

# ARTROSCOPY

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- endoscopic method

- Incisions - PORTS for

- OPTIC (light+camera)
- INSTRUMENTS



- KNEE
- SHOULDER
- ANKLE
- ELBOW
- WRIST
- HIP
- SMALL JOINTS
- RETRO-TENDINOUS SPACE (ACHILLES TENDON)



**MONITOR**

**PC**

**light source**

**camera processor**





pump

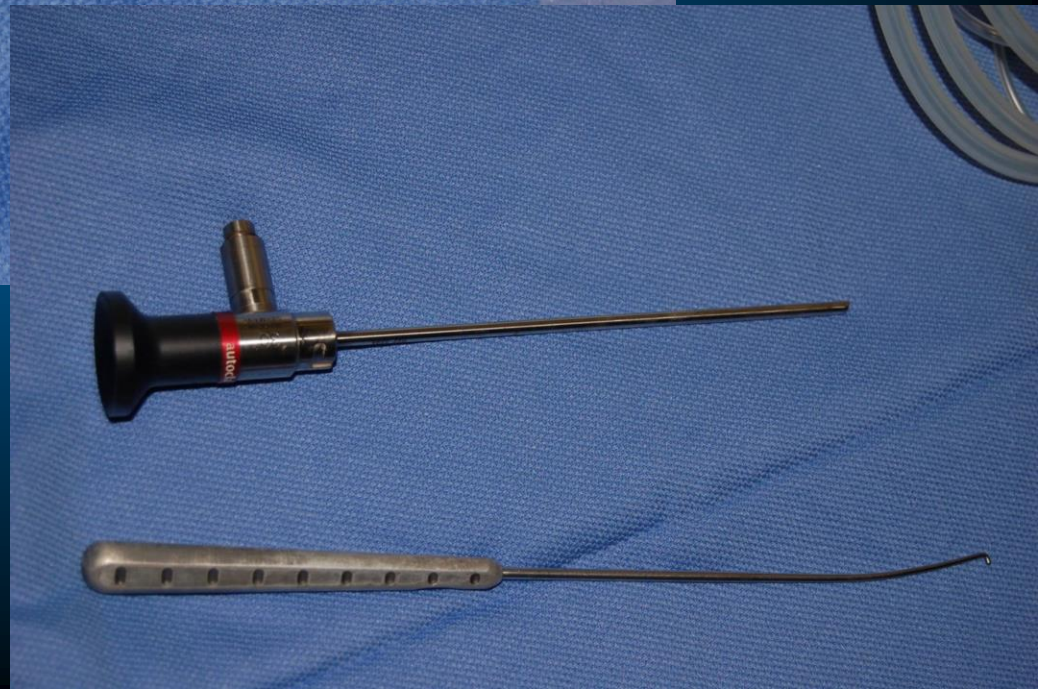
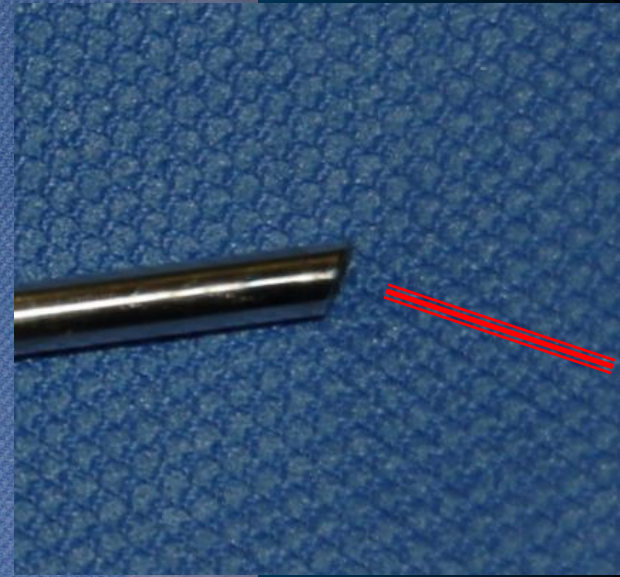
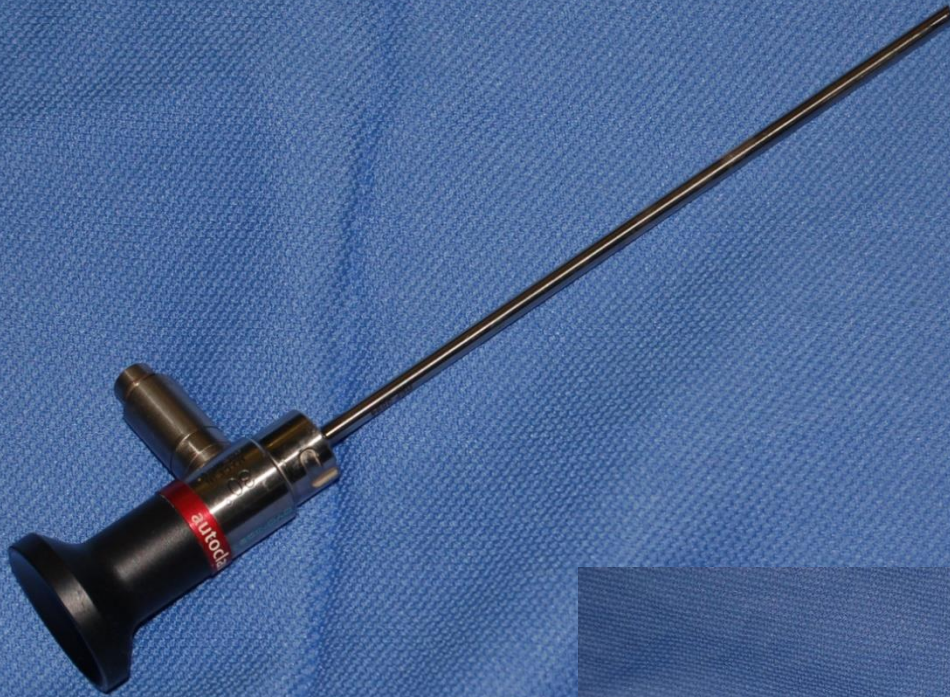


shaver





30 degree optic



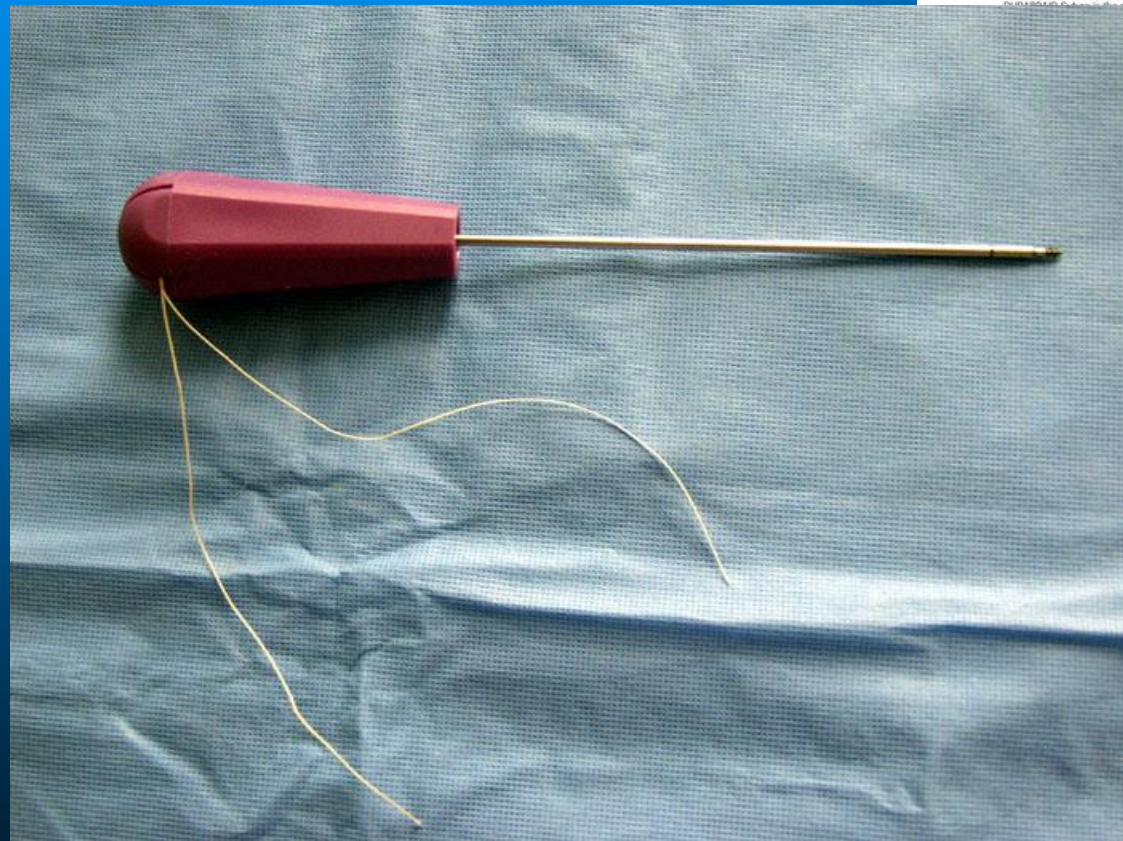


# ARTHROSCOPIC INSTRUMENTS





# IMPLANTS - anchors



## Features

### DURABRAID® Suture

TwinFix® Suture Anchors come preloaded with #2 DURABRAID Suture. DURABRAID Suture is a unique brand of Smith & Nephew braided polyester suture. It offers a perfect mix of strength, knot sliding ability, and knot security for performing arthroscopic or mini-open procedures with no special cutting instruments.

Offered in a variety of sizes and materials, with options depending on your technique and requirements.

Designed to fit into the dilator to reduce the insertion torque thereby ensuring the suture eyelets are located deeper in the anchor body to resist cyclic loading.

- Suture Anchor with #2 DURABRAID Suture
- Suture Anchor with #1 Preloaded Suture
- Suture Anchor with two, #2 DURABRAID Sutures
- Suture Anchor with two, #2 DURABRAID Sutures
- Suture Anchor with two, #2 DURABRAID Sutures
- Suture Anchor with two, #2 DURABRAID Sutures
- Suture Anchor with two, #2 DURABRAID Sutures
- Suture Anchor with two, #2 DURABRAID Sutures

- Suture Anchor, PLLA, with two, #2 DURABRAID Sutures, threaded dilator and guide
- Suture Anchor, PLLA, with two, #2 DURABRAID Sutures, ties and threaded dilator
- Suture Anchor, PLLA, with two, #2 DURABRAID Sutures, ties
- Suture Anchor, PLLA, with two, #2 DURABRAID Sutures
- Suture Anchor, PLLA, with two, #2 DURABRAID Sutures
- Suture Anchor, PLLA, with two, #2 DURABRAID Sutures
- Suture Anchor, PLLA, with two, #2 DURABRAID Sutures
- Suture Anchor, PLLA, with two, #2 DURABRAID Sutures

- 1/8"-6" x 3.5 mm
- 1/8"-6" x 5 mm
- 1/8"-6" x 6.5 mm
- 1/8" Anchor
- and 5.0 mm Anchor
- TwinFix Ti Anchor
- dilator
- dilator
- 1/8" Suture



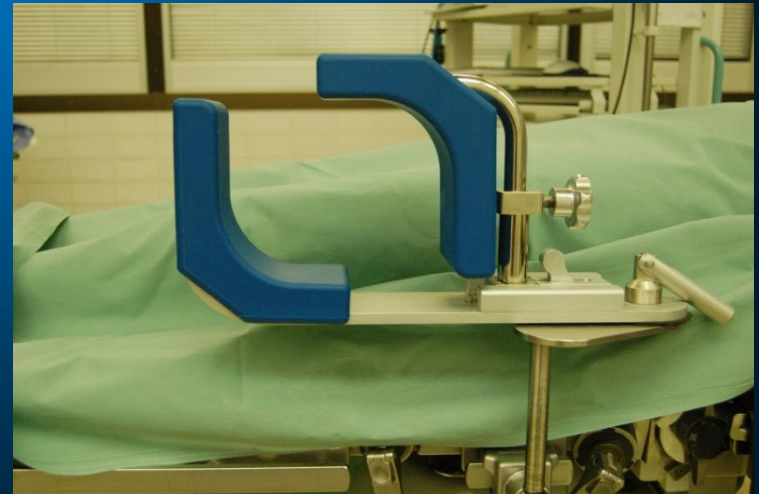
Titanium Anchor



Absorbable Anchor



- **TOURNIQUET** (extremity ischemization, for bloodless surgery)
  - cca 250 Torr (syst. Blood Pres+100)
  - maximum 90 min
  - knee, ankle



# Preparation



TOURNIQUET







STERILITY















scrub nurse

asistent

patient

surgeon

anesth



UPPER EXTREMITY

# SHOULDER

- DEGENERATIVE DISORDERS
- TRAUMA, POSTRAUMATIC DISORDERS
- INFLAMMATION
- TUMOUR



# SURGERY

- ARTHROSCOPY
  - RECURRENT DISLOCATION
  - DEGENERATIVE AFFECTION OF ROTATOR CUFF
  - SUBACROMIAL PROBLEMS (IMPINGEMENT)
  - DEGENERATIVE ARTHRITIS

# SURGERY TECHNIQUE





# SURGERY TECHNIQUE



# SURGERY TECHNIQUE





# Treatment of instability - anchors







**ANCHORS (TIGHTENING OF JOINT CAPSULE FOR INSTABILITY)**



# POSTOPERATIVE TREATMENT

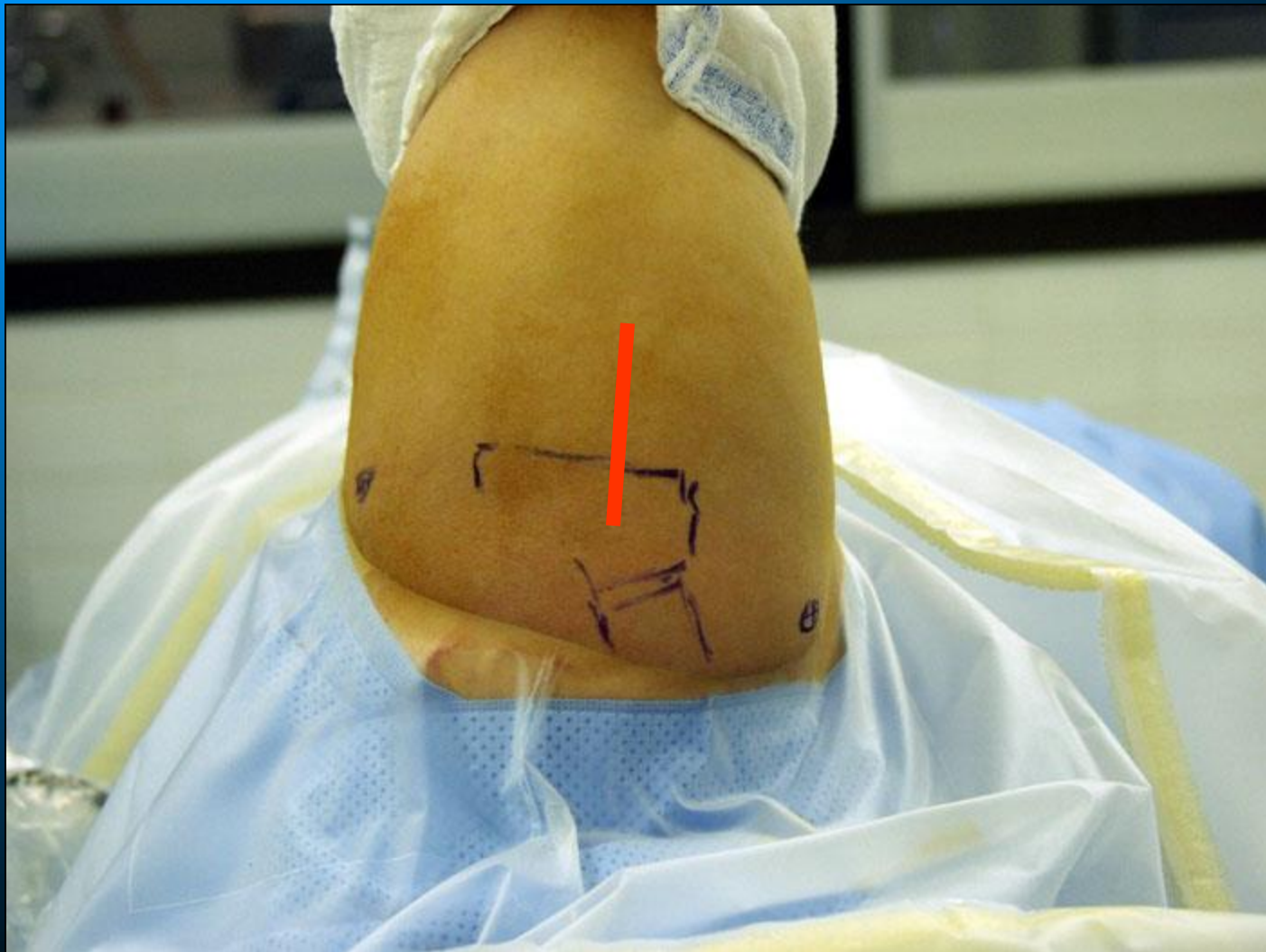


Desault orthosis

# OPEN SURGERY

- MINIMALLY INVASIVE
  - SUTURE OF ROTATOR CUFF
  - LATERAL CLAVICULA RESECTION (Stewart)

# SURGERY TECHNIQUE



# POSTOPERATIVE TREATMENT



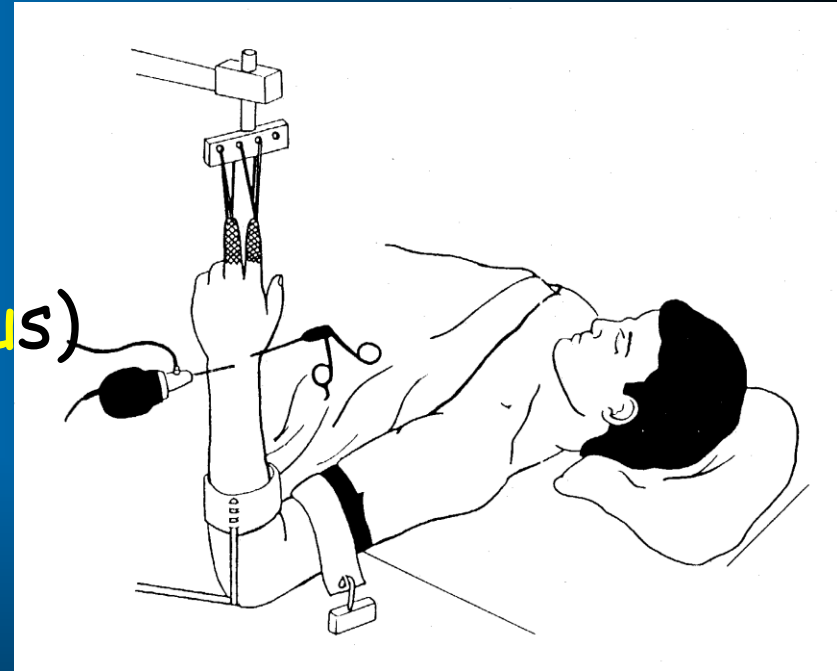
Abduction orthosis



- ARTROSCOPY OF THE WRIST
- WRIST and FINGERS ARTHRODESIS
- LIMITED WRIST ARTHRODESIS
- PARTIAL EXCISION OF CARPUS
- OSTEOTOMY OF DISTAL RADIUS/ULNA
- CARPAL TUNEL DECOMPRESSION

# WRIST ARTROSCOPY

- wrist instability
- synovectomy
- TFCC surgery (wrist meniscus)
- navicular pseudoarthrosis



- smaller optics, instruments
- without pump

**LOWER EXTREMITY**

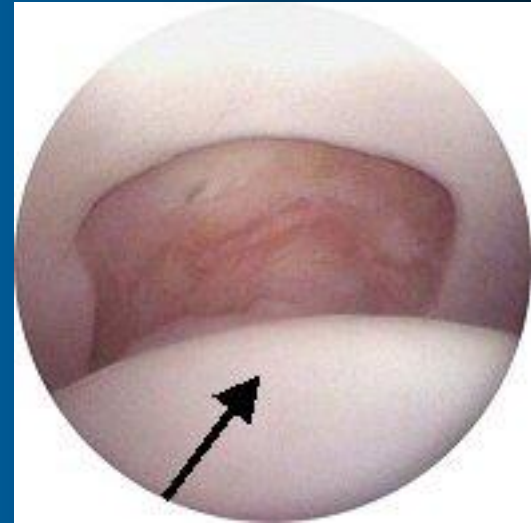


# HIP

- ARTROSCOPY

- posttraumatic disorders
- degenerative arthritis
- coxitis

- DEBRIDEMENT
- LOOSE BODIES REMOVING
- LABRUM SURGERY
- RINSE (LAVAGE)



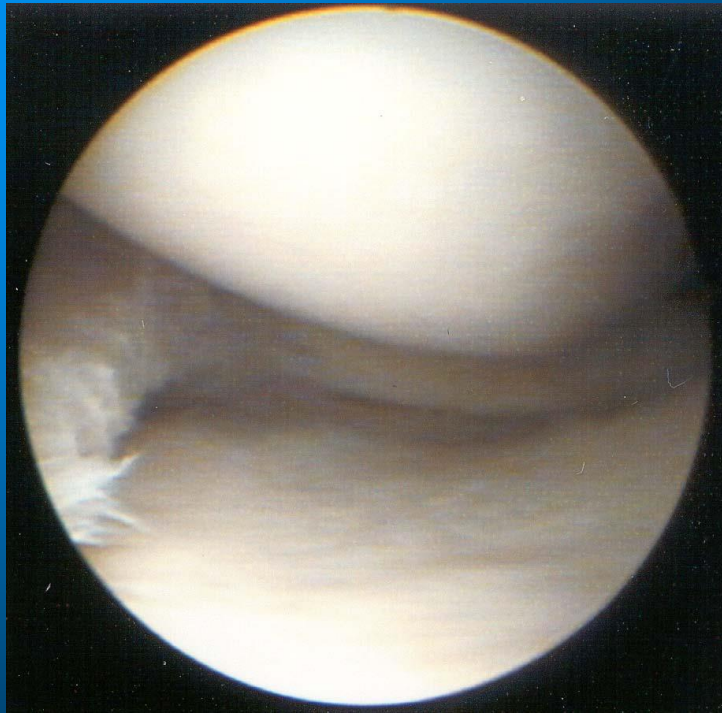
# KNEE

- ARTROSCOPY
  - „acute injuries“
  - instability
  - degenerative arthritis
  - gonitis

(surgery of meniscus, plicae,  
loose bodies removing,  
lateral patellar retinaculum  
release, etc.)



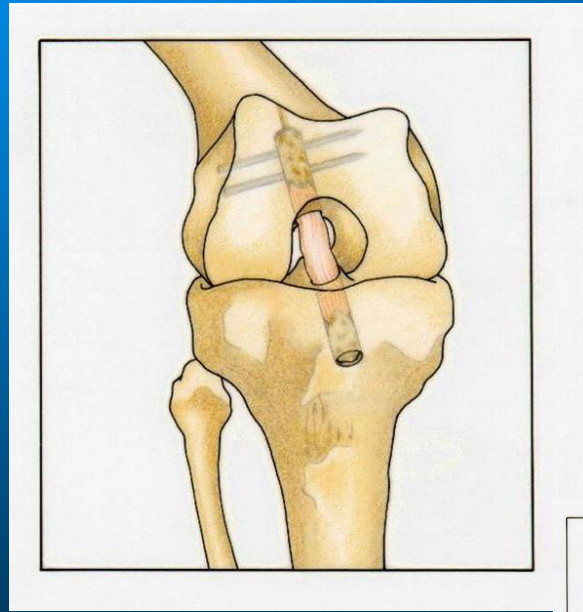




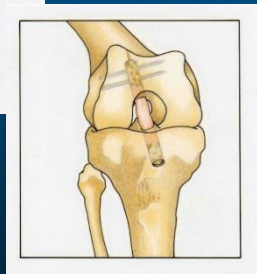
# Method with graft sec. Brückner

-BTB graft (BONE-TENDON-BONE)

(source - ligamentum patellae)



Treatment of  
ACL - Ant. Cruciate Ligament  
Instability



so called „golden standard“

# CHONDRAL DEFECT

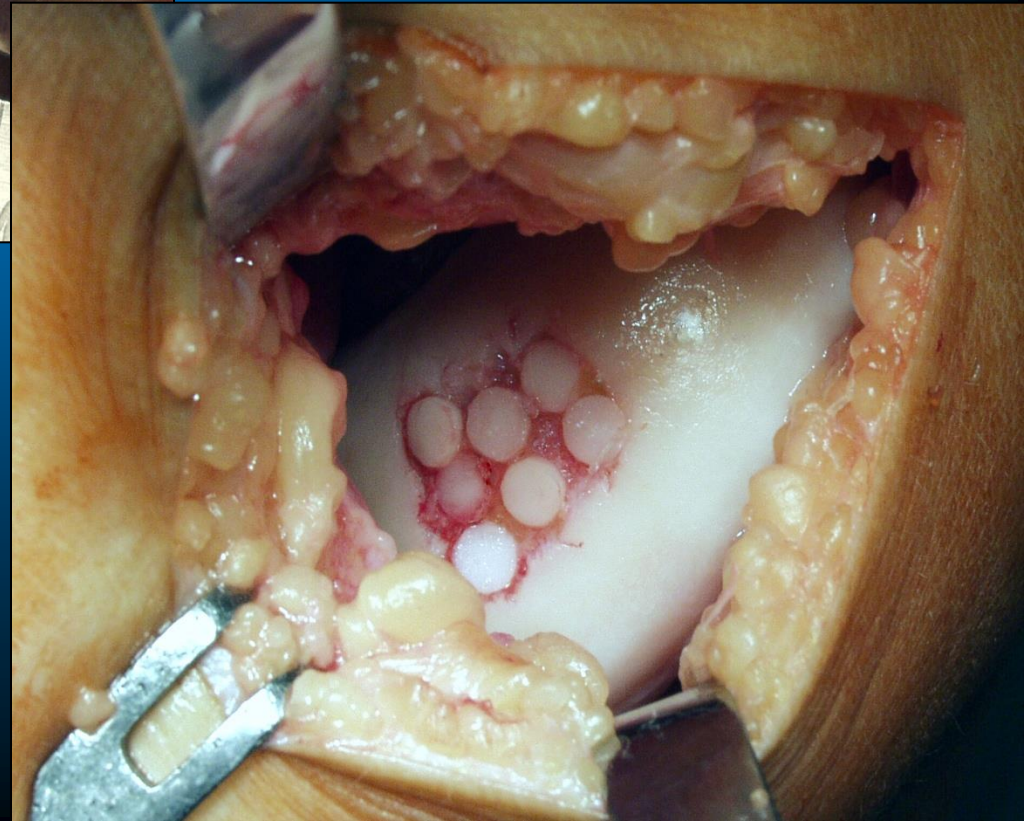
- MOSAICPLASTY
- AUTOLOGOUS CHONDROCYTES TRANSPLANTATION

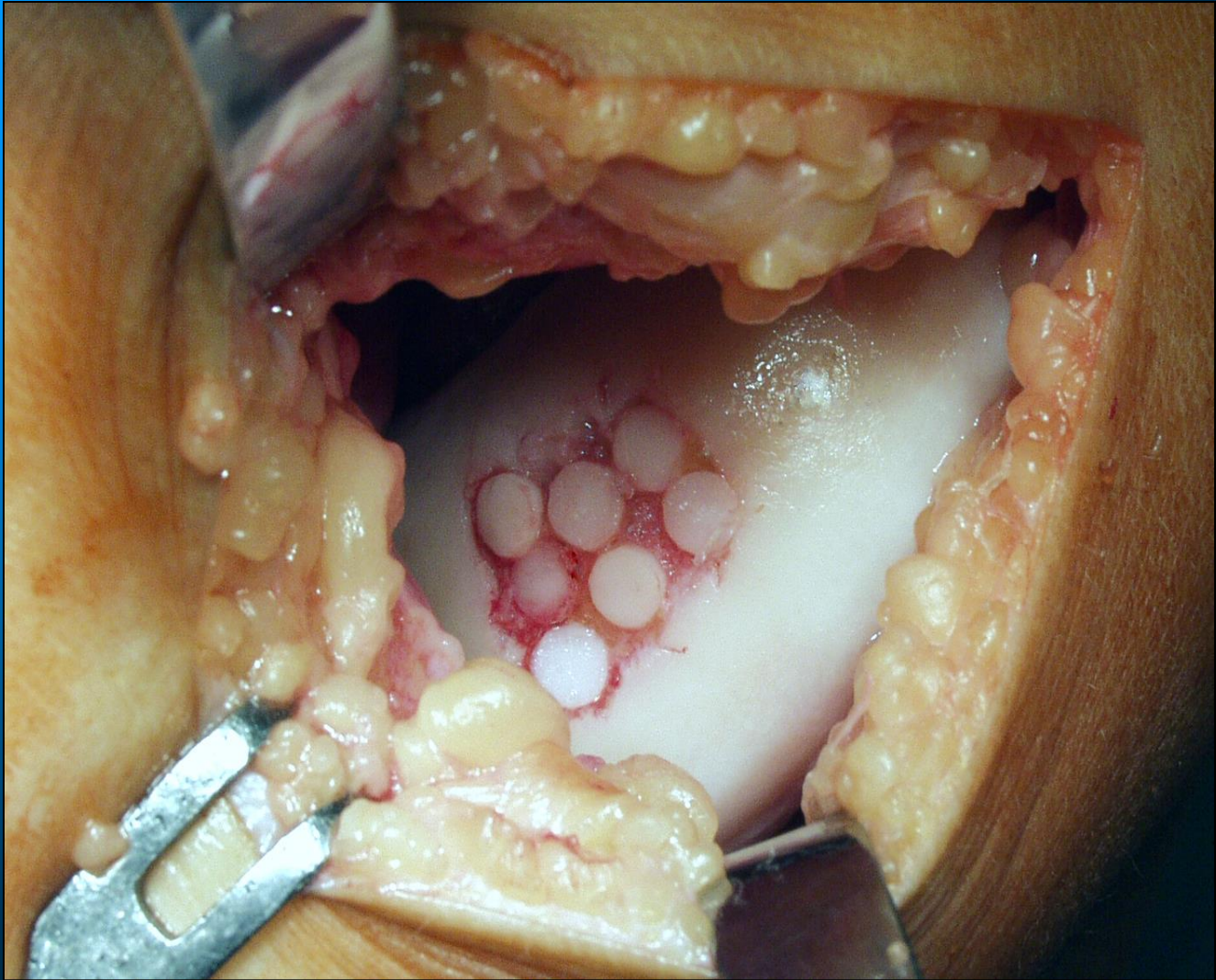




# MOSAICPLASTY

(Puzzle technique)







# Mosaicplasty





# AUTOLOGOUS CHONDROCYTES TRANSPLANTION

- 2 SURGERIES

- arthroscopic chondral sample taking
- chondrocytes cultivation on bone bank for 4-8 weeks
- open implant of cartilaginous tissue graft (using fibrin glue)

# CHONDROCYTES transplantation

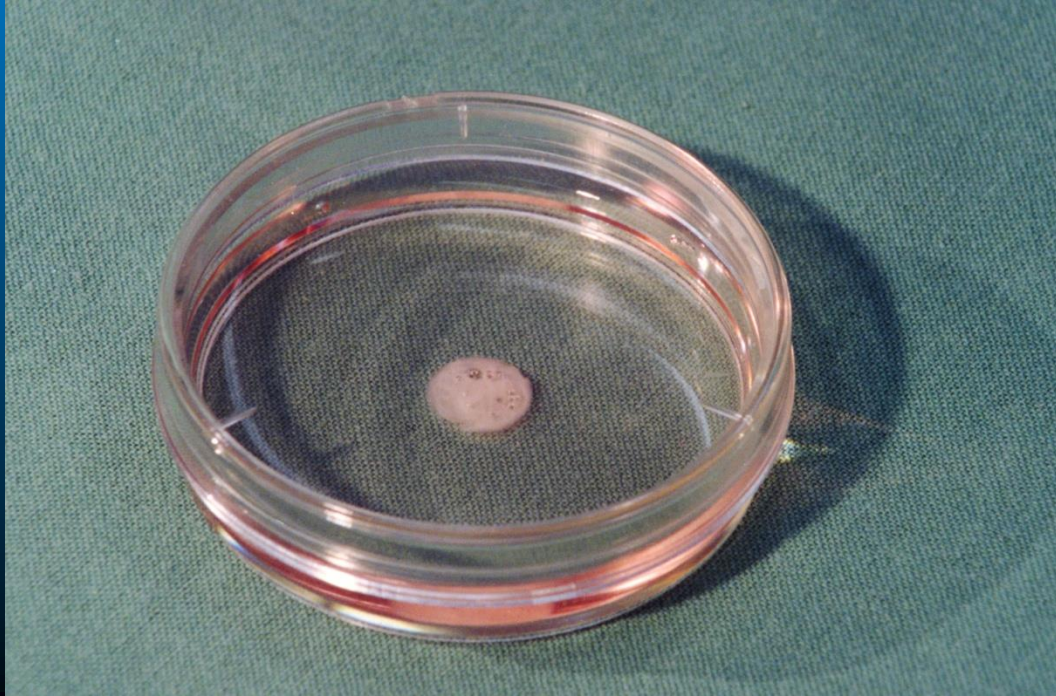
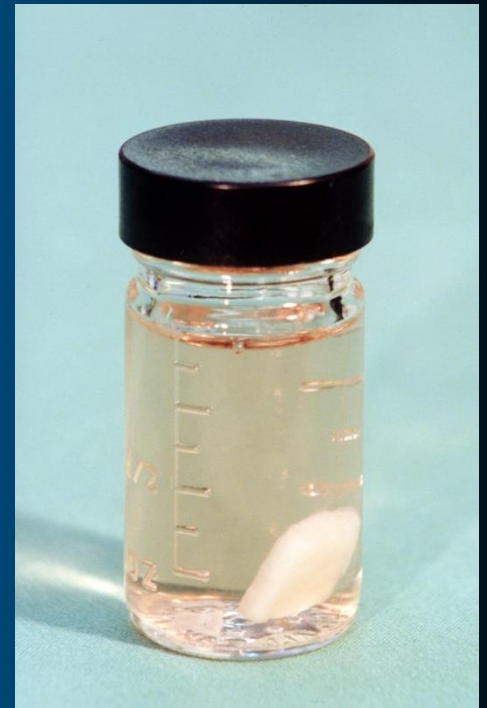
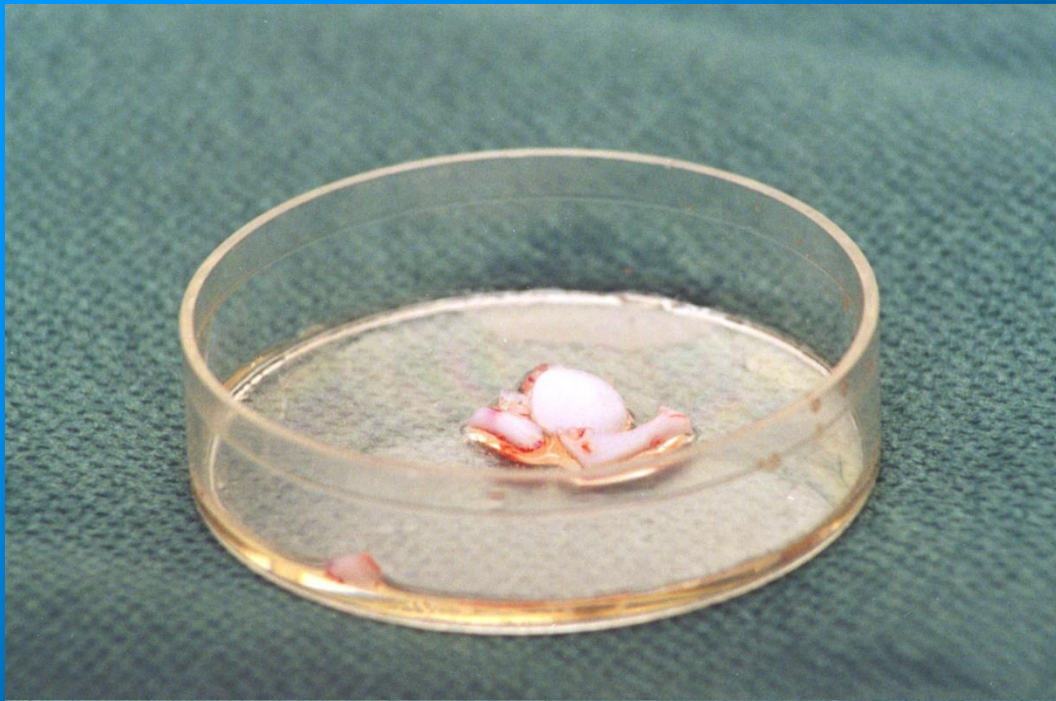
## ADVANTAGE

„ultimate“ chondral defects healing

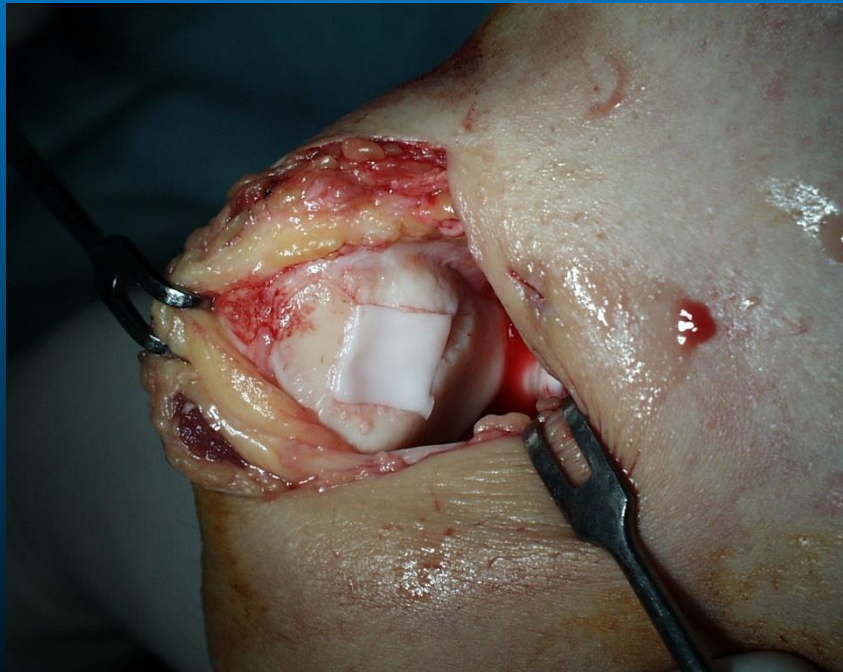
## DISADVANTAGE

2 surgeries

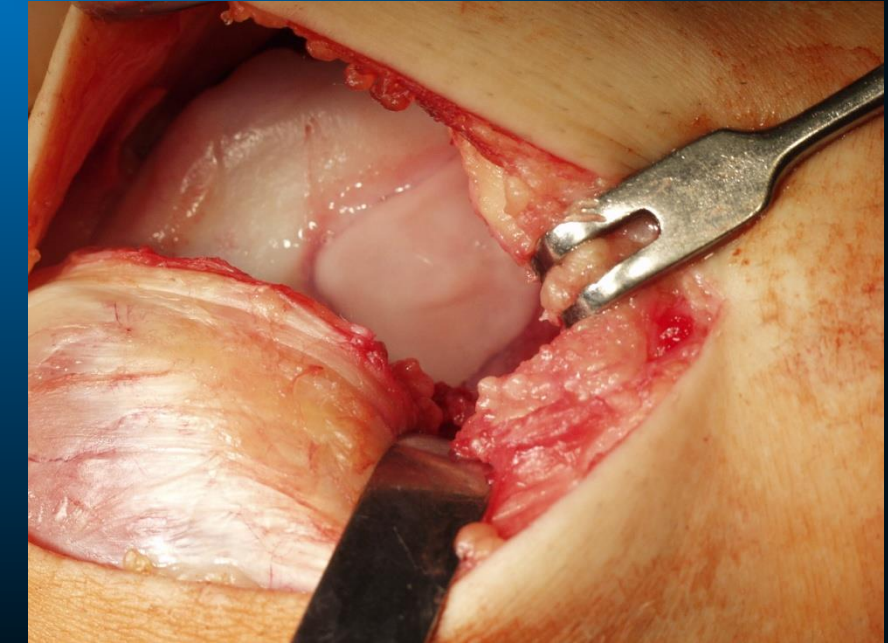
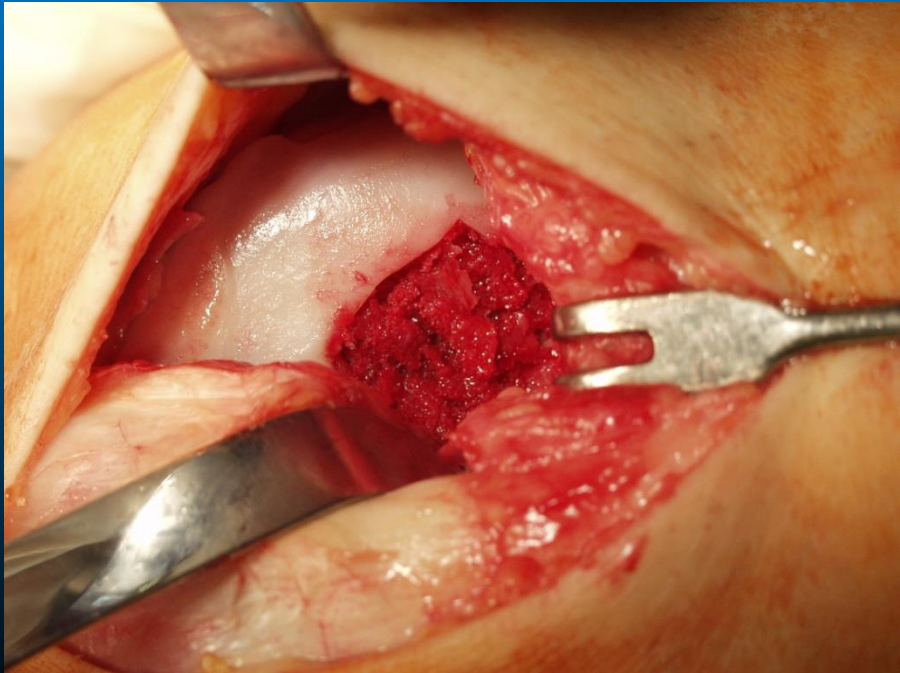
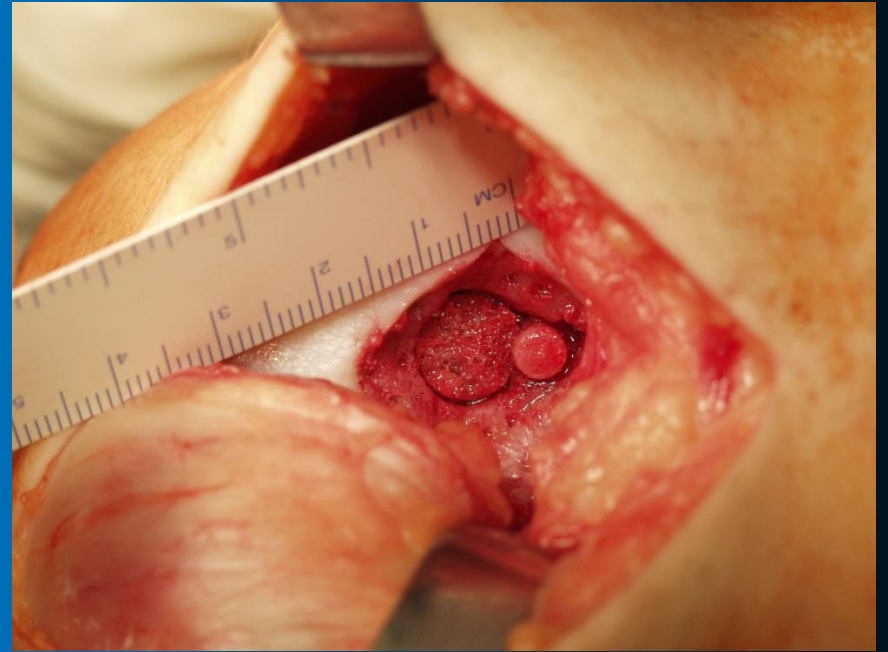
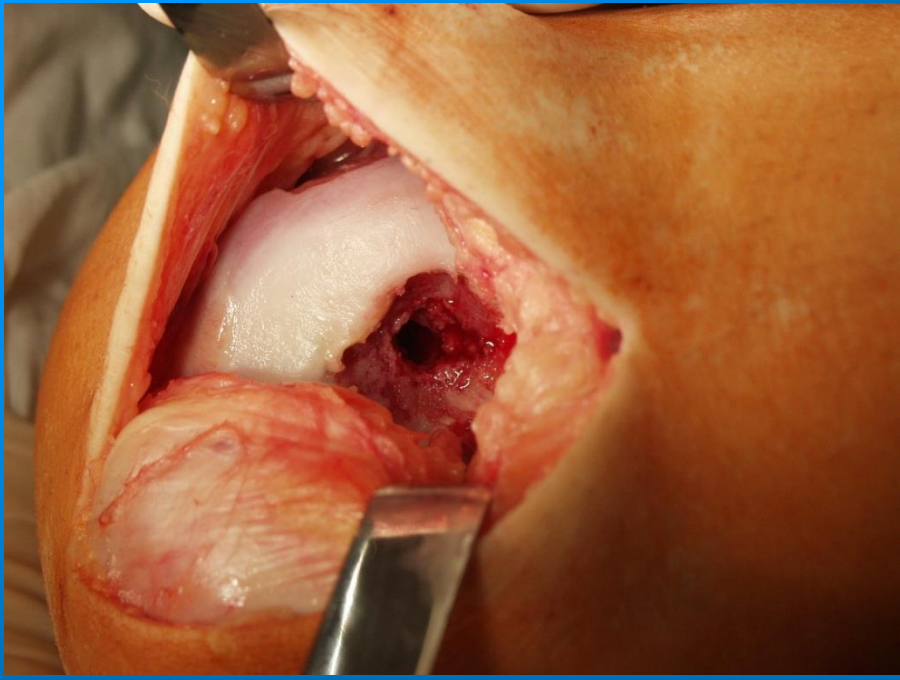
price



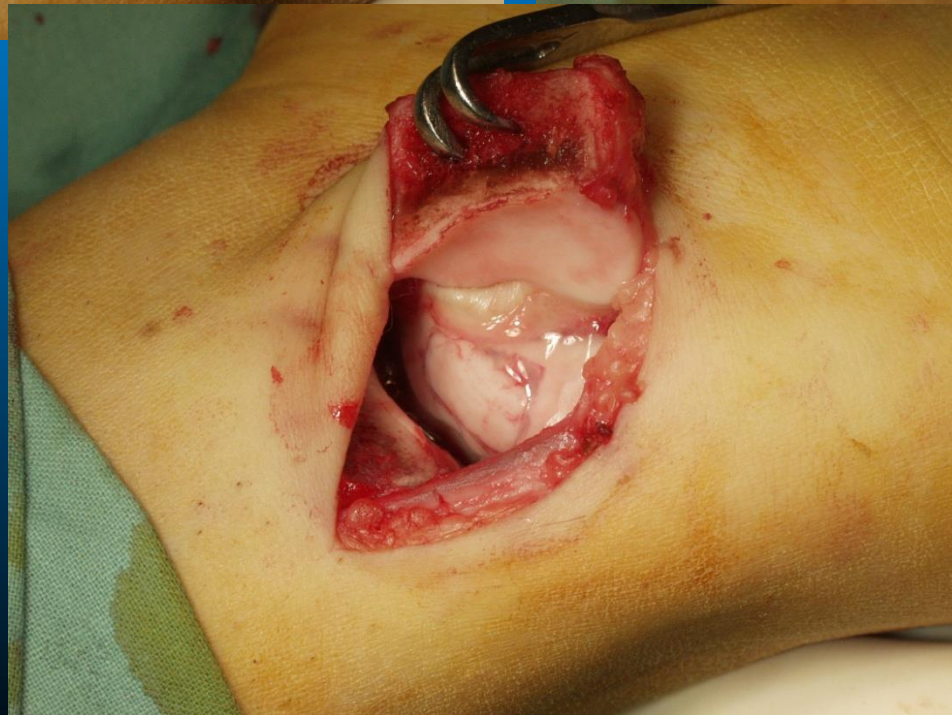
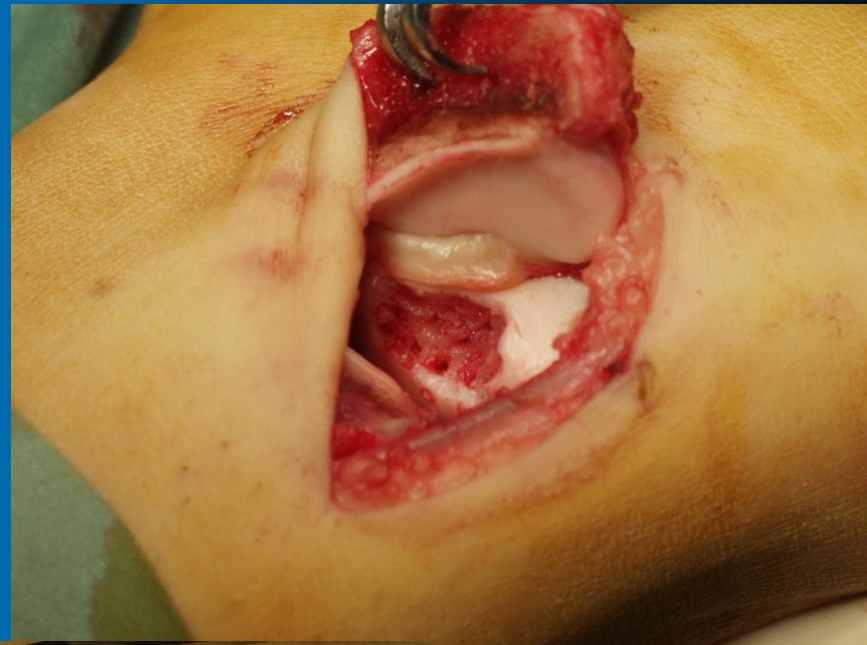














# ANKLE

- ARTHROSCOPY

- injury
- degenerative arthritis
  
- chondral defects
  - mosaicplasty
  - Chondrograft - chondrocytes transplantation

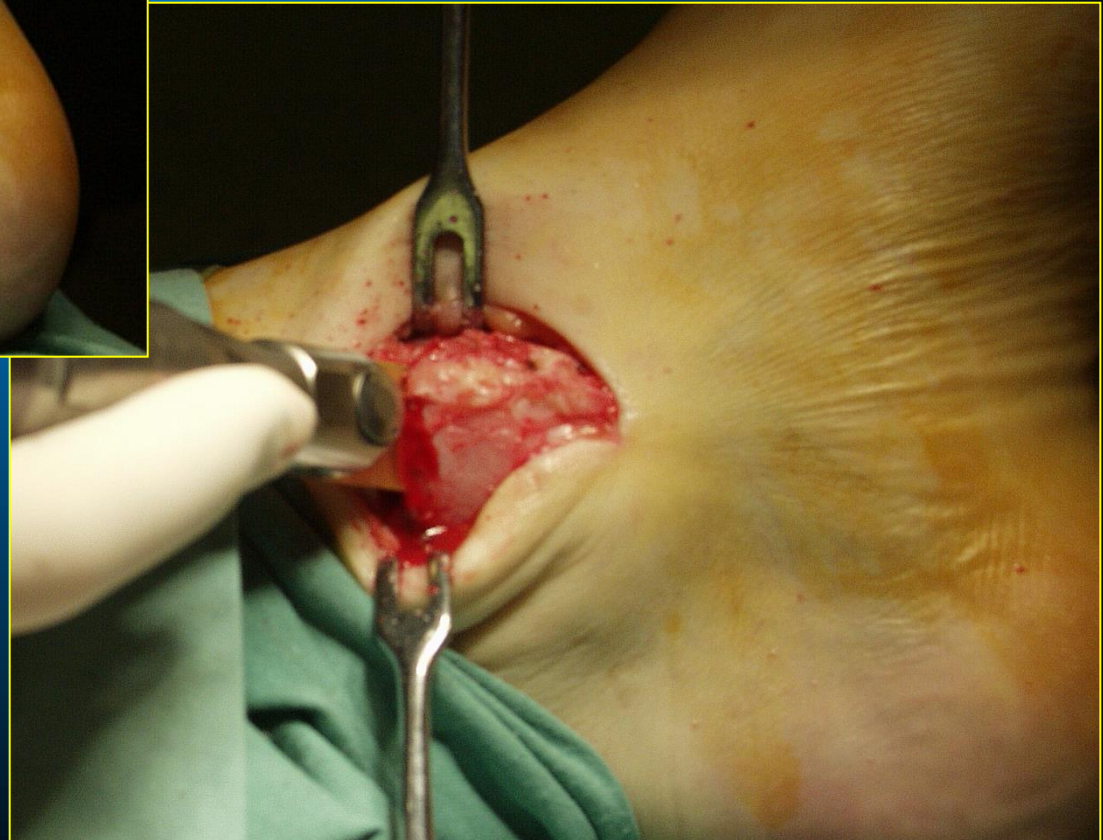




# Surgery - defect filling with chondrograft

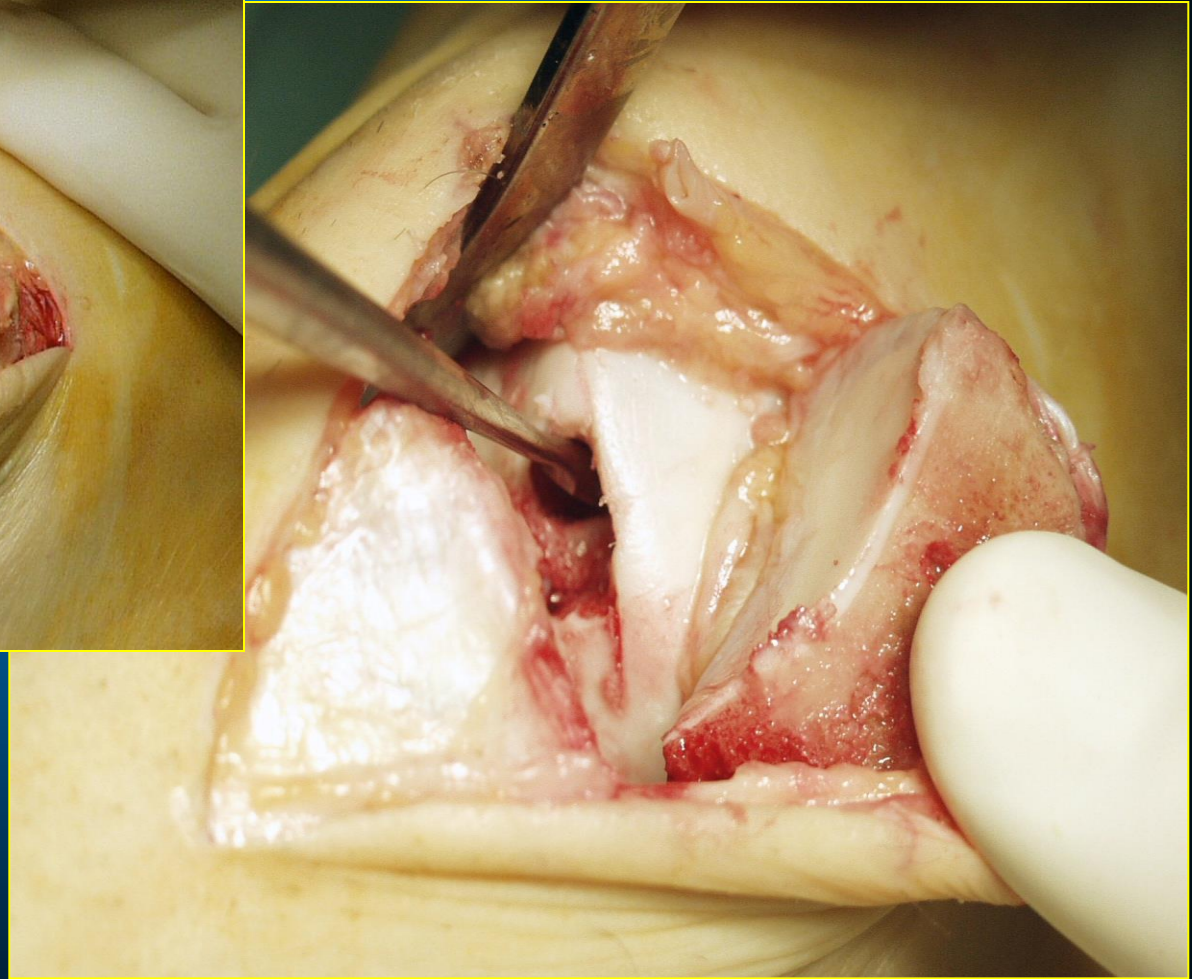
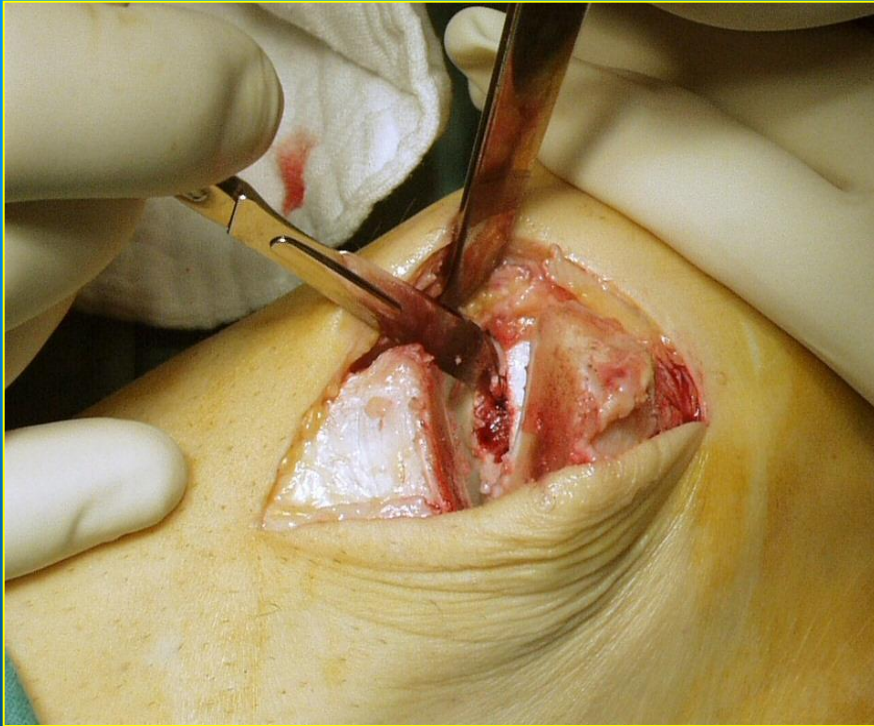


Medial malleolus osteotomy





# Surgery - defect filling with chondrograft

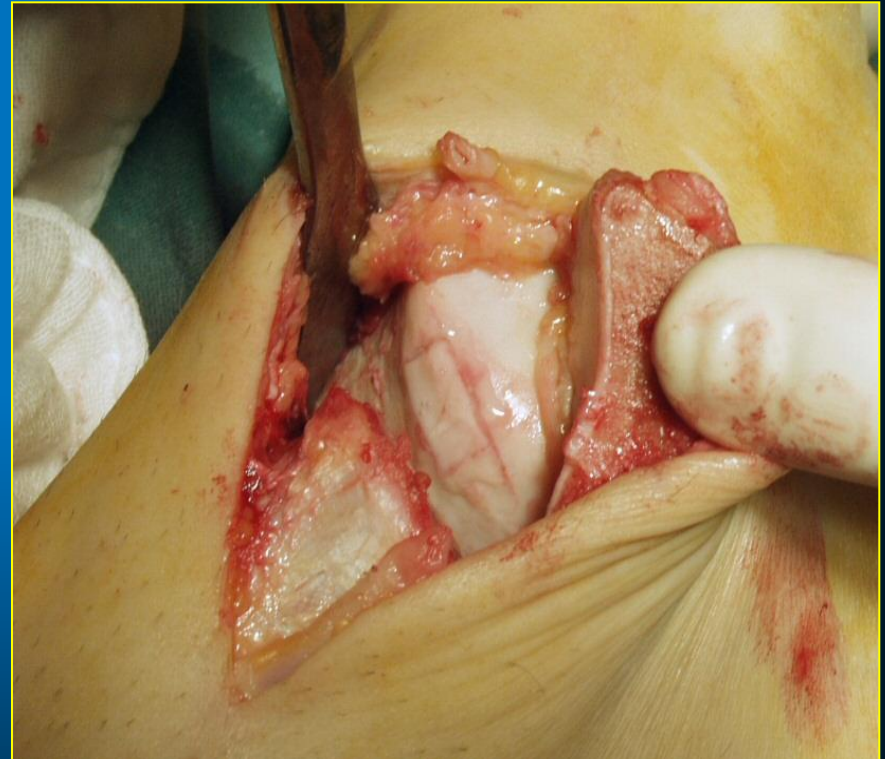
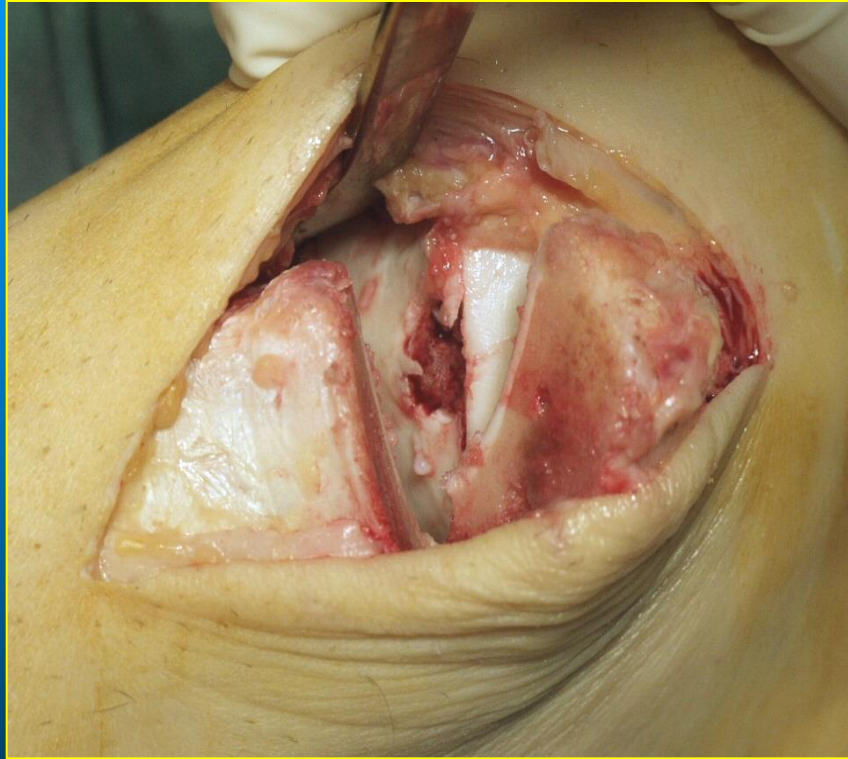


# Surgery - defect filling with chondrograft





# Surgery - defect filling with chondrograft





# Surgery - screw fixation of osteotomy



5.4.2016