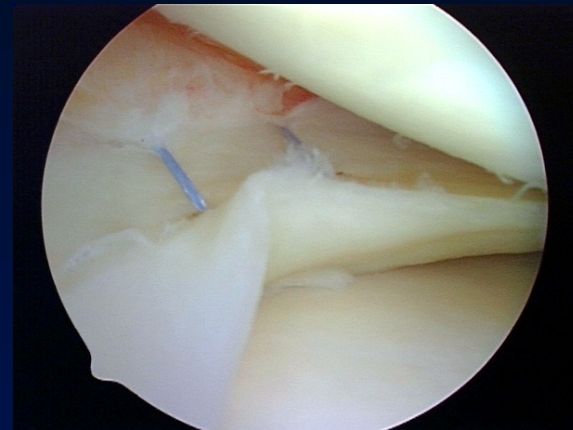
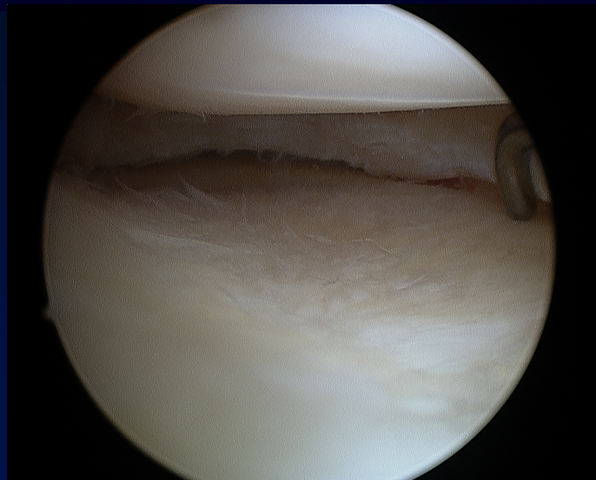


Is meniscectomy still valid ?



LIMITS of MENISCAL REPAIR



François Kelberine, Jean-Philippe Vivona

Aix en Provence - France



Meniscectomy

One of the most frequent orthopædic operation

Remove the injured part and no more



Meniscal repair

12% in stable knee in France

L'arthroscopie 2015 SFA Ed

Avoid cartilage damages

Protect degeneration

depend on surgeon's skills and experience

! Save the meniscus !

- Worldwide trend supported by KOL
- Based on long term FU > meniscectomy
 - systematic review minimal FU 8y
 - 5 studies = radiographic OA @ 8-16y
- ESSKA consensus
 - Onset worse > arthroscopic resection
 - Repair ASAP

Petty & Lubowitz Arthroscopy 2011

Kopf & al KSSTA 2018

Whatever the type of meniscal tear

Ishibashi ISAKOS 2021

- Lateral discoid (meniscoplasty)
- Traumatic
- Concomitant with ligament injury
- Degenerative meniscal tear

Meniscal repair raises questions

- Do we really prevent degeneration?

Rockborn KSSTA 2000

Paxton Arthrocopy 2011

- Iatrogenicity risks of repair?

- Tear pattern

- Vascularization

- Combined lesion

- Lasting of the tear

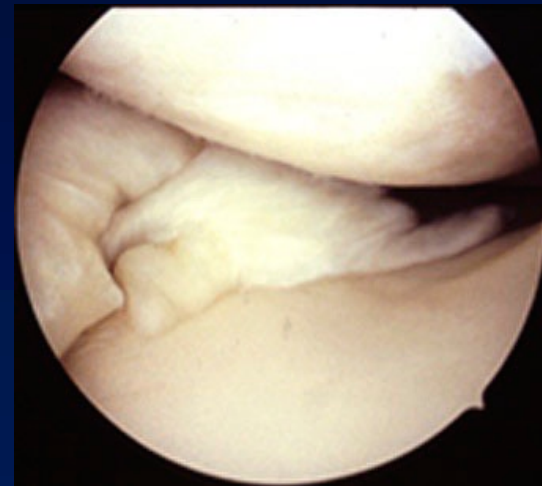
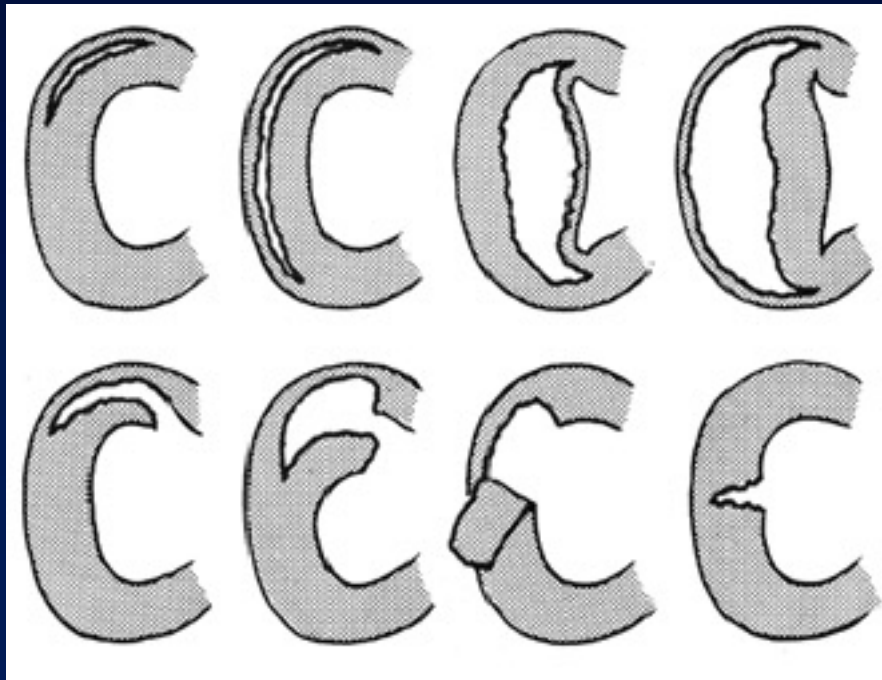
- Patient's age

- Activities (level & type)



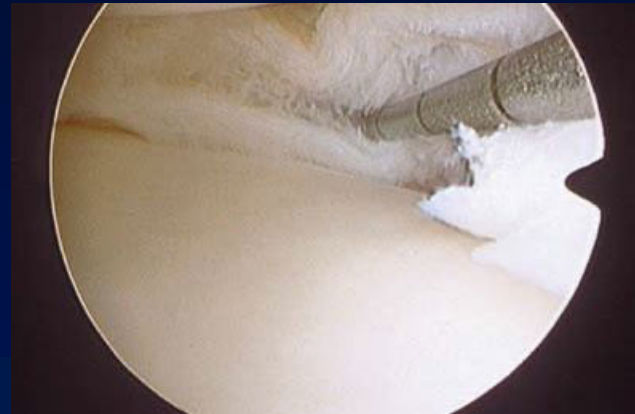
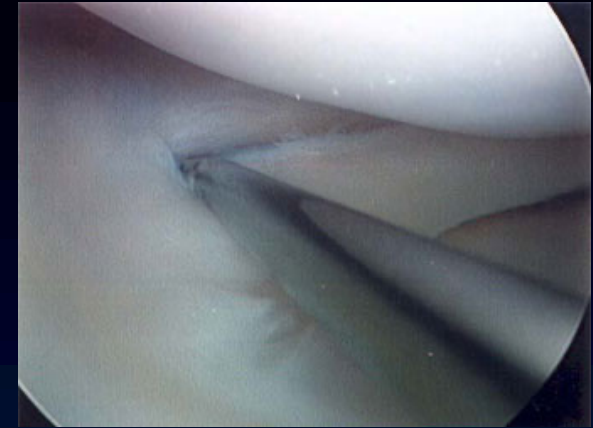
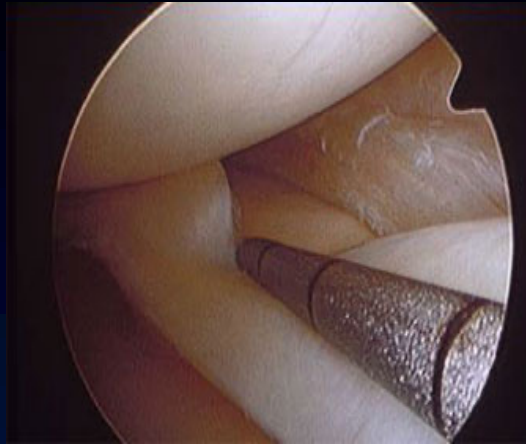
Meniscal Tear

- Pattern
- Location (extend, root, ramp)
- Quality of tissue itself ++

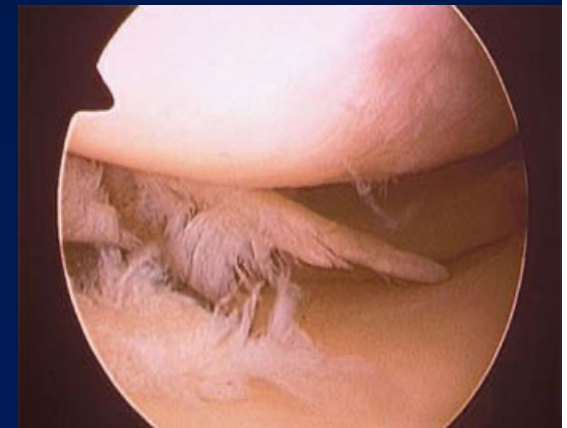


Pattern

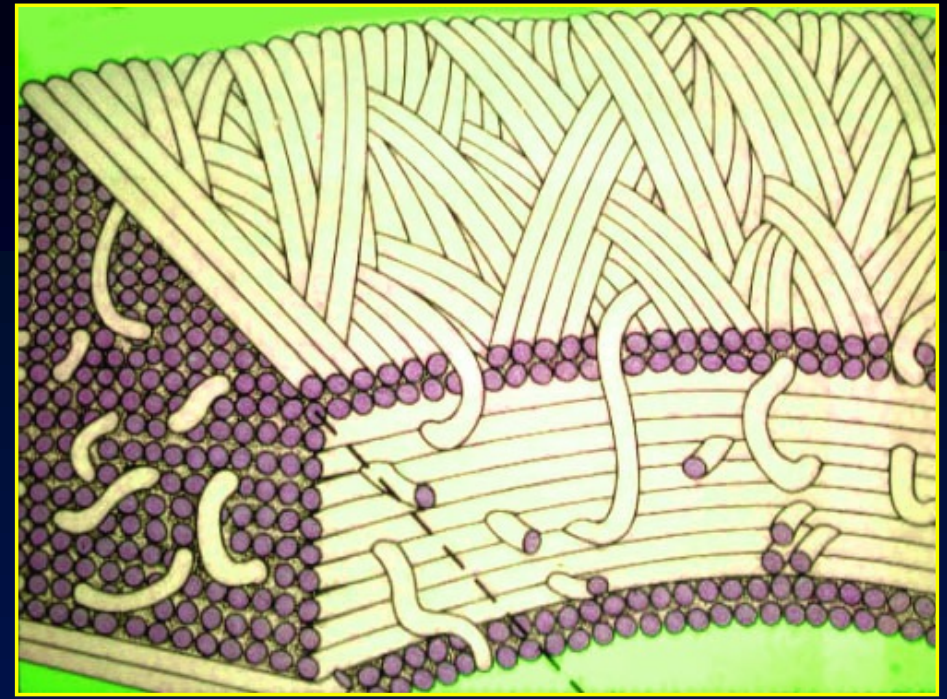
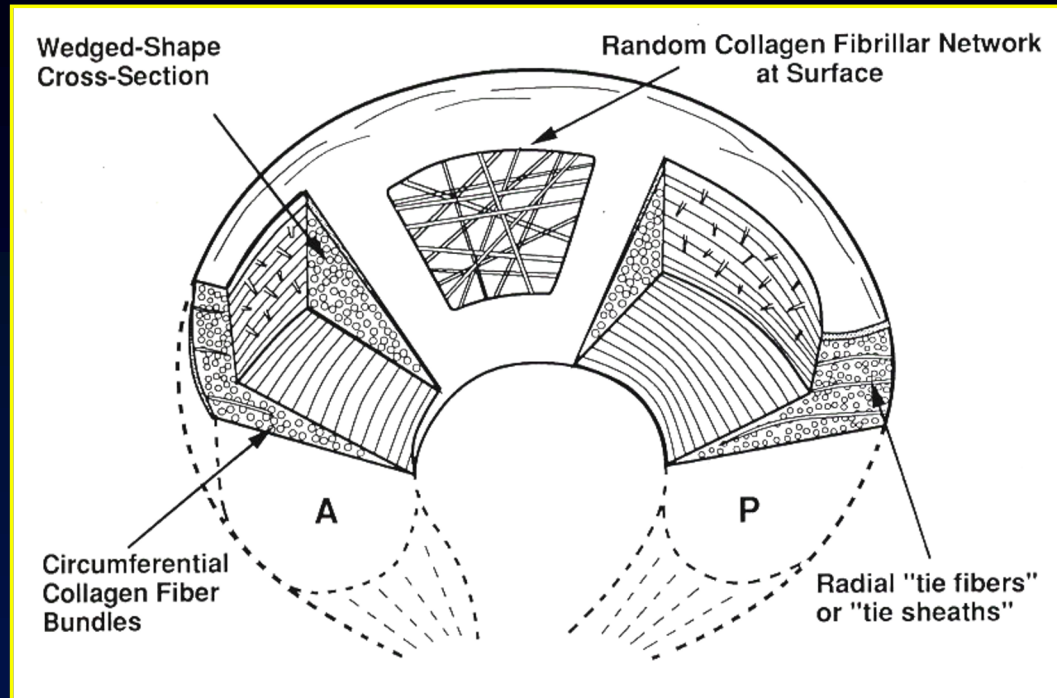
Longitudinal tears
Horizontal tears
Oblique tears
Radial tears



From trauma to degenerative
From simple to complex



Structure of the Meniscus

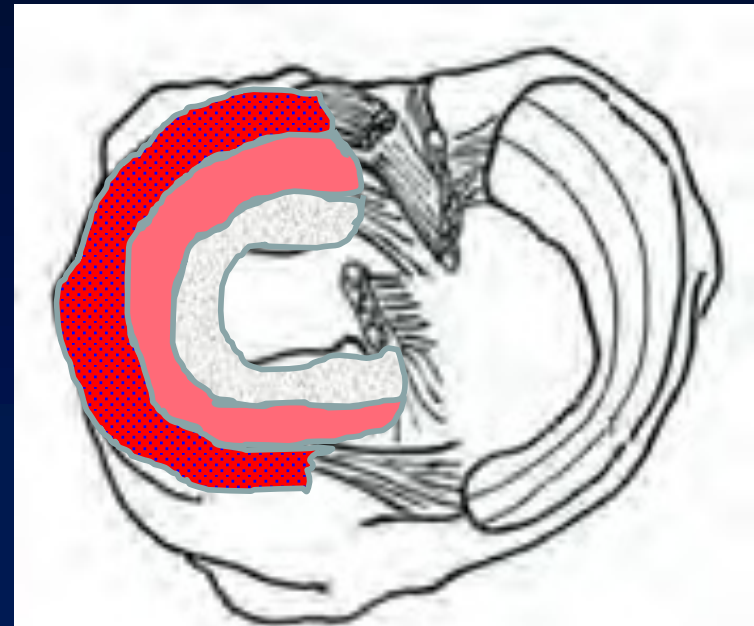


Circumferential fibers spread compressive load

Radial & oblique fibers enhance rigidity, prevent longitudinal splitting = Ties

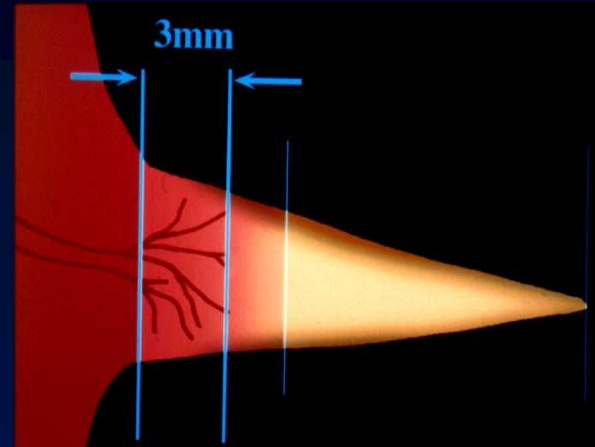
Healing capability

3 zones of blood supply



Is the healing effective?

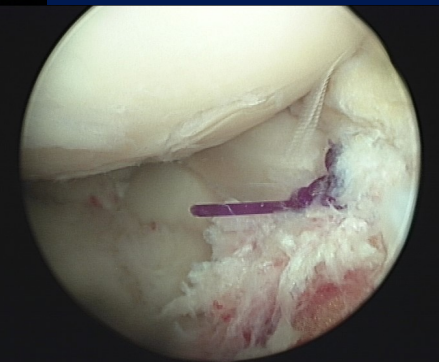
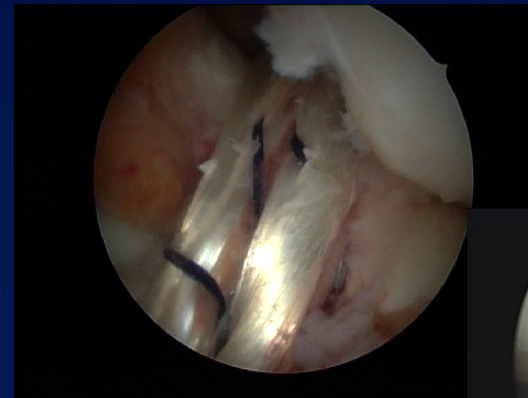
- Synovial, Red-Red, Red-white zones
- *eg* roots



- White-White zone?

Noyes JBJS 2010

- Biological enhancement
- Clot, trephination, GF,
- Bleeding from another area
 - (*eg* ACL, Tibial fracture)
- Cost, benefit ?



Degenerative Meniscal Tear

- Middle aged patient
- Start with oblique
- Tissue damages within the meniscus
- Long lasting onset



Degenerative Meniscal Tear

Resection @ 20 years > OA needing TKR

Aprato Arthroscopy 2021

Repair meta analysis : less OA and TKA

Krivich AJSM 2021

Better long term results but more re
surgery.....unclear

Feeley JAAOS 2018

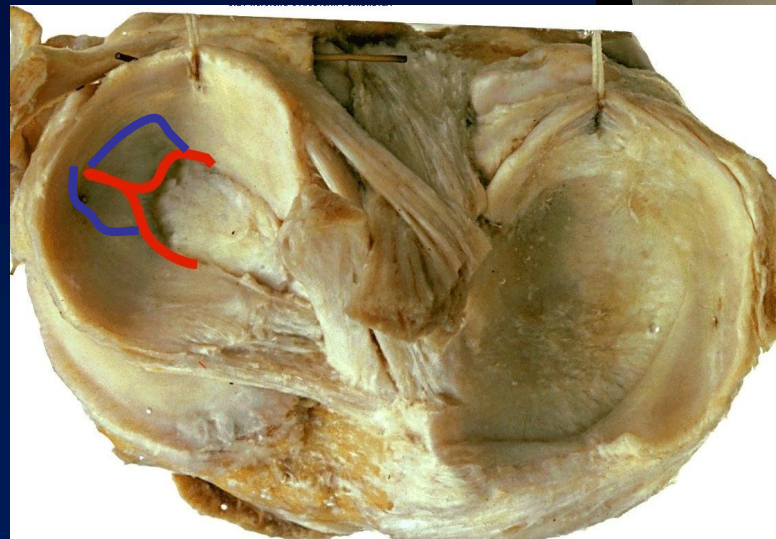
Symptomatic for acute RR zone tear

Weler Isakos 2021

! but it is degeneration !

LM Resection is not detrimental by keeping intact the stable peripheral circumferencial fibers which resists hoop stress

- Cyst
- Popliteus wall
- DMT
- Meniscopeplasty for discoid lesion



Patients

- **Age?**

El Kousy Sport Med Arthr Rev 2002

- **Morphotype**

- *Eg* varus & ML

- **Activities**

- Difficult to convince

- Deny

- Explain risk of OA

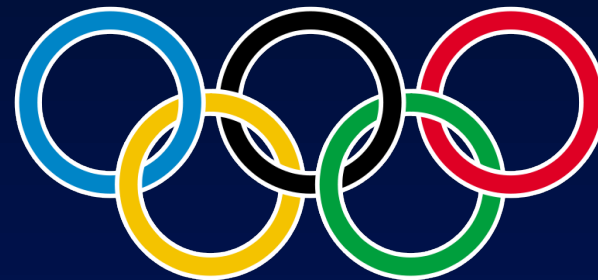


Patients

- **Activities**

- **ADL or sport**

- None or many
 - Special event



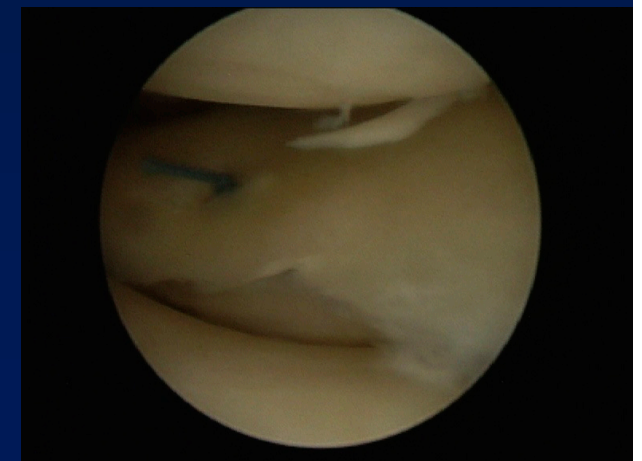
- **Difficult to convince**

- Explain risk of OA
 - Repair increases, long term FU for athletes but direct comparison impossible

Karia EJOST 2019

Risks of repair to assess

- Technically challenging
- Iatrogenic lesion
- Detrimental role of suture material ?



Meniscal tear with associated lesion

- Preserve menisci as much as possible
- The time of healing process of the procedure overlaps the meniscus one



- Radial ML tear in w-w zone ?

No doubt
Lateral compartment, Young age
Combined pathology



We know

Consequences of
meniscectomy

- Amount of resection
- Indications

eg traumatic mm tears

10% / Inside out

25% / All inside

We don't know yet

Consequences of
repair

at the same FU

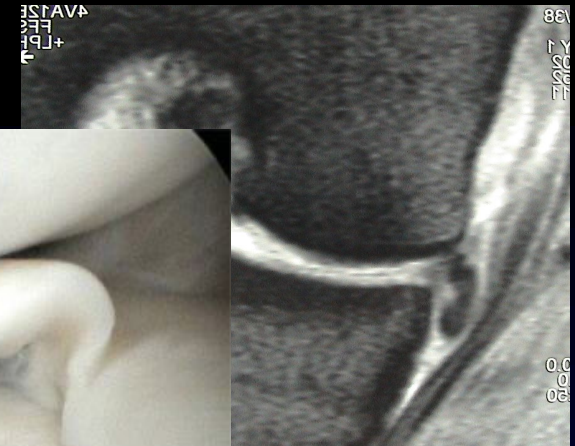
Complications

Failure

Recurrence

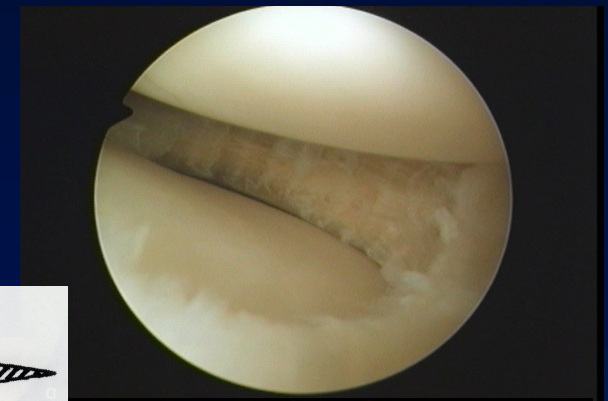
Meniscectomy

- Is still largely valid



- Partial meniscectomy (as conservative as possible)

- Leaf resection (minimal resection)



- Avoid cartilage damages

- Combined with repair

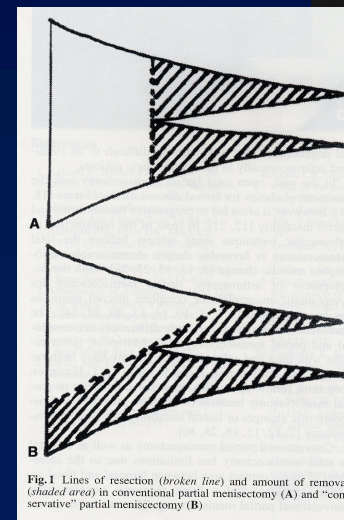


Fig.1 Lines of resection (broken line) and amount of removal (shaded area) in conventional partial meniscectomy (A) and "conservative" partial meniscectomy (B)

