

# Olfactory Cleft Width and Volumes in Patients with COVID-19 Anosmia

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We agree with Mungmunpantipantip and Wiwanitkit [1] on their comment regarding form and function. Form and function, in general, are two concepts that may interact and rely on one another. However, a large olfactory cleft does not always equate to a higher functional sense of smell. Smell is a multifactorial process of anatomical, neurobiological and genetic mechanisms, which are very complex and still not elucidated. We tried to briefly touch on these mechanisms in our article. The contribution of the cleft width on the cleft volume is great. When the cleft volume increases, the receptor density in the olfactory area increases in all living things. Receptor density is also effective on olfactory thresholds. Likewise, among the patient group included in our study, there were cases with large olfactory cleft without COVID-19-related anosmia. But what we tried to investigate in this study was to test the following hypothesis: “As the olfactory cleft width increases, the olfactory mucosa and epithelium area will expand, so the inflammation-destruction caused by the virus may be more pronounced in these patients.” In our study [2], we found an inversely correlation between TDI scores with cleft width

and volume as a result of statistical analyzes supporting this hypothesis. In other words, as the width increased, the olfactory function was more affected and anosmia was more common. Although the predictivity of anatomical features alone may be low in terms of functional prediction, it is possible to come across many similar studies that have been conducted in this direction recently and support our study. Future multifaceted studies on olfactory function may be exciting in terms of shedding light on this issue.

Thank you.

## Conflict of Interest Statement

The authors declare that there is no conflict of interest.

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## Author Contributions

Deniz Esin Tekcan Sanli: investigation, data curation, writing – the original draft, review, and editing; Aytug Altundag: conceptualization, methodology, validation, formal analysis, review, and editing; Duzgun Yıldırım: writing – the original draft, review, and editing; Sedat Giray Kandemirli: data curation, review, and editing; Ahmet Necati Sanli: data curation, review, and editing.

## References

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- 2 Tekcan Sanli DE, et al. Comparison of olfactory cleft width and volumes in patients with COVID-19 anosmia and COVID-19 cases without anosmia. [ORL](#). 2022. doi: 10.1159/000518672.