

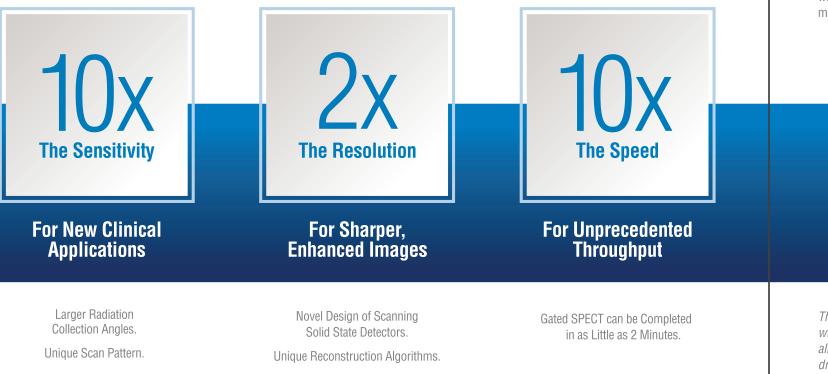
# Smart R Imaging by Design

# **Molecular Imaging... Redefined**

### Though nuclear cardiology has grown significantly in the past 25 years, supporting detector technology has not improved.

Sodium iodide and vacuum tubes continue to be the dominant technology in the nuclear equipment marketplace. The lack of industry investment in new technologies has placed severe constraints on clinical workflow and the development of new applications. With exciting new molecular imaging radiopharmaceuticals on the horizon and tremendous gains being made routinely in computing horsepower and applications, the limiting factor necessary to unlock the true potential of molecular imaging will be data collection.

Spectrum Dynamics redefines SPECT Imaging with the innovative D-SPECT<sup>™</sup> Cardiac Imaging System.



#### **Breaking the Paradigm**

Spectrum Dynamics provides technology that allows medical professionals to experience a true breakthrough in Nuclear Imaging. Now we no longer have to choose between speed and image quality.

Dramatic improvements in both clinical workflow and image quality are now possible with the D-SPECT<sup>™</sup> Cardiac Imaging System, powered by Spectrum Dynamics' unique BroadView<sup>™</sup> Technology. This new technology represents a breakthrough in almost every component of nuclear cardiology imaging diagnostics and workflow, including up to a 50% improvement in energy resolution, which will provide the capability to image multiple isotopes simultaneously.

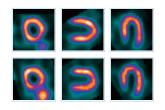
These dramatic gains in detector performance, combined with proprietary high resolution reconstruction algorithms, allow medical professionals to enhance clinical results while drastically reducing acquisition time, thereby improving overall clinical workflow. With these improvements, the D-SPECT™ Cardiac Imaging System revolutionizes the entire molecular imaging process.





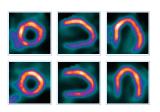
## **Experience the Power.**

### Patient 1



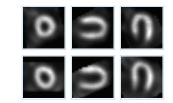
- Rest/Stress
- 54 year old male
- 5 foot 7 inches
- 181 lbs
- Atypical angina
- Risk factors: family history of CAD

### Patient 2

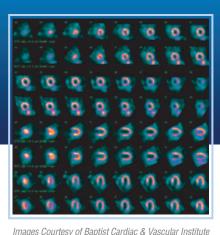


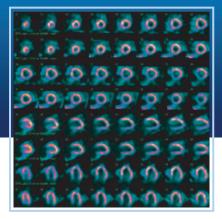
- Rest/Stress
- 63 year old male
- 5 foot 9 inches
- 191 lbs
- Atypical angina
- Risk factors: hypertension, family history of CAD

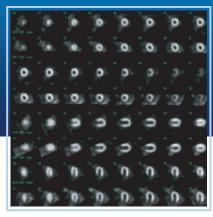
### Patient 3



- Rest/Stress
- 59 year old female
- 5 foot 2 inches
- 123 lbs
- Atypical angina, SOB
- Hx: coronary calcification
- Risk factors: hypertension, hypercholesterolemia, family history of CAD





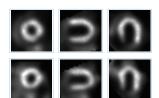


Images Courtesy of Cedars-Sinai Medical Center

#### Images Courtesy of Baptist Cardiac & Vascular Institute



## Patient 4



- Rest/Stress
- 59 year old female
- 5 foot 5 inches
- 185 lbs
- Kidney transplant evaluation
- Hx: end-stage renal disease
- Risk factors: hypertension



Images Courtesy of Cedars-Sinai Medical Center

## **Improve Your Results.**

#### **Improved Process**

The D-SPECT<sup>™</sup> Cardiac Imaging System's RScan<sup>™</sup> Technology uses two consumables (RScan<sup>™</sup> Wristband and RScan<sup>™</sup> Syringe) which provides for automated patient and dose matching as a final quality control step, streamlines the imaging process by fully automating the setup for the technician and optimizes each of the nine solid state detectors for a personalized scan. By utilizing innovative RFID technology, each element of our RScan<sup>™</sup> system communicates patient-critical information to enhance the molecular imaging process.

 The RScan<sup>™</sup> Wristband utilizes an RFID device as its active memory and communication element. The wristband is encrypted with detailed patient information and placed on the patient's wrist at the nuclear medicine reception desk.

- The RScan<sup>™</sup> Syringe contains encrypted dosing and timing data that is wirelessly cross-linked with study-specific data at the time of the injection.
- When in proximity of the RScan<sup>™</sup> Syringe, the RScan<sup>™</sup> Wristband receives the study-related information. This wristband will be recognized and read by the D-SPECT<sup>™</sup> system, thus initiating imaging and optimizing performance.

#### Their Safety. Their Comfort. Your Patients.

With the innovative technology of the D-SPECT<sup>™</sup> Cardiac Imaging System, you can improve not only image quality and clinical throughput, but also your patients' imaging experience.

With up to 10 times the sensitivity of a conventional camera, the D-SPECT<sup>™</sup> has the potential to provide high quality images with a significant reduction in dose, all while assuring the right patient receives the right radiopharmaceutical and undergoes the correct imaging procedure.

Patient comfort remains a significant issue on conventional cameras. Long scan times, arm(s) behind the head, and supine or prone imaging can create real discomfort and increase the chance of motion during the imaging procedure. The D-SPECT<sup>™</sup> Cardiac Imaging System's open chair allows patients to remain upright in a natural sitting position, eliminating the need to have an arm raised overhead for the duration of the test. Combined with the shortened acquisition time, this relaxed position reduces patient discomfort and the likelihood of patient motion during the scan.







Spectrum Dynamics is redefining molecular imaging in ways you never thought possible. Discover how our unique solutions can benefit you and your patients.



## Advanced Technology. Advanced Applications. Better Results.

Exceptional gains in clinical throughput, image quality, patient safety and comfort set the D-SPECT<sup>TM</sup> apart from conventional systems. To rise to the next level of performance and clinical utility, however, requires providing key diagnostic information not currently possible with a conventional system. The D-SPECT's<sup>TM</sup> unprecedented sensitivity provides the foundation necessary to calculate absolute blood flow numbers from the acquired data. Spectrum Dynamics is fully committed to leveraging the unique imaging capabilities of the D-SPECT<sup>TM</sup> to provide clinicians with next generation clinical applications.



Spectrum Dynamics is a pioneering medical device company dedicated to developing high definition, functional imaging technology to meet the clinical and workflow demands of this growing market.

Spectrum Dynamics revolutionizes the diagnostic imaging market, a field that was void of major gamma camera developments for the past two decades. In order to ensure optimal imaging results, the company has also developed various accessories to assure quality control and complete patient data collection and verification throughout the entire imaging process.

Spectrum Dynamics protects its revolutionary technology through a strong and broad portfolio of over 70 patents and patent applications.

## Spectrum Dynamics, Smart® by Design

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