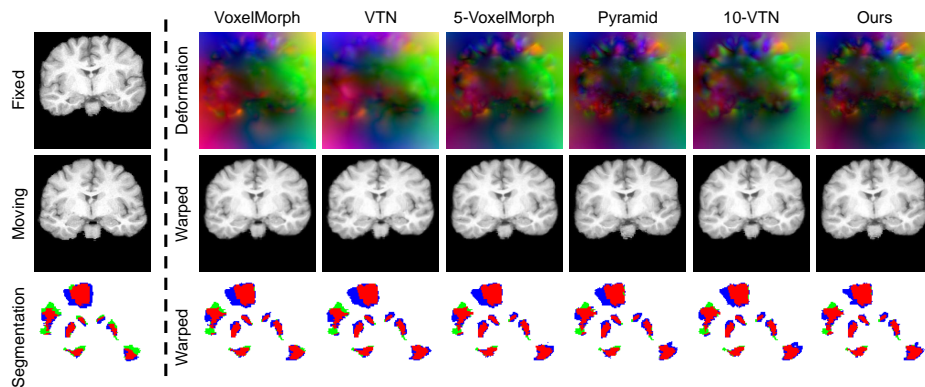


# Supplementary Material for “Self-Recursive Contextual Network for Unsupervised 3D Medical Image Registration”

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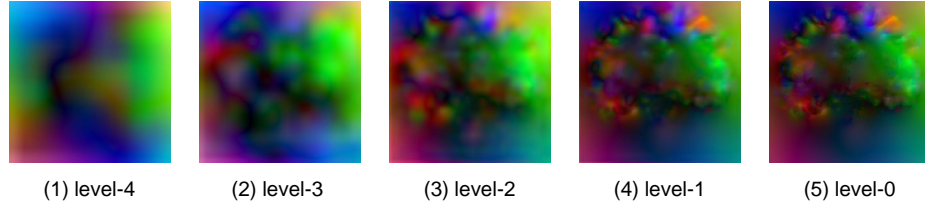
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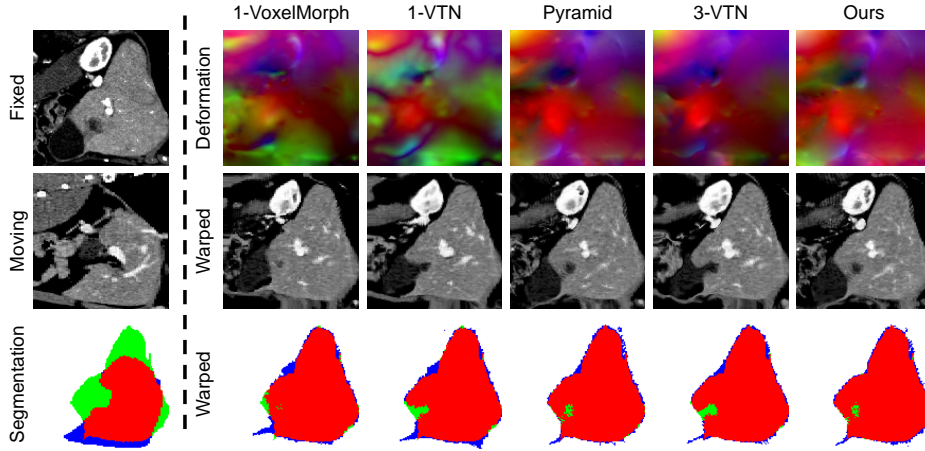
**Fig. 1.** Visualization of an example in the brain MRI dataset LPBA. Left: fixed image, moving image and 6 selected anatomical structures with overlaps of them. Right: The first row shows the generated deformation fields of different methods, the second row shows the corresponding warped moving images, and the third row shows the overlaps (red) of fixed image segments (green) and warped moving image segments (blue). Ours performs best in terms of the overlap of segments especially for the top one.

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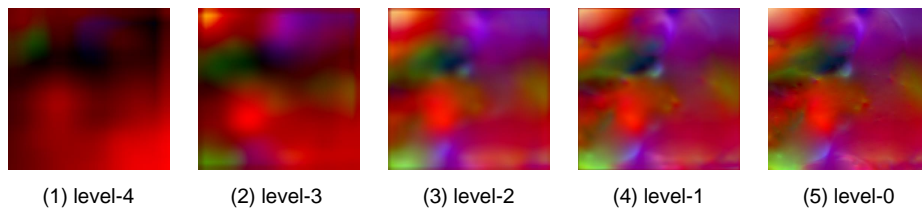
\* Authors contributed equally.



**Fig. 2.** An example of deformation fields of multiple levels from the level 4(the lowest resolution) to the level 0(the highest resolution) generated from our network in the brain MRI dataset LPBA. All of them are upsampled to the highest resolution by trilinear interpolation and arranged in a row for comparison.



**Fig. 3.** Visualization of an example in the liver CT dataset SLIVER. Left: fixed image, moving image and anatomical structures with overlaps of them. Right: The first row shows the generated deformation fields of different methods, the second row shows the corresponding warped moving images, and the third row shows the overlaps (red) of fixed image segments (green) and warped moving image segments (blue). Ours performs best on the overlap rate especially our blue area is the smallest.



**Fig. 4.** An example of deformation fields of multiple levels from the level 4(the lowest resolution) to the level 0(the highest resolution) generated from our network in the liver CT dataset SLIVER. All of them are upsampled to the highest resolution by trilinear interpolation and arranged in a row for comparison. The tendency of these fields shows our network can refine deformation fields recursively with only one deformation generator and one receptive module.