

Subject: Cosmetic and Reconstructive Services of the Trunk and Groin

 Document #:
 ANC.00009
 Publish Date:
 06/28/2023

 Status:
 Reviewed
 Last Review Date:
 05/11/2023

Description/Scope

This document addresses a variety of surgical procedures of the trunk or groin that may be considered medically necessary, cosmetic or reconstructive in nature.

Note: Please see these documents for related topics:

- CG-SURG-12 Penile Prosthesis Implantation
- CG-SURG-27 Gender Affirming Surgery
- CG-SURG-71 Reduction Mammaplasty
- CG-SURG-88 Mastectomy for Gynecomastia
- SURG.00023 Breast Procedures; including Reconstructive Surgery, Implants and Other Breast Procedures

Note: For information regarding excision of excess abdominal skin, please see CG-SURG-99 Panniculectomy and Abdominoplasty.

Medically Necessary: In this document, procedures are considered medically necessary if there is a significant functional impairment AND the procedure can be reasonably expected to improve the functional impairment.

Reconstructive: In this document, procedures are considered reconstructive when intended to address a significant variation from normal related to accidental injury, disease, trauma, treatment of a disease or congenital defect.

Note: Not all benefit contracts/certificates include benefits for reconstructive services as defined by this document. Benefit language supersedes this document.

Cosmetic: In this document, procedures are considered cosmetic when intended to change a physical appearance that would be considered within normal human anatomic variation. Cosmetic services are often described as those which are primarily intended to preserve or improve appearance.

Position Statement

A. Brachioplasty:

Brachioplasty is considered **medically necessary** when done in the presence of a significant functional impairment (for example, redundant or excessive skin is interfering with activities of daily living or causing persistent dermatitis, cellulitis, or skin ulcerations) and the impairment persists despite optimal medical management (for example, topical or systemic treatments for infection) and the procedure is reasonably expected to improve that significant functional impairment.

Brachioplasty is considered **cosmetic and not medically necessary** when done in the absence of a significant functional impairment or when not expected to improve a significant functional impairment.

B. Buttock/Thigh Lift:

Buttock or thigh lifts are considered **medically necessary** when there is a significant functional impairment (for example, redundant or excessive skin is interfering with activities of daily living or causing persistent dermatitis, cellulitis, or skin ulcerations) and the impairment persists despite optimal medical management (for example, topical or systemic treatments for infection) and the procedure is reasonably expected to improve that significant functional impairment.

Buttock and thigh lifts are considered **cosmetic and not medically necessary** when done in the absence of a significant functional impairment or when not expected to improve a significant functional impairment.

C. Congenital Abnormalities:

Correction of congenital abnormalities of the trunk and groin are considered **medically necessary** when there is evidence of a significant functional impairment and the procedure can be reasonably expected to improve the functional impairment.

Correction of congenital abnormalities of the trunk and groin that are a significant variation from normal are considered **reconstructive** in nature.

In the absence of a significant functional impairment or significant variation from normal, correction of congenital abnormalities is considered **cosmetic and not medically necessary.**

D. Lipectomy/Liposuction:

Lipectomy or liposuction for the treatment of lymphedema (for example, related to surgical mastectomy) or lipedema is considered **medically necessary** when **all** of the following criteria are met (1 through 4):

- 1. There is a significant functional impairment (for example, difficulty ambulating or performing activities of daily living) or medical complication, such as recurrent cellulitis; **and**
- 2. When lipectomy or liposuction is reasonably expected to improve the functional impairment; and
- 3. Individual has not responded to at least 3 consecutive months of optimal medical management (for example, conservative treatment with compression garments and manual lymph drainage); and
- 4. The plan of care is to wear compression garments as instructed and continue conservative treatment postoperatively to maintain benefits.

Correction of lymphedema (for example, related to surgical mastectomy) or lipedema using lipectomy or liposuction is considered **reconstructive** when done to address a significant variation from normal.

Lipectomy or liposuction is considered **cosmetic and not medically necessary** when the reconstructive criteria in this section are not met **or** when the medically necessary criteria in this section are not met.

Notes: Please refer to:

CG-SURG-99 Panniculectomy and Abdominoplasty for information regarding lipectomy and liposuction of the abdomen.

SURG.00023 Breast Procedures; including Reconstructive Surgery, Implants and Other Breast Procedures for information regarding the Women's Health and Cancer Rights Act of 1998.

E. Pectus Excavatum/Carinatum:

Surgical repair of a significant *pectus excavatum* with either an open or a minimally invasive approach (Nuss procedure) is considered **reconstructive** for individuals with a Haller index (pectus severity index) of greater than or equal to 3.2.

Surgical repair of a significant *pectus carinatum* is considered **reconstructive** for individuals with a Haller index (pectus severity index) of less than or equal to 2.0.

Surgical repair of *pectus excavatum or carinatum* is considered **cosmetic and not medically necessary** when the criteria above have not been met.

Note:

- 1. For *pectus excavatum* the Haller index is calculated by measuring the transverse diameter of the thorax between the internal rib margins, divided by the minimal antero-posterior depth as measured from the internal aspect of the sternum to the anterior cortex of the subjacent vertebral body.
- 2. For *pectus carinatum* the Haller index is calculated by measuring the transverse diameter of the thorax between the internal rib margins, divided by the antero-posterior depth as measured from the most anterior level of the sternum to the anterior cortex of the subjacent vertebral body.

F. Procedures on the Genitalia:

Procedures performed on genitalia when intended to address the sequelae of significant trauma, injury, disease, or congenital defect in the absence of a functional impairment, may be considered **reconstructive** in nature, including, but not limited to, surgical correction of ambiguous genitalia and buried penis.

Procedures on the external genitalia intended to improve the appearance or enhance sexual performance are considered **cosmetic and not medically necessary** including, but not limited to, the following:

- 1. Labia minora reduction;
- 2. Labia major reshaping;
- 3. Clitoral reduction;
- 4. Hymenoplasty;
- 5. Pubic liposuction or lift;
- 6. Phalloplasty.

Vaginal rejuvenation or vaginal tightening procedures are considered **not medically necessary** under all circumstances.

Rationale

Concepts of Medical Necessity, Reconstructive and Cosmetic

Cosmetic and Reconstructive Services of the Trunk and Groin

The coverage eligibility of medical and surgical therapies to treat musculoskeletal abnormalities is often based on a determination of whether repair of the abnormality is considered medically necessary, reconstructive or cosmetic in nature. In many instances, the concept of reconstructive overlaps with the concept of medical necessity. For example, services intended to correct a significant functional impairment as a result of trauma will be considered medically necessary and thus eligible for coverage, regardless of the contract language pertaining to reconstructive services, unless some other exclusion applies. Generally, reconstructive is often taken to mean that the service, "Returns the person to whole," as a result of a congenital anomaly, disease or other condition including post trauma or post therapy. Cosmetic generally describes improving a physical appearance that would be considered within normal human anatomic variation. Categories of conditions without associated functional impairment that may be included as reconstructive definitions, include or may be due to the following: a) surgery, b) accidental trauma or injury, c) diseases, d) congenital anomalies, e) severe anatomic variants, and f) chemotherapy.

Brachioplasty, Buttock/Thigh lift

Brachioplasty and buttock or thigh lifts have been proposed as a treatment for individuals with conditions related to excess skin and subcutaneous fat associated with significant functional impairment. Conditions, such as persistent infection or maceration resistant to conservative therapy, may be indications for brachioplasty, buttock lift or thigh lift when the condition poses a risk to the health of the individual.

Congenital abnormalities of the trunk and groin

Correction of a congenital abnormality, for example, ambiguous genitalia, congenital chordae, hypospadias, penile torsion or congenital buried or concealed penis, may be considered when the procedure is intended to address a significant variation from normal.

Pectus Excavatum and Carinatum

Validation of the medical necessity of surgical repair of pectus excavatum (PE) requires objective documentation of an associated functional impairment that is improved following surgical correction. In many cases, the motivation for surgical correction may be the restoration of a normal appearance. However, some individuals have reported associated cardiorespiratory symptoms, such as mild to moderate exercise limitation, respiratory infections or asthmatic symptoms. Nevertheless, the published literature regarding PE is dominated by articles focusing on the surgical technique; few articles have published studies that have included results of pre- and postoperative cardiorespiratory function tests. In general, the available literature investigating significant objective functional limitations associated with PE or significantly improved objective functional outcomes, as a result of corrective surgery, provides inadequate, controversial or conflicting data, which do not convincingly support surgical repair of PE on functional grounds. Moreover, there is no evidence that the presence of PE limits the life expectancy or the ability to perform any sort of occupation.

In a review article, Shamberger concluded that preoperative cardiopulmonary testing in subjects with PE revealed a wide range of cardiopulmonary abnormalities, but since studies frequently did not report the degree of severity of the PE or define controls, no generalizations could be made (Shamberger, 2000). Morshuis and colleagues (1994a) studied the pulmonary function in 152 subjects with PE before and after surgical correction. Pulmonary function was abnormal preoperatively and may have been part of the motivation for surgery. However, multivariate analysis showed that preoperative pulmonary function was not related to age, the severity of the deformity at physical

examination, or to pulmonary complaints. At follow-up (mean, 8.1 ± 3.6 years), the restriction of pulmonary function was increased despite improvement in the symptoms of most subjects and despite a significant increase in the anteroposterior diameter of the chest. Morshuis (1994b) reported on another case series of 35 subjects who underwent pulmonary function tests and exercise testing. Cardiorespiratory symptoms were present in almost all subjects before surgery; these symptoms either diminished or disappeared by 1 year post-surgery. However, the results of the cardiorespiratory tests did not correlate with the clinical improvement. For example, all measures of pulmonary function decreased after surgery. The authors hypothesize that this decrease is related to postoperative restriction of the chest wall. After surgical repair, there was also a significant increase in the maximal oxygen uptake during exercise while the maximal work performance was unchanged. These findings suggest a less efficient cardiorespiratory function.

Kaguraoka and colleagues (1992) reported on a series of 138 subjects with PE, correlating the degree of respiratory improvement with the severity of the deformity in the 22 who were available for postoperative assessment. There was mild respiratory impairment prior to surgery, as measured by a mean percent of predicted vital capacity (VC) of 86%. The severity of deformity was inversely related to the VC. Post-surgery, the VC increased only slightly. Other respiratory parameters did not change. The authors concluded that surgical correction resulted in adequate cosmetic results but did not influence objective measures of respiratory function.

Peterson (1985) reported on the cardiovascular function of 13 subjects who underwent surgical repair of PE. All subjects were symptomatic before surgery and showed a striking improvement post-surgery. However, left ventricular ejection fraction and cardiac index, as measured by radionuclide studies at rest and during exercise, were normal both before and after surgery. There was an increase in ventricular volumes, suggesting that some degree of cardiac compression had been relieved by the surgical correction.

The above articles, which are representative of the literature on PE, indicate that there is discordance between participants' subjective assessment of improvement and objective measures of cardiorespiratory function. Some have suggested that discordance is due to the fact that improvements in cardiorespiratory function can only be seen during periods of exercise, and thus are not detected during routine pulmonary function tests. Haller and colleagues (2000) studied 15 subjects before and after surgery for PE and compared the results to age-matched controls. After surgery, individuals exercised longer and had a higher oxygen pulse than before surgery, whereas the non-surgical control group showed no such changes. Subjectively, 66% of subjects undergoing surgery reported improved exercise tolerance. The authors concluded that repair of PE improved cardiorespiratory function during vigorous exercise.

Lawson and colleagues (2011) reported on the association of severity of PE and the impact on pulmonary function. The authors concluded that individuals with PE demonstrated an:

Increased depth of chest depression is related to an increased likelihood of below-normal pulmonary function, primarily with a restrictive pattern. Future studies should examine other measures in combination with depth of depression to increase our understanding of the mechanisms and impact of this deformity in cardiopulmonary function in both the resting and exercising states.

The Haller index is the most commonly used scale for the measurement of chest deformity in individuals with PE. Many studies have used a cut-off point of 3.2 to determine the appropriateness of surgery, and this has become the

This Medical Policy provides assistance in understanding Healthy Blue's standard Medicaid benefit plan. When evaluating coverage for a specific member benefit, reference to federal and state law, as well as contractual requirements may be necessary, since these may differ from our standard benefit plan. In the event of a conflict with standard plan benefits, federal, state and/or contractual requirements will govern. Before using this policy, please check all federal, state and/or contractual requirements applicable to the specific benefit plan coverage. Healthy Blue reserves the right to modify its Policies and Guidelines as necessary and in accordance with legal and contractual requirements. This Medical Policy is provided for informational purposes. It does not constitute medical advice. Healthy Blue may also use tools and criteria developed by third parties, to assist us in administering health benefits. Healthy Blue's Policies and Guidelines are intended to be used in accordance with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.

Cosmetic and Reconstructive Services of the Trunk and Groin

accepted standard for most individuals undergoing pectus repair procedures (Croitoru, 2012; Lawson, 2011; Nuss, 1998; Nuss, 2002).

As with PE, the measurement of pectus carinatum, also called pigeon chest, is commonly done using the Haller index. Although there is far less published data for this condition when compared to PE, it has been widely accepted that a Haller index of 2.0 or less is a reasonable threshold for consideration of surgical correction of pectus carinatum (Fonkalsrud, 2006, 2004, 2002).

Regarding the surgical outcomes of a minimally invasive approach to correction, (that is, the Nuss procedure), initial results suggested a good to excellent outcome in the majority of individuals among those who have completed the treatment with subsequent removal of the steel bar (Nuss, 1998; Morshuis, 1994).

Lymphedema

Lymphedema is a debilitating progressive, incurable condition characterized by painful swelling of the extremities (arms and/or legs) but can affect any part of the body. The excessive swelling is the result of lymphatic stasis and accumulation in the subcutaneous tissue, due to a chronic imbalance between the production and drainage of lymph fluid. Primary lymphedema is a congenital condition; however, in the developed world, secondary lymphedema is the most common type of lymphedema and may be caused by infection, trauma or, most commonly, treatment of cancer. The resultant accumulation of lymph fluid in the tissues, usually of the extremities, produces painful disability and interferes with mobility and activities of daily living for affected individuals with varying degrees of severity. The onset of symptoms is subject to individual variation and can occur shortly after the insult, for example, following mastectomy, or can occur years later. When first line conservative treatments, such as limb elevation, skin care, compression garments, manual lymph drainage and complex decompressive therapy (CDT), are ineffective surgical options can be considered. These include reductive/ablative techniques, like liposuction and excisional lipectomy, for more advanced lymphedema where fat deposition and tissue fibrosis has occurred, resulting in significant functional impairment or serious complications, such as cellulitis. For advanced cases in which all conservative options have been exhausted, liposuction has been shown to safely restore function, as long as conservative therapy, (such as compression garments, elevation, and exercise), is maintained postoperatively.

In a descriptive study, Lamprou and colleagues (2017) reported on circumferential suction-assisted lipectomy (CSAL) for end-stage lymphedema (primary or secondary) of the lower extremity. The researchers included subjects that did not respond to conventional therapy and had a volume difference of at least 1500 ml between the affected and non-affected extremity or a relative volume difference of more than 15% of the unaffected extremity volume. Exclusion criteria included bilateral lymphedema, active malignancy, or persistent open wounds. A total of 88 subjects (47 with primary lymphedema and 41 with secondary lymphedema) were included. Lower extremity volume was measured before surgery and at 1, 6, 12, and 24 months postop. In the primary lymphedema group, the median preoperative volume difference between the affected and unaffected lower extremity was 3686 ml. At 2 years, the difference was reduced to 761 ml (79% reduction). In the secondary lymphedema group, the median preoperative volume difference between the affected and unaffected lower extremity was 3320 ml. At 2 years, the difference was reduced to –38 ml (101% reduction). Cellulitis attacks in the primary and secondary group were significantly reduced (8/year to 0.2/year and 6/year to 0.3/year, respectively). There was a significant relationship between preoperative volume difference and the eventual outcome after 2 years in both groups (p<0.001). In addition, men with primary lymphedema had a significantly greater volume reduction than women (median 1629 versus 275 ml; p<0.001). The researchers concluded that CSAL was effective for treating end-stage, non-pitting

lymphedema of the lower extremity. However, postoperative physical therapy, weight control, and lifestyle changes are needed to maintain the benefits.

In a consecutive cohort study, Hoffner and colleagues (2017) evaluated health-related quality of life (HRQoL) following liposuction (combined with postop conservative therapy) for individuals with post-mastectomy upper extremity lymphedema. Between 1999 and 2013, the researchers gave 90 consecutive individuals a 36-item shortform health survey (SF-36) to fill out before liposuction and at 1, 3, 6, and 12 months postop. A total of 30 individuals did not answer all surveys and were excluded from the final cohort. Inclusion criteria included a minimum 10% increase in volume of the affected extremity compared to the non-affected side, subjective discomfort, failure of conservative treatment to reduce excess volume completely, and no or minimal pitting edema (less than 5mm). Exclusion criteria included generalized disease, local ulcers, and unwillingness or doubts about undergoing continuous conservative therapy after surgery. Lymphedema volume was measured by water displacement, and aspirate volumes were collected in 2000 ml canisters and measured within a 10 ml accuracy. The total aspirated volume was 1361 ± 66 ml, with fat volume totaling 1373 ± 56 ml. The mean \pm standard error of the mean (SEM) was reduced from 1365 ± 73 mL preoperatively to -213 ± 35 ml at 1-year follow-up. No minor or major complications were reported. In 49 individuals (82%), excess volume was completely reduced. After 1 year, SF-36 scores were significantly improved for functional impairments, bodily pain, vitality, social functioning and mental health. The authors concluded that liposuction combined with conservative therapy improves HRQoL. The study was limited by a small sample size.

In 2018, Hoffner and colleagues published a prospective study on the 5-year results of liposuction for arm lymphedema following breast cancer treatment. A total of 127 women received liposuction and conservative therapy between 1993 and 2012. A total of 105 women with non-pitting edema remained in the study after 27 were lost to follow-up, 18 died, 1 had recurrence of breast cancer, 1 stopped postoperative conservative treatment, 1 moved abroad, and 1 had missing data. The researchers used standardized forms to collect pre-, peri-, and post-operative data. Inclusion criteria included the diagnosis of secondary arm lymphedema following breast cancer treatment, significant excess volume at least 10% larger than the unaffected arm, discomfort, failure of conservative treatment to reduce the excess volume completely, and no or minimal pitting edema (less than 5 mm). Exclusion criteria included active cancer, wounds, infections, and unwillingness to undergo post-operative conservative therapy. The post-operative mean reduction at 5 years was $117\% \pm 26\%$ (range 25–191) as compared with the unaffected arm. There were no reported complications. The authors concluded that as long as post-operative conservative therapy is maintained, liposuction is effective for treating chronic, non-pitting arm lymphedema.

Lipedema

Lipedema is a painful, chronic, incurable disease that almost exclusively affects women after puberty and is characterized by abnormal bilateral enlargement of subcutaneous adipose tissue of the legs or arms but with normal hands and feet. The cause of lipedema is unknown, but evidence suggests it may be genetically inherited and triggered by hormonal changes, such as puberty, pregnancy, or menopause. The lymphatic system is not typically affected by lipedema; however, in severe cases, the lymphatic system can become overloaded and secondary lymphedema, (referred to as lipolymphedema or lympho-lipedema), can develop. In addition, advanced cases of lipedema can affect the venous system (venolipedema). The major symptoms are painful sensation in the involved limbs, impaired mobility and disfigurement with lipoma-like lumps under the skin. First line treatment is conservative, including complex decongestive therapy (CDT). CDT combines several approaches including manual lymph drainage (a massage technique), compression therapy, and physical mobilization. When symptoms persist

and worsen, surgical options are considered. Although the condition is rare, there is some published evidence to support surgical treatment techniques, such as liposuction and excisional lipectomy. For individuals afflicted with lipedema, liposuction helps to reduce volume, inflammation and pain; restore or maintain mobility; slow disease progression; and has had a positive impact on the quality of life. However, there is no cure for lipedema, and ongoing postoperative conservative treatment is usually necessary to retain the benefits gained by liposuction.

According to the National Center for advancing translational sciences (NIH):

Classical guidelines for diagnosing lipedema include the following criteria: occurrence almost exclusively in women; bilateral and symmetrical presentation with minimal involvement of the feet; minimal pitting edema, pain, tenderness, and easy bruising, and persistent swelling of lower extremities despite elevation or weight loss. Updated guidelines propose a diagnosis of lipedema with the criteria as classically defined, in addition to symptoms of the upper leg(s) and arm(s), such as a circularly thickened layer of fat affecting the skin...Treatment for lipedema is focused on managing the symptoms. There is no one effective treatment for lipedema. Management to alleviate symptoms and prevent progression involves exercise, diet and nutrition, emotional support, and management of co-existing health problems that may cause leg-swelling. The main conservative treatment is CDT. Surgery may be considered if conservative and supportive therapies are not effective. Surgical options may include liposuction using specialized techniques for lipedema, (such as water jet-assisted liposuction) and excision (surgical removal of large deposits of affected tissue) (Bauer, 2019; Canning, 2018; Halk, 2017).

In 2019, Wollina and colleagues published a case series on liposuction for the treatment of lipedema (n=111; stage 1=7, stage II=50, stage III=48). Participants were treated consecutively at a single center between 2007 and 2018. Most individuals were treated by micro-cannula liposuction in tumescent anesthesia, but some were treated with laser-assisted liposuction. Reduction of circumference was assessed using a tape measure. Pain was measured by a 10-point VAS, and mobility and reduction of bruising was evaluated using a 3-point scale. All participants had been treated with CDT for at least 6 months prior to surgery and had lipedema of the legs (27 individuals also had involvement of the arms). The mean follow-up was 2.0 ± 2.1 years. An improvement in the perception of mobility was achieved in all subjects; marked improvement or a complete reversal of impairment was reported in 86% of trial subjects. At follow-up, the median reduction of limb circumference was 6 cm. The median pain level before treatment was reduced from 7.8 to 2.2. Bruising after minor trauma improved somewhat in 20.9% of individuals and completely or almost completely in 29.1% of individuals. A total of 16.4% of individuals no longer needed CDT. For 18 individuals, a follow-up of 5-7 years was available and showed no relapse in lipedema. Common adverse events included temporary methemoglobinemia (100%), bruising (98%), and burning sensations (82%). Less common adverse events included mild arm-vein phlebitis (2 cases), noninfectious panniculitis (1 case), arm edema from toluidine blue extravasation (1 case), epileptic attack during methemoglobinemia (1 case), postsurgical anemia requiring a blood transfusion (1 case), pulmonary fat embolism 2 days after surgery (1 case), and acute pulmonary edema 24 hours after surgery (1 case). There were no fatalities, wound infections, or surgical interventions. In 4.5% of cases, liposuction was completed with other surgical procedures, such as thigh lifts, laser lipolysis, or debulking surgery. The authors concluded that an improvement of mobility could be achieved in all subjects and that liposuction is an effective treatment for painful lipedema. The authors also noted that centers performing liposuction should carefully monitor individuals for 24 hours and must be able to deal with possible complications.

Lymphedema vs. Lipedema

Lipedema is characterized by symmetric enlargement of the limbs, combined with tenderness and easy bruising. Unlike lymphedema, lipedema is not caused by a disorder of the lymphatic system. While lipedema always affects both legs symmetrically (bilateral appearance), primary lymphedema usually affects one leg only. If both legs are involved in primary lymphedema, the swelling appears asymmetric. The feet are not involved in lipedema; the symmetrical distribution of fat is located between the hips and the ankles. In contrast, the feet in lymphedema are involved in the swelling, and a diagnostic indicator known as the Stemmer sign* is positive. Lymphedema involves pitting edema, and the tissue feels firmer than what is present in lipedema. The cause for the onset of lymphedema is malformations of the lymphatic system, while the underlying cause of lipedema remains unknown and is thought to be associated with hormonal disorders.

There are several distinct differences between the presentation of lipedema and primary lymphedema which are part of the differential diagnosis process, and are provided in the table** below.

Lipedema	Lymphedema	
Disproportion present	Disproportion absent	
Pubertal age of onset	Onset at any age	
Usually bilateral and mainly involving legs, but not feet	Uni- or bilateral, involving arms or legs	
Skin color is normal, without pitting	Skin color is brown, warty, or sclerotic with pitting	
Stemmer sign negative	Stemmer sign positive	
Skin consistency is firm	Skin consistency is soft	
No response to compression therapy	Responds to compression therapy	
Easy bruising	Generally not bruising	

^{**} Shavit, 2018.

Female Genital Procedures

In 2020 the American College of Obstetricians and Gynecologists (ACOG) published a Committee Opinion, Elective Female Genital Cosmetic Surgery. This document addresses several important issues on this topic, including:

• Patients should be made aware that surgery or procedures to alter sexual appearance or function (excluding procedures performed for clinical indications, such as clinically diagnosed female sexual dysfunction, pain with intercourse, interference in athletic activities, previous obstetric

^{*} The Stemmer Test is done by trying to lift a skin fold on the back of the second toe or middle finger. If you are able to gently pinch and lift the skin fold, the Stemmer Sign is negative. If it is not possible to gently pinch and lift the fold, this may be an indication of protein accumulation in the tissue. In this case, the Stemmer Sign is positive and serves as an indication that lymphedema may be present.

- or straddle injury, reversing female genital cutting, vaginal prolapse, incontinence, or gender affirmation surgery) are not medically indicated, pose substantial risk, and their safety and effectiveness have not been established.
- Women should be informed about the lack of high-quality data that support the effectiveness of
 genital cosmetic surgical procedures and counseled about their potential complications,
 including pain, bleeding, infection, scarring, adhesions, altered sensation, dyspareunia, and
 need for reoperation.

ACOG (2022) has also published a statement of policy on the use of female genital mutilation. That document sates the following:

Female genital mutilation (FGM), sometimes annotated as female genital cutting or female circumcision, is described by the World Health Organization (WHO) as comprising "all procedures that involve partial or total removal of the external female genitals, or other injury to the female genital organs for non-medical reasons (1,2)." Although these procedures are more commonly performed in Africa, the Middle East, and Asia, it is estimated that more than 513,000 girls and women in the U.S. have experienced or are at risk of FGM (3,4). People may arrive in the U.S. having already had the procedure performed, but there are reports of these procedures being performed in immigrant populations by traditional practitioners, or children being sent to the family's home country to have the procedures performed.

Female genital mutilation is internationally recognized as a human rights violation and is considered an extreme form of discrimination against women (1,2). According to U.S. federal law (18 U.S. Code § 116), it is illegal to perform FGM in the U.S. on anyone under the age of 18 years; it is also illegal to knowingly transport a girl out of the U.S. for the purpose of having FGM performed. Many state laws also prohibit FGM on minors, and some states prohibit the practice on adult women. The American College of Obstetricians and Gynecologists condemns the practice of FGM and supports all efforts to eliminate the practice of FGM in the U.S. as well as internationally. This position is aligned with those of the World Health Organization, the American Medical Association, and the American Academy of Family Physicians (1,2,5,6).

In 2017ACOG published a Committee Opinion for Breast and Labial Surgery in Adolescents which has guidance on the topic. Specifically, the following:

- When adolescents seek medical treatment, the first step is often education and reassurance regarding normal variation in anatomy, growth, and development.
- Appropriate patient counseling and assessment of the adolescent's physical maturity and emotional readiness are necessary before surgical management or referral.
- Individuals should be screened for body dysmorphic disorder. If an obstetrician- gynecologist suspects an adolescent has body dysmorphic disorder, referral to a mental health professional is appropriate.

Surgical correction (labiaplasty) in girls younger than 18 years should be considered only in those with significant congenital malformation, or persistent symptoms that the physician believes are caused directly by labial anatomy, or both. Physicians should be aware that surgical alteration of the

labia that is not necessary to the health of the adolescent, who is younger than 18 years, is a violation of federal criminal law 10. At least half of the states also have laws criminalizing labiaplasty under certain circumstances, and some of these laws apply to minors and adults. Obstetrician—gynecologists should be aware of federal and state laws that affect this and similar procedures.

Several laser devices have been marketed to tighten lax vaginal anatomy. The safety and efficacy of these laser systems has not been demonstrated in clinical trials with peer-reviewed published evidence for the indication of vaginal atrophy. The U.S. Food and Drug Administration (FDA) has issued a warning about use of these energy-based devices as follows:

To alert patients and health care providers that the use of energy-based devices to perform vaginal "rejuvenation," cosmetic vaginal procedures, or non-surgical vaginal procedures to treat symptoms related to menopause, urinary incontinence, or sexual function may be associated with serious adverse events. The safety and effectiveness of energy-based devices for treatment of these conditions has not been established...The FDA has not cleared or approved any energy-based medical device for vaginal "rejuvenation" or vaginal cosmetic procedures, or for the treatment of vaginal symptoms related to menopause, urinary incontinence, or sexual function (FDA, 2018).

Background/Overview

Brachioplasty is a surgical procedure used to remove excess fat and skin from the back of the upper arm. This procedure is done primarily to improve an individual's appearance. However, when associated with significant functional impairment, this procedure may be necessary to protect the individual's health.

Buttock and thigh lifts are surgical procedures used to remove excess fat and skin from the buttocks and thighs. These procedures are primarily intended to enhance the appearance and have no known medical benefits, although these procedures may be necessary when the excessive tissue presents a significant functional impairment despite optimal medical management.

Congenital abnormalities in children include a wide variety of physical abnormalities present at birth. In many cases, the abnormality is not associated with any functional impairment. However, its correction can be considered reconstructive in nature. In most severe cases, immediate surgical care is needed to save a child's life.

Cosmetic surgery is defined as any surgical procedure conducted solely to enhance an individual's appearance. Such surgical procedures have no impact on an individual's physical health.

Liposuction, (also known as lipoplasty, suction-assisted lipectomy, circumferential suction-assisted lipectomy [CSAL], liposuction in lymphedema and lympho-liposuction), is a surgical procedure performed to recontour the individual's body by removing excess fat deposits that have been resistant to reduction by diet or exercise. There are multiple techniques for performing liposuction, including gentler methods like tumescent, power-assisted, ultrasound-assisted, laser-assisted, and water-jetted liposuction. These procedures have been used successfully on many body locations, including the buttocks, thighs, chin and lower abdomen, but do not remove large quantities of

Cosmetic and Reconstructive Services of the Trunk and Groin

fat and are not intended as a weight reduction technique. Liposuction is also used to treat advanced symptomatic lymphedema when there is a significant variation from normal, such as of the breast related to surgical mastectomy.

Excisional lipectomy, (also referred to as longitudinal debulking excisional surgery), is another surgical technique that involves the invasive surgical removal of excess subcutaneous adipose tissue that accumulates as a result of lipedema or lymphedema. Excisional lipectomy has been used to treat advanced cases with large localized deposits of lipedematous tissue, serious mechanical difficulties, valgus deformity of the knees, or the inability to walk (Halk, 2017).

PE, also known as funnel chest, is the most common chest wall deformity; this abnormality is present at birth, consisting of a depression in the center of the chest over the sternum. It is caused by excessive growth of the cartilage (connective tissue) joining the ribs to the breastbone, with the result being an inward deformity of the sternum. Although it has been proposed that PE can be associated with various cardiopulmonary dysfunctions, this relationship has not been confirmed in the published literature. Until recently surgical correction of PE involved the resection of the involved costal cartilages and osteotomy of the sternum with placement of a metal bar behind the sternum. The metal bar may be removed in 1 to 2 years. In the past several years, a minimally invasive approach has been developed that involves the placement of a convex steel bar beneath the sternum through small bilateral thoracic incisions. The bar may be removed after 2 years when remolding of the cartilage is complete. This procedure, which may be referred to as the Nuss procedure or MIRPE (minimally invasive repair of pectus excavatum) does not require cartilage resection or sternal osteotomy. The degree of deformity in individuals with this condition is commonly measured using the Haller index. The index is calculated using chest dimension measurements obtained with computed tomography (CT scan) or magnetic resonance imaging (MRI). A Haller Index of at least 3.2 is generally recognized to indicate a PE of sufficient severity to consider surgical repair.

Pectus carinatum is the second most common congenital chest wall deformity, a condition where the breastbone protrudes out from the chest, often described as giving the person a bird-like appearance. Pectus carinatum may occur as a solitary abnormality or in association with other genetic disorders or syndromes. Although it has been proposed that pectus carinatum can be associated with various cardiopulmonary dysfunctions, this relationship has not been confirmed in the published literature. As with PE, the degree of deformity is measured using the Haller index. A Haller Index of 2.0 or less is generally recognized to indicate a pectus carinatum of sufficient severity to consider surgical repair.

A wide variety of procedures have been proposed to alter the appearance, size, or function of the external and internal vaginal anatomy. Surgical procedures to alter the size or shape of the labia or clitoris, restore the hymen, and other such measures do not provide any physical health benefits.

The labia minora is part of the external structure of the vagina. In some individuals, the labia minora may be enlarged or asymmetrical leading to mild discomfort with wearing certain clothing or during some activities. Reconstructive surgical procedures have been proposed to reduce enlarged labia minora. These procedures have not been well studied in the medical literature, and the possible risks they present have not been adequately assessed in relation to the potential benefits. In addition, fractional carbon dioxide (CO₂) lasers are new non-surgical treatments purported to relieve vulvovaginal atrophy. This laser therapy is proposed as a means of delivering thermal energy to the vaginal walls resulting in thickening and tightening to improve vaginal atrophy. One such device is the MonaLisa Touch® (Cynasure, Hologic, Inc. Marlborough, MA), which is a CO₂ laser system which is performed in several sessions in the provider's office and promoted as a treatment for the symptoms of vaginal atrophy

Phalloplasty is a surgical procedure to reconstruct or enlarge the penis. Reconstruction may be required in cases of traumatic injury or loss due to disease, in the absence of a functional impairment. Enlargement may be desired in cases of abnormally small penis size.

Definitions

Cellulitis: An infection that spreads to deep tissues of the skin and muscle and may cause warmth, tenderness, fever, chills, swollen lymph nodes, and blisters.

Complex decongestive therapy: A multimodality program that consists of manual lymphedema drainage therapy, low-stretch bandaging, exercises, and skin care. This approach has been recommended as a primary treatment by consensus panels and as an effective therapy for lymphedema when it is unresponsive to standard elastic compression therapy.

Excisional lipectomy: A surgical technique that involves the invasive surgical removal of excess subcutaneous adipose tissue that accumulates as a result of lipedema or lymphedema.

Functional impairment: Significant functional impairment may include physical, social, emotional, and psychological impairments or potential impairments. Examples of limits on normal physical functioning include problems with: ambulation, mobilization, communication, respiration, eating, swallowing, vision, facial expression, skin integrity, distortion of nearby body parts, or obstruction of an orifice. The cause of a functional impairment can be due to pain, structural integrity, congenital anomalies or other factors.

Lipedema: A chronic disease affecting almost exclusively women after puberty, characterized by painful abnormal enlargement of subcutaneous adipose tissue of the arms and legs.

Lymphatic fluid: A clear fluid that contains white blood cells (lymphocytes) and plasma.

Lymph nodes: Small, bean-shaped structures, found in the axilla, pelvis, neck, abdomen, and groin, that filter lymphatic fluid and store white blood cells.

Lymphatic system: A network of lymph vessels, tissues, and organs that carry lymphatic fluid throughout the body and return it to the bloodstream.

Lymphedema: Abnormal accumulation of interstitial fluid and fibro-adipose tissues resulting from injury, infection, or congenital abnormalities of the lymphatic system.

Liposuction also known as lipoplasty or suction-assisted lipectomy: A surgical technique performed to recontour the individual's body by removing excess fat deposits that have been resistant to reduction by diet or exercise.

Coding

ANC.00009

Medical Policy

Cosmetic and Reconstructive Services of the Trunk and Groin

The following codes for treatments and procedures applicable to this document are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

Procedures for excessive skin and subcutaneous tissue, lipectomy and liposuction (includes brachioplasty, buttock/thigh lifts)

Note: see SURG.00023 Breast Procedures; including Reconstructive Surgery, Implants and Other Breast Procedures for information regarding the Women's Health and Cancer Rights Act of 1998.

When services may be Medically Necessary when criteria are met:

CPT	
15832	Excision, excessive skin and subcutaneous tissue (includes lipectomy); thigh
15833	Excision, excessive skin and subcutaneous tissue (includes lipectomy); leg
15834	Excision, excessive skin and subcutaneous tissue (includes lipectomy); hip
15835	Excision, excessive skin and subcutaneous tissue (includes lipectomy); buttock
15836	Excision, excessive skin and subcutaneous tissue (includes lipectomy); arm
15837	Excision, excessive skin and subcutaneous tissue (includes lipectomy); forearm or hand
15839	Excision, excessive skin and subcutaneous tissue (includes lipectomy), other area
15877	Suction assisted lipectomy; trunk
15878	Suction assisted lipectomy; upper extremity
15879	Suction assisted lipectomy; lower extremity
ICD-10 Procedure	
0JBD0ZZ-0JBF3ZZ	Excision of upper arm subcutaneous tissue and fascia, right or left, open or
	percutaneous approach [includes codes 0JBD0ZZ, 0JBD3ZZ, 0JBF0ZZ, 0JBF3ZZ]
0JBG0ZZ-0JBH3ZZ	Excision of lower arm subcutaneous tissue and fascia, right or left, open or
	percutaneous approach [includes codes 0JBG0ZZ, 0JBG3ZZ, 0JBH0ZZ, 0JBH3ZZ]
0JD70ZZ-0JD73ZZ	Extraction of back subcutaneous tissue and fascia [by approach; includes codes
	0JD70ZZ, 0JD73ZZ]
0JD90ZZ-0JD93ZZ	Extraction of buttock subcutaneous tissue and fascia, open or percutaneous approach
	[includes codes 0JD90ZZ, 0JD93ZZ]
0JDB0ZZ-0JDB3ZZ	Extraction of perineum subcutaneous tissue and fascia [by approach; includes codes
	0JDB0ZZ-0JDB3ZZ]
0JDC0ZZ-0JDC3ZZ	Extraction of pelvic region subcutaneous tissue and fascia, open or percutaneous
	approach [includes codes 0JDC0ZZ, 0JDC3ZZ]
0JDD0ZZ-0JDF3ZZ	Extraction of upper arm subcutaneous tissue and fascia, right or left, open or
	percutaneous approach [includes codes 0JDD0ZZ, 0JDD3ZZ, 0JDF0ZZ, 0JDF3ZZ]
0JDG0ZZ-0JDK3ZZ	Extraction of lower arm and hand subcutaneous tissue and fascia, right or left, open or
	percutaneous approach [includes codes 0JDG0ZZ, 0JDG3ZZ, 0JDH0ZZ, 0JDH3ZZ,
	0JDJ0ZZ, 0JDJ3ZZ, 0JDK0ZZ, 0JDK3ZZ]
0JDL0ZZ-0JDM3ZZ	Extraction of upper leg subcutaneous tissue and fascia, right or left, open or
	percutaneous approach [includes codes 0JDL0ZZ, 0JDL3ZZ, 0JDM0ZZ, 0JDM3ZZ]

0JDN0ZZ-0JDR3ZZ	Extraction of lower leg or foot subcutaneous tissue and fascia [right or left, by
	approach; includes codes, 0JDN0ZZ, 0JDN3ZZ, 0JDP0ZZ, 0JDP3ZZ, 0JDQ0ZZ,
	0JDQ3ZZ, 0JDR0ZZ, 0JDR3ZZ]
0J070ZZ-0J073ZZ	Alteration of back subcutaneous tissue and fascia, open or percutaneous approach
	[includes codes 0J070ZZ, 0J073ZZ]
0J090ZZ-0J093ZZ	Alteration of buttock subcutaneous tissue and fascia, open or percutaneous approach
	[includes codes 0J090ZZ, 0J093ZZ]
0J0D0ZZ-0J0F3ZZ	Alteration of upper arm subcutaneous tissue and fascia [right or left, by approach;
	includes codes 0J0D0ZZ, 0J0D3ZZ, 0J0F0ZZ, 0J0F3ZZ]
0J0G0ZZ-0J0H3ZZ	Alteration of lower arm subcutaneous tissue and fascia [right or left, by approach;
	includes codes 0J0G0ZZ, 0J0G3ZZ, 0J0H0ZZ, 0J0H3ZZ]
0J0L0ZZ-0J0M3ZZ	Alteration of subcutaneous tissue and fascia, upper leg [right or left, by approach;
	includes codes 0J0L0ZZ, 0J0L3ZZ, 0J0M0ZZ, 0J0M3ZZ]
0J0N0ZZ-0J0P3ZZ	Alteration of lower leg subcutaneous tissue and fascia [right or left by approach;
	includes codes 0J0N0ZZ, 0J0N3ZZ, 0J0P0ZZ, 0J0P3ZZ]
ICD-10 Diagnosis	
	All diagnoses, including but not limited to the following:
E65	Localized adiposity

E88.2

Lipomatosis, not elsewhere classified Lymphedema, not elsewhere classified 189.0

Postmastectomy lymphedema syndrome [see Note regarding WHCRA] I97.2

Other postprocedural complications and disorders of the circulatory system, not I97.89

elsewhere classified [post-surgical lymphedema]

Q82.0 Hereditary lymphedema

When services may be Reconstructive when criteria are met:

Note: for criteria for breast reconstructive procedures, see SURG.00023.

CPT

15877 Suction assisted lipectomy; trunk

ICD-10 Procedure

0J060ZZ-0J063ZZ Alteration of chest subcutaneous tissue and fascia [by approach, includes codes

0J060ZZ, 0J063ZZ]

0JD60ZZ-0JD63ZZ Extraction of chest subcutaneous tissue and fascia [by approach; includes codes

0JD60ZZ, 0JD63ZZ]

ICD-10 Diagnosis

N65.0-N65.1 Deformity and disproportion of reconstructed breast Encounter for breast reconstruction following mastectomy Z42.1 Personal history of malignant neoplasm of breast Z85.3

Z90.10-Z90.13 Acquired absence of breast and nipple

When services are Cosmetic and Not Medically Necessary:

For the procedure codes listed above when medical necessity or reconstructive criteria are not met.

When services are also Cosmetic and Not Medically Necessary:

For the following procedure codes:

ICD-10 Procedure	
0Y0007Z-0Y0147Z	Alteration of buttock with autologous tissue substitute [right or left, by approach;
	includes codes 0Y0007Z, 0Y0037Z, 0Y0047Z, 0Y0107Z, 0Y0137Z, 0Y0147Z]
0Y000JZ-0Y014JZ	Alteration of buttock with synthetic substitute [right or left, by approach; includes
	codes 0Y000JZ, 0Y003JZ, 0Y004JZ, 0Y010JZ, 0Y013JZ, 0Y014JZ]
0Y000KZ-0Y014KZ	Alteration of buttock with nonautologous tissue substitute [right or left, by approach;
	includes codes 0Y000KZ, 0Y003KZ, 0Y004KZ, 0Y010KZ, 0Y013KZ, 0Y014KZ]
0Y000ZZ-0Y014ZZ	Alteration of buttock [right or left, by approach; includes codes 0Y000ZZ,
	0Y003ZZ, 0Y004ZZ, 0Y010ZZ, 0Y013ZZ, 0Y014ZZ]

ICD-10 Diagnosis

All diagnoses

Repair of Pectus Excavatum or Pectus Carinatum

When services may be Reconstructive when criteria are met:

CDT	
CPT	
21740	Reconstructive repair of pectus excavatum or carinatum; open
21742	Reconstructive repair of pectus excavatum or carinatum; minimally invasive
	approach (Nuss procedure), without thoracoscopy
21743	Reconstructive repair of pectus excavatum or carinatum; minimally invasive
	approach (Nuss procedure), with thoracoscopy
ICD-10 Procedure	
0PS000Z-0PS040Z	Reposition sternum with rigid plate internal fixation device [by approach; includes
	codes 0PS000Z, 0PS030Z, 0PS040Z]
0PS004Z-0PS044Z	Reposition sternum with internal fixation device [by approach, includes codes
	0PS004Z, 0PS034Z, 0PS044Z]
0WU80JZ	Supplement chest wall with synthetic substitute, open approach
0WU84JZ	Supplement chest wall with synthetic substitute, percutaneous endoscopic approach
ICD-10 Diagnosis	
E64.3	Sequelae of rickets
M95.4	Acquired deformity of chest and rib
Q67.6	Pectus excavatum

When services are Cosmetic and Not Medically Necessary:

For the procedure codes listed above, when reconstructive criteria are not met.

Pectus carinatum

Procedures on genitalia

O67.7

When services may be Reconstructive or Cosmetic and Not Medically Necessary based on criteria:

CPT	
54360	Plastic operation on penis to correct angulation
54440	Plastic operation on penis for injury
55899	Unlisted procedure, male genital system [when specified as phalloplasty]
56800	Plastic repair of introitus
56805	Clitoroplasty for intersex state
56810	Perineoplasty, repair of perineum, nonobstetrical (separate procedure)
57291	Construction of artificial vagina, without graft
57292	Construction of artificial vagina, with graft
57335	Vaginoplasty for intersex state
ICD-10 Procedure	
0UBJXZZ	Excision of clitoris, external approach
0UMK0ZZ-0UMK4ZZ	Reattachment of hymen [by approach; includes codes 0UMK0ZZ, 0UMK4ZZ]
0UQG0ZZ-0UQGXZZ	Repair vagina [by approach; includes codes 0UQG0ZZ, 0UQG3ZZ, 0UQG4ZZ,
	0UQG7ZZ, 0UQG8ZZ, 0UQGXZZ]
0UQJ0ZZ-0UQJXZZ	Repair clitoris [by approach; includes codes 0UQJ0ZZ, 0UQJXZZ]
0UQK0ZZ-0UQKXZZ	Repair hymen [by approach; includes codes 0UQK0ZZ, 0UQK3ZZ, 0UQK4ZZ,
	0UQK7ZZ, 0UQK8ZZ, 0UQKXZZ]
0UQM0ZZ-0UQMXZZ	Repair vulva [by approach; includes codes 0UQM0ZZ, 0UQMXZZ]
0UTJXZZ	Resection of clitoris, external approach
0UTMXZZ	Resection of vulva, external approach
0VUS07Z-0VUSX7Z	Supplement penis with autologous tissue substitute [by approach; includes codes 0VUS07Z, 0VUS47Z, 0VUSX7Z]
0VUS0KZ-0VUSXKZ	Supplement penis with nonautologous tissue substitute [by approach; includes codes
	0VUS0KZ, 0VUS4KZ, 0VUSXKZ]
0W0M07Z-0W0M47Z	Alteration of male perineum with autologous tissue substitute [by approach; includes
	codes 0W0M07Z, 0W0M37Z, 0W0M47Z]
0W0M0JZ-0W0M4JZ	Alteration of male perineum with synthetic substitute [by approach; includes codes 0W0M0JZ, 0W0M3JZ, 0W0M4JZ]
0W0M0KZ-0W0M4KZ	Alteration of male perineum with nonautologous tissue substitute [by approach;
	includes codes 0W0M0KZ, 0W0M3KZ, 0W0M4KZ]
0W0M0ZZ-0W0M4ZZ	Alteration of male perineum [by approach; includes codes 0W0M0ZZ, 0W0M3ZZ,
	0W0M4ZZ]
0W0N07Z-0W0N47Z	Alteration of female perineum with autologous tissue substitute [by approach; includes codes 0W0N07Z, 0W0N37Z, 0W0N47Z]
0W0N0JZ-0W0N4JZ	Alteration of female perineum with synthetic substitute [by approach; includes codes
0 W 01 1032 0 W 01 1432	0W0N0JZ, 0W0N3JZ, 0W0N4JZ]
0W0N0KZ-0W0N4KZ	Alteration of female perineum with nonautologous tissue substitute [by approach;
	includes codes 0W0N0KZ, 0W0N3KZ, 0W0N4KZ]
0W0N0ZZ-0W0N4ZZ	Alteration of female perineum [by approach; includes codes 0W0N0ZZ, 0W0N3ZZ,
♥	0W0N4ZZ]

ICD-10 Diagnosis

All diagnoses

When services are Not Medically Necessary

CPT

58999 Unlisted procedure, female genital system (nonobstetrical) [when specified as any

vaginal rejuvenation or tightening procedure for atrophy, including laser procedures

such as MonaLisa Touch]

ICD-10 Diagnosis

All diagnoses

References

Peer Reviewed Publications:

- 1. Basta MN, Gao LL, Wu LC. Operative treatment of peripheral lymphedema: a systematic meta-analysis of the efficacy and safety of lymphovenous microsurgery and tissue transplantation. Plast Reconstr Surg. 2014; 133(4):905-913.
- 2. Bauer AT, von Lukowicz D, Lossagk K, et al. New insights on lipedema: The enigmatic disease of the peripheral fat. Plast Reconstr Surg. 2019; 144(6):1475-1484.
- 3. Baumgartner A, Hueppe M, Schmeller W. Long-term benefit of liposuction in patients with lipedema: a follow-up study after an average of 4 and 8 years. Br J Dermatol. 2016; 174(5):1061-1067.
- 4. Boyages J, Kastanias K, Koelmeyer LA, et al. Liposuction for advanced lymphedema: a multidisciplinary approach for complete reduction of arm and leg swelling. Ann Surg Oncol. 2015; 22 Suppl 3:S1263-1270.
- 5. Bawazir OA, Montgomery M, Harder J, Sigalet DL. Midterm evaluation of cardiopulmonary effects of closed repair for pectus excavatum. J Pediatr Surg. 2005; 40(5):863-867.
- 6. Canning C, Bartholomew JR. Lipedema. Vasc Med. 2018; 23(1):88-90.
- 7. Carl HM, Walia G, Bello R, et al. Systematic review of the surgical treatment of extremity lymphedema. J Reconstr Microsurg. 2017; 33(6):412-425.
- 8. Cemal Y, Pusic A, Mehrara BJ. Preventative measures for lymphedema: separating fact from fiction. J Am Coll Surg. 2011; 213(4):543-551.
- 9. Ciudad P, Manrique OJ, Bustos SS, et al. Comparisons in long-term clinical outcomes among patients with upper or lower extremity lymphedema treated with diverse vascularized lymph node transfer. Microsurgery. 2020; 40(2):130-136.
- 10. Coln E, Carrasco J, Coln D. Demonstrating relief of cardiac compression with the Nuss minimally invasive repair for pectus excavatum. J Pediatr Surg. 2006; 41(4):683-686.
- 11. Cornelissen AJM, Beugels J, Ewalds L, et al. Effect of lymphaticovenous anastomosis in breast cancer-related lymphedema: a review of the literature. Lymphat Res Biol. 2018 Oct; 16(5):426-434.
- 12. Croitoru DP, Kelly RE Jr, Goretsky MJ, et al. Experience and modification update for the minimally invasive Nuss technique for pectus excavatum repair in 303 patients. J Pediatr Surg. 2002; 37(3):437-445.
- 13. Dadras M, Mallinger PJ, Corterier CC, et al. Liposuction in the treatment of lipedema: a longitudinal study. Arch Plast Surg. 2017; 44(4):324-331.
- 14. Damstra RJ, Voesten HG, Klinkert P, Brorson H. Circumferential suction-assisted lipectomy for lymphedema after surgery for breast cancer. Br J Surg. 2009; 96(8):859-864.

- 15. Daunt SW, Cohen JH, Miller SF. Age-related normal ranges for the Haller index in children. Pediatr Radiol. 2004; 34(4):326-330.
- 16. Del Frari B, Blank C, Sigl S, et al. The questionable benefit of pectus excavatum repair on cardiopulmonary function: a prospective study. Eur J Cardiothorac Surg. 2021; 61(1):75-82.
- 17. Del Frari B, Sigl S, Schwabegger AH, et al. Impact of surgical treatment of pectus carinatum on cardiopulmonary function: a prospective study. Eur J Cardiothorac Surg. 2021; 59(2):382-388.
- 18. De Oliveira Carvaldo PE, de Silva MVM, Rodrigues OR, Cataneo AJM. Surgical interventions for treatment pectus excavatum. Cochrane Database of Sys Rev. 2014; (10):CD008889.
- 19. DiSipio T, Rye S, Newman B, et al. Incidence of unilateral arm lymphedema after breast cancer: a systematic review and meta-analysis. Lancet Oncol. 2013; 14(6):500-515.
- 20. Eroglu E, Gundogdu G. Isolated penile torsion in newborns. Can Urol Assoc J. 2015; 9(11-12):E805-E807.
- 21. Fallahian F, Tadisina KK, Xu KY. Efficacy of Microsurgical Treatment of Primary Lymphedema: A Systematic Review. Ann Plast Surg. 2022; 88(2):195-199..
- 22. Fonkalsrud EW, Anselmo DM. Less extensive techniques for repair of pectus carinatum: the undertreated chest deformity. J Am Coll Surg. 2004; 198(6):898-905.
- 23. Fonkalsrud EW, DeUgarte D, Choi E. Repair of pectus excavatum and carinatum deformities in 116 adults. Ann Surg. 2002; 236(3):304-12; discussion 312-314.
- 24. Fonkalsrud EW, Mendoza J. Open repair of pectus excavatum and carinatum deformities with minimal cartilage resection. Am J Surg. 2006; 191(6):779-784.
- 25. Forner-Cordero, I., et al. Lipedema: An overview of its clinical manifestations, diagnosis and treatment of the disproportional fatty deposition syndrome systematic review. Clin Obes. 2012; 2(3-4):86-95.
- 26. Forte AJ, Khan N, Huayllani MT, et al. Lymphaticovenous anastomosis for lower extremity lymphedema: a systematic review. Indian J Plast Surg. 2020; 53(1):17-24.
- 27. Frantz FW. Indications and guidelines for pectus excavatum repair. Curr Opin Pediatr. 2011; 23:486-491.
- 28. Ghods M, Georgiou I, Schmidt J, Kruppa P. Disease progression and comorbidities in lipedema patients: A 10-year retrospective analysis. Dermatol Ther. 2020; 33(6):e14534.
- 29. Granzow JW, Soderberg JM, Kaji AH, Dauphine C. An effective system of surgical treatment of lymphedema. Ann Surg Oncol. 2014; 21(4):1189-1194.
- 30. Guiotto M, Bramhall RJ, Campisi C, et al. A systematic review of outcomes after genital lymphedema surgery: microsurgical reconstruction versus excisional procedures. Ann Plast Surg. 2019; 83(6):e85-e91.
- 31. Haller JA, Loughlin GM. Cardiorespiratory function is significantly improved following corrective surgery for severe pectus excavatum. Proposed treatment guidelines. J Cardiovasc Surg. 2000; 41:125-130.
- 32. Hebra A, Swoveland B, Egbert M, et al. Outcome analysis of minimally invasive repair of pectus excavatum. Review of 251 cases. J Pediatr Surg. 2000; 35:252-257.
- 33. Hoffner M, Bagheri S, Hansson E, et al. SF-36 shows increased quality of life following complete reduction of postmastectomy lymphedema with liposuction. Lymphat Res Biol. 2017; 15(1):87-98.
- 34. Hoffner M, Ohlin K, Svensson B, et al. Liposuction gives complete reduction of arm lymphedema following breast cancer treatment-a 5-year prospective study in 105 patients without recurrence. Plast Reconstr Surg Glob Open. 2018; 6(8):e1912.
- 35. Huddleston CB. Pectus excavatum. Semin Thorac Cardiovasc Surg. 2004; 16(3):225-232.
- 36. Johnson WR, Fedor D, Singhal S. Systematic review of surgical treatment techniques for adult and pediatric patients with pectus excavatum. J Cardiothorac Surg. 2014; 9:25.
- 37. Kaguraoka H, Ohnuki T, Itaoka T, et al. Degree of severity of pectus excavatum and pulmonary function in preoperative and postoperative periods. J Thoracic Cardiovasc Surg. 1992; 104:483-488.

- 38. Kowalewski J, Brocki M, Dryjanski T, et al. Pectus excavatum: increase of right ventricular systolic, diastolic, and stroke volumes after surgical repair. J Thorac Cardiovasc Surg. 1999; 118(1):87-92.
- 39. Lamprou DA, Voesten HG, Damstra RJ, Wikkeling OR. Circumferential suction-assisted lipectomy in the treatment of primary and secondary end-stage lymphedema of the leg. Br J Surg. 2017; 104(1):84-89.
- 40. Lawson ML, Barnes-Eley M, Burke BL, et al. Reliability of a standardized protocol to calculate cross-sectional chest area and severity indices to evaluate pectus excavatum. J Pediatr Surg. 2006; 41(7):1219-1225.
- 41. Lawson ML, Mellins RB, Paulson JF, et al. Increasing severity of pectus excavatum is associated with reduced pulmonary function. J Pediatr. 2011; 159:256-261.
- 42. Lawson ML, Mellins RB, Tabangin M, et al. Impact of pectus excavatum on pulmonary function before and after repair with the Nuss procedure. J Pediatr Surg. 2005; 40(1):174-180.
- 43. Lee M, Perry L, Granzow J. Suction assisted protein lipectomy (SAPL) even for the treatment of chronic fibrotic and scarified lower extremity lymphedema. Lymphology. 2016; 49(1):36-41.
- 44. Malek MH, Berger DE, Housh TJ, et al. Cardiovascular function following surgical repair of pectus excavatum: a meta-analysis. Chest. 2006; 130(2):506-516.
- 45. Micha JP, Nguyen DH, Goldstein BH. Successful management of persistent lower extremity lymphedema with suction-assisted lipectomy. Gynecol Oncol Rep. 2017; 23:13-15.
- 46. Morshuis WJ, et al. Exercise cardiorespiratory function before and one year after operation for pectus excavatum. J Thorac Cardiovasc Surg. 1994a; 107(6):1403-1409.
- 47. Morshuis W, Folgering H, Barentsz J, et al. Pulmonary function before surgery for pectus excavatum and at long-term follow up. Chest 1994b; 105:1646-1652.
- 48. Nuss D, Croitoru DP, Kelly RE Jr, et al. Review and discussion of the complications of minimally invasive pectus excavatum repair. Eur J Pediatr Surg. 2002; 12(4):230-234.
- 49. Nuss D, Kelly RE, Croitoru DP, Katz ME. A 10-year review of a minimally invasive technique for the correction of pectus excavatum. J Pediatr Surg. 1998; 33:545-552.
- 50. Obermeyer RJ, Goretsky MJ. Chest wall deformities in pediatric surgery. Surg Clin N Am. 2012; 92:669-684.
- 51. Peled AW, Slavin SA, Brorson H. Long-term outcome after surgical treatment of lipedema. Ann Plast Surg. 2012; 68(3):303-307.
- 52. Peterson RJ, Young WG, Godwin JD, et al. Noninvasive assessment of exercise cardiac function before and after pectus excavatum repair. J Thorac Cardiovasc Surg. 1985; 90:251-260.
- 53. Rapprich S, Dingler A, Podda M. Liposuction is an effective treatment for lipedema-results of a study with 25 patients. J Dtsch Dermatol Ges. 2011; 9(1):33-40.
- 54. Rosian K, Stanak M. Efficacy and safety assessment of lymphovenous anastomosis in patients with primary and secondary lymphedema: A systematic review of prospective evidence. Microsurgery. 2019; 39(8):763-772.
- 55. Salgarello M, Mangialardi ML, Pino V, et al. A prospective evaluation of health-related quality of life following lymphaticovenular anastomosis for upper and lower extremities lymphedema. J Reconstr Microsurg. 2018; 34(9):701-707.
- 56. Schalamon J, Pokall S, Windhaber J, Hoellwarth ME. Minimally invasive correction of pectus excavatum in adult patients. J Thorac Cardiovasc Surg. 2006; 132(3):524-529.
- 57. Schmeller W, Hueppe M, Meier-Vollrath I. Tumescent liposuction in lipedema yields good long-term results. Br J Dermatol. 2012; 166(1):161-168.
- 58. Schmeller W, Meier-Vollrath I. Tumescent liposuction: a new and successful therapy for lipedema. J Cutan Med Surg. 2006; 10(1):7-10.
- 59. Shamberger RC. Cardiopulmonary effects of anterior chest wall deformities. Chest Surg Clin N Am. 2000; 10(2):245-252.

- 60. Shavit E, Wollina U, Alavi A. Lipoedema is not lymphoedema: a review of current literature. Int Wound J. 2018; 15(6):921-928.
- 61. Sigalet DL, Montgomery M, Harder J. Cardiopulmonary effects of closed repair of pectus excavatum. J Pediatr Surg. 2003; 38(3):380-385.
- 62. Sigalet DL, Montgomery M, Harder J, et al. Long term cardiopulmonary effects of closed repair of pectus excavatum. Pediatr Surg Int. 2007; 23(5):493-497.
- 63. Sigl S, Del Frari B, Harasser C, Schwabegger AH. The effect on cardiopulmonary function after thoracoplasty in pectus carinatum: a systematic literature review. Interact Cardiovasc Thorac Surg. 2018; 26(3):474-479.
- 64. Sudduth CL, Maclellan RA, Greene AK. Study of 700 Referrals to a Lymphedema Program [published online ahead of print, 2020 Apr 29].
- 65. Tanner H, Bischof D, Roten L, et al. Electrocardiographic characteristics of patients with funnel chest before and after surgical correction using pectus bar: A new association with precordial J wave pattern. J Electrocardiol. 2016; 49(2):174-181.
- 66. Witte T, Dadras M, Heck FC, et al. Water-jet-assisted liposuction for the treatment of lipedema: Standardized treatment protocol and results of 63 patients. J Plast Reconstr Aesthet Surg. 2020; 73(9):1637-1644.
- 67. Wollina U, Heinig B. Treatment of lipedema by low-volume micro-cannula liposuction in tumescent anesthesia: results in 111 patients. Dermatol Ther. 2019; 32(2):e12820.
- 68. Wynn SR, Riscoll DJ, Ostrum NK, et al. Exercise cardiorespiratory function in adolescents with pectus excavatum. Observations before and after operation. J Thorac Cardiovasc Surg. 1990; 9:41-47.

Government Agency, Medical Society, and Other Authoritative Publications:

- The American College of Obstetricians and Gynecologists (ACOG). Committee Opinion No. 686. January 2017. Breast and Labial Surgery in Adolescents. Available at: https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2017/01/breast-and-labial-surgery-in-adolescents. Accessed on May 15, 2023.
- The American College of Obstetricians and Gynecologists (ACOG). Committee Opinion No. 795. January 2020. Elective Female Genital Cosmetic Surgery. Available at https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2020/01/elective-female-genital-cosmetic-surgery. Accessed on May 15, 2023.
- The American College of Obstetricians and Gynecologists (ACOG). Female Genital Mutilation. Statement of Policy. Approved 2019, Amended and Reaffirmed July 2022. Available at: https://www.acog.org/clinical-information/policy-and-position-statements/statements-of-policy/2022/female-genital-mutilation. Accessed on May 15, 2023.
- 4. Chang DW, Dayan J, Greene AK, et al. Surgical Treatment of Lymphedema: A systematic review and meta-analysis of controlled trials. Results of a Consensus Conference. Plast Reconstr Surg. 2021; 147(4):975-993.
- 5. Halk AB, Damstra RJ. First Dutch guidelines on lipedema using the international classification of functioning, disability and health. Phlebology. 2017; 32(3):152-159.
- 6. International Society of Lymphology. The diagnosis and treatment of peripheral lymphedema: 2020 consensus document of the International Society of Lymphology. Lymphology. 2020; 53(1):3-19.
- 7. National Cancer Institute. Lymphedema (PDQ®) health professional version. August 28, 2019. Available at: https://www.cancer.gov/about-cancer/treatment/side-effects/lymphedema/lymphedema-hp-pdq. Accessed on May 15, 2023.
- 8. National Institutes of Health. National Center for advancing translational sciences. Lipedema. Last updated February 12, 2021. Available at: https://rarediseases.info.nih.gov/diseases/10542/lipedema. Accessed on May 15, 2022.

- 9. National Lymphedema Network (NLN). National Lymphedema position papers. Available at: https://lymphnet.org/position-papers/. Accessed on May 15, 2023.
- 10. Reich-Schupke S, Schmeller W, Brauer WJ, et al. S1 guidelines: lipedema. J Dtsch Dermatol Ges. 2017; 15(7):758-767.
- 11. U.S. Food and Drug Administration (FDA) warns against use of energy-based devices to perform vaginal "Rejuvenation" or Vaginal Cosmetic: FDA Safety Communication Procedures. July 30, 2018. Available at: <a href="https://www.iuga.org/news/fda-warns-against-use-of-energy-based-devices-to-perform-vaginal-rejuvenation-or-vaginal-cosmetic-procedures-fda-safety-communication#:~:text=On%20July%2030%2C%202018%2C%20the. Accessed on May 15, 2023.

Websites for Additional Information

- 1. American Academy of Facial Plastic and Reconstructive Surgery. Available at: http://www.aafprs.org/. Accessed on May 15, 2023.
- 2. American Cancer Society. Lymphedema. Available at: https://www.cancer.org/treatment/treatments-and-side-effects/lymphedema.html. Accessed on May 15, 2023.
- 3. American Society for Aesthetic Plastic Surgery. Available at: http://www.surgery.org/. Accessed on May 15, 2023.
- 4. American Society of Plastic Surgeons. Available at: http://www.plasticsurgery.org. Accessed on May 15, 2023.

Index

Brachioplasty

Buttock

Circumferential Suction-assisted Lipectomy (CSAL)

Congenital Abnormalities

Labia Minora

Lipectomy

Lipedema

Lipoplasty

Liposuction in Lymphedema

Lymphedema

Lympho-Liposuction

MonaLisa Touch Laser

Pectus Carinatum

Pectus Excavatum

Phalloplasty

Suction-assisted Lipectomy

Thigh

The use of specific product names is illustrative only. It is not intended to be a recommendation of one product over another, and is not intended to represent a complete listing of all products available.

Document History

Status	Date	Action
Reviewed	05/11/2023	Medical Policy & Technology Assessment Committee (MPTAC) review.
		Updated Rationale and References sections.
Revised	05/12/2022	MPTAC review. The example of buried penis was added to the Reconstructive
		statement for procedures on the genitalia. The Rationale and References
		sections were updated.
Revised	05/13/2021	MPTAC review. Removed the word, "Physical" in the term, "Functional
		impairment" in the Position Statement section. Revised the reconstructive
		statement for genitalia to add congenital defects. Updated the Rationale,
	04/07/2021	Definitions and References sections. Revised MN definition text in the Description section to remove the word,
	04/07/2021	"Physical" in the term, "Functional impairment." Removed same in the
		Rationale and Background sections and clarified the Definition of 'Functional
		impairment' in the Definitions section.
Revised	11/05/2020	MPTAC review. A reconstructive statement has been added to the Position
	,,	Statements. The Background, Index and References were updated. Updated
		Coding section; added codes 55899, 58999.
Revised	11/07/2019	MPTAC review. Criteria for liposuction and lipectomy were expanded to add
		MN indications and Reconstructive indications beyond breast cancer. The
		Rationale, Background, Definitions, Coding, and Index sections were updated.
Reviewed	01/24/2019	MPTAC review. References were updated.
Reviewed	02/27/2018	MPTAC review. The document header wording was updated from "Current
Daviamad	02/02/2017	Effective Date" to "Publish Date." References were updated.
Reviewed Revised	02/02/2017 02/04/2016	MPTAC review. Updated References section. MPTAC review. Revised cosmetic and not medically necessary statement to
Reviseu	02/04/2010	address procedures on external genitalia. Revised reconstructive statement to
		addressing genitalia. Removed ICD-9 codes from Coding section.
Reviewed	08/06/2015	MPTAC review. Updated References.
Reviewed	08/14/2014	MPTAC review. References and Websites updated.
Revised	08/08/2013	MPTAC review. Clarified note that defines how Haller index is measured for
		pectus excavatum and pectus carinatum. Updated Background and Websites.
Revised	08/09/2012	MPTAC review. Clarified medically necessary statement for brachioplasty.
		Added medically necessary statement for buttock & thigh lift. Added
		reconstructive statement for lipectomy/liposuction when done to address
		significant variant from normal directly related to surgical mastectomy.
		Clarified cosmetic and not medically necessary statements for buttock & thigh
		lift and lipectomy/liposuction. Rationale, Background, Coding, Websites and References sections updated.
Reviewed	05/10/2012	MPTAC review. Websites and References sections updated.
Reviewed /	05/19/2011	MPTAC review. References and websites updated.
Reviewed	05/13/2010	MPTAC review. References and websites updated.
Reviewed	05/21/2009	MPTAC review. References updated.

Cosmetic and Reconstructive Services of the Trunk and Groin

Revised	05/15/2008	MPTAC review. Added reconstructive criteria for pectus excavatum and for pectus carinatum. Added cosmetic and not medically necessary statement for		
Revised	11/29/2007	pectus excavatum and for pectus carinatum. Updated Reference section. MPTAC review. Added medically necessary statement to Brachioplasty section when significant physical functional impairment is present. Added reconstructive statement for congenital abnormalities. Changed not medically necessary statement for congenital abnormalities to be cosmetic/not medically necessary. Revised wording in Lipectomy/liposuction section to add "for all indications, including but not limited to the removal of excess fat from the thighs, buttocks, chest or abdomen." The phrase "cosmetic/not medically necessary" was clarified to read "cosmetic and not medically necessary."		
		Updated coding and		
Reviewed	03/08/2007			statement. Updated reference section.
Revised	03/23/2006	MPTAC review. Added clarification and references regarding physiological impairment associated with pectus excavatum.		
Revised	12/01/2005	MPTAC review. Added procedures of male and female genitalia.		
	11/22/2005	Added reference for Centers for Medicare and Medicaid Services (CMS) –		
	11,22,2000	National Coverage Determination (NCD).		
Revised	09/22/2005			
	WellPoint Harmonization.			
Pre-Merger Organizations		Last Review	Document	Title
		Date	Number	
Anthem, Inc	2.	06/16/2003	ANC.00009	Cosmetic and Reconstructive
WellPoint H	WellPoint Health Networks, Inc.		3.01.25	Services of the Trunk and Groin Surgical Treatment of Pectus
				Excavatum
		09/23/2004		Clinical Guideline: Liposuction

