



FIGURE 60-1 Anatomic regions of the head and neck.

system is used. Patients with early-stage disease have an excellent prognosis, with 5-year survival rates approaching 90%. However, only a minority of patients are diagnosed with early-stage disease; cancer is usually locally advanced at the time of diagnosis, with large, invasive primary tumors or regional lymph node metastases. Cure is possible with multimodality therapies, but the aggregate outcome is less favorable.

The prognosis for patients with HPV-associated oropharyngeal cancer is better than for those whose cancer is related to tobacco smoke and alcohol abuse. Both the biology of the disease and medical comorbidities contribute to the poorer prognosis. Furthermore, these patients are at high risk for development of second primary cancers of the upper aerodigestive tract, including lung cancer and esophageal cancer—so-called *field cancerization*: the entire upper aerodigestive epithelium is at increased risk for malignant transformation.

Both surgery and radiotherapy are potentially curative in patients with head and neck cancer. Chemotherapy alone is not a curative treatment, but chemotherapy given simultaneously with radiotherapy, termed *chemoradiotherapy*, may enhance the cytotoxic effects of radiation. Chemoradiotherapy is more efficacious but more toxic than radiotherapy alone. The choice of treatment is based on the location of the primary tumor and the extent of disease. Surgery or radiotherapy alone can cure early-stage disease. Patients with locally advanced cancers require more aggressive management, either chemoradiotherapy or a combination of chemoradiotherapy and surgery.

Radiation-based treatment may be used instead of surgery for disease for which tumor resection could cause cosmetic deformity or loss of organ function. For example, chemoradiotherapy may be used to treat locally advanced laryngeal cancer without the

need to sacrifice the larynx. Although chemoradiotherapy may permit organ preservation, it has both acute and chronic toxicity.

Metastatic disease is incurable, and therapy is palliative. Chemotherapy may mitigate cancer-related symptoms and produce a modest improvement in the median survival time compared with supportive care alone.

MELANOMA

Definition and Epidemiology

Melanoma, a malignant disorder of melanocytes, differs from other common skin cancers by its aggressive behavior and proclivity for regional and distant metastasis. The incidence of melanoma is increasing; it is now the fifth most common cancer in the United States. There were expected to be 76,690 new diagnoses and 9,480 deaths from melanoma in 2013. Melanoma is more common in fair-skinned individuals who tend not to darken with sun exposure. Although there are multiple risk factors for melanoma, sun exposure is the most important. Intense and intermittent sun exposure, especially during childhood and early adulthood, is the strongest risk factor for development of this disease. Chronic or occupational sun exposure does not confer the same degree of risk but may contribute to the development of melanoma on sun-exposed areas such as the head and neck. Other risk factors for melanoma include a family or personal history of this disease, multiple typical nevi, and the presence of atypical nevi.

Pathology

Melanocytes are derived from neural crest cells that have migrated to the epidermis. They occupy the basal layer of the epidermis