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Subject: Proton Beam Therapy

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

Position Statement	Billing/Coding	Reimbursement	Program Exceptions	Definitions	Related Guidelines
Other	References	Updates			

DESCRIPTION:

Proton beams are charged particle beams used as an alternative to conventional x-rays, gamma-rays, and other types of photon irradiation in the treatment of malignancies. Proton beam therapy requires specialized equipment in the form of accelerators (cyclotrons, synchrotrons, synchrocyclotrons, or linear accelerators) that can generate a beam of proton particles. Accurate localization of the malignancy by using tomographic scanning (with x-ray and/or magnetic resonance imaging), and precise and reproducible positioning (relative to the beam) and immobilization of the body during both tomographic scanning and treatment is also required. This type of radiation therapy allows for minimal scatter as particulate beams pass through tissue and disposes ionizing energy at precise depths (i.e., the Bragg peak), thereby minimizing tissue damage around the area being treated.

Proton beam therapy has been found to be useful in the treatment of tumors that are localized and have not spread to distant areas of the body and are not amenable to surgical excision or other conventional forms of radiation treatment. This includes tumors that are in close proximity to vital structures, which make surgery or conventional radiation therapy difficult or impossible. Because proton beam therapy can be used to precisely focus radiation on specific areas with little exposure to adjacent tissues, proton beam may be useful for treatment of tumors located near radio-sensitive structures. Proton beam therapy can be given with or without stereotactic techniques. Stereotactic approaches are frequently used for uveal and skull based tumors. Like conventional radiation therapy, proton beam therapy treatments may be delivered in a few days or up to several weeks.

Coverage for proton beam therapy is subject to the member's benefit terms, limitations and maximums. The member's contract language must be reviewed to determine coverage for proton beam therapy. Please note, this policy contains a specific "Comparative Effectiveness" coverage analysis section for Proton Beam Therapy in the treatment of Prostate Cancer. For Florida Blue policies with a definition of

Medical Necessity that contains the comparative effectiveness language, coverage for Proton Beam Therapy will be determined through application of the Comparative Effectiveness section of this medical policy.

POSITION STATEMENT:

NOTE: Coverage for proton beam therapy is subject to the member's benefit terms, limitations and maximums. Some contracts may exclude coverage for proton beam therapy. Refer to specific contract language to determine coverage. Medical records may be required to be submitted for medical review.

NOTE: For member contracts that include comparative effectiveness language, the relative cost of proton beam therapy compared to other forms of treatment may be considered in the medical necessity determination as more particularly described in the section below entitled Comparative Effectiveness Analysis.

While proton beam therapy has been used for cancer treatment, there is limited published clinical evidence demonstrating its clinical benefit over conventional forms of radiation therapy (e.g., IMRT, brachytherapy). Because proton therapy is generally more costly than alternative therapies, comparative effectiveness evidence is needed on the safety, benefits, and health outcomes compared to other conventional forms of radiation therapy.

The intent of proton beam therapy is curative, with an expectation of a long-term benefit (greater than 2 years).

Proton beam therapy **meets the definition of medical necessity** for the following indications:

Central Nervous System	
Arteriovenous Malformation (AVM)	Proton beam therapy **meets the definition of medical necessity** for AVM the following: • Intracranial AVM not amenable to surgical excision or other conventional forms of treatment; **OR** • Intracranial AVM adjacent to critical structures such as the optic nerve, brain stem or spinal cord
Central Nervous System (CNS) Tumors	Proton beam therapy **meets the definition of medical necessity** for CNS tumors for the following: Primary or metastatic CNS malignancies, including, but not limited to gliomas (**Note**: **ALL** of the following criteria must be met.): • When adjacent to critical structures such as the optic nerve, brain stem, or spinal cord; **AND** • When other standard radiation techniques such as IMRT or standard stereotactic modalities would not reduce the risk of radiation damage to the critical structure
Base of Skull Tumors	

Chordoma/Chondrosarcoma	Proton beam therapy **meets the definition of medical necessity** for chordoma, chondrosarcoma for the following: • As postoperative therapy for members who have undergone biopsy or partial resection of a chordoma or low-grade (I or II) chondrosarcoma of the basisphenoid region (e.g., skull-base chordoma or chondrosarcoma), cervical spine, or sacral/lower spine and have residual, localized tumor without evidence of metastasis
Sinonasal Cancer	Proton beam therapy **meets the definition of medical necessity** for locally advanced sinonasal carcinoma for the following: • Tumor involves the base of skull and proton therapy is needed to spare the orbit, optic nerve, optic chiasm or brainstem
Head and Neck Cancers	Proton beam therapy **meets the definition of medical necessity** for head and neck cancers for the following: Where treatment planning with conventional or advanced photon-based radiotherapy cannot meet dose-volume constraints for normal tissue radiation tolerance.
Hepatocellular Carcinoma (HCC) and Intrahepatic Cholangiocarcinoma	Proton beam therapy **meets the definition of medical necessity** for hepatocellular carcinoma for the following: • To treat unresectable hepatocellular carcinoma (HCC) or intrahepatic cholangiocarcinoma with curative intent when there is no evidence of metastatic disease.
Melanoma (Ocular Melanoma)	Proton beam therapy **meets the definition of medical necessity** for ocular melanoma for the following: • To treat melanoma of the uveal tract (including the iris, choroid, or ciliary body) and no evidence of metastasis or extrascleral extension
Solid Tumors in Children	Proton beam therapy **meets the definition of medical necessity** for solid tumors in children below age 18 in which radiation therapy is required.
Other	Proton beam therapy **meets the definition of medical necessity** for the following indications when **ALL** of the below criteria (a, b, c, and d) are met: • Benign or malignant conditions involving the base of the skull or axial skeleton • Left breast tumors • Lung cancer • Malignant lesions of liver • Peri-diaphragmatic cancer • Unresectable extremity sarcoma

	• Unresectable retroperitoneal sarcoma • Upper abdominal cancer **Criteria** a) The disease is primary and non-metastatic, that is confined regionally to the primary organ (including regional lymph nodes); **AND** b) Dosimetric treatment planning comparisons between IMRT and proton beam therapy have been made; **AND** c) Dosimetric treatment planning with IMRT predicts the radiation dose to adjacent organs would be exceeded; **AND** d) Dosimetric treatment planning with proton beam therapy is able to reduce adjacent organ radiation exposure to a safe level
Prostate Cancer	**Note**: With regard to the use of proton beam therapy for prostate cancer, even if the use of proton beam therapy meets the general medical necessity criteria below, then coverage is subject to the additional analysis of the comparative effectiveness, if applicable, in accordance with the section below entitled **Comparative Effectiveness Analysis for Proton Beam Therapy in the Treatment of Prostate Cancer**. Proton beam therapy **meets the definition of medical necessity** for the treatment of prostate cancer when the below medical necessity criteria are met. Either #1, #2, **OR** #3 must be present; **AND** Either #4 **OR** #5 must be present; **AND** #6 must always be present. 1. When dose constraints to normal tissues limit the total dose of radiation safely deliverable to the tumor with other indicated methods. 2. When there is a reason to believe that doses generally thought to be above the level otherwise attainable with other methods might improve control rates. 3. In circumstances when the higher levels of precision associated with proton beam therapy as compared to other radiation methods are necessary (e.g., clinically relevant). 4. For the treatment of primary lesions, the intent of treatment must be curative. 5. For the treatment of metastatic lesions, there must be: • The expectation of a long-term benefit (> 2y) that could not have been attained with conventional therapy.

	• The expectation of a complete eradication of the metastatic lesion that could not have been safely accomplished with conventional therapy, as evidenced by a dosimetric advantage for proton beam radiotherapy over other forms of radiation therapy. 6. The member's record must demonstrate why proton beam therapy is considered the treatment of choice for the member. Specifically, the notes in the member's medical record must address the lower risk to normal tissue, the lower risk of disease recurrence, and the advantages of the treatment over IMRT or 3-dimensional conformal radiation. Dosimetric evidence of reduced normal tissue toxicity and/or improved tumor control must be maintained as part of the member's medical record (the medical record may be requested as part of the review process). 7. Florida Blue strongly supports (but does not require) *ASTRO's recommendation that members with prostate cancer being treated with Proton Beam Therapy enroll either in an Institutional Review Board (IRB) approved clinical trial or in a multi-institutional patient registry, for evidence development. Documentation in the member's medical record must note the reason why the member is unable to enroll in either an Institutional Review Board (IRB) approved clinical trial or in a multi-institutional patient registry for evidence development. As an alternative to meeting the seven (1-7) factors above, the treatment will be considered to **meet the definition of medical necessity** and meeting the first six (1-6) factors above if the member is enrolled in an IRB approved clinical trial or in a multi-institutional patient registry treated in a protocol that is designed for evidence development for proton beam therapy for prostate cancer treatment.
Re-irradiation	Proton beam therapy **meets the definition of medical necessity** for the repeat irradiation of previously treated fields where the dose tolerance of surrounding normal structures would be exceeded with 3D conformal radiation or IMRT.

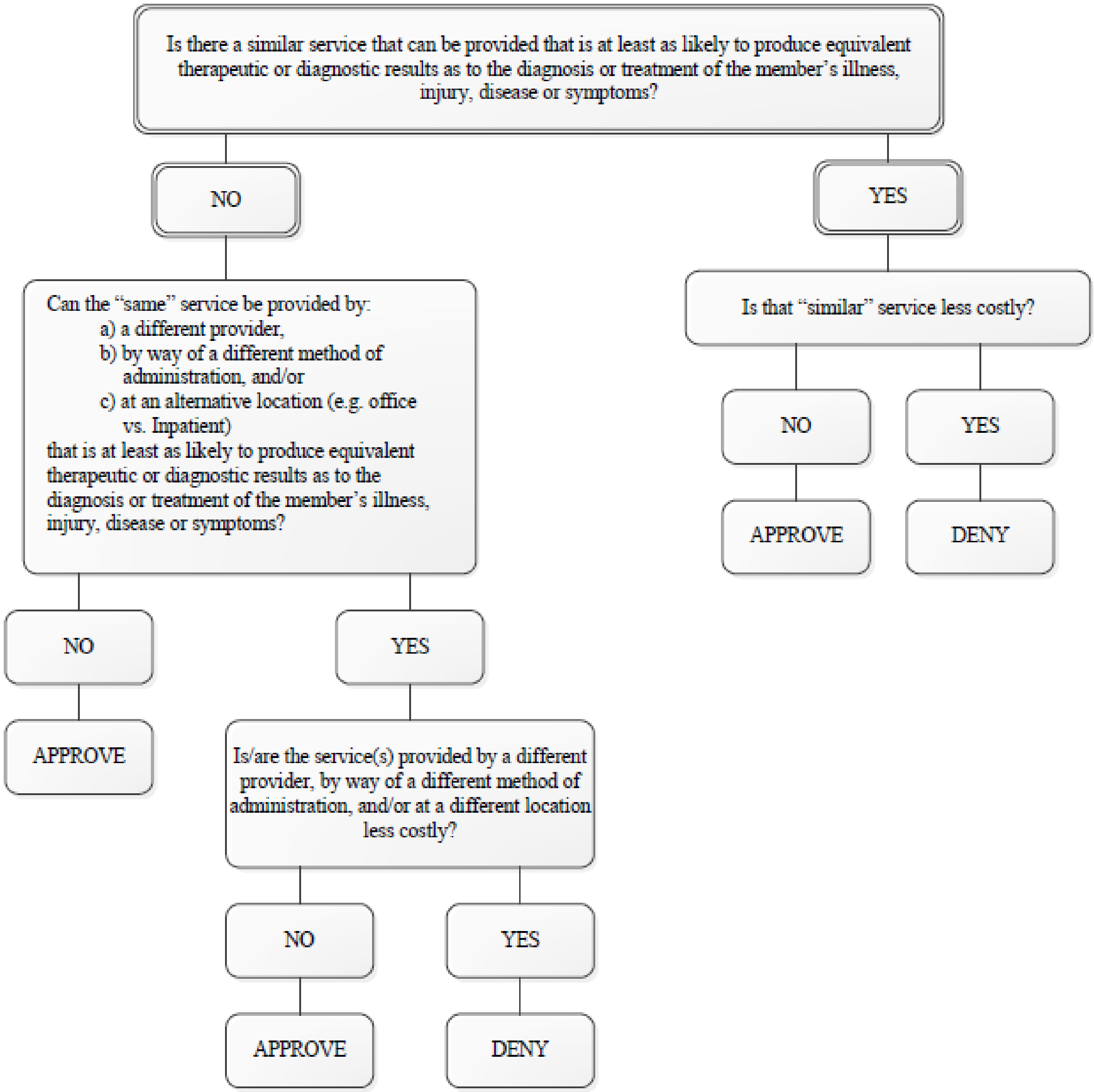
For **all other indications** not listed above, proton beam therapy is considered **experimental or investigational**, as there is insufficient evidence to support conclusions regarding the effect of proton beam therapy on health outcomes.

*American Society for Radiation Oncology (ASTRO)

COMPARATIVE EFFECTIVENESS ANALYSIS:

This section only applies to member contracts that contain a comparative effectiveness analysis within the definition of Medical Necessity. This may apply to member contracts that were issued or renewed on or after January 1, 2014.

If a service meets the medical necessity criteria set forth above in the Position Statement, then an analysis under this comparative effectiveness section should be applied, solely for coverage and payment purposes. Initially, this analysis should determine if: 1.) There is an alternate service available that produces the same or similar outcomes and/or 2.) The same service as requested or performed can be rendered at a different location of service. If there is no alternative service that produces the same or similar outcomes nor is there a different location at which the services could be rendered, then no further comparative effectiveness analysis need be completed and the service will be deemed to have met the definition of medical necessity. If, however, there are alternative services that produce the same or similar outcomes and/or there is a different location of service at which the services can be rendered, then a comparative effectiveness analysis must be conducted to determine if: a.) The same service rendered at a different location; or b.) An alternate service(s) is/are less costly. If the answer is yes, then the requested service does satisfy the requirements of this comparative effectiveness analysis and does not meet the medical necessity requirements for coverage and payment purposes. The comparative effectiveness analysis is represented by the following flowchart:



Application of Comparative Effectiveness Analysis for Proton Beam Therapy for the Treatment of Prostate Cancer

A. Is there a similar service that can be provided that is at least as likely to produce equivalent therapeutic or diagnostic results?

For those services that meet the criteria described above in the Position Statement, yes. Proton beam therapy for the treatment of prostate cancer is merely one of many different treatments for prostate cancer. Several forms of radiation treatment alone (e.g., intensity modulated radiation therapy (IMRT), brachytherapy) are available for treatment of prostate cancer. Florida Blue, after analysis, has determined that these alternative forms of services are:

1.) Similar to proton beam therapy and;

2.) Proton beam therapy has not been documented to have equivalent or better outcomes with regard to the treatment of prostate cancer than such alternative services.

With regard to prostate cancer, there is limited published clinical evidence of proton beam demonstrating clinical equivalence or benefit over conventional forms of radiation therapy (e.g., IMRT, brachytherapy) or surgical treatments for prostate cancer. There is a need for more well-designed registries and studies with sizable comparator cohorts for data collection. As a result, there is no clinical documentation demonstrating the safety, benefits, and health outcomes compared to other conventional forms of radiation therapy or, more generally, other forms of treatment for prostate cancer.

For required documentation, refer to the **REIMBURSEMENT INFORMATION** section of this guideline.

BILLING/CODING INFORMATION:

CPT Coding:

Proton Delivery

77520	Proton beam delivery; simple, without compensation
77522	Proton beam delivery; simple with compensation
77523	Proton beam delivery; intermediate
77525	Proton beam delivery; complex

Planning

77295	3-dimensional radiotherapy plan, including dose-volume histograms (3D conformal treatment plan)
77301	Intensity modulated radiotherapy plan, including dose-volume histograms for target and critical structure partial tolerance specifications

HCPCS Coding:

S8030	Scleral application of tantalum ring(s) for localization of lesions for proton beam therapy

ICD-10 Diagnosis Codes That Support Medical Necessity:

C11.0 – C11.9	Malignant neoplasm of nasopharynx
C30.0	Malignant neoplasm of nasal cavity
C31.0 – C31.9	Malignant neoplasm of accessory sinuses
C41.2	Malignant neoplasm of vertebral column
C41.4	Malignant neoplasm of pelvic bones, sacrum and coccyx
C41.9	Malignant neoplasm of bone and articular cartilage, unspecified
C69.30	Malignant neoplasm of unspecified choroid
C69.40	Malignant neoplasm of unspecified ciliary body
C69.90	Malignant neoplasm of unspecified site of unspecified eye

C71.0 – C71.9	Malignant neoplasm of brain
C72.0 – C72.1	Malignant neoplasm of spinal cord, cranial nerves and other parts of central nervous system
C72.20 – C72.22	Malignant neoplasm of olfactory nerve
C72.30 – C72.32	Malignant neoplasm of optic nerve
C72.40 – C72.42	Malignant neoplasm of acoustic nerve
C72.50 – C72.59	Malignant neoplasm of unspecified cranial nerve
C72.9	Malignant neoplasm of central nervous system, unspecified
C79.31	Secondary malignant neoplasm of brain
C79.49	Secondary malignant neoplasm of other parts of nervous system
D09.8	Carcinoma in situ of other specified sites
D33.0 – D33.9	Benign neoplasm of brain and other parts of central nervous system
D42.0 – D42.9	Neoplasm of uncertain behavior of meninges
D43.0 – D43.9	Neoplasm of uncertain behavior of brain and central nervous system
D49.6	Neoplasm of unspecified behavior of brain
Q28.2	Arteriovenous malformation of cerebral vessels
Q28.3	Other malformations of cerebral vessels

LOINC Codes:

The following information may be required documentation to support medical necessity: physician history and physical, physician progress notes, plan of treatment and reason for proton beam therapy.

Documentation Table	**LOINC Codes**	**LOINC Time Frame Modifier Code**	**LOINC Time Frame Modifier Codes Narrative**
Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Attending physician progress note	18741-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Plan of treatment	18776-5	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim

REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

Required Documentation

The medical record may be requested as part of the review process.

The primary treating physician MUST submit the following information for the member:

- Documentation which supports one or more condition as noted under the position statement section of this guideline that meets the definition of medical necessity or that may be considered in the medical necessity determination.
- The member's record must demonstrate why proton beam therapy is considered the treatment of choice for the member. Specifically, the notes in the member's medical record must address the lower risk to normal tissue, the lower risk of disease recurrence, and the advantages of the treatment over IMRT or 3-dimensional conformal radiation.
- Treatment prescription that defines the goals of the member's treatment plan, including specific dose-volume parameters for the target and nearby critical structures, details of beam delivery (e.g., method of beam modulation, field arrangement, expected positional and range uncertainties).
- Treatment plan signed by the treating physician that meets the prescribed dose-volume parameters for the clinical target volume (CTV) and surrounding organs at risk (OARs).
- Description of the target setup verification methodology, including member's positioning, immobilization and use of image guidance.
- Verification of planned dose distribution via independent dose calculation or physical assessment.
- Dosimetric evidence of reduced normal tissue toxicity and/or improved tumor control must be maintained as part of the member's medical record.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: The following Local Coverage Determination (LCD) was reviewed on the last guideline review date: Proton Beam Radiotherapy, (L33937) located at fcso.com.

DEFINITIONS:

Adjacent: near close or adjoining.

Benign: not cancerous. Benign tumors may grow larger but do not spread to other parts of the body. Also called nonmalignant.

Central nervous system (CNS) tumors (children): masses of abnormal cells in the brain or spinal cord that have grown out of control. Examples of CNS tumors in children (e.g., glioma, craniopharyngioma, infratentorial, ependymoma, medulloblastoma).

Craniopharyngioma: a rare, benign (not cancer) brain tumor that usually forms near the pituitary gland and the hypothalamus. Craniopharyngiomas are slow-growing and do not spread to other parts of the brain or to other parts of the body. However, they may grow and press on nearby parts of the brain, including the pituitary gland, hypothalamus, optic chiasm, optic nerves, and fluid-filled spaces in the brain. This may cause problems with growth, vision, and making certain hormones. Craniopharyngiomas usually occur in children and young adults.

Conventional forms of treatment (AVM): includes (e.g., surgery, embolization, radiation therapy, stereotactic radiosurgery).

Conventional forms of treatment (prostate cancer): includes (e.g., surgery, chemotherapy, radiation therapy).

Dosimetry: the calculation of the radiation dose to be delivered to the tumor. The physician chooses the energy level and modality of photon or electron beams to be used for each simulated port, even if only one treatment area is concerned. Once the tentative treatment fields have been determined, the dosimetry of the treatment portals can be calculated. Special dosimetry uses measuring and monitoring devices when the physician deems it necessary to calculate the total amount of radiation that a patient has received at any given point. The results determine whether to uphold or alter the current treatment plan.

Extrascleral extension: occurring outside of the scleral or orbit (eye).

IRB (Institutional Review Board): a group of individuals (e.g., scientists, physicians, clergy, patient advocates) that reviews and approves the detailed plan for clinical trials.

Malignant: cancerous. Malignant tumors can invade and destroy nearby tissue and spread to other parts of the body.

Metastatic: having to do with metastasis, which is the spread of cancer from the primary site (place where it started) to other places in the body.

Nonmalignant (non-metastatic): not cancerous. Nonmalignant tumors may grow larger but do not spread to other parts of the body. Also called benign.

Plaque brachytherapy: an eye and vision-sparing method to treat patients with intraocular tumors.

Regional: in oncology, describes the body area right around a tumor.

Solid tumor: an abnormal mass of tissue that usually does not contain cysts or liquid areas. Solid tumors may be benign (not cancer), or malignant (cancer). Different types of solid tumors are named for the type of cells that form them (e.g., sarcomas, carcinomas, and lymphomas). Examples of solid tumors in children (e.g., brain tumor, neuroblastoma, rhabdomyosarcoma, Wilms' tumor, osteosarcoma).

Stereotactic modalities: Stereotactic radiosurgery (SRS), stereotact body radiotherapy (SBRT).

Tumor: a new growth of tissue in which the multiplication of cells is uncontrolled and progressive; also called neoplasm (benign or malignant).

RELATED GUIDELINES:

None applicable.

OTHER:

Other names used to report proton beam:

Charged Particle Radiation Therapy
Charged Particle Radiotherapy
Hadron therapy

Helium Ion Radiation Therapy
Particle Beam Therapy
Proton Beam Radiation Therapy
Proton Beam Radiotherapy
Proton Radiation Therapy
Proton Radiotherapy
Proton Therapy

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 12/7/23.

06/15/02	Reviewed; proton beam delivery information separated from Radiation Treatment Delivery and Radiation Treatment Management MCG; added one additional diagnosis code.
07/15/03	Annual review. Added rationale to support investigational statement.
01/15/04	Added S8030, and updated references.
09/15/04	Scheduled review, and updated references.
06/15/05	Scheduled review. Revised when services are covered. Added localized prostate cancer to the when services are covered. Revised when services are not covered. Added ICD-9 diagnosis 185 (malignant neoplasm of the prostate). Added charge particle radiation therapy and helium ion radiation therapy to the other section, and updated references.
04/15/07	Deleted “Radiation” from MCG title. Revised WHEN SERVICES ARE COVERED; expanded covered indications to include: intraocular melanomas, benign or malignant conditions involving the base of the skull or axial skeleton, including but not limited to chordomas and chondrosarcomas, benign or malignant central nervous system tumors, including primary and variant forms of medulloblastoma, astrocytoma, glioblastoma, arteriovenous malformations, acoustic neuroma, craniopharyngioma, benign and atypical meningomas and pineal gland tumors, solid tumors in children, malignant lesions of the head and neck, malignant lesions of the para nasal sinus, and other accessory sinuses, malignant advanced state-non-metastatic tumors of the bladder, advanced pelvic tumors, malignant lesions of the cervix, left breast tumors, adrenal tumors, skin cancer with perineural/cranial nerve invasion, unresectable retroperitoneal sarcoma, unresectable extremity sarcoma, lung cancer, upper abdominal cancer, peridiaphragmatic cancer, malignant lesions of liver, malignant lesions of biliary tract, malignant lesions of anal canal, and malignant lesions of rectum. Expanded ICD-9 diagnoses for proton beam therapy to include: 141.0, 142.0, 142.1, 142.2, 143.0, 143.1, 144.0 – 144.9, 145.0 – 145.9, 146.0 – 146.9, 147.0 – 147.9, 148.0 – 148.9, 149.0, 149.1, 154.0 – 154.8, 155.0 – 155.2, 157.0 – 157.9, 158.0, 160.0 – 160.9, 161.0 – 161.9, 162.0 – 162.9, 164.0, 164.1, 164.2, 164.3, 170.0 – 170.9, 171.0 – 171.9, 173.0 – 173.9, 174.0 – 174.6, 180.0 – 180.8, 183.0, 184.0, 188.0 – 188.9, 189.0, 190.0 – 190.9, 191.0 – 191.9, 192.0, 192.1, 192.2, 192.3, 192.8, 193, 194.1, 194.3, 194.4, 195.1, 195.2, 195.3, 197.0, 197.7, 198.3, 225.0-225.8, 227.3, 227.4, 237.0, 237.1, 237.5, 237.6, and 747.81. Revised code descriptor for 198.5. Added guideline specific definitions. Added Charged Particle Radiotherapy and Proton Beam Radiotherapy to OTHER section, and updated references.

06/15/07	Reformatted guideline.
04/15/08	Scheduled review. Revised experimental or investigational statement, and updated references.
04/15/09	Scheduled review. No change in position statements, and updated references.
08/15/10	Revised position statement, deleted malignant advanced state, non-metastatic tumors of the bladder, advanced pelvic tumors, malignant lesions of the cervix, pancreatic tumors, adrenal tumors, skin cancer with perineural/cranial nerve invasion, upper abdominal cancer, malignant lesions of: biliary tract, anal canal, and rectum. Deleted ICD-9 diagnoses codes: 141.0, 142.0, 142.1, 142.2, 143.0, 143.1, 144.0 – 144.9, 145.0 – 145.9, 146.0 – 146.9, 147.0 – 147.9, 148.0 – 148.9, 149.0, 149.1, 154.0 – 154.8, 157.0 – 157.9, 164.0, 164.1, 164.2, 164.3, 171.0 – 171.9, 173.0 – 173.9, 180.0 – 180.8, 183.0, 184.0, 188.0 – 188.9, 189.0, 193, 194.1, 195.1, 195.2, and, 195.3. Added program exception for Medicare Advantage products; covered indications and ICD-9 codes that support medical necessity. Updated references.
02/01/11	Revision; related ICD-10 codes added.
10/15/11	Annual review; maintain position statements. Added uveal tract (iris, ciliary body, choroid) to intraocular melanomas). Added definition for axial skeleton. Updated references.
05/01/16	Revision; updated description, added medical necessity criteria for: benign or malignant conditions involving the base of the skull or axial skeleton, left breast tumors, lung cancer, malignant lesions of liver, peri-diaphragmatic cancer, unresectable extremity sarcoma, unresectable retroperitoneal sarcoma, and upper abdominal cancer; added medical necessity position statement and criteria for prostate cancer, added comparative effectiveness analysis statement and flowchart; added comparative effective analysis statement for proton beam therapy for the treatment of prostate cancer, updated ICD-10 codes; updated program exception; added LOINC codes; updated references.
08/15/16	Updated program exceptions.
12/15/16	Revision; updated references.
02/15/18	Review; revised position statement. Added position statement for central nervous system (CNS) tumors in children. Updated definitions and references.
11/10/19	Revision; added sinonasal cancer and criteria for locally advanced sinonasal carcinoma, when tumor involves base of skull and proton beam therapy is needed. Deleted tumor size restrictions for ocular melanoma of the uveal tract, pediatric central nervous system tumors and proton beam therapy and IMRT statement. Added ICD-10 diagnosis code: (C11.0-C11.9, C30.0, C31.0-C31.9). Added CPT code (77301, 77295). Updated research summary and references.
03/15/21	Review/revision. Added hepatocellular carcinoma (HCC), intrahepatic cholangiocarcinoma and criteria. Solid tumors in children: Added radiation therapy. Updated references.
05/15/23	Review; no change in position statement. Updated references.
12/15/23	Review; added head and neck cancers. Updated references.