Cincinnati Children's | Innovation Ventures

Surgery

Personalized Pain Management Diagnostic

Brief Description of Technology

A method of identifying genetic variants that affect acute treatment for acute pain.

TECHNOLOGY ID

2010-0914

COMPLEMENTARY TECHNOLOGY

2012-0506, 2014-0207

BUSINESS OPPORTUNITY

Exclusive License or Sponsored Research

PATENT INFORMATION

Nationalized

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Technology Overview

This technology evaluated more than 70 relevant SNPs for their clinical utility in determining inter-individual variability in response to a dose of morphine and opioids. By confirming many of the previous genotype-phenotype associations reported in literature, our researchers have found several strong novel associations with clinical outcome measures, gene-gene interactions and gene-non-genetic factor interactions which are critical in connecting clinically important dots in predicting and personalizing care and reducing adverse clinical and economical outcomes in children and adults.

Applications

- Rapid point-of-care genotyping for personalized pain management.
- Opioid pain research

Advantages

- Personalized dosing of opioids for better safety.
- More effective acute pain management.
- Proactive risk identification and prevention of opioid-related adverse events.
- Potential for savings to the healthcare system.

Market Overview

In the US alone, every year more than 5 million children and more than 25 million adults undergo painful surgery. Inadequate pain relief and serious side effects from perioperative opioids occur frequently in up to 50% of patients.

Investigator Overview

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