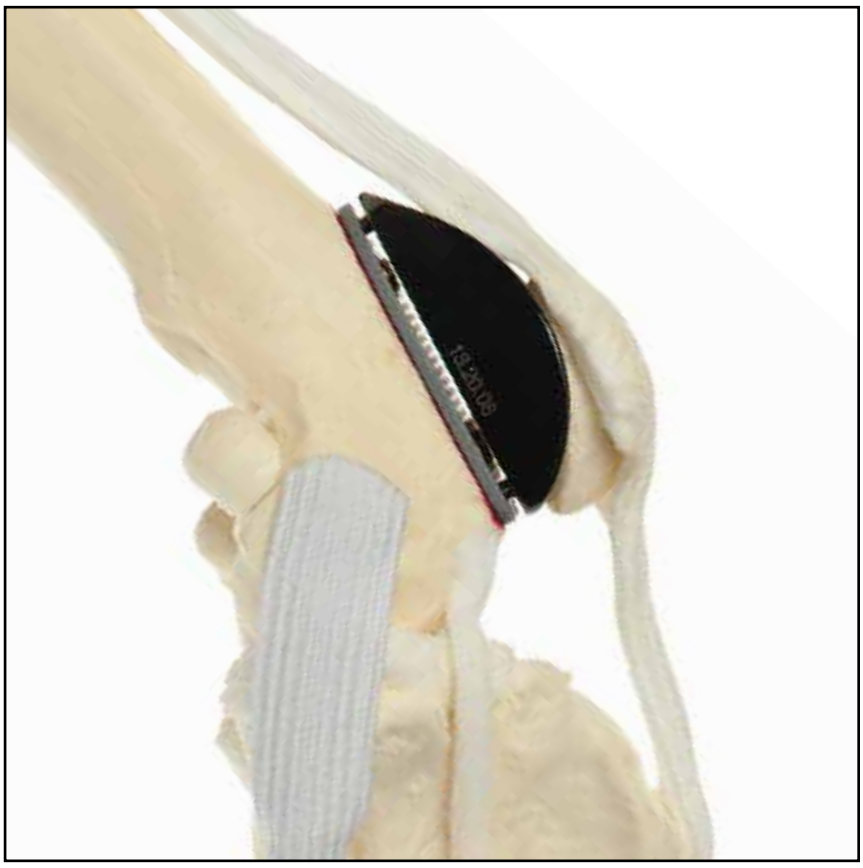
KYON
VETERINARY SURGICAL PRODUCTS

PGR
PATELLAR GROOVE REPLACEMENT



SURGICAL TECHNIQUE

Volume 1.7 - April 2016

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Special Thanks: Dragan Lorinson, DVM, Dipl. ECVS - Chirurgisches Zentrum für Kleintiere, Vienna, Austria
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PGR SURGICAL TECHNIQUE

Volume 1.7 - April 2016

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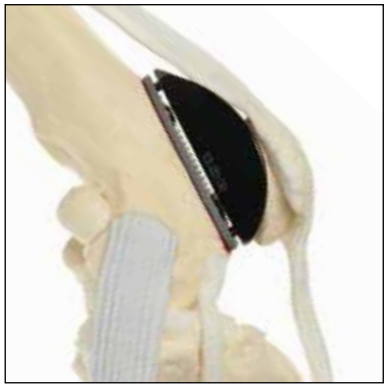


CLINICAL DEVELOPMENT

Patello-femoral degenerative joint disease is a frequent, often ignored consequence of some of the most common conditions of the canine stifle such as patellar luxation, or cruciate ligament degeneration and rupture. Surgical treatments of patellar luxation, whether by tibial tuberosity transposition or by corrective osteotomies of the femur and/or tibia, combined with patellar groove deepening by one of several methods, seek restoration of joint stability.

Progression of arthrosis to a chronically painful joint must be expected, but that seems to be an accepted, generally ignored consequence of these surgical interventions. Replacement of the severely effected and/or worn-out patellar groove by a prosthesis presents an option worthy of serious consideration. In an effort to address this need, Slobodan Tepic, Dr. Sci., CTO, KYON AG proposed a novel prosthesis, the KYON Patellar Groove Replacement (PGR)*.

The PGR should provide a low friction, scratch resistant surface that could indefinitely tolerate the contact pressures and gliding friction generated by the bare bone of the patella. The KYON Patellar Groove Replacement (PGR) is thus comprised of two components (patent pending):

(i) an upper anatomically shaped groove component produced from Titanium alloy (TiAl6V4), highly polished and treated with Amorphous Diamond-Like Coating (ADLC). ADLC shows exceptionally low friction against many solid surfaces, offering the possibility of maintaining heat generation below the threshold of thermal necrosis. ADLC is also very hard and scratch resistant when applied to a suitable substrate. It is chemically inert and thus biocompatible.

(ii) a perforated base plate produced from c.p. titanium, coated by glow discharge anodisation with addition of calcium phosphate to promote bony integration.

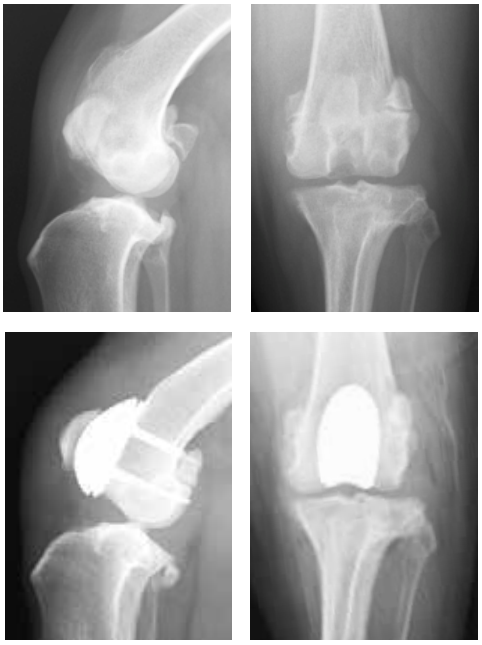
Ostectomy of the patellar groove just cranially to the insertion of the tendon of the long digital extensor creates a broad, well perfused cancellous bone bed onto which the base plate is secured by titanium bone screws. The groove component is then attached to the base plate by means of 3 conical pegs fitted into receiving conical holes. The broad area of the ostectomy of the patellar groove allows for considerable freedom in medial-lateral positioning of the base plate that can be used to improve quadriceps-to-patellar tendon alignment, thus avoiding conventional tibial tuberosity transposition. Use of trial implants during surgery aids the search for an optimal position of the final implant.

Functional loading of the implant leads to compression of its interface to the bone, which is mechanically favourable to the ill-conditioned load transfer called for by conventional tuberosity transposition, where the full force of the patellar tendon is transferred to the tibia by pins and a figure eight wire.

Significant angular deformities can be treated by concurrent corrective osteotomies in addition to patellar groove replacement, should the condition of the patello-femoral joint call for it. The same is true for cruciate ligament ruptures that can be concurrently treated by, for example, Tibial Tuberosity Advancement (TTA).

Clinical application of the Kyon PGR was initiated in 2009 through a controlled clinical release with 15 surgeons (from USA, Europe and Japan) participating in this phase. By mid 2012, 35 surgeons had performed ~100 procedures. Surgical planning with templates and execution of the procedure are deemed simple and the risks as acceptable.

Post-surgical recovery is rapid and, at this time, no signs of implant loosening have been observed. The procedure presents relatively low morbidity and is meeting the expectations of the early adopters in terms of clinical improvement.



Images courtesy of Aldo Vezzoni, DVM, Dipl. ECVS
Clinica Veterianaria Vezzoni, Cremona, Italy

*Patent Pending

IMPLANTS & INSTRUMENTS

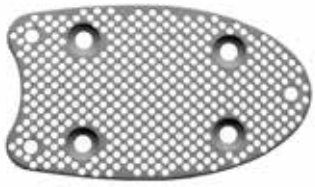
Patellar Groove Replacement implants and instruments were invented and developed by KYON, with optimal selection of materials and manufacturing techniques for precision, durability, and maintenance. KYON products are manufactured in Switzerland with proprietary processes that produce superior products to those made by conventional manufacturing.

PGR SETS; *c.p. titanium, titanium alloy, ADLC, Biocer®*

13.10.01	size 1 set	13.10.06	size 6 set
13.10.02	size 2 set	13.10.07	size 7 set
13.10.03	size 3 set	13.10.08	size 8 set
13.10.04	size 4 set	13.10.09	size 9 set
13.10.05	size 5 set	13.10.10	size 10 set

GROOVE TECHNICAL FEATURES & BIOLOGICAL BENEFITS

c.p. titanium, grade 4	• supreme biocompatibility
Amorphous Diamond-Like Coating (ADLC)	• corrosion resistant, biocompatible, inert, hard, smooth, scratch resistant surface reduces friction and wear
wide range of sizes	• accommodates wide case selection and greater intra-operative flexibility



BASEPLATE TECHNICAL FEATURES & BIOLOGICAL BENEFITS

titanium alloy	• supreme biocompatibility
Biocer® microporous coating	• facilitates rapid bone integration to reduce risk of aseptic loosening
wide range of sizes	• accommodates wide case selection and greater intraoperative flexibility

ø1.5mm CORTICAL SCREWS; *titanium alloy, self-tapping, RU-6 recess*

- for use with ALPS 5/6.5 & PGR size 1 - 4

05.16.06	6mm	05.16.12	12mm	05.16.20	20mm
05.16.07	7mm	05.16.14	14mm	05.16.22	22mm
05.16.08	8mm	05.16.16	16mm	05.16.24	24mm
05.16.10	10mm	05.16.18	18mm	05.16.26	26mm

ø2.4mm CORTICAL SCREWS; *titanium alloy, self-tapping, RU-10 recess*

- for use with ALPS 8 & 9 & PGR size 5 - 10

05.26.10	10mm	05.26.18	18mm	05.26.26	26mm
05.26.12	12mm	05.26.20	20mm	05.26.28	28mm
05.26.14	14mm	05.26.22	22mm	05.26.30	30mm
05.26.16	16mm	05.26.24	24mm	05.26.32	32mm

CORTICAL SCREW TECHNICAL FEATURES & BIOLOGICAL BENEFITS

titanium alloy	• supreme biocompatibility
pickled & anodized	• thorough cleaning for biocompatability creates inert titanium oxide surface
self-tapping	• faster insertion and improved grip
RU 10/6 head	• compatible with Torx

PATELLAR GROOVE REPLACEMENT INSTRUMENTS

06.10.01	ø1.1mm drill bit; quick coupling, 60/35mm (for 1.5mm screw)
06.10.03	ø1.8mm drill bit; quick coupling, 125/100mm (for 2.4mm screw)
06.50.01	depth gauge; f/ screws 1.5 to 2.0mm, measuring depth up to 38mm
14.20.01	ø1.1mm/ø1.8mm drill sleeve
14.60.01	screwdriver handle; quick coupling, PEEK
06.60.04	RU 6 screwdriver insert; compatible with Torx 6
06.60.05	RU 10 screwdriver insert; compatible with Torx 10
06.60.06	screw forceps
14.10.01	trial prosthesis, size 1
14.10.02	trial prosthesis, size 2
14.10.03	trial prosthesis, size 3
14.10.04	trial prosthesis, size 4
14.10.05	trial prosthesis, size 5
14.10.06	trial prosthesis, size 6
14.10.07	trial prosthesis, size 7
14.10.08	trial prosthesis, size 8
14.10.09	trial prosthesis, size 9
14.10.10	trial prosthesis, size 10
14.90.01	patellar groove instrument & trial implants tray
80.00.03	sterile container lid, gold; aluminum, w/o permanent filter
80.01.01	sterile container body; aluminum, 30mm high (fits 1 tray)
80.02.01	permanent filter for 80.00.--
80.02.02	silicone pad insert for 80.01.--
80.02.03	sterile container locks, blue; (100pcs)

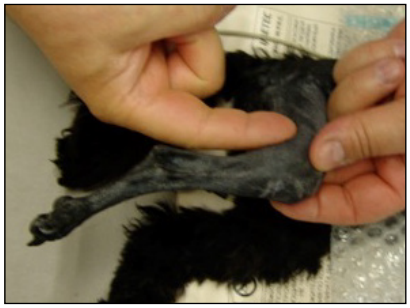
ADDITIONAL INSTRUMENTS

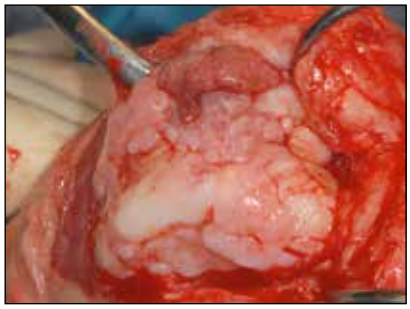
- surgical drill
- precision oscillating saw
- selection of saw blades
- periosteal elevator
- Gelpi retractors
- Mini Hohmann retractor
- selection of flat rasps

PGR TRAINING

PGR is a technically demanding procedure. We strongly recommend instructional training. KYON sponsors instructional courses to facilitate the introduction of the PGR into clinical practice. KYON PGR training and educational opportunities can be found on our website @ www.kyon.ch.

INDICATIONS





Images courtesy of Aldo Vezzoni, DVM, Dipl. ECVS - Clinica Veterinaria Vezzoni, Cremona, Italy

- Dogs >6 months old
- Severe femoro-patellar DJD
- Severe loss of joint cartilage on the trochlea
- Severe trochlear malformation
- Unresponsive to conventional surgery with recurrence of luxation.
- Unresponsive to conservative management
- Patella Alta
- Grade 2 - 4 MPL or LPL
  - Grade 2 = patella is unstable inside the groove, moving in and out spontaneously during flexion and extension
  - Grade 3 = patella rides out of its groove most of the time, but can be reset in the groove via manipulation
  - Grade 4 = patella rides out of its groove all the time, cannot be reset inside the groove, severe loss of cartilage

XR PLANNING

It is recommended that you take the following radiographs:

a. Standard lateral femoral and tibial view (standing angle)
b. Standard cranial-caudal femoral view, with the femur parallel to the table, to assess femoral valgus/varus
c. Standard caudal-cranial tibial view, including the distal femur, with the tibia parallel to the table, to assess tibial valgus/varus and torsion
d. V-D pelvic radiograph view of the hip joints
e. Axial view to assess and measure femoral torsion
f. CT with 3D reconstruction may allow all of the above evaluations and measurements

Use your digital system to scale the Xray of the mediolateral view to the PGR acetate template.

Using the standard lateral projection, find the prosthesis size/s that when placed cranial to the origin of the Long Digital Extensor, the hatched area conforms to the subchondral bone of the sulcus. The non-hatched area gives an indication of the height of the ridges on the prosthesis and thus an idea of depth of cover. In cases with patella alta, the prosthesis may be positioned more proximally (see image 1), centralizing the patella within the prosthetic sulcus in a standing angle radiograph or at least be sufficiently engaged proximally.

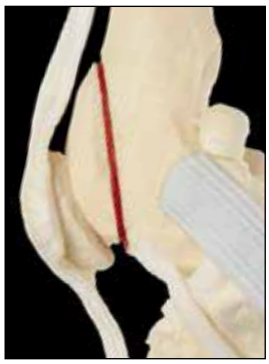
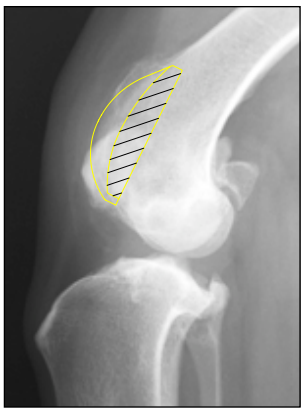
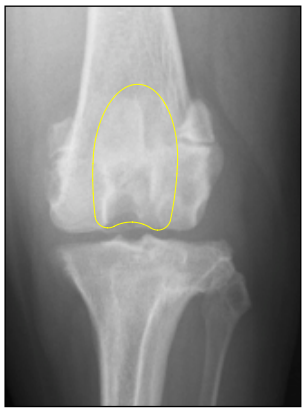


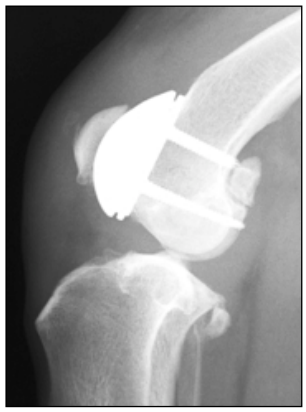
Image courtesy of Andy Torrington, DVM - Torrington Orthopaedics, Brighouse, UK

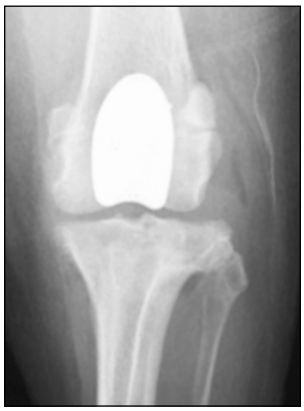
On the caudocranial projection do not equate the prosthesis size with the distal femur width. The prosthesis will be narrower than the subchondral bed in which it sits. Thus, the prosthesis can be repositioned in the mediolateral plane to match the patellar positioning.

It is common to enter the operating room with two possible sizes. Check the possible sizes intra-op using the trial prostheses included in the instrument kit, also matching the trial groove with the patella itself. There is a tendency to oversize the prosthesis in your initial case/s and, while this has not presented a post operative problem, it is best avoided.









Images courtesy of Aldo Vezzoni, DVM, Dipl. ECVS - Clinica Veterinaria Vezzoni, Cremona, Italy

SURGICAL TECHNIQUE

The instructions outlined in this guide are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution, and care are factors that cannot be built into any procedure. Caution and care must be supplied by the person(s) planning for the PGR procedure. PGR is a technically demanding procedure. We strongly recommend instructional training. KYON sponsors instructional courses to facilitate the introduction of the PGR technique into clinical practice. KYON PGR training and educational opportunities can be found on our website @ www.kyon.ch.

The images and text in this document are provided by KYON Veterinary Surgical Products, Michael Kowaleski, DVM, DACVS/DECVS, Andy Torrington, DVM, MRCVS - Torrington Orthopaedics, Brighouse, UK, and Aldo Vezzoni, DVM, Dipl. ECVS - Clinica Veterinaria Vezzoni, Cremona, Italy.

PREP & POSITIONING

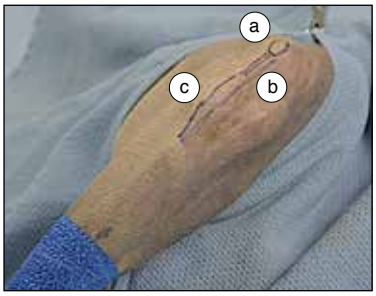
Use the methodical approach normally used for any prosthetic surgery. The patient should be prepped twice, the surgeon should double glove and an Iodine impregnated Adhesive drape used in addition to the standard use of impervious draping.

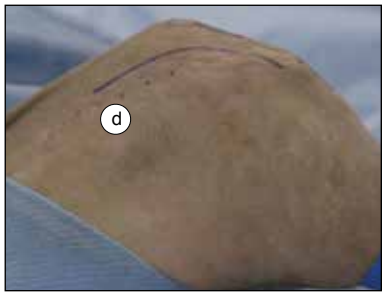
Position the patient in dorsal recumbency, with the surgical limb accessible from both sides and the stifle in a natural degree of flexion.

PERTINENT SURGICAL ANATOMY

The landmarks for a lateral parapatellar arthrotomy include:

- patella (a),
- patellar tendon (b),
- tibial crest (c), and
- the cranial edge of the biceps muscle/fascia.





SURGICAL APPROACH

In addition to the standard approach to the stifle for lateral patellar luxation, perform a standard lateral parapatellar arthrotomy for medial patellar luxation and medial parapatellar arthrotomy for lateral luxation.

The lateral incision will extend from cranial to the biceps femoris, parallel to the patellar tendon, ending at the proximal extent of the tibial crest.

The skin incision is made parallel to the patellar tendon. Then, at the level of the patella, it curves proximally to stay parallel to the cranial border of the biceps muscle.

The incision is deepened through the subcutaneous tissue until the biceps fascia is identified.

The fascia is incised and the incision is extended with Mayo scissors.

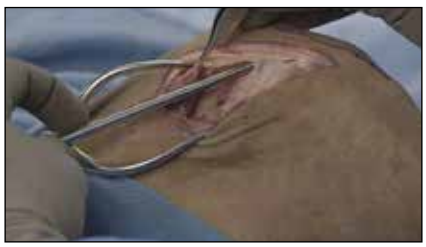
A Gelpi retractor can be used to expose the muscle planes.

The vastus lateralis is lifted from the femur and exposure is continued to the joint capsule.

The joint capsule is incised and extended with Mayo scissors.

The medial incision will have the same extension as the lateral one, up to the Sartorius muscle.

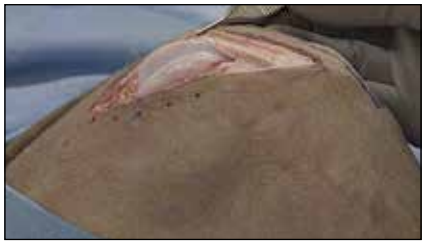
Note: This incision will extend more proximal than the standard desmotomy in order to clearly identify the most proximal aspect of the Trochlea. Ideally the dissection between muscle bellies should extend a distance equating to one third of the Trochlear length. This is particularly important in cases that are being treated because of Patella Alta as the prosthesis will be positioned more proximal than normal in these patients.



LUXATE PATELLA

The patella is luxated and exposure is maintained with a Gelpi retractor.

A Hohmann retractor can be used to retract the vastus from the field.

PLAN OSTEOTOMY

The landmarks for the osteotomy include the long digital extensor tendon (LDE) and the proximal extent of the femoral trochlea.

Establish a line with scalpel or diathermy proximal to the cartilage cranial to the origin of the LDE. The proximal extent of this line will likely fall just proximal to the trochlea itself.

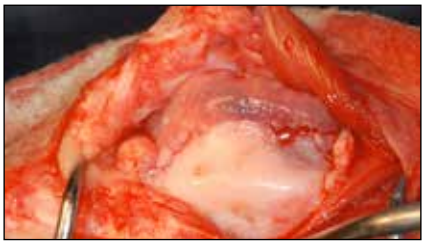
Ensure that the soft tissues are adequately retracted. A small Hohmann retractor can be used to ensure that the patella and patellar tendon are protected during the osteotomy.

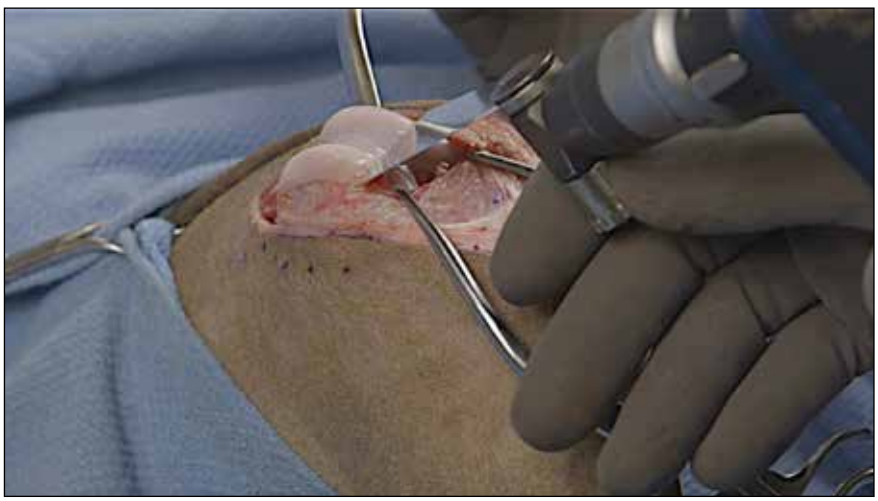
Confirm osteotomy alignment in rotation.

Note: Unless you have planned to correct femoral torsion, avoid angulation in the frontal plane.









STANDARD OSTEOTOMY
(no femoral torsion)

Distal femoral alignment is confirmed and the osteotomy is aimed for the proximal extent of the femoral trochlea in the frontal plane.

Use an oscillating saw with a new blade, not too flexible, of the suitable size. The osteotomy can be performed from lateral to medial or distal to proximal, across the trochlea. Beginning from the distomedial, sweeping distolateral, and then proximal can aid in maintaining osteotomy alignment.

Flush constantly with saline solution, to protect against necrosis.

Use full power, allowing the saw to do the work and gently mm by mm complete the cut.

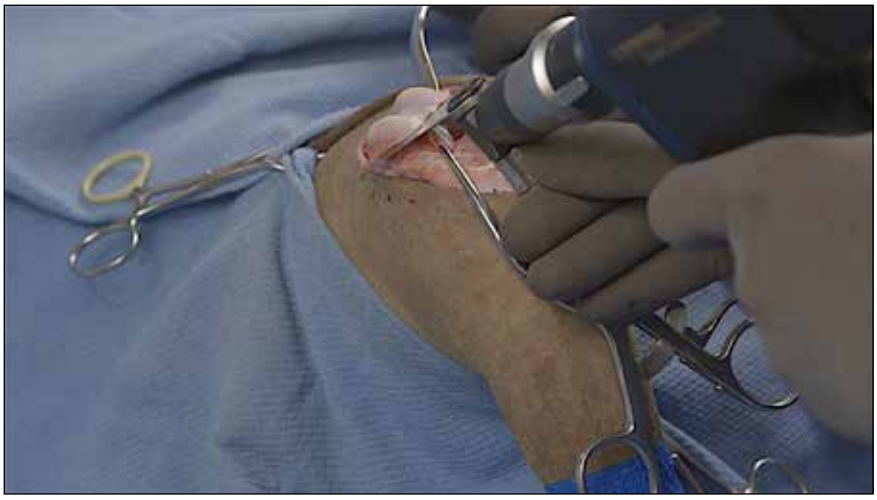
Cut step by step, checking your progress, with uniform action, until the cut is complete.

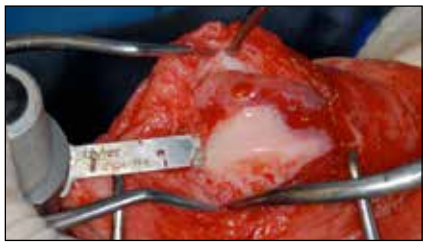
It is possible to correct femoral torsion by angling your cut so that it emerges deeper on the medial femur than its' origin on the lateral side. It is recommended to do this in stages, rechecking the effect with the trial prostheses.

If the bony bed of the osteotomy is shaped like a butterfly, this is an indication that you did not have the osteotomy oriented proximally enough, i.e. the proximal part has two humps rather than a broad curve. This can point the groove toward the floor. Taking another cut and or shaving the cut so that the groove points more cranially will improve the translation and final position of the implant.

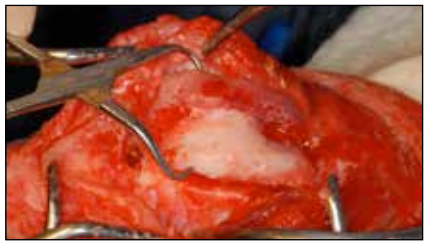
Ensure that the osteotomy surface is flat. Use a large osteotome or other flat instrument to check for steps, ridges, humps and/or divots that will warp the plate. Distortion of the plate can result in the improper coupling of the groove to the plate, resulting in groove detachment.







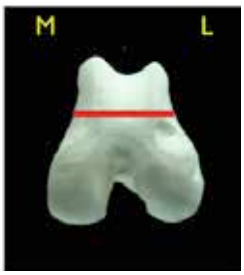




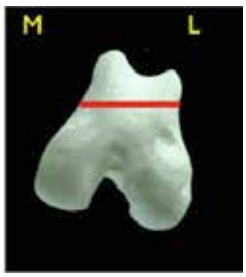
OBLIQUE OSTEOTOMY

(Femoral torsion)

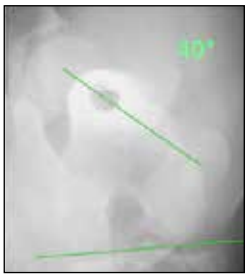
In cases of femoral torsion the osteotomy is tilted medial or lateral to correct for the torsion, keeping 25° to 35° as a normal reference for FAA (Femoral Anteversion Angle). In medial patellar luxation (MPL), the FAA of the femoral neck is reduced, and the femoral condyle has an external torsion, thus the osteotomy is tilted toward medial in the frontal plane to compensate the axial deformity. In cases of lateral patellar luxation (LPL), with increased femoral neck anteversion and internal femoral torsion, the osteotomy is tilted toward lateral. In summary the osteotomy is tilted toward the luxation side. The amount of correction could be checked measuring the inclination of the removed trochlea.



NEUTRAL



Medial Patellar Luxation (MPL)



Lateral Patellar Luxation (LPL)

TRIAL IMPLANT:

Based on the preoperative plan a trial prosthesis is selected.

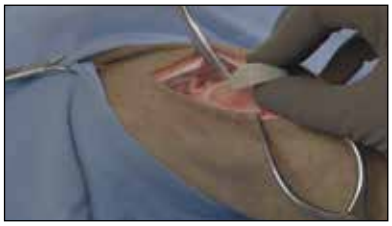
Remove the trial implant from the instrument set and place it on the subchondral bed, indented end of the prosthesis distally and the curve proximally, accommodating the patella.

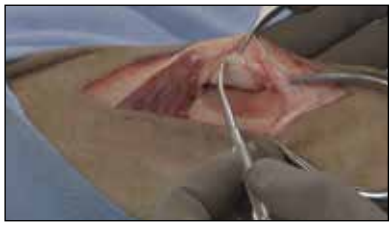
Use two small towel clamps to flip the patella over.

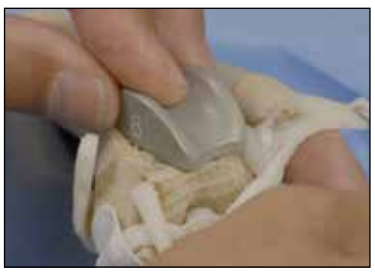
Examine the undersurface of the patella, to ensure that it will fit adequately within the prosthesis. If the patella does not seat fully, because too flat or surrounded by osteohytes, its width can be narrowed by a patelloplasty procedure. The oscillating saw or a sharp osteotome or a rongerur and a rasp are used to ostectomize the lateral and/or medial redundant edges of the patella as needed.

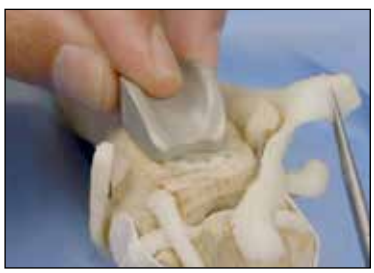
Examine the parapatellar regions for osteophytosis formations. Remove osteophytes to allow the patella to seat deeply within the prosthetic trochlea. Check the seating of the patella inside the groove of the trail prosthesis, they should match uniformly.

The implant is positioned and the Gelpi retractor is removed.









TRIAL IMPLANT (continued)

Reduce the patella and apply gentle flexion extension, allowing the trial prosthesis to find its ideal position, avoiding varus or valgus mal-alignment. Place a finger or periosteal elevator proximal to the trial prosthesis to stop it migrating proximally during the flexion/extension.

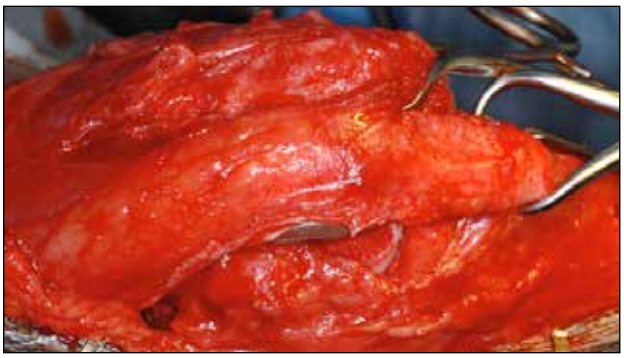
The size is correct when the proximal and distal borders of the trial prosthesis matches with the corresponding edges of the osteotomy. With the trial prosthesis in position on the femur, the patella is reduced and the tightness of the reduction assessed and the necessary adjustments made, i.e. a larger or smaller trial prosthesis or removal of an additional slice of bone when reduction is too tight.

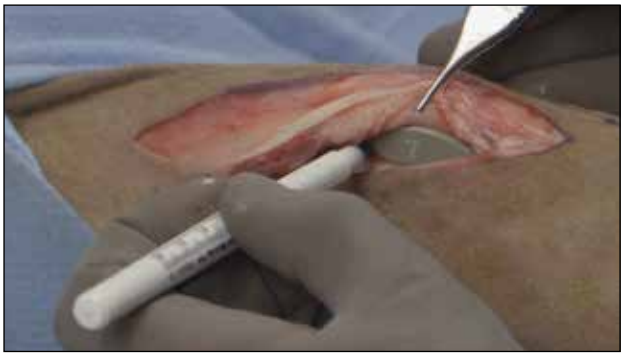
It is important to align the prosthesis with the quadriceps mechanism. To do this, medial to lateral translation as well as proximal to distal translation are assessed.

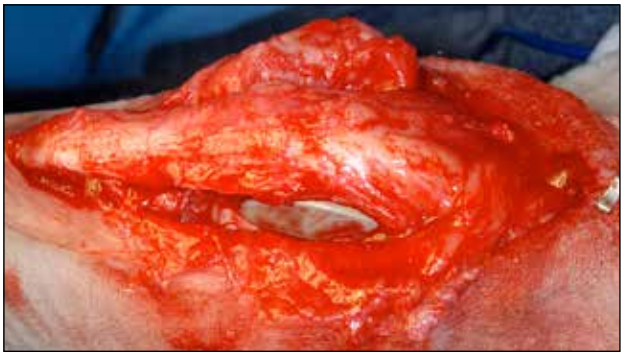
Moreover in MPL the prosthetic groove could be fixed more proximally to counteract the tendency of medial luxation occurring with extension of the knee, and vice versa, in LPL it could be fixed more distally to counteract the tendency of lateral luxation happening during knee flexion. Femoral varus or valgus is partially compensated by rotating the prosthesis in the frontal plane in the desired amount according to the preoperative measured valgus/varus.

Once the ideal position has been established, trace a line in the bone bed with a surgical pen, scalpel, osteotome or small sections K-wire or hypodermic needles. These should give a good indication of mediolateral and proximodistal positioning so that the prosthesis can be placed in this position.

The trial is removed. The patella is luxated.







Notes: The patella should glide smoothly in the trial implant. Take care in clearing any osteophytes and shaping down imperfections. This will avoid possible grinding/catching of osteophytes in the groove, an observation that has been made in cases with delayed improvement. The patella should sit snugly in the groove. The templated size is often large enough to replace the entire portion of the femur. It is common for this size to be too large for the size of the patella. Flipping the patella and checking this relationship typically results in a downsizing of the implant, which is advantageous as it will provide a greater area on the bony bed for implant placement and cause less strain on soft tissues.

The trial implants are intentionally quite slippery. The base of the trials needs to be able to move freely in order to find the correct position on the osteotomy surface. If you are not mindful, the grooves, especially the little ones, can shoot out of your hands, off the patient and even up into the muscles of the thigh. Dry your hands before selecting the trial implant and take great care handling the trials to avoid dropping the trial off of the table.

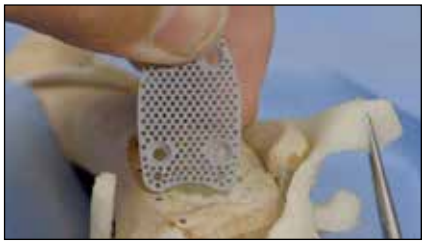
If there is excessive tension on reduction of the patella into the trial, consider using a smaller prosthesis or cutting deeper.

A medial desmotomy may be required to relocate the patella in the trial (and ultimately actual) prosthesis. This can be used to perform a Quadriceps release simultaneously as would commonly be required to manage Patellar Luxation.

IMPLANT BASE PLATE:

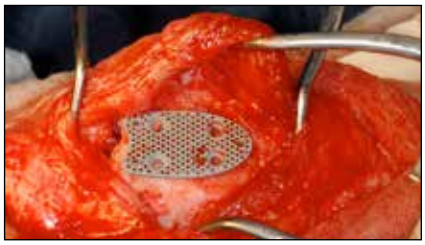
Remove the Base Plate implant from the double-wrapped sterile packaging.

Position the Base Plate, using the markings made to define the location of the trial. Note that the top of the baseplate has recessed holes for the screw heads.

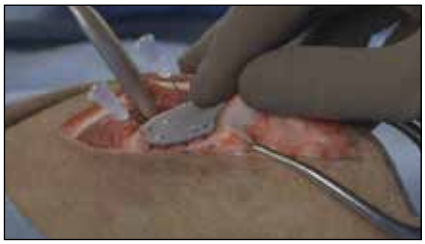


The Base Plate should lie as flush as possible with the subchondral bed in order to prevent it from becoming deformed when the screws are tightened. If the bed is not flat, a high speed burr or file may be used to level the bed.

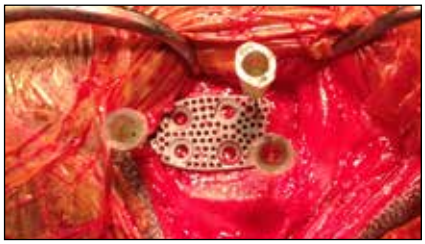
Use pointed forceps or hypodermic needles through the small fenestrations in the baseplate to secure it in position while the first two screws are placed.



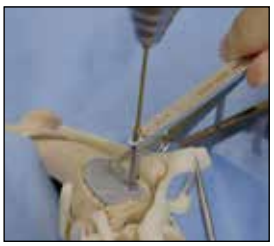
It is recommended to place two screws and then recheck the position of the implant by soft-attaching the groove to the baseplate prior to the insertion of the final two screws. This will preserve bone in the event that you need to reposition the baseplate.



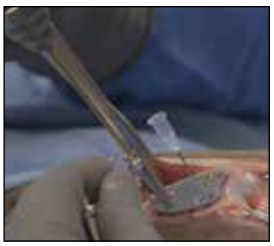
Keep the drill guide perpendicular to the baseplate. Use the chart below to select the appropriate drill bit and screw size for the implant.

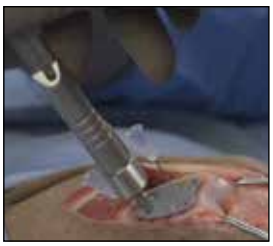


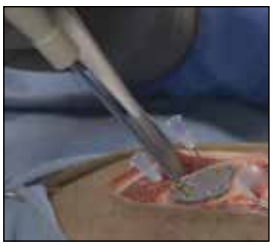
Implant Size	Drill Bit Size	Screw Size
1 - 4	ø1.1 mm	ø1.5 mm
5 - 10	ø1.8 mm	ø2.4 mm



Drill the first hole, measure depth, select and insert screw. For the distal screws, it is important to select a screw that is slightly shorter than what is measured in order to eliminate joint invasion and impingement during flexion of the stifle.

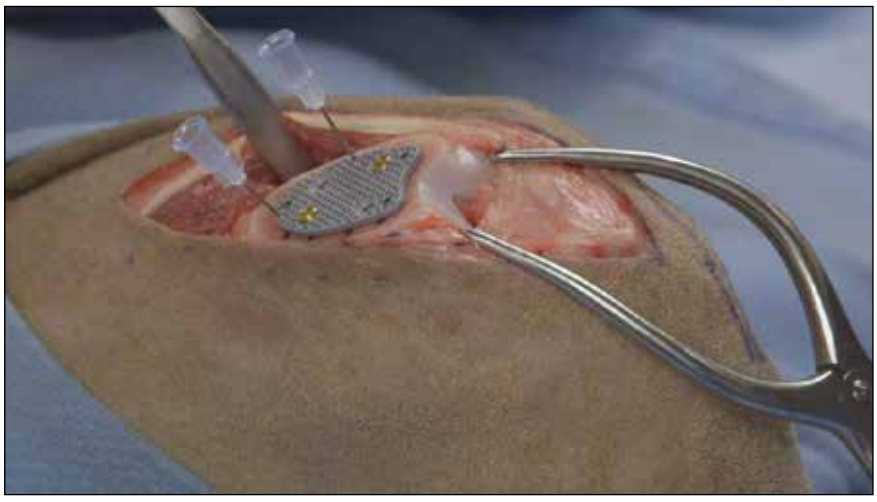






Drill the second hole, measure depth, select and insert screw. For the proximal holes, 2mm is added to the screw length because impingement is not encountered being extra-articular.

The drill guide should be used to center the drill and screw. The screws should not be angled as this may cause the screw head to protrude and interfere with the attachment of the groove component.



TRIAL REDUCTION:

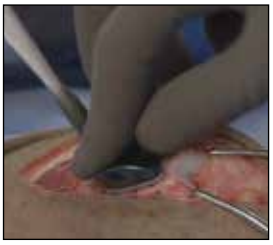
The groove has two or three conical projections, feet, on its underside. Align the feet on the groove piece with the conical holes in the baseplate and press the groove prosthesis into position by hand

Gently, replace and reduce the patella.

Assess range of motion (ROM), patella tracking, and tendency for reluxation.

The patella should be stable in extension and flexion with internal and external tibial rotation, before the capsule is closed.

If there is still a tendency for luxation, at this point you may consider either re positioning (if feasible) of the prosthesis or Tibial Tuberosity Transposition to secure stability prior to joint closure.

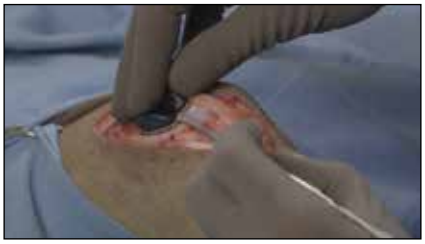
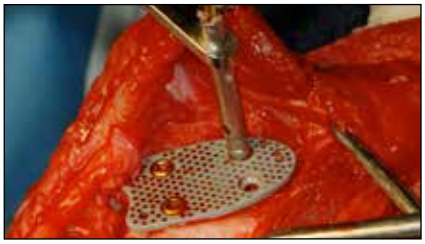
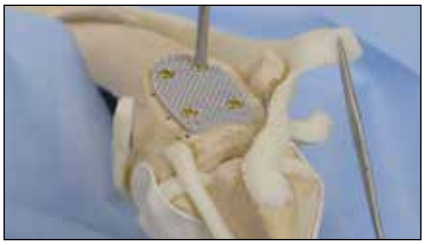
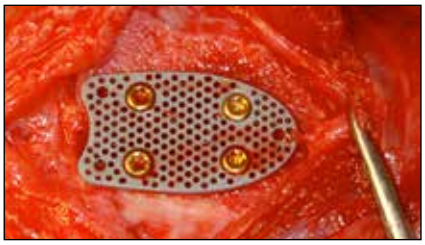

IMPLANT BASE PLATE:

Once proper alignment is confirmed, the implant is removed and the remaining screws are placed.

Remember, keep the drill guide perpendicular to the baseplate. Use the appropriate drill bit and screw size for the implant.

For the distal screws, it is important to select a screw that is slightly shorter than what is measured in order to eliminate joint invasion and impingement during flexion of the stifle.

For the proximal holes, 2mm is added to the screw length because impingement is not encountered, being extra-articular.

IMPLANT GROOVE:

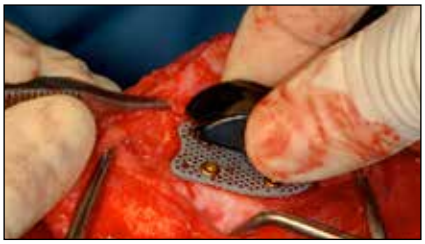
Again, align the feet on the groove piece with the conical holes in the baseplate and press the groove prosthesis into position.

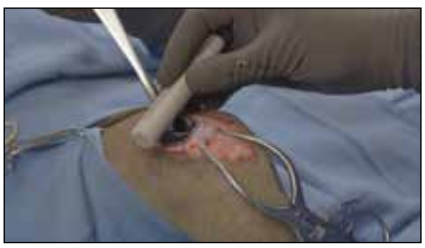
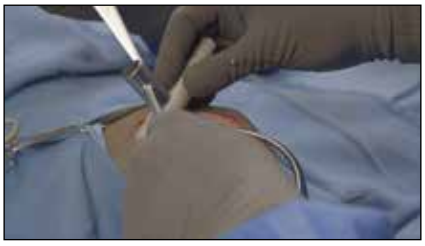
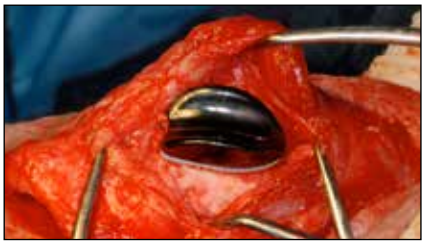
If it has engaged all three prongs the prosthesis should feel stable.

Cover the prosthesis with wet sponge and/ or a flat handle and gently hammer the groove component into the base plate. Take care not to scratch or damage the ADLC coating of the groove implant. A gap of ~1-2mm will remain between the groove and the baseplate. This is normal. The prosthesis is secure if it cannot be elevated with a finger tip from any side.

For small size implants, it is recommended that you pre-impact the groove into the base plate on a sturdy surface, protecting the ADLC surface with sponge.

If the prosthesis needs to be removed it can be elevated with a periosteal elevator or similar device.



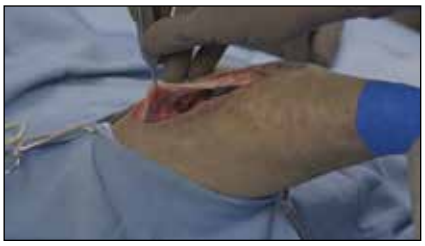
REPLACE PATELLA & ASSESS ROM:

Gently, replace and reduce the patella.

Assess range of motion (ROM), patella tracking, and tendency for reluxation.

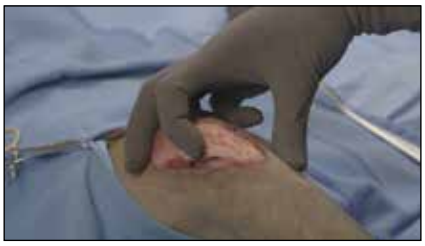
The patella should be stable in extension and flexion with internal and external tibial rotation, before the capsule is closed.

If there is still a tendency for luxation, at this point you may consider either re positioning (if feasible) of the prosthesis or Tibial Tuberosity Transposition, Or Proximal Tibial Osteotomy, or Distal Femoral osteotomy to secure stability prior to joint closure.









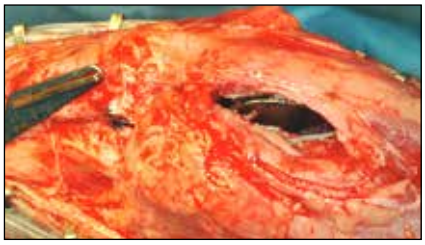

CLOSURE & IMBRICATION:

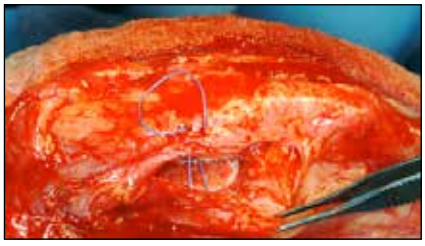
Perform a routine closure with imbrication of the side opposite to luxation and closure of the desmotomy, if necessary.

The joint capsule is closed with an imbricating pattern.

The biceps fascia is closed with an imbricating pattern.

The subcutaneous tissue is closed in a simple continuous pattern.






CLOSURE & IMBRICATION (continued):

The skin is closed routinely.

Patellar stability and complete range of motion are finally assessed.




BANDAGE & DISCHARGE:

None or small soft bandage for the first 24 hours.

Patient is generally discharged from the hospital the day following surgery. Many patients will use the limb 24 hours following surgery even with lameness.

POST-OP CARE:

Confine patient to house and garden (on lead for urination/defecation) for the first 14 days.

In the subsequent two weeks, the patient can have five, five minute sessions on lead beyond the garden.

Review the patient at week four.

Activity can be gradually extended and return to normal by week 8-10.

Radiograph at week 8 to establish integrity of the prosthesis. Bony ingrowth to the baseplate is not often visible at this stage. Bony ingrowth can be seen at nine months radiographically, but bony ingrowth was observed at week 4 during a revision surgery for a septic stifle case where the prosthesis was removed temporarily.

Physiotherapy may be required in case of severe muscle atrophy.

THE KYON SYMPOSIUM

Every spring, KYON hosts a Symposium, primarily for clients, but the event is open to all veterinary professionals. Our goal is to provide a forum for addressing advancements, adaptations, issues and complications in veterinary orthopedic surgery. We also hope to foster some spirited dialogue and exchange of ideas. In addition to a dynamic international faculty of human and veterinary orthopedic opinion leaders who present, each KYON Symposium gives a glimpse into our ongoing research and development in the area of veterinary orthopedic surgery. View past Symposia and register for the next Symposium @ www.kyon.ch.

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