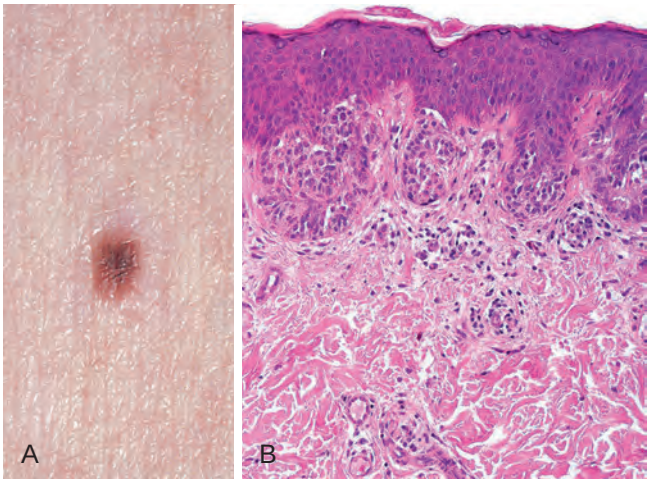

Figure 25-2 Melanocytic nevus, junctional type. **A,** Grossly, lesions are small, relatively flat, symmetric, and uniform. **B,** On histologic examination, junctional nevi are characterized by rounded nests of nevus cells originating at the tips of rete ridges along the dermoepidermal junction.

Clinically, compound and dermal nevi are often more elevated than junctional nevi.

Progressive growth of nevus cells from the dermoepidermal junction into the underlying dermis is accompanied by morphologic changes that are taken to be a reflection of oncogene-induced senescence (Fig. 25-4). Whereas superficial nevus cells are larger, tend to produce melanin, and grow in nests, deeper nevus cells are smaller, produce little or no pigment, and appear as cords and single cells. At the deepest extent of the lesions, these cells often acquire fusiform contours and grow in fascicles resembling neural tissue (neurotization; Fig. 25-4*E*). This striking metamorphosis correlates with enzymatic changes (progressive loss of tyrosinase activity and acquisition of cholinesterase activity) in deeper, nonpigmented "nervelike" nevus cells. **These changes are helpful in distinguishing benign nevi from melanomas, which lack such features.**

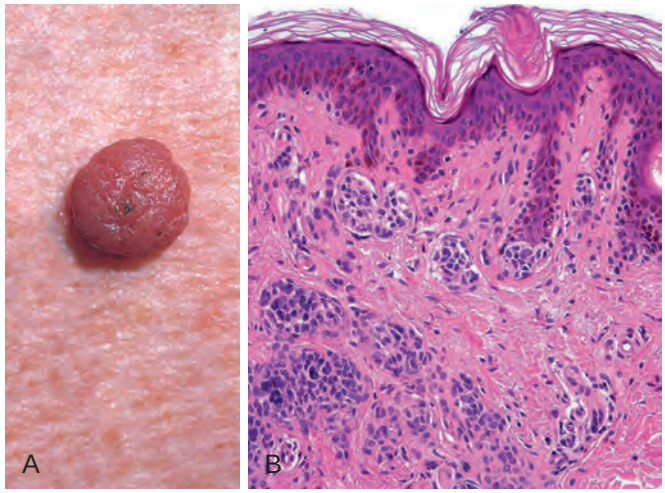

Figure 25-3 Melanocytic nevus, compound type. In contrast to the junctional nevus, the compound nevus **(A)** is raised and dome-shaped. The symmetry and uniform pigment distribution suggest a benign process. Histologically **(B),** compound nevi combine the features of junctional nevi (intraepidermal nevus cell nests) with nests and cords of dermal nevus cells.

Although melanocytic nevi are common, their clinical and histologic diversity necessitates thorough knowledge of their appearance and natural evolution, lest they be confused with other skin conditions, most notably melanoma. The biologic importance of some nevi, however, resides in their possible transformation to melanoma or as markers of increased risk for melanoma (as described below).

Dysplastic Nevi

Dysplastic nevi are important because they may be direct precursors of melanoma and when multiple in number are a marker of an increased risk for melanoma. The association of melanocytic nevi with melanoma was

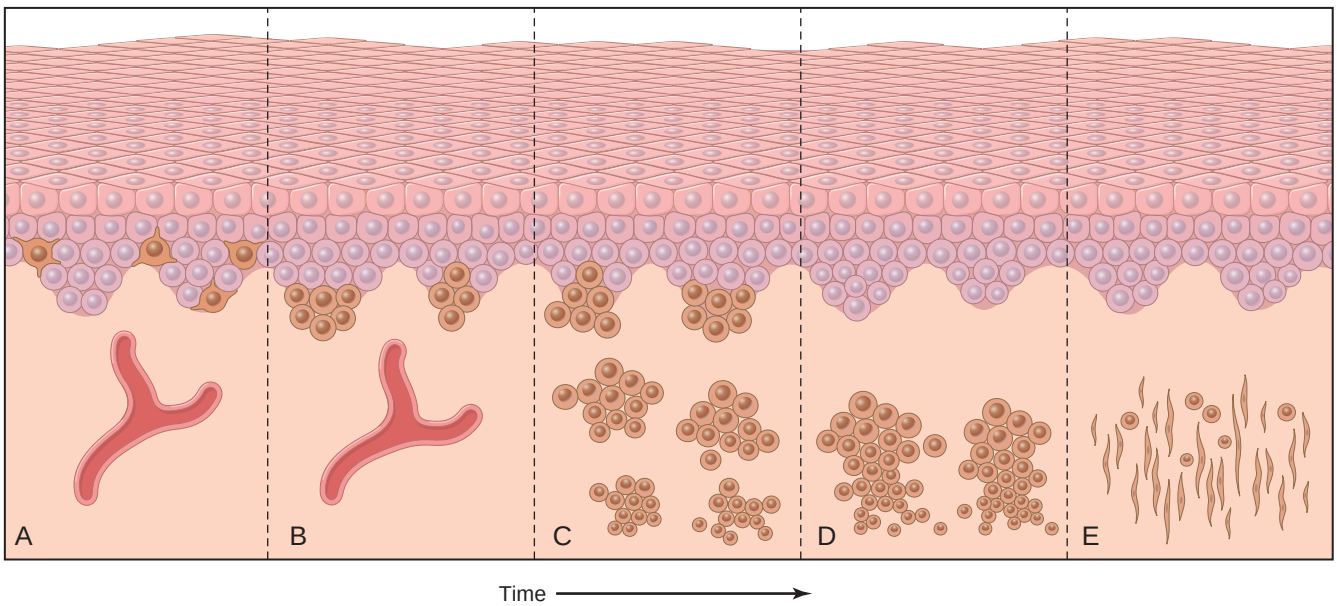

Figure 25-4 Maturation sequence of nondysplastic melanocytic nevi. **A,** Normal skin shows only scattered dendritic melanocytes within the epidermal basal cell layer. **B,** Junctional nevus. **C,** Compound nevus. **D,** Dermal nevus. **E,** Dermal nevus with neurotization, a change that is also referred to as maturation. Nevi may exist at any stage in this sequence for variable periods of time, although many are believed to progress through this sequence.