



How a New Blood Volume Analyzer Could Save Lives From Acute Heart Failure

Daxor's new technology designed to measure blood volume has the potential to reduce patient readmission rates and improve outcomes for patients suffering from acute heart failure.

Kristopher Sturgis | Nov 28, 2018

An innovative new medical instrumentation and biotechnology company known as Daxor just published some exciting new data for their flagship technology, the BVA-100 blood volume analyzer . The new technology is designed to quantify circulating total blood volume, plasma volume, and red cell volume with 98% accuracy — all through a simple, rapid blood test administered in both inpatient and outpatient settings.

The test utilizes the indicator tracer dilution technique and is considered to be the gold standard for accuracy. The BVA-100 was specifically designed to automatically quantify the patient's blood volume by taking a concentration of undiluted HSA-I tracer prior to injection into the patient and comparing it to the tracer concentration diluted in the patient's blood sample. From there a detailed report is generated that measures total blood volume, plasma volume, and red blood cell volume in milliliters, and the results are available in less than 60 minutes.

“Heart failure represents one of the largest areas of healthcare spending and one of the most significant treatment challenges for approximately 6 million U.S. patients, which is expected to double as the population ages,” said Michael Feldschuh, CEO of Daxor. “The BVA-100 provides a simple, rapid, inexpensive, non-invasive, and most importantly, objective measurement of volume status and composition. This level of precision enables individualization of treatment and significantly better outcomes for patients with heart failure.”

The most recent data for the technology was just published in the *Journal of the American College of Cardiology — Heart Failure* on Nov. 5, and cited an 82% mortality and 56% rehospitalization reduction just 30 days after therapy guided by the BVA-100 in patients suffering from acute heart failure. Current treatment methods aim to treat patients to euvolemia, and this new test will finally allow physicians to have a measure of the volume so that they can achieve specific treatment goals.

In the absence of the BVA-100, physicians typically rely on clinical assessment and a range of surrogate pressure measures and biomarkers to estimate and measure patient blood volume. A variety of different studies have shown these indirect testing methods to lack specificity and sensitivity when compared side-by-side with the new BVA-100 measurements.

“Treatment goals and strategies are currently a high-stakes guessing game without accurate knowledge of both the patient’s actual and ideal total blood volume,” Feldschuh says. “The results of the recent outcome study demonstrate that accurate blood volume measurement substantially improves the physician’s ability to prescribe decongestion therapy that results in significantly better outcomes in acute heart failure, particularly with regard to rehospitalization and mortality.”

As of now, the BVA-100 is the only instrument cleared by the FDA to provide a rapid direct measurement of a patient’s blood volume and optimal volume. The company’s mission moving forward is to continue to help hospitals and physicians incorporate Daxor’s advanced technologies to help significantly improve patient care and therapeutic outcomes.

“The BVA-100 is a rapid, clinically-available FDA-cleared diagnostic test that is already in use in over 65 hospitals across the United States, with over 40,000 patients clinically evaluated in a broad range of medical conditions,” Feldschuh said. “Bringing awareness to breakthrough outcomes studies like the recent one published, increasing our focus on commercialization efforts, working with key researchers to add to our already wide-body of evidence, and educating hospitals and physicians on the value of our technology will all position us to ensure direct blood volume measurement is integrated into standard clinical practice in both the inpatient and outpatient settings.”

Source URL: <https://www.mddionline.com/ivd/how-new-blood-volume-analyzer-could-save-lives-acute-heart-failure>