

Editorial

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Artificial intelligence for equity

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In this Special Issue, several relevant topics concerning the perceived obstacles faced by female surgeons in pursuing a surgical career have been addressed, with a particular focus on the role of technology and AI as new tools to reduce gender disparities. Given that the applications of AI solutions to address gender biases in healthcare is a relatively recent development, there are not many papers available in the literature. Yet, the authors have made great efforts to identify potential applications of AI in eliminating gender-based discrimination in surgery, an area that has already been extensively investigated.

As reported by Dr. Capelli and colleagues in “Women surgeons fighting for work-life balance: how technology might help close the gender gap”^[1], flexible work hours, implementation of childcare facilities, encouragement of paternity leave for surgeons, and enforcement of mentorship for female surgeons are among the possible solutions to overcome gender stereotypes in surgery that still negatively affect surgeons at all career levels.

In “The potential of artificial intelligence as an equalizer of gender disparity in surgical training and education”^[2], Dr. Mari *et al.* demonstrate how technology can help overcome the barriers that women face during surgical education and training. They highlight that AI-driven selection processes or evaluations of surgical performance may assist in equalizing opportunities for surgeons regardless of gender. Technologies such as virtual and augmented reality, remote mentoring, and simulators have the potential to support female surgeons and positively influence women’s decisions to pursue a surgical career.



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In the last paper, “Mentorship and early career mentorship”^[3], Dr. Ferrari *et al.* emphasize the lack of available mentors, particularly same-sex mentors for young female surgeons, as a detriment for choosing a surgical career. The importance of mentorship for personal and professional development at different career stages is highlighted. The authors discuss how technology now enables long-distance mentorship, thus overcoming geographical barriers and enhancing the surgical and professional performance of telementored surgeons who may not have the opportunity to attend in-person courses, workshops, or conferences.

While AI offers promises in eliminating gender-based discrimination, as demonstrated by the papers in this Special Issue, it is crucial to be aware of the potential risks involved. Inappropriately designed and trained AI algorithms used in surgical settings can inherit and amplify existing biases from the training data, inadvertently perpetuating gender biases and inequalities in the surgical field. Therefore, active awareness and diligent oversight are essential to ensure that the deployment of AI technologies effectively combats gender biases and fosters equality in the field.

Finally, in the NEWS section, an interview with Prof. Franca Melfi, President of SIET (Italian Society of Endoscopic Thoracic Surgery) and Past Thoracic Domain Chair of EACTS (European Association for Cardio-Thoracic Surgery), a master in robotic surgery, conducted by Dr. Parini, explores a remarkable career in a male-dominated field, covering a journey driven by passion, motivation, and perseverance.

In conclusion, with this Special Issue, the AIS journal fully embraces the purpose of being the official Journal of Women in Surgery Italia!

DECLARATIONS

Authors' contributions

Made substantial contributions to the conception and design of the study and performed data analysis and interpretation: Frigerio I, Rashidian N

Performed data acquisition, as well as provided administrative, technical, and material support: Frigerio I, Rashidian N

Availability of data and materials

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All authors declared that there are no conflicts of interest.

Ethical approval and consent to participate

Not applicable.

Consent for publication

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