<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Clinical Trials</th>
<th>Clinical Trials</th>
<th>Clinical Trials</th>
<th>Clinical Trials</th>
<th>Clinical Trials</th>
<th>Clinical Trials</th>
<th>Clinical Trials</th>
<th>Clinical Trials</th>
<th>Clinical Trials</th>
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</thead>
</table>
REFERENCES:


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
## SARS-CoV-2 Vaccines: Evidence from Immunogenicity Studies

**Haojun Xiong, Ruqian Zhou, Jiwu Li, Xiaoxia Li, Fuchun He, Lingjun Yang, and Xia Wang**

**Table 1: Immunogenicity Studies on SARS-CoV-2 Vaccines**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Manufacturer</th>
<th>Study Design</th>
<th>Participants</th>
<th>Age</th>
<th>Dose</th>
<th>Primary Outcome</th>
<th>Secondary Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>mRNA-1273</td>
<td>Moderna</td>
<td>Randomized, double-blind, placebo-controlled phase 2/3</td>
<td>30,000</td>
<td>18-55</td>
<td>2 doses, 28 days apart</td>
<td>Seroconversion, neutralization</td>
<td>Safety, reactogenicity</td>
</tr>
<tr>
<td>BNT162b2</td>
<td>Pfizer/BioNTech</td>
<td>Randomized, double-blind, placebo-controlled phase 2/3</td>
<td>30,000</td>
<td>18-55</td>
<td>2 doses, 21 days apart</td>
<td>Seroconversion, neutralization</td>
<td>Safety, reactogenicity</td>
</tr>
<tr>
<td>SARS-CoV-2 Ad 2D</td>
<td>SinoVac</td>
<td>Randomized, double-blind, placebo-controlled phase 2/3</td>
<td>30,000</td>
<td>18-55</td>
<td>2 doses, 28 days apart</td>
<td>Seroconversion, neutralization</td>
<td>Safety, reactogenicity</td>
</tr>
</tbody>
</table>

**Table 2: Comparison of SARS-CoV-2 Vaccines**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Immunogenicity</th>
<th>Reactogenicity</th>
<th>Side Effects</th>
<th>Approval Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>mRNA-1273</td>
<td>High</td>
<td>Moderate</td>
<td>Fatigue, headache, myalgia</td>
<td>Emergency Use</td>
</tr>
<tr>
<td>BNT162b2</td>
<td>High</td>
<td>Moderate</td>
<td>Fatigue, headache, myalgia</td>
<td>Emergency Use</td>
</tr>
<tr>
<td>SARS-CoV-2 Ad 2D</td>
<td>High</td>
<td>Moderate</td>
<td>Fatigue, headache, myalgia</td>
<td>Emergency Use</td>
</tr>
</tbody>
</table>

**Table 3: Challenges and Opportunities in SARS-CoV-2 Vaccines**

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited efficacy</td>
<td>Improved vaccine formulations</td>
</tr>
<tr>
<td>Reactogenicity</td>
<td>Improved vaccine adjuvants</td>
</tr>
<tr>
<td>Cost</td>
<td>Scalability and accessibility</td>
</tr>
</tbody>
</table>

**Table 4: Conclusion**

SARS-CoV-2 vaccines have shown promising immunogenicity and safety profiles in clinical trials. Further research is needed to address challenges and optimize vaccine formulations and delivery methods. The global impact of vaccination programs underscores the importance of continued collaboration and innovation in vaccine development.

**References**


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**Disclosure**

The authors declare no conflicts of interest.
REFERENCES:


**Applies to**

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

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