Editorial

Commentary on "Frailty Status Is a More Robust Predictor Than Age of Spinal Tumor Surgery Outcomes: A NSQIP Analysis of 4,662 Patients"

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This study[1] revealed that the modified frailty index-5 (mFI-5) score which is a predictor of postoperative morbidity that can evaluate frailty rather than age, is a stronger feature through typical analysis method of risk factors for outcomes after spinal tumor surgery. Specifically, the mortality, major complication, unplanned readmission, reoperation, hospital length of stay, and discharge destination, which parameterized patient demographic and clinical characteristics for age and mFI-5 score using the odds ratio to provide a quantitative comparison and confidence interval analysis are very appropriate. Although there seems to be limitations in analyzing only age and mFI-5 as major predictors of surgery for spinal tumors, it is possible to analyze more detailed risk factors using the pre- and postoperative clinical characteristics of patients presented in Table 3. For example, age, frailty score, preoperative clinical value, and postoperative complications can be examples of how to find factors that influence and contribute to surgical outcome.[2-4]
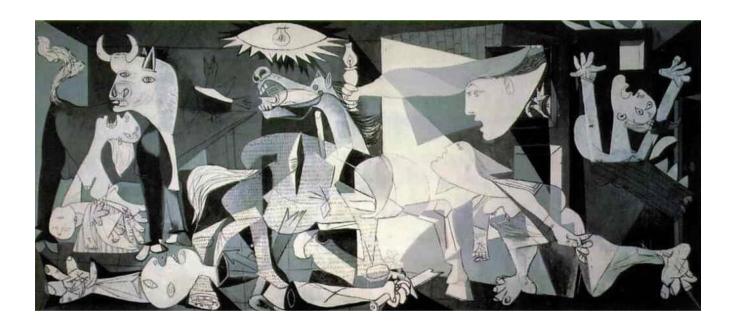
The preoperative prognostic factor tools such as this study are valuable research data that can be clinically useful.[2-4] There is a method of estimating the importance of each factor that contributed to the output of an artificial intelligence model modeled by using a recently explainable artificial intelligence technique as the average value of the entire dataset, or finding the significance of cases in individual datasets.[5] In this study, area under the curve and receiver operating characteristic of univariate and multivariate models were statistically analyzed, but extended analysis is possible with metrics such as confusion matrix, precision, and recall that compare the predicted results of the artificial intelligence model with the actual values. For this analysis, the number of datasets (n = 4,662) used in the current analysis may need to be expanded further. Also, categorical manipulation may be necessary if the dataset to be used for input is a continuous variable. The dataset from this study could be an excellent source for another research topic.

Conflict of Interest: The author has nothing to disclose.

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Title: Guernica
Artist: Pablo Picasso
Year: 1937
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