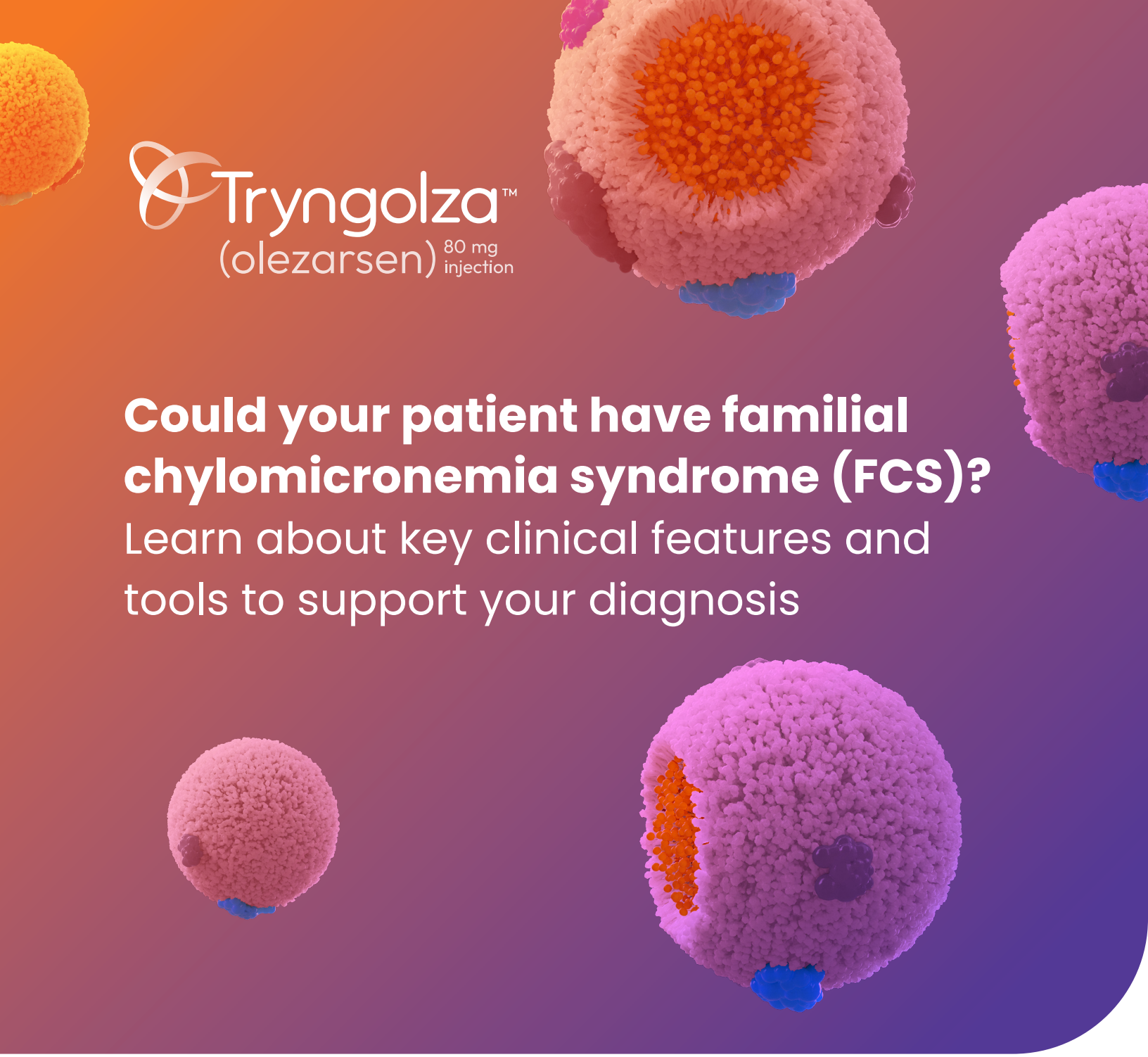
Tryngolza™
(olezarsen) 80 mg injection

Could your patient have familial chylomicronemia syndrome (FCS)?

Learn about key clinical features and tools to support your diagnosis



INDICATION

TRYNGOLZA (olezarsen) is indicated as an adjunct to diet to reduce triglycerides in adults with familial chylomicronemia syndrome (FCS).

SELECT IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS

TRYNGOLZA is contraindicated in patients with a history of serious hypersensitivity to TRYNGOLZA or any of the excipients in TRYNGOLZA. Hypersensitivity reactions requiring medical treatment have occurred.

Please see Important Safety Information throughout, and accompanying full Prescribing Information for TRYNGOLZA.

FCS vs MCS: critical distinctions

Familial chylomicronemia syndrome (FCS) and multifactorial chylomicronemia syndrome (MCS) are both genetic forms of severe hypertriglyceridemia (sHTG) characterized by fasting triglyceride levels ≥880 mg/dL, but there are several key features that distinguish them from each other.[1]

Clinical/genetic feature	FCS	MCS
Triglyceride levels	Persistently >880 mg/dL[2]	Transiently or variable >880 mg/dL[2]
Population frequency	1-13 per 1 million people[3,4]	Up to 4000 per 1 million people[5]
Genetic basis	Can be homogenic[3]	Polygenic[5]
Age of onset	Often younger (childhood/adolescence)[1,6]	Often older (mostly adulthood)[1]
Body weight	Often within normal body mass index (BMI) range[5]	Often overweight (BMI between 28 and 30 kg/m^2)[5]
Secondary factors	Less likely (except pregnancy/hormonal birth control)[2]	Likely (metabolic syndrome)[2]
Response to pharmacologic treatment	Minimal to no effect (fibrates, niacin, omega-3 fatty acids, and statins)[7]	Variable response (omega-3 fatty acids and niacin)[7]

Consider using validated scoring criteria to aid in a clinical diagnosis or to support a diagnosis of FCS with either indeterminate or positive genetic test results.[2,8]

Please note that not all genetic variants associated with FCS have been identified. So, even with indeterminate results, genetic testing can be supportive of a clinical FCS diagnosis.[2]

Please see Important Safety Information on back, and accompanying full Prescribing Information for TRYNGOLZA.

Using the North American FCS (NAFCS) scoring criteria to confer a clinical diagnosis

Its rarity and overlapping features with MCS can make FCS difficult to diagnose. In 2024, the North American FCS (NAFCS) scoring criteria were developed and validated specifically in North American patients to facilitate a diagnosis of FCS and improve patient care.[8]

Use the tearaway NAFCS scoring tool on the back of this page, along with the included secondary factors chart, to help distinguish FCS from MCS in your patients and facilitate a clinical diagnosis of FCS. A clinical FCS diagnosis can help in cases where genetic testing results are indeterminate.[8]

Use the NAFCS scoring tool for your patients

Calculate a score for FCS[8]

This calculator, adapted from Hegele et al, should be used in patients ≥1 year old with hypertriglyceridemia (≥440 mg/dL). In patients ≥10 years old, the calculator is intended for patients who are not responsive to fibrates and high-dose omega-3 fatty acids even when the patient is adherent to therapy (ie, triglycerides do not decrease by 20% or more from these treatments and do not remain reduced).

Characteristic*	Patient data	Category score
Current age (years) <1† ; ≥1-9 **[+12]** ; ≥10		
Hypertriglyceridemia onset (years) Only asked of patients ≥10 <10 **[+12]** ; ≥10 **[+0]**		
Body mass index (percentile for children/adolescents) <25 kg/m² or <85th percentile **[+9]** ; ≥25 kg/m² or ≥85th percentile **[+0]**		+
History of pancreatitis Pancreatitis **[+16]** ; Abdominal pain but no pancreatitis **[+9]** ; Neither abdominal pain nor pancreatitis **[+0]**		+
Presence of secondary factors that may contribute to hypertriglyceridemia None **[+11]** ; ≥1 **[+0]**		+
Laboratory values (select if true) All triglycerides >880 mg/dL **[+13]** ; Ratio triglycerides/total cholesterol >8 mg/dL **[+8]** ; Apolipoprotein B (apoB) <1.0 g/L **[+12]**		+
Additional points added: If patient is ≥1-9 years old AND has no secondary factors **[+7]** If triglycerides/total cholesterol >8 mg/dL AND apoB <1.0 g/L **[+7]** If triglycerides/total cholesterol >8 mg/dL AND has no secondary factors **[+5]**		+
Interpreting results[8] **≥60** strongly indicates definite FCS **≥45-59** suggests likely FCS rather than MCS **≥30-44** suggests patient may have FCS and genetic testing should be considered‡ **<30** deemed unlikely to be FCS, but genetic testing may still be needed	**Result**	=

Adapted from Hegele RA, Ahmad Z, Ashraf A, et al. Development and validation of clinical criteria to identify familial chylomicronemia syndrome (FCS) in North America. *J Clin Lipidol.* 2025;19(1):83-94.

*The NAFCS Score does not provide a value for pregnant patients.[8]

†Calculator cannot be used for patients <1 year old. If infant presents with no secondary factors that may contribute to hypertriglyceridemia, consider a diagnosis of FCS. If infant presents with ≥1 secondary factor that may contribute to hypertriglyceridemia, but with 2 triglyceride readings >880 mg/dL and unexplained failure to thrive, consider a diagnosis of FCS.[8]

‡Further research is needed to determine the validity of a score from 30-44.[8]

FCS=familial chylomicronemia syndrome.

Using the Moulin et al scoring criteria to confer a clinical diagnosis

In 2018, a panel of European experts published an algorithm-based diagnostic tool to help identify FCS in clinical practice. This FCS score is composed of the following features needed for diagnosis: severe elevation of fasting TGs, minimal response to standard TG-lowering therapies, a young age at onset, the lack of secondary factors, and a history of acute pancreatitis.[2]

Use the tearaway Moulin et al scoring tool on the back of this page to help distinguish FCS from MCS in your patients and facilitate a clinical diagnosis of FCS. A clinical FCS diagnosis can help in cases where genetic testing results are indeterminate.[2]

Use the Moulin et al scoring tool for your patients

Identify FCS in your patients[2]

Use the scoring tool below to assess your patient for FCS. Follow the "Yes/No" prompts and add category scores to determine your patient's FCS score. The numbers in parentheses represent the weighting given to the presence of each characteristic.

Characteristic	(Yes/No)	Category score
Triglycerides		
Fasting triglycerides (TGs) >880 mg/dL for 3 consecutive blood analyses* **(+5)**		+
Fasting TGs of >1770 mg/dL at least once **(+1)**		+
Previous TGs <177 mg/dL at least once **(-5)**		+
Medical history		
No secondary factor (except pregnancy and ethinylestradiol) **(+2)** Secondary factors include alcohol, diabetes, metabolic syndrome, hypothyroidism, corticotherapy, and additional drugs including neuroleptics. If diagnosis is made during pregnancy, a second assessment is necessary to confirm diagnosis post partum.		+
History of pancreatitis **(+1)**		+
Unexplained recurrent abdominal pain **(+1)**		+
No history of familial combined hyperlipidemia **(+1)**		+
No response (TG decrease <20%) to hypolipidemic treatment **(+1)**		=
Onset of symptoms at age: <40 years **(+1)** <20 years **(+2)** <10 years **(+3)**		
Interpreting results[2] **≥10:** FCS very likely **≤9:** FCS unlikely **≤8:** FCS very unlikely	**Result**	

Adapted from Moulin et al. *Atherosclerosis*. 2018;275:265-272.

*Plasma TG concentration measured at least 1 month apart. Eruptive xanthomas may be used as a surrogate for high TG levels (rare).[2]

Secondary factors that may contribute to hypertriglyceridemia[9]

	Adolescents/adults	Children	Infants
Lifestyle	• High alcohol intake • Reduced physical activity • High fat or sugar intake • Ultraprocessed (NOVA4) food diet	• High fat or sugar intake • Ultraprocessed (NOVA4) food diet	
Clinical conditions	• Autoimmune chylomicronemia (eg, systemic lupus erythematosus, anti-lipoprotein lipase antibodies) • Uncontrolled diabetes type 1 or 2 (non-pancreatitis induced) • Endocrine causes (eg, Cushing's syndrome, polycystic ovarian syndrome, growth hormone deficiency, acromegaly) • Human immunodeficiency virus (HIV) • Hypothyroidism • Metabolic syndrome • Rare genetic disorders (eg, glycogen storage disorders) • Lipodystrophies • Renal causes (eg, chronic renal failure, nephrotic syndrome) • Glycerol kinase deficiency • Autoantibodies against GPI-HDL binding protein 1	• Cancer • Congenital nephrotic syndrome • Glycogen storage disease type 1 • Hypothyroidism • Protein-losing enteropathy • Lipodystrophies • Glycerol kinase deficiency	• Cancer • Congenital nephrotic syndrome • Hypothyroidism • Protein-losing enteropathy • Glycerol kinase deficiency
Medications	• Androgen deprivation therapy • Antidepressants (eg, sertraline) • Antiretrovirals (eg, protease inhibitors) • Atypical antipsychotics • Beta-adrenergic blocking agents • Bile acid binding resins • Diuretics • Estrogen, estrogen receptor agonists, estrogen receptor modulators, oral contraceptives • Glucocorticoids (eg, corticosteroids) • Immunosuppressants (eg, cyclosporine) • L-asparaginase • Propofol • Retinoids, retinoid X receptor agonists • Total parenteral nutrition	• Total parenteral nutrition • Glucocorticoids (eg, corticosteroids) • Chemotherapy • Antiretrovirals (eg, protease inhibitors) • Immuno-suppressants (eg, cyclosporine) • Propofol • For older children: — Antidepressants (eg, sertraline) — Atypical antipsychotics	• Total parenteral nutrition • Glucocorticoids (eg, cortico-steroids) • Chemotherapy

Adapted from Hegele RA, Ahmad Z, Ashraf A, et al. Development and validation of clinical criteria to identify familial chylomicronemia syndrome (FCS) in North America. *J Clin Lipidol.* 2025;19(1)(online-only supplementary material):83-94.

Tryngolza™ (olezarsen) 80 mg injection

Indicated as an adjunct to diet to reduce triglyceride levels in adults with familial chylomicronemia syndrome (FCS)[10]


Genevie, living with FCS.

Scan the QR code to learn more about FCS and why TRYNGOLZA may be right for your patient.

SELECT IMPORTANT SAFETY INFORMATION

WARNINGS AND PRECAUTIONS

Hypersensitivity Reactions

Hypersensitivity reactions (including symptoms of bronchospasm, diffuse erythema, facial swelling, urticaria, chills, and myalgias) have been reported in patients treated with TRYNGOLZA. Advise patients on the signs and symptoms of hypersensitivity reactions and instruct patients to promptly seek medical attention and discontinue use of TRYNGOLZA if hypersensitivity reactions occur.

ADVERSE REACTIONS

Most common adverse reactions (incidence >5% of TRYNGOLZA-treated patients and >3% higher frequency than placebo) were injection site reactions, decreased platelet count, and arthralgia.

INDICATION

TRYNGOLZA (olezarsen) is indicated as an adjunct to diet to reduce triglycerides in adults with familial chylomicronemia syndrome (FCS).

Please see accompanying full Prescribing Information for TRYNGOLZA.

References: 1. D'Erasmo L, Di Costanzo A, Cassandra F, et al. Spectrum of mutations and long-term clinical outcomes in genetic chylomicronemia syndromes. *Arterioscler Thromb Vasc Biol*. 2019;39(12):2531-2541. **2.** Moulin P, Dufour R, Averna M, et al. Identification and diagnosis of patients with familial chylomicronaemia syndrome (FCS): expert panel recommendations and proposal of an "FCS score". *Atherosclerosis*. 2018;275:265-272. **3.** Pallazola VA, Sajja A, Derenbecker R, et al. Prevalence of familial chylomicronemia syndrome in a quaternary care center. *Eur J Prev Cardiol*. 2020;27(19):2276-2278. **4.** O'Dea LSL, MacDougall J, Alexander VJ, et al. Differentiating familial chylomicronemia syndrome from multifactorial severe hypertriglyceridemia by clinical profiles. *J Endocr Soc*. 2019;3(12):2397-2410. **5.** Paquette M, Bernard S. The evolving story of multifactorial chylomicronemia syndrome. *Front Cardiovasc Med*. 2022;9:886266. **6.** Davidson M, Stevenson M, Hsieh A, et al. The burden of familial chylomicronemia syndrome: results from the global IN-FOCUS study. *J Clin Lipidol*. 2018;12(4):898-907.e2. **7.** Brahm AJ, Hegele RA. Chylomicronaemia—current diagnosis and future therapies. *Nat Rev Endocrinol*. 2015;11(6):352-362. **8.** Hegele RA, Ahmad Z, Ashraf A, et al. Development and validation of clinical criteria to identify familial chylomicronemia syndrome (FCS) in North America. *J Clin Lipidol.* 2025;19(1):83-94. **9.** Hegele RA, Ahmad Z, Ashraf A, et al. Development and validation of clinical criteria to identify familial chylomicronemia syndrome (FCS) in North America. *J Clin Lipidol.* 2025;19(1)(online-only supplementary material):83-94. **10.** TRYNGOLZA™. Prescribing information. Ionis Pharmaceuticals; 2024.