

RETRACTION NOTE

Open Access



# Retraction Note: Tumor microenvironment and immune system preservation in early-stage breast cancer: routes for early recurrence after mastectomy and treatment for lobular and ductal forms of disease

Hassan A. Saad<sup>1\*</sup>, Azza Baz<sup>2</sup>, Mohamed Riad<sup>1</sup>, Mohamed E. Eraky<sup>1</sup>, Ahmed El-Taher<sup>1</sup>, Mohamed I. Farid<sup>1</sup>, Khaled Sharaff<sup>1</sup> Faculty of Medicine<sup>1</sup>, Huda E. M. Said<sup>3</sup> and Lotfy A. Ibrahim<sup>4</sup>

**Retraction Note: BMC Immunology (2024) 25:9**  
<https://doi.org/10.1186/s12865-023-00591-y>

The Editor has retracted this article because it contains material that substantially overlaps with [1, 2]. The corresponding author Hassan A. Saad has stated that all authors agree with this retraction.

Published online: 17 October 2024

## References

1. Andrianto A, et al. Immune system and tumor microenvironment in early-stage breast cancer: different mechanisms for early recurrence after mastectomy and chemotherapy on ductal and lobular types. *F1000 Res.* 2023;12:841.
2. Tower, et al. The Immune Microenvironment of breast Cancer progression. *Cancers.* 2019;11(9):1375.

## Publisher's note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

The online version of the original article can be found at <https://doi.org/10.1186/s12865-023-00591-y>.

\*Correspondence:

Hassan A. Saad  
ebramos\_2010@yahoo.com

<sup>1</sup>Surgical Department, Faculty of Medicine, Zagazig University,  
Zagazig City 44661, Egypt

<sup>2</sup>Surgical Department, Alahrar Teaching Hospital, Zagazig University,  
Zagazig City 55971, Egypt

<sup>3</sup>Clinical Pathology Department, Faculty of Medicine, Zagazig University,  
Zagazig City 55971, Egypt

<sup>4</sup>Surgical Department, AlAzhar University, Nasr City, Cairo 55888, Egypt



© The Author(s) 2024. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.