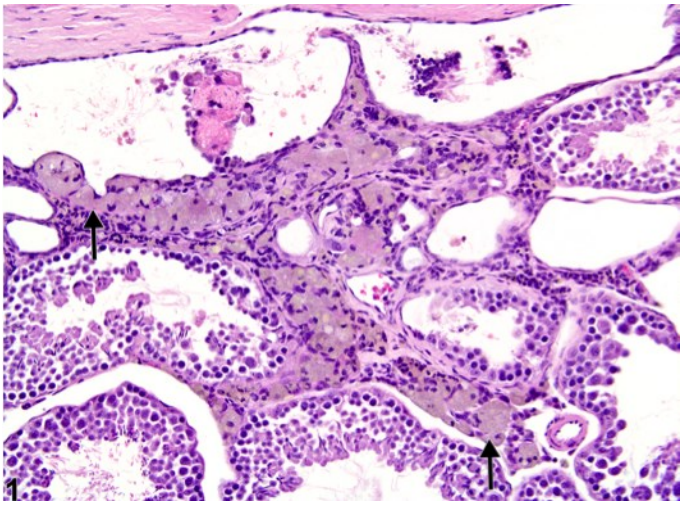
Testis – Pigment



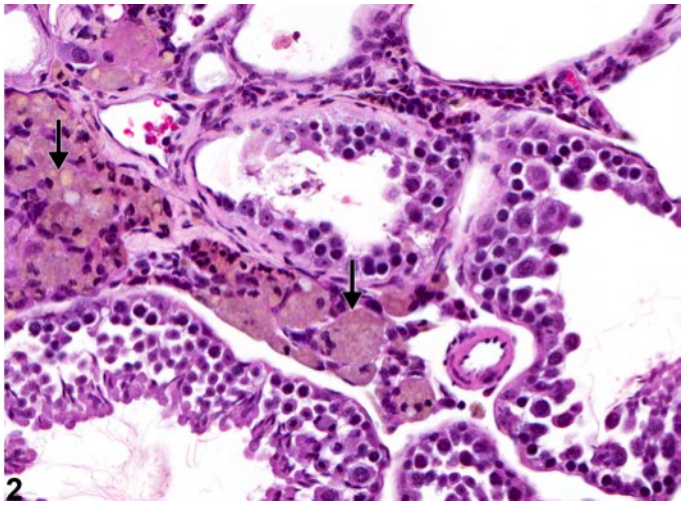
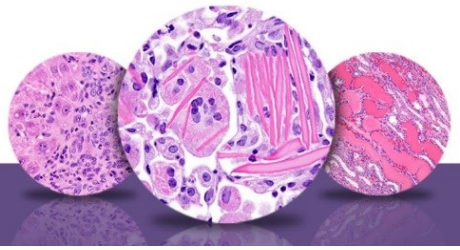


Figure Legend: Figure 1 Testis - Pigment in a male B6C3F1 mouse from a chronic study. Intracytoplasmic accumulation of ceroid (lipofuscin) pigment (arrows) in interstitial cells. **Figure 2** Testis - Pigment in a male B6C3F1 mouse from a chronic study (higher magnification of Figure 1). Accumulation of ceroid (lipofuscin) pigment (arrows) in the cytoplasm of interstitial cells.

Comment: The pigment in the testis shown in Figure 1 and Figure 2 represents intracytoplasmic accumulation of ceroid pigment (lipofuscin), which is a light brown, finely granular lipid-derived pigment. This can occasionally be seen as an incidental finding in the interstitial cells and may be associated with degenerative changes. Another pigment that may be seen as a consequence of hemorrhage is hemosiderin. Lipofuscin stains positively with Periodic acid-Schiff and with Schmorl's stain, whereas hemosiderin stains with Perls' stain.

Recommendation: Pigment should be diagnosed and given a severity grade. If present in both testes, it should be designated as bilateral with severity based on the more severely affected testis. 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.



Testis – Pigment

References:
Creasy D, Bube A, de Rijk E, Kandori H, Kuwahara M, Masson R, Nolte T, Reams R, Regan K, Rehm S, Rogerson P, Whitney K. 2012. Proliferative and nonproliferative lesions of the rat and mouse male reproductive system. Toxicol Pathol 40:40S-121S.
Abstract: http://www.ncbi.nlm.nih.gov/pubmed/22949412

Giannessi F, Giambelluca MA, Scavuzzo MC, Ruffoli R. 2005. Ultrastructure of testicular macrophages in aging mice. J Morphology 263:39-42.
Abstract: http://www.ncbi.nlm.nih.gov/pubmed/15536646

Authors:

Dianne M. Creasy, PhD, Dip RCPath, FRCPath
Dianne Creasy Consulting LLC
Pipersville, PA

Robert R. Maronpot, DVM, MS, MPH, DACVP, DABT, FIATP
Senior Pathologist
Experimental Pathology Laboratories, Inc.
Research Triangle Park, NC

Dipak K. Giri, DVM, PhD, DACVP
Toxicologic Pathologist
Integrated Laboratory Systems, Inc.
Research Triangle Park, NC