

## Summer School 2009 – Urinary Tract

Case 2 (S04-0421.11)	Points (20)
<p><b>Species:</b> Dog <b>Organ:</b> Kidney</p> <p><b>Description:</b></p> <p>Most glomeruli show <u>global thickening of the glomerular basement membrane</u> and moderate <u>increased cellularity of mesangial cells</u>. Some glomeruli show adhesions between glomerular loops and the Bowman's capsule (<u>synechie</u>). <u>Bowman's capsules are moderately to severely thickened</u> and the <u>glomerular space</u> is sometimes enlarged and filled with homogenous, eosinophilic material (<u>protein</u>). Sometimes also blueish concretions are visible in the Bowman's space or the glomerular tufts at the basement membranes (<u>mineralization</u>). Only few glomeruli are completely hyalinized and eosinophilic and the glomerular loops adhered to the Bowman's capsule (<u>sclerotic glomeruli</u>).</p> <p>In the edematous <u>interstitium</u> multifocally a moderate to large amount of <u>plasma cells and few macrophages</u> are visible. <u>In the cytoplasm of the macrophages multiple, round, some 2micrometer big organism can be seen (protozoa interpreted as Leishmania)</u>.</p> <p>Some tubuli show homogenous, eosinophilic material in the lumen (<u>moderate proteinuria</u>) or are slightly dilated as well as few <u>tubular basement membranes are severely thickened</u>. In some tubular lumina mostly in the medullary region finely stippled or granular to compact dark blue material is found (<u>mineralization</u>). In the pelvic area under the urothelium multifocally to diffuse granular to linear blueish material (<u>metastatic calcification</u>) and multifocally moderate amounts of <u>plasma cells and lymphocytes and seldom neutrophils (pyelitis)</u> can be seen</p> <p>The cytoplasm of some tubular epithelial cells is foamy and show vacuoles (fat storage).</p> <p><b>Diagnosis:</b></p> <p>Severe, diffuse (generalized) and global membranoproliferative glomerulonephritis, slight multifocal chronic pyelitis with metastatic calcification Moderate, multifocal plasmacellular interstitial nephritis with intrahistiocytic Leishmania</p> <p><b>Etiology:</b></p> <p>Leishmania sp. Leishmania donovani/infantum Leishmania chagasi (South America)</p> <p><b>Associated lesions:</b></p> <p><b>Skin:</b> Dermatitis, plasmacellular and histiocytic. Alopecia around the eyes. <b>Kidney:</b> Chronic renal failure</p>	<p>2 points 1 point 2 points</p> <p>1 point 1 point</p> <p>2 points</p> <p>2 points</p> <p>1 point 1 point</p> <p>4 points</p> <p>1 point</p> <p>2 points</p>