

# European Pharmacogenetic Opioid Study (EPOS)

Pål Klepstad, Stein Kaasa

Pain and Palliation Research Group, Norwegian University of Science and Technology

## Background

In palliative medicine it is well known that opioids have variable efficacy. This variability is observed clinically as a large variability in opioid doses and as changes in clinical outcomes after opioid rotation.

The aim of this translational research project is to investigate the mechanisms explaining opioid variability. A potential cause of the clinical observed variability may be genetic variation. Single center studies performed by clinical and genetic researchers have demonstrated differences in patient outcome related to variability in genes encoding:

- Opioid receptors
- Opioid metabolism
- Opioid transporters
- Biological systems known to modify opioid analgesia

The European Pharmacogenetic Opioid Study is a multinational effort with the aim of expanding this research field by including a large number of patients, by studying other opioids than morphine and by including patients with different ethnicity.

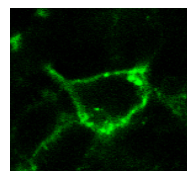


Clinical practice

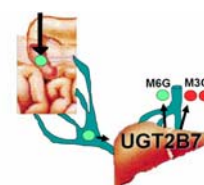


Basic science

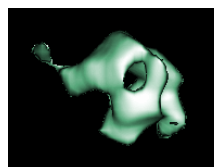
Translational research



Opioid receptors



Opioid metabolism



Opioid transport



Modifying systems - COMT

## The study

- is organized through the EAPC Research Network
- has 15 participating centres
- includes 3000 cancer patients using opioid for moderate to severe pain
- has started inclusion and at the present 1200 patients are included
- collects data on pain (Brief Pain Inventory), health related quality of life (EORTC QLQ-C30) and cognitive function (MMSE)
- measures serum concentrations of opioids
- collects full blood for genetic analysis
- establishes a biobank that gives the study group unique possibilities to explore hypotheses related to the pharmacogenetics of analgesics and the genetics of pain.

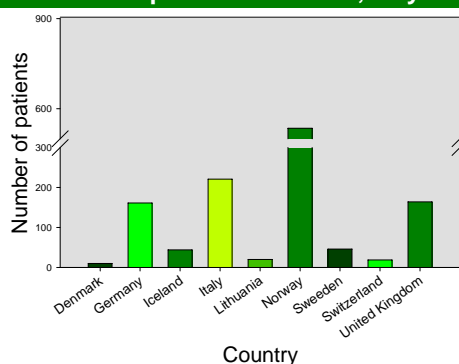
## Integrated research

- In the EPOS study one or more centres can perform local research projects.
- Examples are:
- Patients attitudes towards pain and pain treatments
  - Sleep
  - Hope
  - Nutrition

## Information

- For information please contact:  
Pål Klepstad (pal.klepstad@ntnu.no) or  
Stein Kaasa (stein.kaasa@ntnu.no)

## Number of patients included, May 2006



## Participating centres, May 2006

