<td>(N=35)</td>
<td>(N=35)</td>
</tr>
<tr>
<td></td>
<td>52.42</td>
<td>6750.27</td>
<td>66274.91</td>
</tr>
<tr>
<td></td>
<td>(37.7, 72.9)</td>
<td>(4184.6, 10889.0)</td>
<td>(49546.6, 88651.1)</td>
</tr>
</tbody>
</table>

Similar results were seen with the nAb responses by pseudoneutralisation assay.
Subgroup analyses of vaccine efficacy as a function of dose interval showed a trend for increasing vaccine efficacy associated with longer dose interval.

<table>
<thead>
<tr>
<th>Dose interval</th>
<th>AZD1222 Participants with events, n (%)</th>
<th>Control Participants with events, n (%)</th>
<th>Vaccine efficacy (%)</th>
<th>95% CI (%)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>8–11 weeks</td>
<td>9 / 1444 (0.62)</td>
<td>34 / 1488 (2.28)</td>
<td>72.85</td>
<td>(43.45, 86.97)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>&gt; 11 weeks</td>
<td>7 / 2093 (0.33)</td>
<td>39 / 2116 (1.84)</td>
<td>81.90</td>
<td>(59.53, 91.90)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Vaccine Efficacy: Single Dose And In Subjects With Co-Morbidities

**Single Dose:** Participants were censored from the analysis at the earliest time point of when they received a second dose or at 12 weeks post dose 1

<table>
<thead>
<tr>
<th>Occurring 22 days after 1st dose through 2nd dose up until 12 weeks</th>
<th>Total Events</th>
<th>AZD1222 n (%) N=7998</th>
<th>Control n (%) N=7982</th>
<th>Vaccine efficacy (%) (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>56</td>
<td>12 (0.15)</td>
<td>44 (0.55)</td>
<td>73.00 (48.79, 85.76)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>

**Co-morbidities**

<table>
<thead>
<tr>
<th>Comorbid population&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Vaccine efficacy (%)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>73.4</td>
<td>48.5, 86.3</td>
</tr>
</tbody>
</table>

<sup>a</sup>Comorbidity was defined as BMI ≥30 kg/m², cardiovascular disorder, respiratory disease or diabetes. The proportion of subjects with comorbidities at baseline was substantial (36%): Obesity (20%); Cardiovascular disease (11%) - Mainly hypertension (5%); Respiratory disease (12%) - Mainly asthma (8%); Diabetes (2%).

COVID-19 Vaccine AstraZeneca, solution for injection in multidose container COVID-19 Vaccine (ChAdOx1-S [recombinant]).

Key inclusion criteria:
• Adults age ≥ 18 years
• Healthy or have medically-stable chronic diseases
• At increased-risk for exposure to SARS-CoV-2 and COVID-19
• Able to understand and comply with study requirements/procedures

Key exclusion criteria:
• History of laboratory-confirmed COVID-19 infection