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Renal Multicompartment Segmentation Object Boundaries

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ABSTRACT

Boundary descriptions for segmentations produced by the CMILab multicompartment segmentation pipeline for PAS-stained renal whole slide images.

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segmentations.ome.tiff channels

1 Cortical Interstitium: Defined as the spaces in the renal cortex situated between basement membranes of glomeruli, tubules, and vessels. Does not include perivascular stroma.

2 Medulla Interstitium: Defined as the spaces in the renal medulla situated between basement membranes of tubules, and vessels. Does not include perivascular stroma.

3 Non Globally Sclerotic Glomeruli: Outer boundary is defined by the outer boundary of the bowman's capsule. Glomeruli may show signs of sclerosis but are not deemed globally sclerotic.

4 Globally Sclerotic Glomeruli: Outer boundary is defined by the outer boundary of what would be the bowman's capsule in a healthy glomerulus. Glomeruli are deemed globally sclerotic, and no longer functional.

5 Tubules: Outer boundary is defined as the outer boundary of the tubular basement membrane. Classification is not specific to tubular segments (i.e. PCT, DCT, TAL, etc.).

6 Arteries/Arterioles: Outer boundary is defined as the outer boundary of the medial layer of all arteries or arterioles in the sections. Veins and capillaries are not considered.