CHAPTER 5
SECTION 3.1

# RADIATION ONCOLOGY

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## I. CPT[1] PROCEDURE CODES

61793, 61795, 77261 - 77421, 77427 - 77799, 0073T

## II. DESCRIPTION

A. Radiation therapy is also known as radiotherapy, radiation treatment, x-ray therapy, cobalt therapy, and proton beam therapy. The primary purpose of radiation therapy is to eliminate or shrink localized cancers (as opposed to cancers that have spread to distant parts of the body).

B. Stereotactic radiosurgery/radiotherapy is a method of delivering ionizing radiation to small intracranial targets. Stereotactic radiosurgery entails delivering a high dose in a single session. Stereotactic radiotherapy entails fractionating the dose over a number of treatments.

1. There are three main variations of stereotactic radiosurgery/radiotherapy: gamma beam or gamma knife, linear accelerator (linac), and charged particle beam (proton or helium ion). The three radiation delivery devices differ technically in several ways: source of radiation, size and shape of the radiation field, and range of radiation dosages.

2. The radiosurgical/radiotherapy procedure is preceded by a process of localizing the target, which can be performed with one or more of the following techniques: skull x-ray, cerebral angiography, Computerized Tomography (CT), or Magnetic Resonance Imaging (MRI).

## III. POLICY

A. Radiation therapy (fast neutron, hyperfractionated, and radioactive chromic phosphate synoviorthesis) is covered for those indications documented by reliable evidence as safe, effective and comparable or superior to standard care (proven). For coverage on brachytherapy/radiation therapy, see Chapter 5, Section 3.2.

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B. Hyperthermia is covered for those indications documented by reliable evidence as safe, effective and comparable or superior to standard care (proven).

C. Gamma knife radiosurgery/radiotherapy is covered for the following indications. This list of indications is not all inclusive. Other indications are covered when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

1. Arteriovenous malformations.

2. Benign brain tumors.

3. Acoustic neuromas (vestibular Schwannomas).

4. Pituitary adenomas.

5. Craniopharyngiomas.

6. Other tumors of the skull base.

7. Pineal region tumors.

8. Metastatic brain tumors.

9. High grade gliomas (glioblastoma multiforme, anaplastic astrocytomas).

D. Linear accelerator radiosurgery/radiotherapy is covered for the following indications. This list of indications is not all inclusive. Other indications are covered when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

1. Arteriovenous malformations.

2. Acoustic neuromas (vestibular Schwannomas).

3. Metastatic brain tumors.

E. Proton beam radiosurgery/radiotherapy is covered for the following indications. This list of indications is not all inclusive. Other indications are covered when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

1. Arteriovenous malformations.

2. Cushing's disease or acromegaly caused by pituitary microadenomas.

3. As postoperative therapy in patients who have undergone biopsy or partial resection of the chordoma or low grade (I or II) chondrosarcoma of the basisphenoid region (skull-base chordoma or chondrosarcoma) or cervical spine.

4. As primary therapy for patients with uveal melanoma, with no evidence of metastasis or extrascleral extension, and with tumors up to 22 mm in largest diameter and 14 mm in height.

5. Prostate cancer.

6. Meningioma.

7. Low grade glioma (astrocytoma, grade I-II).

8. Glioblastoma multiforme.

9. Soft tissue sarcoma (liposarcoma).

10. Hodgkin's disease when conventional radiotherapy is contraindicated.

11. Acoustic neuromas.

12. As post-operative therapy for sacral chordoma under the rare disease policy as described in Chapter 1, Section 3.1.

F. Helium ion beam radiosurgery/radiotherapy is covered for the following indications. This list of indications is not all inclusive. Other indications are covered when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

1. As primary therapy for patients with melanoma of the uveal tract, with no evidence of metastasis or extrascleral extension, and with tumors up to 24 mm in largest diameter and 14 mm in height.

2. As postoperative therapy in patients who have undergone biopsy or partial resection of the chordoma or low grade (I or II) chondrosarcoma of the basisphenoid region (skull-base chordoma or chondrosarcoma) or cervical spine.

G. Extracranial stereotactic radiosurgery/radiotherapy is covered for the following indication. This list of indications is not all inclusive. Other indications are covered when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

1. Primary and metastatic lung carcinoma.

H. Frameless stereotaxy (neuronavigation) is covered for the following indications. This list of indications is not all inclusive. Other indications are covered when documented by reliable evidence as safe, effective, and comparable or superior to standard care (proven).

1. Localization, surgical planning and guidance for intracranial tumors, skull base tumors, metastatic brain tumors, AVMs, cavernomas, chordomas, and pituitary adenomas.

2. Biopsy guidance.

3. Cerebrospinal fluid shunt placement.

4. Surgery for intractable epilepsy.

5. Spinal surgery.

I. The frameless stereotaxy device must be FDA-approved. The following devices are FDA-approved: StealthStation System, The Operating Arm, ISG Viewing Wand, MKM System, and Philips Easyguide. Other systems which are FDA-approved are also covered.

J. High energy neutron radiation treatment (CPT[2] procedure codes 77422 and 77423) is covered for adenoid cystic carcinoma for the following indications:

1. Unresectable, inoperable or recurrent tumors.

2. Locally advanced disease.

3. In situations where surgical extirpation would cause considerable morbidity.

## IV. EXCLUSIONS

A. Whole body hyperthermia in the treatment of cancer is unproven. Hyperthermia for recurrent breast cancer is unproven.

B. Helium ion beam radiosurgery/radiotherapy for arteriovenous malformations and ependymoma is unproven.

C. Intra-Operative Radiation Therapy (IORT) is unproven.

D. High energy neutron radiation treatment delivery, single treatment area using a single port or parallel-opposed ports with no blocks or simple blocking (CPT[2] procedure code 77422) is unproven (except for treatment of adenoid cystic carcinoma, see paragraph III.J.).

E. High energy neutron radiation treatment delivery, single treatment area using a single port or parallel-opposed ports with no blocks or simple blocking one or more isocenter(s) with coplanar or non-coplanar geometry with blocking and/or wedge, and/or compensator(s) (CPT[2] procedure code 77423) is unproven (except for treatment of adenoid cystic carcinoma, see paragraph III.J.).

F. Proton Beam Therapy (PBT)/radiosurgery/radiotherapy for the treatment of thymoma is unproven.

## V. EFFECTIVE DATES

A. February 26, 1986, for proton beam radiosurgery/radiotherapy for arteriovenous malformations.

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B. March 1, 1988, for proton beam radiosurgery/radiotherapy for patients with Cushing's disease or acromegaly caused by pituitary microadenoma.

C. October 6, 1988, for gamma beam (gamma knife) radiosurgery/radiotherapy for treatment of arteriovenous malformation, benign brain tumors, acoustic neuromas, pituitary adenomas, craniopharyngiomas, other tumors of the posterior fossa and pineal region tumors.

D. January 1, 1990, for proton beam radiosurgery/radiotherapy for soft tissue sarcoma (liposarcoma).

E. June 18, 1990, for proton beam radiosurgery/radiotherapy for chordomas or chondrosarcomas.

F. January 1, 1994, for gamma beam (gamma knife) and linear accelerator radiosurgery/radiotherapy for metastatic brain tumors.

G. January 1, 1996, for proton beam radiosurgery/radiotherapy for uveal melanoma.

H. January 1, 1996, for helium ion beam radiosurgery/radiotherapy for uveal melanoma and chordomas or chondrosarcomas.

I. April 1, 1996, for linear accelerator radiosurgery/radiotherapy for arteriovenous malformations and acoustic neuromas.

J. April 26, 1996, for proton beam radiosurgery/radiotherapy for prostate cancer.

K. October 1, 1997, for gamma knife radiosurgery/radiotherapy for high grade gliomas (glioblastoma multiforme, anaplastic astrocytomas).

L. January 1, 1998, for extracranial stereotactic radiosurgery/radiotherapy for lung carcinoma.

M. The date of FDA approval for frameless stereotaxy.

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