Spleen – Atrophy

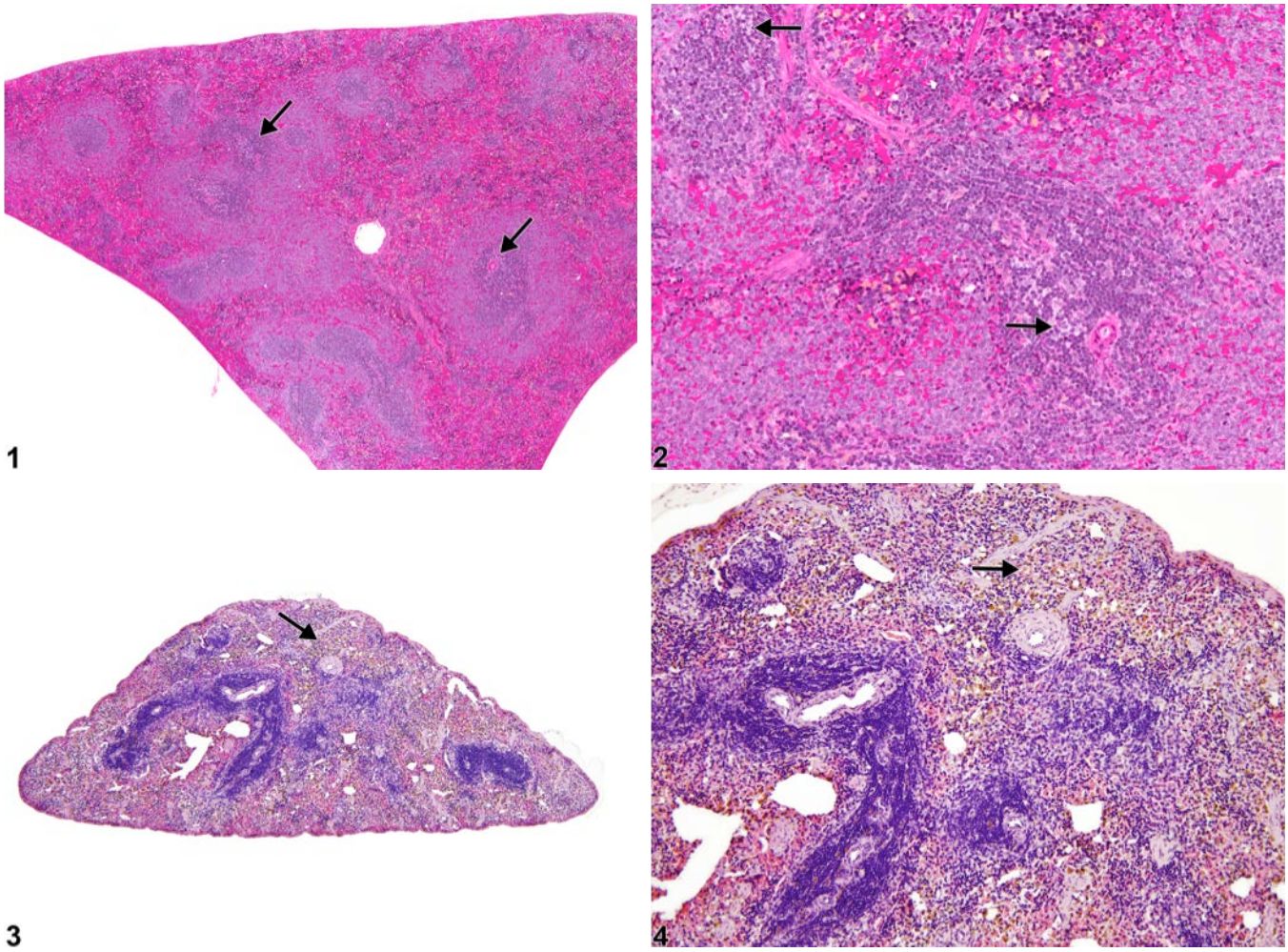
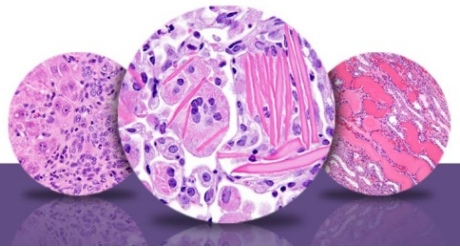


Figure Legend: **Figure 1** Spleen, White pulp - Atrophy in a female F344/N rat from a subchronic study. Overall area and cellularity of the white pulp (periarteriolar lymphatic sheaths and follicles) are decreased (arrows), although the marginal zones appear to be within normal limits. **Figure 2** Spleen, White pulp - Atrophy in a female F344/N rat from a subchronic study (higher magnification of Figure 1). Decreased cellularity and area of the periarteriolar lymphatic sheath region (arrows) are evident. **Figure 3** Spleen - Atrophy in a female B6C3F1/N mouse from a subchronic study. Both red pulp (arrow) and white pulp (follicles, periarteriolar lymphatic sheaths, marginal zones) are atrophied. **Figure 4** Spleen - Atrophy in a female B6C3F1/N mouse from a subchronic study (higher magnification of Figure 3). In addition to white pulp atrophy, red pulp elements are decreased, and there is a moderate amount of pigment within the red pulp compartment (arrow).



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Comment: Atrophy can affect the white pulp and/or red pulp compartments of the spleen. Lymphocyte atrophy of the white pulp is characterized by a loss of lymphocytes in the T-cell areas (periarteriolar lymphatic sheaths [PALS]) and/or B-cell areas (follicles, germinal centers, marginal zones). Depending on severity, this can result in a decrease in overall PALS cellularity/area or follicle number/size (Figure 1 and Figure 2, arrows). Red pulp atrophy is characterized by a decrease in the relative amount of red pulp components, including hematopoietic cells (Figure 3 and Figure 4, arrows). Splenic atrophy can be observed as a spontaneous change in older rats and mice and typically involves red and white pulp compartments. Atrophy can also occur as a direct treatment-related effect or can be an indirect effect secondary to weight loss or reduced body weight gain.

Recommendation: Whenever present, atrophy of the spleen should be diagnosed and assigned a severity grade. A site modifier should be included in the diagnosis to indicate whether the red pulp or the white pulp is affected. If both compartments are involved, diagnose “Spleen - Atrophy.” If splenic atrophy is present as a secondary lesion, as in the case of neoplasia, it need not be recorded but should be described in the pathology narrative.

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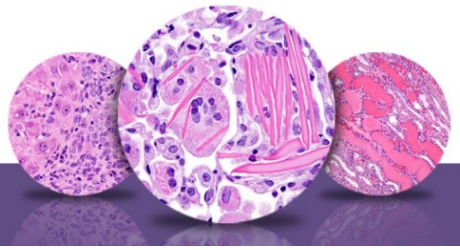

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