

Figure 16-6 Clinical, histologic, and molecular progression of oral cancer. **A**, An idealized representation of the clinical progression of oral cancer. **B**, The histologic progression of squamous epithelium from normal, to hyperkeratosis, to mild/moderate dysplasia, to severe dysplasia, to cancer. **C**, The sites of the most common genetic alterations identified as important for cancer development. CIS, Carcinoma in situ; SCC, squamous cell carcinoma. (Clinical photographs courtesy of Sol Silverman, MD, from Silverman S: Oral Cancer. Hamilton, Ontario, Canada, BD Dekker, 2003.)

SCC. Similarly, histologically “normal” appearing mucosal lesions may truly be benign or they may represent molecularly premalignant lesions that have not yet developed morphologic changes consistent with dysplasia. Therefore, conventional histologic findings can only indicate that a given lesion may have malignant potential.

MORPHOLOGY

Squamous cell carcinoma may arise anywhere in the head and neck region that is lined by stratified squamous epithelium. For the “classic” oral cavity SCC, the favored locations are the ventral surface of the tongue, floor of the mouth, lower lip, soft palate, and gingiva (Fig. 16-7A). The “classic” malignancies are typically preceded by the presence of premalignant lesions that can be very heterogeneous in presentation (see earlier).

In the early stages, cancers of the oral cavity appear either as raised, firm, pearly plaques or as irregular, roughened, or verrucous areas of mucosal thickening, possibly mistaken for leukoplakia. Either pattern may be superimposed on a background of apparent leukoplakia or erythroplakia. As these lesions enlarge, they typically create ulcerated and protruding masses that have irregular and indurated (rolled) borders.

On histologic examination, these cancers begin as dysplastic lesions, which may or may not progress to full-thickness dysplasia (carcinoma in situ) before invading the underlying connective tissue stroma (Fig. 16-7B). This difference in progression should be contrasted with cervical cancer (Chapter 22), in which, typically, full-thickness dysplasia, representing carcinoma in situ, develops before invasion. Squamous cell carcinomas range from well-differentiated keratinizing neoplasms to anaplastic, sometimes sarcomatoid, tumors, and

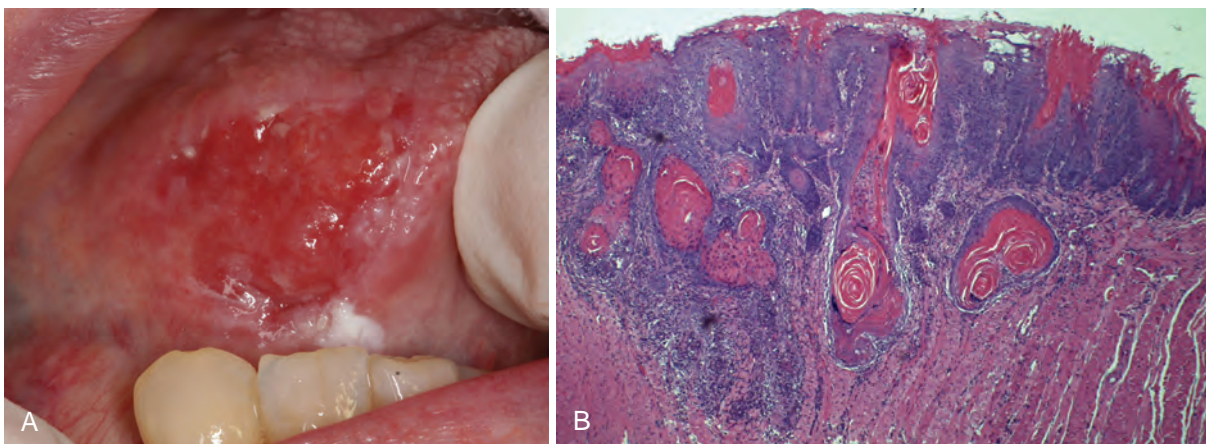


Figure 16-7 Squamous cell carcinoma. **A**, Clinical appearance demonstrating ulceration and induration of the oral mucosa. **B**, Histologic appearance demonstrating numerous nests and islands of malignant keratinocytes invading the underlying connective tissue stroma and skeletal muscle.