Evolent Clinical Guideline 1770 for Shoulder Arthroscopy

Guideline Number: Evolent_CG_1770	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. ***© 2016 - ~~2024~~2025 Evolent. All rights Reserved.***		
Original Date: August 2016	**Last Revised Date:** ~~December 2023~~**November 2024**	**Implementation Date:** July ~~2024~~**2025**

TABLE OF CONTENTS

STATEMENT

General Information

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.

Purpose

This guideline addresses elective, non-emergent, arthroscopic shoulder repair procedures, including Rotator Cuff Repair, Labral Repairs, Lysis of Adhesions (Capsulotomy), Distal Clavicle Excision (DCE), Long Head Biceps (LHB) Tenotomy or Tenodesis, Loose body removal, Synovectomy, and Subacromial Decompression (SAD).

Scope

Surgical indications are based on relevant subjective clinical symptoms, objective physical exam & radiologic findings, and response to previous non-operative treatments when medically appropriate.

Open, non-arthroplasty shoulder repair surgeries are performed as dictated by the type and severity of injury and/or disease.

GENERAL REQUIREMENTS

Elective surgery of the shoulder may be considered if the following general criteria are met:

- Clinical correlation of individual's subjective complaints with objective exam findings and/or imaging (when applicable)
- Individual has limited function (age-appropriate activities of daily living (ADLs), occupational, or athletic)
- Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with shoulder surgery when comorbidities exist as it pertains to the increased risk of complications.
- Individual does not have an active local or systemic infection
- Individual does not have active, untreated drug dependency (including but not limited to narcotics, opioids, muscle relaxants) unless engaged in a treatment program

  *A smoking cessation program is highly recommended and should be instituted pre-operatively for all actively smoking patients [1,2]

Clinical notes should address:

- Symptom onset, duration, and severity
- Loss of function and/or limitations

- Type and duration of non-operative management modalities (where applicable)

Non-operative management, when required, will be specified within the clinical indications below and may include one or more of the following:

- Physical therapy or properly instructed home exercise program
- Rest or activity modification
- Application of heat or ice
- Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- Single injection of corticosteroid and local anesthetic into subacromial, intra-articular space, or bicipital groove

INDICATIONS

Diagnostic Shoulder Arthroscopy

Diagnostic arthroscopy is considered medically necessary when the following criteria in either section have been met [3,4]:

- **Section One**
  - For the evaluation of a painful total shoulder arthroplasty
- **Section Two**
  - Severe, disabling pain and/or a documented loss of shoulder function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
  - Individual demonstrates **any** of the following abnormal, shoulder physical examination findings, as compared to the non-involved side:
    - Functionally limited range of motion (active or passive)
    - Measurable loss in strength
    - Positive impingement signs
  - Individual has undergone an appropriate radiographic work-up that includes both routine x-rays and an MRI evaluation which are determined to be inconclusive for a specific diagnosis
  - Other potential diagnostic conditions have been excluded, including, but not limited to, fracture, thoracic outlet syndrome, brachial plexus disorders, referred neck pain and arthritis
  - Failure of non-surgical management for at least 12 weeks duration to include **TWO** of the following:
    - Rest or activity modifications/limitations
    - Ice/heat
    - Use of a sling/immobilizer/brace
    - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol

- Physical therapy modalities
- Supervised home exercise program

NOTE: In-office diagnostic arthroscopy (e.g., Mi-Eye, VisionScope) [5] is not managed by Evolent.

Rotator Cuff Repair (RCR)

Surgical treatment of a rotator cuff tear (RCT) should only be performed when there is a clinical correlation of symptoms, clinical exam findings, imaging, and failed non-operative management (where required). [6,7]

NOTE: There is a separate section for **subscapularis tears**

Partial-Thickness Rotator Cuff Tear or Calcific Tendinitis

Surgical repair of a partially torn rotator cuff or excision of an area of calcific tendinopathy may be necessary when **all** the following criteria are met [8]:

- Reproducible rotator cuff pain patterns (lateral arm, deltoid pain rarely radiating past the elbow, night pain, or pain with overhead motions)
- Functional loss (age-appropriate activities of daily living (ADL), occupational, or athletic)
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder) [9]
- MRI or ultrasound (if an MRI cannot be performed) that demonstrates a partial thickness tear (articular-sided, concealed, or bursal-sided) or evidence of calcific tendinitis [10,11]
- Unless worsening symptoms develop, failure of at least 12 weeks of non-operative treatment, including at least 6 weeks of physical therapy or a properly instructed home exercise program that includes exercises for scapular dyskinesis when present **AND** one of the following:
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

NOTE: US-guided percutaneous debridement or tenotomy (e.g., Tenex, TenJet) is not managed by Evolent

Small (< 1 cm), Full-Thickness Rotator Cuff Tear

Surgical repair of a small full-thickness rotator cuff tear may be necessary when **all** the following criteria are met:

- Reproducible rotator cuff pain patterns (lateral arm, deltoid pain not radiating past the elbow, night pain, or pain with overhead motions)
- Functional loss (age-appropriate activities of daily living (ADLs), occupational, or athletic)
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe test or

reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder) [9]

- Rotator cuff weakness or severe pain with rotator cuff testing on physical exam
- MRI or Ultrasound that demonstrates a small, full thickness tear (< 1 cm) [10,15]
- Unless worsening symptoms develop, failure of at least 6 weeks of non-operative treatment*, including physical therapy or a properly instructed home exercise program (that includes exercises for scapular dyskinesis when present) **AND** one of the following:
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

*__NOTE__: The requirement for conservative, non-operative treatment is waived in individuals < age 55 with an acute traumatic tear (onset of shoulder pain attributed to a specific traumatic event with no prior history of significant shoulder pain). For ages > 55, non-operative treatment may be waived on a case-by-case basis.

Medium (1-3 cm) or Large (3-5 cm), Full-Thickness Rotator Cuff Tear

Surgical repair of a medium or large full-thickness rotator cuff tear may be necessary when the following criteria are met:

- Significant progression of a full-thickness tear on serial imaging performed at least 12 weeks apart (at least 50% increase in tear size) **OR**
- When the following criteria are met:
  - Reproducible rotator cuff pain patterns (lateral arm, deltoid pain rarely not radiating past the elbow, night pain, or pain with overhead motions)
  - Functional loss (age-appropriate activities of daily living (ADLs), occupational or athletic)
  - Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe, empty can or drop-arm test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder [9]
  - Rotator cuff weakness or severe pain with rotator cuff testing on physical exam
  - MRI or ultrasound results demonstrates a medium (1-3 cm) or large (3-5 cm), full-thickness tear (tear must be a complete single tendon or greater) [10,15]
  - MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) [11,16]
  - Warner classification of atrophy ‘none’ or ‘mild’ [16,17]
  - No cortisone injection within 12 weeks prior to surgery [12,13,14]

Massive (> 5 cm and ≥ 2 tendons involved), Full-Thickness Rotator Cuff Tear

Surgical repair of a massive torn rotator cuff **WITH OR WITHOUT** a superior capsular reconstruction may be necessary when **all** the following criteria are met [7,18]:

- MRI or ultrasound demonstrates massive (> 5 cm), full-thickness tears (with intact or reparable subscapularis tendon for superior capsular reconstruction) [10,15]
- MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) [11,16]
- Warner classification of atrophy 'none' or 'mild' [16,17]
- No x-ray evidence of chronic subacromial articulation of the humeral head, defined as an acromiohumeral space less than 5 mm (Hamada grade 2)
- No advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on- bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

NOTE: AAOS consensus guidelines state that partial repair and superior capsular reconstruction, can improve patient reported outcomes [7]

Subscapularis Tears

Surgical repair of a subscapularis rotator cuff tear may be necessary when the following criteria are met [19]:

- History of an acute injury or chronic complaints of anterior shoulder pain, weakness, or functional impairment
- Positive physical examination findings of subscapularis deficiency – lift-off, bear-hug, belly press test, etc.
- MRI demonstrates a significant partial thickness tear (at least 50% of tendon), full-thickness tear, or any tear associated with subluxation of the biceps tendon
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

Isolated Superior Capsular Reconstruction

A Superior Capsular Reconstruction may be necessary when **all** the following criteria are met [18,20,21]:

- MRI or ultrasound demonstrates massive (> 5 cm), full-thickness tears with an intact or reparable subscapularis tendon
- No x-ray evidence of chronic subacromial articulation of the humeral head, defined as an acromiohumeral space less than 5 mm (Hamada grade 2)
- No advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)

NOTE: A Concomitant Rotator Cuff Repair is **NOT** allowable with advanced Goutallier or Warner muscle atrophy changes as noted in the previous section

Rotator Cuff Repair Revision

Surgical revision within 1 year of a previously repaired small, medium, large or massive torn rotator cuff will be reviewed on a case-by-case basis and must include an MRI (with or

without arthrogram) or CT arthrogram that demonstrate failure of healing (Sugaya type 4-5, see **Background** section) or recurrent tear > 12 weeks after index surgery. [22,23]

All RCR revision cases greater than 1 year following an initial repair must again meet indications as specified by tear size listed in Background section.

Contraindications (applies to all rotator cuff repair) [23]:

- Active infection (local or remote)
- Treatment of asymptomatic, full thickness rotator cuff tear
- Active systemic bacteremia
- Deltoid or rotator cuff paralysis
- Advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)
- Any cortisone injection within 12 weeks prior to surgery [12,13,14]

Labral Repairs

Repair of Superior Labral Anterior-Posterior (SLAP) Tear

Surgical indications should be focused on clinical symptoms and failure to respond to non-operative treatments, rather than imaging (due to a higher percentage of tears being missed on images and significant over-diagnosing of tears based on imaging-alone). [6]

Repair *(not debridement of a SLAP lesion)* may be necessary when **all** the following criteria are met [24]:

- History compatible with tear (acute onset in thrower or overhead athlete, fall, traction injury, shear injury (MVA), lifting injury
- Pain localized to the glenohumeral joint (often only associated with certain reaching or lifting activities and at night) or painful catching/popping/locking sensations
- Inability to perform desired tasks without pain (age-appropriate ADLs, sports, or occupation)
- Age < 40; requests for SLAP repair in an individual age > 40 will be reviewed on a case-by-case basis [25]
- Physical examination demonstrates findings of a SLAP tear (active compression test (O'Brien test), compression rotation test, clunk, or crank test, etc.) [6,26]
- MRI demonstrates Type II, IV SLAP tear - see the classifications of tears below [27]:
    - **Primary SLAP tear classification:**
        - I - Labral and biceps fraying, anchor intact
        - II - Labral tearing with detached biceps tendon anchor
        - III - Bucket handle tear, intact biceps tendon anchor (uncommon)
        - IV - Bucket handle tear with detached biceps tendon anchor, often seen with anterior instability and anterior labral tears
    - **Subclassification for SLAP tears:**
        - V – Type II SLAP tear with Bankart lesion/anterior shoulder instability

        - VI –Superior labral flap, intact biceps anchor
        - VII – Type II SLAP tear with extension to MGHL/IGHL and instability
        - VIII – Type II SLAP with cartilage injury at bicipital footplate
            - (Type V, VII, and VIII are variants of repairable Type II tears and would usually include additional stabilization procedures or biceps tenodesis) (see note* below)
- Failure of at least 12 weeks of non-operative treatment, including activity modification/avoidance of painful activities and one of the following:
    - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
    - Physical therapy or a properly instructed home exercise program

Contraindications [24]:

- **ANY** evidence of degenerative disease upon imaging
    - Smoker and age > 40
    - Diabetics with poor control HgBA1c > 7
    - MRI findings not attributable to normal common variants (for example, labral overhang)

***NOTE**: In cases where a true SLAP tear exists, but the individual has one or more contraindications or findings at the time of surgery that indicates a repair is not feasible, a SLAP debridement (limited, extensive debridement), biceps tenotomy or tenodesis may be an alternative. In addition, for some repairable SLAP tears, biceps tenodesis is a viable alternative to repair (see Tenotomy and Tenodesis Indications). [27,28]

Anterior-Inferior Labral Tear (Bankart Lesion) [29]

- Bankart repair of an **acute labral tear** may be necessary when **all** the following criteria are met:
    - History of an acute event of instability (subluxation or dislocation) or acute onset of pain following activity
    - Age < 30
    - Clinical exam findings demonstrate positive apprehension test, positive relocation test, positive labral grind test, or objective laxity with pain
    - Range of motion is not limited by stiffness upon physical exam (PE is not required if there has been a recent episode of instability)
    - Labral tear/Bankart lesion on MRI or CT imaging
- Bankart repair for **recurrent instability,** with or without a Remplissage or Latarjet procedure, may be necessary when **all** the following criteria are met:
    - Recurrent instability (two or more episodes of subluxation or dislocation)
    - Physical examination findings demonstrate positive apprehension test, positive relocation test, positive labral grind test, or objective laxity with pain (PE is not required if there has been a recent episode of instability or there is a radiographic evidence of any prior dislocation)
    - Range of motion is not limited by stiffness upon physical exam (not required with

a history of a recent dislocation)

- MRI evidence of a labral tear with or without bony Bankart fracture of the glenoid upon imaging

Anterior-Inferior Labral Tear (Bankart Lesion) - Contraindications [29]

- Radiographic findings of an engaging Hill Sachs humeral head defect or glenoid bone loss (if surgery only includes Bankart repair). Latarjet or Remplissage procedures should be considered for anterior dislocations of the shoulder when there is evidence of an engaging ("off-track")* Hill-Sachs lesion of the humerus, or if there is greater than 20% glenoid bone loss by x-ray, CT, or MRI [30,31,32]
- Pain only (no documented recurrent instability events) in individuals over 40
- X-ray, MRI, or CT documentation of significant degenerative arthritis of the glenohumeral joint

***See <u>Background</u> section**

Posterior Labral Tear [33,34]

Surgical repair of a posterior labral tear may be necessary when **ALL** of the following criteria are met:

- Symptoms of pain, catching/popping, or instability
- MRI findings of posterior labral tear
- Exam findings demonstrate positive load-and-shift test, jerk test, glenohumeral grind test, or objective laxity with pain or profound weakness
- Failure of at least 12 weeks of non-operative treatment (unless presenting as a traumatic tear in a competitive athlete at any level) that includes any **TWO** of the following**:**
  - Physical therapy or a properly instructed home exercise program
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- Age < 40
- No radiographic evidence of degenerative disease (e.g., posterior glenoid cartilage loss, subchondral glenoid cysts, mucoid degeneration of labrum, narrowing of joint space with posterior humeral head subluxation on axillary x-ray or axial MRI images)

Combined Labral Tears

(E.g., Anterior / Posterior, SLAP / Anterior, SLAP / Posterior, SLAP / Ant. / Post.) [35]

- Surgical repair of an **acute combination tear** may be necessary when **all** the following criteria are met:
  - History of an acute event of instability (subluxation or dislocation)
  - Acute labral tear on MRI/CT imaging with/without bony Bankart fracture not > 25% of glenoid width upon imaging
  - Age < 30

- Range of motion not limited by stiffness upon physical exam
- Clinical exam findings demonstrate positive apprehension test and positive relocation test, **OR** positive labral grind test **OR** objective laxity with pain
- Minimal to no evidence of degenerative changes on imaging

- Surgical repair of **recurrent combination tear** may be necessary when **all** the following criteria are met:
  - Recurrent instability (subluxation or dislocation) with at least 2 instability events
  - Labral tear on MRI or CT, with/without bony Bankart fracture not > 25% of glenoid width upon imaging
  - Range of motion not limited by stiffness upon physical exam
  - Clinical exam findings demonstrate positive apprehension test and positive relocation test, or positive labral grind test, or objective laxity with pain
  - Minimal to no evidence of degenerative changes on imaging

Multidirectional Instability of the Shoulder (MDI)

Open or Arthroscopic Capsulorrhaphy for MDI

Surgical repair for MDI may be necessary when **all** the following criteria are met [36,37]:

- Individual has pain and limited function (age-appropriate ADLs, occupation, or sports)
- Individual has recurrent instability due to hyperlaxity or mobility and no traumatic dislocation
- Physical exam supports repeatable increased glenohumeral joint translation (greater than 1 cm of movement during the sulcus test)
- Imaging (x-ray and MRI) rules out fracture and/or other soft-tissue injury
- Failure of at least 6 months of formal physical therapy and activity modification

Adhesive Capsulitis [38,39]

(Lysis of Adhesions, Capsulotomy/Capsular Release or Manipulation under Anesthesia)

Surgery for adhesive capsulitis may be necessary when **all** of the following criteria are met:

- Individual has pain, loss of motion, and limited function (age-appropriate ADLs, occupation, or sports)
- Physical exam demonstrates loss of motion of at least 50% in 2 planes, as compared to the contralateral shoulder
- Co-morbidities (such as diabetes, thyroid disease, lung disease, etc.), and other causes of loss of shoulder motion have been ruled out
- Failure of at least 12 weeks of non-operative treatment that includes physical therapy or a properly instructed home exercise program and documentation of **ONE** of the following:
  - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
  - Rest or activity modification

- Heat/Ice
- Corticosteroid injection

Distal Clavicle Excision (DCE)

Distal Clavicle Excision may be necessary when **all** the following criteria are met [40,41]:

- Positive clinical exam findings as evidenced by pain upon palpation over AC joint and/or pain with cross-body adduction test
- Positive findings on X-ray **OR** MRI:
  - Radiographic (X-ray) demonstrates narrowed joint space, distal clavicle or medial acromial sclerosis, and/or osteophytes or cystic degeneration of distal clavicle or medial acromion correlating with the clinical findings, patient symptoms and diagnosis; **OR** MRI findings with edema in the distal clavicle and/or inflammatory change within the joint space correlating with the clinical findings, patient symptoms and diagnosis
- Failure of at least 12 weeks of non-operative treatment that includes **at least two** of the following:
  - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
  - Rest or activity modification
  - AC joint corticosteroid injection (if DCE is to be performed as a standalone procedure, AC injection must be performed*****)
  - Physical therapy or a properly instructed home exercise program

***NOTE:** If DCE is to be performed in isolation of other shoulder procedures, an AC joint injection is required for diagnostic purposes and documentation should support pain relief from injection. If no response to injection, this is a strong negative predictor to surgical outcome for isolated DCE.

Long Head Biceps (LHB) Tenotomy/Tenodesis

The indications and outcomes for tenodesis and tenotomy are the same [42,43,44] with the exception that tenodesis is typically better for more active, muscular individuals that are performing higher-demand activities for work or sport. Tenotomy is often preferred in individuals that smoke (this is a relative indication of tenotomy over tenodesis) due to healing problems in tenodesis. **An actual primary repair of a proximal long head of the biceps tear is rare and poorly understood.** [42]

Biceps tenotomy or tenodesis may be necessary when the following criteria in any of the following sections are met [45,46]:

- **Section One**
  - Any of the following:
    - When performed in conjunction with a total shoulder arthroplasty **(a separate request for Shoulder Surgery - Other is required)**
    - When performed in conjunction with a subscapularis tendon repair
    - Type II (or subcategories) or type IV tear, any age, in lieu of a labral repair
    - Age > 50 with SLAP tear

- Smoker with SLAP labral tear (regardless of age, more significant with increasing age)
- Failed SLAP repair
- SLAP tear in diabetic or individual with loss of motion or predisposition to stiff shoulder
- LHB hypertrophy/tearing/subluxation in association with RCR

- **Section Two**
  - **Patient complains** of ~~chronic LHB~~**pain localized to the bicipital** groove ~~pain from tenosynovitis~~
  - **Physical examination findings localized to the bicipital groove (tenderness to palpation, Speed's test, etc.)**
  - Failure of at least 12 weeks of non-operative treatment to include **TWO** of the following:
    - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
    - Rest or activity modification
    - Bicipital groove corticosteroid injection
    - Physical therapy or a properly instructed home exercise program
- **Section Three - Tenodesis for long head of the biceps tendon rupture** [42,43,44,47]
  - **Age < 50. Requests for tenodesis for long head of the biceps rupture in those over 50 will be reviewed on a case-by-case basis**
  - **Patient complains of loss of strength, pain, fatigue, or concern for cosmetic deformity**
  - **Physical examination demonstrates a complete long head of the biceps rupture (Popeye deformity, distally located biceps muscle belly, etc.)**
  - **Unless symptoms worsen, failure of at least 6 weeks of non-operative treatment to include TWO of the following***
    - **Oral or topical NSAIDS (if not medically contraindicated)**
    - **Rest or activity modification**
    - **Physical therapy or properly instructed home exercise program**

*** NOTE: Request for acute tenodesis without attempts of non-operative treatment will be reviewed on a case-by-case basis**

NOTE: US-guided percutaneous debridement or tenotomy (e.g., Tenex, TenJet) is not managed by Evolent

Loose Body Removal

Loose body removal may be medically necessary when the following criteria are met:

- Documentation of pain, mechanical symptoms (catching or locking), stiffness, loss of motion, feelings of instability or loss of function
- X-ray, CT, or MRI documentation of a loose body

Synovectomy

Synovectomy as an isolated procedure is usually reserved for primary synovial disease or in cases where secondary hypertrophic synovitis is documented during arthroscopy (these include adhesive capsulitis, osteoarthritis, chronic rotator cuff tear). These should be evident on arthroscopic photographs taken at surgery but may be missed on preoperative images. (48)

Subacromial Decompression (SAD) (49,50)

See Background Section

Subacromial decompression may be necessary **in conjunction with** other shoulder procedures (listed below) if there is radiographic (x-ray) evidence of mechanical outlet impingement as evidenced by a Bigliani type 3 morphology. Subacromial decompression should not be performed in isolation.

- Rotator cuff repair
- Labral repair
- Capsulorrhaphy
- Loose body removal
- Synovectomy
- Debridement
- Distal clavicle excision
- Lysis of adhesions
- Biceps tenodesis/tenotomy

Contraindications:

- Type 1 or Type 2 or a thinned acromion. Subacromial bursectomy may be a reasonable option.
- If individual has received an injection in the subacromial space and there is failure to adequately respond—significant relief (> 50%) for minimum of 1 week—to injection in the subacromial space (pain should respond temporarily if impingement)
- Prior subacromial decompression with either a Type 1 or a thinned acromion or no evidence of overhang on x-ray (unnecessary revision can thin the acromion and lead to deltoid avulsion and/or acromial fracture)
- Open SAD procedures should rarely be performed given the increased morbidity due to deltoid disruption.

CODING AND STANDARDS

Coding

CPT Codes

Shoulder Rotator Cuff Repair: 23410, 23412, 23420, 29827

Shoulder Labral Repair: 23450, 23455, 23460, 23462, 23465, 23466, 29806, 29807

Frozen Shoulder Repair/Adhesive Capsulitis: 29825

Shoulder Surgery Other: 23120, 23125, 23130, 23405, 23415, 23430, 23700, 29805, 29819, 29820, 29821, 29822, 29823, 29824, 29825, +29826, 29828

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Rotator Cuff Repair

Traditional open rotator cuff repair (RCR) with deltoid take-down should be rare given increased morbidity when compared to arthroscopic or mini-open surgery.

Rotator Cuff Classification and Grades

Goutallier classification of fatty infiltration of rotator cuff musculature *(11)*

Grade 0 – Normal

Grade 1 – Mild - muscle contains some fatty streaks

Grade 2 – Moderate – more muscle than fat

Grade 3 – Severe – equal amounts of fat and muscle

Grade 4 – More fat than muscle

Hamada classification of rotator cuff arthropathy *(51)*

Acromiohumeral interval (AHI)

- Grade 1 – AHI over 6 mm
- Grade 2 – AHI < 5mm
- Grade 3 – Acetabulization
- Grade 4 – Acetabulization and narrowed GH joint
- Grade 5 - Acetabulization with humeral head collapse

Sugaya classification [52]

Revision rotator cuff repair

The Sugaya classification for evaluation in revision rotator cuff repair is as follows:

- Type I - Sufficient thickness, homogeneous tendon (low signal on T2 images)
- Type II - Sufficient thickness, partial high-intensity from within the tendon
- Type III - Insufficient thickness without discontinuity
- Type IV - Minor discontinuity on more than one slice, suggesting a small tear
- Type V - Major discontinuity suggesting a moderate or large tear

~~Labral Repairs~~

~~There is a tendency to misinterpret normal degenerative labral changes and variations as "tears" which may lead to over-utilization of surgery if decisions are made upon imaging reports alone. In general, true labral tears lead to pain, catching, popping, functional limitations (including age-appropriate activities of daily living (ADLs), occupational and athletic), micro-, and gross instability. Labral repairs are most-frequently associated with a specific traumatic event.~~

~~The anterior-superior labrum (from 12 to 3 o'clock for a right shoulder) has many normal variations that can be misinterpreted as a tear, including sublabral hole/foramen, Buford complex, and a labral overhang with an intact biceps anchor.~~

~~*Anterior-Inferior Labral-Tear (Bankart lesion)*~~

~~A Bankart tear of the glenoid labrum is located at the 3-6 o'clock position of a right shoulder. It is typically caused by a traumatic instability event (dislocation or subluxation). It can involve the labrum, the capsular ligaments (IGHL [inferior glenohumeral ligamentous complex]) and/or the bone (bony Bankart fracture). If symptomatic typically requires surgical repair as individuals less than 30 have a high recurrence rate of instability. If there has been significant bone loss of the anterior glenoid, further stabilization might be required by transferring the coracoid process and attached conjoined tendon (Latarjet Procedure) or using a bone graft to the anterior glenoid. Engaging or "off-track" defects of the humeral head (Hill-Sachs lesion) may require the use of portions of the rotator cuff (Remplissage Procedure) to fill the bony defect, in order to further stabilize the shoulder.~~

~~*Posterior Labral Tear*~~

~~Similar to Bankart tears, posterior labral tears are often associated with a paralabral cyst that grows large enough to compress the suprascapular nerve (isolated to infraspinatus). Posterior labral tears are frequently associated with contact sports or a history of a traumatic fall/posterior loading of the joint. They are often observed in athletes performing repetitive posterior loading of the joint (offensive linemen in football, weightlifting, push-ups, and bench press). These tears are more likely to result in pain and weakness rather than recurrent dislocations/instability. Posterior labral changes are often misinterpreted on MRI as a "tear" in age > 40 years old, when changes due to early glenohumeral degeneration begin to appear.~~

~~*Combined Labral Tears*~~

~~(E.g., Anterior / Posterior, SLAP / Anterior, SLAP / Posterior, SLAP / Ant. / Post.)~~

~~Combined tears that require repair are almost always associated with significant recurrent instability. Often tears begin within one area and overtime the failure to repair the original injury causes the tear to extend.~~

~~Adhesive Capsulitis~~

~~(Lysis of Adhesions; Capsulotomy/Capsular Release)~~

~~Adhesive capsulitis is a thickening and tightening of the soft tissue capsule that surrounds the glenohumeral joint. Adhesive capsulitis usually begins with the gradual onset of pain and limitation of shoulder motion, with a progression to interference of activities of daily living. Primary adhesive capsulitis is the subject of much debate as the specific causes of this condition are not fully understood. Individuals with uncontrolled diabetes have a significantly higher risk of developing adhesive capsulitis than the general population. Secondary (acquired) adhesive capsulitis develops from a known cause, such as stiffness following a shoulder injury, surgery, or a prolonged period of immobilization. Adhesive capsulitis may last from one to three years, despite active treatment, and is more common in women.~~

~~Distal Clavicle Excision (DCE)~~

~~The AC joint (acromioclavicular joint) can develop degenerative disease in those over 30 years of age, those with a history of a prior grade I or II AC sprain/separation, those with a history of heavy lifting (labor occupation or strength training), or those with evidence of remote trauma. It can occur in isolated form in younger individuals (distal clavicle osteolysis) but is more commonly observed concomitantly with rotator cuff disease in those over 40 years of age.~~

~~Long Head Biceps (LHB) Tenotomy/Tenodesis~~

~~Pain in the area of the long head of the bicep tendon is common, especially in overhead sports and in the presence of rotator cuff tears (especially subscapularis). It can be an isolated source of pain in chronic tenosynovitis, SLAP tears, or small tears of the biceps sling, resulting in dynamic or static subluxation or dislocation of the tendon. LHB problems are frequently missed on MRI (especially using contrast which can mask the pathology). The choice of tenodesis versus tenotomy is controversial. Typically, tenodesis is better for more active, muscular individuals performing higher demand activity (labor, sports). Tenotomy is generally a better option for older, less active individuals with poor muscle definition, as it generally leaves the individual with a "Popeye" deformity and the possibility of biceps cramping or anterior shoulder pain with activity. The choice of tenotomy vs. tenodesis is generally left up to the surgeon/patient.~~

~~Loose Body Removal~~

~~Although not as common as in the knee, a loose body in the shoulder may require arthroscopic removal if symptoms such as pain, catching or locking are present. Because of the non-weightbearing status of the shoulder and the axillary fold where a loose body might be positioned, not every loose body diagnosed by imaging requires removal.~~

On-Track/Off-Track Instability of the Shoulder [30,31,32,53,54]

Latarjet or Remplissage procedures should be considered for anterior dislocations of the shoulder when there is evidence of an engaging 'off-track' Hill-Sachs lesion of the humerus, or if there is greater than 20% glenoid bone loss by X-ray, CT, or MRI.

~~Synovitis is common in many shoulder conditions and typically resolves when the primary pathology is treated. Most commonly, this includes loose bodies, inflammatory arthritis or degenerative arthritis, labral tears, and adhesive capsulitis. Primary synovial diseases include pigmented villonodular synovitis, synovial chondromatosis, rheumatoid arthritis, other inflammatory arthritis, traumatic synovial hypertrophy or metaplasia.~~

The glenoid track, a zone of dynamic contact during arm elevation, is a unique biomechanical model that uses both glenoid and humeral head bone loss to predict subsequent risk of humeral head engagement and possible dislocation. An ***engaging*** Hill-Sachs bony defect, or 'off-track' lesion, is one in which the width of the bony defect is greater than the width of the glenoid track. Off-track engagement occurs when the medial margin of the Hill-Sachs defect engages the glenoid track. If there is bony loss of the glenoid as well, the glenoid track will proportionately be less, causing greater risk of engagement. A ***nonengaging***, or 'on-track' Hill-Sachs lesion is one in which the width of the bony defect is less than the width of the glenoid track. Using preoperative CT or MR imaging, the glenoid track can identify individuals who are more likely to fail only a primary capsuloligamentous Bankart repair. Glenoid track evaluation shows that restoring the track (glenoid) to its normal width should be the first priority in restoring shoulder stability**.**

Subacromial Decompression (SAD)

There are 3 types of acromion anatomy according to Bigliani classification: type 1, flat (20%), type 2, curved (40%) and type 3, hooked, (40%). Acromioplasty involves removing bone from the undersurface of the acromion to change a type 3 (hooked) acromion to a type 1 (flat) acromion. Although debated for decades, current evidence concludes that there is no role for isolated acromioplasty (subacromial decompression), which prompted conversion of CPT code 29826 (acromioplasty, subacromial decompression) from an index, primary, "stand-alone" code to an "add-on" code only.

POLICY HISTORY

Date	Summary
November 2024	• **This guideline replaces Evolent Clinical Guideline 318 for Shoulder Arthroscopy** • **Added indications for biceps tenodesis for long head of the biceps ruptures** • **Removed background sections for: labral repairs, adhesive capsulitis, DCE, LHB, Loose body removal, synovectomy and added on-track/off-track instability to background section**
December 2023	• Partial thickness Rotator Cuff Tear or Calcific Tendinitis: in surgical repair of the partially torn rotator cuff added in "or excision of an area of calcific tendinopathy" • Modified criteria for failure of non-operative treatment to include "unless worsening symptoms develop" • Labral Repairs: SLAP tear – updated the classification of

Date	Summary
	SLAP I-VIII • Anterior-Inferior Labral Teal (Bankart lesion): added in under clinical exam findings demonstration of positive test were not required if recent or prior documented dislocation • LHB Tenotomy/Tenodesis: added in Type II (or subcategories) or type IV tear, any age, in lieu of repair as a criteria • Added table of contents • Reduced Background Section • Updated references
May 2023	• Added the requirement of 6 weeks of physical therapy for partial rotator cuff repairs • Added the requirement for no significant muscle atrophy or fatty infiltration for medium or large rotator cuff repairs • Clarification of the indications for Latarjet or Remplissage procedures • Added requirement for 50% decreased ROM in 2 planes, as compared to the opposite shoulder, for frozen shoulder surgery • Added requirement for a chest X-ray in the past 12 months for frozen shoulder surgery
~~May 2022~~	~~• Updated background and references~~ ~~Further defined the glenoid track verbiage for "off-track" and "on-track" Hill-Sachs lesions (bony defects of the humeral head)~~ ~~Clarified individual is medically stable and *optimized for surgery*~~ ~~Revised Partial-Thickness Rotator Cuff Tear or Calcific Tendinitis to "include *two* of the following criteria"~~ ~~Revised criteria for Latarjet or Remplissage to "Recurrent *anterior dislocations*"~~ ~~Non-operative treatment for small RCT revised to *ONE* of the following (previously "at least one")~~ ~~Revised 3 months to 12 weeks throughout~~ ~~Replace "patient" with "individual" where appropriate~~ ~~**Added:**~~ ~~Evaluation of pain prior total shoulder arthroplasty as indication for a diagnostic arthroscopy~~ ~~Cortisone injection within 12 weeks of a rotator cuff repair or revision as a contraindication~~

Date	Summary
	~~Added more specific indications for repair of a subscapularis rotator cuff tear~~ ~~Physical examination findings requirement for SLAP tears~~ ~~Criteria for loose body removal~~ ~~"performed in conjunction with a subscapularis tendon repair" to criteria for Long Head Biceps Tenotomy/Tenodesis~~ ~~**Deleted:**~~ ~~Requirement for a cortisone injection for calcific tendinopathy~~ ~~Deleted cortisone injections from lists of treatment modalities~~ ~~IA joint corticosteroid injection from non-operative treatments for LHB Tenotomy/Tenodesis~~ ~~Rotator cuff repair surgical management statement~~

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

REFERENCES

1. Kashanchi K, Nazemi A, Komatsu D, Wang E. Smoking as a risk factor for complications following arthroscopic rotator cuff repair. JSES International. 2021; 5: 83-87. 10.1016/j.jseint.2020.10.002.

2. Zabrzyński J, Huri G, Gagat M, Łapaj Ł, Yataganbaba A et al. The impact of smoking on clinical results following the rotator cuff and biceps tendon complex arthroscopic surgery. Journal of Clinical Medicine. 2021; 10: 1-12. 10.3390/jcm10040599.

3. Akgün D, Maziak N, Plachel F, Minkus M, Scheibel M et al. Diagnostic Arthroscopy for Detection of Periprosthetic Infection in Painful Shoulder Arthroplasty. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2019; 35: 2571-2577. 10.1016/j.arthro.2019.03.058.

4. Guild T, Kuhn G, Rivers M, Cheski R, Trenhaile S. The Role of Arthroscopy in Painful Shoulder Arthroplasty: Is Revision Always Necessary? Arthroscopy - Journal of Arthroscopic and Related Surgery. 2020; 36: 1508-1514. 10.1016/j.arthro.2020.01.045.

5. Zhang K, Crum R, Samuelsson K, Cadet E, Ayeni O. In-Office Needle Arthroscopy: A Systematic Review of Indications and Clinical Utility. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2019; 35: 2709-2721. 10.1016/j.arthro.2019.03.045.

6. Thiagarajan A, Nagaraj R, Marathe K. Correlation Between Clinical Diagnosis, MRI, and Arthroscopy in Diagnosing Shoulder Pathology. Cureus. 2021; 10.7759/cureus.20654.

7. Weber S, Chahal J. Management of Rotator Cuff Injuries. Journal of the American Academy of Orthopaedic Surgeons. 2020; 28: E193-E201. 10.5435/JAAOS-D-19-00463.

8. Thangarajah T, Lo I. Optimal Management of Partial Thickness Rotator Cuff Tears: Clinical Considerations and Practical Management. Orthopedic research and reviews. 2022; 14: 59-70. 10.2147/ORR.S348726.

9. Gismervik S, Drogset J O, Granviken F, Rø M, Leivseth G. Physical examination tests of the shoulder: A systematic review and meta-analysis of diagnostic test performance. BMC Musculoskeletal Disorders. 2017; 18: 10.1186/s12891-017-1400-0.

10. Apostolopoulos A P, Angelis S, Yellapragada R K, Khan S, Nadjafi J et al. The Sensitivity of Magnetic Resonance Imaging and Ultrasonography in Detecting Rotator Cuff Tears. Cureus. 2019; 10.7759/cureus.4581.

11. Yubran A, Pesquera L, Juan E, Saralegui F, Canga A et al. Rotator cuff tear patterns: MRI appearance and its surgical relevance. Insights into Imaging. 2024; 15: 10.1186/s13244-024-01607-w.

12. Darbandi A, Cohn M, Credille K, Hevesi M, Dandu N et al. A Systematic Review and Meta-analysis of Risk Factors for the Increased Incidence of Revision Surgery After Arthroscopic Rotator Cuff Repair. American Journal of Sports Medicine. 2024; 52: 1374-1383. 10.1177/03635465231182993.

13. Traven S A, Brinton D, Simpson K N, Adkins Z, Althoff A et al. Preoperative Shoulder Injections Are Associated With Increased Risk of Revision Rotator Cuff Repair. Arthroscopy. 2019; 35: 706-713. 10.1016/j.arthro.2018.10.107.

14. Werner B, Cancienne J, Burrus M, Griffin J, Gwathmey F. The timing of elective shoulder surgery after shoulder injection affects postoperative infection risk in Medicare patients. Journal of Shoulder and Elbow Surgery. 2016; 25: 390-397. 10.1016/j.jse.2015.08.039.

15. Katepun S, Boonsun P, Boonsaeng W S, Apivatgaroon A. Reliability of the Single-Arm and Double-Arm Jobe Test for the Diagnosis of Full-Thickness Supraspinatus Tendon Tear. Orthopaedic Journal of Sports Medicine. 2023; 11: 10.1177/23259671231187631.

16. Kuzel B, Grindel S, Papandrea R, Ziegler D. Fatty infiltration and rotator cuff atrophy. Journal of the American Academy of Orthopaedic Surgeons. 2013; 21: 613-623. 10.5435/JAAOS-21-10-613.

17. Naimark M, Trinh T, Robbins C, Rodoni B, Carpenter J et al. Effect of Muscle Quality on Operative and Nonoperative Treatment of Rotator Cuff Tears. Orthopaedic Journal of Sports Medicine. 2019; 7: 10.1177/2325967119863010.

18. Sheth M, Shah A. Massive and Irreparable Rotator Cuff Tears: A Review of Current Definitions and Concepts. Orthopaedic Journal of Sports Medicine. 2023; 11: 10.1177/23259671231154452.

19. Ghasemi S, McCahon J, Yoo J, Toussaint B, McFarland E et al. Subscapularis tear classification implications regarding treatment and outcomes: consensus decision-making. JSES Reviews, Reports, and Techniques. 2023; 3: 201-208. 10.1016/j.xrrt.2022.12.004.

20. Claro R, Fonte H. Superior capsular reconstruction: current evidence and limits. EFORT Open Reviews. 2023; 8: 340-350. 10.1530/EOR-23-0027.

21. Mahatme R, Modrak M, Wilhelm C, Lee M, Owens J et al. Glenohumeral Superior Translation and Subacromial Contract Pressure Are Both Improved With Superior Capsular Reconstruction: A Systematic Review and Meta-analysis of Biomechanical Investigations. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2024; 40: 1279-1287. 10.1016/j.arthro.2023.08.025.

22. Mandaleson A. Re-tears after rotator cuff repair: Current concepts review. Journal of Clinical Orthopaedics and Trauma. 2021; 19: 168-174. 10.1016/j.jcot.2021.05.019.

23. Strauss E, McCormack R, Onyekwelu I, Rokito A. Management of failed arthroscopic rotator cuff repair. Journal of the American Academy of Orthopaedic Surgeons. 2012; 20: 301-309. 10.5435/JAAOS-20-05-301.

24. Varacallo M, Tapscott D C, Mair S D. Superior Labrum Anterior Posterior Lesions [2023 Aug 4]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK538284/.

25. Erickson J, Lavery K, Monica J, Gatt C, Dhawan A. Surgical treatment of symptomatic superior labrum anterior-posterior tears in patients older than 40 years: A systematic review. American Journal of Sports Medicine. 2015; 43: 1274-1282. 10.1177/0363546514536874.

26. Dean R, Onsen L, Lima J, Hutchinson M. Physical Examination Maneuvers for SLAP Lesions: A Systematic Review and Meta-analysis of Individual and Combinations of Maneuvers. American Journal of Sports Medicine. 2023; 51: 3042-3052. 10.1177/03635465221100977.

27. Familiari F, Huri G, Simonetta R, McFarland E. SLAP lesions: Current controversies. EFORT Open Reviews. 2019; 4: 25-32. 10.1302/2058-5241.4.180033.

28. Hester W, O'Brien M, Heard W, Savoie F. Current Concepts in the Evaluation and Management of Type II Superior Labral Lesions of the Shoulder. The Open Orthopaedics Journal. 2018; 12: 331-341. 10.2174/1874325001812010331.

29. Tupe R N, Tiwari V. Anteroinferior Glenoid Labrum Lesion (Bankart Lesion) [Updated 2023 Aug 3]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK587359/.

30. Min K, Horng J, Cruz C, Ahn H, Patzkowski J. Glenoid Bone Loss in Recurrent Shoulder Instability after Arthroscopic Bankart Repair: A Systematic Review. Journal of Bone and Joint Surgery. 2023; 105: 1815-1821. 10.2106/JBJS.23.00388.

31. Momaya A, Tokish J. Applying the Glenoid Track Concept in the Management of Patients with Anterior Shoulder Instability. Current Reviews in Musculoskeletal Medicine. 2017; 10: 463-468. 10.1007/s12178-017-9436-1.

32. Woodmass J, McRae S, Lapner P, Kamikovski I, Jong B et al. Arthroscopic Bankart Repair With Remplissage in Anterior Shoulder Instability Results in Fewer Redislocations Than Bankart Repair Alone at Medium-term Follow-up of a Randomized Controlled Trial. American Journal of Sports Medicine. 2024; 52: 2055-2062. 10.1177/03635465241254063.

33. Doehrmann R, Frush T. Posterior Shoulder Instability. [Updated 2023 Jul 10]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK557648/.

34. Hurley E, Aman Z, Doyle T, Levin J, Jazrawi L et al. Posterior Shoulder Instability, Part I—Diagnosis, Nonoperative Management, and Labral Repair for Posterior Shoulder Instability—An

International Expert Delphi Consensus Statement. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2024; 10.1016/j.arthro.2024.04.035.

35. Ireland M L, Hatzenbuehler J R. Superior labrum anterior to posterior (SLAP) tears [Updated 11 May 2023]. Wolters Kluwer UpToDate. 2023; Accessed: 10/2/2024. https://www.uptodate.com/contents/superior-labrum-anterior-to-posterior-slap-tears.

36. Johnson D J, Tadi P. Multidirectional Shoulder Instability [Updated 2023 Jul 3]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK557726/.

37. Gerber C, Nyffeler R. Classification of glenohumeral joint instability. Clinical orthopaedics and related research. 2002; 65-76. 10.1097/00003086-200207000-00009.

38. Pandey V, Madi S. Clinical Guidelines in the Management of Frozen Shoulder: An Update! Indian Journal of Orthopaedics. 2021; 55: 299-309. 10.1007/s43465-021-00351-3.

39. St Angelo J M, Taqi M, Fabiano S E. Adhesive Capsulitis [Updated 2023 Aug 4]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK532955/.

40. Docimo S, Kornitsky D, Futterman B, Elkowitz D. Surgical treatment for acromioclavicular joint osteoarthritis: patient selection, surgical options, complications, and outcome. Current Reviews in Musculoskeletal Medicine. 2008; 1: 154-160. 10.1007/s12178-008-9024-5.

41. Flores D, Goes P, Gómez C, Umpire D, Pathria M. Imaging of the acromioclavicular joint: Anatomy, function, pathologic features, and treatment. Radiographics. 2020; 40: 1355-1382. 10.1148/rg.2020200039.

42. Chen R, Voloshin I. Long Head of Biceps Injury: Treatment Options and Decision Making. Sports medicine and arthroscopy review. 2018; 26: 139-144. 10.1097/JSA.0000000000000206.

43. Hsu D, Anand P, Mabrouk A, Chang K. Biceps Tendon Rupture [Updated 2023 Jul 15]. Stat Pearls Publishing. 2023;

44. Panico L, Roy T, Namdari S. Long Head of the Biceps Tendon Ruptures Biomechanics, Clinical Ramifications, and Management. JBJS Reviews. 2021; 9: 10.2106/JBJS.RVW.21.00092.

45. Franceschetti E, Giovannetti de Sanctis E, Palumbo A, Paciotti M, La Verde L et al. The management of the long head of the biceps in rotator cuff repair: A comparative study of high vs. subpectoral tenodesis. Journal of Sport and Health Science. 2023; 12: 613-618. 10.1016/j.jshs.2020.08.004.

46. Ranieri R, Nabergoj M, Xu L, Coz P, Mohd Don A et al. Complications of Long Head of the Biceps Tenotomy in Association with Arthroscopic Rotator Cuff Repair: Risk Factors and Influence on Outcomes. Journal of Clinical Medicine. 2022; 11: 10.3390/jcm11195657.

47. Frank R, Cotter E, Strauss E, Jazrawi L, Romeo A. Management of Biceps Tendon Pathology: From the Glenoid to the Radial Tuberosity. Journal of the American Academy of Orthopaedic Surgeons. 2018; 26: e77-e89. 10.5435/JAAOS-D-17-00085.

48. Habusta S F, Mabrouk A, Tuck J A. Synovial Chondromatosis [Updated 2023 Apr 22]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK470463/.

49. Beard D, Rees J, Cook J, Rombach I, Cooper C et al. Arthroscopic subacromial decompression for subacromial shoulder pain (CSAW): a multicentre, pragmatic, parallel group, placebo-controlled, three-group, randomised surgical trial. Lancet (London, England). 2018; 391: 329-338. 10.1016/S0140-6736(17)32457-1.

50. Paavola M, Kanto K, Ranstam J, Malmivaara A, Inkinen J et al. Subacromial decompression versus diagnostic arthroscopy for shoulder impingement: a 5-year follow-up of a randomised, placebo surgery controlled clinical trial. British journal of sports medicine. 2021; 55: 99-107. 10.1136/bjsports-2020-102216.

51. Brolin T, Updegrove G, Horneff J. Classifications in Brief: Hamada Classification of Massive Rotator Cuff Tears. Clinical Orthopaedics and Related Research. 2017; 475: 2819-2823. 10.1007/s11999-017-5340-7.

52. Sugaya H, Maeda K, Matsuki K, Moriishi J. Functional and structural outcome after arthroscopic full-thickness rotator cuff repair: single-row versus dual-row fixation. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association. 2005; 21: 1307-16. 10.1016/j.arthro.2005.08.011.

53. Pécora J, Neves Junior A, Roesler C, Fancello E, Malavolta E et al. Glenoid track evaluation by a validated finite-element shoulder numerical model. Orthopaedics and Traumatology: Surgery and Research. 2020; 106: 735-742. 10.1016/j.otsr.2020.03.004.

54. Trivedi S, Pomerantz M, Gross D, Golijanan P, Provencher M. Shoulder instability in the setting of bipolar (glenoid and humeral head) bone loss: The glenoid track concept. Clinical Orthopaedics and Related Research. 2014; 472: 2352-2362. 10.1007/s11999-014-3589-7.

Evolent Clinical Guideline 1770 for Shoulder Arthroscopy

Guideline Number: Evolent_CG_1770	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: August 2016	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

TABLE OF CONTENTS

STATEMENT

General Information

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.

Purpose

This guideline addresses elective, non-emergent, arthroscopic shoulder repair procedures, including Rotator Cuff Repair, Labral Repairs, Lysis of Adhesions (Capsulotomy), Distal Clavicle Excision (DCE), Long Head Biceps (LHB) Tenotomy or Tenodesis, Loose body removal, Synovectomy, and Subacromial Decompression (SAD).

Scope

Surgical indications are based on relevant subjective clinical symptoms, objective physical exam & radiologic findings, and response to previous non-operative treatments when medically appropriate.

Open, non-arthroplasty shoulder repair surgeries are performed as dictated by the type and severity of injury and/or disease.

GENERAL REQUIREMENTS

Elective surgery of the shoulder may be considered if the following general criteria are met:

- Clinical correlation of individual's subjective complaints with objective exam findings and/or imaging (when applicable)
- Individual has limited function (age-appropriate activities of daily living (ADLs), occupational, or athletic)
- Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with shoulder surgery when comorbidities exist as it pertains to the increased risk of complications.
- Individual does not have an active local or systemic infection
- Individual does not have active, untreated drug dependency (including but not limited to narcotics, opioids, muscle relaxants) unless engaged in a treatment program

  *A smoking cessation program is highly recommended and should be instituted pre-operatively for all actively smoking patients [1,2]

Clinical notes should address:

- Symptom onset, duration, and severity
- Loss of function and/or limitations

- Type and duration of non-operative management modalities (where applicable)

Non-operative management, when required, will be specified within the clinical indications below and may include one or more of the following:

- Physical therapy or properly instructed home exercise program
- Rest or activity modification
- Application of heat or ice
- Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- Single injection of corticosteroid and local anesthetic into subacromial, intra-articular space, or bicipital groove

INDICATIONS

Diagnostic Shoulder Arthroscopy

Diagnostic arthroscopy is considered medically necessary when the following criteria in either section have been met [3,4]:

- **Section One**
  - For the evaluation of a painful total shoulder arthroplasty
- **Section Two**
  - Severe, disabling pain and/or a documented loss of shoulder function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
  - Individual demonstrates **any** of the following abnormal, shoulder physical examination findings, as compared to the non-involved side:
    - Functionally limited range of motion (active or passive)
    - Measurable loss in strength
    - Positive impingement signs
  - Individual has undergone an appropriate radiographic work-up that includes both routine x-rays and an MRI evaluation which are determined to be inconclusive for a specific diagnosis
  - Other potential diagnostic conditions have been excluded, including, but not limited to, fracture, thoracic outlet syndrome, brachial plexus disorders, referred neck pain and arthritis
  - Failure of non-surgical management for at least 12 weeks duration to include **TWO** of the following:
    - Rest or activity modifications/limitations
    - Ice/heat
    - Use of a sling/immobilizer/brace
    - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol

- Physical therapy modalities
- Supervised home exercise program

NOTE: In-office diagnostic arthroscopy (e.g., Mi-Eye, VisionScope) [5] is not managed by Evolent.

Rotator Cuff Repair (RCR)

Surgical treatment of a rotator cuff tear (RCT) should only be performed when there is a clinical correlation of symptoms, clinical exam findings, imaging, and failed non-operative management (where required). [6,7]

NOTE: There is a separate section for **subscapularis tears**

Partial-Thickness Rotator Cuff Tear or Calcific Tendinitis

Surgical repair of a partially torn rotator cuff or excision of an area of calcific tendinopathy may be necessary when **all** the following criteria are met [8]:

- Reproducible rotator cuff pain patterns (lateral arm, deltoid pain rarely radiating past the elbow, night pain, or pain with overhead motions)
- Functional loss (age-appropriate activities of daily living (ADL), occupational, or athletic)
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder) [9]
- MRI or ultrasound (if an MRI cannot be performed) that demonstrates a partial thickness tear (articular-sided, concealed, or bursal-sided) or evidence of calcific tendinitis [10,11]
- Unless worsening symptoms develop, failure of at least 12 weeks of non-operative treatment, including at least 6 weeks of physical therapy or a properly instructed home exercise program that includes exercises for scapular dyskinesis when present **AND** one of the following:
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

NOTE: US-guided percutaneous debridement or tenotomy (e.g., Tenex, TenJet) is not managed by Evolent

Small (< 1 cm), Full-Thickness Rotator Cuff Tear

Surgical repair of a small full-thickness rotator cuff tear may be necessary when **all** the following criteria are met:

- Reproducible rotator cuff pain patterns (lateral arm, deltoid pain not radiating past the elbow, night pain, or pain with overhead motions)
- Functional loss (age-appropriate activities of daily living (ADLs), occupational, or athletic)
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe test or

reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder) [9]

- Rotator cuff weakness or severe pain with rotator cuff testing on physical exam
- MRI or Ultrasound that demonstrates a small, full thickness tear (< 1 cm) [10,15]
- Unless worsening symptoms develop, failure of at least 6 weeks of non-operative treatment*, including physical therapy or a properly instructed home exercise program (that includes exercises for scapular dyskinesis when present) **AND** one of the following:
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

*__NOTE__: The requirement for conservative, non-operative treatment is waived in individuals < age 55 with an acute traumatic tear (onset of shoulder pain attributed to a specific traumatic event with no prior history of significant shoulder pain). For ages > 55, non-operative treatment may be waived on a case-by-case basis.

Medium (1-3 cm) or Large (3-5 cm), Full-Thickness Rotator Cuff Tear

Surgical repair of a medium or large full-thickness rotator cuff tear may be necessary when the following criteria are met:

- Significant progression of a full-thickness tear on serial imaging performed at least 12 weeks apart (at least 50% increase in tear size) **OR**
- When the following criteria are met:
  - Reproducible rotator cuff pain patterns (lateral arm, deltoid pain rarely not radiating past the elbow, night pain, or pain with overhead motions)
  - Functional loss (age-appropriate activities of daily living (ADLs), occupational or athletic)
  - Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe, empty can or drop-arm test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder [9]
  - Rotator cuff weakness or severe pain with rotator cuff testing on physical exam
  - MRI or ultrasound results demonstrates a medium (1-3 cm) or large (3-5 cm), full-thickness tear (tear must be a complete single tendon or greater) [10,15]
  - MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) [11,16]
  - Warner classification of atrophy ‘none’ or ‘mild’ [16,17]
  - No cortisone injection within 12 weeks prior to surgery [12,13,14]

Massive (> 5 cm and ≥ 2 tendons involved), Full-Thickness Rotator Cuff Tear

Surgical repair of a massive torn rotator cuff **WITH OR WITHOUT** a superior capsular reconstruction may be necessary when **all** the following criteria are met [7,18]:

- MRI or ultrasound demonstrates massive (> 5 cm), full-thickness tears (with intact or reparable subscapularis tendon for superior capsular reconstruction) [10,15]
- MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) [11,16]
- Warner classification of atrophy 'none' or 'mild' [16,17]
- No x-ray evidence of chronic subacromial articulation of the humeral head, defined as an acromiohumeral space less than 5 mm (Hamada grade 2)
- No advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on- bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

NOTE: AAOS consensus guidelines state that partial repair and superior capsular reconstruction, can improve patient reported outcomes [7]

Subscapularis Tears

Surgical repair of a subscapularis rotator cuff tear may be necessary when the following criteria are met [19]:

- History of an acute injury or chronic complaints of anterior shoulder pain, weakness, or functional impairment
- Positive physical examination findings of subscapularis deficiency – lift-off, bear-hug, belly press test, etc.
- MRI demonstrates a significant partial thickness tear (at least 50% of tendon), full-thickness tear, or any tear associated with subluxation of the biceps tendon
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

Isolated Superior Capsular Reconstruction

A Superior Capsular Reconstruction may be necessary when **all** the following criteria are met [18,20,21]:

- MRI or ultrasound demonstrates massive (> 5 cm), full-thickness tears with an intact or reparable subscapularis tendon
- No x-ray evidence of chronic subacromial articulation of the humeral head, defined as an acromiohumeral space less than 5 mm (Hamada grade 2)
- No advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)

NOTE: A Concomitant Rotator Cuff Repair is **NOT** allowable with advanced Goutallier or Warner muscle atrophy changes as noted in the previous section

Rotator Cuff Repair Revision

Surgical revision within 1 year of a previously repaired small, medium, large or massive torn rotator cuff will be reviewed on a case-by-case basis and must include an MRI (with or

without arthrogram) or CT arthrogram that demonstrate failure of healing (Sugaya type 4-5, see **Background** section) or recurrent tear > 12 weeks after index surgery. [22,23]

All RCR revision cases greater than 1 year following an initial repair must again meet indications as specified by tear size listed in Background section.

Contraindications (applies to all rotator cuff repair) [23]:

- Active infection (local or remote)
- Treatment of asymptomatic, full thickness rotator cuff tear
- Active systemic bacteremia
- Deltoid or rotator cuff paralysis
- Advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)
- Any cortisone injection within 12 weeks prior to surgery [12,13,14]

Labral Repairs

Repair of Superior Labral Anterior-Posterior (SLAP) Tear

Surgical indications should be focused on clinical symptoms and failure to respond to non-operative treatments, rather than imaging (due to a higher percentage of tears being missed on images and significant over-diagnosing of tears based on imaging-alone). [6]

Repair *(not debridement of a SLAP lesion)* may be necessary when **all** the following criteria are met [24]:

- History compatible with tear (acute onset in thrower or overhead athlete, fall, traction injury, shear injury (MVA), lifting injury
- Pain localized to the glenohumeral joint (often only associated with certain reaching or lifting activities and at night) or painful catching/popping/locking sensations
- Inability to perform desired tasks without pain (age-appropriate ADLs, sports, or occupation)
- Age < 40; requests for SLAP repair in an individual age > 40 will be reviewed on a case-by-case basis [25]
- Physical examination demonstrates findings of a SLAP tear (active compression test (O'Brien test), compression rotation test, clunk, or crank test, etc.) [6,26]
- MRI demonstrates Type II, IV SLAP tear - see the classifications of tears below [27]:
    - **Primary SLAP tear classification:**
        - I - Labral and biceps fraying, anchor intact
        - II - Labral tearing with detached biceps tendon anchor
        - III - Bucket handle tear, intact biceps tendon anchor (uncommon)
        - IV - Bucket handle tear with detached biceps tendon anchor, often seen with anterior instability and anterior labral tears
    - **Subclassification for SLAP tears:**
        - V – Type II SLAP tear with Bankart lesion/anterior shoulder instability

        - VI –Superior labral flap, intact biceps anchor
        - VII – Type II SLAP tear with extension to MGHL/IGHL and instability
        - VIII – Type II SLAP with cartilage injury at bicipital footplate
            - (Type V, VII, and VIII are variants of repairable Type II tears and would usually include additional stabilization procedures or biceps tenodesis) (see note* below)
- Failure of at least 12 weeks of non-operative treatment, including activity modification/avoidance of painful activities and one of the following:
    - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
    - Physical therapy or a properly instructed home exercise program

Contraindications [24]:

- **ANY** evidence of degenerative disease upon imaging
    - Smoker and age > 40
    - Diabetics with poor control HgBA1c > 7
    - MRI findings not attributable to normal common variants (for example, labral overhang)

***NOTE**: In cases where a true SLAP tear exists, but the individual has one or more contraindications or findings at the time of surgery that indicates a repair is not feasible, a SLAP debridement (limited, extensive debridement), biceps tenotomy or tenodesis may be an alternative. In addition, for some repairable SLAP tears, biceps tenodesis is a viable alternative to repair (see Tenotomy and Tenodesis Indications). [27,28]

Anterior-Inferior Labral Tear (Bankart Lesion) [29]

- Bankart repair of an **acute labral tear** may be necessary when **all** the following criteria are met:
    - History of an acute event of instability (subluxation or dislocation) or acute onset of pain following activity
    - Age < 30
    - Clinical exam findings demonstrate positive apprehension test, positive relocation test, positive labral grind test, or objective laxity with pain
    - Range of motion is not limited by stiffness upon physical exam (PE is not required if there has been a recent episode of instability)
    - Labral tear/Bankart lesion on MRI or CT imaging
- Bankart repair for **recurrent instability,** with or without a Remplissage or Latarjet procedure, may be necessary when **all** the following criteria are met:
    - Recurrent instability (two or more episodes of subluxation or dislocation)
    - Physical examination findings demonstrate positive apprehension test, positive relocation test, positive labral grind test, or objective laxity with pain (PE is not required if there has been a recent episode of instability or there is a radiographic evidence of any prior dislocation)
    - Range of motion is not limited by stiffness upon physical exam (not required with

a history of a recent dislocation)

- MRI evidence of a labral tear with or without bony Bankart fracture of the glenoid upon imaging

Anterior-Inferior Labral Tear (Bankart Lesion) – Contraindications (29)

- Radiographic findings of an engaging Hill Sachs humeral head defect or glenoid bone loss (if surgery only includes Bankart repair). Latarjet or Remplissage procedures should be considered for anterior dislocations of the shoulder when there is evidence of an engaging ("off-track")* Hill-Sachs lesion of the humerus, or if there is greater than 20% glenoid bone loss by x-ray, CT, or MRI [30,31,32]
- Pain only (no documented recurrent instability events) in individuals over 40
- X-ray, MRI, or CT documentation of significant degenerative arthritis of the glenohumeral joint

***See <u>Background</u> section**

Posterior Labral Tear [33,34]

Surgical repair of a posterior labral tear may be necessary when **ALL** of the following criteria are met:

- Symptoms of pain, catching/popping, or instability
- MRI findings of posterior labral tear
- Exam findings demonstrate positive load-and-shift test, jerk test, glenohumeral grind test, or objective laxity with pain or profound weakness
- Failure of at least 12 weeks of non-operative treatment (unless presenting as a traumatic tear in a competitive athlete at any level) that includes any **TWO** of the following**:**
  - Physical therapy or a properly instructed home exercise program
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- Age < 40
- No radiographic evidence of degenerative disease (e.g., posterior glenoid cartilage loss, subchondral glenoid cysts, mucoid degeneration of labrum, narrowing of joint space with posterior humeral head subluxation on axillary x-ray or axial MRI images)

Combined Labral Tears

(E.g., Anterior / Posterior, SLAP / Anterior, SLAP / Posterior, SLAP / Ant. / Post.) [35]

- Surgical repair of an **acute combination tear** may be necessary when **all** the following criteria are met:
  - History of an acute event of instability (subluxation or dislocation)
  - Acute labral tear on MRI/CT imaging with/without bony Bankart fracture not > 25% of glenoid width upon imaging

- Age < 30
- Range of motion not limited by stiffness upon physical exam
- Clinical exam findings demonstrate positive apprehension test and positive relocation test, **OR** positive labral grind test **OR** objective laxity with pain
- Minimal to no evidence of degenerative changes on imaging

- Surgical repair of **recurrent combination tear** may be necessary when **all** the following criteria are met:
  - Recurrent instability (subluxation or dislocation) with at least 2 instability events
  - Labral tear on MRI or CT, with/without bony Bankart fracture not > 25% of glenoid width upon imaging
  - Range of motion not limited by stiffness upon physical exam
  - Clinical exam findings demonstrate positive apprehension test and positive relocation test, or positive labral grind test, or objective laxity with pain
  - Minimal to no evidence of degenerative changes on imaging

Multidirectional Instability of the Shoulder (MDI)

Open or Arthroscopic Capsulorrhaphy for MDI

Surgical repair for MDI may be necessary when **all** the following criteria are met [36,37]:

- Individual has pain and limited function (age-appropriate ADLs, occupation, or sports)
- Individual has recurrent instability due to hyperlaxity or mobility and no traumatic dislocation
- Physical exam supports repeatable increased glenohumeral joint translation (greater than 1 cm of movement during the sulcus test)
- Imaging (x-ray and MRI) rules out fracture and/or other soft-tissue injury
- Failure of at least 6 months of formal physical therapy and activity modification

Adhesive Capsulitis [38,39]

(Lysis of Adhesions, Capsulotomy/Capsular Release or Manipulation under Anesthesia)

Surgery for adhesive capsulitis may be necessary when **all** of the following criteria are met:

- Individual has pain, loss of motion, and limited function (age-appropriate ADLs, occupation, or sports)
- Physical exam demonstrates loss of motion of at least 50% in 2 planes, as compared to the contralateral shoulder
- Co-morbidities (such as diabetes, thyroid disease, lung disease, etc.), and other causes of loss of shoulder motion have been ruled out
- Failure of at least 12 weeks of non-operative treatment that includes physical therapy or a properly instructed home exercise program and documentation of **ONE** of the following:
  - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)

- Rest or activity modification
- Heat/Ice
- Corticosteroid injection

Distal Clavicle Excision (DCE)

Distal Clavicle Excision may be necessary when **all** the following criteria are met [40,41]:

- Positive clinical exam findings as evidenced by pain upon palpation over AC joint and/or pain with cross-body adduction test
- Positive findings on X-ray **OR** MRI:
  - Radiographic (X-ray) demonstrates narrowed joint space, distal clavicle or medial acromial sclerosis, and/or osteophytes or cystic degeneration of distal clavicle or medial acromion correlating with the clinical findings, patient symptoms and diagnosis; **OR** MRI findings with edema in the distal clavicle and/or inflammatory change within the joint space correlating with the clinical findings, patient symptoms and diagnosis
- Failure of at least 12 weeks of non-operative treatment that includes **at least two** of the following:
  - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
  - Rest or activity modification
  - AC joint corticosteroid injection (if DCE is to be performed as a standalone procedure, AC injection must be performed*****)
  - Physical therapy or a properly instructed home exercise program

***NOTE:** If DCE is to be performed in isolation of other shoulder procedures, an AC joint injection is required for diagnostic purposes and documentation should support pain relief from injection. If no response to injection, this is a strong negative predictor to surgical outcome for isolated DCE.

Long Head Biceps (LHB) Tenotomy/Tenodesis

The indications and outcomes for tenodesis and tenotomy are the same [42,43,44] with the exception that tenodesis is typically better for more active, muscular individuals that are performing higher-demand activities for work or sport. Tenotomy is often preferred in individuals that smoke (this is a relative indication of tenotomy over tenodesis) due to healing problems in tenodesis. An actual primary repair of a proximal long head of the biceps tear is rare and poorly understood. [42]

Biceps tenotomy or tenodesis may be necessary when the following criteria in any of the following sections are met [45,46]:

- **Section One**
  - Any of the following:
    - When performed in conjunction with a total shoulder arthroplasty (a separate request for Shoulder Surgery - Other is required)
    - When performed in conjunction with a subscapularis tendon repair
    - Type II (or subcategories) or type IV tear, any age, in lieu of a labral repair

        - Age > 50 with SLAP tear
        - Smoker with SLAP labral tear (regardless of age, more significant with increasing age)
        - Failed SLAP repair
        - SLAP tear in diabetic or individual with loss of motion or predisposition to stiff shoulder
        - LHB hypertrophy/tearing/subluxation in association with RCR
- **Section Two**
    - Patient complains of pain localized to the bicipital groove
    - Physical examination findings localized to the bicipital groove (tenderness to palpation, Speed's test, etc.)
    - Failure of at least 12 weeks of non-operative treatment to include **TWO** of the following:
        - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
        - Rest or activity modification
        - Bicipital groove corticosteroid injection
        - Physical therapy or a properly instructed home exercise program
- **Section Three - Tenodesis for long head of the biceps tendon rupture** (42,43,44,47)
    - Age < 50. Requests for tenodesis for long head of the biceps rupture in those over 50 will be reviewed on a case-by-case basis
    - Patient complains of loss of strength, pain, fatigue, or concern for cosmetic deformity
    - Physical examination demonstrates a complete long head of the biceps rupture (Popeye deformity, distally located biceps muscle belly, etc.)
    - Unless symptoms worsen, failure of at least 6 weeks of non-operative treatment to include **TWO** of the following*
        - Oral or topical NSAIDS (if not medically contraindicated)
        - Rest or activity modification
        - Physical therapy or properly instructed home exercise program

*** NOTE:** Request for acute tenodesis without attempts of non-operative treatment will be reviewed on a case-by-case basis

NOTE: US-guided percutaneous debridement or tenotomy (e.g., Tenex, TenJet) is not managed by Evolent

Loose Body Removal

Loose body removal may be medically necessary when the following criteria are met:

- Documentation of pain, mechanical symptoms (catching or locking), stiffness, loss of motion, feelings of instability or loss of function
- X-ray, CT, or MRI documentation of a loose body

Synovectomy

Synovectomy as an isolated procedure is usually reserved for primary synovial disease or in cases where secondary hypertrophic synovitis is documented during arthroscopy (these include adhesive capsulitis, osteoarthritis, chronic rotator cuff tear). These should be evident on arthroscopic photographs taken at surgery but may be missed on preoperative images. (48)

Subacromial Decompression (SAD) (49,50)

See Background Section

Subacromial decompression may be necessary **in conjunction with** other shoulder procedures (listed below) if there is radiographic (x-ray) evidence of mechanical outlet impingement as evidenced by a Bigliani type 3 morphology. Subacromial decompression should not be performed in isolation.

- Rotator cuff repair
- Labral repair
- Capsulorrhaphy
- Loose body removal
- Synovectomy
- Debridement
- Distal clavicle excision
- Lysis of adhesions
- Biceps tenodesis/tenotomy

Contraindications:

- Type 1 or Type 2 or a thinned acromion. Subacromial bursectomy may be a reasonable option.
- If individual has received an injection in the subacromial space and there is failure to adequately respond—significant relief (> 50%) for minimum of 1 week—to injection in the subacromial space (pain should respond temporarily if impingement)
- Prior subacromial decompression with either a Type 1 or a thinned acromion or no evidence of overhang on x-ray (unnecessary revision can thin the acromion and lead to deltoid avulsion and/or acromial fracture)
- Open SAD procedures should rarely be performed given the increased morbidity due to deltoid disruption.

CODING AND STANDARDS

Coding

CPT Codes

Shoulder Rotator Cuff Repair: 23410, 23412, 23420, 29827

Shoulder Labral Repair: 23450, 23455, 23460, 23462, 23465, 23466, 29806, 29807

Frozen Shoulder Repair/Adhesive Capsulitis: 29825

Shoulder Surgery Other: 23120, 23125, 23130, 23405, 23415, 23430, 23700, 29805, 29819, 29820, 29821, 29822, 29823, 29824, 29825, +29826, 29828

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Rotator Cuff Repair

Traditional open rotator cuff repair (RCR) with deltoid take-down should be rare given increased morbidity when compared to arthroscopic or mini-open surgery.

Rotator Cuff Classification and Grades

Goutallier classification of fatty infiltration of rotator cuff musculature *(11)*

Grade 0 – Normal

Grade 1 – Mild - muscle contains some fatty streaks

Grade 2 – Moderate – more muscle than fat

Grade 3 – Severe – equal amounts of fat and muscle

Grade 4 – More fat than muscle

Hamada classification of rotator cuff arthropathy *(51)*

Acromiohumeral interval (AHI)

- Grade 1 – AHI over 6 mm
- Grade 2 – AHI < 5mm
- Grade 3 – Acetabulization
- Grade 4 – Acetabulization and narrowed GH joint
- Grade 5 - Acetabulization with humeral head collapse

Sugaya classification [52]

Revision rotator cuff repair

The Sugaya classification for evaluation in revision rotator cuff repair is as follows:

- Type I - Sufficient thickness, homogeneous tendon (low signal on T2 images)
- Type II - Sufficient thickness, partial high-intensity from within the tendon
- Type III - Insufficient thickness without discontinuity
- Type IV - Minor discontinuity on more than one slice, suggesting a small tear
- Type V - Major discontinuity suggesting a moderate or large tear

On-Track/Off-Track Instability of the Shoulder [30,31,32,53,54]

Latarjet or Remplissage procedures should be considered for anterior dislocations of the shoulder when there is evidence of an engaging 'off-track' Hill-Sachs lesion of the humerus, or if there is greater than 20% glenoid bone loss by X-ray, CT, or MRI.

The glenoid track, a zone of dynamic contact during arm elevation, is a unique biomechanical model that uses both glenoid and humeral head bone loss to predict subsequent risk of humeral head engagement and possible dislocation. An ***engaging*** Hill-Sachs bony defect, or ‘off-track’ lesion, is one in which the width of the bony defect is greater than the width of the glenoid track. Off-track engagement occurs when the medial margin of the Hill-Sachs defect engages the glenoid track. If there is bony loss of the glenoid as well, the glenoid track will proportionately be less, causing greater risk of engagement. A ***nonengaging***, or ‘on-track’ Hill-Sachs lesion is one in which the width of the bony defect is less than the width of the glenoid track. Using preoperative CT or MR imaging, the glenoid track can identify individuals who are more likely to fail only a primary capsuloligamentous Bankart repair. Glenoid track evaluation shows that restoring the track (glenoid) to its normal width should be the first priority in restoring shoulder stability.

Subacromial Decompression (SAD)

There are 3 types of acromion anatomy according to Bigliani classification: type 1, flat (20%), type 2, curved (40%) and type 3, hooked, (40%). Acromioplasty involves removing bone from the undersurface of the acromion to change a type 3 (hooked) acromion to a type 1 (flat) acromion. Although debated for decades, current evidence concludes that there is no role for isolated acromioplasty (subacromial decompression), which prompted conversion of CPT code 29826 (acromioplasty, subacromial decompression) from an index, primary, "stand-alone" code to an "add-on" code only.

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 318 for Shoulder Arthroscopy • Added indications for biceps tenodesis for long head of the biceps ruptures

Date	Summary
	• Removed background sections for: labral repairs, adhesive capsulitis, DCE, LHB, Loose body removal, synovectomy and added on-track/off-track instability to background section
December 2023	• Partial thickness Rotator Cuff Tear or Calcific Tendinitis: in surgical repair of the partially torn rotator cuff added in “or excision of an area of calcific tendinopathy” • Modified criteria for failure of non-operative treatment to include “unless worsening symptoms develop” • Labral Repairs: SLAP tear – updated the classification of SLAP I-VIII • Anterior-Inferior Labral Teal (Bankart lesion): added in under clinical exam findings demonstration of positive test were not required if recent or prior documented dislocation • LHB Tenotomy/Tenodesis: added in Type II (or subcategories) or type IV tear, any age, in lieu of repair as a criteria • Added table of contents • Reduced Background Section • Updated references
May 2023	• Added the requirement of 6 weeks of physical therapy for partial rotator cuff repairs • Added the requirement for no significant muscle atrophy or fatty infiltration for medium or large rotator cuff repairs • Clarification of the indications for Latarjet or Remplissage procedures • Added requirement for 50% decreased ROM in 2 planes, as compared to the opposite shoulder, for frozen shoulder surgery • Added requirement for a chest X-ray in the past 12 months for frozen shoulder surgery

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

REFERENCES

1. Kashanchi K, Nazemi A, Komatsu D, Wang E. Smoking as a risk factor for complications following arthroscopic rotator cuff repair. JSES International. 2021; 5: 83-87. 10.1016/j.jseint.2020.10.002.

2. Zabrzyński J, Huri G, Gagat M, Łapaj Ł, Yataganbaba A et al. The impact of smoking on clinical results following the rotator cuff and biceps tendon complex arthroscopic surgery. Journal of Clinical Medicine. 2021; 10: 1-12. 10.3390/jcm10040599.

3. Akgün D, Maziak N, Plachel F, Minkus M, Scheibel M et al. Diagnostic Arthroscopy for Detection of Periprosthetic Infection in Painful Shoulder Arthroplasty. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2019; 35: 2571-2577. 10.1016/j.arthro.2019.03.058.

4. Guild T, Kuhn G, Rivers M, Cheski R, Trenhaile S. The Role of Arthroscopy in Painful Shoulder Arthroplasty: Is Revision Always Necessary? Arthroscopy - Journal of Arthroscopic and Related Surgery. 2020; 36: 1508-1514. 10.1016/j.arthro.2020.01.045.

5. Zhang K, Crum R, Samuelsson K, Cadet E, Ayeni O. In-Office Needle Arthroscopy: A Systematic Review of Indications and Clinical Utility. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2019; 35: 2709-2721. 10.1016/j.arthro.2019.03.045.

6. Thiagarajan A, Nagaraj R, Marathe K. Correlation Between Clinical Diagnosis, MRI, and Arthroscopy in Diagnosing Shoulder Pathology. Cureus. 2021; 10.7759/cureus.20654.

7. Weber S, Chahal J. Management of Rotator Cuff Injuries. Journal of the American Academy of Orthopaedic Surgeons. 2020; 28: E193-E201. 10.5435/JAAOS-D-19-00463.

8. Thangarajah T, Lo I. Optimal Management of Partial Thickness Rotator Cuff Tears: Clinical Considerations and Practical Management. Orthopedic research and reviews. 2022; 14: 59-70. 10.2147/ORR.S348726.

9. Gismervik S, Drogset J O, Granviken F, Rø M, Leivseth G. Physical examination tests of the shoulder: A systematic review and meta-analysis of diagnostic test performance. BMC Musculoskeletal Disorders. 2017; 18: 10.1186/s12891-017-1400-0.

10. Apostolopoulos A P, Angelis S, Yellapragada R K, Khan S, Nadjafi J et al. The Sensitivity of Magnetic Resonance Imaging and Ultrasonography in Detecting Rotator Cuff Tears. Cureus. 2019; 10.7759/cureus.4581.

11. Yubran A, Pesquera L, Juan E, Saralegui F, Canga A et al. Rotator cuff tear patterns: MRI appearance and its surgical relevance. Insights into Imaging. 2024; 15: 10.1186/s13244-024-01607-w.

12. Darbandi A, Cohn M, Credille K, Hevesi M, Dandu N et al. A Systematic Review and Meta-analysis of Risk Factors for the Increased Incidence of Revision Surgery After Arthroscopic Rotator Cuff Repair. American Journal of Sports Medicine. 2024; 52: 1374-1383. 10.1177/03635465231182993.

13. Traven S A, Brinton D, Simpson K N, Adkins Z, Althoff A et al. Preoperative Shoulder Injections Are Associated With Increased Risk of Revision Rotator Cuff Repair. Arthroscopy. 2019; 35: 706-713. 10.1016/j.arthro.2018.10.107.

14. Werner B, Cancienne J, Burrus M, Griffin J, Gwathmey F. The timing of elective shoulder surgery after shoulder injection affects postoperative infection risk in Medicare patients. Journal of Shoulder and Elbow Surgery. 2016; 25: 390-397. 10.1016/j.jse.2015.08.039.

15. Katepun S, Boonsun P, Boonsaeng W S, Apivatgaroon A. Reliability of the Single-Arm and Double-Arm Jobe Test for the Diagnosis of Full-Thickness Supraspinatus Tendon Tear. Orthopaedic Journal of Sports Medicine. 2023; 11: 10.1177/23259671231187631.

16. Kuzel B, Grindel S, Papandrea R, Ziegler D. Fatty infiltration and rotator cuff atrophy. Journal of the American Academy of Orthopaedic Surgeons. 2013; 21: 613-623. 10.5435/JAAOS-21-10-613.

17. Naimark M, Trinh T, Robbins C, Rodoni B, Carpenter J et al. Effect of Muscle Quality on Operative and Nonoperative Treatment of Rotator Cuff Tears. Orthopaedic Journal of Sports Medicine. 2019; 7: 10.1177/2325967119863010.

18. Sheth M, Shah A. Massive and Irreparable Rotator Cuff Tears: A Review of Current Definitions and Concepts. Orthopaedic Journal of Sports Medicine. 2023; 11: 10.1177/23259671231154452.

19. Ghasemi S, McCahon J, Yoo J, Toussaint B, McFarland E et al. Subscapularis tear classification implications regarding treatment and outcomes: consensus decision-making. JSES Reviews, Reports, and Techniques. 2023; 3: 201-208. 10.1016/j.xrrt.2022.12.004.

20. Claro R, Fonte H. Superior capsular reconstruction: current evidence and limits. EFORT Open Reviews. 2023; 8: 340-350. 10.1530/EOR-23-0027.

21. Mahatme R, Modrak M, Wilhelm C, Lee M, Owens J et al. Glenohumeral Superior Translation and Subacromial Contract Pressure Are Both Improved With Superior Capsular Reconstruction: A Systematic Review and Meta-analysis of Biomechanical Investigations. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2024; 40: 1279-1287. 10.1016/j.arthro.2023.08.025.

22. Mandaleson A. Re-tears after rotator cuff repair: Current concepts review. Journal of Clinical Orthopaedics and Trauma. 2021; 19: 168-174. 10.1016/j.jcot.2021.05.019.

23. Strauss E, McCormack R, Onyekwelu I, Rokito A. Management of failed arthroscopic rotator cuff repair. Journal of the American Academy of Orthopaedic Surgeons. 2012; 20: 301-309. 10.5435/JAAOS-20-05-301.

24. Varacallo M, Tapscott D C, Mair S D. Superior Labrum Anterior Posterior Lesions [2023 Aug 4]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK538284/.

25. Erickson J, Lavery K, Monica J, Gatt C, Dhawan A. Surgical treatment of symptomatic superior labrum anterior-posterior tears in patients older than 40 years: A systematic review. American Journal of Sports Medicine. 2015; 43: 1274-1282. 10.1177/0363546514536874.

26. Dean R, Onsen L, Lima J, Hutchinson M. Physical Examination Maneuvers for SLAP Lesions: A Systematic Review and Meta-analysis of Individual and Combinations of Maneuvers. American Journal of Sports Medicine. 2023; 51: 3042-3052. 10.1177/03635465221100977.

27. Familiari F, Huri G, Simonetta R, McFarland E. SLAP lesions: Current controversies. EFORT Open Reviews. 2019; 4: 25-32. 10.1302/2058-5241.4.180033.

28. Hester W, O'Brien M, Heard W, Savoie F. Current Concepts in the Evaluation and Management of Type II Superior Labral Lesions of the Shoulder. The Open Orthopaedics Journal. 2018; 12: 331-341. 10.2174/1874325001812010331.

29. Tupe R N, Tiwari V. Anteroinferior Glenoid Labrum Lesion (Bankart Lesion) [Updated 2023 Aug 3]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK587359/.

30. Min K, Horng J, Cruz C, Ahn H, Patzkowski J. Glenoid Bone Loss in Recurrent Shoulder Instability after Arthroscopic Bankart Repair: A Systematic Review. Journal of Bone and Joint Surgery. 2023; 105: 1815-1821. 10.2106/JBJS.23.00388.

31. Momaya A, Tokish J. Applying the Glenoid Track Concept in the Management of Patients with Anterior Shoulder Instability. Current Reviews in Musculoskeletal Medicine. 2017; 10: 463-468. 10.1007/s12178-017-9436-1.

32. Woodmass J, McRae S, Lapner P, Kamikovski I, Jong B et al. Arthroscopic Bankart Repair With Remplissage in Anterior Shoulder Instability Results in Fewer Redislocations Than Bankart Repair Alone at Medium-term Follow-up of a Randomized Controlled Trial. American Journal of Sports Medicine. 2024; 52: 2055-2062. 10.1177/03635465241254063.

33. Doehrmann R, Frush T. Posterior Shoulder Instability. [Updated 2023 Jul 10]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK557648/.

34. Hurley E, Aman Z, Doyle T, Levin J, Jazrawi L et al. Posterior Shoulder Instability, Part I—Diagnosis, Nonoperative Management, and Labral Repair for Posterior Shoulder Instability—An

International Expert Delphi Consensus Statement. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2024; 10.1016/j.arthro.2024.04.035.

35. Ireland M L, Hatzenbuehler J R. Superior labrum anterior to posterior (SLAP) tears [Updated 11 May 2023]. Wolters Kluwer UpToDate. 2023; Accessed: 10/2/2024. https://www.uptodate.com/contents/superior-labrum-anterior-to-posterior-slap-tears.

36. Johnson D J, Tadi P. Multidirectional Shoulder Instability [Updated 2023 Jul 3]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK557726/.

37. Gerber C, Nyffeler R. Classification of glenohumeral joint instability. Clinical orthopaedics and related research. 2002; 65-76. 10.1097/00003086-200207000-00009.

38. Pandey V, Madi S. Clinical Guidelines in the Management of Frozen Shoulder: An Update! Indian Journal of Orthopaedics. 2021; 55: 299-309. 10.1007/s43465-021-00351-3.

39. St Angelo J M, Taqi M, Fabiano S E. Adhesive Capsulitis [Updated 2023 Aug 4]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK532955/.

40. Docimo S, Kornitsky D, Futterman B, Elkowitz D. Surgical treatment for acromioclavicular joint osteoarthritis: patient selection, surgical options, complications, and outcome. Current Reviews in Musculoskeletal Medicine. 2008; 1: 154-160. 10.1007/s12178-008-9024-5.

41. Flores D, Goes P, Gómez C, Umpire D, Pathria M. Imaging of the acromioclavicular joint: Anatomy, function, pathologic features, and treatment. Radiographics. 2020; 40: 1355-1382. 10.1148/rg.2020200039.

42. Chen R, Voloshin I. Long Head of Biceps Injury: Treatment Options and Decision Making. Sports medicine and arthroscopy review. 2018; 26: 139-144. 10.1097/JSA.0000000000000206.

43. Hsu D, Anand P, Mabrouk A, Chang K. Biceps Tendon Rupture [Updated 2023 Jul 15]. Stat Pearls Publishing. 2023; Accessed: October 14, 2024. https://www.ncbi.nlm.nih.gov/books/NBK513235/

44. Panico L, Roy T, Namdari S. Long Head of the Biceps Tendon Ruptures Biomechanics, Clinical Ramifications, and Management. JBJS Reviews. 2021; 9: 10.2106/JBJS.RVW.21.00092.

45. Franceschetti E, Giovannetti de Sanctis E, Palumbo A, Paciotti M, La Verde L et al. The management of the long head of the biceps in rotator cuff repair: A comparative study of high vs. subpectoral tenodesis. Journal of Sport and Health Science. 2023; 12: 613-618. 10.1016/j.jshs.2020.08.004.

46. Ranieri R, Nabergoj M, Xu L, Coz P, Mohd Don A et al. Complications of Long Head of the Biceps Tenotomy in Association with Arthroscopic Rotator Cuff Repair: Risk Factors and Influence on Outcomes. Journal of Clinical Medicine. 2022; 11: 10.3390/jcm11195657.

47. Frank R, Cotter E, Strauss E, Jazrawi L, Romeo A. Management of Biceps Tendon Pathology: From the Glenoid to the Radial Tuberosity. Journal of the American Academy of Orthopaedic Surgeons. 2018; 26: e77-e89. 10.5435/JAAOS-D-17-00085.

48. Habusta S F, Mabrouk A, Tuck J A. Synovial Chondromatosis [Updated 2023 Apr 22]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK470463/.

49. Beard D, Rees J, Cook J, Rombach I, Cooper C et al. Arthroscopic subacromial decompression for subacromial shoulder pain (CSAW): a multicentre, pragmatic, parallel group, placebo-controlled, three-group, randomised surgical trial. Lancet (London, England). 2018; 391: 329-338. 10.1016/S0140-6736(17)32457-1.

50. Paavola M, Kanto K, Ranstam J, Malmivaara A, Inkinen J et al. Subacromial decompression versus diagnostic arthroscopy for shoulder impingement: a 5-year follow-up of a randomised, placebo surgery controlled clinical trial. British journal of sports medicine. 2021; 55: 99-107. 10.1136/bjsports-2020-102216.

51. Brolin T, Updegrove G, Horneff J. Classifications in Brief: Hamada Classification of Massive Rotator Cuff Tears. Clinical Orthopaedics and Related Research. 2017; 475: 2819-2823. 10.1007/s11999-017-5340-7.

52. Sugaya H, Maeda K, Matsuki K, Moriishi J. Functional and structural outcome after arthroscopic full-thickness rotator cuff repair: single-row versus dual-row fixation. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association. 2005; 21: 1307-16. 10.1016/j.arthro.2005.08.011.

53. Pécora J, Neves Junior A, Roesler C, Fancello E, Malavolta E et al. Glenoid track evaluation by a validated finite-element shoulder numerical model. Orthopaedics and Traumatology: Surgery and Research. 2020; 106: 735-742. 10.1016/j.otsr.2020.03.004.

54. Trivedi S, Pomerantz M, Gross D, Golijanan P, Provencher M. Shoulder instability in the setting of bipolar (glenoid and humeral head) bone loss: The glenoid track concept. Clinical Orthopaedics and Related Research. 2014; 472: 2352-2362. 10.1007/s11999-014-3589-7.