

**STEREOTACTIC RADIOSURGERY (SRS) and STEREOTACTIC BODY
RADIOTHERAPY (SBRT)**

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Status: Current

Date Of Origin: July 31, 1992

Summary of Changes

Deletions:

- Hepatocellular carcinoma deleted as an experimental or investigational indication for proton beam radiotherapy.

I. POLICY/CRITERIA

A. Stereotactic Radiosurgery (SRS)

1. Stereotactic Radiosurgery by Gamma Knife, CyberKnife or linear accelerator is a covered benefit for *any* of the following:
 - a. Treatment of patients with symptomatic, small (less than 4 cm) arterio-venous malformations (AVM), aneurysms, and benign tumors (acoustic neuromas, vestibular schwannomas, meningiomas, hemangiomas, pituitary adenomas, craniopharyngiomas, and neoplasms of the pineal gland) if the lesion is unresectable due to its deep intracranial location or if the patient is unable to tolerate conventional operative intervention.
 - b. Palliative treatment of initial or recurrent brain metastases, solitary or multiple, in patients with good performance status (Karnofsky > 70).
 - c. Treatment of initial or recurrent primary brain malignancies that are less than 5 cm in diameter and in addition, Karnofsky status > 70 or ECOG grade 0-2.
 - d. Trigeminal neuralgia that has not responded to other more conservative treatments and contraindications to open procedure are present.
 - e. Ocular melanomas not amenable to surgical excision

B. Stereotactic Body Radiation Therapy (SBRT) is covered for any of the following indications:

1. Non- small cell lung cancer for inoperable stage I or II tumors
2. Treatment of inoperable liver tumors if *one* of the following:
 - a. Isolated liver metastasis, *or*

- b. Hepatocellular cancer
 3. Treatment of pancreatic cancer if *one* of the following:
 - a. Primary therapy for locally advanced disease, *or*
 - b. Isolated local recurrence after prior therapy
 4. Treatment of non-operable spinal tumors.
 5. Clinically localized, low-to intermediate-risk prostate cancer
 6. Lung, liver, bone or adrenal gland metastasis
- C. SRS and SBRT are considered experimental and investigational for treatment of:
 1. Parkinson's disease and essential tremors
 2. Cancers in extracranial sites, not specified in B above because definitive conclusions regarding indications and efficacy have not been demonstrated in large, controlled clinical trials.
 3. cluster headaches
 4. all other indications not outlined in A & B above
- D. Proton and neutron beam therapies
 1. Proton beam radiotherapy (PBRT) may be medically necessary in *any* of the following radiosensitive tumors:
 - a. Uveal melanomas confined to the globe (i.e. not distant metastases) (the uvea is comprised of the iris, ciliary body, and choroid (the vascular middle coat of the eye)); *or*
 - b. Chordomas or chondrosarcomas arising at the base of the skull or along the axial skeleton without distant metastases; *or*
 - c. Pituitary neoplasms; *or*
 - d. Other central nervous system tumors located near vital structures.Proton beam radiotherapy may be used either with or without stereotactic guidance. Stereotactic administration of proton beam radiotherapy is considered medically necessary only for the above-listed lesions that are located intracranially. Stereotactic administration of proton beam radiotherapy for extracranial lesions (i.e., stereotactic body radiosurgery) is *not* considered medically necessary.
 2. Proton beam radiotherapy for treatment of the following conditions is considered not medically necessary because alternate equally effective forms of therapy which are more cost-effective exist.
 - a. intracranial arteriovenous malformations
 - b. prostate cancer
 3. Proton beam radiotherapy is considered experimental and investigational for all other indications, including but not limited to:

- a. Age-related macular degeneration
 - b. Non-uveal melanoma.
 - c. Non-small cell lung cancer
 - 4. Neutron beam therapy is medically necessary for the treatment of any of the following salivary gland tumors:
 - a. Locally advanced tumors especially in persons with gross residual disease;
 - b. Unresectable tumors
 - c. Inoperable tumors.
 - 5. Neutron beam radiotherapy is considered experimental and investigational for all other indications, including but not limited to:
 - a. Pancreatic cancer;
 - b. Prostate cancer;
 - c. Rectal cancer;
 - d. Soft tissue sarcomas;
 - e. colon cancer
 - f. kidney cancer
 - g. lung cancer
- E. Requests for stereotactic radiosurgery and proton or neutron radiotherapy may be reviewed for coverage determination for treatment in a clinical trial if the criteria of the Clinical Trials medical policy are met.

Special Notes:

- The Karnofsky performance status scale is widely used to evaluate the functional status of cancer patients to determine their eligibility for clinical trials and their prognosis.

70	Cares for self; unable to carry on normal activity or to do active work.
80	Normal activity with effort, some signs or symptoms of disease
90	Able to carry on normal activity; minor signs or symptoms of disease
100	Normal; no complaints; no evidence of disease

- The Eastern Cooperative Oncology Group (ECOG) performance status is a scale used to assess how a patient's disease is progressing, assess

how the disease affects the daily living abilities of the patient, and determine appropriate treatment and prognosis.

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 any 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

- Proton and Neutron Beam Therapies were reviewed at Priority Health's Technology Assessment Committee (TAC) on December 3, 2004. This policy follows the recommendations of the TAC.
- Radiosurgery for extracranial indications was reviewed by Priority Health's Technology Assessment Committee on September 7, 2007. This policy reflects recommendations of the TAC.

II. MEDICAL NECESSITY REVIEW

Required

Not Required

Not Applicable

III. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- ❖ **HMO/EPO:** *This policy applies to insured HMO/EPO plans.*
- ❖ **POS:** *This policy applies to insured POS plans.*
- ❖ **PPO:** *This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.*
- ❖ **ASO:** *For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.*
- ❖ **INDIVIDUAL:** *For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.*

- ❖ **MEDICARE:** Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, this policy applies.
- ❖ **MEDICAID/HEALTHY MICHIGAN PLAN:** For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. If there is a discrepancy or lack of guidance in the Michigan Medicaid Provider Manual, the Priority Health contract with Michigan Medicaid will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.

IV. DESCRIPTION

Stereotactic Radiosurgery, by Gamma Knife, CyberKnife or linear accelerator (LINAC), delivers precisely defined ionizing beams of radiation. Stereotactic radiosurgery is a noninvasive treatment that delivers targeted radiation to small areas of the brain in a single or few treatment sessions. Stereotactic radiation may also be delivered to extra-cranial sites by the same device (e.g. Cyberknife) and is referred to as stereotactic body radiotherapy (SBRT).

SRS and SBRT performed more than one time on a specific site are called fractionated stereotactic radiotherapy.

Stereotactic guidance may also be used to deliver proton and/or neutron beam radiotherapy.

V. CODING INFORMATION

ICD-10 codes:

Not specified – see criteria

CPT/HCPCS codes:

- 61796 Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 simple cranial lesion
- 61797 Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); each additional cranial lesion, simple (List separately in addition to code for primary procedure)
- 61798 Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 complex cranial lesion
- 61799 Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); each additional cranial lesion, complex (List separately in addition to code for primary procedure)
- 61800 Application of stereotactic headframe for stereotactic radiosurgery (List separately in addition to code for primary procedure)

- 63620 Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); 1 spinal lesion
- 63621 Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); each additional spinal lesion (List separately in addition to code for primary procedure)

- 77371 Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cerebral lesion(s) consisting of 1 session; multi-source Cobalt 60 based
- 77372 Radiation treatment delivery, stereotactic radiosurgery (SRS), complete course of treatment of cerebral 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

- 77422 High energy neutron radiation treatment delivery; single treatment area using a single port or parallel-opposed ports with no blocks or simple blocking
- 77423 High energy neutron radiation treatment delivery; 1 or more isocenter(s) with coplanar or non-coplanar geometry with blocking and/or wedge, and/or compensator(s)

- 77432 Stereotactic radiation treatment management of cerebral lesion(s) (complete course of treatment consisting of one session)
- 77435 Stereotactic body radiation therapy, treatment management, per treatment course, to one or more lesions, including image guidance, entire course not to exceed 5 fractions

- 77520 Proton treatment delivery; simple, without compensation (*not covered for Medicaid*)
- 77522 Proton treatment delivery; simple, with compensation (*not covered for Medicaid*)
- 77523 Proton treatment delivery; intermediate (*not covered for Medicaid*)
- 77525 Proton treatment delivery; complex (*not covered for Medicaid*)

Facility billing only:

Revenue code:

- 0333 Radiation therapy (billed with 7xxxx codes listed above)

HCPCS codes:

- G0339 Image guided robotic linear accelerator base 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

These services are not covered:

S8030 Scleral application of tantalum ring(s) for localization of lesions for proton beam therapy

VI. REFERENCES:

- CyberKnife® Robotic Radiosurgery system (Accuray, Inc.) for Non-Neurological Indications, Hayes Search & Summary, December 7, 2006.
- Gerszten P, Burton S, Ozhasoglu C, *et al.* Radiosurgery for the management of spinal metastases. In: Kondziolka D, editor. Radiosurgery. Vol 6. Basel: Karger; 2006. pp. 199-210.
- Gerszten PC, Burton SA, Belani CP, *et al.* Radiosurgery for the treatment of spinal lung metastases. *Cancer* 2006;107:2653-2661.
- Gerszten PC, Burton SA, Ozhasoglu C, *et al.* Radiosurgery for the management of spinal metastases. In: Kondziolka D, editor. Radiosurgery. Vol 6. Basel: Karger; 2006. pp. 199-210.
- Gerszten PC, Burton SA, Ozhasoglu C, *et al.* Stereotactic radiosurgery for spinal metastases from renal cell carcinoma. *J Neurosurg Spine* 2005;3:288-295.
- Gerszten PC, Burton SA, Quinn AE, *et al.* Radiosurgery for the treatment of spinal melanoma metastases. *Stereotact Funct Neurosurg* 2005;83:213-221.
- Gerszten PC, Burton SA, Welch WC, *et al.* Single-fraction radiosurgery for the treatment of spinal breast metastases. *Cancer* 2005;104:2244-2254.
- Sinclair J, Chang SD, Gibbs IC, *et al.* Multisession CyberKnife radiosurgery for intramedullary spinal cord arteriovenous malformations. *Neurosurgery* 2006;58:1081-1089; discussion 1081-1089.
- Degen JW, Gagnon GJ, Voyadzis JM, *et al.* CyberKnife stereotactic radiosurgical treatment of spinal tumors for pain control and quality of life. *J Neurosurg Spine* 2005;2:540-549.
- Le QT, Loo BW, Ho A, *et al.* Results of a phase I dose-escalation study using single-fraction stereotactic radiotherapy for lung tumors. *Journal of Thoracic Oncology* 2006;1:802-809.
- Nuytens JJ, Prevost JB, Praag J, *et al.* Lung tumor tracking during stereotactic radiotherapy treatment with the CyberKnife: Marker placement and early results. *Acta Oncol* 2006;45:961-965.
- Casamassima F, Cavedon C, Francescon P, *et al.* Use of motion tracking in stereotactic body radiotherapy: Evaluation of uncertainty in off-target dose distribution and optimization strategies. *Acta Oncol* 2006;45:943-947.
- Koong AC, Christofferson E, Le QT, *et al.* Phase II study to assess the efficacy of conventionally fractionated radiotherapy followed by a stereotactic radiosurgery boost in patients with locally advanced pancreatic cancer. *Int J Radiat Oncol Biol Phys* 2005;63:320-323.
- Koong AC, Le QT, Ho A, *et al.* Phase I study of stereotactic radiosurgery in patients with locally advanced pancreatic cancer. *Int J Radiat Oncol Biol Phys* 2004;58:1017-1021.

- Stereotactic Radiosurgery, Aetna Clinical Policy Bulletin
@http://www.aetna.com/cpb/medical/data/1_99/0083.html (Retrieved July 27, 2015 & June 15, 2018)
- Proton Beam and Neutron Beam Radiotherapy, Aetna Clinical Policy Bulletin @
http://www.aetna.com/cpb/medical/data/200_299/0270.html (Retrieved July 27, 2015 & June 21, 2018)
- Stereotactic Radiosurgery (SRS) and Stereotactic Body Radiotherapy (SBRT), Anthem Blue Cross Medical Policy @
https://www.anthem.com/ca/medicalpolicies/policies/mp_pw_a050201.htm (Retrieved July 27, 2015 & June 15, 2018)
- Proton Beam Radiation Therapy, Anthem Blue Cross Medical Policy @
https://www.anthem.com/ca/medicalpolicies/policies/mp_pw_a053258.htm (Retrieved July 27, 2015)
- Oken MM, Creech RH, Tormey DC et-al. Toxicity and response criteria of the Eastern Cooperative Oncology Group. Am. J. Clin. Oncol. 1983;5 (6): 649-55. [Pubmed citation](#)
- Hayes, Inc. Proton Beam Therapy for Non-Small Cell Lung Cancer, January 19, 2017
- Hayes, Inc. Stereotactic Radiosurgery for Trigeminal Neuralgia and Movement Disorders, February 26, 2015 and annual reviews
- Hayes, Inc. Stereotactic Body Radiation Therapy with CyberKnife Robotic Radiosurgery System (Accuray Inc.) for Monotherapy of Primary Localized Prostate Cancer, October 13, 2016 and annual reviews
- Hayes, Inc. Stereotactic Body Radiation Therapy with CyberKnife Robotic Radiosurgery System (Accuray Inc.) Boost Treatment in Primary Localized Prostate Cancer, October 20, 2016 and annual reviews
- Stereotactic Radiosurgery (SRS) and Stereotactic Body Radiotherapy (SBRT), Humana Medical Coverage Policy @
http://apps.humana.com/tad/tad_new/Search.aspx?criteria=stereotactic&searchtype=freetext&policyType=both (Retrieved June 15, 2018)
- CMS, Local Coverage Determination (LCD): STEREOTACTIC Radiation Therapy: STEREOTACTIC Radiosurgery (SRS) and STEREOTACTIC Body Radiation Therapy (SBRT) (L35076) @
https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=35076&ver=39&CoverageSelection=Both&ArticleType=All&PolicyType=Final&s=All&Keyword=stereotactic&KeywordLookup=Title&KeywordSearchType=And&list_type=ncd&bc=gAAAAACAAAAA& (Retrieved June 15, 2018)
- Proton and Neutron Beam Radiation Therapy, Humana Medical Coverage Policy @
http://apps.humana.com/tad/tad_new/Search.aspx?criteria=proton&searchtype=freetext&policyType=both (Retrieved June 21, 2018)

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