Kidney, Renal Tubule – Cytoplasmic Alteration

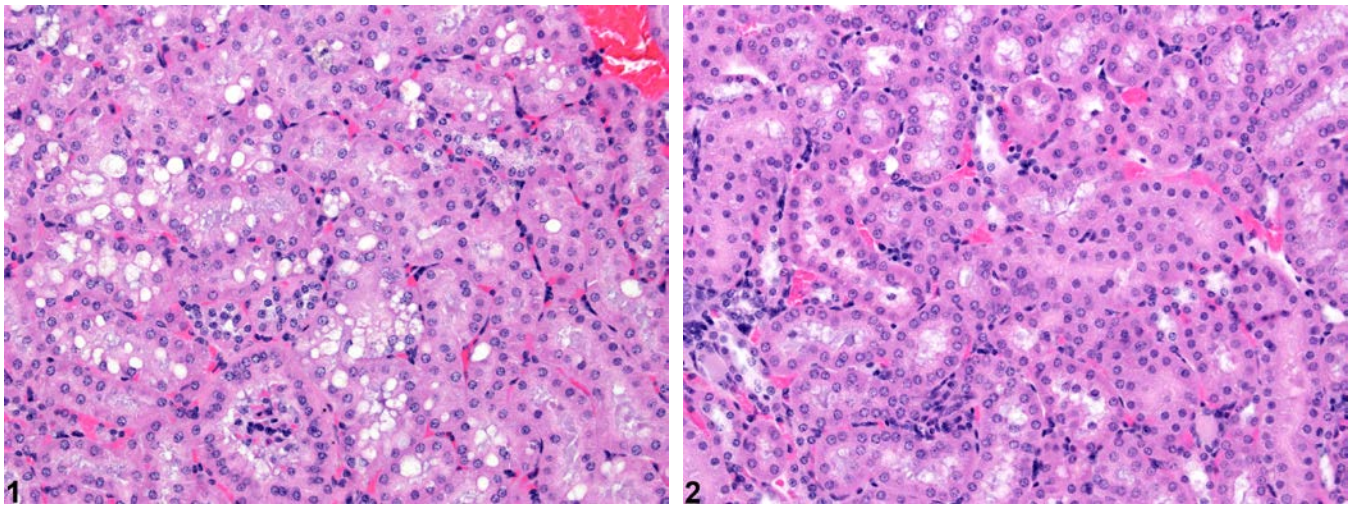


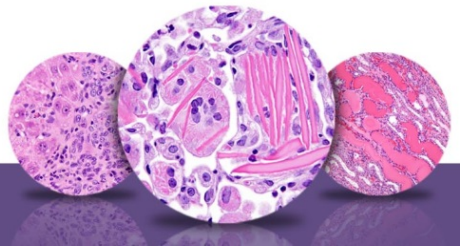
Figure Legend: Figure 1 Kidney, Renal tubule - Normal in a male B6C3F1 mouse from a chronic study. Numerous clear cytoplasmic vacuoles are present in renal tubule cells. **Figure 2** Kidney, Renal tubule - Cytoplasmic alteration in a male B6C3F1 mouse from a chronic study. A decrease in the normal cytoplasmic vacuoles is evident in this treated male mouse.

Comment: Variable cytoplasmic vacuolation in outer cortical tubules of certain strains of male mice is a normal finding (Figure 1). They are thought to represent autophagic vacuoles associated with the normal degeneration of these cells. Some chemicals may decrease the number of vacuoles in the renal tubular epithelium (Figure 2).

Recommendation: Cytoplasmic vacuolation that is present as a normal background finding in male mice does not have to be diagnosed. If a decrease in cytoplasmic vacuoles is seen following treatment in male mice (compared with controls), then this finding should be diagnosed as “cytoplasmic alteration” and given a severity grade.

References:

Ormos J, Sztriha L, Bóti ZS, Kuthy E. 1975. Electron microscopic and cytochemical study of the vacuoles of regenerating renal tubular cells. Br J Exp Pathol 55:477-483.
Abstract: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2072774/



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References:

Seely JC. 1999. Kidney. In: Pathology of the Mouse: Reference and Atlas (Maronpot RR, Boorman GA, Gaul BW, eds). Cache River Press, Vienna, IL, 207-234.
Abstract: http://www.cacheriverpress.com/books/pathmouse.htm

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