Mammary Gland – Fibrosis

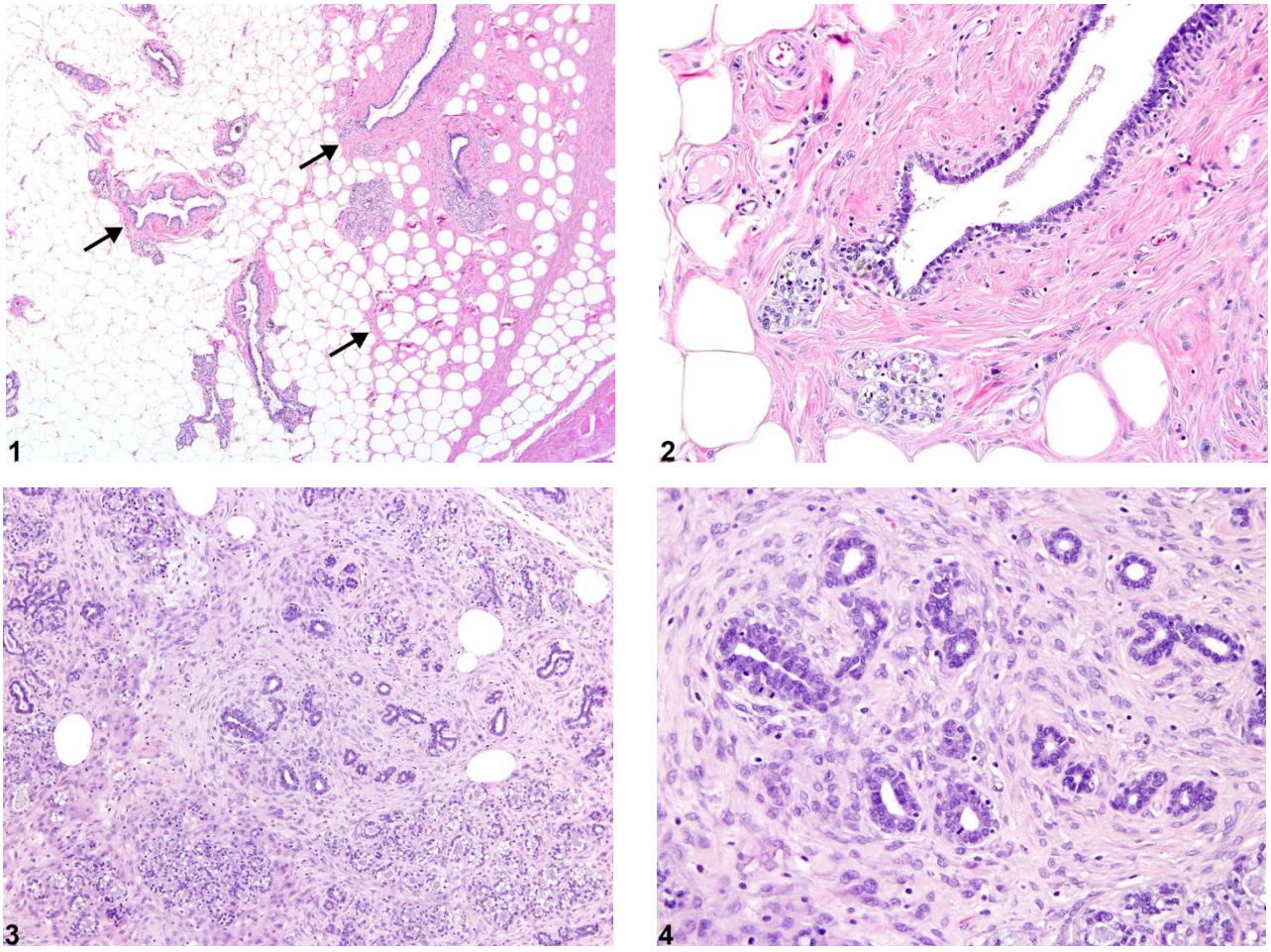
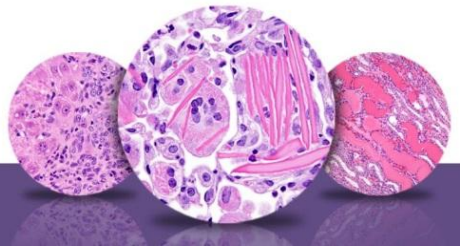


Figure Legend: Figure 1 Mammary gland - Fibrosis in a male F344/N rat from a chronic study. Mammary gland fibrosis is characterized by increased amounts of mature fibrous connective tissue both surrounding mammary gland ducts and extending into the adjacent mammary adipose tissue (arrows). **Figure 2** Mammary gland - Fibrosis in a male F344/N rat from a chronic study (higher magnification of Figure 1). Mature fibrous connective tissue surrounds a mammary gland duct and alveoli and extends into the adjacent mammary adipose tissue. **Figure 3** Mammary gland - Fibrosis in a female F344/N rat from a chronic study. Diffuse sheets of mature fibrous connective tissue are a feature of concurrent lobular hyperplasia in the mammary gland. **Figure 4** Mammary gland - Fibrosis in a female F344/N rat from a chronic



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study (higher magnification of Figure 3). A diffuse sheet of mature fibrous connective tissue surrounds mammary gland ducts and alveoli.

Keywords: mouse; rat; mammary gland; fibrosis; stroma; periductular

Comment: Variable degrees of fibrosis of the mammary gland lobule are commonly seen in older rats and mice. Mammary gland fibrosis is usually periductular and often occurs secondary to other changes, such as cystic ductal dilation, galactoceles, chronic inflammation, atrophy, epithelial hyperplasia, and neoplasia. However, mammary gland fibrosis can also be a primary change due to experimental manipulations or chemical exposures, such as implantation of foreign materials, iodine deficiency, or prenatal exposure to organochlorines in rats. It can also be associated with the proliferation of small- and medium-sized ducts in BALB/c mice treated with epidermal growth factor. Mammary gland fibrosis is characterized by increased amounts of mature fibrous connective tissue surrounding mammary gland ducts (periductular) and extending into the adjacent mammary adipose tissue (Figure 1and Figure 2). Diffuse sheets of mature fibrous connective tissue are a feature of lobular hyperplasia (Figure 3 and Figure 4). Fibrosis must be differentiated from early fibroadenomas, which are nodular, space-occupying lesions.

Recommendation: Mammary gland fibrosis should be diagnosed and assigned a severity grade if it is a primary change. Fibrosis occurring as a secondary change to other lesions (such as duct dilatation, galactocele, inflammation, epithelial hyperplasia, neoplasia, etc.) should not be diagnosed separately unless warranted by severity, though it should be described in the pathology narrative.

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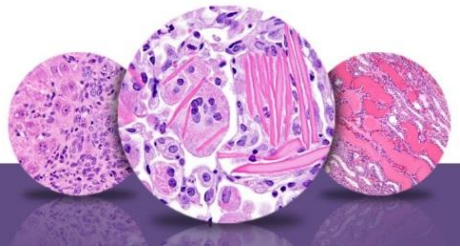

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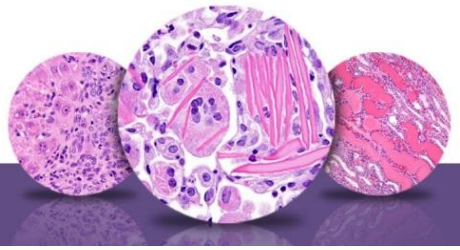

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