Treatment with GLP-1 receptor agonists (GLP-1RAs) was associated with a significantly lower risk of progression to metastatic disease in non–small cell lung cancer (NSCLC), breast cancer, colorectal cancer (CRC), and hepatocellular carcinoma (HCC). The study, presented at the 2026 American Society of Clinical Oncology Annual Meeting (May 29–June 2; Abstract 3143), also suggested lower rates of stage IV progression in prostate, pancreatic, and kidney cancers among patients receiving GLP-1RAs versus DPP-4 inhibitors (gliptins), although these differences were not statistically significant.

"*For patients managing both diabetes and cancer, the possibility that their antidiabetic medication may also be working in their favour is an encouraging finding. That said, these are observational data, and observational data have limits,*" said study presenter Mark David Orland, from Cleveland Clinic Taussig Cancer Institute.

From Metabolic Disease to Cancer Research

Initially approved for treatment of type 2 diabetes and obesity, GLP-1RA therapies, such as semaglutide (Ozempic, Wegovy) and tirzepatide (Mounjaro, Zepbound), have since expanded their indications to include cardiovascular disease, chronic kidney disease, and steatotic liver disease. More recently, interest has extended beyond metabolic outcomes. A study by Aparna Kamat (Houston Methodist Hospital), published this June in *Annals of Oncology*, analysed records from 229,467 obese, non-diabetic patients in the U.S.-wide TriNetX database and found that those receiving GLP-1RA therapies had an overall 41% lower risk of developing cancer.

Building on these observations, Orland and colleagues were interested to investigate whether among patients with established cancer, GLP-1RAs might reduce the risk of metastatic spread? The team conducted a propensity score–matched retrospective cohort study using electronic health records from the TriNetX Global Health Research Network, which includes data from approximately 150 million patients across 106 health care organisations worldwide. The study evaluated 10,225 patients with stage I–III cancer who initiated a GLP-1RA after their cancer diagnosis and matched them 1:1 with patients initiating a dipeptidyl peptidase-4 (DPP-4) inhibitor (gliptin), generating a final analytic cohort of 12,112 patients balanced for age, race, body mass index, comorbidities, cancer treatment, and concomitant medications. Eligible patients had one of seven obesity-associated cancers, including NSCLC, adenocarcinomas of the breast, prostate, pancreas, or colorectum, HCC, and renal cell carcinoma.

Lower Rates of Metastatic Progression

Results showed that the matched cohort was racially diverse, comprising approximately 55–60% White, 20–25% Black, and 10–15% Asian participants. NSCLC was the most common malignancy (36%), followed by breast (20%), prostate (17%), CRC (13%), renal cell (9%), hepatocellular (5%), and pancreatic cancer (2%).

Over a five-year follow-up period, initiation of GLP-1RAs was associated with significantly lower rates of progression to metastatic disease compared with DPP-4 inhibitor use across four cancer types. The greatest relative reduction was observed in NSCLC, where metastatic progression occurred in 10% of patients receiving GLP-1 therapy versus 22% receiving DPP-4 inhibitors (HR 0.50, 95% CI 0.43–0.59; P<0.001). Similar findings were observed in breast cancer (10% vs 20%; HR 0.57, 95% CI 0.46–0.71; P<0.001), HCC (19% vs 28%; HR 0.62, 95% CI 0.44–0.89; P=0.009), and CRC (13% vs 22%; HR 0.69, 95% CI 0.54–0.88; P=0.003).

Differences for the three cancers were not found to be statistically significant – prostate (8.2% vs

13.6%, P<0.09), kidney (14.3% vs 18.9%, P=0.76), and pancreatic (23.3% vs 30.8%, P=0.14).

To help understand why the drugs are associated with benefit, the researchers used the Cancer Genome Atlas to examine whether GLP-1 receptor expression for the seven cancer types was linked with survival. Here, they found that high expression was associated with a 33% lower risk of death overall and a 45% lower risk in breast cancer.

Experts Urge Caution Pending Randomised Trials

Commenting on the study, Marcin Chwistek, Chief of Supportive Oncology and Palliative Care at Fox Chase Cancer Center, noted that GLP-1RAs have "never been just glucose-lowering drugs," pointing to their anti-inflammatory and immunomodulatory properties that have long suggested broader biological effects. "*What's new here is the consistency across tumour types*," he said, adding that data of this scale and consistency warrant confirmation in a prospective randomised trial.

Similarly, Julie Gralow, Chief Medical Officer of the American Society of Clinical Oncology (ASCO), said that future research must determine whether the observed associations reflect a direct anticancer effect of GLP-1RAs or whether they are explained by differences in health behaviours among patients prescribed these agents. "*We'll need a randomised trial to establish causation*," she said.

Commenting on both studies, Kamat said, "*Our findings do not prove causation, and cancer risk reduction should not yet be a stand-alone reason to prescribe GLP-1 RAs. However, for obese, non-diabetic patients who are already candidates for these medications, our data provide an additional and potentially important reason to have that conversation.*"

About the Author

Janet Fricker is a UK medical writer with an MA in Physiology from the University of Oxford. She is the *News Editor of CancerWorld*. Janet has worked for the Cancer Drug Development Forum, Cancer Research UK, Lancet Oncology, European Journal of Cancer, Molecular Oncology, Ecancer Medical Science, and European School of Oncology (where she wrote the Oncopaedia sections on breast cancer). She has written for consumer publications including The Times, The Economist, The Daily Mail, The Independent and Marie Claire.