Stereotactic Radiosurgery and Stereotactic Body Radiation Therapy

Policy Number: MM.05.008
Original Effective Date: 05/12/1999
Line(s) of Business: HMO; PPO; QUEST Integration
Current Effective Date: 11/20/2015
Section: Radiology
Place(s) of Service: Outpatient

I. Description

Stereotactic radiosurgery (SRS) and stereotactic body radiation therapy (SBRT) are radiotherapy methods that entail delivering highly focused convergent beams, on a precise target that is defined with 3-dimensional imaging techniques, sparing adjacent structures. SRS primarily refers to such radiotherapy applied to intracranial lesions, while SBRT refers to therapy applied to other areas of the body. Both techniques differ from conventional external beam radiotherapy, which involves exposing large areas of tissue to relatively broad fields of radiation, over multiple sessions.

SRS

The evidence for SRS in patients who have a variety of benign and malignant intracranial lesions includes randomized controlled trials (RCTs), nonrandomized retrospective cohort studies, and observational studies or case series. Relevant outcomes are overall survival, symptoms, and treatment-related morbidity. General limitations of the body of evidence include, but are not limited to, a lack of trials that directly compare SRS and comparators, patient heterogeneity within and between studies, and failure to use standardized methods to collect and report outcomes (benefits and harms). There are several contextual factors to consider, such as: SRS offers a noninvasive, highly precise radiotherapy alternative to surgery (particularly important for patients unable to undergo resection due to the presence of underlying comorbidities), intracranial lesions often are difficult to access surgically (and may be associated with a high risk for devastating adverse sequelae), intracranial lesions typically are located adjacent to vital organs and structures that are highly susceptible to radiation toxicities, and the accuracy and precision of SRS in this context make this technique a viable alternative to standard, nonconformal EBRT. Finally, given the rarity of many of the conditions under review, direct comparative trials are unlikely.

The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome of patients who have intracranial arteriovenous malformations; acoustic neuromas (vestibular schwannomas); pituitary adenomas; nonresectable, residual, or recurrent meningiomas; craniopharyngiomas; glomus jugulare tumors; and primary malignancies of the central nervous system (CNS); and trigeminal neuralgia that is refractory to medical management.
Stereotactic Body Radiotherapy

The evidence for SBRT in patients who have a variety of solid tumors or other metastatic lesions includes a few RCTs and nonrandomized cohort studies. Relevant outcomes are overall survival, symptoms, and treatment-related morbidity. Limitations of the evidence include a lack of comparative trials, heterogeneity between patients and treatment schedules and planning techniques, and failure to use standardized methods to collect and report outcomes. Survival rates may be similar for SBRT compared with surgical resection for patients with stage T1 and T2a non-small-cell lung cancer (NSCLC) who are not candidates for surgical resection because of comorbid conditions. SBRT has been shown to improve outcomes (reduce pain) in patients with spinal (vertebral) tumors.

The evidence is sufficient to determine qualitatively that the technology results in a meaningful improvement in the net health outcome in patients with stage T1 or T2a NSCLC (not >5 cm) showing no nodal or distant disease and who are not candidates for surgical resection; spinal or vertebral body tumors (metastatic or primary) in patients who have received prior radiotherapy; and spinal or vertebral metastases that are radioresistant (eg, renal cell carcinoma, melanoma, sarcoma).

II. Criteria/Guidelines

A. SRS utilizing a gamma-ray or linear-accelerator unit is covered (subject to Limitations and Administrative Guidelines) for the following indications:

1. Arteriovenous malformations
2. Acoustic neuromas
3. Pituitary adenomas
4. Non-resectable, residual, or recurrent meningiomas
5. Craniopharyngiomas
6. Glomus jugulare tumors
7. Solitary or multiple brain metastases in patients having good performance status and no active systemic disease (defined as extracranial disease that is stable or in remission)
8. Primary malignancies of the central nervous system (CNS), including but not limited to, high-grade gliomas (initial treatment or treatment of recurrence)
9. Nasopharyngeal, oropharyngeal and high hypopharyngeal malignancies, spinal cord and meninges
10. Patients with disabling symptoms from Parkinson's disease refractory to conventional therapies (Medicare)
11. Trigeminal neuralgia refractory to medical management

B. SBRT is covered (subject to Limitations and Administrative Guidelines) for the following indications:

1. Patients with stage T1 or T2a non-small cell lung cancer (not larger than 5cm) showing no nodal or distant disease and who are not candidates for surgical resection
2. Spinal or vertebral body tumors (metastatic or primary) in patients who have received prior radiation therapy
3. Spinal or vertebral metastases that are radioresistant (e.g., renal cell carcinoma, melanoma and sarcoma)
4. Clinically localized prostate cancer (Stage <T3a, Gleason score <8, PSA <20)

III. Limitations
A. Non-covered applications of SRS include, but are not limited to, the treatment of seizures, functional disorders other than trigeminal neuralgia, including chronic pain, tremor and uveal melanoma
B. SBRT is not covered for primary and metastatic tumors of the liver, pancreas, kidney and adrenal glands.

IV. Administrative Guidelines
A. Precertification is required. To precertify, please complete HMSA’s Precertification Request and mail or fax the form as indicated. Requests must include the radiation oncologist's consultation notes.
B. Applicable codes:

<table>
<thead>
<tr>
<th>CPT Codes</th>
<th>Description</th>
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<tbody>
<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>each additional cranial lesion, simple (list separately in addition to code for primary procedure)</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>each additional cranial lesion, complex (list separately in addition to code for primary procedure)</td>
</tr>
<tr>
<td>61800</td>
<td>Application of stereotactic headframe for stereotactic radiosurgery (list separately in addition to code for primary procedure)</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>each additional spinal lesion (list separately in addition to code for primary procedure)</td>
</tr>
<tr>
<td>77371</td>
<td>Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cranial lesion(s) consisting of 1 session; multi-source Cobalt 60 based</td>
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<tr>
<td>77372</td>
<td>linear accelerator based</td>
</tr>
<tr>
<td>HCPCS Codes</td>
<td>Description</td>
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<tr>
<td>-------------</td>
<td>-------------</td>
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<tr>
<td>G0173</td>
<td>Linear accelerator based stereotactic radiosurgery, complete course of therapy in one session</td>
</tr>
</tbody>
</table>

## V. Important Reminder

The purpose of this Medical Policy is to provide a guide to coverage. This Medical Policy is not intended to dictate to providers how to practice medicine. Nothing in this Medical Policy is intended to discourage or prohibit providing other medical advice or treatment deemed appropriate by the treating physician.

Benefit determinations are subject to applicable member contract language. To the extent there are any conflicts between these guidelines and the contract language, the contract language will control.

This Medical Policy has been developed through consideration of the medical necessity criteria under Hawaii’s Patients’ Bill of Rights and Responsibilities Act (Hawaii Revised Statutes §432E-1.4), generally accepted standards of medical practice and review of medical literature and government approval status. HMSA has determined that services not covered under this Medical Policy will not be medically necessary under Hawaii law in most cases. If a treating physician disagrees with HMSA’s determination as to medical necessity in a given case, the physician may request that HMSA reconsider the application of the medical necessity criteria to the case at issue in light of any supporting documentation.

## VI. References

1. The American College of Radiology (ACR) and the American Society for Radiation Oncology (ASTRO). Practice Guideline for the Performance of Stereotactic Radiosurgery. Revised 2011
4. ECRI Institute. HTAIS hotline service. Cyberknife and Gamma Knife Radiosurgery for Trigeminal Neuralgia. Updated 05/03/07.
10. Noridian LCD for Stereotactic body radiation therapy L34224. Revised 10/01/2015