MPGN is not a disease
MPGN is not a single, specific disease, but is a light microscopic pattern of kidney injury. The older nomenclature of MPGN types 1–3 should be discarded.

Classification of MPGNs
Glomerular injury with an MPGN pattern is now classified by pathobiology, and relies on the immunofluorescence examination of the kidney biopsy. These entities may be broadly-defined as immunofluorescence-negative, complement-dominant, or immunoglobulin (with or without complement) positive (Figure 1).

Differential diagnosis of MPGNs
The differential diagnosis of glomerular injury with an MPGN pattern is broad and includes infection-related glomerular disease, autoimmune diseases, and complement-mediated diseases (Figure 2).

Exclude infection
Infection should be excluded in patients with immune complex-mediated GN, followed by evaluation for an autoimmune disease. If monoclonal immunoglobulin deposits are present, evaluate for a hematologic malignancy.

Considerations for idiopathic ICGN in adults
Idiopathic immune complex-mediated GN (ICGN) is not common in adults. If no etiology is discovered, evaluate for complement dysregulation and drivers of complement dysregulation. C3 glomerulopathy (C3G) can masquerade as an immune complex-mediated GN.

Considerations for C3G
Prior to assigning a diagnosis of C3G, infection should be excluded, and in patients age 50 or older, a monoclonal gammopathy should be excluded.

Treatment of ICGN of known cause
The treatment of immune complex-mediated GN should be directed at the underlying cause.

Treatment of ICGN of unknown cause
In the absence of an underlying cause, idiopathic immune complex-mediated GN may be treated with glucocorticoids and/or immunosuppressive therapies, based on the severity and activity of the disease.

Treatment of C3G
Patients with C3G who have proteinuria over 1 g/d and/or declining kidney function over 6 months should be treated initially with mycophenolate mofetil plus glucocorticoids, and if this fails, eculizumab may be considered.

Clinical trials
Patients with C3G who do not respond to therapy should be considered for a clinical trial.