



NTP Nonneoplastic Lesion Atlas

Kidney – Hyaline Glomerulopathy

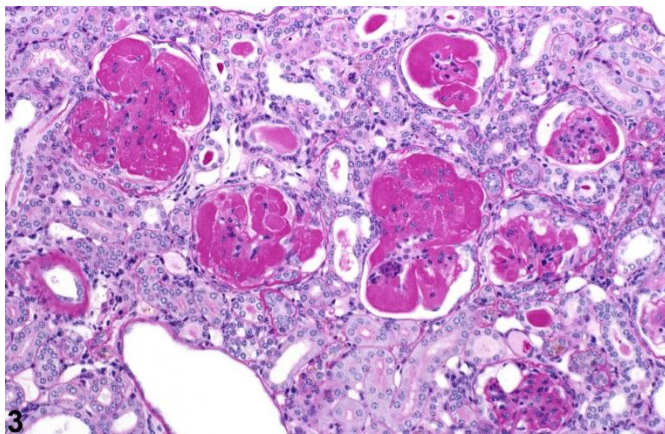
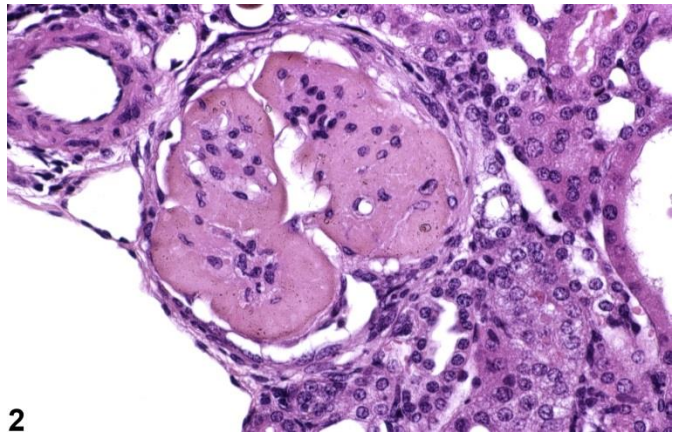
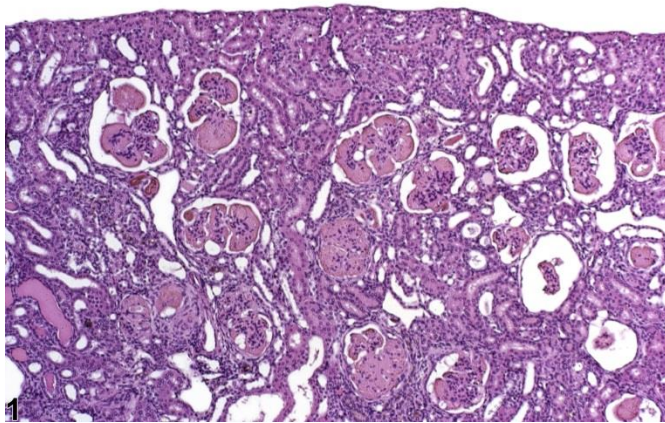


Figure Legend: **Figure 1** Kidney - Hyaline glomerulopathy in a female B6C3F1 mouse from a chronic study. Hyaline glomerulopathy is characterized by enlargement of the glomerular tufts by eosinophilic material. **Figure 2** Kidney - Hyaline glomerulopathy in a female B6C3F1 mouse from a chronic study (higher magnification of Figure 1). Hypocellularity of the glomerulus is apparent. **Figure 3** Kidney - Hyaline glomerulopathy in a female B6C3F1 mouse from a chronic study. The material in the glomerulus stains strongly positive with periodic acid-Schiff.

Comment: Hyaline glomerulopathy may occur as a spontaneous and/or treatment-related condition in B6C3F1 mice and a treatment-related condition in F344/N rats. It is characterized by several glomerular changes that include diffuse glomerular enlargement by an extracellular eosinophilic deposit accompanied by a reduction in glomerular tuft cellularity (Figure 1 and Figure 2). Hyaline glomerulopathy must be differentiated from amyloidosis. Special staining qualities, which help to



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distinguish it from amyloid, include period acid-Schiff negativity (Figure 3), Congo red negativity, and Masson's trichrome positivity. Eosinophilic deposits occur only within the glomerulus and are not present in other organs. The term "hyaline nephropathy" is used to describe a specific glomerular lesion but does not indicate or define the composition of the accumulated material. Special studies outside the scope of routine histopathologic evaluation would be warranted.

Recommendation: Hyaline glomerulopathy should be diagnosed and graded whenever present. Grading should be based on the number of glomeruli affected and the amount of material within the affected glomeruli.

References:

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