females earned first authorships 5% more frequently than males, females held the senior author position 50% less frequently. Regardless, these authors are to be commended on their efforts to investigate the important topic of trends in academic productivity and influence by gender in cardiology.

However, research on gender imbalance in cardiology publications has thus far largely been focused on the field as a whole (1,2). Two international electrocardiology societies (International Society for Holter and Noninvasive Electrocardiology and International Society of Electrocardiology) specifically examined gender differences within electrocardiology. The proportion of female first authors (23%), senior authors (14%), board constituents (9%), and society presidents (3%) reflects the pervasiveness of gender imbalance within electrocardiology (3).

Given the heterogeneity by gender within cardiology, such as the higher rates of female cardiologists with noninvasive/clinical practices, as opposed to interventional/invasive practices (4), it is imperative that future research on gender disparities considers the subspecialties within cardiology. Moreover, although Asghar et al. (1) begin to speculate on the underlying causes of their results, such as the relatively younger career stages of female cardiologists, a complex interplay of other nuanced factors contributes to the gender imbalance, including institutional barriers, salary differences, and other lifestyle priorities (3). A concrete understanding of how such factors impede gender equity, and how the relative contributions of these factors differ between cardiology subspecialties, is imperative to the development of a systematic approach that reduces the barriers preventing female cardiologists from fulfilling their academic potential.

Cynthia Yeung, BSc
***Adrian Baranchuk, MD**

*Department of Cardiology
Queen's University, Kingston General Hospital
76 Stuart Street
Kingston, Ontario K7L 2V7
Canada
E-mail: Adrian.Baranchuk@kingstonhsc.ca
Twitter: @adribaran

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REPLY: Gender Equity Trends in Academic Productivity and Influence by Subspecialties of Cardiology

Ms. Yeung and Dr. Baranchuck have made an interesting comparison between the results of our study and Lerchenmüller et al. (1). In contrast to our findings (2), Lerchenmüller et al. (1) found no increase in the frequency of female senior authorship following 1995. Several methodological factors could have resulted in this discrepancy. The study by Lerchenmüller et al. (1) focused exclusively on National Institutes of Health-supported research articles and used 3 intervals of 10 years as their independent variable. Our study, however, had a broader inclusion criterion, and all articles were considered. Furthermore, we used 3 discrete time points as our independent variable.

In their letter, the authors also state the importance of studying gender disparities in research output according to subspecialties within cardiology. We acknowledge that this should be the next step in understanding and combating gender inequity within academic cardiology. Such a study should preferably adjust for the number of active female academic physicians in each subspecialty to assess if their research output is proportional to female representation in the field.

Fewer female cardiologists, younger career stages of female cardiologists, and salary differences likely impede equity within cardiology research (3); however, other factors remain elusive. Although institutional barriers are a likely suspect, specific causes have yet to be identified. For example, we recently showed that women may be equally or more likely than men to progress to leadership positions in academic cardiology (4). This suggests a lack of institutional barriers in promotion. Similarly, lifestyle differences and childbearing responsibilities have been proposed as possible factors, yet the Professional Life Survey conducted by the American College of Cardiology Women in Cardiology found that females are actually significantly less likely to interrupt training for a year or more (4). Therefore, we agree that much work needs to be done to

identify factors responsible for asymmetric research output and eventually reach gender equity.

Tariq Jamal Siddiqi, MBBS
Muhammad Shariq Usman, MBBS
Muhammad Shahzeb Khan, MD
Kaneez Fatima, MBBS
***Vincent M. Figueredo, MD**

*Cardiology, Institute for Heart & Vascular Health
Einstein Medical Center
5501 Old York Road, Levy 3232
Philadelphia, PA 19141
E-mail: figueredov@einstein.edu

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Risk Stratification According to Midlife Physical Fitness in an Asymptomatic Population

Clausen et al. (1) report on the prognostic role of midlife physical fitness on long-term prediction of cardiovascular mortality and all-cause mortality in a prospective cohort of asymptomatic Danish population. Given the decline in physical activity among young adults in Western countries throughout the last decades (2), these positive results are greatly appreciated and may be envisioned as an excellent starting point for further research lines aiming to improve cardiorespiratory fitness among the middle-aged population.

This work (1) remarks on the utility of physical fitness in midlife as a useful tool for risk stratification using a single parameter: heart rate during a submaximal cycle ergometer exercise test. The authors estimated the maximal aerobic capacity (Vo_2max) based on the Åstrand et al. (3) monogram with no measurement of gas exchange parameters. Even though the results showed a robust association between long-term prognosis and physical fitness in midlife, there are some issues that deserve to be commented on for avoiding misconception and improving generalizability of these findings.

First, Vo_2max estimated in the present study is based on results from experiments in the 1950s with young healthy subjects, 18 to 30 years old (3), but these results have not been validated in older subjects. Second, in the Åstrand et al. (3) monogram the best results were obtained when the heart rate during the steady state of exercise test was between 125 and 170 beats/min. Thus, the accuracy of Vo_2max estimation below or above these values of heart rate is more conflicting.

Third, all participants were interviewed by a physician excluding history of cardiovascular disease. Unfortunately, there were no data about musculoskeletal condition, respiratory disease, or other disorder in the oxygen-transporting system. Once again, we must consider that the Åstrand et al. (3) monogram excluded all these comorbidities. Lastly, despite the authors adjusted risk estimations for age and categories of body mass index among other covariates, we believe that evaluating Vo_2max as a percentage of age-, body mass index-, and sex-predicted Vo_2max equations may infer with more accuracy the contribution of physical fitness in prognosis.

In conclusion, we acknowledged the relevance of these findings for clinical practice, yet in-depth analysis of the beneficial role of physical activity in young adults is warranted. Additionally, further studies evaluating the contribution of physical fitness for predicting adverse events in women are welcome.

***Patricia Palau, MD, PhD**
Antoni Bayés-Genís, MD, PhD
Julio Núñez, MD, PhD

*Cardiology Department
Hospital General Universitario de Castellón
Universitat Jaume I
Avda. Benicasim, s/n, 12004
Castellón-Spain
E-mail: palaup@uji.es

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