

Investigación en Covid 19: retos para la región Andina

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**CONFLICT
OF INTEREST**



NINGUNO

PER ^{WUHAN} oxígeno ^{Rt} niños

distanzia social

NEUMONIA

BULOS

UCI

vacuna, MASCARILLA

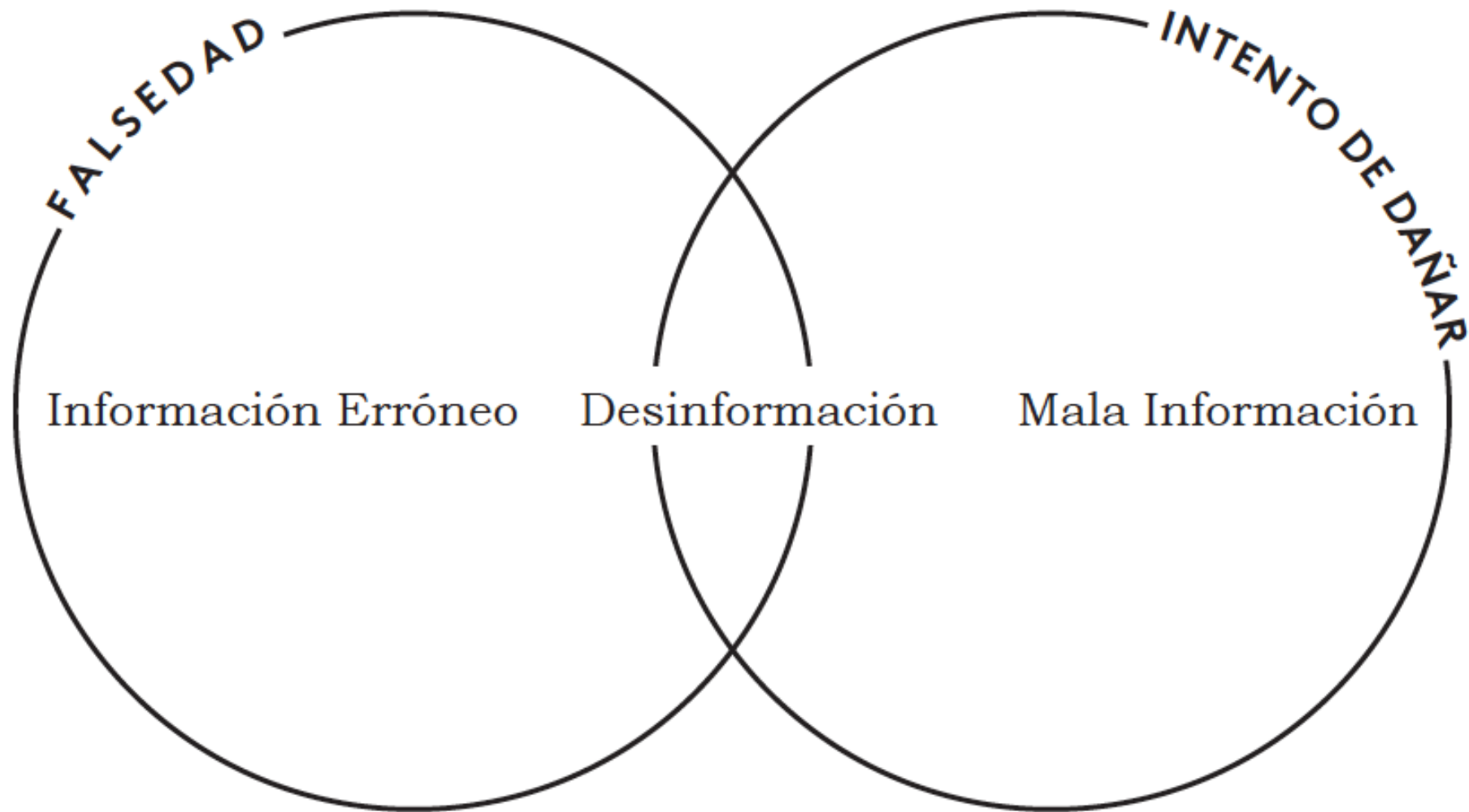
EPIDEMIOLOGO

quincena

teletrabajo

Katalin Karico
Covid-19

HIDROXICLOROQUINA



7 Tipos de Información Errónea y Desinformación

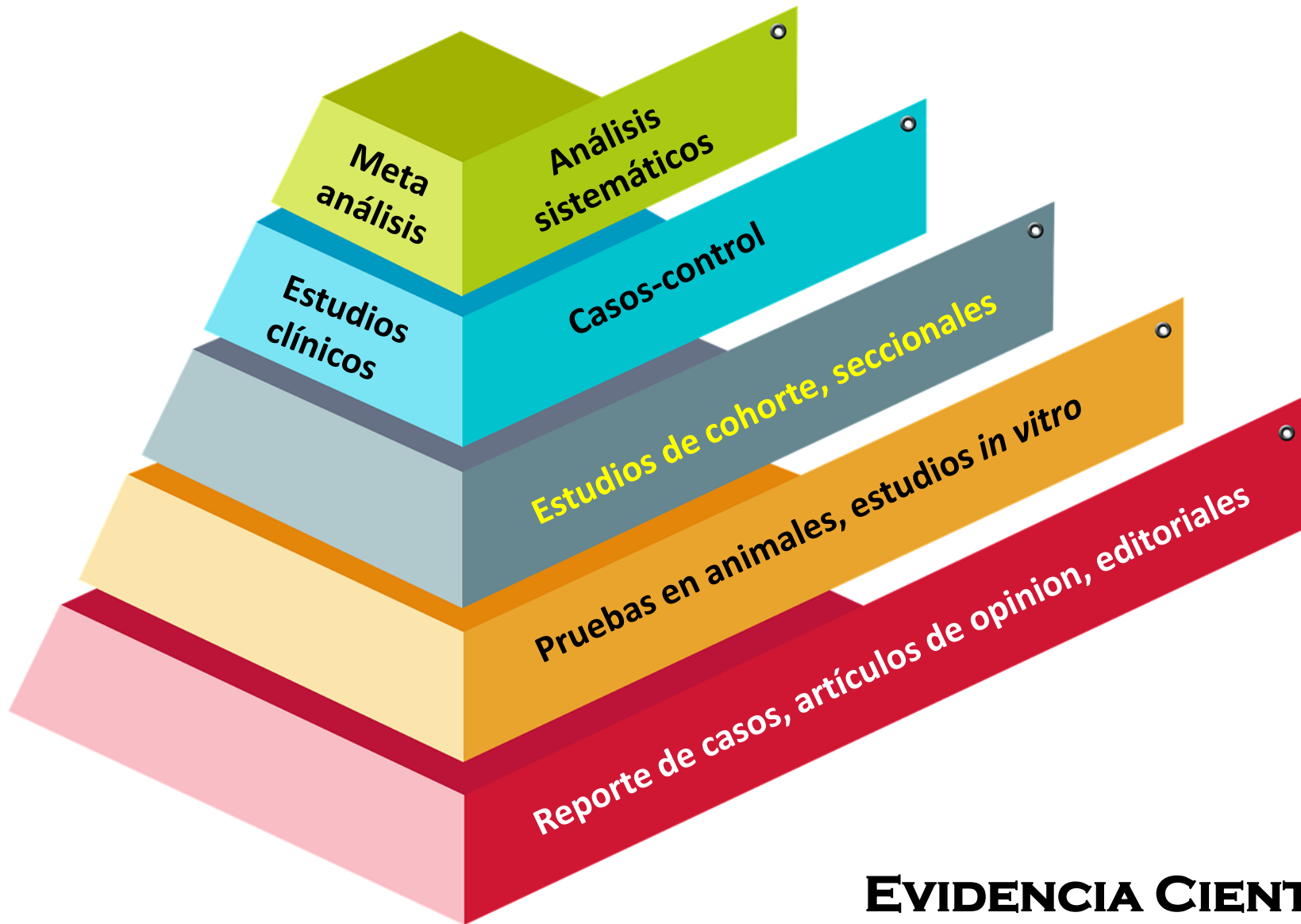


**Esto es lo
que pasa**

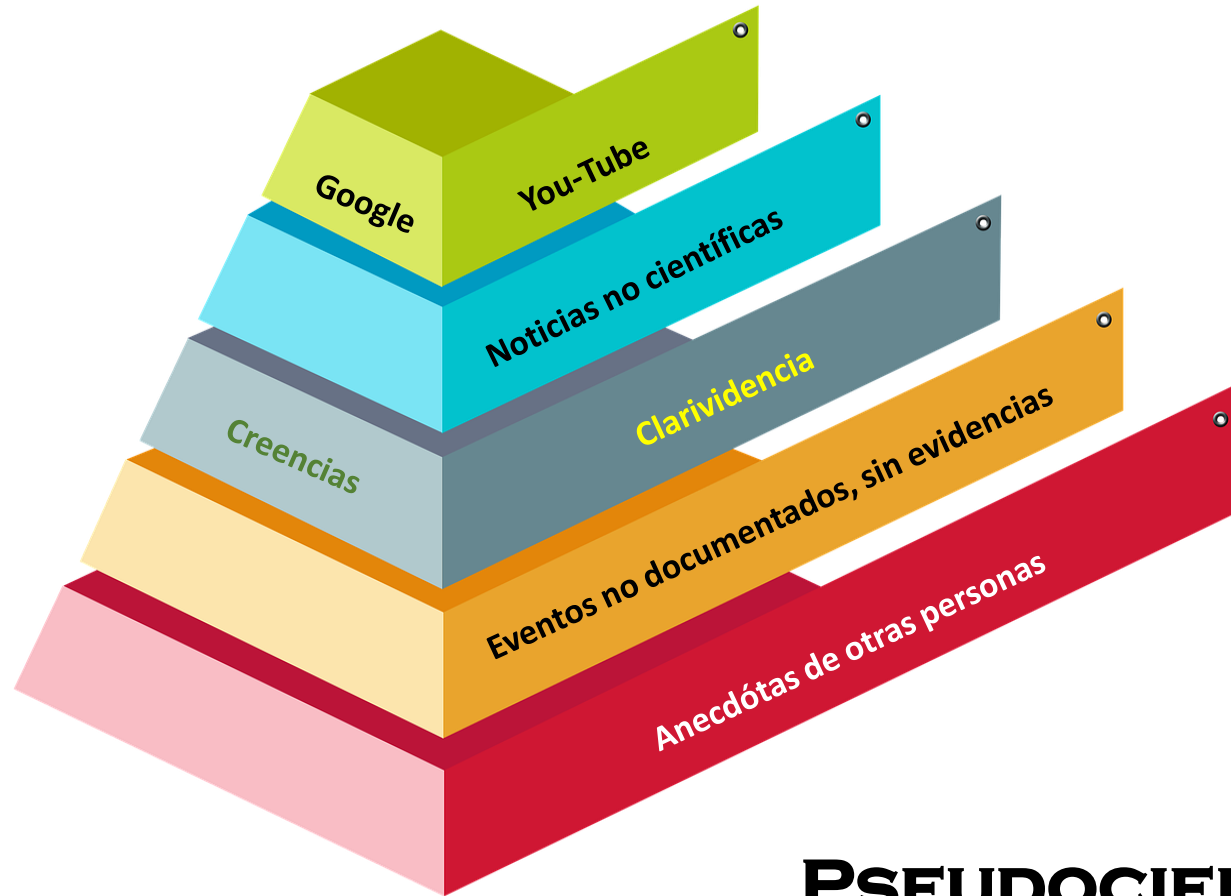


**En un
minuto en el
Internet**

First Draft Octubre 2019



EVIDENCIA CIENTÍFICA



PSEUDOCIENCIA

Terapéuticas clave en investigación para el tratamiento de COVID-19

Antivirals

Baloxivir

Plasma de Convalescientes

Favipiravir

(Hydroxy)chloroquine

Interferon

Lopinavir/ritonavir

Nitazoxanide

Oseltamivir

Remdesivir

Ribavirin

Immunomodulators

Corticosteroides (eg, dexametasona)

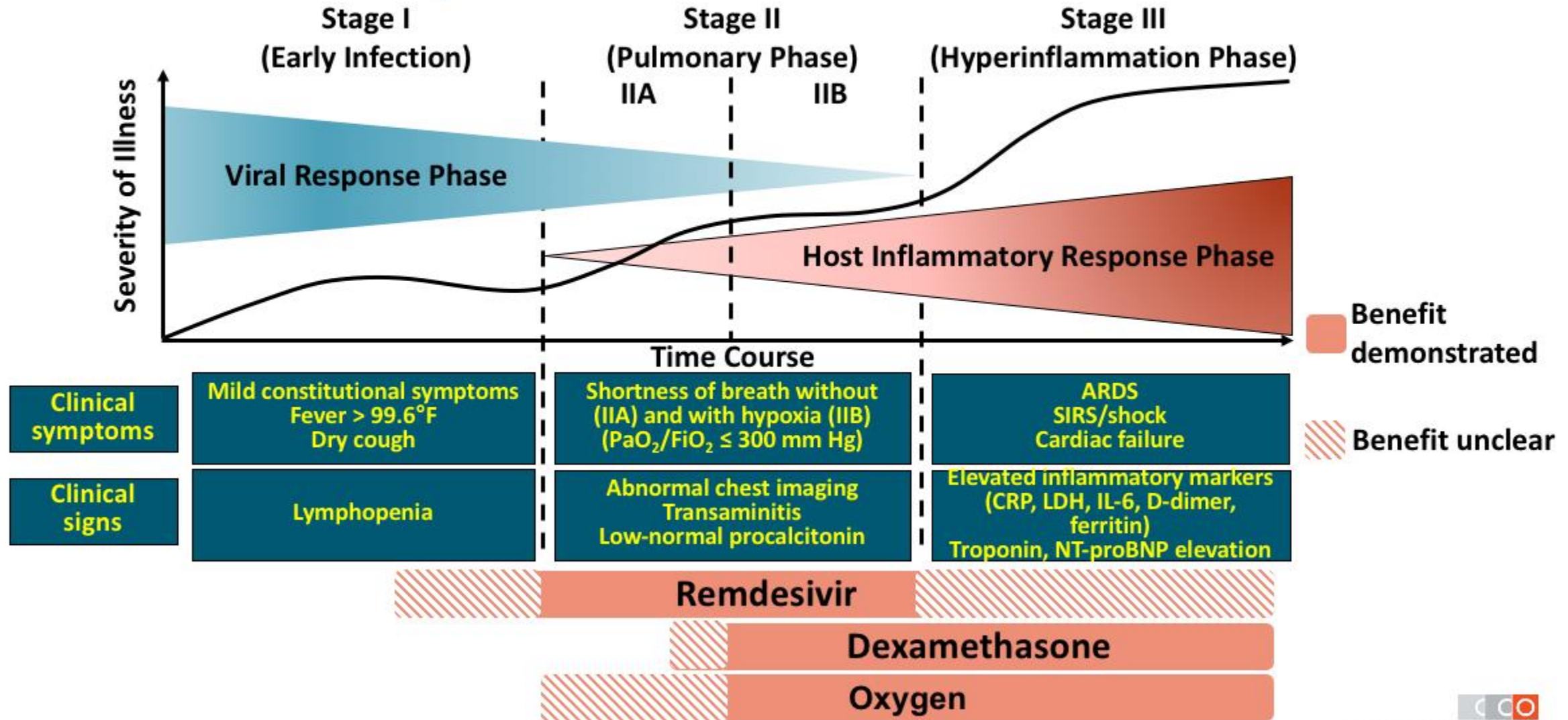
IL-1 inhibitors (eg, anakinra)

IL-6 inhibitors (eg, tocilizumab)

Intravenous immunoglobulin

JAK inhibitors (eg, baricitinib)

Se prevé que las terapias COVID-19 brinden beneficios en diferentes etapas



Recomendaciones de la IDSA para el tratamiento de pacientes con COVID-19

- **Objetivo general: reclutar pacientes en ensayos en curso para proporcionar la evidencia necesaria sobre la eficacia y seguridad de posibles terapias**

IDSA Guidance	Patient Population	Treatment
Recommends	<ul style="list-style-type: none"> ▪ Hospitalized with critical* COVID-19 	<ul style="list-style-type: none"> ▪ Dexamethasone[†] vs none
Suggests	<ul style="list-style-type: none"> ▪ Hospitalized with severe[‡] COVID-19 ▪ Hospitalized with severe*[‡] COVID-19 ▪ Hospitalized with severe[‡] COVID-19 and corticosteroids contraindicated 	<ul style="list-style-type: none"> ▪ Dexamethasone[†] vs none ▪ Remdesivir[§] vs no antiviral ▪ Baricitinib + remdesivir vs remdesivir alone
Recommends only in clinical trial	<ul style="list-style-type: none"> ▪ Hospitalized with COVID-19 ▪ Hospitalized with COVID-19 	<ul style="list-style-type: none"> ▪ Convalescent plasma ▪ Baricitinib + remdesivir + corticosteroids

*Mechanical ventilation or ECMO. Includes end organ dysfunction (eg, ARDS). [†]If unavailable, methylprednisolone and prednisone acceptable at equivalent total daily doses. [‡]SpO₂ ≤ 94% on room air, including those on supplemental oxygen. [§]For patients on supplemental oxygen, 5 days suggested; for patients on mechanical ventilation or ECMO, 10 days.

Recomendaciones en CONTRA de la IDSA

- **Objetivo general: reclutar pacientes en ensayos en curso para proporcionar la evidencia necesaria sobre la eficacia y seguridad de posibles terapias**

IDSA Guidance	Patient Population	Treatment
Recommends against	<ul style="list-style-type: none">▪ COVID-19▪ Hospitalized with COVID-19▪ Hospitalized with COVID-19	<ul style="list-style-type: none">▪ (Hydroxy)chloroquine▪ (Hydroxy)chloroquine + azithromycin▪ Lopinavir/ritonavir
Suggests against	<ul style="list-style-type: none">▪ Hospitalized with nonsevere* COVID-19▪ Hospitalized with COVID-19▪ Hospitalized with COVID-19*▪ Ambulatory with COVID-19	<ul style="list-style-type: none">▪ Glucocorticoids▪ Routine tocilizumab▪ Routine remdesivir▪ Routine bamlanivimab
Suggests against outside clinical trial	<ul style="list-style-type: none">▪ Hospitalized with severe COVID-19	<ul style="list-style-type: none">▪ Famotidine

*SpO₂ > 94%, no supplemental oxygen.

Directrices de los NIH: Manejo terapéutico

Disease Severity	Recommendation
Not hospitalized, mild to moderate COVID-19	<ul style="list-style-type: none"> ▪ Insufficient data to recommend for or against any specific antiviral or antibody ▪ Bamlanivimab, casirivimab plus imdevimab available through EUAs, if high risk of disease progression ▪ Recommend against dexamethasone
Hospitalized but does not require supplemental oxygen	<ul style="list-style-type: none"> ▪ Recommend against dexamethasone ▪ Insufficient data to recommend for or against remdesivir; may be appropriate if high risk of disease progression
Hospitalized and requires supplemental oxygen (but no high-flow oxygen, ventilation, or ECMO)	<p>Use 1 of the following:</p> <ul style="list-style-type: none"> ▪ Remdesivir (eg, in case of minimal supplemental oxygen requirement) ▪ Remdesivir plus dexamethasone (eg, with increasing need for supplemental oxygen)* ▪ Dexamethasone (eg, if remdesivir cannot be used or is unavailable)

Disease Severity	Recommendation
Hospitalized and requires high-flow oxygen or noninvasive ventilation	<p>Use 1 of the following:</p> <ul style="list-style-type: none"> ▪ Remdesivir plus dexamethasone* ▪ Dexamethasone
Hospitalized and requires invasive mechanical ventilation or ECMO	<ul style="list-style-type: none"> ▪ Dexamethasone ▪ For patients recently intubated, consider remdesivir plus dexamethasone (remdesivir alone not recommended)

*In rare case when corticosteroids cannot be used, **remdesivir** plus **baricitinib** available via EUA.

Remdesivir: 200 mg IV once, then 100 mg IV QD for 4 days or until discharge. Treatment may continue up to 10 days if no substantial clinical improvement by Day 5.

Dexamethasone: 6 mg IV or PO QD for 10 days or until discharge.

Baricitinib: 4 mg PO QD for 14 days or until discharge.

Directrices de los NIH: tratamientos de COVID-19 en investigación

Antivirals^[1]

Guidance	Treatment
Recommends against	<ul style="list-style-type: none">High-dose chloroquine (600 mg BID for 10 days)(Hydroxy)chloroquine ± azithromycin in hospitalized patients
Recommends against except in a clinical trial	<ul style="list-style-type: none">(Hydroxy)chloroquine ± azithromycin in non-hospitalized patientsLopinavir/ritonavir or other HIV protease inhibitorsIvermectin

Immune-Based Therapies^[2,3]

Guidance	Treatment
Insufficient data to recommend for or against	<ul style="list-style-type: none">IL-1 inhibitorsIFN-β for early mild to moderate COVID-19COVID-19 convalescent plasma or SARS-CoV-2 Ig
Recommends against except in a clinical trial	<ul style="list-style-type: none">IL-6/IL-6R inhibitorsIFN-α/β for severe or critical COVID-19BTK and JAK inhibitorsNon-SARS-CoV-2-specific IVIGMesenchymal stem cells

1. NIH COVID-19 Treatment Guidelines. Antiviral drugs that are approved or under evaluation for the treatment of COVID-19. Last updated November 3, 2020.

2. NIH COVID-19 Treatment Guidelines. Blood-derived products under evaluation for the treatment of COVID-19. Last updated July 17, 2020.

3. NIH COVID-19 Treatment Guidelines. Immunomodulators under evaluation for the treatment of COVID-19. Last updated November 3, 2020.



Tratamiento farmacológico contra COVID-19

1

F.D.A.
approved

2

Widely
used

2

Promising
evidence

13

Tentative or
mixed evidence

2

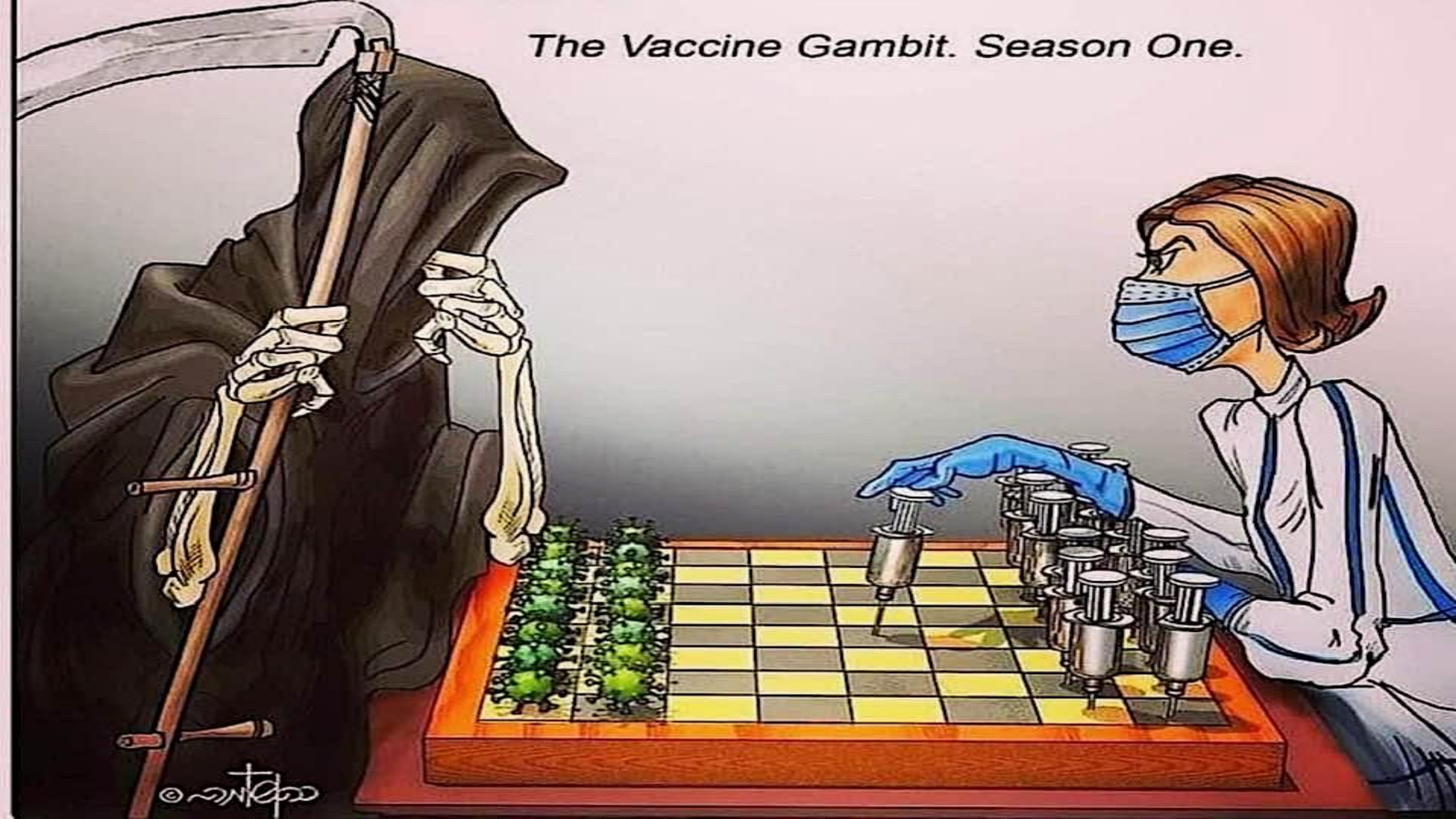
Not
promising

3

Pseudoscience
or fraud

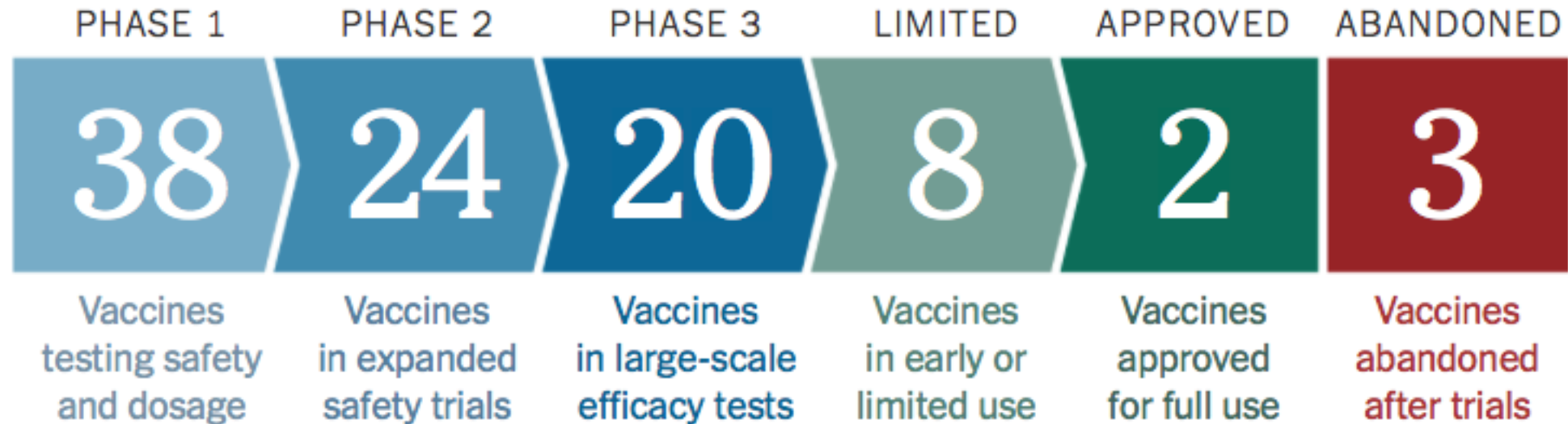
Enero 15	Ningún beneficio en la mortalidad entre los pacientes hospitalizados que reciben plasma convaleciente .
Enero 14	NIH no encuentran datos suficientes a favor o en contra del uso de la ivermectina .
Nov 21	Regeneron recibe la autorización de uso de emergencia de la F.D.A.
Nov 10	Bamlanivimab recibe la autorización de uso de emergencia de la F.D.A.
Oct 23	Se aprueba Remdesivir como el primer medicamento para tratar Covid-19.

The Vaccine Gambit. Season One.









Coronavirus Vaccine Tracker

By Carl Zimmer, Jonathan Corum and Sui-Lee Wee Updated Jan. 25, 2021

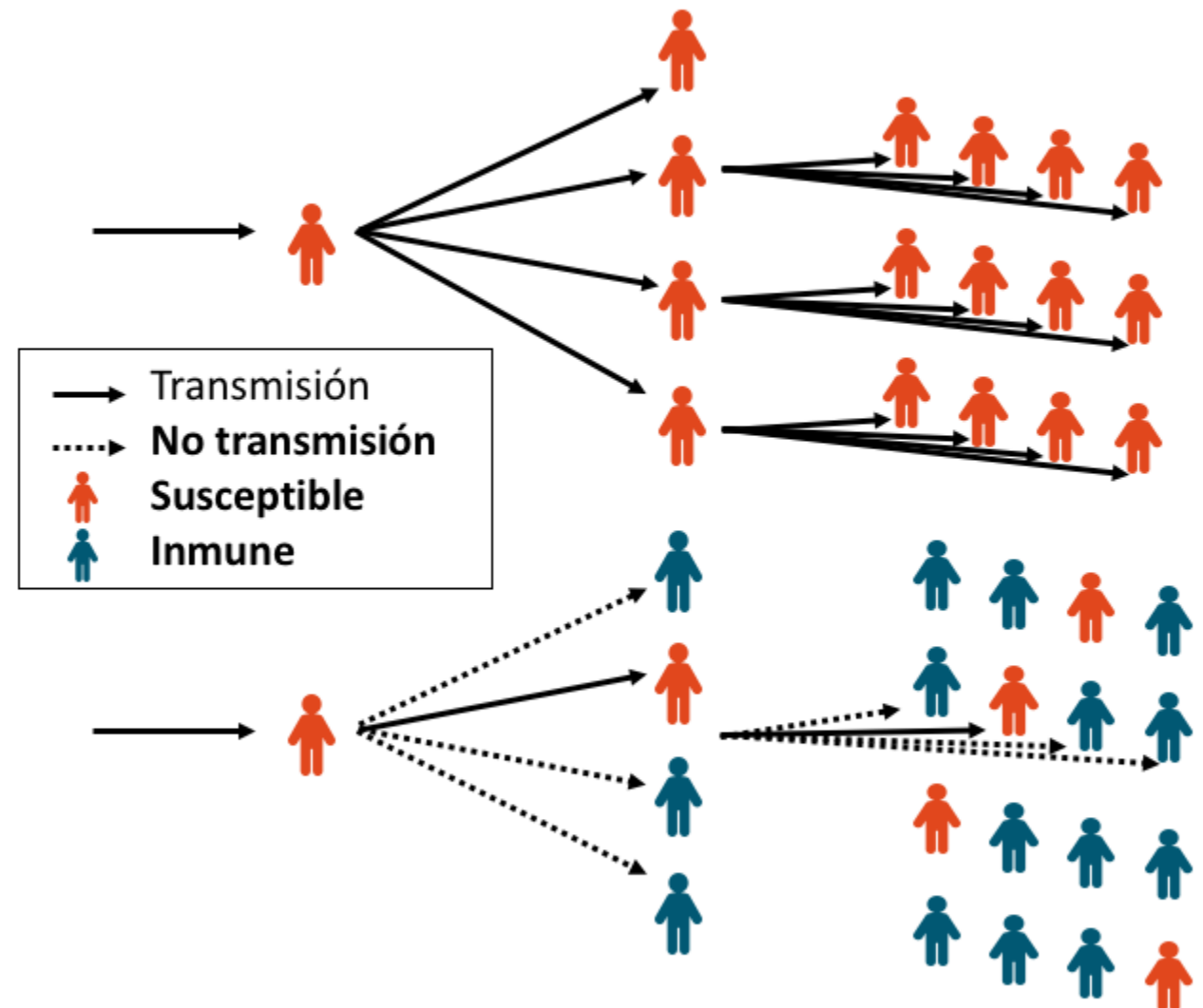


The New York Times

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

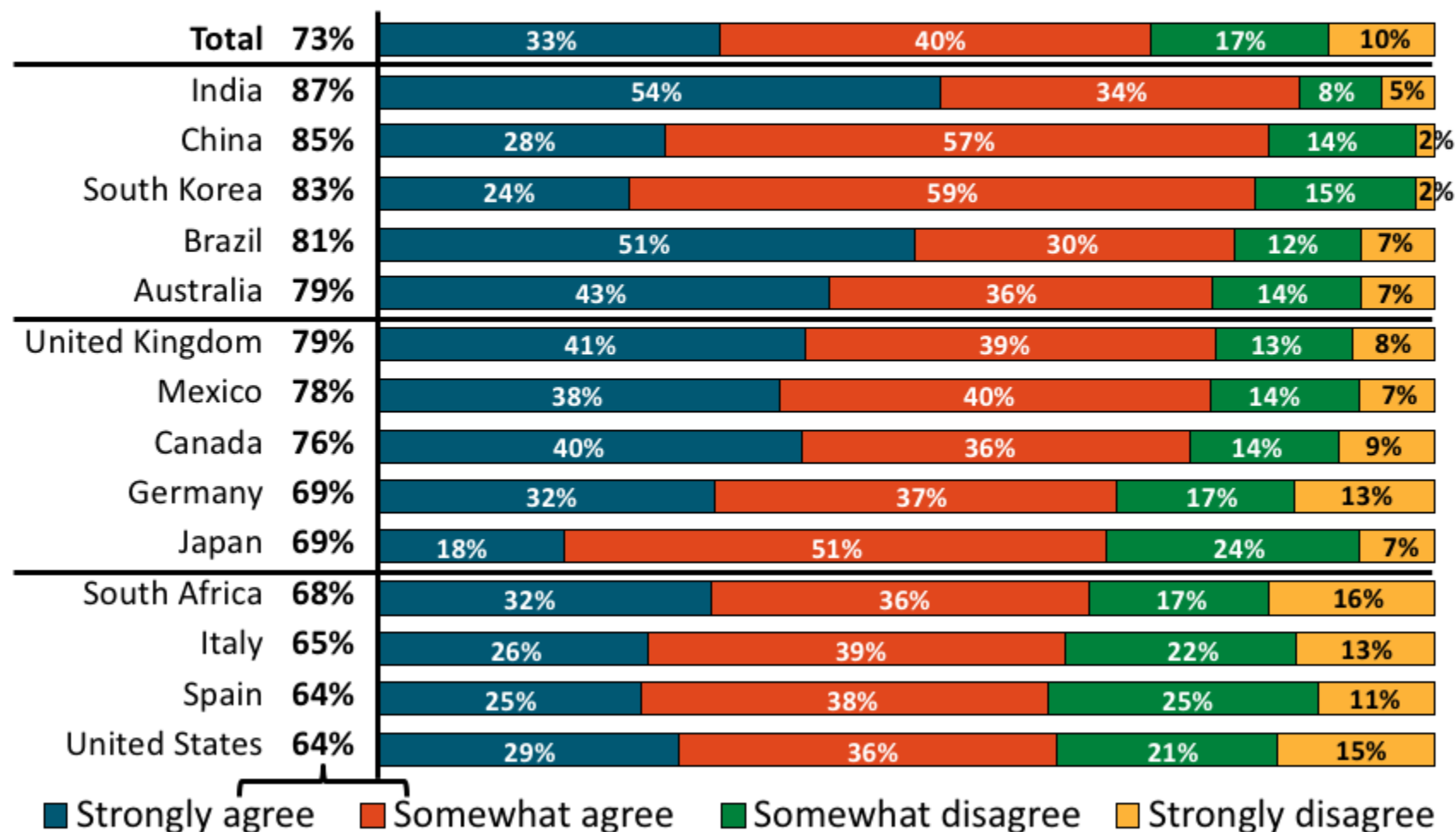
Inmunidad Colectiva con vacuna contra la COVID-19

- La proporción de población que debe ser vacunada depende de:
 - Número de reproducción básico, R_0 ; para SARS-CoV-2, R_0 estimado 2.5-3.5
 - Eficacia de la vacuna
- Para COVID-19, la proporción de vacunación estimada necesaria es del 60% al 72%



Global: Encuesta de 15 países en octubre de 2020

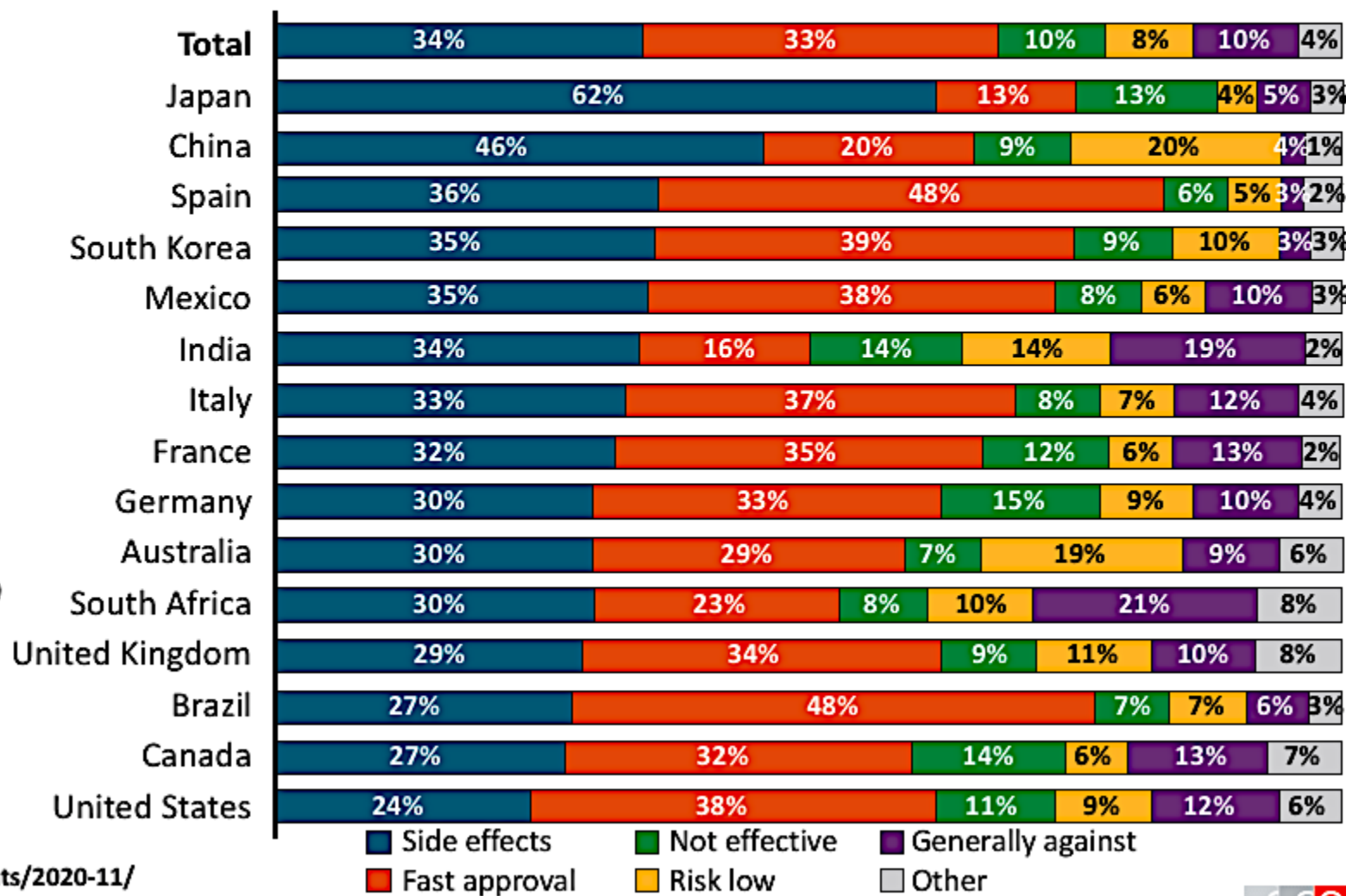
- Encuesta en línea a 18,526 (16 a 74 años)
- "Si hubiera una vacuna para COVID-19 disponible, la recibiría"
- 73% está de acuerdo
- La intención general de vacunación disminuyó un 4% de agosto a octubre



Global : Razones para la reticencia vacunal

■ "¿Razones?"

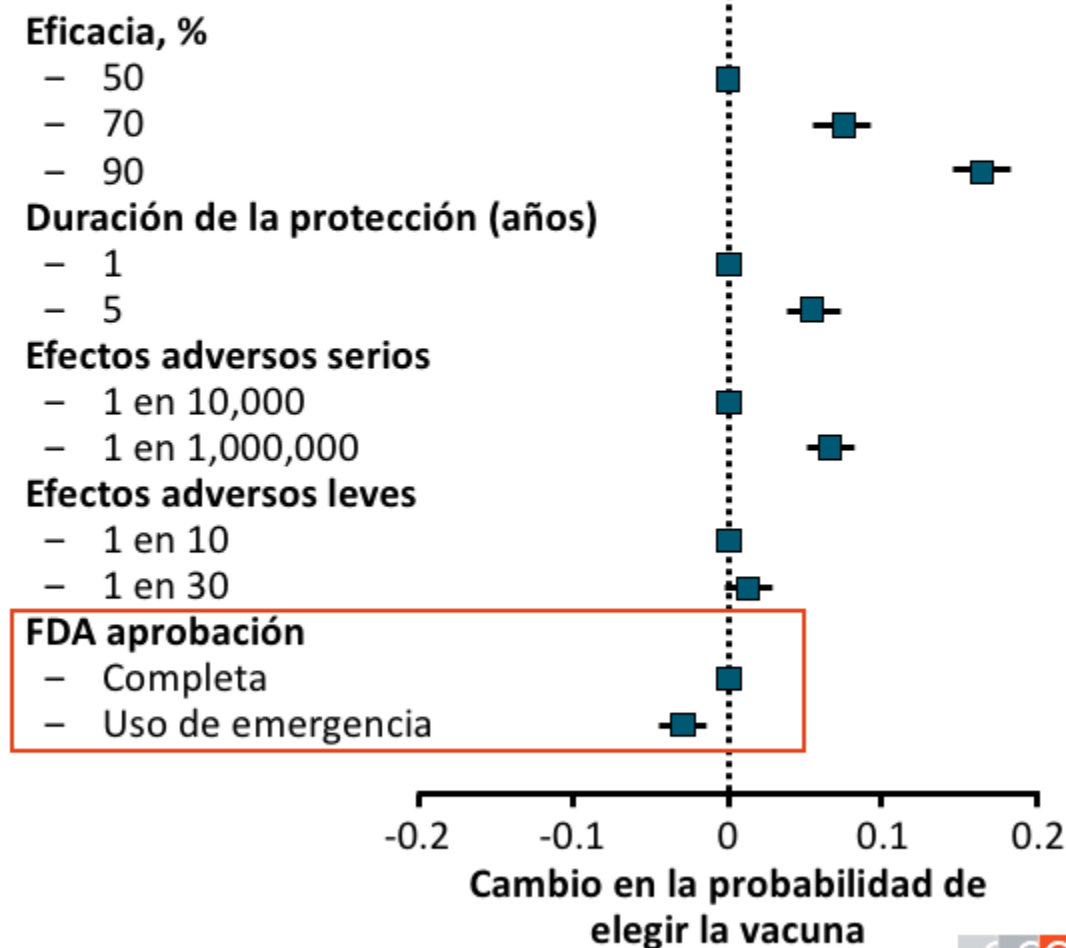
- **El 67%: los efectos secundarios y la velocidad del proceso de aprobación.**
- **~ 10% contra vacunas**
- **~ 8% cree que el riesgo de contraer COVID-19 es bajo**

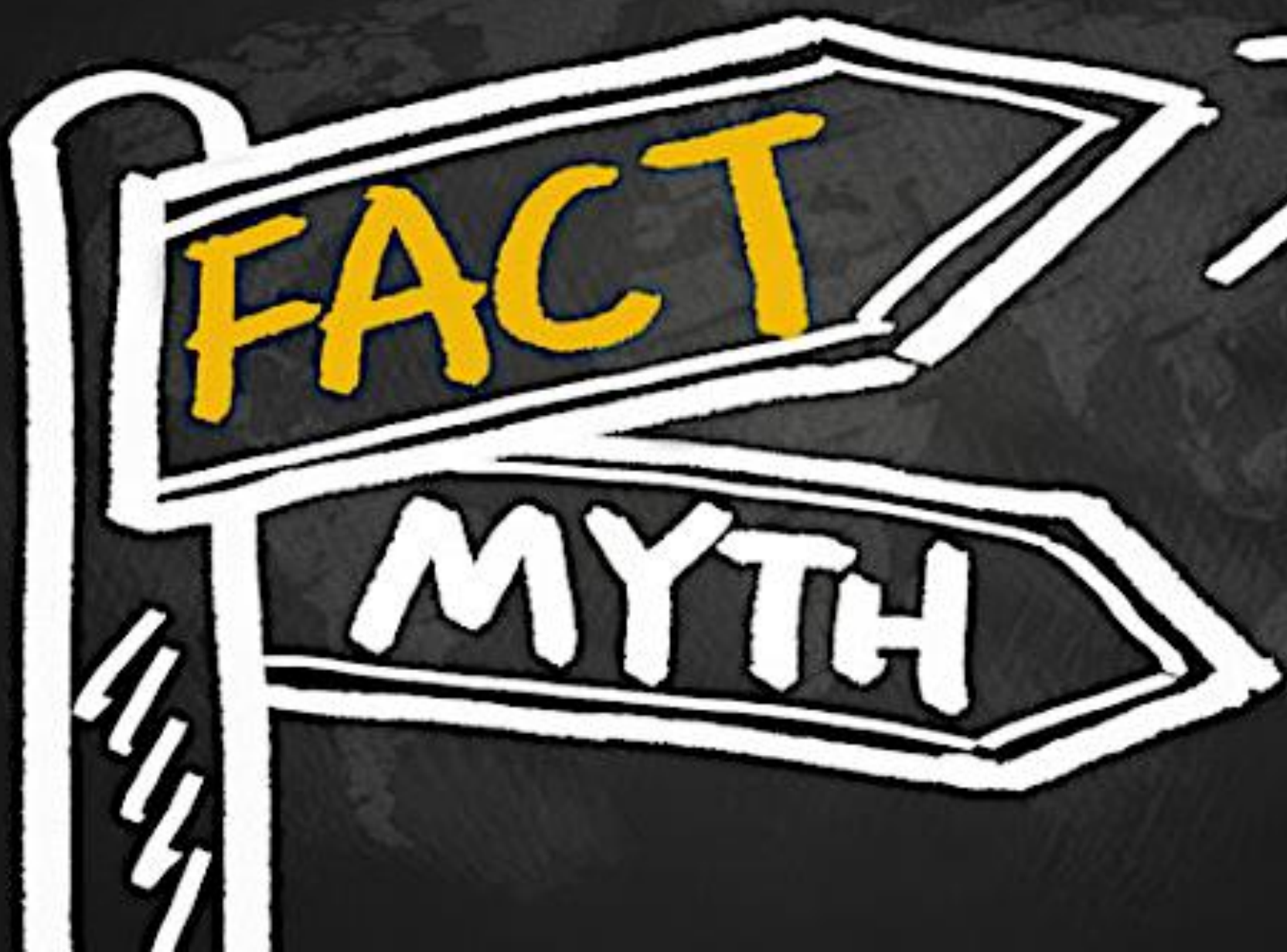


Factores que afectan la reticencia a la vacuna COVID-19

- Características de la vacuna: eficacia, duración, seguridad, efectos secundarios
- Preocupaciones sobre el proceso de aprobación: demasiado rápido, influencia política
- Fuentes de información: proveedores de atención médica, funcionarios de salud pública más confiables que los políticos
- Demografía: en promedio, personas mayores, personas de raza negra y mujeres menos dispuestas a vacunarse

Tamaño del efecto estimado según atributos de la vacuna





FACT

MYTH



¿Y entonces?

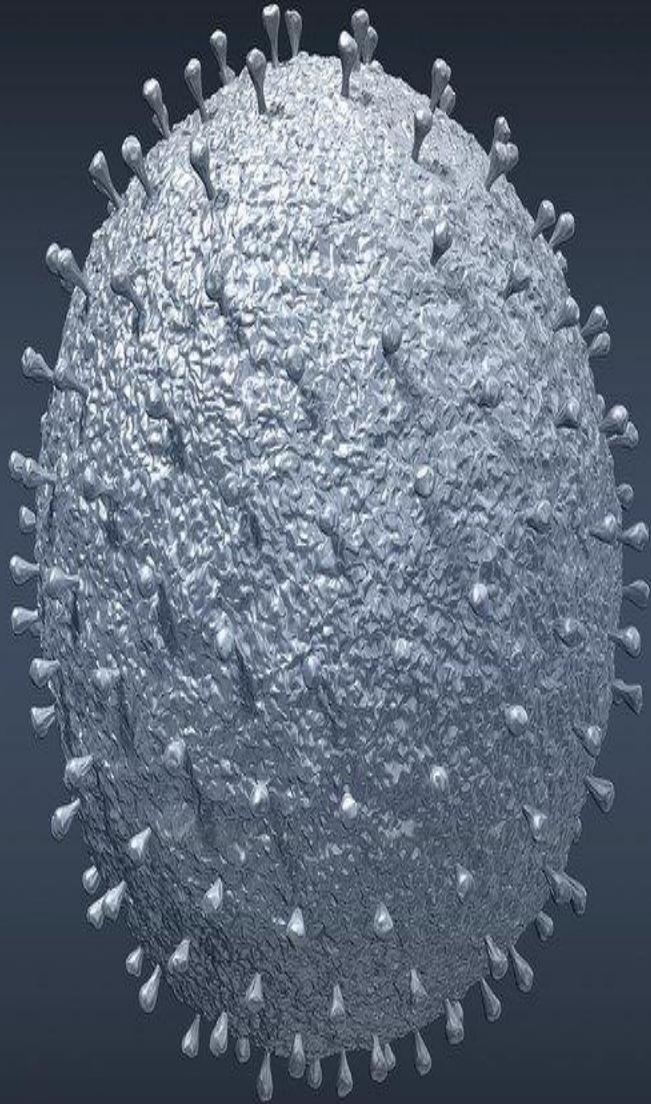




WE TRUST IN SCIENCE



Conclusiones



Gracias por la atención



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