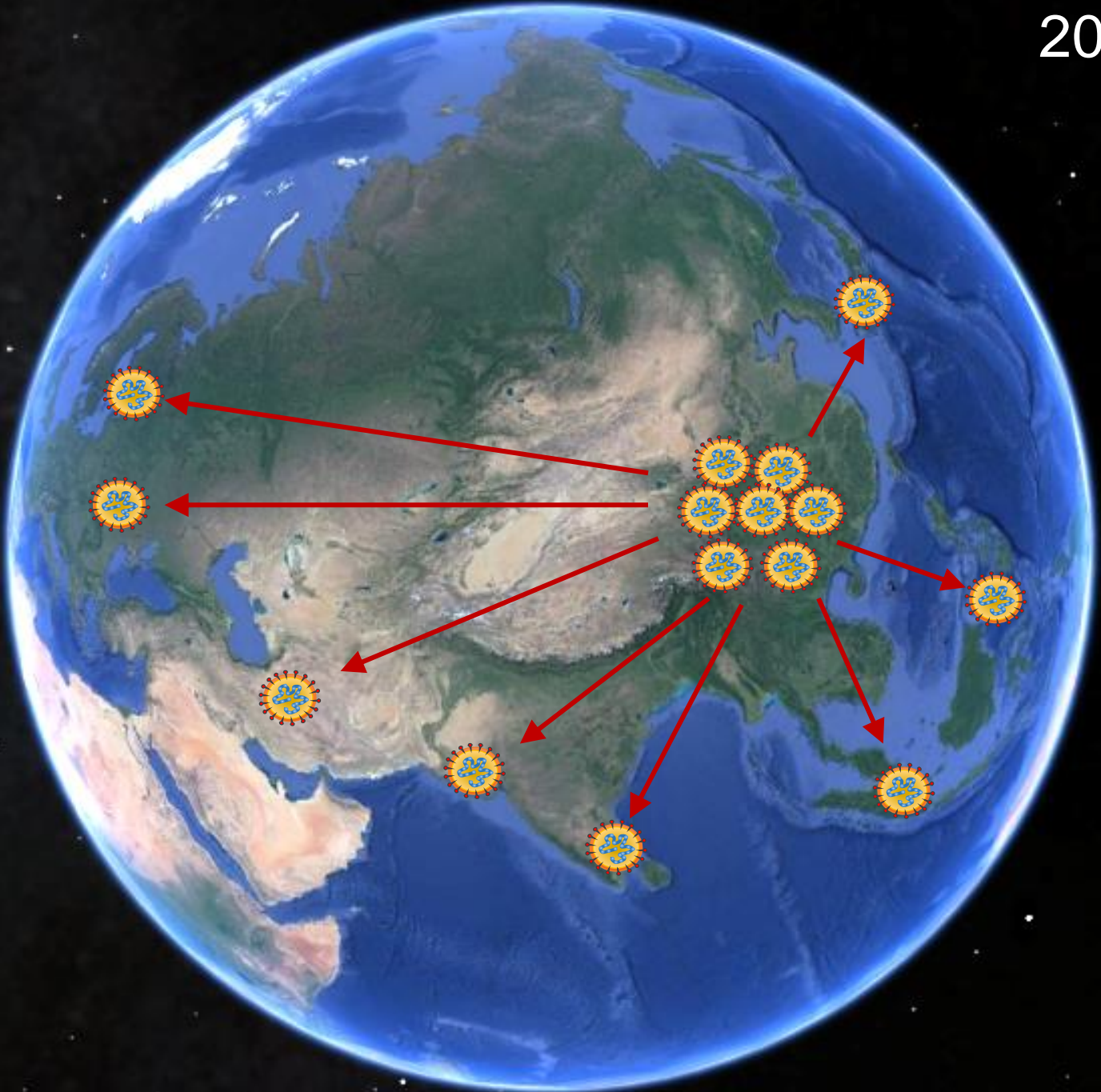


Questions on the Covid 19 pandemic and the proposal of a European public research infrastructure for future medicines

Giuseppe Remuzzi

LESSONS FROM THE PANDEMIC: BIOMEDICAL INNOVATION, THE PHARMACEUTICAL INDUSTRY AND THE ROLE OF PUBLIC INSTITUTIONS
20 January 2022 on line

2020



Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China

Chaolin Huang, Yeming Wang*, Xingwang Li*, Lili Ren*, Jianping Zhao*, Yi Hu*, Li Zhang, Guohui Fan, Jiuyang Xu, Xiaoying Gu, Zhenshun Cheng, Ting Yu, Jiaan Xia, Yuan Wei, Wenjuan Wu, Xuelei Xie, Wen Yin, Hui Li, Min Liu, Yan Xiao, Hong Gao, Li Guo, Jungang Xie, Guangfa Wang, Rongmeng Jiang, Zhancheng Gao, Qi Jin, Jianwei Wang†, Bin Cao†*

The 2019-nCoV infection caused clusters of severe respiratory illness similar to severe acute respiratory syndrome coronavirus and was associated with ICU admission and high mortality

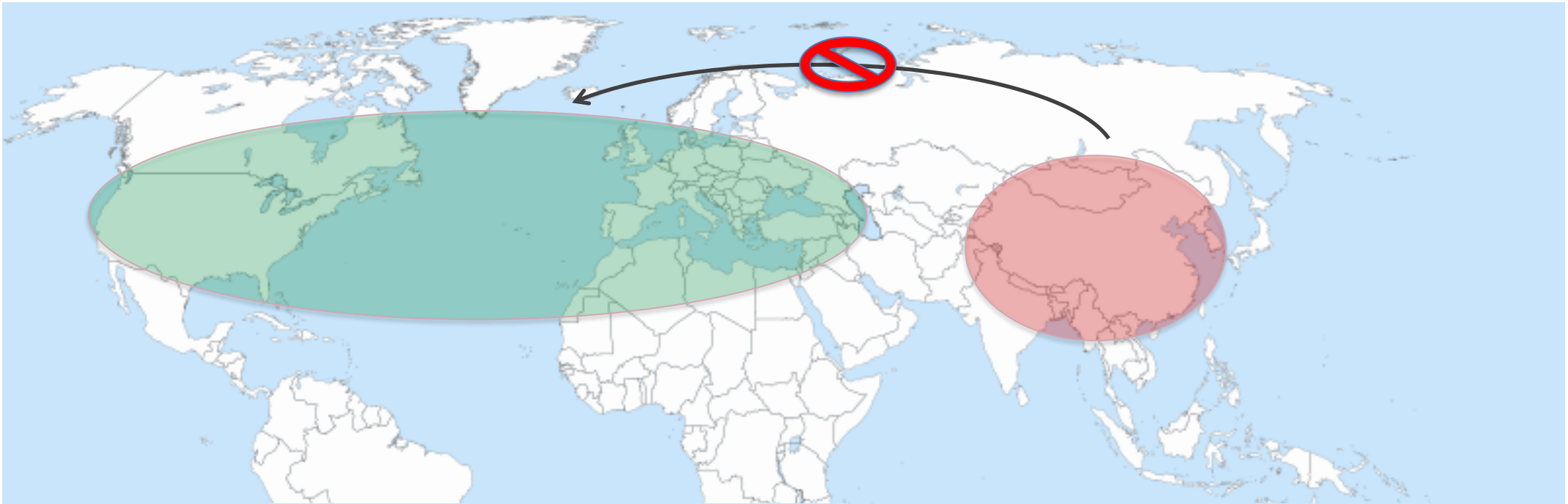
- Baseline characteristics of patients
- Timeline of symptoms after onset of illness
- All possible laboratory measurements
- X Ray and TC examination

QUESTIONS WE WOULD HAVE ASKED OURSELVES IF THE CHINESE PAPERS HAD BEEN TAKEN SERIOUSLY

- Do we have personal protective equipment?
- How can we manage social distancing?
- What is our policy in schools?
- How can we stop the virus being transmitted in communities?

All of this should have been discussed within 48-72 hours of a state of emergency being declared

That did not happen

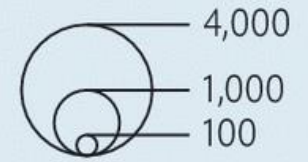


It wasn't just Italy, it was all of Europe and North America

The Western scientists didn't take the science coming out of China seriously

Going south

Italy, covid-19 cases, 2020



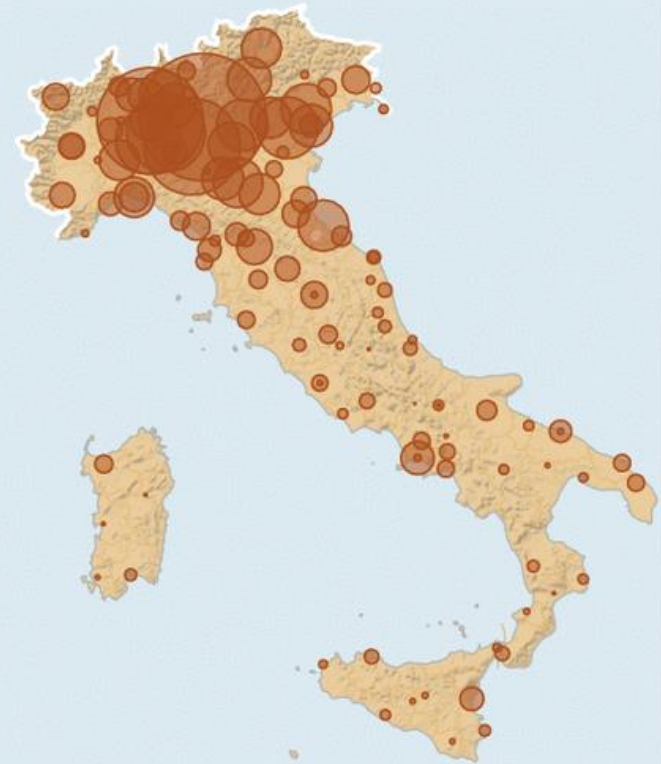
February 25th



March 6th



March 18th



Source: Department of Civil Protection

The New York Times

**THE LOST DAYS THAT MADE BERGAMO A
CORONAVIRUS TRAGEDY**

By Jason Horowitz Photographs by Fabio Bucciarelli

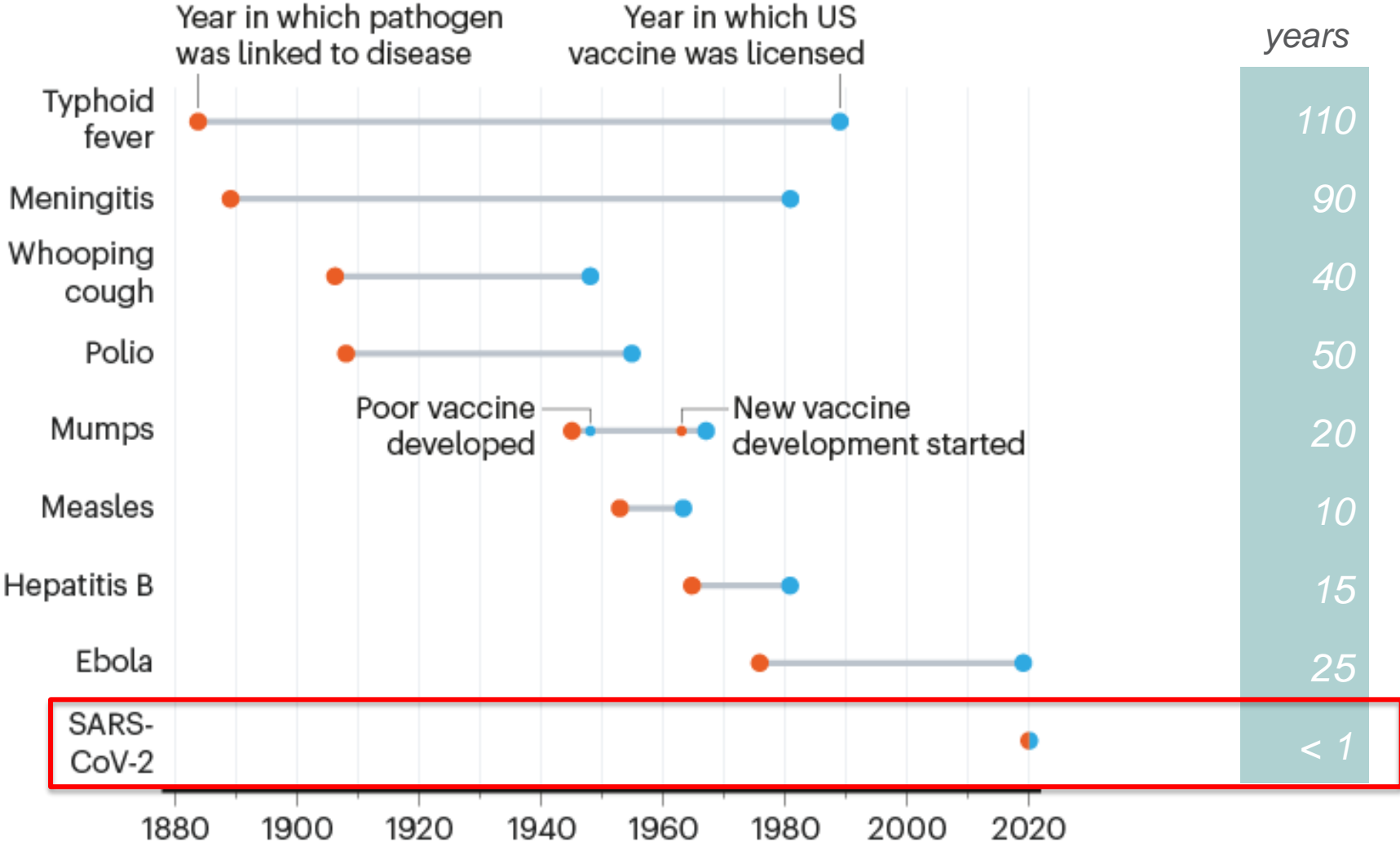
Nov. 29, 2020



The systematic demolition of public health services - which has been particularly egregious in the last decade, especially in Lombardy, the region most affected - allowed the tragic initial impact observed

NO COUNTRY CAN DO IT ALONE

VACCINE INNOVATION



Regarding Covid-19 vaccines, what the industry has done has surpassed even the most optimistic expectations.

But Big Pharma's first priority is to remunerate its shareholders and this does not necessarily coincide with the need to protect the health of the population.

COVID-19 – vaccines (EU)

4 approved
5 arriving
> 250 studied

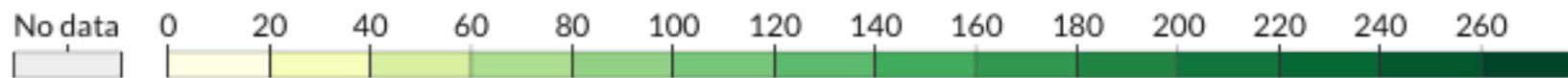
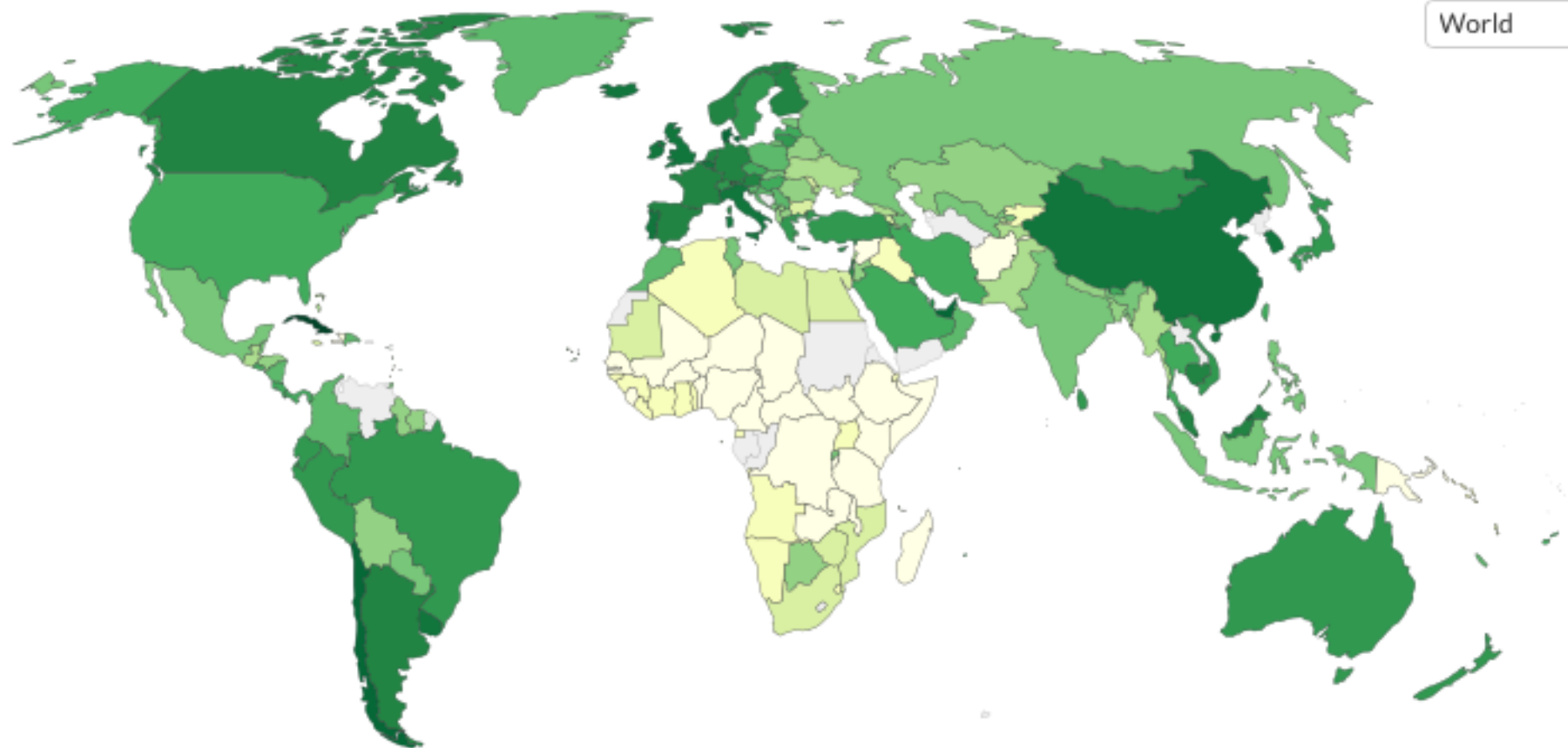
		<i>Technology</i>	<i>Efficacy</i>	
			<i>Mild disease</i>	<i>Severe disease or death</i>
• <i>BNT162b2</i>	Pfizer/BioNTech	mRNA	94 %	100 %
• <i>mRNA-1273</i>	Moderna	mRNA	95 %	100 %
• <i>AZD1222</i>	AstraZeneca	Adenovirus	70 %	100 %
• <i>Ad26.COV2.S</i>	Johnson & Johnson^o	Adenovirus	66 %	100 %

^o Single dose

COVID-19 vaccine doses administered per 100 people, Jan 17, 2022

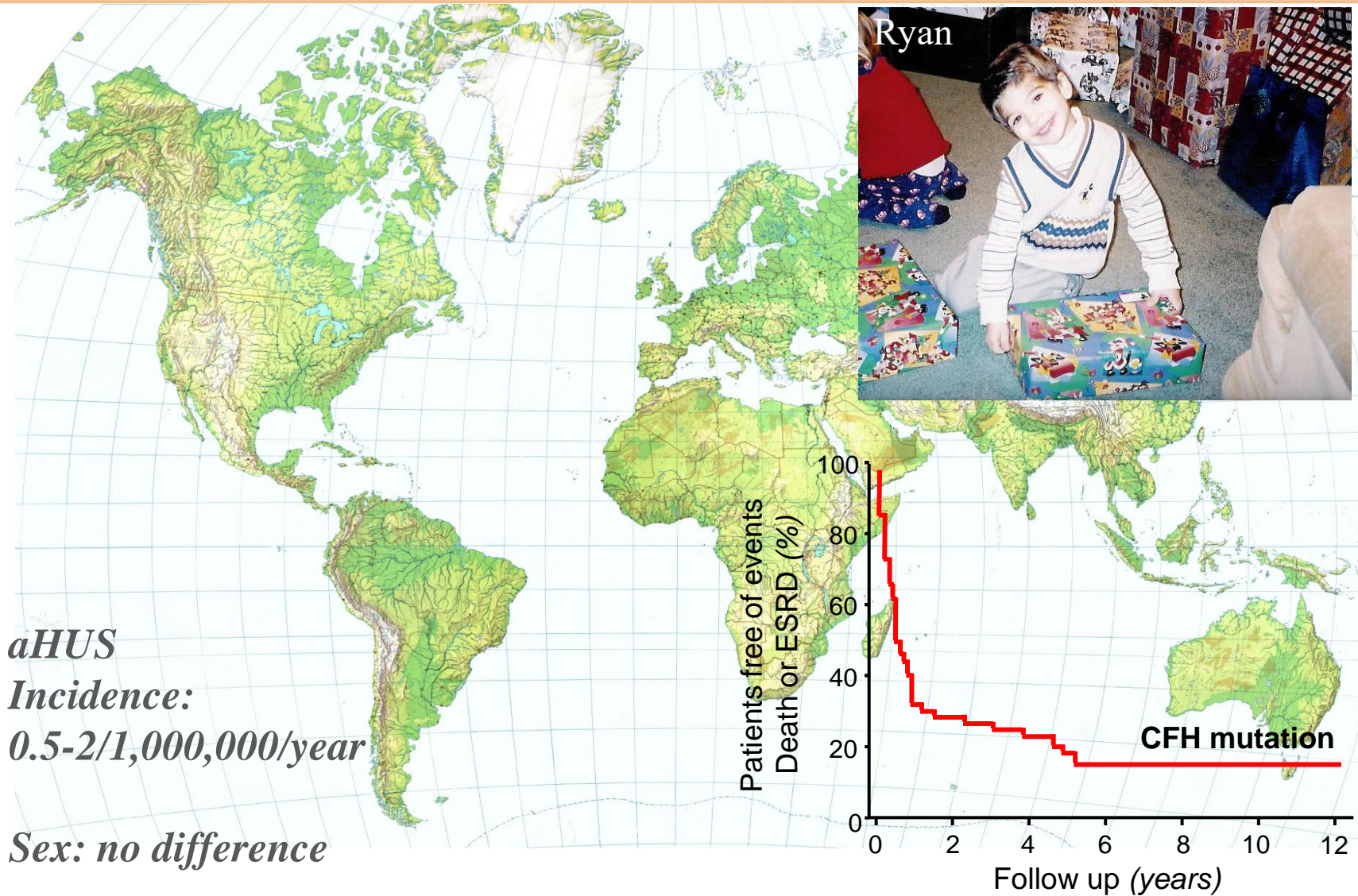
All doses, including boosters, are counted individually. As the same person may receive more than one dose, the number of doses per 100 people can be higher than 100.

World

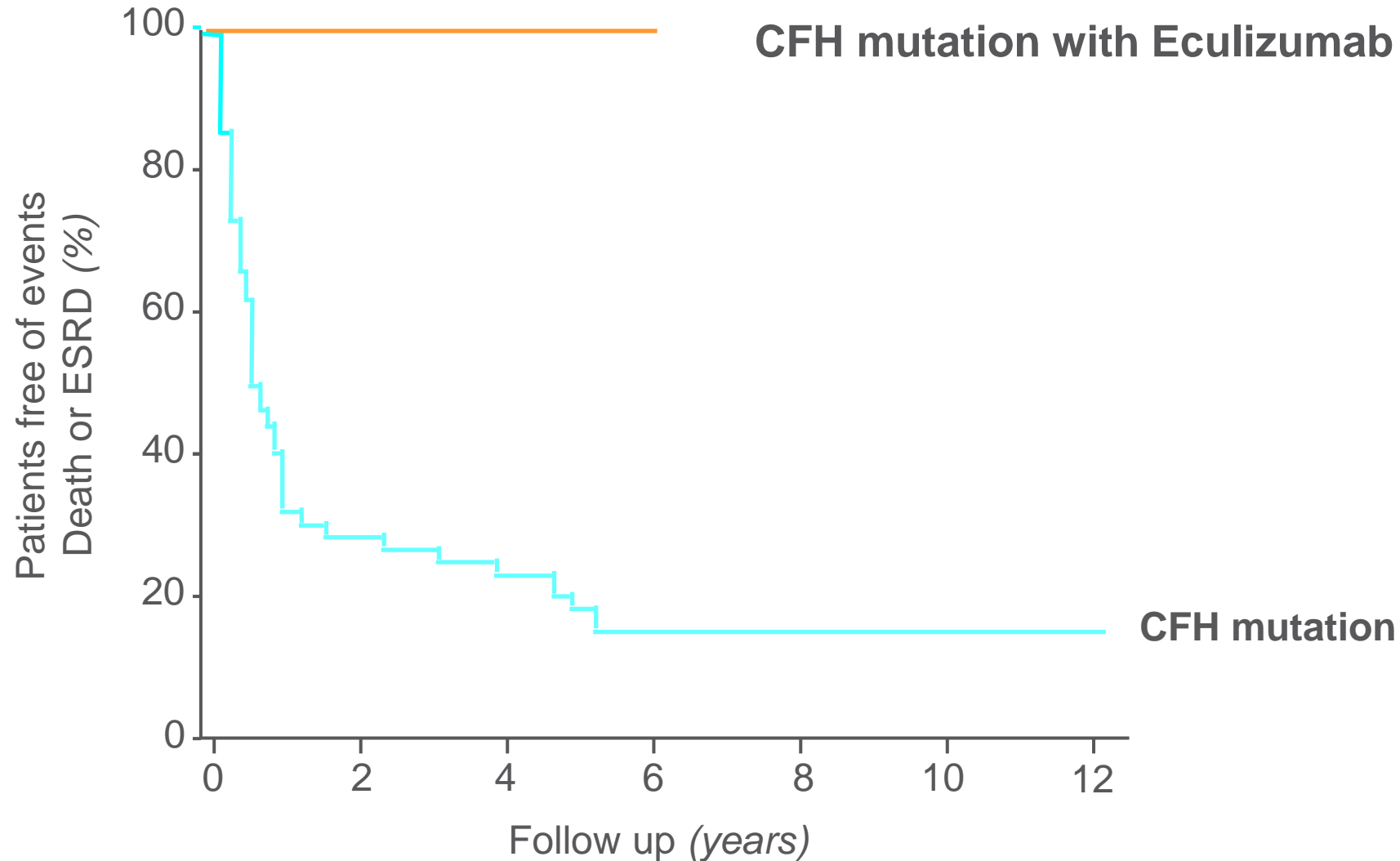


HOW DO BIG PHARMA NORMALLY WORK?

ATYPICAL HEMOLYTIC UREMIC SYNDROME



LONG TERM OUTCOME OF aHUS PATIENTS





330.000

euro per patient per year

When the Mario Negri Institute, a not for profit organization, launches a clinical trial, the negotiations to obtain financial support from the pharmaceutical industry are exhausting, despite their huge profits, and almost never cover the costs of the research.

But then, when a drug is proven to be effective against a disease, even a fatal one, we have to start another difficult process of negotiation to convince the companies to grant continuation of treatment with that specific drug to the same people on whom its beneficial effects were tested.

Often the response is negative.

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Mario Negri Institute for
Pharmacological Research,
Bergamo, Italy

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