Effective November 1, 2023, refer to CMS Manual 100-02, Chapter 16-General Exclusions from Coverage for services included in this policy.

BlueCross BlueShield of Alabama

Name of Blue Advantage Policy:

Radioimmunoscintigraphy (Monoclonal Antibody Imaging) with Indium-111 Capromab Pendetide for Prostate Cancer

Policy #: 249
Latest Review Date: October 2022
Category: Radiology
ARCHIVED EFFECTIVE 11/1/2023

BACKGROUND:

Blue Advantage *medical policy does not conflict with Local Coverage Determinations (LCDs), Local Medical Review Policies (LMRPs) or National Coverage Determinations (NCDs) or with coverage provisions in Medicare manuals, instructions or operational policy letters. In order to be covered by Blue Advantage the service shall be reasonable and necessary under Title XVIII of the Social Security Act, Section 1862(a)(1)(A). The service is considered reasonable and necessary if it is determined that the service is:*

1. *Safe and effective;*
2. *Not experimental or investigational*;*
3. *Appropriate, including duration and frequency that is considered appropriate for the service, in terms of whether it is:*
   - *Furnished in accordance with accepted standards of medical practice for the diagnosis or treatment of the patient's condition or to improve the function of a malformed body member;*
   - *Furnished in a setting appropriate to the patient's medical needs and condition;*
   - *Ordered and furnished by qualified personnel;*
   - *One that meets, but does not exceed, the patient's medical need; and*
   - *At least as beneficial as an existing and available medically appropriate alternative.*

Routine costs of qualifying clinical trial services with dates of service on or after September 19, 2000 which meet the requirements of the Clinical Trials NCD are considered reasonable and necessary by Medicare. Providers should bill* ***Original Medicare* *for covered services that are related to* ***clinical trials*** *that meet Medicare requirements (Refer to Medicare National Coverage Determinations Manual, Chapter 1, Section 310 and Medicare Claims Processing Manual Chapter 32, Sections 69.0-69.11).*

POLICY:

Blue Advantage will treat **radioimmunoscintigraphy using indium-111 capromab pendetide (ProstaScint®)** as a **non-covered benefit** and as **investigational.**

Blue Advantage does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Advantage administers benefits based on the members' contract and medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

DESCRIPTION OF PROCEDURE OR SERVICE:

Radioimmunoscintigraphy (RIS) involves the administration of radiolabeled monoclonal antibodies, which are directed against specific molecular targets, followed by imaging with an external gamma camera. Indium-111 capromab pendetide (ProstaScint®) is a monoclonal antibody directed against a binding site on prostate-specific membrane antigen (PSA).

Radioimmunoscintigraphy is an imaging modality that uses radiolabeled monoclonal antibodies to target specific tissue types. Monoclonal antibodies that react with specific cellular antigens are conjugated with a radiolabeled isotope. The labeled antibody-isotope conjugate is then injected into the patient and allowed to localize to the target over a 2 to 7-day period. The patient then undergoes imaging with a nuclear medicine gamma camera, and radioisotope counts are analyzed. Imaging can be performed with planar techniques or by using single-photon emission computed tomography (SPECT).

KEY POINTS:

The most recent update with literature review covers the period through October 27, 2022.

Summary of Evidence

For individuals who have prostate cancer and are undergoing staging before curative treatment who receive RIS with indium 111 capromab pendetide, the evidence includes diagnostic accuracy studies and a systematic review (TEC Assessment). Relevant outcomes are overall survival, disease-specific survival, test accuracy, and test validity. For pretreatment staging before curative treatment, a TEC Assessment found that RIS has a modest sensitivity, estimated at 50% to 75%, and a moderate to high specificity, estimated at 72% to 93%. No studies have demonstrated that the use of RIS for pretreatment staging changes patient management or improves health outcomes. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have prostate cancer and have biochemical failure after curative treatment who receive RIS with indium 111 capromab pendetide, the evidence includes case series.

Relevant outcomes are overall survival, disease-specific survival, test accuracy, and test validity. The available case series were generally retrospective, descriptive, and did not provide consistent verification of disease status. Thus, the studies do not permit accurate estimation of the rate of false-positive and false-negative RIS. There is a lack of published evidence demonstrating an association between RIS findings and change in patient management or health outcomes in this population of patients. The evidence is insufficient to determine the effects of the technology on health outcomes.

Practice Guidelines and Position Statements

National Comprehensive Cancer Network

The National Comprehensive Cancer Network guidelines for prostate cancer (v.1.2022) do not mention ProstaScint or radioimmunoscintigraphy.

American College of Radiology

In 2018, the American College of Radiology's Appropriateness Criteria rated the appropriateness of various imaging tests in men with rising prostate-specific antigen levels after prostatectomy or radiotherapy. Indium 111 capromab pendetide (ProstaScint) scans were found to be "not routinely used in the evaluation of prostate cancer recurrence" and studies "have demonstrated no benefit with use of capromab pendetide in selection of patients for local salvage therapy." It was also noted that for salvage therapy with a rising prostate specific antigen, use of "ProstaScint provided no incremental value in appropriately selected patients compared to basic clinicopathologic factors alone."

U.S. Preventive Services Task Force Recommendations

Not applicable.

KEY WORDS:

Capromab Pendetide, Indium-111, ProstaScint®, Radioimmunoscintigraphy

APPROVED BY GOVERNING BODIES:

In 1996, Indium 111 capromab pendetide (ProstaScint®) (also referred to as CYT-356) which targets an intracellular binding site on prostate-specific membrane antigen. It was approved by the U.S. Food and Drug Administration through the biologics license application process for use as a “diagnosing imaging agent in newly diagnosed patients with biopsy-proven prostate cancer, thought to be clinically localized after standard diagnostic evaluation, who are at high risk for pelvic lymph node metastases..[It] is also indicated in post-prostatectomy patients with a rising prostate specific-antigen (PSA) and a negative or equivocal standard metastatic evaluation in whom there is a high clinical suspicion of occult metastatic disease.” Other monoclonal antibodies, directed at extracellular prostate-specific membrane antigen binding sites, are also under development.

As of April 2018, Aytu BioScience voluntarily discontinued the manufacture and distribution of Prostascint® in the United States.

BENEFIT APPLICATION:

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

CURRENT CODING:

CPT Codes:

78800	Radiopharmaceutical localization of tumor or distribution of radiopharmaceutical agent(s); planar, single area, single day imaging
78801	Radiopharmaceutical localization of tumor or distribution of radiopharmaceutical agent(s); planar, 2 or more areas, 1 or more days imaging or single area imaging over 2 or more days
78802	Radiopharmaceutical localization of tumor or distribution of radiopharmaceutical agent(s); planar, whole body, single day imaging
78803	Radiopharmaceutical localization of tumor or distribution of radiopharmaceutical agent(s); single area, single day imaging, tomographic (SPECT)
78804	Radiopharmaceutical localization of tumor or distribution of radiopharmaceutical agent(s); planar, whole body, requiring 2 or more days imaging

HCPCS:

A9507	Indium In-111 capromab pendetide, diagnostic, per study dose, up to 10 millicuries

REFERENCES:

1. American College of Radiology. ACR Appropriateness Criteria: Post-Treatment Followup of Prostate Cancer. 2017; www.guidelinecentral.com/summaries/acr-appropriateness-criteria-post-treatment-follow-up-of-prostate-cancer/#section-society.
2. IOM (Institute of Medicine). 2011. Clinical Practice Guidelines We Can Trust. Washington, DC: The National Academies Press.
3. Manafi-Farid R, Ranjbar S, Jamshidi Araghi Z, Pilz J, Schweighofer-Zwink G, Pirich C, Beheshti M. Molecular Imaging in Primary Staging of Prostate Cancer Patients: Current Aspects and Future Trends. Cancers (Basel). 2021 Oct 26;13(21):5360. doi: 10.3390/cancers13215360.

4. National Comprehensive Cancer Network. Clinical Practice Guidelines in Oncology. Prostate Cancer. Version 1.2022. ww.nccn.org/professionals/physician_gls/pdf/prostate.pdf.
5. Rieter WJ, Keane TE, Ahlman MA et al. Diagnostic performance of In-111 capromab pendetide SPECT/CT in localized and metastatic prostate cancer. Clinical nuclear medicine 2011; 36(10):872-8.
6. Schuster DM, Nieh PT, Jani AB et al. Anti-3-[18F]FACBC PET-CT and 111In-capromab-pendetide SPECT-CT in Recurrent Prostate Carcinoma: Results of a Prospective Clinical Trial. J Urol 2013.
7. Schuster DM, Nieh PT, Jani AB, et al. Anti-3-[18F]FACBC PET-CT and 111In-capromab-pendetide SPECT-CT in Recurrent Prostate Carcinoma: Results of a Prospective Clinical Trial. J Urol. Oct 18 2013.
8. Sengupta S, Asha Krishnan M, Chattopadhyay S, Chelvam V. Comparison of prostate-specific membrane antigen ligands in clinical translation research for diagnosis of prostate cancer. Cancer Rep (Hoboken). 2019 Aug;2(4):e1169. doi: 10.1002/cnr2.1169. Epub 2019 Apr 2.
9. Tsivian M, Wright T, Price M et al. 111-In-capromab pendetide imaging using hybrid-gamma camera-computer tomography technology is not reliable in detecting seminal vesicle invasion in patients with prostate cancer. Urol Oncol 2012; 30(2):150-4.
10. Wong WW, Schild SE, Vora SA et al. Image-guided radiotherapy for prostate cancer: a prospective trial of concomitant boost using indium-111-capromab pendetide (ProstaScint) imaging. International journal of radiation oncology, biology, physics 2011; 81(4):e423-9.

POLICY HISTORY:

Adopted for Blue Advantage, April 2011
Available for comment April 13 – May 30, 2011
Medical Policy Group, February 2012
Medical Policy Group, May 2013
Medical Policy Group, January 2014
Medical Policy Group, January 2015
Medical Policy Group, September 2016
Medical Policy Group, October 2017
Medical Policy Group, September 2018 **(9):** 2018 Updates to Description, Key Points & References. No change to policy statement.
Medical Policy Group, October 2019
Medical Policy Group, September 2020
Medical Policy Group, October 2020
Medical Policy Group, October 2021
Medical Policy Group, October 2022: Reviewed by consensus. No new published peer-reviewed literature available that would alter the coverage statement in this policy.
Medical Policy Group, November 2023: Archived effective 11/1/2023.

This medical policy is not an authorization, certification, explanation of benefits, or a contract. Eligibility and benefits are determined on a case-by-case basis according to the terms of the member's plan in effect as of the date services are rendered. All medical policies are based on (i) research of current medical literature and (ii) review of common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.

This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield's administration of plan contracts.