RIJKSINSTITUUT VOOR ZIEKTE-EN INVALIDITEITSVERZEKERING

Openbare instelling opgericht bij de wet van 9 augustus 1963
Galileelaan 5/1 - 1210 Brussel

Dienst voor geneeskundige verzorging

NATIONALE COMMISSIE ARTSEN-ZIEKENFONDSEN

Nota NCAZ 2021-120 Brussel, 29 november 2021

BETREFT

Artsen-specialisten - Nomenclatuur van de geneeskundige verstrekkingen - Wijziging van **artikel 14, k) - Heelkunde - Orthopedie (Implant LARS)** - Ontwerp van koninklijk besluit

BIJLAGEN

Bijlage 1: ontwerp van koninklijk besluit
Bijlage 2: gecoördineerde versie van de nomenclatuur
Bijlage 3: actuariële analyse
Bijlage 4 : Brochure CM Orthopaedics over LARS
Bijlage 5 : Chirurgische ingreep LARS
Bijlage 6 : Mail van Prof. Dr. Peter Verdonk, Voorzitter Belgian Knee Society 2019-2021

INHOUD van het VOORSTEL

De CTIIMH is bezig met een procedure om een terugbetaling voor de LARS (kunstband die met name wordt gebruikt bij de reconstructie van de kruisbanden van de knie) op te zetten om het materiaal terugbetaalbaar te maken.

Er is echter geen verstrekking van nomenclatuur voor een dergelijke reconstructie. De huidige verstrekking dekt namelijk alleen reconstructies van niet-synthetisch materiaal (pees, huid of aponeurose).

277351	277362	Plastie van één of beide gekruiste knieligamenten met tendineus, cutaan of aponeurotisch materiaal, ongeacht de techniek	N	400
294114	294125	Plastie van verscheidene knieligamenten met tendineus, cutaan of aponeurotisch materiaal, ongeacht de techniek	N	500

De werkgroep Heelkunde sprak zich uit voor het toevoegen van de mogelijkheid om synthetisch materiaal (inclusief LARS) toe te voegen aan de huidige code om het gebruik ervan mogelijk te maken.

277351	277362	Plastie van één of beide gekruiste knieligamenten met tendineus, cutaan, ~~of~~ aponeurotisch, of synthetisch materiaal ongeacht de techniek	N	400
294114	294125	Plastie van verscheidene knieligamenten met tendineus, cutaan, ~~of~~ aponeurotisch, of synthetisch (alleen voor de gekruiste knieligamenten) materiaal ongeacht de techniek	N	500

MOTIVERING

Na procedure van de CTIIMH wordt een implantaat terugbetaald, maar geen enkele chirurgische verstrekking zal het plaatsen ervan toestaan. Het is daarom nodig de nomenclatuur aan te passen om deze inconsistentie op te lossen.

BUDGETTAIRE WEERSLAG

Het voorstel wordt als **budgetneutraal** beschouwd.

ADMINISTRATIEVE WEERSLAG

Geen weerslag.

PROCEDURE

Wettelijke basis : artikel 35, § 2, 1° - Wet van 14-07-1994 – Initiatief van de Technische geneeskundige raad

Voorgeschiedenis

Werkgroep Heelkunde van 16 maart 2021
Voltallige zitting TGR van 26 oktober 2021

OPDRACHT van de NATIONALE COMMISSIE ARTSEN-ZIEKENFONDSEN

De Nationale Commissie Artsen-Ziekenfondsen wordt verzocht te beslissen over de overmaking van het ontwerp van koninklijk besluit (bijlage 1) aan de Commissie voor Begrotingscontrole en aan het Verzekeringscomité.

ANNEXE 1	BIJLAGE 1

ROYAUME DE BELGIQUE

SERVICE PUBLIC FEDERAL SECURITE SOCIALE

@. - Arrêté royal modifiant l'article 14, k), de l'annexe à l'arrêté royal du 14 septembre 1984 établissant la nomenclature des prestations de santé en matière d'assurance obligatoire soins de santé et indemnités

Philippe, Roi des Belges,
A tous, présents et à venir, Salut.

Vu la loi relative à l'assurance obligatoire soins de santé et indemnités, coordonnée le 14 juillet 1994, l'article 35, § 1er, alinéa 5, et § 2, alinéa 1er, 1°, modifié par l'arrêté royal du 25 avril 1997, confirmé par la loi du 12 décembre 1997 ;

Vu l'annexe à l'arrêté royal du 14 septembre 1984 établissant la nomenclature des prestations de santé en matière d'assurance obligatoire soins de santé et indemnités ;

Vu la proposition du Conseil technique médical formulée au cours de sa réunion du @ ;

Vu l'avis du Service d'évaluation et de contrôle médicaux de l'Institut national d'assurance maladie-invalidité, donné le @ ;

Vu la décision de la Commission nationale médico-mutualiste du @ ;

Vu l'avis de la Commission de contrôle budgétaire, donné le @ ;

Vu la décision du Comité de l'assurance soins de santé de l'Institut national d'assurance maladie-invalidité du @ ;

KONINKRIJK BELGIE

FEDERALE OVERHEIDSDIENST SOCIALE ZEKERHEID

@. - Koninklijk besluit tot wijziging van artikel 14, k), van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen

Filip, Koning der Belgen,
Aan allen die nu zijn en hierna wezen zullen,
Onze Groet.

Gelet op de wet betreffende de verplichte verzekering voor geneeskundige verzorging en uitkeringen, gecoördineerd op 14 juli 1994, artikel 35, § 1, vijfde lid, en § 2, eerste lid, 1°, gewijzigd bij het koninklijk besluit van 25 april 1997, bekrachtigd bij de wet van 12 december 1997;

Gelet op de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen;

Gelet op het voorstel van de Technische geneeskundige raad, gedaan tijdens zijn vergadering van @;

Gelet op het advies van de Dienst voor geneeskundige evaluatie en controle van het Rijksinstituut voor ziekte- en invaliditeitsverzekering, gegeven op @;

Gelet op de beslissing van de Nationale commissie artsen-ziekenfondsen van @;

Gelet op het advies van de Commissie voor begrotingscontrole, gegeven op @;

Gelet op de beslissing van het Comité van de verzekering voor geneeskundige verzorging van het Rijksinstituut voor ziekte- en invaliditeitsverzekering @;

Vu l'avis de l'Inspecteur des Finances, donné le @ ;

Vu l'accord de la Secrétaire d'Etat au Budget, donné le @ ;

Vu l'avis @ du Conseil d'Etat, donné le @, en application de l'article 84, § 1er, alinéa 1er, 2°, des lois sur le Conseil d'Etat, coordonnées le 12 janvier 1973 ;

Sur la proposition du Ministre des Affaires sociales,

Nous avons arrêté et arrêtons :

Article 1er. A l'article 14, k), I., § 1er, de l'annexe à l'arrêté royal du 14 septembre 1984 établissant la nomenclature des prestations de santé en matière d'assurance obligatoire soins de santé et indemnités, modifié en dernier lieu par l'arrêté royal du 3 octobre 2018, au D., 2°, les modifications suivantes sont apportées :

1° le libellé de la prestation 277351-277362 est remplacé par ce qui suit :

« 277351-277362
Plastie par matériel tendineux, cutané, aponévrotique ou synthétique d'un ou des ligaments croisés du genou, quelle que soit la technique……N 400. » ;

2° le libellé de la prestation 294114-294125 est remplacé par ce qui suit :

« 294114-294125
Plastie par matériel tendineux, cutané, aponévrotique ou synthétique (uniquement pour les ligaments croisés) de plusieurs ligaments du genou, quelle que soit la technique…….N 500. ».

Art. 2. Le présent arrêté entre en vigueur le premier jour du deuxième mois qui suit celui de sa publication au *Moniteur belge.*

Art. 3. Le ministre qui a les Affaires sociales dans ses attributions est chargé de l'exécution du présent arrêté.

Donné à

Gelet op het advies van de Inspecteur van Financiën, gegeven op @;

Gelet op de akkoordbevinding van de Staatssecretaris voor Begroting van @;

Gelet op advies @ van de Raad van State, gegeven op @, met toepassing van artikel 84, § 1, eerste lid, 2°, van de wetten op de Raad van State, gecoördineerd op 12 januari 1973;

Op de voordracht van de Minister van Sociale Zaken,

Hebben Wij besloten en besluiten Wij:

Artikel 1. In artikel 14, k), I., § 1, van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen, laatstelijk gewijzigd bij het koninklijk besluit van 3 oktober 2018, in de bepalingen onder D., 2°, worden de volgende wijzigingen aangebracht:

1° de omschrijving van de verstrekking 277351-277362 wordt vervangen als volgt:

"277351-277362
Plastie van één of beide gekruiste knieligamenten met tendineus, cutaan, aponeurotisch, of synthetisch materiaal ongeacht de techniek…..……..…N 400.";

2° de omschrijving van de verstrekking 294114-294125 wordt vervangen als volgt:

"294114-294125
Plastie van verscheidene knieligamenten met tendineus, cutaan, aponeurotisch, of synthetisch (alleen voor de gekruiste knieligamenten) materiaal ongeacht de techniek……..……..…..N 500.".

Art. 2. Dit besluit treedt in werking op de eerste dag van de tweede maand na die waarin het is bekendgemaakt in het *Belgisch Staatsblad*.

Art. 3. De minister bevoegd voor Sociale Zaken is belast met de uitvoering van dit besluit.

Gegeven te

PAR LE ROI :
Le Ministre des Affaires sociales et de la Santé publique,

VAN KONINGSWEGE:
De Minister van Sociale Zaken en Volksgezondheid,

F. VANDENBROUCKE

Artikel 14. k)

k) de verstrekkingen die tot het specialisme orthopedie (DP) behoren :

(…)

I. Heelkundige verstrekkingen.

(…)

§ 1. Bloedige behandelingen.

(…)

D. Onderste ledematen en bekkengordel.

(…)

2° Pezen, ligamenten, slijmbeurzen :

(…)

277336 277340	Hechten van één of beide gekruiste knieligamenten, ongeacht de techniek	N		250
277351 277362	Plastie van één of beide gekruiste knieligamenten met tendineus, cutaan, ~~of~~ aponeurotisch, of synthetisch materiaal ongeacht de techniek	N		400
277432 277443	Meniscectomie geassocieerd met één van de verstrekkingen aangeduid met de rangnummers 277336-277340, 277351-277362.	N		52

(…)

300296 300300	Excisie van plica synovialis of (re)sectie van retinaculum patellae, ongeacht de techniek	N		100

De verstrekkingen aangeduid met de rangnummers 275273-275284, 276636-276640, 277336-277340, 277351-277362, 277476-277480, 300252-300263, 300274-300285, 300296-300300, 300311-300322, 300392-300403 en 300414-300425 zijn niet onderling cumuleerbaar, noch met andere in dezelfde streek verrichte bloedige orthopedische verstrekkingen, met uitsluiting van de gipstoestellen.

294114 294125	Plastie van verscheidene knieligamenten met tendineus, cutaan, ~~of~~ aponeurotisch, of synthetisch (alleen voor de gekruiste knieligamenten) materiaal ongeacht de techniek	N		500
294136 294140	Sectie van de knieflexoren	N		200

BIJLAGE 3

RIJKSINSTITUUT VOOR ZIEKTE- EN INVALIDITEITSVERZEKERING

Openbare instelling opgericht bij de wet van 9 augustus 1963
Galileelaan 5/01 - 1210 Brussel

Dienst voor geneeskundige verzorging

Brussel, 26 oktober 2021

Betreft : **Financiële analyse van het actuariaat:**
Artsen-specialisten – Nomenclatuur van de geneeskundige verstrekkingen
Aanpassing van artikel 14 k) – Implantaten LARS

Deze maatregel werd niet voorzien in de doelstelling 2021.

CRIDMI is bezig met een procedure om een terugbetaling voor de LARS (kunstband die met name wordt gebruikt bij de reconstructie van de kruisbanden van de knie) op te zetten om het materiaal terugbetaalbaar te maken.
Er is echter geen akte in de nomenclatuur voor een dergelijke reconstructie. De onderstaande nomenclatuurcodes zijn in die zin aangepast dat ze ook reconstructie op basis van synthetisch materiaal omvatten.

277351 – 277362 : Plastie van één of beide gekruiste knieligamenten met tendineus, cutaan of aponeurotisch materiaal, ongeacht de techniek N 400
294114 – 294125 : Plastie van verscheidene knieligamenten met tendineus, cutaan of aponeurotisch materiaal, ongeacht de techniek N 500

worden :

277351 – 277362 : Plastie van één of beide gekruiste knieligamenten met tendineus, cutaan, aponeurotisch **of synthetisch** materiaal ongeacht de techniek N 400
294114 – 294125 : Plastie van verscheidene knieligamenten met tendineus, cutaan, aponeurotisch **of synthetisch (alleen voor de gekruiste knieligamenten)** materiaal ongeacht de techniek N 500

Conclusie

Het voorstel wordt als **budgetneutraal** beschouwd.

ANNEXE 4 - BIJLAGE 4

LARS™ PCL

PCL Reconstruction and Reinforcement

Surgical technique

CM ORTHOPAEDIC

LARS™ PCL

Contents

We would like to thank Dr JP Laboureau and Mr D Houlihan-Burne for their contributions to this surgical technique.

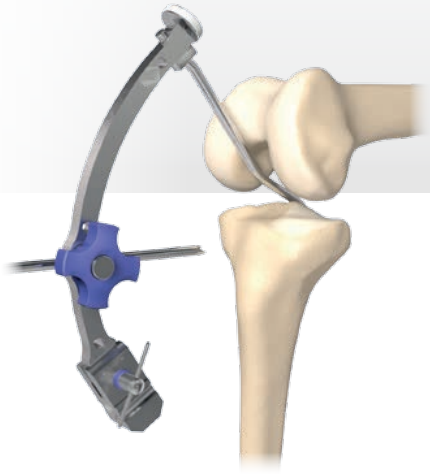
LARS™ PCL

Stability | Versatility | Recovery

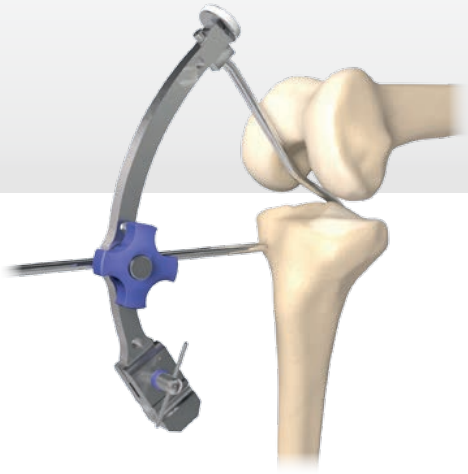
The next generation in soft tissue internal fixation

LARS™ PCL

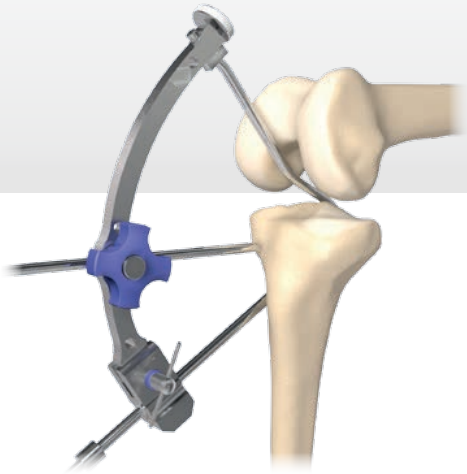
Operative summary



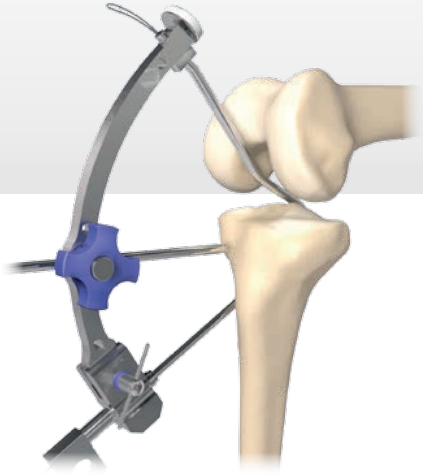
a. Tibial jig placement



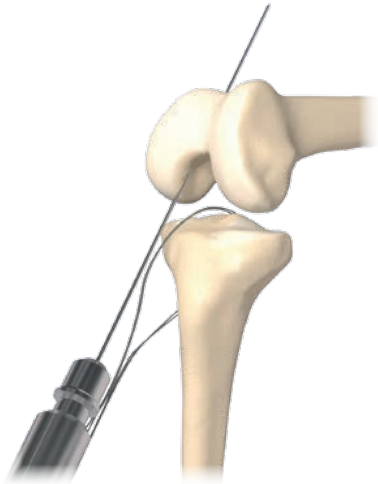
b. Stabiliser pin insertion



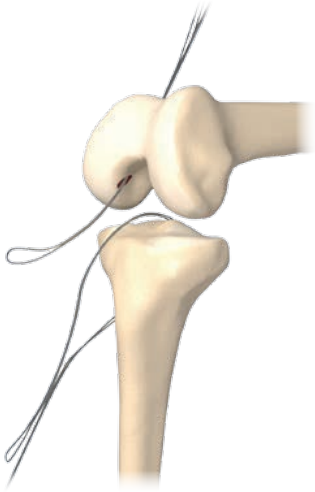
c. Tibial drilling



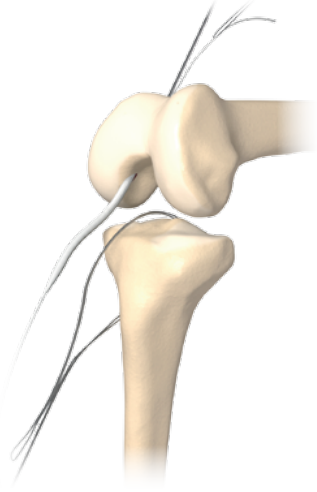
d. Tibial wire loop insertion



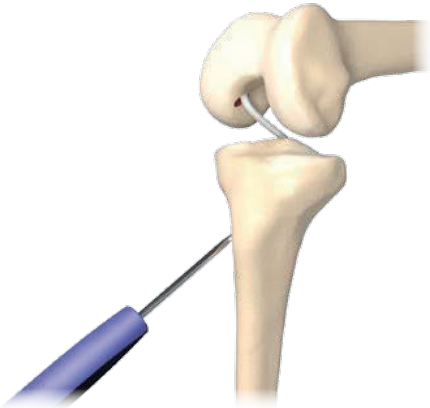
e. Femoral drilling



f. Femoral wire insertion



g. Inserting the LARS ligament



h. Fixation

Overview

LARS is a range of versatile synthetic ligament augmentation and reconstruction devices. From intra or extra-articular reconstruction of ruptured ligaments in the knee, to tendon repairs such as Achilles tendon and rotator cuff tears, LARS is suitable for a wide variety of applications.

The LARS ligament is used as an internal fixation device, providing immediate stability and allowing restoration of knee function by re-centring the knee[1, 2]. The intra-articular longitudinal fibres resist fatigue and allow fibroblastic in-growth[3, 4, 5, 6, 7], whilst the extra-articular woven fibres provide strength and resistance to elongation[5, 6, 7]. LARS can be used in conjunction with the remnants of the ruptured ligament, or as reinforcement of an autologous reconstruction. In both cases, LARS protects the original ligament tissues during the immediate post-operative period, particularly in instances where an excess of traction would otherwise elongate the tissue.

Indications

LARS ligaments can be considered for:

- Acute (less than 3 weeks old) cruciate ligament injuries
- Multiple ligament injuries
- Late or chronic injuries where a good stump of ligament remains with evidence of vascularity

LARS synthetic ligament composition

Mechanical *in vivo* tests for resistance, fatigue and creep have shown that LARS ligaments are highly effective ligament reconstruction and augmentation devices and clinical results are excellent[1, 2, 5, 8].

LARS ligaments are manufactured in a range of sizes, with various numbers of longitudinal fibres corresponding to varying resistance to elongation and tensile strength. The strength of LARS ligaments is approximately 1,500N for 30 fibres, 2,500N for 60 fibres, 3,600N for 80 fibres and 4,700N for 100 fibres[5].

General considerations

LARS ligaments must always be placed in an anatomical and isometric position within the joint. During the positioning of the ligament it is essential to avoid any abrasion within the joint or obstruction such as wall or notch impingement, or with other surrounding tissues, as this may lead to wear of the ligament fibres[6, 7, 8]. It is also important to avoid placing the intra-articular portion of the LARS ligament within the tunnels or at the tunnel edges as these fibres are more prone to damage due to rubbing against sharp bony edges. At least 2mm of the extra-articular fibres should be visible outside the tunnel entrance, to minimise risk of long-term wear of the ligament.

Acute angles must also be avoided during the drilling of bony tunnels. The diameter of the bony tunnels must correspond to the specific technique for each type of ligament and should typically be as small as possible to encourage bony tissue in-growth.

Due to the stiffness of a LARS ligament it is crucial to implant the ligament in an isometric and anatomic position with final fixation at the angle where the ligament is longest to avoid any excessive strain on the ligament fibres. To this effect, LARS ligaments should not be over-tensioned during fixation as this will restrict motion and cause undue strain on the ligament. The tension should not be more than that of the repaired anatomic ligament.

The fixation of the ligament is carried out using dedicated cannulated interference screws, which do not damage the ligament and provide maximum contact with the tunnel wall. As a general rule, the interference screw size should be at least 1mm bigger than the tunnel size and its length should be the longest permissible, dependent on tunnel length. Secondary fixation with an additional screw or staple is recommended for the tibia. In order to avoid irritation of surrounding soft tissue, fixation of the ligament extremities must be extra-articular, with the screw edge fixed and ligament cut flush with the bone periphery. The use of non-resorbable screws is not recommended with the LARS ligament.

LARS™ PCL

LARS in PCL reconstruction

There are two LARS ligament sizes for PCL reconstructions with varying strength and tunnel diameters. In single bundle PCL reconstructions, PC80 is recommended. In double bundle PCL reconstructions, a PC80 should be used to reconstruct the antero-lateral bundle and a PC60 or PC80 used to reconstruct the postero-medial bundle.

Ligaments	Strength (N)	Tunnel ø (mm)	Ligament ø (mm)	Screw size (mm)
PC60	2500	6.0	6.5	7.0 - 8.0
PC80	3500	6.0 or 7.5	7.7	7.0 - 9.0

A LARS PCL is comprised of a 40mm long intra-articular portion consisting of longitudinal parallel fibres only with two intraosseous portions. These portions are composed of the same fibres bound together by transverse fibres via a warp knitting process. Maximum strain before rupture of a LARS PCL is 9.8%, which is approximately 4mm[5].

An acute reconstruction is generally recommended. In severe chronic cases, combined instabilities and revisions, an open technique should be employed. For chronic cases, a double bundle reconstruction is recommended as this allows knee stabilisation through range of motion. In the latter instance, the posterior displacement of the tibia is controlled by the antero-lateral bundle in flexion and by the postero-medial bundle in extension.

Operative set-up

The use of an image intensifier (C-arm) is crucial to check the placement of the tibial jig and to confirm the precise isometric position for the femoral tunnel.

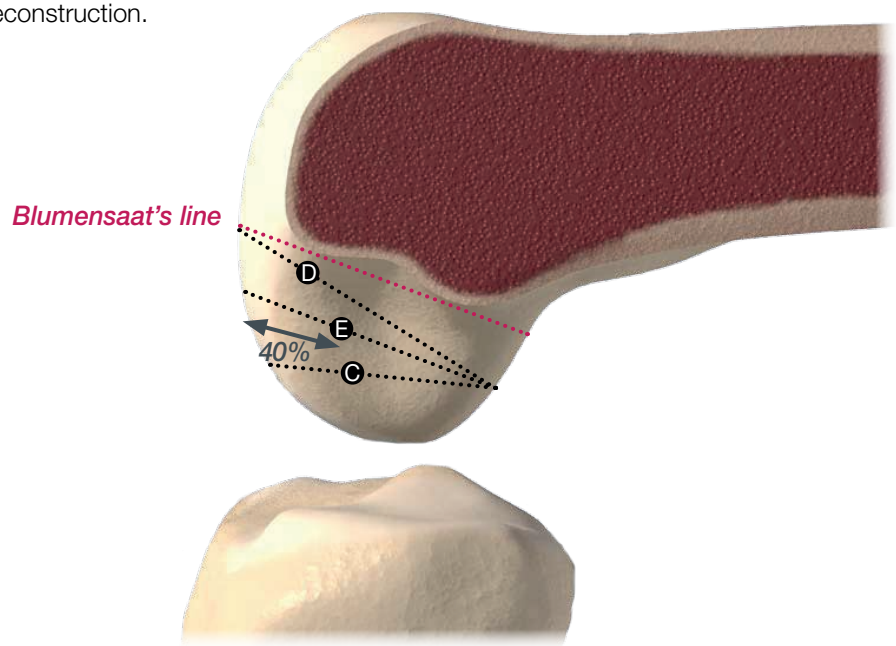
Place the patient in the supine position, with the thigh in a knee holder which is placed with the tourniquet as proximal as possible. The knee must be able to be positioned in full extension and 100°-110° of flexion.

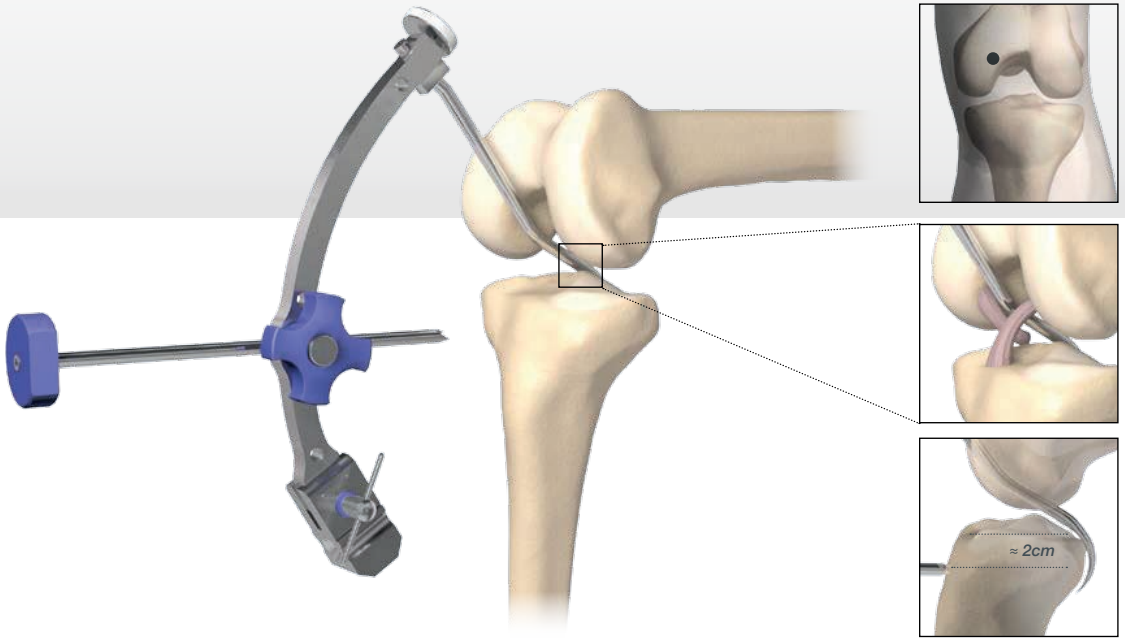
Do not use an arthroscopic pump in acute cases.

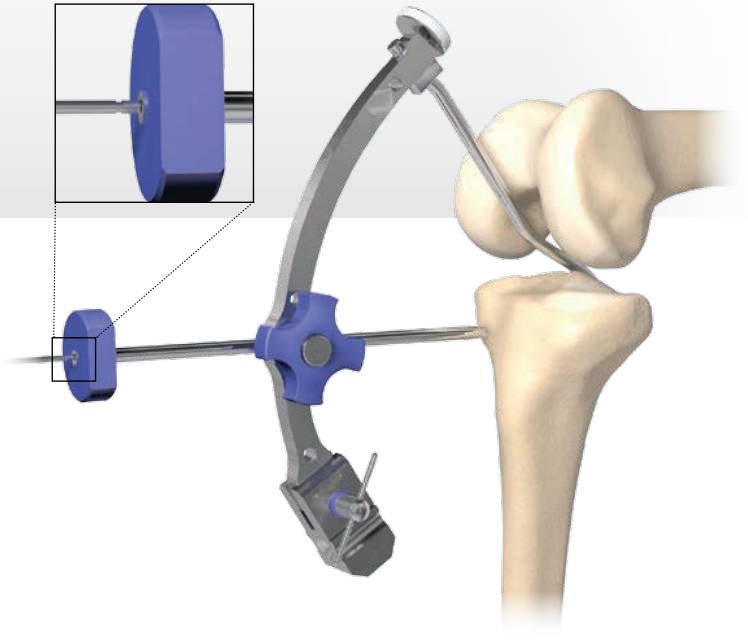
Femoral positioning in single bundle LARS PCL reconstruction

It is recommended that point E be used for femoral tunnel position in a single bundle PCL reconstruction. Point E corresponds to 40% of a line drawn parallel to the Blumensaat's line and passes through the most prominent point of the posterior condyle on an X-ray when the two condyles are superimposed; this can also be done intra-operatively on an image intensifier.

Ogata's points, D and C, denote insertion positions for a double bundle PCL reconstruction.







Step 1. Tibial jig placement

The knee should be flexed to 90°. The tibial jig should be assembled with the appropriately sized 6mm drill guide, the spatula and the stabiliser pin guide.

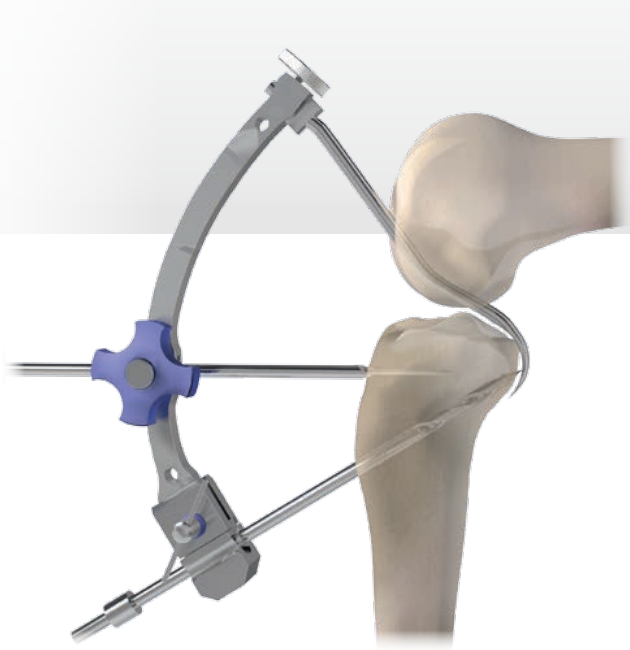
The spatula of the jig should be inserted into the knee via a medial parapatellar portal 1-2cm above the lower extremity of the patella. This should pass medial to the ACL and behind the tibia in the midline, pushed back until its stem lies on the roof of the notch. This should be confirmed under an image intensifier.

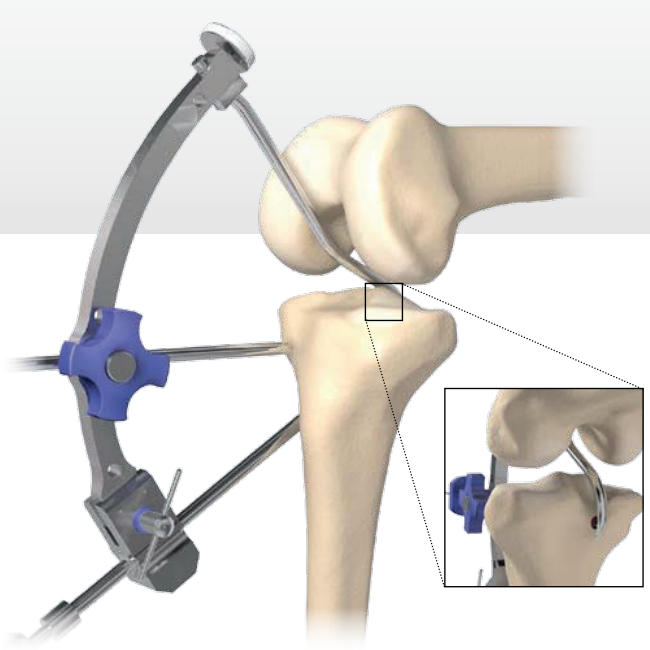
Note: In a small notch the femoral tunnel may be drilled first and protected with a telescopic tube prior to drilling the tibial tunnel. This avoids the tibial wire loop obstructing the femoral tunnel drilling.

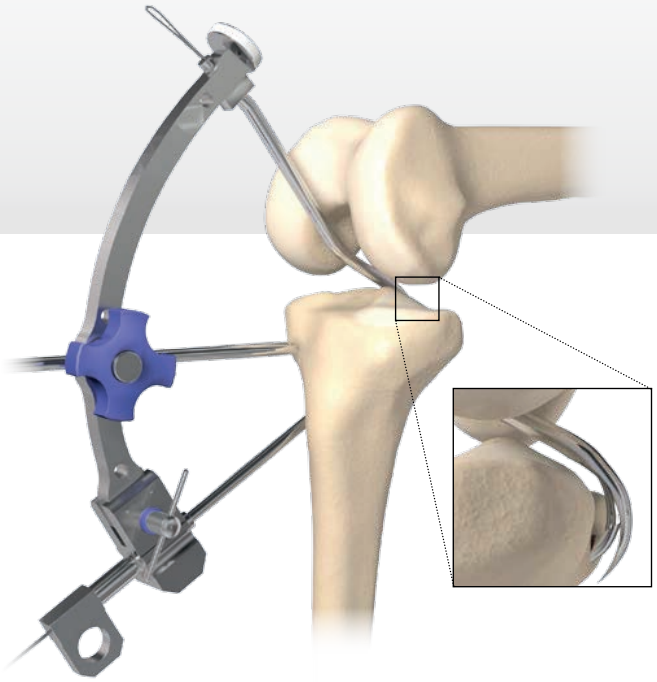
Step 2. Stabiliser pin insertion

Once the alignment is confirmed the stabiliser pin should be inserted, up to the indent mark, perpendicular to the tibial crest and parallel to the tibial plateau, approximately 2cm below it. This should be checked under an image intensifier.

Note: Care should be taken to insert the stabiliser pin only up to the engraved mark so as to ensure it does not obstruct the tibial drill.







Step 3. Tibial drilling

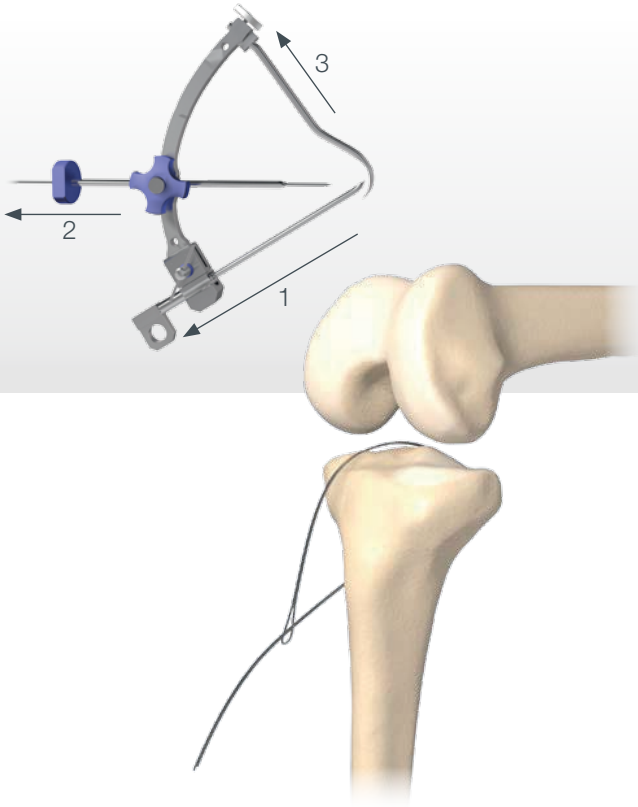
The sharp 6mm drill should be driven through with the drill tip towards the spatula. The image intensifier should be used to confirm completion of this step and to check the stabiliser pin and drill do not converge.

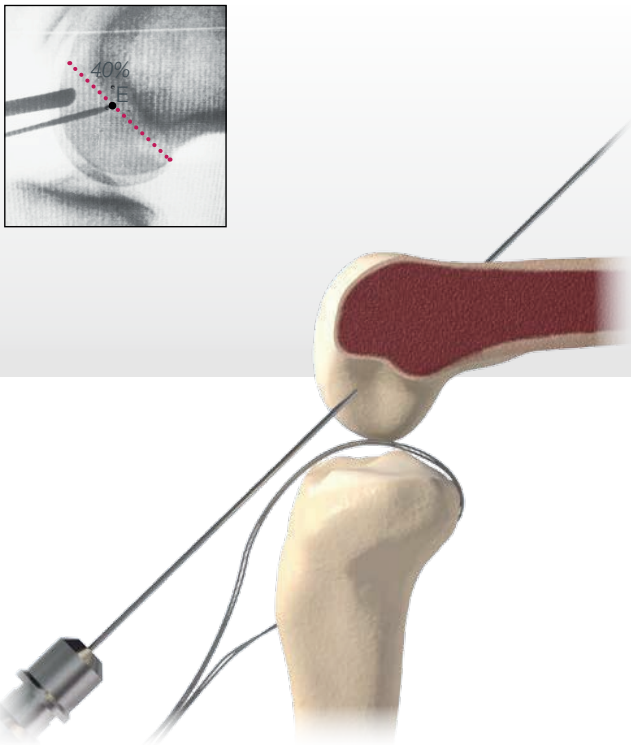
Repeat the process with the 6mm cannulated drill making sure it has contact with the spatula at the back of the knee. The drill should be moved back and forth to remove any bony debris.

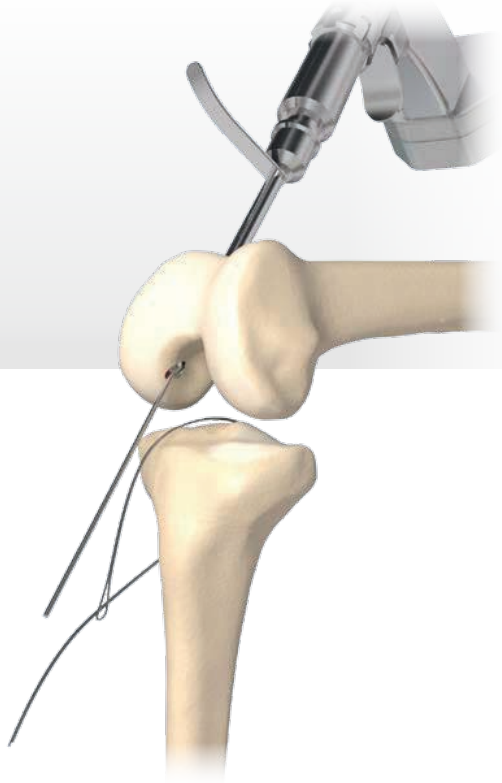
Step 4. Tibial wire loop insertion

The cannulated wire passer should be introduced into the drill guide with the flag pointing down, as shown, to ensure the distal end of the wire passer is aligned correctly with the tibial jig spatula. A wire loop should then be passed into the cannulated wire passer, into the spatula at the back of the knee, and exiting out of the top of the jig. This can be confirmed on the image intensifier.

Note: If it is difficult to insert the wire loop, artery forceps may be placed on the wire loop 1cm from the flag, and steady pressure applied to advance the wire loop.







Step 5. Tibial jig disassembly

The jig should be dismantled carefully, securing the tibial wire end to prevent it from moving. Clip the wire loop that exits from the medial portal to the other end to prevent impediment within the notch as the femoral tunnel is drilled.

Step 6. Femoral tunnel positioning

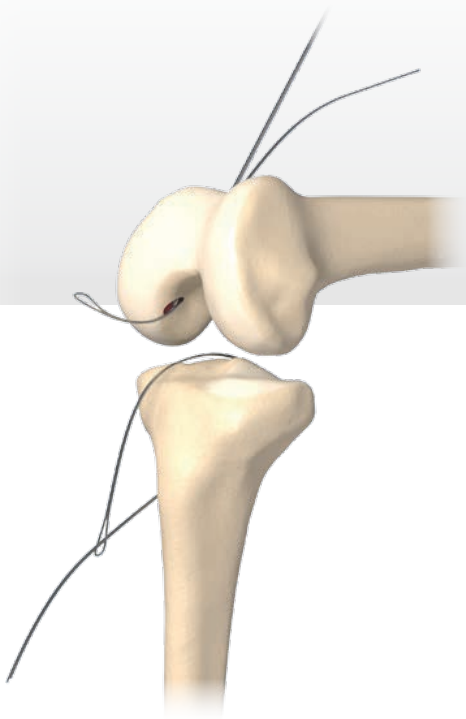
As directed on page 5 a single bundle reconstruction should be centred at point E.

A sharp K-wire is inserted at the correct isometric point E using an image intensifier. This may be done using an outside-in (please see appendix B), or an inside-out technique by introducing the K-wire directly through a lateral portal towards point E.

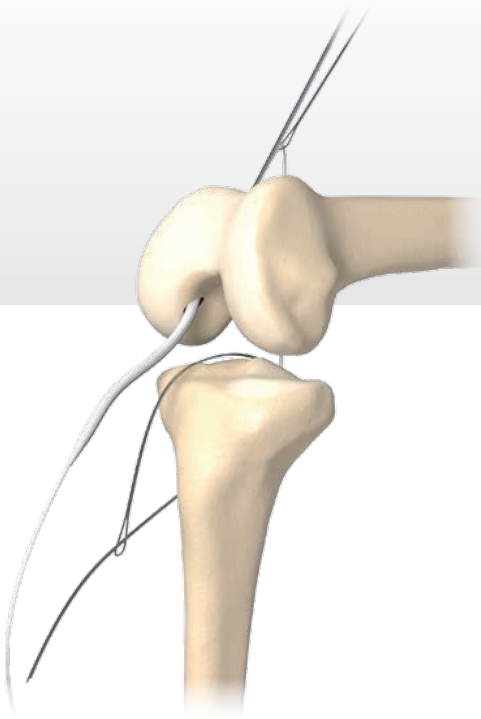
Step 7. Femoral drilling

The blunt 6mm cannulated drill should be driven over the K-wire to create the femoral tunnel. The K-wire can be kept in place to allow an easier passage of the telescopic tube into the femoral tunnel.

Note: In acute cases, it is recommended the femoral tunnel is drilled from outside-in to avoid further damage to the PCL remnants.



The curved wire loop should then be fed from outside-in through the telescopic tube through the medial portal. The blunt K-wire can also passed through the tube at this stage to aid in ligament fixation.

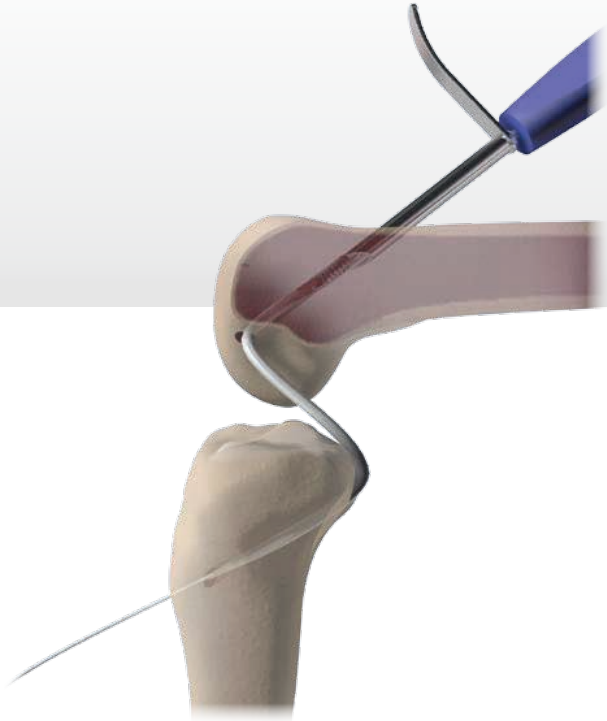


Step 8. Passage of the ligament

Using the femoral wire loop, the ligament (PC80) can be pulled through the femoral tunnel. Adjustments should be made to ensure 1mm of woven fabric is visible exiting the femoral tunnel.

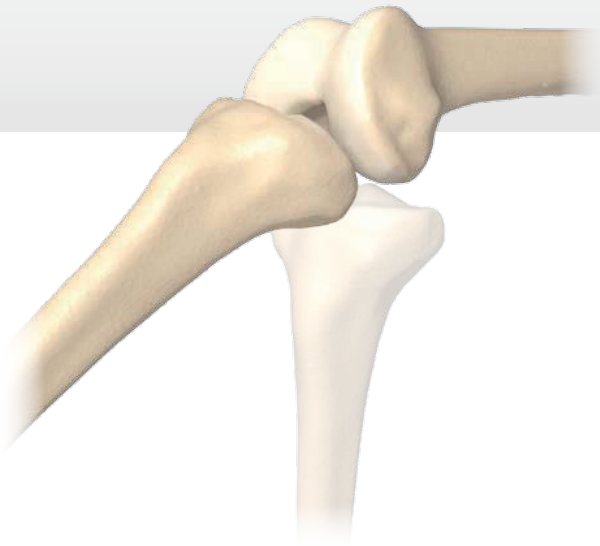
The ligament can be pulled through the tibial tunnel using the tibial wire loop so that it exits anteriorly.

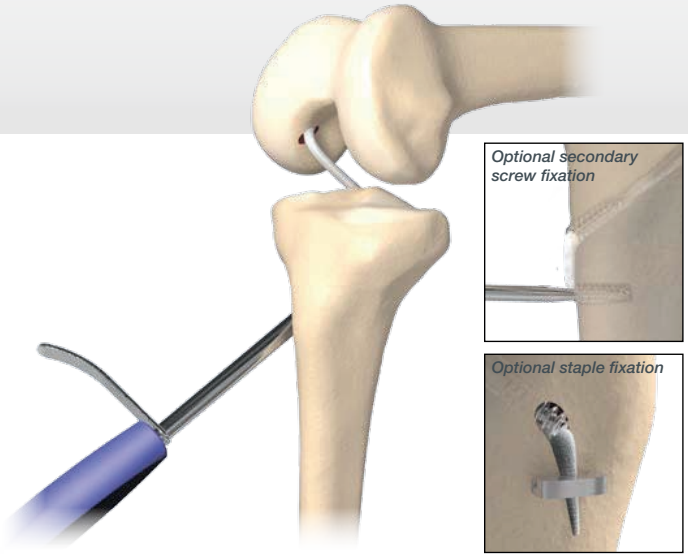
Note: Care must be taken to ensure that the blunt K-wire is not pushed out of the femoral tunnel whilst pulling through the ligament.

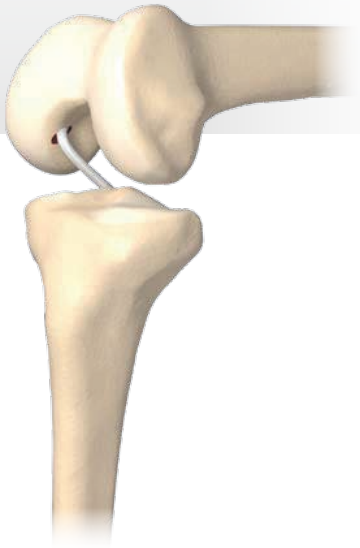


Step 9. Femoral screw fixation

The telescopic tubes should be applied over the blunt K-wire, in ascending diameter size ending with the largest handled telescopic tube. The smaller inner telescopic tubes should then be removed to allow the correct screw to be introduced over the K-Wire *in situ*, at least 1-2mm bigger than the tunnel used. Once the screwdriver handle sits flush with the edge of the telescopic tube the screw is fully implanted into the cortex.







Step 10. Tibial screw fixation

The posterior sag should be corrected and full range of motion checked, making sure the ACL is functional. If the ACL is deficient, its position should be checked using an image intensifier and repaired if necessary.

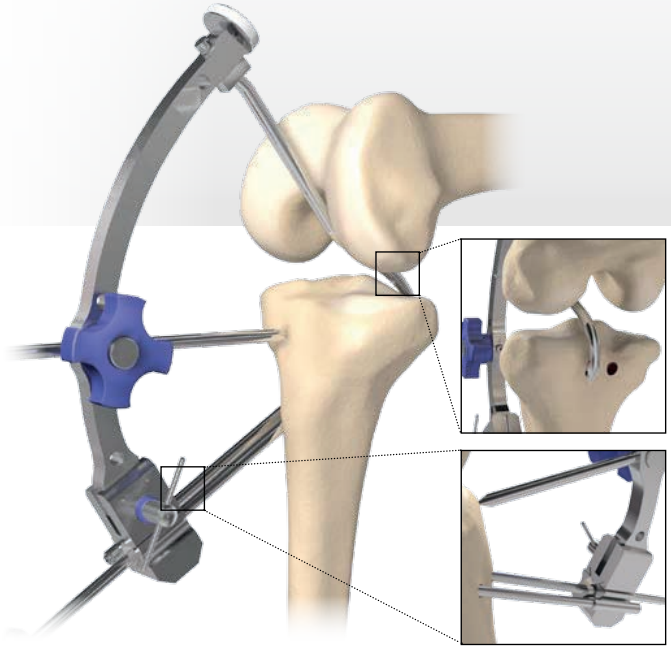
Once range of motion is confirmed, a tibial screw should be inserted and the ligament cut flush to the bone completing the procedure. Secondary fixation is recommended for the tibia, particularly in instances of poor bone quality. For secondary fixation a blind tunnel may be drilled below the tibial tunnel exit, the ligament should be cut to the correct length and inserted into the tunnel fixing with an appropriate screw. Alternatively a staple can also be used as a secondary fixation.

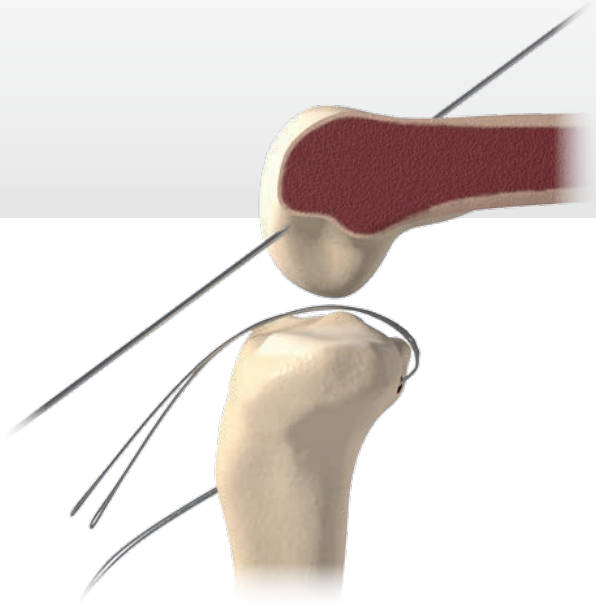
Inspect the completed reconstruction/reinforcement through the arthroscope. Check for any impingement, undue strain on the ligament and correct if necessary.

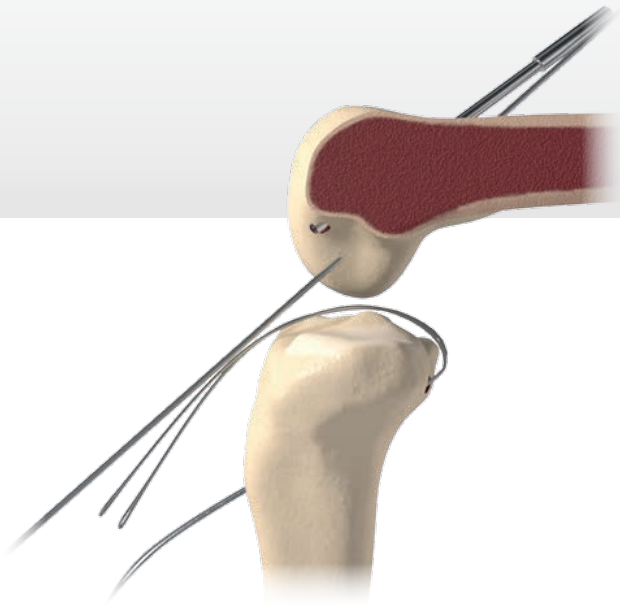
Close the skin wounds in your usual manner and apply dressing. There is no need for post-op bracing. Obtain post-op X-rays to confirm the placement of interference screws.

Telos stress X-rays may be used to assess the outcome of surgery.

Appendix A: Double-bundle technique







Step A1. Postero-medial tibial tunnel

Follow previous steps for tibial jig placement as per Step 1 and drilling of the postero-medial tibial tunnel. It is recommended that this tunnel be drilled first. The tunnel is protected with a metal cannula during drilling of the second tunnel.

Step A2. Antero-lateral tibial tunnel

The tibial jig is reassembled with the first tunnel's protective cannula in the groove on the medial side of the drill guide. The spatula should always be medial to the ACL and lateral to the midline and the jig fixed in that position.

To drill the lateral tunnel repeat the steps as before, first with the sharp 6mm drill and then with the cannulated drill to remove bone debris. Pass the wire loop through the jig and then clip both wires to the side.

Step A3. Femoral tunnel positioning

A double bundle reconstruction should be made corresponding to Ogata's points D and C.

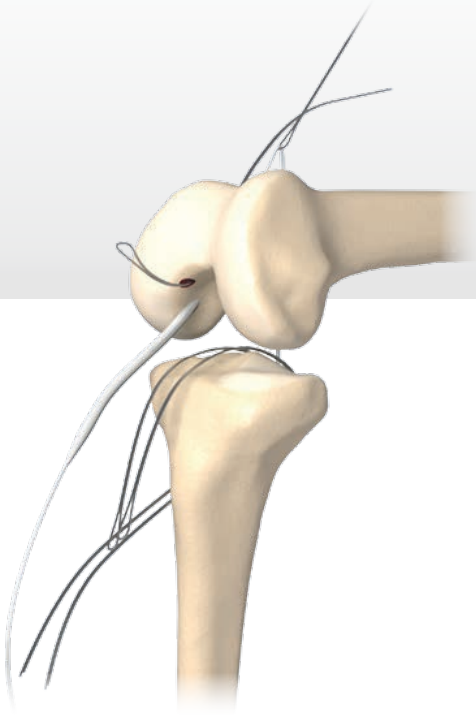
The orientation of these tunnels should be made carefully to avoid any sharp angles for the implant and to prevent osteonecrosis or collapse of the condyle.

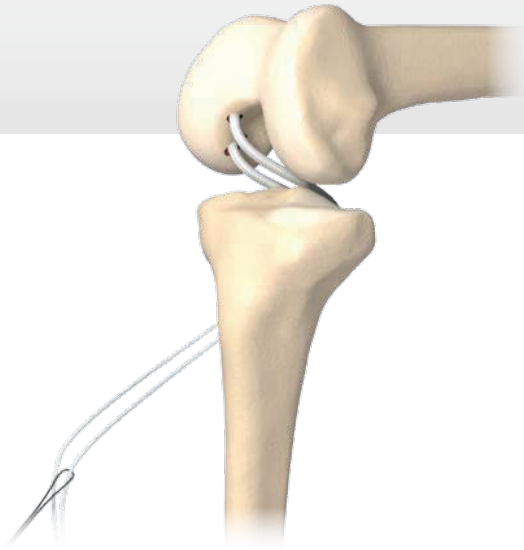
The anterior tunnel is drilled anterior, proximal and medial to exit at the junction of the medial and anterior aspect of the femoral metaphysis.

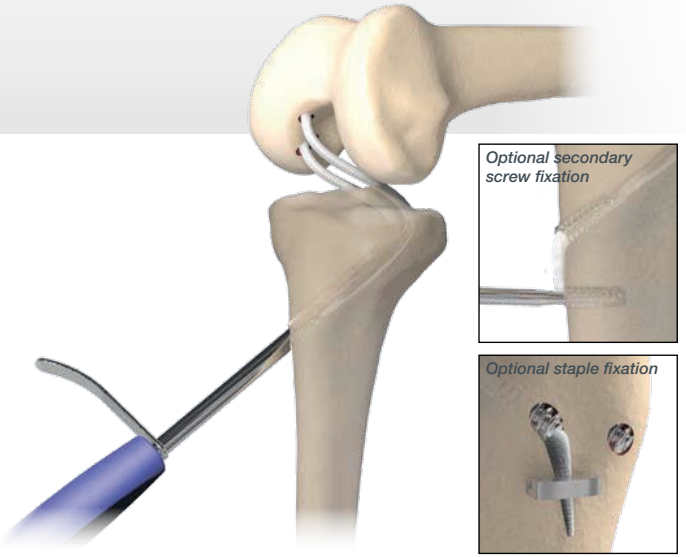
The posterior tunnel will exit more distally and medial just in the middle of the medial aspect.

The less transverse and closer to the axis of the femur the tunnels are, the lower the risk of stress to the implant in flexion and torsion.

Drill the first femoral tunnel as per Step 7. To protect the first femoral tunnel, place a blunt guide wire and metal tube in place. Drill the second femoral tunnel.







Step A4. Wire loop insertion

A wire loop should be passed through both femoral tunnels, these can be pulled through the medial portal.

The ligament should be pulled through from the femoral wire loops first; each ligament should have 1mm of woven fabric exiting out of the femoral tunnel. Perform femoral fixation of both tunnels with a screw, at least 1mm bigger than the tunnels drilled.

Step A5. Ligament fixation

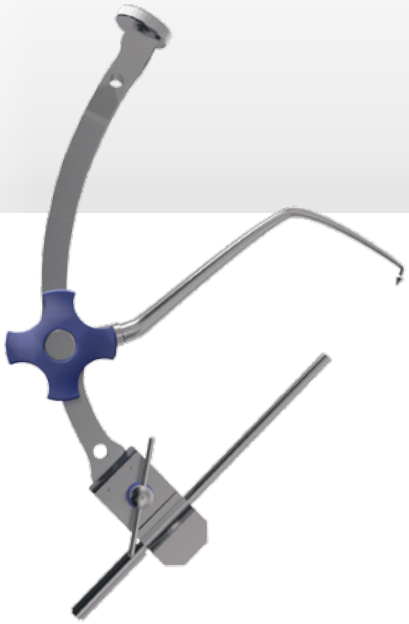
Using the wire loops, the tibial bundles should be pulled through the tibial tunnels. Adjustments can be made to the ligament so that posterior displacement is corrected and the ACL is functional. The tibial ends of the ligament can be held static to check that there is a full range of movement and that the posterior sag is corrected.

The antero-lateral bundle should be tightened in flexion and the postero-medial bundle in extension. Insert tibial screws.

Note: Secondary fixation for the tibia is recommended, particularly for patients with poor bone quality. In this instance a staple or additional screw can be used as described in Step 10.

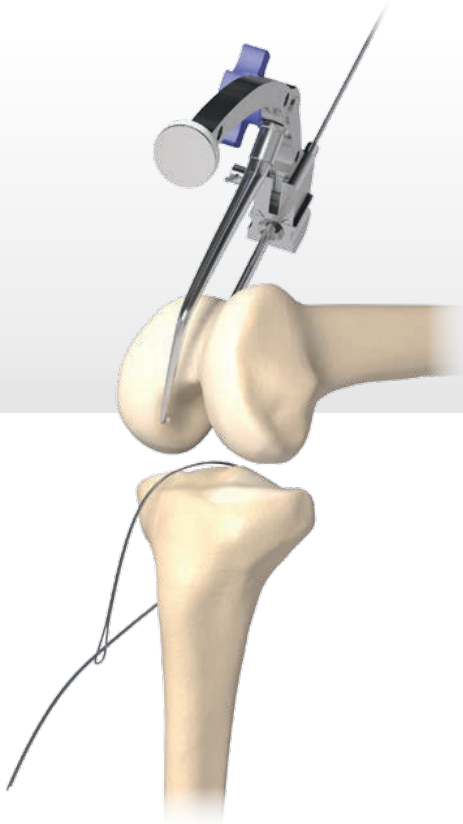
LARS™ PCL

Appendix B: Outside-In femoral tunnel positioning technique



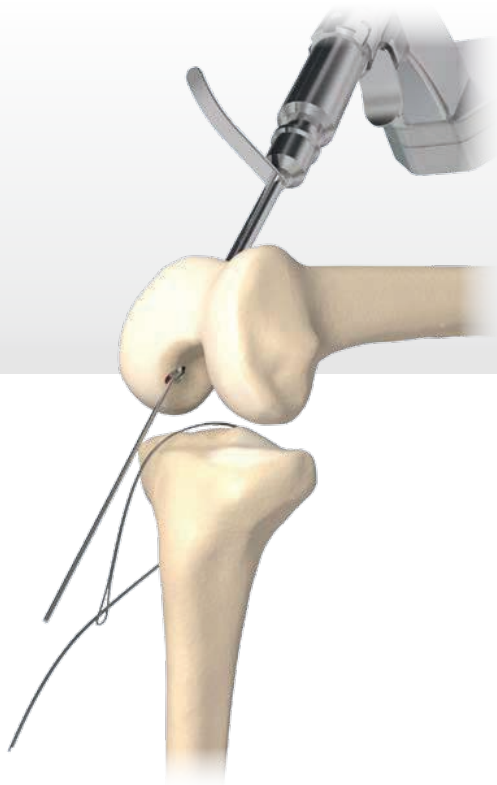
Step B1. Jig assembly

To use an outside-in technique for insertion of the K-wire a femoral pointer can be assembled onto the tibial jig as shown.



Step B1. Femoral tunnel positioning

The appropriately sized drill guide should be used and the correctly sized K-wire passer introduced into the drill guide to insert the K-wire into the femur. The femoral pointer should be inserted into the joint and held at the point at which the femoral tunnel is to be drilled, corresponding to point E for a single bundle and points C and D for a double bundle reconstruction. The K-wire should subsequently be driven through until it touches the tip of the pointer.



The K-wire passer and drill guide can then be removed and the drill bit used to create the femoral tunnel as per standard surgical procedure detailed within this surgical technique. All remaining steps of the surgical procedure remain unchanged.

Simultaneous reconstruction of PCL and ACL

Isolated PCL injuries represent about only 30% of the cases. They are more often combined with other ligament injuries, meniscal tears and cartilage damage.

The PCL reconstruction must always be performed first so as to ensure the knee has been centred correctly. Any overcorrection of the posterior tibial displacement must be carefully avoided. Before fixation of the PCL on the tibia, one must ensure that the posterior border of the femoral condyles is not in front of the posterior edge of the tibial plateau at 90° flexion.

To ensure the above is achieved, an intra-operative X-ray with the two condyles superimposed is very useful. A line is drawn down from the posterior edge of the condyle parallel to the posterior cortex of the tibia. The tension on the PCL must be adjusted so that the posterior edge of the condyle is flush with the posterior border of the tibial plateau. If the tibial plateau is in front of this line the tension on the PCL must be released.

If the ACL is deficient, its reconstruction can only be performed when the knee has been re-centred, by PCL and/or postero-lateral reconstruction.

PCL and knee replacement

A deficient PCL is sometimes noticed with unicompartmental knee arthritis. In this case it is more conservative to perform a unicompartmental knee surgery in conjunction with a PCL reconstruction instead of a posterior stabilised total knee replacement.

Moreover, in chronic situations severe damage to the patellofemoral joint can be seen with a deficient PCL and lack of arthritis in the remaining compartments. In these cases as well a PCL reconstruction with an isolated PFJ replacement can be conducted.

Postero-lateral laxities

These occur quite frequently in conjunction with a PCL or ACL injury. Postero-lateral laxities must be diagnosed and treated simultaneously. If reconstructing the popliteus tendon, only a PC60 or PC80 can be used for an anatomic reinforcement. If the lateral collateral ligament is also injured, a LARS ‘Y’ ligament can be used to reconstruct the postero-lateral corner complex. Please refer to the LARS postero-lateral corner surgical technique for detailed information on this indication.

LARS™ PCL

Notes

LARS™ PCL

Notes

References:

1. Machotka et al., 2010: Anterior cruciate ligament repair with LARS (ligament advanced reinforcement system): a systematic review. Sports Med Arthrosc Rehabil Ther Technol
2. Shen et al, 2010. Arthroscopic posterior cruciate ligament reconstruction using LARS artificial ligament: A retrospective study. Journal of Surgical Research
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6. Shao-bin et al., 2008. Histological characteristics and ultrastructure of polyethylene reconstruction of anterior cruciate ligament in rabbits. Journal of ZGLCKF, e-journals
7. Trieb et al., 2004. In vivo and in vitro cellular in-growth into a new generation of artificial ligaments. European surgical research
8. Guidoin et al., 2000. Analysis of retieved polymer fibre based replacements for ACL. Biomaterials.

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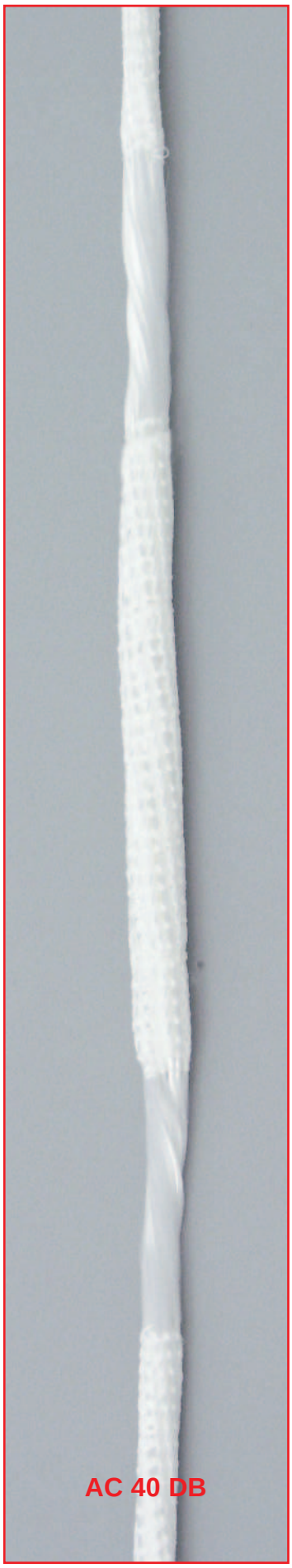
ANTERIOR CRUCIATE RECONSTRUCTION with LARS LIGAMENT AC 40 DB, AC 50 DB and AC 60 DB

For transversal fixation or suspension

In addition to technical device in this brochure, LARS recommands carefully reading the labels and using instructions accompanying the medical devices.

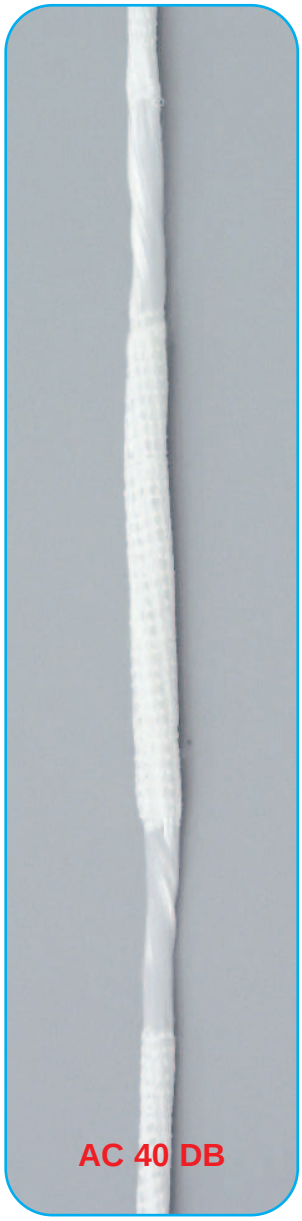


Alternately to the interference canulated screw, these last years, several fixing system have been developped.

LARS Company created a synthetic ligament for these various systems.

This ligament can be used with :

- Transfix ARTHREX
- Endo Button SMITH & NEPHEW
- Cross Screw STRYKER
- Bone Mulch BIOMET



The ligament

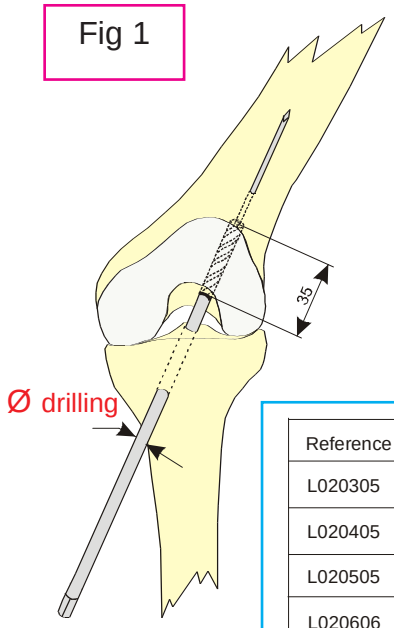
Reference :
L020405 - AC 40 DB
L020505 - AC 50 DB
L020606 - AC 60 DB

is composed by :

- two weaved extremity of 40, 50 or 60 fibres,
- two 30 mm parts of free fibres corresponding to the intra articular part, each composed by 40, 50 or 60 fibres,
- a central 70 mm part of twisted fibres reversed on theirselves to reach 80, 100 or 120 fibres for to get maximal resistence at the folding point.

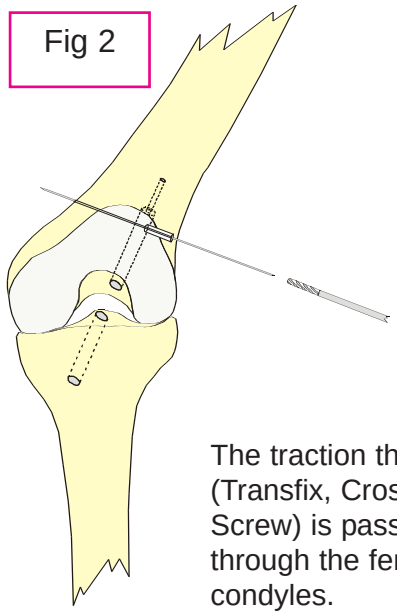
Surgical technique

Fig 1



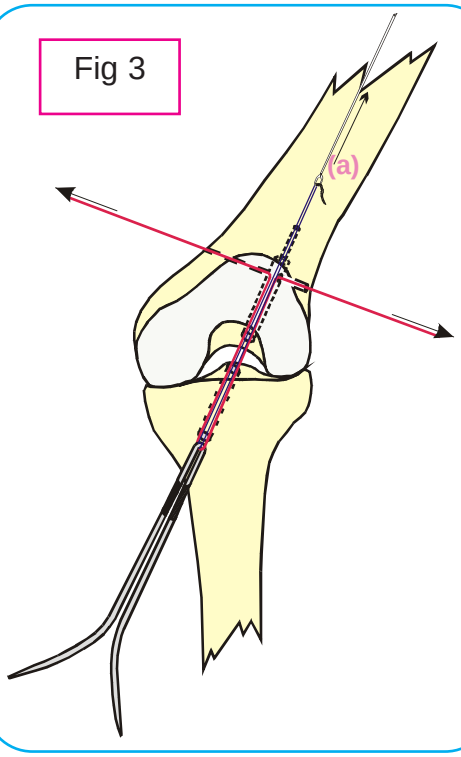
Reference	Description	Ø Drilling
L020305	AC 30 BD	6.00
L020405	AC 40 DB	7.00
L020505	AC 50 DB	7.00 à 7.50
L020606	AC 60 DB	7.50 à 8.00

Fig 2



The traction thread (Transfix, Cross Screw) is passed through the femoral condyles.

Fig 3

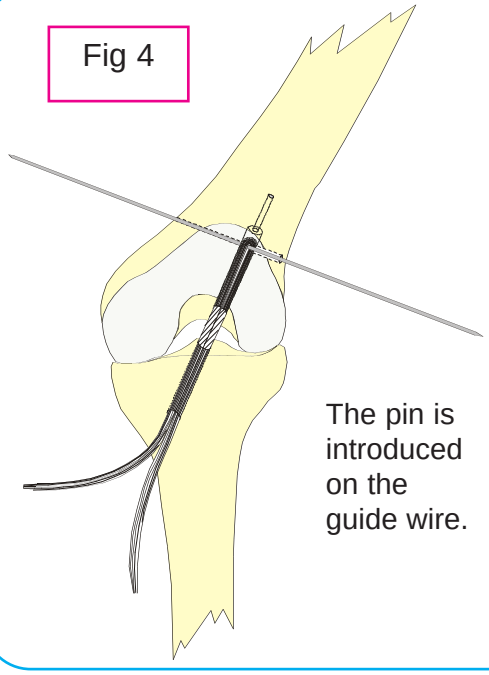


The ligament is passed across the metallic wire with the help of a strong traction on the thread **(a)**.

It is drawed in the axis of the tibial and the femoral tunnels.

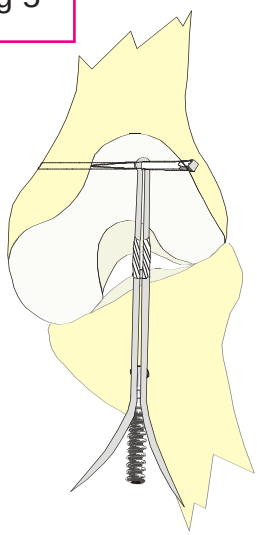
Before to draw, it is necessary to control carefully that the two bundles of free fibres are at the same level.

Fig 4



The pin is introduced on the guide wire.

Fig 5



After controled the resistance to traction and of the isometry, an interference **LARS** screw * Ø 7 / 8 / 9 / 10 x 30 mm, according to the bone density, fixes the tibial part.

The screw must be inserted in the middle of the two bundles in way to have press fit to the bone wall of the tunnel.

In case of poor bone density, the fixation must be completed with a staple.

(* Reference F110730 / F110830 / F110930 / F111030)

Post-operative care

- Passive motion with or without C.P.M.
- Isometric contraction of the quadriceps since the first day.
- At the 3rd week, all the range of flexion-extension has generally been reached.
- Weight-bearing with or without crutches as early as possible according to the patient's tollerance (1st or 3rd day).
- Isometric work of quadriceps. The active dynamic contractions against resistance begins generally on the 3rd week.
- After 21 days, the rehabilitation of proprioception and the muscular streeching are carried on for 2 months or until the total recover of full range of motion with deficit under 20 %.
- The progressive return to the athletic preparation begins from the 1st and 3rd month, depending the progresses of the patient.

A Company certified in accordance with the requirement of international standards.

NF EN ISO 13485

LARS ligaments (class IIb) and LARS ancillaries materials (class I - class IIa)
are medical devices comply with the requirement of
directive 93/42/EEC.

Certifications obtained in 1997

LARS TECH-EN-02D-0103-0813

GTWGCHIR_2021_02_Annexe 3

Van: Peter Verdonk <pverdonk@yahoo.com>
Verzonden: 17 februari 2021 9:03
Aan: Alain Van Hende (RIZIV-INAMI) <Alain.VanHende@riziv-inami.fgov.be>
Onderwerp: Re: kunstligamenten knie

beste alain

in bijlage de richtlijnen ivm arthroscopische partiele meniscectomie. zoals u kan zien grote aandacht voor CONSERVATIEVE AANPAK gedurende minstens een 3 maand

tevens mijn visie en bredere kijk op gebruik van kunstligamenten reeds gecommuniceerd naar chris monten

betreffende indicatie voor kunststofligamenten in ligamentaire knie letsels...een bredere kijk

er zijn verschillende ligamenten in de knie, ACL, PCL, MCL, LCL, ALL, arcuate ligament, POL,...

kunstligamenten hebben enkel een indicatie in situaties waarbij er wordt voldaan aan de volgende voorwaarden
1. een ligamentair letsel is thv knie
EN
2. er is geen geschikte autologe of allogene greffe beschikbaar

deze 2 bovenstaande voorwaarden bedekken correct zowel a. multiligamentaire letsels (2 of meer ligamenten) als b. revisie van ligamentaire letsels (reeds 1 keer een autoloog greffe gebruikt EN bv geen geschikt allogene greffe beschikbaar)

vandaag zijn er 2 nomenclatuur nrs gangbaar

277351 N 400 277362 plastiek van de kruisbanden van de knie door arthroscopie met eventuele selectieve arthrotomieën
294114 N 500 294125 plastiek van verscheidene knieligamenten met tendineus, cutaan of aponeurotsch materiaal
in 2014 werd 294092 N 400 294103 plastiek van het of de gekruiste knieligamenten met tendineus, cutaan of aponeurotisch materiaal reeds geschrapt

probleem
a. 277351 N400 277362 is tevens gelinked aan een forfait betreffende beperkt aantal implantaten, die onmogelijk de kostprijs van een kunstligamenten kan dekken

-->ofwel een aanpassing van forfait dient te gebeuren ofwel 2. nieuwe nomenclatuur nummer bij gebruik van kunststofligament

b. 294114 N500 294125 omvat beschrijving van tendineus, cutaan en aponeurotisch materiaal

-->Hier dient kunststofligament dus duidelijk te worden TOEGEVOEGD ofwel dient er een nieuw nomenclatuur nummer te worden voordien bij gebruik kunststofligament

c. nomenclatuur voor complexere revisie kruisband chirurgie is onbestaande. dit blijft een langbestaande frustratie in expert centers met een grotere load van revisie chirurgie ongeacht het gebruik van kunststof ligamenten. Indien de nomenclatuur wordt aangepast richting kunststofligamenten, dan denk ik dat er ook een aanpassing kan gebeuren voor revisie ligamentaire chirurgie....

aarzel niet om de belgian knee society verder te betrekken bij dergelijke projecten

+32486213595 is mijn rechtstreeks nr

beste groet

peter

Prof. Dr. Peter Verdonk, MD, PhD
Knee Surgery & Sports Traumatology
President Belgian Knee Society 2019-2021
ISAKOS Board of Directors Member-at-large 2019-2023
www.verdonk.be

upcoming meetings:
The Meniscus Meeting January 12-15 2022, Luxemburg. www.the-meniscus.org
BVOT goes digital. The Sport Joint, from injury to recovery. New date coming soon
ESSKA Milano. May 11-14 2021
ISAKOS Cape Town Nov 27- Dec 1 2021

VOOR URGENTIES pverdonk@yahoo.com. Download de ORTHOCA app en maak account aan

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www.orthoca.be and www.knee.be

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Projects
European Consortium Mefisto Project WP1 leader: Solving the problem of meniscectomy https://www.mefisto-project.eu and video