

Oscar Clinical Guideline: Pancreatic Digestive Enzymes - pancrelipase (Brand Names: Creon; Pancreaze; Pertzye; Viokace; Zenpep) (PG027, Ver. 5)

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Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Summary

The pancreas is an organ located in the abdomen. It has two main functions: it releases hormones (insulin and glucagon) to help regulate blood sugar. It also produces enzymes that help digest and convert the food we eat into energy for the body's functions.

Digestive enzymes produced by the pancreas enter the small intestine and break down fats, starch, and protein from food. Exocrine pancreatic insufficiency (EPI) occurs when pancreatic enzymes are not produced, resulting in maldigestion or the ability to digest food properly. Patients with EPI experience broad symptoms such as abdominal discomfort, bloating, cramping, increased flatulence, nutritional and vitamin deficiency, weight loss, and diarrhea or steatorrhea. Edema (swelling), anemia (low red blood cell count), osteopenia (loss of bone mass) or osteomalacia (softening of bones), and certain neurologic disorders may result from severe nutritional deficiencies.

EPI can be caused by chronic pancreatitis, cystic fibrosis, previous pancreatic surgery, blockage of pancreatic duct, Shwachman-Diamond syndrome (a rare genetic condition), and other disorders of the digestive tract. EPI is treated with dietary adjustments, vitamin supplementation (primarily the fat-soluble vitamins A, D, E, and K), and pancreatic enzyme replacement therapy (PERT) which is the mainstay of treatment for EPI. If abdominal symptoms do not improve with PERT, alternate causes of symptoms should be evaluated and treated.

PERT products all contain porcine-derived amylases, lipases, and proteases. The formulations available in the US are categorized as enteric-coated (Creon, Pancreaze, Pertzye, and Zenpep) and non-enteric coated (Viokace). Enteric coating prevents the enzymes from being denatured by gastric acid as the coating dissolves in the duodenum. The PERT products are not interchangeable due to their different enzyme contents and release mechanisms. New prescriptions will be needed when switching between products.

The choice of PERT products will depend on indications. The prescribed dose should be individualized and adjusted based on the patient's weight, fat content of the diet, severity of steatorrhea, and clinical symptoms. The total daily PERT dose should reflect food consumption of approximately three meals plus two or three snacks per day. Half of the prescribed dose is usually for snacks. The initial dose is generally 500 lipase units/kg/meal orally. Dosing is increased to a maximum of 2500 lipase units/kg/meal, 4000 lipase units/g fat ingested/day, or 10,000 lipase units/kg/day. Higher doses should be used with caution and only if they are documented to be effective by 3-day fecal fat measurements that indicate a significantly improved fat absorption.

Adverse effects of PERT which have been reported include fibrosing colonopathy at high doses, abdominal discomfort, flatulence, biliary tract stones, pruritus, and allergic reactions.

The efficacy of PERT is determined by the timing of doses. Pancrelipase should be taken with meals and snacks. Improvement in symptoms is reflected by stool consistency and weight gain. The most common reasons for treatment failure include inadequate dosage or inadequate amount of enzymes that reach the duodenum. Changing to another formulation may improve symptoms if the patient is still having inadequate responses after increasing dose, timing PERT with food intake, acid suppression, and lifestyle changes that avoid risk factors for the underlying causes of EPI.

Pertzye is the only product that has G-tube administration information in the package insert; however instructions are available for G-tube administration with other products.

Table 1: Product Label Information

Product	Formulation	FDA-Approved Indications and Usage
CREON (pancrelipase) delayed-release capsules	Enteric-coated capsule	Treatment of exocrine pancreatic insufficiency due to cystic fibrosis (FDA approved in infants, children, adolescents, and adults), chronic pancreatitis, pancreatectomy, or other conditions (FDA approved in adults).
PANCREAZE® (pancrelipase) delayed-release capsules	Enteric-coated capsule	Treatment of exocrine pancreatic insufficiency due to cystic fibrosis or other conditions (FDA approved in infants, children, adolescents, and adults).
PERTZYE (pancrelipase) delayed-release capsules	Enteric-coated with bicarbonate	
ZENPEP® (pancrelipase) delayed release capsules	Enteric-coated capsule	
VIOKACE® (pancrelipase) tablets	Non-enteric-coated tablet	Treatment of exocrine pancreatic insufficiency due to chronic pancreatitis or pancreatectomy in combination with a proton pump inhibitor (FDA approved in adults). NOTE: Since VIOKACE is not enteric-coated, it should be taken in combination with a proton pump inhibitor

NOTE: Pancrelipase products are not interchangeable. All of these products contain a combination of porcine-derived lipases, proteases, and amylases.

Definitions

“Chronic pancreatitis” is inflammation of the pancreas that does not heal or improve. It may get worse over time and lead to permanent damage. Chronic pancreatitis eventually impairs a patient's ability to digest food and make pancreatic hormones.

“Exocrine pancreatic insufficiency” is a condition which occurs when the pancreas does not make enough of a specific enzyme the body uses to digest food in the small intestine.

“Fibrosing colonopathy” is a disease that arises in people with cystic fibrosis treated with high doses of pancreatic enzyme supplements. Signs and symptoms include thickening of the bowel wall, abdominal pain, abdominal swelling, vomiting, and constipation.

“Hyperuricemia” is an excess of uric acid in the blood.

“Pruritus” is an uncomfortable, irritating, or itchy sensation.

“Steatorrhea” is the result of fat malabsorption and is characterized by pale, bulky, and malodorous stools. These stools often float on top of the toilet water with oily droplets and are difficult to flush.

Medical Necessity Criteria for Initial Authorization

The Plan considers **pancrelipase (Brand Names: Creon; Pancreaze; Pertzye; Viokace; Zenpep)** medically necessary when ALL the following criteria are met:

1. The member has a documented diagnosis of exocrine pancreatic insufficiency caused by **ONE** of the following:
 - a. Celiac disease; **or**
 - b. Chronic pancreatitis; **or**
 - c. Cystic fibrosis; **or**
 - d. GI bypass surgery (e.g., Billroth II gastroenterostomy); **or**
 - e. Pancreatectomy; **or**
 - f. Pancreatic cancer; **or**
 - g. Other medical conditions that lead to pancreatic insufficiency and impair fat digestion;

AND
2. The requested product is prescribed by or in consultation with an appropriate specialist (e.g., pulmonologists, endocrinologists, gastroenterologists, oncologists, among others); **AND**
3. Supporting evidence in the form of chart documentation, lab test results (such as fecal elastase measurement, ultrasound, secretin pancreatic function test), or imaging studies (CT scan or MRI) confirms exocrine pancreatic insufficiency due to one of the conditions listed above; **AND**
4. Clinical chart documentation indicates the member has been provided individualized dietary advice OR will be referred to a nutritionist; **AND**
5. The request meets **ONE** of the following:

- a. The requested product is Creon, or Zenpep; **or**
- b. The requested product is Viokace, and documentation is provided that Viokace will be used with a proton pump inhibitor; **or**
- c. The requested product is for Pancreaze or Pertzye, AND the member is unable to use or has tried and failed ALL of the following:
 - i. Creon; **and**
 - ii. Zenpep; **and**
 - iii. Viokace.

If the above prior authorization criteria are met, then the pancrelipase product will be approved for 12 months.

Medical Necessity Criteria for Reauthorization:

Reauthorization for 12 months will be granted if **BOTH** of the following are met:

1. The member still meets the applicable initial criteria; **and**
2. Recent chart documentation (within the past 6 months) shows that the patient is demonstrating sustained improvement or control of symptoms related to maldigestion (e.g., symptoms of abdominal pain, steatorrhea, and/or flatulence).

Experimental or Investigational / Not Medically Necessary

Pancrelipase (Brand Names: Creon; Pancreaze; Pertzye; Viokace; Zenpep) for any other indication is considered not medically necessary by the Plan, as this is deemed to be experimental, investigational, or unproven. Additionally, it should be noted that the safety and efficacy of Viokace in patients younger than 18 years of age has not been established.

References

1. Borowitz DS, Baker RD, Stallings V. Consensus report on nutrition for pediatric patients with cystic fibrosis. *Journal of Pediatric Gastroenterology Nutrition*. 2002 Sep; 35: 246-259.
2. Borowitz DS, Grand RJ, Durie PR, et al. Use of pancreatic enzyme supplements for patients with cystic fibrosis in the context of fibrosing colonopathy. *Journal of Pediatrics*. 1995; 127: 681-684.
3. Capurso G., et al.: Exocrine pancreatic insufficiency: prevalence, diagnosis, and management. *Clin Exp Gastroenterol* 2019; 12: pp. 129-139.

4. Creon (pancrelipase) [prescribing information]. North Chicago, IL: AbbVie Inc; March 2020.
5. Cystic Fibrosis Foundation (CFF). Pancreatic enzymes clinical care guidelines. <https://www.cff.org/pancreatic-enzymes-clinical-care-guidelines#recommendations>. Accessed May 2022.
6. DeWitt J.M., et al.: EUS pancreatic function testing and dynamic pancreatic duct evaluation for the diagnosis of exocrine pancreatic insufficiency and chronic pancreatitis. *Gastrointest Endosc* 2021; 93 (2): pp. 444-453.
7. Dominguez-Munoz J.E.: Management of pancreatic exocrine insufficiency. *Curr Opin Gastroenterol* 2019; 35 (5): pp. 455-459.
8. Feldman M., et al.: Sleisenger and Fordtran's gastrointestinal and liver disease: pathophysiology/diagnosis/management. 2016. Saunders/Elsevier, Philadelphia
9. FitzSimmons SC, Burkhart GA, Borowitz DS, et al. High-dose pancreatic-enzyme supplements and fibrosing colonopathy in children with cystic fibrosis. *New England Journal of Medicine*. 1997; 336: 1283-1289.
10. Gardner TB, Adler DG, Forsmark CE, Sauer BG, Taylor JR, Whitcomb DC. ACG clinical guideline: chronic pancreatitis. *Am J Gastroenterol*. 2020;115(3):322-339. doi:10.14309/ajg.0000000000000535
11. Hamilton J.L., et al.: Pancreatic insufficiency converted to pancreatic sufficiency with ivacaftor. *Pediatr Pulmonol* 2019; 54 (11): pp. 1654.
12. Iglesia D, Avci B, Kiriukova M, et al. Pancreatic exocrine insufficiency and pancreatic enzyme replacement therapy in patients with advanced pancreatic cancer: a systematic review and meta-analysis. *United European Gastroenterol J*. 2020;8(9):1115-1125. doi:10.1177/2050640620938987
13. Landers A, Brown H, Strother M. The effectiveness of pancreatic enzyme replacement therapy for malabsorption in advanced pancreatic cancer, a pilot study. *Palliat Care*. 2019;12:1178224218825270. doi:10.1177/1178224218825270
14. Min M., et al.: Exocrine pancreatic insufficiency and malnutrition in chronic pancreatitis: identification, treatment, and consequences. *Pancreas* 2018; 47 (8): pp. 1015-1018.
15. National Pancreas Foundation Patient Information. <https://pancreasfoundation.org/patient-information/ailments-pancreas/exocrine-pancreatic-insufficiency-epi/> (Accessed June 2020).
16. Othman M.O.: Introduction and practical approach to exocrine pancreatic insufficiency for the practicing clinician. *Int J Clin Pract* 2018; 72 (2): 29405509.
17. Pancreaze (pancrelipase) [prescribing information]. Campbell, CA: Vivus Inc; April 2021.
18. Pertzeye (pancrelipase) [prescribing information]. Bethlehem, PA: Digestive Care, Inc; March 2020.
19. Rinzivillo M., et al.: Occurrence of exocrine pancreatic insufficiency in patients with advanced neuroendocrine tumors treated with somatostatin analogs. *Pancreatology* 2020; 20 (5): pp. 875-879.
20. Romagnuolo J., et al.: Clinical profile, etiology, and treatment of chronic pancreatitis in North American women: analysis of a large multicenter cohort. *Pancreas* 2016; 45 (7): pp. 934-940.
21. Singh V.K., Schwarzenberg S.J.: Pancreatic insufficiency in cystic fibrosis. *J Cyst Fibros* 2017; 16 (Suppl 2): pp. S70-S78.
22. Smyth RL, Ashby D, O'Hea U, et al. Fibrosing colonopathy in cystic fibrosis: results of a case-

control study. Lancet. 1995; 346: 1247-1251.

23. Stallings VA, Start LJ, Robinson KA, et al. Evidence-based practice recommendations for nutrition-related management of children and adults with cystic fibrosis and pancreatic insufficiency: results of a systematic review. Journal of the American Dietetic Association. 2008; 108: 832-839.
24. Stevens T., et al.: A prospective crossover study comparing secretin-stimulated endoscopic and Dreiling tube pancreatic function testing in patients evaluated for chronic pancreatitis. Gastrointest Endosc 2008; 67 (3): pp. 458-466.
25. The Medical Letter : Pancreatic enzyme replacement products. Med Lett 2017; 59: pp. 170.
26. Viokace (pancrelipase) [prescribing information]. Bridgewater, NJ: Nestle HealthCare Nutrition, Inc; March 2020.
27. Yadav D., Lowenfels A.B.: The epidemiology of pancreatitis and pancreatic cancer. Gastroenterology 2013; 144 (6): pp. 1252-1261.
28. Zenpep (pancrelipase) [prescribing information]. Bridgewater, NJ: Nestle HealthCare Nutrition, Inc; March 2020.

Clinical Guideline Revision / History Information

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