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## Evaluating vaccination against SARS-CoV-2

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<b>Author Comments:</b>	Marseille, 28th May 2021 The Lancet Editor in Chief  Dear Editor, I am sending you this correspondence regarding a recent publication in the Lancet. I am sure that it will arrive shortly, but I think it is essential for consideration, and I am therefore submitting it to you.  Yours sincerely,  Prof. Didier Raoult Corresponding author

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## Evaluating vaccination against SARS-CoV-2

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17 The work done on COVID-19 vaccination in Scotland in the Lancet is very interesting  
18 because it shows a preliminary evaluation of the effect of vaccines on a population scale (1).  
19 However, some elements are missing to really understand the effect of vaccines. To date, we  
20 have been able to document 478 cases of vaccinated persons who developed PCR-proven  
21 COVID-19 infection in our single center (2). Interestingly, as reported elsewhere, it was  
22 particularly in the first two weeks after vaccination that these infections were observed (3). In  
23 addition, a recent article mentioned the risk of deadly thrombosis associated with Astra  
24 Zeneca (4). This particularly affects the female population younger than 60 years without  
25 previous underlying disease. Over the past year, we observed no death in this population  
26 among 40 000 PCR-positive cases. However, a 22-year-old student without any known  
27 medical history developed a central retinal vein occlusion three days following her first  
28 Oxford-AstraZeneca vaccine dose. Therefore, in this population, vaccination appears more  
29 dangerous than COVID itself, not to mention the fact that not all the unvaccinated population  
30 will suffer COVID-19.

31 In this work (1), the death rates of the vaccinated and unvaccinated populations are not  
32 mentioned, which neglects vaccine-related deaths. In our center, among 15242 patients  
33 followed up for COVID-19 from January 1<sup>st</sup>, 2021, 1213 were hospitalized (7.9%) and 125  
34 died (0.8%) with COVID 19. Among these, 545 were vaccinated, 62 of whom (11.3%,  $p < 10^{-2}$ )  
35 were hospitalized and eight died (1.4%,  $p = 0.08$ ). Therefore, vaccination did neither  
36 prevent hospitalizations nor the most severe forms. Moreover, the viral carriage of vaccinated  
37 people has not been studied. It is an essential element of vaccination intended to play a role in  
38 public health by reducing transmission of the virus. All in all, the rapidity of the vaccine  
39 response has interests, but obviously key evaluation elements of this vaccination were  
40 overlooked, including the limitation of carriage, the risks associated with vaccination and the

41 generalization of the vaccination to populations that are not likely to have a personal benefit,

42 in particular subjects under 55 years old.

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## References

- (1) Vasileiou E, Simpson CR, Shi T, Kerr S, Agrawal U, Akbari A et al. Interim findings from first-dose mass COVID-19 vaccination roll-out and COVID-19 hospital admissions in Scotland: a national prospective cohort study. *Lancet* 2021 May 1;397(10285):1646-57.
- (2) <https://www.mediterranee-infection.com/>
- (3) Keehner J, Horton LE, Pfeffer MA, Longhurst CA, Schooley RT, Currier JS et al. SARS-CoV-2 Infection after Vaccination in Health Care Workers in California. *N Engl J Med* 2021 May 6;384(18):1774-5.
- (4) Ledford H. How could a COVID vaccine cause blood clots? Scientists race to investigate. *Nature* 2021 April;592(7854):334-5.