Neuralert Technologies LLC

ONE LINE PITCH
Wristbands that detect and alert staff to the onset of stroke in one-fourth of the time it currently takes, saving lives, improving outcomes, and lowering cost.

COMPANY SUMMARY
Neuralert offers non-invasive, wearable wristband devices which monitor asymmetric arm movement/weakness, a tell-tale sign of stroke. Neuralert's proprietary algorithm accurately identifies stroke symptoms and immediately alerts medical staff to assess the patient and begin treatment. Neuralert's technology can detect stroke in under an hour, which is more than 4 times faster than manual assessment processes currently used.

MANAGEMENT
The Neuralert team is experienced in neurology, computing, wearable devices, and startup management. CEO Eric Corkhill has over 40 years of healthcare technology experience and five previous startup exits totaling $480 million. Co-Founder Dr. Steven Messé is a Neurology Professor and Director of the Center for Neuro-Cardio Protection at the University of Pennsylvania. Co-Founder James Weimer, PhD, is a Research Assistant Professor at the University of Pennsylvania with expertise in signal processing and machine learning. CTO Det Ansinn is founder and president of BrickSimple, LLC with extensive experience developing FDA approved mobile and wearable healthcare technologies.

CUSTOMER PROBLEM
Stroke is the 5th leading cause of death, the #1 cause of disability and 10% occur to patients in the hospital. Compared to strokes that occur outside the hospital, in-hospital strokes are associated with delayed detection, fewer and delayed interventions, and worse outcomes. This increases the hospital's length of stay by 2 – 28 days, dramatically increasing non-reimbursed costs. If litigated, in-hospital strokes after a procedure, result in an average settlement cost of >$1.8 million and judgements nearing $10 million.

PRODUCT/SERVICES
Neuralert consists of a pair of non-invasive, Bluetooth- and WIFI-enabled wearable devices attached to a patient's wrists. These devices contain accelerometers and continuously monitor for asymmetric arm movement/weakness. The bands transmit telemetry data to a secure and HIPAA compliant data store housing Neuralert's proprietary algorithm. The algorithm processes the data and models out confounding factors such as right-left bias, sedation effects, sleep/awake status, etc. When stroke indicative asymmetry is detected, a secure text-based alert is immediately sent to the attending medical staff, enabling them to more quickly assess the patient and begin stroke mitigation treatment.

TARGET MARKET
The initial target market are the 1,500 U.S. based, acute care hospitals who perform 1.7 million high stroke risk cardiovascular procedures each year. These healthcare facilities also have advanced neurological teams and stroke treatment protocols. As such, they are the organizations most aware of, sympathetic to, and impacted by the impact and cost of in-hospital strokes. Sales expansion includes Neuralert monitoring all 13 million acute care patients with elevated risk for strokes (e.g., prior history of Stroke/TIA, AFib, CHF and the elderly). Additional expansion plans include international, non-acute and personal health monitoring markets.

CONTACT
Eric Corkhill
corkhill@neuralerttechnologies.com

TEAM
Eric Corkhill, CEO
Dr. Steven Messé, Co-Founder
James Weimer PhD, Co-Founder
Det Ansinn, CTO

ADVISORS
Business: Bhavana Mohanraj PhD, PCI Ventures
Legal: Andrew Hamilton Esq, Morgan Lewis & Bockius
Financial: Michael Stephano CPA, Stephano Slack LLC

COMPANY PROFILE
Industry: Healthcare
Sub-Industry: Medical Device
Stage: Seed
Employees: 1 FTE, 3 PTE
Founded: April 8, 2019
Univ. of Penn, PCI Ventures spin out

FINANCIAL INFORMATION
Capital Raised to Date: $47,500
Current Revenue Rate: $0
Monthly Burn Rate: $0
Capital Seeking: $500,000
Pre-Money Valuation: $5M
Revenue Model: SaaS with device sales
Previous Investors: Accelerator, BFTF-SEP

Neuralert Technologies LLC

BUSINESS MODEL

Neuralert will be sold as a SaaS product for the backend server, data management and alerting services priced as an annual, recurring seat license of $5,000 per seat/per year. The annual seat license supports an unlimited number of patients to use the license (e.g., 40+ patients per seat/year). The reusable, wearable devices, built using cheap, off-the-shelf components (e.g., SoC), are priced at $200 per pair. The total per patient cost is $135 (assumes 40 patients per year per seat) encouraging Neuralert to be used as a generalized, health monitoring device for any patient admitted to the hospital with an elevated risk of stroke.

CUSTOMERS

The primary customers in the targeted acute hospital market will be the departments of Cardiovascular Surgery and Neurology since in-hospital strokes occur most prevalently after certain cardiovascular procedures. Both departments have discretionary budgets and can purchase a limited number of licenses and bands. This allows Neuralert to establish proven value in automated stroke detection and alerting without significant sales cycle delays.

SALES/MARKETING STRATEGY

Neuralert has identified and will initially target the 250 medical centers performing the highest volume of high stroke risk procedures and who have a Neurology department performing mechanical thrombectomies. We will initially use a direct sales model supported with thought leadership and peer reviewed papers that endorse the clinical impact of rapid stroke detection and treatment. Once established within these facilities as a post-procedure monitoring system, Neuralert will expand within these clients as a generalized stroke monitor system for all patient admitted with elevated stroke risk (e.g., prior history of stroke, AFib, CHF, Diabetes, and the elderly. Broad adoption will be driven by the CMIO, CMO, Risk Management, Quality and Finance.

COMPETITORS

There is only one other vendor (Alva-Health) known to be developing a stroke monitoring system utilizing accelerometer data. The primary challenge will be changing the status quo mentality of the existing manual patient assessment process.

COMPETITIVE ADVANTAGE

Alva Health does not have Neuralert's proprietary algorithm, exclusively licensed from the Univ. of Penn., to model out confounding factors, and are relying exclusively on AI and machine learning. This will require substantial time and data to obtain the same clinically acceptable false alarm rate of Neuralert, which is below 3%. The current manual assessment process is hampered by limited observable clues (patients are bed bound and often sedated), staffing shortages, limited training, and emergent interruptions, all of which contribute to extended stroke detection time, poorer outcomes, and increased cost.

FINANCIALS (000s)

Category / Year	2021	2022	2023	2024	2025
Clients	0	26	221	605	989
Licenses	0	255	2,333	7,275	14,265
Revenue	$0	$1,377	$12,596	$39,285	$77,031
COGS	$65	$153	$1,361	$3,996	$7,245
OPEX	$364	$2,297	$7,093	$11,597	$15,432
EBIDTA	-$429	-$1,073	$4,141	$23,692	$54,354

DEAL STRUCTURE

Raising $500,000 via a Convertible Note, Discount: 20%, Term: 24 months, Interest: 6%, Valuation Cap: $5,000,000
CAP Table: 60% ownership between Co-Founders, CEO and CTO / 40% University of Pennsylvania (Exclusive license rights in negotiations with Penn)

MAJOR INFLECTION POINTS

- Complete End-to-end test at Univ. of Penn including use of purpose-built wearables   10/15/2021
- FDA Approval   3/31/2022
- Start of commercial operations   07/01/2022