

NTP Nonneoplastic Lesion Atlas

Kidney, Renal Tubule – Hyperplasia, Amphophilic-Vacuolar

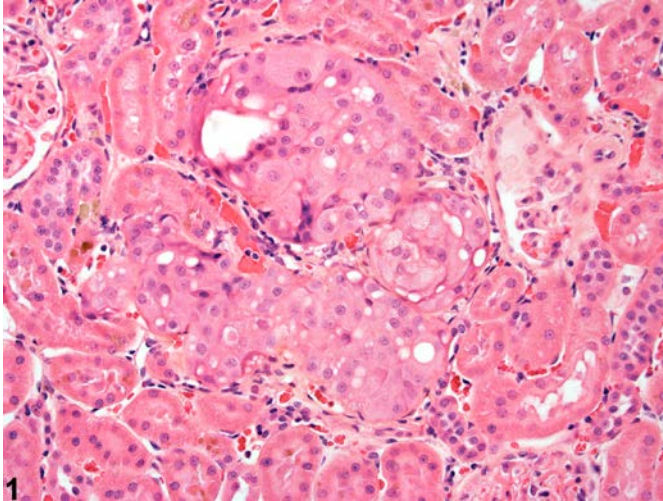


Figure Legend: **Figure 1** Kidney, Renal tubule - Hyperplasia, Amphophilic-vacuolar in a female F344/N rat from a chronic study. There is a small focus of hyperplastic tubule cells with amphophilic and vacuolated cytoplasm.

Comment: Amphophilic-vacuolar (A-V) hyperplasia is a small proliferative lesion associated with variable amphophilic cytoplasmic staining and intra- and/or extracellular vacuoles (Figure 1). As with atypical tubule hyperplasia, in A-V hyperplasia the proliferating cells are considered to be within the confines of a single renal tubule. If the cells proliferate beyond the confines of a single tubule, the lesion is considered a neoplasm (adenoma or carcinoma). A-V hyperplasia has been postulated to be a familial condition in rats, which may progress to tumors.

Recommendation: Amphophilic-vacuolar hyperplasia should be diagnosed as “Kidney, Renal tubule - Hyperplasia, Amphophilic-vacuolar” and given a severity grade.

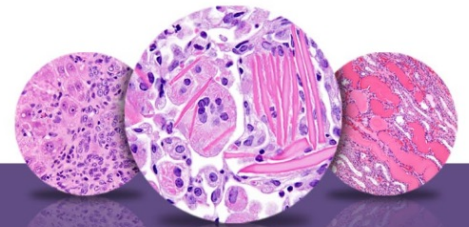
References:

Frazier KS, Seely JC, Hard GC, Betton G, Burnett R, Nakatsuji S, Nishikawa A, Durchfeld-Meyer B, Bube A. 2012. Proliferative and non-proliferative lesions in the rat and mouse urinary system. *Toxicol Pathol* 40:14S-86S.

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Hard GC, Seely JC, Kissling GE, Betz LJ. 2012. Spontaneous occurrence of a distinctive renal tubule phenotype in rat carcinogenicity studies conducted by the National Toxicology Program. *Toxicol Pathol* 36:388-396.

Abstract: <http://www.ncbi.nlm.nih.gov/pubmed/18441261>



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References:

Kudo K, Hoshiya T, Nakazawa T, Saito T, Shimoyama N, Suzuki I, Tamura K, Seely JC. 2012. Spontaneous renal tumors suspected of being familial in Sprague-Dawley rats. *J Toxicol Pathol* 25:277-280.

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