Adenocarcinoma, Esophagus, Rat

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Synonyms. Carcinoma with glandular differentiation, tubular adenocarcinoma, signet ring cell carcinoma

Gross Appearance

Adenocarcinomas of the esophagus are seen with two macroscopic forms (Pera et al. 1989). One form has a diffuse pattern of infiltration with thickening of the esophageal wall, which may measure up to 4 mm in thickness. The second form is seen as a nodular pattern with single or multiple nodules measuring from 1 mm up to 7 mm in diameter (Fig. 289). In the larger nodular adenocarcinomas, it is common to find an ulcerated surface. Adenocarcinomas are found in the middle and distal thirds of the esophagus.

Microscopic Features

Three microscopic patterns are observed: (1) tubular and glandular structures, (2) signet-ring shaped, diffusely infiltrating cells, and (3) a combination of the first two patterns (Pera et al. 1989). The tubular and glandular pattern is formed by well-developed glands lined with mucous-
Fig. 289. Nodular adenocarcinoma in the lower third of the esophagus of a Sprague-Dawley rat. Note its origin immediately above one of the suture stitches placed along the line of the esophago-jejunostomy (arrow).

Fig. 290. (above) Adenocarcinoma, esophagus, rat, with a characteristic tubular and glandular pattern. Alcian blue plus H&E, ×200

Fig. 291. (below) Tubular/glandular adenocarcinoma of the esophagus of a rat. Note moderately to well-developed glandular structures with mucin production. H&E, ×250