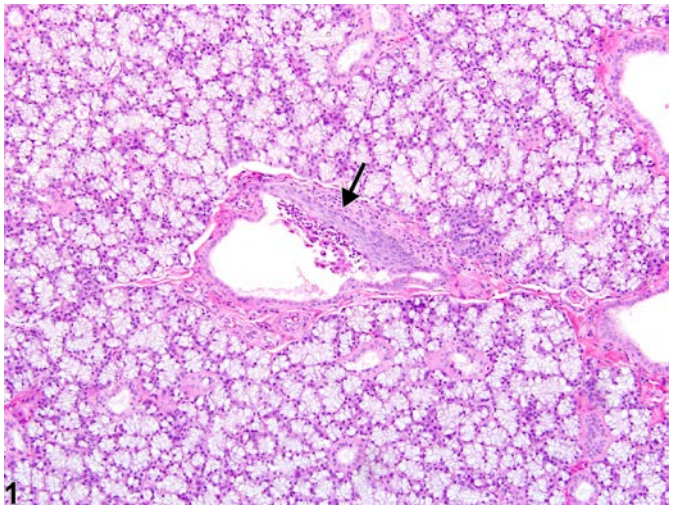
NTP Nonneoplastic Lesion Atlas

Salivary Gland, Duct – Metaplasia, Squamous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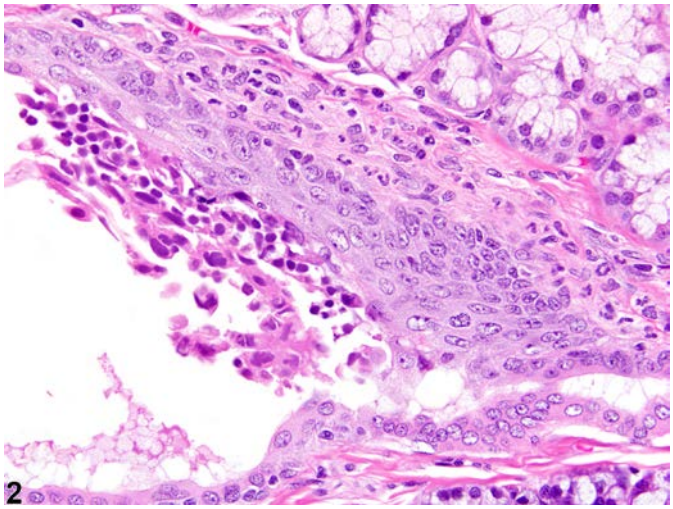
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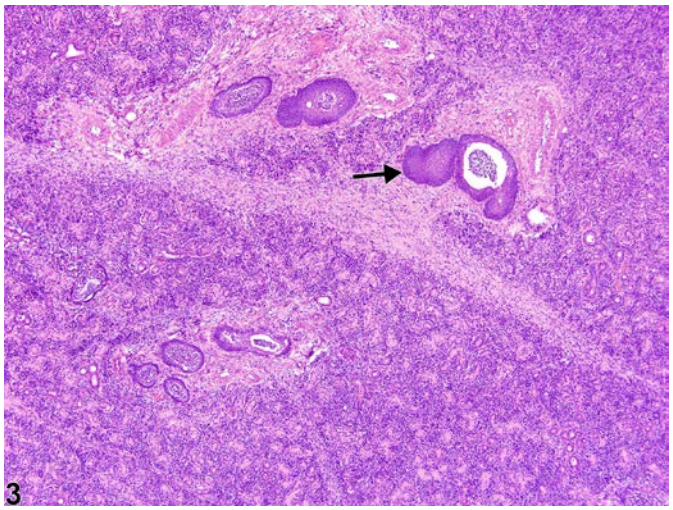
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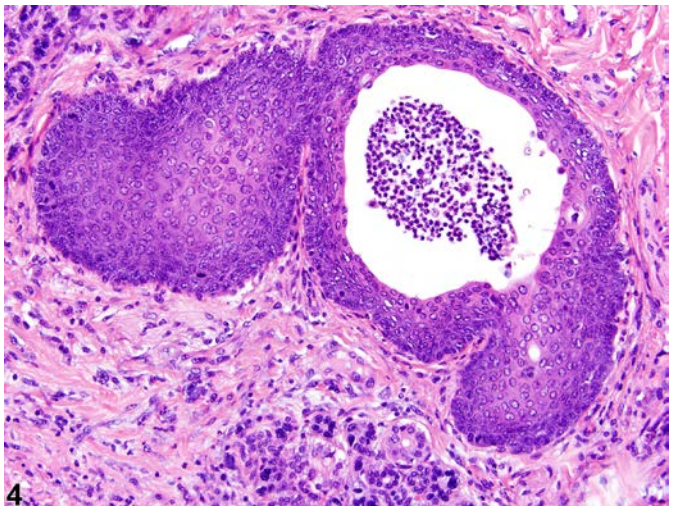
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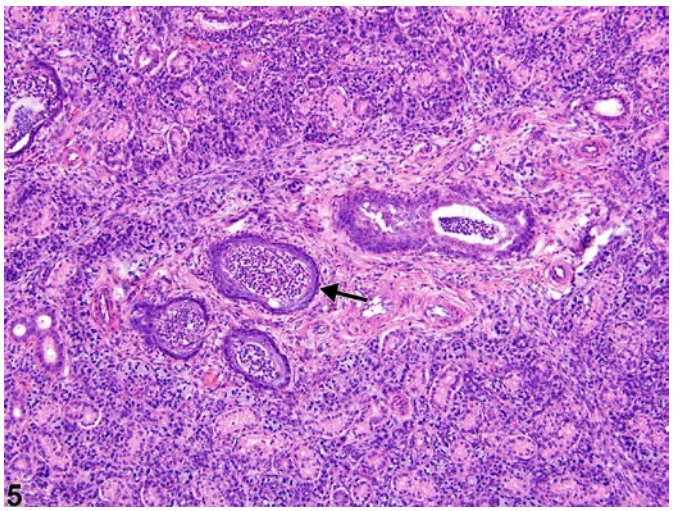
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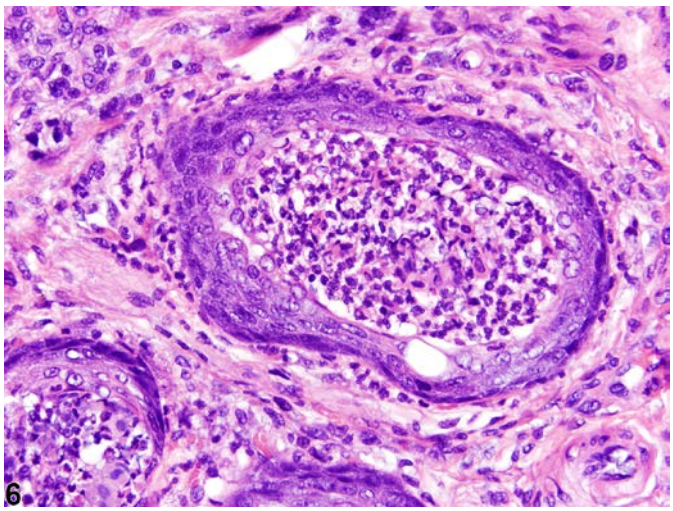
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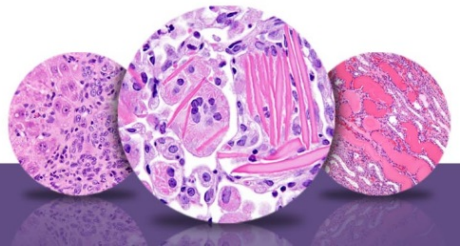

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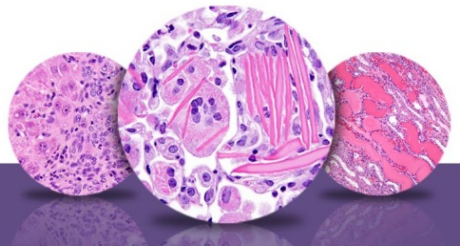
Figure Legend: Figure 1 Salivary gland, Duct - Metaplasia, Squamous in a male F344/N rat from a chronic study. The normally cuboidal ductal epithelial cells have been replaced by stratified squamous epithelium (arrow). **Figure 2** Salivary gland, Duct - Metaplasia, Squamous in a male F344/N rat from a chronic study (higher magnification of Figure 1). The normally cuboidal ductal epithelial cells have been replaced by stratified squamous epithelium. **Figure 3** Salivary gland, Duct - Metaplasia, Squamous in a male F344/N rat from a chronic study. The normally cuboidal ductal epithelial cells have been replaced by stratified squamous epithelium (arrow). **Figure 4** Salivary gland, Duct - Metaplasia, Squamous in a male F344/N rat from a chronic study (higher magnification of Figure 3). The normally cuboidal ductal epithelial cells have been replaced by stratified squamous epithelium. **Figure 5** Salivary gland, Duct - Metaplasia, Squamous in a male F344/N rat from a chronic study. The normally cuboidal ductal epithelial cells have been replaced by stratified squamous epithelium (arrow). **Figure 6** Salivary gland, Duct - Metaplasia, Squamous in a male F344/N rat from a chronic study (higher magnification of Figure 5). The normally cuboidal ductal epithelial cells have been replaced by stratified squamous epithelium.

Comment: Metaplasia is a change in which one terminally differentiated cell type is replaced by another cell type of the same germ line. Usually, a specialized type of epithelium is replaced by less specialized type of epithelium. Metaplasia is often, but not always, an adaptive change that occurs in response to repeated epithelial damage and is therefore often accompanied by other lesions such as inflammation or necrosis. Squamous metaplasia may be reversible if the cause is removed. Squamous metaplasia is a common form of metaplasia, presumably because squamous epithelium is more resistant to damage than other forms of epithelia. Squamous metaplasia is usually the result of chronic irritation, but it can have other causes (e.g., hypovitamnosis A). In the salivary ducts, metaplasia of the normally cuboidal ductal epithelium to stratified squamous epithelium has been seen in response to chemicals, ionizing radiation, viral infections, vitamin A deficiency, and blockage of ducts by salivary calculi. Squamous metaplasia of the ductular epithelium may be a preneoplastic lesion progressing to squamous cell carcinoma.

Recommendation: Squamous metaplasia of the salivary duct should be diagnosed and graded based on the number of areas involved and the thickness of the squamous epithelium. Associated lesions, such as inflammation, necrosis, or degeneration, should be diagnosed separately.



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Authors:

Linda H. Kooistra, DVM, PhD, DACVP
Pathologist
Charles River Laboratories, Inc.
Research Triangle Park, NC

Abraham Nyska, DVM, Diplomate ECVP, Fellow IATP
Expert in Toxicologic Pathology
Visiting Full Professor of Pathology
Sackler School of Medicine, Tel Aviv University
Timrat Israel