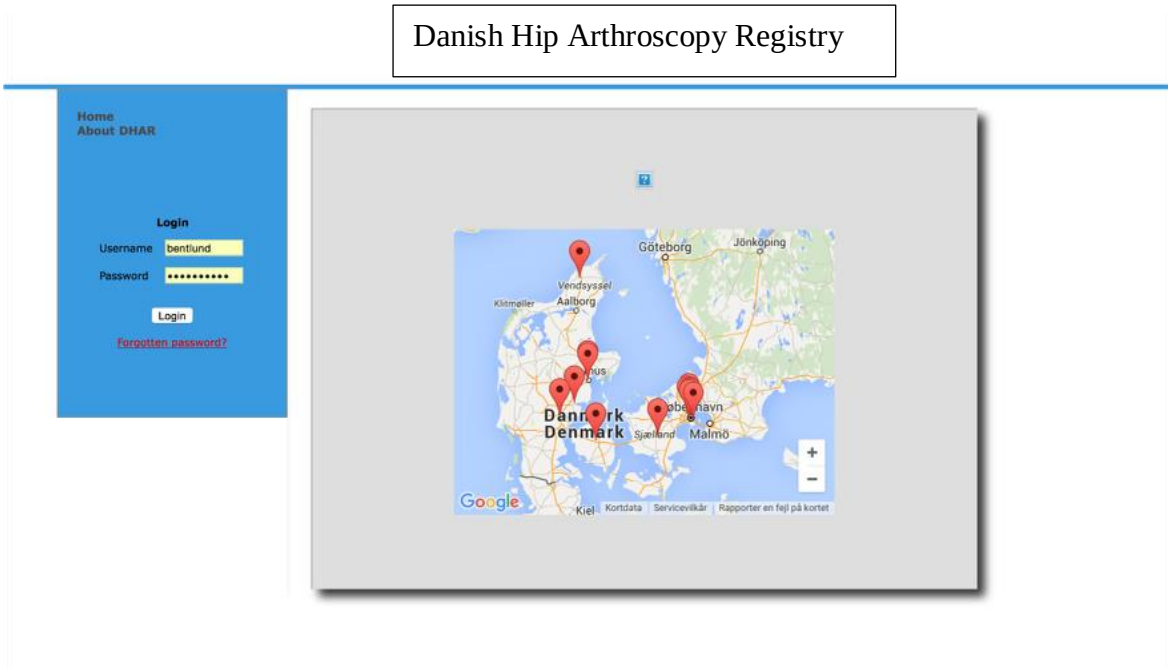
Dansk Hofte Artroskopi Register
DHAR

Årsrapport 2017



Styregruppe:

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Indledning

Af Bent Lund

Som led i kvalitetssikringen af de hofteartroskopiske indgreb i Danmark blev der i 2012 etableret et nationalt hofte artroskopi register. Dette register var det første nationale hofte artroskopi register i verden og sidenhen er der kommet et lignende i Storbritannien (The Non-Arthroplasty Hip Registry). Indtil videre er disse to registre stadig nogle af de eneste nationale registre på verdensplan, der registrerer ledbevarende kirurgi i og omkring hofteleddet.

Sundhedsstyrelsen fastsatte i 2010, at hofteartroskopier skulle udføres som en Regionsfunktion, og derfor kun måtte blive udført på afdelinger, der fik tildelt denne funktion i Specialeplanen for Ortopædkirurgi. Da man samtidig som led i Specialeplanen skulle kunne dokumentere antal indgreb og på længere sigt også kvalitetssikre disse data, var det naturligt, at en form for database måtte etableres. Derfor blev Dansk Hofte Artroskopi Register (DHAR) startet.

DHAR blev startet af en gruppe af danske hofteartroskopører og opstarten blev hjulpet på vej af en donation på 25.000 kr. fra SAKS (Dansk Selskab for Artroskopisk Kirurgi og Sportstraumatologi) til programmering af registeret. Midlerne til den fortsatte drift er efter aftale delt ud på de deltagende afdelinger og andrager 5.000 kr. pr. afdeling pr. år. Hertil kommer et bidrag fra Regionshospitalet Horsens på 0,2 sekretærtimer pr. uge til administration.

Selve DHAR har været åben for indtastninger siden januar 2012, og der er løbende blevet justeret og opdateret i strukturen. Som ved alle komplekse databaser har der været en del børnesygdomme, der skulle udryddes, og vi har løbende med hjælp fra brugerne fået rettet databasen til.

I 2016 kom den første egentlige årsrapport ud og de efterfølgende årsrapporter er en videreudbygning af data herfra. På længere sigt vil mængden af data øges og herved vil mulighederne for yderligere analyse af data blive forbedrede og udviklet.

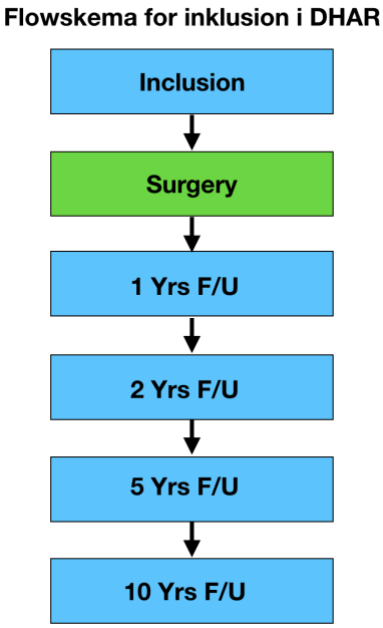
DHAR drives ved frivilligt arbejde og er drevet ved hjælp fra Procordo Aps. Der skal herfra lyde en stor tak til Anders Odgaard og Anette Liljensøe for hjælp i det daglige med support. En stor tak skal også lyde for et stort arbejde udført af Erik Poulsen, SDU mht. validering af DHAR op mod Landspatientregisteret (LPR). Ligeledes en stor tak til projektfysioterapeut Torsten Grønbech Nielsen for hjælp med databehandling og udtræk.

Samtidig skal der lyde en stor tak til de af kollegerne ude på afdelingerne der har bidraget med forslag til og kritik af databasen, samt ikke mindst til indtastningerne i DHAR.

Bent Lund
Formand for styregruppen
Aarhus d. 18.11.2018

DHAR

Registeret er bygget op omkring et flowchart, der danner basis for selve opbygningen, og det er muligt at tilgå de enkelte delelementer via flowchartet.



Indgangen i registeret er for patienterne en inklusionsdel, hvor patienterne via en Patientkiosk taster deres data ind og udfylder præ-scores. I forbindelse med operationen udfylder kirurgen sin del af skemaet, med de fund der er gjort i forbindelse med indgrebet, og de operative ting der er lavet ved operationen.

Ved inklusionen udfylder patienterne følgende Patient Related Outcome Measures (PROM); VAS-samlet vurdering af hoftefunktion, HAGOS, NRS-hvile og NRS-gang, iHOT12, EQ5D samt HSAS score.

Kirurgen registrerer i forbindelse med operationen bl.a. røntgendata, tidligere operationer, anæstesiform, antibiotika, DVT-profylakse, labrumskade, bruskskade, anden skade, tidsforbrug, stræktid, behandlingens art, antal ankre, bruskbehandling, knoglekirurgi, ekstraartikulær kirurgi og perioperative komplikationer.

Der er i databasen indbygget automatisk followup således, at der sendes en mail til patienten efter 1, 2, 5 og 10 år med spørgeskemaer. I mailen er der et link, som patienten skal klikke på og kan så besvare skemaerne online.

I databasen er det muligt at udtrække data dels på den enkelte patient, men også på grupper af patienter og på det samlede datasæt. Alle kirurger kan tilgå egne data, men kun udvalgte dataadministratorer kan få adgang til samtlige data af hensyn til datasikkerheden. Databasen er sikret, så uvedkommende ikke kan få adgang til data.

Generelle data

Der er ved udgangen af 2017 registreret i alt **4483 artroskopiske hofteoperationer** i DHAR.
Data, der indgår i dette års rapport, er en samlet opgørelse af de registreringer, der er foretaget fra årsrapportens start i 2012 til og med 31.12.2017. Der er indtastet i alt **4483** operationer og **2868** inklusionsskemaer fra patienter pr. 31.12.2017.
Der er **11** hospitaler og klinikker, der har regionsfunktionen (®) i hofteartroskopi. Der er i alt **15** hospitaler, der har indberettet.

Årstal	**2012-2013**	**2014**	**2015**	**2016**	**2017**	**Samlet**
Region Nord						
Hjørring Regionshospital ®	**50**	**38**	**49**	**78**	**90**	**305**
Region Midt						
Aarhus Universitetshospital THG ®	**169**	**23**	**47**	**32**	**54**	**325**
Aleris Hamlet Århus ®	**244**	**152**	**89**	**73**	**0**	**558**
Horsens Regionshospital ®	**134**	**260**	**243**	**168**	**179**	**984**
OPA Aarhus	**0**	**0**	**0**	**2**	**3**	**5**
Region Syd						
Odense Universitetshospital OUH ®	**119**	**103**	**88**	**98**	**80**	**488**
Privathospitalet Mølholm	**3**	**42**	**31**	**31**	**49**	**156**
Region Hovedstaden						
Aleris Hamlet København ®	**0**	**27**	**31**	**65**	**124**	**247**
Artroskopisk Center Amager* ®	**104**	**54**	**40**	**0**	**0**	**198**
Bispebjerg Hospital ®	**34**	**32**	**44**	**38**	**31**	**179**
CFR Privathospitaler ®	**159**	**122**	**115**	**105**	**95**	**596**
Gildhøj Privathospital	**0**	**0**	**22**	**30**	**5**	**57**
Hospitalet Valdemar	**0**	**4**	**5**	**0**	**0**	**9**
Hvidovre Hospital ®	**0**	**0**	**25**	**57**	**51**	**133**
Parkens Privathospital ®	**70**	**82**	**59**	**32**	**0**	**243**
Samlede antal operationer	**1086**	**939**	**888**	**809**	**761**	**4483**

Det skal bemærkes, at ikke alle afdelinger har indtastet fra starten af pga. diverse begyndervanskeligheder med dataadgang mm.
*Artroskopisk Center Amager flyttede pr. 1.8.2015 til Hvidovre Hospital

Kvalitetsindikatorer

Komplethed (indberetning) DHAR/LPR **Mål 90 %**

Komplethed indberetninger	2012	2013	2014	2015	2016
DHAR	**450**	**709**	**936**	**921**	**803**
Landspatientregisteret (LPR)	**576***	**827**	**1201**	**1042**	**826**
Procentfordeling i DHAR (%)	**78,1**	**85,7**	**77,9**	**88,4**	**97,2**

* Fra 1. februar 2012 hvor registreringer i DHAR påbegyndes.

Komplethed af PROMS/DHAR **Mål 70 %**

Komplethed af PROMS antal (%)	2012-2013	2014	2015	2016	2017	Samlet
Præ	**586** (54)	**561** (60)	**458** (52)	**349** (43)	**361** (47)	**2315** (52)
1 år	**553** (51)	**565** (60)	**467** (53)	**438** (54)	-	**2090** (56)
2 år	**556** (51)	**408** (44)	365 (41)	-	-	**1396** (48)
5 år	135 (34)	-	-	-	-	135 (34)

Revisioner (artroskopi) **Mål < 5 % (1 år)**

Reoperationer antal (%)	2012-2013	2014	2015	2016	2017	Samlet
Revisioner	**137** (13)	**105** (11)	**101** (11)	**85** (11)	**106** (14)	**534** (12)

QOL-stigning > 25 point forbedring ved hhv. 1, 2 og 5 år. **Mål 75 %**

HAGOS QOL-antal (%)	2012-2013	2014	2015	2016	2017	Samlet
1 år	**111** (35)	**129** (35)	**115** (42)	**94** (42)	-	**449** (38)
2 år	**137** (38)	**100** (40)	**108** (49)	-	-	**324** (42)
5 år	**34** (45)	-	-	-	-	**34** (45)

iHOT-12 stigning > 25 point forbedring ved hhv. 1, 2 og 5 år. **Mål 75 %**

iHOT-12 antal (%)	2012-2013	2014	2015	2016	2017	Samlet
1 år	-	-	**128** (47)	**103** (46)	-	**231** (47)
2 år	-	-	**110** (50)	-	-	**110** (50)
5 år	-	-	-	-	-	-

Vedr. kodning i DHAR og LPR.

Der har vist sig usikkerhed ved opgørelserne af antal registreringer i LPR. Dette er grundet uensartet brug af operationskoderne fra de forskellige operatører og afdelinger. Fremadrettet anbefaler vi der ved alle hofteartroskopier kodes minimum én af Sundhedsstyrelsens anbefalede operationskoder (Specialevejledningen for Ortopædisk kirurgi af 19. marts 2018).

Procedurekode	
KNFA01A	Endoskopisk eksploration i bløddele i hofte
KNFA01B	Endoskopisk eksploration i bløddele i lår
KNFA11B	Diagnostisk artroskopi af hofteled
KNFA21A	Endoskopisk ledbiopsi i hofte
KNFA21B	Endoskopisk bløddelsbiopsi i lår
KNFA21C	Endoskopisk bløddelsbiopsi i hofte
KNFF01	Artroskopisk total synovektomi i hofteled
KNFF11	Artroskopisk partiel synovektomi i hofteled
KNFF21	Artroskopisk fiksation af ledfladefragment i hofteled
KNFF31	Artroskopisk resektion af ledbrusk i hofteled
KNFF91	An. artroskop. op. på synovia/ledflade i hofteled
KNFH01	Artroskopisk reposition af hofteled
KNFH21	Artroskopisk reposition af lukseret ledprotese i hofte
KNFH31	Artroskopisk løsning af adhærencer i hofteled
KNFH41	Artroskop. fjern. af mus el. frem.leg. fra hofteled
KNFH51	Artroskop. resekt. af intraart. exostose/osteofyt, hofteled
KNFH71	Artroskopisk operation for habituel luksation i hofteled
KNFH91	Anden artroskopisk ledoperation i hofte

Derudover benyttes relevante koder foreliggende i Procordo under 'Diagnosekoder'.

Generelle data

Præoperative variabler	2012-2013	2014	2015	2016	2017	Samlet
Mænd	**479**	**402**	**377**	**337**	**317**	**1912**
Kvinder	**607**	**537**	**511**	**472**	**444**	**2571**
Ratio (m/k)	**44/56**	**43/57**	**42/58**	**42/58**	**42/58**	**43/57**
Gennemsnitsalder	**37,8**	**37,2**	**37,6**	**37,9**	**38,0**	**37,7**
Tidligere PAO (%)	**9,8**	**6,7**	**4,2**	**4,2**	**6,0**	**6,4**

Tidligere kirurgi

Af de **4483** opererede har 966 tidligere fået foretaget kirurgi i samme hofte af forskellig slags, og heraf er der tale om 282 patienter, der tidligere har fået udført PAO på baggrund af hoftedysplasi. Endelig er der 33 hoftealloplastik patienter, der er blevet artroskoperet. Herudover diverse indgreb.

Tidligere kirurgi (antal)	2012-2013	2014	2015	2016	2017	Samlet
Labrumskade	**5**	**3**	**5**	**2**	**8**	**23**
Cam deformitet	**25**	**13**	**20**	**9**	**18**	**85**
Pincer deformitet	**55**	**34**	**28**	**31**	**35**	**183**
Bruskskade	**46**	**53**	**49**	**42**	**44**	**234**
Mus/chondromatosis	**3**	**1**	**2**	**1**	**1**	**8**
Ligamentum teres ruptur	**2**	**1**	**0**	**0**	**1**	**4**
Infektion	**0**	**0**	**0**	**1**	**0**	**1**
Periacetabular osteotomi	**106**	**61**	**35**	**34**	**46**	**282**
Andet	**16**	**8**	**9**	**6**	**5**	**44**
Hoftealloplastik	**10**	**3**	**8**	**5**	**7**	**33**
Osteosyntese af epifysiolyse	**4**	**7**	**5**	**4**	**5**	**25**
Z-plastik på tractus	**1**	**3**	**5**	**3**	**4**	**16**
Åben hofteoperation	**5**	**7**	**5**	**7**	**4**	**28**
Samlet	**278**	**194**	**171**	**145**	**178**	**966**

Operationstid

Operationstid – min.	2012-2013	2014	2015	2016	2017	Gennem snit
Samlet operationstid	**92**	**80**	**78**	**73**	**71**	**79,7**
Samlet stræktid	**52**	**47**	**46**	**41**	**41**	**46,0**

Radiologi

Radiologi	2012-2013	2014	2015	2016	2017	Samlet
CE-vinkel (grader)	**32**	**32**	**32**	**31**	**31**	**32**
Alpha-vinkel (grader)	**70**	**67**	**67**	**68**	**66**	**68**
Tönnis AI-vinkel (grader)	**6,6**	**6,1**	**5,9**	**4,9**	**4,7**	**5,7**
Ischial spine sign (antal (%))	**363** (33)	**299** (32)	**238** (27)	**198** (24)	**152** (20)	**1250** (28)
Joint Space Width (antal (%))						
<2 mm	**16** (1)	**3** (0)	**5** (0)	**4** (0)	**2** (0)	**30** (1)
2,1-3,0 mm	**62** (6)	**41** (4)	**40** (5)	**42** (5)	**16** (2)	**201** (5)
3,1-4,0 mm	**393** (36)	**287** (31)	**298** (34)	**206** (26)	**206** (27)	**1390** (31)
>4 mm	**615** (57)	**608** (65)	**545** (61)	**557** (69)	**537** (71)	**2862** (64)

Knoglekirurgi

Knoglekirurgi (antal (%))	2012-2013	2014	2015	2016	2017	Samlet
Isoleret cheilektomi	**133** (13)	**159** (18)	**175** (21)	**186** (25)	**182** (26)	**835** (20)
Isoleret rimtrimming	**68** (7)	**75**(9)	**84** (10)	**75** (10)	**101** (14)	**403** (10)
Komb. cheilektomi-rimtrimming	**819** (80)	**639** (73)	**563** (69)	**482** (65)	**430** (60)	**2933** (70)
Cheilektomi (antal (%))	**952** (93)	**798** (91)	**738** (89)	**668** (90)	**612** (85)	**3768** (90)
Dybde (gennemsnit i mm)	**4,3**	**3,6**	**4,0**	**4,2**	**3,8**	**4,0**
Omfang (gennemsnit grader)	**113**	**115**	**113**	**110**	**106**	**112**
Rimtrimming (antal (%))	**887** (87)	**714** (82)	**647** (78)	**557** (75)	**531** (74)	**3336** (80)
dybde (gennemsnit i mm)	**3,8**	**3,5**	**3,4**	**3,4**	**3,1**	**3,5**

Labrum kirurgi

Labrum-skade (antal (%))	2012-2013	2014	2015	2016	2017	Samlet
Ja	**957** (88)	**821** (87)	**772** (87)	**693** (86)	**652** (86)	**3895** (87)
Nej	**129** (12)	**118** (13)	**116** (13)	**116** (14)	**109** (14)	**588** (13)
Type kirurgi (antal (%))	**2012-2013**	**2014**	**2015**	**2016**	**2017**	**Samlet**
Labrum urørt (ingen behandling)	**3** (0)	**0** (0)	**1** (0)	**1** (0)	**2** (0)	**7** (0)
Labrum fuldtykkelse resektion	**62** (7)	**31** (4)	**33** (4)	**30** (4)	**34** (5)	**190** (5)
Labrum rekonstruktion	**12** (1)	**2** (0)	**2** (0)	**1** (0)	**3** (0)	**20** (1)
Labrum reinsertion	**742** (81)	**680** (85)	**618** (82)	**530** (79)	**514** (81)	**3084** (81)
Labrum remodelering / partiel resektion	**103** (11)	**86** (11)	**100** (13)	**106** (16)	**80** (13)	**475** (13)

Graduering af bruskskader

Brusk Skade Acetabulum (antal (%))	2012- 2013	2014	2015	2016	2017	Samlet
Becks Grad 0 - Rask	**17** (2)	**6** (1)	**21** (3)	**15** (2)	**19** (3)	**78** (2)
Becks Grad 1 - Fibrillering	**143** (15)	**135** (16)	**145** (19)	**92** (14)	**95** (15)	**610** (16)
Becks Grad 2 - Bølge tegn	**387** (40)	**359** (44)	**322** (42)	**249** (38)	**260** (41)	**1577** (41)
Becks Grad 3 - Løsning af brusk fra knogle	**288** (30)	**231** (28)	**212** (27)	**214** (33)	**194** (31)	**1139** (30)
Becks Grad 4 - Blottet knogle	**123** (13)	**89** (11)	**72** (9)	**87** (13)	**63** (10)	**434** (11)

Becks Skade Størrelse (antal (%))	2012- 2013	2014	2015	2016	2017	Samlet
Ingen skade	**20** (2)	**7** (1)	**26** (3)	**18** (3)	**21** (3)	**92** (2)
Skade < 1 cm^2	**308** (32)	**217** (26)	**205** (27)	**211** (32)	**265** (42)	**1206** (31)
Skade 1-2 cm^2	**480** (50)	**457** (56)	**428** (55)	**351** (53)	**269** (43)	**1985** (52)
Skade > 2 cm^2	**150** (16)	**139** (17)	**113** (15)	**77** (12)	**76** (12)	**555** (15)

Brusk Skade Caput (antal (%))	2012- 2013	2014	2015	2016	2017	Samlet
ICRS Grad 0 - Normal	**680** (71)	**591** (72)	**528** (68)	**490** (75)	**446** (71)	**2735** (71)
ICRS Grad 1 - Næsten normal	**79** (8)	**78** (10)	**74** (10)	**50** (8)	**44** (7)	**325** (8)
ICRS Grad 2 - Abnorm	**126** (13)	**104** (13)	**110** (14)	**62** (9)	**82** (13)	**484** (13)
ICRS Grad 3 - Svært Abnorm	**46** (5)	**25** (3)	**44** (6)	**40** (6)	**36** (6)	**191** (5)
ICRS Grad 4 - Blottet knogle	**27** (3)	**22** (3)	**16** (2)	**15** (2)	**23** (4)	**103** (3)

ICRS Skade Størrelse (antal (%))	2012- 2013	2014	2015	2016	2017	Samlet
Ingen skade	**686** (72)	**596** (73)	**534** (69)	**495** (75)	**448** (71)	**2759** (72)
Skade < 1 cm^2	**96** (10)	**70** (9)	**67** (9)	**53** (8)	**52** (8)	**338** (9)
Skade 1-2 cm^2	**96** (10)	**83** (10)	**87** (11)	**82** (13)	**82** (13)	**430** (11)
Skade > 2 cm^2	**80** (8)	**71** (9)	**84** (11)	**27** (4)	**49** (8)	**311** (8)

Bruskkirurgi

Type bruskkirurgi (antal (%))	2012- 2013	2014	2015	2016	2017	Samlet
Brusk-resektion på caput femoris	**63** (6)	**31** (3)	**32** (4)	**21** (3)	**26** (3)	**173** (4)
Brusk-resektion i acetabulum	**628** (58)	**316** (34)	**201** (23)	**211** (26)	**180** (24)	**1536** (34)
Mikrofraktur på caput femoris	**5** (0)	**5** (1)	**0** (0)	**1** (0)	**4** (1)	**15** (0)
Mikrofraktur i acetabulum	**52** (5)	**54** (6)	**30** (3)	**28** (3)	**23** (3)	**187** (4)
Brusk-refiksation caput femoris	**1** (0)	**1** (0)	**0** (0)	**0** (0)	**0** (0)	**2** (0)
Brusk-refiksation i acetabulum	**8** (1)	**2** (0)	**3** (0)	**1** (0)	**0** (0)	**14** (0)
Afglatning med RF-probe	**59** (5)	**500** (53)	**510** (57)	**500** (62)	**497** (65)	**2066** (46)
Andet	**7** (1)	**1** (0)	**50** (6)	**16** (2)	**1** (0)	**75** (2)

En del patienter har fået en kombination af behandlingerne.

Ekstrartikulær kirurgi

Type ekstraart. kirurgi (Antal (%))	2012-2013	2014	2015	2016	2017	Samlet
Psoas-tenotomi	**99** (9)	**66** (7)	**49** (6)	**30** (4)	**27** (4)	**271** (6)
Reinsertion af gluteus medius	**1** (0)	**2** (0)	**1** (0)	**1** (0)	**0** (0)	**5** (0)
Operation for ekstern springhofte	**5** (0)	**6** (1)	**1** (0)	**3** (0)	**4** (1)	**19** (0)
Resektion af bursa trochanterica	**9** (1)	**7** (1)	**1** (0)	**4** (0)	**4** (1)	**25** (1)
Opchipsning af acetabulum	**0** (0)	**0** (0)	**0** (0)	**1** (0)	**0** (0)	**1** (0)
Drænage bursit	**4** (0)	**0** (0)	**0** (0)	**2** (0)	**0** (0)	**6** (0)
Kapsellukning	**100** (9)	**84** (9)	**97** (11)	**132** (16)	**302** (40)	**715** (16)
Fjernelse hardware (AO-skruer)	**13** (1)	**12** (1)	**4** (0)	**4** (0)	**6** (1)	**39** (1)
Fjernelse af forkalkning	**0** (0)	**0** (0)	**2** (0)	**1** (0)	**1** (0)	**4** (0)
Osteosyntese af os acetabuli	**0** (0)	**0** (0)	**1** (0)	**0** (0)	**0** (0)	**1** (0)
Psoas synovektomi	**4** (0)	**7** (1)	**0** (0)	**0** (0)	**1** (0)	**12** (0)
Fjernelse af os acetabuli	**0** (0)	**9** (1)	**7** (1)	**5** (1)	**7** (1)	**29** (1)
Inforation af cyste	**0** (0)	**6** (1)	**2** (0)	**0** (0)	**0** (0)	**8** (0)
Partiel AIIS resektion	**0** (0)	**2** (0)	**22** (2)	**24** (3)	**9** (1)	**57** (1)
Samlet	**236 (**22**)**	**201 (**21**)**	**187 (**21**)**	**207 (**26**)**	**361 (**47**)**	**842** (23)

Antibiotika profylakse og DVT-profylakse

Antibiotika (Antal (%))	2012-2013	2014	2015	2016	2017	Samlet
Dicloxacillin	**312** (29)	**177** (19)	**324** (36)	**325** (40)	**283** (37)	**1421** (32)
Cefuroxim	**755** (69)	**722** (77)	**508** (57)	**416** (51)	**447** (59)	**2848** (64)
Samlet	**1067 (**98**)**	**899 (**96**)**	**832 (**94**)**	**741 (**92**)**	**730 (**96**)**	**4269** (95)
Tromboseprofylakse (Antal (%))	**2012-2013**	**2014**	**2015**	**2016**	**2017**	**Samlet**
Fragmin	**25** (2)	**13** (1)	**10** (1)	**1** (0)	**6** (1)	**55** (1)
Arixtra	**1** (0)	**0** (0)	**0** (0)	**0** (0)	**0** (0)	**1** (0)
Innohep	**104** (10)	**54** (6)	**27** (3)	**2** (0)	**1** (0)	**188** (4)
Xarelto	**201** (19)	**188** (20)	160 (18)	**126** (16)	**21** (3)	**696** (16)
Samlet	**331 (**30**)**	**255 (**27**)**	**197 (**22**)**	**129 (**16**)**	**28 (**4**)**	**940** (21)

Komplikations typer - perioperative.

Komplikationstyper (Antal (%))	2012-2013	2014	2015	2016	2017	Samlet
Knækket instrument	**13** (1)	**6** (1)	**8** (1)	**11** (1)	**11** (1)	**49** (1)
Labrum overskåret	**14** (1)	**12** (1)	**11** (1)	**6** (1)	**10** (1)	**53** (1)
Anker revet løst	**25** (2)	**23** (2)	**18** (2)	**16** (2)	**10** (1)	**92** (2)
Ben-stræk tabt	**5** (0)	**1** (0)	**2** (0)	**5** (1)	**4** (1)	**17** (0)
Tryksår på labia eller scrotum	**0** (0)	**1** (0)	**0** (0)	**0** (0)	**0** (0)	**1** (0)
Sutur-defekt (brud, udtræk, knudedefekt)	**63** (6)	**31** (3)	**19** (2)	**16** (2)	**15** (2)	144 (3)
Penetration af labrum	**2** (0)	**2** (0)	**6** (1)	**1** (0)	**2** (0)	**13** (0)
Anker penetration af acetabular ledflade	**1** (0)	**10** (1)	**10** (1)	**11** (1)	**10** (1)	**42**(1)
Gennemlyser defekt	**0** (0)	**2** (0)	**1** (0)	**2** (0)	**0** (0)	**5** (0)
Andet	**16** (1)	**18** (2)	**19** (2)	**17** (2)	**22** (2)	**92** (2)
Samlet (Antal (%))	**139** (13)	**106** (11)	**94** (11)	85 (11)	**84** (11)	**508** (11)

Som det ses af tabellen, er de fleste registrerede komplikationer relaterede til, enten ankre der trækkes ud, eller suturer der knækker.

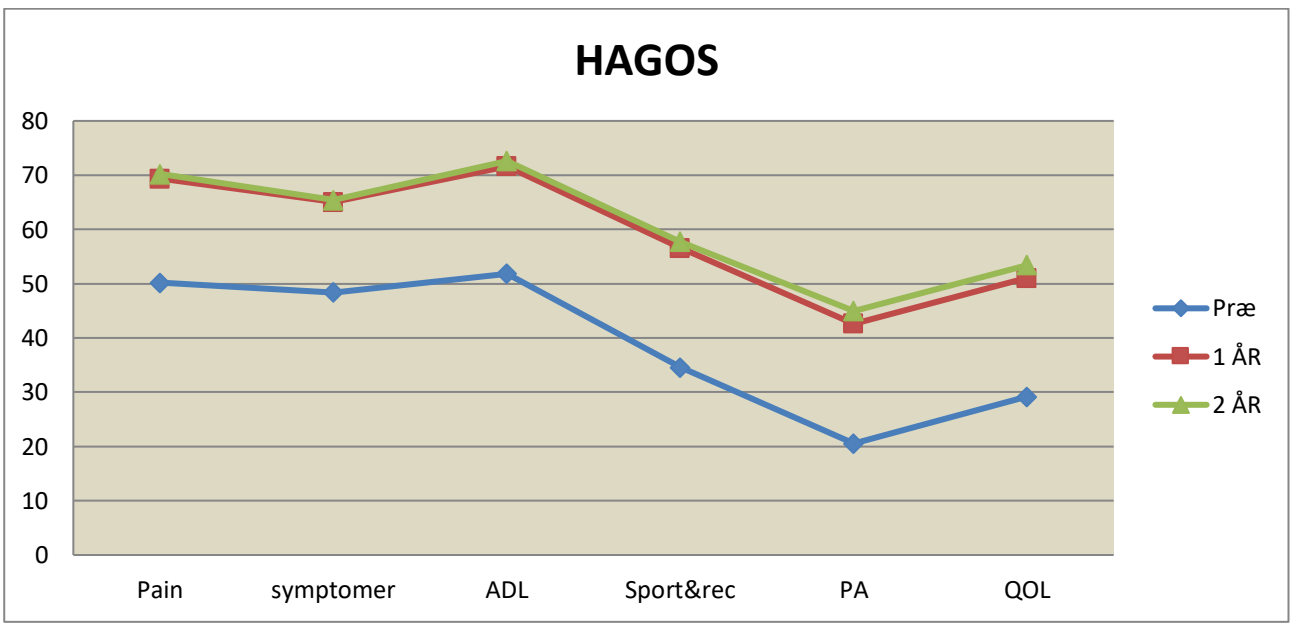
PROM (Patient Reported Outcome Measures)

HAGOS

PROMS præ	2012-2013	2014	2015	2016	2017	Samlet
HAGOS						
Pain	**51,0**	**50,8**	**49,5**	**49,5**	**49,5**	**50,2**
Symptoms	**48,7**	**49,2**	**48,7**	**47,4**	**47,2**	**48,4**
ADL	**51,9**	**53,0**	**51,8**	**49,9**	**51,6**	**51,8**
Sport & rec	**34,0**	**35,7**	**33,7**	**34,5**	**35,1**	**34,6**
PA	**19,8**	**20,4**	**19,9**	**20,5**	**22,9**	**20,6**
QOL	**29,4**	**28,4**	**29,3**	**29,6**	**29,5**	**29,2**

PROMS 1 år	2012-2013	2014	2015	2016	2017	Samlet
HAGOS						
Pain	**67,8**	**69,1**	**71,0**	**69,6**	-	**69,3**
Symptoms	**63,6**	**64,5**	**67,0**	**65,0**	-	**65,1**
ADL	**70,2**	**70,9**	**73,7**	**71,8**	-	**71,6**
Sport & rec	**54,0**	**55,7**	**58,8**	**58,3**	-	**56,6**
PA	**40,1**	**40,6**	**46,8**	**44,0**	-	**42,6**
QOL	**49,2**	**49,7**	**53,3**	**52,5**	-	**51,1**

PROMS 2 år	2012-2013	2014	2015	2016	2017	Samlet
HAGOS						
Pain	**69,4**	**69,4**	**71,1**	-	-	**70,2**
Symptoms	**64,4**	**65,0**	**66,5**	-	-	**65,4**
ADL	**72,0**	**71,6**	**73,4**	-	-	**72,6**
Sport & rec	**55,7**	**57,4**	**59,4**	-	-	**57,7**
PA	**42,1**	**43,6**	**49,1**	-	-	**45,0**
QOL	**51,6**	**52,3**	**56,0**	-	-	**53,4**

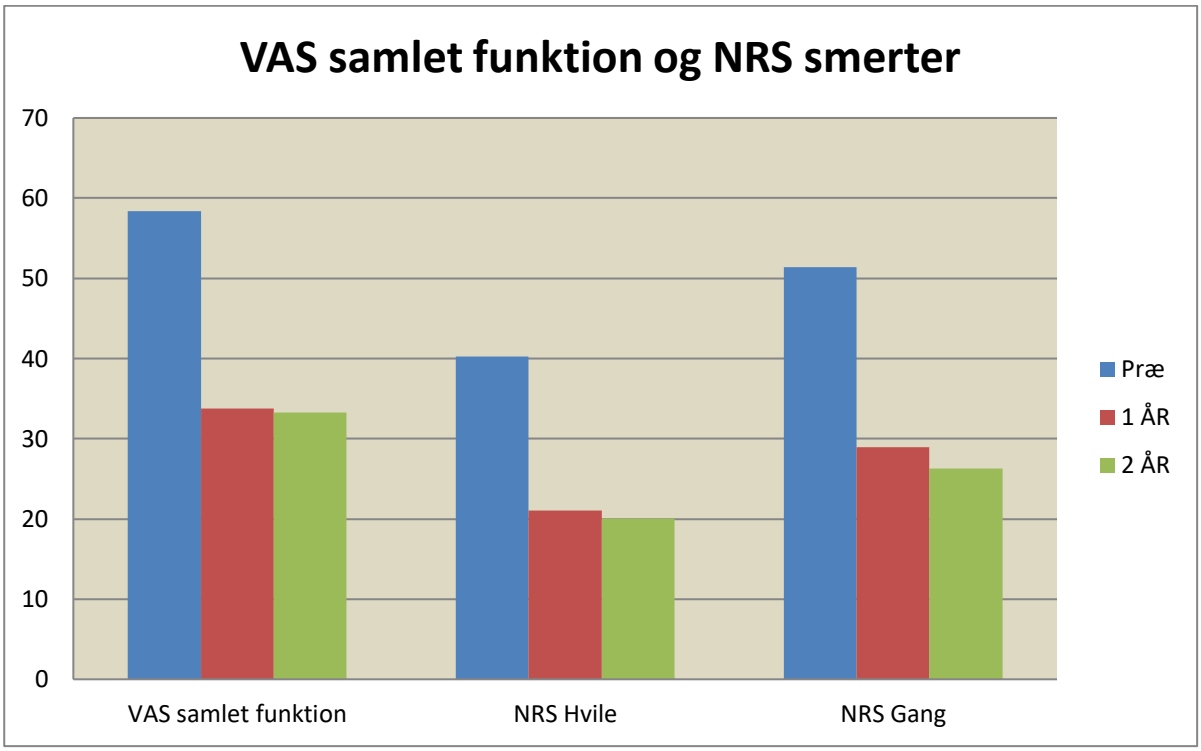


NRS og VAS scores for smerte og samlede vurdering af hoftefunktion

NRS smerte - hvile	2012-2013	2014	2015	2016	2017	Samlet
Præ	**38,7**	**39,8**	**43,3**	**39,2**	**40,3**	**40,2**
1 år	**21,7**	**21,5**	**20.9**	**20,2**	**-**	**21,1**
2 år	**20,3**	**21,5**	**19,3**	**-**	**-**	**20,1**

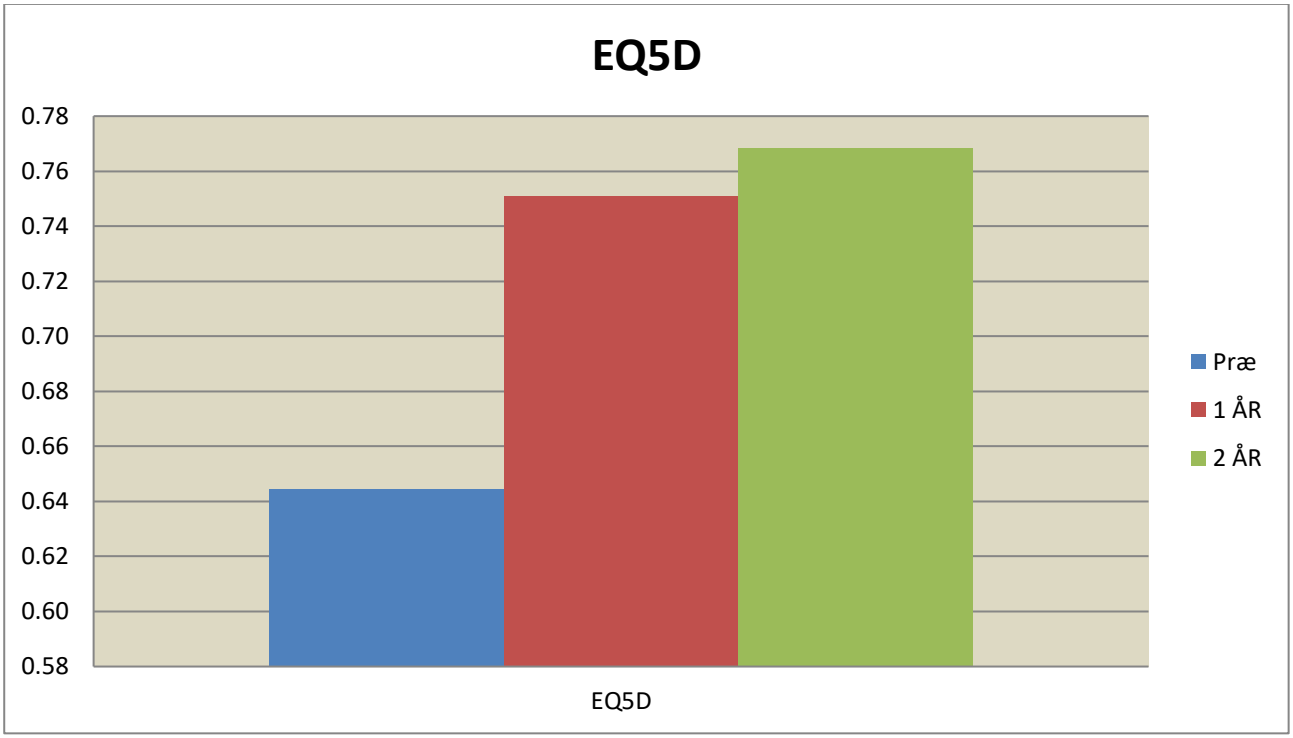
NRS smerte – 15 min. gang	2012-2013	2014	2015	2016	2017	Samlet
Præ	**52,9**	**49,7**	**53,2**	**50,0**	**50,5**	**51,4**
1 år	**33,1**	**29,5**	**26,5**	**26,8**	**-**	**29,0**
2 år	**26,7**	**27,8**	**25,8**	**-**	**-**	**26,3**

VAS - Samlet funktion	2012-2013	2014	2015	2016	2017	Samlet
Præ	**57,3**	**58,5**	**59,4**	**57,2**	**59,8**	**58,3**
1 år	**33,9**	**35,4**	**33,1**	**33,0**	**-**	**33,8**
2 år	**34,3**	**34,2**	**32,1**	**-**	**-**	**33,3**



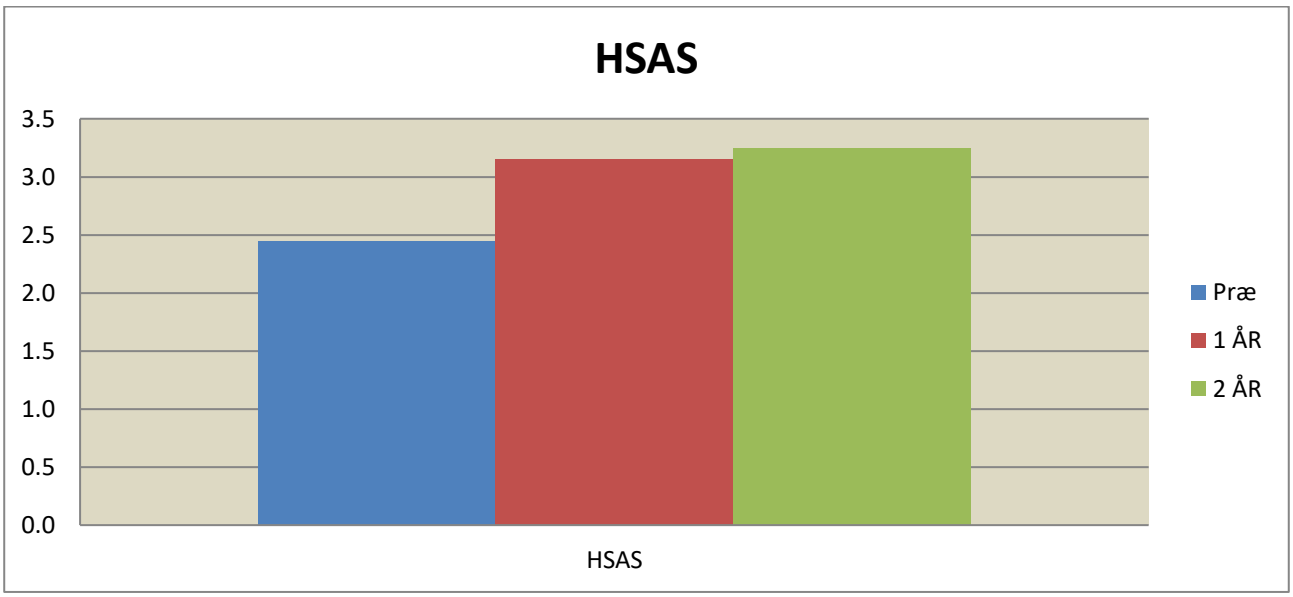
EQ5D scores

EQ5D	2012-2013	2014	2015	2016	2017	Samlet
Præ	**0,64**	**0,65**	**0,64**	**0,65**	**0,64**	**0,64**
1 år	**0,74**	**0,75**	**0,76**	**0,74**	**-**	**0,75**
2 år	**0,76**	**0,76**	**0,78**	**-**	**-**	**0,77**



HSAS score (Hip Sports Activity Score)

HSAS	2012-2013	2014	2015	2016	2017	Samlet
Præ	**2,3**	**2,5**	**2,4**	**2,6**	**2,5**	**2,4**
1 år	**2,9**	**3,0**	**3,7**	**3,1**	**-**	**3,2**
2 år	**3,1**	**3,4**	**3,3**	**-**	**-**	**3,2**



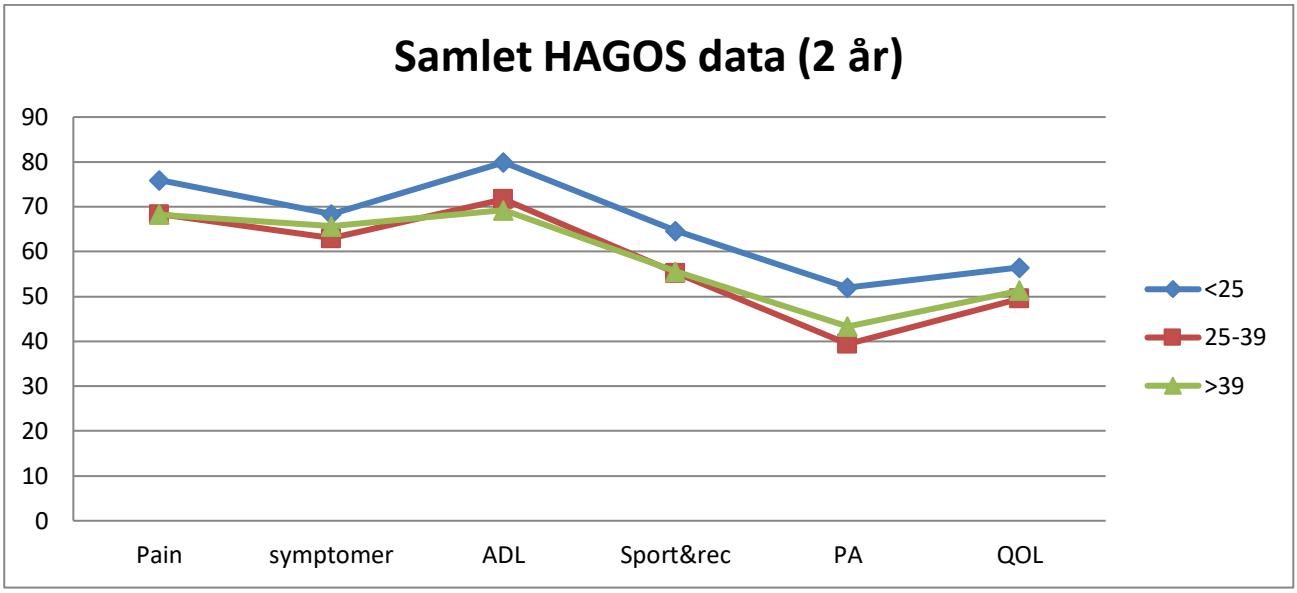
Subanalyser på Outcome data

HAGOS aldersopdelte data

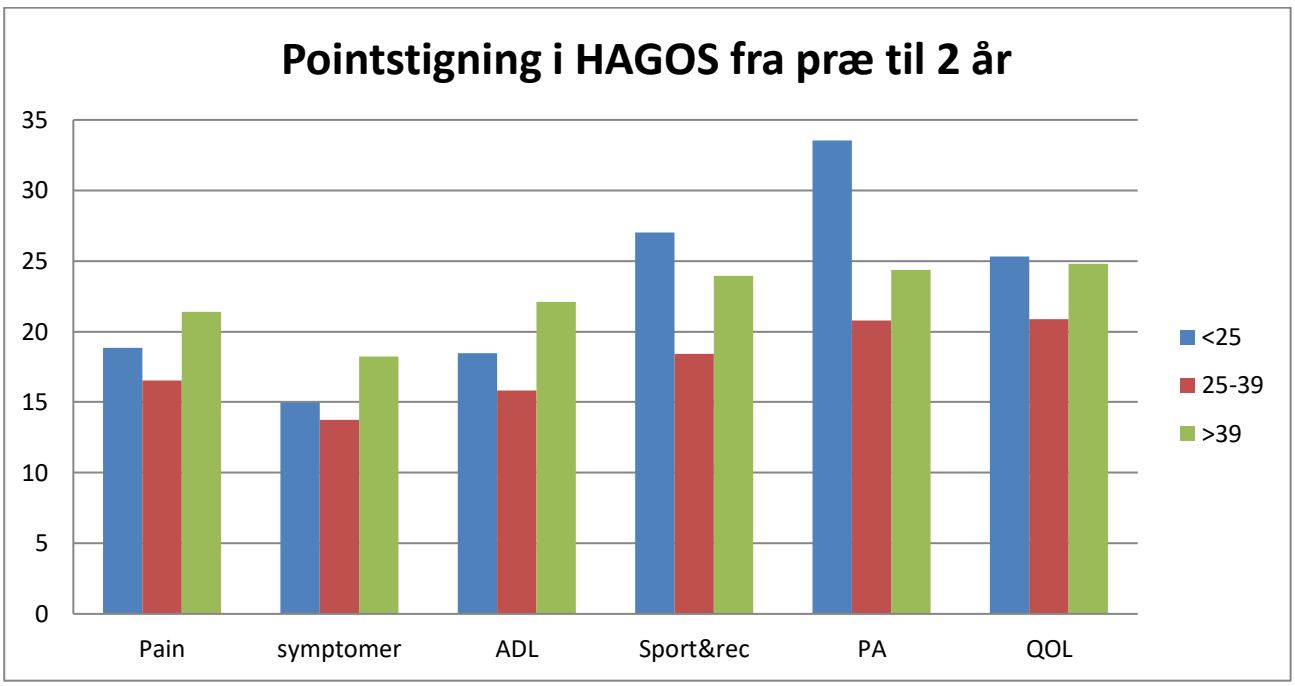
Alder < 25 år (PROMS 2 år)	2012-2013	2014	2015	2016	2017	Samlet
HAGOS						
Pain	**74,7**	**71,8**	**79,2**	**-**	**-**	**75,3**
Symptoms	**66,7**	**64,2**	**69,6**	**-**	**-**	**66,8**
ADL	**78,3**	**75,8**	**84,5**	**-**	**-**	**79,7**
Sport & rec	**60,6**	**61,1**	**70,4**	**-**	**-**	**63,7**
PA	**49,6**	**48,3**	**62,7**	**-**	**-**	**53,2**
QOL	**57,7**	**54,0**	**62,7**	**-**	**-**	**58,3**

Alder 25-39 år (PROMS 2 år)	2012-2013	2014	2015	2016	2017	Samlet
HAGOS						
Pain	**68,6**	**65,1**	**70,7**	**-**	**-**	**68,4**
Symptoms	**63,2**	**60,3**	**65,2**	**-**	**-**	**63,0**
ADL	**72,3**	**68,6**	**73,5**	**-**	**-**	**71,7**
Sport & rec	**54,6**	**51,5**	**59,2**	**-**	**-**	**55,3**
PA	**36,7**	**35,6**	**46,3**	**-**	**-**	**39,4**
QOL	**47,0**	**45,8**	**56,3**	**-**	**-**	**49,6**

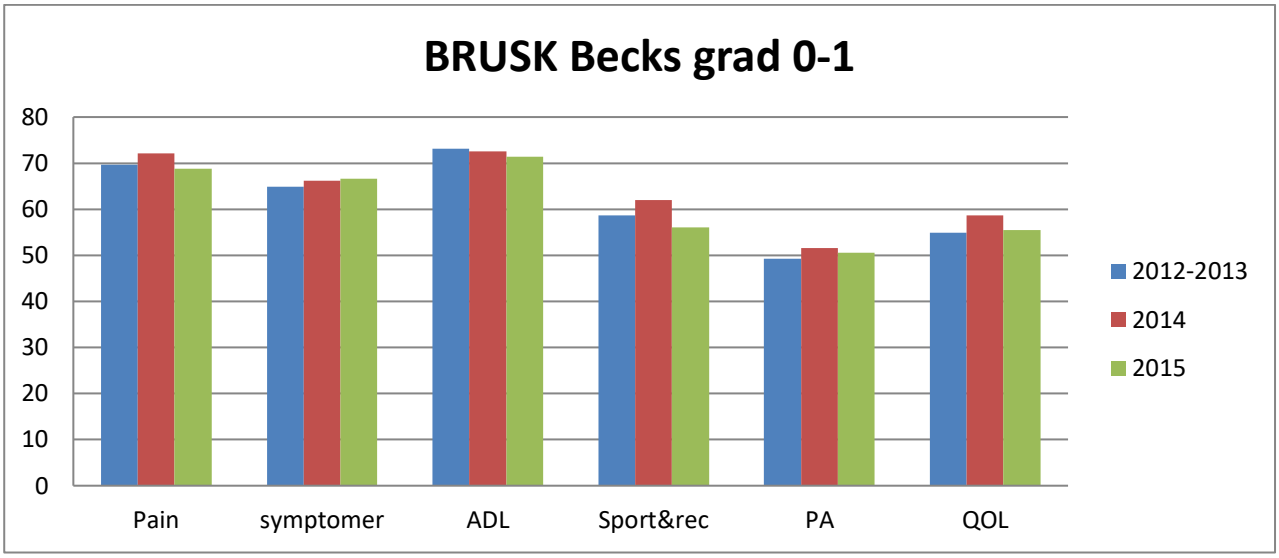
Alder ≥ 40 år (PROMS 2 år)	2012-2013	2014	2015	2016	2017	Samlet
HAGOS						
Pain	**68,3**	**71,7**	**68,2**	**-**	**-**	**69,7**
Symptoms	**64,5**	**68,7**	**66,0**	**-**	**-**	**66,6**
ADL	**69,7**	**72,3**	**69,1**	**-**	**-**	**70,7**
Sport & rec	**54,8**	**60,4**	**55,2**	**-**	**-**	**57,3**
PA	**43,5**	**47,7**	**45,8**	**-**	**-**	**45,9**
QOL	**52,9**	**56,3**	**53,2**	**-**	**-**	**54,4**



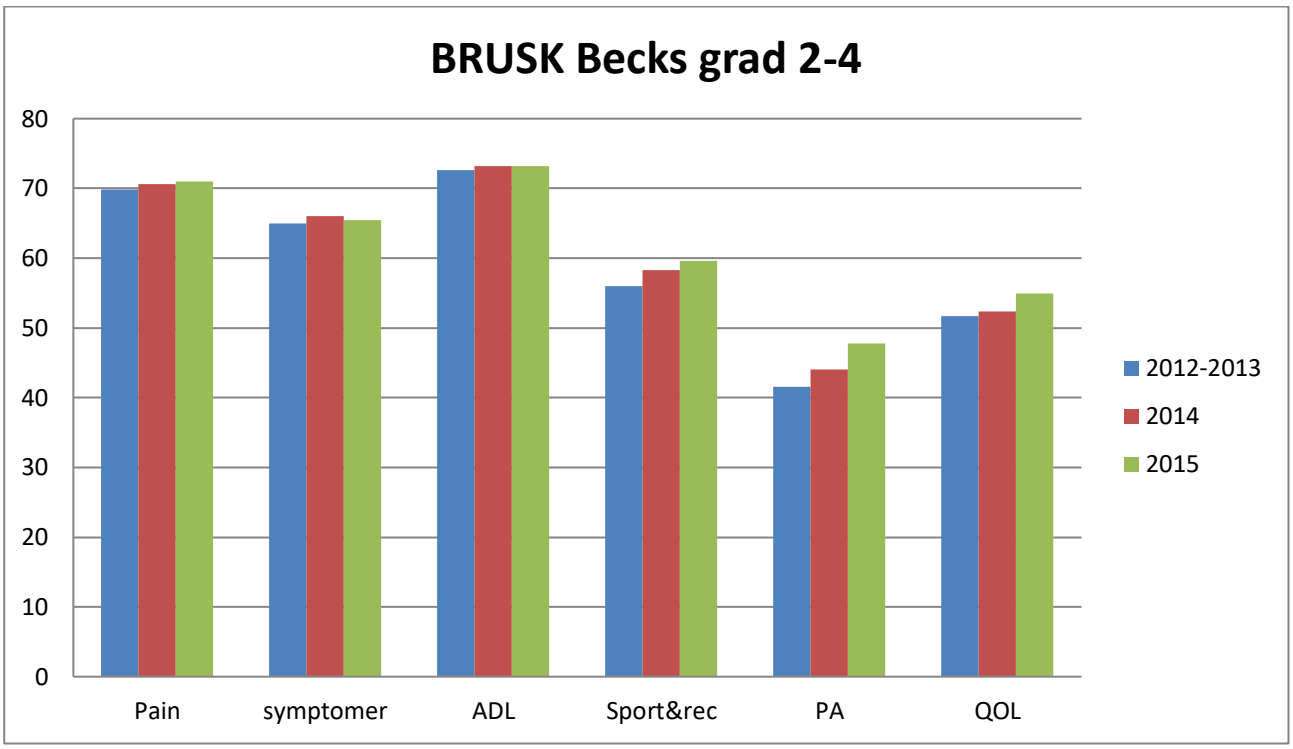
Aldersrelaterede ændringer i HAGOS fra præ- til 2 års data



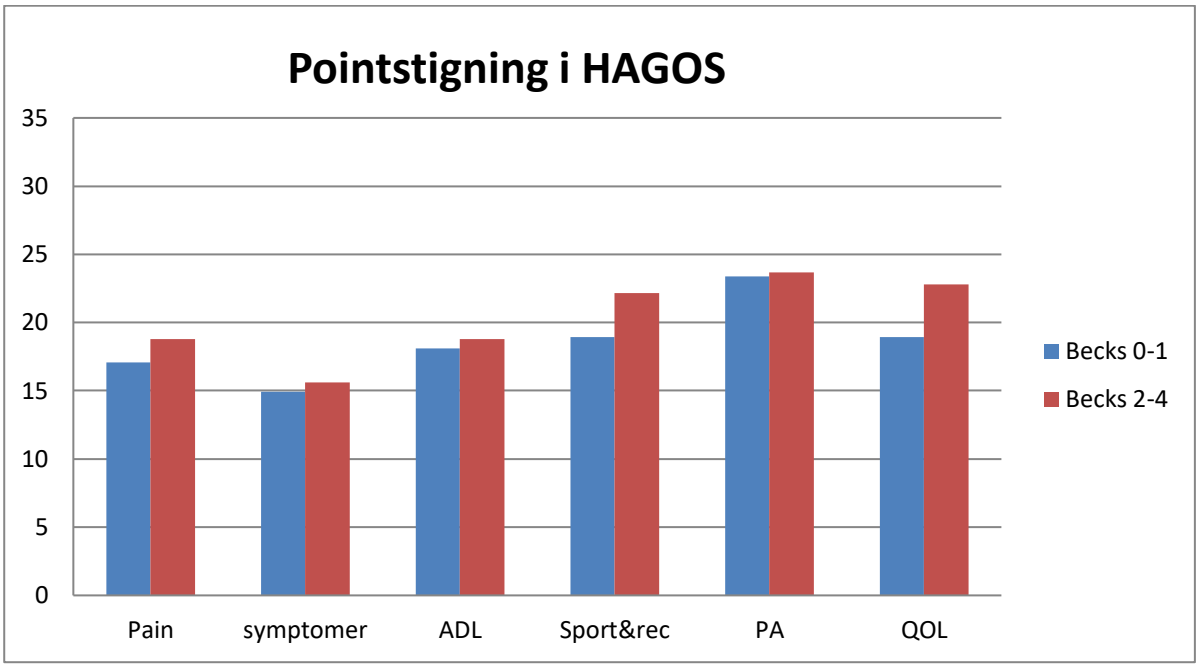
Brusk Becks grad 0-1 (PROMS 2 år)	2012-2013	2014	2015	2016	2017	Samlet
HAGOS						
Pain	**69,6**	**72,1**	**68,8**	-	-	**70,4**
Symptoms	**64,9**	**66,2**	**66,6**	-	-	**66,1**
ADL	**73,2**	**72,5**	**71,4**	-	-	**72,8**
Sport & rec	**58,6**	**62,0**	**56,1**	-	-	**59,1**
PA	**49,2**	**51,5**	**50,6**	-	-	**50,5**
QOL	**54,9**	**58,6**	**55,5**	-	-	**56,4**


BRUSK Becks grad 0-1
80
70
60
50
40
30
20
10
0
Pain
symptomer
ADL
Sport&rec
PA
QOL
2012-2013
2014
2015

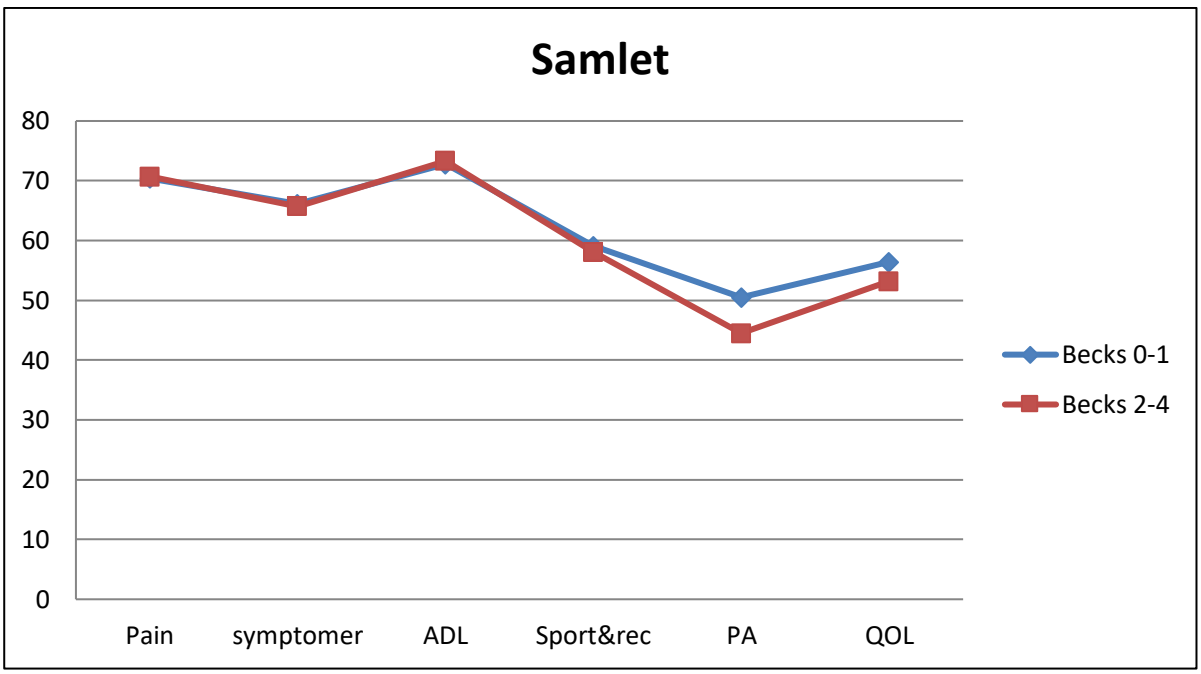
Brusk Becks grad 2-4 (PROMS 2 år)	2012-2013	2014	2015	2016	2017	Samlet
HAGOS						
Pain	**69,9**	**70,6**	**71,0**	-	-	**70,7**
Symptoms	**65,0**	**66,0**	**65,5**	-	-	**65,7**
ADL	**72,6**	**73,2**	**73,2**	-	-	**73,3**
Sport & rec	**56,0**	**58,3**	**59,6**	-	-	**58,1**
PA	**41,6**	**44,0**	**47,8**	-	-	**44,5**
QOL	**51,7**	**52,4**	**54,9**	-	-	**53,2**



Ændringer i outcome relateret til bruskstatus i acetabulum fra præ- til 2 år.



HAGOS 2 års data ift. bruskskade i acetabulum



Dansk resume

I Danmark er hofteartroskopier reguleret af Sundhedsstyrelsen via Specialeplanen for Ortopædkirurgi og er en såkaldt regionsfunktion. Dvs. kun hospitaler og klinikker med denne tildelte funktion må lave hofteartroskopier på patienter i det offentlige sundhedsvæsen. Aktuelt er der 11 hospitaler og klinikker, der har denne tilladelse.

Siden 2012 har det været muligt at indberette online til Dansk Hofte Artroskopi Register (DHAR). Aktuelt er der 15 hospitaler og privatklinikker der indberetter. Forsikringspatienter er ikke omfattet af Specialeplanen for Ortopædkirurgi, men der indberettes også fra privatklinikker, der udfører hofteartroskopier på forsikringspatienter.

Patienterne bedes om at udfylde Patient Relaterede Outcome Measures online før operationen og igen efter 1, 2, 5 og 10 år. (VAS-hoftefunktion, NRS-rest (smerte), NRS-walk (smerte), HAGOS, iHOT-12, EQ5D og HSAS score). Pga. en programmeringsfejl er de første års iHOT-12 ikke tilgængelige.

Ved årsskiftet 2017-2018 var der registreret i alt **4483** hofte artroskopier i DHAR. Der er ved årsskiftet registreret **2276** præoperative inklusion PROMs i registeret. Der er **2868** PROMs registreret efter 1 år og der er i alt registreret **1508** 2 års PROMs i DHAR. Endvidere er der ved årsskiftet registreret **154** PROMs med et follow-up på 5 år.

DHAR Styregruppe, Torsten Grønbech Nielsen (databehandler) og Erik Poulsen (LPR-udtræk).

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English summary

In Denmark hip arthroscopies are regulated by the Danish Health Authorities and only 11 public hospitals have the permission to perform the operation on patients from the Public Healthcare System. In 2012 the Danish Hip Arthroscopy Registry was initiated, and the surgeons started to complete the forms on-line. In total 15 hospitals and clinics are reporting to the Registry. Some private clinics report to DHAR even though they are not entitled to.

The patients were asked to complete various Patient Related Outcome Measures pre-operatively (HAGOS, iHOT12, VAS-hip function, NRS-rest (pain), NRS-walk (pain), EQ5D and the HSAS score). Both the surgeon related, and patient related registrations are web based. Due to a programming error iHOT-12 was not included right from the beginning.

At the end of 2017 there were included **4483** Hip Arthroscopies in the registry. There are **2276** pre-op inclusion PROMs included in this report. There are **2868** PROMs included at 1-year and there are **1508** 2-year PROMs in the registry at the end of 2016. So far, we have **154** PROMs with a 5-year follow-up.

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Publikationer:

1. *Cartilage status in FAI patients – Results from the Danish Hip Arthroscopy Registry (DHAR)*
Lund B, Nielsen TG, Lind M. SICOT-J Volume 3, 2017. DOI 10.1051/sicotj/2017023

2. *Danish Hip Arthroscopy Registry: Capsular Closing in Patients with Femoroacetabular Impingement (FAI):* Results of a Matched-cohort Controlled Study
Mygind-Klavsen B, Winge S, Lund B, Nielsen TG et al.
J Hip Preserv Surg (2016) 3

3. *Danish Hip Arthroscopy Registry (DHAR). The outcome of patients with femoroacetabular impingement (FAI).* Lund B, Mygind-Klavsen B, Nielsen TG, Maagaard N, et al.
J Hip Preserv Surg (2016) 3

4. *Danish Hip Arthroscopy Registry: an epidemiologic and perioperative description of the first 2000 procedures.* Mygind-Klavsen B, Nielsen TG, Maagaard N et al.
J Hip Preserv Surg 2016

5. *Danish Hip Arthroscopy Registry: Predictors of Outcome in Patients with Femoroacetabular Impingement (FAI)* Mygind-Klavsen B, Lund B, Nielsen TG, Maagaard N et al**.**
J Hip Preserv Surg. 2016 Sep; 3

1. *Cartilage status in FAI patients – Results from the Danish Hip Arthroscopy Registry (DHAR)*
Lund B, Nielsen TG, Lind M. SICOT-J Volume 3, 2017. DOI 10.1051/sicotj/2017023

Abstract
INTRODUCTION:
The femoroacetabular impingement (FAI) morphology is associated with specific cartilage lesions, which are suspected to be early stages of the osteoarthritic development, which can be the end result of FAI. The cartilage status of FAI afflicted hip joints at the time of arthroscopic management is not fully elucidated. This study from the Danish Hip Arthroscopy Registry (DHAR) will try to show data on the cartilage status from a large cohort. Data from a national registry potentially represent large amounts of population-based epidemiological information from multiple centres and surgeons. Therefore, outcome data might be more reliable for a specific surgical intervention.
METHODS:
This study includes patients operated for symptomatic FAI from January 2012 until December 31st. 2013, with a minimum of two-year follow-up and being registered in DHAR. The extent of cartilage damage at the time of surgery is reported and the Patient Related Outcome Measures (PROM) outcome data are presented.
RESULTS:
Data from a total of 686 FAI procedures in 1082 patients from January 2012 until December 31st. 2013 were extracted from DHAR. Cartilage injuries were found in 88% of cases, mainly on the acetabular side. Overall PROM including pain scores improved significantly from preoperative status to follow-up one and two years postoperatively. The Copenhagen Hip and Groin Outcome Score (HAGOS), Hip Sports Activity Scale (HSAS) and global hip function showed less improvement in patients with more severe acetabular cartilage injury.
DISCUSSION:
The majority of patients with femoroacetabular impingement (FAI) undergoing hip arthroscopy have significant cartilage changes at the time of surgery primarily at the acetabulum and to a lesser degree at the femoral head. During FAI surgery the majority of patients have cartilage debridement performed but rarely cartilage repair. The presence of severe cartilage injury at the time of arthroscopic FAI surgery results in reduced subjective outcome and hip function.

2. ***Danish Hip Arthroscopy Registry: Capsular Closing in Patients with Femoroacetabular Impingement (FAI):*** **Results of a Matched-cohort Controlled Study**
Mygind-Klavsen B, Winge S, Lund B, Nielsen TG et al
J Hip Preserv Surg (2016)
Abstract
Summary: Capsular closure might positively affect outcome in FAI patients.

Background: Capsular closure in FAI patients during hip arthroscopy procedures are still debated. The Danish Hip Arthroscopy Registry (DHAR) contains data to perform matched-cohort analyses.

Purpose/aim of study: The purpose of this study was to describe data from DHAR after FAI surgery associated with capsular closure, report outcome data and compare these outcome data with a matched-cohort study group. Our primary hypothesis was that patients undergoing hip arthroscopy would not benefit in subjective outcome from capsular closure compared with no closure.

Materials and methods: We identified FAI patients in DHAR where the capsule was closed during the hip arthroscopy. A matched cohort of patients who did not have capsular closure performed were selected. Matching criteria were age, gender, radiological parameters (lateral centre edge angle and alpha angle). Statistical analyses comparing these two groups regarding changes in patient the following outcome scores; HAGOS, HSAS, EQ-5D and VAS at one and two-year follow-up were performed. There was no significant difference in PROM preoperatively between the two groups except for two HAGOS sub scales. A total of 247 hips were identified and included in the group with capsular closure and 247 hips in the matched control group. (PA: Participation in physical activity and QoL: Quality of life).

Findings/results: Both groups improved significantly in all postoperative PROMs at one and two-year follow-up. When comparing the improvements between the two groups we found a significant better improvement in the capsular closure group in VAS and all HAGOS sub scales at both one and two-year follow-up. HSAS demonstrated improvement in the closure group at one year but no difference at two-year follow-up. EQ-5D showed difference at two-year follow-up.

Conclusions: This study showed that FAI-patients undergoing capsular closure during hip arthroscopy had a significant improvement in outcome when compared to a matched control group at two years follow-up. We also found improvement in physical activity and quality of life scores. We therefore conclude that capsular closure might positively affect the outcome in FAI-patients during hip arthroscopy.

3. *Danish Hip Arthroscopy Registry (DHAR). The outcome of patients with femoroacetabular impingement (FAI*). Lund B, Mygind-Klavsen B, Nielsen TG, Maagaard N et al
J Hip Preserv Surg (2016)

Abstract
The Danish Hip Arthroscopy Registry (DHAR) was initiated in January 2012 as a web-based prospective registry. The purpose of this study was to evaluate and report the first registry-based outcome data of a national population with radiological and clinical femoroacetabular impingement (FAI) undergoing hip arthroscopic treatment. Our primary hypothesis was that patients undergoing hip arthroscopy would improve significantly in pain, quality of life and sports related outcome measurements in Patient Related Outcome Measures (PROM). Peri-operative data and Patient Reported Outcome Measures (PROM) data from DHAR between January 2012 and November 2015 were extracted. Radiological pincer-type FAI was defined as LCE > 35° and cam FAI as alpha-angle > 55°. These data were combined with FAI surgical data such as osteochondroplasty and labral repair or resection. PROMs consisting of HAGOS, EQ-5 D, HSAS and NRS pain scores were submitted online by the patients pre-operatively and at 1 and 2-years follow-up. 2054 FAI procedures in 1835 patients were included in this study (219 patients had bilateral procedures performed). HAGOS demonstrated significant improvement in all subscales at follow up. EQ-5 D demonstrated improvement after 1 and 2 years from 0.66 pre-op to 0.78 at 2 years. HSAS improved significantly from 2.5 to 3.3. Pain score data demonstrated improvement in NRS-rest 39 to 17 and NRS Walk 49 to 22 at follow-up. We conclude that patients with FAI undergoing hip arthroscopy experience improvement in pain, quality of life and also in function and sports related outcome measures during the first 2 years after surgery.

4. *Danish Hip Arthroscopy Registry: an epidemiologic and perioperative description of the first 2000 procedures.* Mygind-Klavsen B, Nielsen TG, Maagaard N et al.
J Hip Preserv Surg 2016

Abstract
Danish Hip Arthroscopy Registry (DHAR) was initiated in 2012 as a web-based prospective registry. The purpose of this study was to evaluate and report the epidemiologic and perioperative data of the first 2000 procedures in a Danish hip arthroscopy population and to describe the development of DHAR. We describe the use of various Patient Related Outcome Measures related to non-arthritic hip patients. The 2000 procedures consisted of 56% females and 44% males. Mean age 37.5 years mean surgical time was 86.5 min and mean traction time 50.5 min. The most frequently performed procedure was CAM and Pincer resection in 93.5% of the cases. Labral refixation or repair was done in 70.3% of the cases. The most common type of acetabular chondral damage was grade II lesions (36.6%). Grade III and IV changes were seen in 36.1% of the cases. The preoperative iHOT12 was 45 (mean) based on all 12 items. EQ-5D was 0.65 and HAGOS sub-scores were 51 (pain), 49 (symptoms), 53 (ADL), 35 (sport), 20 (physical activity) and 29, respectively. We conclude that patients undergoing hip arthroscopy report considerable pain, loss of function, reduced level of activity and reduced quality-of-life prior to surgery. The problems with development and maintaining a large clinical registry are described and further studies are needed to validate data completeness. We consider the development of a national clinical registry for hip arthroscopy as a successful way of developing and maintaining a valuable clinical and scientific tool.

5. ***Danish Hip Arthroscopy Registry: Predictors of Outcome in Patients with Femoroacetabular Impingement (FAI)*** **Mygind-Klavsen B, Lund B, Nielsen TG, Maagaard N et al**
J Hip Preserv Surg. 2016 Sep; 3(Suppl 1

Summary: We conclude that age above 25, major cartilage injuries at the acetabulum and female gender might negatively affect the outcome of surgery in 2054 patients with FAI undergoing hip arthroscopy.

Background: Predictors of outcome after FAI surgery are not well documented. The Danish Hip Arthroscopy Registry (DHAR) contains the data volume for such analyses.

Purpose/aim of study: The purpose of this study was to identify predictors of poor outcome after FAI surgery in a Danish FAI population. Our primary hypothesis was that older patients, patients with severe cartilage damage and female patients might have inferior outcome results compared with younger patients, patients with minor cartilage damage and male patients.

Materials and methods: Radiological, operative and PROM data from FAI patients in DHAR between January 2012 and May 2015 were collected. PROMs consisting of HAGOS, EQ-5D, HSAS and NRS pain scores. The patients were divided in the following age groups <25 years, 25-39 years and >40 years. Cartilage injuries were grouped according to ICRS (femoral side) and Becks (acetabular side) classifications.

Findings/results: We collected data from 2054 FAI procedures in DHAR. 53% of the procedures were in female patients. All HAGOS sub-scales, EQ-5D, HSAS and NRS demonstrated significant improvements in all age groups at follow up. Comparison between age groups demonstrated poorer outcomes in both older age groups when compared with the <25 years age group at one and two year follow up. Comparison between the middle and oldest age group showed poorer outcome in some HAGOS sub-scales (PA, QoL), HSAS and EQ-5D at two year follow up. Regarding femoral cartilage injury we found no significant changes at follow up. Acetabular cartilage injuries demonstrated poorer outcomes in patients with major injuries compared with minor cartilage injuries in almost all outcome scores. Comparison between gender demonstrated poorer outcome in females at one year follow up in two sub-scales of HAGOS (pain, ADL) and for HSAS at two year follow up.

Conclusions: We conclude that age above 25, major cartilage injuries at the acetabulum and female gender might negatively affect the outcome of surgery in patients with FAI undergoing hip arthroscopy.