

Executive Summary

Zeit Medical Inc.

July 2020

Vision & Product

Zeit Medical is building *Synaptis*, the first stroke alert system providing peace of mind for patients and families. Our stroke detection algorithms monitor the brain's activity continuously, reliably recognizing a stroke within minutes and notifying patients, caretakers, and the emergency response system. *Synaptis* enables fast access to life-saving treatments and has the potential to save hundreds of thousands of Americans from death and crippling disability.

Timing & Opportunity

Catheter-based, clot removal technologies (thrombectomy) have emerged as the treatment of choice for large strokes, drastically changing the outcomes for the patients receiving it in time. Time passed from stroke onset to treatment is the most crucial parameter deciding over treatment outcomes. To date mortality still exceeds 25% and only 22% are being able to live independently, for large strokes. It is estimated that less than 1% of patients receive treatment in under one hour. The critical delay happens before the 911 call and can be attributed to patients sleeping (25% of all strokes), lack of recognition, and inability to communicate or move. *Synaptis* has the potential to more than triple the number of people living independently after a stroke and slash associated costs (\$72bn annual cost for stroke care in US). In the US, 8-10 million patients are identifiably at risk for stroke, which, besides disability and death, has been associated with depression and anxiety. Our beachhead market for patients with very high risk for stroke is estimated at \$6bn.

Team

- **Cofounders:** [Orestis Vardoulis, PhD](#), [Urs Naber, MD](#), [Patrick Thompson, MD](#). Orestis builds biosignal processing algorithms and drives business development. Urs is a critical care physician and leads clinical development and product design. Patrick is a vascular surgeon with expertise in minimally invasive procedures.
- **Engineers & Consultants:** [Stylianou Kyriacou, PhD](#), [Athanasios \(Thanos\) Vlontzos](#), and [Antony Passaro, PhD](#). Stylianou and Thanos are our data science experts with years of experience in optimisation and artificial intelligence. Antony is a neuroscientist with over a decade of experience in quantitative brain activity analysis.
- **Advisors:** [Jaime Lopez, MD](#) (Neurology Stanford), [Raul Nogueira, MD](#) (Stroke Neurology, Emory University), [Jeremy Heit, MD](#) (Interventional Neurology, Stanford), [Elton Sherwin](#) (Retired VC & Stroke survivor), [Laurent Grandidier, MBA](#) (Business), [Maria Sainz, MBA](#) (Business), [Mark Kirk](#) (former Senator, Stroke survivor).

Validation & Progress

Built a state of the art, curated database that contains a large collection of ischemic events captured in real time by brain monitoring sensors. Developed a robust library of signal processing and artificial intelligence (AI) tools that capture the onset of ischemia rapidly with excellent sensitivity and specificity. Built a device prototype for external/wearable use that supports real time detection of ischemia onset. Completed design and site budgets for upcoming multi-center trial. Completed a series of adoption studies with patients and prescribing physicians. Established a strong support network of KOLs in neurointervention and stroke neurology. Completed the design and site budgets for our upcoming multi-center AI performance trial.

Stage

Raised \$350k in non-dilute funding. Working towards an FDA breakthrough designation. Raising Seed round to hire talent, drive RnD and complete the prospective clinical trial for our ischemia detection AI.