

Existing Problem

Developed at MCW and The Hospital for Special Surgery in New York, this technology uses multi-spectral MRI combined with sophisticated processing tools to monitor degenerative tissue damage near total hip replacements. It automates the detection of soft tissue abnormalities and quantifies metal particle debris, enabling early intervention and improved outcomes in hip implant revision surgeries.

Problems Solved

Silent progression of soft tissue damage leading to late detection.

High failure and morbidity rates in hip implant revision surgeries

Need for improved monitoring tools to better time and plan revisions

Lack of automated, objective analysis methods for soft tissue pathology

Application

Orthopedic imaging centers and hospitals performing hip replacement monitoring

Companies developing diagnostic tools for implant health assessment

Clinical research in implant longevity and tissue health diagnostics

Key Advantages

Automated, accurate detection of soft tissue damage around hip implants

Quantification of metal particle debris from implants

Enables routine, non-invasive monitoring before symptoms arise

Protected by intellectual property with two key patents

Designed to improve staging and success of revision surgeries

Stage of Development:
Design stage

Intellectual Property Status:
Issued US Patent

Inventors

Kevin Koch, PhD

Professor
Department of Radiology
Medical College of Wisconsin

Hollis Potter, MD

Chairman of the
Department of
Radiology and Imaging
Hospital for Special
Surgery, NY

Contact

Kevin Boggs

414-955-4381

kpboggs@mcw.edu