

OBESITY, CANCER RISK, AND THE ROLE OF BARIATRIC SURGERY: A LITERATURE REVIEW

Felippe Antonio GÓes Scorsioni

Sandra Maria Barbalho -; 3. Professor with a Master's degree in Genetics and Evolution; PhD in Biology; supervisor in the Postgraduate Program in Structural and Functional Interactions in Rehabilitation at the University of Marília - UNIMAR

RESUMO

Introduction: Obesity is associated with an increased risk of cancer, including endometrial, esophageal, stomach, kidney, colorectal, liver, gallbladder, pancreatic, prostate, breast, ovarian, and thyroid cancers. By 2035, worldwide, more than 4 billion people, representing 51% of the global population, are expected to be overweight or obese. Cancer incidence rates are also increasing worldwide; by 2050, it is predicted that more than 35 million new cancer cases will be diagnosed each year. **Objectives:** To review the most recent studies (2021-2026) on the relationship between obesity and cancer, to assess the role of bariatric surgery in reducing cancer risk and thus discuss the main biological mechanisms linking obesity to oncogenesis. **Materials and Methods:** Systematic review of scientific literature between 2020 and 2026, using PubMed, Scopus, and Web of Science databases.

Results: Obesity-related cancer are increasing at faster rates than other types of cancer among young adults aged 25 to 49 years. This review summarizes the current evidence on the main biological pathways by which obesity can promote cancer development. Pharmacological approaches to weight management can also reduce the risk of cancer; the use of metformin as a first-line treatment for type 2 diabetes can reduce the risk of cancer by decreasing weight, hyperglycemia, and hyperinsulinemia. Glucagon-like peptide-1 (GLP-1) receptor agonists, such as semaglutide, and dual gastric inhibitory polypeptide/GLP-1 receptor agonists, such as tirzepatide, are associated with sustained weight loss of approximately 10% to 15%. Weight-loss surgeries generally result in a weight reduction of more than 20% compared to baseline weight, in contrast to lifestyle interventions, which induce a weight reduction of approximately 4% to 6%. The primary outcome assessed was the reduction in the risk of developing cancer in obese patients undergoing bariatric surgery, compared to obese patients who did not undergo surgery. **Conclusion:** Bariatric surgery has a consolidated role in reducing the risk of cancer, especially breast and endometrial cancer; thus, obesity control through surgical interventions becomes an adjunct to cancer prevention strategies.

Palavras-chave: Obesity; Neoplasms; Bariatric Surgery; Cancer Risk; Chronic Inflammation.