

Global Summit on **O**BESITY AND **H**ORMONES

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**Artificial Intelligence in Metabolic Bariatric Surgery: Where we stand and the road ahead****Athanasios G. Pantelis***Queen Mary University of London, Greece*

**Statement of the problem:** Artificial intelligence (AI) should be deemed as a novel statistical tool through which, in contradistinction to traditional methods, the investigator can manage and process a large quantity of digitized data. Literature of AI applications in the fields of Medicine and Bioscience has increased exponentially in less than half a decade. Metabolic bariatric surgery (MBS) spearheads modern surgical technology and represents the most effective and enduring way for losing weight and alleviating the comorbidities that accompany obesity. There have been numerous reports on the application of AI in the field of MBS but attempts to systematize pertinent literature have emerged only recently.

**Methodology:** We conducted a literature review spanning 2000-2021, in accordance with the PRISMA extension for scoping reviews. Eligible studies included adults who had undergone any bariatric/metabolic operation and the data were analyzed with at least one AI algorithm.

**Conclusion:** This is the first attempt to systematize the applications of AI in MBS. Pertinent evidence is accumulating constantly, but a lack of uniform reporting has prevented us from performing a meta-analysis. Future studies should focus on meticulous validation, strict reporting, and objective benchmarking. Additionally, potential areas of investigation include standardization of bariatric operations based on big data from international registries, individualized choice of bariatric operation with maximal effectiveness and minimal complications, individualized perioperative thromboprophylaxis and micronutrient supplementation etc.

**Biography**

Athanasios G. Pantelis is a surgeon practicing in the largest public hospital of Greece, with a special interest and expertise in Metabolic Bariatric Surgery, as well as Trauma and Acute Care Surgery. He received his MSc in Thrombosis, Hemostasis and Transfusion Medicine in 2015 from the University of Athens and his MSc in Trauma Sciences in 2020 from Queen Mary University of London. He has been a member of the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO®) since 2017 and has taken part in all international and regional IFSO meetings ever since. He has been awarded the IFSO-EC Scholarship in 2019 in the context of the 2nd IFSO-EC Symposium in Lyon, France. During the Covid-19 pandemic he, along with other faculty of his department, has been part of the GENEVA collaborative, an international working group studying the impact of the pandemic on MBS and conversely the protective effect of MBS on the vulnerable population of patients living with obesity.