Coding for Difficult Tendon Repairs and Transfers

Tendons

Dorsal View

- Achilles tendon
- Peroneus brevis
- Peroneus longus

Medical View

- Achilles tendon
- Flexor hallucis longus

Sole/Plantar Surface of Foot

- Tibialis posterior
- Peroneus longus
- Extensor digitorum longus
- Extensor hallucis longus

TENIS ELBOW

- Right arm, lateral view
- Humerus
- Area of pain and inflammation
- Lateral epicondyle

Rotator Cuff Repair 23420

- **February 2002** page 11
- Code 23420 describes a repair of a complete shoulder (rotator) cuff avulsion, referring to the repair of all three major muscles/tendons of the shoulder cuff

- **October 2005** page 23
- What is the intent of CPT code 23420?

- **AMA Comment**
- CPT code 23420, Reconstruction of complete shoulder (rotator) cuff avulsion, chronic (includes acromioplasty), is intended to identify an old tear. This type of extreme tear usually requires rearrangement of the normal anatomy and sometimes grafting with either biological or nonbiological material for repair.
POSTOPERATIVE DIAGNOSIS: Chronic right subscapularis tear

The pectoralis major insertion was then released off the bone and tagged with 0 Vicryl sutures and then #5 FiberWire was run in a Krakow fashion on the superior border and then run back down with superficial only coming inferior. The same was done for the inferior part of the tendon and a Mason-Allen stitch was placed in the middle with a #5 FiberWire. The pectoralis major was fully released superficially and inferiorly proximally 8 cm and superiorly taking care to protect the neurovascular bundle. The tendon had excellent excursion, once the releases have been made along with the muscle. However, the subcoracoid space was quite tight, even though we made a large space it was difficult to pass the tendon and the sutures underneath the subcoracoid space and conjoined tendon and superficial to the musculocutaneous nerve. However, this was done successfully but instead of having excursion to the greater tuberosity we were able to bring the tendon back very nicely to the lesser tuberosity. The lesser tuberosity was debrided of soft tissues until bleeding bone was achieved but not fully decorticated. Three 2-mm drill holes were then placed in the medial edge of the lesser tuberosity and taken out underneath the bicipital groove and coming out into the greater tuberosity. A Hewson suture passer was then used along with 0 Vicryl loop to then uphold appropriate sutures through the 3 drill holes. The tendon was then tied on top of the bone bridge creating a mattress compressing the tendon onto the lesser tuberosity footprint. The patient had external rotation with elbow to the sides about 30 degrees at that point with full adduction. He had good internal and external rotation.
Pectoralis Major transfer to lesser tuberosity

**Pectoralis Major**

Insertion – Lateral lip of intertubercular groove of humerus

**Subscapularis**

Insertion – lesser tuberosity of humerus
Grafting with Biological Material

POSTOPERATIVE DIAGNOSIS: Massive supraspinatus rotator cuff tear

An 8-cm anterior incision was made lateral to the coracoid process. The fat was divided. The cephalic vein was retracted laterally, with the deltoid and pectoralis retracted medially. The remaining bursa was excised anteriorly, laterally, and posteriorly. I basically converted the tear into a large V-shaped tear using a sharp knife. Working at the apex medially, I closed the anterior and posterior leaflets together with multiple figure-of-eight 0 TiCron sutures. I then ran several sutures through the bone of the tuberosity to seal the joint. The tendon was of poor quality and was relatively white and avascular in appearance, and I decided to augment the repair. A 4 x 4 cm Conexa patch was brought to the field and reconstituted in saline. It was cut into basically an oblong-shape patch. I tacked it as far medially as possible over the top of the repair to the lateral soft tissues of the humerus, then pulled it anteriorly and posteriorly using multiple 3-0 Ethibond sutures. We were able to get the patch completely strung over the entire repair area, covering all sutures. The patch was tacked down. I ran the entire peripheral edge with 3-0 FiberWire as a safety stitch. The arm was abducted and rotated, and the patch remained stable in this position. The wound was irrigated. The deltopectoral interval was closed with 2-0 Vicryl, the subcutaneous layer with 3-0 Vicryl, and the skin with cuticular 4-0 Prolene. A bulky soft dressing and a sling were placed. The patient tolerated the procedure well and was taken from the operating room in satisfactory condition.
Grafting with Biological Material

23420 - Reconstruction of complete shoulder (rotator) cuff avulsion, chronic (includes acromioplasty)

+15777 - Implantation of biologic implant (eg. acellular dermal matrix) for soft tissue reinforcement (eg. breast, trunk)

2014 CPT Guidelines
(For implantation of biologic implants for soft tissue reinforcement in tissues other than breast and trunk, use 17999)

Q4100 – Skin substitute, not otherwise specified

Conexa offers a ready-to-use biological solution for soft tissue repair.
Neuroplasty vs. Transposition

- The NCCI has an edit with column one CPT code of 24305 (tendon lengthening, upper arm and elbow, each tendon) and column two CPT code of 64718 (neuroplasty and/or transposition; ulnar nerve at elbow). When performing the tendon lengthening described by CPT code 24305, a neuroplasty of the ulnar nerve is not separately reportable, but a transposition of the ulnar nerve at the elbow is separately reportable. If a provider performs the tendon lengthening described by CPT code 24305 and performs an ulnar nerve transposition at the elbow, the NCCI edit may be bypassed by reporting CPT code 64718 appending modifier 59.

| Code only 24305 for tendon lengthening and neurolysis (freeing of nerve from scar tissue) |
| Code BOTH the 24305 and 64718 when a tendon lengthening and “ulnar nerve transposition” are performed even for a Medicare patient (per CCI Edit Guidelines) |
Extensor/Flexor Tendons

**Extensor tendons – dorsal surface**
- Extensor mechanism
- Extensor tendon compartments
- Extensor retinaculum

**Flexor tendons – palmar surface**
- Flexor digitorum profundus
- Flexor digitorum superficialis
- Intrinsic muscles
- Palmar fascia
- Flexor retinaculum

Extensor Tendon Compartments

I  Abductor pollicis longus & extensor pollicis brevis
II Extensor carpi radialis longus & brevis
III Extensor pollicis longus
IV Extensor digitorum communis (4 tendons) & extensor indicis
V  Extensor digiti minimi
VI  Extensor carpi ulnaris

Flexor Tendon Sheath
Zone 2 Repair

Code 26370, Repair or advancement of profundus tendon, with intact superficialis tendon; primary, each tendon, is used when only the flexor profundus is cut. There is little room to repair the profundus because the tight sheath and the repair must go through the two slips to the superficialis, further complicating the repair and results. Greater work and skill are required.

- 26370 – Repair of profundus tendon, with intact superficialis tendon, primary, each
- 26372 – secondary with free graft, each
- 26373 – secondary w/o graft, each
Zone 2 Repair

- 26350 – Repair, flexor tendon, not in zone 2; primary or secondary, w/o graft each tendon
- 26352 – secondary with free graft, each tendon
- 26356 – Repair, flexor tendon in zone 2 w/o graft, each tendon
- 26357 – secondary w/o graft
- 26358 – secondary with free graft.
A1 Pulley Reconstruction

Release of the adhesions and scar tissue on the flexor aspect of the joint were then performed. The joint was then able to extend to lack only 10° of full extension. As the profundus tendon was carefully followed and had good excursion throughout its sheath, a separate incision was made in the palm. The sublimis tendon was identified and was terribly scarred in at the A1 pulley and throughout the other scar tissue. Decision was made that releasing this was not going to be successful and after tendolysis the tendon was removed. Separate incision was made proximally in the forearm the tendon identified and incised. The plan was therefore to use of this tendon for reconstruction of the A2/A3 pulley.

The A2 pulley was then reconstructed by using the sublimis tendon which was taken in 3 wraps around the profundus tendon. This was sutured to itself around the dorsal aspect of the proximal phalanx. This created a nice wide and a stable reconstruction. The finger then moved freely. The pulley reconstruction was stable and did not loosen or pull apart. Pulling on the profundus tendon both distally and proximally produced excellent excursion through the digit with greater than 90° at the PIP joint and additional DIP of flexion.

In order to maintain the release and also try and stretch out the residual contracture (about 10°) a digit widget was applied in standard fashion to the dorsal aspect of the middle phalanx. This was performed without difficulty. The position of the screws was checked with the FluoroScan to make sure they were to and just barely through the cortex. Position proximally and distally was excellent.

26502 – Reconstruction of tendon pulley, each tendon; w/tendon or fascial graft (includes obtaining graft)
20650-Insertion of wire or pin with application of skeletal traction, including removal
20650-Insertion of wire or pin with application of skeletal traction, including removal

Digit Widget

Patient following 3 weeks of extension torque

Patient at 6 weeks
POSTOPERATIVE DIAGNOSIS: RIGHT FIRST WEB SPACE CONTRACTURE AND PROXIMAL INTERPHALANGEAL CONTRACTURES WITH RANGE OF MOTION DEFICITS, INDEX, RING, AND LITTLE. FOREIGN BODY.

OPERATIVE PROCEDURE:

1. RIGHT INDEX FINGER Z-PLASTY, 2 CENTIMETERS SQUARED.
2. RIGHT INDEX FINGER PROXIMAL INTERPHALANGEAL CAPSULOTOMY.
3. RIGHT INDEX FINGER FLEXOR DIGITORUM SUPERFICIALIS TENOLYSIS, FINGER.
4. RIGHT INDEX FINGER FLEXOR DIGITORUM PROFUNDUS TENOLYSIS, FINGER.
5. RIGHT INDEX FINGER FULL-THICKNESS SKIN GRAFT, 2 CENTIMETERS SQUARED.
6. RIGHT FOREARM FLEXOR DIGITORUM SUPERFICIALIS LENGTHENING OF INDEX FINGER TENDON.
7. RIGHT RING FINGER Z-PLASTY, 2 CENTIMETERS SQUARED.
8. RIGHT RING FINGER PROXIMAL INTERPHALANGEAL CAPSULOTOMY.
9. RIGHT RING FINGER FLEXOR DIGITORUM SUPERFICIALIS TENOLYSIS, FINGER.
10. RIGHT RING FINGER FLEXOR DIGITORUM PROFUNDUS TENOLYSIS, FINGER.
11. RIGHT RING FINGER FULL-THICKNESS SKIN GRAFT, 2 CENTIMETERS SQUARED.
12. RIGHT FOREARM FLEXOR DIGITORUM PROFUNDUS INDEX FINGER TENOLYSIS.
13. RIGHT FOREARM FLEXOR DIGITORUM PROFUNDUS RING FINGER TENOLYSIS.
14. RIGHT FOREARM FLEXOR DIGITORUM PROFUNDUS INDEX FINGER TENOLYSIS.
15. RIGHT FIRST WEB SPACE Z-PLASTY, 6 CENTIMETERS SQUARED.
16. RIGHT WRIST REMOVAL OF DEEP FOREIGN BODY.
PROCEDURE:
The patient was brought in to the operating room and induced under an anesthetic. Her arm was prepped and draped for surgery. I used Esmarch and tourniquet to 250. I had the hand marked up with potential incisions.

#15 I started with the first web space and did Z-plasty, four flap. This was designed and then cut out. The flaps were transposed and inset with nylon.

#1-#4 I then went to the index finger. The index and ring were treated the same. I went to the index finger, and I did a Z-plasty by stretching the finger in extension, making the Z-plasty which identified the central limb over the scar band. I elevated the flaps, dissected down, and then I had to make an incision more proximal to do tenolysis and capsulotomy. I did FDS and FDP tenolysis from throughout the zone of scar. In particular, the FDS was stuck to bone across the PIP joint; this was problematic. I did FDS and FDP tenolysis, protecting the major pulley, going back proximal to A2. This then had these freed. I was able to roll them over to the side and do PIP capsular release. There was evidence of this prior. I cut the volar plate such that it would free.
Tenolysis and Capsulotomy

• How is a tenolysis with capsulotomy of the IP joint coded?

• If a physician performs a tenolysis and capsulotomy on the flexor tendon in the interphalangeal (IP) joint, the correct codes to report are 26440, 
  Tenolysis, flexor tendon; palm OR finger, each tendon, and 26525-51, 
  Capsulotomy or capsulotomy; interphalangeal joint, each joint. A capsulotomy is performed on the joint in an attempt to increase the range of motion of the joint and/ or release a contracture. A tenolysis releases scar tissue that binds a tendon to surrounding structures, allowing for improved motion of the tendon. Capsulotomy and tenolysis are distinct procedures that can be performed independently or together.

• Similarly, to code for extensor tenolysis and IP capsulotomy, report both codes: 26445-Tenolysis, extensor tendon, hand OR finger and 26525- 
  Capsulotomy or capsulotomy; interphalangeal joint, each joint

CPT ASSISTANT Mar 03: 20
CCI Edits – 26440 bundles into 26525
CPT ASSISTANT Apr 02: 18

#6, #12 – 25280 – forearm, FDS tendon lengthening
#5, #11 – 15240 – index finger/ring finger, FTSG 20sq cm or less
  #7 – 14040 – ring finger Z-plasty, 2cm squared
  #8 – 26525-F8 – ring finger PIP capsulotomy
#9, #10 – 26440 x2 – ring finger FDS, FDP tenolysis

I identified at this point a problem. At least it is a theory that the reason that the middle finger is so good is that I have had previous tendon transfer from the middle finger taking the FDS. This has resulted in the middle finger being very, very good. Either the FDS is scarring over the PIP or the FDS is tight. Therefore, I went into the forearm rather than the hand because this will make more scar. I did a step-cut lengthening of the FDS at the forearm aponeurotic junction. I tenolysed the FDS to the index finger, and then I did step-cut lengthening until I could feel it. When I would straighten the finger out, it would not rubberband back.

I then closed the wound and the Z-plasty, transposing the limbs. Full-thickness skin was taken from skin in the forearm where the incision had been made. This was defatted and inset to the wound at the PIP with the finger extended. The finger had the Z-plastics transposed, and there were two fairly large deficits where the flaps were transposed. The skin was inset with nylon about 2 cm², one proximal and one distal.

On the ring finger, I did the same procedure as I had done on the index finger. I did straightening of the finger, found the band, did the Z-plasty, then I did the FDS and FDP tenolysis. I was then able to roll these over. Again, I protected the pulleys. I did my PIP capsulotomy, which was a cut through the volar plate. This allowed the finger to extend. The FDS was tight. I went into the forearm, identified this, and I did step-cut lengthening of the FDS in the forearm for the ring finger. When I tested it, it would come out to zero degrees with not a lot of tension. I closed the finger wound with nylon and then I closed the Z-plasty, transposing the flaps, insetting with nylon about 2 cm². I then used skin graft, one proximal and one distal for the donor site since there was a lot of scar here. There was not a lot of other liberal flap donor space.
AAOS – tenolysis for surgical exposure is included in CPT code 25280 (forearm tendon lengthening)

**Question:** When you have 2 lesions from the same anatomical area (trunk) and separate adjacent tissue transfer procedures are performed for each defect how is this reported?

**Answer:** You would report one CPT code for each tissue transfer procedure as long as the margins were separate and not contiguous.

*CPT ASSISTANT JUL: 00 (REPORT EACH ADJACENT TISSUE TRANSFER)*

**Question:** A 3sq cm FTSG was placed on the cheek, chin and a finger. Since this was 3 separate anatomical areas would 15240 be reported 3 times?

**Answer:** No, since cheek, chin and fingers are all identified by the same full thickness graft code and the total area covered was 9sq cm CPT code 15240 would only be reported one time.

*CPT ASSISTANT NOV: 00 (ADD TOGETHER, ANATOMICAL SITES THAT HAVE THE SAME FTSG CPT CODE)*
Tendon Transfers

OPERATIONS PERFORMED:

1. Flexor digitorum superficialis to flexor digitorum profundus tendon transfers to index finger.
2. Flexor digitorum superficialis to flexor digitorum profundus tendon transfers to middle finger.
3. Flexor digitorum superficialis to flexor digitorum profundus tendon transfers to right ring finger.
4. Flexor digitorum superficialis to flexor digitorum profundus tendon transfers to right small finger.
5. Tenotomy and tendon lengthening to flexor carpi ulnaris tendon.
6. Tenotomy and tendon lengthening, flexor carpi radialis tendon.
7. Tenotomy and lengthening to right flexor pollicis longus.
8. Extensor indicis proprius to extensor digitorum communis tendon transfer.
5. Tenotomy and tendon lengthening to flexor carpi ulnaris tendon.
6. Tenotomy and tendon lengthening, flexor carpi radialis tendon.
7. Tenotomy and lengthening to right flexor pollicis longus.

25280 x3 – Lengthening or shortening of flexor or extensor tendon, forearm and/or wrist, single, each tendon

A long incision was made in the midforearm measuring about 14 cm in length. I first identified the flexor carpi radialis tendon as this was contributing to a significant amount of flexion deformity. I performed a tendon lengthening. I cut half of the tendon as far distal as I could in the wrist crease and cut the other half of the tendon as far as proximally as I could in the incision. The tendon was then incised longitudinally and marked to the ends. I performed the same procedure for the flexor carpi ulnaris tendon. I was still unable to really get much length out at this point and I had no correction of any of the single flexion deformities, which were very I therefore proceeded with the FDS to FDP tendon transfers. I identified the four flexor digitorum superficialis tendons near the wrist crease and I performed a tenotomy of each one of these individually very far distal in the wrist crease. I then retracted the ends back. These were marked individually. Next, I did a deeper dissection and performed all four flexor digitorum profundus tendons again making sure to protect my neurovascular structure. I performed a tenotomy of each one of the FDP tendons in the very proximal extent of my incision. The only remaining tendon was now flexor pollicis longus. I identified it and performed a stepwise lengthening by cutting half of it distally and half of it proximally and then performing a longitudinal incision along the lengths of the tendon. With all volar tendons released, I annually extended the wrist and fingers. While there was some adhesion formation, I was able to fully
If the surgeon chooses a tendon graft as the interposition material, and if the tendon is harvested at a different site through a separate incision(s), the harvesting of the tendon graft should be coded separately with 20924 (Tendon graft, from a distance)

If, on the other hand, the surgeon harvests a local tendon through the same incision as that used for the arthroplasty, it is included in the basic procedure and is not reported separately.

extend the wrist out to neutral and get the fingers almost all the way out to neutral. There was some superficial tearing of the skin at the flexion creases but no deep tear was noted. The ends of the tendon lined up fairly well with the exception of the flexor pollicis longus. Once I straightened up the thumb, I did not have adequate length of tendon to perform direct repair. I therefore used palmaris longus of the tendon graft to connect these 2 ends with prominent extension. Of note, I did remove the palmaris longus at the beginning of the procedure. The
1. Flexor digitorum superficialis to flexor digitorum profundus tendon transfers to index finger.
2. Flexor digitorum superficialis to flexor digitorum profundus tendon transfers to middle finger.
3. Flexor digitorum superficialis to flexor digitorum profundus tendon transfers to right ring finger.
4. Flexor digitorum superficialis to flexor digitorum profundus tendon transfers to right small finger.
8. Extensor indicis proprius to extensor digitorum communis tendon transfer.

25310 x5 – Tendon transplantation or transfer, flexor or extensor, forearm and/or wrist, single; each tendon

there were undamaged during the lengthening procedure. Now, I identified the proximal ends of the FDP tendons as they were now in the distal wrist crease and I identified the distal end of the FDS tendon at their tenotomy sites and performed a direct end-to-end repair of each of these in order beginning with the FDS to FDP transfer of the index finger, then middle, ring, and small fingers each one of these had 6-core suture repair with 3-0 Ethibond. The MCP joint of the index finger remained extended with a bowstringing of the extensor tendon dorsally on the MCP. I made a dorsal incision down to these tendons. The extensor digitorum communis to the index as well as the extensor indicis proprius tendon were easily visualized. I cut the EIP tendon, therefore, proximal in my incision and I tenotomized the EDC to the index finger distally. I then flexed the MP down in a slightly flexed position. I performed a transfer of the EIP to the EDC with three figure-of-eight sutures using 3-0 Ethibond.

Now, I completed all my tendon transfers. I copiously irrigated both volar and dorsal wounds and then closed.
CMC Arthroplasty

• Excision of carpal bone
• Hole is drilled in the base of 1st metacarpal
• FCR tendon is harvested through proximal incision in the forearm *(separately reported)*
• Tendon is taken through drill hole, sewn upon itself
• Remaining tendon is rolled up as an “anchovy” and placed into defect left by trapezium
CMC Arthroplasty
A longitudinal incision was then made in the capsule of the basilar joint. Under loupe magnification, we proceeded to release the soft tissue attachments of the trapezium, thus skeletonizing the bone. Once the bone was well visualized, it was divided into quarters with the Hoke osteotome and removed in a piecemeal fashion using a small synovial rongeur. Once the trapezium had been completely vacated, we were ready to proceed with harvesting the tendon.

For purposes of suspension arthroplasty, we elected to use the ECRL tendon autograft. This was readily identified as it inserted into the base of the index finger metacarpal. A small counterincision was then made in the mid-dorsal forearm. Once through the skin, we proceeded directly through the subcutaneous tissues down to the antebrachial fascia, which was divided. The ECRL tendon was then divided just distal to its musculotendinous junction. The cut end was then brought into the wound distally, leaving it attached to its native insertion site. A tag suture was then placed into the cut end of the tendon. This tendon was then passed through the capsule at the base of the index finger, into the space of the trapezium.

A drill was used to fashion a hole in the base of the thumb metacarpal. This was directed from dorsal to palmar in a radial to ulnar fashion. The hole was systematically enlarged to an outside diameter of 4 mm. Once complete, the edges of the tunnel were chamfered and the entire area was throughout irrigated with saline solution.

The tendon graft was then brought through the bony tunnel from palmar to dorsal. It was then looped back upon itself. Longitudinal traction was applied to the thumb and the graft was appropriately tensioned. It was then anchored to itself with multiple 3-0 Ethibond sutures placed as a horizontal mattress. Once complete, the thumb had a normal resting position and showed no tendency toward proximal migration with axial loading. We were satisfied that we had established a stable suspension arthroplasty and proceeded to close.
Tendon Transfer

- 25447 - Arthroplasty, interposition, *intercarpal* or *carpometacarpal* joints

- The transfer of the FCR to the base of the first metacarpal is not a part of the basic first CMC arthroplasty procedure and must be coded in addition to 25447.....

**WITH EITHER**

- 26480 - Transfer or transplant of tendon, *carpometacarpal area* or dorsum of hand; without free graft, each tendon

**OR**

- 25310, Tendon transplantation or transfer, flexor or extensor, forearm and/or *wrist*, single; each tendon, **AS APPROPRIATE.**
Intrinsic Muscles

**Thenar Group**
- Opponens pollicis
- Abductor pollicis brevis
- Flexor pollicis brevis
- Adductor pollicis

**Hypothenar Group**
- Abductor digiti minimi
- Flexor digiti minimi brevis (superficial muscles)
- Opponens digiti minimi (deep muscle)
Intrinsic Muscles

Cross intrinsic transfer: Transfer of the lumbricals from the radial side to the ulnar side of the finger to the ulnar side of the finger (CPT code 26510)

Lumbricals (Superficial muscles)

Ulna  Radius

Dorsal Interossei

Palmar Interossei

Deep Muscles
Intrinsic Muscle CPT Codes

26591 – Repair, intrinsic muscles of hand, each muscle
26593 – Release, intrinsic muscles of hand, each muscle

26591

Next, wound was opened and then carried proximally through the subcutaneous tissues using electrocautery as needed for hemostasis. The tendons were noted to be normal however it would appear to be the common digital nerve of small ring finger was completely lacerated. There is also intrinsic muscle laceration. The glass foreign body was identified and was removed. Next, the muscle laceration was repaired with a 4-0 Vicryl sutures. The common digital nerve laceration was repaired with 6-0 Prolene sutures and microforceps. The wounds were then copiously irrigated and tourniquet was deflated. Hemostasis was secured. The skin was then closed with 5-0 nylon simple horizontal mattress sutures. The wounds were then injected with 0.25% Marcaine plain. The

26593

The volar plate was then released along the margin. The volar aspect of the collateral ligament was then released until the middle finger was able to extend 40 degrees. Both collateral ligaments had to be completely released off the metacarpal neck along the radioulnar aspect. In spite of this, the intrinsic muscles were extremely scarred and contracted and no flexibility whatsoever. Therefore, the intrinsic mechanism was released and excised along the radial and ulnar aspect of the metacarpal. After volar capsular release of the metacarpophalangeal joint of the middle finger and release of both the radial and ulnar intrinsics the digit was then easily extended to neutral at the metacarpophalangeal joint.

26593 – intrinsic release bundles into 26520 – MCPJ capsulotomy
Opponensplasty

- 26490 - Superficialis tendon transfer type; each tendon
- 26492 - tendon transfer w/graft (includes obtaining graft), each tendon
- 26494 - hypothenar muscle transfer
- 26496 - other methods
PROCEDURES PERFORMED:
1. Flexor carpi radialis to extensor carpi radialis brevis tendon transfer.
2. Flexor digitorum superficialis opponensplasty, right ring finger to right thumb through a loop of the flexor carpi ulnaris tendon.
3. MP joint fusion with K-wire fixation.

• The first procedure was harvesting the opponens tendon donor. A transverse incision was made at the volar MP joint of the ring finger and the sublimis tendon was identified and incised to free it.

• Incision was then made at the ulnar wrist level in a zigzag manner. The flexor carpi ulnaris tendon was identified along with the ulnar neurovascular bundle. The ulnar nerve and artery were gently retracted out of harm’s way as well as the nerve to the opposite side and exposure was taken to the flexor tendon. Due to some tendon adhesions, the flexor digitorum superficialis to the ring finger would not freely pull into this wound. Therefore, a second midpalmar incision was made to further free up the tendon. At this time, it was easier to identify the location at the wrist level and then the tendon could be retrieved proximally.

• The tendon was then looped around the distal aspect of the FCU tendon and tunneled subcutaneously over to the thenar muscles.
Opponensplasty

- A longitudinal U-shaped incision was made over the MP joint of the thumb. Dissection was taken into the capsule through the extensor pollicis longus and brevis tendons and the unstable and arthritic joint was visualized. A rongeur was used to decorticate the joint surfaces. The bones were apposed and then secured with cross 0.045 K-wires. These K-wires were cut short at the bone level.

- The opponens tendon transfer was then secured into the opponens muscle using an end-weave anastomosis. This was secured with 3-0 Tycron suture.

- Attention was then turned to the tendon transfer. The flexor carpi radialis was incised through a small transverse incision as it entered the tunnel of the scaphoid. A second incision was then made more proximally to help redirected it in a radial direction.

- It was then tunneled beneath the skin to the dorsal wrist surface, where it was sewn into the extensor carpi radialis brevis again using an end-weave anastomosis.
26135 – Synovectomy, metacarpophalangeal joint including intrinsic release and extensor hood reconstruction

A dorsal long incision was made over the metacarpal head from the index finger, the mid and little fingers. Subcutaneous tissue was spread. Each extensor mechanism was exposed. Starting at the index finger, each radial, ulnar intrinsic was cut at the level of the mid proximal phalanx. I then sharply elevated the radial sagittal fibers exposing the capsule. Capsulectomy was performed and complete synovectomy was performed of each joint. synovium in the joint and in the recesses by the collateral ligaments. She was getting dorsal wear of the proximal phalanges but each joint still had a significant amount of cartilage still remaining. I felt that at her young age, we would probably hold off and do MP arthroplasties later. The wounds were irrigated. I pulled the extensor mechanisms midline and imbricating the radial sagittal fibers up to them to hold them over directly over the joint. She was tagged several times with 4-0 Vicryl, then ran the radial sagittal fibers with a running locking 4-0 Vicryl. The skin was run with 5-0 nylon. Wounds anesthetized with Marcaine. A soft positioning dressing was placed holding the fingers in extension in neutral radial and ulnar deviation. Thumb spica splint was put on the thumb. She tolerated the difficult procedure well and was taken from the operating room in satisfactory condition.
Repair, Revision, and/or Reconstruction

- 27385 - Suture of quadriceps or hamstring muscle rupture, primary
- 27386 - secondary reconstruction, including fascial or tendon graft

What code is used to report an endoscopic gastocnemius recession?

There is no specific CPT code to describe endoscopic gastocnemius recession. This procedure should be reported using Unlisted Procedure Code 29999. While 29999 uses the term “arthroscopic” and the joint space is not entered 29999 is located in the section for arthroscopic or endoscopic procedures of the musculoskeletal system and is intended to include unlisted endoscopic services.

Nov. 08 CPT Assistant

POSTOPERATIVE DIAGNOSIS: Left quadriceps tendon rupture.

tissue was sharply dissected down to the patellar tendon itself and upon entrance near the superior pole of the patella there was essentially no evidence of any quadriceps tendon present, and a large void full of hematoma was then present. This hematoma was evacuated with forceps as well as hemostats and irrigation of the knee was then performed. Once the knee was completely irrigated, the margins along the tendons proximally were then freshened down to a relatively fresh surface and then once this was freshened with a #10-blade, attention was then carried to the more distal attachment which was basically the superior pole of the patella. There was remnant tissue present around the superior pole of the patella, and it was felt that if anchors could be placed into the superior pole of the patella then to leave the tissue which was connected to the patella to allow for reattachment of the quadriceps tendon.

The total of 6 sutures were placed, two sutures to each anchor which had been placed in the patella were then utilized to reattach the quadriceps tendon down to the superior pole of the patella.
A patient with a right quadriceps tendon rupture with an extensive retinaculum tear underwent an open repair of the tendon rupture and the retinaculum tear.

Our dilemma is that some of the coders feel that CPT code 27385, Suture of quadriceps or hamstring muscle rupture; primary, would be assigned since he four quadriceps muscles in essence come down to form the quadriceps tendon.

Other coders feel that CPT code 27385 would not be accurate and CPT code 27664, Repair extensor tendon, leg; primary, without graft, each tendon, would be more appropriate because the quadriceps tendon is an extensor tendon of the leg.

The other perspective is that CPT code 27664 would not be appropriate for a quadriceps tendon repair because CPT code 27664 is listed under the subsection of leg (tibia and fibula) in the CPT manual.

Yet a few of the coders feel that the unlisted code (27599) would be the most appropriate code assignment for the quadriceps tendon repair.

What would be the correct code assignment for this case?
ANSWER

- Based on the information provided in the operative report, **only** CPT code 27385, *Suture of quadriceps or hamstring muscle rupture; primary*, would be **appropriately reported for this case**. Although the code descriptor refers to the muscle, the muscle connects into a bone via a tendon, and the rupture was actually of the tendon and not the muscle. Therefore, code 27385 is the correct code assignment for this procedure.
The semitendinosus tendon is attached to the patella to pull it medially.

2008 Text

- 27396 – *Transplant, hamstring tendon to patella, single tendon*
Femur (Thigh Region) and Knee Joint

REPAIR, REVISION, AND/OR RECONSTRUCTION

▲ 27396 Transplant or transfer (with muscle redirection or rerouting), thigh (eg, extensor to flexor); single tendon
▲ 27397 multiple tendons

Rationale
Codes 27396 and 27397 have been editorially revised to report muscle transplant or transfer of muscles in the thigh. These code changes were made to allow performance of procedures beyond transplant from a hamstring tendon to the patella. Because the efforts of transfers to other areas of the thigh require an equal amount of work, these codes have been revised to reflect any transplant or transfer of muscles, including redirection or rerouting of muscles to any part of the thigh. This includes transplant or transfer for any tendon, whether an extensor or a flexor tendon.

Muscular imbalance in the thigh can lead to knee dysfunction and gait abnormality. Various tendon transfers in the thigh may be utilized to minimize the dysfunction by redirecting muscle forces.
OPERATIVE PROCEDURE: Diagnostic arthroscopy of the right knee with removal of loose body, lateral compartment; arthroscopic lateral release; and MPFL reconstruction with quad tendon turnover.

Visualization allowed for exposure of the quad tendon. Approximately, 80 mm of the quad tendon were taken and approximately 10 mm in width. This was marked out with a ruler and a 15 blade was then used to perform harvesting of the quad tendon to turnover. This was harvested and the quad tendon was then repaired with 0 Ethibond sutures. A tissue plane was created just underneath the MPFL and the medial retinaculum between these structures and the capsule. A long-handled right-angled retractor was then used to make a hole in the MPFL and medial retinaculum at the level of the medial epicondyle. A #2 FiberWire was then used to whipstitch around the end of the quad tendon that was harvested and still attached to the superomedial third of the patella. The long-handled retractor was then used to bring this graft into the tissue plane that had been created underneath the MPFL and medial retinaculum and up underneath the hole through these structures and back over on itself, coming back, and connecting to the medial portion of the kneecap. This was secured there with 0 Ethibond sutures followed by backing this up with #2 FiberWire stitches. All wounds were thoroughly washed with saline after secure fixation of the quad tendon back over itself reconstructing the MPFL and medial retinaculum. This robust structure will prevent any lateral dislocation in the future hopefully. All wounds were thoroughly washed.
Repair, Revision, and/or Reconstruction

- 27380 – Suture of *infrapatellar tendon*, primary
- 27381 – secondary reconstruction, including fascial or tendon graft
Tendon Transfer - Deep

DO NOT USE 27690 FOR TENDON TRANSFERS OF THE TOES

cauterized and ligated as necessary. Dissection was carefully carried down to the level of the posterior tibial tendon at its insertion onto the navicular tuberosity where the tendon was carefully dissected free of its soft tissue and osseous attachments. A sagittal bone saw was utilized to reflect the posterior tibial tendon from the navicular tuberosity site. Next, the distal aspect of the posterior tibial tendon was secured with 3-0 nylon at its and in preparation for passing the tendon, so, next utilizing a tendon passer, this was inserted at the proximal aspect of this incision along the course of posterior tibial tendon to determine the incision point more proximally to the ankle. Approximately 6 cm proximal to the ankle joint on the medial aspect of the tibia, a 3 cm linear longitudinal incision was made. The incision was deepened through the subcutaneous tissues using blunt dissection. Care was taken to identify and retract any vital and neural and vascular structures. Any bleaders were ligated and cauterized as necessary. At this time, dissection was carefully bluntly carried down until the tendon sheaths were identified. Once the appropriate tendon was identified via manipulation of the tendons, a hemostat was inserted to pull the posterior tibial tendon proximally and out of this incisional point proximally. Next, the tendon was carefully wrapped in a saline soaked gauze to keep moistened in preparation for its next area of tendon passing. Next, again approximately 6 cm proximal to the ankle joint and located over the anterior medial aspect of the fibula, approximately a 3 cm linear longitudinal incision was made. The incision was deepened through the subcutaneous tissues using blunt dissection and care was taken to identify and retract any vital neural and vascular structures. All bleeders were ligated and cauterized as necessary. Dissection was carried down to the anterior aspect of the fibula and to the interosseus membrane which could be appreciated. Next utilizing a hemostat, a small hole was created in the interosseus membrane to allow for passing of the posterior tibial tendon posterior to the tibia and out anteriorly through the interosseus membrane. Next, the tendon passer was inserted through this hole which was created in the interosseus membrane and the posterior tibial tendon was redirected posteriorly to the tibia and routed anteriorly out through the interosseous membrane. Again, the tendon was wrapped in a saline soaked gauze to preserve the tendon moisture during this transfer. Next, approximately a 3 cm linear longitudinal incision was made over the dorsal lateral aspect of the foot overlying the 3rd cuneiform cuboid joint where the incision was deepened through the subcutaneous tissues using sharp and blunt dissection. Care was taken to identify and
retract any vital neural and vascular structures, any bleeders were ligated and cauterized as necessary. At this time all the periosteal and capsular structures were dissected free of their osseus attachments overlying the 3rd cuneiform and cuboid area exposing the underlying bone. Next, the foot was dorsiflexed and it became apparent that the posterior tibial tendon was too short to be tacked to the 3rd cuneiform so that the cuboid was a better insertion point for insertion of the tendon. So, utilizing a trephine the cuboid was trephined out to allow for passing the posterior tibial tendon through the cuboid. Dissection of bone was then placed on the back table to be used later. Next, utilizing an Arthrotak TI 3 mm bone screw anchor, this was inserted into the proximal aspect of the cuboid in the area of the trephine where the suture was then attached to the posterior tibial tendon once it was passed through the subcutaneous tissues from its proximal lateral incision point down to the incision overlying the cuboid. Once the posterior tibial tendon was securely tacked to the anchor, while the foot was held in the dorsiflexed 90 degree position, the tendon was then routed through the trephine created hole in the cuboid where this was utilized using a Keith needle where the Keith needle exited the plantar aspect of the foot. This suture was held taut on the plantar aspect of the foot while the foot was held at 90 degrees and the trephine plug of bone was then reinserted overlying the posterior tibial tendon and into the trephine created hole and the cuboid where a tamp was utilized to secure the tendon. Once satisfied, the wound was flushed with copious amounts of sterile normal saline and the periosteal and capsular structures were reapproximated and coapted with 3-0 Vicryl in all subcutaneous layers for the incisions utilized for the transfer of the posterior tibial tendon were closed with 3-0 Vicryl and all skin incisions were reapproximated and coapted in a horizontal and Interrupted suture technique utilizing 4-0 nylon. The suture from the plantar aspect of the foot was then cut flush with the skin as well.
Girdlestone - flexor to extensor tendon transfer for the correction of lesser toe deformities

The FDL tendon was harvested and split in 2 halves and brought over the dorsum of the second toe proximal phalanx. The sutures were tied and the FDL tendon was tied on to itself and onto the EDL tendon. Good stability was achieved. The second toe was checked for the presence of a hammertoe deformity and no significant deformity was noted.
Response to AMA Inquiry

- It would be appropriate to report the Girdlestone with 28285 if used to correct a flexible hammer toe.

- In this case the hammer toes were repaired with a PIPJ fusion, so the Girdlestone can be coded 28270, if it was used to correct capsular laxity at the metatarsophalangeal joint.

- The unlisted code 28899 could be used depending on what it is being use for as there is no CPT code for tendon transfer of the toe.
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