AMA CPT / Copyright Statement

Indications and Limitations of Coverage and/or Medical Necessity

This Model Policy[1] addresses coverage for Stereotactic Radiosurgery (SRS).

Stereotactic Radiosurgery (SRS) is a distinct discipline that utilizes externally generated ionizing radiation in certain cases to inactivate or eradicate a defined target(s) in the head or spine without the need to make an incision. The target is defined by high-resolution stereotactic imaging. To assure quality of patient care, the procedure involves a multidisciplinary team consisting of a neurosurgeon, radiation oncologist, and medical physicist. (For a subset of tumors involving the skull base, the multidisciplinary team may also include a head and neck surgeon with training in stereotactic radiosurgery).

The adjective "Stereotactic" describes a procedure during which a target lesion is localized relative to a fixed three dimensional reference system, such as a rigid head frame affixed to a patient, fixed bony landmarks, a system of implanted fiducial markers, or other similar system. This type of localization procedure allows physicians to perform image-guided procedures with a high degree of anatomic accuracy and precision.

Stereotactic radiosurgery (SRS) couples this anatomic accuracy and reproducibility with very high doses of highly precise, externally generated, ionizing radiation, thereby maximizing the ablative effect on the target(s) while minimizing collateral damage to adjacent tissues. SRS requires computer-assisted, three-dimensional planning and delivery with stereotactic and convergent-beam technologies, including, but not limited to: multiple convergent cobalt sources (e.g. Gamma Knife®); protons; multiple, coplanar or non-coplanar photon arcs or angles (e.g. XKnife®); fixed photon arcs; or image-directed robotic devices (e.g. CyberKnife®) that meet the criteria.

SRS typically is performed in a single session, using a rigidly attached stereotactic guiding device, other immobilization technology and/or a stereotactic-guidance system, but can be performed in a limited number of sessions, up to a maximum of five.

Regardless of the number of sessions, all SRS procedures include the following components:

1. Position stabilization (attachment of a frame or frameless)
2. Imaging for localization (CT, MRI, angiography, PET, etc.)
3. Computer assisted tumor localization (i.e. "Image Guidance")

[1] ASTRO model policies were developed as a means to efficiently communicate what ASTRO believes to be correct coverage policies for radiation oncology services. The ASTRO Model Policies do not serve as clinical guidelines and they are subject to periodic review and revision without notice. The ASTRO Model Policies may be reproduced and distributed, without modification, for noncommercial purposes.

4. Treatment planning - number of isocenters, number, placement and length of arcs or angles, number of beams, beam size and weight, etc.
5. Isodose distributions, dosage prescription and calculation
6. Setup and accuracy verification testing
7. Simulation of prescribed arcs or fixed portals

Radiation oncologists and neurosurgeons have separate CPT billing codes for SRS. CPT Codes 61781–61783, 61796-61800 and 63620 and 63621 are reported for the work attributed to the neurosurgeon. These codes are mutually exclusive with the radiation oncology CPT codes 77432 and 77435; therefore the same physician should not bill for both of these codes.

A radiation oncologist may bill the SRS management code 77432 (*stereotactic radiation treatment management of cranial lesion(s) (complete course of treatment consisting of one session*) for single fraction intracranial SRS (and only once per treatment course) when and only when fully participating in the management of the procedure. CPT 77432 will be paid only once per course of treatment for cranial lesions regardless of the number of lesions. When SRS is administered in more than one but not more than five fractions to the brain or in one through five fractions to the spine, the radiation oncologist should instead bill the Stereotactic Body Radiation Therapy (SBRT) code 77435 to cover patient management during that course of therapy. CPT 77435 will be paid only once per course of therapy regardless of the number of sessions, lesions or days of treatment. The radiation oncologist may not bill 77432 and 77435 for the same course of therapy. In addition to the management codes, a radiation oncologist may bill other appropriate radiation oncology (77xxx) codes for services performed prior to the delivery of SRS as indicated by the pattern of care and other Medicare policies.

No one physician may bill both the neurosurgical codes 61781-83, 61796–61800, 63620 or 63621 and the radiation oncology 77XXX codes. If either the radiation oncologist or the neurosurgeon does not fully participate in the patient's care, that physician must take care to indicate this change by use of the appropriate -54 modifier (followed by any appropriate -55 modifier) on the global procedure(s) submitted. As the services are collegial in nature with different specialties providing individual components of the treatment, surgical assistants will not be reimbursed.

The technical charges used by hospital-based and outpatient facilities for SRS delivery are described by the CPT codes listed below. It is not appropriate to bill more than one treatment delivery code on the same day of service, even though some types of delivery may have elements of several modalities (for example, a stereotactic approach with IMRT). Only one delivery code is to be billed.

Other radiation oncology professional and technical services required prior to the delivery of SRS are coded separately and may be appropriately billed by the radiation oncologist, when necessary.

Indications for SRS:

1. Primary central nervous system malignancies, generally used as a boost or salvage therapy for lesions <5cm.
2. Primary and secondary tumors involving the brain or spine parenchyma, meninges/dura, or immediately adjacent bony structures.
3. Benign brain tumors and spinal tumors such as meningiomas, acoustic neuromas, other schwannomas, pituitary adenomas, pineocytomas, craniopharyngiomas, glomus tumors, hemangioblastomas
4. Arteriovenous malformations and cavernous malformations.
5. Other cranial non-neoplastic conditions such as trigeminal neuralgia and select cases of medically refractory epilepsy. As a boost treatment for larger cranial or spinal lesions that have been treated initially with external beam radiation therapy or surgery (e.g. sarcomas, chondrosarcomas, chordomas, and nasopharyngeal or paranasal sinus malignancies).
6. Metastatic brain or spine lesions, with stable systemic disease, Karnofsky Performance Status 40 or greater (and expected to return to 70 or greater with treatment), and otherwise reasonable survival expectations, OR an Eastern Cooperative Oncology Group (ECOG) Performance Status of 3 or less (or expected to return to 2 or less with treatment).
7. Relapse in a previously irradiated cranial or spinal field where the additional stereotactic precision is required to avoid unacceptable vital tissue radiation.

Limitations:

SRS is not considered medically necessary under the following circumstances:

1. Treatment for anything other than a severe symptom or serious threat to life or critical functions.
2. Treatment unlikely to result in functional improvement or clinically meaningful disease stabilization, not otherwise achievable.
3. Patients with wide-spread cerebral or extra-cranial metastases with limited life expectancy unlikely to gain clinical benefit within their remaining life.
4. Patients with poor performance status (Karnofsky Performance Status less than 40 or ECOG Performance greater than 3) - see Karnofsky and ECOG Performance Status scales below.
5. For ICD-9-CM code 333.1, essential tremor, coverage should be limited to the patient who cannot be controlled with medication, has major systemic disease or coagulopathy, and who is unwilling or unsuited for open surgery. Coverage should further be limited to unilateral thalamotomy.

Karnofsky Performance Status Scale

100	Normal; no complaints, no evidence of disease
90	Able to carry on normal activity; minor signs or symptoms of disease
80	Normal activity with effort; some signs or symptoms of disease
70	Cares for self; unable to carry on normal activity or to do active work
60	Requires occasional assistance but is able to care for most needs
50	Requires considerable assistance and frequent medical care
40	Disabled; requires special care and assistance
30	Severely disabled; hospitalization is indicated although death not imminent
20	Very sick; hospitalization necessary; active supportive treatment is necessary
10	Moribund, fatal processes progressing rapidly
0	Dead

Karnofsky DA, Burchenal JH. (1949). "The Clinical Evaluation of Chemotherapeutic Agents in Cancer." In: MacLeod CM (Ed), Evaluation of Chemotherapeutic Agents. Columbia Univ Press. Page 196.

ECOG Performance Status Scale

Grade 0:	Fully active, able to carry on all pre-disease performance without restriction.
Grade 1:	Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g. light house work, office work.
Grade 2:	Ambulatory and capable of all self-care but unable to carry out and work activities. Up and about more than 50% of waking hours.
Grade 3:	Capable of only limited self-care, confined to bed or chair more than 50% of waking hours.
Grade 4:	Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair.
Grade 5:	Dead

Eastern Cooperative Oncology Group, Robert Comis M.D., Group Chair.

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CPT/HCPCS Codes

Note: Uses of 77435 and 77373 are addressed in both this Model Policy and in the Stereotactic Body Radiation Therapy Model Policy.

77371 Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; multi-source Cobalt 60 based

77372 Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; linear accelerator based

77373 Stereotactic body radiation therapy, treatment delivery, per fraction to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions. (Do not report 77373 in conjunction with 77401-77416, 77418). (For single fraction cranial lesion, see 77371, 77372)

77432 Stereotactic radiation treatment management of cranial lesion(s) (complete course of treatment consisting of 1 session)

(The same physician should not report both stereotactic radiosurgery services [61796-61800] and radiation treatment management [77432 or 77435] for cranial lesions)

(For stereotactic body radiation therapy treatment, use 77435)

77435 Stereotactic body radiation therapy, treatment management, per treatment course, to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions
(Do not report 77435 in conjunction with 77427-77432)
(The same physician should not report both stereotactic radiosurgery services [63620, 63621] and radiation treatment management [77435] for extracranial lesions)

G0173 Linear accelerator based stereotactic radiosurgery, complete course of therapy in one session

G0251 Linear accelerator based stereotactic radiosurgery, delivery including collimator changes and custom plugging, fractionated treatment, all lesions, per session, maximum five sessions per course of treatment

G0339 Image-guided robotic linear accelerator-based stereotactic radiosurgery, complete course of therapy in one session or first session of fractionated treatment

G0340 Image-guided robotic linear accelerator-based stereotactic radiosurgery, delivery including collimator changes and custom plugging, fractionated treatment, all lesions, per session, second through fifth sessions, maximum five sessions per course of treatment

ICD-9 Codes that Support Medical Necessity

Note: Diagnosis codes are based on the current ICD-9-CM codes that are effective at the time of Model Policy publication. Any updates to ICD-9-CM codes will be reviewed by ASTRO, and coverage should not be presumed until the results of such review have been published/posted. These ICD-9-CM codes support medical necessity under this Model Policy:

147.0 MALIGNANT NEOPLASM OF SUPERIOR WALL OF NASOPHARYNX
147.1 MALIGNANT NEOPLASM OF POSTERIOR WALL OF NASOPHARYNX
147.2 MALIGNANT NEOPLASM OF LATERAL WALL OF NASOPHARYNX
147.3 MALIGNANT NEOPLASM OF ANTERIOR WALL OF NASOPHARYNX

147.8 MALIGNANT NEOPLASM OF OTHER SPECIFIED SITES OF NASOPHARYNX
147.9 MALIGNANT NEOPLASM OF NASOPHARYNX UNSPECIFIED SITE
160.0 MALIGNANT NEOPLASM OF NASAL CAVITIES
160.1 MALIGNANT NEOPLASM OF AUDITORY TUBE MIDDLE EAR AND MASTOID AIR CELLS
160.2 MALIGNANT NEOPLASM OF MAXILLARY SINUS
160.3 MALIGNANT NEOPLASM OF ETHMOIDAL SINUS
160.4 MALIGNANT NEOPLASM OF FRONTAL SINUS
160.5 MALIGNANT NEOPLASM OF SPHENOIDAL SINUS
160.8 MALIGNANT NEOPLASM OF OTHER ACCESSORY SINUSES
160.9 MALIGNANT NEOPLASM OF ACCESSORY SINUS UNSPECIFIED
191.0 MALIGNANT NEOPLASM OF CEREBRUM EXCEPT LOBES AND VENTRICLES
191.1 MALIGNANT NEOPLASM OF FRONTAL LOBE
191.2 MALIGNANT NEOPLASM OF TEMPORAL LOBE
191.3 MALIGNANT NEOPLASM OF PARIETAL LOBE
191.4 MALIGNANT NEOPLASM OF OCCIPITAL LOBE
191.5 MALIGNANT NEOPLASM OF VENTRICLES
191.6 MALIGNANT NEOPLASM OF CEREBELLUM NOS
191.7 MALIGNANT NEOPLASM OF BRAIN STEM
191.8 MALIGNANT NEOPLASM OF OTHER PARTS OF BRAIN
191.9 MALIGNANT NEOPLASM OF BRAIN UNSPECIFIED SITE
192.0 MALIGNANT NEOPLASM OF CRANIAL NERVES
192.1 MALIGNANT NEOPLASM OF CEREBRAL MENINGES
194.3 MALIGNANT NEOPLASM OF PITUITARY GLAND AND CRANIOPHARYNGEAL DUCT
194.4 MALIGNANT NEOPLASM OF PINEAL GLAND
194.6 MALIGNANT NEOPLASM OF AORTIC BODY AND OTHER PARAGANGLIA
198.3 SECONDARY MALIGNANT NEOPLASM OF BRAIN AND SPINAL CORD
198.4* SECONDARY MALIGNANT NEOPLASM OF OTHER PARTS OF NERVOUS SYSTEM
198.5* SECONDARY MALIGNANT NEOPLASM OF BONE AND BONE MARROW
198.89* SECONDARY MALIGNANT NEOPLASM OF OTHER SPECIFIED SITES
225.0 BENIGN NEOPLASM OF BRAIN
225.1 BENIGN NEOPLASM OF CRANIAL NERVES
225.2 BENIGN NEOPLASM OF CEREBRAL MENINGES
227.3 BENIGN NEOPLASM OF PITUITARY GLAND AND CRANIOPHARYNGEAL DUCT
227.4 BENIGN NEOPLASM OF PINEAL GLAND
227.5 BENIGN NEOPLASM OF CAROTID BODY
227.6 *BENIGN NEOPLASM OF AORTIC BODY AND OTHER PARAGANGLIA
228.02 HEMANGIOMA OF INTRACRANIAL STRUCTURES
237.0 NEOPLASM OF UNCERTAIN BEHAVIOR OF PITUITARY GLAND AND CRANIOPHARYNGEAL DUCT
237.1 NEOPLASM OF UNCERTAIN BEHAVIOR OF PINEAL GLAND
237.3* NEOPLASM OF UNCERTAIN BEHAVIOR OF PARAGANGLIA
237.5* NEOPLASM OF UNCERTAIN BEHAVIOR OF BRAIN AND SPINAL CORD
237.6* NEOPLASM OF UNCERTAIN BEHAVIOR OF MENINGES

239.6* NEOPLASM OF UNSPECIFIED NATURE OF BRAIN
239.7* NEOPLASM OF UNSPECIFIED NATURE OF ENDOCRINE GLANDS AND OTHER PARTS OF NERVOUS SYSTEM
332.0 PARALYSIS AGITANS
333.1** ESSENTIAL AND OTHER SPECIFIED FORMS OF TREMOR
345.11 GENERALIZED CONVULSIVE EPILEPSY WITH INTRACTABLE EPILEPSY
345.3 GRAND MAL STATUS EPILEPTIC
345.91 EPILEPSY UNSPECIFIED WITH INTRACTABLE EPILEPSY
350.1 TRIGEMINAL NEURALGIA
350.8 OTHER SPECIFIED TRIGEMINAL NERVE DISORDERS
350.9 TRIGEMINAL NERVE DISORDER UNSPECIFIED
351.0 BELL'S PALSY
351.1 GENICULATE GANGLIONITIS
351.8 OTHER FACIAL NERVE DISORDERS
351.9 FACIAL NERVE DISORDER UNSPECIFIED
352.0* DISORDERS OF OLFACTORY (1ST) NERVE
352.1* GLOSSOPHARYNGEAL NEURALGIA
352.2* OTHER DISORDERS OF GLOSSOPHARYNGEAL (9TH) NERVE
352.3* DISORDERS OF PNEUMOGASTRIC (10TH) NERVE
352.4* DISORDERS OF ACCESSORY (11TH) NERVE
352.5* DISORDERS OF HYPOGLOSSAL (12TH) NERVE
352.6* MULTIPLE CRANIAL NERVE PALSIES
352.9* UNSPECIFIED DISORDER OF CRANIAL NERVES
747.81* CONGENITAL ANOMALIES OF CEREBROVASCULAR SYSTEM
990*** EFFECTS OF RADIATION UNSPECIFIED

* ICD-9-CM codes 198.4, 198.5, 198.89, 234.8, 237.5, 237.6, 239.6, 239.7, 333.1, 352.0, 352.1, 352.2, 352.3, 352.4, 352.5, 352.6, 352.9 and 747.81 are all limited to use for lesions occurring either above the neck or in the spine.

** ICD-9-CM 333.1 code is limited to the patient who cannot be controlled with medication, has major systemic disease or coagulopathy, and who is unwilling or unsuited for open surgery.

*** ICD-9-CM 990 may only be used where prior radiation therapy to the site is the governing factor necessitating SRS in lieu of other radiotherapy. An ICD-9-CM code for the anatomic diagnosis must also be used.

General Information

Documentation Requirements

The patient's record must support the necessity and frequency of treatment. Medical records should include not only the standard history and physical but also the patient's functional status and a description of current performance status (Karnofsky Performance Status or ECOG Performance Status). See Karnofsky Performance Status or ECOG Performance Status listed under Indications and Limitation of Coverage above.

Documentation should include the date and the current treatment dose. A radiation oncologist and a neurosurgeon must evaluate the clinical aspects of the treatment, and document and sign this evaluation as well as the resulting management decisions. A radiation oncologist and medical physicist must evaluate the technical aspects of the treatment and document and sign this evaluation as well as the resulting treatment management decisions.

For Medicare claims, the HCPCS/CPT code(s) may be subject to Correct Coding Initiative (CCI) edits. This policy does not take precedence over CCI edits. Please refer to the CCI for correct coding guidelines and specific applicable code combinations prior to billing Medicare.

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