



NTP Nonneoplastic Lesion Atlas

Zymbal's Gland, Duct - Cyst

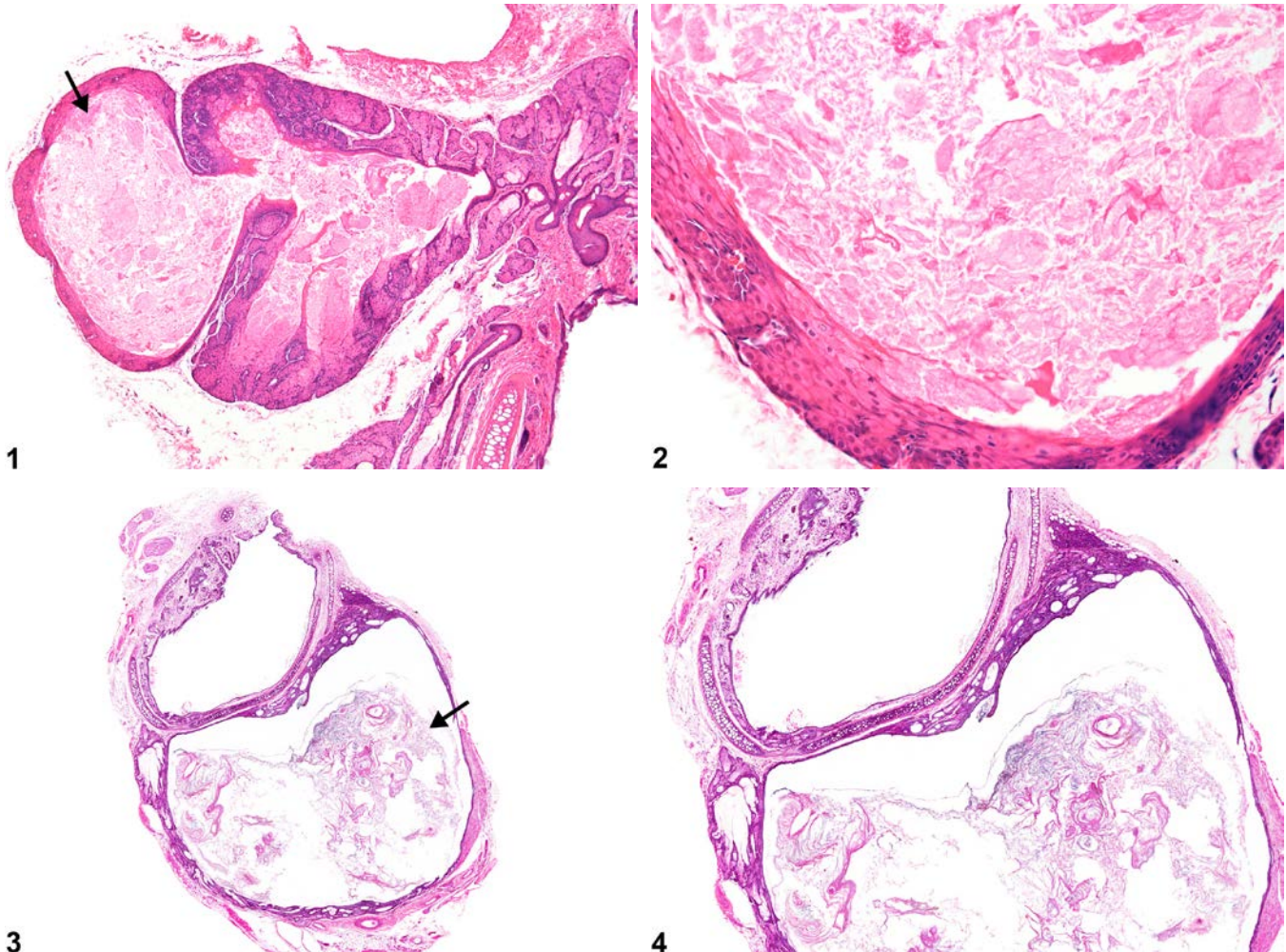


Figure Legend: **Figure 1** Zymbal's gland, Duct - Cyst in a female F344/N rat from a chronic study. The Zymbal's gland duct is markedly distended (arrow). **Figure 2** Zymbal's gland, Duct - Cyst in a female F344/N rat from a chronic study (higher magnification of Figure 1). The Zymbal's gland duct cyst contains sloughed epithelial cells, necrotic debris, and keratin lamellae. **Figure 3** Zymbal's gland, Duct - Cyst in a male B6C3F1 mouse from a chronic study. The duct of the Zymbal's gland is markedly dilated (arrow). **Figure 4** Zymbal's gland, Duct - Cyst in a male B6C3F1 mouse from a chronic study (higher magnification of Figure 3). The Zymbal's gland duct cyst contains necrotic debris, sloughed epithelial cells, and keratin lamellae.

Comment: Zymbal's gland duct cysts (Figure 1, Figure 2, Figure 3, and Figure 4) are prominently distensions of the Zymbal's gland duct that are lined by either attenuated squamous or glandular



NTP Nonneoplastic Lesion Atlas

Zymbal's Gland, Duct - Cyst

epithelium or by flattened stratified squamous epithelium. The former are typically filled with sebum, while the latter typically contain sloughed keratin lamellae. Zymbal's gland cysts are uncommon, but this may reflect the fact that this tissue is not usually sampled in routine toxicity studies.

Recommendation: Zymbal's gland duct cysts should be diagnosed whenever present but should not be graded.

References:

Copeland-Haines D, Eustis SL. 1990. Specialized sebaceous glands. In: Pathology of the Fischer Rat: Reference and Atlas (Boorman GA, Eustis SL, Elwell MR, Montgomery CA, MacKenzie WF, eds). Academic Press, San Diego, CA, 279-294.

Abstract: <http://www.ncbi.nlm.nih.gov/nlmcatalog/9002563>

National Toxicology Program. 1990. NTP TR-372. Toxicology and Carcinogenesis Studies of 3,3'-Dimethoxybenzidine Dihydrochloride (CAS No. 20325-40-0) in F344/N Rats (Drinking Water Studies). NTP, Research Triangle Park, NC.

Abstract: <http://ntp.niehs.nih.gov/go/8884>

National Toxicology Program. 2011. NTP TR-536. Toxicology and Carcinogenesis Studies of bis(2-Chloroethoxy)methane (CAS No. 111-91-1) in F344/N Rats and B6C3F1 Mice (Dermal Studies). NTP, Research Triangle Park, NC.

Abstract: <http://ntp.niehs.nih.gov/go/34791>

Seely JC, Boorman GA. 1999. Mammary gland and specialized sebaceous glands. In: Pathology of the Mouse: Reference and Atlas (Maronpot RR, Boorman GA, Gaul BW, eds). Cache River Press, Vienna, IL, 613-635.

Abstract: <http://www.cacheriverpress.com/books/pathmouse.htm>

Author:

Margarita M. Gruebbel, DVM, PhD, DACVP
Senior Pathologist
Experimental Pathology Laboratories, Inc.
Research Triangle Park, NC