MASSACHUSETTS

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Medical Policy

High-Dose Rate Temporary Prostate Brachytherapy

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Policy Number: 353

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NCD/LCD: NA

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Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO Blue℠ and Medicare PPO Blue℠ Members

High-dose rate prostate brachytherapy may be **MEDICALLY NECESSARY** as monotherapy or in conjunction with external beam radiation therapy in the treatment of localized prostate cancer.

High-dose rate prostate brachytherapy is **INVESTIGATIONAL** in the treatment of prostate cancer when used as salvage therapy.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	Prior authorization is **not required**.

Commercial PPO and Indemnity	Prior authorization is **not required**.
Medicare HMO Blue[SM]	Prior authorization is **not required**.
Medicare PPO Blue[SM]	Prior authorization is **not required**.

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The above medical necessity criteria MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

CPT Codes

CPT codes:	Code Description
55860	Exposure of prostate, any approach, for insertion of radioactive substance
55875	Transperineal placement of needles or catheters into prostate for interstitial radioelement application, with or without cystoscopy
76873	Ultrasound, transrectal; prostate volume study for brachytherapy treatment planning
76965	Ultrasound guidance for interstitial radioelement application
77316	Brachytherapy isodose plan; simple (calculation[s] made from 1 to 4 sources, or remote afterloading brachytherapy, 1 channel), includes basic dosimetry calculation(s)
77317	Brachytherapy isodose plan; intermediate (calculation[s] made from 5 to 10 sources, or remote afterloading brachytherapy, 2-12 channels), includes basic dosimetry calculation(s)
77318	Brachytherapy isodose plan; complex (calculation[s] made from over 10 sources, or remote afterloading brachytherapy, over 12 channels), includes basic dosimetry calculation(s)
77770	Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; 1 channel
77771	Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; 2-12 channels
77772	Remote afterloading high dose rate radionuclide interstitial or intracavitary brachytherapy, includes basic dosimetry, when performed; over 12 channels
77778	Interstitial radiation source application, complex, includes supervision, handling, loading of radiation source, when performed
77790	Supervision, handling, loading of radiation source

HCPCS Codes

HCPCS codes:	Code Description
C1717	Brachytherapy source, nonstranded, high dose rate iridium-192, per source
C2638	Brachytherapy source, stranded, iodine-125, per source
C2639	Brachytherapy source, nonstranded, iodine-125, per source
C2640	Brachytherapy source, stranded, palladium-103, per source
C2641	Brachytherapy source, nonstranded, palladium-103, per source
C2642	Brachytherapy source, stranded, cesium-131, per source
C2643	Brachytherapy source, nonstranded, cesium-131, per source

Q3001	Radioelements for brachytherapy, any type, each

The following ICD Diagnosis Codes are considered medically necessary when submitted with the CPT codes above if medical necessity criteria are met:

ICD-10 Diagnosis Codes

ICD-10-CM Diagnosis codes:	Code Description
C61	Malignant neoplasm of prostate
D07.5	Carcinoma in situ of prostate

Description

Brachytherapy for prostate cancer can be delivered in a variety of ways. Perhaps the most common technique uses radioactive seeds permanently implanted into the prostate tissue. These seeds contain isotopes that slowly emit radiation of relatively low energy. In contrast, temporary prostate brachytherapy involves the use of higher energy radioisotopes such as iridium 192. The latter isotopes deliver radiation at higher dose rates than permanent seeds and may be more effective in destroying rapidly dividing cancer cells. For implantation, needle catheters are placed into the prostate gland using transrectal ultrasound guidance. Once placed, a dosimetric plan is developed, and the radioactive source is inserted into each needle using an after loading device. The radioactive source is left in the needle for a predetermined time, called the "dwell" time. The radiation usually is delivered once or twice daily over several days. The dwell time can be altered at various positions along the needle's length to control dose distribution to the target volume and critical surrounding structures (eg, rectum, urethra). This strategy contrasts with permanent seed implantation in which dosimetry is calculated before needle placement and which cannot be altered after seed implantation. Treatment typically consists of delivering a dose of 4000 to 5000 centigray with external-beam radiotherapy (EBRT) to the prostate and periprostatic tissues, while high-dose rate (HDR) brachytherapy is used as the method of dose escalation to the prostate gland. Total boost doses vary. Additionally, studies are also being conducted using HDR brachytherapy as the sole treatment modality (monotherapy) for prostate cancer.

It is accepted that increasing doses of radiotherapy are associated with improved biochemical control (ie, stable levels of prostate-specific antigen), and thus there has been an interest in exploring different techniques of dose escalation, simultaneously limiting both early and late toxicities in surrounding tissues. In patients with the locally advanced disease, it has been hypothesized that local failure might be related to large tumor volume and radioresistant cell clones, both of which might respond to higher radiation doses. HDR brachytherapy has been primarily investigated as an adjunct to EBRT for dose escalation. Other techniques for dose escalation include EBRT using intensity-modulated radiotherapy for treatment planning and delivery, proton beam therapy (which may also use intensity-modulated radiotherapy), or EBRT combined with brachytherapy using interstitial seeds.

Summary

Description

High-dose rate (HDR) temporary prostate brachytherapy is a technique for delivering a high-intensity radiation source directly to the prostate gland to treat cancer. The radiation source is administered through hollow catheters or needles inserted precisely into several areas of the prostate gland using ultrasound guidance and treatment planning computed tomography or ultrasound images. Radiation is applied to target areas until the prescribed dose is reached and is then removed. The goal of treatment is to induce direct tumor necrosis and reduce toxicity and surrounding tissue damage.

Summary of Evidence

For individuals who have localized prostate cancer who receive HDR temporary brachytherapy plus external-beam radiotherapy (EBRT), the evidence includes randomized controlled trials (RCTs), observational studies, and a systematic review. Relevant outcomes are overall survival (OS), disease-specific survival, and treatment-related morbidity. One of the RCTs found no statistically significant

differences in outcomes between patients treated with HDR brachytherapy plus EBRT and those receiving radical prostatectomy. The other RCT found significantly better biochemical recurrence-free survival, but not better OS, in patients treated with HDR brachytherapy plus EBRT compared with EBRT alone. Among several controlled observational studies with matched analyses, one has reported 5 year OS rates for HDR brachytherapy plus EBRT similar to those of 1 of the RCTs. In another study, 4 year biochemical recurrence-free survival was significantly higher after HDR brachytherapy plus EBRT than after EBRT alone. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have localized prostate cancer who receive HDR temporary brachytherapy as monotherapy, the evidence includes large observational studies and systematic reviews. Relevant outcomes are OS, disease-specific survival, and treatment-related morbidity. A number of observational studies, controlled and uncontrolled, have been published. Systematic reviews have found biochemical recurrence-free survival rates of 80% to 100%. Long-term survival data are available from case series; 1 found an 8-year survival rate of 95% and another found an actutimes 10-year survival rate of 77%. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have treatment-resistant or recurrent prostate cancer and no disseminated disease who receive HDR temporary brachytherapy as salvage treatment with or without EBRT, the evidence includes case series. Relevant outcomes are OS, disease-specific survival, and treatment-related morbidity. Only 3 cases series have reported survival outcomes; no comparative studies have been published. In these series, median 5-year OS rates after salvage HDR brachytherapy ranged from 83% to 95.5% and the median 5-year biochemical control rate ranged from 45% to 67%. Rates of grade 3 or 4 toxicities were relatively low. The evidence is insufficient to determine the effects of the technology on health outcomes.

Policy History

Date	Action
11/2020	BCBSA National medical policy review. Description, summary, and references updated. Policy statements unchanged.
9/2019	BCBSA National medical policy review. Description, summary, and references updated. Policy statements unchanged.
9/2018	BCBSA National medical policy review. No changes to policy statements. New references added. Background and summary clarified.
8/2017	New references added from BCBSA National medical policy.
8/2016	New references added from BCBSA National medical policy.
1/2016	Clarified coding information.
8/2015	New references added from BCBSA National medical policy.
1/2015	Clarified coding information.
9/2014	New references added from BCBSA National medical policy.
5/2014	Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.
8/2013	New references from BCBSA National medical policy.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
1/1/2012	New policy, effective 01/01/2012, describing covered and non-covered indication.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

Medical Policy Terms of Use
Managed Care Guidelines
Indemnity/PPO Guidelines
Clinical Exception Process
Medical Technology Assessment Guidelines

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