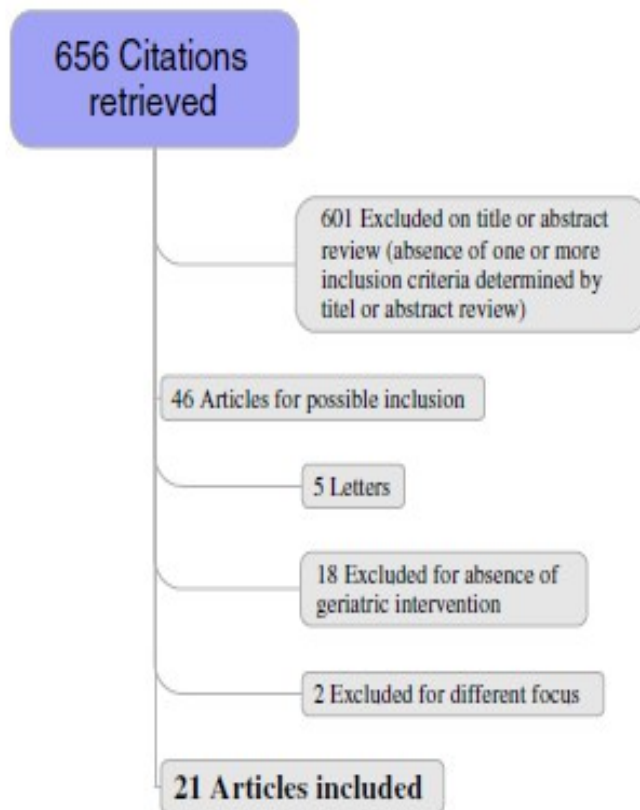


# The Oslo Orthogeriatric Trial

Leiv Otto Watne, lege/stipendiat,  
Geriatrisk avd., OUS Ullevål

## Ortho-geriatric service—a literature review comparing different models

C. Kammerlander · T. Roth · S. M. Friedman ·



1. Orthopedic ward and geriatric consultant service. (2 studier)

2. Orthopedic ward and daily consultative service. (8 studier)

3. Geriatric and rehabilitation ward and orthopedic consultant service. (5 studier)

4. Orthopedic ward and integrated care. (6 studier)

# Oslo Orto geriatrik RCT

- Samarbeid med ortopedisk avdeling
- Inkluderte pasienter fra september 2009 til januar 2012.



## **Inclusion and randomization**

Patients are included and randomized in the emergency department by the orthopaedic surgeon on call.

## **Intervention**

Patients are screened daily for delirium. Background information is collected while patients are admitted

## **Assessment**

After 4 and 12 months the patient will be assessed by a specially trained research assistant blinded to allocation.

Primary endpoint: Cognitive function

**Kvifor er kognitiv funksjon 4  
månedder etter bruddet valgt  
som primært endepunkt?**

# Delirium

- An acute change in cognition and attention
- Common condition:
  - At hospital admittance: 14-24%
  - Incident delirium among general hospital populatons: 6-56 %
  - **Hip fracture patients: 35-65 %**
  - ICU patients: 70 – 83 %



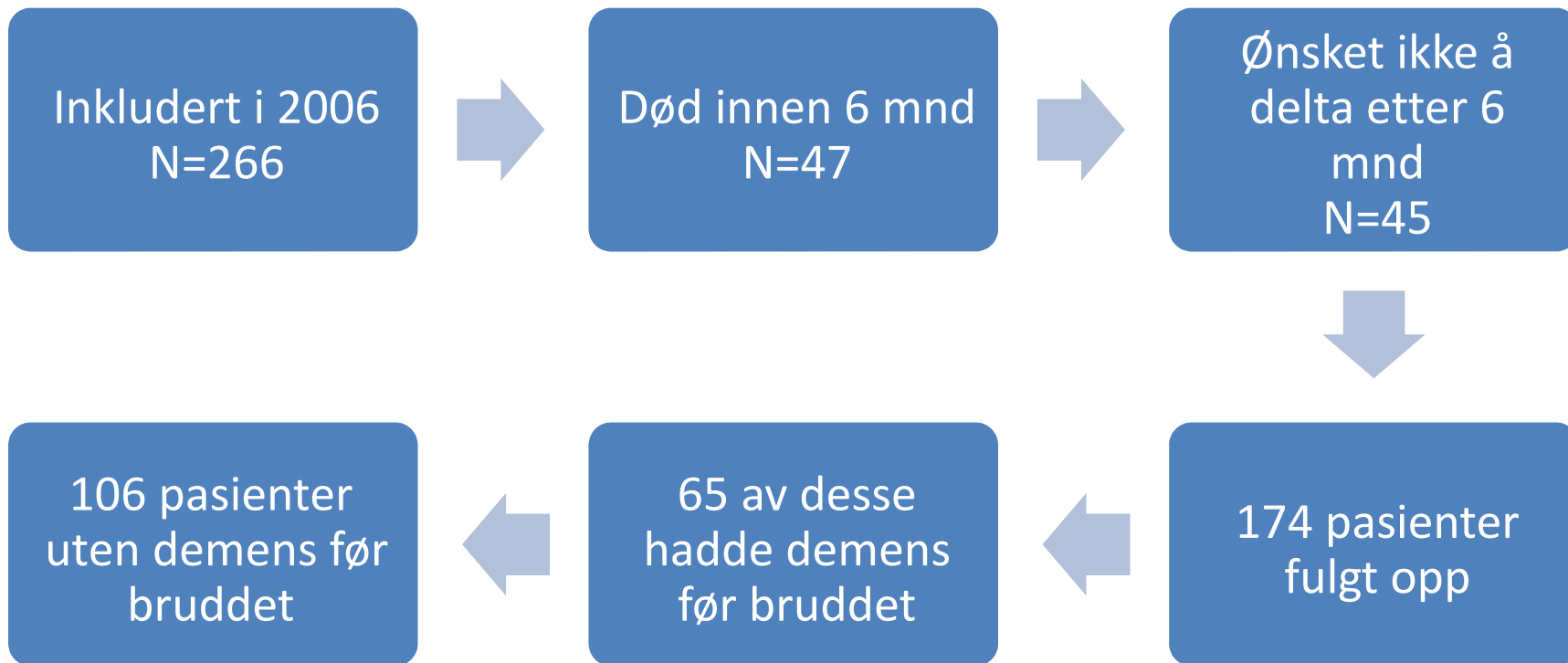
Inouye, SK. N Engl J Med 2006  
Rudolph, J. Anesthesia & Analgesia 2011

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# **Delirium Is an Important Predictor of Incident Dementia among Elderly Hip Fracture Patients**

Maria Krogseth<sup>a,b</sup> Torgeir Bruun Wyller<sup>a,b</sup> Knut Engedal<sup>a,c</sup> Vibeke Juliebø

Er delirium assosiert med utvikling av demens?





Delirium: 27%

Demens: 37.5%

## Hoftebrudd

Ingen demens  
n=106

Intet delirium

Demens: 6.5%

$p < 0.001$

**Etter 6 måneder**

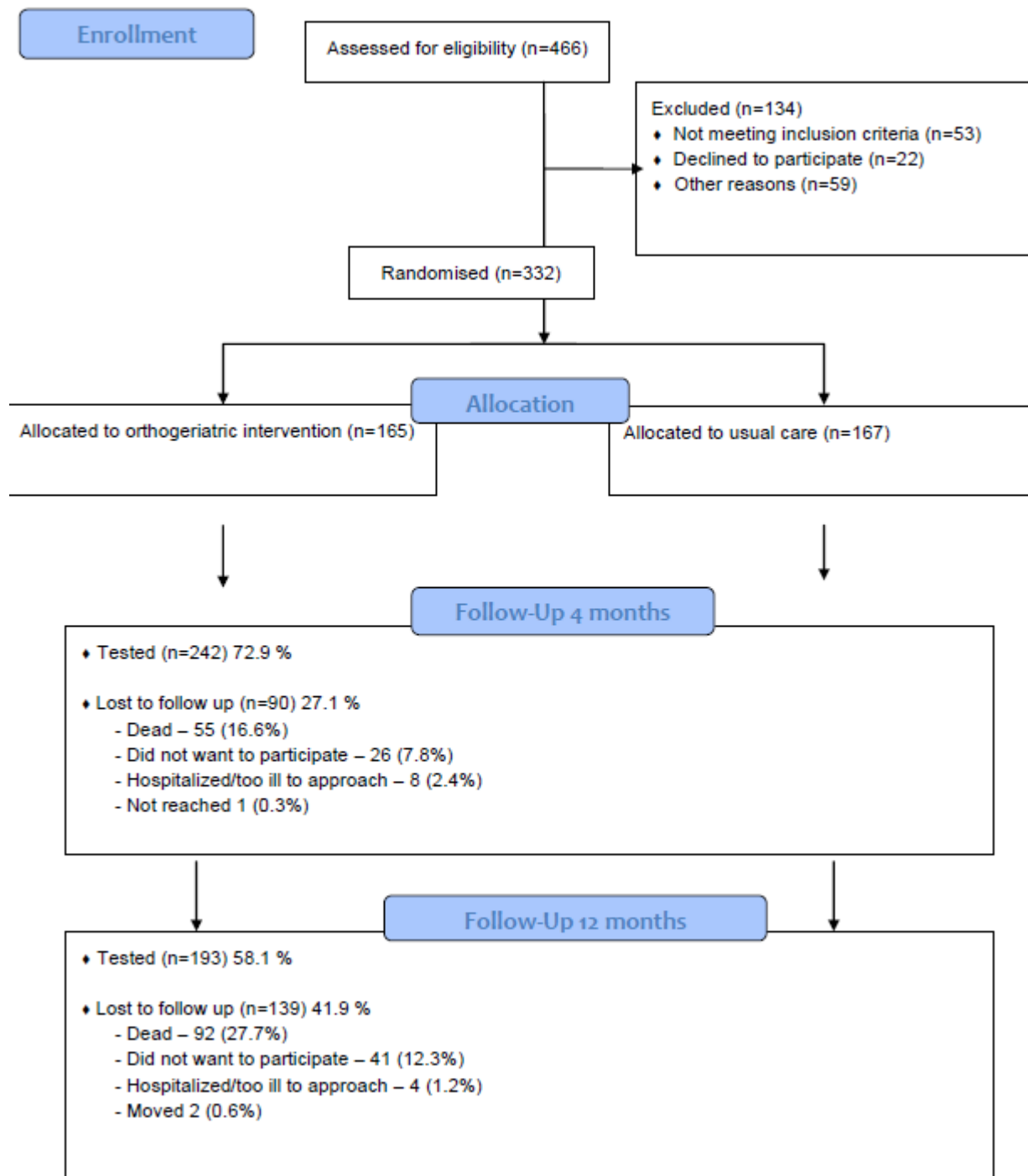
**Table 4.** Logistic regression analysis of factors associated with development of dementia

|                              | Adjusted OR<br>IQCODE-SF<br>not included<br>(n = 103) | Adjusted OR<br>IQCODE-SF<br>included<br>(n = 76) |
|------------------------------|---|--|
| Age                          | 1.1 (1.0–1.2)   | 1.1 (0.9–1.3)                                    |
| IQCODE-SF score >3.12        |   | 4.7 (0.6–34.3)                                   |
| Delirium in the acute phase  | 6.4 (1.6–26.1)  | 10.5 (1.6–70.3)                                  |
| Heart rate on admission      | 1.0 (1.0–1.1)   | 1.0 (1.0–1.1)                                    |
| MAP reduction during surgery | 1.0 (1.0–1.1)   | 1.0 (1.0–1.1)                                    |
| ASA score >2                 | 2.7 (0.7–11.5)  | 4.9 (0.7–37.3)                                   |

Values in parentheses denote 95% CI. OR = Odds ratio.

Er delirium assosiert med utvikling av demens?

**JÅ!**



# Admission

|                                  | Geriatric ward | Orthopedic ward | P-value |
|----------------------------------|----------------|-----------------|---------|
| Female                           | 74,5 %         | 77,2 %          |         |
| Age                              | 82,6           | 82,8            |         |
| From nursinghome                 | 31,5 %         | 31,1 %          |         |
| IQCODE avg                       | 3,91           | 3,9             |         |
| IQCODE > 3,44                    | 58 %           | 57,6 %          |         |
| Barthel ADL                      | 15,9           | 16,6            |         |
| Length of stayd, days            | 12,8           | 8,4             | <0,001  |
| From admission to surgery, hours | 32,7           | 28,9            | 0,13    |

# Delirium

|                       | Geriatric ward | Orthopedic ward | P-value |
|-----------------------|----------------|-----------------|---------|
| Delirium anytime      | 49,4 %         | 53,4 %          | 0,47    |
| Preoperative delirium | 31,6 %         | 34,7 %          | 0,30    |

# 4 month follow-up

|                       | Geriatric ward | Orthopedic ward | P-value |
|-----------------------|----------------|-----------------|---------|
| Dead                  | 18,2 %         | 15,0 %          | 0,43    |
| Tested                | 120 (72,7 %)   | 122 (73,1 %)    |         |
| Living in nursinghome | 44,6 %         | 46,7 %          | 0,44    |
| Re-admitted           | 19,1 %         | 19,2 %          | 0,99    |
| Barthel ADL           | 14,4           | 14,5            | 0,88    |
| NEADL                 | 29,1           | 27,2            | 0,52    |

# Primary endpoint

A composite endpoint combining the Clinical Dementia Rating Scale (CDR) and the 10 words memory task (immediate recall and the delayed recall parts) from the CERAD battery.

CDR weighs 50% and CERAD 50%.

Interpretation: higher value means better cognitive function





|                              | <b>Geriatric ward</b> | <b>Orthopedic ward</b> | <b>P-value</b> |
|------------------------------|-----------------------|------------------------|----------------|
| Composite<br>endpoint 4 mnd  | 54,7                  | 52,9                   | 0.65           |
| Composite<br>endpoint 12 mnd | 51,0                  | 49,1                   | 0.69           |

# 12 month follow-up

|                       | Geriatric ward | Orthopedic ward | P-value |
|-----------------------|----------------|-----------------|---------|
| Dead                  | 28,5 %         | 26,9 %          | 0,76    |
| Tested                | 98 (59,4 %)    | 95 (56,9 %)     |         |
| Living in nursinghome | 42,3 %         | 47,4 %          | 0,47    |
| Re-admitted           | 28,6 %         | 26,4 %          | 0,75    |
| Barthel ADL           | 14,5           | 14,4            | 0,87    |
| NEADL                 | 29,3           | 27,3            | 0,51    |

# Kva no?

- Grine litt
- Finne ut kvifor det ikkje var nokon forskjell
- Analysere sekundære endepunkt