There are two main possibilities

- **Open surgery**
  Intratendinous surgical treatment is often associated with a long rehabilitation period and varying clinical results

- **Arthroscopic surgery**
  Better option?
SURGERY

- Open intra-tendinous surgery

SURGERY

- Arthroscopic surgery
Surgical treatment is indicated in athletes if carefully followed conservative treatment protocol is unsuccessful after more than six months, making it impossible to practice in sports (Blazina grade 3).

There is no consensus in the literature on the best surgical procedure for patellar tendinosis when non-operative treatment fails. Also, no consensus about immobilisation. And no consensus about closing of the paratenon or not. In other words, more good studies needed.
Most studies are retrospective and use varying surgical techniques.

Studies that described surgical treatment of the inferior pole of the patella had 70% success compared to 90% for those that performed no patella bony work.

(Keading et al, CORR, 2006)

Open patellar tenotomy is the conventionally accepted surgical treatment of insertional patellar tendinopathy, but often requires six to nine months of rehabilitation.

Removal of degenerated tendon tissue, central part of the tendon, sometimes difficult to detect.

(Khan et al, BJSM, 1998)
Coleman reviewed 25 patellar tendon surgery papers and identified several methodological flaws in many of them.

(Cook et al, BJSM, 2001)

Coleman’s criticisms of the literature included: the nature of the studies (mainly retrospective case series); bias in subject recruitment and data collection; insensitive outcome measures; and the variable postoperative regimens.

Coleman score

(Cook et al, BJSM, 2001)
Neovascularisation evident on Doppler ultrasound correlates well with pain and poor function (Tan & Chan et al, *Disab & Rehab*, 2008)

Peritendinous injections and eccentric training decrease neovascularity, relieve pain and improve outcome (Tan & Chan et al, *Disab & Rehab*, 2008)
Although surgery is the last resort in those patients failing conservative management, it is still unclear how the removal of adhesions and excision of affected tendinopathic areas affects healing and vascularity, or resolves pain.

(Tan & Chan et al, Dis & Rehab, 2008)

Intratendinous surgical treatment is always associated with a prolonged (at least 6-9 months) rehabilitation period and sometimes varying clinical results.
Ultrasound and colour Doppler-guided arthroscopic shaving, have shown promising results (RCT)

(Willberg et al., BJSM, 2011)

Both treatment with ultrasound and colour Doppler-guided sclerosing polidocanol injections and arthroscopic shaving showed good clinical results, but patients treated with arthroscopic shaving had less pain and were more satisfied with the treatment result (RCT)

(Willberg et al., BJSM, 2011)
Taken together

Arthroscopic and conventional surgical techniques when compared show similar results with a success rate of approximately or more than 85%.

There is a tendency towards faster recovery in patients who undergo arthroscopy, with patients beginning sports activities sooner, often within less than six months after surgery.

Taken together

Nevertheless, arthroscopy is not found to be more successful (in terms of final outcome) than open surgery for patellar tendinopathy.
**SURGERY**

- Taken together
- **Q:** Conventional open surgical techniques – what is the problem – as results are close to 85% G/E?
- **A:** Surgical morbidity; long rehabilitation period

**SURGERY**

- Taken together
- **Q:** Arthroscopic techniques – why better – as results are very similar or close to 85% G/E?
- **A:** Less surgical morbidity; shorter rehabilitation period
Conclusion
So – does surgery work?
Yes, results are generally good
But, there are concerns, like surgical morbidity, long rehabilitation period and lack of well designed studies

THANK YOU