



## **New Research from Sheba Medical Center Demonstrates Success of Aidoc Algorithm in Early Detection of Critical Brain Hemorrhages**

*Aidoc Algorithm Analyzing Head Computed Tomography (CT) Scans, Successfully Detected and Triageed Intracerebral Hemorrhage, Resulting in Over 30% Relative Decrease in Absolute Mortality Rate*

**Ramat Gan, Israel – September 19, 2023**, - Sheba Medical Center, Israel's largest medical center and a Newsweek ranked world's best hospital for the last five years, revealed a ground-breaking study in the International Journal of Emergency Medicine validating an AI algorithm developed by Aidoc for Intracerebral Hemorrhage (ICH) detection, which demonstrated that machine learning analysis of head computed tomography (CT) scans upon admission to the emergency department enables earlier detection of ICH, reducing the overall mortality rate associated with the hemorrhage.

Aidoc which was originally developed and founded at Sheba Medical Center, develops AI solutions for clinical practice. Aidoc's tools have the most FDA clearances in clinical AI and are used by more than 1,000 medical centers worldwide.

Dr. David Orion, Director of the Acute Stroke & Neuro-Endovascular at Sheba Medical Center along with Sheba neurology and radiology experts, conducted the retrospective cohort study in a level 1 trauma center involving 587 patients with a confirmed diagnosis of ICH. The study compared 289 patients between January 2017 and January 2018 who did not have their CT scan analyzed by AI, to 298 patients between January 2019 and January 2020 who had an AI analysis, examining for the impact on 30- and 120-day all-cause mortality.

Results from the trial demonstrated that AI analysis of CT scans drove earlier detection of ICH, enabling physicians to begin administering therapeutic interventions earlier. As a result of these early interventions, the study demonstrated an over 30% relative decrease in absolute mortality rate in the AI-scanned cohort.

"Intracerebral hemorrhages are one of the most critical medical conditions in emergency care, with early detection vital for preventing loss of life and further morbidities," said Dr. David Orion, Director of the Acute Stroke & Neuro-Endovascular Department at Sheba. "This study shows the tremendous impact of AI to drive improved patient outcomes, helping to save lives and improve overall quality of life."

The study also examined the impact of AI analysis and early treatment initiation on patient comorbidities. Measured using the Modified Rankin Scale (MRS), a scale measuring the degree of disability or dependence in the daily activities of patients with neurological disabilities, the study found that patients in the AI cohort had a significantly lower MRS score at discharge than those in the non-AI group.

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### **About Sheba Medical Center**

The largest and most comprehensive medical center in the Middle East, Sheba Medical Center, Tel Hashomer is generating global impact through its medical care, research and healthcare

transformation. Sheba's City of Health boasts acute-care, rehabilitation, children's, cancer and geriatric hospitals, research and innovation hubs, medical simulation center and center for disaster response on one comprehensive campus in the center of Israel. Sheba serves as a true hospital without borders, welcoming patients and healthcare professionals from all over the world and consistently providing the highest-level medical care to all in need. Sheba has been ranked a World's Best Hospital by Newsweek five years in a row (2019, 2020, 2021, 2022, 2023). For more information, visit: <https://sheba-global.com/>

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