

Anterior Cruciate Ligament Reconstruction Registry

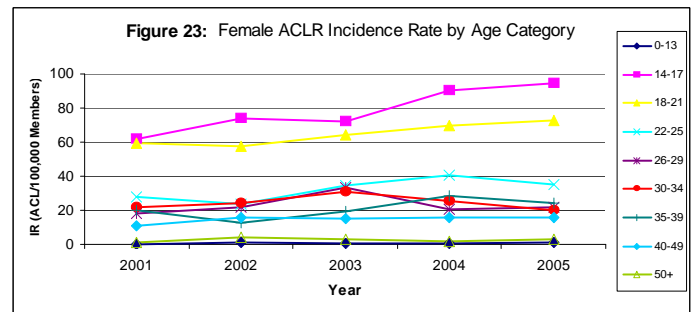
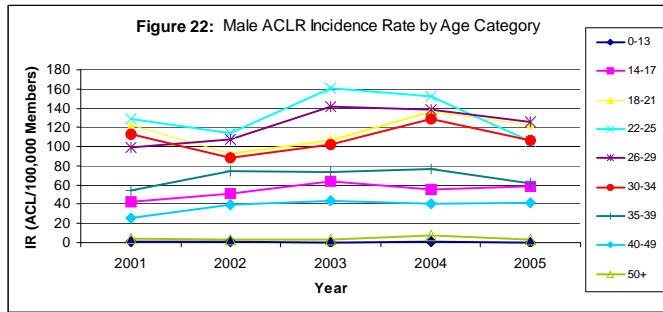
The Anterior Cruciate Ligament Reconstruction (ACLR) Registry tracks detailed information about surgical procedure, technique, graft type, fixation type and implants. The registry objectives are to:

1. Identify risk factors that lead to degenerative joint disease, graft failure, meniscal failure and failure to return to sports
2. Determine outcomes of various graft types and fixation techniques
3. Describe the epidemiology of ACLR patients
4. Determine and compare procedure incidence rates at participating sites
5. Provide a framework for future studies tracking ACLR outcomes



Background Data:

Our administrative databases include registry cases and non-registry cases performed before the ACLR registry was launched. Epidemiology trends from 2001 to 2005, indicate the incidence rate of ACLR decreased for 22-25 year old males, increased for 14-17, 26-29 and 40-49 year old males, and increased for 14-17 and 18-21 year old females⁹.



Patient Demographics:

As of June 30, 2008, there were 4,025 (95.2%) primary and 205 (4.8%) revision cases registered.

- ✓ Males comprise 65.1% of the cases with a mean age of 30, and females 34.9% of the cases with an average age of 28
- ✓ 25.5% of the cases are an acute injury (injury date <=90 days of surgery), and 74.5% are chronic (injury date >90 days of surgery)
- ✓ 21.2% (896) of the cases had a cartilage injury, and 61.8% (2,612) a meniscal injury
- ✓ Meniscectomy accounted for 42.8% of medial meniscus procedures, and 54.1% of lateral meniscus procedures

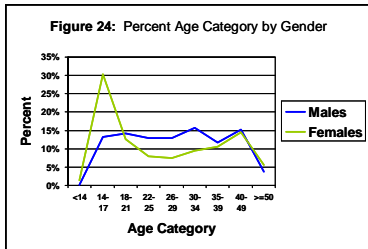


Figure 25: Cases with a Meniscal Injury.

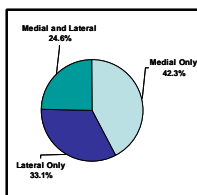


Figure 26: Medial Meniscus Procedure.

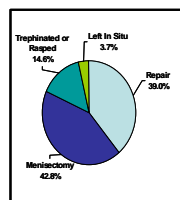
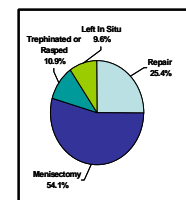


Figure 27: Lateral Meniscus Procedure.



Implants:

The most common primary ACLR grafts are patella tendon autografts (37.2% in males, 31.8% in females) and allografts (36.3% in males, 34.7% in females). The most common types of allografts are tibialis anterior (29.5%) and Achilles tendon (23.5%). Allografts were used in 83.3% of revision procedures.

Figure 28: Primary ACLR Graft Use.

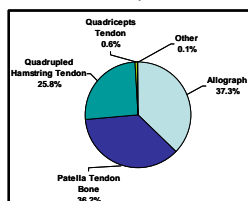
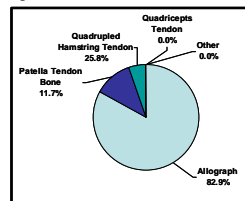


Figure 29: Revision ACLR Graft Use.



Outcomes:

Of the 4,230 primary and revision cases in the registry, 88% (3,720) were active Health Plan members. Using ACLR Registry post-operative reports and administrative databases, primary cases with revision, re-operation on both index and contralateral knee, and other complications are reported below.

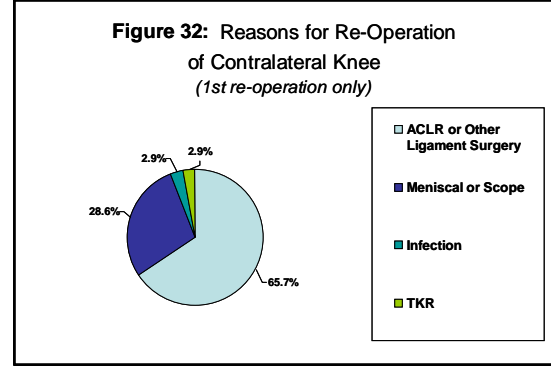
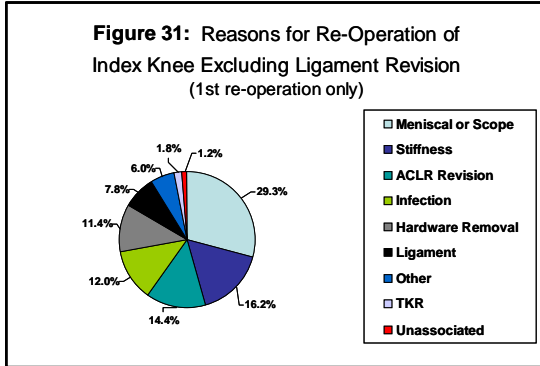
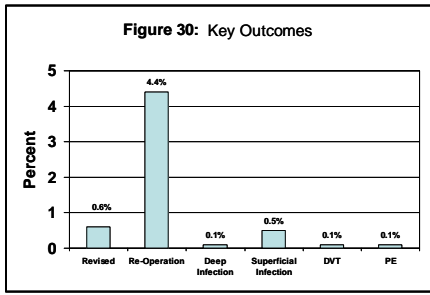
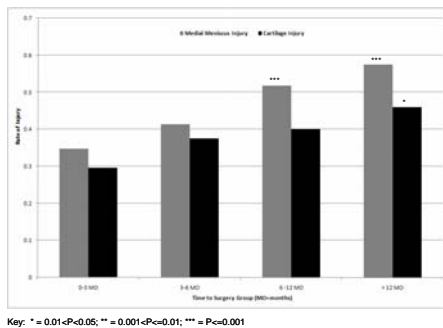


Figure 33: Time to surgery groups 6-12 months and >12 months were associated with increased risk of medical meniscus injury compared to the 0-3 months group¹². The time to surgery group >12 months was associated with increased risk of cartilage injury compared to the 0-3 month group¹².



Key: * = 0.01 < P < 0.05; ** = 0.001 < P < 0.01; *** = P < 0.001

Figure 34: Increasing age was associated with increased risk of cartilage injury ($P < 0.001$)¹².

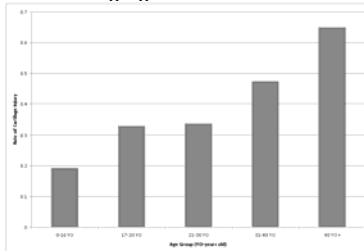
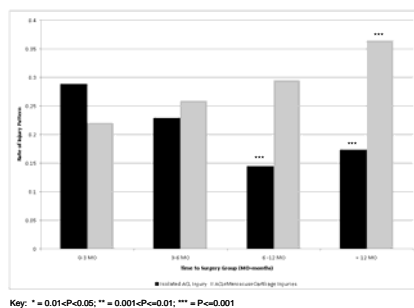


Figure 35: The later time to surgery groups were associated with a decreased risk of isolated ACLR injury and an increased risk of combined ACLR, meniscus and cartilage injuries¹².



Key: * = 0.01 < P < 0.05; ** = 0.001 < P < 0.01; *** = P < 0.001