Mass General Brigham
Health Plan

Medical Policy
Lutathera (^{177}Lu dotatate)

Policy Number: 033

	Commercial and Qualified Health Plans	Mass General Brigham ACO	Medicare Advantage	OneCare	Senior Care Options (SCO)
Authorization required	X	X	X	X	X
No notification or authorization					

FDA-Approved Indication
Lutathera (^{177}Lu dotatate) is a radiolabeled somatostatin analog indicated for the treatment of adult and pediatric patients 12 years of age and older with somatostatin receptor (SSTR)-positive gastroenteropancreatic neuroendocrine tumors (GEP-NETs), including foregut, midgut, and hindgut neuroendocrine tumors.

Criteria

1. Patient Population

   Mass General Brigham Health Plan may authorize coverage of Lutathera for adult or pediatric members aged 12 years of age and older, when the following criteria are met:
   - Members have a documented diagnosis of a GEP-NET.
   - The tumor has been shown to be SSTR-positive.

Note: Requests for authorization for other indications supported by NCCN Compendia, including somatostatin-receptor positive carcinoid tumors of lung or thymus, will be reviewed on an individual basis.

2. Prescribing
   - Prescribed by an oncologist.
3. Approval Duration:
   - 4 doses at 8 week intervals

Exclusions

- Indications not supported by National Cancer Comprehensive Network (NCCN) category 2A or higher recommendations may not be considered medically necessary[1].
- The member has experienced disease progression on or following Lutathera.

Medicare Variation
Mass General Brigham Health Plan uses guidance from the Centers for Medicare and Medicaid Services (CMS) for medical necessity determinations for its Medicare Advantage plan members. National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Local Coverage Articles (LCAs), and documentation included in the Medicare manuals are the basis for medical necessity determinations. When there is no guidance from CMS for the requested service, Mass General Brigham Health Plan's medical policies

[1]Category 2A: Based upon lower-level evidence, there is uniform NCCN consensus that the intervention is appropriate

are used for medical necessity determinations. **As of Mass General Brigham Health Plan's most recent policy review, CMS had:**

- Medicare Benefit Policy Manual Chapter 15 - Covered Medical and Other Health Services

MassHealth Variation
Mass General Brigham Health Plan uses guidance from MassHealth for medical necessity determinations for its Mass General Brigham ACO members. When there is no guidance from MassHealth for the requested service, Mass General Brigham Health Plan's medical policies are used for medical necessity determinations. **As of Mass General Brigham Health Plan's most recent policy review, MassHealth did not have medical necessity guideless for Lutathera.**

OneCare and SCO Variation
Mass General Brigham Health Plan uses guidance from CMS for medical necessity determinations for its OneCare and SCO plan members. NCDs, LCDs, LCAs, and documentation included in the Medicare manuals are the basis for medical necessity determinations. When there is no guidance from CMS for the requested service, Mass General Brigham Health Plan uses medical necessity guidelines from MassHealth. When there is no guidance from CMS or from MassHealth, Mass General Brigham Health Plan's medical policies are used for medical necessity determinations.

Codes

The following codes are included below for informational purposes only; inclusion of a code does not constitute or imply coverage.

Authorized Codes	Code Description
A9513	Lutetium Lu 177, dotatate, therapeutic, 1 mCi

Summary of Evidence
Early studies on the treatment of GEP NETs using peptide receptor radionuclide therapy (PRRT) were published in the early 2000s. Kwekkeboom et al. (2008) used a radiolabeled somatostatin analogue, ^{177}Lu octreotate, to treat adults with GEP NETs, demonstrating a good safety profile and moderate objective response rates; comparison with historical controls suggested a possible overall survival benefit. A phase 1-2 study of ^{177}Lu dotatate in patient with unresectable/metastatic tumors expressing type 2 somatostatin receptor (mainly neuroendocrine tumors) showed evidence of renal toxicity, an otherwise good safety profile, and an objective response rate of 29% (Bodei et al. 2021).

The pivotal, phase 3 NETTER-1 trial by Strosberg et al. (2017) demonstrated ^{177}Lu dotatate's efficacy in adults with inoperable metastatic or locally advanced midgut NETs. Patients randomized ^{177}Lu dotatate in addition to long-acting octreotide had progression-free survival at 20 months of 65%, compared with 11% in those who were randomized to long-acting octreotide alone. Response rates were 18% with ^{177}Lu dotatate and 3% in the control group. In long-term follow-up, a nonsignificant trend toward improved median overall survival was observed in the treatment group (48 months) compared with the control group (36.3 months; Strosberg et al. 2021). Subsequent studies have reported on a small but significant risk (approximately 2.6%) of therapy-related myeloid neoplasm, including acute myeloid leukemia and myelodysplastic syndrome, following treatment with peptide receptor radionucleide therapy (Sonbol, Halfdanarson, and Hilal 2020).

While the FDA granted Lutathera an expanded indication in 2024 to include children with SSTR-positive GEP-NETs, only limited evidence has been published on safety and efficacy in the pediatric population. FDA labeling cites unpublished evidence from the NETTER-P study that includes safety data on 4 adolescent patients. A retrospective study by Aggarwal et al. (2024) included 8 adolescent patients (10-18 years) with NET at various

sites, and outcomes were similar to previously published adult data. A phase 2A trial of ^{177}Lu dotate in children with primary refractory or relapsed high-risk neuroblastoma showed no objective responses (Gains 2020).

In clinical practice guidelines from ESMO (Pavel et al. 2020) and NCCN (2025), ^{177}Lu dotatate is considered to be a therapeutic optyion for progressive NETs that express somatostatin receptor. Retrospective reviews of patients with lung NET treated with PRRT, including ^{177}Lu dotatate, were reported by Mirvis et al. (2020) and Zidan et al. (2022); these studies suggested safety and efficacy for this indication. Larger retrospective reviews by Brabander et al. (2017) and Baum et al. (2018) of patients with a variety of primary tumor types treated with PRRT suggested lower efficacy for bronchial tumors than for pancreatic and midgut tumors. Further research is needed to evaluate efficacy of this therapy for NETs of the lung and other sites.

Mass General Brigham Health Plan considers that the NETTER-1 study provides strong evidence of Lutathera's safety and efficacy for management of SSTR-positive metastatic or locally advanced midgut NETs in adults. There is moderate-quality evidence of safety and efficacy in patients with other gastroenteropancreatic cancers in the foregut, hindgut, and pancreas. Evidence of safety/efficacy in children is sparse, but the use of Lutathera in this patient population is consistent with FDA labeling and NCCN guidelines, and use in children is also reasonable based on extrapolation from adult data, inadequacy of other treatment options, and the low incidence of these tumors in the pediatric population. As described above, evidence of efficacy remains insufficient to consider this treatment medically necessary for treatment of tumors other than gastroenteropancreatic NETs.

Effective Date
January 2026: Ad hoc review. Updated prior authorization table and added variation for OneCare and SCO members. Fixed code disclaimer. References updated.
March 2025: Ad hoc review. Summary of evidence added. References updated.
February 2025: Annual Review. Reorganized policy sections. Added MassHealth variation language.
February 2024: Annual Review.
February 2023: Annual Review. Medicare Advantage added to table. Statement regarding indications supported by NCC Compendia added. Medicare Variation language added. References updated.
March 2022: Annual Review. Added exclusions. References updated.
February 2021: Annual Review. References updated.
February 2020: Annual Review. References Updated.
February 2019: Annual Review. Added criteria requiring the tumor has been shown to be somatostatin receptor-positive. Revised approval of duration. Removed reauthorization criteria.
August 2018: Effective Date

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