

# The Use of Artificial Intelligence in Female Genital Cosmetic Surgery



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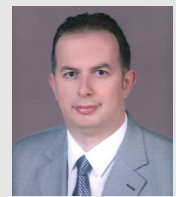
Female genital cosmetic surgery (FGCS) comprises various procedures, including vaginoplasty, labiaplasty, labia majora augmentation, clitoral hood reduction, G-spot amplification, and hymenoplasty (1). There has been a great patient interest in the performance of these procedures by gynecologists during the past decade (2). While FGCS has been a subject of debate, the use of artificial intelligence (AI) in this field to assist the procedures raises essential questions about the intersection of patient well-being, ethics, and technology.

In FGCS, machine learning algorithms are being developed to analyze patient data and predict surgical outcomes. In this way, they assist healthcare providers in decision-making by improving preoperative planning and surgical precision (3). Although the current model of FGCS is a reactive, after-the-fact management rather than a proactive approach, machine learning, and AI innovations utilize data to create predictive models that help patients and surgeons detect issues early enough to provide proper preventative care with quicker and real-time decisions. (1). In the end, improved patient satisfaction and safety are expected. Additionally, AI systems have the potential to provide personalized plans of treatment by considering individual variations in anatomy and aesthetic preferences. Furthermore, using AI may lead to standardized practices and reduce the risk of human error.

However, ethical and social considerations, including the potential for unrealistic beauty standards, the commodification of the female body, and patient coercion, are also implicated in integrating AI into cosmetic gynecology. Moreover, by utilizing AI, there is a need for robust regulatory frameworks to ensure patient safety and privacy and fear of algorithmic bias (3).

As the conversation around AI in FGCS continues, regulatory bodies, healthcare professionals, and society should be in close contact to establish regulation,

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transparency, and ethical guidelines while implementing AI technologies in cosmetic gynecological practices (3, 4).

In conclusion, the emergence of AI in FGCS presents not only promises but also some challenges. While AI can potentially enhance the surgical precision in these operations with personalized care, its integration must be approached with caution and mindful ethical considerations.

#### Competing Interests

None declared.

#### Ethical Issues

Not applicable.

#### References

1. Huang W-H, Hsu T-Y, Chang H-C. Blockchain-and AI-based female genital cosmetic surgery (FGCS): Beyond a mechanistic view of sexual satisfaction. The 34th Annual Conference of the Japanese Society for Artificial Intelligence; June 9 – June 12, 2020.
2. Elective female genital cosmetic surgery. *Obstet Gynecol.* 2020; 135:e36-e42. doi: 10.1097/aog.0000000000003616
3. Buzzaccarini G, Degliuomini RS, Borin M. The artificial

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intelligence application in aesthetic medicine: How ChatGPT can revolutionize the aesthetic world. *Aesthetic Plast Surg.* 2023; 47: 2211-2. doi:10.1007/s00266-023-03416-w

4. Brandão M, Mendes F, Martins M, et al. Revolutionizing

women's health: A comprehensive review of artificial intelligence advancements in gynecology. *J Clin Med.* 2024;13:1061. doi: 10.3390/jcm13041061

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