

## Quantitative Comparison of Circular Orbit and non Circular Orbit Acquisition using Myocardial SPECT Imaging

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### INTRODUCTION

There are a number of practical considerations when acquiring SPECT data, such as collimator selection, matrix size, number of angles, 360° or 180° acquisition, continuous or step & shoot acquisition, circular or non-circular orbit acquisition. In attempts to eliminate or reduce artifacts, imaging parameter in which the camera head is contoured closer to the body than with standard circular orbits have been proposed. Therefore This study examined Myocardial imaging with a circular and a Contour study using ELSINT HERIX Dual-Head Imaging System

### METHOD

A cardiac Phantom was employed to assess the Uniformity, Contrast and resolution characteries of the contour reconstruction Algorithm and to compare circular orbit and body contour image quality. For both types of acquisition (circular orbit and body contour orbit) 120 views were taken over a full 360°. The scan time per view was 20 seconds and a software zoom of 1 and 64\*64 matrix was employed.

### RESULTS

According to Quantitative analysis, there is a data for the body contour SPECT appears to be a significant improvement in Uniformity, contrast and resolution

### DISCUSSION

A Body contour orbit by a rotational and translational motion improves the resolution, contrast and uniformity due to closer distance between patient and collimator. This result shows that the body contour orbiting may be preferable to circular orbiting when using Myocardial SPECT

### CONCLUSION

We have compared the SPECT image quality of a body contour and circular orbit. With the improved image quality, the body contour technique could lead to more accuracy in diagnostic.