



Prior Authorization Approval Criteria

Department of Pharmacy Services

Generic Name: octreotide

Brand Name: Sandostatin®, available in both depot and immediate-release forms

Medication Class: somatostatin analog

FDA Approved Uses:

- **Immediate-release injection:** treatment of acromegaly in patients who have failed or are not candidates for surgery or radiation
- **Depot injection:** treatment of acromegaly in patients who have failed or are not candidates for surgery or radiation, and who have responded to and tolerated octreotide immediate-release injection
- Both forms also approved for:
 - Metastatic carcinoid tumors → controls the associated severe diarrhea and flushing
 - Vasoactive intestinal peptide tumors (VIPomas) → controls the associated profuse watery diarrhea

Available Dosage Forms:

- **Immediate-release injection:** 0.05 mg/mL, 0.1 mg/mL, 0.2 mg/mL, 0.5 mg/mL, 1 mg/mL injection solution
- **Depot injection:** kits for reconstitution containing extended release biodegradable polymer microspheres: 10mg, 20mg, 30mg

Usual Dose (for acromegaly):

- **Immediate-release injection:** Initiate at 50 mcg TID and increase to 100-500 mcg TID as needed to control GH (growth hormone) and IGF-1 (insulin-like growth factor 1) levels; most patients are controlled on 100 mcg TID. Continue for at least 2 weeks to determine tolerance before transitioning to depot octreotide injection. May be given SQ or IV.
- **Depot injection:** Initiate therapy with 20 mg deep gluteal IM injection every 4 weeks for 3 doses, then adjust dose based on patients' GH and IGF-1 levels. At 3 months, adjust as follows:
 - GH > 2.5 ng/mL, IGF-1 elevated, and/or clinical symptoms are uncontrolled: 30 mg every 4 weeks
 - GH > 1 to ≤ 2.5 ng/mL, IGF-1 normal, and clinical symptoms are controlled: 20 mg every 4 weeks
 - GH ≤ 1 ng/mL, IGF-1 normal, and clinical symptoms are controlled: 10 mg every 4 weeks

Duration of Therapy:

- **Immediate-release injection:** at least 2 weeks to determine response and tolerance; patient may then be converted to long-acting depot injection
- **Depot injection:** Indefinite; long-term



Approximate monthly cost (based on AWP 2008):

- **Immediate-release injection:** 100 mcg TID is \$1950.00 per month
- **Depot injection:** 20 mg every 4 weeks is \$2340.00

Criteria for Use: *(bullet points below are all inclusive unless otherwise noted)*

- **Immediate-release injection:**
 - Clinically diagnosed acromegaly
 - Failure to respond to surgery or radiation **OR** not a candidate for surgery or radiation
- **Depot injection:**
 - Clinically diagnosed acromegaly
 - Failure to respond to surgery or radiation **OR** not a candidate for surgery or radiation
 - Responded to and tolerated immediate-release octreotide injection

Cautions:

- Can reduce gallbladder motility, leading to gallbladder sludge and cholelithiasis
- Can cause dysglycemias: hypoglycemia, hyperglycemia, diabetes
- Can cause hypothyroidism
- Can lower B₁₂ levels, possibly due to altered nutrient absorption
- Can cause bradycardia

Monitoring:

- GH level, with goal GH level ≤ 2.5 ng/mL
- IGF-1 level, with goal of age & gender normalization of IGF-1
- Baseline and periodic thyroid function (TSH, T₄) and B₁₂ levels to monitor toxicity

Contraindications:

- Hypersensitivity to octreotide or any component of the injection suspension

Not Approved if:

- Patient does not meet the above-stated criteria
- Patient has any contraindications to the use of octreotide

Special Considerations:

Immediate-release injection:

- Store in refrigerator at 2°C to 8°C; may keep at room temperature for up to 14 days
- Not recommended in the American Association of Clinical Endocrinologists' current acromegaly treatment guidelines
- Immediate-release octreotide has a long history of use and many off-label indications, including variceal bleeding; GI and pancreatic fistulas; diarrhea related to many disease states, including AIDS, diabetes, short-bowel syndrome, and chemotherapy/radiation-related; and gastric dumping syndrome.

Depot injection:

- Store in refrigerator at 2°C to 8°C; warm at room temperature for 30-60 minutes before injection
- Depot somatostatin analogs are recommended as first line pharmacotherapy in the American Association of Clinical Endocrinologists' current acromegaly treatment guidelines; the guidelines do not give preference to either octreotide or lanreotide
- Kit must be reconstituted and administered by a healthcare professional



- Limited clinical comparisons to octreotide depot injection: no head-to-head comparisons, only cross-over studies with patients previously treated with octreotide depot
 - Cross-over studies show similar efficacy and similar degrees of GH and IGF-1 suppression between octreotide and lanreotide depot injections, but fewer injection site reactions with lanreotide depot
 - Intolerance (severe diarrhea or GI upset; rash) to octreotide does not necessarily mean intolerance to lanreotide

Comparison of available long-acting injectable somatostatin analogs					
Somatostatin Analog	How supplied	How injected	Dosing interval	Monthly Dose	Price per Dose
Lanreotide (Somatuline® Depot)	<ul style="list-style-type: none"> • Ready-to-use prefilled syringes of < 0.5 mL • Allows at-home administration 	<ul style="list-style-type: none"> • SQ injection • Short 20 mm needle 	Q4 weeks	60 mg	\$2052.00
				90 mg	\$2481.60
				120 mg	\$3668.40
Octreotide (Sandostatin® LAR Depot)	<ul style="list-style-type: none"> • Kits for reconstitution of ~2.5 mL • Requires healthcare professional for injection 	<ul style="list-style-type: none"> • IM injection • Longer 38 mm needle for muscle penetration 	Q4 weeks	10 mg	\$1866.29
				20 mg	\$2335.79
				30 mg	\$3453.07

Efficacy of long-acting injectable somatostatin analogs					
Treatment		Timepoint	Percent of patients with...		
			GH ≤ 2.5 ng/mL	Normal IGF-1	GH ≤ 2.5 ng/mL + Normal IGF-1
Sandostatin® LAR Depot	Trial 1 (n=88)	44 weeks	66%	67%	57%
	Trial 2 (n=122)	108 weeks	47%	51%	42%
Somatuline® Depot	Trial 1 (n=107)	Baseline	0%	8%	0%
		4 weeks	34%	25%	16%
		16 weeks	50%	55%	39%
		32 weeks	57%	55%	45%
		52 weeks	54%	59%	43%
	Trial 2 (n=63)	Baseline	33%	0%	0%
		12 weeks	75%	27%	22%
		28 weeks	80%	37%	34%
48 weeks		86%	43%	38%	

Step Therapy Requirements (for depot octreotide injection):

- Has tried immediate-release octreotide and demonstrated response and tolerance
 - Initiate at 50 mcg TID and increase to 100-500 mcg TID as needed
 - Continue for at least 2 weeks to determine tolerance before converting to depot octreotide

P&T Approval: _____ Date: _____