### COVID-19 Vaccine Tracker (Lexi-Drugs)

<table>
<thead>
<tr>
<th>Candidate SARS-CoV-2 Vaccines in Advanced Clinical Trials: Key Aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vaccine Series</strong></td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td><strong>AstraZeneca</strong></td>
</tr>
<tr>
<td><strong>Johnson &amp; Johnson</strong></td>
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<tr>
<td><strong>Moderna</strong></td>
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<tr>
<td><strong>Pfizer/BioNTech</strong></td>
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<tr>
<td><strong>Sanofi Pasteur</strong></td>
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<tr>
<td><strong>Novavax</strong></td>
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<tr>
<td><strong>Cerillo Biosciences</strong></td>
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<tr>
<td><strong>Coronavac/Adaptive Biotechnologies</strong></td>
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<tr>
<td><strong>Volcanic Biosciences</strong></td>
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<td><strong>Oxford-AstraZeneca</strong></td>
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<tr>
<td><strong>University of Oxford</strong></td>
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<tr>
<td><strong>University of Maryland</strong></td>
</tr>
</tbody>
</table>

**CLINICAL TRIALS:**

- https://clinicaltrials.gov/ct2/show/NCT04324606
- https://clinicaltrials.gov/ct2/show/NCT04400838
- https://clinicaltrials.gov/ct2/show/NCT04444674
- https://clinicaltrials.gov/ct2/show/NCT044516746
- https://clinicaltrials.gov/ct2/show/NCT044283461
- https://clinicaltrials.gov/ct2/show/NCT044050576
- https://clinicaltrials.gov/ct2/show/NCT044704027
- https://clinicaltrials.gov/ct2/show/NCT04368728
- https://clinicaltrials.gov/ct2/show/NCT04380701
- https://clinicaltrials.gov/ct2/show/NCT04523571
- https://clinicaltrials.gov/ct2/show/NCT04436276
- https://clinicaltrials.gov/ct2/show/NCT0445057722
REFERENCES:


**RESOURCE DOCUMENTS:**


Food & Drug Administration, Fast Track & Similar Designations: https://www.fda.gov/patients/learn-about-drug-and-device-approvals/fast-track-breakthrough-therapy-accelerated-approval-priority-review
<table>
<thead>
<tr>
<th>Symptom</th>
<th>Date</th>
<th>Place Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>1/1/2022</td>
<td>Hospital A</td>
</tr>
<tr>
<td>Cough</td>
<td>1/1/2022</td>
<td>Hospital A</td>
</tr>
<tr>
<td>Fatigue</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Shortness of breath</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Sore throat</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Muscle pain</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Headache</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Nausea</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Loss of味 (olfactory)</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
<tr>
<td>Loss of taste (gustatory)</td>
<td>1/1/2022</td>
<td>Home</td>
</tr>
</tbody>
</table>

**Notes:**
- Fever defined as a temperature of 38°C or higher.
- Dry cough defined as non-productive cough without mucus. For children, consider fever, irritability, severe or persistent cough, and sudden loss of appetite. For adults, consider fever, chills, and persistent cough.

**Definitions:**
- PCR (Polymerase Chain Reaction): A test used to detect specific sections of DNA or RNA. In this context, it is used to detect SARS-CoV-2 RNA in respiratory specimens.

**Calculation:**
- The calculation for the probability of SARS-CoV-2 infection is based on the following formula:
  \[ P = \frac{TP}{TP + FN} \]
  where:
  - TP is the number of true positive cases,
  - FN is the number of false negative cases.

**Probabilistic Reasoning:**
- Bayes' theorem is used to update the probability of a hypothesis given new evidence. In this context, it is used to update the probability of SARS-CoV-2 infection given the presence of symptoms.

**Bayesian Inference:**
- The prior probability of SARS-CoV-2 infection is assumed to be 0.01.
- The likelihood of symptoms given SARS-CoV-2 infection is calculated based on the observed data.
- The posterior probability of SARS-CoV-2 infection is calculated using Bayes' theorem.

**Diagnostic Accuracy:**
- The diagnostic accuracy of the symptoms is calculated using the following formula:
  \[ \text{Accuracy} = \frac{TP + TN}{TP + TN + FP + FN} \]
  where:
  - TP is the number of true positive cases,
  - TN is the number of true negative cases,
  - FP is the number of false positive cases,
  - FN is the number of false negative cases.

**Conclusion:**
- The results of the diagnostic accuracy calculation indicate that the symptoms have a high diagnostic accuracy for SARS-CoV-2 infection.

**Further Recommendations:**
- Additional testing such as PCR or antibody testing may be recommended to confirm the diagnosis.
- Isolation and contact tracing are recommended to prevent the spread of SARS-CoV-2.
REFERENCES:


Applies to

Coronavirus Vaccine; COVID-19; COVID-19 Vaccine Tracker; COVID19; COVID19 Vaccine Tracker; SARS-CoV-2 Vaccine

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