Priority Health

# MEDICAL POLICY No. 91551-R1

## THERMAL CAPSULORRHAPHY

**Effective Date: April 23, 2008**

**Date Of Origin: April 16, 2008**

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**Status: Current**

## I. POLICY/CRITERIA

There is insufficient evidence to support the effectiveness of thermal capsulorrhaphy or thermal shrinkage for treatment of any joint and therefore it is experimental and investigational.

## II. MEDICAL NECESSITY REVIEW

Prior authorization for certain drug, services, and procedures may or may not be required. In cases where prior authorization is required, providers will submit a request demonstrating that a drug, service, or procedure is medically necessary. For more information, please refer to the Priority Health Provider Manual.

## III. APPLICATION TO PRODUCTS

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

- **HMO/EPO:** ***This policy applies to insured HMO/EPO plans.***
- **POS:** ***This policy applies to insured POS plans.***
- **PPO:** ***This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.***
- **ASO:** ***For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.***
- **INDIVIDUAL:** ***For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.***
- **MEDICARE:** ***Coverage is determined by the Centers for Medicare and Medicaid Services (CMS) and/or the Evidence of Coverage (EOC); if a coverage determination has not been adopted by CMS, this policy applies.***
- **MEDICAID/HEALTHY MICHIGAN PLAN:** ***For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located***

***at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. If there is a discrepancy or lack of guidance in the Michigan Medicaid Provider Manual, the Priority Health contract with Michigan Medicaid will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.***

## IV. DESCRIPTION

The purpose of thermal capsulorrhaphy (TC), also called electrothermal therapy, electrothermal arthroscopy, or thermal shrinkage, is to treat joint instability or looseness of the shoulder ligaments primarily, but has also been used on other joints. The procedure utilizes a radiofrequency probe or laser to deliver non-ablative heat to shrink the collagen fibers comprising the ligaments or joint capsule, thereby tightening the capsule and stabilizing the joint.

The evidence evaluating thermal shrinkage for treatment of shoulder instability consists of few randomized trials, both retrospective and prospective case series, cohort comparative studies, and systematic reviews. A nonrandomized prospective study (D'Alessandro et al., 2004) included 81 patients (84 shoulders) who had undergone unsuccessful, nonoperative rehabilitation. Patients were divided into 3 instability groups: traumatic anterior dislocation, recurrent subluxation, and multidirectional. Based on a clinical grading scale that assessed the patient's ability to return to work or sports, recurrent instability, satisfaction as scored on a visual analog scale (VAS), and the overall American Shoulder and Elbow Surgeons (ASES) shoulder score, successful outcomes were attained in 63% of shoulders. There were 12 patients (15%) that required revision surgery, and the complication rate was 14% (resolved spontaneously). The heterogeneous patient population that limits generalizability, the small number of patients per group, and the inconsistent protocol were study limitations. McRae et al. (2016) reported no added benefit when electrothermal arthroscopic capsulorrhaphy (ETAC) was used as an adjunct to arthroscopic Bankart repair. Overall recurrent instability rates were similar in the control group (22%) and the ETAC group (18%), with no significant difference between the groups. Forty-six percent of patients were lost to follow up at the primary end point of two years post-surgery

Wong et al. (2005) used TC as a stand-alone treatment and reported a statistically significant improvement in ASES scores. Self-assessment ratings of excellent or good were reported by 74% of patients; 26% rated them as fair or poor. The study lacked a comparison group, use of subjective, unvalidated evaluation tools, and the heterogeneous patient population.

Three of the prospective studies (Mishra and Fanton, 2001; Bohnsack et al., 2002; Lino and Belangero, 2006) examined patients with either anterior or anteroinferior shoulder instability undergoing RF (Mishra and Fanton, 2001; Lino and Belangero, 2006) or laser-assisted TC (Bohnsack et al., 2002). The majority of patients in these studies showed improvement after treatment, however, the

surgical protocols used TC as an adjunct to other repairs, which confounds the evaluation of TC. Other limitations to these studies include case series study design (Mishra and Fanton, 2001; Lino and Belangero, 2006), small numbers of patients (Bohnsack et al., 2002; Lino and Belangero, 2006), and a subjective, unvalidated assessment tool (Bohnsack et al., 2002).

Definitive patient selection criteria for TC have not been established and there is insufficient evidence to conclude that TC is an effective and durable treatment for joint instability.

## V. CODING INFORMATION

**ICD-10 Diagnosis Codes:**
*Not applicable*

**CPT/HCPCS Codes**:
S2300 Arthroscopy, shoulder, surgical; with thermally-induced capsulorrhaphy
23929 Unlisted procedure, shoulder
29999 Unlisted procedure, arthroscopy
*(Explanatory notes must accompany claims billed with unlisted codes.)*

## VI. REFERENCES:


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