

# PROM endrer klinisk praksis

Torbjørn Berge Kristensen  
Overlege Ortopedisk avd. HUS  
Nasjonal Hoftebruddregister



Foto: Colorbox

Patient Reported Outcome Measures (PROM) er skjema (instrument) som måler korleis pasientane opplever forhold knytt til helse og sjukdom og behandlingseffektar.\*

\*[www.kvalitetsregistre.no](http://www.kvalitetsregistre.no)

# Formål

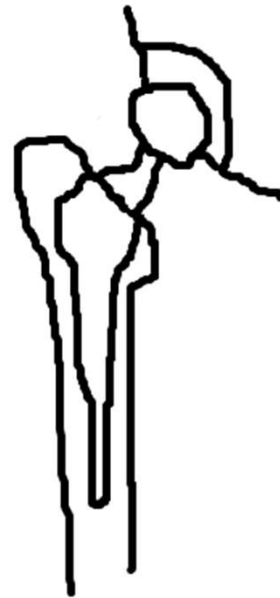
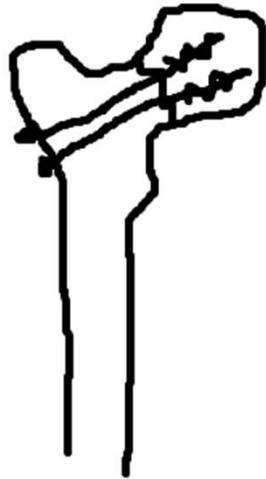
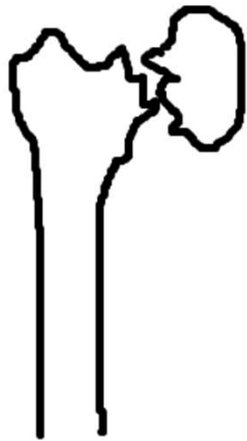
- Vise hvordan vi har brukt PROM i 2 studier til å endre klinisk praksis for hoftebruddpasienter
- Litt erfaringer rundt bruk av PROM

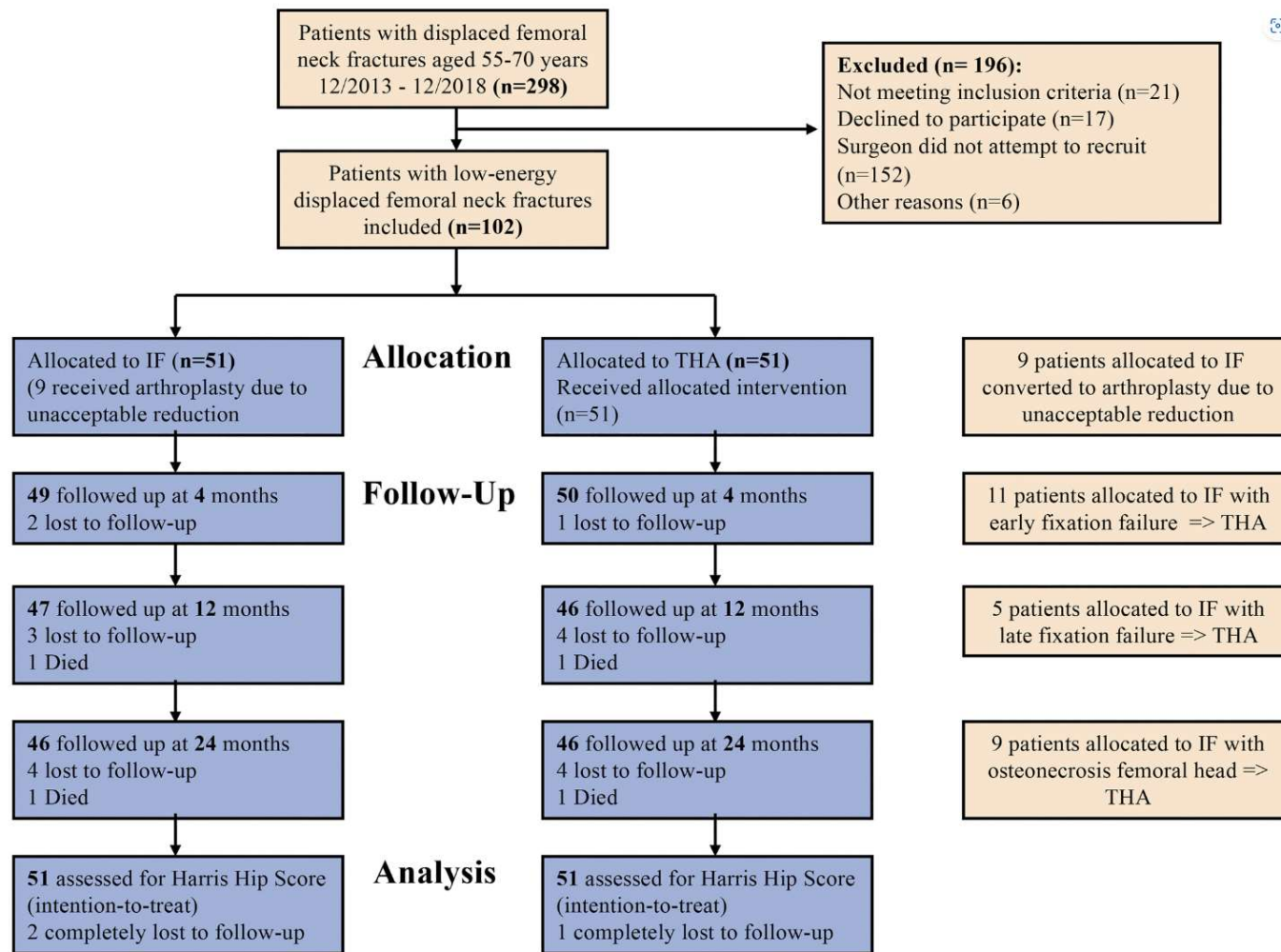
# Total Hip Arthroplasty Leads to Better Results After Low-Energy Displaced Femoral Neck Fracture in Patients Aged 55 to 70 Years

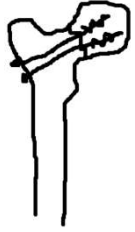
A Randomized Controlled Multicenter Trial Comparing Internal Fixation and Total Hip Arthroplasty

Stefan Bartels, MD, Torbjørn B. Kristensen, MD, PhD, Jan-Erik Gjertsen, MD, PhD, Frede Frihagen, MD, PhD, Cecilia Rogmark, MD, PhD, Filip C. Dolatowski, MD, PhD, Wender Figved, MD, PhD, Jūratė Šaltytė Benth, PhD, and Stein Erik Utvåg, MD, PhD

*Investigation performed at Akershus University Hospital, Lørenskog, and Haukeland University Hospital, Bergen, Norway*







51 vs 51

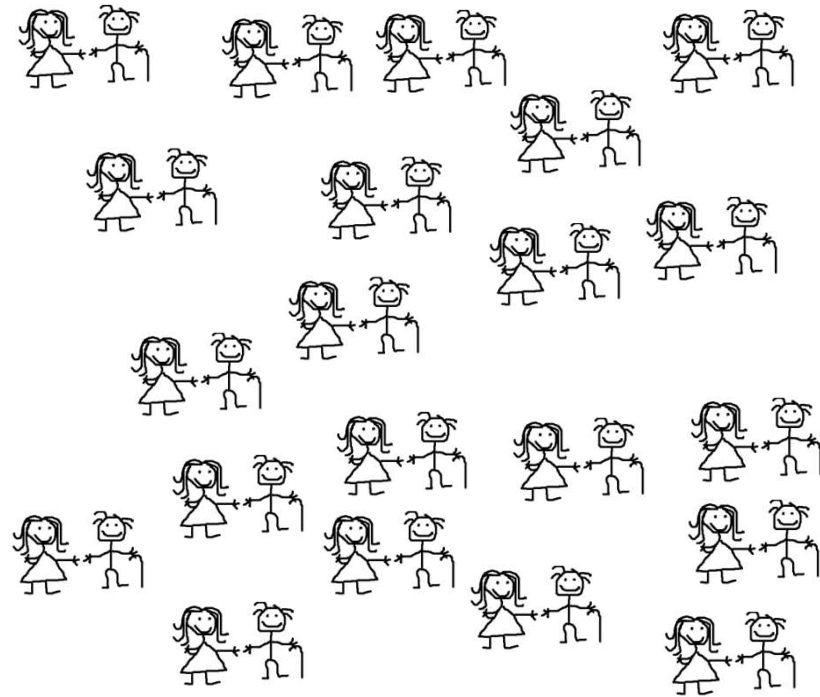
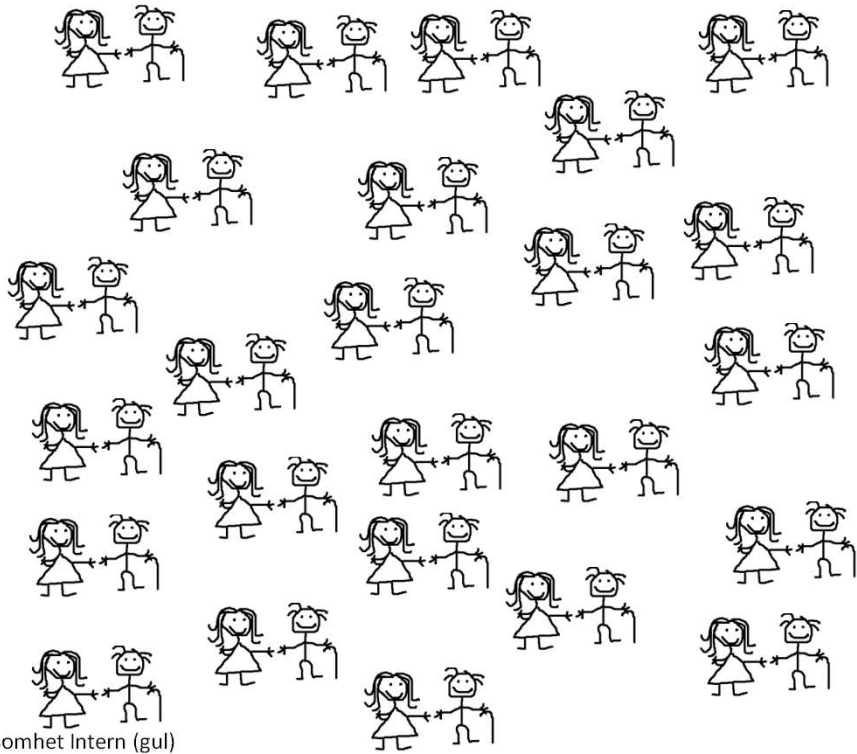




TABLE IV - Surgical Details\*



	IF (N = 51)	THA (N = 51)	P Value
Type of fixation			
Screw fixation	42		
Conversion to cemented THA during index surgery	9		
Fixation of prosthesis			
Cemented		48 (94.1)	
Reverse hybrid		3 (5.9)	
Duration of surgery (min)	43.3 ± 28.5	107.4 ± 22.9	<0.001†
Surgeon experience of >3 years	45 (88.2)	49 (96.1)	0.020‡
Hip joint approach			
Direct lateral		34 (66.7)	
Posterior		17 (33.3)	
Intraoperative blood loss§ (mL)	119.6 ± 144.4	418.8 ± 208.1	<0.001†
Need for blood transfusion	2 (3.9)#	4 (7.8)	
Postoperative complication			
Urinary tract infection**	7 (13.7)	2 (3.9)	
Pneumonia	0	2 (3.9)	
Deep vein thrombosis**	1	0	
Pulmonary embolism**	1	0	
Alcohol abstinence	0	1 (2.0)	

\* Values are given as the mean ± SD or as the count with or without the percentage in parentheses

† Independent-samples t test

‡ Chi-square test

§ Intraoperative blood loss data were missing for 14 patients in the IF group and 2 patients in the THA group

# Both of these were patients who underwent intraoperative conversion to THA

\*\* One patient had 3 different postoperative complications.

TABLE II - Patient Characteristics at Baseline<sup>a</sup>

	IF (N = 51)	THA (N = 51)	Total (N = 102)
Age (yr)	64.1 ± 4.3	63.4 ± 4.0	63.7 ± 4.2
Sex by age group, F/M			
55-59 years	6 (16.2)/2 (14.3)	6 (18.8)/6 (31.6)	12 (17.4)/8 (24.2)
60-64 years	12 (32.4)/2 (14.3)	10 (31.3)/6 (31.6)	22 (31.9)/8 (24.2)
65-70 years	19 (51.4)/10 (71.4)	16 (50.0)/7 (36.8)	35 (50.7)/17 (51.5)
Female	37 (72.5)	32 (62.7)	69 (67.6)
BMI (kg/m <sup>2</sup> )	24.7 ± 4.6	25.2 ± 3.9	24.9 ± 4.3
ASA classification			
1	7 (13.7)	4 (7.8)	11 (10.8)
2	30 (58.8)	38 (74.5)	68 (66.7)
3	14 (27.5)	9 (17.6)	23 (22.5)
Charlson comorbidity index score	2.8 ± 1.0	2.5 ± 1.1	2.7 ± 1.0
mMRC Dyspnea scale			
0	34 (66.7)	36 (70.6)	70 (68.6)
1	14 (27.5)	14 (27.5)	28 (27.5)
2	3 (5.9)	1 (2.0)	4 (3.9)
NYHA			
0	10 (19.6)	8 (15.7)	18 (17.6)
1	38 (74.5)	39 (76.5)	77 (75.5)
2	3 (5.9)	3 (5.9)	6 (5.9)
3	0	1 (2.0)	1 (1.0)
Current smokers	26 (51.0)	19 (37.3)	45 (44.1)
Alcohol abuse	7 (13.7)	8 (15.7)	15 (14.7)
Residence			
Living at home	49 (96.1)	50 (98.0)	99 (97.1)
With public assistance	1 (2.0)	1 (2.0)	2 (2.0)
Institution	1 (2.0)	0	1 (1.0)
Civil status			
Unmarried	7 (13.7)	13 (25.5)	20 (19.6)
Married	34 (66.7)	32 (62.7)	66 (64.7)
Widowed	8 (15.7)	5 (9.8)	13 (12.7)
Divorced	2 (3.9)	1 (2.0)	3 (2.9)
Established osteoporosis	10 (19.6)	6 (11.8)	16 (15.7)
Fall from standing height			
Indoors	28 (54.9)	22 (43.1)	50 (49.0)
Outdoors	23 (45.1)	29 (56.9)	52 (51.0)
Died during follow-up	1 (2.0)	1 (2.0)	2 (2.0)

<sup>a</sup>Values given as the mean ± SD or as the count with the percentage in parentheses. BMI = body mass index, mMRC = Modified British Medical Research Council, and NYHA = New York Heart Association.

TABLE I - Primary and Secondary Outcome Measures

Outcome Measure	Description of Measure	Score Interpretation	MCID or MDC*	Assessment Time Points	Assessor Blinding
HHS	Hip function (0-47 points), pain (0-44 points), range of motion (0-5 points), and deformity (0-4 points)	<70 = poor, 70-79 = fair, 80-89 = good, 90-100 = excellent	MCID 10	Prefracture and 4, 12, and 24 months	Surgeon and investigator unblinded
OHS	Hip function (0-48 points)	<27 = poor, 27-33 = fair, 34-41 = good, >41 = excellent	MCID 5.2	Prefracture and 4, 12, and 24 months	Surgeon and investigator unblinded
HOOS	5 subscales, measuring pain, symptoms, function in activity of daily living, function in sport and recreation, and quality of life, scored from 0 = worst to 100 = best	Each subscale is scored separately: <70 = poor, 70-79 = fair, 80-89 = good, 90-100 = excellent	MDC pain: 21.6, symptoms: 22.7, activities of daily living: 17.7, quality of life: 24.4	Prefracture and 4, 12, and 24 months	Surgeon and investigator unblinded
EQ-5D-3L	Quality of life, patient-reported, in 5 dimensions: mobility, self-care, usual activity, pain/discomfort, anxiety/depression; each dimension with 3 levels: no problems, some problems, and extreme problems	<0 = worse than death, 0 = death, 1 = highest quality of life	MCID 0.1	Postop. At discharge and 4, 12, and 24 months	Surgeon and investigator unblinded
EQ-VAS	Health related quality of life, patient-reported, Visual analogue scale, range 0-100	0 = worst imaginable health, 100 = best imaginable health	MCID 7	Postop. and 4, 12, and 24 months	Surgeon and investigator unblinded
VAS pain	Pain, patient-reported, range 0-100	0 = no pain, 100 = worst imaginable pain	MCID 10	Postop. and 4, 12, and 24 months	Surgeon and investigator unblinded
VAS patient satisfaction	Satisfaction, patient-reported, range 0-100	0 = maximally satisfied, 100 = maximally dissatisfied	MCID 10	Postop. and 4, 12, and 24 months	Surgeon and investigator unblinded

\*MCID and MDC were predefined according to published data and clinical practice<sup>30,35</sup>.

TABLE VI - Reoperations and Interventions\*



	IF (N = 51)	THA (N = 51)	P Value†
IF converted during index procedure	9		
To THA	8		
To hemiarthroplasty	1		
Reoperation	34 (66.7)	2 (3.9)	<0.001‡
Major reoperation	26 (51.0)	2 (3.9)	<0.001‡
Early fixation failure§ (<4 month)	11		
Late fixation failure§ (≥4 month)	5		
Osteonecrosis§	9		
Deep infection	1		
Cement leak		1	
Acetabular cup misplacement		1	
Dislocation of prosthesis		0	
Minor reoperation#	8 (15.7)		

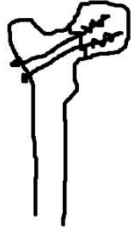
^Values are given as the count with or without the percentage in parentheses.

†Chi-square test.

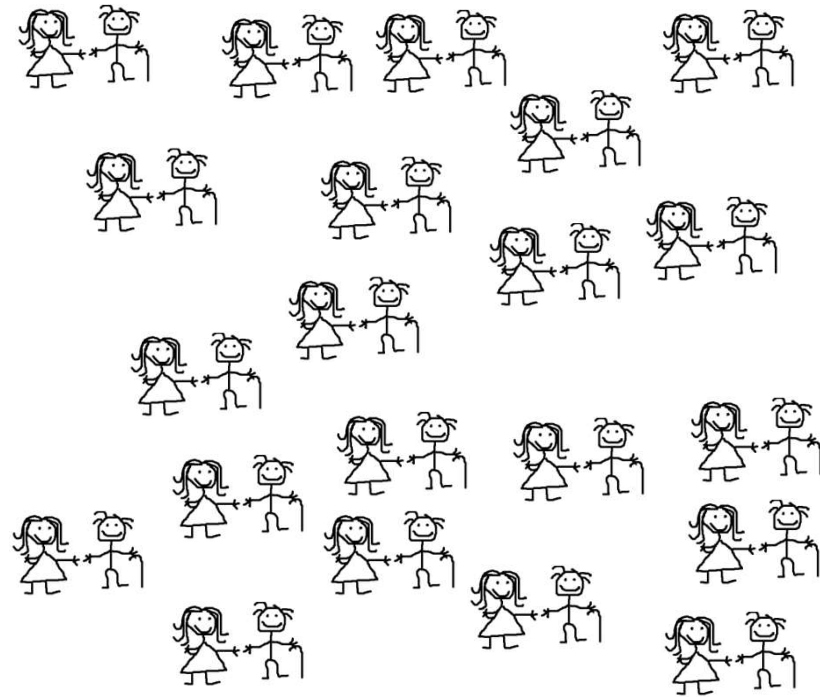
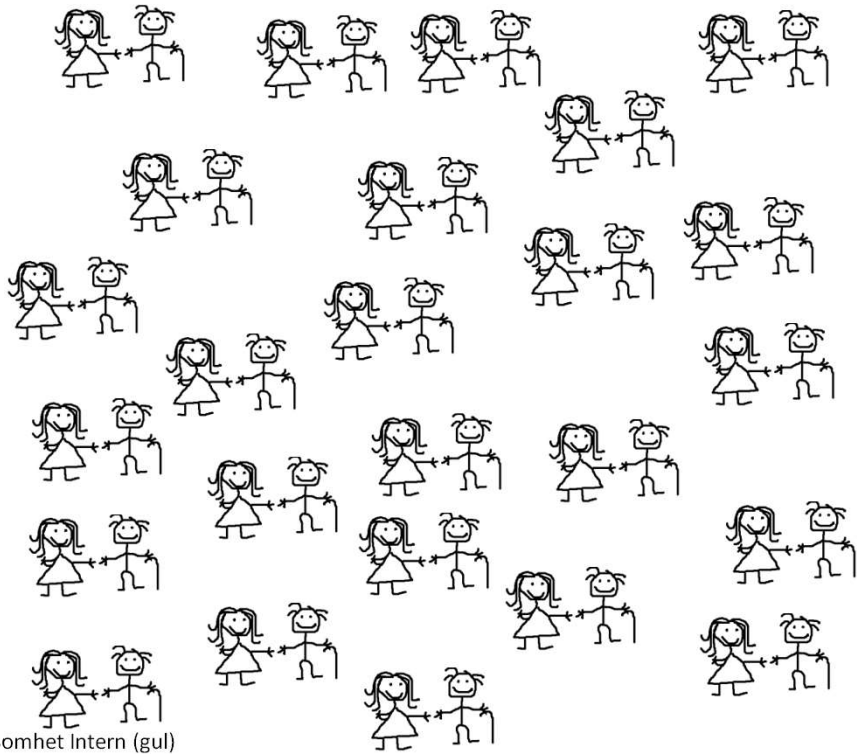
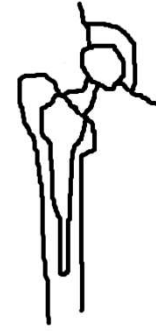
‡Significant

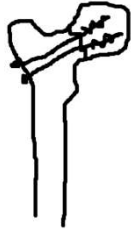
§Converted to THA.

#Removal of screws only.

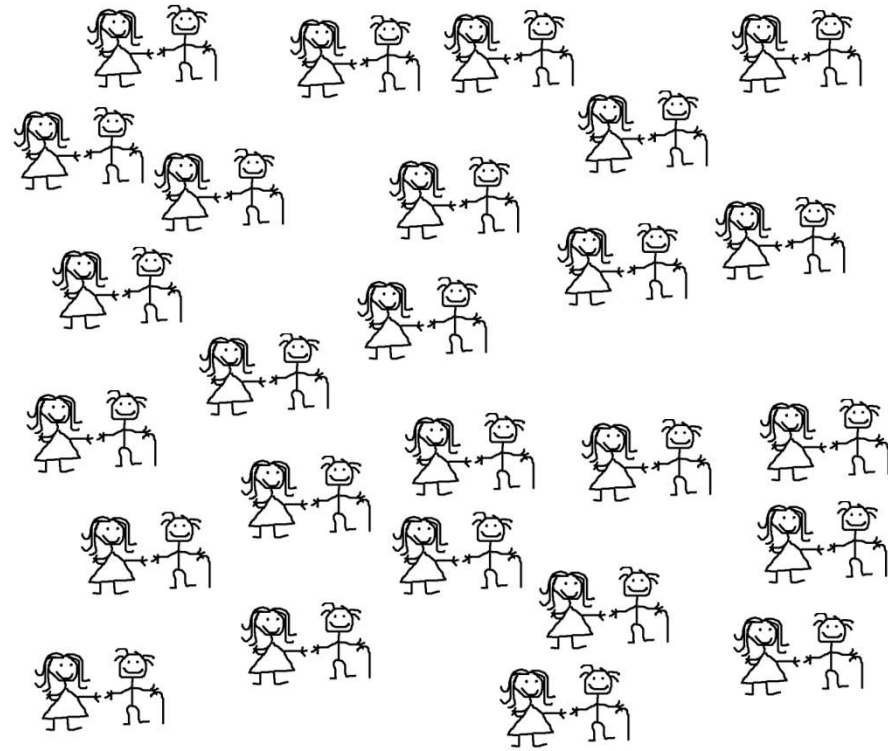
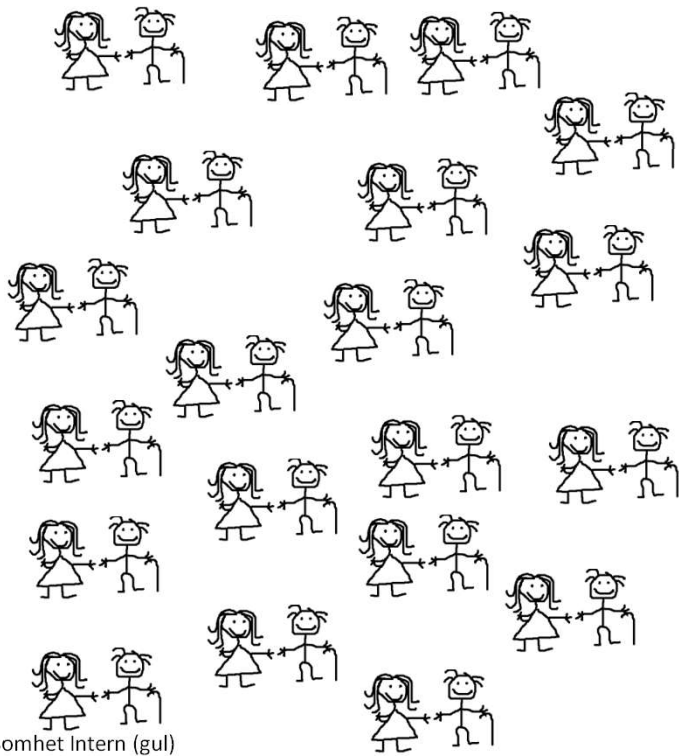


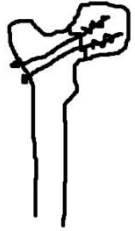
51 vs 51



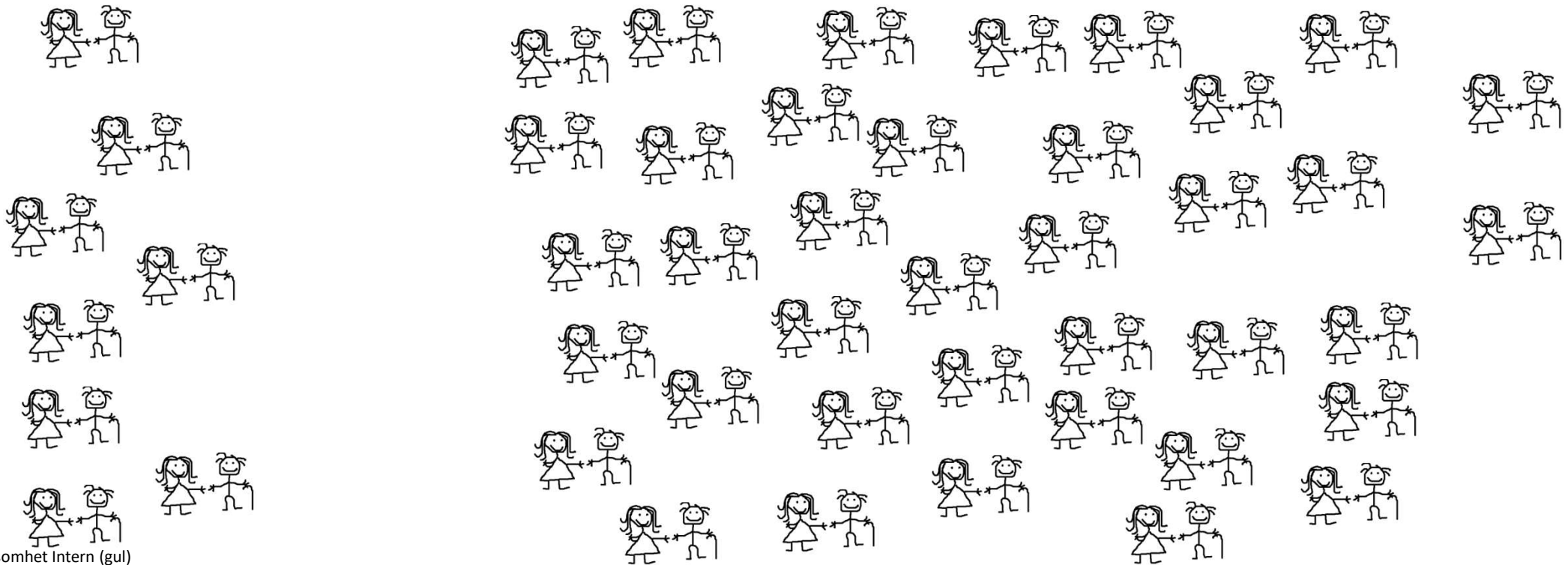
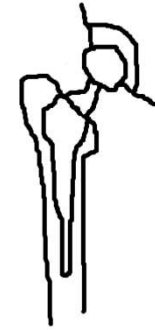


42 vs 60





16 vs 86

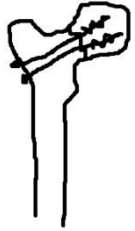




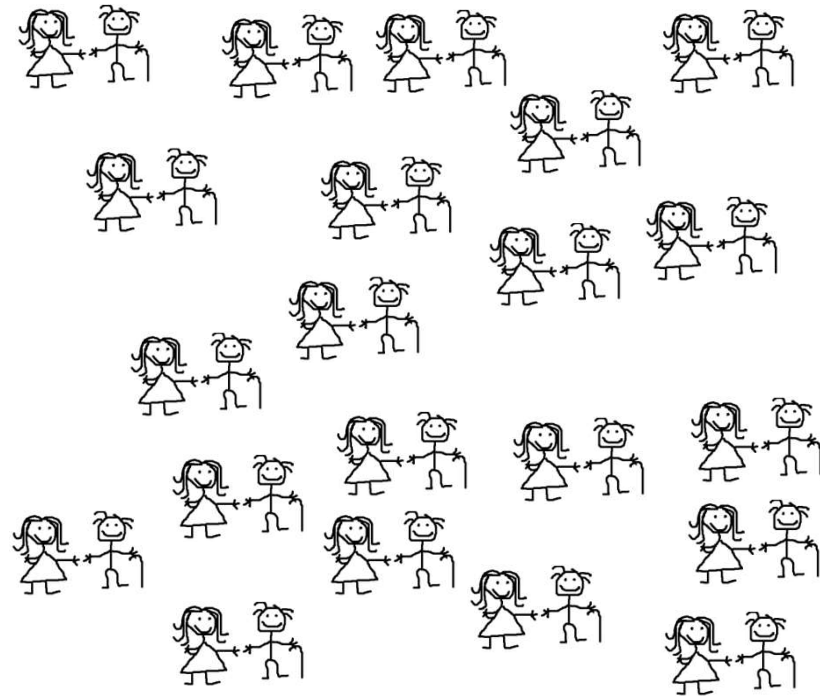
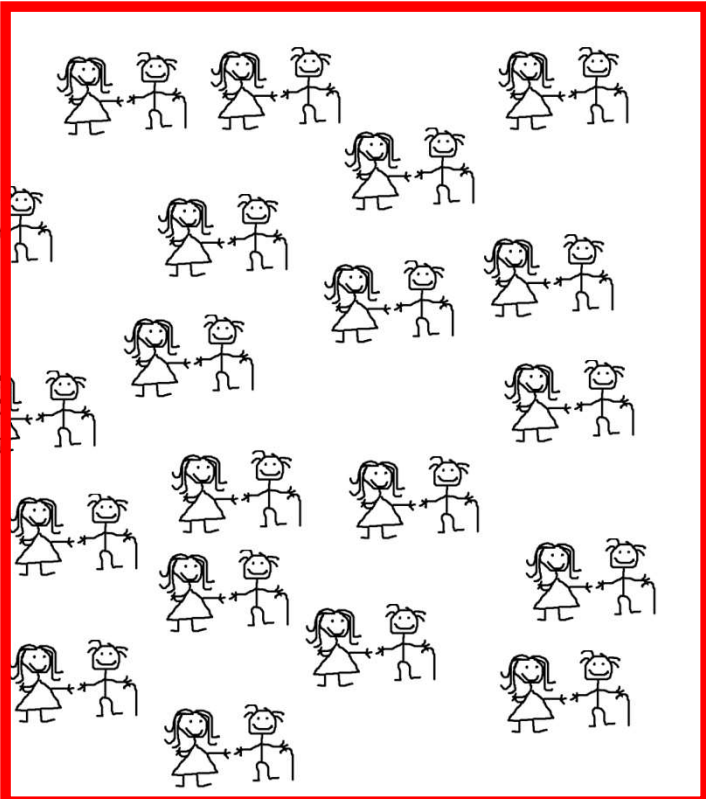
## CONSORT 2010 checklist of information to include when reporting a randomised trial\*

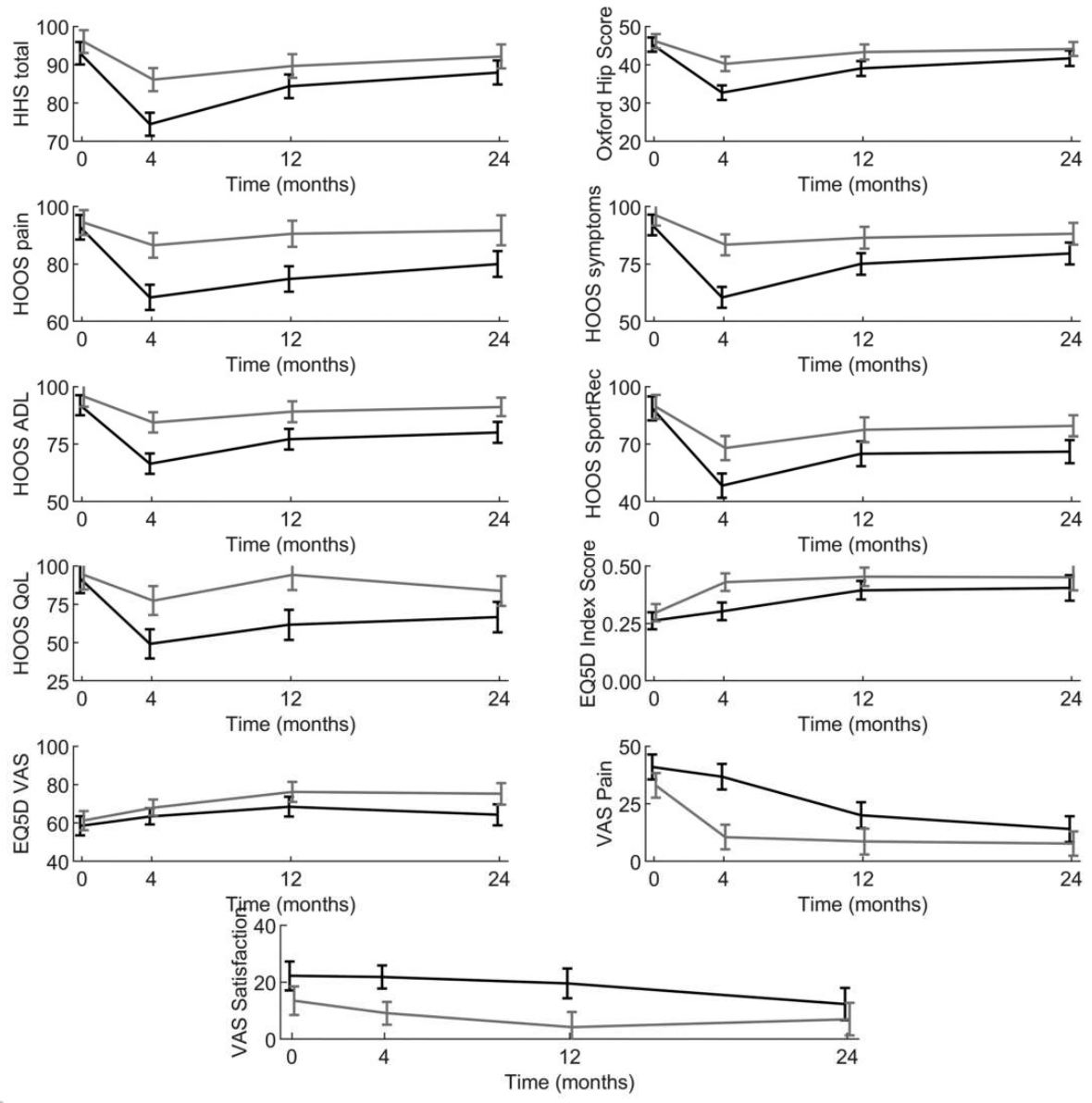
Section/Topic	Item No	Checklist Item	Reported on page No
<b>Title and abstract</b>			
		1. Identification of randomised trial in the title	
<b>Results</b>			
Participant flow (a diagram is strongly	13a	For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome	





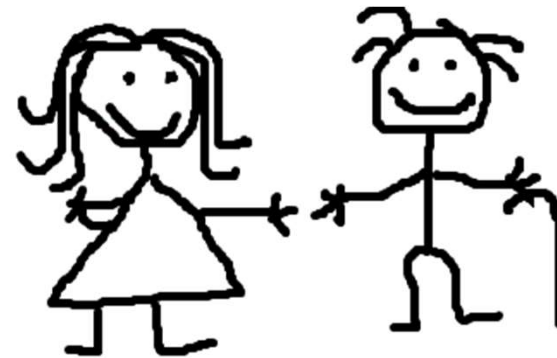
51 vs 51





# Konklusjon

- For lav energi hoftebrudd hos pasienter 55-70 er behandling med hofteprotese bedre



Clin Orthop Relat Res (2020) 478:90-100  
DOI 10.1097/CORR.0000000000000826

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

**Clinical Research**

**OPEN**

## **Cemented or Uncemented Hemiarthroplasty for Femoral Neck Fracture? Data from the Norwegian Hip Fracture Register**

**Torbjørn B Kristensen MD, Eva Dybvik PhD, Målfrid Kristoffersen MD, Håvard Dale MD, PhD, Lars Birger Engesæter MD, PhD, Ove Furnes MD, PhD, Jan-Erik Gjertsen MD, PhD**

Received: 30 January 2019 / Accepted: 2 May 2019 / Published online: 6 June 2019

Copyright © 2019 The Author(s). Published by Wolters Kluwer Health, Inc. on behalf of the Association of Bone and Joint Surgeons





Følsomhet Intern (gul)

# PROMs-data

4months, 1year, 3 years

**PAIN**

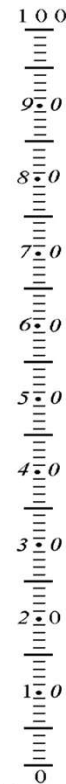
**Place a mark on the line that represents the average pain from the operated hip the last month:**

No pain

Maximal pain

mild
moderate
medium
strong
unbearable

Best imaginable health state



Worst imaginable health state

By placing a tick in one box in each group below, please indicate which statements best describe own health state today

**Mobility**

- I have no problems in walking about
- I have some problems in walking about
- I am confined to bed

**Self-Care**

- I have no problems with self-care
- I have some problems washing or dressing myself
- I am unable to wash or dress myself

**Usual activities** (e.g. work, study, homework, family or leisure activities).

- I have no problems with performing my usual activities
- I have some problems with performing my usual activities
- I am unable to perform my usual activities

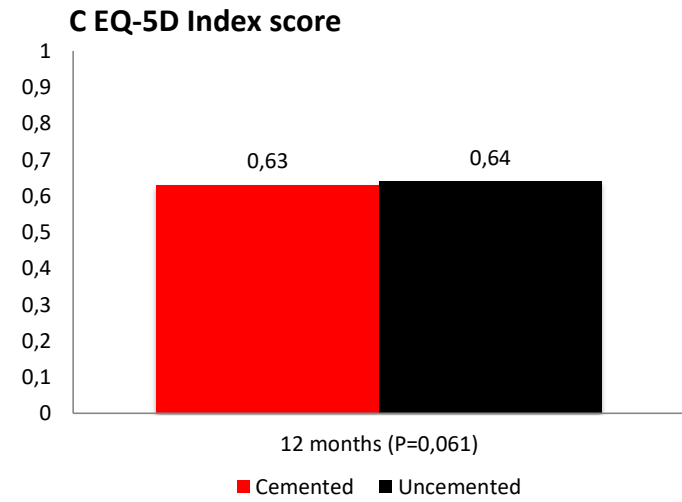
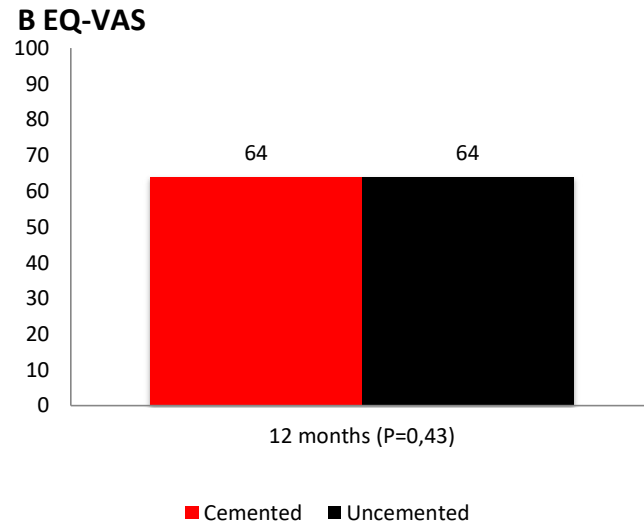
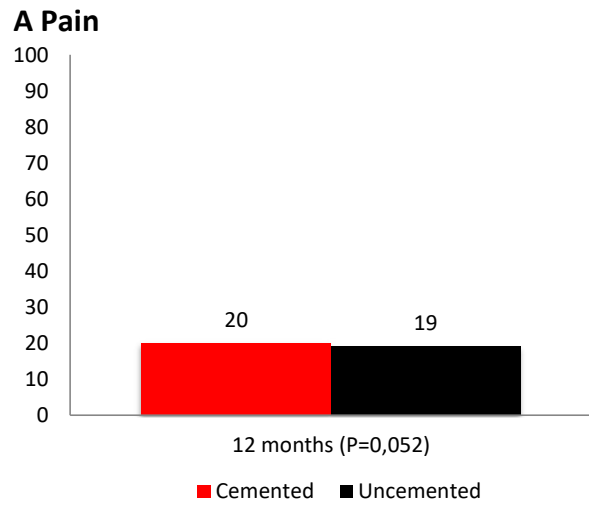
**Pain/Discomfort**

- I have no pain or discomfort
- I have moderate pain or discomfort
- I have extreme pain or discomfort

**Anxiety/Depression**

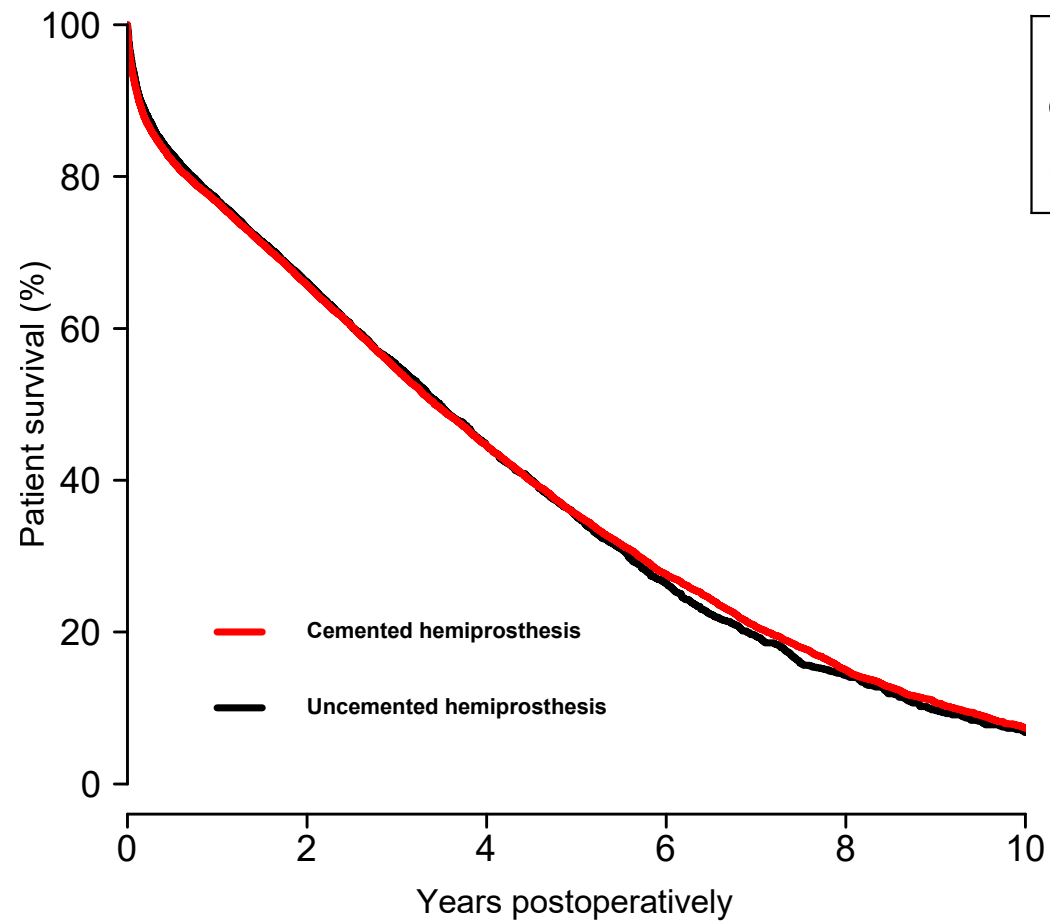
- I am not anxious or depressed
- I am moderately anxious or depressed
- I am extremely anxious or depressed

# PROMs-data





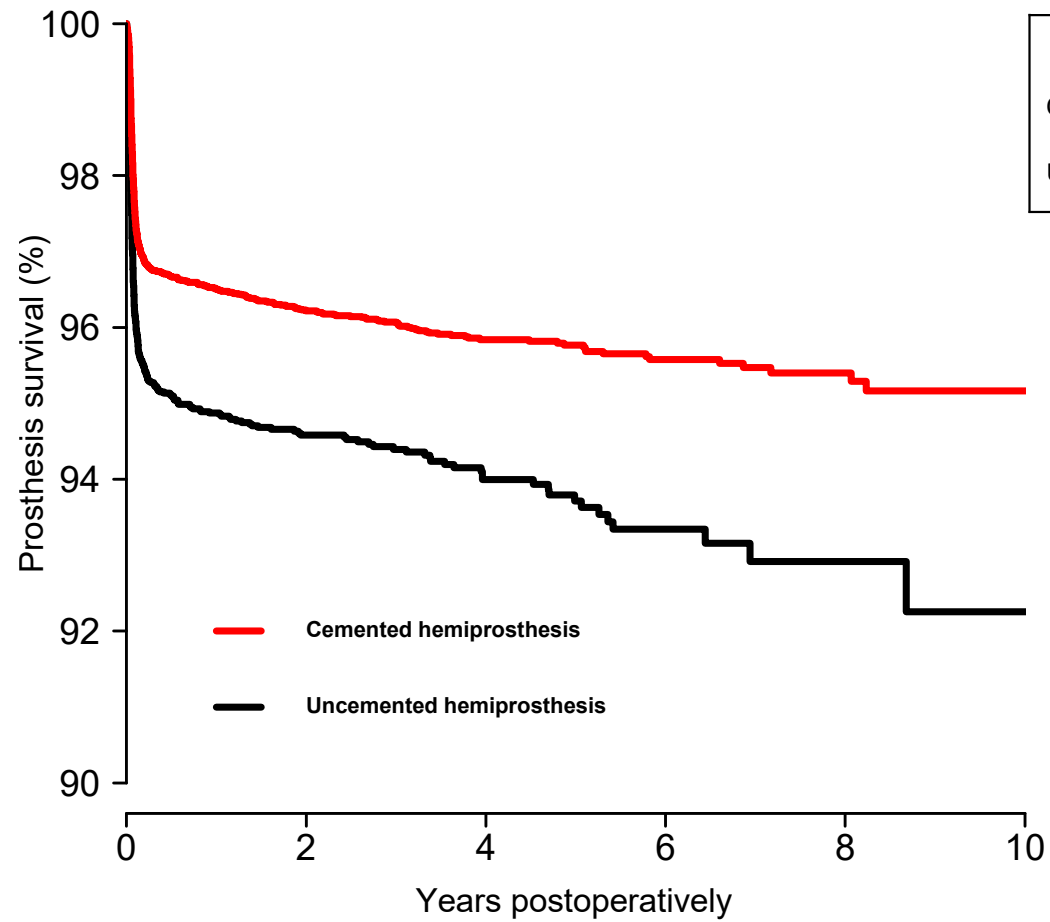
# Mortality



## Overall 1-year mortality

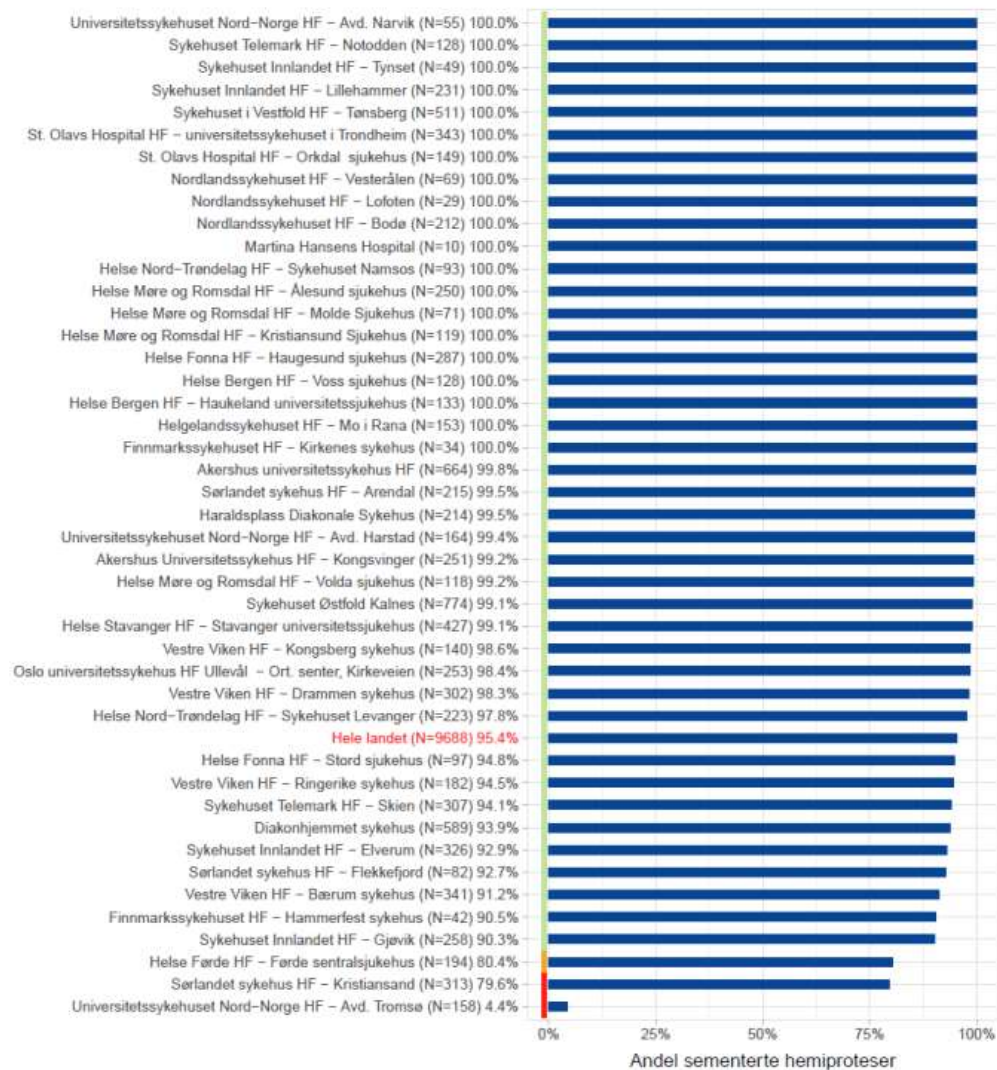
	HRR	KI	P-verdi
Cemented	1,0 Ref		
Uncemented	1,0	0,9-1,0	P=0,12

# Reoperations



# Konklusjon

- Sementert hemiprotese bør brukes når man behandler elder pasienter med hoftebrudd for å minske risiko for reoperasjon



**Figur 3.2:** Fiksasjonsmetode for hemiprotoser hos pasienter over 70 år

Takk!

