

## Survodutide-Novel Anti Obesity Drug

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Survodutide (BI 456906) is a novel, dual agonist of glucagon and glucagon-like peptide-1 (GLP-1) receptors developed as a once-weekly subcutaneous injection for the management of obesity. While GLP-1 receptor agonists have shown promise in managing obesity and associated complications, survodutide combines GLP-1 and glucagon receptor agonism to potentially enhance weight loss and address obesity-related co-morbidities. Emerging clinical evidence highlights its significant weight-loss efficacy and potential cardiometabolic benefits.<sup>[1]</sup>

Survodutide is indicated for the treatment of adults with obesity (BMI  $\geq 27$  kg/m<sup>2</sup>) who have established CV disease, chronic kidney disease (CKD), or at least two weight-related complications or risk factors for CV disease. Additionally, it shows potential for managing obesity-related conditions such as metabolic dysfunction-associated steatohepatitis (MASH) and heart failure with preserved ejection fraction (HFpEF).<sup>[2][3]</sup>

Survodutide's dual agonism of GLP-1 and glucagon receptors promotes complementary mechanisms for weight reduction and metabolic improvement. GLP-1 receptor activation enhances satiety, reduces food intake, and modulates glucose homeostasis. Concurrent glucagon receptor activation increases energy expenditure, promotes hepatic lipolysis, and reduces visceral and epicardial fat deposition. These combined effects contribute to significant weight loss and improvements in CV and metabolic health. Preclinical studies suggest potential antifibrotic and anti-inflammatory benefits through glucagon receptor activity, supporting broader therapeutic applications.<sup>[4]</sup>

The common adverse events are nausea, vomiting, and diarrhea, mild to moderate in severity. Additionally, an increase in heart rate has been observed, with pooled data showing a mean increase of 2.7 beats per minute. Hypothetical concerns about glucagon receptor agonism

potentially exacerbating CV stress require further evaluation in ongoing trials. Survodutide is contraindicated in individuals with a history of severe hypersensitivity to its components, medullary thyroid carcinoma, or multiple endocrine neoplasia syndrome type 2. Ongoing studies like SYNCHRONIZE-CVOT are essential to fully elucidate its safety profile and CV effects.<sup>[5]</sup>

Survodutide represents a promising advancement in obesity management, offering significant weight loss and potential cardiometabolic benefits through its dual GLP-1 and glucagon receptor agonism. Its unique mechanism of action addresses both weight-related and independent factors contributing to obesity-associated complications. While early trials demonstrate efficacy, further research is essential to confirm its safety and broaden its clinical applications.

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