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(54) Title: AUTOMATED MOTION CORRECTION IN PET IMAGING

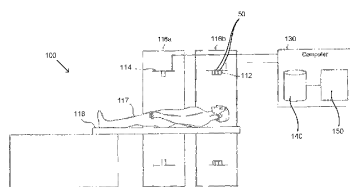


FIG. 1

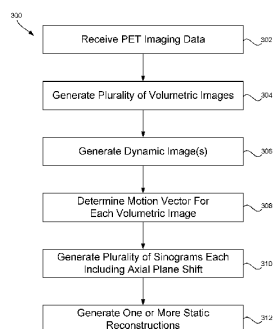


FIG. 3

(57) Abstract: Methods and systems for automated motion correction of nuclear images are disclosed. A method includes receiving a first set of imaging data including a plurality of annihilation events detected during an imaging period and generating a plurality of four-dimensional volumetric images from the imaging data for the imaging period. Each four-dimensional volumetric image includes a target tissue. At least one motion correction is determined for each of the plurality of four-dimensional volumetric images. The at least one motion correction is determined using target tracking data generated for the target tissue over a time period associated with the four-dimensional volumetric image. Corrected image data is generated from the first set of imaging data and the at least one motion correction and at least one static reconstruction image including the target tissue during the imaging period is generated from the corrected image data.

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