

NTP Nonneoplastic Lesion Atlas

Lacrimal Gland – Metaplasia, Harderian

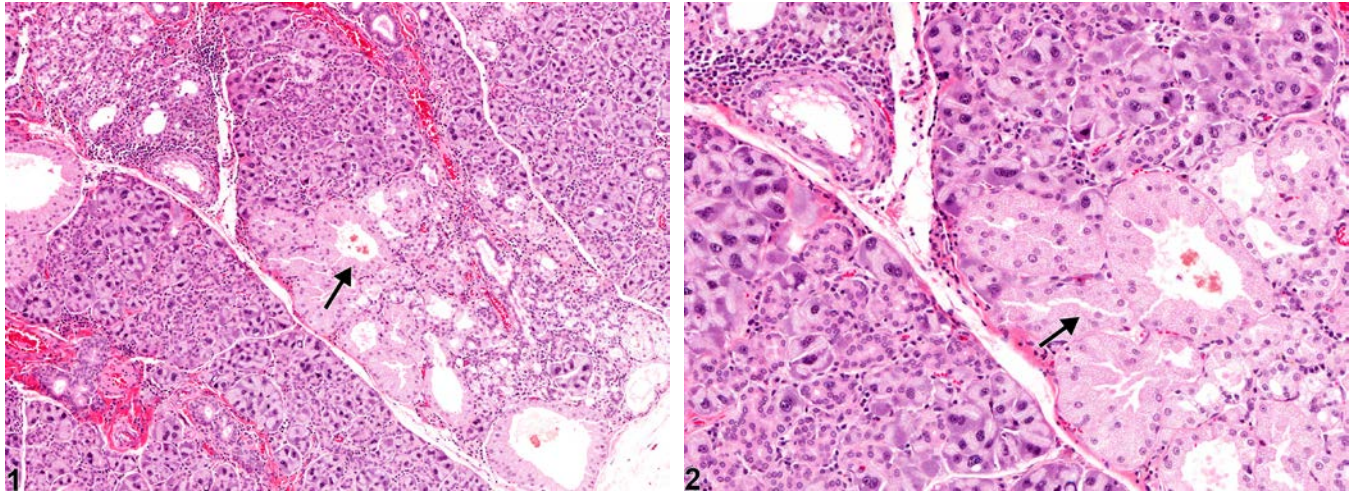
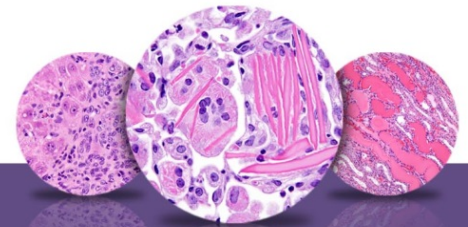


Figure Legend: **Figure 1** Lacrimal gland - Metaplasia, Harderian in a male Osborne-Mendel rat from a chronic study. Metaplasia, Harderian (arrow) is characterized by a focus of tubules resembling Harderian gland alveoli. **Figure 2** Lacrimal gland - Metaplasia, Harderian in a male Osborne-Mendel rat from a chronic study (higher magnification of Figure 1). Metaplasia, Harderian (arrow) is characterized by tubules lined by cuboidal cells with pale, foamy to vacuolated cytoplasm resembling Harderian gland alveoli.

Comment: Clusters of tubules lined by cuboidal cells with pale, foamy to vacuolated cytoplasm (resembling Harderian gland alveoli) can occur in the lacrimal glands of rats and mice, especially rats (Figure 1 and Figure 2). This “harderization” is more prominent in the exorbital lacrimal gland (the lacrimal gland usually sampled for histology) than in the intraorbital lacrimal gland. Incidence and severity of this change increase with age, and it is more common and extensive in male than in female rats. The increased Harderian gland–type development in the lacrimal glands of male versus female rats is one feature of the prominent sexual dimorphism of this tissue in this species. In mice, this change appears to be more frequent in females than in males. The metabolic and functional characteristics of these cells have not been characterized, and it is unknown whether this represents a true metaplastic or a degenerative change.

Recommendation: This finding should be diagnosed as “lacrimal gland – metaplasia, Harderian” and assigned a severity grade. It should be diagnosed only if there are treatment-related differences in



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incidence and/or severity. “Ectopic Harderian gland” and “ectopic tissue” are considered inappropriate terms because they suggest a developmental anomaly.

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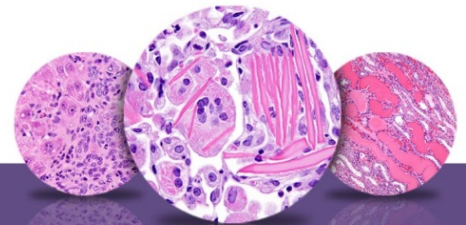
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