Plugs for Anal Fistula Repair

Policy # 00598
Original Effective Date: 04/01/2018
Current Effective Date: 02/08/2021

Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc.(collectively referred to as the "Company"), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers biosynthetic fistula plugs, including plugs made of porcine small intestine submucosa or of synthetic material for the repair of anal fistulas to be **investigational.***

Background/Overview

Anal Fistulas

An anal fistula is an abnormal communication between the interior of the anal canal or rectum and the skin surface. Rarer forms may communicate with the vagina or other pelvic structures, including the bowel. Most fistulas begin as anorectal abscesses, which are thought to arise from infection in the glands around the anal canal. When the abscess opens spontaneously in the anal canal (or has been opened surgically), a fistula may occur. Studies have reported that 26% to 37% of cases of perianal abscesses eventually form anal fistulas.

Other causes of fistulas include tuberculosis, cancer, prior radiotherapy, and inflammatory bowel disease. Fistulas may occur singly or in multiples. Symptoms include a purulent discharge and drainage of pus and/or stool near the anus, which can irritate the outer tissues causing itching and discomfort. Pain occurs when fistulas become blocked, and abscesses recur. Flatus may also escape from the fistulous tract.

The most widely used classification of anal fistulas is the Parks classification system, which defines anal fistulas by their position relative to the anal sphincter as transsphincteric, intersphincteric, suprasphincteric, or extrasphincteric. More simply, anal fistulas are described as low (present distally and not extending up to the anorectal sling) or high (extending up to or beyond the anorectal sling). The repair of high fistulas can be associated with

incontinence. Diagnosis may involve a fistula probe, anoscopy, fistulography, ultrasound, or magnetic resonance imaging.

Treatment
Treatment is aimed at repairing the fistula without compromising continence.

Surgical treatments for anal fistulas includefistulotomy or fistulectomy,endorectal or anal sliding flaps, ligation of the intersphincteric fistula tract technique, seton drain, and fibrin glue. Fistulotomy involves a division of the tissue over the fistula and laying open of the fistula tract. Although fistulotomies are widely used for low fistulas, lay-open fistulotomies in high fistulas carry the risk of incontinence. A seton is a thread placed through the fistula tract to drain fistula material and preventing the development of a perianal infection. Draining setons can control sepsis, but few patients heal after removal of the seton, and the procedure is poorly tolerated long-term. A "cutting seton" refers to the process of regular tightening of the seton to encourage the gradual cutting of the sphincteric muscle with subsequent inflammation and fibrosis. Cutting setons can cause continence disturbances.Endorectal advancement flaps involve the advancement of a full or partial thickness flap of the proximal rectal wall over the internal (rectal) opening of the fistula tract. The intersphincteric fistula tract technique involves identifying the intersphincteric plane and then dividing the fistula tract; its use has been reported in small studies, but long-term follow-up is unavailable. Fibrin glue is a combination of fibrinogen, thrombin, and calcium in a matrix, which is injected into the fistula tract. The glue induces clot formation within the tract, which is then closed through the overgrowth of new tissue.

Fistula Plugs
Fistula plugs are designed to provide a structure that acts as a scaffold for new tissue growth. The scaffold, which can be derived from animal (eg, porcine) tissue or a synthetic copolymer fiber, is degraded by hydrolytic or enzymatic pathways as healing progresses. The plug is pulled through the fistula tract and secured at the fistula's proximal opening; the fistula tract is left open at the distal opening to allow drainage. Several fistula plugs have been cleared for marketing by the U.S. Food and Drug Administration (see Regulatory Status section).

A fistula plug derived from autologous cartilage tissue has been investigated in a small (n=10) pilot study.

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FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)

Several plugs for fistula repair have been cleared for marketing by the U.S. FDA through the 510(k) process and are outlined in Table 1.

Table 1: Devices for Anal Fistula Repair

Device	Year	Description	Indication(s)	Predicate Device(s)	FDA Product Code
SIS Fistula Plug (Cook Biotech)	Mar 2005	• Manufactured from porcine SIS	• Repair of anal, rectal, and enterocutaneous fistulas	• Surgisis® Soft Tissue Graft (Cook Biotech) • Stratasis® Urethral Sling (Cook Biotech)	FTM
Surgisis RVP Recto-Vaginal Fistula Plug (Cook Biotech)	Oct 2006	• Manufactured from porcine SIS • Tapered configuration with a button to increase plug retention and improve fistula blockage	• Reinforce soft tissue to repair rectovaginal fistulas	• SIS Fistula Plug (Cook Biotech)	FTM
Surgisis Biodesign Enterocutaneous Fistula Plug (Cook Biotech)	Feb 2009	• Manufactured from porcine SIS • Tapered configuration with flange to increase plug retention and improve fistula blockage	• Reinforce soft tissue to repair enterocutaneous fistulas	• SIS Fistula Plug (Cook Biotech)	FTM
Gore Bio-A Fistula Plug (W.L. Gore & Associates)	Mar 2009	• Manufactured from bioabsorbable PGA:TMC copolymer • Supplied in a 3-dimensional configuration of a disk with attached tubes	• Reinforce soft tissue to repair anorectal fistulas	• Gore Bioabsorbable Mesh (W.L. Gore & Associates) • SIS Fistula Plug (Cook Biotech)	FTL
Biodesign Anal Fistula Plug (Cook Biotech)	May 2016	• Manufactured from porcine SIS • Additional wash steps added in processing	• Reinforce soft tissue where a rolled configuration is required to repair anal, rectal, and enterocutaneous fistulas	• SIS Fistula Plug (Cook Biotech)	FTM

FDA: Food and Drug Administration; PGA:TMC: polyglycolide-co-trimethylene carbonate; SIS: small intestinal submucosa.

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Rationale/Source

Anal fistula plugs (AFPs) are biosynthetic devices used to promote healing and prevent the recurrence of anal fistulas. They are proposed as an alternative to procedures including fistulotomy, endorectal advancement flaps, seton drain placement, and use of fibrin glue in the treatment of anal fistulas.

For individuals who have anal fistula(s) who receive placement of AFP(s), the evidence includes three randomized controlled trials, a number of comparative and noncomparative nonrandomized studies, and systematic reviews of these studies. The relevant outcomes are symptoms, change in disease status, morbid events, functional outcomes, and treatment-related morbidity. Two randomized controlled trials comparing AFP with surgical flap treatment have reported disparate findings: one found significantly higher rates of fistula recurrence with AFP; the other found similar rates of recurrence for AFP and surgical treatment. Another randomized controlled trial that compared AFP with seton drain removal alone for patients with fistulizing Crohn disease, found no significant difference in healing rates at 12 weeks between groups. Systematic reviews of AFP repair have demonstrated a wide range of success rates and heterogeneity in study results. Nonrandomized studies have also reported conflicting results. The evidence is insufficient to determine the effects of the technology on health outcomes.

Supplemental Information

Clinical Input From Physician Specialty Societies and Academic Medical Centers

While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

In response to requests, input was received from 3 physician specialty societies and 5 academic medical centers while this policy was under review in 2013. Input was mixed, with three reviewers agreeing that biosynthetic fistula plugs are considered investigational for all indications while four reviewers considered their use as both investigational and medically necessary. One reviewer disagreed with the policy statement but noted that the success rates of all procedures (including anal fistula plugs) vary widely, as reflected by BCBSA's review of the literature.

Practice Guidelines and Position Statements

American Society of Colon and Rectal Surgeons
The 2016 practice guidelines on the treatment of anorectal abscess, fistula-in-ano, and rectovaginal fistula from the Society provided a weak recommendation with moderate-quality evidence. With recent evidence of success rates of less than 50% in most studies for the treatment of complex anal fistulas with an anal fistula plug, the guidelines concluded that the fistula plug is relatively ineffective in the treatment of fistula-in-ano.

National Institute for Health and Care Excellence
The National Institute for Health and Care Excellence (2019) updated its guidance on the suturable bioprosthetic plug. The Institute determined that "evidence on the safety and efficacy of bioprosthetic plug insertion for anal fistula is adequate to support the use of this procedure provided that standard arrangements are in place for clinical governance, consent, and audit." Though, it was noted that "the procedure should only be done by a surgeon experienced in managing anal fistulas."

U.S. Preventive Services Task Force Recommendations
Not applicable.

Medicare National Coverage
There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials
Some currently unpublished trials that might influence this review are listed in Table 2.

Table 2. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
Unpublished			

ISRCTN78352529	Surgisis® anal fistula plug versus surgeon's preference (advancement flap, fistulotomy, cutting seton) for transsphincteric fistula-in-ano: a multicentre phase III randomised controlled trial	306	May 2017 (completed)
NCT01478139	Ligation of Intersphincteric Fistula Tract (LIFT) Versus LIFT-plug Procedure for Anal Fistula Repair: a Multicenter, Randomized, Open-label, Parallel Controlled Trial	240	Nov 2013 (unknown)

NCT: national clinical trial.
[a] Denotes industry-sponsored or cosponsored trial.

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Policy History

Original Effective Date: 04/01/2018
Current Effective Date: 02/08/2021
01/04/2018 Medical Policy Committee review
01/17/2018 Medical Policy Implementation Committee approval. New policy.
01/10/2019 Medical Policy Committee review
01/23/2019 Medical Policy Implementation Committee approval. No change to coverage.
01/03/2020 Medical Policy Committee review
01/08/2020 Medical Policy Implementation Committee approval. No change to coverage.
01/07/2021 Medical Policy Committee review
01/13/2021 Medical Policy Implementation Committee approval. No change to coverage.
Next Scheduled Review Date: 01/2022

Coding

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Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	46707
HCPCS	No codes
ICD-10 Diagnosis	K60.0-K60.5

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and

whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or

B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
    1. Consultation with the Blue Cross and Blue Shield Association technology assessment program (TEC) or other nonaffiliated technology evaluation center(s);
    2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
    3. Reference to federal regulations.

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NOTICE: If the Patient's health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.