UCI Beall
Applied Innovation
Research Translation Group

Research Translation Group   Available Technologies   Contact Us

Request Information

Permalink

Epipangi-Dx: A Cell-Free Dna Methylation Fingerprint For The Early Detection Ofgastrointestinal Cancers

Tech ID: 34529 / UC Case 2021-721-0

OTHER
INFORMATION

CATEGORIZED AS

» **Medical**
  » Diagnostics
  » Disease: Cancer
  » Disease: Metabolic/Endocrinology
  » Screening
» **Research Tools**
  » Bioinformatics
  » Nucleic Acids/DNA/RNA

RELATED CASES

2021-721-0

BRIEF DESCRIPTION

A novel method for detecting, diagnosing, monitoring, and treating gastrointestinal cancers by analyzing DNA methylation levels in patient samples.

FULL DESCRIPTION

This technology provides comprehensive methods to measure methylation levels of CpG sites in DNA samples from patients to detect and diagnose gastrointestinal cancers early. It enables monitoring of treatment efficacy and cancer risk by comparing DNA methylation levels over time. The methods cover multiple types of GI cancers including colorectal, liver, esophageal, gastric, and pancreatic cancers by assessing methylation patterns in a panel of gene regions specific to each cancer type.

SUGGESTED USES

» Early screening tests for gastrointestinal cancers in at-risk and general populations.

» Diagnostic tools for clinical oncology to confirm GI cancer diagnoses.

» Monitoring tools to evaluate patient response to cancer therapies.

» Companion diagnostic platforms to guide personalized cancer treatment choices.

» Research assays for studying epigenetic changes in gastrointestinal cancers.

ADVANTAGES

» Enables early detection of gastrointestinal cancers through minimally invasive blood tests.

» Monitors cancer progression and treatment response via sequential methylation level assessments.

» Covers multiple GI cancer types with specific gene region methylation profiles.

» Supports personalized cancer treatment planning through precise molecular diagnostics.

» Cost-effective compared to current screening methods, suitable for population screening.

PATENT STATUS

Country	Type	Number	Dated	Case
Patent Cooperation Treaty	Reference for National Filings	WO 2023/023123	02/23/2023	2021-721

Patent Pending

RELATED MATERIALS

» Raju Kandimalla, Jianfeng Xu, Alexander Link, Takatoshi Matsuyama, Kensuke Yamamura, M. Iqbal Parker, Hiroyuki Uetake, Francesc Balaguer, Erkut Borazanci, Susan Tsai, Douglas Evans, Stephen J. Meltzer, Hideo Baba, Randall Brand, Daniel Von Hoff, Wei Li, Ajay Goel; EpiPanGI Dx: A Cell-free DNA Methylation Fingerprint for the Early Detection of Gastrointestinal Cancers. Clin Cancer Res 15 November 2021; 27 (22): 6135–6144.