FDA Approves Semaglutide, Novo Nordisk's Once-Weekly GLP-1 for Type 2 Diabetes

Semaglutide, Novo Nordisk’s once-weekly glucagon-like peptide-1 (GLP-1) receptor agonist for type 2 diabetes (T2D), received FDA approval Tuesday, after beating its rival in a head-to-head trial and coming to the approval process with proof of cardiovascular benefits already in hand. Novo Nordisk announced approval for the therapy, to be sold as Ozempic, in a statement.

The FDA approved 2 doses of semaglutide, 0.5 mg and 1.0 mg, which will be administered in a prefilled pen. As part of its post-approval requirements, Novo Nordisk will conduct a pediatric trial in adolescents under age 18 and add semaglutide to the 15-year medullary thyroid carcinoma registry being kept for all long-acting GLP-1 therapies.

“We are very excited about the first approval of Ozempic and look forward to making this important innovation available to people in the US with type 2 diabetes in the beginning of 2018,” said Mads Krogsgaard Thomsen, executive vice president and chief science officer. “Type 2 diabetes is a complex disease, but with the unique clinical profile of Ozempic, we believe it has the potential to set a new standard for the treatment of the disease.”

Approval is based on results from the SUSTAIN clinical research program, which included 8000 patients. FDA received results from SUSTAIN 6, a 2-year, preapproval cardiovascular outcomes trial that showed 26% risk reduction in the primary outcome, a composite of nonfatal heart attacks, nonfatal strokes, and cardiovascular death. In SUSTAIN 7, semaglutide outperformed the once-weekly GLP-1 dulaglutide, sold by Eli Lilly as Trulicity, both in lowering glycated hemoglobin (A1C) and in offering more weight loss.
That 40-week trial compared the 0.5 mg dose of semaglutide with the 0.75 mg dose of dulaglutide, and the 1.0 mg dose of semaglutide with the 1.5 mg dose of dulaglutide, when added to metformin. From a mean baseline of 8.2% A1C, the lower dose of semaglutide achieved a 1.5% reduction compared with 1.1% for low-dose dulaglutide, and the higher dose of semaglutide achieved a 1.8% reduction compared with 1.4% for the higher dose of dulaglutide.³

An FDA panel voted 16-0 to recommend semaglutide for approval on October 18, 2017,⁴ after discussing concerns raised in the SUSTAIN 6 trial about increased retinopathy. However, those results did not repeat in SUSTAIN 7, and further analyses suggest those earlier results were due to rapid A1C reduction, not the drug itself.⁵

Novo Nordisk has big plans for semaglutide, as it plans a new round of clinical trials to gain indications for obesity. And, all 10 trials from the PIONEER program, which are examining an oral form of the drug, are expected to be reported in 2018.⁶

While Novo Nordisk already has a daily GLP-1 on the market with liraglutide (Victoza), the company does not see the 2 as competitors, vice president and chief medical office Todd Hobbs, MD, told Evidence-Based Diabetes Management™ in an interview. Rather, Hobbs said, the company’s research shows T2D patients who would benefit from a GLP-1 but have declined to start an injectable drug would be less wary of a once-weekly therapy.

“In our strategy, we agree with others in the industry and with patient groups that GLP-1 agents are underutilized in the treatment of type 2 diabetes. Less than 10% of all diabetes prescriptions are GLP-1 agents,” he said.

“So, the goal would be that primary care physicians initiating the first injectable early on in therapy could choose an agent like semaglutide and see the results that we’ve seen—the robust results we’ve seen—in the SUSTAIN program,” Hobbs continued. “We’re not looking to capture other agent market share as much as we’re looking to grow the GLP-1 space that again, is much underutilized, as GLP-1 agents are underappreciated…as excellent agents for type 2 diabetes.”

In August, the formulation of liraglutide for T2D, Victoza, received an FDA indication for reducing the risk of cardiovascular events, based on results of the LEADER trial.⁷ Novo Nordisk also markets a different formulation of liraglutide, called Saxeda, for obesity.

Hobbs said that semaglutide’s weight loss benefits are important in the population that needs GLP-1 therapy, along with the A1C lowering. Depending on the dose, he said, the difference with dulaglutide was between 10 and 15 pounds.
In the interview, Hobbs said early discussions about the clinical results for semaglutide have been positive, “both from thought leaders in the community but, more importantly, payers now are looking at this data and agreeing that this is a very robust agent with A1C lowering, weight reduction, as well as the lower risk of hypos. They are excited to have this.”

Discussions about pricing would not occur until FDA finalized the semaglutide label, Hobbs said. “We hope to quickly turn that around…and then slowly and gradually have formulary access in 2018 to support the semaglutide launch.”