

Subject: [BDS] Editor Decision

Dear Aliny Bisaia, Eloá Cristina Passucci Ambrosio, Kelly Maria Silva Moreira, Eduarda Cristina de Oliveira Benedito, Thais Marchini Oliveira, Maria Aparecida Andrade Moreira Machado:

Your submission Digital palatal anthropometry in children with and without congenital zika syndrome-associated microcephaly to Brazilian Dental Science, has been revised and according to reviewers' comments, there are questions to be addressed and/or points to be clarified/corrected.

Please answer the reviewers considerations point-by-point in a separate document and also please make all the corrections in the text highlighted in yellow.

Deadline: 30 days

Thank you for considering Brazilian Dental Science for publishing your research. We are looking forward the revised version of you manuscript.

Sincerely,

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Reviewer A:

Recommendation: Revisions Required  
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### *Comments to the Author*

Dear authors, please find below my suggestions that should be addressed before the manuscript can be accepted for publication.

#### Abstract

Please, standardize angle nomenclature for consistency (use "T'C'I" for left canine angle and "ICT" for right canine angle throughout, as in Tables 1-2; currently "TCI" is used inconsistently). Also, clarify that linear measurements showed no significant intergroup differences while angular ones did, to avoid overstating "tendency towards anterior palatal narrowing."

I recommend to expand the results section slightly to mention the sole significant intragroup finding (higher T'-T in CZS males,  $p=0.0496$ ) and key correlations (e.g., strong  $r=0.919$ ), as these are novel and support the conclusion.

In the conclusion, I suggest to link angular changes explicitly to clinical implications (e.g., "implying need for early palatal expansion"), strengthening translational value.

#### Introduction

- Authors should strengthen the rationale by quantifying the knowledge gap (e.g., "No studies have yet quantified palatal angular changes in CZS infants using 3D digital methods, despite reports of narrow palates in up to 80% of cases [cite ref. 17 or 19]").

- Please, briefly mention the hypothesized mechanism (e.g., Zika's impact on neural crest cells affecting maxillary growth) to bridge epidemiology and craniofacial outcomes, citing a recent review (add ref. on Zika embryopathy).

- Please ensure all DOIs are active and formatted consistently (e.g., some lack "doi:" prefix).

#### Material and methods

- Authors need to clarify CZS diagnostic criteria (CZS confirmed per WHO criteria: microcephaly  $<32$  cm at birth + Zika exposure + neuroimaging findings) and control selection (Controls from pre-epidemic period [2010-2014] to avoid confounding Zika exposure).

- Age discrepancy between groups should be addressed (CZS:  $9.54 \pm ?$  months vs. controls:  $6.57 \pm ?$  months);

- I encourage authors to perform sensitivity analysis or ANCOVA adjusting for age, as palatal growth accelerates post-6 months.
- Specify software versions (e.g., Mirror Imaging v.X) and landmark identification protocol (e.g., "Landmarks placed at palatal vault midpoint for canines/tuberosities to ensure reproducibility").
- Please, report full sample size calculation details (effect size from pilot study data?) and confirm if it was powered for angular measures (primary outcome was intercanine, which was non-significant).

#### Results

- In Table 1, please authors should fix formatting inconsistencies—provide both Mean  $\pm$  SD and (Median  $\pm$  IA) for all cells (CZS values currently only show medians in parentheses; controls only means). Add n per subgroup (e.g., CZS males n=6).
- In Tables 1 and 2 please standardize angle notation (use "ICT" consistently, not "TCI"). In Table 2, report effect sizes (Cohen's d) for significant angles to quantify clinical relevance (e.g., T'C'I difference  $\sim 5^\circ$ ).
- I recommend to expand intragroup correlations in text. Present a summary table or heatmap excerpt from Figure 2, as the detailed r-values (e.g., moderate negative correlations with C'IC) are key novel findings but buried in prose.

#### Discussion

- Angular metrics may be more sensitive to early soft-tissue hypertonia effects? Please, elaborate on why linear measures were non-significant despite angular changes.
- I suggest to compare findings to analogous conditions. "Similar anterior narrowing seen in Robin sequence or cleft palate (ref. 10-15), suggesting shared mechanotransduction deficits".
- Add a limitation sentence before Conclusion to align with journal guidelines.

#### Conclusion

- Temper language (change "reinforce... have a more atretic palate" to "provide evidence of... anterior palatal atresia"), as linear differences were non-significant; and, please emphasize call for longitudinal studies.

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Reviewer B:

Recommendation: Revisions Required

Please ensure compliance with the journal's standard image formatting, separate the abstracts and titles according to their respective languages, and include the keywords after each abstract.