



Press Release

ST. LUKE'S-ROOSEVELT HOSPITAL COMPLETES EXTENSIVE CLINICAL STUDY TO EVALUATE ULTRASPECT'S WBR™ "QUARTER-TIME" GATED MYOCARDIAL PERFUSION SPECT IMAGING

A 209-Patient Study Completed by Dr. E. Gordon DePuey Demonstrates Xpress3.Cardiac™ 3-Minute Cardiac Imaging to Be Equivalent to Full-time OSEM and FBP in Image Quality, Defect Characterization, and Functional Assessment.

MERRICK, New York, March 2, 2009 —UltraSPECT, a leading provider of NM products for enhancing the imaging quality, productivity, and patient comfort/safety of Gamma Cameras by shortening acquisition times, increasing image resolution, and enabling reduced radiopharmaceutical doses, announced today the results and conclusions of the recent clinical study conducted in the Division of Nuclear Medicine, Department of Radiology of St.-Luke's-Roosevelt Hospital in New York by a group of researchers led by Dr. DePuey, MD, Director of Nuclear Medicine at St.Luke's-Roosevelt and Professor of Radiology at Columbia University.

Since the introduction of the half-time Xpress.Cardiac™ in 2005, UltraSPECT's WBR (Wide-Beam Reconstruction) image reconstruction algorithm has been in routine clinical use for Nuclear Cardiology, producing half-time SPECT images of high diagnostic quality. WBR incorporates simultaneous resolution recovery and noise control during reconstruction without applying a post-processing filter. The purpose of the current study was to clinically evaluate the more recently introduced Xpress3.Cardiac product for quarter-time imaging, and determine whether this image acquisition protocol processed by the WBR algorithm optimized for quarter-time SPECT produced adequate imaging outcomes.

Describing the methodology used in the study, Dr. DePuey said, "Using the optimized algorithm, 209 patients (91 men, 118 women, mean chest circumference = 40") were imaged at Rest and Stress (dosage: 9 and 32 mCi ^{99m}Tc-sestamibi, respectively), first full-time using OSEM (and FBP), and then quarter-time with the new optimized WBR algorithm. Full-time Rest scans were acquired in just over 14 minutes (180° arc covered by 64 stops at 25 seconds per stop (sps) with a 90°-angled dual-headed detector), while full-time gated (8 frames per cardiac cycle) post-Stress scans were performed at 20 sps. Each of these tests were immediately followed by their quarter-time counterparts: rest (6sps) and post-stress (4 sps) gated SPECT. Blinded observers graded scan quality (1 = poor to 5 = excellent) based on myocardial uniformity, endocardial/epicardial edge definition, and background noise.

Perfusion defects were scored using a 17-segment model. In addition, three different commercially available software methods were used to calculate EDV, ESV, and LVEF."

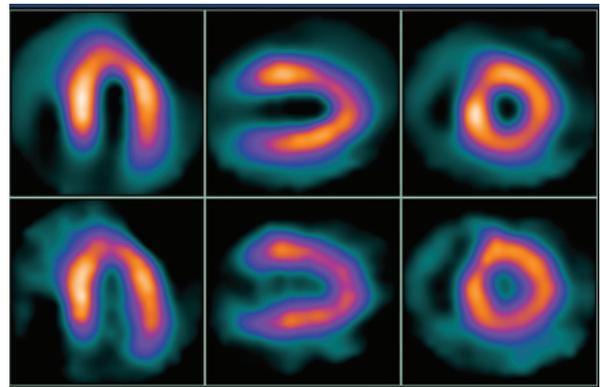
The results of the study showed that for Rest studies, the mean image quality for quarter-time WBR was equivalent to those of full-time OSEM and full-time FBP. For Stress, quarter-time WBR quality was actually superior to full-time OSEM. In patients with chest circumferences >44" a longer, 10 sps WBR acquisition improved resting image quality. Mean SSS's, SRS's, and SDS's were not significantly different with quarter-time WBR vs. full-time OSEM or FBP.

As for the quantitative analysis of LV volume and function, all three software methods employed showed a good correlation between LVEF, EDV, and ESV as determined by WBR vs. OSEM, although ESV's were generally higher with WBR, primarily due to better delineation of the valve plane at end-systole; EDV's, however, were similar. Thus, EF's were significantly lower with WBR.



Summarizing the study's conclusions, Dr. DePuey stated, "For perfusion SPECT, quarter-time WBR affords image quality, defect characterization, and functional assessment equivalent to full-time OSEM, providing the potential for decreased SPECT acquisition times and/or decreased radiopharmaceutical doses. However, users should be aware of the differences between the various methods when reporting functional results; compared to full-time gated SPECT, quarter-time gated WBR yields significantly lower LVEF's."

"I am pleased with the results and conclusions of this study with respect to the newly introduced Xpress3.cardiac," said John W. Schaumburg, president of UltraSPECT Inc. "UltraSPECT products have consistently offered cost-effective solutions that leverage the investment of existing equipment by increasing their performance not only in terms of patient care, but also in terms patient throughput, with absolutely no trade-off in image quality. At minimal capital investment, these products make a lot of sense in today's tough economic climate. The rapidly growing number of installations across the U.S. is a testament to the expediency of WBR technology."



Stress images: top row, images acquired with quarter-time protocol and processed by WBR; bottom row, images acquired with full-time protocol and processed with FBP, with all other acquisition and dose parameters identical.

About UltraSPECT:

UltraSPECT Ltd., based in Haifa, Israel, with U.S. offices in Merrick, NY, is a leading provider of products dedicated to enhancing the performance of NM Gamma Cameras by shortening acquisition times, increasing image resolution, and providing the potential for reduced radiopharmaceutical doses. Compatible with most major manufacturers' cameras and workstations, these products can be installed within hours, offering a transparent interface between the camera and workstation. Shorter acquisitions improve patient comfort, reducing patient motion, and increase patient throughput without compromising image quality. Higher resolution offers improved lesion localization, raising diagnostic confidence. Lower doses reduce patient exposure to radiation. Xpress.Cardiac and Xpress3.Cardiac cut cardiac imaging times to one-half and one-quarter, respectively, without compromising image quality; Xpress/Xact.Bone™ can either cut bone imaging acquisition times by half, or double the image resolution. UltraSPECT products are exclusively distributed in the United States by Cardinal Health, a \$91 billion, global health care company headquartered in Dublin, Ohio.

For more information visit our website: www.ultraspect.com

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