



# Challenge Journal

## OF PERIOPERATIVE MEDICINE

### Editorial

## Database studies and hemogram derivatives in perioperative medicine research: Does it mean taking shortcuts in the scientific journey?

Serkan Tulgar<sup>a,\*</sup> , Ali Ahiskalioglu<sup>b</sup> 

<sup>a</sup> Department of Anesthesiology and Reanimation, Samsun University Faculty of Medicine, Samsun Training and Research Hospital, Samsun, Türkiye (Deputy Editor of CJPM)

<sup>b</sup> Department of Anesthesiology and Reanimation, Development and Design Application and Research Center, Atatürk University School of Medicine, Erzurum, Türkiye (Editor-in-Chief of CJPM)

As you are aware, our journal's scope is centered on perioperative medicine, encompassing a wide range of studies, from preoperative patient preparation to the long-term outcomes of surgical and anesthesia interventions. As editorial chiefs, we will continue to write editorials in each issue, addressing the topics our journal focuses on and the perspectives we ignore. In this issue, we will delve into relatively effortless, commonly used practices in the academic journey that many academics often resort to and discuss the rationale and outcomes of such endeavors.

In our country and globally, the transition from the 'small and functional clinic' model to 'colossal hospitals' has nearly concluded in the past two decades. Consequently, this has led to the natural formation of extensive databases containing a wealth of patient data. Regrettably, academics working in these institutions often opt for the easier and more accessible route of analyzing this data instead of formulating new hypotheses and conducting proof-of-concept studies. These studies, mockingly referred to as 'database mining,' are widely accepted and published in many journals. On the other hand, beyond conducting clinical studies using their institutional data, another research method involves writing reviews using national databases or data systems similar to COCHRANE. The academic credibility of articles written through database mining was recently brought into question. Some high-impact journals have declared their decisions to reduce the space dedicated to such articles and reviews or even refrain from publishing them [1].

In our publishing philosophy, the priority for publications will always lean towards clinical research. Certainly, in retrospective studies, patients to be included will be selected from a data system. However, a more appropriate approach would be a comprehensive

analysis of the data by also examining physical records. Retrospective studies with a well-formulated hypothesis and an effective research model will be considered more valuable, compared to a 'database mining' study that merely presents descriptive data. *Demonstrating one's prowess as an original article author necessitates a profound understanding and wealth of experience that transcend the mere access to database systems and proficiency in basic Excel skills.*

Another salient aspect of our discourse relates to research endeavors utilizing hematological-derived ratios, such as the neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR), extracted from hemogram data. These ratios and derivatives are applied across a spectrum of research domains, encompassing diagnostic processes, differential diagnosis, mortality prognosis, and the anticipation of complications [2–4]. Given the routine nature of complete blood counts conducted in the majority of hospitalized patients, we can contemplate the widespread applicability of these ratios in various clinical contexts. Therefore, using the expression 'a parameter that can be used for the diagnosis and predictability of nearly everything' does not actually mean defining a parameter that will contribute to the differentiation of anything specifically, does it? *Can conducting statistical analysis on over 40 hemogram parameters and their ratios across any patient group to investigate significance be more superior than simply tossing a coin?*

Undoubtedly, we shall not dismiss articles rooted in NLR and akin ratios entirely. Those studies underpinned by well-articulated hypotheses and executed with scientific rigor will persist within the sphere of our scholarly scrutiny. Parameters like NLR can exhibit interindividual variability, influenced by factors like age, gender, and weight status, often resulting in limited

\* Corresponding author. Tel.: +90-362-311-1500 ; E-mail address: serkantulgar.md@gmail.com (S. Tulgar)

specificity. In optimizing study design, it is advisable to contemplate the examination of more homogenized cohorts characterized by narrower parameters, acknowledging the importance of this consideration [5,6].

As editors, our intention is not to constrain prospective authors, as it would be contrary to the spirit of science. However, we must be mindful of not squandering the valuable time of our editorial board and reviewers. Given the existence of journals that prioritize articles focused on database mining and hemogram parameters, please understand our decision to relatively limit the inclusion of such topics. Conclusively, although we acknowledge the significance of database (mining) and hemogram parameter studies, our journal's objective is to elevate the intellectual dialogue and promote pioneering, hypothesis-driven research endeavors that align with the zenith of scientific investigation.

---

#### **Acknowledgements**

*None declared.*

#### **Funding**

*The authors received no financial support for the research, authorship, and/or publication of this manuscript.*

#### **Conflict of Interest**

*The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this manuscript.*

---

#### **REFERENCES**

---

1. Mallon WJ, Jed Kuhn JE. Review articles and database studies. *J Shoulder Elbow Surg.* 2023 May;32(5):907–8.
2. Tasargol O. A Prospective Study on the Predictability of Propofol Injection Pain. *Cureus.* 2020 Feb 10;12(2):e6945.
3. Canikli Adigüzel Ş, Akyurt D, Bahadır Altun H, Tulgar S, Ültan Özgen G. Can Neutrophil-Lymphocyte Ratio, Platelet-Lymphocyte Ratio, or Systemic Immune Inflammation Index Be an Indicator of Postoperative Pain in Patients Undergoing Laparoscopic Cholecystectomy? *Cureus.* 2023 Jan;15(1):e33955.
4. Yigit Y, Yilmaz S, Ozbek AE, Karakayali O, Cetin B, Halhalli HC. Can Platelet Indices Reduce Negative Appendectomy Rates? *Cureus.* 2019 Mar 21;11(3):e4293.
5. Taşargöl Ö, Köse HC. Role of hemogram parameters as predictive markers for propofol injection pain in reproductive and postmenopausal women: a prospective study. *Med Princ Pract.* 2023 Sep 28;6(5):1047–51.
6. Valero C, Lee M, Hoen D, Weiss K, Kelly DW, Adusumilli PS, Paik PK, Plitas G, Ladanyi M, Postow MA, Ariyan CE, Shoushtari AN, Balachandran VP, Hakimi AA, Crago AM, Long Roche KC, Smith JJ, Ganly I, Wong RJ, Patel SG, Shah JP, Lee NY, Riaz N, Wang J, Zehir A, Berger MF, Chan TA, Seshan VE, Morris LGT. Pretreatment neutrophil-to-lymphocyte ratio and mutational burden as biomarkers of tumor response to immune checkpoint inhibitors. *Nat Commun.* 2021 Feb 1;12(1):729.