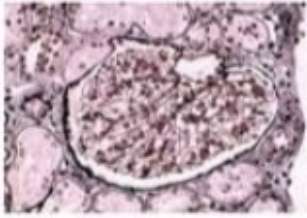
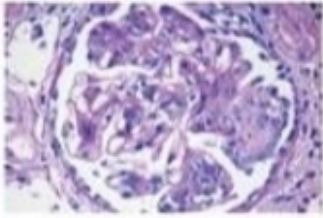
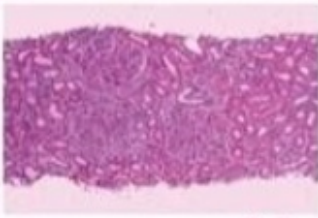
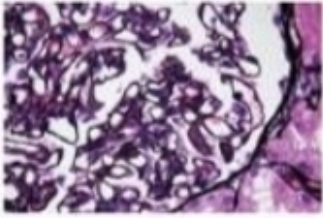
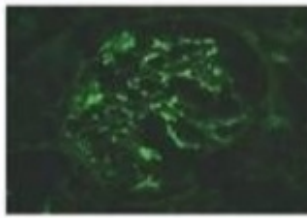
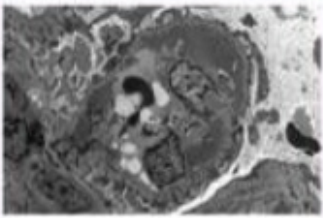
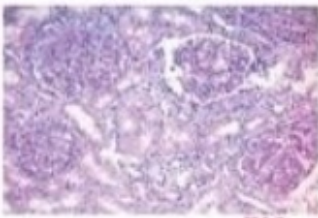
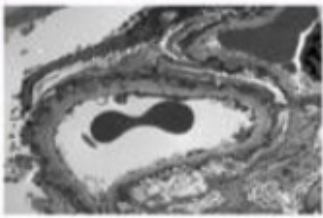


In this question diagnosis is clear that she is a case of SLE. Now she has come with renal manifestation.

So first we should know about types of lupus nephritis.

| TABLE: INTERNATIONAL SOCIETY OF NEPHROLOGY/RENAL PATHOLOGY SOCIETY (ISN/RPS) 2003 CLASSIFICATION OF LUPUS NEPHRITIS (CLASSES II-V) | | | |
|---|---|---|---|
| Class II | Class III | Class IV | Class V |
| Mesangial proliferative LN | Focal LN | Diffuse LN | Membranous LN |
|  |  |  IV-G |  |
|  |  |  IV-S |  |
| The glomeruli show mesangial proliferation with mesangial immune deposits by IF (lower panel) and EM. Isolated subepithelial or subendothelial deposits may be present by IF or EM. | Active or inactive segmental or global endocapillary or crescentic GN involving less than 50% of all glomeruli. Segmental is defined as a lesion that involves less than half of the glomerular tuft. | Active or inactive segmental or global lesions in > 50% of all glomeruli. The glomerular lesions are classified as global (G) when > 50% of the involved glomeruli have global lesions (upper panel), and as segmental (S) when > 50% of the involved glomeruli have segmental lesions (lower panel). | Global or segmental subepithelial immune deposits, usually with mesangial alterations. Class V LN may occur in combination with Class III or IV LN. |

LN = Lupus Nephritis; IF = Immunofluorescence; EM = Electron Microscopy

From the above classification its clear that she is having features of class V lupus nephritis.

Next is to identify the severity.

Following table help us to grade the class V lupus nephritis

| Membranous Nephropathy | |
|------------------------|---|
| Mild | 1. Non-nephrotic range proteinuria with normal renal function |
| Moderate | 2. Nephrotic range proteinuria with normal renal function at presentation |
| Severe | 3. Nephrotic range proteinuria with impaired renal function at presentation ($\geq 30\%$ increase in Cr) |

So this patient has decreased GFR indicating decreased renal function and hence severe degree of class V LN.

Management of LN depends upon the class and severity. Following table shows initial management options for class V LN.

| |
|--|
| Class V LN |
| Renin-angiotensin-aldosterone system blockade is recommended. Consider immunosuppressive therapy in cases of proteinuria >1g/day (particularly if nephrotic-range proteinuria), reduced GFR. |
| Initial (Induction) Treatment |
| Oral prednisone, 0.5 mg/kg/day; consider initial pulses IV MP (750-1000 mg ×3 days) in severe cases Immunosuppressive treatment AZA (2-2.5 mg/kg/day): consider in mild disease CNIs (cyclosporine A, tacrolimus): in mild or moderately severe disease MMF (3 g/day; or equivalent dose of eMPA): in moderately severe disease or severe disease High-dose IV CYC (0.75-1 g/m ² × 7 monthly pulses): in moderately severe or severe disease |

So looking at the management options prednisolone and need of second line agent is very evident. Since its severe disease Cyclophosphamide would be preferred agent.
Hence answer is option 4.