I. Policy: Stereotactic Radiosurgery (SRS) and Stereotactic Body Radiation Therapy (SBRT)

II. Purpose/Objective:
To provide a policy of coverage regarding Stereotactic Radiosurgery (SRS) and Stereotactic Body Radiation Therapy (SBRT)

III. Responsibility:
A. Medical Directors
B. Medical Management

IV. Required Definitions
1. Attachment – a supporting document that is developed and maintained by the policy writer or department requiring/authoring the policy.
2. Exhibit – a supporting document developed and maintained in a department other than the department requiring/authoring the policy.
3. Devised – the date the policy was implemented.
4. Revised – the date of every revision to the policy, including typographical and grammatical changes.
5. Reviewed – the date documenting the annual review if the policy has no revisions necessary.

V. Additional Definitions
Medical Necessity or Medically Necessary means Covered Services rendered by a Health Care Provider that the Plan determines are:

a. appropriate for the symptoms and diagnosis or treatment of the Member's condition, illness, disease or injury;
b. provided for the diagnosis, and the direct care and treatment of the Member's condition, illness disease or injury;
c. in accordance with current standards of good medical treatment practiced by the general medical community.
d. not primarily for the convenience of the Member, or the Member's Health Care Provider; and
e. the most appropriate source or level of service that can safely be provided to the Member. When applied to hospitalization, this further means that the Member requires acute care as an inpatient due to the nature of the services rendered or the Member's condition, and the Member cannot receive safe or adequate care as an outpatient.

Medicaid Business Segment
Medical Necessity shall mean a service or benefit that is compensable under the Medical Assistance Program and if it meets any one of the following standards:

(i) The service or benefit will, or is reasonably expected to, prevent the onset of an illness, condition or disability.
(ii) The service or benefit will, or is reasonably expected to, reduce or ameliorate the physical, mental or development effects of an illness, condition, injury or disability.
(iii) The service or benefit will assist the Member to achieve or maintain maximum functional
capacity in performing daily activities, taking into account both the functional capacity of the Member and those functional capacities that are appropriate for members of the same age.

DESCRIPTION:
Stereotactic radiosurgery and Stereotactic Body Radiation Therapy are a non-invasive method of delivering high doses of ionizing radiation utilizing three-dimensional planning of stereotactic and convergent beam technologies to small intracranial, some extracranial lesions, and tissues or lesions that may be inaccessible or unsuitable for open surgery. Stereotactic radiosurgery entails delivering highly focused convergent beams in a single session or multiple sessions (fractionated stereotactic radiotherapy) so that only the desired target is radiated, sparing adjacent structures. Four main methods of this technology exist: gamma-ray radiosurgery (e.g. Cyberknife or Gamma Knife®), linear accelerator radiosurgery (Linac), helium–ion radiosurgery, and neutron-beam radiosurgery. The four radiation delivery devices differ technically in several ways: source of radiation, size and shape of the radiation field, and range of radiation dosages. Other frameless systems involve the use of image-guided robotics, including Cyberknife, Neuromate and Mehrkoordinaten Manipulator (MKM), which recognizes the treatment sites by integrating images from preoperative CT and MRI techniques with intraoperative target localization tactics.

INDICATIONS:
Stereotactic radiosurgery or stereotactic body radiation therapy for treatment of the following lesions may be considered medically necessary:

- Angiographically visible arteriovenous malformations that because of their location, cannot be excised without a significant risk of serious neurological sequelae
- Acoustic neuromas (Schwannoma)
- Pituitary adenomas (e.g. Cushing’s disease or acromegaly)
- Pineal tumors
- Non-resectable, residual, or recurrent meningiomas less than 4 cm in diameter
- Solitary or multiple brain metastases associated with good performance status and no active systemic disease
- Intracranial tumors that are not amenable to surgical excision or other conventional forms of treatment, for local tumor control, or for non-operative skull base sarcomas
- High-grade gliomas (primary or recurrent less than 4 cm in diameter) or Oligodendrogliomas
- Craniopharyngiomas
- Nasopharyngeal or parasinus tumors
- Spinal and paraspinal tumors
- Trigeminal neuralgia refractory to aggressive pharmacological medical management
- Ocular melanoma
- Chordomas
- Mediastinal tumors
- Pulmonary tumors
- Retroperitoneal metastases
- Hepatic tumors
- Pancreatic tumors
- Paragangliomas
- Essential tremor coverage is limited to patients who cannot be controlled with medication, has major systemic disease or coagulopathy, and who is unwilling or unsuited for open surgery or Deep Brain Stimulation. Coverage is limited to unilateral thalamotomy
- Renal cell carcinoma
- Non-small cell lung cancer (NSCLC) or pulmonary metastasis
- Refractory mesial temporal lobe epilepsy if standard surgery is contraindicated or not an option

*For information regarding Proton Beam Radiation, please see MP226 – Proton Beam Radiation.

EXCLUSIONS:
Stereotactic radiosurgery by any method for treatment of the following lesions is considered experimental, investigational or unproven:

- Intractable pain (except for tic douloureux/trigeminal neuralgia)
- Psychoses and psychiatric illness
- Seizures other than noted under Indications
Note: A complete description of the process by which a given technology or service is evaluated and determined to be experimental, investigational or unproven is outlined in MP 15 - Experimental Investigational or Unproven Services or Treatment.

**Medicaid Business Segment:**
Any requests for services, that do not meet criteria set in the PARP, may be evaluated on a case by case basis.

**CODING ASSOCIATED WITH:** Stereotactic Radiosurgery (SRS) and Stereotactic Body Radiation Therapy (SBRT)

The following codes are included below for informational purposes and may not be all inclusive. Inclusion of a procedure or device code(s) does not constitute or imply coverage nor does it imply or guarantee provider reimbursement. Coverage is determined by the member specific benefit plan document and any applicable laws regarding coverage of specific services. Please note that per Medicare coverage rules, only specific CPT/HCPCS Codes may be covered for the Medicare Business Segment. Please consult the CMS website at [www.cms.gov](http://www.cms.gov) or the local Medicare Administrative Carrier (MAC) for more information on Medicare coverage and coding requirements.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20660</td>
<td>Application of cranial tongs, caliper, or stereotactic frame including removal</td>
</tr>
<tr>
<td>61796</td>
<td>Stereotactic Radiosurgery (particle beam, Gamma Ray, or Linear Accelerator); 1 Simple Cranial Lesion</td>
</tr>
<tr>
<td>61797</td>
<td>Stereotactic Radiosurgery (particle beam, Gamma Ray, or Linear Accelerator); each additional Cranial Lesion, simple</td>
</tr>
<tr>
<td>61798</td>
<td>Stereotactic Radiosurgery (particle beam, Gamma Ray, or Linear Accelerator); 1 complex Cranial Lesion</td>
</tr>
<tr>
<td>61799</td>
<td>Stereotactic Radiosurgery (particle beam, Gamma Ray, or Linear Accelerator); each additional Cranial Lesion, complex</td>
</tr>
<tr>
<td>61800</td>
<td>Application of stereotactic headframe for stereotactic radiosurgery</td>
</tr>
<tr>
<td>63620</td>
<td>Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 spinal lesion</td>
</tr>
<tr>
<td>63621</td>
<td>Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); each additional spinal lesion</td>
</tr>
<tr>
<td>77331</td>
<td>Special dosimetry only when prescribed by the treating physician</td>
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<tr>
<td>77370</td>
<td>Special medical radiation physics consultation</td>
</tr>
<tr>
<td>77371</td>
<td>Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cerebral lesion(s) consisting of 1 session, multi-source Cobalt 60 based</td>
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<tr>
<td>77372</td>
<td>Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cerebral lesion(s) consisting of 1 session, linear accelerator based</td>
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<tr>
<td>77373</td>
<td>Radiation treatment delivery, stereotactic radiosurgery (SRS), treatment delivery, per fraction to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions</td>
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<tr>
<td>77435</td>
<td>Radiation treatment delivery, stereotactic radiosurgery (SRS), treatment management, per treatment course, to one or more lesions, including image guidance, entire course not to exceed 5 fractions</td>
</tr>
<tr>
<td>77432</td>
<td>Stereotactic radiation treatment management of cerebral lesion(s) (complete course of treatment consisting of one treatment)</td>
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<tr>
<td>C9728</td>
<td>Placement of interstitial device(s) for radiation therapy/surgery guidance (eg, fiducial markers, dosimeter), other than prostate (any approach), single or multiple</td>
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<tr>
<td>G0173</td>
<td>Stereotactic radiosurgery, complete course of therapy in one session.</td>
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<tr>
<td>G0242</td>
<td>Multi-source photon stereotactic radiosurgery plan</td>
</tr>
<tr>
<td>G0243</td>
<td>Multi-source photon stereotactic radiosurgery delivery</td>
</tr>
<tr>
<td>G0251</td>
<td>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.</td>
</tr>
<tr>
<td>G0338</td>
<td>Linear accelerator based stereotactic radiosurgery plan including dose volume histograms for target and critical structure tolerances, plan optimization performed for highly conformal distributions, plan positional accuracy and dose verification, all lesions</td>
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<tr>
<td>G0339</td>
<td>Image guided robotic linear accelerator based stereotactic radiosurgery, complete course of therapy in one session, or first session of fractionated treatment</td>
</tr>
<tr>
<td>G0340</td>
<td>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</td>
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**LINE OF BUSINESS:**
Eligibility and contract specific benefits, limitations and/or exclusions will apply. Coverage statements found in the line of business specific benefit document will supersede this policy. For Medicare, applicable LCD’s and NCD’s will supercede this policy. For PA Medicaid Business segment, this policy applies as written.

REFERENCES:
General Reference


Solitary, Multiple or Recurrent Metastases


ACR Appropriateness Criteria for Solitary Brain Metastasis, Revised 2012
ACR Appropriateness Criteria for Multiple Brain Metastases, Revised 2014


**Trigeminal Neuralgia**


**Acoustic Neuroma**


**Arteriovenous Malformations**


**Primary Brain Tumors**


**Thalamotomy**


**Ocular Applications**


**Seizures**


**Robotically Assisted Stereotactic Surgery**


**Extracranial Indications**

ECRI Institute, HTAIS Hotline, Stereotactic Radiotherapy for Primary Liver Cancer and Liver Metastases. 9/2007.

ECRI Institute, HTAIS Hotline, Stereotactic Radiotherapy for Primary Lung Cancer and Lung Metastases. 9/2007.

ECRI Institute, HTAIS Hotline, Stereotactic Radiotherapy for Pancreatic Cancer. 9/2007.


**All other indications**


National Cancer Institute. Childhood Craniopharyngioma Treatment (PDQ®) This policy will be revised as necessary and reviewed no less than annually. [http://www.cancer.gov/cancertopics/pdq/treatment/child-cranio/patient/page4](http://www.cancer.gov/cancertopics/pdq/treatment/child-cranio/patient/page4)


Tatsuya K., et al. PROGNOSTIC FACTORS FOR TUMOR RECURRENCE AFTER GAMMA KNIFE RADIOSURGERY OF PARTIALLY RESECTED AND RECURRENT CRANIOPHARYNGIOMAS. Nagoya J. Med. Sci. 74. 141 ~ 147 2012


Devised: 12/96

Revised: 7/97, 2/03, 2/04, 2/05, 2/06, 2/07 (coding);2/08 (Add'l indications added); 3/09 (wording,coding); 4/11 (indication revision), 4/12 (essential tremor indication added); 6/12 (add stereotactic body radiation therapy), 6/13 (added indications); 5/15 (removed auth); 5/20(add indication, exclusion)


Geisinger Health Plan may refer collectively to health care coverage sponsors Geisinger Health Plan, Geisinger Quality Options, Inc., and Geisinger Indemnity Insurance Company, unless otherwise noted. Geisinger Health Plan is part of Geisinger, an integrated health care delivery and coverage organization.

Coverage for experimental or investigational treatments, services and procedures is specifically excluded under the member's certificate with Geisinger Health Plan. Unproven services outside of an approved clinical trial are also specifically excluded under the member's certificate with Geisinger Health Plan. This policy does not expand coverage to services or items specifically excluded from coverage in the member's certificate with Geisinger Health Plan. Additional information can be found in MP015 Experimental, Investigational or Unproven Services.

Prior authorization and/or pre-certification requirements for services or items may apply. Pre-certification lists may be found in the member's contract specific benefit document. Prior authorization requirements can be found at https://www.geisinger.org/health-plan/providers/ghp-clinical-policies

Please be advised that the use of the logos, service marks or names of Geisinger Health Plan, Geisinger Quality Options, Inc. and Geisinger Indemnity Insurance Company on a marketing, press releases or any communication piece regarding the contents of this medical policy is strictly prohibited without the prior written consent of Geisinger Health Plan. Additionally, the above medical policy does not confer any endorsement by Geisinger Health Plan, Geisinger Quality Options, Inc. and Geisinger Indemnity Insurance Company regarding the medical service, medical device or medical lab test described under this medical policy.