

Stereotactic Radiosurgery (SRS) and Stereotactic Body Radio Therapy (SBRT)

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Member-specific benefits take precedence over medical policy and benefits may vary across plans. Refer to the individual's benefit plan for details*.

Purpose:

This policy addresses the medical necessity for Stereotactic Radiosurgery (SRS) and Stereotactic Body Radio Therapy (SBRT).

Description & Definitions:

Computer-assisted navigation (CAN) is the use of computer enabled tracking systems to facilitate alignment in a variety of surgical procedures. The goal of CAN is to increase surgical accuracy. **CAN** devices may be image-based or non-image based. Image-based devices use preoperative computed tomography (CT) scans and operative fluoroscopy to direct implant positioning. Non-image-based devices use probes and signaling transducers to transmit signals from anatomic positions to a dedicated computer. Computer-assisted navigation involves three steps: data acquisition, registration, and tracking. The data can be acquired from fluoroscopy, computed tomography (CT) scans or magnetic resonance imaging (MRI) scans, or imageless systems. Registration is relating the images to the anatomical position of the surgical area using "fiducial markers". Tracking is the feedback from the measurement devices regarding the orientation and relative position of tools to bone anatomy. This is medically necessary when used with most intracerebral procedures.

Stereotactic Body Radiation Therapy (SBRT) is a non-surgical higher dose radiation therapy that is used to damage the DNA of tumor cells causing shrinkage and prevent tumor growth. The procedure uses three-dimensional imaging to minimize, localize and target surrounding tissue exposure typically used for small-to-medium size tumors throughout the body such as, but not limited to, the lung, liver, abdomen, spine, prostate, head and neck.

Stereotactic RadioSurgery (SRS) is a non-surgical higher dose radiation therapy that is used to damage the DNA of tumor cells causing shrinkage and prevent tumor growth. The procedure uses three-dimensional imaging to minimize, localize and target surrounding tissue exposure typically used for smaller size tumors such as brain tumors, vascular tumors (blood vessels or lymph vessels), arteriovenous malformations and neurological conditions.

Stereotactic RadioSurgery (SRS) or Stereotactic Body radiation therapy using any of the following methodology: Gamma Knife, Linear Accelerator (LINAC), Cyberknife, X-Knife, Peacock, Trilogy, TomoTherapy, Hi-Art, ONCOR, or Surgical 88

RapidArc is the administration of a single high dose radiation treatment to an extremely precise area while minimizing radiation exposure to the surrounding tissues.

Criteria:

Stereotactic Radio procedures with or without Computer-assisted navigation (CAN) are considered medically necessary for 1 or more of the following:

- **Stereotactic Radio Surgery (SRS)** is considered medically necessary for **1 or more** of the following:
 - Arteriovenous malformation (intracranial), as indicated by **1 or more** of the following:
 - Arteriovenous malformation location makes microsurgery high-risk approach (eg, deep area of brain or speech center).
 - Individual not at significant risk of hemorrhage during period between stereotactic radiosurgery and obliteration of arteriovenous malformation
 - Unacceptable operative risk (eg, advanced age, comorbidity)
 - For the treatment of Benign Brain Lesions (acoustic neuromas, craniopharyngiomas, pineal gland tumors, schwannomas) and individual is symptomatic with **1 or more** of the following:
 - Postoperative residual or recurrent tumor
 - Signs of brainstem compression (eg, facial weakness, numbness or hypesthesias, diplopia, fixation nystagmus)
 - Signs of cerebellar compression (eg, loss of balance, ataxia)
 - Tumor growth seen with MRI monitoring
 - Unilateral sensorineural hearing loss or tinnitus
 - Vertigo or dizziness
 - Breast Cancer as indicated by **ALL of the following**:
 - To treat a previously irradiated field
 - Chordoma, as indicated by **1 or more** of the following:
 - Contraindications to microsurgical resection (eg, unacceptable operative risk or tumor adjacent to critical structures)
 - Residual tumor following surgery
 - Epilepsy, as indicated by **ALL of the following**:
 - Brain MRI findings concordant with EEG findings
 - EEG shows localized epileptogenic source (eg, mesial temporal lobe).
 - Seizures refractory to at least 2 different anticonvulsant medications
 - Essential tremor, as indicated by **ALL of the following**:
 - Deep brain stimulation is not option due to **1 or more** of the following:
 - Individual declines deep brain stimulation
 - Individual has coagulopathy or uses anticoagulants
 - Individual has contraindication to permanent hardware implantation (eg, chronic infection, immunocompromised)
 - Individual is elderly.
 - Individual is unable to keep mandatory, regular, frequent follow-up appointments (eg, due to living long distance from medical care).
 - Disability of one or more limbs from resting, positional, or kinetic tremor that affects safety, functional status, or quality of life
 - Tremor refractory to 1 year or more of standard medication
 - Glomus jugulare tumor, as indicated by **1 or more** of the following:
 - Contraindications to microsurgical resection (eg, unacceptable operative risk or tumor adjacent to critical structures)
 - Residual or recurrent glomus jugulare tumor following microsurgical resection
 - Intracranial cavernous malformation, as indicated by **ALL of the following**:
 - Associated symptoms including **1 or more** of the following:

- Intractable epilepsy
 - Progressive neurologic deterioration
 - Recurrent hemorrhage
- Contraindications to microsurgical resection (eg, unacceptable operative risk or tumor adjacent to critical structures)
- Intracranial hemangioblastoma, as indicated by **1 or more** of the following:
 - Contraindications to microsurgical resection (eg, unacceptable operative risk or tumor adjacent to critical structures)
 - New tumor associated with von-Hippel Lindau disease
 - Progression of residual intracranial hemangioblastoma following microsurgical resection
 - Recurrent sporadic hemangioblastoma following microsurgical resection
- Lymphoma: Hodgkin and Non-Hodgkin, as indicated by **1 or more** of the following:
 - To treat a previously irradiated field
- Meningioma as indicated by **1 or more** of the following:
 - When lesion is unresectable or recurrent, or if there is residual disease following surgery
 - To treat a previously irradiated field
- Pediatric individuals (age 20 years or younger) as indicated by **1 or more** of the following:
 - To treat an intracranial malignancy
 - To treat a previously irradiated field
- Pituitary adenoma, as indicated by **ALL of the following**:
 - Conventional surgery not indicated, due to **1 or more** of the following:
 - Tumor extension or size prohibits more traditional surgical approach.
 - Unacceptable operative risk (eg, advanced age, comorbidity)
 - Unacceptable risk of re-resection
 - Failed medical treatment or inadequate response to pituitary microsurgery (eg, tumor regrowth)
- Primary Malignant Brain Lesions as indicated for **1 or more** of the following:
 - High-Grade Gliomas (grade 3-4) as indicated for **1 or more** of the following:
 - Recurrent disease
 - To treat a previously irradiated field
 - Low-Grade Gliomas (grade 1-2) as indicated for **1 or more** of the following:
 - Initial treatment
 - Recurrent disease
 - To treat a previously irradiated field
 - Medulloblastoma supratentorial primitive neuroectodermal tumors (PNET) Ependymoma as indicated by **ALL of the following**:
 - To treat a previously irradiated field
 - CNS lymphoma as indicated by **ALL of the following**:
 - To treat a previously irradiated field
 - Metastatic Brain Lesions as indicated for **1 or more** of the following:
 - There are 4 or fewer brain metastases
 - Postoperative treatment of 1-2 brain metastases
 - To treat a previously irradiated field
- Sarcoma as indicated by **ALL of the following**:
 - To treat a previously irradiated field
- Thymic Carcinoma as indicated by **ALL of the following**:
 - To treat a previously irradiated field
- Thymoma as indicated by **ALL of the following**:
 - To treat a previously irradiated field
- Trigeminal neuralgia, as indicated by **ALL of the following**:
 - When symptoms are refractory to standard medical management
 - To treat a previously irradiated field

- Uveal Melanoma as indicated by **1 or more** of the following:
 - For treatment of melanoma of the choroid
 - To treat a previously irradiated field
- **Stereotactic Body radiation therapy (SBRT) for 1 or more** of the following:
 - Bone Metastases as indicated by **all of the following**:
 - To treat a previously irradiated field
 - Re-treatment with External Beam Radiation Therapy (EBRT) would result in significant risk of adjacent organ injury
 - Breast Cancer as indicated by **ALL of the following**:
 - To treat a previously irradiated field (prone breast radiotherapy)
 - Colorectal and Anal Cancers (Anal Cancer, Rectal Cancer, Colon Cancer) as indicated by **ALL of the following**:
 - To treat a previously irradiated field
 - Gastrointestinal Cancers, Non-Colorectal (Cholangiocarcinoma, Esophageal Cancer, Gastric Cancer) as indicated by **ALL of the following**:
 - To treat a previously irradiated field
 - Genitourinary Cancers (Bladder Cancer, Penile Cancer, Testicular Cancer) as indicated by **ALL of the following**:
 - To treat a previously irradiated field
 - Gynecologic Cancers (Cervical Cancer, Fallopian Tube Cancer, Ovarian Cancer, Uterine Neoplasms [Endometrial Carcinoma, Uterine Sarcoma, Uterine Carcinosarcoma], Vulvar/Vaginal Cancers) as indicated by **ALL of the following**:
 - To treat a previously irradiated field
 - Head and Neck Cancer (includes paranasal sinus malignant lesions and Thyroid Cancer) as indicated by **ALL of the following**:
 - To treat a previously irradiated field
 - Hepatocellular carcinoma, as indicated by **1 or more** of the following:
 - Sufficient amount of uninvolved liver to tolerate treatment course
 - Individual is not candidate for or refuses surgery and ablation
 - As palliative treatment for individuals with liver-related symptoms
 - As treatment of up to 3 lesions, as an option to surgery or embolization when these therapies have been done and have failed, or are contraindicated, when all of the following conditions are met:
 - Diameter less than 6 cm
 - Individuals with Child-Pugh category A or B (Note: SBRT has not been established as a safe treatment option in patients with Child-Pugh category C cirrhosis)
 - To treat a previously irradiated field
 - Liver metastases, as indicated by **ALL of the following**:
 - As palliative treatment for individuals with liver-related symptoms
 - To treat a previously irradiated field
 - Sufficient amount of uninvolved liver to tolerate treatment course
 - Individual is not candidate for or refuses surgery and ablation.
 - Locoregional recurrence, or tumors arising near previously irradiated regions
 - Lung metastases, as indicated by **1 or more** of the following:
 - To treat oligometastatic disease (see separate section)
 - Individual is not candidate for or refuses surgery
 - Lung Cancer (Non-Small Cell Lung Cancer, Small Cell Lung Cancer) as indicated by **ALL of the following**:
 - As an alternative to surgical resection for **all of the following**:
 - Treatment intent is cure as indicated by **all of the following**:
 - There is no evidence of nodal or distant metastases based on conventional staging techniques (Stage IA, IB, or IIA with negative lymph nodes)

- Single lesion measuring less than or equal to 5 cm
 - Lesion is inoperable for **1 or more** of the following reasons:
 - Tumor location
 - Individual is not a surgical candidate
 - To treat a previously irradiated field
- Lymphoma: Hodgkin and Non-Hodgkin as indicated by **ALL of the following**:
 - To treat a previously irradiated field
- Metastatic Brain Lesions as indicated for **1 or more** of the following:
 - Metastatic Brain Lesions as indicated for **1 or more** of the following:
 - There are 4 or fewer brain metastases
 - Postoperative treatment of 1-2 brain metastases
 - To treat a previously irradiated field
- Oligometastatic Extracranial Disease as indicated by **ALL of the following**:
 - One (1) to three (3) metastatic lesions involving the lungs, liver, adrenal glands or bone
 - Primary tumor is breast, colorectal, melanoma, non-small cell lung, prostate, renal cell, or sarcoma
 - Primary tumor is controlled
 - No prior history of metastatic disease
- Other malignant tumors as indicated by **all of the following**:
 - To treat a previously irradiated field
- Pancreatic Cancer as indicated by **1 or more** of the following:
 - To treat locally advanced or recurrent disease without evidence of distant metastasis
 - To treat a previously irradiated field
- Pediatric individuals (age 20 years or younger) as indicated by **1 or more** of the following:
 - To treat an intracranial malignancy
 - To treat a previously irradiated field
- Prostate cancer, as indicated by **1 or more** of the following:
 - Low-risk disease as indicated by **ALL of the following**:
 - International Society of Urological Pathology (ISUP) Grade Group 1 (Gleason score of 6 or less)
 - Life expectancy 10 years or greater
 - Pretreatment PSA less than 10 ng/mL (mcg/L)
 - Stage T1 to T2a prostate cancer
 - Individual is being treated for 1 or more of the following:
 - As primary treatment
 - To treat a previously irradiated field
 - Intermediate risk of recurrence as indicated by **all of the following**:
 - Individual with **1 or more** of the following:
 - Stage T2b to T2c
 - Gleason score of 7
 - PSA 10-20 ng/mL
 - Individual is being treated for **1 or more** of the following:
 - As primary treatment
 - To treat a previously irradiated field
 - High risk of recurrence as indicated by **all 1 or more** of the following:
 - Individual with **1 or more** of the following:
 - Stage T3a
 - Gleason score 8-10
 - PSA greater than 20 ng/mL
 - Only to treat a previously irradiated field
 - Localized disease with **all of the following**:

- T stage of T1-3a (tumor has spread through the capsule on one or both sides but has not invaded the seminal vesicles or other structures)
- N0 (no lymph node involvement)
- Locally advanced disease with **1 or more** of the following:
 - Any T status with N1 disease (either no spread to lymph nodes or there has been spread to the regional lymph nodes)
 - T3b and above, no distant metastatic disease beyond local lymph nodes
- Post-prostatectomy as indicated by **ALL of the following**:
 - To treat a previously irradiated field
- Local recurrence after radiotherapy as indicated by **ALL of the following**:
 - To treat locally recurrent disease with no evidence of distant metastasis
- Spine Lesions (Primary or Metastatic Lesions of the Spine) as indicated by 1 or more of the following:
 - Individual meets **1 or more** of the following:
 - Metastasis resistant to conventional external beam radiotherapy (eg, sarcoma, melanoma, renal cell carcinoma, non-small cell lung cancer, colon carcinoma)
 - Need for additional treatment (eg, palliation of symptoms)
 - No cord compression
 - No spinal fracture or instability
 - When other treatment options are not available for **all of the following**:
 - Not amenable to surgical resection for **1 or more** of the following:
 - Related to prior surgery, tumor location, or surgical candidacy
 - Surgery alone is not an option
 - When lesions are not amenable to 3D conformal techniques
 - To treat a previously irradiated field

Stereotactic Radiosurgery (SRS) and Stereotactic Body Radio Therapy (SBRT) are considered **not medically necessary** for any use other than those indicated in clinical criteria.

Coding:

Medically necessary with criteria:

Coding	Description
32701	Thoracic target(s) delineation for stereotactic body radiation therapy (SRS/SBRT), (photon or particle beam), entire course of treatment
61720	Creation of lesion by stereotactic method, including burr hole(s) and localizing and recording techniques, single or multiple stages; globus pallidus or thalamus
61735	Creation of lesion by stereotactic method, including burr hole(s) and localizing and recording techniques, single or multiple stages; subcortical structure(s) other than globus pallidus or thalamus
61760	Stereotactic implantation of depth electrodes into the cerebrum for long-term seizure monitoring
61770	Stereotactic localization, including burr hole(s), with insertion of catheter(s) or probe(s) for placement of radiation source

61781	Stereotactic computer-assisted (navigational) procedure; cranial, intradural (List separately in addition to code for primary procedure)
61782	Stereotactic computer-assisted (navigational) procedure; cranial, extradural (List separately in addition to code for primary procedure)
61783	Stereotactic computer-assisted (navigational) procedure; spinal (List separately in addition to code for primary procedure)
61790	Creation of lesion by stereotactic method, percutaneous, by neurolytic agent (eg, alcohol, thermal, electrical, radiofrequency); gasserian ganglion
61791	Creation of lesion by stereotactic method, percutaneous, by neurolytic agent (eg, alcohol, thermal, electrical, radiofrequency); trigeminal medullary tract
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 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
77432	Stereotactic radiation treatment management of cranial lesion(s) (complete course of treatment consisting of 1 session)

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
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 5 sessions per course of treatment

Considered Not Medically Necessary:

Coding	Description
	None

U.S. Food and Drug Administration (FDA) - approved only products only.

Document History:

Revised Dates:

- 2023: May
- 2022: May, November
- 2021: June
- 2020: January
- 2015: April
- 2014: May, October
- 2013: April
- 2012: April
- 2011: April, June, September
- 2010: April
- 2009: January, April

Reviewed Dates:

- 2020: July
- 2019: January
- 2017: January
- 2016: January
- 2014: April
- 2010: March

Effective Date:

- May 2008

References:

Specialty Association Guidelines; Government Regulations; Winifred S. Hayes, Inc; UpToDate; Literature Review; Specialty Advisors; National Coverage Determination (NCD); Local Coverage Determination (LCD).

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Special Notes: *

This medical policy expresses Sentara Health Plan's determination of medical necessity of services, and they are based upon a review of currently available clinical information. Medical policies are not a substitute for clinical judgment or for any prior authorization requirements of the health plan. These policies are not an explanation of benefits.

Medical policies can be highly technical and complex and are provided here for informational purposes. These medical policies are intended for use by health care professionals. The medical policies do not constitute medical advice or medical care. Treating health care professionals are solely responsible for diagnosis, treatment and medical advice. Sentara Health Plan members should discuss the information in the medical policies with their treating health care professionals. Medical technology is constantly evolving and these medical policies are subject to change without notice, although Sentara Health Plan will notify providers as required in advance of changes that could have a negative impact on benefits.

Keywords:

Stereotactic Radio Surgery, SRS, Gamma Knife, Linear Accelerator, LINAC, Cyberknife, X-Knife, Peacock, Trilogy, TomoTherapy, Hi-Art, ONCOR, RapidArc, Surgical 88, radiosurgery, radiation, fractions, Acoustic neuroma, Arterio-Venous Malformation, Hemangioma, Intracranial aneurysm, Pituitary Adenoma, Craniopharyngioma, Pineal gland, neoplasm, Nonresectable, Non-resectable, metastasis, brain metastasis, glioma, salvage therapy, Trigeminal neuralgia, schwannoma, uveal melanoma, malignancy, spinal tumors, lung, liver, kidney, adrenal, pancreas, tumor, radiotherapy, lesion, seizure, tremor, intractable, chordoma, Glomus jugulare, prostate