# To appropriately address severe hypertriglyceridemia (sHTG), prompt patient identification is needed[1,2]

sHTG increases a patient's risk of acute pancreatitis (AP), atherosclerotic cardiovascular disease (ASCVD), and other serious health complications. Additionally, a patient's risk for these conditions varies depending on their triglyceride levels and medical history.[2,3]

sHTG is defined as fasting triglyceride levels ≥500 mg/dL.[2]

## Michael

His cardiologist suspected there was more to his sHTG.

## Sandra

She experienced her first AP attack. Will there be another?

## Lawrence

His diabetes and triglycerides were out of control.

**Explore these patient profiles to see how sHTG may present in your practice**

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# Michael, 58

**Has severe hypertriglyceridemia (sHTG), hypertension, and was diagnosed with multifactorial chylomicronemia syndrome (MCS)**

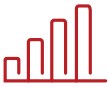
Not a real patient; actor portrayal or generated model.

## Patient story

- A lipid panel run by Michael's cardiologist showed an elevated triglyceride (TG) level of 650 mg/dL (fasting). Michael was on an ACE inhibitor, which helped to keep his hypertension well controlled, and he was already on a statin, so he was advised to follow a strict diet to reduce his TGs
- Upon follow-up 6 weeks later, Michael complained of intermittent abdominal discomfort, and a repeat lipid panel showed fasting TG levels of 1500 mg/dL due to his difficulty adhering to the diet. He was then prescribed an omega-3 fatty acid and later, a fibrate
- At his next follow-up, Michael's TGs remained above 880 mg/dL, so his cardiologist suspected a genetic cause. He used the NAFCS scoring tool to rule out FCS, a monogenic genetic form of sHTG. Michael was finally diagnosed with MCS, a polygenic form of sHTG, commonly seen with comorbid conditions[4-7]

ACE=angiotensin-converting enzyme; AP=acute pancreatitis; BMI=body mass index; FCS=familial chylomicronemia syndrome; MCS=multifactorial chylomicronemia syndrome; NAFCS=North American Familial Chylomicronemia Syndrome.

## Clinical presentation



### TGs intermittently >880 mg/dL (fasting)

TG levels >880 mg/dL are associated with a significant risk of AP[2,8,9]

### TG level not at goal despite statin, fibrate, and omega-3 fatty acid therapy

Statins, fibrates, and omega-3 fatty acids do not reduce TG levels sufficiently in all patients with sHTG[10,11]

### Overweight with a BMI of 29 kg/m$^2$

sHTG is commonly associated with comorbidities such as obesity[2,12]

### Has well-controlled hypertension

sHTG is commonly associated with comorbidities such as hypertension[2,12]

Could a genetic component be complicating the management of your patient with sHTG?


# Sandra, 49

**Has severe hypertriglyceridemia (sHTG) with a history of acute pancreatitis (AP)**

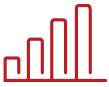
Not a real patient; actor portrayal or generated model.

## Patient story

- Sandra was diagnosed with sHTG at age 47, when multiple lipid panels revealed elevated triglyceride (TG) levels of 664 mg/dL and 773 mg/dL (fasting)
- Sandra was prescribed a fibrate, which she stopped taking shortly afterward due to myalgias
- Sandra experienced her first episode of AP at age 48. She was prescribed an omega-3 fatty acid and a statin, to which she adhered, but her TGs remained above 500 mg/dL
- Sandra has implemented lifestyle changes but is still feeling anxious that she might experience another AP episode if she doesn't get her TG levels under control

BMI=body mass index.

## Clinical presentation



### TGs 500-880 mg/dL (fasting)

TG levels of 500-880 mg/dL are associated with an increased risk of AP, especially when there's a history of AP[2,8,9,13]

### Intolerant to fibrates, and TG level not at goal despite statin and omega-3 fatty acid therapy

Statins, fibrates, and omega-3 fatty acids do not reduce TG levels sufficiently in all patients with sHTG[10,11]

### Overweight with a BMI of 29.7 kg/m$^2$

sHTG is commonly associated with comorbidities such as obesity[2,12]

### History of AP with hospitalization

Once a patient with sHTG has had an episode of AP, the risk for future episodes significantly increases[13]

Is there more that can be done to lower Sandra's TGs and decrease the risk of another AP episode?

*"I want to turn my health around for my family."*

# Lawrence, 62

**Has severe hypertriglyceridemia (sHTG) and type 2 diabetes mellitus (T2DM)**

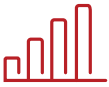
Not a real patient; actor portrayal or generated model.

## Patient story

- Lawrence's endocrinologist started him on metformin and a statin and recommended lifestyle modification
- With the medications and lifestyle changes, his A1c improved; however, his elevated triglycerides (TGs) persisted in the range of 789 mg/dL to 873 mg/dL (fasting)
- An omega-3 fatty acid, and eventually a fibrate, were prescribed to control Lawrence's TG levels. Both were ineffective in lowering his TG levels below 500 mg/dL
- The endocrinologist prescribed a GLP-1 receptor agonist, which achieved weight loss and better glycemic control but showed limited TG reduction
- Lawrence is worried his endocrinologist won't find a treatment to lower his TGs, leaving him at risk for AP

A1c=glycated hemoglobin; AP=acute pancreatitis; ASCVD=atherosclerotic cardiovascular disease; BMI=body mass index; GLP-1=glucagon-like peptide-1.

## Clinical presentation



### TGs 500-880 mg/dL (fasting)

TG levels of 500-880 mg/dL are associated with an increased risk of ASCVD and AP[2,8,9]

### TG level not at goal despite statin, fibrate, omega-3 fatty acid therapy, and GLP-1 receptor agonist

Statins, fibrates, omega-3 fatty acids, and GLP-1 receptor agonists do not reduce TG levels sufficiently in all patients with sHTG[10,11,14]

### Obese with a BMI of 36 kg/m$^2$

sHTG is commonly associated with comorbidities such as obesity[2,12]

### T2DM is well managed

sHTG is commonly associated with comorbidities such as diabetes[2,12]

Is there more that can be done to lower Lawrence's TGs and reduce the risk of acute pancreatitis?

# sHTG demands vigilant management and urgent intervention with standard-of-care treatment[2,15,16]

Visit **TGAware.com** to learn more about sHTG

sHTG=severe hypertriglyceridemia.

**References: 1.** Grundy SM, Stone NJ, Bailey AL, et al. 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the management of blood cholesterol: a report of the American College of Cardiology/American Heart Association task force on clinical practice guidelines. *J Am Coll Cardiol*. 2019;73(24):e285-e350. **2.** Virani SS, Morris PB, Agarwala A, et al. 2021 ACC expert consensus decision pathway on the management of ASCVD risk reduction in patients with persistent hypertriglyceridemia: a report of the American College of Cardiology solution set oversight committee. *J Am Coll Cardiol*. 2021;78(9):960-993. **3.** Gurevitz C, Chen L, Muntner P, Rosenson RS. Hypertriglyceridemia and multiorgan disease among U.S. adults. *JACC Adv*. 2024;3(5):100932. **4.** 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. **5.** 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. **6.** Paquette M, Bernard S. The evolving story of multifactorial chylomicronemia syndrome. *Front Cardiovasc Med*. 2022;9:886266. **7.** 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. **8.** Yuan G, Al-Shali KZ, Hegele RA. Hypertriglyceridemia: its etiology, effects and treatment. *CMAJ*. 2007;176(8):1113-1120. **9.** Rashid N, Sharma PP, Scott RD, Lin KJ, Toth PP. Severe hypertriglyceridemia and factors associated with acute pancreatitis in an integrated health care system. *J Clin Lipidol*. 2016;10(4):880-890. **10.** Patel SB, Wyne KL, Afreen S, et al. American Association of Clinical Endocrinology clinical practice guideline on pharmacologic management of adults with dyslipidemia. *Endocr Pract*. 2025;31(2):236-262. **11.** Skulas-Ray AC, Wilson PWF, Harris WS, et al. Omega-3 fatty acids for the management of hypertriglyceridemia: a science advisory from the American Heart Association. *Circulation*. 2019;140(12):e673-e691. **12.** 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. **13.** Sanchez RJ, Ge W, Wei W, Ponda MP, Rosenson RS. The association of triglyceride levels with the incidence of initial and recurrent acute pancreatitis. *Lipids Health Dis*. 2021;20(1):72. **14.** Rivera FB, Chin MNC, Pine PLS, et al. Glucagon-like peptide 1 receptor agonists modestly reduced low-density lipoprotein cholesterol and total cholesterol levels independent of weight reduction: a meta-analysis and meta-regression of placebo controlled randomized controlled trials. *Curr Med Res Opin*. 2025;41(1):185-197. **15.** Kirkpatrick CF, Sikand G, Petersen KS, et al. Nutrition interventions for adults with dyslipidemia: a clinical perspective from the National Lipid Association. *J Clin Lipidol*. 2023;17(4):428-451. **16.** Santos-Baez LS, Ginsberg HN. Hypertriglyceridemia—causes, significance, and approaches to therapy. *Front Endocrinol (Lausanne)*. 2020;11:616.



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