



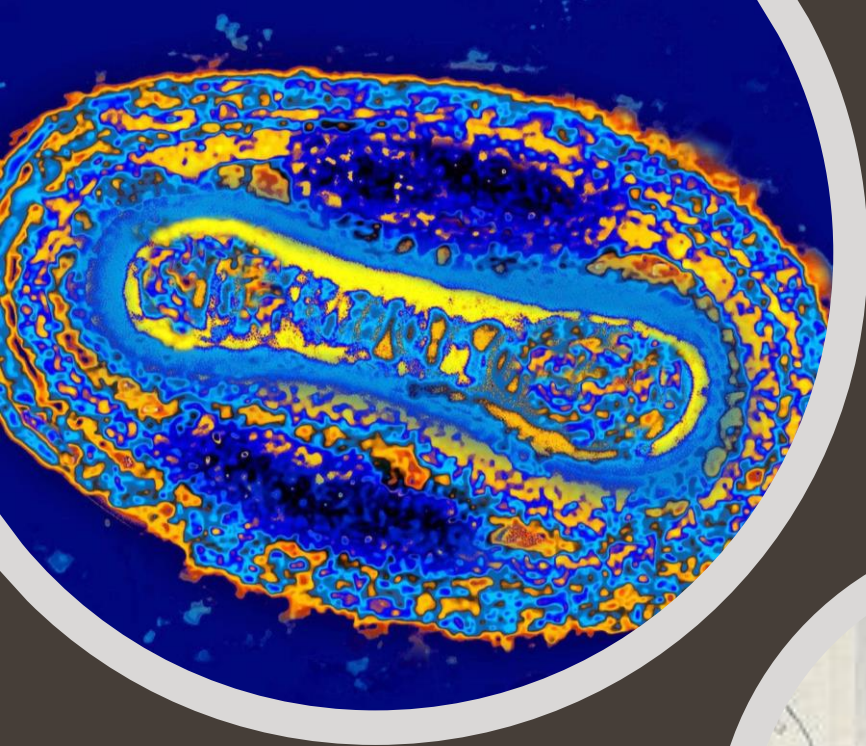
Pandemie ztráty soudnosti

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Viral infections ain't fun



- Smallpox: Variola virus
- Case Fatality Rate **20–80%**
- Killed **500 million** people during the 20th century
- **Eradicated in 1979** as the first and only (apart from rindpest)!
- Inoculation (variolation) known since 10th century in China
- Brought to Europe by the wife of British ambassador to Turkey (Montagu, 1720s)
- Banned by the French parliament :-)

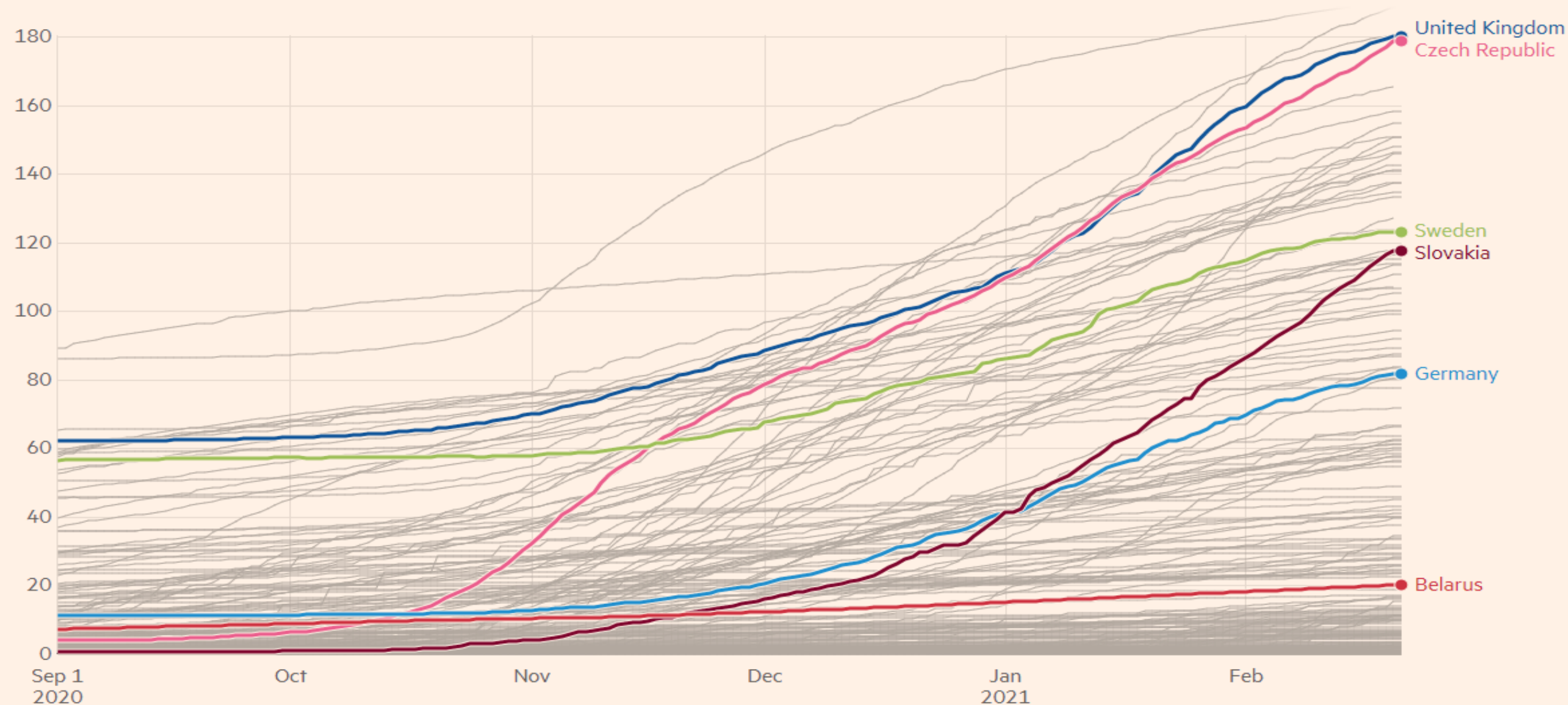
Coronavirus SARS-CoV-2

- Over 100 million cases
- Over 2.5 million deaths
- More PCR tests than people on the planet!
- Up to 2 deaths per thousand inhabitants
- 10% prevalence in badly hit regions



Cumulative deaths attributed to Covid-19 in United Kingdom, Czech Republic, Sweden, Germany, Slovakia and Belarus

Cumulative deaths (per 100k)

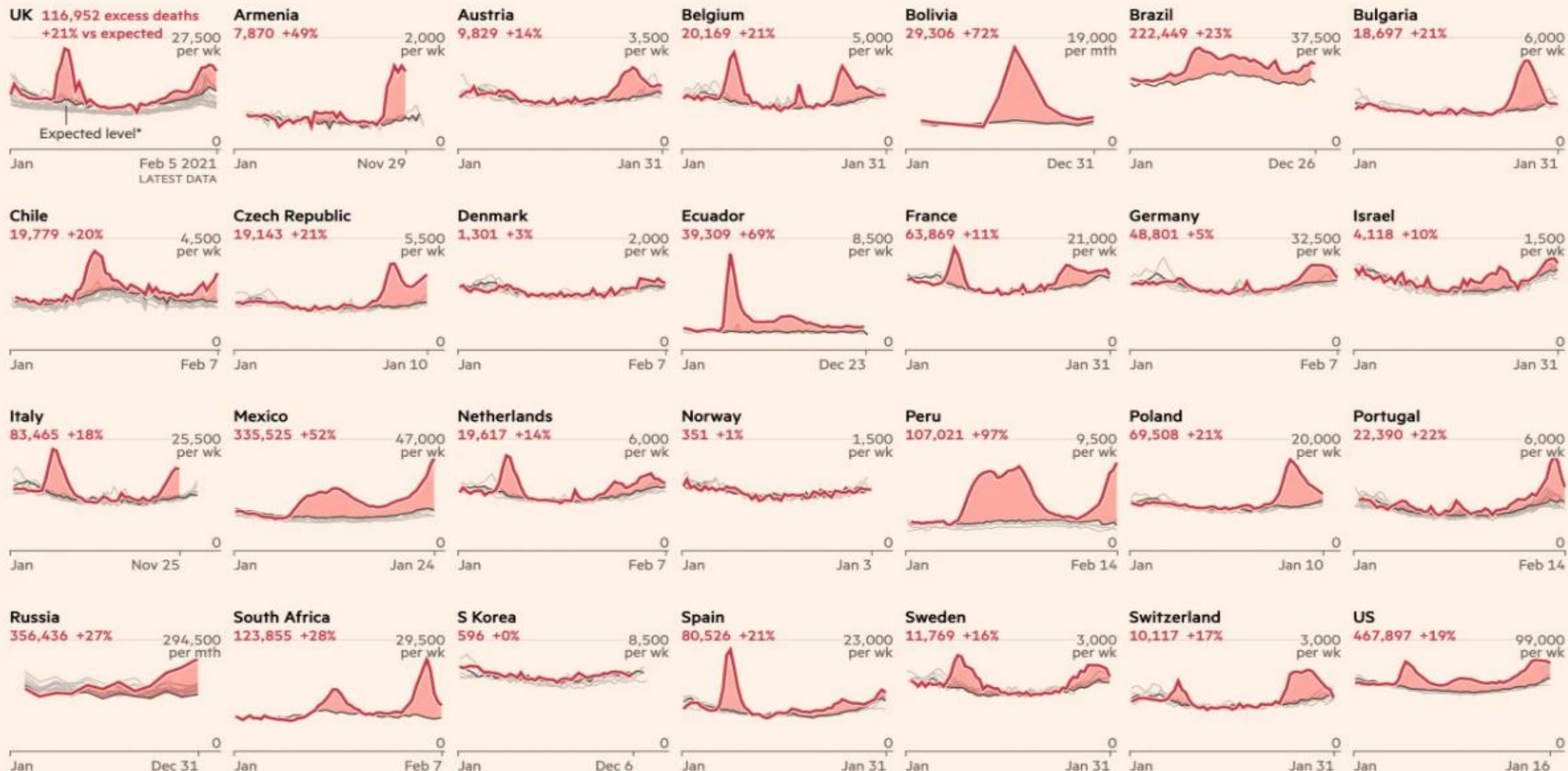


Source: Financial Times analysis of data from the Johns Hopkins CSSE, the Covid Tracking Project, the World Health Organization, the UK Government coronavirus dashboard and the Swedish Public Health Agency.
Data updated February 21 2021 10.35am GMT. Interactive version: [ft.com/covid19](https://www.ft.com/covid19)

FINANCIAL TIMES

Death rates have climbed far above historical averages in many countries that have faced Covid-19 outbreaks

Number of deaths per week from all causes, 2020 vs recent years:  Shading indicates total excess deaths since 100 confirmed cases in the country



*Adjusted for trend over recent years

Sources: FT analysis of national mortality statistics and Karlinsky & Kobak's World Mortality Dataset. Data updated February 20

FT graphic: John Burn-Murdoch / @burnmurdoch

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Overlapping compartments

- Non-susceptibles (muscle)
 - Can we measure?
- Cell-mediated immunity
 - The first test
- Antibody-based tests
 - Rapid tests
 - non-systematic
- COVID-19 symptoms
 - SARS-CoV-2 is present (days)
- Viral RNA presence in a nasal swab (or other material)
 - PCR detection: how it works
- Spike protein presence in a nasal swab
 - Antigen test

We need data to estimate

- The size of the compartments
- Their overlap
- The fluxes between them
- Ask the right questions

ATA

Q&A session one year after

Q: How many people are non-susceptible and who are they?

A: We don't know (we may guess from natural experiments: Diam

Q: How many people activated cell-mediated response and w

A: We don't know (the first test appeared last week)

Q: How many people have antibodies?

A: We have no idea (our guesses in CR have uncertainty in the ord

Q: What are the parameters of PCR testing?

A: We don't know (10 million tests performed, no one asked)

Q: What is the relation of PCR result (CT) to infection spreadi

A: We don't know (UZIS does not collect the data on CT, they are r

Q: What is the effect of non-pharmaceutical interventions?

A: We don't know (but we do them anyway and if they fail, blame

Q: What is the IFR and CFR of the disease?

A: We have not translated the terminology to Czech yet



Why?

- Scientific context

Three waves

The start of

studies:

- Spectacular failures

- Strong opinions

- Political and economic

- Media preferences

The fake-news blame game

„V březnu někdo přišel s tím
matematickým modelem
a v srpnu někdo, sice byl to ten samý
člověk, ale už přišel v nějakém čase.
A ti, kteří měli přijít, nepřišli.“

ch

knowledge

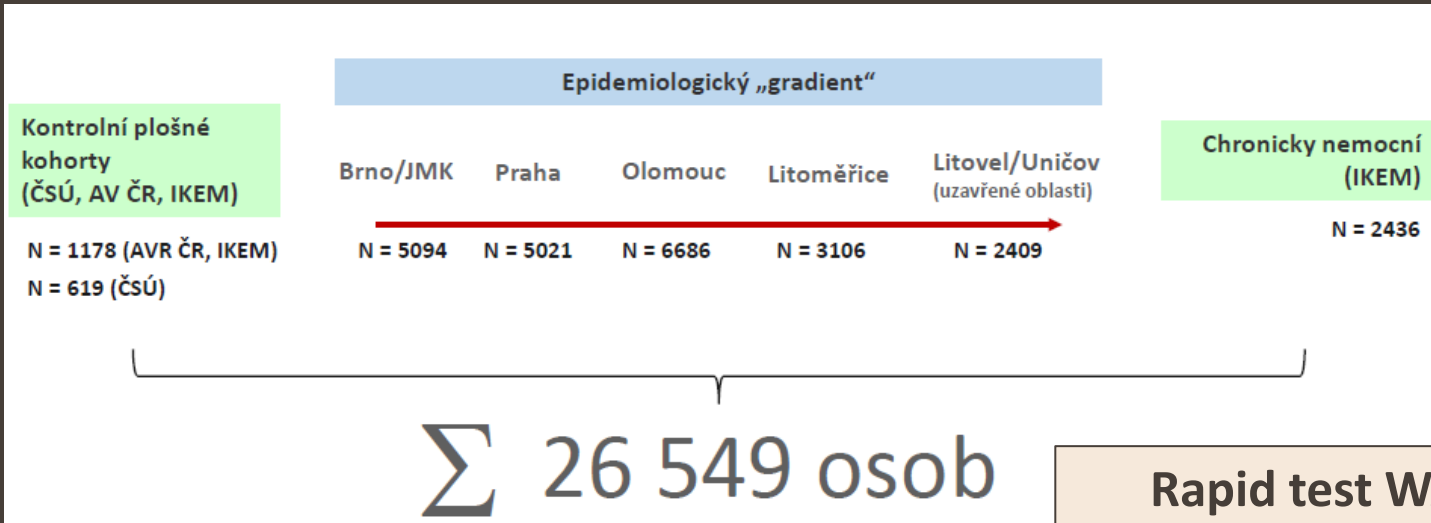
mized

the LB approach

“m” and “d



An example of spectacular failure: SARS-CoV-2-CZ-Preval



Mathematical case pre-assessment:

- Prevalence 0%, specificity 99%
at least **260** positive results
- Prevalence 0%, specificity 95%
at least **1 300** positive results

Rapid test WANTAI
Manufactured in China

Sensitivity 95.6 %
Specificity 95.2 %

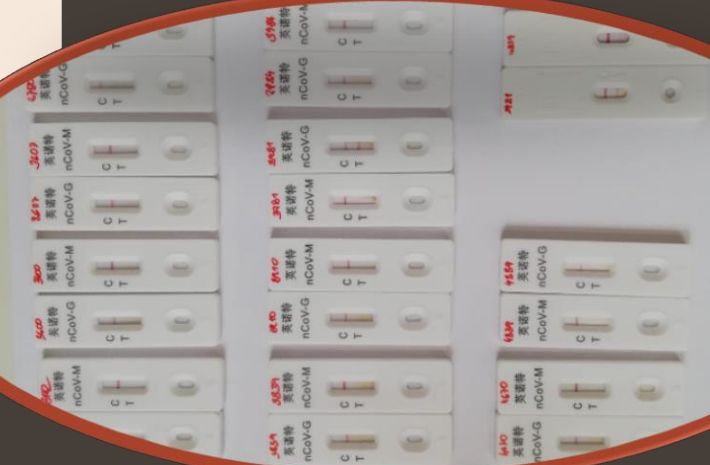
DISKUZNÍ ŽURNÁL
O DĚNÍ NA UP V OLOMOUCI

Čínský panelák ve španělské vesnici

/TOMÁŠ FÜRST, ZUZANA KRÁTKÁ, ŠTĚPÁNKA LUXOVÁ,
HALINA ŠIMKOVÁ, JAN STROJIL/

Centrum pro bayesovskou inferenci 4BIN www.4bin.org.

Když Němci něčemu nerozumí, řeknou, že je to pro ně „jako v španělské vesnici“ (böhmsche Dörfer). Pro nás je to vesnice španělská. Když španělskou vesnici si můžete připadat, když...



Studie SARS-CoV-2-CZ-Preval

<http://covid-imunita.uzis.cz>

Předběžné odhady výskytu positivity protilátek

Kohorta / populace	Rozmezí hodnot prevalence SARS-CoV-2 pozitivních se zohledněním parametrů testů
ČSÚ – populační výběry	
Hlavní město Praha	0 – 1,478 %
Brno / Jihomoravský kraj	0 – 1,873 %
Olomouc / Olomoucký kraj	0 – 4,056 %
AV ČR / IKEM	
ČR – populační výběr	0 – 1,291 %
IKEM	
Chroničtí pacienti	0 – 0,632 %

Kohorta / populace	Rozmezí hodnot prevalence SARS-CoV-2 pozitivních se zohledněním SENZ a SPEC
Brno / Jihomoravský kraj	0 – 0,219 %
Hlavní město Praha	0 – 0,400 %
Město Litoměřice	0 – 0,598 %
Olomouc / Olomoucký kraj	0 – 1,293 %
Města Litoměřice a Přibramy	0 – 3,335 %

Ve všech kohortách bylo celkově zachyceno 107 osob s pozitivním testem na protilátky. Stupeň imunizace české populace je velmi nízký a ani v nejvíce zatížených lokalitách nedosahuje hodnoty cca 4% - 5%.

A message for the government

1. Undo the damage
2. Stop piling up more damage
3. Give simple advice based on data
4. Go ahead with vaccination

„Základním deficitem tohoto postupu je však okolnost, že z žádného relevantního zdroje není patrné, na základě čeho vláda dospěla právě k tomuto řešení.“

Zákaz maloobchodního prodeje byl nezákonný, rozhodl Ústavní soud



TOMÁŠ SVOBODA



OVÁNO · 9:44

A message for the citizen

1. Your health is not a property of the state
2. Do not panic, cheer up, switch off the TV and go for a walk (without a mask)
3. Read a history textbook (on epidemics, and totality)
4. “On a long enough timeline, the survival rate of everyone drops to zero”

A message for the Academia

1. Observe the private sector: No twaddle, and then the vaccine
2. Recall the Scientific approach: EB
3. Beware the loss of prestige
4. Remember the coronavirus DataGeddon when making the next global warming forecast 😊

Bud'te zdraví a veselí
Skončil rok KRYSY a začal rok BŮVOLA

