General Anesthesia Type and Cancer Prognosis: Comment

To the Editor:

We read the article "Volatile *versus* Total Intravenous Anesthesia for Cancer Prognosis in Patients Having Digestive Cancer Surgery" by Makito *et al.*[1] with great interest. This study is a large clinical retrospective study of more than 190,000 surgical patients with cancer. For further statistical analysis, the authors did a score-matching analysis to compensate for the huge difference in the number of patients who received volatile or intravenous anesthesia. They concluded that there were no significant differences between anesthetic choices on cancer recurrence/survival after surgery. However, we found several limitations in this study which may distort the data analysis. First, various cancer types and surgeries were included in the same analysis; however, it is well known that cancer aggressiveness and malignancy largely differ between cancer types and their origins.[2] Second, the subgroup analysis for each type of surgery (presented in table 2 of Makito *et al.*) did not specify open surgery or laparoscopic surgery. Previous studies have demonstrated in preclinical and clinical settings that surgical trauma/stress and associated systemic inflammation, which often occurs in major open surgeries, promoted cancer progression and malignancy, leading to worse outcomes.[3,4] Lastly, there were no data about perioperative steroid and/or nonsteroidal anti-inflammatory drug use; those medications, which are often used during the perioperative period, have been found to improve the clinical outcome in several types of cancers.[5] The crosslink between the inflammation and cancer progression after surgery would affect cancer surgical outcomes. It would be great if the authors could elaborate on our concerns for future refined studies wherever possible.

Competing Interests

The authors declare no competing interests.

Masae Iwasaki, M.D., Ph.D., Daqing Ma, M.D., Ph.D., F.R.C.A.
Nippon Medical School, Tokyo, Japan (D.M.). d.ma@imperial.ac.uk

DOI: 10.1097/ALN.0000000000003804

References

1. Makito K, Matsui H, Fushimi K, Yasunaga H: Volatile *versus* total intravenous anesthesia for cancer prognosis in patients having digestive cancer surgery. Anesthesiology 2020; 133:764–73
2. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A: Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin 2018; 68:394–424
3. Krall JA, Reinhardt F, Mercury OA, Pattabiraman DR, Brooks MW, Dougan M, Lambert AW, Bierie B, Ploegh HL, Dougan SK, Weinberg RA: The systemic response to surgery triggers the outgrowth of distant immune-controlled tumors in mouse models of dormancy. Sci Transl Med 2018; 10:eaan3464
4. Wu TC, Xu K, Martinek J, Young RR, Banchereau R, George J, Turner J, Kim KI, Zurawski S, Wang X, Blankenship D, Brookes HM, Marches F, Obermoser G, Lavecchio E, Levin MK, Bae S, Chung CH, Smith JL, Cepika AM, Oxley KL, Snipes GJ, Banchereau J, Pascual V, O'Shaughnessy J, Palucka AK: IL1 receptor antagonist controls transcriptional signature of inflammation in patients with metastatic breast cancer. Cancer Res 2018; 78:5243–58
5. Huang WW, Zhu WZ, Mu DL, Ji XQ, Nie XL, Li XY, Wang DX, Ma D: Perioperative management may improve long-term survival in patients after lung cancer surgery: A retrospective cohort study. Anesth Analg 2018; 126:1666–74

(Accepted for publication April 5, 2021. Published online first on April 30, 2021.)

This letter was sent to the author of the original article referenced above, who declined to respond.—Evan D. Kharasch, M.D., Ph.D., Editor-in-Chief.

Placental Veins Catheterization: A Realistic Simulation Model for Medical Students

To the Editor:

Classical teaching has been based on "see one—do one." More recently, a stepwise teaching approach has been described that has four steps: demonstration, deconstruction, comprehension, and performance.[1,2] The process of

Downloaded from http://asa2.silverchair.com/anesthesiology/article-pdf/135/1/191/509441/20210700.0-00034.pdf by guest on 13 March 2024

Copyright © 2021, the American Society of Anesthesiologists. Unauthorized reproduction of this article is prohibited.