Obesity is a chronic, multifactorial disease of increasing clinical and societal significance, acknowledged as a major public health challenge in the 21st century. In Poland, similar to numerous other nations, the prevalence of obesity is escalating rapidly, resulting in substantial economic burdens and a decline in both life expectancy and quality of life. Metabolic and bariatric surgery has emerged as one of the most efficacious therapeutic modalities, achieving significant weight reduction and improved control of comorbidities. The most commonly utilised surgical procedures encompass sleeve gastrectomy, one-anastomosis gastric bypass and Roux-en-Y gastric bypass.

Although the overall complication rate is relatively low, knowledge of potential complications, along with effective prevention and early detection strategies, remains crucial for ensuring optimal outcomes. One tool that enhances surgical safety is fluorescence imaging using indocyanine green. Due to its favourable optical and pharmacokinetic properties, dye enables intraoperative assessment of tissue perfusion, anastomotic integrity, and the identification of anatomical structures. This technology, widely utilised in oncologic and general surgery, is also gaining traction in the surgical treatment of obesity. Scientific reports suggest its potential value in reducing complications such as leaks and ischemia.

The aim of this study was to analyse the current state of knowledge and to evaluate the rationale for the use of indocyanine green in metabolic and bariatric surgery.