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: 04/01/2015
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 refers to such radiotherapy applied to intracranial lesions, while SBRT refers to therapy applied to other areas of the body. The technique differs from conventional radiotherapy, which involves exposing large areas of tissue to relatively broad fields of radiation, over multiple sessions. It may offer a non-invasive alternative to invasive surgery, particularly for patients unable to undergo surgery or for lesions that are difficult to access surgically or are adjacent to vital organs.

SRS

SRS is an established safe and effective treatment modality for many benign and malignant intracranial tumors/conditions. The evidence, largely consisting of nonrandomized cohort studies, combined with clinical input, supports the use of SRS for the following conditions: 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. Evidence from several randomized controlled trials (RCTs) demonstrate the benefit of SRS for small numbers of brain metastases from a variety of tumor types. Evidence from nonrandomized studies suggests that outcomes from SRS for intracranial metastatic disease is not worse for larger numbers of metastases; therefore, SRS may be considered medically necessary for solitary or multiple brain metastases in patients who have otherwise good performance status.

Traditional external beam radiation therapy may involve daily treatments for a duration of 6 weeks or longer. The emerging trend in recent years has been toward shorter, more “hypofractionated” courses, such as with SRS and SBRT. Both SRS and SBRT may be completed with one session (single-fraction) or less may require additional sessions (typically no more than 5) over a course of days,
referred to as fractionated stereotactic radiotherapy. Fractionation has been made possible by the ability to duplicate the treatment plan from one session to the next. Fractionation of stereotactic radiotherapy aims to optimize the therapeutic ratio; that is the ratio between tumor control and late effects on normal tissues. The main advantage of fractionation is that it allows higher total doses to be delivered to the tumor because of increased tolerance of the surrounding healthy tissues to each individual, fractionated dose. In addition, some lesions such as large arteriovenous malformations may require more than one procedure to complete the obliteration process.

The main methods of this technology include gamma-ray radiosurgery (Gamma Knife), most frequently used for intracranial lesions, and linear-accelerator radiosurgery or LINAC (e.g., CyberKnife). The radiosurgical procedure using SRS or SBRT is preceded by a process of localizing the target with 3-dimensional imaging such as computed tomography (CT), magnetic resonance imaging (MRI), and positron emission tomography/computed tomography (PET/CT).

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
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>
</tr>
</thead>
<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>
</tr>
<tr>
<td>77372</td>
<td>linear accelerator based</td>
</tr>
<tr>
<td>77373</td>
<td>Stereotactic body radiation therapy, treatment delivery, per fraction to 1 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 cranial lesion(s) (complete course of treatment consisting of 1 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.