# Can GLP-1 Medications Slow Cancer Progression?

Developed first for diabetes and later approved for weight loss, these drugs may also help reduce metastasis of obesity-related cancers.

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GLP-1 agonists, widely used to treat type 2 diabetes and manage obesity, were associated with a lower risk of metastatic progression of certain obesity-related cancers, in particular lung, breast, colorectal and liver cancer, according to study results presented at a media briefing in advance of the upcoming American Society of Clinical Oncology Annual Meeting (ASCO 2026).

"GLP-1 receptor agonists have never been just glucose-lowering drugs. Their anti-inflammatory and immune-modulatory properties have long suggested broader effects," ASCO expert Marcin Chwistek, MD, of Fox Chase Cancer Center, said in a news release. "What's new here is the consistency across tumor types, and data this large and this consistent warrant a prospective randomized trial."

Glucagon-like peptide-1 (GLP-1) receptor agonists, such as semaglutide (Ozempic or Wegovy), were originally developed to treat diabetes and were later approved for obesity. Tirzepatide (Mounjaro or Zepbound) targets both GLP-1 and a second gut hormone called GIP. Some drugs in the pipeline target three or more hormones. These medications stimulate insulin production, regulate appetite and slow emptying of the stomach; they also appear to have anti-inflammatory properties and other beneficial effects that are not yet fully understood.

Overweight and obesity have been linked to at least 13 types of cancer. Losing weight has been shown to reduce the risk of developing cancer, and a growing body of evidence suggests that GLP-1 meds may play a role in both preventing cancer and improving outcomes.

Mark David Orland, MD, of the Taussig Cancer Institute at the Cleveland Clinic in Ohio, and colleagues used real-world data to compare the effects of two types of diabetes medication—GLP-1 agonists and DPP-4 inhibitors (gliptins)—on progression of seven obesity-related malignancies. People with diabetes are more prone to developing certain cancers, perhaps because the associated metabolic dysfunction creates an environment that encourages the growth of malignant cells.

The researchers looked at health records from more than 12,000 people in the TriNetX Global

Health Research Network database who had Stage I, II or III breast, colorectal, kidney, liver, pancreatic, prostate or non-small-cell lung cancer. They compared the likelihood of progression to Stage IV, or metastatic cancer, among patients who started taking GLP-1 agonists and those who took DPP-4 inhibitors after their cancer diagnosis. Participants in the two groups were matched for age, sex, body mass index, comorbidities, cancer treatment, smoking status and other relevant factors.

In addition, given that prior research has shown that GLP-1 receptor expression on tumor cells is associated with better survival for some cancers but worse survival for others, the study team also used data from The Cancer Genome Atlas to look for links between tumor GLP-1 receptor expression and overall survival for these seven cancer types.

The researchers found that for four of the seven cancer types, people who used GLP-1 agonists were up to 50% less likely to progress to Stage IV cancer over five years compared with those who used DPP-4 inhibitors; these differences were all statistically significant.

- Lung cancer: 10% versus 22% (50% reduction)
- Breast cancer: 10% versus 20% (43% reduction)
- Liver cancer: 19% versus 28% (38% reduction)
- Colorectal cancer: 13% versus 22% (31% reduction).

For pancreatic, prostate and kidney cancers, GLP-1 agonist users had slightly fewer cases of metastasis than DPP-4 inhibitor users, but the differences did not reach statistical significant, Orland reported.

Overall, high tumor GLP-1 receptor expression was associated with a 33% lower risk of death compared with low expression. This was especially true for breast cancer, with a 45% risk reduction. This association suggests that the direct biological activity of GLP-1 and its agonists could be protective against certain cancers, beyond the effect on body weight.

“Our study found that use of GLP-1 drugs, compared to DPP-4 inhibitors and other antidiabetic drugs, was associated with a meaningful reduction in cancer progression across four solid tumor types,” Orland said. “It provides early evidence that future studies are worth pursuing.”

Ongoing research will explore how GLP-1 agonists might control cancer progression, for example, by directing malignant cells to stop growing or changing how they get fuel, influencing immune responses against cancer or tamping down inflammation.

As Chwistek suggests, the researchers also aim to conduct randomized controlled clinical trials of GLP-1 drugs in people with cancer. Other investigators are doing the same. Such studies would provide stronger evidence and could potentially lead to additional indications for these increasingly ubiquitous medications.

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