



Scandinavia pioneered ACL registries, where are we now

Magnus Forssblad, MD, PhD, Ass Prof

Consultant - Orthopedic Stockholm Clinic.

Stockholm Sports Trauma Research center at
Karolinska Institutet.

FIFA Medical Centre of Excellence.

Registry Director Swedish ACL registry.

Member of Swedish FA, UEFA, FIFA Medical Committees



**Karolinska
Institutet**

Teaching Center

Background

- The Scandinavian knee ligament registries were established in Norway 2004 and in Sweden and Denmark 2005
- Include data from 110 000 patients
- Have led to more than 70 publications



**Karolinska
Institutet**

Teaching Center

Patient-related factors

- Younger patients report superior knee function and have an increased risk of additional ACL reconstruction
- The risk of revision ACL reconstruction does not differ between sexes; however, females have an increased risk of contralateral ACL reconstruction

Treatment-related factors

- Over 90% of all ACL reconstructions in Sweden and over 80% in Denmark are performed with hamstring tendon autografts. In Norway the majority of ACL reconstructions were performed with patella tendon autografts in 2017
- Hamstring tendon autografts are associated with small but superior short-term knee function compared with patella tendon autografts

Treatment-related factors

- Studies reporting on graft choice reported an increased risk of revision ACL reconstruction for hamstring versus patella tendon autograft
- Risk of ACL revision is reduced by 14% for every 0.5 mm increase in hamstring graft diameter

Injury-related factors

- Concomitant injuries are associated with inferior patient-reported knee function

Strengths

- High coverage rate for surgeons (> 90 %) in Sweden
- Only about 20 questions for the surgeon
- Platform for randomized studies
- Easy statistics for surgeons
- International cooperation



**Karolinska
Institutet**

Teaching Center

Weaknesses

- Low response rate for patients (< 70 %)
- We use KOOS and EQ5 – not really ACL specific
- Non-operative treatments are not included



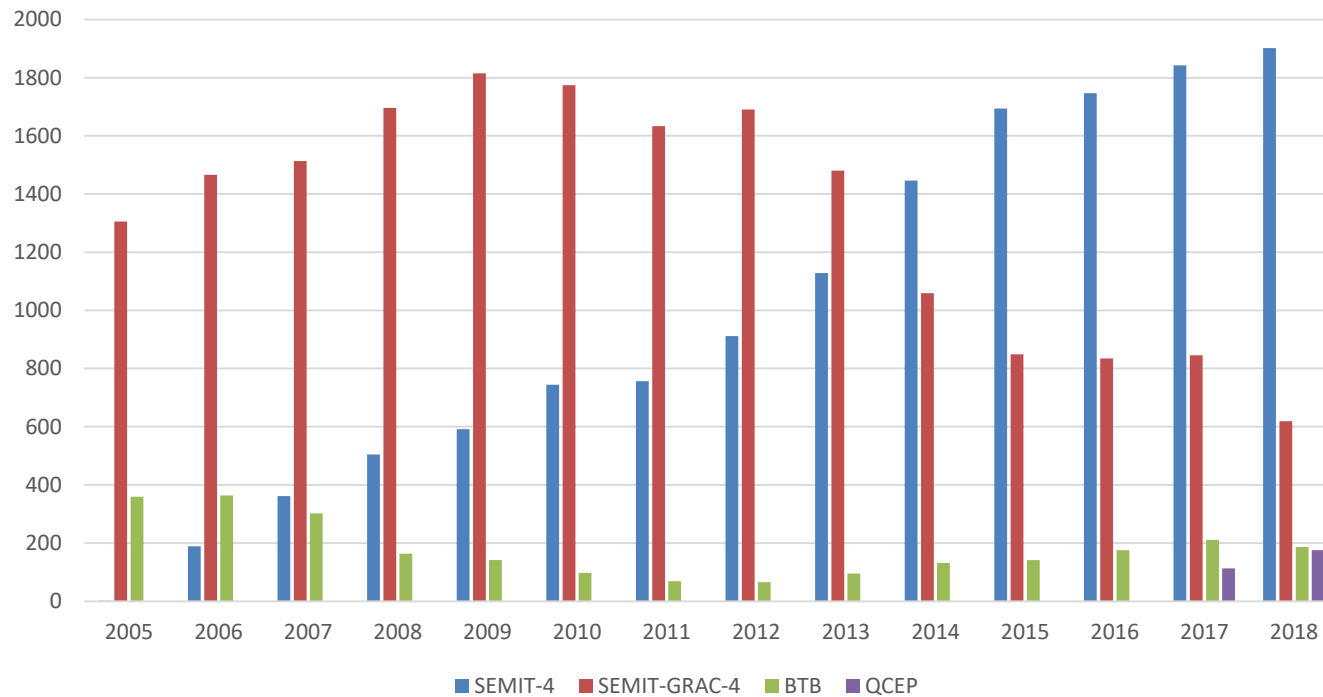
**Karolinska
Institutet**

Teaching Center

Latest trends

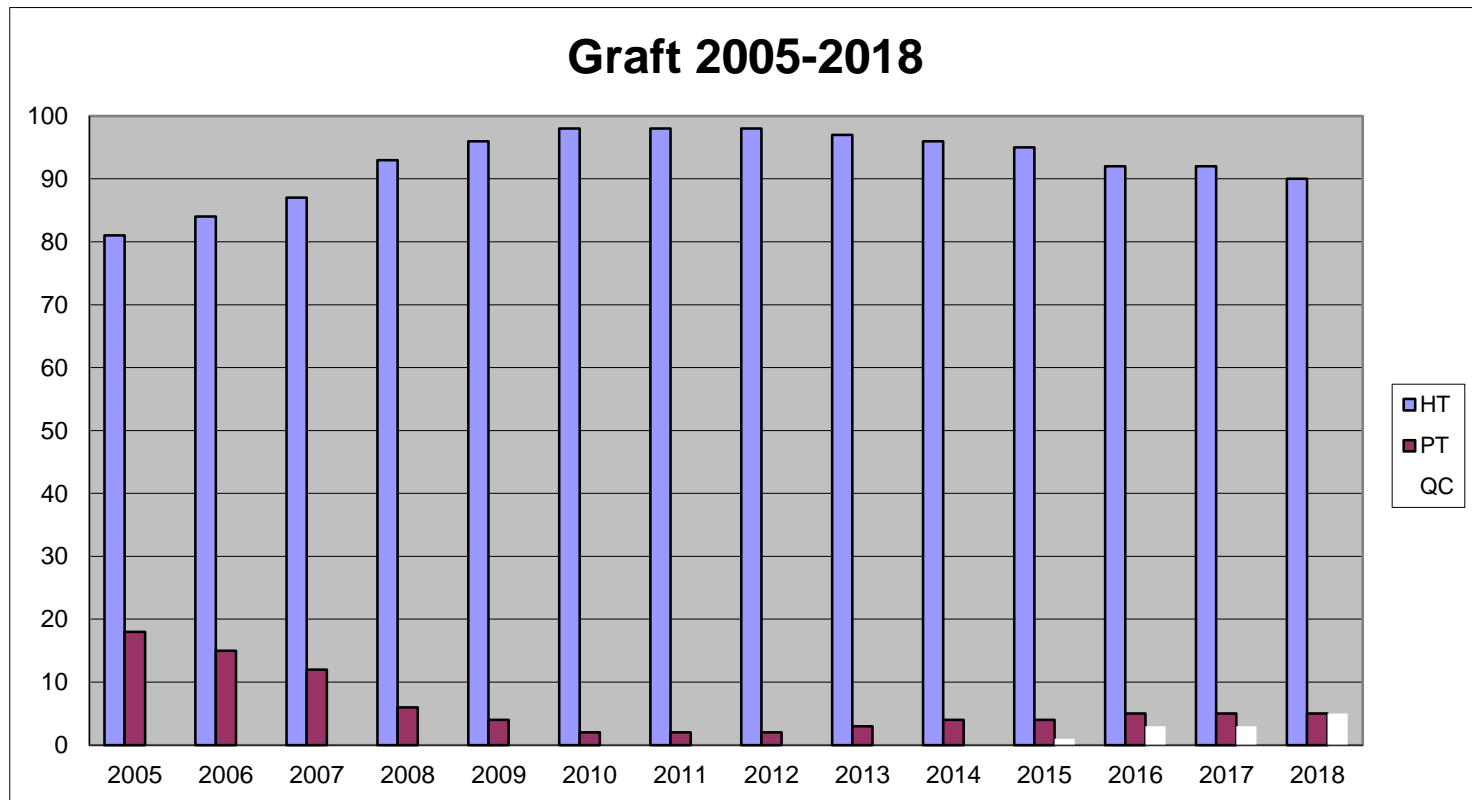
- Sweden – Quadrupled semitendinosus with cortical fixation 50 % and Semit/Grac 90 %

Grafts 2005 - 2018



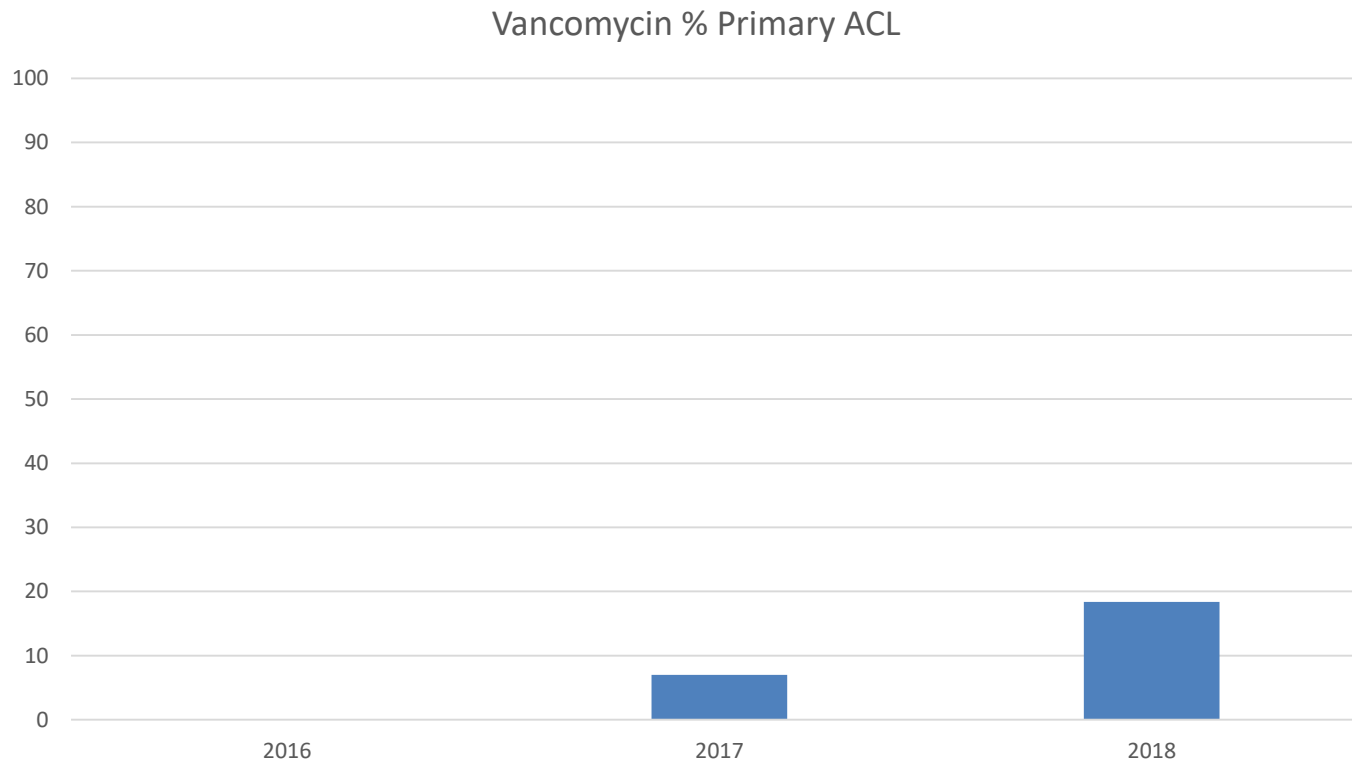
Latest trends

- Sweden – Quadriceps graft 5 %



Latest trends

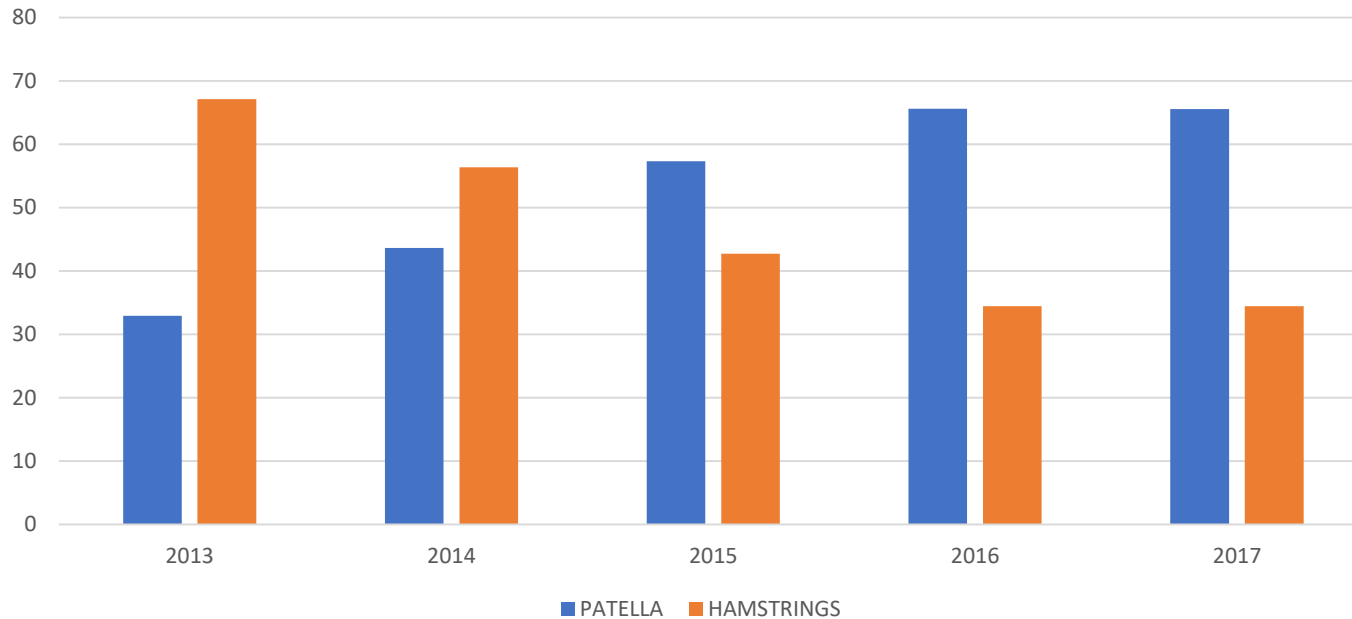
- Sweden – Vancomycin from 0 to 20 % in two years



Latest trends

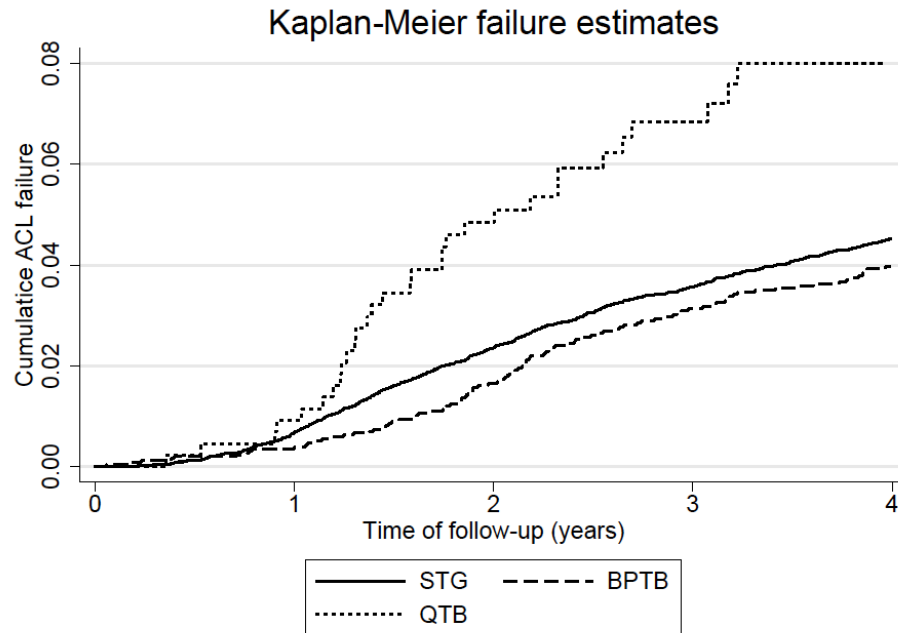
- Norway – Patella tendon from 35 % to 65 % in 5 years

Graft Norway 2013-2017



Latest trends

Denmark – Quadriceps more revisions but opposite in Sweden (4.9 % vs 1.1 %)



2 year revision rates

- QTB 4.9 %
- STG 2.3 %
- BPTB 1.6 %

Take home message

ACL Registries are a very useful platform for development of ACL surgery and for discussions about surgical techniques and outcome!



**Karolinska
Institutet**