RICERCA BIBLIOGRAFICA COVID 19

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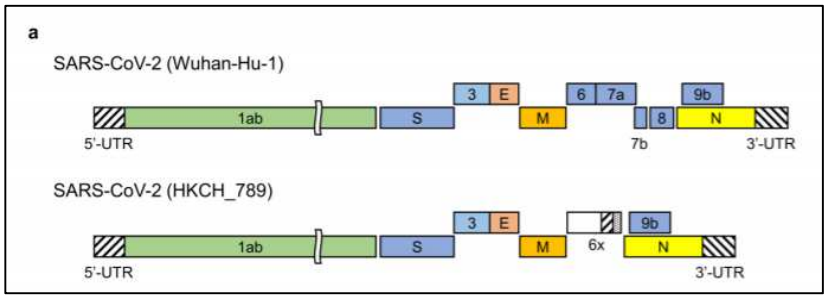
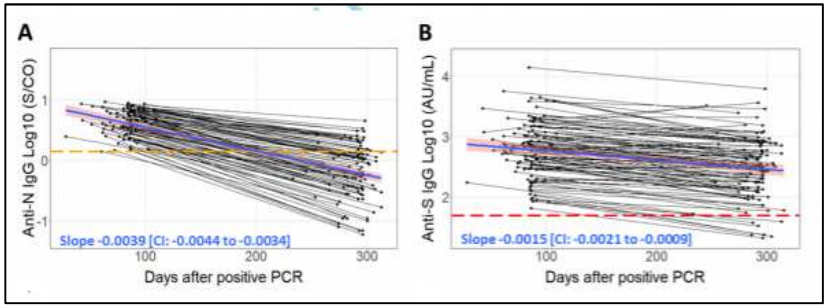
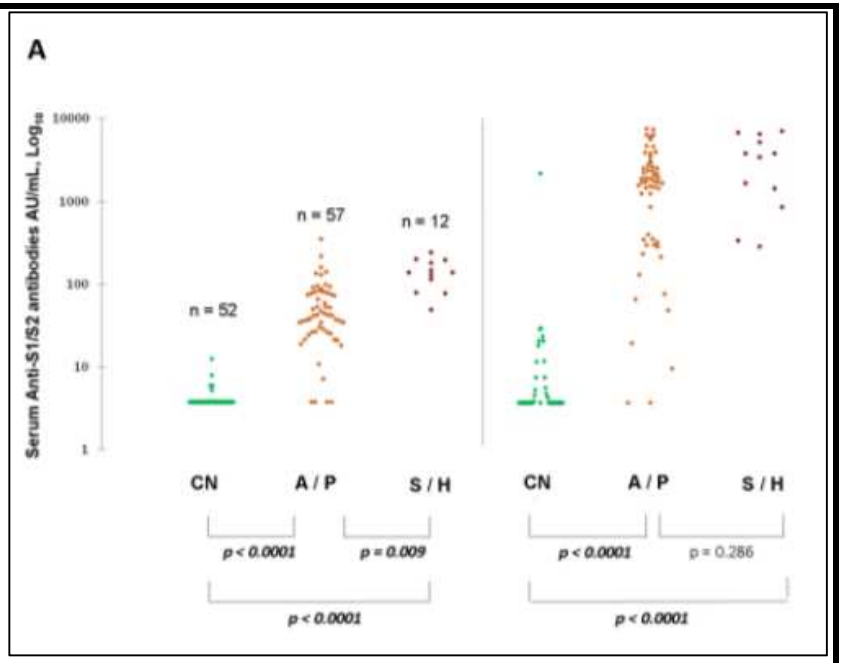
AUTORE/RIVISTA	TITOLO	OUTCOME PRINCIPALE	ABSTRACT
Tse H et al Clinical Infectious Diseases https://doi.org/10.1093/cid/ciab198	Emergence of a Severe Acute Respiratory Syndrome Coronavirus 2 virus variant with novel genomic architecture in Hong Kong.	Tre casi di infezione da SARS-CoV-2 mutato, portatore di una delezione ampia (evento raro rispetto alle sostituzioni a singolo nucleotide). L'emergere di nuove varianti mette in guardia sulla sensibilità dei test diagnostici.	Throughout the COVID-19 pandemic, divergent SARS-CoV-2 lineages have emerged continuously, mostly through the genomic accumulation of substitutions. We report the discovery of a SARS-CoV-2 variant with a novel genomic architecture characterized by absent ORF7a, ORF7b and ORF8, and a C-terminally modified ORF6 product resulting from partial 5'-UTR duplication and transposition. 

Blumenthal KG et al JAMA https://jamanetwork.com/journals/jama/fullarticle/2777417	Acute Allergic Reactions to mRNA COVID-19 Vaccines	Reazioni avverse in una casistica di 64 900 vaccinazioni con vaccino a mRNA: le reazioni allergiche generiche si sono presentate in 1365/64900 persone, in particolare 2.20% dei vaccinati con MODERNA e 1.95% dei vaccinati con Pfizer. Invece l'anafilassi si è verificata in 16 casi totali (9 MODERNA e 7 Pfizer). I casi di anafilassi si sono verificati per lo più in donne, età media 41 anni, storia precedente di allergia, entro 17 minuti dall'iniezione.	Anaphylaxis to the mRNA COVID-19 vaccines is currently estimated to occur in 2.5 to 11.1 cases per million doses, largely in individuals with a history of allergy. Allergic concerns contribute to vaccine hesitancy; we investigated acute allergic reaction incidence after more than 60 000 mRNA COVID-19 vaccine administrations. Acute allergic reactions were reported by 1365 employees overall (2.10% [95% CI, 1.99%-2.22%]), more frequently with the Moderna vaccine compared with Pfizer-BioNTech (2.20% [95% CI, 2.06%-2.35%] vs 1.95% [95% CI, 1.79%-2.13%]; P = .03, Table 1). Anaphylaxis was confirmed in 16 employees (0.025% [95% CI, 0.014%-0.040%]): 7 cases from the Pfizer-BioNTech vaccine (0.027% [95% CI, 0.011%-0.056%]) and 9 cases from the Moderna vaccine (0.023% [95% CI, 0.011%-0.044%]) (P = .76).
Chan VW et al Critical Care Medicine https://journals.lww.com/ccmjournal/Abstract/9000/Transmission_of_Severe_Acute_Respiratory_Syndrome.95317.aspx	Transmission of Severe Acute Respiratory Syndrome Coronavirus 1 and Severe Acute Respiratory Syndrome Coronavirus 2 During Aerosol-Generating Procedures in Critical Care A Systematic Review and Meta-Analysis of Observational Studies	Revisione a proposito del rischio di infezione da Coronavirus durante le procedure generanti aerosol e sull'impatto dei dispositivi di protezione.	Objectives: To assess the risk of coronavirus transmission to healthcare workers performing aerosol-generating procedures and the potential benefits of personal protective equipment during these procedures. Data Sources: MEDLINE, EMBASE, and Cochrane CENTRAL were searched using a combination of related MeSH terms and keywords. Study Selection: Cohort studies and case controls investigating common anesthetic and critical care aerosol-generating procedures and transmission of severe acute respiratory syndrome coronavirus 1, Middle East respiratory syndrome coronavirus, and severe acute respiratory syndrome coronavirus 2 to healthcare workers were included for quantitative analysis.

			Data Extraction: Qualitative and quantitative data on the transmission of severe acute respiratory syndrome coronavirus 1, severe acute respiratory syndrome coronavirus 2, and Middle East respiratory syndrome coronavirus to healthcare workers via aerosol-generating procedures in anesthesia and critical care were collected independently. The Risk Of Bias In Non-randomized Studies - of Interventions tool was used to assess the risk of bias of included studies. Data Synthesis: Seventeen studies out of 2,676 yielded records were included for meta-analyses. Endotracheal intubation (odds ratio, 6.69, 95% CI, 3.81–11.72; $p < 0.001$), noninvasive ventilation (odds ratio, 3.65; 95% CI, 1.86–7.19; $p < 0.001$), and administration of nebulized medications (odds ratio, 10.03; 95% CI, 1.98–50.69; $p = 0.005$) were found to increase the odds of healthcare workers contracting severe acute respiratory syndrome coronavirus 1 or severe acute respiratory syndrome coronavirus 2. The use of N95 masks (odds ratio, 0.11; 95% CI, 0.03–0.39; $p < 0.001$), gowns (odds ratio, 0.59; 95% CI, 0.48–0.73; $p < 0.001$), and gloves (odds ratio, 0.39; 95% CI, 0.29–0.53; $p < 0.001$) were found to be significantly protective of healthcare workers from contracting severe acute respiratory syndrome coronavirus 1 or severe acute respiratory syndrome coronavirus 2. Conclusions: Specific aerosol-generating procedures are high risk for the transmission of severe acute respiratory syndrome coronavirus 1 and severe acute respiratory syndrome coronavirus 2 from patients to healthcare workers. Personal protective equipment reduce the odds of contracting severe acute respiratory syndrome coronavirus 1 and severe acute respiratory syndrome coronavirus 2.

Van Elslande J et al Clinical Infectious Diseases https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciab219/6162856?searchresult=1	Estimated half-life of SARS-CoV-2 anti-spike antibodies more than double the half-life of anti-nucleocapsid antibodies in healthcare workers	Durata del titolo anticorpale anti-proteina S e anti-Nucleocapside di SARS-COV-2 in 118 operatori sanitari : dopo 7-10 mesi dall'infezione, il 92.4% è ancora positivo per anticorpi anti-S mentre meno del 20% per gli anti-N. Tale durata della risposta anti-S potrebbe prédire la durata della risposta vaccinale.	We report antibody levels for anti-S and anti-N in 118 individual HCW with a previous SARS-CoV-2 infection. Participants were sampled 1-3 months (28-103 days) and 7-10 months (209-315 days) after positive PCR. Seroconversion for anti-S and anti-N typically occurs within 28 days after positive PCR [3]. Antibodies were measured on Abbott Architect with the SARS-CoV-2 IgG (anti-N) and IgG II Quant (anti-S) assays using the manufacturer's cut-offs for positivity of 1.4 S/CO and 50 AU/mL, respectively. The median age was 48 years old (range 20-62), with 88.1% women. Most participants experienced mild disease and only six participants were briefly hospitalized. 
Capetti AF et al Clinical Infectious Diseases https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciab214/6159798?searchresult=1	Impressive boosting of anti-S1/S2 IgG production in COVID-19-experienced patients after the first shot of the BNT162b2 mRNA COVID-19 Vaccine	Confronto della risposta alla prima dose di vaccino Pfizer di 52 soggetti COVID-19 naive e 69 con storia di infezione pregressa : si osserva un aumento del titolo fino a tre ordini di grandezza nel secondo gruppo. In accordo con altri studi analoghi, viene proposta la somministrazione di una	Our pilot study was aimed to describe anti-spike production after the first dose of the BNT162b2 mRNA COVID-19 Vaccine in COVID-19-naïve and COVID-19-experienced subjects, using the DiaSorin‟s LIAISON-CLIAS1/S2® IgG solution, which has a 94.4% positive agreement to Plaque Reduction Neutralization Test (PRNT).

		sola dose ai soggetti non naive.	
Rapaka RR et al Clinical Infectious Diseases https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciab213/6159795?searchresult=1	Are some COVID vaccines better than others? Interpreting and comparing estimates of efficacy in trials of COVID-19 vaccines	Aspetti in base ai quali confrontare i risultati di diversi trial su vaccini contro SARS-CoV-2.	COVID-19 vaccine trials provide valuable insight into the safety and efficacy of vaccines, with individually-randomized, placebo-controlled trials being the gold standard in trial design. However, a myriad of variables must be considered as clinical trial data are interpreted and used to guide policy decisions. These variables include factors such as the characteristics of the study population and circulating SARS-CoV-2 strains, the force of infection, the definition and ascertainment of endpoints, the timing of vaccine efficacy assessment, and the potential for performance bias. In this Viewpoint, we discuss critical variables to consider when comparing efficacy measurements across current and future COVID-19 vaccine trials.

Derruau S et al Journal of Clinical Medicine https://doi.org/10.3390/jcm10040779	COVID-19 and Dentistry in 72 Questions: An Overview of the Literature.	Settantadue domande sulle cure odontoiatriche durante la pandemia di COVID-19 ; molte riguardono semplicemente il corretto utilizzo di DPI, come nelle altre discipline.	The outbreak of Coronavirus Disease 2019 (COVID-19), caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), has significantly affected the dental care sector. Dental professionals are at high risk of being infected, and therefore transmitting SARS-CoV-2, due to the nature of their profession, with close proximity to the patient's oropharyngeal and nasal regions and the use of aerosol-generating procedures. The aim of this article is to provide an update on different issues regarding SARS-CoV-2 and COVID-19 that may be relevant for dentists. Members of the French National College of Oral Biology Lecturers ("College National des EnseignantS en Biologie Orale"; CNESBO-COVID19 Task Force) answered seventy-two questions related to various topics, including epidemiology, virology, immunology, diagnosis and testing, SARS-CoV-2 transmission and oral cavity, COVID-19 clinical presentation, current treatment options, vaccine strategies, as well as infection prevention and control in dental practice. The questions were selected based on their relevance for dental practitioners. Authors independently extracted and gathered scientific data related to COVID-19, SARS-CoV-2 and the specific topics using scientific databases. With this review, the dental practitioners will have a general overview of the COVID-19 pandemic and its impact on their practice.
Cassone A et al Pathogens and Global Health	Can reasoned mass testing impact covid-19 outcomes in wide community contexts?An evidence-based opinion	Conseguenze di una diversa politica di testing per SARS-CoV-2 sull’andamento dell’epidemia in Lombardia e Veneto a inizio 2020.	We describe the early phases of a COVID-19 epidemic in two contiguous Italian regions, Lombardy and Veneto, which were heavily and simultaneously hit by SARS-CoV-2 in Italy but showed markedly different disease outcome in terms of case fatality rate, SARS-CoV-2-attributable mortality and hospitalization. We discuss data limitations together with similarities and differences of the regional context possibly affecting COVID-19 control in the two regions. We conclude that the better COVID-19 outcome in Veneto

https://www.tandfonline.com/doi/full/10.1080/20477724.2021.1878444			was due, at least in part, to the adoption of a strategy of active search of asymptomatic SARS-CoV-2 infections (Reasoned Mass Testing), instead of a strategy strictly based on the detection of symptomatic cases.
Geurts MH et al Stem Cell Reports https://www.cell.com/stem-cell-reports/fulltext/S2213-6711(20)30457-4?utm_medium=homepage	The Organoid Platform: Promises and Challenges as Tools in the Fight against COVID-19	Gli organoidi sono strutture che riproducono l'istologia di un organo e che possono essere utilizzate nella ricerca al posto di modelli animali o umani : prospettive di utilizzo nella ricerca su COVID-19.	Many pathogenic viruses that affect man display species specificity, limiting the use of animal models. Studying viral biology and identifying potential treatments therefore benefits from the development of in vitro cell systems that closely mimic human physiology. In the current COVID-19 pandemic, rapid scientific insights are of the utmost importance to limit its impact on public health and society. Organoids are emerging as versatile tools to progress the understanding of SARS-CoV-2 biology and to aid in the quest for novel treatments.
Abbasi J et al JAMA https://jamanetwork.com/journals/jama/fullarticle/2777219	Saliva Tests Comparable With Nasal Swabs for SARS-CoV-2 Detection	Commento a due metanalisi (https://www.acpjournals.org/doi/10.7326/M20-6569 e https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2775397) che concludono per la equivalenza della saliva rispetto al tampone nasofaringeo come campione per la ricerca di SARS-CoV-2.	During the coronavirus disease 2019 (COVID-19) pandemic, polymerase chain reaction testing with nasopharyngeal swabs has been the standard diagnostic approach, but the method is uncomfortable and requires a trained health professional. Now, 2 meta-analyses have concluded that self-administered saliva tests are on par with nose and throat swabs for detecting severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

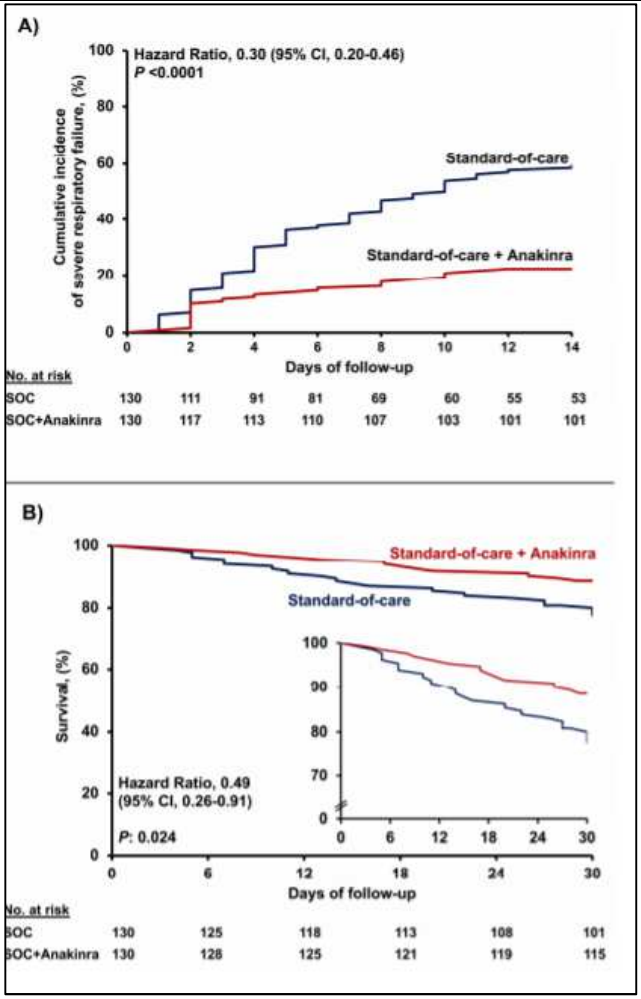
Saad-Roy CM et al Science https://science.sciencemag.org/content/early/2021/03/08/science.abg8663	Epidemiological and evolutionary considerations of SARS-CoV-2 vaccine dosing regimes	Modelli predittivi dell'impatto di diversi tipi di strategie vaccinali contro SARS-CoV-2 sull'andamento della pandemia : fondamentale ampliare le conoscenze sull'effetto della singola somministrazione.	In the face of vaccine dose shortages and logistical challenges, various deployment strategies are being proposed to increase population immunity levels to SARS-CoV-2. Two critical issues arise: how will the timing of delivery of the second dose affect both infection dynamics and prospects for the evolution of viral immune escape via a build-up of partially immune individuals. Both hinge on the robustness of the immune response elicited by a single dose, compared to natural and two-dose immunity. Building on an existing immuno-epidemiological model, we find that in the short-term, focusing on one dose generally decreases infections, but longer-term outcomes depend on this relative immune robustness. We then explore three scenarios of selection and find that a one-dose policy may increase the potential for antigenic evolution under certain conditions of partial population immunity. We highlight the critical need to test viral loads and quantify immune responses after one vaccine dose, and to ramp up vaccination efforts throughout the world.
Raches E et al The Lancet https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00070-0/fulltext	Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine, BBV152: interim results from a double-blind, randomised, multicentre, phase 2 trial, and 3-month follow-up of a double-blind, randomised phase 1 trial	Studio di fase I/II sul vaccino a virione intero inattivato BBV152 (COVAXIN) contro SARS-CoV-2 che si aggiunge all'armamentario dei vaccini per contrastare la pademia in India, ove è stato autorizzato.	BBV152 is a whole-virion inactivated SARS-CoV-2 vaccine (3 µg or 6 µg) formulated with a toll-like receptor 7/8 agonist molecule (IMDG) adsorbed to alum (Algel). We previously reported findings from a double-blind, multicentre, randomised, controlled phase 1 trial on the safety and immunogenicity of three different formulations of BBV152 (3 µg with Algel-IMDG, 6 µg with Algel-IMDG, or 6 µg with Algel) and one Algel-only control (no antigen), with the first dose administered on day 0 and the second dose on day 14. The 3 µg and 6 µg with Algel-IMDG formulations were selected for this phase 2 study. Herein, we report interim findings of the phase 2 trial on the immunogenicity and safety of BBV152, with the first dose administered on day 0 and the second dose on day 28.

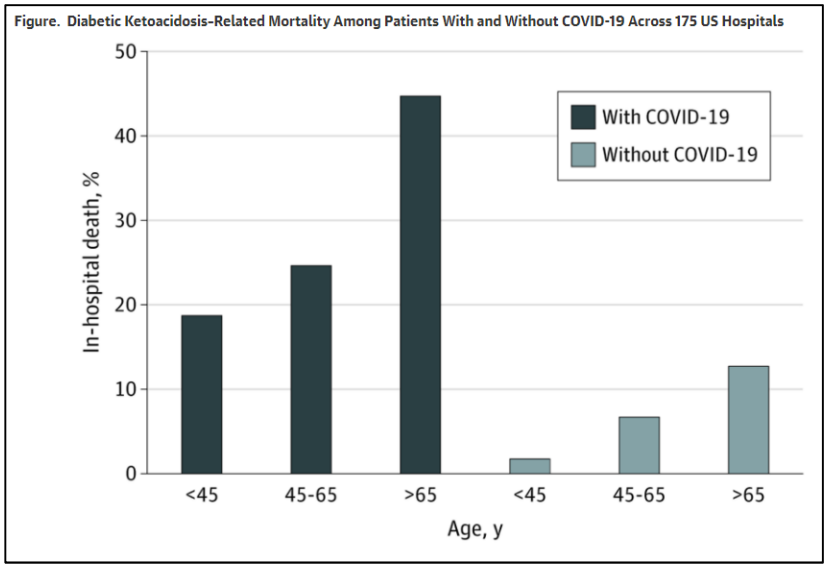
			Methods : We did a double-blind, randomised, multicentre, phase 2 clinical trial to evaluate the immunogenicity and safety of BBV152 in healthy adults and adolescents (aged 12–65 years) at nine hospitals in India. Participants with positive SARS-CoV-2 nucleic acid and serology tests were excluded. Participants were randomly assigned (1:1) to receive either 3 µg with Algel-IMDG or 6 µg with Algel-IMDG. Block randomisation was done by use of an interactive web response system. Participants, investigators, study coordinators, study-related personnel, and the sponsor were masked to treatment group allocation. Two intramuscular doses of vaccine were administered on day 0 and day 28. The primary outcome was SARS-CoV-2 wild-type neutralising antibody titres and seroconversion rates (defined as a post-vaccination titre that was at least four-fold higher than the baseline titre) at 4 weeks after the second dose (day 56), measured by use of the plaque-reduction neutralisation test (PRNT50) and the microneutralisation test (MNT50). The primary outcome was assessed in all participants who had received both doses of the vaccine. Cell-mediated responses were a secondary outcome and were assessed by T-helper-1 (Th1)/Th2 profiling at 2 weeks after the second dose (day 42). Safety was assessed in all participants who received at least one dose of the vaccine. In addition, we report immunogenicity results from a follow-up blood draw collected from phase 1 trial participants at 3 months after they received the second dose (day 104). This trial is registered at ClinicalTrials.gov, NCT04471519. Findings : Between Sept 5 and 12, 2020, 921 participants were screened, of whom 380 were enrolled and randomly assigned to the 3 µg with Algel-IMDG group (n=190) or 6 µg with Algel-IMDG group (n=190). Geometric mean titres (GMTs; PRNT50) at day 56 were significantly higher in the 6 µg with Algel-IMDG group (197·0 [95%

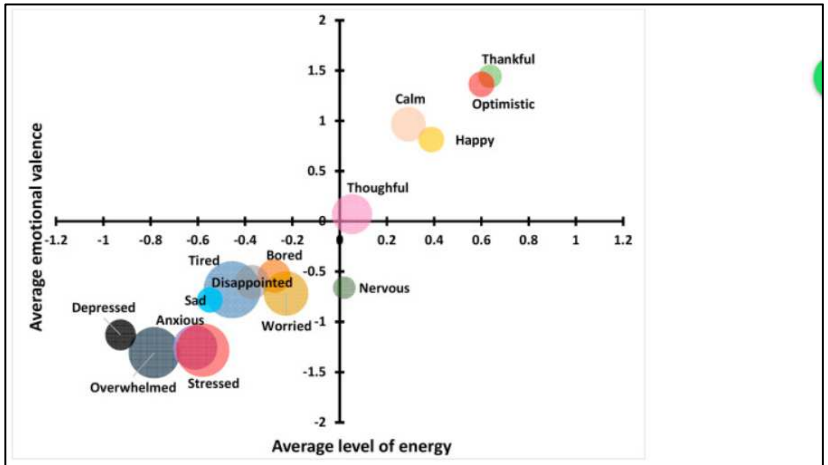
			CI 155·6–249·4]) than the 3 μg with Algel-IMDG group (100·9 [74·1–137·4]; p=0·0041). Seroconversion based on PRNT50 at day 56 was reported in 171 (92·9% [95% CI 88·2–96·2] of 184 participants in the 3 μg with Algel-IMDG group and 174 (98·3% [95·1–99·6]) of 177 participants in the 6 μg with Algel-IMDG group. GMTs (MNT50) at day 56 were 92·5 (95% CI 77·7–110·2) in the 3 μg with Algel-IMDG group and 160·1 (135·8–188·8) in the 6 μg with Algel-IMDG group. Seroconversion based on MNT50 at day 56 was reported in 162 (88·0% [95% CI 82·4–92·3]) of 184 participants in the 3 μg with Algel-IMDG group and 171 (96·6% [92·8–98·8]) of 177 participants in the 6 μg with Algel-IMDG group. The 3 μg with Algel-IMDG and 6 μg with Algel-IMDG formulations elicited T-cell responses that were biased to a Th1 phenotype at day 42. No significant difference in the proportion of participants who had a solicited local or systemic adverse reaction in the 3 μg with Algel-IMDG group (38 [20·0%; 95% CI 14·7–26·5] of 190) and the 6 μg with Algel-IMDG group (40 [21·1%; 15·5–27·5] of 190) was observed on days 0–7 and days 28–35; no serious adverse events were reported in the study. From the phase 1 trial, 3-month post-second-dose GMTs (MNT50) were 39·9 (95% CI 32·0–49·9) in the 3μg with Algel-IMDG group, 69·5 (53·7–89·9) in the 6 μg with Algel-IMDG group, 53·3 (40·1–71·0) in the 6 μg with Algel group, and 20·7 (14·5–29·5) in the Algel alone group. Interpretation : In the phase 1 trial, BBV152 induced high neutralising antibody responses that remained elevated in all participants at 3 months after the second vaccination. In the phase 2 trial, BBV152 showed better reactogenicity and safety outcomes, and enhanced humoral and cell-mediated immune responses compared with the phase 1 trial. The 6 μg with Algel-IMDG formulation has been selected for the phase 3 efficacy trial.

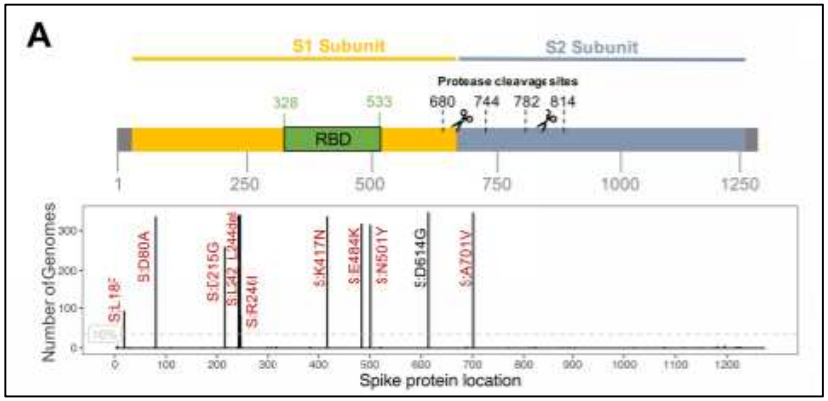
The Centers for Disease Control and Prevention https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html	Guidance for Fully Vaccinated People	Indicazioni di comportamento dei CDC americani per le persone che hanno eseguito un ciclo completo di vaccinazione anti-SARS-CoV-2 : apertura ad alcune eccezioni al distanziamento sociale, salvo che con i soggetti a rischio.	Fully vaccinated people can: - Visit with other fully vaccinated people indoors without wearing masks or physical distancing - Visit with unvaccinated people from a single household who are at low risk for severe COVID-19 disease indoors without wearing masks or physical distancing - Refrain from quarantine and testing following a known exposure if asymptomatic For now, fully vaccinated people should continue to: - Take precautions in public like wearing a well-fitted mask and physical distancing - Wear masks, practice physical distancing, and adhere to other prevention measures when visiting with unvaccinated people who are at increased risk for severe COVID-19 disease or who have an unvaccinated household member who is at increased risk for severe COVID-19 disease - Wear masks, maintain physical distance, and practice other prevention measures when visiting with unvaccinated people from multiple households - Avoid medium- and large-sized in-person gatherings - Get tested if experiencing COVID-19 symptoms - Follow guidance issued by individual employers - Follow CDC and health department travel requirements and recommendations
Christie A et al JAMA https://jamanetwork.com/journals/jama/fullarticle/2777536	CDC Interim Recommendations for Fully Vaccinated People An Important First Step	Commento alle linee guida precedenti e ai dati su cui esse si basano.	Preliminary but rapidly increasing evidence suggests that fully vaccinated people likely pose little risk of transmission to unvaccinated people. Studies from the US, UK, and Israel found that 2 doses of Pfizer-BioNTech or Moderna vaccines were 86% to 92% effective against asymptomatic and symptomatic SARS-CoV-2 infection. More specifically, studies from Israel demonstrated that the Pfizer-BioNTech COVID-19 vaccine was 90% effective against asymptomatic infection, and vaccinated people who developed

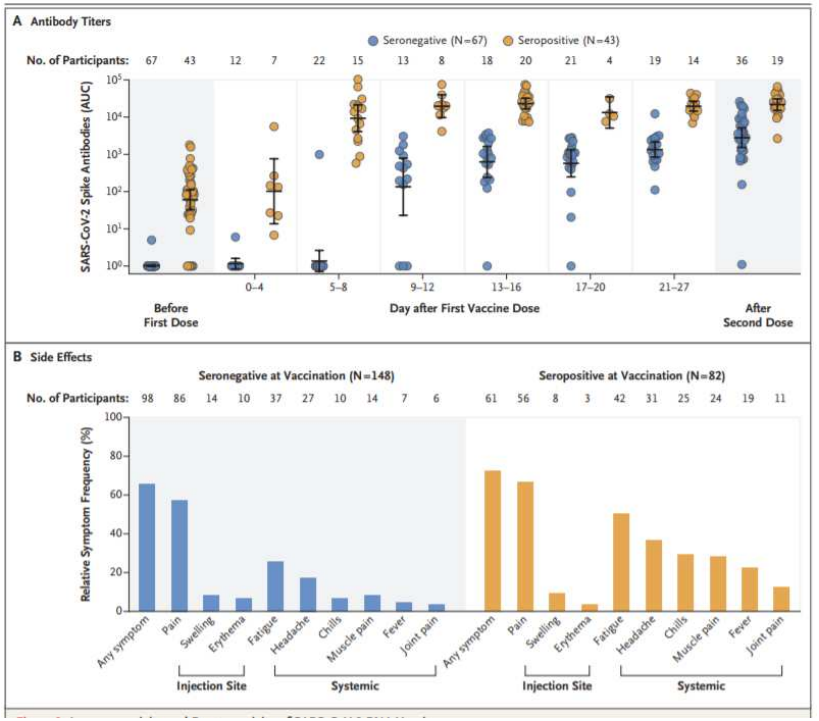
			COVID-19 had a substantially lower viral load than unvaccinated people. Viral load has been identified as a key driver of transmission and this observation may indicate reduced transmissibility. Collectively, these findings demonstrate that vaccination has the potential to substantially reduce the COVID-19 disease burden in the US.
Kyriazopoulou E et al eLife https://elifesciences.org/articles/66125	An open label trial of anakinra to prevent respiratory failure in COVID-19	Confronto fra 130 pazienti trattati con anakinra sulla base della elevazione del marcatore suPAR (recettore dell'attivatore del plasminogeno) e altrettanti controlli : si dimostra un beneficio della terapia con anakinra in termini di miglioramento clinico, progressione a insufficienza respiratoria grave, mortalità a 30 giorni.	Background It was studied if early suPAR-guided anakinra treatment can prevent severe respiratory failure (SRF) of COVID-19. Methods 130 patients with suPAR ≥6 ng/ml were assigned to subcutaneous anakinra 100mg once daily for 10 days. Primary outcome was SRF incidence by day 14 defined as any respiratory ratio below 150 mmHg necessitating mechanical or non-invasive ventilation. Main secondary outcomes were 30-day mortality and inflammatory mediators; 28-day WHO-CPS was explored. Propensity-matched standard-of care comparators were studied. Results 22.3% with anakinra treatment and 59.2% comparators (hazard ratio, 0.30; 95%CI, 0.20-0.46) progressed into SRF; 30-day mortality was 11.5% and 22.3% respectively (hazard ratio 0.49; 95% CI 0.25-0.97). Anakinra was associated with decrease in circulating interleukin (IL)-6, sCD163 and sIL2-R; IL-10/IL-6 ratio on day 7 was inversely associated with SOFA score; patients were allocated to less severe WHO-CPS strata. Conclusions Early suPAR-guided anakinra decreased SRF and restored the pro-/anti-inflammatory balance.

			
Pasquel FJ et al JAMA	Characteristics of and Mortality Associated With Diabetic Ketoacidosis Among US Patients Hospitalized With or Without COVID-19	Caratteristiche di oltre 5000 pazienti ricoverati negli USA con chetoacidosi diabetica acuta nel periodo febbraio-settembre 2020, di cui il 4% affetti da COVID-19 : questi	Diabetic ketoacidosis (DKA) is a life-threatening, acute complication of diabetes. Despite an increase in DKA hospitalization rates, the age-adjusted DKA in-hospital case-fatality rate has declined over time. However, with the advent of coronavirus disease 2019 (COVID-19), a suspected increase in the frequency and severity of DKA has been hypothesized because of the potential diabetogenic

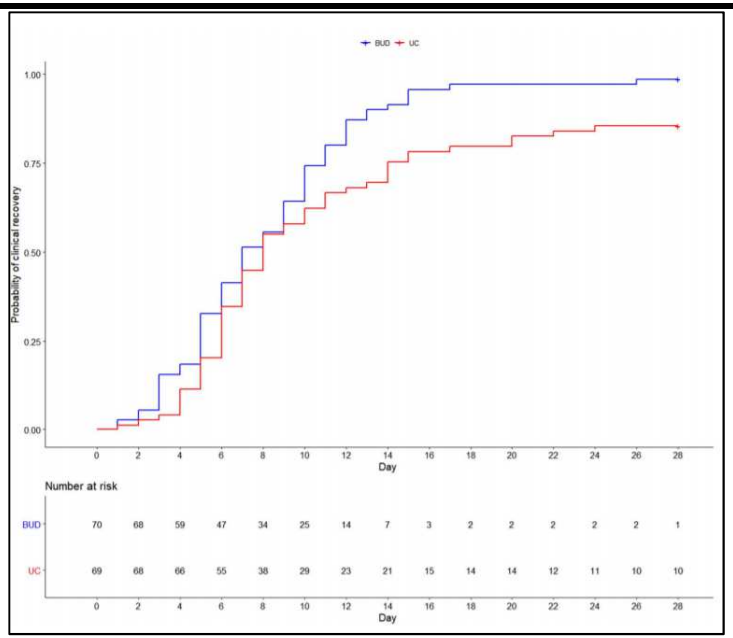
https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2777312		ultimi sono più anziani, hanno più comorbidità e una maggiore mortalità.	effect of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). To further characterize patients with DKA with and without COVID-19, we analyzed individual-level inpatient data from multiple US hospitals. 
Camacho-Zuniga C et al Heliyon https://www.cell.com/heliyon/fulltext/S2405-8440(21)00570-3	The impact of the COVID-19 Pandemic on Students' Feelings at High school, Undergraduate, and Postgraduate levels	Esiti di un sondaggio sulle condizioni psichiche di oltre 13000 studenti delle scuole superiori e dell'università durante la pandemia di COVID-19.	The COVID-19 pandemic and the enforced restrictions have harshly affected educational sectors in 161 countries around the world. With more than 1.6 billion students away from normal school life, the crisis threatens the teaching and learning processes and the students' emotional health. Herein, we present the result of a careful assessment of the feelings of over 13,000 students at high school, undergraduate, and postgraduate levels across 36 campuses over 8 subsequent weeks from the onset of the COVID-19 pandemic. The results indicate a general low energy level and dominance of negative feelings among the students regardless of their academic levels. We have recorded 5 responses (being anxious, stressed, overwhelmed, tired, and depressed) as the most

			frequently reported feelings in the time of lockdown. Overall, 14% of those who have reported to suffer from these feelings have also identified a need for professional help in managing their feelings throughout the quarantine period. The current study also presents several strategies to combat the undesirable consequences of COVID-19 pandemic.  Figure 3 Top-fifteen feelings according to the average valence and level of energy as assessed by the participants/students. The bubbles are size-proportional to the number of counts.
Dan J et al Clinical Infectious Diseases https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa1936/6058751	Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Immunity and Reinfection	Quanto è difficile stabilire una reinfezione da SARS-CoV-2, ruolo protettivo delle IgG circolanti e delle IgA mucosali.	Establishing reinfection or recrudescence of SARS-CoV-2 is not a simple feat. A few case reports have demonstrated phylogenetic confirmation of reinfection [5–7]. It is well established that viral RNA can be detected in the nasopharynx many months after initial infection, particularly in immunocompromised individuals. Demonstrating reinfection necessitates phylogenetic analyses to confirm that a virus detected during subsequent illness is a unique variant. This is made even more difficult by the relatively slow evolutionary rate of SARS-CoV-2, driven by the proofreading ability of SARS-CoV-2 viral polymerase complex.

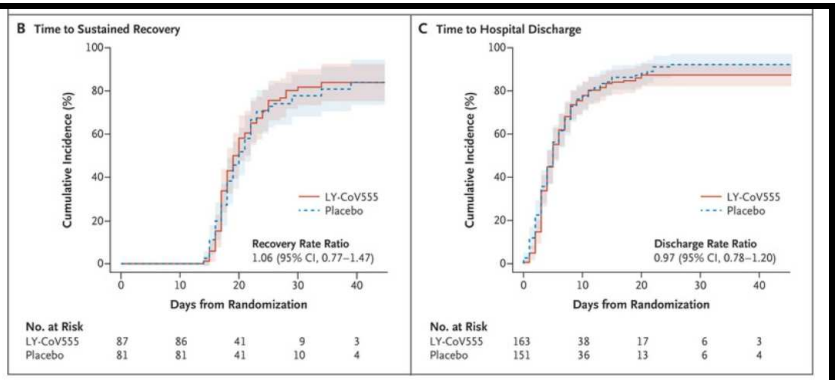
Tegally H et al Nature https://www.nature.com/articles/s41586-021-03402-9	Emergence of a SARS-CoV-2 variant of concern with mutations in spike glycoprotein	Revisione sulle caratteristiche e la diffusione della viariante 501Y.V2 di SARS-CoV-2 (« sudafricana »).	Continued uncontrolled transmission of the severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) in many parts of the world is creating the conditions for signifcant virus evolution. Here, we describe a new SARS-CoV-2 lineage (501Y.V2) characterised by eight lineage-defning mutations in the spike protein, including three at important residues in the receptor-binding domain (K417N, E484K and N501Y) that may have functional signifcance . This lineage was identifed in South Africa after the frst epidemic wave in a severely afected metropolitan area, Nelson Mandela Bay, located on the coast of the Eastern Cape Province. This lineage spread rapidly, becoming dominant in the Eastern Cape, Western Cape and KwaZulu-Natal Provinces within weeks. Whilst the full signifcance of the mutations is yet to be determined, the genomic data, showing the rapid expansion and displacement of other lineages in multiple regions, suggest that this lineage is associated with a selection advantage, most plausibly as a result of increased transmissibility or immune escape. 
Krammer F et al NEJM	Antibody Responses in Seropositive Persons after a Single Dose of SARS-CoV-2 mRNA Vaccine	Versione definitiva di un preprint già recensito: titolo anticorpale dopo la prima dose di vaccino Pfizer più	The efficacy of two injections of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) spike messenger RNA (mRNA) vaccines (BNT162b2 [Pfizer] and mRNA-1273 [Moderna]) in preventing symptomatic SARS-CoV-2 infection in persons without

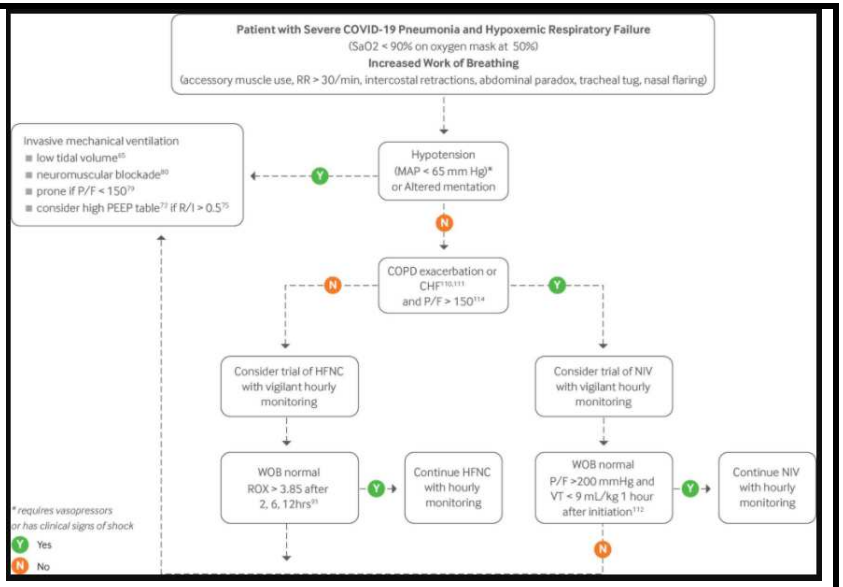
https://www.nejm.org/doi/full/10.1056/NEJMc2101667?query=featured_home		elevato di 10-45 volte nei soggetti con storia di infezione da SARS-CoV-2 rispetto ai naive; i primi hanno anche effetti avversi più frequenti.	previous coronavirus disease 2019 (Covid-19) has been shown to be high. We wondered what the response would be to the first vaccine dose in persons with previous Covid-19. 
Ramakrishnan S et al medRXiv – not peer reviewed https://www.medrxiv.org/content/10.1101/2021.02.04.21251134v1	Inhaled budesonide in the treatment of early COVID-19 illness: a randomised controlled trial	Trial clinico open su 146 pazienti con COVID-19 lieve, non ricoverati : il trattamento con budesonide per via inalatoria riduce la necessità di valutazione in pronto soccorso e il tempo di guarigione (di 1 giorno).	Background Multiple early hospital cohorts of coronavirus disease 2019 (COVID-19) showed that patients with chronic respiratory disease were significantly under-represented. We hypothesised that the widespread use of inhaled glucocorticoids was responsible for this finding and tested if inhaled glucorticoids would be an effective treatment for early COVID-19 illness. Methods We conducted a randomised, open label trial of inhaled budesonide, compared to usual care, in adults within 7 days of the onset of mild Covid-19 symptoms. The primary end point was COVID-19-related urgent care visit, emergency department

			assessment or hospitalisation. The trial was stopped early after independent statistical review concluded that study outcome would not change with further participant enrolment. Results 146 patients underwent randomisation. For the per protocol population (n=139), the primary outcome occurred in 10 participants and 1 participant in the usual care and budesonide arms respectively (difference in proportion 0.131, p=0.004). The number needed to treat with inhaled budesonide to reduce COVID-19 deterioration was 8. Clinical recovery was 1 day shorter in the budesonide arm compared to the usual care arm (median of 7 days versus 8 days respectively, logrank test p=0.007). Proportion of days with a fever and proportion of participants with at least 1 day of fever was lower in the budesonide arm. Fewer participants randomised to budesonide had persistent symptoms at day 14 and day 28 compared to participants receiving usual care. Conclusion Early administration of inhaled budesonide reduced the likelihood of needing urgent medical care and reduced time to recovery following early COVID-19 infection.

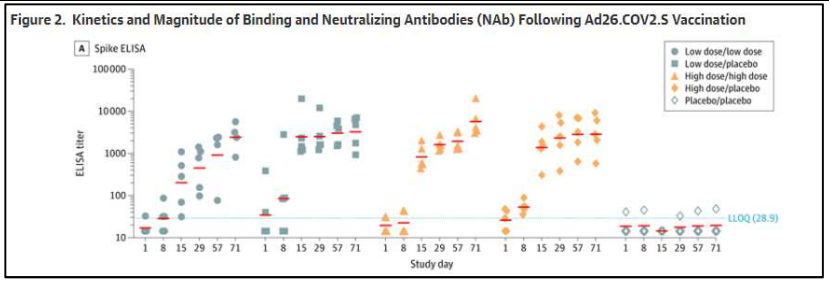
			
ACTIV-3/TICO LY-CoV555 Study Group NEJM https://www.nejm.org/doi/full/10.1056/NEJMoa2033130?query=featured_home	A Neutralizing Monoclonal Antibody for Hospitalized Patients with Covid-19	Trial clinico sulla terapia con anticorpo monoclonale LY-CoV555 in aggiunta a remdesivir nella terapia di COVID-19 non critico (7 giorni mediani dall'esordio dei sintomi) : nessun beneficio ulteriore.	BACKGROUND : LY-CoV555, a neutralizing monoclonal antibody, has been associated with a decrease in viral load and the frequency of hospitalizations or emergency department visits among outpatients with coronavirus disease 2019 (Covid-19). Data are needed on the effect of this antibody in patients who are hospitalized with Covid-19. METHODS : In this platform trial of therapeutic agents, we randomly assigned hospitalized patients who had Covid-19 without end-organ failure in a 1:1 ratio to receive either LY-CoV555 or matching placebo. In addition, all the patients received high-quality supportive care as background therapy, including the antiviral drug remdesivir and, when indicated, supplemental oxygen and glucocorticoids. LY-CoV555 (at a dose of 7000 mg) or placebo was administered as a single intravenous infusion over a 1-hour period. The primary outcome was a sustained recovery during a 90-day

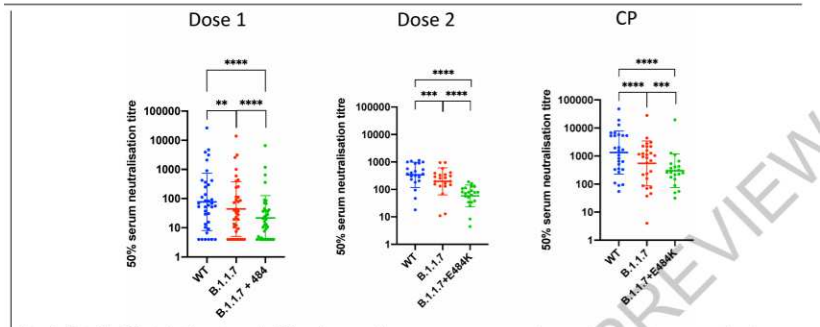
			period, as assessed in a time-to-event analysis. An interim futility assessment was performed on the basis of a seven-category ordinal scale for pulmonary function on day 5. RESULTS : On October 26, 2020, the data and safety monitoring board recommended stopping enrollment for futility after 314 patients (163 in the LY-CoV555 group and 151 in the placebo group) had undergone randomization and infusion. The median interval since the onset of symptoms was 7 days (interquartile range, 5 to 9). At day 5, a total of 81 patients (50%) in the LY-CoV555 group and 81 (54%) in the placebo group were in one of the two most favorable categories of the pulmonary outcome. Across the seven categories, the odds ratio of being in a more favorable category in the LY-CoV555 group than in the placebo group was 0.85 (95% confidence interval [CI], 0.56 to 1.29; P=0.45). The percentage of patients with the primary safety outcome (a composite of death, serious adverse events, or clinical grade 3 or 4 adverse events through day 5) was similar in the LY-CoV555 group and the placebo group (19% and 14%, respectively; odds ratio, 1.56; 95% CI, 0.78 to 3.10; P=0.20). The rate ratio for a sustained recovery was 1.06 (95% CI, 0.77 to 1.47). CONCLUSIONS : Monoclonal antibody LY-CoV555, when coadministered with remdesivir, did not demonstrate efficacy among hospitalized patients who had Covid-19 without end-organ failure.

			
Attaway AH et al BMJ https://www.bmj.com/content/372/bmj.n436	Severe covid-19 pneumonia: pathogenesis and clinical management	Revisione sulla patogenesi e sulla gestione clinica della polmonite grave da SARS-CoV-2. Utilità del ROX index (Respiratory rate-OXygenation), dato da SpO2/FiO2 fratto la frequenza respiratoria, nel predire il fallimento delle cannule nasali ad alto flusso [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7478440/pdf/134_2020_Article_6228.pdf].	Severe covid-19 pneumonia has posed critical challenges for the research and medical communities. Older age, male sex, and comorbidities increase the risk for severe disease. For people hospitalized with covid-19, 15-30% will go on to develop covid-19 associated acute respiratory distress syndrome (CARDS). Autopsy studies of patients who died of severe SARS CoV-2 infection reveal presence of diffuse alveolar damage consistent with ARDS but with a higher thrombus burden in pulmonary capillaries. When used appropriately, high flow nasal cannula (HFNC) may allow CARDS patients to avoid intubation, and does not increase risk for disease transmission. During invasive mechanical ventilation, low tidal volume ventilation and positive end expiratory pressure (PEEP) titration to optimize oxygenation are recommended. Dexamethasone treatment improves mortality for the treatment of severe and critical covid-19, while remdesivir may have modest benefit in time to recovery in patients with severe disease but shows no statistically significant benefit in mortality or other clinical outcomes. Covid-19 survivors, especially patients with ARDS, are at high risk for long term physical and mental impairments, and an interdisciplinary approach is essential for critical illness recovery.

			
Stephenson KE et al JAMA https://jamanetwork.com/journals/jama/fullarticle/2777598	Immunogenicity of the Ad26.COV2.S Vaccine for COVID-19	Trial clinic di fase 1-2 che dimostra l'efficacia del vaccino Janssen contro SARS-CoV-2, in monosomministrazione, nello stimolare anticorpi neutralizzanti e risposta cellulo-mediata. Sono in corso i trial di fase 3	Importance Control of the global COVID-19 pandemic will require the development and deployment of safe and effective vaccines. Objective To evaluate the immunogenicity of the Ad26.COV2.S vaccine (Janssen/Johnson & Johnson) in humans, including the kinetics, magnitude, and phenotype of SARS-CoV-2 spike-specific humoral and cellular immune responses. Design, Setting, and Participants Twenty-five participants were enrolled from July 29, 2020, to August 7, 2020, and the follow-up for this day 71 interim analysis was completed on October 3, 2020; follow-up to assess durability will continue for 2 years. This study was conducted at a single clinical site in Boston, Massachusetts, as part of a randomized, double-blind, placebo-controlled phase 1 clinical trial of Ad26.COV2.S. Interventions Participants were randomized to receive 1 or 2 intramuscular injections with 5 × 1010 viral particles or 1 × 1011

			viral particles of Ad26.COV2.S vaccine or placebo administered on day 1 and day 57 (5 participants in each group). Main Outcomes and Measures Humoral immune responses included binding and neutralizing antibody responses at multiple time points following immunization. Cellular immune responses included immunospot-based and intracellular cytokine staining assays to measure T-cell responses. Results Twenty-five participants were randomized (median age, 42; age range, 22-52; 52% women, 44% male, 4% undifferentiated), and all completed the trial through the day 71 interim end point. Binding and neutralizing antibodies emerged rapidly by day 8 after initial immunization in 90% and 25% of vaccine recipients, respectively. By day 57, binding and neutralizing antibodies were detected in 100% of vaccine recipients after a single immunization. On day 71, the geometric mean titers of spike-specific binding antibodies were 2432 to 5729 and the geometric mean titers of neutralizing antibodies were 242 to 449 in the vaccinated groups. A variety of antibody subclasses, Fc receptor binding properties, and antiviral functions were induced. CD4+ and CD8+ T-cell responses were induced. Conclusion and Relevance In this phase 1 study, a single immunization with Ad26.COV2.S induced rapid binding and neutralization antibody responses as well as cellular immune responses. Two phase 3 clinical trials are currently underway to determine the efficacy of the Ad26.COV2.S vaccine.

			
Collier DA et al Nature https://www.nature.com/articles/s41586-021-03412-7	Sensitivity of SARS-CoV-2 B.1.1.7 to mRNA vaccine-elicited antibodies	Il siero di soggetti guariti, il siero di vaccinati con il vaccino Pfizer e gli anticorpi monoclonali anti-SARS-CoV-2 in uso hanno una attività neutralizzante lievemente ridotta nei confronti della variante B.1.1.7 (“inglese”) del virus rispetto al wildtype. L’introduzione della mutazione E484K (tipica ad esempio della variante “sudafricana”) riduce ulteriormente il titolo neutralizzante e mette a rischio, secondo gli autori, l’efficacia del vaccino Pfizer.	SARS-CoV-2 transmission is uncontrolled in many parts of the world, compounded in some areas by higher transmission potential of the B1.1.7 variant1 now reported in 94 countries. It is unclear whether responses to SARS-CoV-2 vaccines based on the prototypic strain will be impacted by mutations found in B.1.1.7. Here we assessed immune responses following vaccination with mRNA-based vaccine BNT162b22. We measured neutralising antibody responses following first and second immunisations using pseudoviruses expressing the wild-type Spike protein or the 8 amino acid mutations found in the B.1.1.7 spike protein. The vaccine sera exhibited a broad range of neutralising titres against the wild-type pseudoviruses that were modestly reduced against B.1.1.7 variant. This reduction was also evident in sera from some convalescent patients. Decreased B.1.1.7 neutralisation was also observed with monoclonal antibodies targeting the N-terminal domain (9 out of 10), the RBM (5 out of 31), but not in RBD neutralising mAbs binding outside the RBM. Introduction of the E484K mutation in a B.1.1.7 background to reflect a newly emergent Variant of Concern (VOC 202102/02) led to a more substantial loss of neutralising activity by vaccine-elicited antibodies and mAbs (19 out of 31) over that conferred by the B.1.1.7 mutations alone. E484K emergence on a B.1.1.7 background represents a threat to the vaccine BNT162b.

			 **Extended Data Fig. 5 | Neutralisation potency of mRNA vaccine sera and convalescent sera (pre SARS-CoV-2 B.1.1.7) against pseudotyped virus bearing Spike mutations in the B.1.1.7 lineage with and without E484K in the receptor binding domain (all In Spike D614G background).** Vaccine first dose (**a, n=37**), second dose (**b, n=21**) and convalescent sera, Conv. (**c=27**) against WT, B.1.1.7 Spike mutant with N501Y, A570D, ΔH69/V70, Δ144/145, P681H, T716I, S982A and D1118H and B.1.1.7 with E484K. GMT with s.d representative of two independent experiments each with two technical repeats are presented. Wilcoxon matched-pairs signed rank test p-values * <0.05, ** <0.01, *** <0.001, **** <0.0001, ns not significant. GMT: geometric mean titre for 50% neutralization.
Steinberg J et al The Lancet https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00464-5/fulltext	18Fluorodeoxyglucose PET/CT findings in a systemic inflammatory response syndrome after COVID-19 vaccine	Caso di sindrome della risposta infiammatoria sistemica a seguito di vaccinazione contro SARS-CoV-2 (MODERNA) con dimostrazione di linfonodi ascellari ipsilaterali al sito di iniezione captanti alla PET e aumento dell'attività splenica.	A 65-year-old woman attended our hospital with a 1-day history of fever and falls, saying that her legs had given out from under her. The patient's symptoms began within 1 day of the first dose of the mRNA-1273 SARS-CoV-2 vaccine. She had a medical history of hypertension and diabetes. On examination in the emergency department, the patient's temperature was 39·1°C, her respiratory rate was 25 breaths per min, and her heart rate was 88 beats per min. As she met the criteria for systemic inflammatory response syndrome (SIRS), an extensive infection work-up was initiated and she was started on broad-spectrum antibiotics.

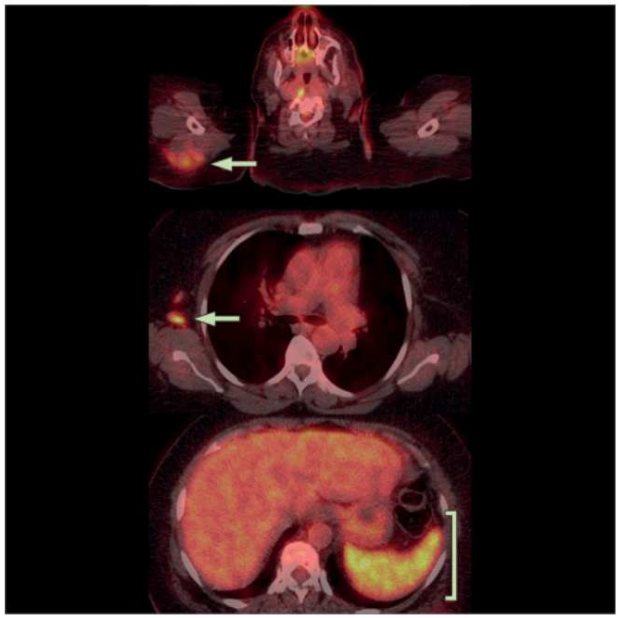
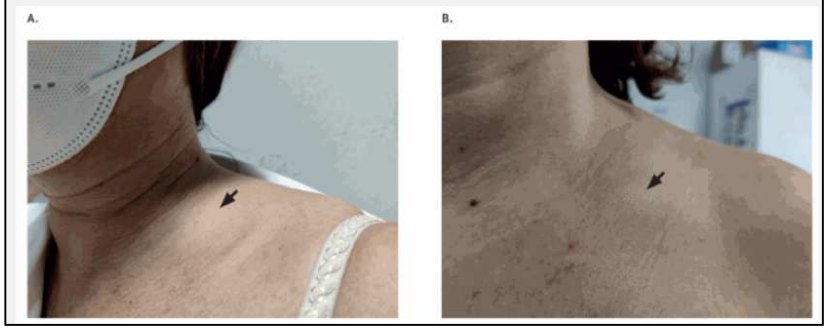
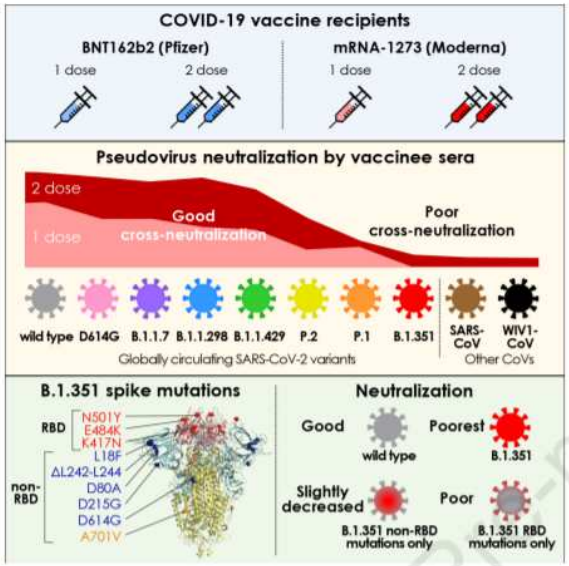
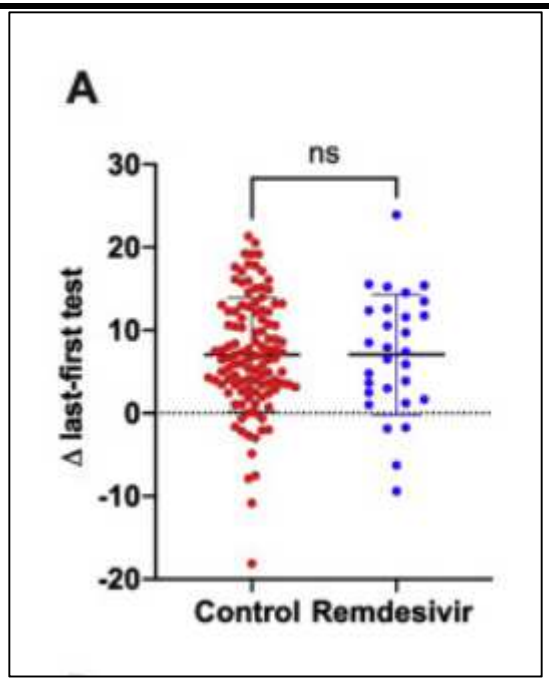
			
Fernández-Prada Mm et al Eurosurveillance https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2021.26.10.2100193	Acute onset supraclavicular lymphadenopathy coinciding with intramuscular mRNA vaccination against COVID-19 may be related to vaccine injection technique, Spain, January and February 2021 separator	Venti casi di linfoadenomegalia sopraclavicolare ipsilaterale rispetto al sito di inoculazione di vaccino a mRNA contro SARS-CoV-2. Conoscere tali reazioni avverse rare potrebbe evitare approfondimenti diagnostici.	The monitoring of adverse reactions associated with vaccination is one of the most important factors in vaccine safety. Although vaccines are among the safest drugs currently on the market, vaccines are not completely risk-free, and adverse events may occur following vaccination. Careful assessment of any adverse events following immunisation is essential to distinguish those that are causally linked to the vaccination from those just coincident in time, in order to prevent vaccine distrust or misperceptions [1]. The objective of this rapid communication was to report a series of adverse reactions consisting of acute onset supraclavicular lymphadenopathy coinciding with vaccination against coronavirus disease (COVID-19).

			Figure. Supraclavicular lymphadenopathy ipsilateral to the vaccination arm (left), COVID-19 vaccination, Spain, 2021 
Sudre CH et al Nature https://www.nature.com/articles/s41591-021-01292-y	Attributes and predictors of long COVID	Si può predire il perdurare dei sintomi da COVID-19 (“long COVID”)? In questo studio basato su dati autoriportati tramite app – prevalentemente da pazienti femmine – emerge che un maggior numero di sintomi riferiti in fase acuta possa essere	Reports of long-lasting coronavirus disease 2019 (COVID-19) symptoms, the so-called ‘long COVID’, are rising but little is known about prevalence, risk factors or whether it is possible to predict a protracted course early in the disease. We analyzed data from 4,182 incident cases of COVID-19 in which individuals self-reported their symptoms prospectively in the COVID Symptom Study app. A total of 558 (13.3%) participants reported symptoms lasting ≥28 days, 189 (4.5%) for ≥8 weeks and 95 (2.3%) for ≥12 weeks. Long COVID was characterized by symptoms of fatigue, headache, dyspnea and anosmia and was more likely with increasing age and body mass index and female sex. Experiencing more than five symptoms during the first week of illness was associated with long COVID (odds ratio = 3.53 (2.76–4.50)). A simple model to distinguish between short COVID and long COVID at 7 days (total sample size, n = 2,149) showed an area under the curve of the receiver operating characteristic curve of 76%, with replication in an independent sample of 2,472 individuals who were positive for severe acute respiratory syndrome coronavirus 2. This model could be used to identify individuals at risk of long COVID for trials of prevention or treatment and to plan education and rehabilitation services.

Kadire SR et al NEJM https://www.nejm.org/doi/full/10.1056/NEJMclde2100910?query=featured_home	Doctor, How Long Should I Isolate?	Discussione di uno scenario clinico incentrato sulla sospensione dell'indicazione a isolamento dopo infezione da SARS-CoV-2. Gli autori sembrano concordare su un aspetto: la valutazione caso per caso è sempre necessaria.	It has now been 1 week since her admission to the hospital, and discharge planning has started. The patient plans to go home to stay with her parents, both of whom are over the age of 65 years, while she recuperates. She is concerned about the risk of transmission of SARS-CoV-2 to her parents. Her father is taking immunosuppressive medication after recent kidney transplantation. She has requested that PCR testing be performed again on a repeat nasopharyngeal swab. The PCR test is performed, and the result is positive. You must advise the patient about the risk of transmitting the virus to her parents, given the time since the onset of Covid-19 symptoms and the positive repeat PCR test.
Agenzia Italiana del Farmaco https://www.aifa.gov.it/web/guest/-/aifa-approva-il-vaccino-janssen	AIFA approva il vaccino Janssen	Comunicato stampa AIFA sulla approvazione del vaccino Janssen/ Johnson&Johnson contro SARS-CoV-2, destinato alla monosomministrazione.	AIFA ha autorizzato il vaccino Janssen di Johnson&Johnson per la prevenzione della malattia COVID-19 per i soggetti al di sopra dei 18 anni, come da indicazione EMA. Il vaccino sarà dunque messo a disposizione a carico del SSN. La Commissione tecnico-scientifica (CTS) dell'Agenzia si è riunita oggi, 12 marzo 2021, ha confermato la valutazione dell'EMA sull'efficacia del vaccino che nelle forme gravi arriva fino al 77 % dopo 14 giorni dalla somministrazione e all'85% dopo 28 giorni dalla somministrazione. I dati attualmente disponibili hanno mostrato che nei soggetti over 65 non si è notata alcuna flessione nella efficacia. Il vaccino Janssen, il quarto approvato, si aggiunge come un'altra utile opzione con un beneficio rilevante nel contrasto alla pandemia.
Garcia-Beltram WF et al Cell	Multiple SARS-CoV-2 variants escape neutralization by vaccine-induced humoral immunity	Il siero di 99 individui vaccinati con vaccino a mRNA Pfizer o MODERNA contro SARS-CoV-2 neutralizza il virus wildtype e alcune varianti, ma non la	Vaccination elicits immune responses capable of potently neutralizing SARS-CoV-2. However, ongoing surveillance has revealed the emergence of variants harboring mutations in spike, the main target of neutralizing antibodies. To understand the impact of these variants, we evaluated the neutralization potency of 99 individuals that received one or two doses of either BNT162b2 or

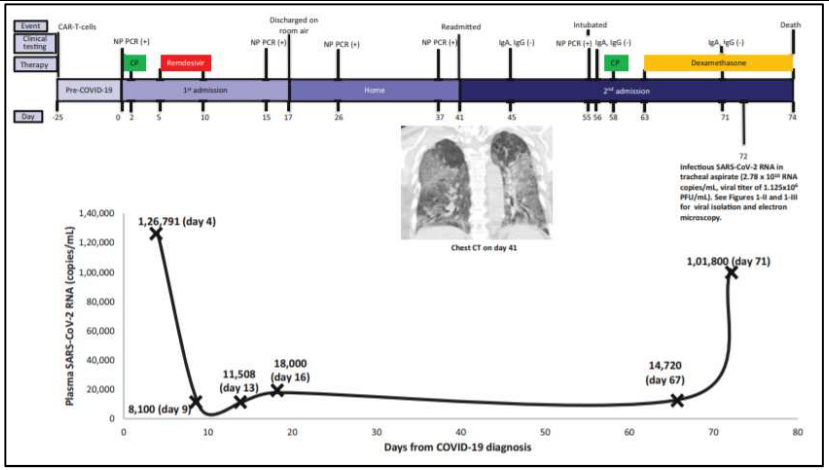
https://www.cell.com/cell/fulltext/S0092-8674(21)00298-1		B.1.351 (“sudafricana”) e la P.2 (“brasiliana”), per cui andrebbe supportata secondo gli autori la sintesi di ulteriori dosi di vaccino adeguate alle mutazioni della proteina Spike.	mRNA-1273 vaccines against pseudoviruses representing 10 globally circulating strains of SARS-CoV-2. Five of the 10 pseudoviruses, harboring receptor-binding domain mutations, including K417N/T, E484K, and N501Y, were highly resistant to neutralization. Cross-neutralization of B.1.351 variants was comparable to SARS-CoV and bat-derived WIV1-CoV, suggesting that a relatively small number of mutations can mediate potent escape from vaccine responses. While the clinical impact of neutralization resistance remains uncertain, these results highlight the potential for variants to escape from neutralizing humoral immunity and emphasize the need to develop broadly protective interventions against the evolving pandemic. 
Goldberg E et al Clinical Microbiology and Infection	A real-life setting evaluation of the effect of remdesivir on viral load in COVID-19	Studio su 142 pazienti ricoverati per COVID-19 in Israele, finalizzato a valutare l’efficacia di remdesivir sulla	OBJECTIVES: The effectiveness of remdesivir, a Food and Drug Administration (FDA) approved drug for severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), has been repeatedly questioned during the current coronavirus disease 2019 (COVID-19)

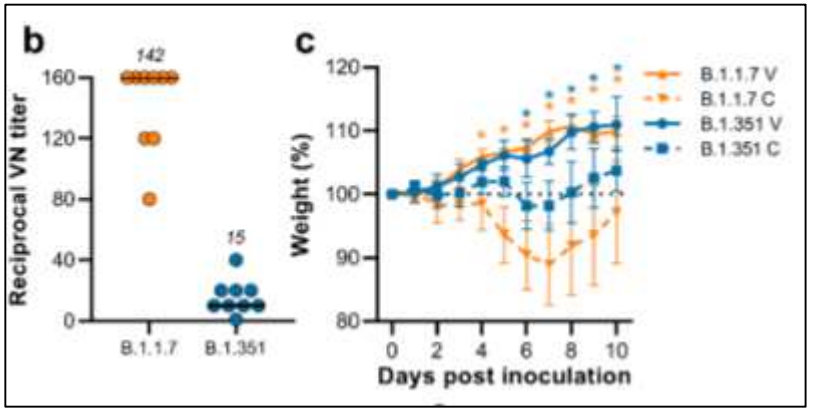
https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(21)00113-0/fulltext	patients admitted to a large tertiary center in Israel.	carica virale (stimata tramite ciclo-soglia della PCR) del tampone nasofaringeo e sulla durata dell'ospedalizzazione: nessuna differenza significativa fra i 29 trattati e i 113 non trattati con remdesivir.	pandemic. Most of the recently reported studies were randomized controlled multicenter clinical trials. Our goal was to test the efficiency of remdesivir in reducing nasopharyngeal viral load and hospitalization length in a real-life setting in admitted patients in a large tertiary center in Israel. METHODS: A total of 142 COVID-19 patients found to have at least three reported SARS-CoV-2 quantitative RT-PCR tests during hospitalization were selected for this study. Of these, 29 patients received remdesivir, while the remaining non-treated 113 patients served as controls. RESULTS: Among the tested parameters, the control and remdesivir groups differed significantly only in the intubation rates. Remdesivir treatment did not significantly affect nasopharyngeal viral load, as determined by comparing the differences between the first and last cycle threshold values of the SARS-CoV-2 quantitative RT-PCR tests performed during hospitalization (Ct 7.07+/-6.85 vs. 7.08+/-7.27, p=0.977 in the control and treated groups, respectively). Remdesivir treatment shortened hospitalization length by less than a day compared to non-treated controls and by 3.1 days when non-intubated patients from both groups were compared. These differences, however, were not statistically significant, possibly because of the small size of the remdesivir group. CONCLUSIONS: Remdesivir was not associated with nasopharyngeal viral load changes, but our study had a significant disease severity baseline imbalance and was not powered to detect viral load or clinical differences.

			
Killerby ME et al Journal of Infectious Diseases https://doi.org/10.1093/infdis/jiab125	Shedding of culturable virus, seroconversion, and 6-month follow-up antibody responses in the first 14 confirmed cases of COVID-19 in the United States.	Evoluzione dell'infezione da SARS-CoV-2 in 14 tra i primi pazienti diagnosticati negli USA: dopo 8 giorni dall'esordio non si osserva virus vivo in coltura da tampone nasofaringeo, e in ogni caso mai dopo la comparsa di anticorpi neutralizzanti.	We aimed to characterize presence of culturable virus in clinical specimens during acute illness, and antibody kinetics up to six months post-onset, among 14 early US COVID-19 patients. We isolated viable SARS-CoV-2 from rRT-PCR-positive respiratory specimens collected during days 0-8 post-onset, but not after. All 13 patients with two or more serum specimens developed anti-spike antibodies; 12 developed detectable neutralizing antibodies. We did not isolate virus after detection of neutralizing antibodies. Eight participants provided serum at six months post-onset; all retained detectable anti-spike IgG, and half had detectable neutralizing antibodies. Two participants reported not feeling fully recovered at six months.

Perlis RH et al JAMA https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2777421	Association of Acute Symptoms of COVID-19 and Symptoms of Depression in Adults	Sondaggio online sui sintomi riportati da 3904 persone con storia di COVID-19 negli USA: più della metà ha sintomi riferibili a un disturbo depressivo maggiore e appaiono fattori di rischio il sesso maschile e l'età più giovanile.	After acute infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a subset of individuals experience persistent symptoms involving mood, sleep, anxiety, and fatigue,1 which may contribute to markedly elevated rates of major depressive disorder observed in recent epidemiologic studies.2 In this study, we investigated whether acute coronavirus disease 2019 (COVID-19) symptoms are associated with the probability of subsequent depressive symptoms.
Guy GP Morbidity and Mortality Weekly Report https://doi.org/10.15585/mmwr.mm7010e3	Association of State-Issued Mask Mandates and Allowing On-Premises Restaurant Dining with County-Level COVID-19 Case and Death Growth Rates - United States, March 1-December 31, 2020.	I dati dei CDC sull'andamento dei contagi di infezione da SARS-CoV-2 sono a favore dell'utilizzo obbligatorio della mascherina e della chiusura dei locali pubblici.	CDC recommends a combination of evidence-based strategies to reduce transmission of SARS-CoV-2, the virus that causes COVID-19. Because the virus is transmitted predominantly by inhaling respiratory droplets from infected persons, universal mask use can help reduce transmission. Starting in April, 39 states and the District of Columbia (DC) issued mask mandates in 2020. Reducing person-to-person interactions by avoiding nonessential shared spaces, such as restaurants, where interactions are typically unmasked and physical distancing (>/=6 ft) is difficult to maintain, can also decrease transmission. In March and April 2020, 49 states and DC prohibited any on-premises dining at restaurants, but by mid-June, all states and DC had lifted these restrictions. To examine the association of state-issued mask mandates and allowing on-premises restaurant dining with COVID-19 cases and deaths during March 1-December 31, 2020, county-level data on mask mandates and restaurant reopenings were compared with county-level changes in COVID-19 case and death growth rates relative to the mandate implementation and reopening dates. Mask mandates were associated with decreases in daily COVID-19 case and death growth rates 1-20, 21-40, 41-60, 61-80, and 81-100 days after implementation. Allowing any on-premises dining at restaurants was associated with increases in daily COVID-19 case growth rates

			41-60, 61-80, and 81-100 days after reopening, and increases in daily COVID-19 death growth rates 61-80 and 81-100 days after reopening. Implementing mask mandates was associated with reduced SARS-CoV-2 transmission, whereas reopening restaurants for on-premises dining was associated with increased transmission. Policies that require universal mask use and restrict any on-premises restaurant dining are important components of a comprehensive strategy to reduce exposure to and transmission of SARS-CoV-2. Such efforts are increasingly important given the emergence of highly transmissible SARS-CoV-2 variants in the United States.
Hensley MK et al Clinical Infectious Diseases https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciab072/6122591?searchresult=1	Intractable Coronavirus Disease 2019 (COVID-19) and Prolonged Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Replication in a Chimeric Antigen Receptor-Modified T-Cell Therapy Recipient: A Case Study	Caso clinico di infezione da SARS-CoV-2 persistente e infine mortale in un paziente sottoposto a terapia con CAR T cells (https://www.aifa.gov.it/documents/20142/0/Terapie_CAR-T.pdf/) per mieloma multiplo, che aveva causato linfopenia e agammaglobulinemia.	A chimeric antigen receptor-modified T-cell therapy recipient developed severe coronavirus disease 2019, intractable RNAemia, and viral replication lasting >2 months. Premortem endotracheal aspirate contained >2 × 1010 severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA copies/mL and infectious virus. Deep sequencing revealed multiple sequence variants consistent with intrahost virus evolution. SARS-CoV-2 humoral and cell-mediated immunity were minimal. Prolonged transmission from immunosuppressed patients is possible.

			
Lythgoe KA et al Science https://science.sciencemag.org/content/early/2021/03/10/science.abg0821	SARS-CoV-2 within-host diversity and transmission	Sequenziamento del genoma di SARS-CoV-2 di oltre 1000 individui che dimostra come l'emergere di varianti all'interno dello stesso individuo sia relativamente raro. Inoltre, la gran parte di esse non verrebbe trasmessa. Si ritiene che le varianti che si sono affermate a livello mondiale siano sorte in individui con prolungata replicazione virale sotto l'effetto della pressione selettiva di un sistema immunitario inefficiente.	Extensive global sampling and sequencing of the pandemic virus SARS-CoV-2 have enabled researchers to monitor its spread, and to identify concerning new variants. Two important determinants of variant spread are how frequently they arise within individuals, and how likely they are to be transmitted. To characterize within-host diversity and transmission we deep-sequenced 1313 clinical samples from the UK. SARS-CoV-2 infections are characterized by low levels of within-host diversity when viral loads are high, and a narrow bottleneck at transmission. Most variants are either lost, or occasionally fixed, at the point of transmission, with minimal persistence of shared diversity - patterns which are readily observable on the phylogenetic tree. Our results suggest that transmission-enhancing and/or immune-escape variants are likely to arise infrequently but could spread rapidly if successfully transmitted.

Fischer RJ et al bioRXiv https://www.biorxiv.org/content/10.1101/2021.03.11.435000v1	ChAdOx1 nCoV-19 (AZD1222) protects against SARS-CoV-2 B.1.351 and B.1.1.7	Criceti vaccinati con una dose di vaccino AstraZeneca contro SARS-CoV-2 e infettati con le varianti B1.1.7 (“inglese”) o B1.351 (“sudafricana”) hanno in entrambi i casi una infezione clinicamente e anatomo-patologicamente più benigna dei non vaccinati, anche se il titolo di anticorpi neutralizzanti contro la variante “sudafricana” è 9 volte inferiore che contro la “inglese”.	We investigated ChAdOx1 nCoV-19 (AZD1222) vaccine efficacy against SARS-CoV-2 variants of concern (VOCs) B.1.1.7 and B.1.351 in Syrian hamsters. We previously showed protection against SARS-CoV-2 disease and pneumonia in hamsters vaccinated with a single dose of ChAdOx1 nCoV-19. Here, we observed a 9.5-fold reduction of virus neutralizing antibody titer in vaccinated hamster sera against B.1.351 compared to B.1.1.7. Vaccinated hamsters challenged with B.1.1.7 or B.1.351 did not lose weight compared to control animals. In contrast to control animals, the lungs of vaccinated animals did not show any gross lesions. Minimal to no viral subgenomic RNA (sgRNA) and no infectious virus was detected in lungs of vaccinated animals. Histopathological evaluation showed extensive pulmonary pathology caused by B.1.1.7 or B.1.351 replication in the control animals, but none in the vaccinated animals. These data demonstrate the effectiveness of the ChAdOx1 nCoV-19 vaccine against clinical disease caused by B.1.1.7 or B.1.351 VOCs. 

Ellebedy A et al Nature – preprint https://www.researchsquare.com/article/rs-310773/v1	SARS-CoV-2 mRNA vaccines induce a robust germinal centre reaction in humans	Dimostrazione della attivazione di una ampia risposta B-cellulare nei centri germinativi linfonodali di 32 vaccinati con vaccino Pfizer (BNT162b2) contro SARS-CoV-2. Ciò sarebbe il preludio a una risposta umorale di lunga durata.	Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) messenger RNA (mRNA)-based vaccines are ~95% effective in preventing coronavirus disease 2019. However, the dynamics of antibody secreting plasmablasts (PBs) and germinal centre (GC) B cells induced by these vaccines in SARS-CoV-2 naïve and antigen-experienced humans remains unclear. Here we examined peripheral blood and/or lymph node (LN) antigen-specific B cell responses in 32 individuals who received two doses of BNT162b2, an mRNA-based vaccine encoding the full-length SARS-CoV-2 spike (S) gene. Circulating IgG- and IgA-secreting PBs targeting the S protein peaked one week after the second immunization then declined and were undetectable three weeks later. PB responses coincided with maximal levels of serum anti-S binding and neutralizing antibodies to a historical strain as well as emerging variants, especially in individuals previously infected with SARS-CoV-2, who produced the most robust serological responses. Fine needle aspirates of draining axillary LNs identified GC B cells that bind S protein in all participants sampled after primary immunization. GC responses increased after boosting and were detectable in two distinct LNs in several participants. Remarkably, high frequencies of S-binding GC B cells and PBs were maintained in draining LNs for up to seven weeks after first immunization, with a substantial fraction of the PB pool class-switched to IgA. GC B cell-derived monoclonal antibodies predominantly targeted the RBD, with fewer clones binding to the N-terminal domain or shared epitopes within the S proteins of human betacoronaviruses OC43 and HKU1. Our studies demonstrate that SARS-CoV-2 mRNA-based vaccination of humans induces a robust and persistent GC B cell response that engages pre-existing as well as new B cell clones, which enables generation of high-affinity, broad, and durable humoral immunity.

Wise J BMJ https://www.bmj.com/content/372/bmj.n699	Covid-19: European countries suspend use of Oxford-AstraZeneca vaccine after reports of blood clots	Sintesi degli avvenimenti dell'ultima settimana che hanno portato alla sospensione di alcuni lotti di vaccino AstraZeneca contro SARS-CoV-2 a seguito della segnalazione di eventi di tromboembolia venosa in persone recentemente vaccinate.	Denmark has temporarily suspended use of the Oxford-AstraZeneca covid-19 vaccine as a precautionary move after reports of blood clots and one death. However, the European Medicines Agency (EMA) and the UK's regulatory body have said that there is no indication that vaccination is linked to thromboembolic events. The EMA's safety committee is reviewing the issue but said that there was currently no indication that vaccination has caused these conditions, which are not listed as side effects. It said that the information available so far showed that the number of thromboembolic events in vaccinated people was no higher than that seen in the general population. It said that, as of 10 March, 30 cases of thromboembolic events had been reported among the five million people given the AstraZeneca vaccine in the European Economic Area.
Agenzia Italiana del Farmaco https://www.aifa.gov.it/web/guest/-/aifa-ingiustificato-allarme-sulla-sicurezza-del-vaccino-astrazeneca	AIFA, ingiustificato allarme sulla sicurezza del vaccino AstraZeneca	Comunicato stampa AIFA in merito ai casi di trombosi venosa temporalmente associati alla somministrazione di vaccino AstraZeneca contro SARS-CoV-2.	I casi di decesso verificatisi dopo la somministrazione del vaccino AstraZeneca hanno un legame solo temporale. Nessuna causalità è stata dimostrata tra i due eventi. L'allarme legato alla sicurezza del vaccino AstraZeneca non è giustificato. AIFA sottolinea che le attività di farmacovigilanza proseguono sia a livello nazionale che europeo in collaborazione con EMA, monitorando con attenzione possibili effetti avversi legati alla vaccinazione. AIFA rassicura fortemente i cittadini sulla sicurezza del vaccino AstraZeneca per una ottimale adesione alla campagna vaccinale in corso.