SIGNIFICANCE STATEMENT

Classical dendritic cells (cDCs) shape the immune response in GN. Recently, new lineage markers have been discovered that help to cDC subsets from other myeloid cells, like macrophages. Using these new tools, this study shows by multiphoton imaging and imaging mass cytometry that cDCs are localized sparsely in the interstitium and form clusters around blood vessels. cDC depletion studies in a mouse model of antibody-mediated nephrotoxic nephritis showed that, in the heterologous phase, the majority of cDCs have proinflammatory properties, whereas the smaller $CD103^+$ subset plays an anti-inflammatory role by limiting neutrophil infiltration. The study presents novel data regarding the anatomic localization and functional properties of cDC subsets in the kidney and provides insights into the underlying pathogenesis of GN.