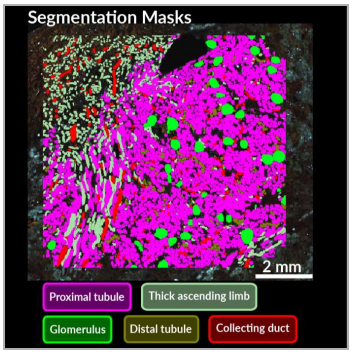

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Kidney Functional Tissue Unit (FTU) Segmentation

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MANUSCRIPT CITATION:
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Protocol status: Working
We use this protocol and it's working

ABSTRACT

This protocol explains how to apply a segmentation model to autofluorescence microscopy images to find kidney functional tissue units (FTUs). Currently the model allows for segmentation of glomeruli, proximal tubules, thick ascending limb, distal tubules, and collecting ducts.

MATERIALS

For performance, a workstation with at least 32 GB of memory is advised and a GPU with 12 GB memory is required for any GPU-based prediction.

Created: Jun 16, 2023

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PROTOCOL integer ID:
83532

Apply kidney FTU segmentation to autofluorescence images

1 Configure the segmentation prediction by creating the dataset .yaml file. Add the path to the saved model and images in the configuration file.

2 Create the python environment needed to run wsimap. See instructions at the wsimap GitHub.

3 Run the model using the command line from the wsimap directory like so:

```
python scripts/config/instance-predict-from-config-newmodels-multi.py
"/path/to/configuration-file-from-step2.yaml
```

4 Collect .geojson segmentations in output folder specified in .yaml file from Step 2. These can be visualized in QuPath.