



Samuel K. Cho, MD | Co-Founder and Lead

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Industry: clinical software assistant/solutions

Team

Samuel K. Cho, MD:
Associate Professor,
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Chief, Spine Surgery, Mount Sinai West

Eric K. Oermann, MD:
Instructor, Department of Neurosurgery, Icahn School of Medicine at Mount Sinai
AI Expert
Former post-doctoral fellow, *Google*
30-Under-30, *Forbes*

Jun S. Kim, MD:
Resident Physician,
Department of Orthopaedic Surgery, Icahn School of Medicine at Mount Sinai
Lead Engineer

Partners

Mount Sinai Health System
Medical Artificial Intelligence Consortium

Mount Sinai Innovation Partners

Executive Summary: Aldentyfy provides accurate and easy-to-use digital solutions to help orthopaedic surgeons with preoperative planning and execution during revision surgery using AI-powered analytics. When the surgeon simply takes a photo of the patient's x-ray that contains the total joint prosthesis that needs to be revised using our app, she will instantly know the make and model of the prosthesis, so that the surgeon and her surgical team can focus on preparing the right tools and save valuable time before and during surgery.

Company History: Realizing the impact of machine learning technology on the practice medicine, Drs. Sam Cho, Eric Oermann, and Jun Kim, along with like-minded physicians and medical students at Mount Sinai, formed a research group, Mount Sinai Health System Medical Artificial Intelligence Consortium, in 2016. The group has now grown to include orthopaedic surgery, neurosurgery, radiology, radiation oncology, critical care medicine, neurology, and emergency medicine, and has informal affiliations with Google, Intel, Merck, and Stanford. With access to the entire medical data within the Mount Sinai Health System, the group is currently addressing extremely focused pain points in the above specialties that only practicing clinicians can recognize as being clinically important and meaningful. Two of three founders being orthopaedic surgeons, Aldentyfy was borne to address the problem of accurately identifying implants that are already in the patient's body and need to be either removed or revised.

Market Opportunity: The annual total joint replacement surgery market is \$15.4 billion (1.3 million hip and 1.4 million knee surgeries), of which \$1.5 billion is spent on revisions (124,000 hip and 144,000 knee surgeries). Published studies report that surgeons and staff spend approximately 30 minutes to identify the implant before surgery. In addition, operation time (\$62/minute) and sterilization of surgical tools (\$250/tray) are wasted when the implant is not identified correctly beforehand. We estimate that up to \$2,700 can be saved per case, totaling \$700 million, annually using our technology.

Products/Services: We have completed the development of AI-powered algorithm that correctly identifies ~20 hip implants with 94% accuracy and are currently working on developing both website and app-based user interface to launch a beta product in the next two months.

Licensing: We have secured an option for exclusive licensing from Mount Sinai.

Regulatory: Not required

Competition: Recall from surgeon memory, manual search of medical records, manual comparison of sample x-rays from websites such as whichorthopaedicimplant.com

Primary purpose of presentation: Networking