We ran Task 3 and Task 5 of the CHAOS challenge with an internal variant of nnU-Net [1]. These tasks need to process T1 in and out phase images as well as T2 images. While the T1 images are registered and can be used as separate color channel inputs, we did not choose to do so because this would have required substantial modification to nnU-Net (2 input modalities for T1, 1 input modality for T2). Instead, we treat T1 in and T1 out as separate training examples, resulting in a total of 60 training examples for the aforementioned tasks. We do not use external data.

Task 3 is a subset of Task 5, so training was only one once and the predictions for Task 3 were generated by isolating the Liver label.

The submitted predictions are a result of an ensemble of five 3D U-Nets ("3d_fullres" configuration of nnU-Net). The five models originate from a cross-validation on the training cases. Furthermore, since only one prediction is accepted for both T1 image types, we ensemble the predictions of T1 in and T1 out.

DIFFERENCE TO OUR SUBMISSION FROM SEPT 25th 2019:

For creating the previous submission we manually interfered with the preprocessing of nnU-Net to enforce a low spacing in the z-axis. This was required to achieve the best results. Here we run nnU-Net v2 in its vanilla state and do not manually interfere with the pipeline at all.