VeriVasc - Al-powered Platform for 3D Vascular Phenotyping

TECHNOLOGY NUMBER: 2024-499

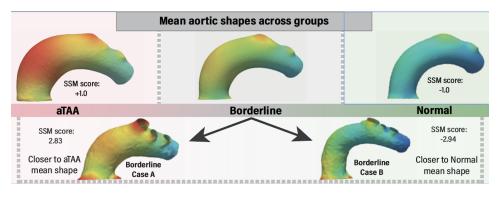
Accelerate Blue Foundry - 2025 (Life Sciences)

OVERVIEW

Verivasc is a novel diagnostic platform that combines advanced 3D aortic shape modeling with body size-adjusted measurements to provide a more precise and individualized assessment of disease severity in patients with known or suspected ascending thoracic aortic aneurysm. In addition to structural assessment, the platform captures functional changes in structure that greatly enhances risk stratification—especially where traditional size-based methods are insufficient.

DESCRIPTION

Verivasc's primary AortIQTM module utilizes clinical CT or MRI scans to generate detailed 3D models of the aorta and other vessels. It automatically quantifies the vessel's dimensions in relation to body size, greatly enhancing the speed and accuracy of diagnostic imaging interpretation, as well as quantifying how closely a patient's anatomy matches reference populations of healthy and diseased aortas. Unlike existing single-dimension metrics, Verivasc's multidimensional approach captures subtle anatomical variations, allowing clinicians to better differentiate normal from high-risk cases—particularly within the large group of patients with "borderline" dilation where diagnosis has historically been uncertain.



Technology ID

2024-499

Category

Life Sciences
Accelerate Blue Foundry 2025/Life Sciences

Inventor

Nick Burris

Further information

Tina Suntres tsuntres@umich.edu

View online

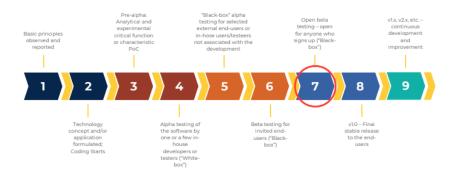


VALUE PROPOSITION

- **Comprehensive Disease Profiling**: Integrates both size- and shape-based analytics, enabling more accurate risk assessment for ascending thoracic aortic aneurysm than diameter measurements alone.
- **Personalized Diagnostics**: Provides patient-specific, quantitative scores to support confident clinical decisions and tailored care for ambiguous cases.
- **Early and Targeted Intervention**: Clearly separates low-risk from high-risk anatomical profiles, reducing overtreatment and better identifying candidates for closer monitoring or intervention.

TECHNOLOGY READINESS LEVEL

Software Technology Readiness Levels



INTELLECTUAL PROPERTY STATUS

Patent applications pending.

MARKET OPPORTUNITY

With rising numbers of incidental aortic dilation findings due to widespread CT and MRI use, there is a growing demand for tools that move beyond crude size criteria to better identify patients at genuine risk of acute aortic events. Verivasc addresses this need across cardiovascular imaging and surgical consult practices, supporting more nuanced disease management in cardiology, radiology, and cardiovascular surgery. The increasing recognition of the limitations of current guidelines, combined with demographic trends showing an aging, imaging-exposed population, underline a strong and expanding market for precise, patient-tailored diagnostic technologies like Verivasc.