AbstractID: 1479 Title: Reducing number of biposies performed with diagnostic digital breast tomosynthesis

Diagnostic digital breast tomosynthesis has been developed: to define, analyse and diagnose mammography findings properly by providing important additional information; to verify correct targets for biopsies; and to reduce the number of unnecessary biopsies performed. Previously we presented results of clinical benefits of diagnostic digital breast tomosynthesis. In this study we evaluated the capability of this method to reduce the number of biopsies performed in the event of challenging breast cases. Digital breast tomosynthesis images were obtained with a GE Diamond 3D TACT (Tuned Aperture Computed Tomography) mammography system. This system incorporated a CCD (Charged Coupled Device) with small-area digital detector with 48 micrometer pixel size and the reconstruction was performed by 3D TACT technology. Reconstruction technology is based on optical aperture theory, which extends and completely generalizes the better known laminographic process termed tomosynthesis. This method provides high clinical image quality and fast reconstruction. This paper presents the results based on the clinical study conducted at Helsinki University Central Hospital. Presentation demonstrates clinical three-dimensional images, as well as results are compared with other imaging modalities. This new imaging modality has the potential to reduce the number of unnecessary biopsies performed.

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