COVID-19 et Rein
Episode 2

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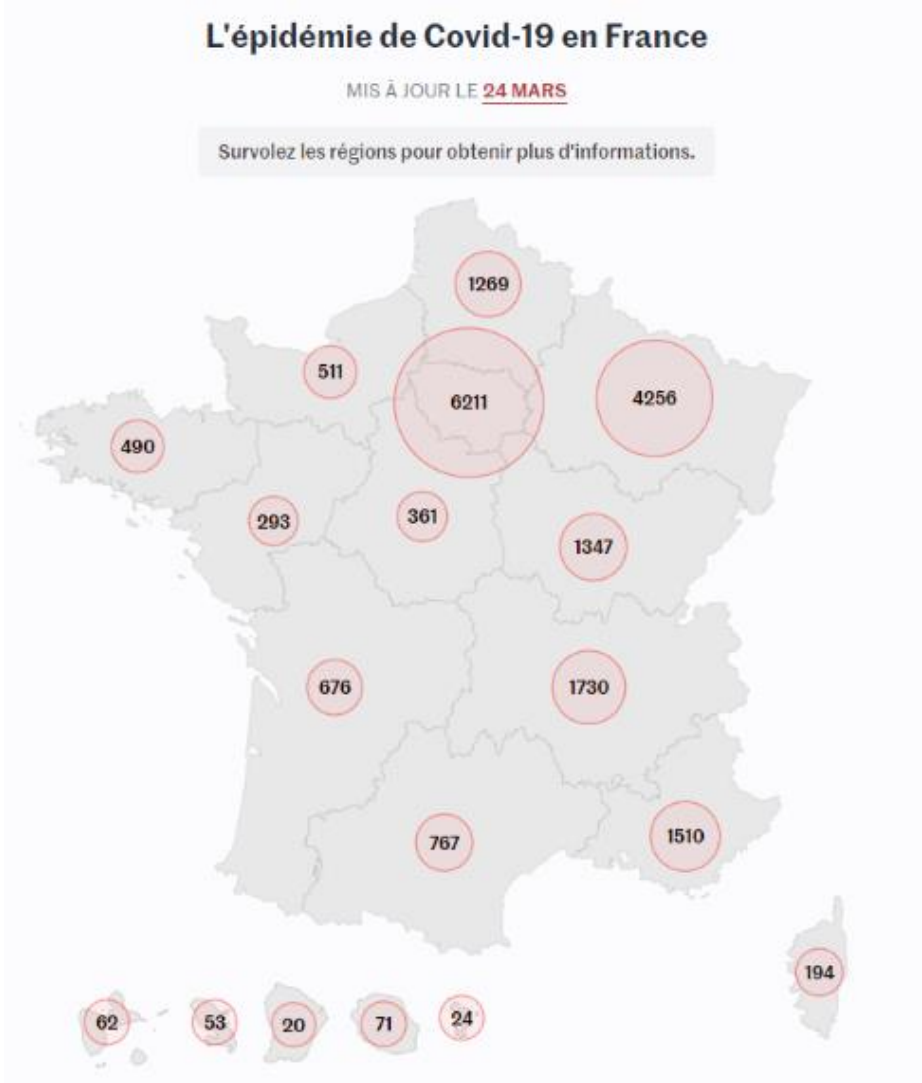
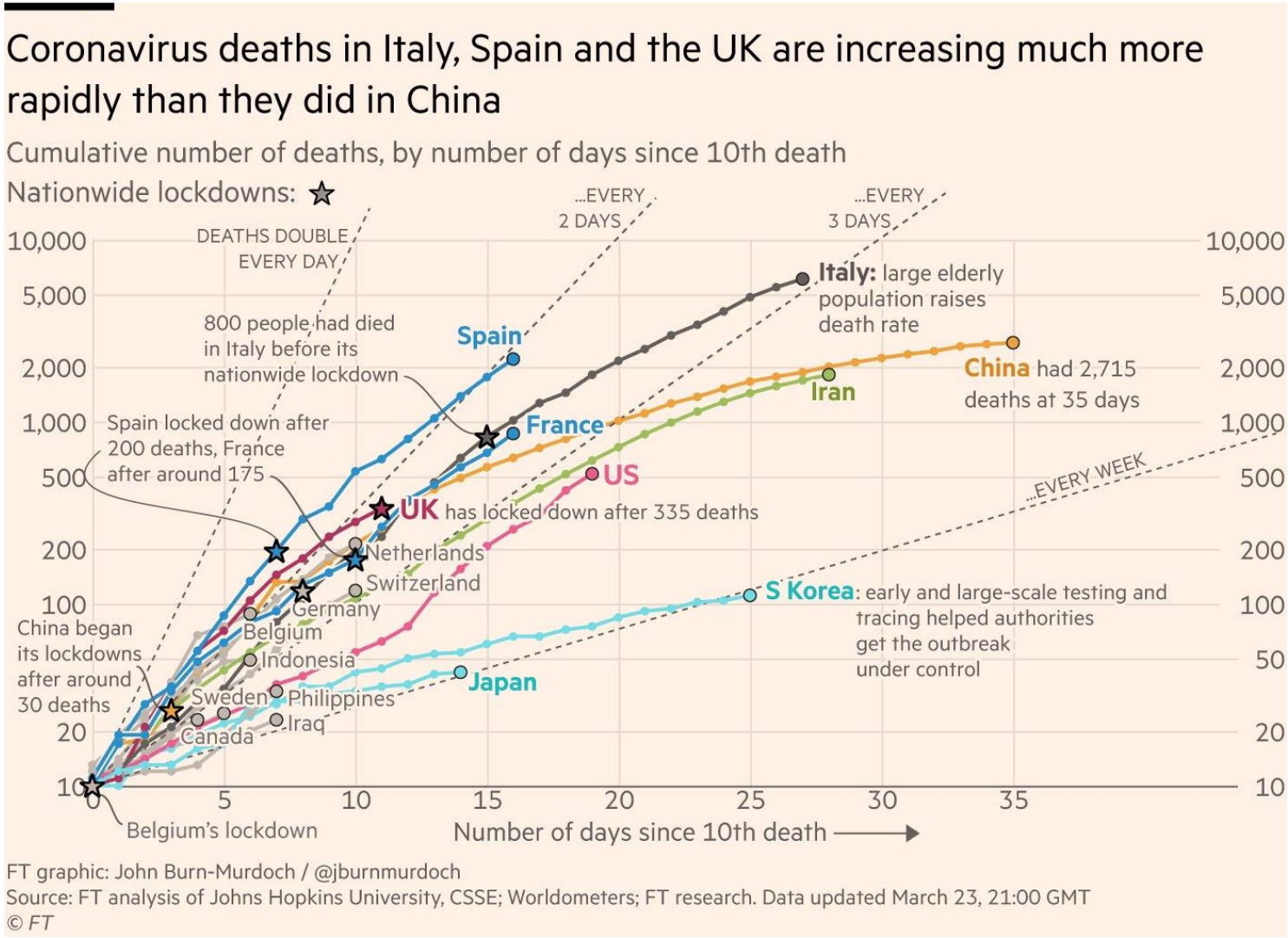
Nouvelles du front

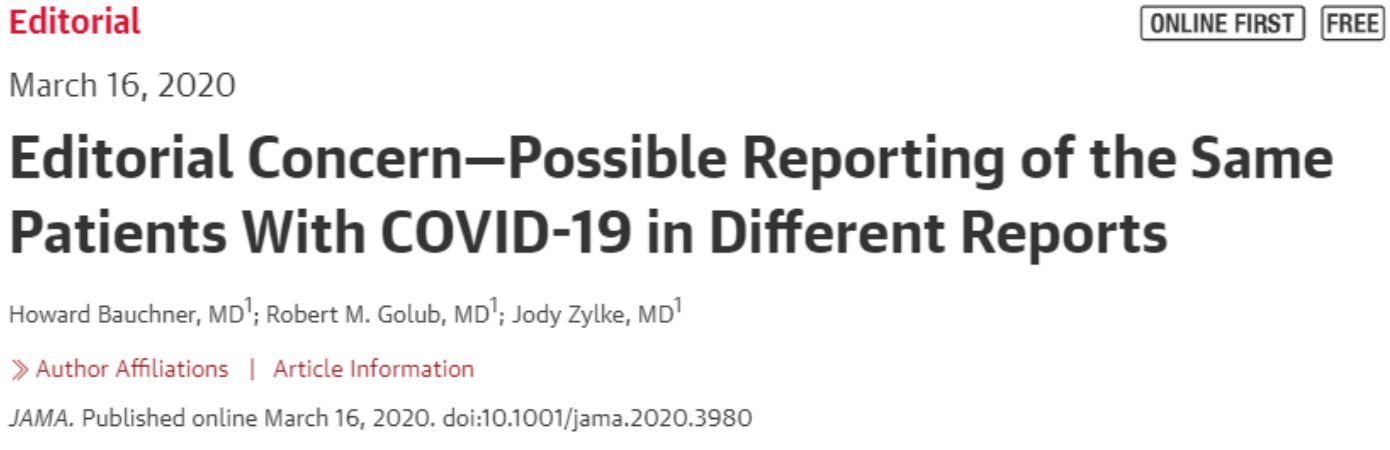
395 647 cas **17 241 morts**





Un risque, la surchauffe informationnelle

- 1367 articles dans Pubmed (23/03/2020) https://www.ncbi.nlm.nih.gov/pubmed/?term=covid-19
- 699 preprints dans BioRxiv https://connect.biorxiv.org/relate/content/181
  - Vous êtes le reviewer… Nécessite une lecture attentive voir très attentive.
- 102 preprints dans arXiv https://arxiv.org/search/?query=covid-19
- 125 études dans ClinicalTrials https://clinicaltrials.gov/ct2/results?cond=covid-19&term=&cntry=&state=&city=&dist=
- Impossible de faire une revue exhaustive
- Question sur la qualité:



Editorial

ONLINE FIRST FREE

March 16, 2020

Editorial Concern—Possible Reporting of the Same Patients With COVID-19 in Different Reports

Howard Bauchner, MD[1]; Robert M. Golub, MD[1]; Jody Zylke, MD[1]

» Author Affiliations | Article Information

JAMA. Published online March 16, 2020. doi:10.1001/jama.2020.3980

Des conseils pour l'éviter

- Ne culpabilisez pas et sachez vous déconnecter.
- Des sources d'informations fiables
  - LitCovid: https://www.ncbi.nlm.nih.gov/research/coronavirus/
  - Living map of evidence: http://eppi.ioe.ac.uk/COVID19_MAP/covid_map_v3.html
  - Consortium REACTING: https://reacting.inserm.fr/literature-review/
  - DocCismef: https://doccismef.chu-rouen.fr/dc/#env=basic&q=covid-19.sr%20ET%202020-03-22.ins&p=1&n=50
  - Un MOOC: https://www.fun-mooc.fr/courses/course-v1:UPEC+169003+cv_01/about
  - NephJC: http://www.nephjc.com/covid19
  - ERA-EDTA: https://www.era-edta.org/en/covid-19-news-and-information/#toggle-id-11
- Ne pas trop regarder et écouter les médias et les réseaux sociaux

Mode de transmission

- **Gouttelette (direct et manuporté)**
  - Selles https://doi.org/10.1038/s41591-020-0817-4
  - Le SARS-COV2 pourrait survivre dans les aérosols (3 hrs) et sur les surfaces (jusqu'à 3 jours sur le plastique et l'acier, jusqu'à 24 hrs sur le carton)
  - L’homme ne fait pas d’aérosol
  - Capital pour éviter les contaminations des soignants
  - Maitres mots protéger les équipes soignantes en permettant un soin de qualité.

Protection

ckj CLINICAL KIDNEY JOURNAL

What lessons can we learn from the Milan experience on coronavirus management in dialysis centers?

General hygienic measures

Have alcohol dispensers available for use in waiting rooms

Patients should wash their hands thoroughly before starting dialysis

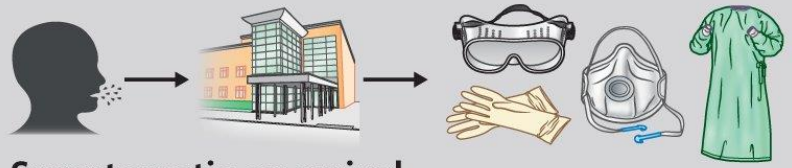
Healthcare staff assisting in dialysis rooms should wear surgical masks

Healthcare staff should regularly wash their hands with soap and water

Dialysis patients in contact with confirmed cases

Asymptomatic

Wear a surgical mask for the duration of time in the dialysis unit



Symptomatic on arrival

Be assessed in the emergency department; dialyse in isolation, treat as if a carrier for SARS-CoV-2

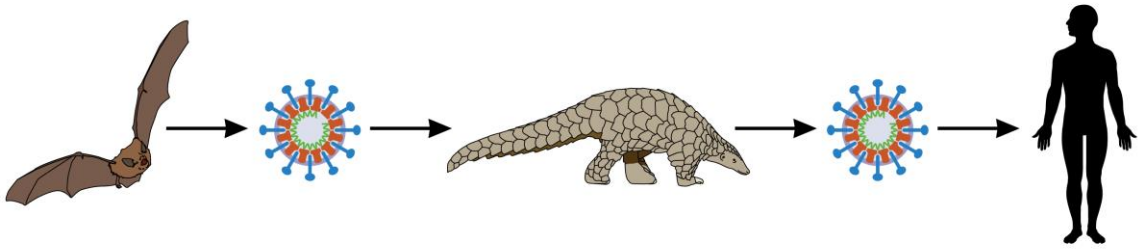
Coronavirus positive

Dialyse in isolation. Staff in contact wear a disposable gown, glasses/visor, FFP3 mask, overshoes and double gloves

Conclusion: Specific prophylactic measures can be adopted to help reduce the spread of coronavirus in dialysis units. There should be specific pathways for patients who have been in contact with confirmed cases of coronavirus.

Cozzolino, M.
Clinical Kidney Journal (2020)
@CKJsocial

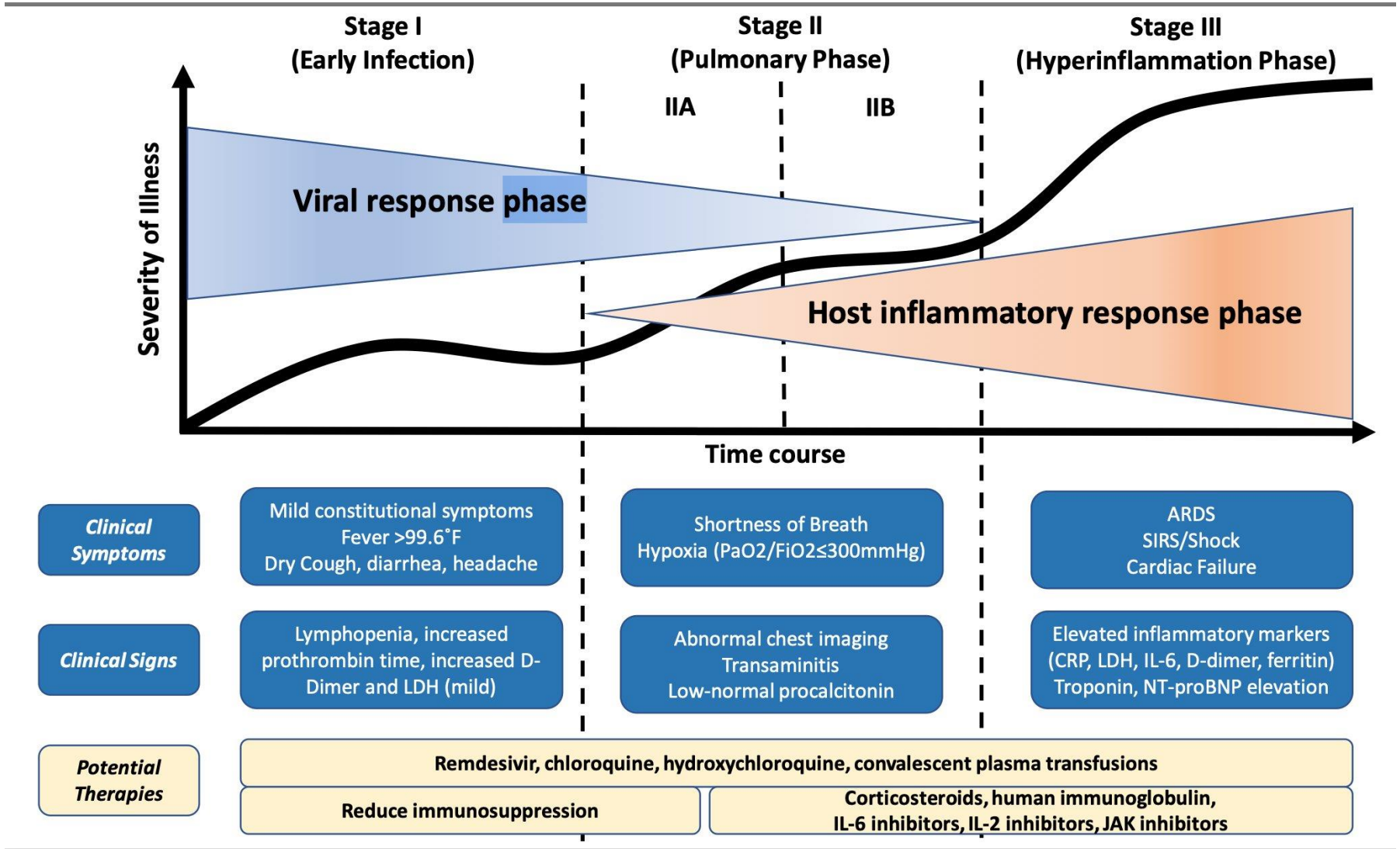
Un virus et une maladie



- SARS-CoV-2 est le virus
- COVID-19 est la maladie
- Virus de la famille des coronavirus des chauves souris.
- Le virus n'a pas été créé par l'homme https://www.nature.com/articles/s41591-020-0820-9
- 80% des cas asymptomatiques ou peu sévères
- 20% des cas plus sévères avec un tableau de pneumopathie interstitielle.
- 5% nécessitant la réanimation

https://doi.org/10.1016/j.kint.2020.03.001

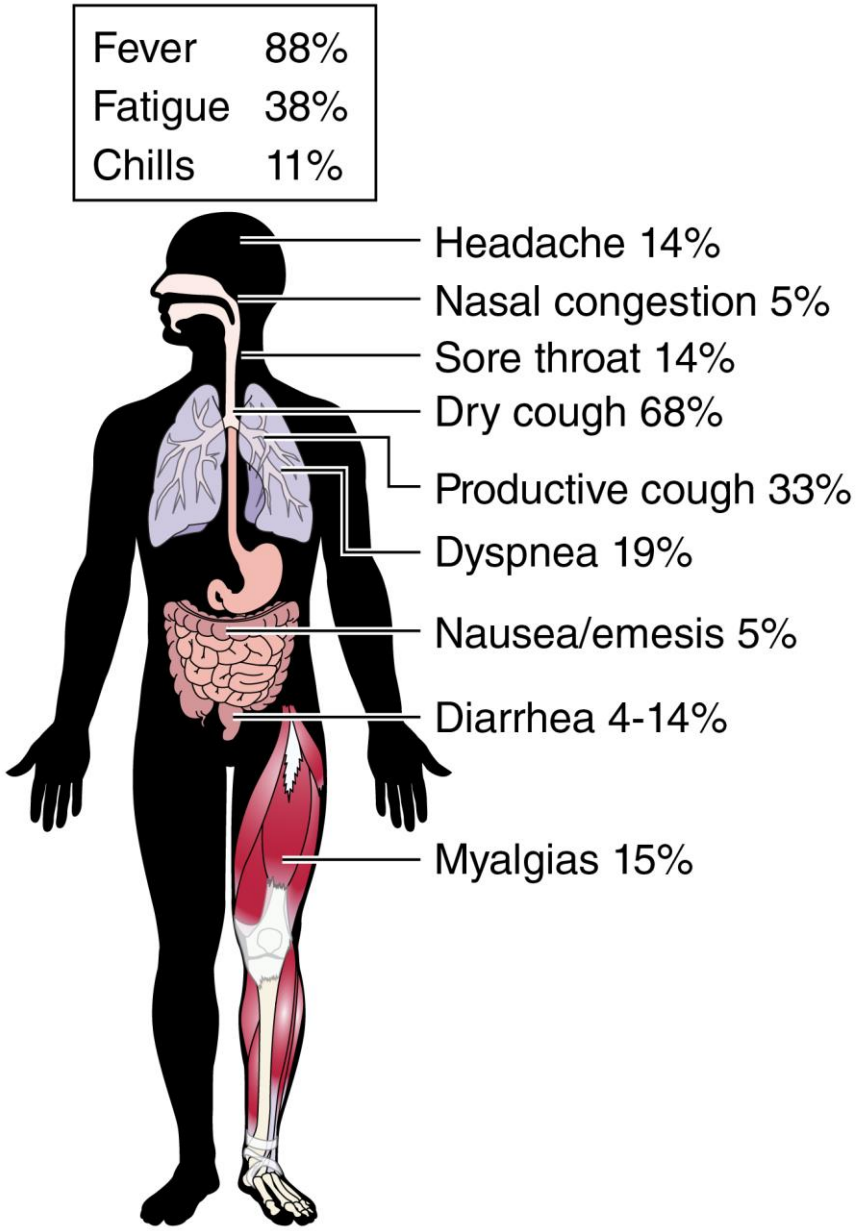
Symptomatologie



10.1016/j.healun.2020.03.012

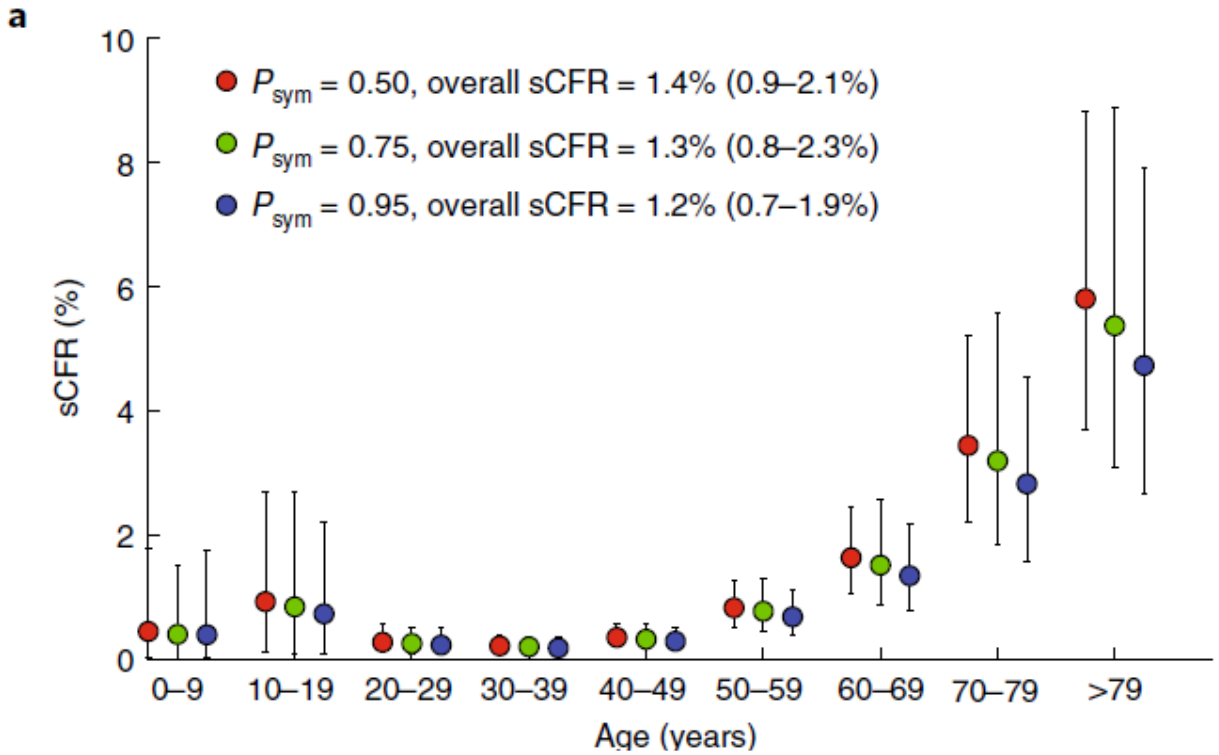
Symptomatologie

- La fièvre n’est pas forcément inaugurale
- Tableau de gastroentérite, y penser
- L’anosmie pourrait être un signe clinique
  https://www.sforl.org/wp-content/uploads/2020/03/Alerte-anosmie-COVID-19.pdf
  - Pour l’instant pas d’article référencé
- Une période à risque d’aggravation entre J7 et J10
- La durée d’incubation médiane est de 5 jours (10.7326/M20-0504)

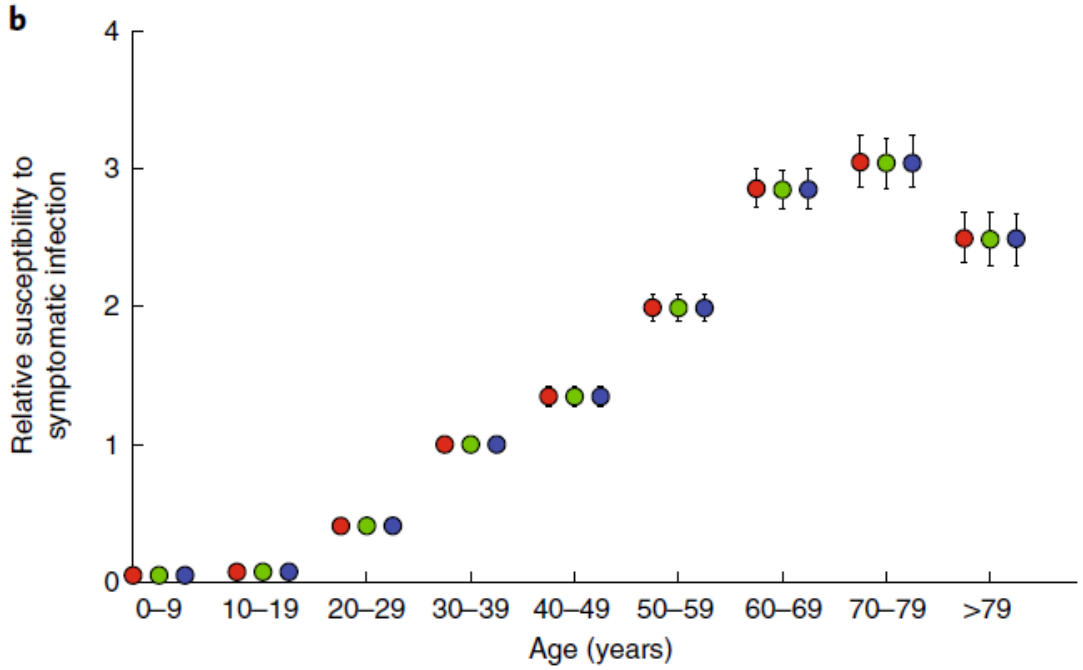


https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.120.046941

Symptomatologie



Probabilité de mourir en Chine après avoir des symptômes



Risque relatif en Chine d'avoir des symptômes

https://www.nature.com/articles/s41591-020-0822-7.pdf

Mortalité

Table. Case-Fatality Rate by Age Group in Italy and China[a]

	Italy as of March 17, 2020		China as of February 11, 2020	
	No. of deaths (% of total)	Case-fatality rate, %[b]	No. of deaths (% of total)	Case-fatality rate, %[b]
All	1625 (100)	7.2	1023 (100)	2.3
Age groups, y				
0-9	0	0	0	0
10-19	0	0	1 (0.1)	0.2
20-29	0	0	7 (0.7)	0.2
30-39	4 (0.3)	0.3	18 (1.8)	0.2
40-49	10 (0.6)	0.4	38 (3.7)	0.4
50-59	43 (2.7)	1.0	130 (12.7)	1.3
60-69	139 (8.6)	3.5	309 (30.2)	3.6
70-79	578 (35.6)	12.8	312 (30.5)	8.0
≥80	850 (52.3)	20.2	208 (20.3)	14.8

37,6% de la cohorte

11,9% de la cohorte

[a] Data from China are from Chinese Center for Disease Control and Prevention.[4] Age was not available for 1 patient.

[b] Case-fatality rate calculated as number of deaths/number of cases.

Sur 355 patients décédés en Italie (Age moyen 79,5 ans, 30% de femmes)

0,8% sans comorbidité

25,1% avec une comorbidité

25,6% avec deux comorbidités

48,5% avec 3 ou plus comorbidités

JAMA. Published online March 23, 2020. doi:10.1001/jama.2020.4683

Insuffisance rénale aigue et COVID-19

- Des séries chinoises entre 2 et 5% d'insuffisance rénale aigue. (peu de détails)
- Dans les séries réanimatoires fréquence plus importante (25%)
- Impact de l'IRA sur le pronostic est difficile à préciser devant la médiocrité des données.
- Une série de 700 patients: 4,5% IRA et pronostic vital corrélé à la fonction rénale (créat et protéinurie) à l'entrée. https://www.kidney-international.org/article/S0085-2538(20)30255-6/fulltext
- Protéinurie 4 articles: 20 à 60% de protéinurie souvent dès le diagnostic suggérant une atteinte inaugurale
- Conforte une atteinte rénale directe reflet de la sévérité et d'une virémie https://www.medrxiv.org/content/10.1101/2020.03.04.20031120v2

Insuffisance rénale aigue et COVID-19

Kidney disease is associated with in-hospital death of patients with COVID-19

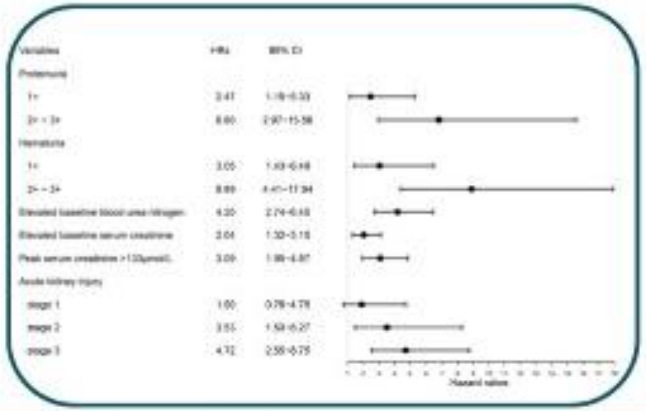
Patients Selection → Kidney disease → Association of kidney disease and in-hospital death

Confirmed COVID-19
Age > 18 y
No maintenance dialysis
No renal transplatation

N=701
Age 63y
52.4% male
42.4% severe
42.6% comorbidity
16.1% in-hospital death

Prevalence of kidney abnormalities

- 14.4% Elevated Scr
- 13.1% Elevated BUN
- 13.1% eGFR<60 ml/min/1.73m²
- 43.9% Proteinuria
- 26.7% Hematuria
- 5.1% Acute kidney injury



CONCLUSION:

Clinicians should increase their awareness of kidney disease in patients with COVID-19.

ISN kidney INTERNATIONAL

OFFICIAL JOURNAL OF THE INTERNATIONAL SOCIETY OF NEPHROLOGY

Y Cheng et al, 2020

HTA et COVID-19

- Aucune raison d'arrêter les IEC et sartans quand l'indication est là
- Aucune raison de les commencer sans indication

Society	Summary of recommendations	Last Statement Update
European Society of Hypertension	Recommend continuing ACEis/ARBs due to lack of evidence to support differential use in COVID-19 patients. In those with severe symptoms or sepsis, antihypertensive decisions should be made on a case-by-case basis taking into account current guidelines	March 12, 2020
European Society of Cardiology Council on Hypertension	Strongly encourage continuing ACEis/ARBs due to lack of evidence to support discontinuing	March 13, 2020
Hypertension Canada	Recommend continuing ACEis/ARBs due to lack of evidence that patients with hypertension or those treated with ACEis/ARBs are at higher risk of adverse outcomes from COVID-19 infection	March 13, 2020
Canadian Cardiovascular Society	Strongly encourage continuing ACEis/ARBs and Angiotensin Receptor Neprilysin Inhibitors due to a lack of clinical evidence to support withdrawal of these agents	March 15, 2020
The Renal Association, United Kingdom	Strongly encourage continuing ACEis/ARBs due to unconvincing evidence that these medications increase risk	March 15, 2020
International Society of Hypertension	Strongly recommend that the routine use of ACEis/ARBs to treat hypertension should not be influenced by concerns about COVID-19 in the absence of compelling data that ACEis/ARBs either improve or worsen susceptibility to COVID-19 infection nor do they affect the outcomes of those infected	March 16, 2020
American College of Physicians	Encourage continuing ACEis/ARBs because there is no evidence linking them to COVID-19 disease severity, and discontinuation of antihypertensive therapy without medical indication could in some circumstances result in harm	March 16, 2020
Spanish Society of Hypertension	Recommend that ACEis/ARBs should not be empirically stopped in patients who are already taking them; in seriously ill patients, changes should be made on a case-by-case basis	March 16, 2020
American Heart Association, Heart Failure Society of America, American College of Cardiology	Recommend continuing ACEis/ARBs for all patients already prescribed them	March 17, 2020
European Renal Association - European Dialysis and Transplant Association	Recommend continuing ACEis/ARBs in COVID-19 infection patients due to a lack of evidence to support differential use and the discontinuation of ACEis/ARBs in COVID-19 patients	March 17, 2020
American Society of Pediatric Nephrology	Strongly recommend continuing ACEis/ARBs until new evidence to the contrary becomes available	March 17, 2020
High Blood Pressure Research Council of Australia	Recommend continuing routine use of ACEis/ARBs. Patients should not cease blood pressure lowering medications unless advised to do so by their physician	March 18, 2020

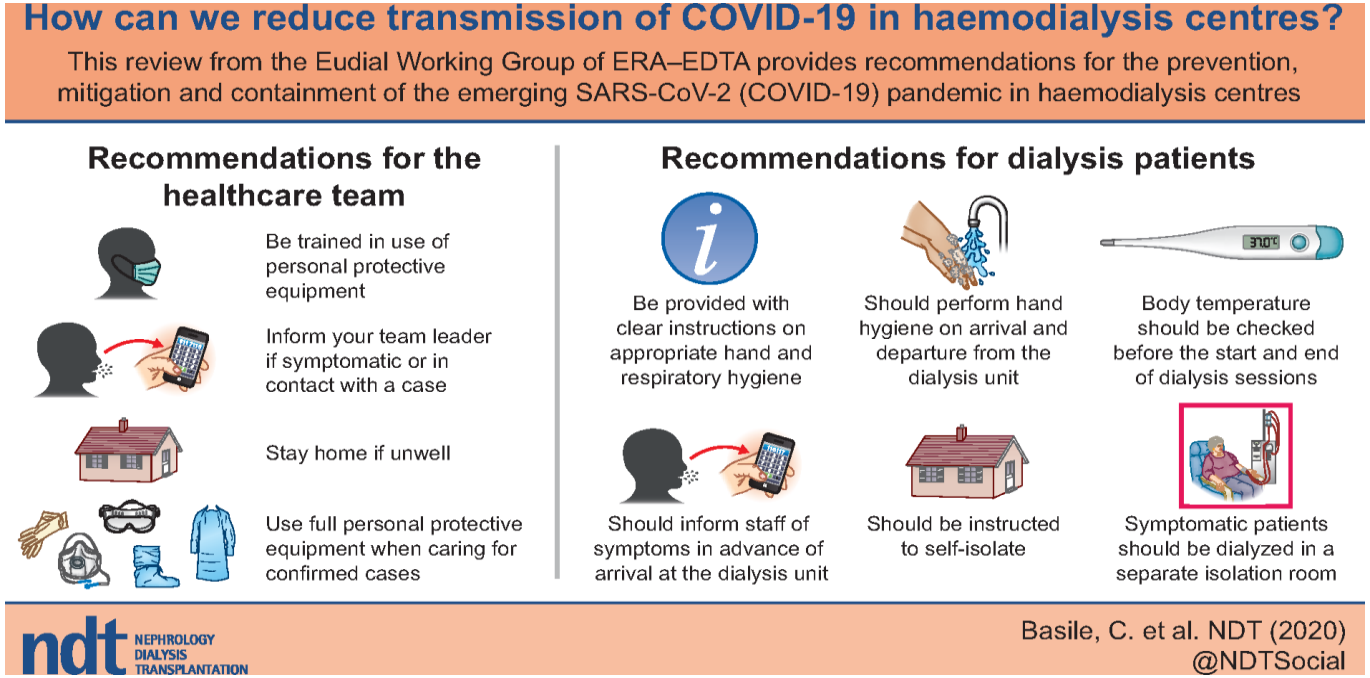
Dialyse et COVID-19

- Expérience Lombarde
- Deux centres touchés
  - Centre 1: 18 patients sur 60 dans structure périphérique en une semaine, isolement immédiat, un patient grave et pas de soignant touché
  - Sur 200 patients pas d'autre contamination
  - Centre 2: 4 sur 170 patients, isolement immédiat et pas de nouveau cas.
- L'isolement est capital.

https://sinitaly.org/wp-content/uploads/2020/03/JN2020Rombola.pdf

Dialyse et COVID-19

- Nous avons besoin de plus de données.
- Surtout des recommandations
  - https://www.ajkd.org/article/S0272-6386(20)30608-9/fulltext
  - https://academic.oup.com/ndt/advance-article/doi/10.1093/ndt/gfaa069/5810637
  - https://cjasn.asnjournals.org/content/early/2020/03/20/CJN.03340320.long
  - https://doi.org/10.1016/j.kint.2020.03.001

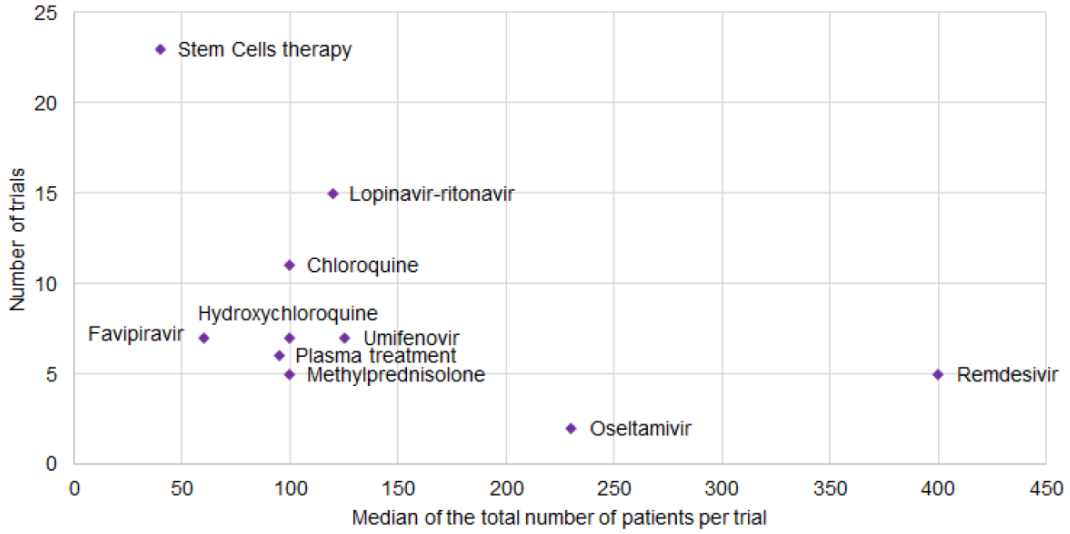


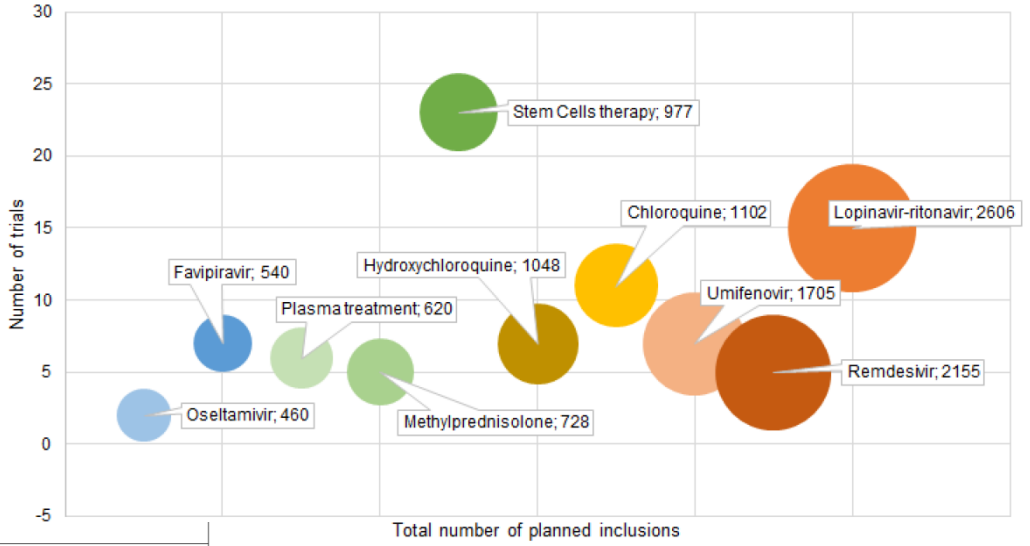
Dialyse et covid-19

- Screening: important d’identifier pour trier
- Isoler les positifs
- Des masques pour les patient(e)s
- Protéger les soignant(e)s: air et surface (charlotte, lunette, masque FFP2, surblouse/tablier et gants)
- Nettoyer, nettoyer et nettoyer
- Marseille: 7 patients

Traitement

- Inefficacité de Lopinavir–Ritonavir 10.1056/NEJMoa2001282
- Protocole marseillais: Hydroxychloroquine/azithromycine
- Essai chinois HCQ (30 patients 400 mg vs placebo 5 j): J7 PCR neg 86,7% HCQ+ vs 93,3% Placebo http://www.zjujournals.com/med/EN/10.3785/j.issn.1008-9292.2020.03.03
- 115 essais en cours dans le monde

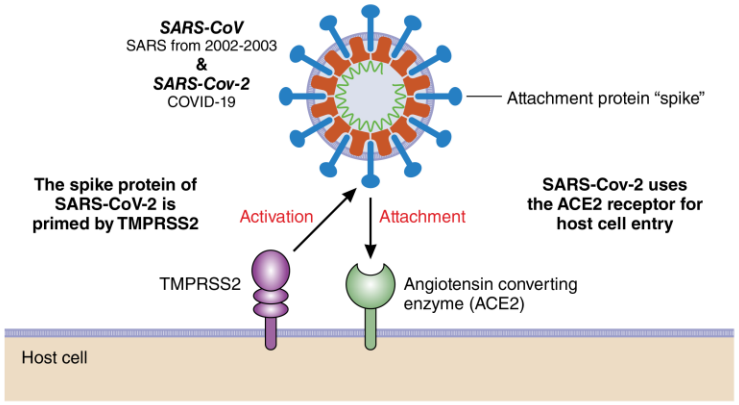


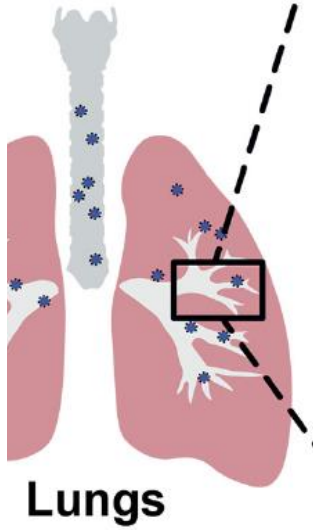


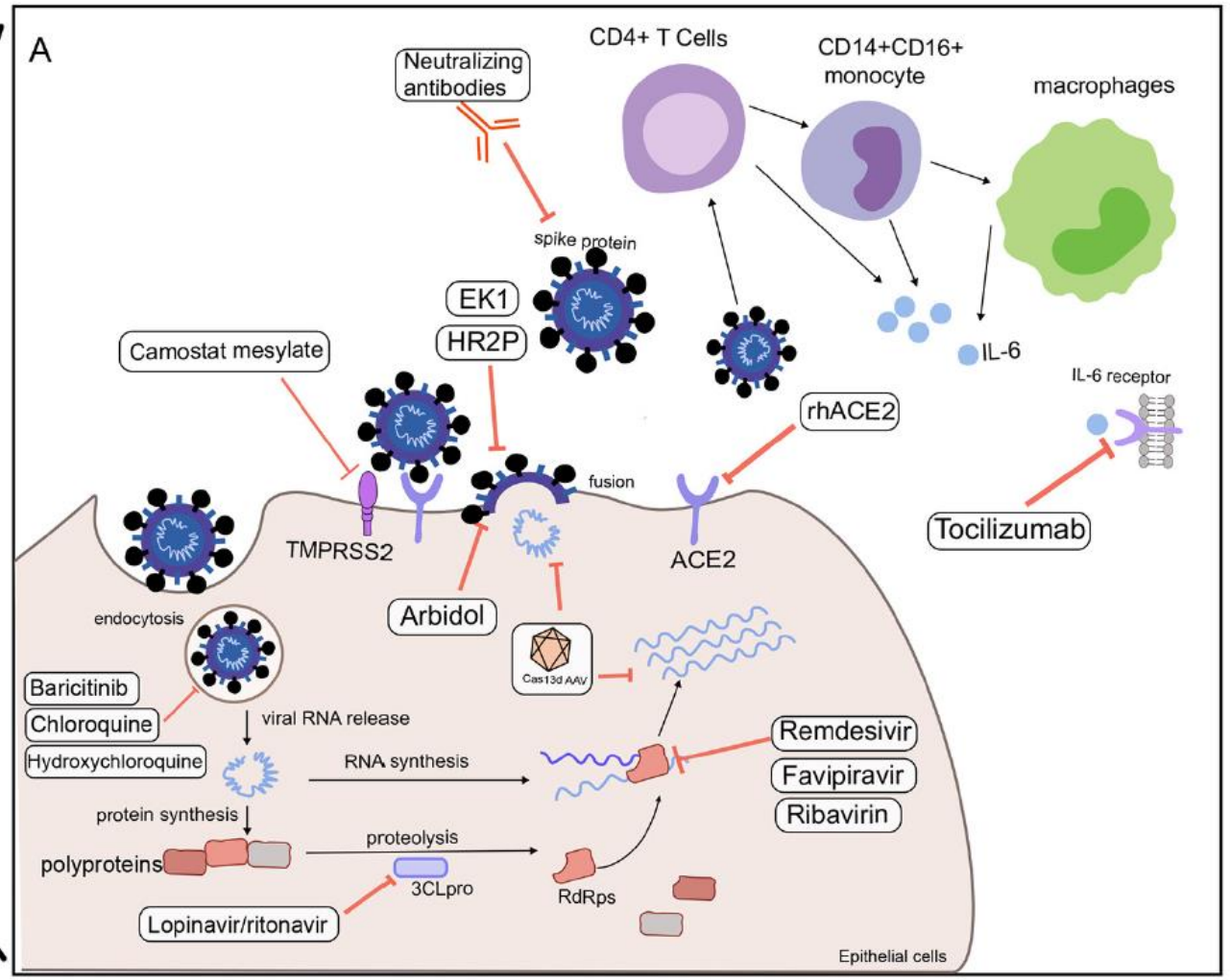
Study design		
	Randomized	92 (80)
	Non-randomized	12 (11)
	Single-arm	11 (10)
Blinding		
	Double-blind	15 (13)
	Single-blind	11 (10)
	Open-label	53 (46)
	Non-applicable†	6 (5)
	Unspecified	30 (26)

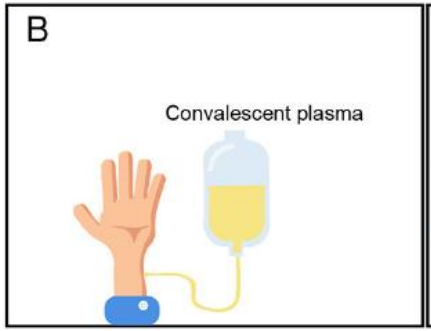
https://doi.org/10.1101/2020.03.18.20038190

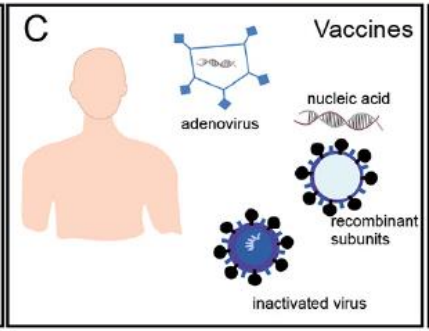
Traitement

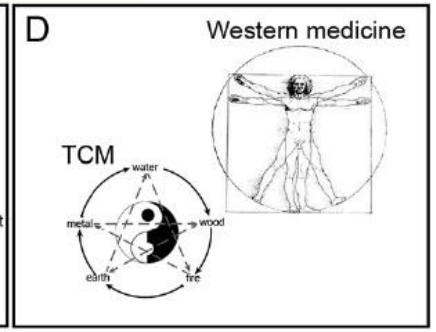












https://aac.asm.org/content/early/2020/03/18/AAC.00483-20

En conclusion

- Plus de questions que de réponses
- Le rein est une cible du SARS-COV2
- Conséquences rénales à long terme?
- Importance de protéger les soignants et les soignés.
- Nous allons avoir des réponses sur les thérapeutiques
- Méfiez vous des informations non validées, croisez vos sources, doutez et critiquez
- Une autre façon de visualiser: http://shinyapps.org/apps/corona/