Concurrent Use of GLP-1 and DPP-4 Agents

We are providing the following information to help you and your patients make informed decisions.

There is a lack of evidence available to demonstrate increased efficacy when combining GLP-1 agonists and DPP-4 inhibitors. The American Diabetes Association (ADA) guidelines do not promote coadministration of these two drug classes for the treatment of Type 2 diabetes.[1] Both GLP-1 agonists and DPP-4 inhibitors work through similar mechanisms by producing glucose-dependent increases in insulin secretion. Research points to studies that demonstrate only a marginal, nonsignificant effect to only modest effect on glycemic control when these classes of drugs are used together.[2,3]

What to do if your patient is concurrently on a DPP-4 and GLP-1 agent

- Consider **deprescribing** one of these drug classes if A1c reduction is not impactful**.** This could potentially eliminate thousands of dollars in wasteful diabetic spending with suspected little or no significant effect on patient A1c outcomes.[2.3]
- GLP-1 agonists have superior A1c reduction in comparison to DPP-4 inhibitors.[4,5]

GLP-1 Agonists	DPP-4 Inhibitors	Combination Products
Bydureon BCise® (exenatide ER)	Alogliptin (generic Nesina®)	Glyxambi® (linagliptin-empagliflozin)
Byetta® (exenatide)	Januvia® (sitagliptin)	Janumet®, Janumet® XR (metformin-sitaliptin)
Mounjaro™ (tirzepatide)**	Onglyza® and saxagliptin	Jentadueto®, Jentadueto® XR (linagliptin-metformin)
Ozempic® (semaglutide)*	Tradjenta® (linagliptin)	Kazano® (aloglipin-metformin)
Rybelsus® (semaglutide)*	Zituvio™ (sitagilptin)	Kombiglyze® XR and saxagliptin-metformin ER
Trulicity® (dulaglutide)		Oseni® (alogliptin-pioglitazone)
Victoza® (liraglutide)*		Qtern® (dapagliflozin-saxagliptin)
		Soliqua™ (insulin glargine-lixisenatide)
		Steglujan® (ertugliflozin-sitagliptin)
		Trijardy® XR (empagliflozin-linagliptin-metformin)
		Xultophy® (insulin degludec-liraglutide)

*Liraglutide is approved for weight loss under the brand name Saxenda®; semaglutide is approved for weight loss under the brand name Wegovy™; and Tirzepatide is approved for weight loss under the brand name Zepbound™. (GLP-1 agonists listed in the chart are not indicated for weight loss but may have a beneficial effect on weight.)
**GLP-1 agonist and GIP agonist

Please call our clinical pharmacist **718-938-2174** if you need additional information.

References:

1. Pharmacologic Approaches to Glycemic Treatment: Standards of Care in Diabetes—2024. Diabetes Care 2024;47 (Supplement 1): S140-S157; DOI: 10.2337/dc24-S009
2. Michael A. Nauck, M. K. (2017, February). Addition of a dipeptidyl peptidase-4 inhibitor, sitagliptin, to ongoing therapy with the glucagon-like peptide-1 receptor agonist liraglutide: A randomized controlled trial in patients with type 2 diabetes. Diabetes, Obesity and Metabolism, 200-207.
3. Lajthia E, Bucheit JD, Nadpara PA, Dixon DL, Caldas LM, Murchie M, Sisson EM. Combination therapy with once-weekly glucagon like peptide-1 receptor agonists and dipeptidyl peptidase-4 inhibitors in type 2 diabetes: a case series. Pharm Pract (Granada). 2019 Oct-Dec;17(4):1588. doi: 10.18549/PharmPract.2019.4.1588. Epub 2019 Dec 12. PMID: 31897252; PMCID: PMC6935552.
4. Susan Tran, R. R. (2018, February). Efficacy of glucagon-like peptide-1 receptor agonists compared to dipeptidyl peptidase-4 inhibitors for the management of type 2 diabetes: A meta-analysis of randomized clinical trials. Diabetes, Obesity and Metabolism, 68-76.
5. Gilbert MP, Pratley RE. GLP-1 Analogs and DPP-4 Inhibitors in Type 2 Diabetes Therapy: Review of Head-to-Head Clinical Trials. Front Endocrinol (Lausanne). 2020; 11:178. Published 2020 Apr 3. doi:10.3389/fendo.2020.00178