

# Image Quality Phantom Comparison of the Biograph Vision Quadra and Biograph Vision PET/CT Scanners

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Comparing scanners performance can be a rather complicated task, since the NEMA protocol was not designed considering long axial field of view PET scanners. This work compares several image quality measures using the NEMA IQ phantom for the Biograph Vision and Biograph Vision Quadra PET/CT scanners. Two acceptance angles of the Vision Quadra were considered in the comparison. The aim was to quantify the improvement introduced by the Vision Quadra compared to Vision in terms of noise without degrading spatial resolution. Results showed that the higher sensitivity of Vision Quadra allowed to reduce the activity by  $3.9\times$  or collect the same amount of trues  $8.1\times$  faster compared to Vision, while the contrast recovery coefficient showed small differences between both scanners.

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