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SPEAKER NOTES

Per Hölmich

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27TH & 28TH JUNE 2016

THE NATIONAL FOOTBALL CENTRE, ST GEORGE'S PARK

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PROFESSOR OF TRAUMA & ORTHOPAEDIC SURGERY

UNIVERSITY OF WARWICK

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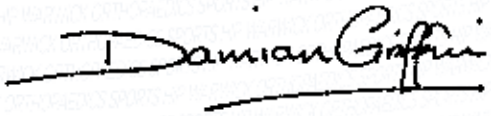
Dear Colleague,

The Sports Hip Conference will run again in 2018 as part of our portfolio of Sports Injury conferences. Some of you may have already attended the Sports Foot & Ankle, Sports Shoulder and and Sports Knee conferences. The dates for the next events will shortly be published on our website
www.sports-surgery.org

The key feature of these Sports Injury conferences is that we explore the latest ideas and most difficult problems in a relatively small group, guided by an expert international faculty.

Please do let us know if you have any thoughts about the meeting or any suggestions as to how we might develop it in the future.

With very best wishes.



PROFESSOR DAMIAN GRIFFIN
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Per Hölmich



Per Hölmich is the Professor of Orthopedic Surgery at the University of Copenhagen and is also Chief Surgeon at the Department of Orthopaedic Surgery, Amager and Hvidovre University Hospital in Denmark. The Center is dedicated to arthroscopic surgery and sports orthopaedics. He specialises in arthroscopic surgery and his main research areas are hip and groin problems, overuse injuries, adolescent sports injuries and hamstring injuries.

Per is the Head of the Arthroscopic Center Hvidovre & Sports Orthopedic Research Center – Copenhagen (SORC-C) and the Strategic Lead of Sports Groin Pain Center at Aspetar Hospital in Doha, Qatar, where the current research focus is Groin, Hamstring, and Patello-femoral injuries, Prevention and Arthroscopic hip surgery.

Per has worked with athletes throughout his career at both the elite and national level as well as with recreational athletes.

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Session 6

FEMOROACETABULAR IMPINGEMENT 1: TREATMENT OPTIONS

Do open and arthroscopic surgery work?

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Do open and arthroscopic surgery for FAI work?

Per Hölmich

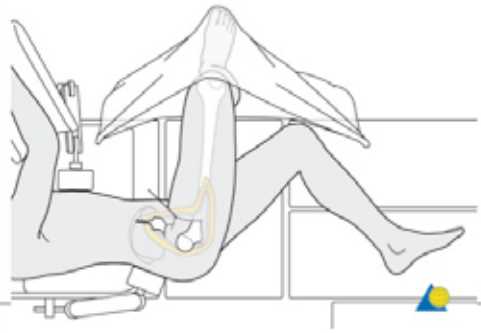
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Doha, Qatar



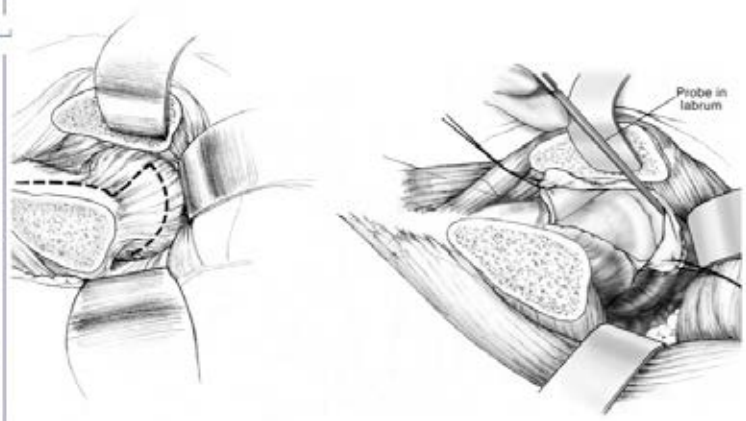
Open surgery for FAI

The technique as described by Ganz et al. is basically an anterior dislocation of the hip after a trochanteric flip osteotomy, avoiding injury to medial femoral circumflex artery (MFCA) maintaining the blood supply to the femoral head

Kuhns et al; Front. Surg. 2015

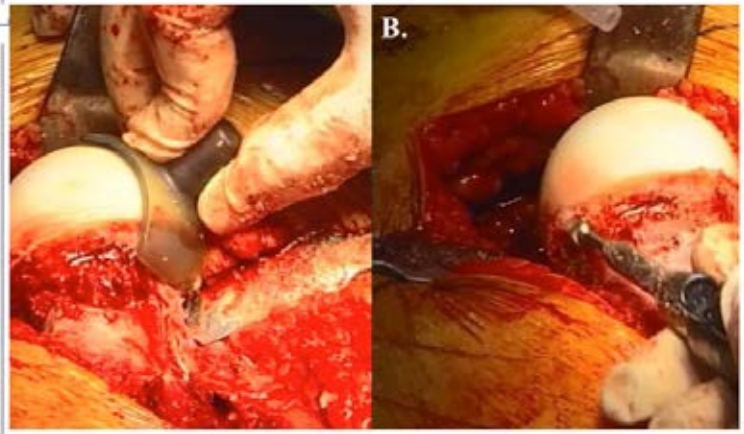


Anterior Z capsulotomy. Adapted with permission from Dr. Rafael J. Sierra and the Mayo Foundation, Rochester, MN, USA.

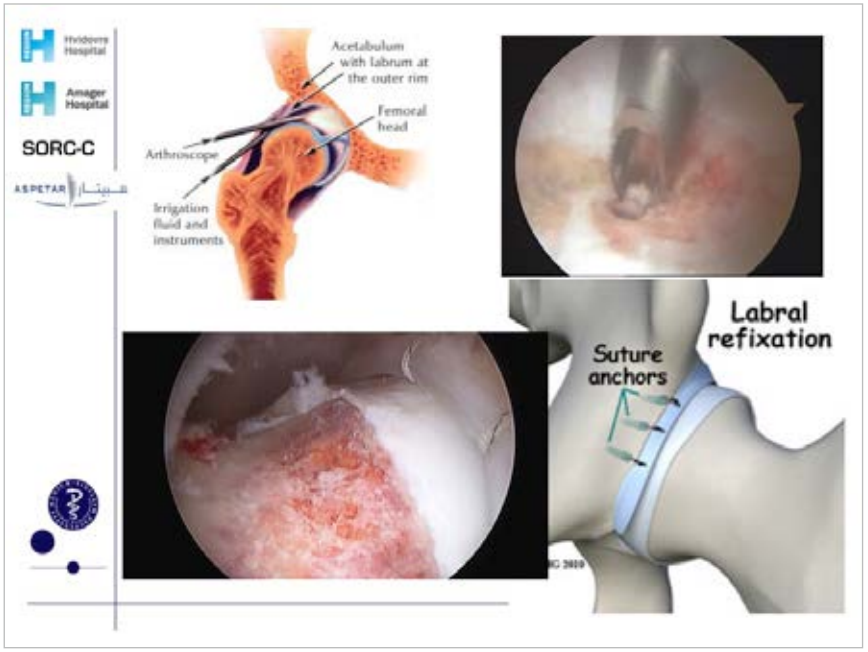


Kuhns et al; Front. Surg. 2015

Open treatment of cam lesion. **(A)** Restoration of femoral head–neck offset and head sphericity with intraoperative templates. **(B)** The high speed burr can be used safely in the posterolateral area with direct visualization of the retinacular vessels. Adapted with permission from Dr. Robert T. Trousdale and the Mayo Foundation, Rochester, MN, USA.



Kuhns et al; Front. Surg. 2015



Arthroscopic Versus Open Treatment of FAI
- A Systematic Review of Medium- to Long-Term Outcomes

- 16 studies met inclusion criteria
  - 9 open surgical hip dislocation
  - 7 hip arthroscopy
- Open studies n= 600 hips
  - mean follow-up of 57.6 months (4.8 years, range 6-144)
- Arthroscopic studies n=1484 hips
  - mean follow-up of 50.8 months (4.2 years, range 12-97)

Nwachukwu et al, AJSM 2016

Arthroscopic Versus Open Treatment of FAI
- A Systematic Review of Medium- to Long-Term Outcomes

- THA was outcome endpoint
- Overall survival rate of
  - 93% for open
  - 90.5% for arthroscopic procedures (P = 0.06)
- Advanced age and pre-existing chondral injury were risk factors for progression to THA after both treatments

Nwachukwu et al, AJSM 2016

PROM outcome

- Change in pre- and postoperative score

	PRE	Change
• HOS SSS (0-100)	45.3	+32.2
• mHHS (0-100)	59.6	+23.4
• NAHS (0-100)	53.3	+22.9
• SF-12 PCS (0-100)	45.1	+13.3
• VAS (0-10)	6.4	- 4.3

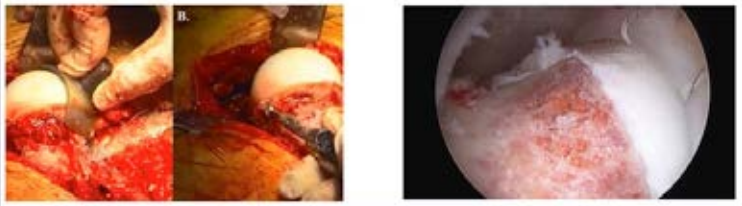
PROM - outcome score

- Direct comparison of PROM between the 2 procedures was limited by outcome measure heterogeneity
- Both treatments demonstrated good outcomes in their respective scoring systems
- Hip arthroscopy was associated with a higher general Health-Related Quality of Life (HRQoL) score on the SF-12 physical component score ($P < 0.001$)
- Prior studies have suggested that in the short term, undergoing arthroscopic FAI correction is associated with improved ability to return to sports
- However, this review suggest that by the time of medium-term follow-up, there is no longer a sport-specific advantage associated with hip arthroscopy

Nwachukwu et al, AJSM 2016

Open – Arthroscopic FAI surgery?

- Arthroscopic surgery has shown slightly superior short- and mid-term outcomes
- Complex joint morphology as combined dysplasia and FAI, may preclude arthroscopy in favour of an open approach
- As with other surgeries, the approach taken to FAI must be individualized to
  - reflect patient anatomy and preference
  - accommodate surgeon comfort and technical skill



Kuhns et al; Front. Surg. 2015

Results of surgery for FAI - open or arthroscopic

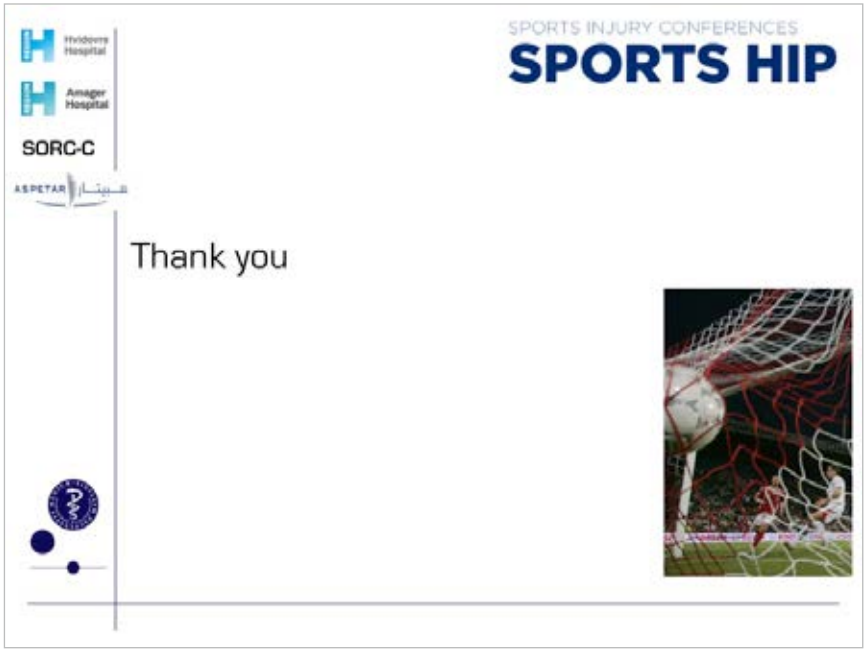
- Both techniques seem to deliver satisfactory results but...
- The majority of the studies has high risk of bias owing to
  - small sample size
  - limitations of observational study designs
  - variations in surgical technique
  - variations in outcome measures

On-going trials in FAI

- FIRST: Femoroacetabular Impingement Randomized Controlled Trial (McMaster University, Ontario, Canada).
  - A randomized controlled trial comparing operative versus sham treatment
- UK FASHIoN: UK Full Randomized Controlled Trial of
  - Arthroscopic Surgery for Hip Impingement Versus Best Conventional Care (University of Warwick, UK)
- FAIT: Trial of Femoroacetabular Impingement Treatment (University of Oxford, UK)
  - A randomized controlled trial evaluating operative versus non-operative treatment

Next: Trials to compare conservative treatment and surgery – Damian Griffin


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Thank you

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Session 7

FEMOROACETABULAR IMPINGEMENT 1: HOT TOPICS

Mini-Battle

Management of asymptomatic FAI hips

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CONTACT THE AUTHOR

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Management of asymptomatic FAI hips

Per Hölmich

Sports Orthopedic Research Center – Copenhagen (SORC-C)
University of Copenhagen, Denmark
&
IOC Sports Medicine Copenhagen
- Research Centre for Injury Prevention and Protection of Athlete Health
&
Sports Groin Pain Center
Aspetar Orthopaedic and Sports Medicine Hospital
Doha, Qatar



A Cam Deformity Is Gradually Acquired During Skeletal Maturation in Adolescent and Young Male Soccer Players

A Prospective Study With Minimum 2-Year Follow-up

Rintje Agricola,*† MSc, Marinus P. Heijboer,† MD, Abida Z. Ginai,† MD, PhD, Pauline Roels,§ MSc, Amir A. Zadpoor,§ PhD, Jan A.N. Verhaar,† MD, PhD, Harrie Weinans,§‖ PhD, and Jan H. Waarsing,† PhD
Investigation performed at Erasmus MC University Medical Center, Rotterdam, the Netherlands

- Cam deformities gradually develop **during skeletal maturation**
- Probably stable from the time of growth plate closure
- **Might be prevented by adjusting athletic activities** during a small period of skeletal growth

AJSM 2014





Radiographic Abnormalities Common in **Senior Athletes** With Well-functioning Hips but **Not** Associated With Osteoarthritis

Anderson et al; CORR 2015

- 547 senior athletes - 55% men, 45% women; 1081 hips,
- Mean age 67 years (SD 8 years)
- 83 % (898 of 1081) of hips had radiographic FAI
- 67% (599 of 898) were cam-type FAI







Radiographic Abnormalities Common in **Senior Athletes** With Well-functioning Hips but **Not** Associated With Osteoarthritis

Anderson et al, CORR 2015

- Increased risk of FAI type morphologies in athletes who participated in competitive sporting events during early adult years (OR, 1.49)
- Participants who reported lifetime participation in competitive sports were at an increased risk of OA compared with those who did not (OR, 1.75)
- Radiographic findings of FAI were **not predictive of OA** after controlling for age and sex

What have we learned so far?

- It is possible to get old with radiologic FAI and still participate in sport with no hip pain
- Those with radiologic FAI do not get more OA than the "normal" hips

67 **asymptomatic** football players (mean age 21)

- 95% of had at least one sign of cam or pincer impingement
- 77% had more than one sign
- 72% had an abnormal alpha angle (>50°)

Kapron et al JBJS 2011



What have we learned?

- It is possible to get old with radiologic FAI and still participate in sport with no hip pain
- Those with radiologic FAI do not get more OA than the "normal" hips
- Young asymptomatic football players have a lot of radiologic FAI without having symptoms

The John Charnley Award: Redefining the Natural History of Osteoarthritis in Patients With Hip Dysplasia and Impingement

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- 722 patients under 55 years who had a unilateral THA
- Pre op x-rays reviewed
- All with Tönnis Grade 0 and a minimum 10 year follow-up were included
- Mean age at the time of study inclusion was 47 years (range, 18–55 years)
- 56% female
- Mean follow-up 20 years (range, 10–35 years)

Wyles et al; CORR 2016

The John Charnley Award: Redefining the Natural History of Osteoarthritis in Patients With Hip Dysplasia and Impingement

SORC-C



- 48 Dysplastic, 74 FAI, and 40 normal (n=172)
- Changes toward dysplastic morphology increase the risk of degenerative change
- Natural history of patients with FAI was quite similar to structurally "normal hips"
- These findings suggest that correction of FAI to a normal morphology may only minimally impact the natural history

Wyles et al; CORR 2016

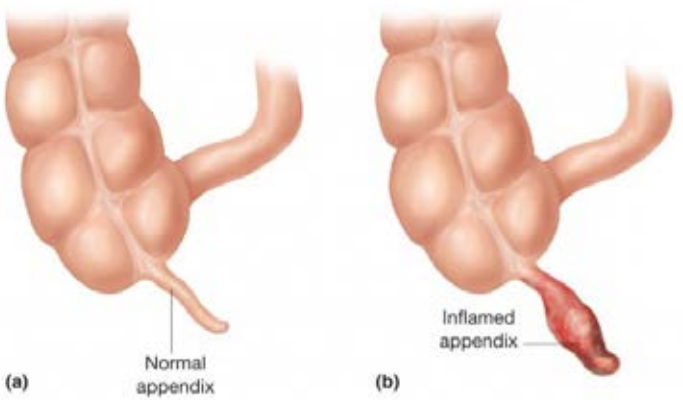
What have we learned?

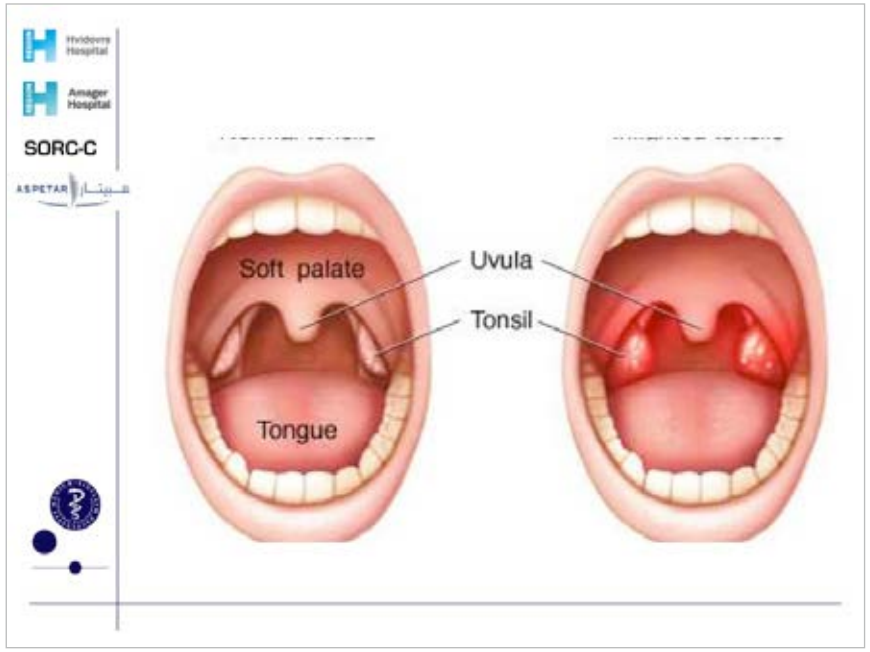
SORC-C

- It is possible to get old with radiologic FAI and still participate in sport with no hip pain
- Those with radiologic FAI do not get more OA than the "normal" hips
- Young asymptomatic football players have a lot of radiologic FAI without having symptoms
- Natural history of patients with FAI is quite similar to structurally "normal hips"

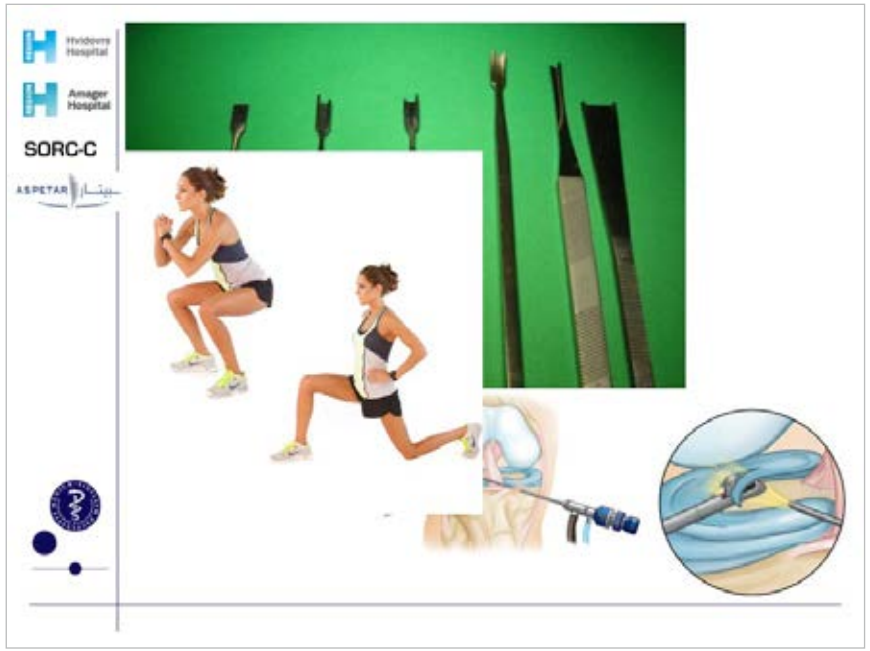
So NO need to operate "patients" with asymptomatic radiologic FAI

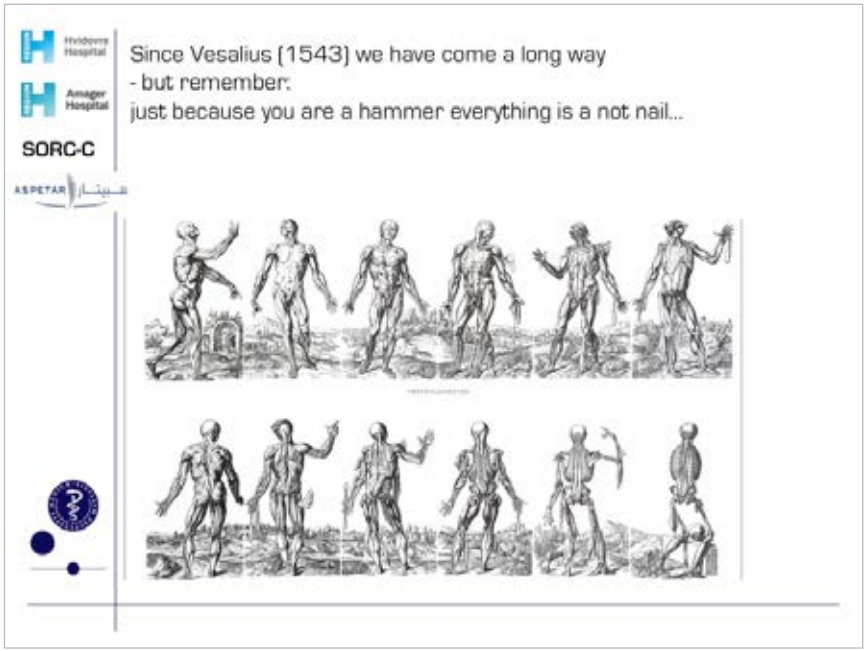
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Tonsil
Tongue


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ASPETAR


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Amager Hospital
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ASPETAR


Hvidovre Hospital
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Since Vesalius (1543) we have come a long way
- but remember:
just because you are a hammer everything is a not nail...