Corporate Medical Policy

Perirectal Spacer Use During Radiotherapy for Prostate Cancer

File Name: perirectal_spacer_use_during_radiotherapy_for_prostate_cancer
Origination: 2/2019
Last Review: 5/2023

Description of Procedure or Service

Prostate cancer is a complex, heterogeneous disease, ranging from microscopic tumors unlikely to be life-threatening to aggressive tumors that can metastasize, leading to morbidity or death. It is the second most common cancer in men, with over 1 in 10 men diagnosed with prostate cancer over their lifetime. Cancer is typically suspected due to increased levels of prostate-specific antigen upon screening. A digital rectal exam may detect nodules, induration, or asymmetry, which is then followed by an ultrasound-guided biopsy with evaluation of the number and grade of positive biopsy core.

Radiation therapy for prostate cancer
Localized prostate cancer may be treated using surgery or definitive radiation therapy. Highly conformal radiation techniques are used in order to minimize toxicity to surrounding normal organs and structures, however, side effects can still occur. Radiation induced toxicity can cause acute symptoms (occurring during radiotherapy or within three months) and/or chronic symptoms (persisting or appearing after three months). Acute gastrointestinal (GI) symptoms can include diarrhea, abdominal pain, nausea, bloating, rectal bleeding and urgency. Chronic GI symptoms can include fecal incontinence, urgency, rectal bleeding, flatulence and abdominal pain.

Various factors contribute to the risk of toxicity to normal tissues, including the type of radiation therapy, the size of the treatment field and dose delivered. Dose escalation of radiation therapy may improve cancer outcomes but also increases the risk of toxicity to surrounding tissue. Image-guided radiation therapy and conformal radiation techniques may be used to limit margins and reduce toxicity but, in the case of prostate cancer, because the rectum lies in close proximity, the risk of rectal toxicity remains high.

Perirectal Spacers
One proposed approach to potentially decrease rectal toxicity associated with radiation therapy to the prostate is to increase the space between the two organs during radiation therapy. A variety of biomaterials, including collagen, hyaluronic acid, polyethylene glycol (PEG) hydrogels, and absorbable balloons have been evaluated as a means to reduce radiation exposure to the anterior rectal wall. The SpaceOAR System is the first PEG hydrogel that was cleared by the U.S Food and Drug Administration specifically for use during radiation therapy of the prostate. The chemical composition of the SpaceOAR is similar to a PEG-based hydrogel that is Food and Drug Administration approved as a dural sealant. Hydrodissection is achieved with saline between the retroprostatic (Denonvilliers') fascia and the anterior rectal wall using a transperineal approach. Once the needle placement is confirmed, two solutions in a two-channel syringe are injected into the perirectal space. The hydrogel then polymerizes to form a soft mass. The hydrogel maintains the space for approximately 3-6 months, the duration of radiotherapy, and is completely absorbed by 12 months. The PEG hydrogel may be injected at the same time as the placement of fiducial markers in the prostate.

Regulatory Status
In October 2014, SpaceOAR® (Augmenix) was cleared by the Food and Drug Administration through the De Novo process (DEN140030). "SpaceOAR System is intended to temporarily position the

anterior rectal wall away from the prostate during radiotherapy for prostate cancer and in creating this space it is the intent of SpaceOAR System to reduce the radiation dose delivered to the anterior rectum."

Policy

BCBSNC will provide coverage for transperineal placement of a biodegradable, perirectal spacer in individuals receiving radiotherapy for prostate cancer (ie SpaceOAR) when it is determined to be medically necessary because the medical criteria and guidelines shown below have been met.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When Perirectal Spacer Use in Radiotherapy for Prostate Cancer is covered

Transperineal placement of a biodegradable, perirectal spacer (ie SpaceOAR) may be considered **medically necessary** in individuals undergoing external beam radiation therapy (IMRT or SBRT) for organ-confined prostate cancer.

When Perirectal Spacer Use in Radiotherapy for Prostate Cancer is not covered

Transperineal, placement of a biodegradable perirectal spacer (ie SpaceOAR) is considered **investigational** when the above criteria are not met, including use with brachytherapy monotherapy.

Policy Guidelines

For low or intermediate risk prostate cancer, radiation therapy is an option. The rectum lies in close proximity to the prostate and is at risk for toxicity due to radiation therapy. One proposed approach is to displace the rectum away from the prostate, increasing the space between the two and reducing the radiation dose to the rectum. A variety of biomaterials, including polyethylene glycol hydrogels (eg, SpaceOAR System) have been evaluated as perirectal spacers.

Evidence Summary

For individuals who have prostate cancer and are undergoing radiation therapy who receive a perirectal spacer, the evidence includes a pivotal randomized controlled trial with three year follow-up, observational studies, and systematic reviews of these studies. Relevant outcomes include symptoms, quality of life, and treatment-related morbidity. The combined evidence indicates that the hydrogel spacer can reduce the radiation dose to the rectum with a statistically significant decrease in Grade 1 or greater late toxicity and a number needed to treat of 14.3. There were few events of greater than Grade 1 toxicity in either group, and the number needed to treat for a reduction in clinically significant Grade 2 toxicity has been reported as 68. Patient-reported declines in rectal and urinary quality of life at 3 years were statistically lower in the spacer group and met the threshold for a clinically significant difference, although patients were not blinded to treatment at the longer-term follow-up. The number needed to treat for late improvement in rectal and urinary quality of life were 6.3 to 6.7, respectively. Limitations to the study include the lack of blinding and the exclusion of patients who might be at greater risk of rectal toxicity.

The Barrigel randomized clinical trial included 201 adult patients across 12 centers in the United States, Australia, and Spain. Participants had biopsy-proven T1 to T2 prostate cancer disease with a Gleason score of 7 or less. All patients underwent hypofractionated radiation therapy, with 136 patients undergoing treatment with the presence of the spacer and 65 patients undergoing therapy without it.

The primary efficacy end point was the percentage of patients who achieved at least a 25% reduction in radiation dose to the rectum. The secondary end point was the percentage of patients who experienced grade 2+ gastrointestinal (GI) toxic effects, as classified by the Common Terminology Criteria for Adverse Events, within the first 3 months. The investigators found that Barrigel was effective at achieving a clinically significant reduction of radiation dosage to the rectum as well as in reducing adverse events.

In the study, 98.5% of patients who were treated with Barrigel met the primary end point of achieving at least a 25% reduction in radiation dose to the rectum, leading to fewer side effects. Patients who met the primary end point averaged an 85% reduction in radiation to the rectum.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable service codes: 55874

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.164, 1/17/2019

Hamstra DA, Mariados N, Sylvester J, et al. Sexual quality of life following prostate intensity modulated radiation therapy (IMRT) with a rectal/prostate spacer: Secondary analysis of a phase 3 trial. Pract Radiat Oncol. 2018 Jan - Feb;8(1):e7-e15.

Hamstra DA, Mariados N, Sylvester J, et al. Continued Benefit to Rectal Separation for Prostate Radiation Therapy: Final Results of a Phase III Trial. Int J Radiat Oncol Biol Phys. 2017 Apr 1;97(5):976-985.

Lawrie TA, Green JT, Beresford M, et al. Interventions to reduce acute and late adverse gastrointestinal effects of pelvic radiotherapy for primary pelvic cancers. Cochrane Database Syst Rev. 2018 Jan 23;1:CD012529.

Mariados N, Sylvester J, Shah D, et al. Hydrogel Spacer Prospective Multicenter Randomized Controlled Pivotal Trial: Dosimetric and Clinical Effects of Perirectal Spacer Application in Men Undergoing Prostate Image Guided Intensity Modulated Radiation Therapy. Int J Radiat Oncol Biol Phys. 2015 Aug 1;92(5):971-977.

Prada PJ, Gonzalez H, Menéndez C, et al. Transperineal injection of hyaluronic acid in the anterior perirectal fat to decrease rectal toxicity from radiation delivered with low-dose-rate brachytherapy for prostate cancer patients. Brachytherapy. 2009 Apr-Jun;8(2):210-217.

Medical Director review 3/2019

Specialty Matched Consultant Advisory Panel 5/2019

Medical Director review 5/2019

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.164, 1/16/20

Specialty Matched Consultant Advisory Panel 5/2020

Medical Director review 5/2020

Medical Director review 9/2020

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.164, 1/14/21

Specialty Matched Consultant Advisory Panel 5/2021

Medical Director review 5/2021

Medical Director review 10/2021

Specialty Matched Consultant Advisory Panel 5/2022

Medical Director review 5/2022

Specialty Matched Consultant Advisory Panel 5/2023

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Mariados NF, Orio III PF, Schiffman Z, et al. Hyaluronic acid spacer for hypofractionated prostate radiation therapy: a randomized clinical trial. *JAMA Oncology*. 2023 Feb 9; e227592. doi: 10.1001/jamaoncol.2022.7592

Policy Implementation/Update Information

3/12/19 New policy developed. Perirectal spacer use during radiotherapy for prostate cancer is considered **investigational.** Medical Director review 3/2019. Reference added. Notification given 3/12/19 for effective date 5/14/19. (lpr)

5/28/19 Specialty Matched Consultant Panel review 5/15/2019. No change to policy statement. (lpr)

6/26/20 Specialty Matched Consultant Panel review 5/20/2020. Reference added. No change to policy statement. (lpr)

10/1/20 Under "When Covered" section: added medical necessity coverage for perirectal spacer use in prostate cancer: "Transperineal placement of a biodegradable, perirectal spacer (ie SpaceOAR) may be considered **medically necessary** in individuals undergoing external beam radiation therapy (IMRT or SBRT) for organ-confined prostate cancer." Updated policy guidelines. Medical Director review 9/2020. (lpr)

6/15/21 Specialty Matched Consultant Panel review 5/19/2021. Updated Description and Policy Guidelines sections. Reference added. Under Description section, clarified statement that hydrogel maintains the space for 3-6 months. (lpr)

11/2/21 Under "When Not Covered" section: added "including use with brachytherapy monotherapy" to the investigational statement. Medical Director review 10/2021. Notification given 11/02/21 for effective date 1/1/22. (lpr)

5/31/22 Specialty Matched Consultant Panel review 5/18/2022. No change to policy statement. (lpr)

6/13/23 Specialty Matched Consultant Panel review 5/17/2023. No change to policy statement. Policy guidelines updated. Reference added. (lpr)