

tion, we believe that it should also be included in the CKD screening groups in order to improve the early detection in those that are at risk of developing CKD. Both aspects should be included in the next update of the document.

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# IgA nephropathy and hematuria after getting vaccine for SARS-CoV-2

## Nefropatía por IgA y hematuria después de recibir la vacuna para SARS-CoV-2



Dear Editor,

We would like to comment on the publication “Hematuria in patients with IgA nephropathy after vaccine for SARS-CoV-2.”<sup>1</sup> The study looks at three examples of IgA nephropathy patients who acquired macroscopic hematuria after receiving the COVID-19 vaccination. It emphasizes that this side effect has been linked to the use of mRNA vaccines (Moderna<sup>®</sup>, Pfizer<sup>®</sup>) and viral vector vaccines (AstraZeneca<sup>®</sup>). The patients in the cases were asymptomatic, and the hematuria went away on its own after 24–72 h. Given the increased mortality risk from COVID-19, the findings suggests that finishing immunization in these susceptible patients is justified.

The article only includes three cases, which is a tiny sample size and may not be representative of the general community. The lack of data on the prevalence of hema-

turia after COVID-19 immunization in individuals with IgA nephropathy makes determining the importance of this side event challenging. The research does not include previous studies or literature on the relationship between immunizations and renal problems in IgA nephropathy patients, limiting the context for the findings. The article does not state if other potential causes of hematuria, such as urinary tract infections or renal stones, were explored. These could be confounding factors. The primary concern for any negative reaction to COVID-19 immunization is the confounding effects of underlying disease, as well as the possibility of previously undiagnosed silent COVID-19 infection, which could disrupt the normal immunological response to vaccine.

If this is a true case of vaccination-induced hematuria, the possible mechanism for vaccine-induced hematuria is intriguing. One theory is that the COVID-19 vaccine activates CD4 and CD8 T cells, resulting in a systemic cytokine cascade. This cascade may increase IgA1 production, resulting in macroscopic hematuria in patients with IgA nephropathy. Another possibility is that the vaccine-induced immune

DOI of original article:

<https://doi.org/10.1016/j.nefro.2024.02.002>.

response causes inflammation and immune complex deposition in the glomeruli, leading to blood vessel damage and hematuria. This mechanism is similar to how IgA nephropathy develops, in which immune complexes deposit in the glomeruli and cause inflammation.

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### Data availability statement

There is no new data generated.

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### Authors' contribution

H.D., 50% ideas, writing, analyzing, and approval. V.W., 50% ideas, supervision, and approval.

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### Conflict of interest

None.

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### Acknowledgement

None.

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<https://doi.org/10.1016/j.nefro.2023.11.006>

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## Response to the attached letter “IgA nephropathy and hematuria after getting vaccine for SARS-CoV-2” by H. Daungsupawong and V. Wiwanitkit



## Contestación a la carta adjunta “IgA nephropathy and hematuria after getting vaccine for SARS-CoV-2” de H. Daungsupawong and V. Wiwanitkit

Dear Editor,

In response to the letter to the editor “IgA nephropathy and hematuria after getting vaccine for SARS-CoV-2” in response to our letter titled “Hematuria in patients with IgA nephropathy after vaccine for SARS-CoV-2” we would like to clarify some considerations in order to appropriately interpret the reason for said letter.

Although it is true that the sample size of our letter is small (3 patients), at the time of carrying out the literature review (August/2021), all published series were less than 5 patients. This is supported by the bibliographic reviews that accompany our letter (see bibliography).

None of the patients presented urinary infections or had a history of kidney stones, which could suggest a possible bias, since they were asymptomatic. They also did not present respiratory symptoms that could suggest covert SARS-CoV2 infection.

Undoubtedly, and despite the communication in our letter, the benefit of administering the vaccine in this group of patients is above the side effects of hematuria, which is non-specific in these cases, due to the high mortality in this respiratory infection in our patients.

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### Conflict of interests

The authors declare that there are no conflicts of interest.

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DOI of original article:  
<https://doi.org/10.1016/j.nefro.2023.11.006>.