

3D Guided Image Filtering to Improve Quality of Short-Time Binned Dynamic PET Images Using MRI Images

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Abstract : This paper evaluates the usability of 3D Guided Image Filtering to enhance the quality of short-time binned dynamic PET images by using MRI images. Guided image filtering is an edge-preserving filter proposed to enhance 2D images. The 3D filter is applied on 1 and 5-minute binned images. The results are compared with 15-minute binned images and the Gaussian filtering. The guided image filter enhances the quality of dynamic PET images while also preserving important information of the voxels.

Keywords : dynamic PET images, guided image filter, image enhancement, information preservation filtering

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