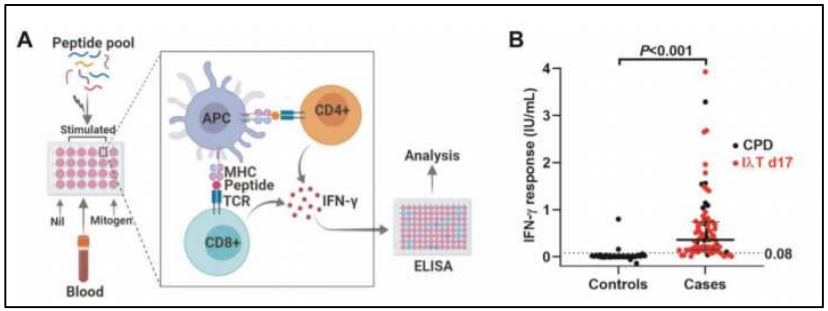
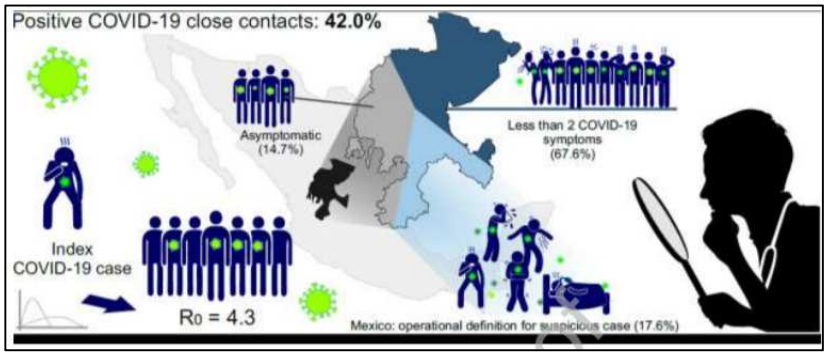
RICERCA BIBLIOGRAFICA COVID 19 SETTIMANA 12-18.10.2020 FONDAZIONE POLICLINICO UNIVERSITARIO A. GEMELLI IRCCS, UOC MALATTIE INFETTIVE DOTT.SSA ELEONORA TADDEI			
AUTORE/RIVISTA	**TITOLO**	**OUTCOME PRINCIPALE**	**ABSTRACT**
Gremese E et al EClinical Medicine https://www.sciencedirect.com/science/article/pii/S2589537020302972?via%3Dihub	Sarilumab use in severe SARS-CoV-2 pneumonia	Studio retrospettivo su 53 pazienti con infezione da SARS-CoV-2 (39 degenza ordinaria e 14 terapia intensiva) trattati con sarilumab EV off-label: si dimostra un buon profilo di risposta clinica e mortalità dopo trattamento, senza effetti avversi significativi.	Background: Interleukin-6 signal blockade showed preliminary beneficial effects in treating inflammatory response against SARS-CoV-2 leading to severe respiratory distress. Herein we describe the outcomes of off-label intravenous use of Sarilumab in severe SARS-CoV-2-related pneumonia. Methods: 53 patients with SARS-CoV-2 severe pneumonia received intravenous Sarilumab; pulmonary function improvement or Intensive Care Unit (ICU) admission rate in medical wards, live discharge rate in ICU treated patients and safety profile were recorded. Sarilumab 400 mg was administered intravenously on day 1, with eventual additional infusion based on clinical judgement, and patients were followed for at least 14 days, unless previously discharged or dead. Findings: Of the 53 SARS-CoV-2pos patients receiving Sarilumab, 39(73·6%) were treated in medical wards [66·7% with a single infusion; median PaO2/FiO2:146(IQR:120–212)] while 14(26·4%) in

			ICU [92·6% with a second infusion; median PaO2/FiO2: 112(IQR:100–141.5)]. Within the medical wards, 7(17·9%) required ICU admission, 4 of whom were re-admitted to the ward within 5–8 days. At 19 days median follow-up, 89·7% of medical inpatients significantly improved (46·1% after 24 h, 61·5% after 3 days), 70·6% were discharged from the hospital and 85·7% no longer needed oxygen therapy. Within patients receiving Sarilumab in ICU, 64·2% were discharged from ICU to the ward and 35·8% were still alive at the last follow-up. Overall mortality rate was 5·7%. Interpretation: IL-6R inhibition appears to be a potential treatment strategy for severe SARS-CoV-2 pneumonia and intravenous Sarilumab seems a promising treatment approach showing, in the short term, an important clinical outcome and good safety.
Murugesan K et al Clinical Infectious Diseases https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa1537/5920279	Interferon-gamma release assay for accurate detection of SARS-CoV-2 T cell response.	Test di rilascio di interferon gamma (IGRA) dimostra accuratezza per la diagnosi di infezione pregressa da SARS-CoV-2.	We investigated feasibility and accuracy of an interferon-gamma release assay (IGRA) for detection of T cell responses to SARS-CoV-2. Whole blood IGRA accurately distinguished between convalescents and uninfected healthy blood donors with a predominantly CD4+ T cell response. SARS-CoV-2 IGRA may serve as a useful diagnostic tool in managing the COVID-19 pandemic. 

Dequin PF et al JAMA https://jamanetwork.com/journals/jama/fullarticle/2770276	Effect of Hydrocortisone on 21-Day Mortality or Respiratory Support Among Critically Ill Patients With COVID-19	Trial clinico su 149 pazienti critici randomizzati a ricevere idrocortisone a bassa dose o placebo per infezione da SARS-CoV-2: nessuna differenza nel fallimento (morte o persistente necessità di ventilazione meccanica) fra i due gruppi.	Importance Coronavirus disease 2019 (COVID-19) is associated with severe lung damage. Corticosteroids are a possible therapeutic option. Objective To determine the effect of hydrocortisone on treatment failure on day 21 in critically ill patients with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and acute respiratory failure. Design, Setting, and Participants Multicenter randomized double-blind sequential trial conducted in France, with interim analyses planned every 50 patients. Patients admitted to the intensive care unit (ICU) for COVID-19–related acute respiratory failure were enrolled from March 7 to June 1, 2020, with last follow-up on June 29, 2020. The study intended to enroll 290 patients but was stopped early following the recommendation of the data and safety monitoring board. Interventions Patients were randomized to receive low-dose hydrocortisone (n = 76) or placebo (n = 73). Main Outcomes and Measures The primary outcome, treatment failure on day 21, was defined as death or persistent dependency on mechanical ventilation or high-flow oxygen therapy. Prespecified secondary outcomes included the need for tracheal intubation (among patients not intubated at baseline); cumulative incidences (until day 21) of prone position sessions, extracorporeal membrane oxygenation, and inhaled nitric oxide; Pao2:Fio2 ratio measured daily from day 1 to day 7, then on days 14 and 21; and the proportion of patients with secondary infections during their ICU stay. Results The study was stopped after 149 patients (mean age, 62.2 years; 30.2% women; 81.2% mechanically ventilated) were enrolled. One hundred forty-eight patients (99.3%) completed the study, and

			there were 69 treatment failure events, including 11 deaths in the hydrocortisone group and 20 deaths in the placebo group. The primary outcome, treatment failure on day 21, occurred in 32 of 76 patients (42.1%) in the hydrocortisone group compared with 37 of 73 (50.7%) in the placebo group (difference of proportions, –8.6% [95.48% CI, –24.9% to 7.7%]; P = .29). Of the 4 prespecified secondary outcomes, none showed a significant difference. No serious adverse events were related to the study treatment. Conclusions and Relevance In this study of critically ill patients with COVID-19 and acute respiratory failure, low-dose hydrocortisone, compared with placebo, did not significantly reduce treatment failure (defined as death or persistent respiratory support) at day 21. However, the study was stopped early and likely was underpowered to find a statistically and clinically important difference in the primary outcome.
Singh H et al Advances in Wound Care https://www.liebertpub.com/doi/10.1089/wound.2020.1309	Cutaneous manifestations of COVID-19: A systematic review.	Revisione sistematica dei lavori che trattano le lesioni cutanee associate a infezione da SARS-CoV-2.	OBJECTIVE: Coronavirus Disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is currently a pandemic. Although pulmonary health has been the primary focus of studies during the early days of COVID-19, development of a comprehensive understanding of this emergent disease requires knowledge of all possible disease manifestations in affected patients. This PRISMA-compliant review focuses on cutaneous manifestations reported in COVID-19 patients. APPROACH: Literature review was conducted using the PubMed database to examine various cutaneous manifestations related to the SARS-CoV-2 infection. Published articles (n=56) related to search criteria from the onset of the COVID-19 pandemic to June 30, 2020 were included. The primary literature articles included in this paper were mainly from France, Spain, Italy, and the UK. RESULTS: Unique to many other symptoms of COVID-19, its cutaneous manifestations

			have been found in people of all age groups including children. The cutaneous manifestations of COVID-19 are varied and include maculopapular, chilblain-like, urticarial, vesicular, livedoid, and petechial lesions. In addition, rashes are common in multisystem inflammatory syndrome in children (MIS-C), a new and serious health condition that shares symptoms with Kawasaki disease and is likely related to COVID-19. In addition, personal protective equipment (PPE)-related skin wounds are of serious concern since broken cutaneous barriers can create an opening for potential COVID-19 infections. Innovation and Conclusion: As this virus continues to spread silently, mainly through asymptomatic carriers, an accurate and rapid identification of these cutaneous manifestations may be vital to early diagnosis and lead to possible better prognosis in COVID-19 patients. This systematic review and photo atlas provide a detailed analysis of the skin pathologies related to COVID-19. Study of these cutaneous manifestations, their pathogenesis, as well their significance in human health will help define COVID-19 in its entirety which is a prerequisite to its effective management.
Martinez-Fierro M et al American Journal of Infection Control https://www.ajicjournal.org/article/S0196-6553(20)30898-1/fulltext	The role of close contacts of COVID-19 patients in the SARS-CoV-2 transmission: an emphasis on the percentage of non-evaluated positivity in Mexico.	Tracciamento degli 81 contatti stretti di 19 casi di infezione da SARS-CoV-2: il 42% dei contatti risulta positivo e di questi l'82.4% è asintomatico o paucisintomatico. Ne deriva l'importanza dello screening dei contatti di un caso indice.	OBJECTIVES: To determine the percentage of positivity of close contacts of coronavirus disease 19 (COVID-19) patients to depict the importance of asymptomatic infections in the patient-to-patient transmission of COVID-19. METHODS: One hundred subjects were included. Nineteen index COVID-19 cases and eighty-one traced close contacts were screened for coronavirus 2 of severe acute respiratory syndrome (SARS-CoV-2) using real-time reverse transcription-polymerase chain reaction (RT-PCR). Immunoglobulin M (IgM) and G (IgG) against SARS-CoV-2 were evaluated by rapid test. RESULTS: Thirty-four (42%) contacts in the study were positive for SARS-CoV-2. Twenty-three (67.6%) manifested less than two

			respiratory symptoms, and five (14.7%) remained asymptomatic. The average of positive contacts by index COVID-19 case (R0) was 4.3 and the mean of time of positive COVID-19 test at sampling time was 18.9 days. Positive antibody test against SARS-CoV-2 was observed in 16% of the participants. CONCLUSION: The proportion of close contacts of COVID-19 patients infected with SARS-CoV-2 (42%) and with less than two or with no respiratory symptoms (82.4%) was high in the study population. A low proportion of COVID-19 patients had a positive test for antibodies against SARS-CoV-2. The screening for SARS-CoV-2 in close contacts of COVID-19 positive patients should be encouraged to avoid spreading the infection and the expansion of the disease. 
Gasperetti A et al Europace https://academic.oup.com/europace/advance-article/doi/10.1093/europace/euaa216/5910968	Arrhythmic safety of hydroxychloroquine in COVID-19 patients from different clinical settings	Valutazione degli effetti di idrossiclorochina sull'elettrocardiogramma di 649 pazienti con COVID-19 trattati a domicilio, in degenza ordinaria o in terapia intensiva: nessuna aritmia mortale e solo modesto incremento dell'intervallo QTc	Aims: The aim of the study was to describe ECG modifications and arrhythmic events in COVID-19 patients undergoing hydroxychloroquine (HCQ) therapy in different clinical settings. Methods and results: COVID-19 patients at seven institutions receiving HCQ therapy from whom a baseline and at least one ECG at 48+ h were available were enrolled in the study. QT/QTc prolongation, QT-associated and QT-independent arrhythmic events, arrhythmic mortality, and overall mortality during HCQ therapy were assessed. A total of 649 COVID-19 patients (61.9 ± 18.7 years, 46.1% males) were enrolled. HCQ therapy was

		suggeriscono la sicurezza a breve termine del farmaco.	administrated as a home therapy regimen in 126 (19.4%) patients, and as an in-hospital-treatment to 495 (76.3%) hospitalized and 28 (4.3%) intensive care unit (ICU) patients. At 36–72 and at 96+ h after the first HCQ dose, 358 and 404 ECGs were obtained, respectively. A significant QT/QTc interval prolongation was observed (P < 0.001), but the magnitude of the increase was modest [+13 (9–16) ms]. Baseline QT/QTc length and presence of fever (P = 0.001) at admission represented the most important determinants of QT/QTc prolongation. No arrhythmic-related deaths were reported. The overall major ventricular arrhythmia rate was low (1.1%), with all events found not to be related to QT or HCQ therapy at a centralized event evaluation. No differences in QT/QTc prolongation and QT-related arrhythmias were observed across different clinical settings, with non-QT-related arrhythmias being more common in the intensive care setting. Conclusion: HCQ administration is safe for a short-term treatment for patients with COVID-19 infection regardless of the clinical setting of delivery, causing only modest QTc prolongation and no directly attributable arrhythmic deaths.

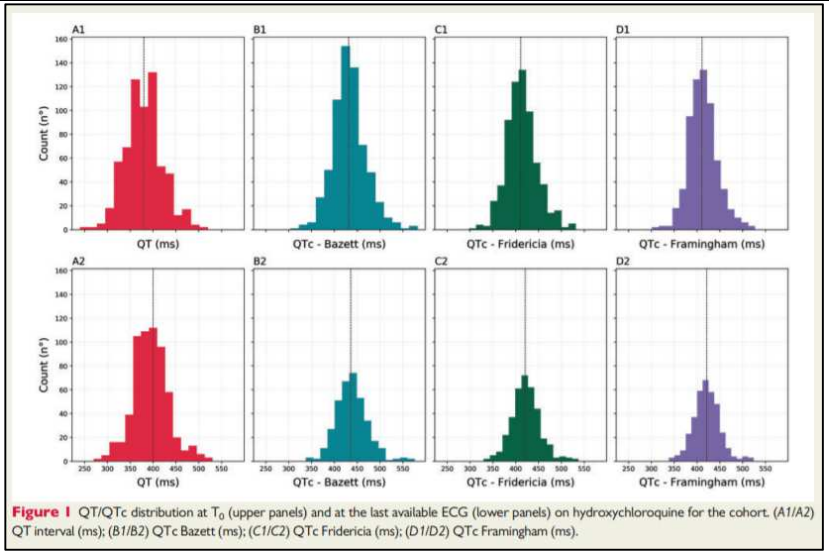
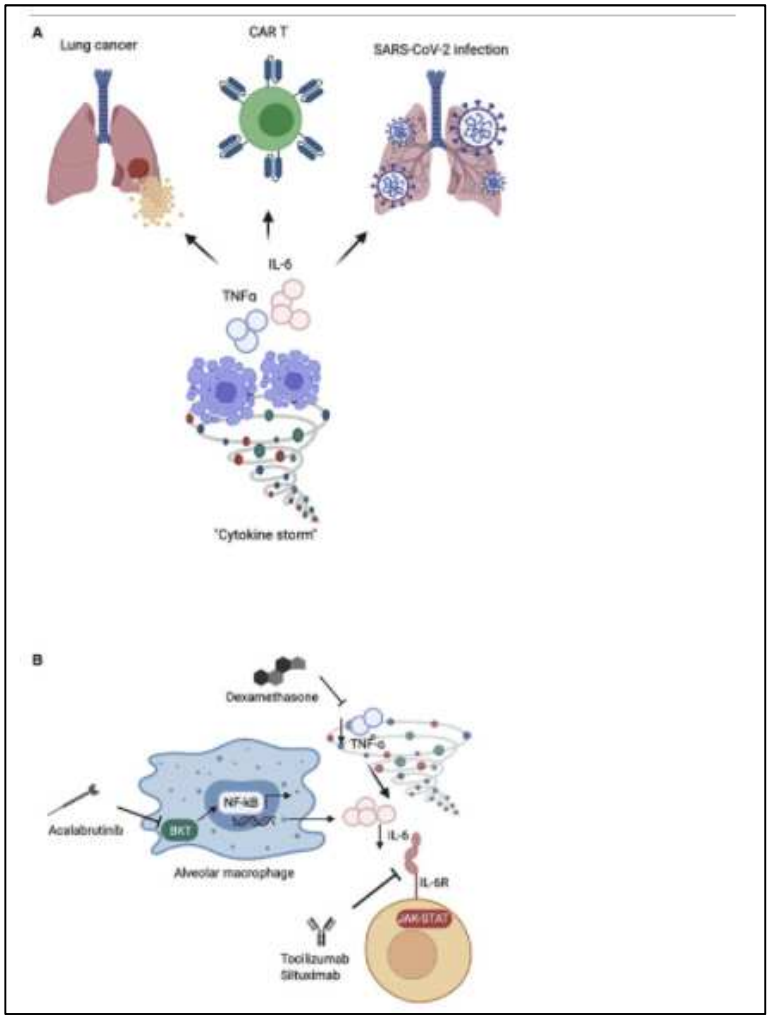
			 **Figure 1** QT/QTc distribution at T_0 (upper panels) and at the last available ECG (lower panels) on hydroxychloroquine for the cohort. (*A1/A2*) QT interval (ms); (*B1/B2*) QTc Bazett (ms); (*C1/C2*) QTc Fridericia (ms); (*D1/D2*) QTc Framingham (ms).
Hernandez-Gaduno E Pediatric Obesity https://onlinelibrary.wiley.com/doi/10.1111/ijpo.12740	Comorbidities that predict acute respiratory syndrome coronavirus 2 test positivity in Mexican Children: A case-control study.	Studio caso-controllo condotto in Messico che mostra una associazione fra obesità e rischio di contrarre COVID-19 per i bambini di entrambi i sessi. Viene suggerito il ruolo dell'infiammazione cronica, effetto dell'obesità, nell'aumentare la suscettibilità alle infezioni in genere.	Some comorbidities are risk factors for severe coronavirus disease (Covid-19) but it is unknown whether some increase susceptibility to Covid-19 in children. In this Mexican case-control study, contact with patients with Covid-19, or having obesity, or having diabetes, or hypertension or been immunosuppressed independently increased the risk for Covid-19 in the whole sample analysis. However, only contact history and obesity remained statistically significant in the separated analysis of girls and boys. The results suggest that obesity is not only associated with severe disease but also increases risk for Covid-19. Contrary to findings in adults, no difference between cases and controls was found for gender, presence of pneumonia or surrogates of severe disease including admission to intensive care unit, tracheal intubation or whether patient had died. This indicates that Covid-19 is less severe in children than adults. Future research is needed to establish the mechanisms involved in obesity and Covid-19 in children.

			TABLE 2 Multivariable logistic regression analysis for characteristics associated with increased risk for Covid-19 in the whole sample and by gender[a] **Parameter:** / **aOR (95% CI)** / ***P*** All children: Contact with Covid-19 — 2.2 (1.49-3.26) — <.0001 Obesity — 5.11 (2.78-9.39) — <.0001 Diabetes Mellitus — 3.02 (1.25-7.32) — 0.014 Hypertension — 3.95 (1.3-11.97) — 0.015 Immunosuppression — 1.59 (1.07-2.37) — 0.022 Girls only: Contact with Covid-19 — 2.51 (1.4-4.5) — 0.002 Obesity — 5.13 (2.0-13.15) — 0.0007 Boys only: Contact with Covid-19 — 1.83 (1.09-3.08) — 0.021 Obesity — 3.5 (1.67-7.34) — 0.0009 Abbreviations: aOR, adjusted odds ratio; CI, confidence interval. [a]after controlling by age (as a continuous variable), gender (in all children analysis) and all other characteristics listed in Table 1.
AlSamman M et al American Journal of Emergency Medicine https://www.ajemjournal.com/article/S0735-6757(20)30847-0/fulltext	Non-respiratory presentations of COVID-19, a clinical review.	Revisione delle caratteristiche di presentazione di COVID-19 che non interessano l'apparato respiratorio.	INTRODUCTION: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2 or COVID-19) is a highly infectious viral syndrome currently threatening millions of people worldwide. It is widely recognized as a disease of the pulmonary system, presenting with fever, cough, and shortness of breath. However, a number of extrapulmonary manifestations have been described in the literature. OBJECTIVE: In this review, we seek to provide a comprehensive summary of the hematologic, gastroenterological, renal, dermatologic, neurologic, and psychiatric manifestations of

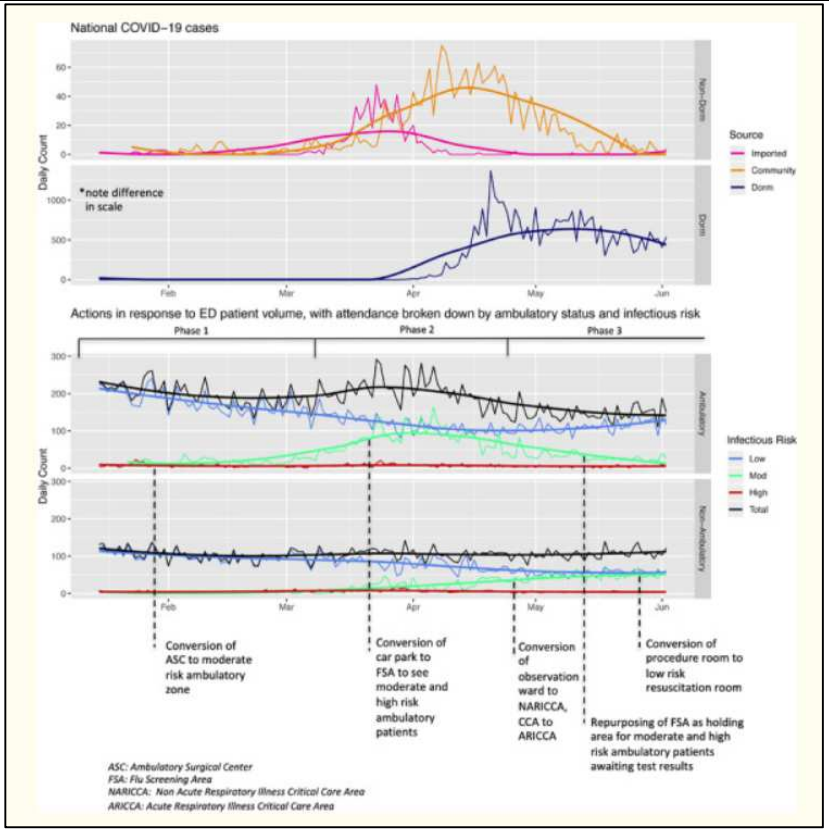
			COVID-19. DISCUSSION: Hematological presentations of COVID-19 include laboratory abnormalities such as decreased total lymphocyte count, prolonged prothrombin time (PT), elevated d-dimer, and increased lactate dehydrogenase (LDH). Several of these findings are associated with increased mortality among infected patients. The most common gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal pain. Furthermore, presence of viral RNA in patient stool suggests the possibility of additional testing modalities for COVID-19. Nephrological findings such as proteinuria, hematuria, and elevated BUN and creatinine levels have been observed. Additionally, several studies demonstrated that patients with COVID-19 who developed acute kidney injury (AKI) had a greater risk of mortality. The virus can also present with cutaneous symptoms such as erythematous rashes, urticaria, and chicken pox-like lesions. Neuropsychiatric symptoms have been described in the literature, and patients can exhibit findings consistent with viral encephalitis, cerebral vascular disease, peripheral nerve disorders, and psychosis. CONCLUSION: Although COVID-19 does usually present primarily with respiratory symptoms, the extra-pulmonary manifestations of the virus are unpredictable and varied. Better understanding and awareness of these symptoms can lead to more efficient diagnosis, rapid treatment, isolation, and decreased spread of the disease.
Arturo EC et al Cell https://www.cell.com/cell/fulltext/S0092-8674(20)31224-1	Lifted Up from Lockdown	Il lock-down ha avuto effetti positivi sulla comunità scientifica? Certamente ha incoraggiato la collaborazione fra gruppi e la condivisione di grandi quantità di dati e ha reso più	The pandemic has impacted every scientist differently. Many negative impacts are frequently discussed. Here we highlight unexpected positives that we have found and hope will persist: improved access to experts; deeper and broader human engagement among colleagues, collaborators, and competitors; and significant democratization of research.

		agevole il contatto con gli esperti in ogni campo.	
Rosenquist JL et al NEJM https://www.nejm.org/doi/full/10.1056/NEJMp2018857	The Stress of Bayesian Medicine — Uncomfortable Uncertainty in the Face of Covid-19	L'assenza di certezze che caratterizza la pandemia di COVID-19 priva i medici della possibilità di rassicurare con fondamento i pazienti, mentre l'emergere di nuove evidenze sulla malattia li sottopone a uno "shock" informativo senza precedenti.	A statistic commonly cited by medical educators is that the corpus of medical knowledge doubles approximately every 2 years. But though that may very well be true in the aggregate, the day-to-day practice of medicine does not change at a breakneck pace. The treatment of the vast majority of human ailments is based on decades of knowledge and is built on a foundation of research into normal human body functioning and the origin and nature of disease states and the ways in which the field of medicine can detect and treat them.
McCaw ZR et al Clinical Infectious Diseases https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa1563/5923375?searchresult=1	Survival analysis of treatment efficacy in comparative COVID-19 studies	Considerazioni sulle analisi di sopravvivenza utilizzate negli studi su COVID-19: necessario presentare il dato tramite diversi indicatori, in particolare paragonando i tasso di mortalità e non solamente tramite hazard ratio o differenza nella sopravvivenza media.	For survival analysis in comparative COVID-19 trials, the routinely used hazard ratio may not provide a meaningful summary of the treatment effect. The mean survival time difference/ratio is an intuitive, assumption-free alternative. However, for short-term studies, landmark mortality rate differences/ratios are more clinically relevant and should be formally analyzed and reported.
Turnquist C et al Cancer Cell https://www.sciencedirect.com/science/article/pii/	Cytokine Storms in Cancer and COVID-19.	La tempesta citochinica, già studiata in oncologia, è attualmente oggetto di attenzione nell'infezione da SARS-CoV-2, con una	During the COVID-19 pandemic, research on "cytokine storms" has been reinvigorated in the field of infectious disease, but it also has particular relevance to cancer research. Interleukin-6 (IL-6) has emerged as a key component of the immune response to SARS-CoV-2, such that the repurposing of anti-IL-6 therapeutics for COVID-19

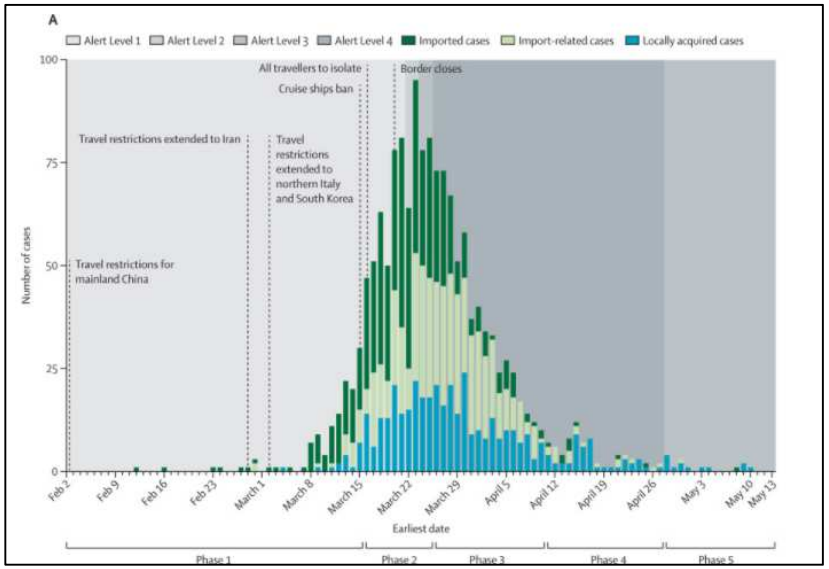
S1535610820304931?via%3Dihub		proficua mutazione di conoscenze fra i due ambiti.	is now a major line of investigation, with several ongoing clinical trials. We lay a framework for understanding the role of IL-6 in the context of cancer research and COVID-19 and suggest how lessons learned from cancer research may impact SARS-CoV-2 research and vice versa. 

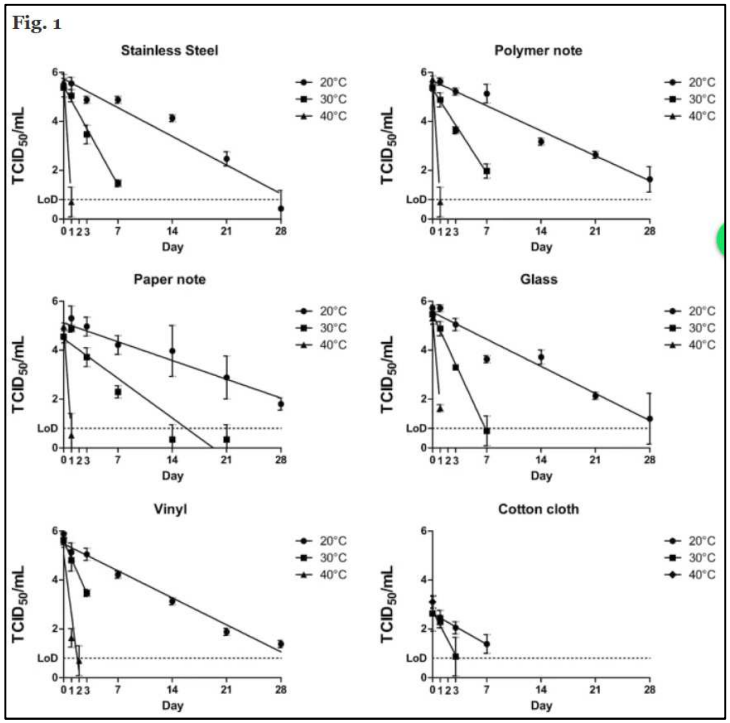
Zhang W et al Internal and Emergency Medicine https://link.springer.com/article/10.1007/s11739-020-02517-7	Clinical characteristics and outcomes in elderly with coronavirus disease 2019 in Beijing, China: a retrospective cohort study.	Studio retrospettivo sulle caratteristiche cliniche di 27 pazienti anziani con infezione da SARS-CoV-2 all'interno di una coorte di 91 pazienti ricoverati in Cina.	A novel human coronavirus, known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has caused a global pandemic of coronavirus disease 2019 (COVID-19). In this study, we aimed to explore the clinical characteristics and outcomes in older patients with COVID-19. Ninety-one patients with SARS-CoV-2 infection were included in the study, 27 of which (29.67%) were elderly. The median age of these 27 patients was 74.9 years (interquartile range 68-82; range 65-94 years), and 15 (55.56%) were female. Elderly with COVID-19 in Beijing (China) were more likely to have underlying comorbidities and more frequently tended to have critical illness and suffer from more complications. The main treatments of the elderly consisted of symptomatic and respiratory support. The most frequent complications in the elderly were pleural effusion [10, (37.04%)], secondary infection [7, (25.93%)], and kidney damage [7, (25.93%)]. Six (22.22%) of the 27 elderly patients received invasive ventilation (three of them switched to extracorporeal membrane oxygenation). As of March 7, 20 (74.07%) of the 27 elderly patients were discharged, two (7.41%) were still hospitalized, and five died; the mortality in the elderly was 18.52%. Age was associated with the mortality in patients with COVID-19 (OR 0.82; 95% CI 0.70-0.97; P = 0.019). Therefore, more attention should be paid to the treatment of comorbidities and complications in elderly patients.
Meredith JW et al JAMA https://jamanetwork.com/journals/jama/fullarticle/2771580	Preserving Elective Surgeries in the COVID-19 Pandemic and the Future	La chirurgia elettiva è per definizion non urgente, ma necessaria. Le conseguenze del suo stop durante la pandemia da COVID-19 sono notevoli.	Cancel everything" has trended as a hashtag during the coronavirus disease 2019 (COVID-19) pandemic, and for good reason. The pandemic has touched virtually every aspect of society, substantially altering, and at its onset halting, the very ways nearly every person in the United States works, learns, lives, and maintains health.

			The practice of surgery has not been immune, with emergency declarations by many states to suspend elective procedures and office visits in mid-March. While only temporary, this abrupt cessation of surgery has had far-reaching implications that can inform future approaches in the context of both crisis and uncertainty.
Liu Z et al The Journal of the American College of Emergency Physicians https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7537534/	Dynamic emergency department response to the evolving COVID-19 pandemic: the experience of a tertiary hospital in Singapore	Esperienza da un ospedale di terzo livello a Singapore sulla gestione del departimento di emergenza-accettazione nelle diverse fasi della pandemia da COVID-19.	The coronavirus disease 2019 (COVID-19) pandemic has placed large stressors on emergency departments (EDs) worldwide. As the pandemic progressed, EDs faced changing patient epidemiology and numbers. Our ED needed to rapidly transform to deal with the risk of COVID-19. Having limited floor space, we opted for a phased, dynamic response that allowed us to adapt the ED multiple times as the epidemiology of the pandemic evolved. The principles behind our response include guiding ED operations with data, enhancing infection control practices, and being prepared to transform areas of the ED to care for different groups of patients. Our experience can serve to guide other EDs in planning their response to surge capacity and ED operations during such pandemics.

			
Jefferis S et al The Lancet https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30225-5/fulltext	COVID-19 in New Zealand and the impact of the national response: a descriptive epidemiological study.	Studio delle caratteristiche di 1503 casi di infezione da SARS-CoV-2 registrati in Nuova Zelanda, cessati dal 13 maggio 2020 grazie alle misure di contenimento adottate dal Paese.	Background: In early 2020, during the COVID-19 pandemic, New Zealand implemented graduated, risk-informed national COVID-19 suppression measures aimed at disease elimination. We investigated their impacts on the epidemiology of the first wave of COVID-19 in the country and response performance measures. Methods: We did a descriptive epidemiological study of all laboratory-confirmed and probable cases of COVID-19 and all patients tested for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in New Zealand from Feb 2 to May 13, 2020, after which time community transmission ceased. We extracted data

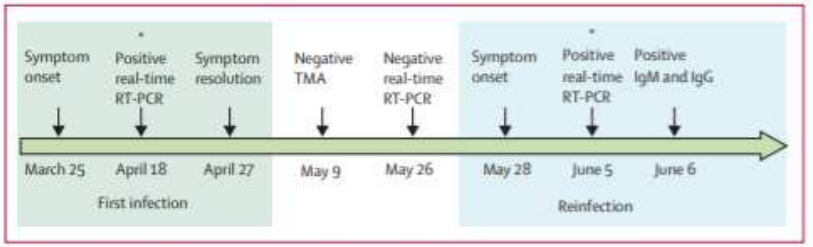
			from the national notifiable diseases database and the national SARS-CoV-2 test results repository. Demographic features and disease outcomes, transmission patterns (source of infection, outbreaks, household transmission), time-to-event intervals, and testing coverage were described over five phases of the response, capturing different levels of non-pharmaceutical interventions. Risk factors for severe outcomes (hospitalisation or death) were examined with multivariable logistic regression and time-to-event intervals were analysed by fitting parametric distributions using maximum likelihood estimation. Findings: 1503 cases were detected over the study period, including 95 (6·3%) hospital admissions and 22 (1·5%) COVID-19 deaths. The estimated case infection rate per million people per day peaked at 8·5 (95% CI 7·6–9·4) during the 10-day period of rapid response escalation, declining to 3·2 (2·8–3·7) in the start of lockdown and progressively thereafter. 1034 (69%) cases were imported or import related, tending to be younger adults, of European ethnicity, and of higher socioeconomic status. 702 (47%) cases were linked to 34 outbreaks. Severe outcomes were associated with locally acquired infection (crude odds ratio [OR] 2·32 [95% CI 1·40–3·82] compared with imported), older age (adjusted OR ranging from 2·72 [1·40–5·30] for 50–64 year olds to 8·25 [2·59–26·31] for people aged ≥80 years compared with 20–34 year olds), aged residential care residency (adjusted OR 3·86 [1·59–9·35]), and Pacific peoples (adjusted OR 2·76 [1·14–6·68]) and Asian (2·15 [1·10–4·20]) ethnicities relative to European or other. Times from illness onset to notification and isolation progressively decreased and testing increased over the study period, with few disparities and increasing coverage of females, Māori, Pacific peoples, and lower socioeconomic groups.

			Interpretation: New Zealand's response resulted in low relative burden of disease, low levels of population disease disparities, and the initial achievement of COVID-19 elimination. 
Riddell S et al Virology Journal https://virologyj.biomedcentral.com/articles/10.1186/s12985-020-01418-7	The effect of temperature on persistence of SARS-CoV-2 on common surfaces	Studio sul ruolo dei fomiti nella trasmissione di SARS-CoV-2 che rileva una sopravvivenza fino a 28 giorni a 20°C sulle superfici non porose, partendo da un inoculo considerato pari a quello massimo escreto dai pazienti infetti (3.38×105/10 µL).	Background: The rate at which COVID-19 has spread throughout the globe has been alarming. While the role of fomite transmission is not yet fully understood, precise data on the environmental stability of SARS-CoV-2 is required to determine the risks of fomite transmission from contaminated surfaces. Methods: This study measured the survival rates of infectious SARS-CoV-2, suspended in a standard ASTM E2197 matrix, on several common surface types. All experiments were carried out in the dark, to negate any effects of UV light. Inoculated surfaces were incubated at 20 °C, 30 °C and 40 °C and sampled at various time points. Results: Survival rates of SARS-CoV-2 were determined at different temperatures and D-values, Z-values and half-life were calculated.

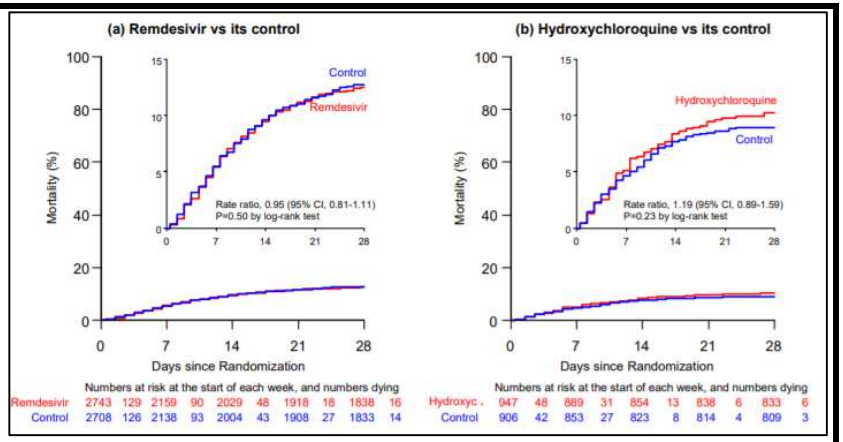
			We obtained half lives of between 1.7 and 2.7 days at 20 °C, reducing to a few hours when temperature was elevated to 40 °C. With initial viral loads broadly equivalent to the highest titres excreted by infectious patients, viable virus was isolated for up to 28 days at 20 °C from common surfaces such as glass, stainless steel and both paper and polymer banknotes. Conversely, infectious virus survived less than 24 h at 40 °C on some surfaces. Conclusion: These findings demonstrate SARS-CoV-2 can remain infectious for significantly longer time periods than generally considered possible. These results could be used to inform improved risk mitigation procedures to prevent the fomite spread of COVID-19. Fig. 1 

Diao B et al Clinical Microbiology and Infection https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(20)30611-X/fulltext	Accuracy of a nucleocapsid protein antigen rapid test in the diagnosis of SARS-CoV-2 infection.	Studio dell'accuratezza di un test antigenico rapido per SARS-CoV-2 basato sulla immunocromatografia a fluorescenza e diretto contro la proteina del nucleocapside (NP): elevata specificità e relativamente alta sensibilità, adeguate allo scopo cui saranno preposti i test antigenici (tracciare i soggetti maggiormente contagiosi per spezzare le catene di trasmissione).	OBJECTIVE: Rapid, reliable, and easy-to-implement diagnostics that can be adapted in early SARS-CoV-2 diagnosis are critical to combat the epidemic. SARS-CoV-2 nucleocapsid protein (NP) is an ideal target for viral antigen-based detection. A rapid and convenient method was developed based on fluorescence immunochromatographic (FIC) assay to detect the SARS-CoV-2 NP antigen. However, the accuracy of this diagnostic method needs to be examined. METHODS: This prospective study was carried out between February 10 and 15, 2020 in 7 hospitals of Wuhan and 1 hospital of Chongqing, China. Participants with clinically suspected SARS-CoV-2 infection were enrolled. NP antigen testing by FIC assay and nucleic acid (NA) testing by RT-PCR were performed simultaneously in a blind manner with the same nasopharyngeal swab sample. The diagnostic accuracy of NP antigen testing was calculated by taking NA testing of RT-PCR as reference standard, in which samples with cycle threshold (Ct) value </= 40 were interpreted as SARS-CoV-2 positives. RESULTS: A total of 253 participants were enrolled and 2 participants were excluded from the analyses due to invalid NP testing results. Of 251 participants (99.2%) that were included in the diagnostic accuracy analysis, a total of 201 participants (80.1%) had a Ct value </=40. With Ct value 40 as the cut-off of NA testing, the sensitivity, specificity, and percent agreement of the FIC assay was 75.6% (95% CI 69.0%-81.3%), 100% (95% CI 91.1%-100%), and 80.5% (95% CI 75.1%-84.9%), respectively. CONCLUSIONS: With RT-PCR assay as reference standard, NP antigen testing by FIC assay shows high specificity and relative high sensitivity in SARS-CoV-2 diagnosis in the early phase of infection.

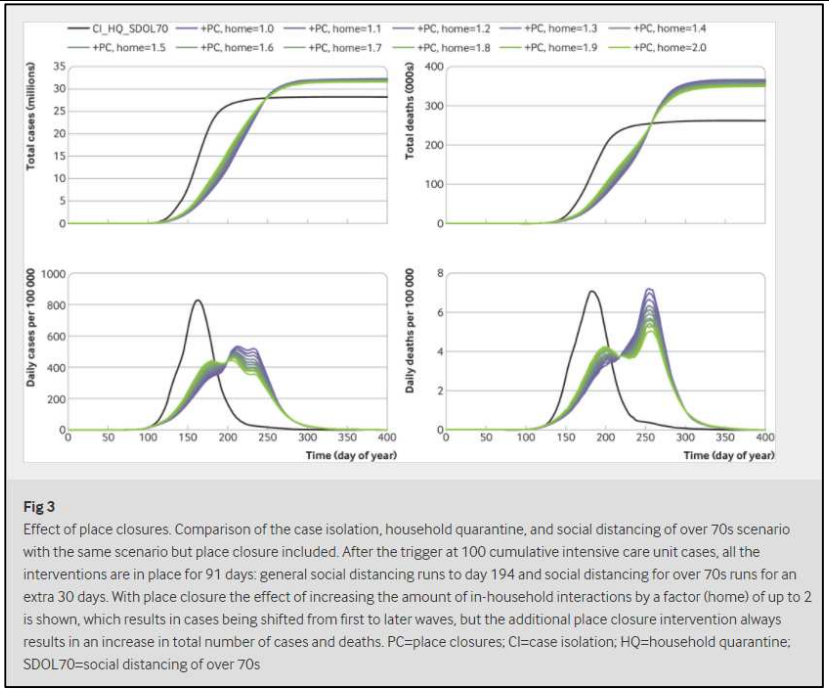
Tillet RL et al The Lancet https://www.thelancet.com/action/showPdf?pii=S1473-3099%2820%2930764-7	Genomic evidence for reinfection with SARS-CoV-2: a case study.	Caso di infezione e reinfezione da parte di due ceppi distinti di SARS-CoV-2. La conclusione da trarre, data la segnalazione di numerosi casi analoghi, è che una storia di infezione pregressa non può sollevare il paziente dall'applicare le misure di prevenzione del contagio.	Background: The degree of protective immunity conferred by infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is currently unknown. As such, the possibility of reinfection with SARS-CoV-2 is not well understood. We describe an investigation of two instances of SARS-CoV-2 infection in the same individual. Methods: A 25-year-old man who was a resident of Washoe County in the US state of Nevada presented to health authorities on two occasions with symptoms of viral infection, once at a community testing event in April, 2020, and a second time to primary care then hospital at the end of May and beginning of June, 2020. Nasopharyngeal swabs were obtained from the patient at each presentation and twice during follow-up. Nucleic acid amplification testing was done to confirm SARS-CoV-2 infection. We did next-generation sequencing of SARS-CoV-2 extracted from nasopharyngeal swabs. Sequence data were assessed by two different bioinformatic methodologies. A short tandem repeat marker was used for fragment analysis to confirm that samples from both infections came from the same individual. Findings: The patient had two positive tests for SARS-CoV-2, the first on April 18, 2020, and the second on June 5, 2020, separated by two negative tests done during follow-up in May, 2020. Genomic analysis of SARS-CoV-2 showed genetically significant differences between each variant associated with each instance of infection. The second infection was symptomatically more severe than the first. Interpretation: Genetic discordance of the two SARS-CoV-2 specimens was greater than could be accounted for by short-term in vivo evolution. These findings suggest that the patient was infected by SARS-CoV-2 on two separate occasions by a genetically

			distinct virus. Thus, previous exposure to SARS-CoV-2 might not guarantee total immunity in all cases. All individuals, whether previously diagnosed with COVID-19 or not, should take identical precautions to avoid infection with SARS-CoV-2. The implications of reinfections could be relevant for vaccine development and application.  *Figure 1:* **Timeline of symptom onset, molecular diagnosis, and sequencing of specimens** TMA=transcription-mediated amplification. *Sequenced specimens.
Simon NM et al JAMA https://jamanetwork.com/journals/jama/fullarticle/2771763	Mental Health Disorders Related to COVID-19–Related Deaths	Fra le conseguenze della pandemia da COVID-19 emergono i problemi di salute mentale nella popolazione, dovuti al protrarsi di una condizione di allarme a livello mondiale. I medici potrebbero essere addestrati a offrire supporto psicologico caso per caso per mitigare questo effetto.	Since February 2020, the coronavirus disease 2019 (COVID-19) pandemic has led to at least 200 000 deaths in the US and 1 million deaths worldwide. These numbers probably underestimate COVID-19 deaths by 50%, with excess cardiovascular, metabolic, and dementia-related deaths likely misclassified COVID-19 deaths.1 In this issue of JAMA, Woolf and colleagues1 update their previous estimate, suggesting that the number of excess deaths between February and August 2020 attributable to COVID-19 is estimated to be about 225 000.
WHO Solidarity Trial Consortium MedRXiv preprint	Repurposed antiviral drugs for COVID-19; interim WHO SOLIDARITY trial results	Remdesivir, idrossiclorochina, lopinavir-ritonavir e interferone beta hanno effetto “scarso o nullo” su mortalità, ventilazione meccanica e	BACKGROUND WHO expert groups recommended mortality trials in hospitalized COVID-19 of four re-purposed antiviral drugs. METHODS Study drugs were Remdesivir, Hydroxychloroquine, Lopinavir (fixed-dose combination with Ritonavir) and Interferon-β1a (mainly subcutaneous; initially with Lopinavir, later not). COVID-

https://www.medrxiv.org/content/10.1101/2020.10.15.20209817v1		durata dell'ospedalizzazione di pazienti con COVID-19 in base ai risultati del trial Solidarity, in corso di revisione prima della pubblicazione.	19 inpatients were randomized equally between whichever study drugs were locally available and open control (up to 5 options: 4 active and local standard-of-care). The intent-to-treat primary analyses are of in-hospital mortality in the 4 pairwise comparisons of each study drug vs its controls (concurrently allocated the same management without that drug, despite availability). Kaplan-Meier 28-day risks are unstratified; log-rank death rate ratios (RRs) are stratified for age and ventilation at entry. RESULTS In 405 hospitals in 30 countries 11,266 adults were randomized, with 2750 allocated Remdesivir, 954 Hydroxychloroquine, 1411 Lopinavir, 651 Interferon plus Lopinavir, 1412 only Interferon, and 4088 no study drug. Compliance was 94-96% midway through treatment, with 2-6% crossover. 1253 deaths were reported (at median day 8, IQR 4-14). Kaplan-Meier 28-day mortality was 12% (39% if already ventilated at randomization, 10% otherwise). Death rate ratios (with 95% CIs and numbers dead/randomized, each drug vs its control) were: Remdesivir RR=0.95 (0.81-1.11, p=0.50; 301/2743 active vs 303/2708 control), Hydroxychloroquine RR=1.19 (0.89-1.59, p=0.23; 104/947 vs 84/906), Lopinavir RR=1.00 (0.79-1.25, p=0.97; 148/1399 vs 146/1372) and Interferon RR=1.16 (0.96-1.39, p=0.11; 243/2050 vs 216/2050). No study drug definitely reduced mortality (in unventilated patients or any other subgroup of entry characteristics), initiation of ventilation or hospitalisation duration. CONCLUSIONS These Remdesivir, Hydroxychloroquine, Lopinavir and Interferon regimens appeared to have little or no effect on hospitalized COVID-19, as indicated by overall mortality, initiation of ventilation and duration of hospital stay. The mortality findings contain most of the randomized evidence on Remdesivir and Interferon, and are consistent with meta-analyses of mortality in all major trials.

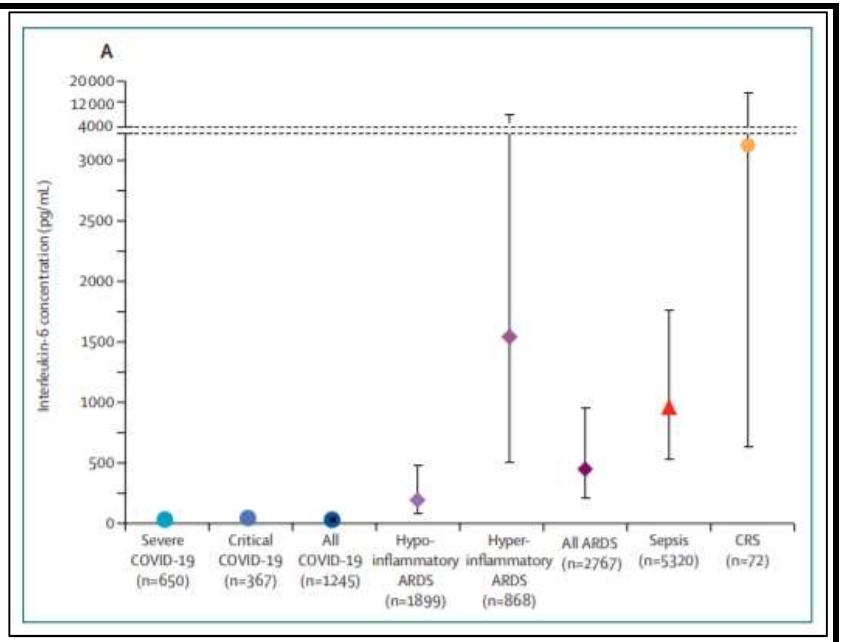
			
Rice K et al BMJ https://www.bmj.com/content/371/bmj.m3588	Effect of school closures on mortality from coronavirus disease 2019: old and new predictions	Sulla base di una simulazione della diffusione di SARS-CoV-2 nel Regno Unito e degli effetti di diverse misure di contenimento si osserva che la chiusura delle scuole provocherebbe una maggiore mortalità a lungo termine per COVID-19 una volta rimossa la misura, a causa del susseguirsi di ulteriori ondate epidemiche a carico di una popolazione suscettibile. Le misure di mitigazione non sono sufficienti a lungo termine se non si ottiene l'immunizzazione della	Objective: To replicate and analyse the information available to UK policymakers when the lockdown decision was taken in March 2020 in the United Kingdom. Design Independent calculations using the CovidSim code, which implements Imperial College London's individual based model, with data available in March 2020 applied to the coronavirus disease 2019 (covid-19) epidemic. Setting: Simulations considering the spread of covid-19 in Great Britain and Northern Ireland. Population: About 70 million simulated people matched as closely as possible to actual UK demographics, geography, and social behaviours. Main outcome measures: Replication of summary data on the covid-19 epidemic reported to the UK government Scientific Advisory Group for Emergencies (SAGE), and a detailed study of unpublished results, especially the effect of school closures. Results: The CovidSim model would have produced a good forecast of the subsequent data if initialised with a reproduction number of about 3.5 for covid-19. The model predicted that school closures and isolation of younger people would increase the total number of

		popolazione, attraverso il vaccino.	deaths, albeit postponed to a second and subsequent waves. The findings of this study suggest that prompt interventions were shown to be highly effective at reducing peak demand for intensive care unit (ICU) beds but also prolong the epidemic, in some cases resulting in more deaths long term. This happens because covid-19 related mortality is highly skewed towards older age groups. In the absence of an effective vaccination programme, none of the proposed mitigation strategies in the UK would reduce the predicted total number of deaths below 200 000. Conclusions It was predicted in March 2020 that in response to covid-19 a broad lockdown, as opposed to a focus on shielding the most vulnerable members of society, would reduce immediate demand for ICU beds at the cost of more deaths long term. The optimal strategy for saving lives in a covid-19 epidemic is different from that anticipated for an influenza epidemic with a different mortality age profile.

			 **Fig 3** Effect of place closures. Comparison of the case isolation, household quarantine, and social distancing of over 70s scenario with the same scenario but place closure included. After the trigger at 100 cumulative intensive care unit cases, all the interventions are in place for 91 days: general social distancing runs to day 194 and social distancing for over 70s runs for an extra 30 days. With place closure the effect of increasing the amount of in-household interactions by a factor (home) of up to 2 is shown, which results in cases being shifted from first to later waves, but the additional place closure intervention always results in an increase in total number of cases and deaths. PC=place closures; CI=case isolation; HQ=household quarantine; SDOL70=social distancing of over 70s
Alwan NA et al The Lancet https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32153-X/fulltext	Scientific consensus on the COVID-19 pandemic: we need to act now	L'immunità di gregge ottenuta tramite la circolazione incontrollata di SARS-CoV-2 non è una strada scientificamente plausibile per arrestare la pandemia. Al contrario la diffusione del virus deve essere limitata fino all'avvento di un vaccino efficace.	Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has infected more than 35 million people globally, with more than 1 million deaths recorded by WHO as of Oct 12, 2020. As a second wave of COVID-19 affects Europe, and with winter approaching, we need clear communication about the risks posed by COVID-19 and effective strategies to combat them. Here, we share our view of the current evidence-based consensus on COVID-19.

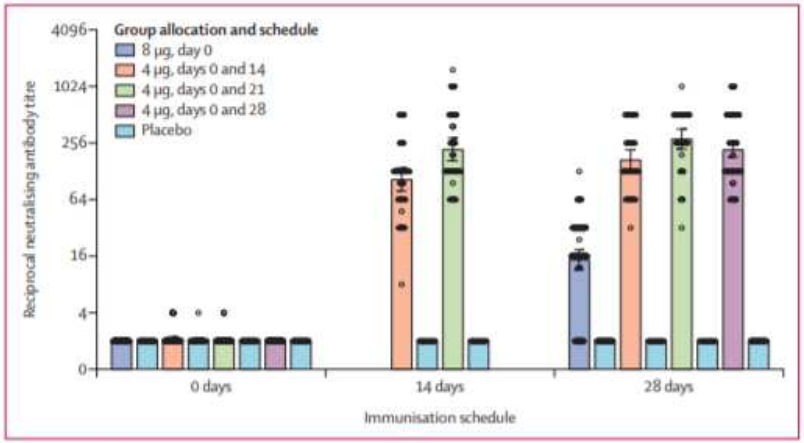
Gorenstein SA et al Undersea and Hyperbaric Medicine https://pubmed.ncbi.nlm.nih.gov/32931666/	Hyperbaric oxygen therapy for COVID-19 patients with respiratory distress: treated cases versus propensity-matched controls	Piccolo trial monocentrico su 20 pazienti trattati con ossigenoterapia in camera iperbarica confrontati con 60 controlli: la terapia appare sicura e merita approfondimento in trial clinici più ampi.	Objective: Given the high mortality and prolonged duration of mechanical ventilation of COVID-19 patients, we evaluated the safety and efficacy of hyperbaric oxygen for COVID-19 patients with respiratory distress. Methods: This is a single-center clinical trial of COVID-19 patients at NYU Winthrop Hospital from March 31 to April 28, 2020. Patients in this trial received hyperbaric oxygen therapy at 2.0 atmospheres of pressure in monoplace hyperbaric chambers for 90 minutes daily for a maximum of five total treatments. Controls were identified using propensity score matching among COVID-19 patients admitted during the same time period. Using competing-risks survival regression, we analyzed our primary outcome of inpatient mortality and secondary outcome of mechanical ventilation. Results: We treated 20 COVID-19 patients with hyperbaric oxygen. Ages ranged from 30 to 79 years with an oxygen requirement ranging from 2 to 15 liters on hospital days 0 to 14. Of these 20 patients, two (10%) were intubated and died, and none remain hospitalized. Among 60 propensity-matched controls based on age, sex, body mass index, coronary artery disease, troponin, D-dimer, hospital day, and oxygen requirement, 18 (30%) were intubated, 13 (22%) have died, and three (5%) remain hospitalized (with one still requiring mechanical ventilation). Assuming no further deaths among controls, we estimate that the adjusted subdistribution hazard ratios were 0.37 for inpatient mortality (p=0.14) and 0.26 for mechanical ventilation (p=0.046). Conclusion: Though limited by its study design, our results demonstrate the safety of hyperbaric oxygen among COVID-19 patients and strongly suggests the need for a well-designed, multicenter randomized control trial.

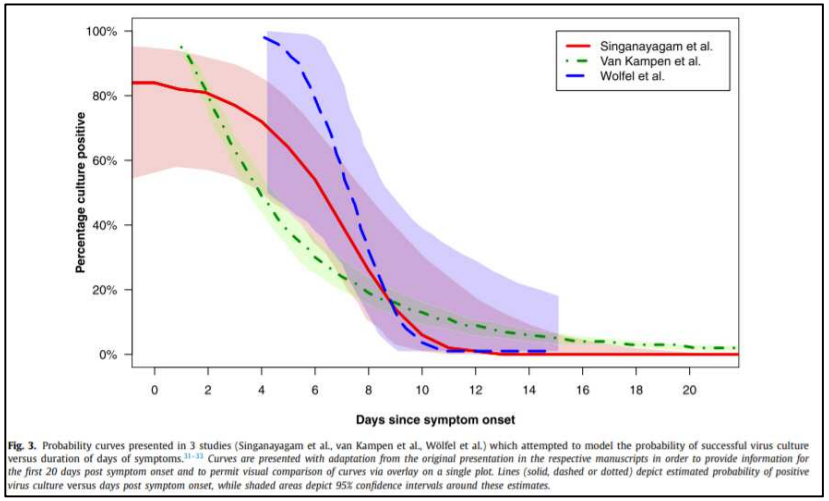
Leisman De et al The Lancet https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30404-5/fulltext	Cytokine elevation in severe and critical COVID-19: a rapid systematic review, meta-analysis, and comparison with other inflammatory syndromes	Ancora un lavoro che mette in dubbio la centralità della "tempesta citochinicha" in COVID-19: sulla base di una revisione della letteratura, altre sindromi gravi quali la sepsi, la ARSD o la sindrome da rilascio di citochine fanno registrare livelli più alti di interleukina-6.	The description of a so-called cytokine storm in patients with COVID-19 has prompted consideration of anti-cytokine therapies, particularly interleukin-6 antagonists. However, direct systematic comparisons of COVID-19 with other critical illnesses associated with elevated cytokine concentrations have not been reported. In this Rapid Review, we report the results of a systematic review and meta-analysis of COVID-19 studies published or posted as preprints between Nov 1, 2019, and April 14, 2020, in which interleukin-6 concentrations in patients with severe or critical disease were recorded. 25 COVID-19 studies (n=1245 patients) were ultimately included. Comparator groups included four trials each in sepsis (n=5320), cytokine release syndrome (n=72), and acute respiratory distress syndrome unrelated to COVID-19 (n=2767). In patients with severe or critical COVID-19, the pooled mean serum interleukin-6 concentration was 36·7 pg/mL (95% CI 21·6–62·3 pg/mL; I2=57·7%). Mean interleukin-6 concentrations were nearly 100 times higher in patients with cytokine release syndrome (3110·5 pg/mL, 632·3–15 302·9 pg/mL; p<0·0001), 27 times higher in patients with sepsis (983·6 pg/mL, 550·1–1758·4 pg/mL; p<0·0001), and 12 times higher in patients with acute respiratory distress syndrome unrelated to COVID-19 (460 pg/mL, 216·3–978·7 pg/mL; p<0·0001). Our findings question the role of a cytokine storm in COVID-19-induced organ dysfunction. Many questions remain about the immune features of COVID-19 and the potential role of anti-cytokine and immune-modulating treatments in patients with the disease.

			
Xia S et al The Lancet https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30831-8/fulltext	Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine, BBIBP-CorV: a randomised, double-blind, placebo-controlled, phase 1/2 trial.	Trial di fase 1/2 su un candidato vaccino inattivato contro SARS-CoV-2 che include nella popolazione testata anche soggetti di età superiore a 60 anni.	Background The ongoing COVID-19 pandemic warrants accelerated efforts to test vaccine candidates. We aimed to assess the safety and immunogenicity of an inactivated severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) vaccine candidate, BBIBP-CorV, in humans. Methods We did a randomised, double-blind, placebo-controlled, phase 1/2 trial at Shangqiu City Liangyuan District Center for Disease Control and Prevention in Henan province, China. In phase 1, healthy people aged 18–80 years, who were negative for serum-specific IgM/IgG antibodies against SARS-CoV-2 at the time of screening, were separated into two age groups (18–59 years and ≥60 years) and randomly assigned to receive vaccine or placebo in a two-dose schedule of 2 μg, 4 μg, or 8 μg on days 0 and 28. In phase 2, healthy adults (aged 18–59 years) were randomly assigned (1:1:1:1) to receive vaccine or placebo on a single-dose schedule of 8 μg on day 0 or on a two-dose schedule of

			4 μg on days 0 and 14, 0 and 21, or 0 and 28. Participants within each cohort were randomly assigned by stratified block randomisation (block size eight) and allocated (3:1) to receive vaccine or placebo. Group allocation was concealed from participants, investigators, and outcome assessors. The primary outcomes were safety and tolerability. The secondary outcome was immunogenicity, assessed as the neutralising antibody responses against infectious SARS-CoV-2. This study is registered with www.chictr.org.cn, ChiCTR2000032459. Findings In phase 1, 192 participants were enrolled (mean age 53·7 years [SD 15·6]) and were randomly assigned to receive vaccine (2 μg [n=24], 4 μg [n=24], or 8 μg [n=24] for both age groups [18–59 years and ≥60 years]) or placebo (n=24). At least one adverse reaction was reported within the first 7 days of inoculation in 42 (29%) of 144 vaccine recipients. The most common systematic adverse reaction was fever (18–59 years, one [4%] in the 2 μg group, one [4%] in the 4 μg group, and two [8%] in the 8 μg group; ≥60 years, one [4%] in the 8 μg group). All adverse reactions were mild or moderate in severity. No serious adverse event was reported within 28 days post vaccination. Neutralising antibody geometric mean titres were higher at day 42 in the group aged 18–59 years (87·7 [95% CI 64·9–118·6], 2 μg group; 211·2 [158·9–280·6], 4 μg group; and 228·7 [186·1–281·1], 8 μg group) and the group aged 60 years and older (80·7 [65·4–99·6], 2 μg group; 131·5 [108·2–159·7], 4 μg group; and 170·87 [133·0–219·5], 8 μg group) compared with the placebo group (2·0 [2·0–2·0]). In phase 2, 448 participants were enrolled (mean age 41·7 years [SD 9·9]) and were randomly assigned to receive the vaccine (8 μg on day 0 [n=84] or 4 μg on days 0 and 14 [n=84], days 0 and 21 [n=84], or days 0 and 28 [n=84]) or placebo on the same schedules (n=112). At least one

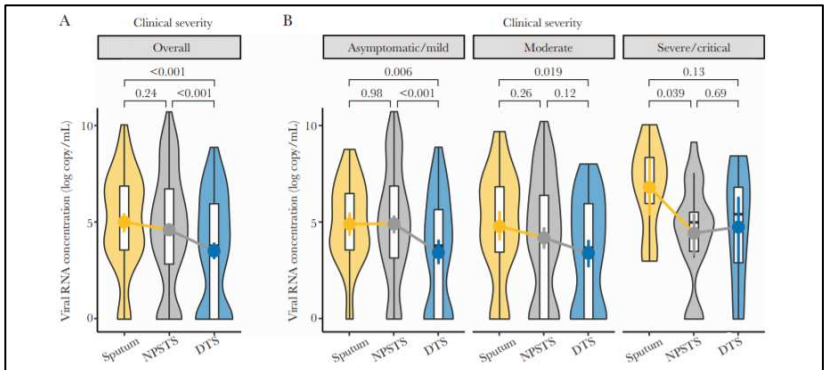
			adverse reaction within the first 7 days was reported in 76 (23%) of 336 vaccine recipients (33 [39%], 8 μg day 0; 18 [21%], 4 μg days 0 and 14; 15 [18%], 4 μg days 0 and 21; and ten [12%], 4 μg days 0 and 28). One placebo recipient in the 4 μg days 0 and 21 group reported grade 3 fever, but was self-limited and recovered. All other adverse reactions were mild or moderate in severity. The most common systematic adverse reaction was fever (one [1%], 8 μg day 0; one [1%], 4 μg days 0 and 14; three [4%], 4 μg days 0 and 21; two [2%], 4 μg days 0 and 28). The vaccine-elicited neutralising antibody titres on day 28 were significantly greater in the 4 μg days 0 and 14 (169·5, 95% CI 132·2–217·1), days 0 and 21 (282·7, 221·2–361·4), and days 0 and 28 (218·0, 181·8–261·3) schedules than the 8 μg day 0 schedule (14·7, 11·6–18·8; all p<0·001). Interpretation The inactivated SARS-CoV-2 vaccine, BBIBP-CorV, is safe and well tolerated at all tested doses in two age groups. Humoral responses against SARS-CoV-2 were induced in all vaccine recipients on day 42. Two-dose immunisation with 4 μg vaccine on days 0 and 21 or days 0 and 28 achieved higher neutralising antibody titres than the single 8 μg dose or 4 μg dose on days 0 and 14.

			 ***Figure 3:* Neutralising antibody titres for different immunisation schedules** The negative in neutralisation antibody detection is represented as a GMT of 2. 0 days is pre-immunisation. 14 days and 28 days refers to day 14 and day 28 after the second inoculation, with the exception of the 8 µg, day 0 group (in which it refers to day 28 after the single inoculation). The measurement of neutralising antibody at day 14 was not designed for the 4 µg days 0 and 14 or days 0 and 28 groups. For the 4 µg days 0 and 14 and days 0 and 21 groups, samples from day 14 were collected from half of the participants in the group and day 28 from the other half.
Walsh KA et al Journal of Infection https://www.journalofinfection.com/article/S0163-4453(20)30651-4/fulltext	The duration of infectiousness of individuals infected with SARS-CoV-2.	Revisione delle evidenze in merito alla durata della contagiosità dei pazienti con infezione da SARS-CoV-2, valutata in base a positività di colture cellulari o al tracciamento dei contatti. Si conclude che la contagiosità oltre i 10 giorni dall'esordio dei sintomi per pazienti con un quadro lieve-moderato (che rimangono per lo più in comunità) è molto improbabile.	OBJECTIVES: To summarise the evidence on the duration of infectiousness of individuals in whom SARS-CoV-2 ribonucleic acid is detected. METHODS: A rapid review was undertaken in PubMed, Europe PubMed Central and EMBASE from 1 January 2020 to 26 August 2020. RESULTS: We identified 15 relevant studies, including 13 virus culture and 2 contact tracing studies. For 5 virus culture studies, the last day on which SARS-CoV-2 was isolated occurred within 10 days of symptom onset. For another 5 studies, SARS-CoV-2 was isolated beyond day 10 for approximately 3% of included patients. The remaining 3 virus culture studies included patients with severe or critical disease; SARS-CoV-2 was isolated up to day 32 in one study. Two studies identified immunocompromised patients from whom SARS-CoV-2 was isolated for up to 20 days. Both contact tracing studies, when close contacts were first exposed greater than 5 days after symptom onset in the index case,

			found no evidence of laboratory-confirmed onward transmission of SARS-CoV-2. CONCLUSION: COVID-19 patients with mild-to-moderate illness are highly unlikely to be infectious beyond 10 days of symptoms. However, evidence from a limited number of studies indicates that patients with severe-to-critical illness or who are immunocompromised, may shed infectious virus for longer.  **Fig. 3.** Probability curves presented in 3 studies (Singanayagam et al., van Kampen et al., Wölfel et al.) which attempted to model the probability of successful virus culture versus duration of days of symptoms.[31–33] *Curves are presented with adaptation from the original presentation in the respective manuscripts in order to provide information for the first 20 days post symptom onset and to permit visual comparison of curves via overlay on a single plot. Lines (solid, dashed or dotted) depict estimated probability of positive virus culture* versus *days post symptom onset, while shaded areas depict 95% confidence intervals around these estimates.*
Montrief T et al The American Journal of Emergency Medicine https://www.ajemjournal.com/article/S0735-6757(20)30682-3/fulltext	COVID-19 respiratory support in the emergency department setting.	Revisione delle norme di gestione avanzata delle vie aeree di pazienti con COVID-19, con attenzione alla sicurezza dell'operatore.	INTRODUCTION: Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), which causes the coronavirus disease 2019 (COVID-19), may result in severe complications, multiorgan dysfunction, acute respiratory failure, and death. SARS-CoV-2 is highly contagious and places healthcare workers at significant risk, especially during aerosol-generating procedures, including airway management. OBJECTIVE: This narrative review outlines the underlying respiratory pathophysiology of patients with COVID-19 and discusses approaches to airway management in the emergency department (ED) based on current literature. DISCUSSION: Patients presenting with SARS-CoV-2 infection are at high risk for acute respiratory failure requiring airway management. Among

			hospitalized patients, 10-20% require intensive care unit admission, and 3-10% require intubation and mechanical ventilation. While providing respiratory support for these patients, proper infection control measures, including adherence to personal protective equipment policies, are necessary to prevent nosocomial transmission to healthcare workers. A structured approach to respiratory failure in these patients includes the use of exogenous oxygen via nasal cannula or non-rebreather, as well as titrated high-flow nasal cannula and non-invasive ventilation. This review offers several guiding principles and resources designed to be adapted in conjunction with local workplace policies for patients requiring respiratory support. CONCLUSIONS: While the fundamental principles of acute respiratory failure management are similar between COVID-19 and non-COVID-19 patients, there are some notable differences, including a focus on provider safety. This review provides an approach to airway management and respiratory support in the patient with COVID-19.
Gunes H et al European Journal of Pediatrics https://link.springer.com/article/10.1007/s00431-020-03841-y	What chances do children have against COVID-19? Is the answer hidden within the thymus?	Il ruolo del timo nel promuovere la funzione T-regolatoria della risposta adattativa potrebbe proteggere i bambini da una infiammazione sregolata in corso di infezione da SARS-CoV-2.	A new type of coronavirus named as SARS-CoV-2 pandemic has begun to threaten human health. As with other types of coronaviruses, SARS-CoV-2 affects children less frequently, and it has been observed that the disease is mild. In the pathogenesis of a standard viral infection, the pathogen's contact with the mucosa is initially followed by an innate immunity response. T cells are the primary decisive element in adaptive immunity capability. For this reason, the adaptive immune response mediated by the thymus is a process that regulates the immune response responsible for preventing invasive damage from a virus. Regulatory T cells (T-reg) are active during the early periods of life and have precise roles in immunomodulation. The thymus is highly active in the intrauterine and neonatal period; it begins to shrink after birth and continues its

			activity until adolescence. The loss of T-reg function by age results in difficulty with the control of the immune response, increased inflammation as shown in coronavirus disease (COVID-19) as an inflammatory storm. Also, the thymus is typically able to replace the T cells destroyed by apoptosis caused by the virus. Thymus and T cells are the key factors of pathogenesis of SARS-CoV-2 in children.Conclusion: We speculated that thymus activity and T lymphocyte function in children protect them against the virus effects. Stimulating and preventing the inhibition of the thymus can be possible treatment components against COVID-19.
Iacobucci G et al BMJ https://www.bmj.com/content/bmj/371/bmj.m3961.full.pdf	Covid-19: Three tier alert system takes effect across England	La situazione a Liverpool, dove è stato dichiarato lo stato di emergenza ed è iniziato un lock-down.	Liverpool and neighbouring local authorities will become the first area of England to have new restrictions imposed under the new three tiered risk system designed to stem rising covid-19 infections across England, the government has announced. Liverpool itself had 609 cases per 100 000 population on 13 October, a 14.3% rise over the previous week. Neighbouring Knowsley, included in the measures that apply to the Liverpool City Region, which also includes Halton, Sefton, St Helens, and Wirral, had 669.5 cases per 100 000. Liverpool has the steepest increase in covid-19 admissions to hospital in England, and the highest number, with more than 250 patients in beds at Liverpool University Hospitals NHS Foundation Trust, around 15% of bed capacity.
Lai CKC et al The Journal of Infectious Diseases https://academic.oup.com/jid/article/222/10/1612/5879767	Prospective Study Comparing Deep Throat Saliva With Other Respiratory Tract Specimens in the Diagnosis of Novel Coronavirus Disease 2019	Studio prospettico volto a confrontare saliva e altri tipi di campione utilizzabili per la diagnosi di infezione da SARS-CoV-2: la saliva appare il meno affidabile.	Self-collected specimens have been advocated to avoid infectious exposure to healthcare workers. Self-induced sputum in those with a productive cough and saliva in those without a productive cough have been proposed, but sensitivity remains uncertain. Methods: We performed a prospective study in 2 regional hospitals in Hong Kong. Results: We prospectively examined 563 serial samples collected during the virus shedding periods of 50 patients: 150 deep throat

			saliva (DTS), 309 pooled-nasopharyngeal (NP) and throat swabs, and 104 sputum. Deep throat saliva had the lowest overall reverse-transcriptase polymerase chain reaction (RT-PCR)-positive rate (68.7% vs 89.4% [sputum] and 80.9% [pooled NP and throat swabs]) and the lowest viral ribonucleic acid (RNA) concentration (mean log copy/mL 3.54 vs 5.03 [sputum] and 4.63 [pooled NP and throat swabs]). Analyses with respect to time from symptom onset and severity also revealed similar results. Virus yields of DTS correlated with that of sputum (Pearson correlation index 0.76; 95% confidence interval, 0.62–0.86). We estimated that the overall false-negative rate of DTS could be as high as 31.3% and increased 2.7 times among patients without sputum. Conclusions: Deep throat saliva produced the lowest viral RNA concentration and RT-PCR-positive rate compared with conventional respiratory specimens in all phases of illness. Self-collected sputum should be the choice for patients with sputum.  **Figure 2.** Severe acute respiratory syndrome coronavirus-2 viral ribonucleic acid (RNA) concentrations among specimen types collected from 50 novel coronavirus disease 2019 patients. (A) Violin plot showing viral RNA concentrations according to specimen types of all patients. (B) Viral RNA concentrations of different specimen types according to clinical severity. The violin plot box widths indicate the kernel densities of number of samples. The dots indicate mean viral concentrations, with error bars shov..ng the 95% confidence intervals. Negative samples with cycle threshold value >39.9 were set as 0 for calculation. DTS, deep-throat saliva; NPSTS, pooled nasopharyngeal and throat swabs.

Mulder M et al Clinical Infectious Diseases https://www.dutchnews.nl/wpcms/wp-content/uploads/2020/10/ciaa1538.pdf	Reinfection of SARS-CoV-2 in an immunocompromised patient: a case report	Primo caso di decesso dopo reinfezione da SARS-CoV-2 in una paziente immunocompromessa di 89 anni.	Knowing the frequency and natural course of reinfections is important for strategies for control of SARS-CoV-2. Recently, To et al. published a report of a 33-year old Hong Kong resident with a SARSCoV-2 reinfection, confirmed by whole-genome sequencing.[1] Here, we report a case of a reinfection, in an 89-year old Dutch woman, suffering from Waldenström's macroglobulinemia, treated with B-cell-depleting therapy. She presented to the emergency department with fever and severe cough and a lymphocyte count of 0.4x109 /L. An in-house SARS-CoV-2 RT-qPCR (E-gen),[2] on a nasopharyngeal swab was positive (Cq 26.2). She was discharged after 5 days and besides some persisting fatigue her symptoms subsided completely.
Mascitti H et al Open Forum Infectious Diseases https://academic.oup.com/ofid/advance-article/doi/10.1093/ofid/ofaa394/5929650	Clinical cutaneous features of patients infected with SARS-CoV-2 hospitalized for pneumonia: a cross-sectional study	Studio cross-sectional che descrive, con ampia iconografia, le lesioni cutanee osservate in 40 pazienti ospedalizzati per polmonite da SARS-CoV-2.	Background: SARS-CoV-2 is the cause of a current pandemic worldwide. This virus can reach all organs, and disturbs the immune system leading to a cytokine storm in severe forms. We aimed to report cutaneous features among COVID-19 hospitalized patients. Methods: We performed a cross-sectional study on one given day among all patients hospitalized in acute care for COVID-19 and included all patients with cutaneous features. Follow-up 48 hours later was obtained. Results: Among 59 adult patients hospitalized on the day of the study, in an infectious diseases ward for SARS-CoV-2 infection, confirmed by molecular assay and/or radiological findings (CT scan), 40 were included. Several cutaneous manifestations were found: macular exanthema (80%), face edema (32%), livedo (13%), urticarial rash (8%), purpura (5%), oral lichenoid lesions (33%) and conjunctivitis (18%). Cutaneous biopsy was performed in 17 patients. Histological findings showed mast cell hyperplasia (100%), superficial perivascular infiltrate of lymphocytes (94%) and superficial edema (47%) consistent with capillary leak.

			Conclusions: Various dermatological signs can be encountered during COVID-19. A macular rash was the most frequent. All cutaneous features could be related to a vascular leak process.
Goodman JL et al JAMA https://jamanetwork.com/journals/jama/fullarticle/2772138	Answering Key Questions About COVID-19 Vaccines	Rispondere in modo diretto e fondato alle più comuni domande sui vaccini contro SARS-CoV-2 sarà una chiave dell'efficace promozione del vaccino presso la popolazione.	The US government is investing in rapid development of vaccines against coronavirus disease 2019 (COVID-19), several relying on new technologies.1 In the US, 4 vaccine candidates are in phase 3 studies with initial results expected soon. If studies succeed, 1 or more vaccines may become available within a few months. Clinicians are likely among the first to be offered COVID-19 vaccines and have a key role in helping patients make decisions about vaccination.2 Providing evidence-based information will be particularly important in an environment of polarization and mistrust. This Viewpoint focuses on common questions patients are likely to ask about COVID-19 vaccines.
Goldstein JL Cell https://www.cell.com/cell/fulltext/S0092-8674(20)31227-7	The Spanish 1918 Flu and the COVID-19 Disease: The Art of Remembering and Foreshadowing Pandemics	Come sarà ricordata la pandemia da COVID-19 nella storia dell'arte? In figura, E. Munch "Autoritratto con l'influenza Spagnola"	Tragic events such as pandemics can be remembered as well as foreshadowed by works of art. Paintings by the artists Edvard Munch and John Singer Sargent (1918–19) tell us in real time what it was like to be stricken by the Spanish flu. Paintings by Edward Hopper (1940s and '50s) foretell the lockdown and social distancing of today's COVID-19 pandemic.