

Canalicular adenoma

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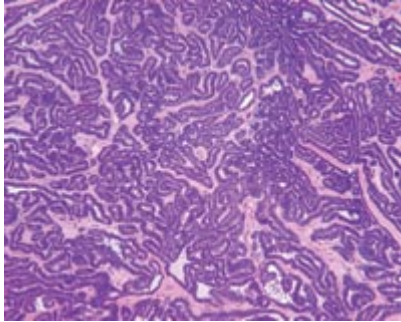


Figure 1. Low-power view shows multiple canaliculi or tubular structures with intervening stroma. The luminal space between rows is variable in size.

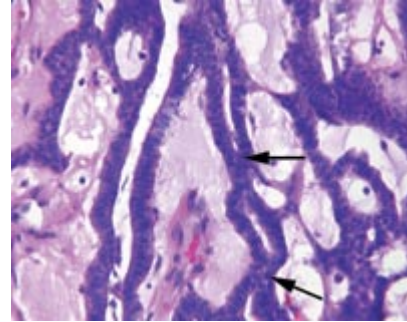


Figure 2. High-power view shows the basaloid cells arranged in a palisaded architecture with central lumens. "Beading" is noted where the cells come together and then separate (arrows).

Canalicular adenomas are benign neoplasms with a unique predilection for the upper lip (~80% of cases). They account for 1% of all salivary gland neoplasms. Their incidence peaks during the seventh decade of life; they are distinctly uncommon in patients younger than 50 years of age. The female-to-male predominance is approximately 2:1.

These tumors develop as slowly enlarging, moveable, compressible, submucosal nodules that are usually asymptomatic. Superficial tumors may exhibit a bluish tint in the overlying mucosa, mimicking a mucocele. Multifocal tumors may be seen clinically.

Canalicular adenomas are typically smaller than 2 cm. They are ordinarily well circumscribed and encapsulated. The multifocality of these tumors may be identified only microscopically rather than clinically. Care must be taken to avoid misdiagnosing these microscopic foci as an invasive carcinoma. The histologic appearance of canalicular adenomas is very consistent; they are made up of columnar epithelial cells that form thin, branching, and interconnecting cords in a very loose but highly vascular stroma (figure 1). Double rows of cells alternately oppose and then separate from one another, producing a "beads-on-a-string" or "canaliculi" appearance. The epithelial cells are cuboidal to tall and columnar in type, with uniform nuclei and inconspicuous nucleoli (figure 2). The loose stroma and the characteristic eosinophilic cuffing of capillaries are useful hints to the diagnosis. The cells are reactive with keratin, vimentin, and S-100 protein, but immunohistochemical analysis is seldom needed in view of the characteristic histologic and clinical appearance. Occasionally, the differential diagnosis includes adenoid cystic carcinomas or basal cell adenoma.

Recurrences develop on occasion, but most cases of "recurrence" are actually new primary growths from a multifocal neoplasm. Complete excision yields excellent outcomes.

Suggested reading

Ellis GL, Auclair PL. Tumors of the salivary glands. In: Ellis GL, Auclair PL, eds. Atlas of Tumor Pathology. 3rd Series. Fascicle 17. Washington, D.C.: Armed Forces Institute of Pathology, 1996:95-103.
Rousseau A, Mock D, Dover DG, Jordan RC. Multiple canalicular adenomas: A case report and review of the literature. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 1999;87:346-50.