

Case 10 (H06-4753.1)	Points
<p>Species: Pig Organ: Kidney</p> <p>Description:</p> <p>Within the cortex and extending to the cut borders a <u>nodular to lobulated, well demarcated, encapsulated, expansile neoplasm</u> composed of a disorganized <u>mixture of epithelial, mesenchymal and blastemal cells supported by fibrous stroma with numerous collagen bundles is present</u>. The epithelial cells are arranged as <u>tubules and branches</u>, sometimes presenting infoldings. Occassionally <u>epithelial cells form tufts of cells within a lumen (glomerulus-like structures)</u>. The mesenchymal cells/spindle-shaped cells are arranged in thin to broad haphazardly and loosely aggregated <u>streams (embryonal mesenchyme appearance)</u>. The third component are poorly defined densely cellular aggregates of undifferentiated cells (<u>blastemal cells</u>). The epithelial cells are cuboidal to columnar, have distinct cell borders, moderate amount of <u>eosinophilic sometimes foamy cytoplasm, round to oval nuclei with a small nucleolus, low mitotic rate and showing only sligth polymorphism</u>. The mesenchymal cells are <u>stellate to spindle shaped with indistinct cell border, showing a slight amount of eosinophilic cytoplasm, an oval to elongated hyperchromatic nucleus and only sligth cell variation (polymorphism) and no mitotic figures at all</u>. The <u>blastemal cells are polygonal with indistinct cell borders and showing a high nuclear to cytoplasmic ratio and scant eosinophilic cytoplasm and a oval often irregular nucleus with densely clumped chromatin</u>. In the capsule and the interstitium of the surrounding renal tissue multifocally a moderate amount of <u>lymphocytes and some plasma cells</u> are visible.</p> <p>Diagnosis:</p> <p>Nephroblastoma, Wilms tumor or embryonal nephroma</p> <p>Pathogenesis:</p> <p>Nephroblastomas are believed to arise from the metanephrogenic renal blastema, a group of pluripotent cels that normally develops into the nephrons and the renal interstitial tissue</p>	<p>3 points</p> <p>3 points</p> <p>1 point</p> <p>1 point</p> <p>1 point</p> <p>1 point</p> <p>2 points</p> <p>2 points</p> <p>2 points</p> <p>1 point</p> <p>1 point</p> <p>2 points</p>