

European Pharmacogenetic Opioid Study

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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 which will study the importance of genetic variability for efficacy of opioids in a large clinical study

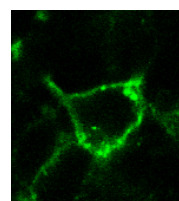


Clinical practice

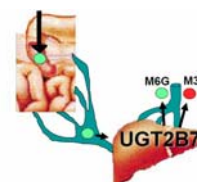


Basic science

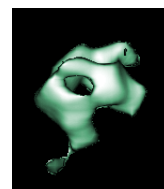
Translational research



Opioid receptors



Opioid metabolism



Opioid transporters



Modifying systems COMT

The study

- is organized through the EAPC Research Network
- has 16 participating centers
- will include 3000 cancer patients using opioid for moderate to severe pain
- 1769 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

The EPOS study includes several associated research projects.

Examples are:

- Patients attitudes towards pain and pain treatments
- Sleep
- Hope
- Nutrition
- Alternative medicine

Information

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Participating centers and number of patients included, April 2007

• Aachen, Germany	91	• Pavia, Italy	35
• Copenhagen, Denmark	20	• Reykjavik, Iceland	109
• Dresden /Cologne, Germany	73	• St. Gallen, Switzerland	72
• Essen, Germany	150	• Stockholm, Sweden	78
• Forli, Italy	194	• Trondheim, Norway	281
• Milan, Italy	92	• Turku, Finland	19
• Sutton, Surrey, UK	258	• Ullevål, Oslo, Norway	35
• National Hospital, Oslo, Norway	230	• Vilnius, Lithuania	32