



NTP Nonneoplastic Lesion Atlas

Spleen – Adipocyte Metaplasia

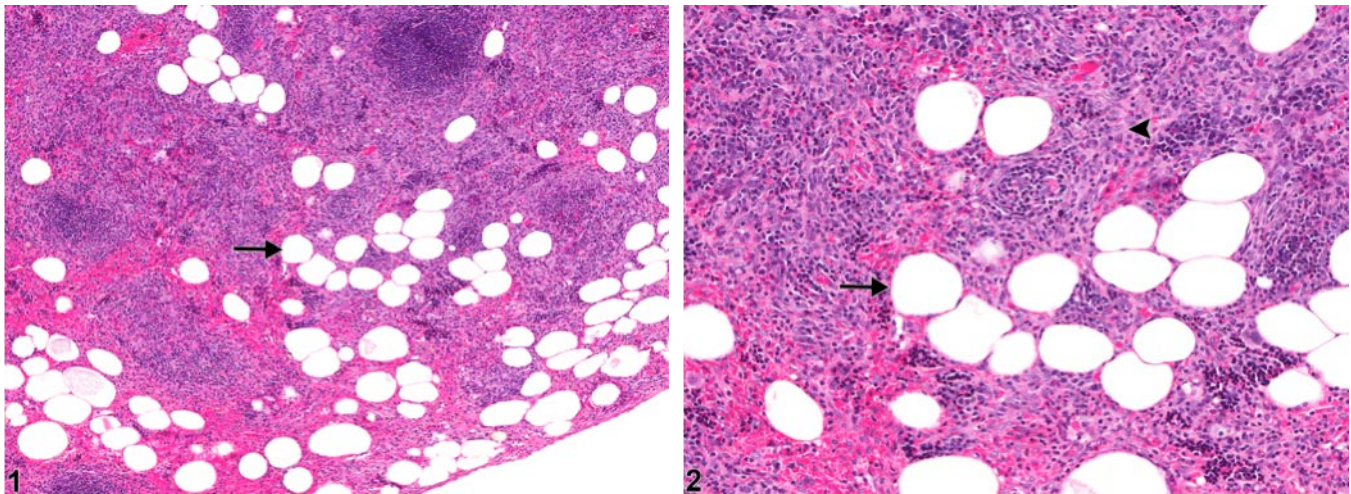


Figure Legend: **Figure 1** Spleen - Adipocyte metaplasia in a female F344/N rat from a chronic study. Well-differentiated adipocytes (arrow) are present multifocally within the splenic red pulp. **Figure 2** Spleen - Adipocyte metaplasia in a female F344/N rat from a chronic study (higher magnification of Figure 1). Adipocytes (arrow) are surrounded by a fibrous stroma (arrowhead).

Comment: Adipocytes are occasionally seen in the spleen in chronic toxicity/carcinogenicity studies but may be unrelated to treatment. It has been reported in the red pulp of rats exposed to some aromatic amines (e.g., aniline, aniline hydrochloride, *para*-chloroaniline) and in rats with splenic mesenchymal neoplasms. This lesion is characterized by well-differentiated adipocytes in the red pulp (Figure 1 and Figure 2, arrows), surrounded by a fibrous stroma (Figure 2, arrowhead), although fibrosis may not always be prominent. The red pulp is typically involved, and the lesion may be focal, nodular, and/or diffuse. These cells most likely arise by metaplasia of splenic stromal cells. Previous terms include “lipidosis,” “fatty infiltration,” “fatty metamorphosis,” and “lipid metaplasia” of the spleen.

Recommendation: Whenever present, adipocyte metaplasia of the spleen should be diagnosed and assigned a severity grade. If this lesion is present concurrently or secondarily to neoplasia, it should not be recorded but should be described in the pathology narrative.



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References:

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