Nasjonalt Register for Leddproteser

Hvilke muligheter ligger det i å benytte leddproteseregisteret

Ove Furnes
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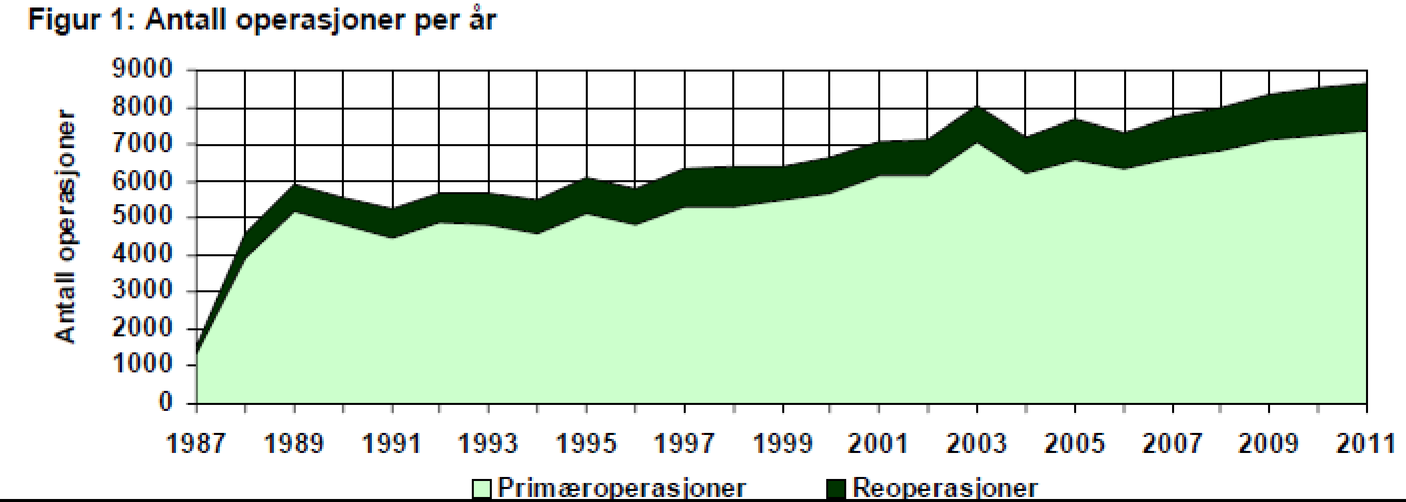
www.haukeland.no/nrl


HOFTEPROTESER
KNEPROTESER
GANT
Lasse Engesæter
Leif Havelin

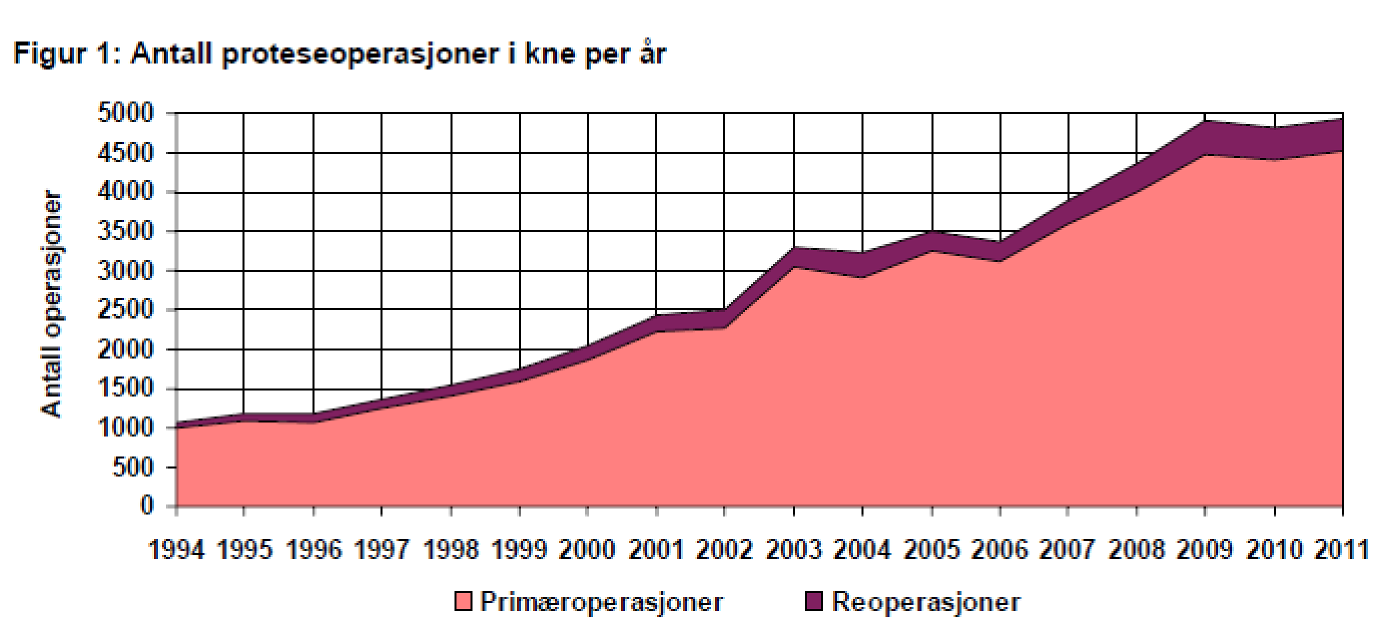
NASJONAL KOMPETANSETJENESTE FOR LEDDPROTESER OG HOFTEBRUDD (2003)

- 1987: Hofteregisteret. Etablert av Norsk ortopedisk forening i 1987 (Spesialforening under den Norske Legeforening)
- 1994: Alle leddproteser-Kneproteser
- 2004: Korsbåndsoperasjoner
- 2005: Hoftebruddoperasjoner
- 2010: Barnehoftelidelser

Hofteproteser

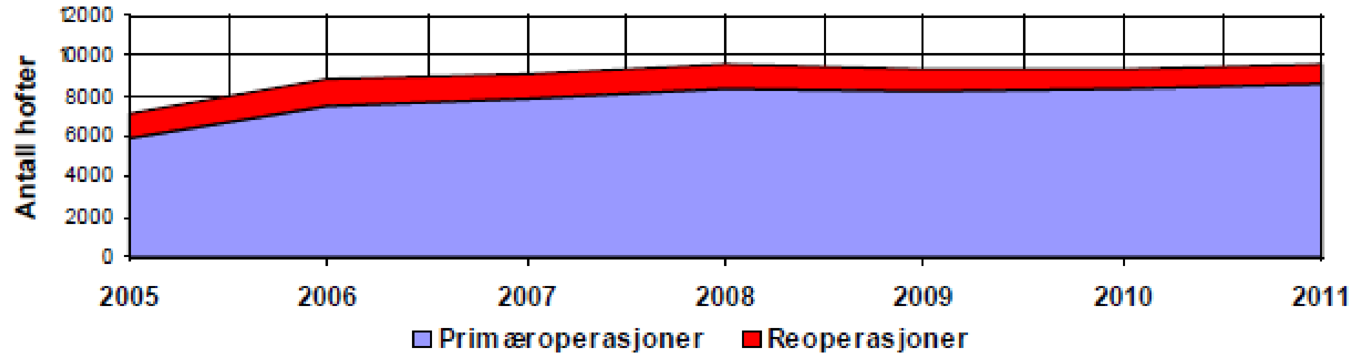


Kneproteser



Hoftebrudd

Figur 1: Totalt antall operasjoner



Korsbånd

Nasjonalt Korsbåndregister

ALLE OPERASJONSTYPER

Tabell 1: Totalt antall operasjoner

	Primær rekonstruksjon		Revisjons-rekonstruksjon		Kun andre prosedyrer		Totalt antall
2011	1808	(84,8%)	172	(8,1%)	151	(7,1%)	**2131**
2010	1728	(87,4%)	131	(6,6%)	118	(6,0%)	**1977**
2009	1856	(87,8%)	144	(6,8%)	113	(5,4%)	**2113**
2008	1683	(87,8%)	117	(6,1%)	116	(6,1%)	**1916**
2007	1632	(88,6%)	110	(6,0%)	100	(5,4%)	**1842**
2006	1475	(88,1%)	126	(7,5%)	74	(4,4%)	**1675**
2005	1528	(88,8%)	121	(7,0%)	71	(4,1%)	**1720**
2004	769	(89,6%)	46	(5,4%)	43	(5,0%)	**858**
Totalt	**12479**	(87,7%)	**967**	(6,8%)	**786**	(5,5%)	**14232**

Mål

- Å oppdage dårlige proteser tidlig
- Stoppe dårlige operasjonsteknikker, proteser og sementer før de blir brukt i store antall pasienter

- Kvalitetsforbedring av kirurgien

Arbeidsmetode

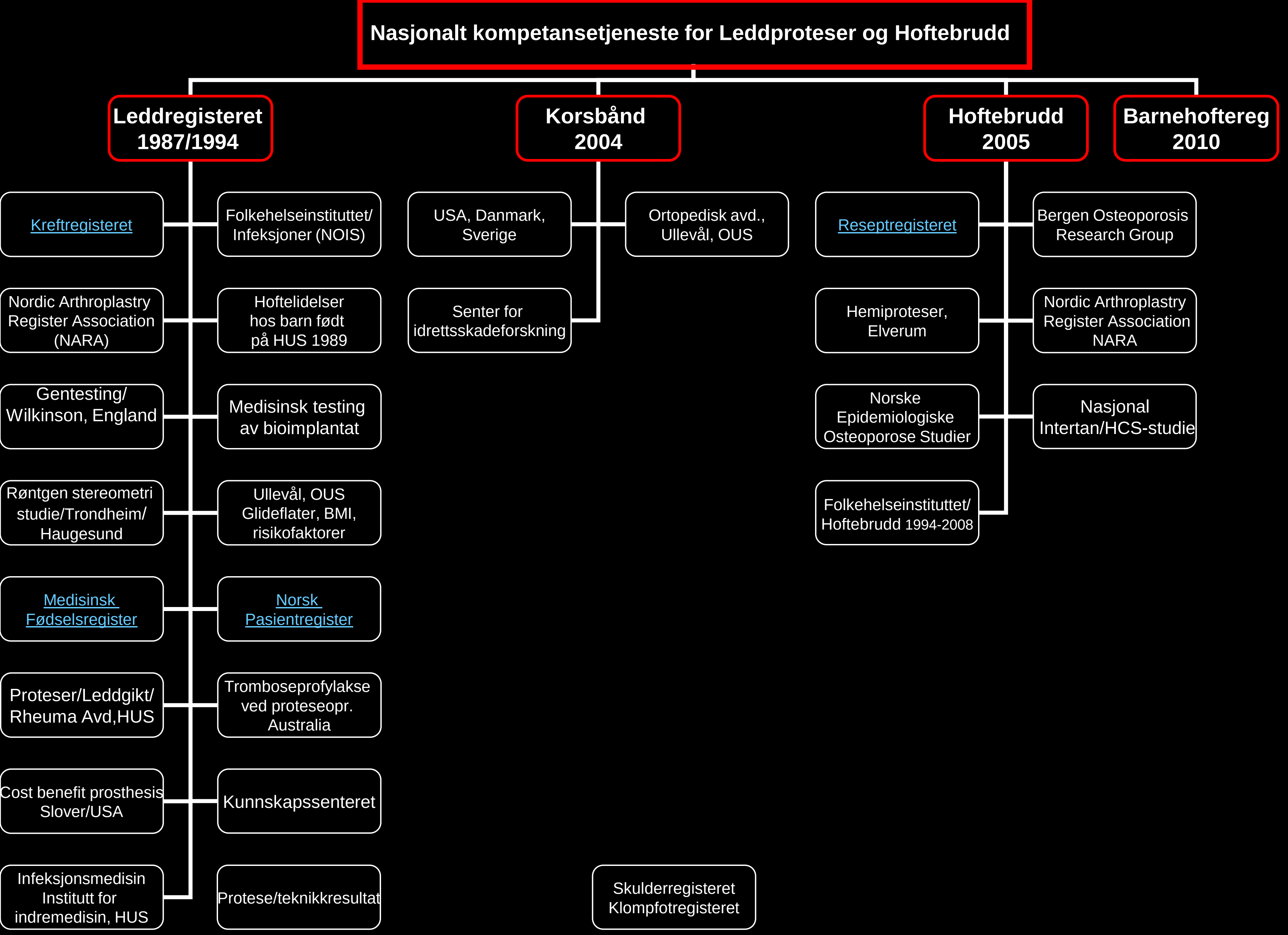
- Papirmelding fra kirurg (ett skjema etter operasjonen- primær og revisjon) + evt. spørreskjema til pasient fra registeret
- Personnummer
- Årsrapport (En felles + en sykehusvis)
- Møter med kirurgene (Høstmøte+regionale møter)
- Analyse av data for enkeltsykehus
- Forskning (11 doktorgrader+127 vitenskapelige artikler)
- Undervisning (Obligatorisk kurs for spesialiteten, industrikurs, lærebok)

Drift

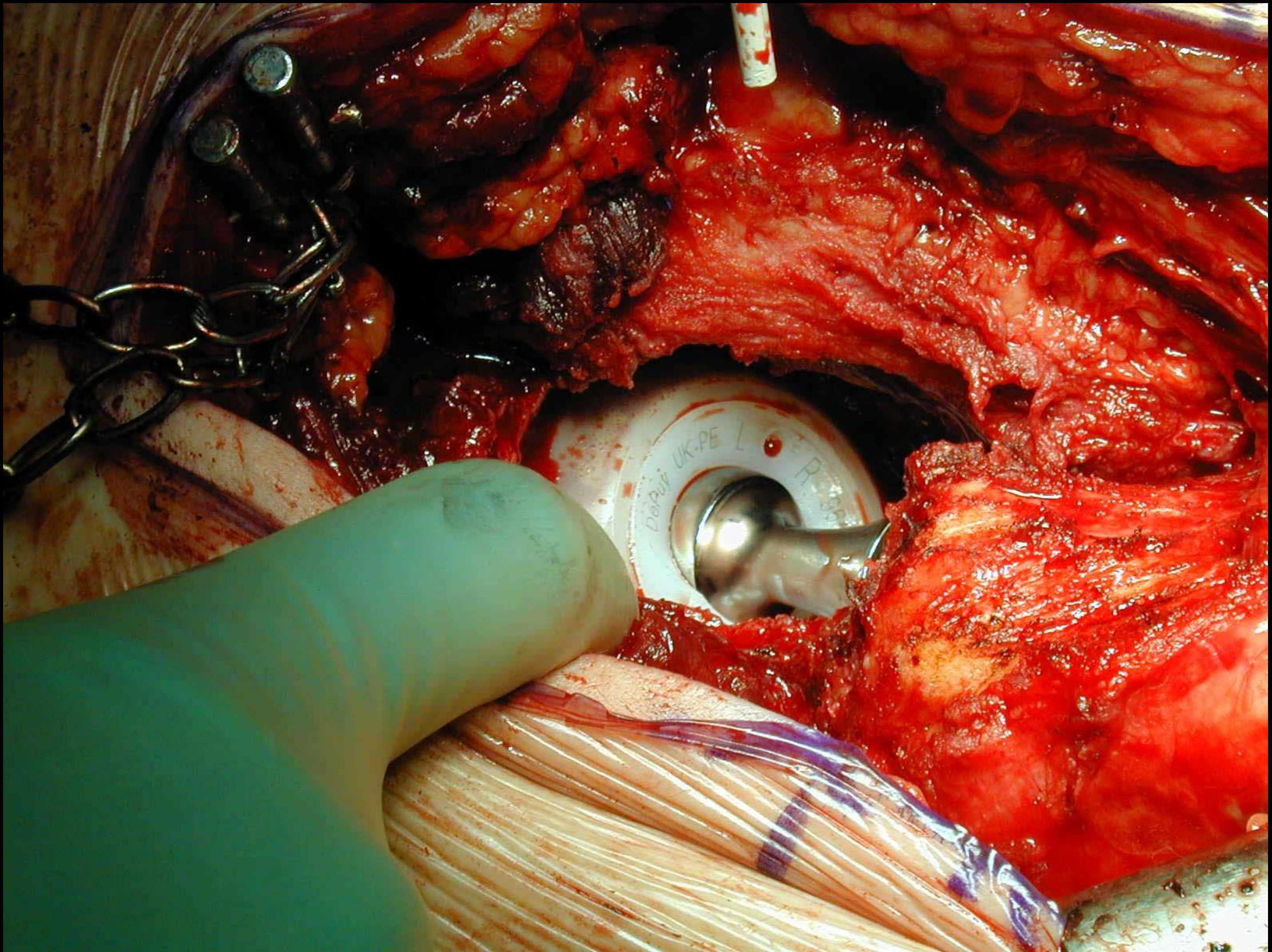
- Ortopedisk klinikk, Haukeland Universitetsykehus
- Finansiert av Helse Bergen via Helse Vest RHF
- Godkjenning som Nasjonale medisinske kvalitetsregistre november 2009. Leddproteseregisteret, Hoftebruddregisteret og Korsbåndsregisteret
- Hva betyr det?

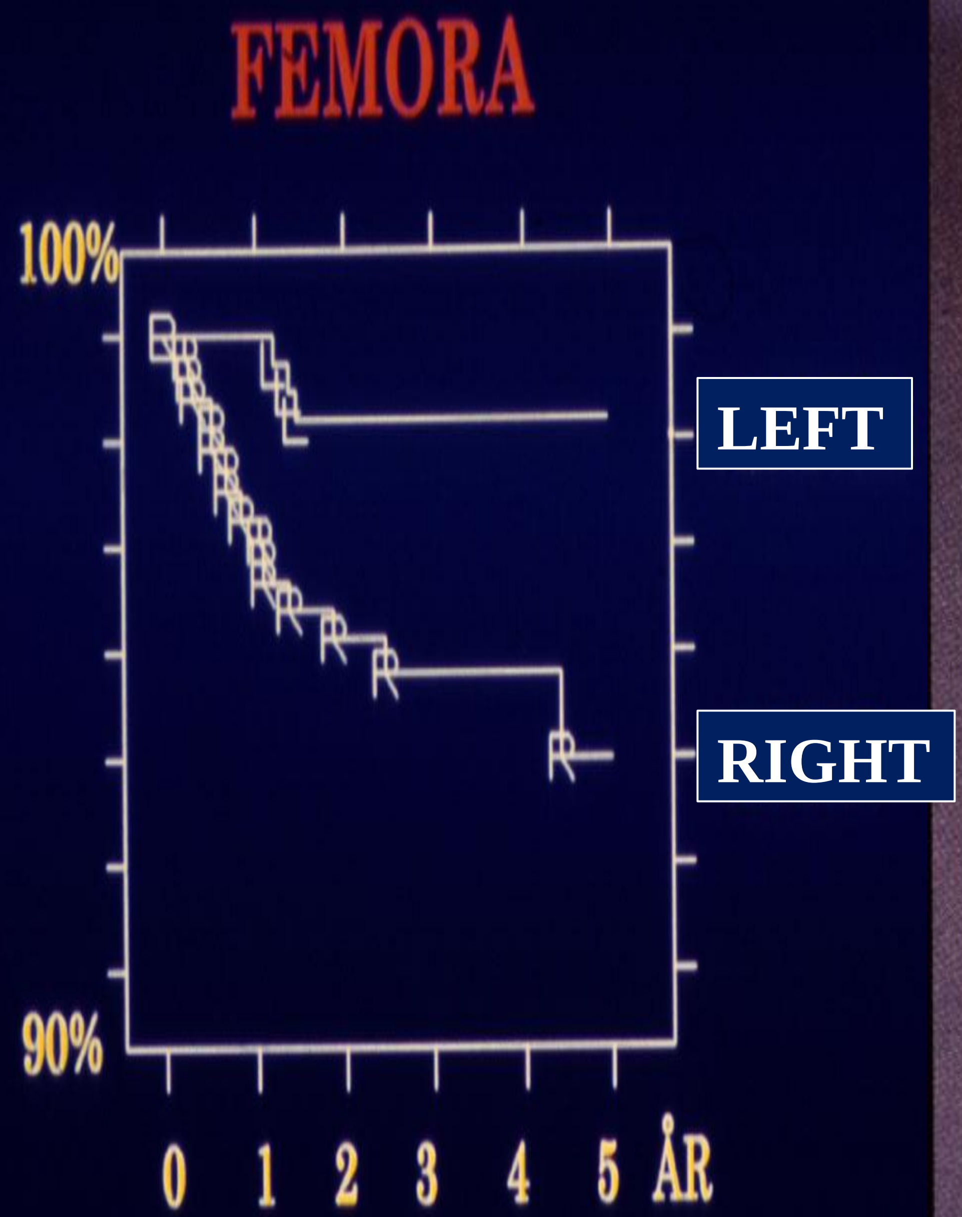
Drift forts.

- Ansatte: Leger (ortopediske kirurger og revmatologer), sekretærer, statistikere, IT-konsulent, stipendiater og leger i forskerstillinger
- Konsesjon fra Datatilsynet. Samtykkebasert
- Forskning knyttet til Universitetet i Bergen (Institutt for kirurgiske fag og Institutt for samfunnsmedisin).
- Nasjonalt og Internasjonalt samarbeid



Nasjonalt kompetansetjeneste for Leddproteser og Hoftebrudd
Leddregisteret 1987/1994
Korsbånd 2004
Hoftebrudd 2005
Barnehoftereg 2010
Kreftregisteret
Folkehelseinstituttet/ Infeksjoner (NOIS)
Nordic Arthroplastry Register Association (NARA)
Hoftelidelser hos barn født på HUS 1989
Gentesting/ Wilkinson, England
Medisinsk testing av bioimplantat
Røntgen stereometri studie/Trondheim/ Haugesund
Ullevål, OUS Glideflater, BMI, risikofaktorer
Medisinsk Fødselsregister
Norsk Pasientregister
Proteser/Leddgikt/ Rheuma Avd,HUS
Tromboseprofylakse ved proteseopr. Australia
Cost benefit prosthesis Slover/USA
Kunnskapssenteret
Infeksjonsmedisin Institutt for indremedisin, HUS
Protese/teknikkresultat
USA, Danmark, Sverige
Ortopedisk avd., Ullevål, OUS
Senter for idrettsskadeforskning
Skulderregisteret Klompfotregisteret
Reseptregisteret
Bergen Osteoporosis Research Group
Hemiproteser, Elverum
Nordic Arthroplastry Register Association NARA
Norske Epidemiologiske Osteoporose Studier
Nasjonal Intertan/HCS-studie
Folkehelseinstituttet/ Hoftebrudd 1994-2008



DePuy UK-PE



Havelin JBJS Br 1995

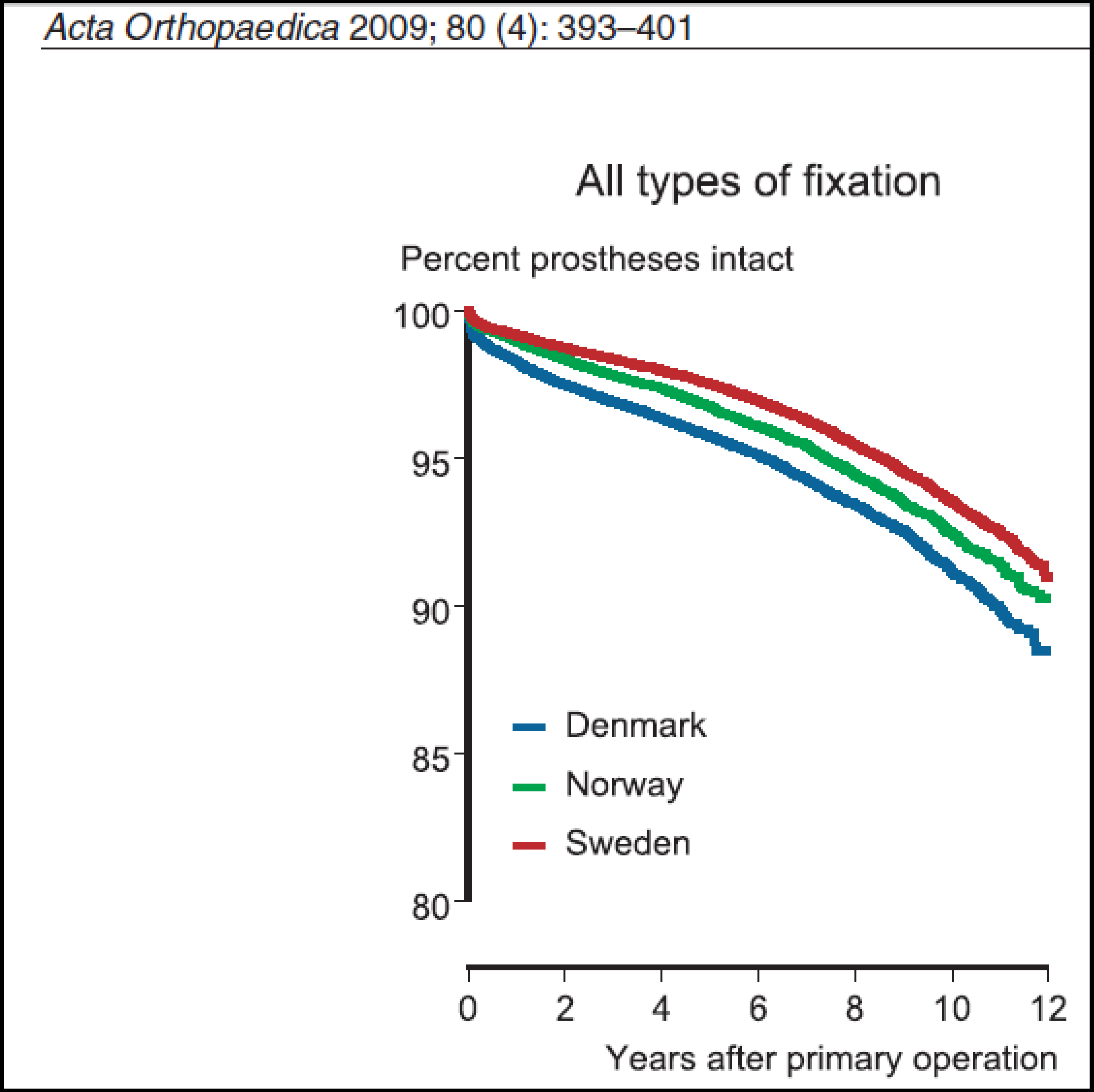
The Nordic Arthroplasty Register Association

A unique collaboration between 3 national hip arthroplasty registries with 280,201 THRs

Leif I Havelin[1,2], Anne M Fenstad[1], Roger Salomonsson[7], Frank Mehnert[4,5], Ove Furnes[1,2,3], Søren Overgaard[4,6], Alma B Pedersen[4,5], Peter Herberts[7], Johan Kärrholm[7], and Göran Garellick[7]

[1]The Norwegian Arthroplasty Register, Department of Orthopaedic Surgery, Haukeland University Hospital, Bergen, [2]Department of Surgical Sciences, University of Bergen, [3]Locus of Registry Based Epidemiology, Faculty of Medicine, University of Bergen, Norway, [4]The Danish Hip Arthroplasty Register, Center for Clinical Databases, Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus, [5]Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus, [6]Department of Orthopaedic Surgery and Clinical Institute, Odense University Hospital, Odense, Denmark, [7]The Swedish Hip Arthroplasty Register. Department of Orthopaedics, Institute of Surgical Sciences, Sahlgrenska University Hospital, University of Gothenburg, Mölndal, Sweden
Correspondence LH: leif.havelin@helse-bergen.no
Submitted 08-10-13. Accepted 09-02-01.

Overlevelse av hofteproteser i Sverige, Norge og Danmark



Havelin LI 2009

International Society of Arthroplasty Registries

ICOR | International Consortium of Orthopaedic Registries

FRIENDS, COLLEAGUES, COUNTRYMEN.

2nd International Congress of Arthroplasty Registries

1st - 3rd June 2013

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22nd OCTOBER 2012

www.isarhome.org

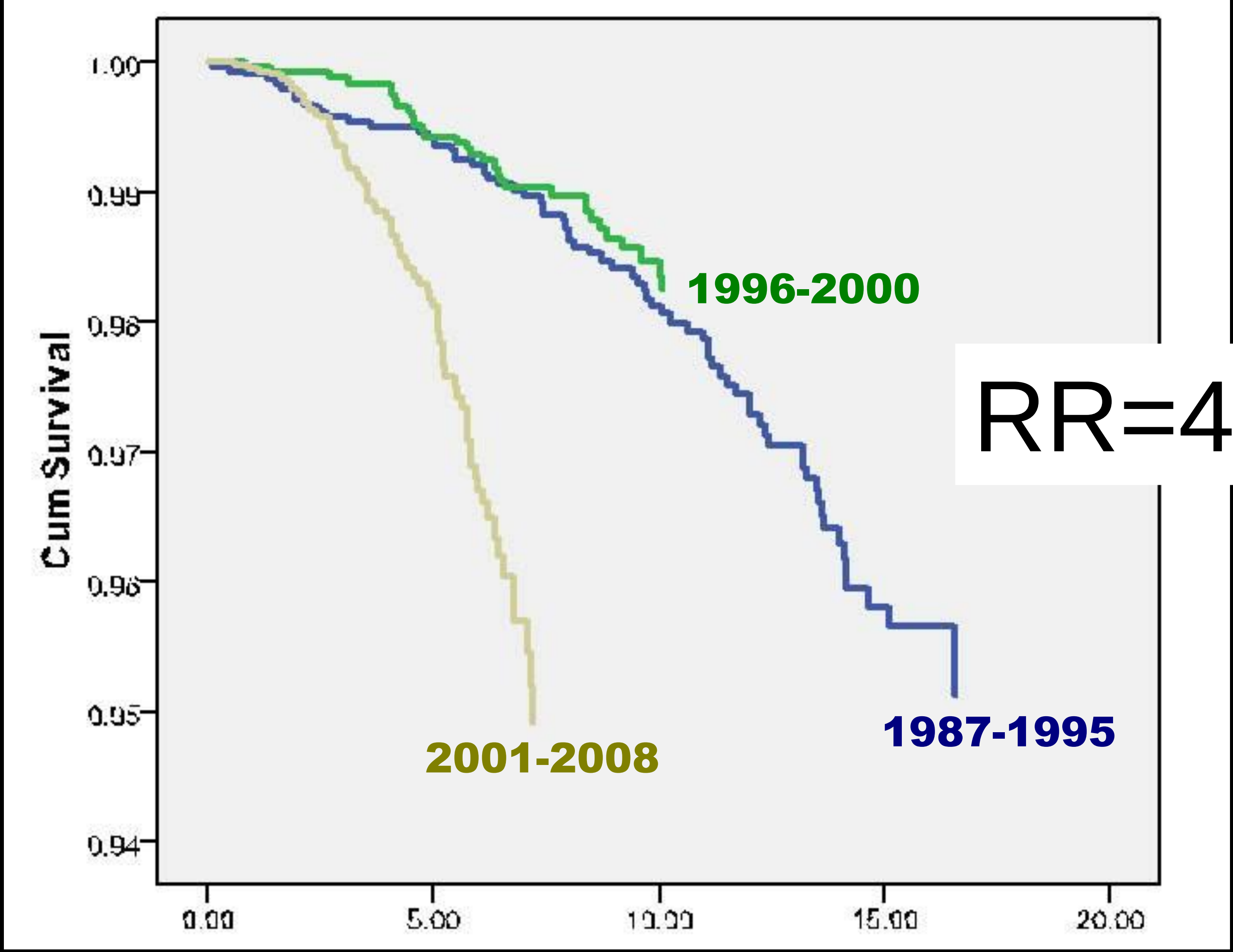
Titan

Is there still a place for the cemented titanium femoral stem?

10,108 cases from the Norwegian Arthroplasty Register

Geir Hallan[1], Birgitte Espehaug[1], Ove Furnes[1,3], Helge Wangen[2], Paul J Høl[3], Peter Ellison[3], and Leif I Havelin[1,3]

[1]Norwegian Arthroplasty Register, Department of Orthopedic Surgery, Haukeland University Hospital, Bergen; [2]Department of Orthopedic Surgery, Innlandet Hospital Trust, Elverum; [3]Department of Surgical Sciences, University of Bergen, Bergen, Norway
Correspondence: geir.hallan@helse-bergen.no
Submitted 10-11-17. Accepted 11-09-19



Cum Survival
1.00
0.99
0.98
0.97
0.96
0.95
0.94
0.00
5.00
10.00
15.00
20.00
1996-2000
2001-2008
1987-1995

RR=4.7

Why…?

Clin Orthop Relat Res (2012) 470:2995–3002
DOI 10.1007/s11999-012-2430-4

Clinical Orthopaedics
and Related Research®
A Publication of The Association of Bone and Joint Surgeons®

SYMPOSIUM: PAPERS PRESENTED AT THE 2011 MEETING OF THE INTERNATIONAL HIP SOCIETY

Coordinating Retrieval and Register Studies Improves Postmarket Surveillance

Peter Ellison PhD, Geir Hallan MD, PhD,
Paul Johan Høl PhD, Nils Roar Gjerdet DDS, PhD,
Leif I. Havelin MD, PhD

Fig. 4 Retrieved Titan® stems show variations in proximal stem geometry and color between groups. Stems shown from left to right are Group A lateralized, Group A standard, Group C lateralized, and Group C standard.

Revisjonsoperasjon for infeksjon NOIS-NPR-NAR-NHFR 2005-2008

		THA (NAR)						HA (NHFR)					
Number infected/included		157 / 24,345 (0.6 %)						133 / 8,140 (1.6 %)					
Risk factor		Number of primary THAs included	Number of revisions due to infection	Risk for revision due to infection	95% CI	p-value	Adjusted 1-year revision percent	Number of primary HAs included	Number of revisions due to infection	Risk for revision due to infection	95% CI	p-value	Adjusted 1-year revision percent
Gender	Female	16,459	72	1			0.5	6.039	93	1			1.6
	Male	7,886	85	2.6	1.9-3.5	<0.001	1.3	2,101	40	1.4	0.9-2.0	0.1	2.1
Age (Years)	<60	4,676	25	1			0.5	107	5	3.2	1.3-7.9	0.01	5.0
	60-69	6,326	38	1.3	0.8-2.2	0.3	0.8	412	5	0.8	0.3-2.0	0.6	1.3
	70-79	8,645	61	1.6	1.0-2.7	0.07	0.8	1,942	32	1.1	0.7-1.6	0.7	1.9
	80-89	4,464	32	1.7	0.9-3.0	0.1	0.8	4,426	67	1			1.6
	>90	233	1	0.9	0.1-6.8	0.9	0.3	1,253	24	1.3	0.8-2.1	0.2	2.1
ASA class	1	7,263	32	1			0.5	441	7	1			1.6
	2	12,396	84	1.7	1.1-2.6	0.02	0.8	2,907	57	1.3	0.6-2.8	0.5	2.2
	≥3	4,686	41	2.0	1.2-3.3	0.005	1.0	4,792	69	1.0	0.4-2.1	1.0	1.5
Duration of surgery (Min)	< 60	1,511	9	0.9	0.4-1.9	0.8	0.5	1,774	41	1.5	1.0-2.3	0.06	2.5
	60-89	9,473	52	1			0.6	3,827	60	1			1.8
	90-119	8,586	55	1.2	0.8-1.7	0.4	0.7	1,894	21	0.7	0.4-1.2	0.2	1.3
	>120	4,775	41	1.6	1.0-2.4	0.03	1.1	645	11	1.0	0.5-2.0	0.9	1.7
Level of emergency	Emergency	470	7	2.7	1.3-5.9	0.03	1.9	6,856	109	1			1.7
	Elective	23,875	150	1			0.7	1,284	24	1.1	0.7-1.8	0.6	2.0
Method of fixation	Uncemented	3,669	31	2.0	1.3-3.1	0.03	1.3	1,535	34	1.3	0.8-1.9	0.3	2.0
	Cemented	16,814	101	1			0.6	6,605	99	1			1.7
	Hybrid	3,862	25	1.5	0.9-2.4	0.1	0.8						
NNIS index	0	15,810	86	1			0.6	2,649	55	1			2.2
	1	7,376	58	1.5	1.1-2.1	0.02	0.9	4,474	64	0.7	0.5-1.0	0.08	1.6
	2	1,159	13	2.1	1.2-3.9	0.01	1.7	1,017	14	0.7	0.4-1.2	0.2	1.5

Dale H Acta Orthop Scand 2011

ARTHRITIS & RHEUMATISM
Vol. 54, No. 3, March 2006, pp 802–807
DOI 10.1002/art.21659

The Impact of Body Mass Index on Later Total Hip Arthroplasty for Primary Osteoarthritis

A Cohort Study in 1.2 Million Persons

Gunnar B. Flugsrud,[1] Lars Nordsletten,[1] Birgitte Espehaug,[2] Leif I. Havelin,[2] Anders Engeland,[3] and Haakon E. Meyer[4]

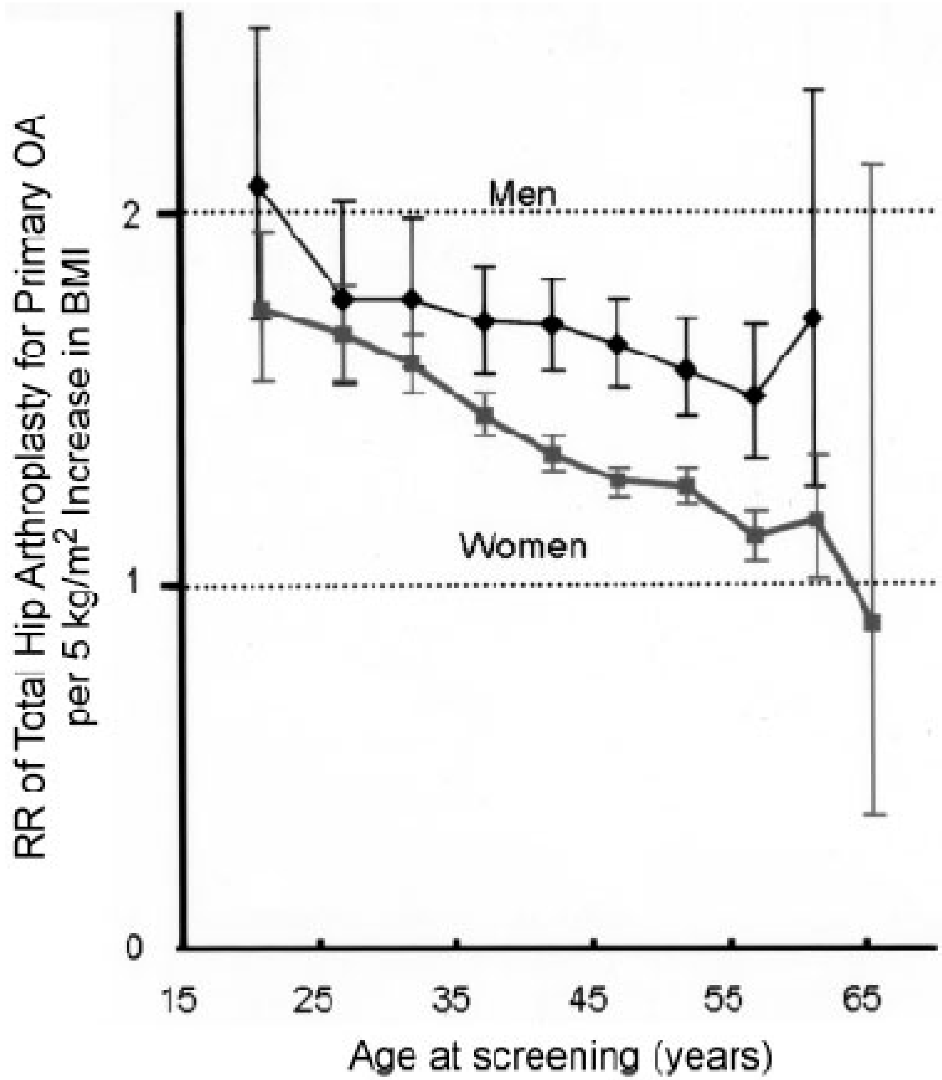


Figure 1. Relative risk (RR) of total hip arthroplasty for primary osteoarthritis (OA) per an increase of 5 kg/m^2 in the body mass index (BMI) in men and women. RRs were stratified according to age at the time of screening and were adjusted for height. Bars show the 95% confidence intervals.

Cancer Epidemiology 33 (2009) 235–241

Contents lists available at ScienceDirect

Cancer Epidemiology

The International Journal of Cancer Epidemiology, Detection, and Prevention

journal homepage: www.cancerepidemiology.net

Long-term risk of receiving a total hip replacement in cancer patients

Eva Dybvik [a,*], Ove Furnes [a,b], Sophie D. Fosså [c,d], Clement Trovik [e], Stein Atle Lie [a,f]

[a] *The Norwegian Arthroplasty Register, Department of Orthopaedic Surgery, Haukeland University Hospital, N-5021 Bergen, Norway*
[b] *Department of Surgical Sciences, University of Bergen, Norway*
[c] *Department of Clinical Cancer Research, The Norwegian Radium Hospital, Oslo, Norway*
[d] *Faculty of Medicine, University of Oslo, Oslo, Norway*
[e] *Musculoskeletal Tumour Centre, Department of Oncology, Haukeland University Hospital, Bergen, Norway*
[f] *University Research Bergen, Department of Health, Bergen, Norway*

Neonatal hip instability and risk of total hip replacement in young adulthood

Follow-up of 2,218,596 newborns from the Medical Birth Registry of Norway in the Norwegian Arthroplasty Register

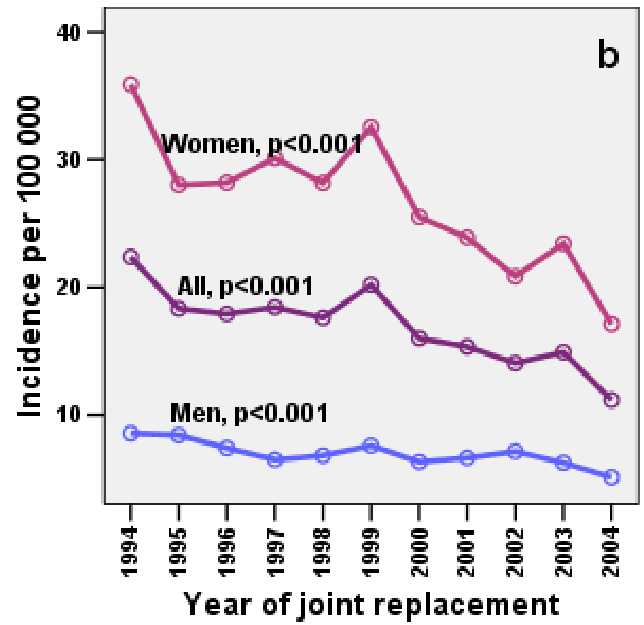
Ingvild Ø Engesæter[1], Stein Atle Lie[1,2], Trude G Lehmann[1], Ove Furnes[1,3], Stein Emil Vollset[4], and Lars B Engesæter[1,3]

Arthritis & Rheumatism (Arthritis Care & Research)
Vol. 57, No. 3, April 15, 2007, pp 529–532
DOI 10.1002/art.22628

CONTRIBUTIONS FROM THE FIELD

Reduction in Orthopedic Surgery Among Patients With Chronic Inflammatory Joint Disease in Norway, 1994–2004

B. T. S. FEVANG,[1] S. A. LIE,[2] L. I. HAVELIN,[2] L. B. ENGESÆTER,[2] AND O. FURNES[2]



THE JOURNAL OF BONE & JOINT SURGERY

Internal Screw Fixation Compared with Bipolar Hemiarthroplasty for Treatment of Displaced Femoral Neck Fractures in Elderly Patients

J.-E. Gjertsen, T Vinje, L.B. Engesæter, S.A. Lie, L.I. Havelin, O. Furnes and J.M. Fevang
J Bone Joint Surg Am. 2010;92:619-628. doi:10.2106/JBJS.H.01750

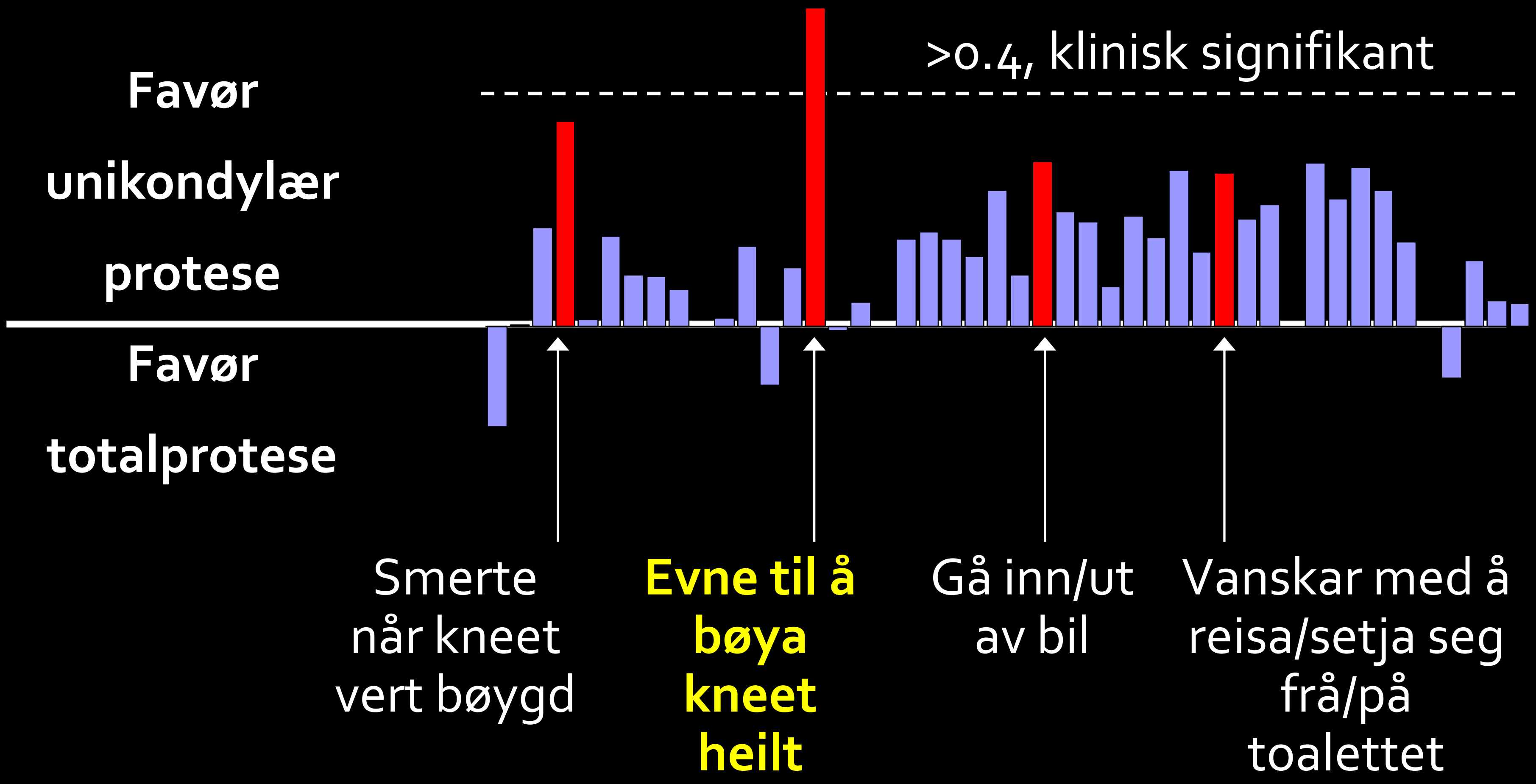
Pain and Function in Patients After Primary Unicompartmental and Total Knee Arthroplasty

By Stein Håkon Låstad Lygre, MSc, PhD, Birgitte Espehaug, MSc, PhD, Leif Ivar Havelin, MD, PhD, Ove Furnes, MD, PhD, and Stein Emil Vollset, MD, DrPH

Investigation performed at the Norwegian Arthroplasty Register, Department of Orthopaedic Surgery, Haukeland University Hospital, Bergen, Norway

UNI vs.Total kne

- 42 ekstra utfall – enkeltspørsmål- KOOS



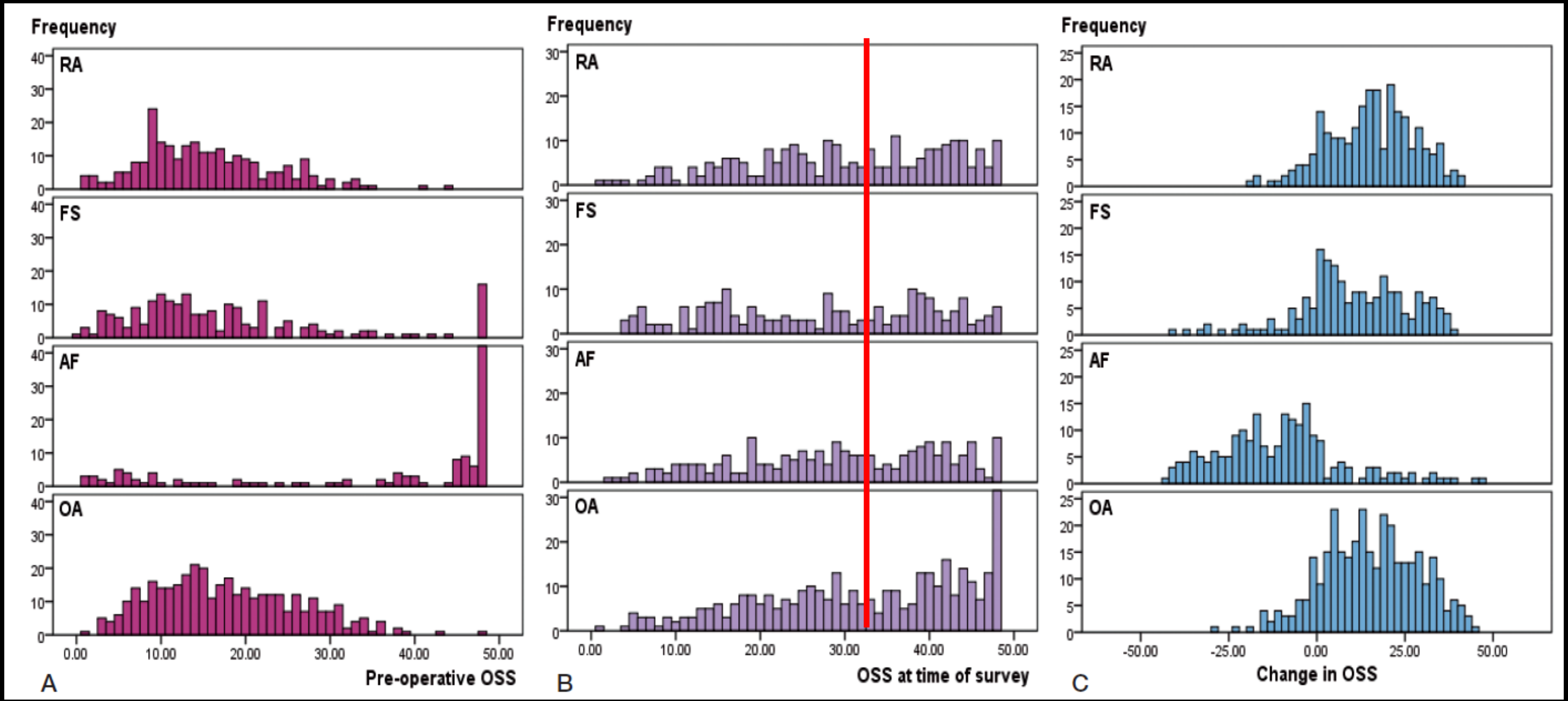
Lygre SH JBJS Am 2010

Acta Orthopaedica 2012; 83 (5): 467–473

Good function after shoulder arthroplasty

1,107 patients with 4 different diagnoses from the Norwegian Arthroplasty Register

Bjørg-Tilde S Fevang[1,2], Stein H L Lygre[3], Glenn Bertelsen[4], Arne Skredderstuen[2], Leif I Havelin[2,4], and Ove Furnes[2,4]

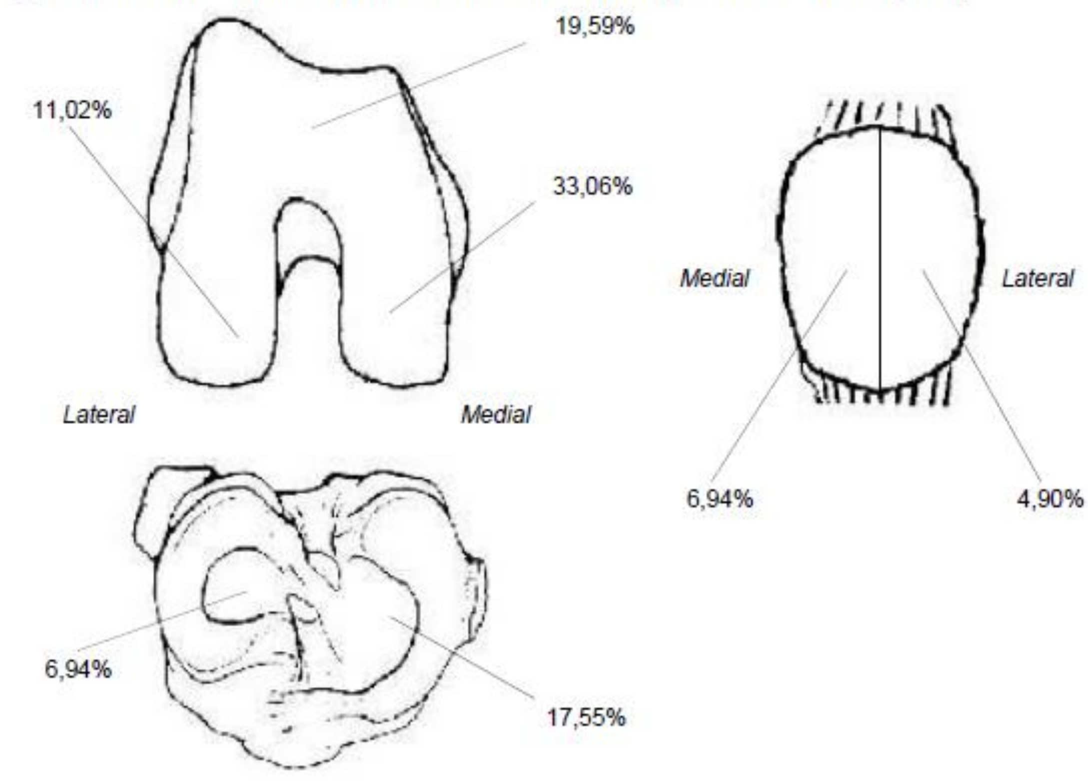


Effect of Gender and Sports on the Risk of Full-Thickness Articular Cartilage Lesions in Anterior Cruciate Ligament –Injured Knees : A Nationwide Cohort Study From Sweden and Norway of 15 783 Patients

Jan Harald Røtterud, Einar A. Sivertsen, Magnus Forssblad, Lars Engebretsen and Asbjørn Årøen

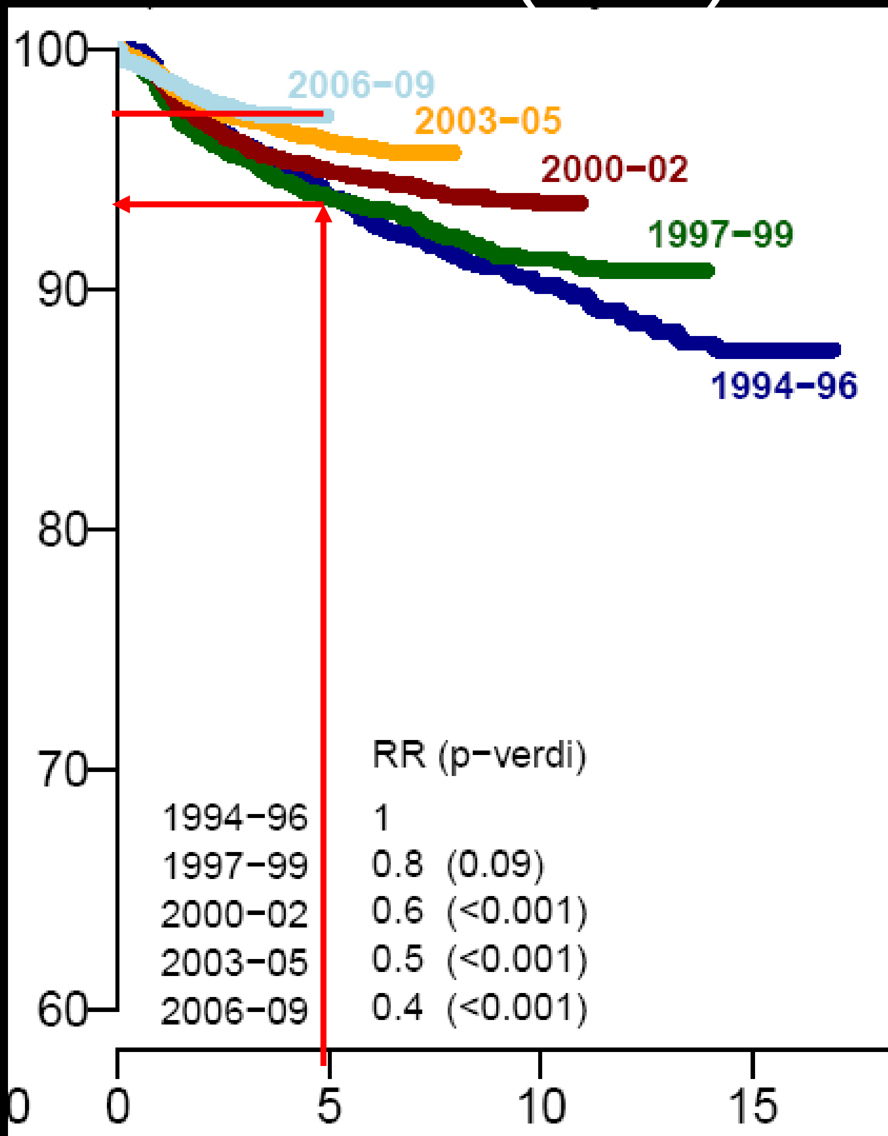
Am J Sports Med 2011 39: 1387

Figur 21: Alle bruskskader med areal større enn 2 cm² og ICRS lik 3 eller 4 (total)



Improvement in survival of primary knee replacements in Norway

Total knee (TKA)

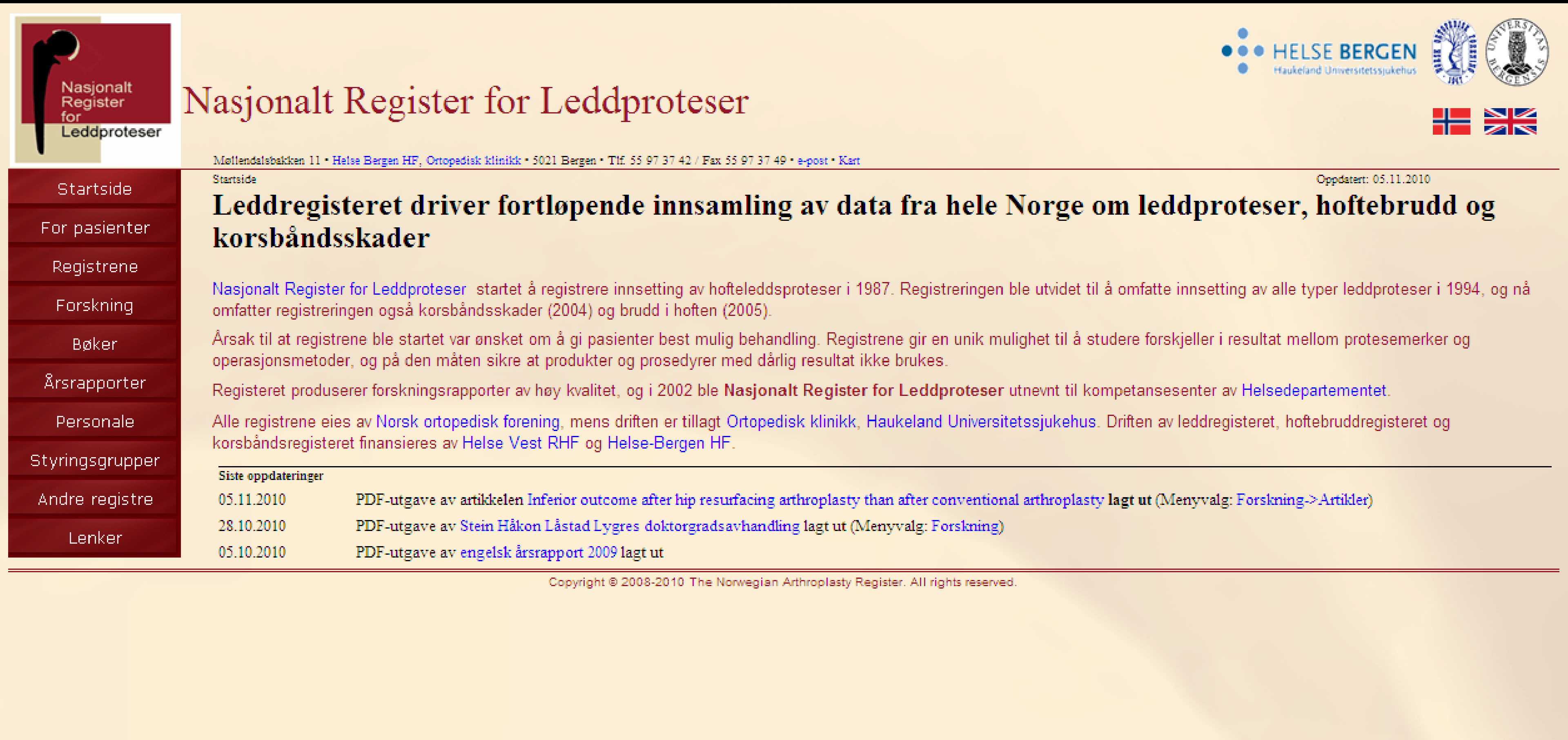


Muligheter, framtid og begrensninger

- Dataløsninger for innhenting av data- Medisinsk Registrerings System (MRS)?

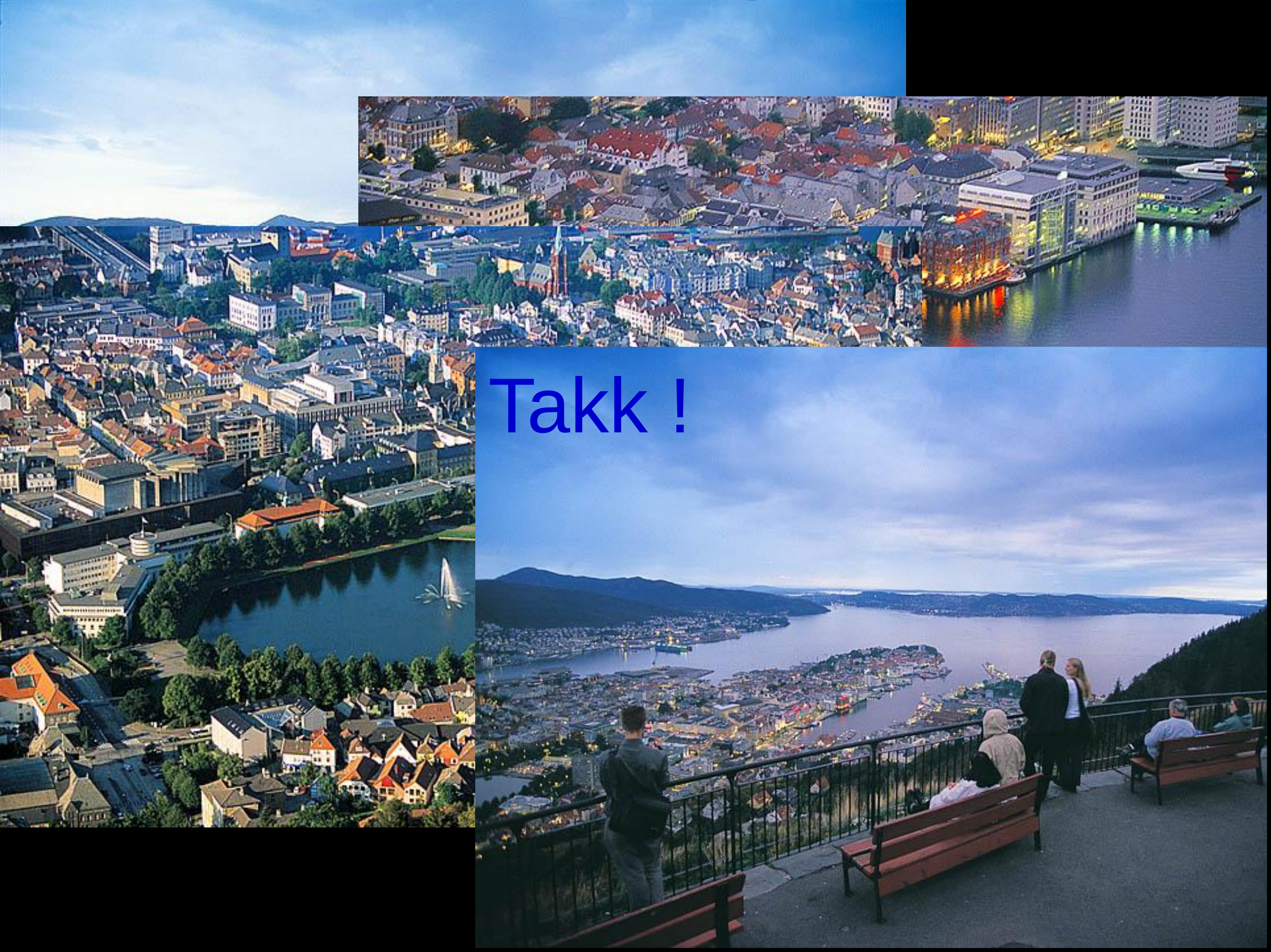
- Konservativt behandla (tilsvarende BOA i Sverige)
- PROM (Patient Reported Outcome Measures)-IPad løsning. EQ-5D, KOOS, HOOS, Oxford 12, UCLA, BMI, Diabetes
- Kobling til andre registre i økende grad –Protesekirurgi er godt egna som endepunkt i risikoanalyser (Folkeregisteret, Kreftregisteret, Fødselsregisteret, NOIS, Reseptregisteret, NPR, Helseundersøkelsene, HUNT)
- Bruk av Norsk Pasient Register (NPR)
- Røntgenbilder
- Genstudier
- Retrieval laboratorium
- Økonomiske analyser, cost-nytte analyser
- Randomiserte kliniske studier gjennom registeret
- Nye ortopediske registre?

- Begrensninger: Økonomi
  - » Kapasitet til å veilede
  - » Medforfatterskap
  - » Kapasitet til å analysere og publisere data



www.haukeland.no/nrl

Snakk med en av oss i registrene og skriv kort søknad om bruk av data. Så REK



Takk !

Ortopedisk klinikk, Haukeland universitetssykehus

- Nasjonal kompetansetjeneste for Leddproteser og hoftebrudd
- Leder: Professor Lars B.Engesæter (Hoftebrudd, infeksjoner,barnehofter)
- Medarbeidere: Professor Leif I.Havelin (ansvarlig totalproteser i hofte)
- Professor Ove Furnes (kne, skulder, ankel, albue)
- 1.amanuensis Bjørg Tilde Fevang (revmatologi)

- Seksjonsoverlege dr.med Jonas Fevang (Hoftebrudd)
- Professor Lars Engebretsen (Korsbånd)
- Overlege dr.med Ola Wiik (Barnehofteregisteret)
- Overlege PhD Jan Erik Gjertsen
- Professor Stein Atle Lie (statistisk veiledning)
- Professor Birgitte Espehaug (statistisk veiledning)
- Statistiker Valborg Baste (statistiker)

Institutt for kirurgiske fag og ortopedisk klinikk

- Radiusfrakturer, Cerebralparese og tetraplegikirurgi
- Forskningsleder Professor Leiv Hove og 1.amanuensis Yngvar Krukhaug
- Sarcomforskning, Scandinavia Sarcoma group seksjonsoverlege dr.med Clement Trovik
- Biomateralguppen
- Leder Professor Nils Roar Gjerdet
- 1.amanuensis Paul Johan Høl