I BEST OF THE WEEK (31 gen – 06 feb 2022)

Articolo	Abstract	Contenuto e Commento
Kojima N et al Lancet Infect Dis. Protective immunity after recovery from SARS-CoV-2 infection. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8575467/pdf/main.pdf	Abstract non disponibile	« Comment » sulla prestigiosa rivista « Lancet Infectious Diseases » riguardo allo sviluppo di immunità protettiva in seguito all'infezione da SARS-CoV-2. Gli autori hanno revisionato diversi studi epidemiologici e clinici pubblicati negli ultimi due anni, alcuni dei quali condotti durante il periodo della variante « delta », che mostrano una riduzione del rischio di reinfezione da SARS-CoV-2 del 80.5-100% in chi ha precedentemente sviluppato COVID-19. Vengono presentati altri studi che mostrano bassissimi tassi di reinfezione in chi ha già avuto una prima infezione da SARS-CoV-2. Non è chiaro ancora quanto duri l'immunità in seguito a una prima infezione, sebbene alcuni lavori lascino intendere che la protezione duri fino a 10 mesi. Gli autori si soffermano sul fatto che la determinazione degli anticorpi rappresenti solo un parziale predittore della risposta immunitaria, che è costituita anche da una non trascurabile componente cellulare. L'articolo si chiude con una riflessione sull'utilità della vaccinazione nei soggetti guariti dall'infezione da SARS-CoV-2 : gli autori sono infatti dell'idea che chi guarisce da COVID-19 dovrebbe essere considerato

		alla stregua di un soggetto vaccinato, in quanto a partecipazione ad eventi pubblici, possibilità di lavorare o di viaggiare.
Frank L. van de Veerdonk et al. A guide to immunotherapy for COVID-19 Nature Medicine https://www.nature.com/articles/s41591-021-01643-9.pdf	Abstract Immune dysregulation is an important component of the pathophysiology of COVID-19. A large body of literature has reported the effect of immune-based therapies in patients with COVID-19, with some remarkable successes such as the use of steroids or anti-cytokine therapies. However, challenges in clinical decision-making arise from the complexity of the disease phenotypes and patient heterogeneity, as well as the variable quality of evidence from immunotherapy studies. This Review aims to support clinical decision-making by providing an overview of the evidence generated by major clinical trials of host-directed therapy. We discuss patient stratification and propose an algorithm to guide the use of immunotherapy strategies in the clinic. This will not only help guide treatment decisions, but may also help to design future trials that investigate immunotherapy in other severe infections.	La disfunzione immunitaria è una componente importante della fisiopatologia del COVID-19. Una vasta letteratura ha riportato l'effetto di terapie immunitarie in pazienti con COVID-19, con alcuni notevoli successi come l'uso di steroidi o le terapie anti-citochine. Attraverso questa revisione delle strategie di immunoterapia nei pazienti con COVID-19, viene fornita una panoramica delle evidenze finora pubblicate, viene discussa una stratificazione del paziente e proposto un algoritmo per guidare l'utilizzo dell'immunoterapia nella pratica clinica.

Pulliam, J.R.C., et al. Medrxiv.org Increased risk of SARS-CoV-2 reinfection associated with emergence of the Omicron variant in South Africa 2021-12-01 https://www.medrxiv.org/content/10.1101/2021.11.11.21266068v2.full.pdf	Objective To examine whether SARS-CoV-2 reinfection risk has changed through time in South Africa, in the context of the emergence of the Beta, Delta, and Omicron variants Design Retrospective analysis of routine epidemiological surveillance data Setting Line list data on SARS-CoV-2 with specimen receipt dates between 04 March 2020 and 27 November 2021, collected through South Africa's National Notifiable Medical Conditions Surveillance System Participants 2,796,982 individuals with laboratory-confirmed SARS-CoV-2 who had a positive test result at least 90 days prior to 27 November 2021. Individuals having sequential positive tests at least 90 days apart were considered to have suspected reinfections. Main outcome measures Incidence of	Studio ancora non peer reviewed svolto in Sudafrica. Viene evidenziato come la recente diffusione della variante Omicron è stata associata ad una diminuzione del coefficiente di rischio per l'infezione primaria ma ad un aumento del coefficiente di rischio di reinfezione. L'evidenza a livello di popolazione suggerisce che la variante Omicron è associata a una sostanziale capacità di eludere l'immunità da una precedente infezione.

	suspected reinfections through time; comparison of reinfection rates to the expectation under a null model (approach 1); empirical estimates of the time-varying hazards of infection and reinfection throughout the epidemic (approach 2) Results 35,670 suspected reinfections were identified among 2,796,982 individuals with laboratory-confirmed SARS-CoV-2 who had a positive test result at least 90 days prior to 27 November 2021. The number of reinfections observed through the end of the third wave was consistent with the null model of no change in reinfection risk (approach 1). Although increases in the hazard of primary infection were observed following the introduction of both the Beta and Delta variants, no corresponding increase was observed in	

	the reinfection hazard (approach 2). Contrary to expectation, the estimated hazard ratio for reinfection versus primaryinfection was lower during waves driven by the Beta and Delta variants than for the first wave (relative hazard ratio for wave 2 versus wave 1: 0.75 (CI95: 0.59–0.97); for wave 3 versus wave 1: 0.71 (CI95: 0.56–0.92)). In contrast, the recent spread of the Omicron variant has been associated with a decrease in the hazard coefficient for primary infection and an increase in reinfection hazard coefficient. The estimated hazard ratio for reinfection versus primary infection for the period from 1 November 2021 to 27 November 2021 versus wave 1 was 2.39 (CI95: 1.88–3.11). Conclusion Population-level evidence suggests that the Omicron variant is associated with substantial ability to evade	

	immunity from prior infection. In contrast, there is no population-wide epidemiological evidence of immune escape associated with the Beta or Delta variants. This finding has important implications for public health planning, particularly in countries like South Africa with high rates of immunity from prior infection. Urgent questions remain regarding whether Omicron is also able to evade vaccine-induced immunity and the potential implications of reduced immunity to infection on protection against severe disease and death.	