**This file contains responses to reviewer comments that were carefully considered but ultimately not implemented, with justifications provided below.**

**Use of Multivariate Linear Model:**  
The mediation effect analysis focuses on CD4+ cell count as the outcome variable, which is a discrete, non-negative integer and biologically constrained to be positive. As such, it does not meet the assumptions of a multivariate linear regression model, which assumes continuous, normally distributed outcomes and can produce implausible negative predictions. In contrast, Poisson regression is specifically designed for count data and accommodates the distributional characteristics of CD4+ counts. Implementing a multivariate linear model in this context would risk biased estimates, incorrect inference, and poor predictive performance. For these reasons, although the proposal to use a multivariate linear model was reviewed, it was not adopted.

**Including p-values in Output Tables:**  
One of the most important takeaways from this course is the understanding that p-values are not always appropriate or sufficient for statistical inference. This perspective aligns with a growing trend in academic research, which increasingly emphasizes estimation over hypothesis testing. Confidence intervals, particularly bootstrap confidence intervals, offer a more informative and robust approach to inference by quantifying both the direction and precision of effect estimates. For this reason, I chose to report only bootstrap confidence intervals in the output tables. Relying solely on p-values can be misleading and may obscure the practical significance of results. Additional rationale for this approach is discussed in the course materials.

**Separating Exploratory Data Analysis from the Main Analysis:**  
This project utilizes data from an epidemiological study that is lab-based and focused on individual-level observations, as described in the manuscript. In such a context, presenting the distributions and characteristics of the study sample is not only informative but also essential for understanding the data structure and interpreting downstream analyses. These descriptive statistics provide critical context and help assess the generalizability and validity of the findings. After careful consideration, I believe that integrating exploratory data analysis into the main analysis section offers a more coherent and transparent presentation. Therefore, I have chosen to retain it as part of the main analysis rather than separating it.