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(54) Title: CONTRAST DOSE REDUCTION FOR MEDICAL IMAGING USING DEEP LEARNING

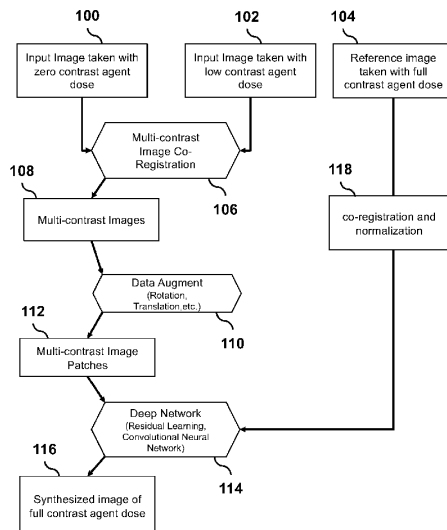


Fig. 1

(57) Abstract: A method for diagnostic imaging with reduced contrast agent dose uses a deep learning network (DLN) [114] that has been trained using zero-contrast [100] and low-contrast [102] images as input to the DLN and full-contrast images [104] as reference ground truth images. Prior to training, the images are pre-processed [106, 110, 118] to co-register and normalize them. The trained DLN [114] is then used to predict a synthesized full-dose contrast agent image [116] from acquired zero-dose and low-dose images.

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