

Clarifying the statistical reporting in the multivariate analysis of retinopathy of prematurity biomarkers

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Dear Editor,

I read with interest the article by Liu and colleagues, “Predictive value of serum hsa_circ_0061346, hsa_circ_0000095, and hsa_circ_0068606 expression levels on the severity of retinopathy of prematurity,” published in The Turkish Journal of Pediatrics.¹

However, I would like to point out an apparent inconsistency in the statistical reporting

in Table V that may affect the interpretation of the multivariate model. For “Gestational age,” the authors report $\beta = -0.015$ and $SE = 0.079$, together with Wald $\chi^2 = 13.436$ and $p = 0.851$.¹ When $z = \beta/SE$ is calculated from the reported β and SE , the Wald chi-square statistic is obtained as z^2 ($df = 1$).² Using the values given in the table, $z \approx -0.19$ and $z^2 \approx 0.036$, which is compatible with $p \approx 0.85$ rather than a Wald χ^2 of 13.436. This suggests that the Wald χ^2 value may have been inadvertently misreported (e.g., transcription or cell-shift error), and clarification or correction would be helpful for readers.

Beyond a typographical issue, this discrepancy has important interpretive implications. If the reported p value ($p = 0.851$) is correct, gestational age—one of the most established determinants of ROP—would appear to have no independent association in the multivariable model.¹ This contrasts with the univariable analysis (Table IV: $p < 0.0001$).¹ Such a reversal

could arise from strong collinearity with closely related covariates (e.g., birth weight), overadjustment, coding/scaling choices, or other model-specification decisions.² Reporting how gestational age was entered into the model and providing basic collinearity diagnostics (e.g., variance inflation factors or correlation structure) would help readers interpret whether the circRNA markers retain independent predictive value beyond prematurity.

In addition, Table II indicates a marked imbalance in key baseline characteristics between the ROP and control groups. The mean gestational age is 30.57 ± 3.16 weeks in the ROP group versus 34.97 ± 1.74 weeks in the control group ($p < 0.0001$), and birth weight also differs substantially (1.56 ± 0.54 kg vs 2.38 ± 0.55 kg; $p < 0.0001$).¹ Given that gestational age is a dominant determinant of ROP risk, differences of this magnitude raise the possibility that observed circRNA expression differences may, at least in part, reflect physiological maturation rather than disease-specific processes. A brief clarification on how these imbalances were handled (and whether additional sensitivity analyses were performed) would strengthen the interpretation of the biomarker findings.

For these reasons, I believe that confirming the Table V values against the original regression output and issuing a correction would be valuable for the scientific record.

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Author contribution

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Conflict of interest

The authors declare that there is no conflict of interest.

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