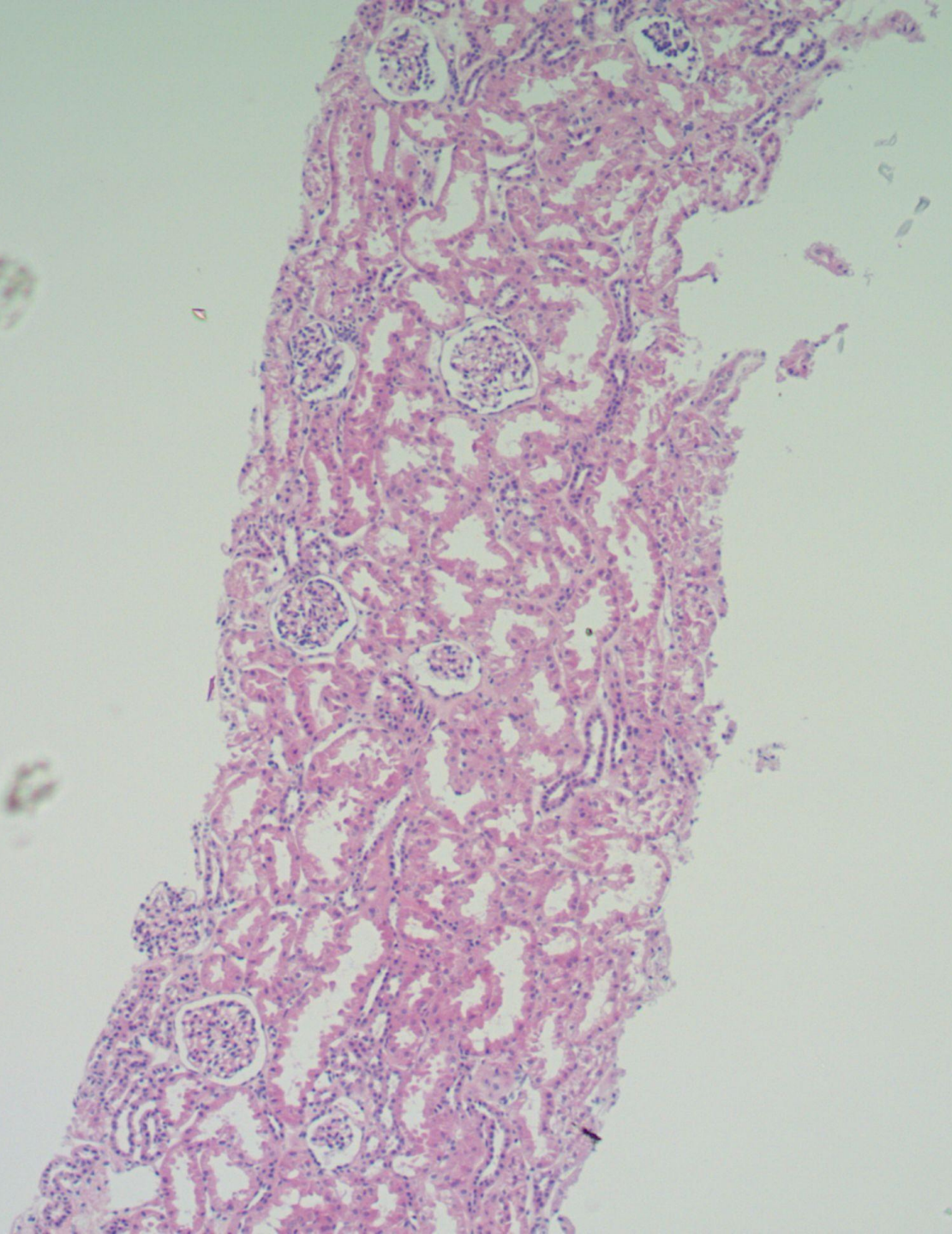


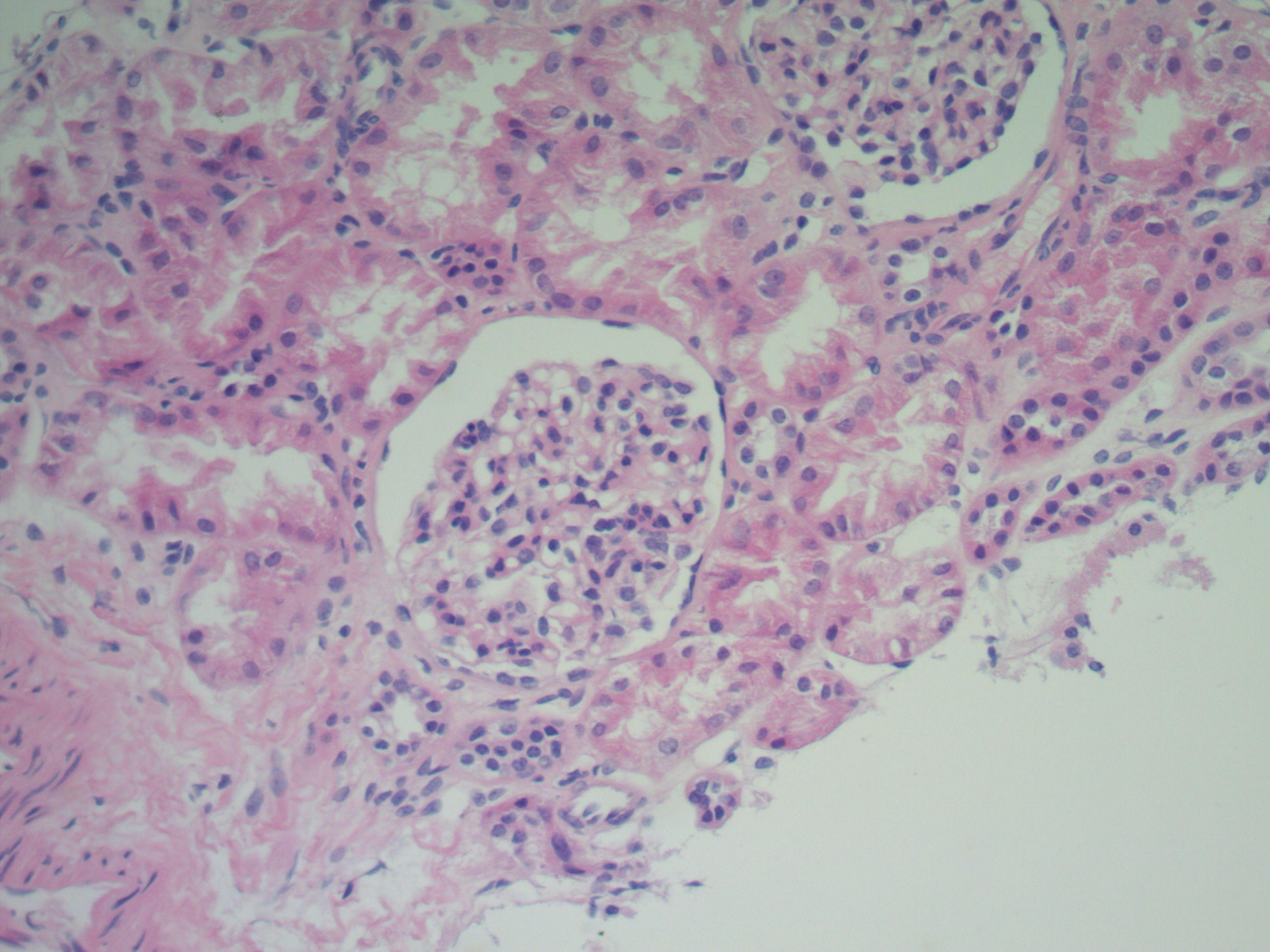
Case 1

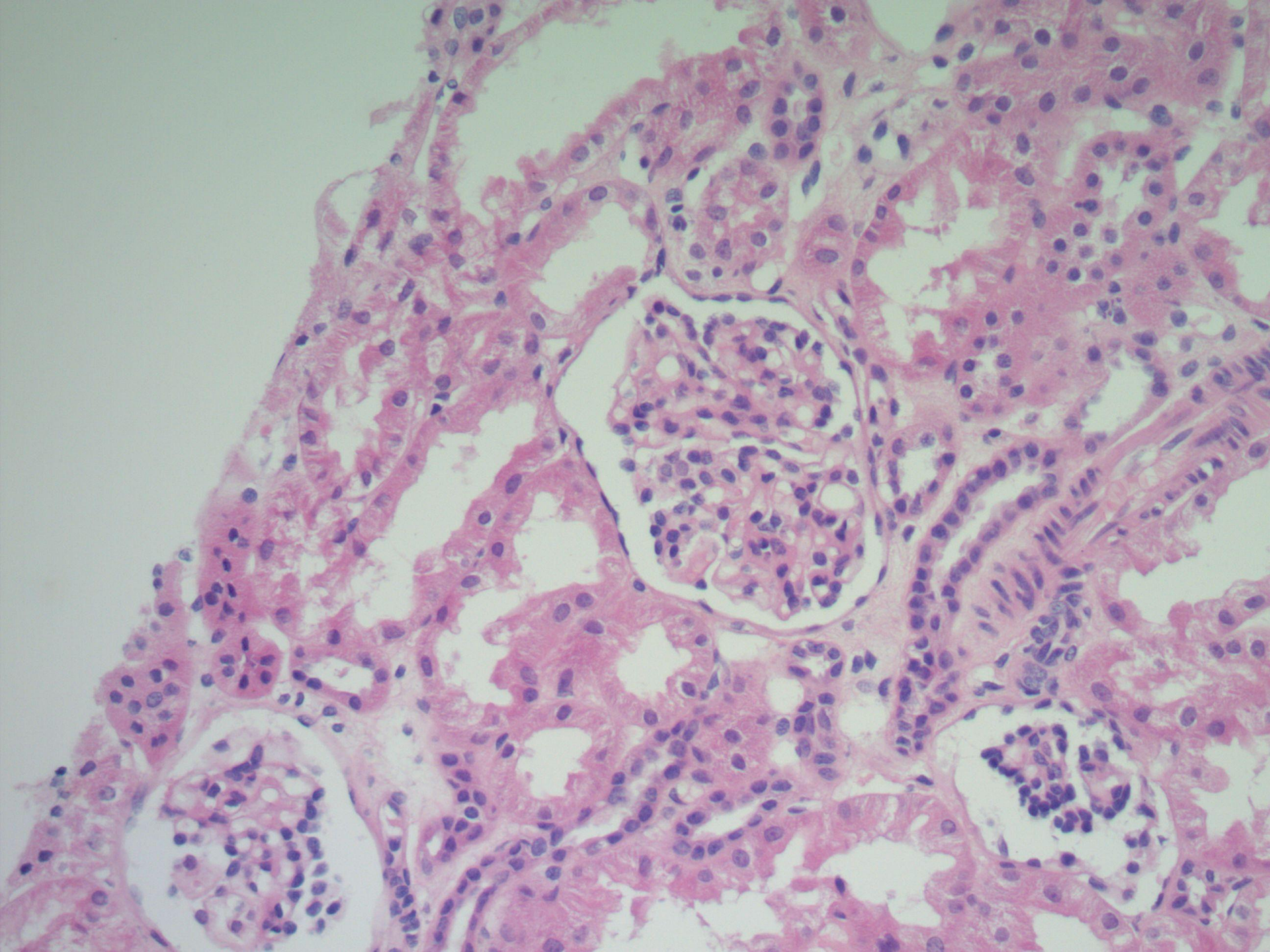
- Male aged 5
- Steroid resistant nephrotic syndrome

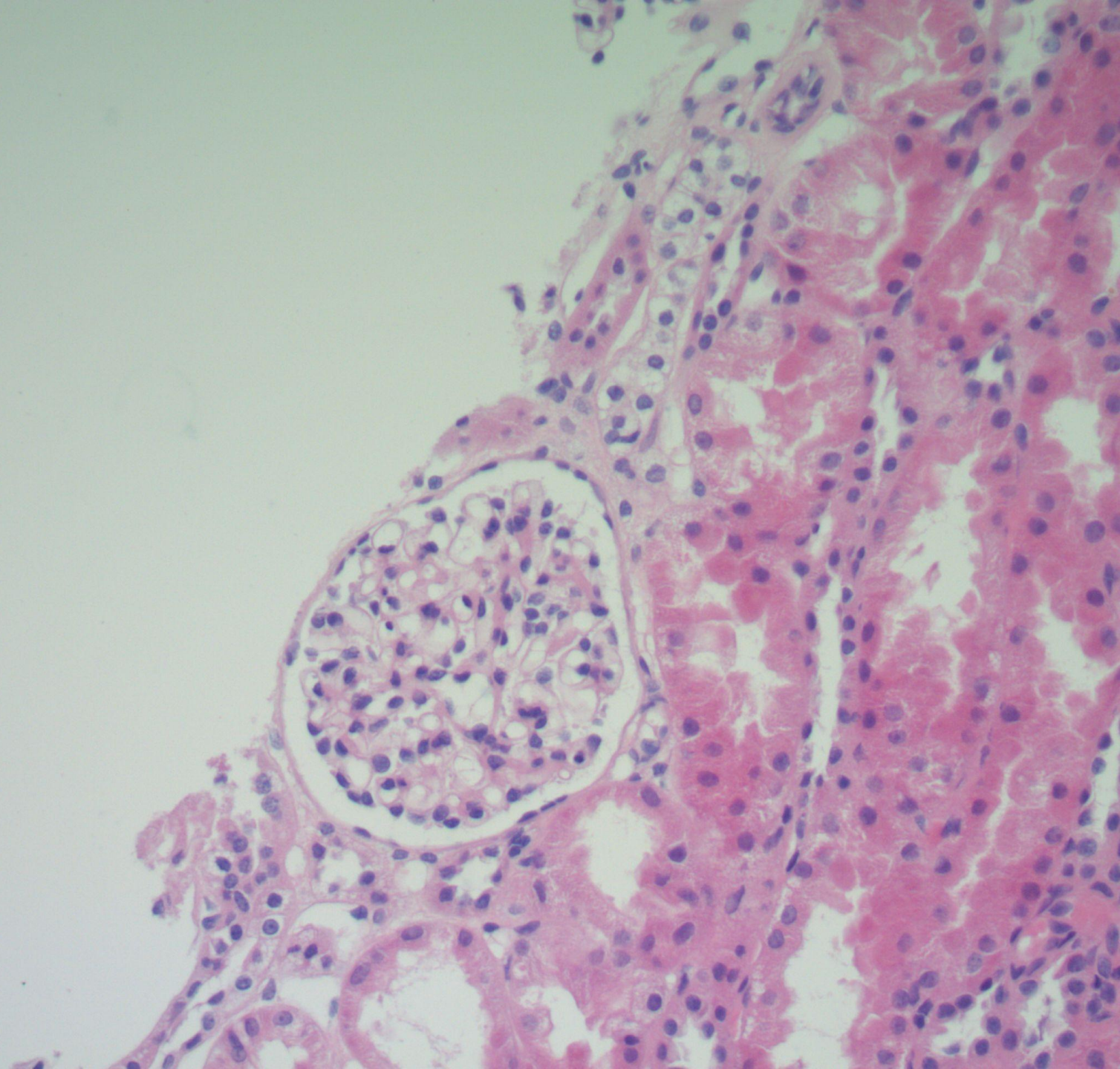
What is nephrotic syndrome?

- Proteinuria - $>3\text{g/day}$, PCR >300
- Hypoalbuminaemia
- Oedema

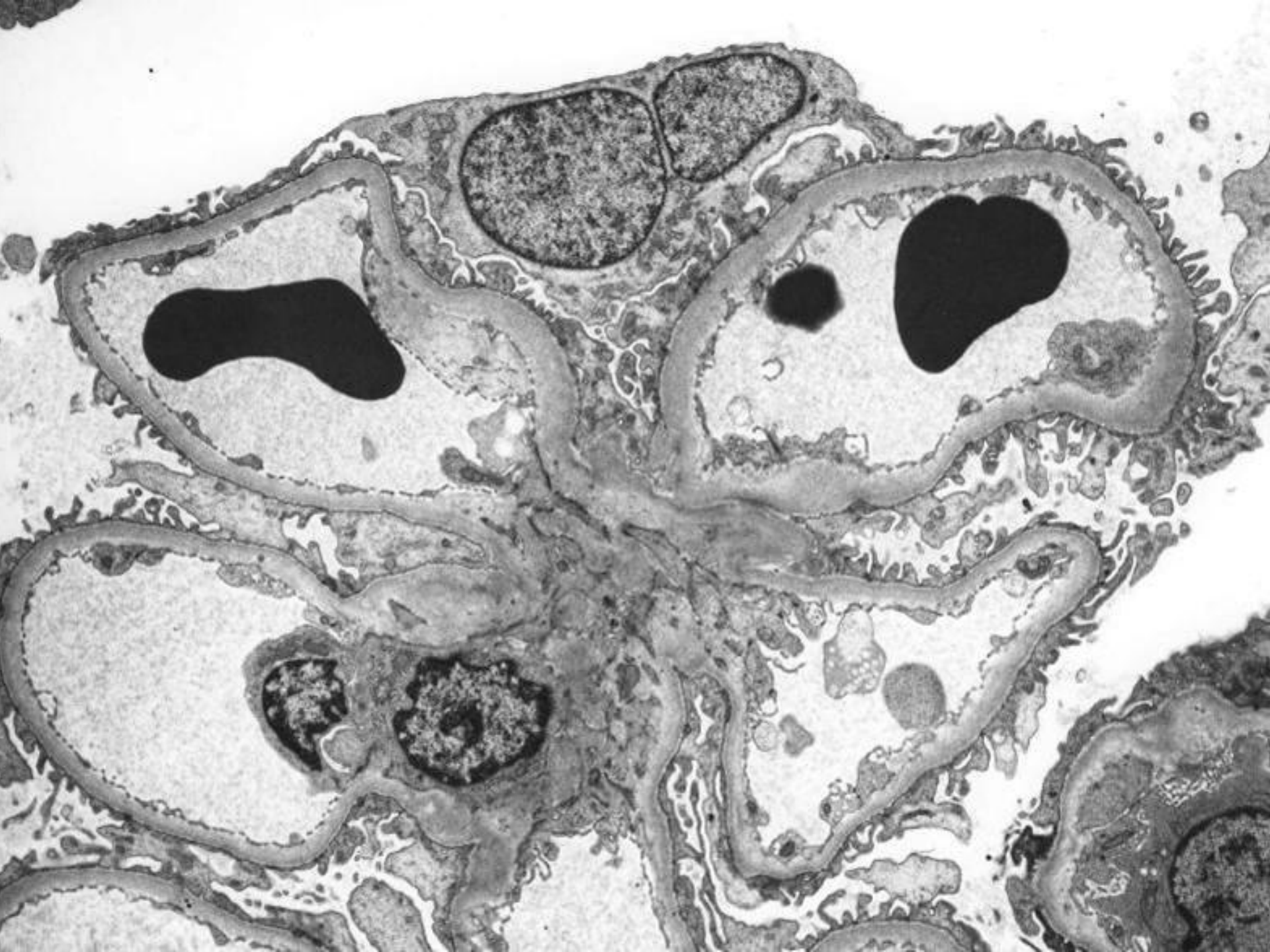




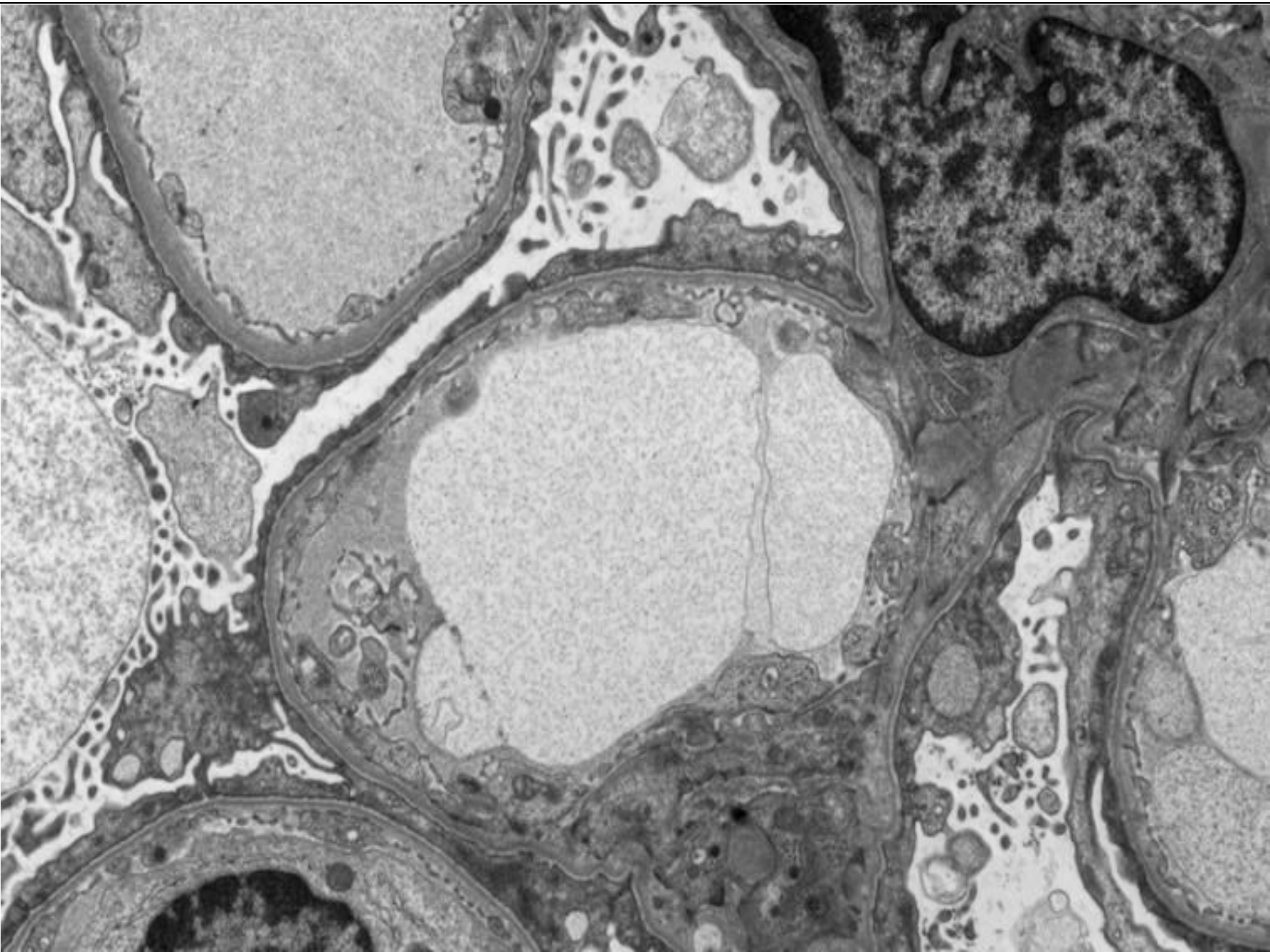




- What is the diagnosis?
- What other diagnoses are possible?
- What do you want to do to investigate further?





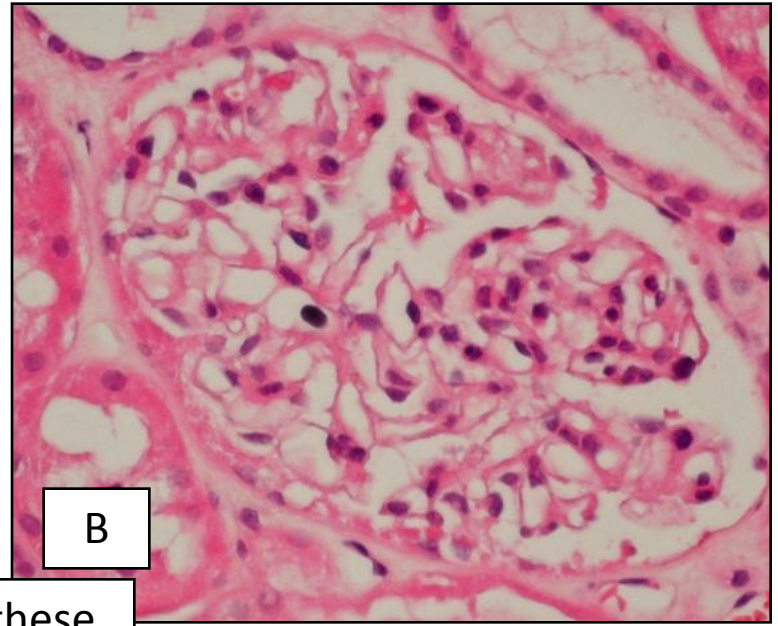
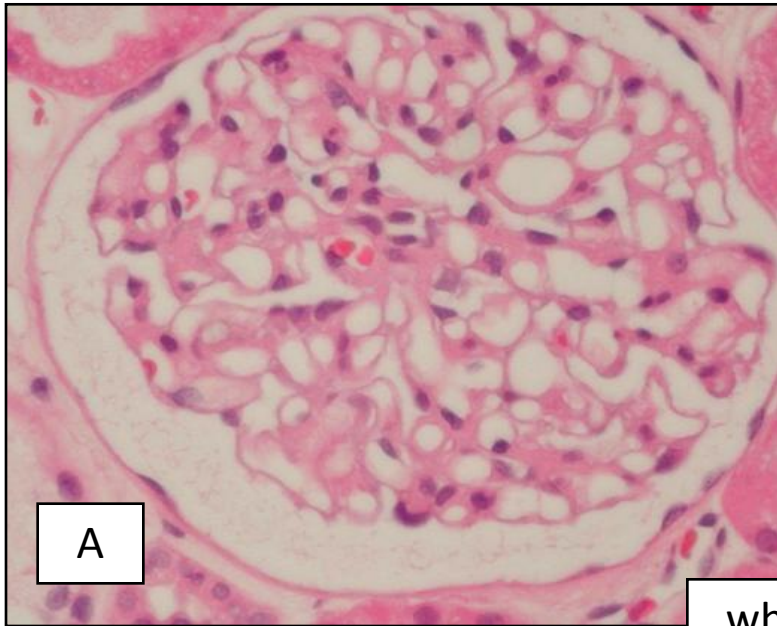


Minimal change disease MCD

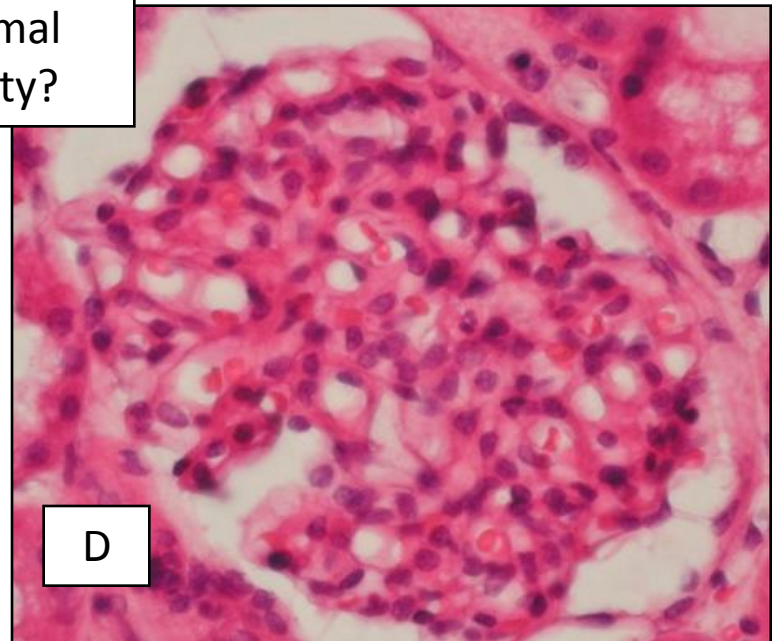
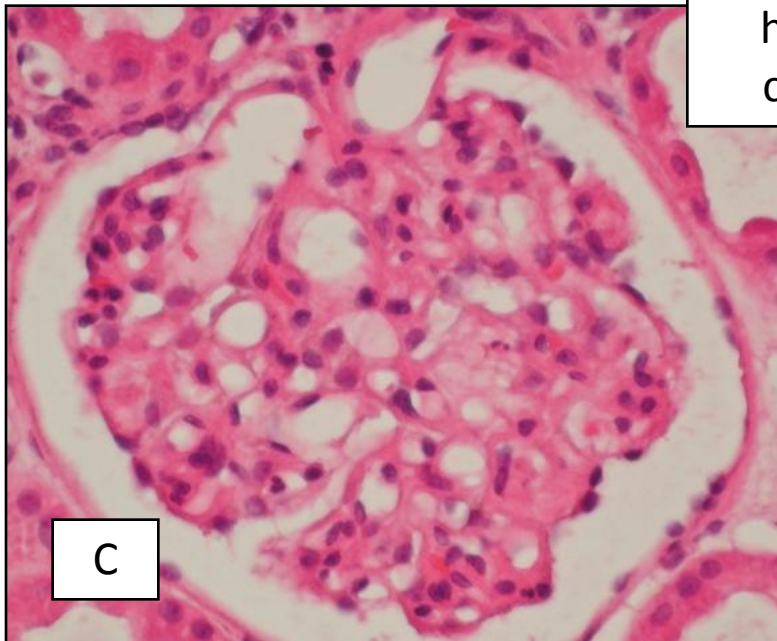
- normal on light microscopy
- effacement of foot processes only on EM
- no immune deposits on IF

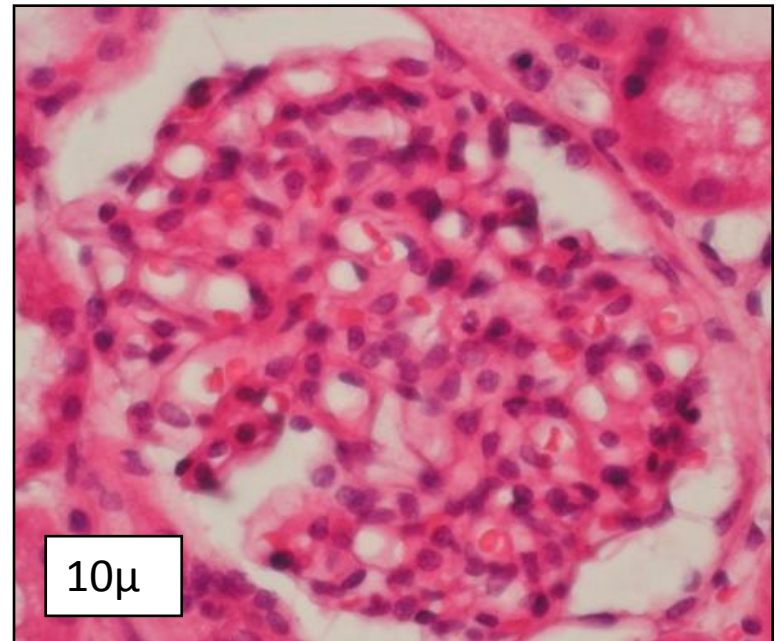
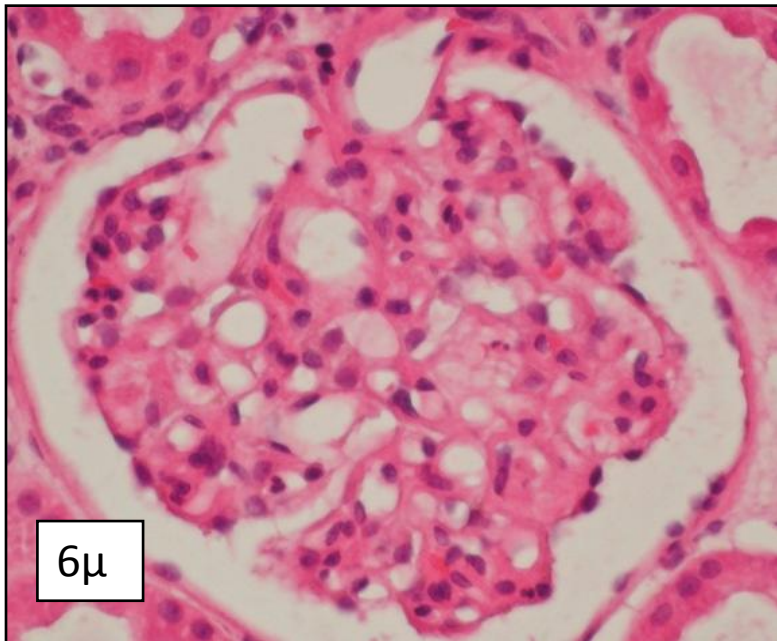
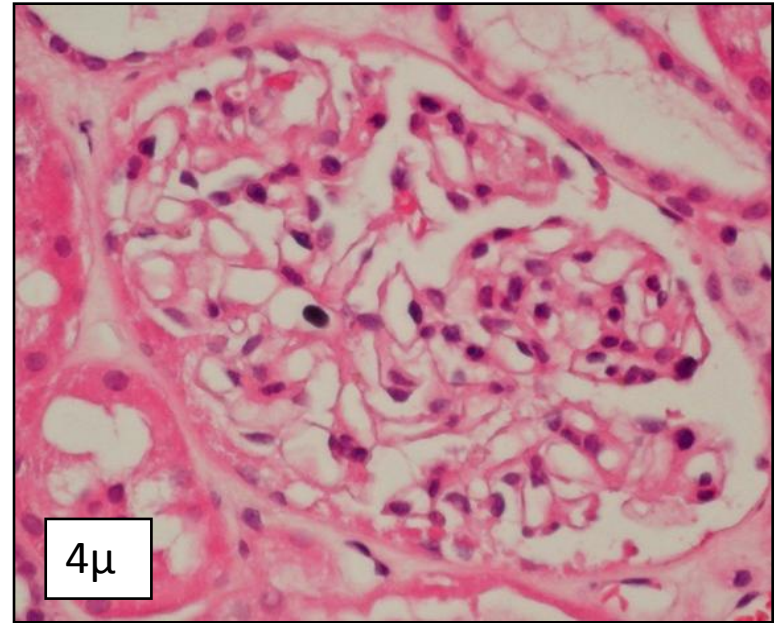
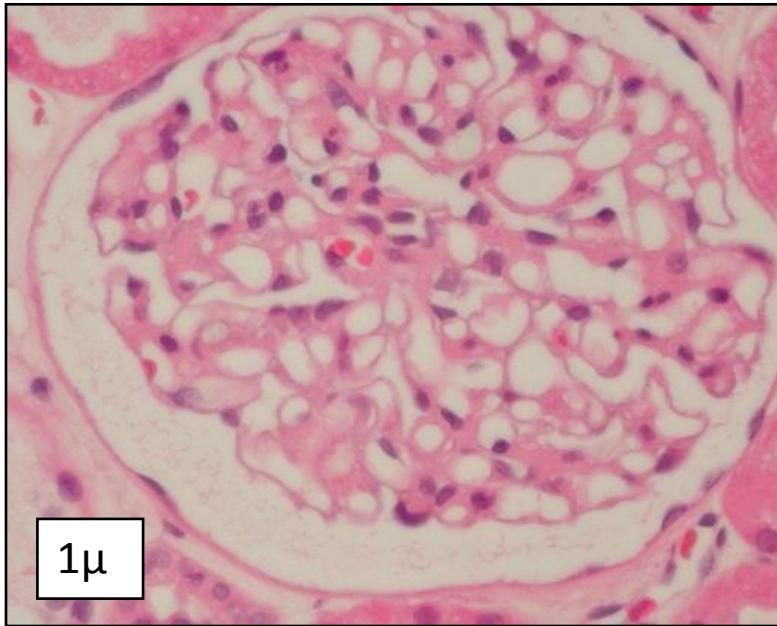
Not minimal change disease if:

- focal glomerular collapse, scarring, adhesions - FSGS
- finding these focal lesions depends on how hard you look for them
- mesangial hypercellularity – ‘non-IgA mesangioproliferative disease’
- but how is mesangial hypercellularity defined?



which of these
has normal
cellularity?





Not minimal change disease if:

- immune deposits on IF – IgA, IgG, kappa, lambda
- electron dense deposits on EM – in any location

Minimal change not excluded by:

- mesangial IgM, C3, C1q on IF or IP (provided there are no electron dense deposits on EM)
- thin basement membranes

Summary - Minimal change

- diagnosis of exclusion
- can only make the diagnosis with certainty using IF and EM
- most importantly, exclude FSGS and early membranous