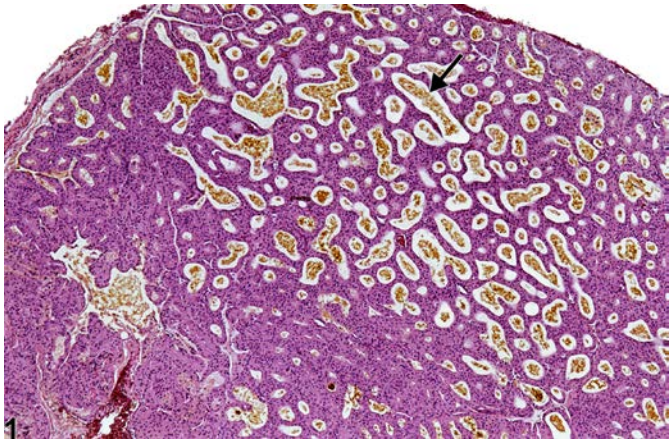
NTP Nonneoplastic Lesion Atlas

Harderian Gland - Pigment



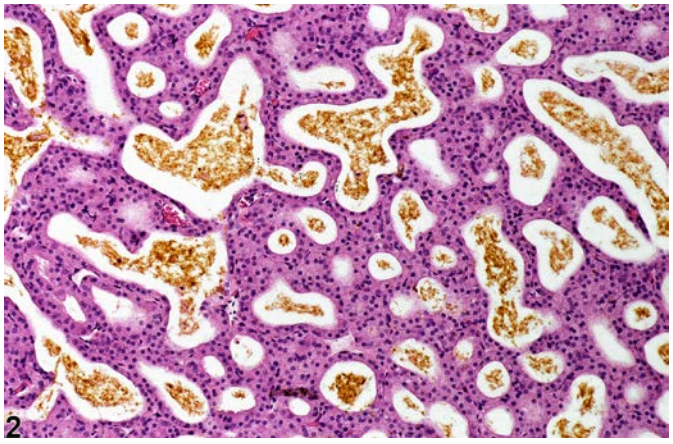


Figure Legend: Figure 1 Harderian gland - Pigment in a female F344/N rat from a subchronic study. There are golden to dark brown amorphous clumps or laminated concretions of pigment (likely porphyrin) in the acinar lumens (arrow). **Figure 2** Harderian gland - Pigment in a female F344/N rat from a subchronic study (higher magnification of Figure 1). This higher magnification image shows the intra-acinar pigment in greater detail.

Comment: Lipids are the primary secretory products of the rodent Harderian gland, but porphyrin pigment is also synthesized and secreted. Porphyrin pigment occurs as golden to dark brown amorphous clumps or laminated concretions in the alveolar lumens (Figure 1 and Figure 2). Porphyrin secretion increases with age, and excessive production results in “red tears” (chromodacyorrhea). Incidentally occurring porphyrin deposits are generally more prominent in the Harderian glands of female rats and mice. Increased porphyrin secretion can also be a treatment-related effect following administration of various chemical agents.

Recommendation: Since porphyrin pigment is a normal finding in rodent Harderian glands, pigment should be diagnosed and assigned a severity grade only if there are treatment-related differences in incidence and/or severity. It should also be diagnosed if the pathologists feels the pigment is composed of something other than porphyrin (e.g., hemosiderin or lipofuscin). Definitive pigment identification is often difficult in histologic sections, even with a battery of special stains. Therefore, it is recommended that a diagnosis of pigment (as opposed to diagnosing the type of pigment, e.g., hemosiderin or lipofuscin) is most appropriate. The pathology narrative should describe the morphologic features of the pigmentation. Not all pigments have to be diagnosed, as some are ubiquitous in aging animals or

related to some other disease process and not toxicologically meaningful. The pathologist should use his or her judgment in deciding whether or not secondary deposits of pigment are prominent enough to warrant a separate diagnosis.

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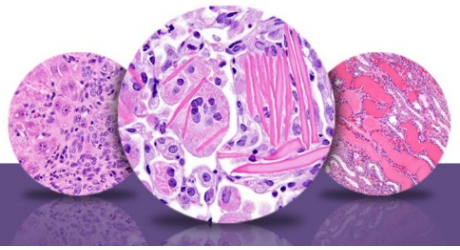

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