

Charged-Particle (Proton) Radiotherapy

Published: 02/01/2025

Next Review: 06/2025

Last Review: 12/2024

Medicare Link(s) Revised: 02/01/2025

IMPORTANT REMINDER

The Medicare Advantage Medical Policy manual is not intended to override the member Evidence of Coverage (EOC), which defines the insured's benefits, nor is it intended to dictate how providers are to practice medicine. Physicians and other health care providers are expected to exercise their medical judgment in providing the most appropriate care for the individual member, including care that may be both medically reasonable and necessary.

The Medicare Advantage medical policies are designed to provide guidance regarding the decision-making process for the coverage or non-coverage of services or procedures in accordance with the member EOC and Centers of Medicare and Medicaid Services (CMS) policies and manuals, along with general CMS rules and regulations. In the event of a conflict, applicable CMS policy or EOC language will take precedence over the Medicare Advantage Medical Policy. In the absence of a specific CMS coverage determination for a requested service, item or procedure, the health plan may apply CMS regulations, as well as their Medical Policy Manual or other applicable utilization management vendor criteria developed with an objective, evidence-based process using scientific evidence, current generally accepted standards of medical practice, and authoritative clinical practice guidelines.

Some services or items may appear to be medically indicated for an individual, but may be a direct exclusion of Medicare or the member's benefit plan. Medicare and member EOCs exclude from coverage, among other things, services or procedures considered to be investigational (experimental) or cosmetic, as well as services or items considered not medically reasonable and necessary under Title XVIII of the Social Security Act, §1862(a)(1)(A). In some cases, providers may bill members for these non-covered services or procedures. Providers are encouraged to inform members in advance when they may be financially responsible for the cost of non-covered or excluded services. Members, their appointed representative, or a treating provider can request coverage of a service or item by submitting a pre-service organization determination prior to services being rendered.

DESCRIPTION

Charged-particle beams consisting of protons or helium ions are a type of particulate radiation therapy that contrast with conventional electromagnetic (i.e., photon) radiation therapy due to the unique properties of minimal scatter as the particulate beams pass through the tissue, and deposition of the ionizing energy at a precise depth (i.e., the Bragg Peak). This type of radiotherapy conforms to the target tumor, minimizing radiation exposure to surrounding healthy tissue. Charged-particle irradiation includes both proton beam therapy (PBT) and helium ion irradiation; however, helium ion irradiation is not currently available in the United States, and therefore this policy focuses on PBT.

MEDICARE ADVANTAGE POLICY CRITERIA

CMS Coverage Manuals*	None
National Coverage Determinations (NCDs)*	None
Noridian Healthcare Solutions (Noridian) Local Coverage Determinations (LCDs) and Articles*	<p>The LCD for Radiation Oncology: External Beam / Teletherapy (L24354) was retired May 15, 2014 and was removed from the Medicare website 10 years post-archival.</p> <p><i>This LCD should no longer be used because it is not publicly accessible.</i></p>
Non-Noridian Healthcare Solutions Local Coverage Determinations (LCDs) and Articles	<p>Article A57669 Billing and Coding: Proton Beam Therapy provides billing and coding guidance for LCD L33937 and includes diagnosis codes that support medical necessity for proton beam therapy. To determine medical necessity for proton beam therapy, review the ICD-10 Group 1 and Group 2 lists of codes that support medical necessity in Article A57669. If the diagnosis code is included in Group 1 or Group 2, then the services may be approved.</p>

POLICY GUIDELINES

REQUIRED DOCUMENTATION

The information below **must** be submitted for review to determine whether policy criteria are met. If any of these items are not submitted, it could impact our review and decision outcome:

- Identification of the location, extent, and volume of tumor(s) to be treated;
- The critical structure surrounding the tumor(s) in question;
- Applicable diagnosis code(s) and descriptions.

CROSS REFERENCES

None

REFERENCES

1. First Coast Service Options, Inc.; Billing and Coding Article: [Proton Beam Radiotherapy A57669](#)
2. First Coast Service Options, Inc.; Local Coverage Determination (LCD): [Proton Beam Radiotherapy L33937](#)
3. Noridian Healthcare Solutions, LLC; Local Coverage Determination (LCD) for Radiation Oncology: External Beam/Teletherapy (L24354), (Retired)

CODING

NOTE: The use of proton beam or helium ion radiation therapy typically consists of a series of CPT codes describing the individual steps required; medical radiation physics, clinical treatment planning, treatment delivery and clinical treatment management. It should be noted that the code for treatment delivery primarily reflects the costs related to the energy source used, and not physician work. Unlisted procedure codes for medical radiation physics, clinical treatment planning and treatment management may be used.

Treatment Delivery:

The codes for treatment delivery will depend on the energy source used typically either photons or protons. For photons (i.e. with a gamma knife or LINAC device) nonspecific radiation therapy treatment delivery CPT codes may be used based on the voltage of the energy source (i.e. CPT codes 77402-77416). When proton therapy is used the following specific CPT codes are available:

Codes	Number	Description
CPT	77299	Unlisted procedure, therapeutic radiology clinical treatment planning
	77301	Intensity modulated radiotherapy plan, including dose-volume histograms for target and critical structure partial tolerance specifications
	77338	Multi-leaf collimator (MLC) device(s) for intensity modulated radiation therapy (IMRT), design and construction per IMRT plan
	77399	Unlisted procedure, medical radiation physics, dosimetry and treatment devices, and special services
	77520	Proton beam delivery, simple, without compensation
	77522	Proton beam delivery; simple with compensation
	77523	Proton beam delivery; intermediate
	77525	Proton beam delivery; complex

Note: Codes for treatment delivery primarily reflects the costs related to the energy source used, and **not** physician work.

HCPCS None

***IMPORTANT NOTE:** Medicare Advantage medical policies use the most current Medicare references available at the time the policy was developed. Links to Medicare references will take viewers to external websites outside of the health plan's web control as these sites are not maintained by the health plan.