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### Reply:

S.B. Strauss, J.E. Lantos, C.D. Phillips, A. Gupta and E. Lin

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## REPLY:



We read the letter written by Shor et al with great interest, and we appreciate the data that they shared from their institution. We concur that subjective perception of olfactory bulb (OB) hyperintensity in isolation should not be interpreted as definitive evidence of coronavirus disease 2019 (COVID-19) infection but wish to note that quantitative assessment of OB signal intensity was additionally performed in the patient sample reported in Lin et al,<sup>1</sup> as detailed in a subsequently published article by Strauss et al.<sup>2</sup> Normalized OB T2 FLAIR signal intensity values were computed to account for technical differences in scan acquisitions among patients. There was a significant difference in a normalized OB T2 FLAIR signal intensity between the patients with COVID-19 (mean normalized signal intensity, 1.85; range, 0.74–1.85) and the controls with anosmia (mean normalized signal intensity, 1.27; range, 0.99–3.13) ( $P = .003$ ). These preliminary findings have important implications for our understanding of potential neurotropism or, at the very least, neuroinflammatory changes associated with Severe Acute Respiratory Syndrome coronavirus 2 infection and pose an avenue for future prospective investigation.

Indicates open access to non-subscribers at [www.ajnr.org](http://www.ajnr.org)

<http://dx.doi.org/10.3174/ajnr.A6932>

## REFERENCES

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2. Strauss SB, Lantos JE, Heier LA, et al. **Olfactory bulb signal abnormality in patients with COVID-19 who present with neurologic symptoms.** *AJNR Am J Neuroradiol* 2020;41:1882–87 [CrossRef](#) [Medline](#)

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