Mammary Gland – Galactocele

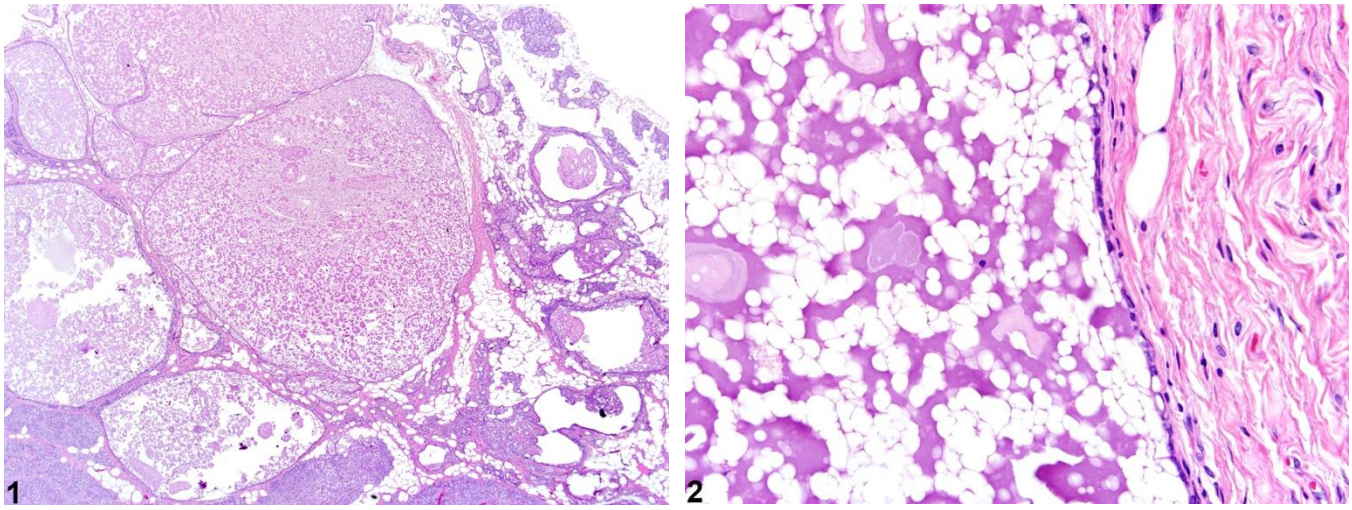
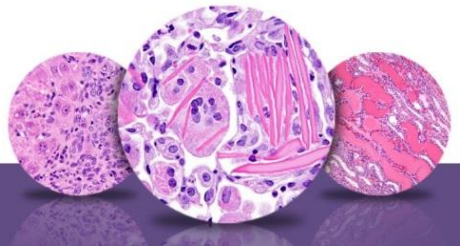


Figure Legend: Figure 1 Mammary gland - Galactocele in a female F344/N rat from a chronic study. Scattered ducts and alveoli are variably distended and contain intraluminal accumulations of eosinophilic secretory material. **Figure 2** Mammary gland - Galactocele in a female F344/N rat from a chronic study (higher magnification of Figure 4). A distended alveolus contains eosinophilic secretory material, and the epithelial lining is flattened and vacuolated.

Keywords: mouse; rat; mammary gland; duct; alveolus; dilation; ectasia; cyst; galactocele

Comment: Mammary gland *galactoceles* are markedly dilated/cystic ducts and alveoli filled with proteinaceous secretory material, which are generally detectable grossly at necropsy. Galactoceles are considered a form of ductular or acinar *dilation*, which is often diffuse and characterized by distention of collecting (lactiferous) ducts and alveoli, often beneath a nipple, and accompany additional histological changes other than just distension. Galactoceles are typically lined by flattened to cuboidal epithelium, which may be vacuolated, with a thin connective tissue wall and filled with proteinaceous secretory fluid and cell debris. Galactoceles may be accompanied by necrotic debris, inflammation, and thickened fibrotic walls, which are thought to be secondary to leakage or rupture.

Galactoceles may occur as a spontaneous age-related change or can be caused by anything that blocks an outlet (e.g., lactiferous duct occlusion during lactation or in response to



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hyperprolactinemia). In rodents, galactoceles are commonly associated with mammary gland neoplasms that cause blockage of a secretory duct.

Recommendation: When present, mammary gland galactocele should be diagnosed, but no severity grade is necessary. The difference between dilation and galactocele is largely the degree of dilation (galactoceles are typically detectable grossly) and severity of secondary changes (inflammation, fibrosis, etc.). The diagnosis can be subjective and will be left to the judgement of the pathologist. Findings that are secondary to a large or ruptured galactocele, such as inflammation, hemorrhage or fibrosis, need not be diagnosed separately unless warranted by severity, but should be described in the pathology narrative as needed. Galactoceles that are secondary to neoplasia should not be diagnosed.

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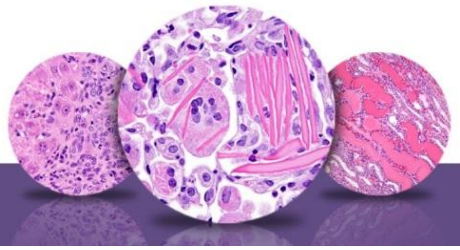

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