

Predictive Diagnostic Imaging

Analysis of MRI with Artificial intelligence (AI) for the quantification of Liver Fibrosis

Brief Description of Technology

The technology employs an AI-based approach to analyze MRI scans and accurately quantify the degree of liver fibrosis in patients.

TECHNOLOGY ID

2020-0405

BUSINESS OPPORTUNITY

Exclusive License or Sponsored
Research

TECHNOLOGY TYPE

Digital Health

PATENT INFORMATION

PCT Filed

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Technology Overview

The technology utilizes AI to accurately quantify liver fibrosis from MRI scans, employing advanced algorithms to detect patterns and provide precise measurements of liver fibrosis. By analyzing a large dataset of MRI scans, the system adapts to individual variations in liver anatomy and disease progression, offering a more objective and accurate measurement while reducing the need for invasive liver biopsies. This AI-based approach has proven effective in predicting liver stiffness using clinical and T2-weighted MRI radiomic data, demonstrating its potential for non-invasive liver fibrosis diagnosis and disease progression evaluation. By analyzing a combination of clinical and radiomic data, the system provides a comprehensive understanding of liver health, leading to more personalized treatment options. The invention improves upon current methods, such as percutaneous biopsy, by offering an automated, noninvasive, accurate, and precise diagnosis using ensemble deep learning methods.

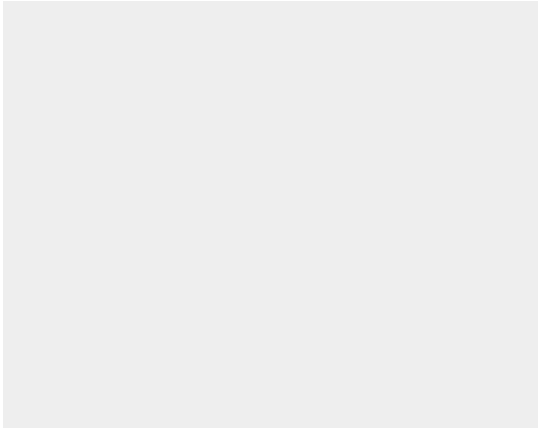
Applications

- The technology can be used in clinical settings to accurately diagnose and monitor the progression of liver fibrosis in patients.
- The system can also be used in research to gain further insights into the underlying mechanisms of liver fibrosis.
- Additionally, the technology can be adapted for use in other liver diseases that involve fibrosis

Advantages

- Accurately quantifies liver fibrosis using AI-based approach
- Non-invasive and safe diagnostic option for patients using MRI scans
- Reduces the need for invasive liver biopsies
- Provides a more comprehensive understanding of liver health through a combination of clinical and radiomic data

Market Overview



The technology market for AI-based liver fibrosis diagnosis using MRI scans is part of the broader healthcare AI and medical imaging markets. The increasing prevalence of liver diseases, advancements in medical imaging technology, and growing adoption of AI in healthcare are some of the key drivers for this market segment. This technology could be a valuable addition to the current diagnostic tools.

Investigator Overview

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