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COVID-19 et rein : épisode 2

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COVID-19 et Rein

Episode 2

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AMU

AP-HM

Marseille

Nouvelles du front

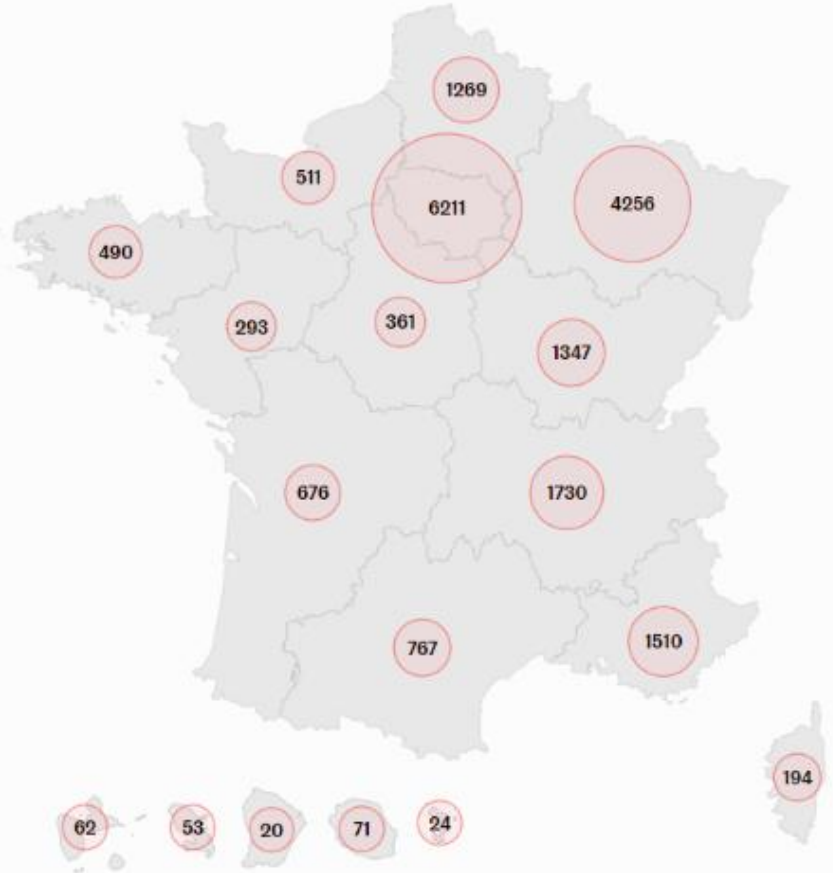
395 647 cas

17 241 morts

L'épidémie de Covid-19 en France

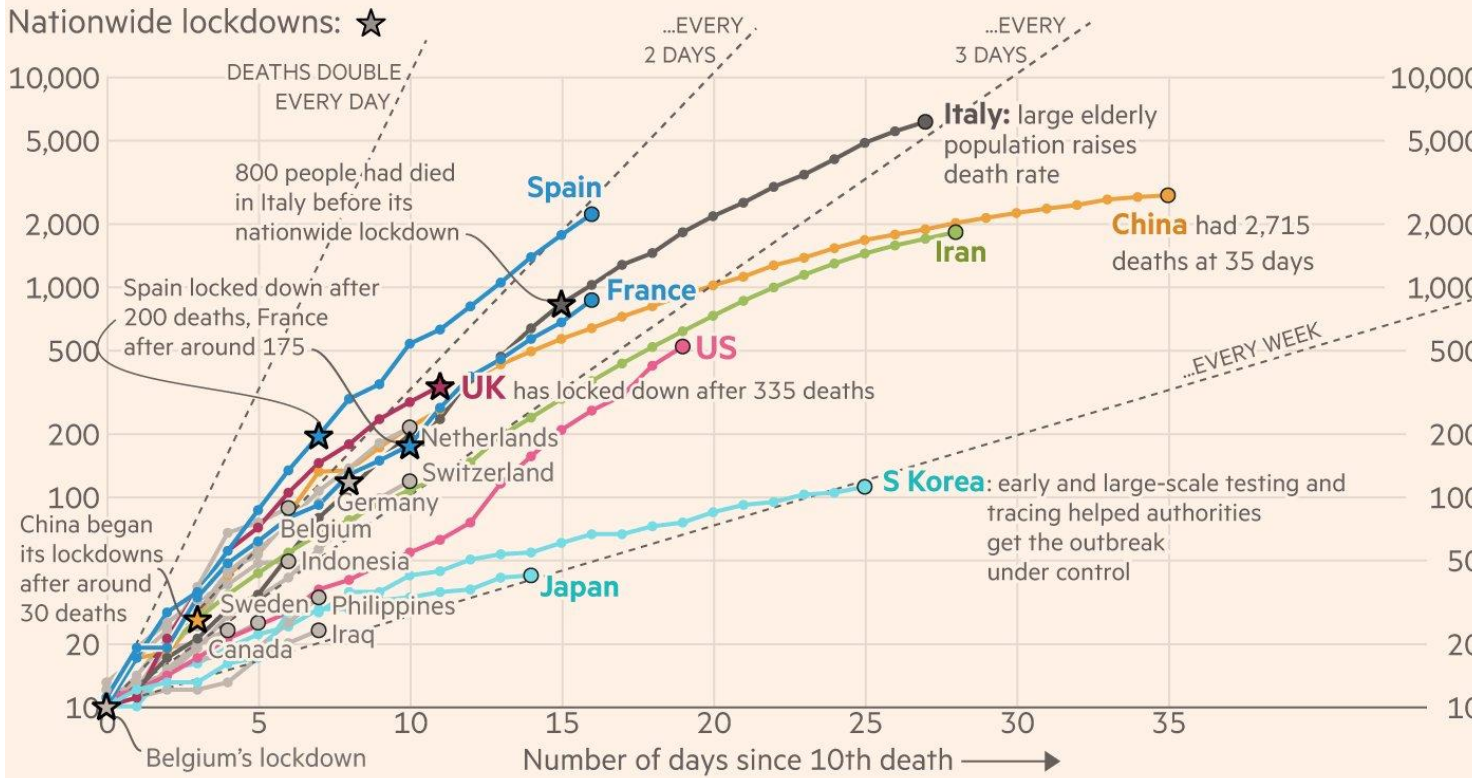
MIS À JOUR LE 24 MARS

Surveillez les régions pour obtenir plus d'informations.



Coronavirus deaths in Italy, Spain and the UK are increasing much more rapidly than they did in China

Cumulative number of deaths, by number of days since 10th death



FT graphic: John Burn-Murdoch / @jburnmurdoch
 Source: FT analysis of Johns Hopkins University, CSSE; Worldometers; FT research. Data updated March 23, 21:00 GMT
 © FT

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

March 16, 2020

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

Howard Bauchner, MD¹; Robert M. Golub, MD¹; Jody Zylke, MD¹

» [Author Affiliations](#) | [Article Information](#)

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

ONLINE FIRST FREE

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



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



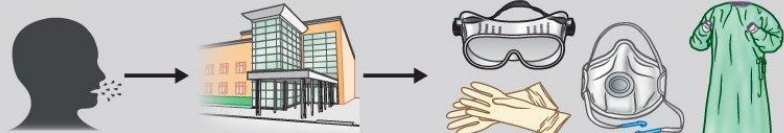
Healthcare staff should regularly wash their hands with soap and water

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

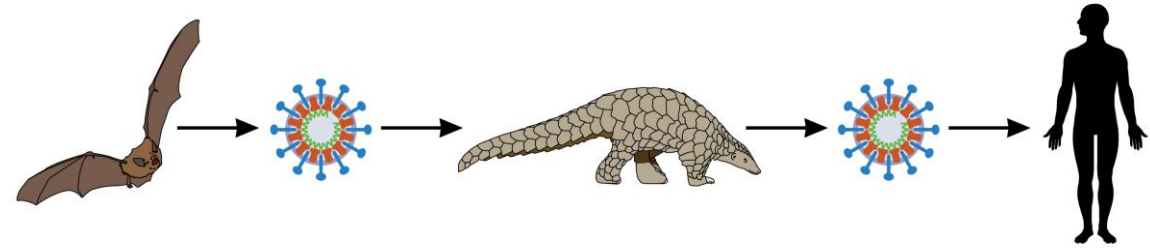
Dialyse in isolation. Staff in contact wear a disposable gown, glasses/visor, FFP3 mask, overshoes and double gloves

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.

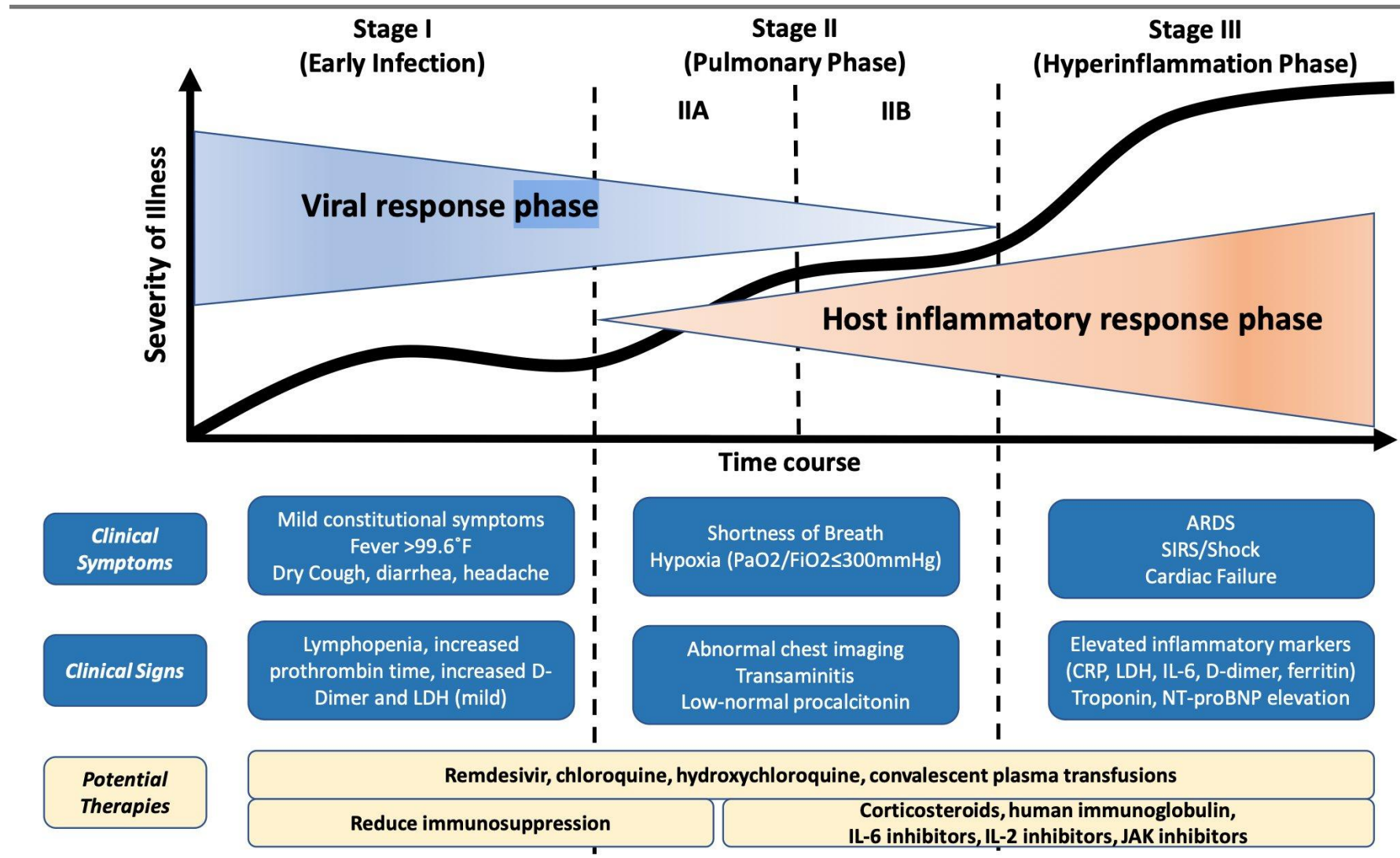
Cozzolino, M.
Clinical Kidney Journal (2020)
@CKJsocial

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

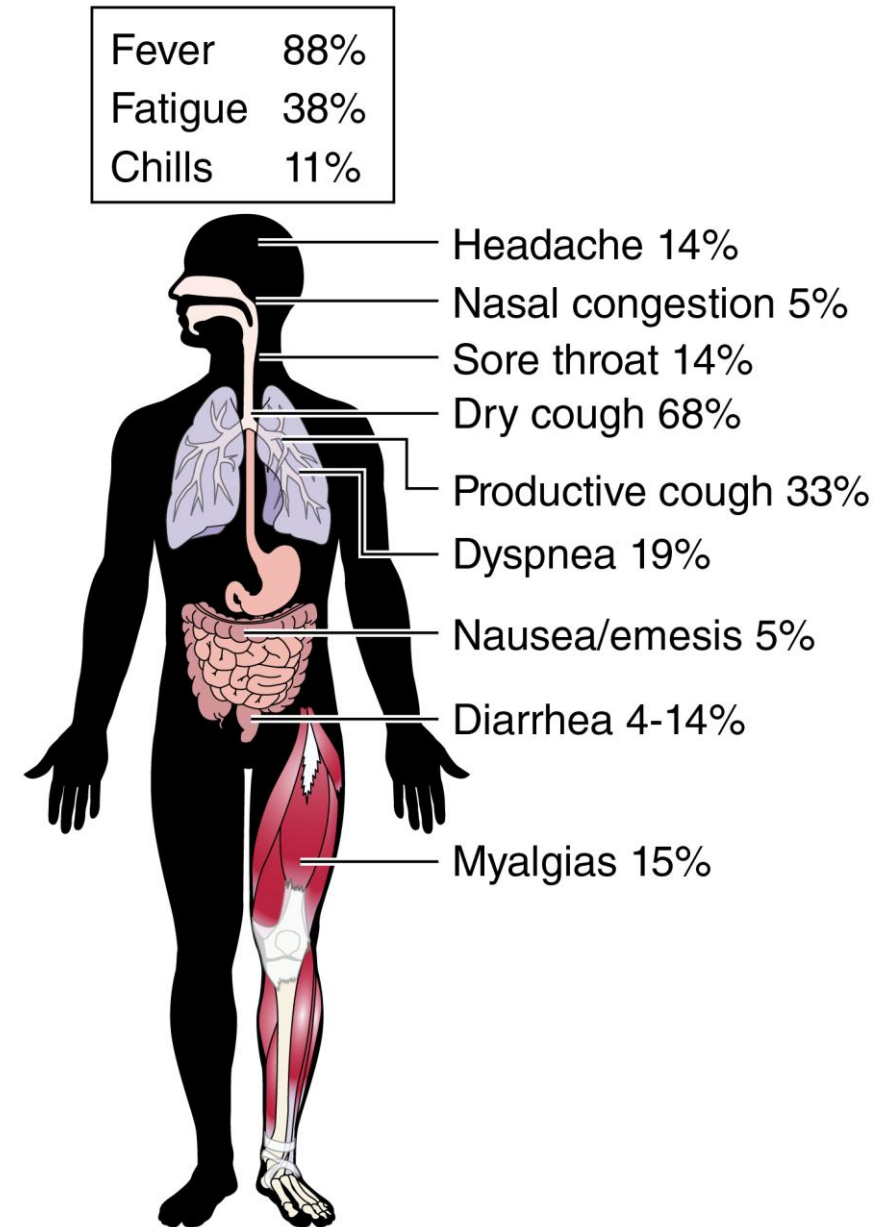


Symptomatology

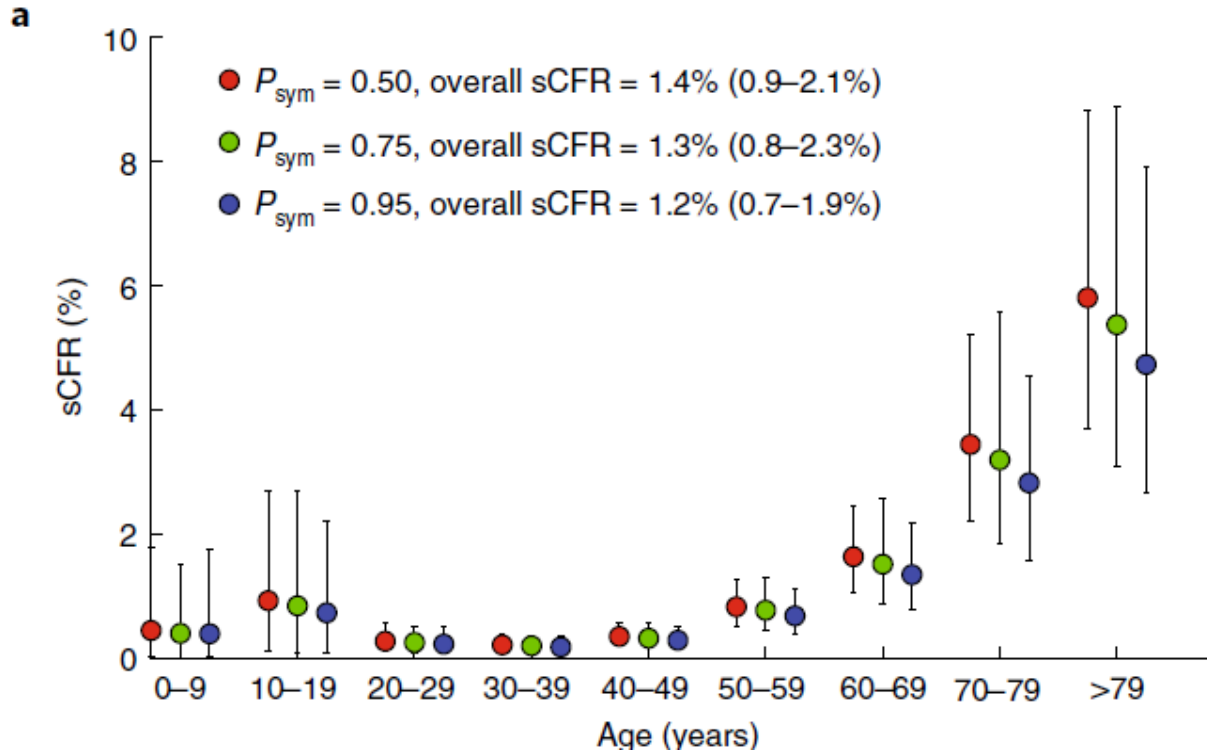


Symptomatologie

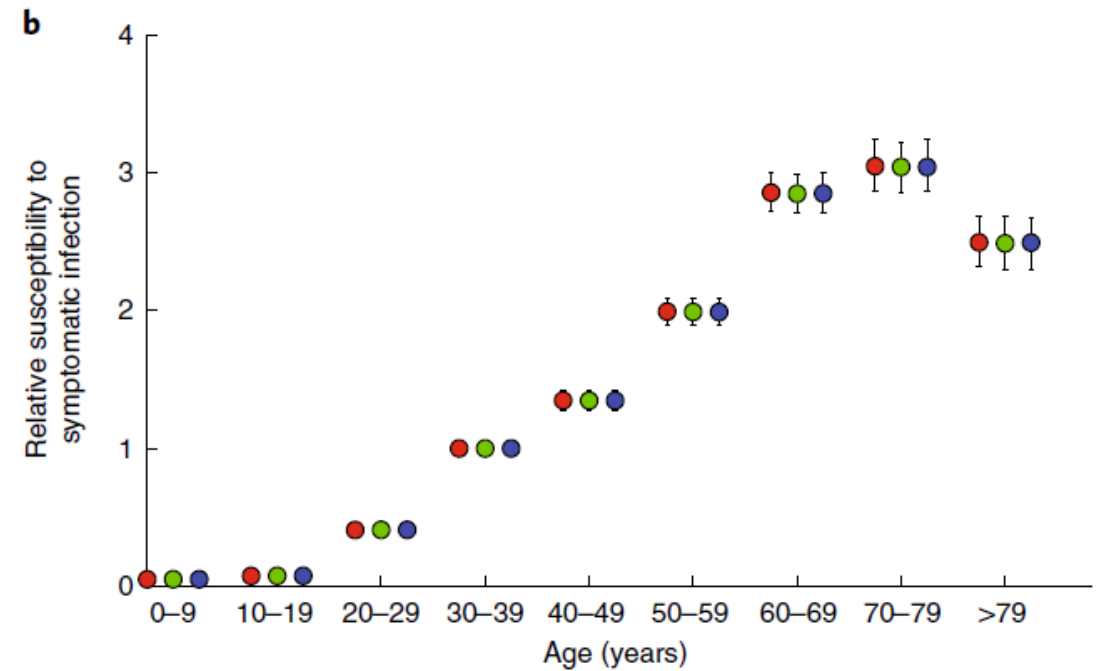
- La fièvre n'est pas forcément inaugurale
- Tableau de gastroentérite, y penser
- L'anosmie pourrait être un signe clinique
<https://www.sforl.org/wp-content/uploads/2020/03/Alerte-anosmie-COVID-19.pdf>
 - Pour l'instant pas d'article référencé
- Une période à risque d'aggravation entre J7 et J10
-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



Symptomatologie



Probabilité de mourir en Chine après avoir des symptômes



Risque relatif en Chine d'avoir des symptômes

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

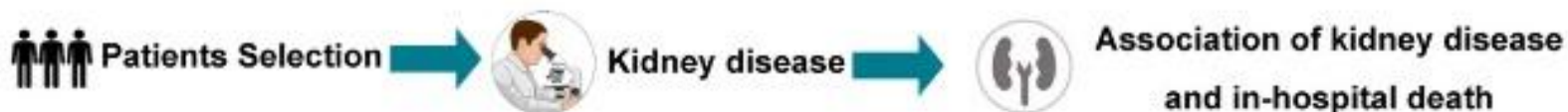
48,5% avec 3 ou plus comorbidités

Insuffisance rénale aiguë et COVID-19

- Des séries chinoises entre 2 et 5% d'insuffisance rénale aiguë. (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](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 aiguë et COVID-19

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

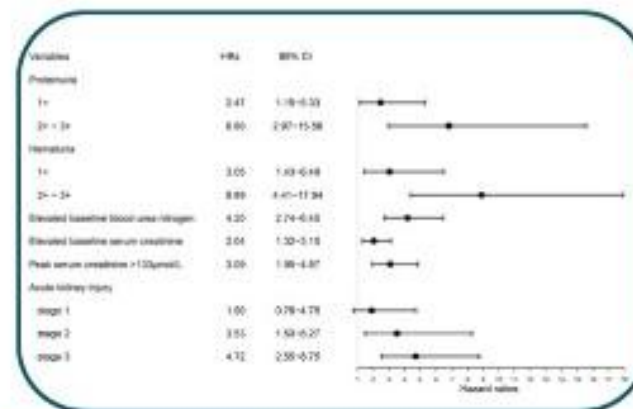


Confirmed COVID-19
Age > 18 y
No maintenance dialysis
No renal transplantation

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.

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 Nephilysin 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.

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://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>







How can we reduce transmission of COVID-19 in haemodialysis centres?

This review from the Eudial Working Group of ERA–EDTA provides recommendations for the prevention, mitigation and containment of the emerging SARS-CoV-2 (COVID-19) pandemic in haemodialysis centres

Recommendations for the healthcare team

-  Be trained in use of personal protective equipment
-  Inform your team leader if symptomatic or in contact with a case
-  Stay home if unwell
-  Use full personal protective equipment when caring for confirmed cases

Recommendations for dialysis patients

-  Be provided with clear instructions on appropriate hand and respiratory hygiene
-  Should perform hand hygiene on arrival and departure from the dialysis unit
-  Body temperature should be checked before the start and end of dialysis sessions
-  Should inform staff of symptoms in advance of arrival at the dialysis unit
-  Should be instructed to self-isolate
-  Symptomatic patients should be dialyzed in a separate isolation room

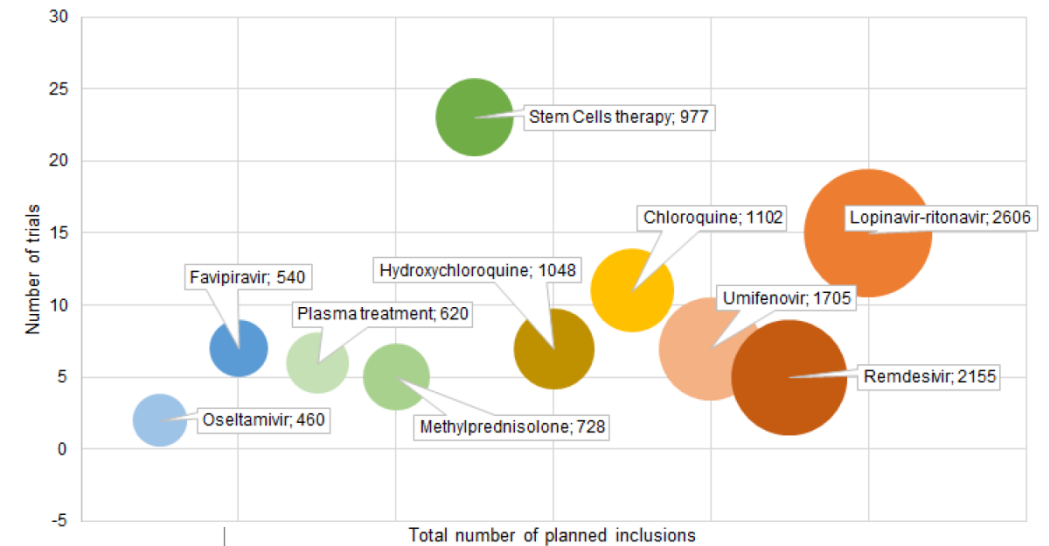
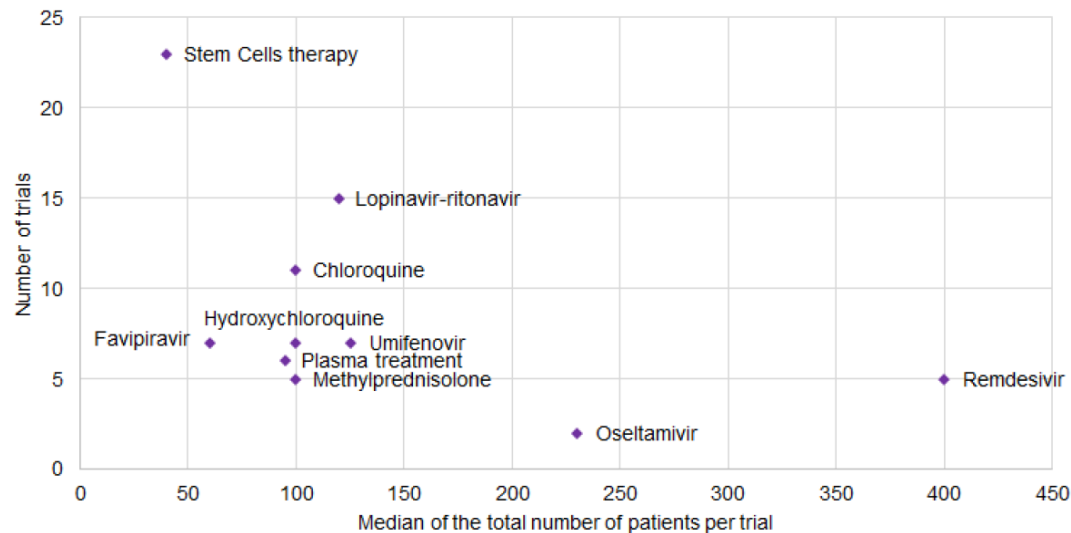
Dialyse et covid-19

- 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

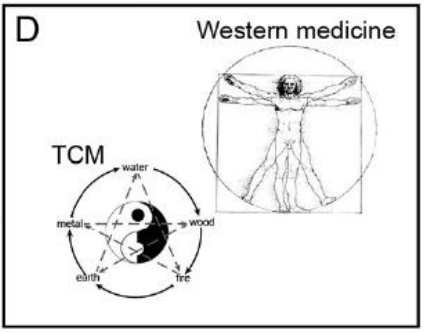
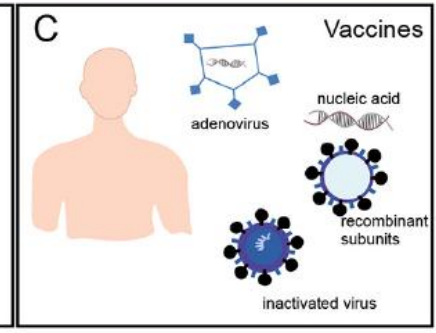
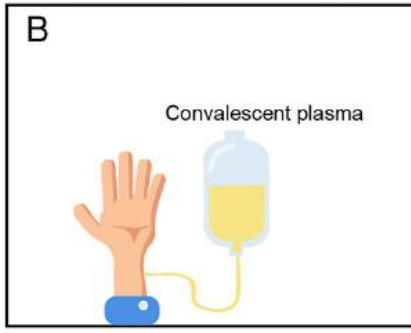
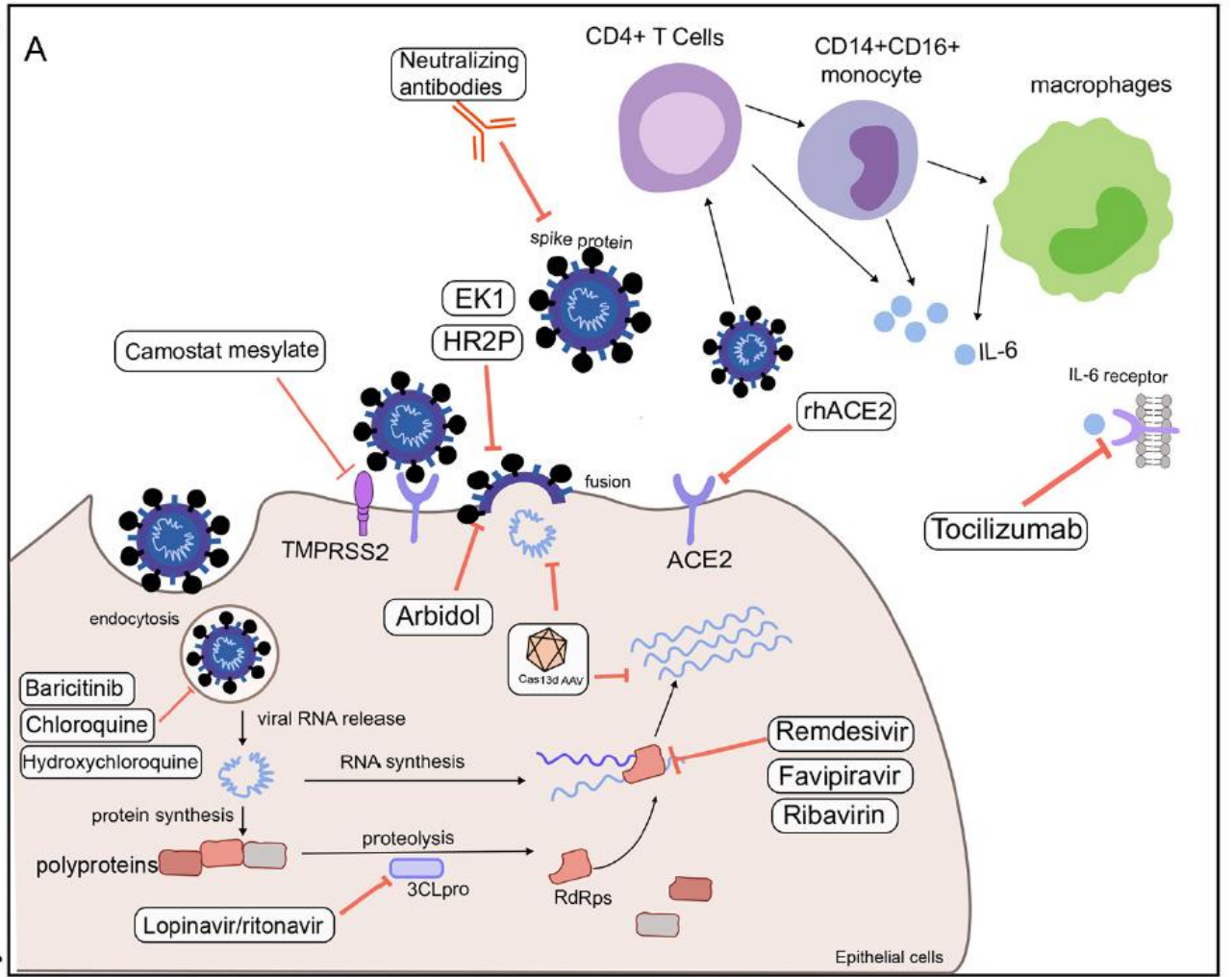
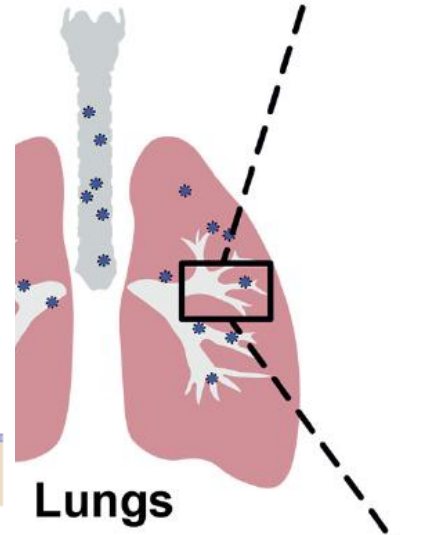
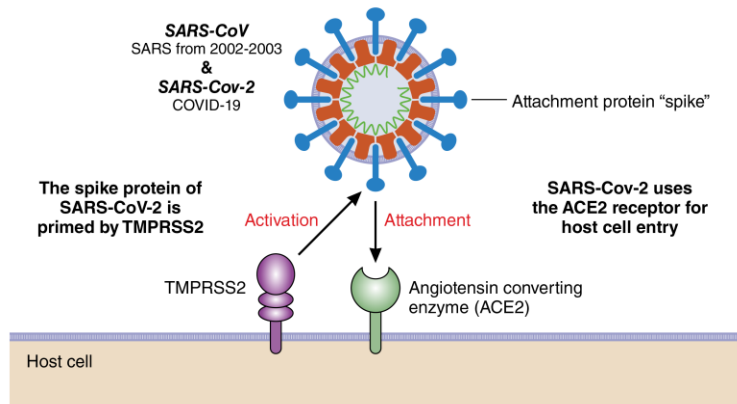


- Inefficacité de Lopinavir–Ritonavir 10.1056/NEJMoa2001282
- Protocole marseillais: Hydroxychloroquine/azithromycine
- Essai chinois HCQ (30 patients 400 mg vs placebo 5 j): J7 PCR neg
86,7% HCQ+ vs 93,3% Placebo <http://www.zjujournals.com/med/EN/10.3785/j.issn.1008-9292.2020.03.03>
- 115 essais en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

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/>