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1120 – The use of probiotics during chemotherapy for breast cancer: a scoping review

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Introduction: Breast cancer treatment using chemotherapy often leads to adverse events, such as mucositis and diarrhea, as well as psychological impacts on patients, reducing treatment tolerance and negatively affecting quality of life. Probiotic supplementation appears promising in mitigating these undesirable effects when used as an adjuvant in the therapeutic regimen.

Methodology: A scoping review developed following the PRISMA ScR methodological guidelines, initiated in September 2025. The search was conducted through PUBMED, BVS, and EMBASE databases. Initially, 492 articles were identified and exported to the Rayyan software, of which 32 were selected and read in full. Finally, nine studies were included in the final evaluation.

Results: The efficacy of probiotics varied according to the strains used. Interventions with *Bacteroides fragilis* 839 significantly reduced severe gastrointestinal effects, including grade 3 and 4 episodes of nausea, vomiting, and diarrhea. Multi-strain formulations containing *Bifidobacterium longum*, *Lactobacillus acidophilus*, and *Enterococcus faecalis* were associated with reduced weight gain, lower fat percentage increase, and decreased plasma glucose and LDL levels, suggesting a strong metabolic impact. In the neurological context, the same formulation significantly reduced chemo-brain, lowering the incidence of mild and moderate cognitive impairment associated with chemotherapy. Finally, regarding quality of life, functional improvements were observed, with reduced fatigue, anorexia, and mucositis incidence.

Conclusion: The use of probiotics during systemic breast cancer treatment appears promising in reducing gastrointestinal, neurocognitive and metabolic effects in patients, although their efficacy depends on formulation, dosage, intervention duration, and therapeutic regimen. Current evidence also points to an improvement in the overall treatment experience, warranting further in-depth investigations on the topic.

Ethics: Public data – Literature review.

Keywords: breast cancer; chemotherapy; quality of life.