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(54) Title: A METHOD OF DETECTION OF A LANDMARK IN A VOLUME OF MEDICAL IMAGES

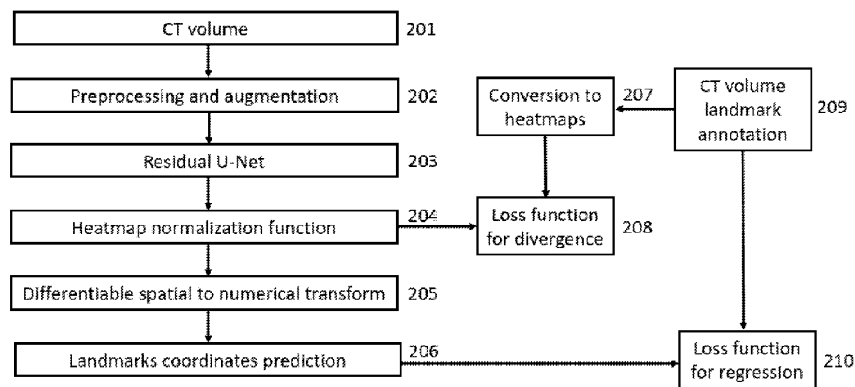


Fig. 2

(57) **Abstract:** Detection of landmarks in volumes of medical images is an important step in developing various diagnostic procedures. The invention pertains to a method detection of a landmark in a volume of medical images. Said volume of medical images can be selected from a computational tomography volume or a magnetic resonance volume. The invention includes a residual U-Net architecture to produce a heatmap that describes probability of finding the landmark which can be combined with a 3D Differentiable Spatial to Numerical Transform (DSNT) in order to obtain coordinates of the landmark. The invention was evaluated on two datasets: dataset containing 157 Coronary Computed Tomography Angiography (CCTA) scans and a dataset containing 77 Computed Tomography Angiography (CTA) scans. The proposed method provides a significantly improve accuracy of landmark detection, especially for ostium landmark detection, when compared to known methods.

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