

<b>Subject: Xiaflex (collagenase, clostridium histolyticum) for Dupuytren's Contracture</b>	<b>Original Effective Date: 10/13/2015</b>
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**DISCLAIMER**

*This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (i.e., will be paid for by Molina) for a particular member. The member's benefit plan determines coverage. Each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their providers will need to consult the member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP document and provide the directive for all Medicare members.*

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**SUMMARY OF EVIDENCE/POSITION**

This policy addresses **Xiaflex (collagenase clostridium histolyticum)** for the treatment of **the treatment of adults with Dupuytren's contracture with a palpable cord** when appropriate criteria are met.

- Dupuytren's disease, a progressive fibro-proliferative disorder, is characterized by nodule formation and contracture of the palmar fascia and may result in flexion deformity of the fingers and loss of hand function. The disease is common in men older than 40 years; and in persons who smoke, use alcohol, or have diabetes mellitus.

- The symptoms of Dupuytren's contracture are often mild and painless and do not require treatment. In some patients, however, it may progress to the next stage, in which cords of fibrous tissue form in the palm and run into the fingers or thumb, eventually, pulling them into a permanently flexed position, making it difficult to perform activities of daily living.
- Xiaflex is a collagenase enzyme that hydrolyzes collagen resulting in lysis of collagen deposits.
- Xiaflex (collagenase clostridium histolyticum) is indicated for the treatment of Dupuytren's contracture with a palpable cord, a condition involving the connective tissue in the hands that leads to abnormal curvature/contracture of the fingers.
- A greater proportion of patients treated with collagenase clostridium histolyticum compared with placebo experienced reduced contractures of the metacarpophalangeal or proximal interphalangeal joint at 30 days post-injection in a multicenter, double-blind, randomized, placebo-controlled trial (n=308). Likewise, in 2 more multicenter, randomized, double-blind, placebo-controlled trials (n=374) more patients treated with collagenase clostridium histolyticum experienced a reduction in contracture of the metacarpophalangeal or proximal interphalangeal joints than with placebo.
- Further long-term studies are needed to establish data on recurrences after use of Xiaflex and to compare all available treatment methods for this disease.

## FDA INDICATIONS

**Dupuytren contracture:** Treatment of adults with Dupuytren contracture with a palpable cord.

- ♦ *In February 2010, the FDA approved Auxilium Pharmaceutical Inc.'s biologics license application (BLA) for clostridial collagenase histolyticum (Xiaflex) for treatment of adult patients with Dupuytren's contracture with a palpable cord. The FDA labeling for Xiaflex states that up to 3 injections at 4-week intervals may be given into a palpable Dupuytren's cord with a contracture of a metacarpophalangeal (MCP) joint or a proximal interphalangeal (PIP) joint.*
- ♦ *In October 2014, FDA approved labeling for Xiaflex stating that up to two cords in the same hand may be injected at a single treatment visit.<sup>a</sup>*

**Peyronie disease:** Treatment of adult men with Peyronie disease with a palpable plaque and curvature deformity of at least 30 degrees at the start of therapy.

**\*NOTE: This indication is not addressed in this coverage policy.**

*Available as:* Single-use glass vials containing 0.9 mg of collagenase clostridium histolyticum as a sterile, lyophilized powder for reconstitution

*FDA Approved:* February 2, 2010

**Black Box Warnings:** Corporal rupture (penile fracture) or other serious penile injury in the treatment of Peyronie disease:

Corporal rupture (penile fracture) was reported as an adverse reaction in 5 of 1,044 (0.5%) collagenase-treated patients in clinical studies. In other collagenase-treated patients (9/1,044 [0.9%]), a combination of penile ecchymoses or hematoma, sudden penile detumescence, and/or a penile "popping" sound or sensation was

reported, and in these cases, a diagnosis of corporal rupture cannot be excluded. Severe penile hematoma was also reported as an adverse reaction in 39 of 1,044 (3.7%) collagenase-treated patients.

Signs or symptoms that may reflect serious penile injury should be promptly evaluated to assess for corporal rupture or severe penile hematoma which may require surgical intervention.

Because of the risks of corporal rupture or other serious penile injury, collagenase is available for the treatment of Peyronie disease only through a restricted program under a risk evaluation and mitigation strategy (REMS) called the **Xiaflex REMS program**.

**CLASSIFICATION:** Connective Tissue Agent; Enzyme; Proteolytic Enzyme; Tissue Permeability Modifier

## COVERAGE CRITERIA FOR INITIAL AUTHORIZATION

**Xiaflex (collagenase clostridium histolyticum)** may be authorized for members who meet **ALL** of the following criteria [ALL]

### 1. Prescriber specialty [ONE]

- Prescribed and administered by a board-certified: [ONE]
  - Hand Surgeon
  - Plastic Surgeon
  - Orthopedic surgeon
  - Rheumatologist

### 2. Diagnosis/Indication [ALL]

Clinical **documented** diagnosis of (*includes clinical notes from the member's medical records including any applicable labs and/or tests, supporting the diagnosis*):

- Diagnosis of Dupuytren's contracture with a palpable cord
- A positive "table top test" (defined as the inability to simultaneously place the affected finger and palm flat against a table top)
- Documentation of either of the following: [ONE]
  - Flexion deformities > 20 degrees at the MP joint
  - Flexion deformities > 20 degrees at the PIP joint
    - ◆ *Patients in clinical trials must have had a finger flexion contracture with a palpable cord of at least one finger (other than the thumb) of 20° to 100° in a metacarpophalangeal (MP) joint or 20° to 80° in a proximal interphalangeal (PIP) joint.<sup>1</sup>*
- Functional impairment as a result of the contracture

### 3. Age/Gender/Other restrictions [ALL]

- 18 years of age or older
  - ♦ *The safety and effectiveness for use in children less than 18 years of age has not been established*

### 4. Step/Conservative Therapy/Other condition Requirements [ALL]

- Member is should **NOT** have received a surgical treatment (e.g. fasciectomy, fasciotomy) on the selected primary joint within 90 days before the first injection
- Member should **NOT** have received an anticoagulation medication (except for up to 150 mg/day of aspirin) within 7 days before the first injection<sup>1</sup>

### 5. Contraindications\*/Exclusions/Discontinuations

*\*Food and Drug Administration (FDA)–approved labeling lists no contraindications to Xiaflex (collagenase clostridium histolyticum).<sup>a</sup>*

Authorization will not be granted if ANY of the following conditions apply [ANY]

- Non-FDA approved indications
- Hypersensitivity to Xiaflex (collagenase clostridium histolyticum) or to collagenase used in any other therapeutic application or application method

Exclusions [ANY]

- Greater than 3 injections per cord
- Surgery on the primary joint within the past 90 days
- Concomitant use of anticoagulants and in patients with coagulation disorders is not recommended

### 6. Labs/Reports/Documentation required [ALL]

All documentation for determination of medical necessity must be submitted for review. Prescriber to submit medical records and specific labs, chart notes, and documentation as indicated in the criteria above. Letters of support and/or explanation are often useful but are not sufficient documentation unless ALL specific information required by this MCP is included.

**NOTE:** Additional documentation, rationale, and/or supporting evidence may be requested for review as deemed necessary or appropriate by Molina Medical/Pharmacy staff.

## REAUTHORIZATION /CONTINUATION OF THERAPY

Xiaflex (collagenase clostridium histolyticum) may be authorized for continuation of therapy if meet **ALL** of the following criteria are met: **[ALL]**

### 1. Initial Coverage Criteria

- Member currently meets ALL initial coverage criteria

### 2. Compliance

- Member must follow-up within 24 hours following an injection for finger extension procedure if a contracture persists in order to qualify for more injections. **If after the second injection there is no improvement the 3rd injection may not be authorized.**

### 3. Labs/Reports/Documentation required **[ALL APPLICABLE]**

Injection may be repeated up to a **maximum of 3 sessions** per cord at 4-week intervals IF:

- Reduction in contracture of the selected primary joint (MP or PIP) is NOT within 0° to 5° of normal full extension  
**NOTE:** After the second injection there is no improvement the 3rd injection will NOT be authorized.

### 4. Discontinuation of Treatment **[ANY]**

Discontinue treatment if ANY of the following conditions applies: **[ANY]**

- Intolerable adverse effects or drug toxicity
- Persistent and uncorrectable problems with adherence to treatment
- Poor response to treatment as evidenced by physical findings and/or clinical symptoms
- Contraindications/Exclusions to therapy
  - Non-FDA approved indications
  - Hypersensitivity to Xiaflex (collagenase clostridium histolyticum) or to collagenase used in any other therapeutic application or application method

Exclusions **[ANY]**

- Greater than 3 injections per cord
- Surgery on the primary joint within the past 90 days
- Concomitant use of anticoagulants and in patients with coagulation disorders
- No improvement\* after the 2nd injection then 3rd injection will NOT be authorized  
*\*Improvement is defined as a reduction in contracture of the selected primary joint (MP or PIP) within 0° to 5° of normal full extension*

## ADMINISTRATION, QUANTITY LIMITATIONS, AND AUTHORIZATION PERIOD

Consult the manufacturer's labeling for more detailed information on dosage and administration of this drug, cautions, precautions, contraindications, potential drug interactions, laboratory test interferences, and monitoring.

### 1. Recommended Dosage [ALL]

- Day 1: Inject Xiaflex 0.58 mg into one palpable cord with contracture of the MP or PIP joint
  - ◆ *Because the injection should not be around neurovascular bundles or into the tendon, the injections are done without analgesics so that the patient may report any nerve related pain. However local anesthesia may be allowed for the physical force to be applied the day after injection.*
- Day 2: The day following the administration of Xiaflex, force is applied to the area of contracture to further disrupt or actually break the fibrous band. Approximately 24 hours after the cord is injected, the physician may perform a finger extension procedure if a contracture persists, to facilitate cord disruption.
- Approximately 4 weeks after the Xiaflex injection and finger extension procedure, if a MP or PIP joint contracture remains, the cord may be repeated per the protocol outlined above
- Injections and finger extension procedures may be administered and performed up to **3 times per cord** at approximately 4-week intervals.
- Injection of up to **2 cords in the same hand may be allowed at a treatment visit**. If other palpable cords are present, they must be treated in sequential order, once the previous cord has been treated per the FDA label protocol.

### 2. Authorization Limit [ALL]

- Site: Metacarpophalangeal (MP) joint contractures or proximal interphalangeal (PIP) joint contractures only
- Quantity limit: [ALL]
  - Initial authorization: One (1) time at no less than 4-week intervals
  - Subsequent authorization: One (1) time at no less than 4-week intervals; up to 2 additional times per cord (Total: 3 injections each affected cord at one month intervals)
  - Total authorization: [ALL]
    - One (1) injection per 30 days
    - **Maximum of three (3) injections per cord**
- Duration of therapy: [ALL]
  - Injections and finger extension procedures may be administered up to 3 times per cord at approximately 4-week intervals [**3 injections per cord at 4 week intervals (maximum 12 weeks)**]
  - Repeat clostridial collagenase histolyticum injection of a previously treated cord will not be authorized
- Injections should be administered at no less than 4-week intervals

### 3. Route of Administration [ALL]

- ❑ Xiaflex (collagenase clostridium histolyticum) is considered **provider-administered** medication and should be administered by a healthcare provider experienced in injection procedures of the hand and in the treatment of patients with Dupuytren's contracture. This procedure is followed-up with manipulation/stretching of the involved cord 24 hours after the injection unless the cord has ruptured. Each injection contains 0.58 mg of Xiaflex, must be performed in a **physician's office**, and does not require anesthesia.
  
- ❑ Refer to MHI Policy & Procedure (P&P): Specialty Medication Administration Site of Care Policy: MHI Pharm 11

## COVERAGE EXCLUSIONS

This policy only addresses the indication of Dupuytren's Contracture for the treatment of Dupuytren's Contracture when appropriate criteria are met.

All other uses of Xiaflex (collagenase clostridium histolyticum) that are not an FDA-approved indication or not included in the 'Coverage Criteria' section of this policy are considered experimental/investigational or not a covered benefit of this policy. This subject to change based on research and medical literature, or at the discretion of Molina Healthcare.

## BACKGROUND/SUMMARY

**Dupuytren's disease**, also referred to as Dupuytren contracture, palmar fascial fibromatosis, or contracture of palmar fascia, is a progressive fibroproliferative disorder characterized by nodule formation and contracture of the palmar fascia. It is characterized by a thickening of the fibrous tissue underneath the skin of the hand, with resulting nodule and contracture formation. These contractures cause the finger(s) to flex forward. The contractures are usually painless, but they can cause disability of the hand as the disease progresses. The two joints most commonly affected by Dupuytren's contracture are the metacarpophalangeal (MCP) joints and the proximal interphalangeal (PIP) joints. Generally, the fourth and fifth digits (ring and pinky) are affected; however, the second and third digits (index and middle) can also be affected.

The cause of Dupuytren's contracture is unknown. Dupuytren's contracture is more common in men than in women.<sup>A</sup>

The goals of treatment are to improve flexibility of the fingers and to evaluate the need for surgery or other interventions.

The therapy chosen depends upon the severity of disease.<sup>3</sup>

Treatment consists of corticosteroid injections into the affected tendon sheaths, analgesics for pain relief, physical therapy, or percutaneous needle aponeurotomy (fasciotomy). Surgery (open fasciectomy) may be required depending on the extent of the deformity caused by the contracture and how it affects the patient's activities of daily living.

Prior to the approval of collagenase clostridium histolyticum (Xiaflex), surgical intervention was the mainstay of treatment for Dupuytren disease despite a high rate of recurrence and complications. Surgery has been the treatment of choice for advanced stages of disease, if function is impaired or if a contracture is progressing. Standard treatment for Dupuytren contracture includes open excision (limited or total fasciectomy), open or



percutaneous division (fasciotomy), or percutaneous puncture (needle aponeurotomy) of the culprit cord(s). Open procedures require extensive hand therapy, involve a prolonged recovery time, carry the risk for multiple complications, and are associated with recurrence rates of 5.0% to 50%. The procedure often requires a lengthy rehabilitation period. Surgical referral should be made when MCP joint contracture reaches 30 degrees or when PIP joint contracture occurs at any degree. In-office percutaneous needle aponeurotomy is an alternative to surgery.<sup>4</sup>

**Collagenase clostridium histolyticum (Xiaflex)** is a first-in-class and approved as an orphan drug. It is a bacterial collagenase that is injected into the Dupuytren's cord with the goal of weakening and disrupting the cord. Xiaflex is the first FDA-approved nonsurgical option for the treatment of adult patients with Dupuytren's contracture with a palpable cord.

Collagenase clostridium histolyticum (Xiaflex) is a biologic injectable that enzymatically breaks down collagen when injected directly into a Dupuytren's cord. This can result in contracture reduction and range of motion improvement. Injected collagenase extracted from *C. histolyticum* weakens and dissolves the Dupuytren cord. Xiaflex contains purified collagenase clostridium histolyticum, consisting of two microbial collagenases, Collagenase AUX-I and Collagenase AUX-II, which are isolated and purified from the fermentation of *Clostridium histolyticum* bacteria. Collagenases are proteinases that hydrolyze collagen in its native triple helical conformation under physiological conditions, resulting in lysis of collagen deposits.

FDA approval of Xiaflex was based on two randomized, double-blind, placebo-controlled, multi-centered trials in 374 adults with Dupuytren's contracture (Studies 1 and 2). The cord affecting the selected primary joint received up to 3 injections of 0.58 mg of Xiaflex or placebo on Days 0, 30, and 60. About 24 hours after each injection of study medication, if needed, the investigator manipulated (extended) the treated finger in an attempt to facilitate rupture of the cord (finger extension procedure).

At study entry, patients must have had:

- (1) a finger flexion contracture with a palpable cord of at least one finger (other than the thumb) of 20° to 100° in a metacarpophalangeal (MP) joint or 20° to 80° in a proximal interphalangeal (PIP) joint and
- (2) a positive "table top test" defined as the inability to simultaneously place the affected finger(s) and palm flat against a table top.
- (3) Patients could not have received a surgical treatment (e.g., fasciectomy, fasciotomy) on the selected primary joint within 90 days before the first injection of study medication and patients could not have received anticoagulation medication (except for up to 150 mg of aspirin per day) within 7 days before the first injection of study medication.

The primary endpoint was to evaluate the proportion of patients who achieved a reduction in contracture of the selected primary joint (MP or PIP) to within 0° to 5° of normal, 30 days after the last injection of that joint on Days 30, 60, or 90 (after up to 3 injections).

A greater proportion of Xiaflex-treated patients compared to placebo-treated patients achieved the primary endpoint. The proportion of patients who achieved a contracture reduction of the primary joint to 0° to 5° after the first injection was 39% and 1% in Study 1 and 27% and 5% in Study 2 in the Xiaflex and placebo groups respectively. Xiaflex-treated patients, compared to placebo-treated patients, showed a greater increase from baseline in the range of motion of MP and PIP joints.

Most common adverse events included localized swelling, pain, bruising, pruritus, and transient regional lymph node enlargement and tenderness



### **Pivotal Trials**

Hurst (2009) published the results of double-blind, placebo-controlled, multicenter trial of 308 subjects with Dupuytren's joint contractures of 20 degrees or more to receive up to three injections of a collagenase preparation (n=204) or placebo (n=104).<sup>1</sup> Joints were stratified according to joint type (MP or PIP). Joints were manipulated one day after injection if necessary.

Primary endpoint was reduction in contracture to within 0-5 degrees of full extension 30 days after last injection comparing collagenase vs. placebo:

- primary endpoint reached in 64% vs. 6.8% ( $p < 0.001$ , NNT 2)
- range of motion in joints increased from 43.9 to 80.7 degrees vs. from 45.3 to 49.5 degrees ( $p < 0.001$ )
- $\geq 1$  treatment-related adverse event in 96.6% vs. 21.2% (no  $p$  value reported)

The primary endpoint was reduction in contracture to 0-5 degrees of full extension 30 days after last injection. Recurrence of contracture was defined as an increase in joint contracture to greater than or equal to 20 degrees and was considered an adverse event. Efficacy results were based on 306 primary joints; 203 injected with collagenase and 103 injected with placebo. In the collagenase treated group, 130 of 203 (64%) cords met the primary endpoint versus 7 of 103 (6.8%) placebo injected cords. More than half of the collagenase injected joints that did not meet the primary endpoint did not receive the maximum allowable number of injections, most commonly because a cord could not be palpated or the participant was satisfied with the result. Median time to reach the primary endpoint for collagenase treated joints was 56 days. At the 90 day visit, there was no recurrence of contracture in collagenase treated primary joints that had reached the primary endpoint. When analyzed by joint type, more collagenase treated joints achieved the primary endpoint than placebo (MP joint: 76.7% vs. 7.2% and PIP joint: 40.9% vs. 5.9%). The mean change in contracture from baseline to 30 days after last injection was 48.0 to 7.2 degrees in the collagen-injected MP joints and 45.4 to 43.1 degrees in the placebo-injected MP joints. Thirty days after last injection, 84.7% of collagenase injected joints versus 11.7% of placebo injected joints showed clinical improvement. Results were better in MP joints than in the PIP joints; 94.0% versus 67.1% in the collagenase group and 11.6% versus 11.8% in the placebo group. Overall, 96.6% of participants who received collagenase reported at least one treatment-related adverse event. They had significantly more injection and manipulation-related events, such as contusion, hemorrhage, injection-site pain, upper extremity pain, and lymphadenopathy, than those who received placebo injection. Most were mild or moderate in intensity; however, 20 participants in the collagenase group and 2 in the placebo group reported events that were severe in intensity. Severe adverse events considered to be treatment-related included 1 individual with complex regional pain syndrome and 2 others with tendon ruptures that required surgical procedures. While Xiaflex provides a less invasive option for the treatment of Dupuytren's contracture, pending additional studies, its use should be restricted to individuals with significant functional deficits.

Watt (2010) reported on 8 individuals who completed an 8 year follow-up after treatment with Xiaflex.<sup>2</sup> In this group, 6 had MP joint contractures averaging 57 degrees and 2 had PIP contractures averaging 45 degrees prior to treatment. Average contracture measurements at 1 year were 11 degrees in the MP group and 15 degrees in the PIP group. At the 8 year evaluation, the MP measurement average was 23 degrees while the PIP measurement average was 60 degrees. The long-term measurements suggested recurrence or progression of disease in 4 out of 6 MP participants and both PIP participants. However, 88% of the participants indicated that they would pursue further injections for the treatment of recurrent or progressive Dupuytren's disease.

## HAYES

A Health Technology Assessment was not available for Xiaflex (collagenase clostridium histolyticum) for Dupuytren Contracture at the time of this review in May 2020. The report was outdated and archived on Apr 25, 2018.

## DEFINITIONS

**Collagen:** A fibrous protein found in connective tissue, bone, and cartilage.

**Collagenase:** An enzyme capable of causing the hydrolysis of collagen and gelatin

**Contracture:** Shortening of the tendon or muscle because of intrinsic or extrinsic conditions.

**Fascia:** A sheet of fibrous tissue that envelops the body beneath the skin; it also encloses muscles and groups of muscles and separates their several layers or groups.

**Fasciectomy:** Surgical removal of the fibrous tissue beneath the skin.

**Fibroproliferative:** Producing new fibrous tissue.

**Metacarpophalangeal (MP) joint:** Commonly called the knuckle, is attached to the proximal first phalanges.

**Proximal interphalangeal (PIP) joint:** The second joint of the finger.

## APPENDIX

N/A

**CODING INFORMATION:** THE CODES LISTED IN THIS CLINICAL POLICY ARE FOR INFORMATIONAL PURPOSES ONLY. LISTING OF A SERVICE OR DEVICE CODE IN THIS POLICY DOES NOT IMPLY THAT THE SERVICE DESCRIBED BY THIS CODE IS A COVERED OR NON-COVERED. COVERAGE IS DETERMINED BY THE BENEFIT DOCUMENT. THIS LIST OF CODES MAY NOT BE ALL INCLUSIVE AND INCLUSION OR EXCLUSION OF ANY CODES DOES NOT GUARANTEE COVERAGE. PROVIDERS SHOULD REFERENCE THE MOST UP-TO-DATE SOURCES OF PROFESSIONAL CODING GUIDANCE PRIOR TO THE SUBMISSION OF CLAIMS FOR REIMBURSEMENT OF COVERED SERVICES.

HCPCS	Description
J0775	Injection, collagenase, clostridium histolyticum, 0.01 mg

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**Clinical Trials, Definitions, Peer-Reviewed Publications**

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**Government Agencies, Professional Societies, and Other Authoritative Publications**

- A. American Academy of Orthopedic Surgeons (AAOS). Dupuytren's Contracture. Available at: <http://orthoinfo.aaos.org/topic.cfm?topic=A00008>. Accessed on May 2020.

Policy History	Approval
<u>Policy Developed</u> <i>Internal Peer Review: 10/13/2015. MCPC Chair, Sr. Medical Director of Policy.</i>	MCPC 10/13/2015
Reviewed* 12/15/2016; 9/19/2017; 7/10/2018; Q4 2019 (P&T)	P&T Q4 2019
Annual Review* No coverage criteria changes with this annual review.	P&T Q3 2020

\*Policy Revisions and Annual Reviews: All content, clinical evidence, coverage criteria, practice guidelines, appendices and reference sections were reviewed and revised with the most recent medical literature and available evidence for both 'Annual Reviews' and 'Revisions.' Revisions include notable content updates or revisions that which may have affected criteria or requires review by a practicing specialist, Peer Reviewer. The revisions noted below but may not be all-inclusive of all revised criteria and content in each policy; refer to MCP for all revisions and complete context.