Tryngolza™ (olezarsen) – New orphan drug approval

- On December 19, 2024, Ionis Pharmaceuticals announced the FDA approval of Tryngolza (olezarsen), as an adjunct to diet **to reduce triglycerides in adults with familial chylomicronemia syndrome (FCS).**

- FCS is a **rare, genetic disease characterized by extremely elevated triglyceride levels**. It is caused by impaired function of the enzyme lipoprotein lipase (LPL). Limited LPL production or function results in patients with FCS being unable to break down chylomicrons, lipoprotein particles that are 90% triglycerides.

    - FCS is estimated to impact up to approximately **3,000 people in the U.S.**
    - People living with FCS are at high risk of acute pancreatitis.

- **Tryngolza is the first FDA approved therapy for FCS**. It is an "antisense oligonucleotide", an RNA-targeted medicine designed to lower the body's production of apolipoprotein C-III, a protein produced in the liver that is a key regulator of triglyceride metabolism.

- The efficacy of Tryngolza was established in a randomized, placebo-controlled, double-blind study in 45 adult patients with genetically identified FCS and fasting triglyceride levels ≥ 880 mg/dL. Patients were randomized to Tryngolza or placebo. The primary endpoint was percent change in fasting triglycerides from baseline to month 6 compared to placebo.

    - The difference between the Tryngolza group and the placebo group in percent change in fasting triglycerides from baseline to month 6 was -42.5% (95% CI: -74.1, -10.9; p = 0.0084).
    - Over the 12-month treatment period, the numerical incidence of acute pancreatitis was 5% in the Tryngolza group vs. 30% in the placebo group.

- Warnings and precautions for Tryngolza include hypersensitivity reactions.

- The most common adverse reactions (> 5% of and > 3% higher frequency than placebo) with Tryngolza use were injection site reactions, decreased platelet count, and arthralgia.

- The recommended dose of Tryngolza is 80 mg administered subcutaneously once monthly.

    - Prior to initiation, patients and/or caregivers should be trained on proper preparation and administration of Tryngolza.

- Ionis Pharmaceuticals plans to launch Tryngolza by the end of the year. Tryngolza will be available as an 80 mg/0.8 mL single-dose autoinjector.