

matrix-based  
medical  
implants

## Presentation

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# A M E D R I X matrix-based medical implants

## Focus

Regenerative medicine - Innovative cell free implants

## Products

*Chondrofiller*: gel, liquid

## R&D/ Production

Implants for soft tissue defects, CE-mark, class III implants

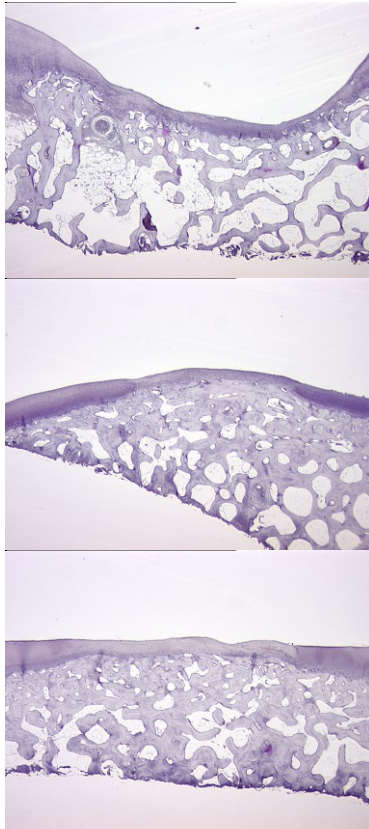
## Location

Esslingen am Neckar

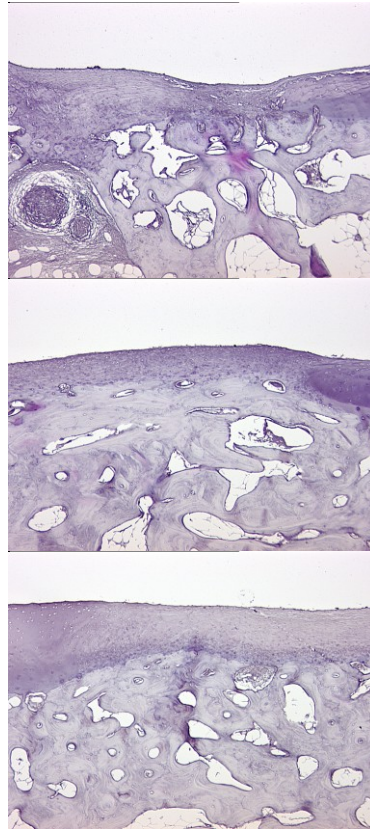
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- Native Collagen
- Isolated from animal tissue (SPF)
- CD rats-tails (SPF) from Charles River Wiga GmbH
- Health monitoring of the animals every 6 weeks
- Aseptic isolation
- Biocompatibility for collagen proven

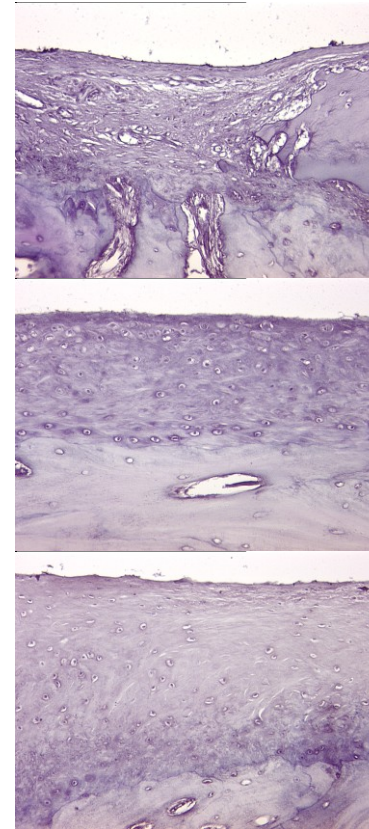
HE-staining  
after 1 year



x1.6



x5



x20

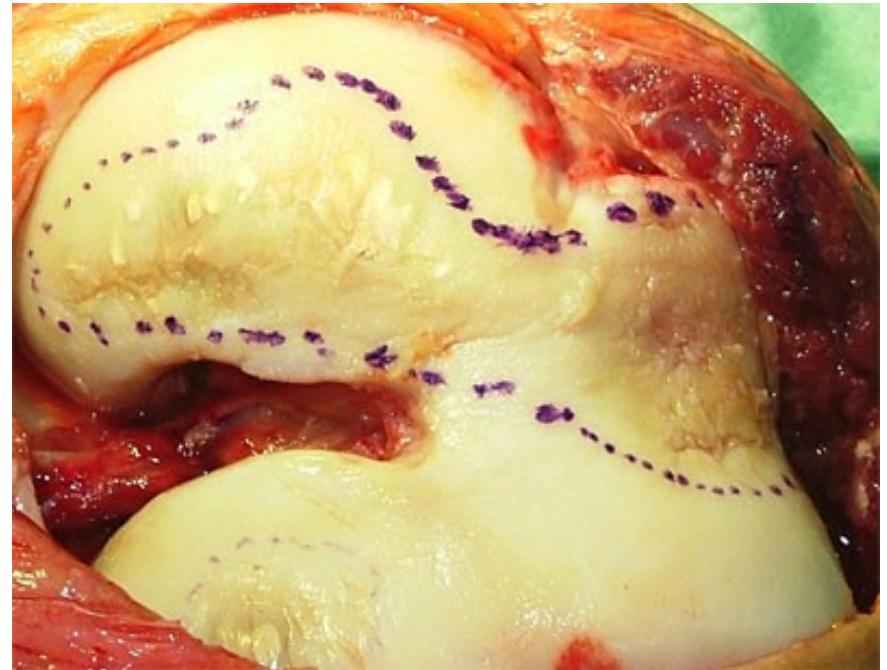
Abrasion

Cell free  
Collagen  
Implant

CaReS®

## Problem

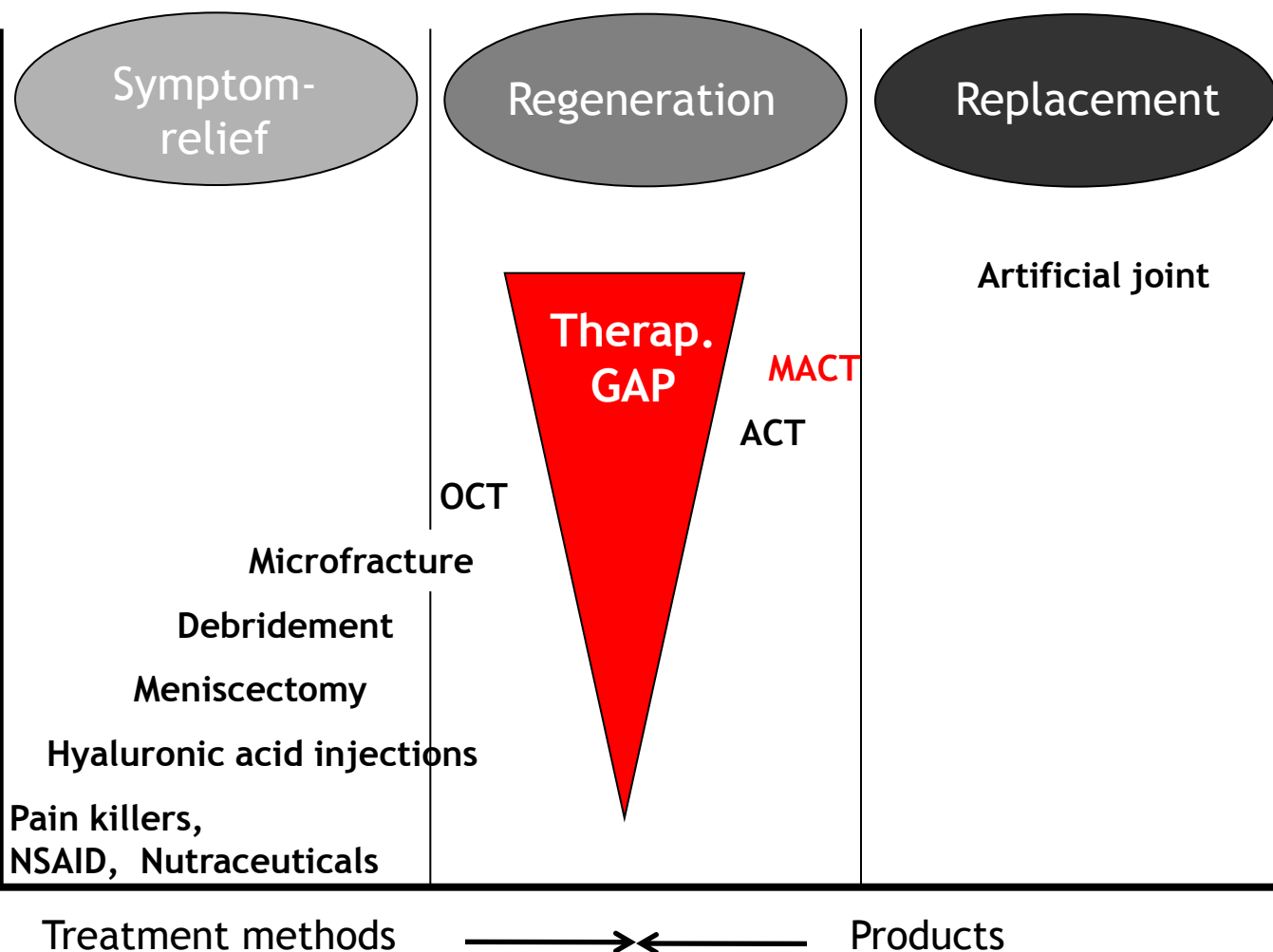
- Cartilage-defects in joints
- Every second individual over 30 years affected
- Currently, no healing in human



# First product-line ChondroFiller

## Therapy

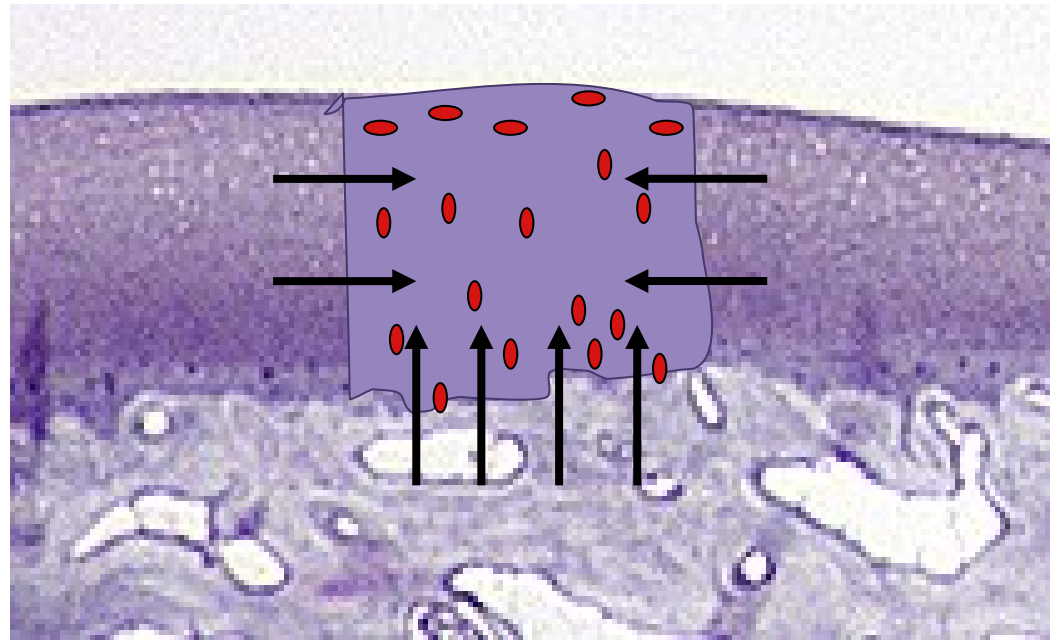
Severity of symptoms





## Amedrix` solution

- Cell-free collagen scaffold
- Perfect fit into defect through innovative application methods
- Repopulation by autologous cells
- Synthesis of matrix-proteins





## ChondroFiller<sup>liquid</sup>



- ChondroFiller liquid is a gamma-sterilized dual chamber syringe system, which is separately filled with pure, liquid collagen type I and a neutralization solution
- For defect sizes: area up to 3 cm<sup>2</sup>
- The liquid collagen obtains its final shape *in situ* in the defect zone



## Technology

- Autoregenerative collagen implant for the treatment of articular cartilage defects in knee joints, ankle joints shoulder joints, etc.
- Both ChondroFiller products are certified as class III implants

## ChondroFiller<sup>gel</sup>



- ChondroFiller gel is a round shaped, gamma-sterilized collagen type I implant, which is ready to use
- Two different sizes: 2cm<sup>2</sup> and 4cm<sup>2</sup>
- It becomes implanted through a minimally invasive surgical operation for defect sizes: area up to 12cm<sup>2</sup>



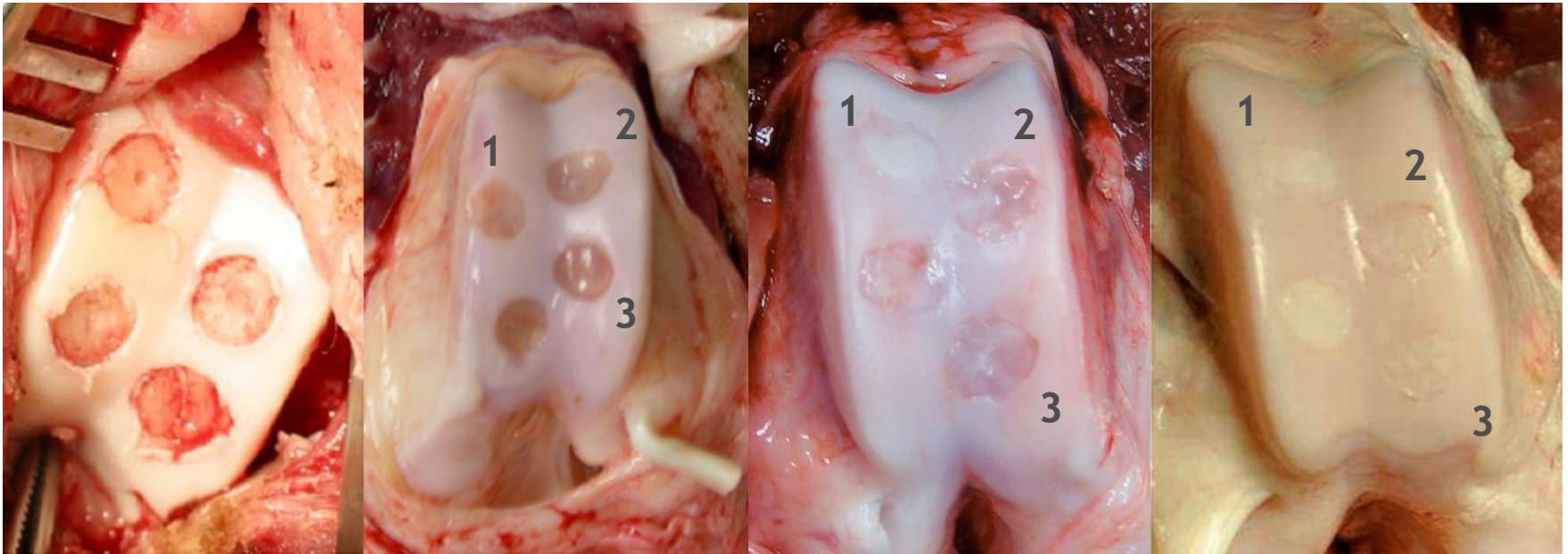
- Solution is autoregenerative in just one procedure
- Perfect fit into defect through innovative application methods
- It is a low-priced implantation
- Liquidity allows perfect adaption to all varieties of small defect zones
- Using fibrin glue is not necessary
- Only one arthroscopic surgery is necessary
- Easy handling, storable and ready to use

- ChondroFiller gel is autoregenerative in just one procedure
- The gel is suitable to fill defect zones up to 12cm<sup>2</sup>
- There is no additional covering or suturing necessary and therefore it is easy to use
- Short surgery procedure based on minimally invasive surgical technique
- Easy handling, storable and easy to use



## Clinical Results, Minipig pre and after OP

1: ChondroFiller liquid; 2: Microfracture; 3: ChondroFiller gel



empty defect.

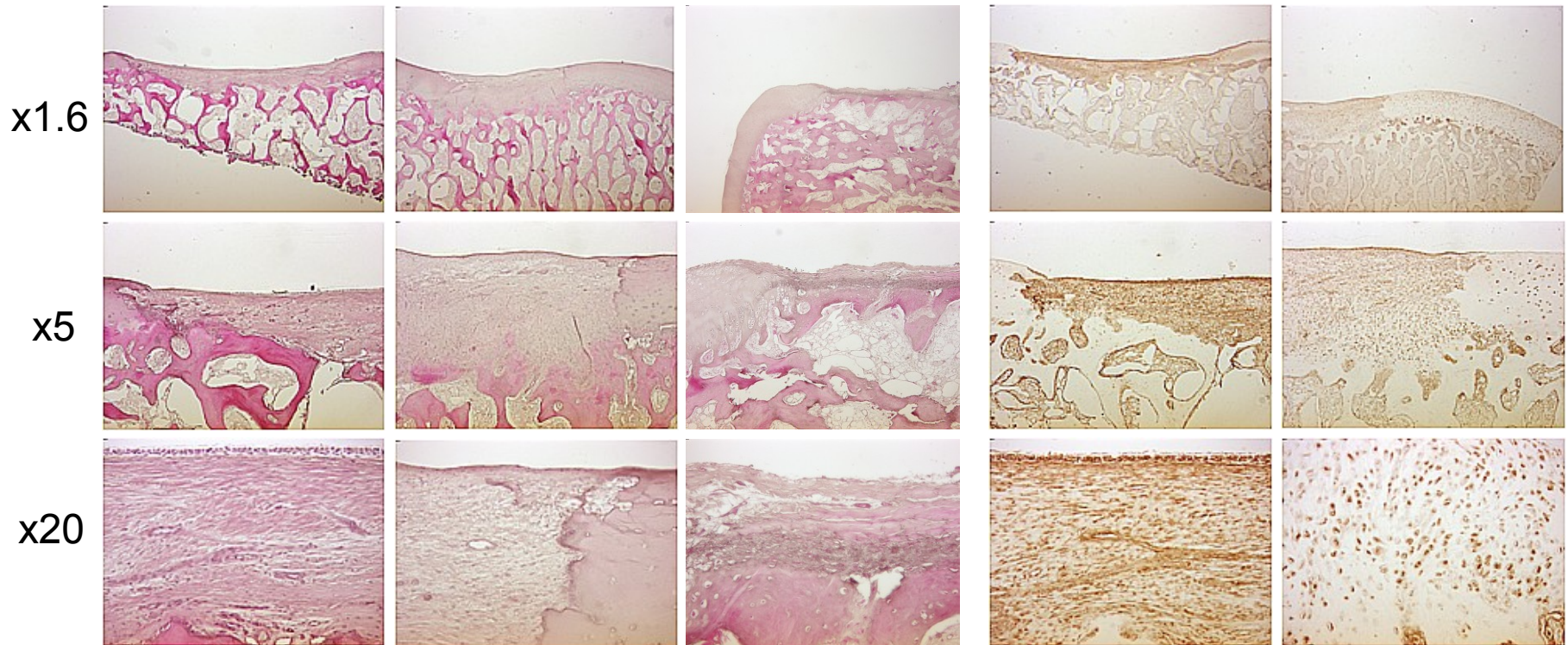
6 weeks post op

6 months post op

12 months post op

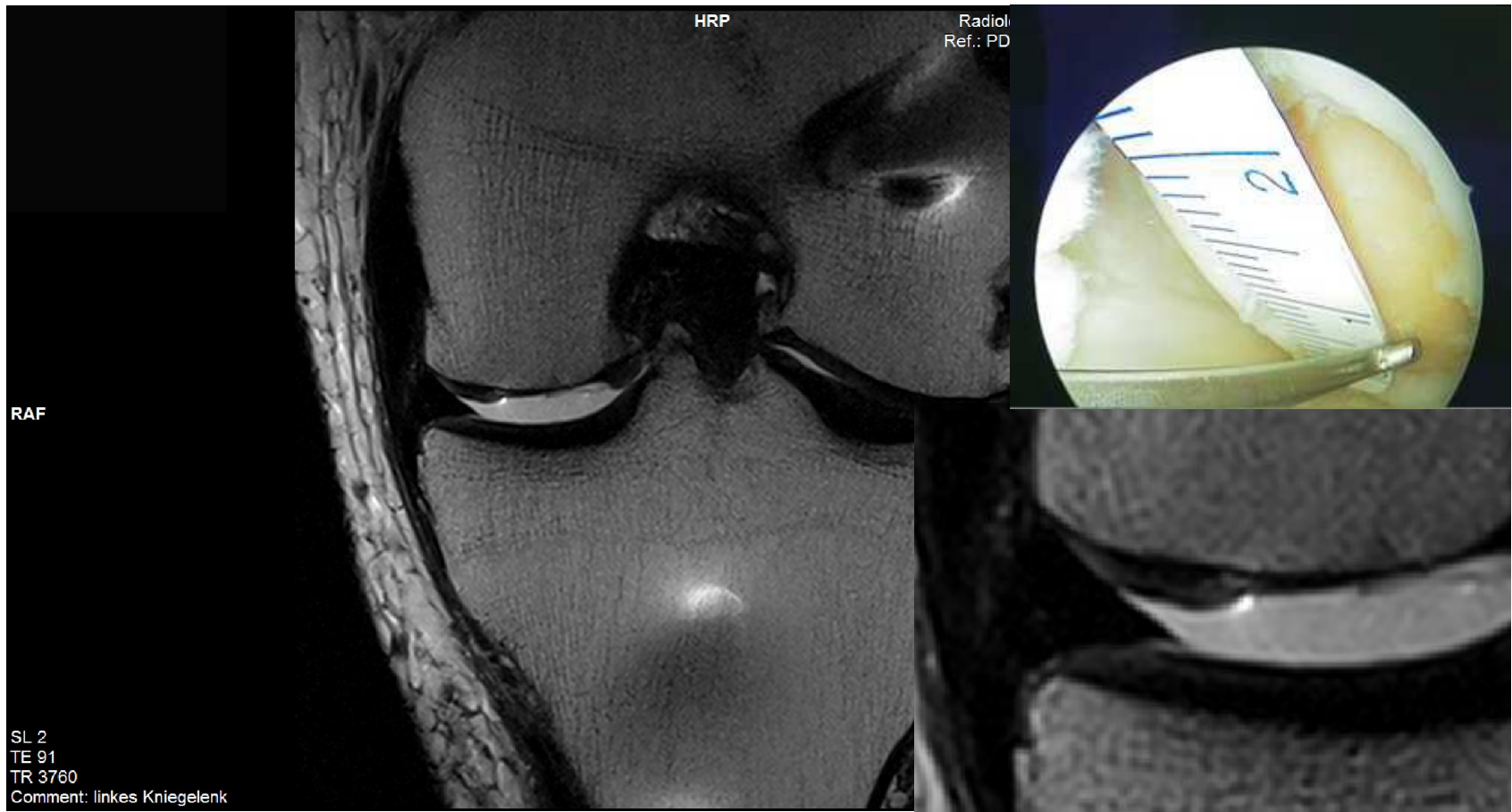
## Histologie, Minipig 6 weeks after op

	gel	HE-staining liquid	control	Col II-staining gel	liquid
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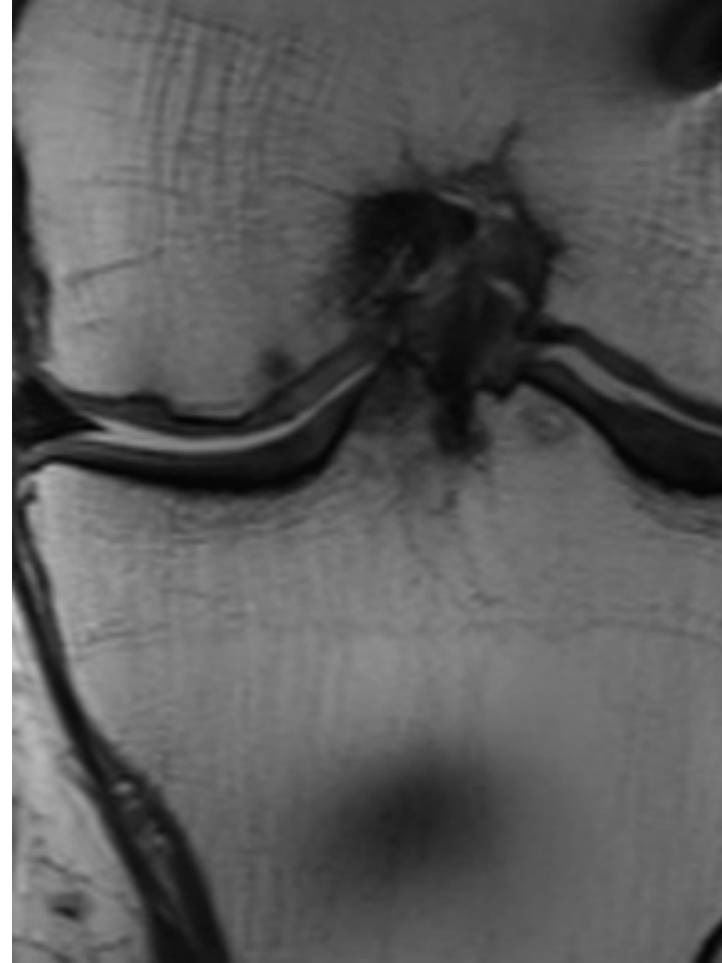
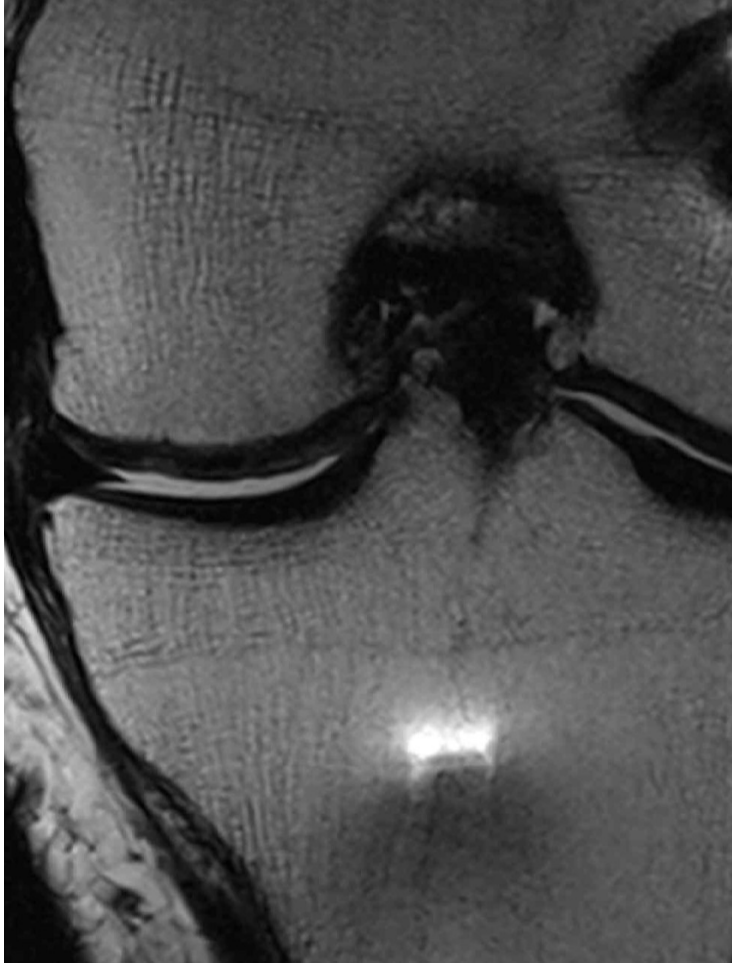
# MRT 4 weeks post op

## Medial femoral condyle



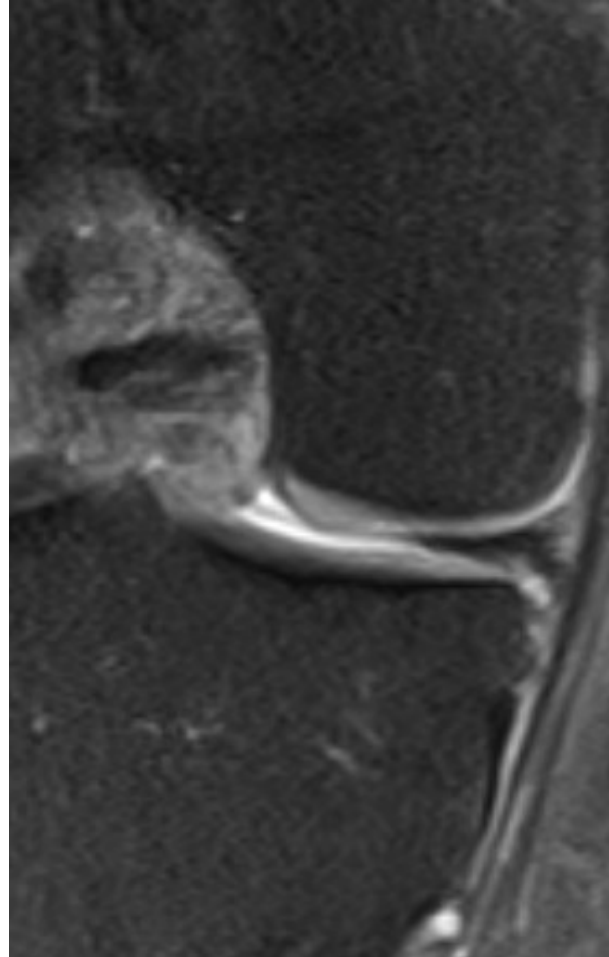
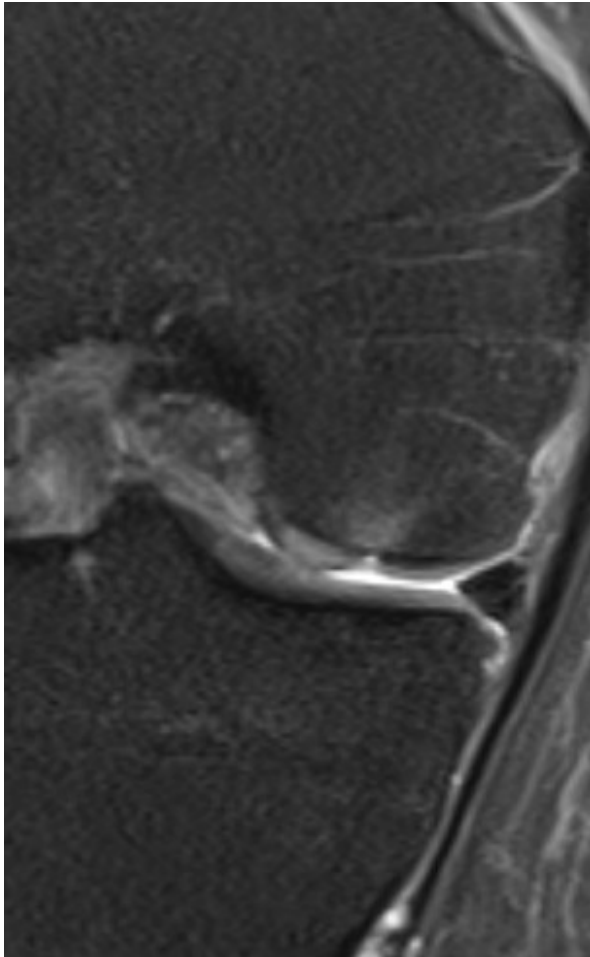


# MRT 6 and 12 months post op



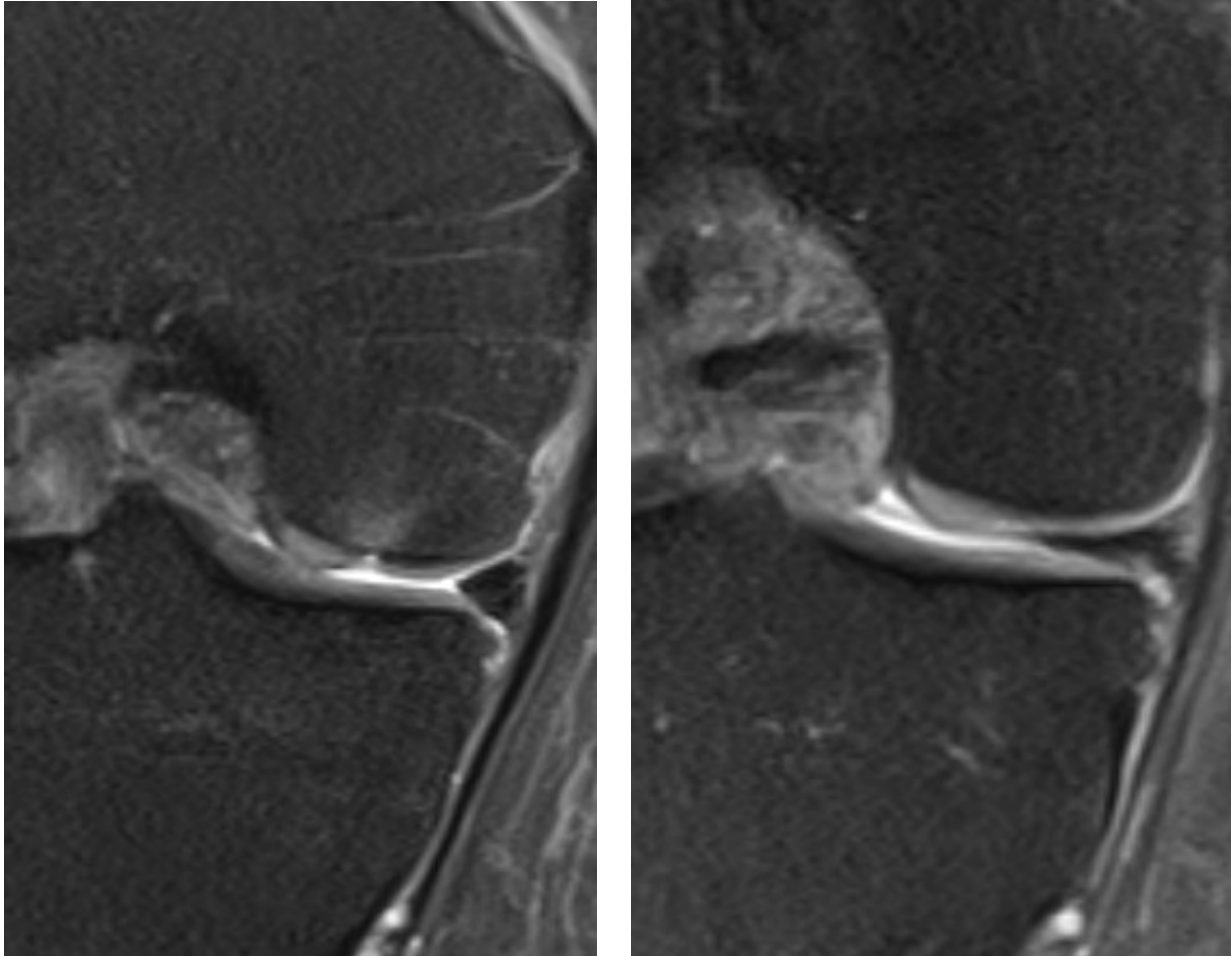
# MRT 6 and 12 months post op

Medial femoral condyle



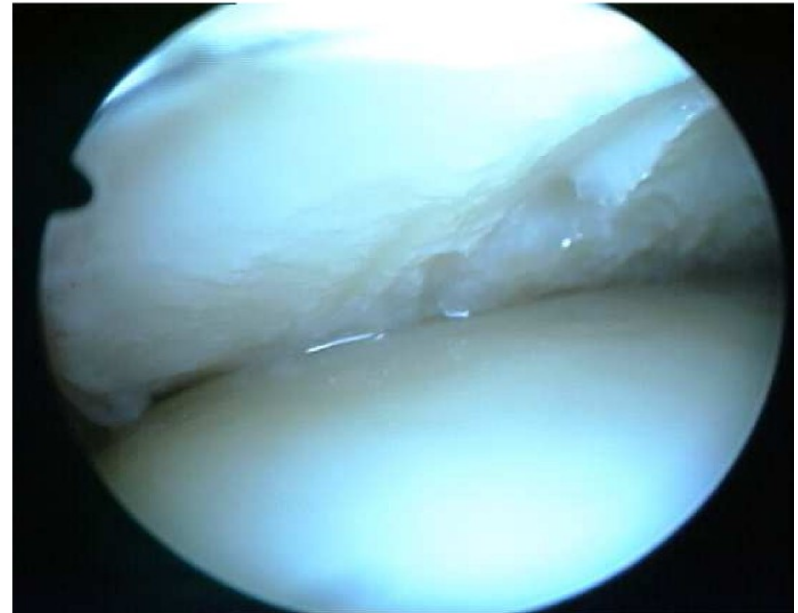
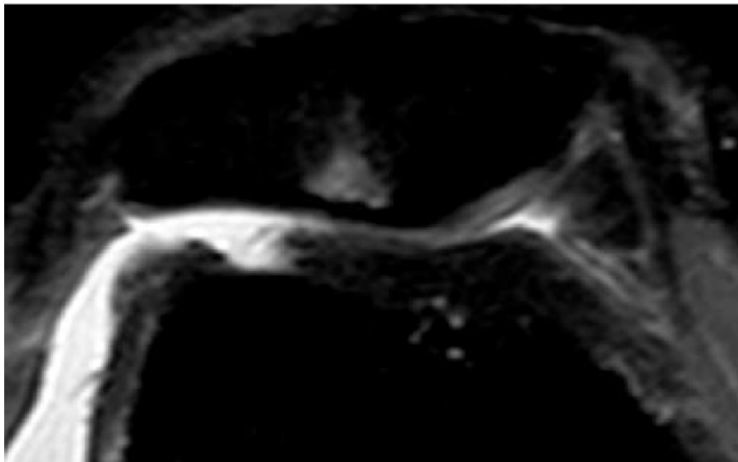
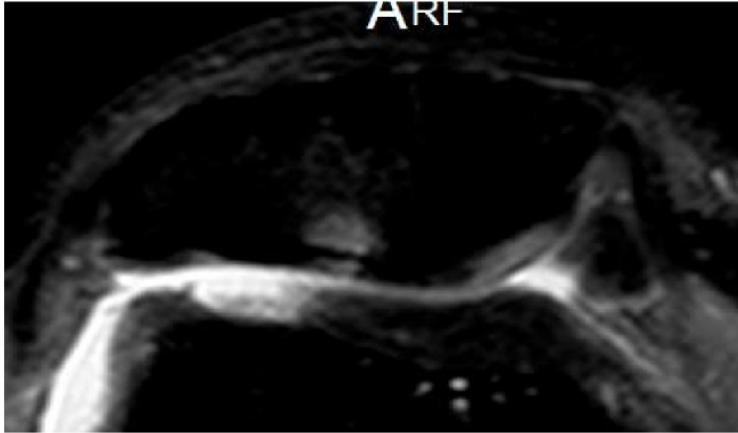
# MRT 6 and 12 months post op

Medial femoral condyle



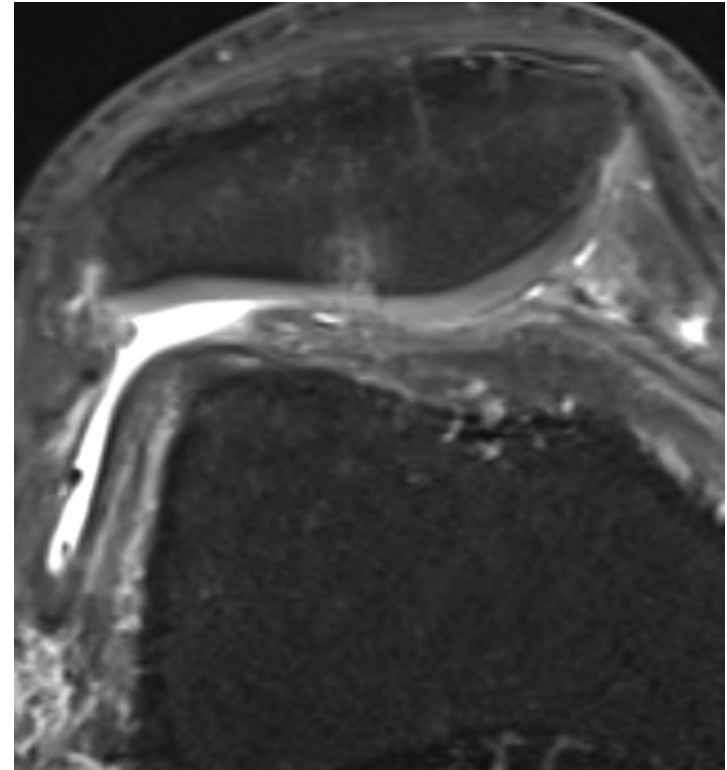
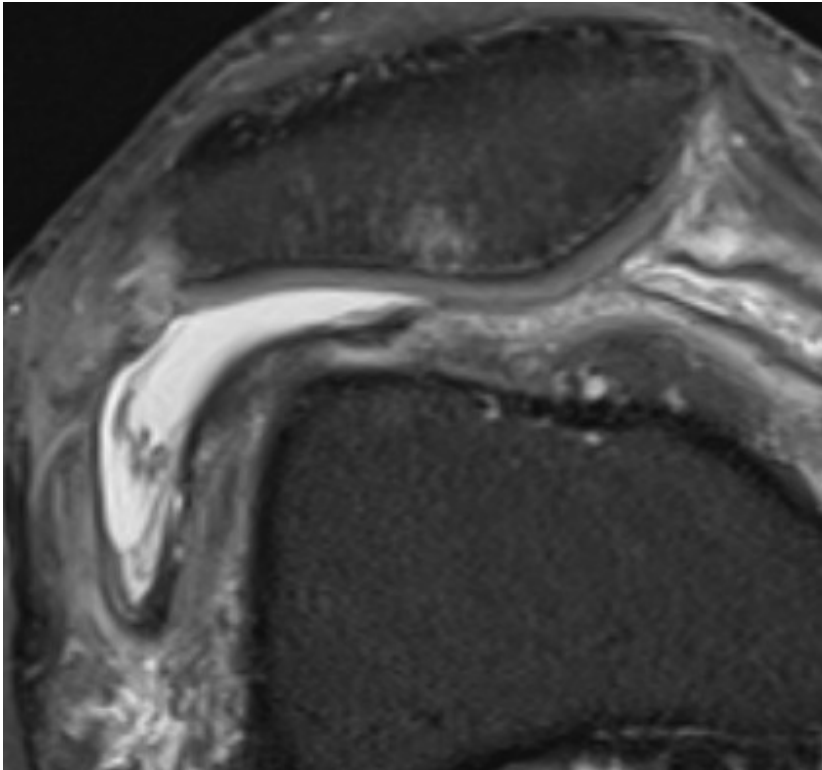
# Patella pre op

## Patella



# MRT 2 and 12 months post op

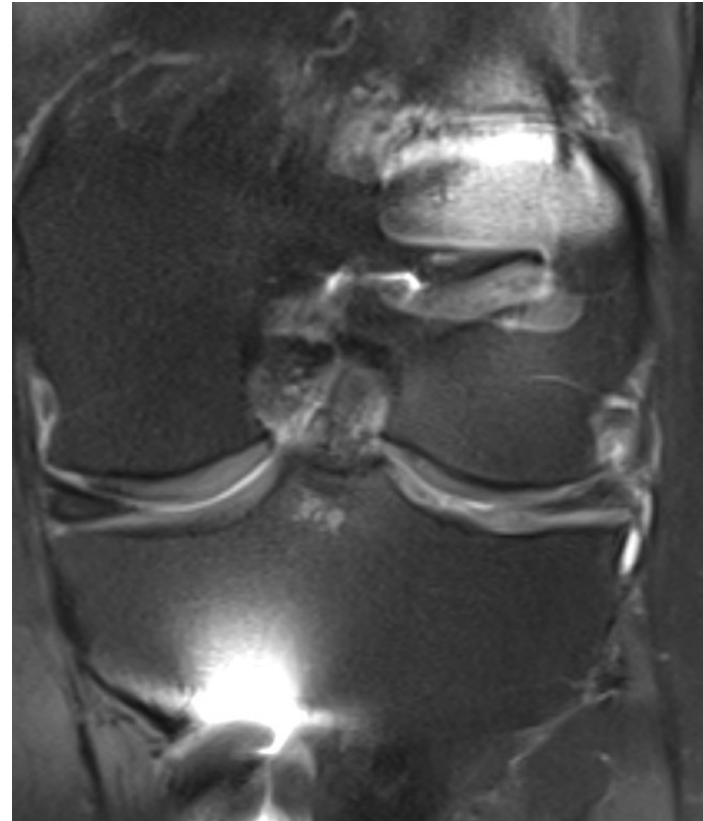
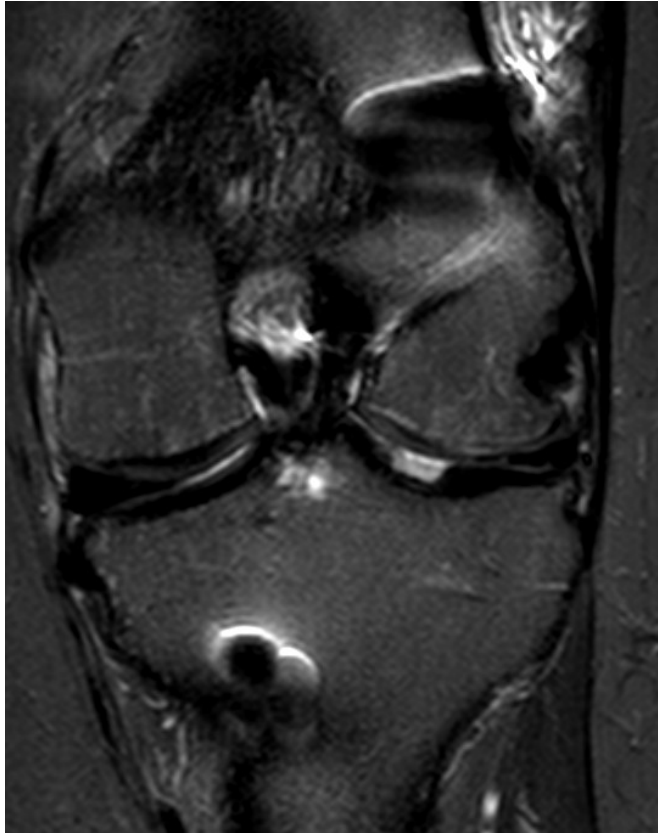
## Patella

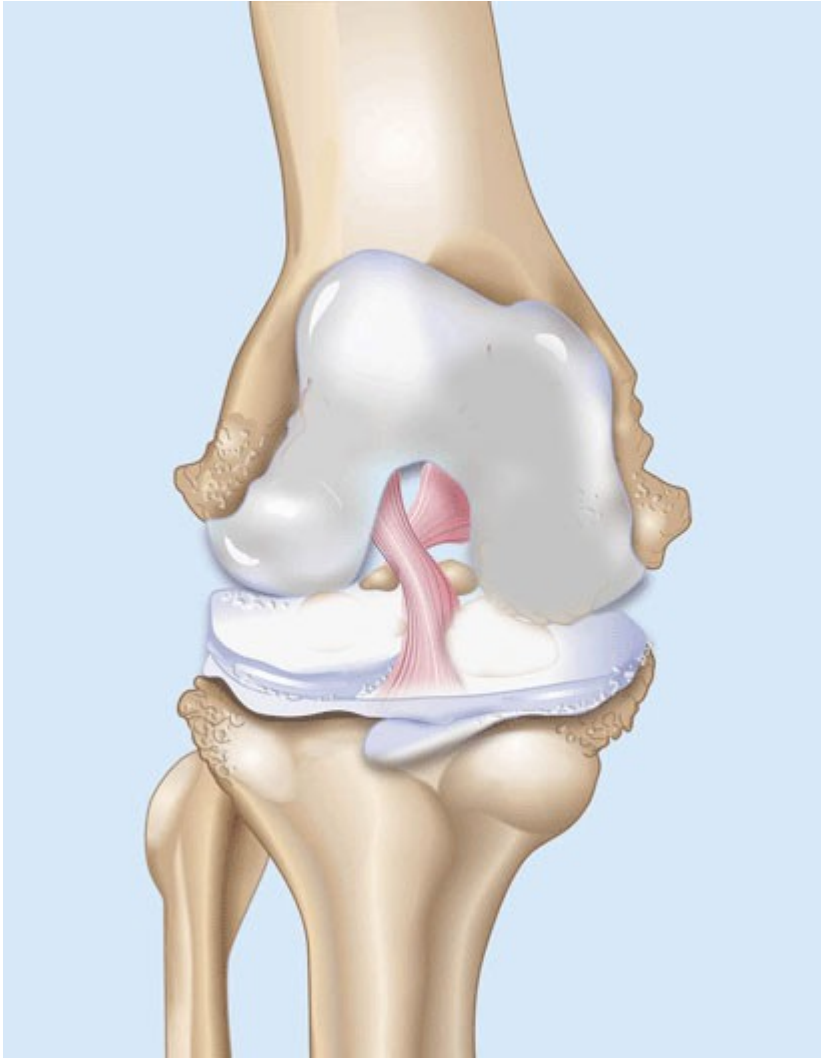




# MRT 2 and 12 months post op

Tibia





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