Dysfunction in the alternate pathway of complement is well known to result in atypical HUS. However, comparatively much less attention has been focused on a newly described type of kidney disease called C3 glomerulopathy, which is also due to abnormalities in the alternate pathway of complement. This talk will review the history behind the evolution of C3 glomerulopathy being considered a distinct disease entity from other types of glomerulonephritis, and the clinical presentation, prognosis, complement abnormalities, and treatment of C3 glomerulopathy. Advancing our understanding of C3 glomerulopathy and improving outcome for patients with this severe type of renal disease will require improved collaboration between clinicians unfamiliar with complement, and scientists unfamiliar with this disease.