OHCA Guideline

Medical Procedure Class:	**Proton Beam Therapy**
Initial Implementation Date:	3//1/2015
Last Review Date:	8/8/2023
Effective Date:	8/10/2023
Next Review/Revision Date:	August 2026

* This document is not a contract, and these guidelines do not reflect or represent every conceived situation. Although all items contained in these guidelines may be met, this does not reflect, or imply any responsibility of this agency or department to change the plan provision to include the stated service as an eligible benefit.

☐ New Criteria ☒ Revision of Existing Criteria

Summary

Purpose:	To provide guidelines to assure medical necessity and consistency in the prior authorization process.

Definitions

Gross Tumor Volume (GTV): the gross palpable or visual / demonstrable extent and location of malignant growth.

Intensity Modulated Radiation (Photon) Therapy (IMRT): a type of 3-dimentional radiation therapy that uses computer-generated images to show the size and shape of the tumor; using photons, thin beams of radiation of different intensities are aimed at the tumor from many angles; this type of radiation therapy reduces collateral damage to healthy tissue near the tumor.

Proton Beam Radiation Therapy (PBT): a type of radiation therapy that uses streams of protons (tiny particles with a positive charge) to kill tumor cells; this type of treatment can reduce the amount of radiation damage to healthy tissue near a tumor.

Description

- Proton Beam Therapy uses a beam of special particles (protons) that are targeted in a precise manner to irradiate specific diseased tissue while minimizing exposure to surrounding areas. The goal is to deliver a higher target dose with a lower normal tissue exposure than is possible with conventional photon radiation, thereby improving local control of tumors and reducing acute and late complications.

- The use of PBT can be advantageous in pediatric cancers due to a potential reduction in toxic and late effects (lower total radiation dosage, fewer side effects, and decreased risk for secondary malignancies).

- PBT may be useful when the target is in close proximity to one or more critical structures and sparing the surrounding normal tissue cannot be adequately achieved with photon-based radiation therapy.

CPT Codes Covered Requiring Prior Authorization (PA)

77520 (Proton Beam Delivery, *simple, without compensation*) a single treatment area utilizing a single, non-tangential / oblique port and custom blocking, without compensation

77522 (*simple, with compensation*) a single treatment area utilizing a single non-tangential / oblique port and custom blocking, with compensation

77523 (*intermediate, with compensation*) one or more treatment areas, utilizing two or more ports or one or more tangential / oblique ports, with custom blocks and compensators

77525 (*complex, with compensation*) one or more treatment areas utilizing two or more ports per treatment area with matching or patching fields and / or multiple isocenters, with custom blocks and compensators

Approval Criteria

INDICATIONS

A. The referral for proton beam radiotherapy should come from the radiation oncologist; **AND**
B. The patient's record must demonstrate why Proton Beam Radiotherapy is considered the treatment of choice for the individual patient. The record must address:
    1. The lower risk to normal tissue,
    2. The lower risk of disease recurrence, and
    3. The advantages of the treatment over IMRT or 3-dimesional conformal radiation; **AND**
C. The intent of treatment must be curative (not palliative care); **AND**
D. The presence of an Institutional Review Board (IRB) or Tumor Board review *when appropriate* **and** documented patient (parent or guardian) informed consent; **AND**
E. The patient has a diagnosis of 1 or more of the following:
    1. Ocular tumors – including intraocular melanomas and ocular adnexal tumors such as tumors of the lacrimal gland;
    2. Malignant or benign conditions of the base of the skull;
    3. Esophageal cancers;
    4. Malignant or benign central nervous system tumors;
    5. Malignant or benign tumors of the spine or around the spinal cord where the radiation tolerance of the spinal cord may be compromised, or previous radiation has occurred;
    6. Hepatocellular carcinoma and cholangiocarcinoma (HCC) that is unresectable;
    7. Malignant lesions of the head and neck – including but not limited to nasopharyngeal, oropharyngeal, paranasal sinus and nasal cavity cancers as well as benign head and neck tumors with long anticipated survivorship;
    8. Unresectable retroperitoneal sarcoma;
    9. Patients with genetic syndromes making total volume of radiation minimization crucial;
    10. Patients with an unacceptably high risk for surgery and a diagnosis of cancer typically treated with surgery where dose escalation is required;
    11. Primary malignant or benign bone tumors;
    12. Malignant pleural mesothelioma;
    13. Advanced and unresectable pelvic tumors with significant pelvic and / or peri-aortic nodal disease;
    14. Patient with a single kidney or transplanted pelvic kidney with treatment of an adjacent target volume and in whom maximal avoidance of the organ is critical.

Proton Beam Therapy may be considered medically necessary for the treatment of pediatric tumors (18 years and younger).

****NOTE - Malignant or benign tumors that do not meet the above criteria may be submitted to Oklahoma Health Care Authority Medical Director for review.**

Discontinuation Criteria

- The intent of PBT treatment must be curative with a long-term expected benefit, or greater than 2 years life expectancy.

- If / when an adequate dose cannot be given to the whole Gross Tumor Volume (GTV) the aim of therapy shifts from radical to palliative.

- In the case of patients with a limited expected survival time, late effects of radiotherapy rarely improves survival rates and PBT is no longer appropriate at this time.

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