

In pursuit of parity: addressing gender disparities in global cancer research

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Research is fundamental for effective cancer treatment to improve patient outcomes worldwide. On one hand, research has driven innovation and delivered treatments that have changed clinical practice for the better. On the other hand, lies concerning disparities. Previous literature outlines the pervasive skew of publications from high-income countries even despite conducting studies in low-income and middle-income countries,¹ a concentration on biological and pharmaceutical sciences instead of other treatment modalities such as surgery and radiotherapy,² and uneven funding and investment for preventative measures such as vaccinations and lifestyle interventions, among others.²

The article by Mutebi *et al*³ outlines another persistent gap by assessing sex-based representation via authorship across global cancer control research. The findings paint a stark picture. In 2009, females comprised only 37.2% of first authors and 23.3% of last authors of cancer research papers. A decade later, these numbers saw a modest improvement, with females accounting for 41.6% of first authors and 29.4% of last authors. While progress has been made, it remains uneven, with substantial disparities persisting across regions and income levels.

One of the most disappointing findings is that despite the increasing proportion of women authors, challenges persist, with females more likely to publish in lower impact journals and receive fewer citations compared with their male counterparts. Notably, countries in Eastern and Southern Europe, as well as Latin American nations, emerged as leaders in achieving gender parity in authorship roles. Encouragingly, low-income and middle-income countries in Latin America and Eastern Europe demonstrated the highest proportions of females as first and last authors.

The study joins a subset of literature outlining persistent gaps in female representation across the spectrum of oncology.⁴

Despite females comprising a larger proportion of medical school graduates, only 29% of professors, 17% of department chairs and 16% of deans in medicine were women.⁵ Similarly, despite relatively equal numbers of oncology residents across specialities, the matched proportion of physicians is lower, meaning women are not continuing into practice.⁶ Other research demonstrates that women are less likely to be lead authors on clinical trials⁷ nor be adequately included as participants in these studies.⁸ These figures demonstrate a phenomenon known as ‘the leaky pipeline’, where the proportions of women decrease along the spectrum to leadership positions.

While the study by Mutebi *et al* is an important addition to the literature, the authors also elicit a current limitation within the field. Despite persistent studies outlining gaps in sex and gender representation, few investigate the reasons why these disparities persist. For example, why do some countries fare better than others in terms of female authorship? What lessons might be learnt from regions that have improved substantially over the past decade? Why are women published in lower tier journals and citations remain low? As the authors demonstrate with weak correlations between gender and corruption indexes, the relationship between sex and gender and research participation is complex. An important area for future research will be to qualitatively unpack the reasons these disparities continue, including understanding the political incentives that perpetuate these inequities. A regional-level or country-level focus may be more appropriate to control for context-dependent factors and elicit in-depth information.

Mutebi *et al* underscores the urgent need for concerted efforts to address gender inequities in cancer research.³ Achieving diversity and equity in research leadership and authorship is essential for advancing scientific excellence to address the challenges of cancer on a



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global scale. To bridge this gap, comprehensive strategies are needed. This includes fostering supportive environments that encourage and empower women to pursue careers in cancer research, promoting mentorship and networking opportunities and implementing policies that promote gender diversity and inclusion in research institutions and funding agencies.⁹ Greater investment in research to understand the underlying factors contributing to gender disparities in cancer research is needed.

Addressing gender inequities in oncology is critical to creating a more inclusive and impactful research ecosystem. Gender parity for cancer research authorship is not only a matter of fairness and equality but also essential for advancing scientific knowledge, promoting innovation and addressing the complex challenges associated with cancer prevention, diagnosis and treatment. The study by Mutebi *et al* is another reminder that we still have a lot of work to do.

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REFERENCES

- 1 Payedimarri AB, Mouhssine S, Aljadeeah S, *et al*. Globalisation of industry-sponsored clinical trials for breast, lung and colon cancer research: trends, threats and opportunities. *Bmjnc* 2023;2:e000101.
- 2 Lawler M, Davies L, Oberst S, *et al*. European Groundshot-addressing Europe's cancer research challenges: a lancet oncology commission. *Lancet Oncol* 2023;24:e11–56.
- 3 Mutebi M, Lewison G, Mukherji D, *et al*. Sex and authorship in global cancer research. *BMJ Oncology* 2024;3:e000200.
- 4 Ginsburg O, Vanderpuye V, Beddoe AM, *et al*. Women, power, and cancer: a lancet commission. *Lancet* 2023;402:2113–66.
- 5 Association of American Medical Colleges. Faculty roster: U.S. medical school faculty. 2023. Available: <https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty> [Accessed 27 Mar 2024].
- 6 Dalal NH, Chino F, Williamson H, *et al*. Mind the gap: gendered publication trends in oncology. *Cancer* 2020;126:2859–65.
- 7 Yalamanchali A, Zhang ES, Jaggi R. Trends in female authorship in major journals of 3 oncology disciplines, 2002–2018. *JAMA Netw Open* 2021;4:e212252e212252.
- 8 Jenei K, Meyers DE, Prasad V. The inclusion of women in global oncology drug trials over the past 20 years. *JAMA Oncol* 2021;7:1569–70.
- 9 Jenei K, West MT, Kim MS. Addressing sex disparities in academic oncology: what can we do? *JAMA Oncol* 2022;8:819–20.