model, individuals who eventually receive the treatment are analyzed as controls before they actually receive the treatment.

The team of investigators in the study by Tseng et al includes experienced biostatisticians who are well aware of this phenomenon and intended to account for it using the method described here. A coding error in the calculation of the survival time led to similar results from the models with and without the time-dependent variables. This caused the investigators to mistakenly conclude that it did not matter which model was used. An astute reader questioned these results, and a re-examination of the data revealed the programming error.

One valuable lesson we can take from this incident is just how easy it can be for a simple programming bug to affect the results of an analysis. No matter how careful we try to be, finding a programming error in what can be thousands of lines of code is often like searching for the proverbial needle in a haystack. We are typically more likely to discover these kinds of errors by critically reviewing the results and noticing when something does not seem right. The only scenario where we would expect those 2 models to have similar results is if the time from diagnosis to treatment was negligible compared with the survival times. Reporting descriptive summary statistics for both these variables can help increase the chance that this kind of error is discovered and corrected.

Another key lesson is how important it is for both investigators and readers to be aware of subtle, perhaps counterintuitive, biases that can occur with these statistical models. We need to be ever vigilant that appropriate statistical methods are used to mitigate the risk of these biases resulting in misleading conclusions about the efficacy of a treatment.

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CORRECTION
Incorrect Orientation of Figure 2: In the article titled “Sudden-Onset Unilateral Macular Hemorrhage in a Middle-aged Man,” the orientation of Figure 2 has been corrected. It was rotated 90° clockwise to be displayed correctly upright.