

**30+ YEARS OF
CLINICAL
EXPERIENCE^{1*}**

The 5E's

A Nurse's Guide to Potential Symptom Triggers

The 5E's are potential triggers of the severe diarrhea and flushing associated with metastatic carcinoid tumors. Recognizing these triggers may help your patients avoid flare-ups.²⁻⁵



Image by Getty. Not actual patient.

*Includes Sandostatin® (octreotide acetate) Immediate-Release Injection and Sandostatin® LAR Depot (octreotide acetate) for injectable suspension for all approved indications.

INDICATIONS AND USAGE

Sandostatin® LAR Depot (octreotide acetate) for injectable suspension is indicated for long-term treatment of the severe diarrhea and flushing episodes associated with metastatic carcinoid tumors and long-term treatment of the profuse watery diarrhea associated with VIP-secreting tumors in patients in whom initial treatment with immediate-release Sandostatin® (octreotide acetate) Injection has been shown to be effective and tolerated. In patients with carcinoid syndrome and VIPomas, the effect of Sandostatin Injection and Sandostatin LAR Depot on tumor size, rate of growth, and development of metastases has not been determined.

HIGHLIGHTS OF IMPORTANT SAFETY INFORMATION

Warnings and Precautions: Treatment with Sandostatin LAR Depot may affect gallbladder function, with postmarketing reports of cholelithiasis (gallstones) resulting in complications; glucose metabolism; thyroid and cardiac function; and nutritional absorption (periodic monitoring is recommended). Cardiac function: use with caution in at-risk patients.

Please see additional Important Safety Information throughout.
Please [click here](#) for full Prescribing Information.



Sandostatin® LAR Depot
(octreotide acetate) for injectable suspension
10mg • 20mg • 30mg

The 5E's

Certain lifestyle choices may have an impact on the severe diarrhea and flushing of carcinoid syndrome. It's important to determine if certain potential triggers, known as the 5E's, may have been responsible for any flare-ups.²⁻⁵



EATING²

What has your patient eaten recently?

Spicy foods may not be the only trigger of severe diarrhea and flushing associated with metastatic carcinoid tumors. In fact, in a nutritional study, large meals were the most common trigger of these symptoms. Foods and beverages that may cause flare-ups include

- Large meals
- Chocolate
- Tomato dishes
- Nuts
- Caffeine
- Spicy foods
- Fatty foods
- Raw vegetables

IMPORTANT SAFETY INFORMATION

Warnings and Precautions

- Gallbladder abnormalities may occur. There have been postmarketing reports of cholelithiasis (gallstones) resulting in complications, including cholecystitis, cholangitis, pancreatitis, and requiring cholecystectomy in patients taking Sandostatin® LAR Depot (octreotide acetate) for injectable suspension. Patients should be monitored periodically. If complications of cholelithiasis are suspected, discontinue Sandostatin LAR Depot and treat appropriately
- Glucose Metabolism: Hypoglycemia or hyperglycemia may occur. Blood glucose levels should be monitored when Sandostatin LAR Depot treatment is initiated or when the dose is altered. Anti-diabetic treatment should be adjusted accordingly
- Thyroid Function: Hypothyroidism may occur. Baseline and periodic assessment of thyroid function (TSH, total and/or free T4) is recommended
- Cardiac Function: Bradycardia, arrhythmia, conduction abnormalities, and other electrocardiogram changes may occur. The relationship of these events to octreotide acetate is not established because many of these patients have underlying cardiac disease. Use with caution in at-risk patients
- Nutrition: Octreotide may alter absorption of dietary fats. Monitoring of vitamin B₁₂ levels is recommended during therapy with Sandostatin LAR Depot. Patients on total parenteral nutrition and octreotide should have periodic monitoring of zinc levels

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The 5E's

Remember the 5E's when discussing recent flare-ups of severe diarrhea and flushing with your patients who have metastatic carcinoid tumors. One or more of the 5E's may have triggered severe diarrhea and flushing.²⁻⁵

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EXERCISING^{2,3}

Has your patient engaged in vigorous physical activity recently?

While physical ability and level of activity vary from patient to patient, physical stress may trigger flushing associated with metastatic carcinoid tumors. Patients should consult their physician before engaging in physical activity or exercise.



EMOTIONS^{2,5}

Has your patient experienced strong emotions lately?

Everybody experiences daily life events that he or she cannot control. Although completely eliminating stress is impossible, it is important for patients with carcinoid syndrome to limit emotional stress.

Certain emotional states—such as anxiety or stress—can trigger severe diarrhea and flushing associated with metastatic carcinoid tumors.

IMPORTANT SAFETY INFORMATION (continued)

Drug Interactions

- The following drugs require monitoring and possible dose adjustment when used with Sandostatin® LAR Depot (octreotide acetate) for injectable suspension: cyclosporine, insulin, oral hypoglycemic agents, beta-blockers, and bromocriptine. Octreotide has been associated with alterations in nutrient absorption, so it may have an effect on absorption of orally administered drugs. Drugs mainly metabolized by CYP3A4 and which have a low therapeutic index should be used with caution
- Octreotide competitively binds to somatostatin receptors and may interfere with the efficacy of lutetium Lu 177 dotatate. Discontinue Sandostatin LAR Depot at least 4 weeks prior to each lutetium Lu 177 dotatate dose

Adverse Reactions

- The most common adverse reactions occurring in patients receiving Sandostatin LAR Depot are biliary abnormalities (62%), injection-site pain (20%-50%), nausea (24%-41%), abdominal pain (10%-35%), fatigue (8%-32%), headache (16%-30%), hyperglycemia (27%), back pain (8%-27%), constipation or vomiting (15%-21%), dizziness (18%-20%), sinus bradycardia (19%), pruritus (18%), upper respiratory tract infection (10%-18%), myalgia (4%-18%), flatulence (9%-16%), arthropathy (8%-15%), rash (15%), generalized pain (4%-15%), sinusitis (5%-12%), conduction abnormalities (9%), hypoglycemia (4%), and arrhythmia (3%)



EPINEPHRINE³⁻⁵

Has your patient been given epinephrine recently?

Use caution when patients are to receive epinephrine as part of certain medical procedures, such as those performed by a dentist or surgeon. The effect of epinephrine, when given in carcinoid patients, may result in flare-ups of severe diarrhea and flushing associated with metastatic carcinoid tumors. This is not considered an allergic reaction. It is important to ask patients if they have had or will be having these types of procedures to be proactive in preventing exacerbation of symptoms, which could lead to carcinoid crisis.



ETHANOL^{2,3}

Has your patient consumed alcohol recently?

There is a link between alcohol consumption and severe diarrhea and flushing associated with metastatic carcinoid tumors.

In a nutrition survey of patients with carcinoid syndrome, alcohol was reported as the second most common food or beverage trigger for flushing or severe diarrhea.

References: **1.** Sandostatin LAR Depot [prescribing information]. East Hanover, NJ: Novartis Pharmaceuticals Corp; 2021. **2.** Warner M. Nutritional concerns for the carcinoid patient: developing nutrition guidelines for persons with carcinoid disease. The Carcinoid Cancer Foundation website. <http://www.carcinoid.org/for-patients/general-information/nutrition/nutritional-concerns-for-the-carcinoid-patient-developing-nutrition-guidelines-for-persons-with-carcinoid-disease/>. Accessed April 24, 2019. **3.** Powell B, Mukhtar AA, Mills GH. Carcinoid: the disease and its implications for anaesthesia. *Contin Educ Anaesth Crit Care Pain*. 2011;11(1):9-13. **4.** Bader JD, Bonito AJ, Shugars DA. *Cardiovascular Effects of Epinephrine in Hypertensive Dental Patients: summary*. National Center for Biotechnology Information. Agency for Healthcare Research and Quality (AHRQ) Publication 02-E005. <http://www.ncbi.nlm.nih.gov/books/NBK11858/>. Accessed April 24, 2019. **5.** Grahame-Smith DG. What is the cause of the carcinoid flush? *Gut*. 1987;28(11):1413-1416.

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Novartis offers resources for your patients

The **RealSupport™** program was developed to provide support and information to people who are receiving, or may be appropriate candidates for, Sandostatin LAR Depot. This program does not replace the information provided by health care professionals. It offers additional information from health care experts and patients who are receiving Sandostatin LAR Depot.



For more information, visit the Sandostatin LAR Depot Facebook page at www.facebook.com/SandostatinLARDepot.

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HIGHLIGHTS OF IMPORTANT SAFETY INFORMATION (continued)

Drug Interactions:

- The following drugs require monitoring and possible dose adjustment when used with Sandostatin LAR Depot: cyclosporine, insulin, oral hypoglycemic agents, beta-blockers, and bromocriptine
- For lutetium Lu 177 dotatate injection: Discontinue Sandostatin LAR Depot at least 4 weeks prior to each lutetium Lu 177 dotatate dose

Adverse Reactions:

- The most common adverse reactions occurring in $\geq 20\%$ of patients are back pain, fatigue, headache, abdominal pain, nausea, and dizziness.

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