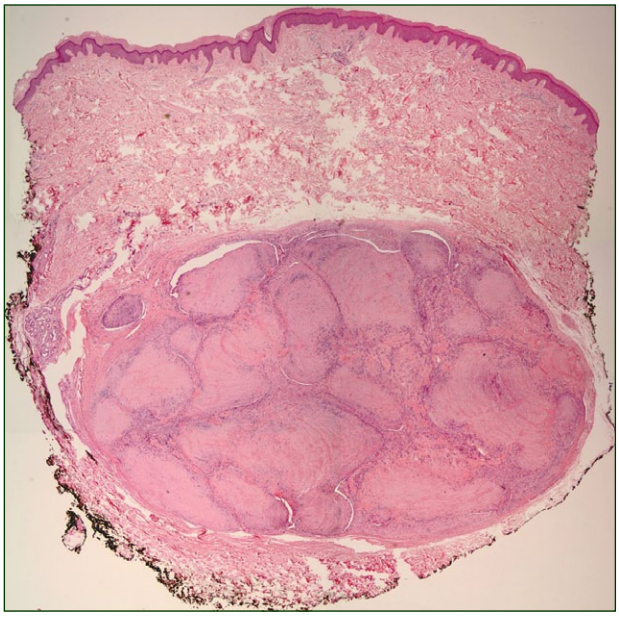
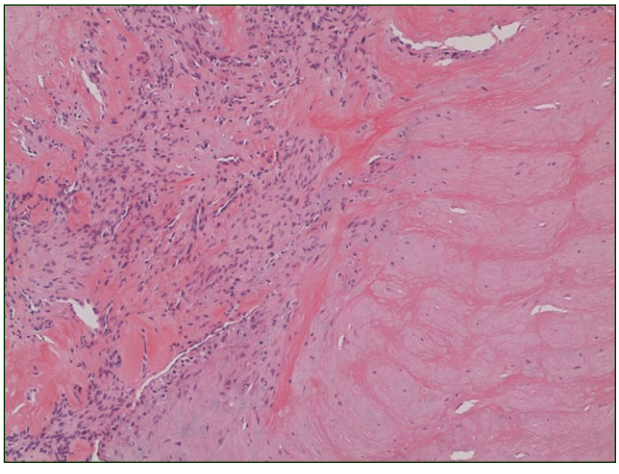


H&E, original magnification ×20.



H&E, original magnification ×200.

The best diagnosis is:

a. chondroid syringoma
b. dermatofibroma
c. leiomyosarcoma
d. myofibroma
e. schwannoma

PLEASE TURN TO PAGE 139 FOR DERMATOPATHOLOGY DIAGNOSIS DISCUSSION

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The authors report no conflict of interest.
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Myofibroma

Myofibromas are rare, benign, mesenchymal tumors that primarily occur in infants and children but also have been documented in adults. Occurring predominantly on the head and neck, myofibromas are painless, slow-growing, dermal neoplasms that show a tendency for spontaneous regression.[1] On low-power magnification, myofibromas generally present as well-circumscribed unencapsulated neoplasms with a lobular appearance (Figure 1). The lobules are relatively hypocellular, with surrounding hypercellular areas showing 2 distinct populations of cells: (1) mature, plump, spindle-shaped myofibroblasts, and (2) smaller, less differentiated, round cells with scant cytoplasm (Figure 2). The hypocellular lobules typically demonstrate extensive hyalinization, giving a pseudochondroid appearance in some areas. Immunohistochemical staining typically shows diffuse reactivity of the spindled cells with smooth muscle actin and no reactivity to CD34, CD31, or S-100.

Clinically, dermatofibromas present as minimally elevated, mildly hyperpigmented papules predominantly affecting the extremities. They are histologically defined by a dermal proliferation of fibrohistiocytic cells with an atrophic or acanthotic overlying epidermis and characteristically demonstrate peripheral collagen trapping (Figure 3).[2] Distinct histologic features of dermatofibromas include ringed lipidized siderophages, which are pathognomonic if present; reactivity to factor XIIIa; and no reactivity to CD34.[2]

Chondroid syringomas (benign mixed tumors) often present as painless, firm, white to yellow nodules occurring predominantly on the head and neck. On histopathologic examination, stromal cells among tubuloglandular components often can be noted (Figure 4). The tubuloglandular component has 2 cell layers that react differently on immunostaining: the

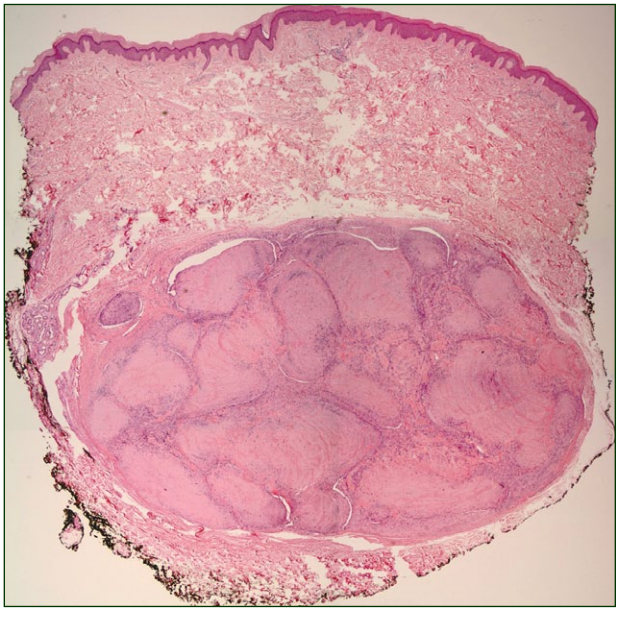

Figure 1. Well-circumscribed unencapsulated dermal neoplasm with a lobular appearance of myofibroma (H&E, original magnification ×20).

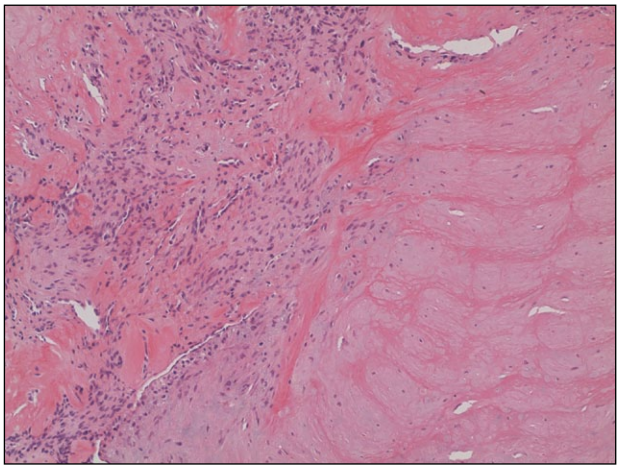

Figure 2. Hypercellular and hypocellular areas with spindle-shaped cells among less differentiated cells and the pseudochondroid appearance of a hypocellular lobule of myofibroma (H&E, original magnification ×200).

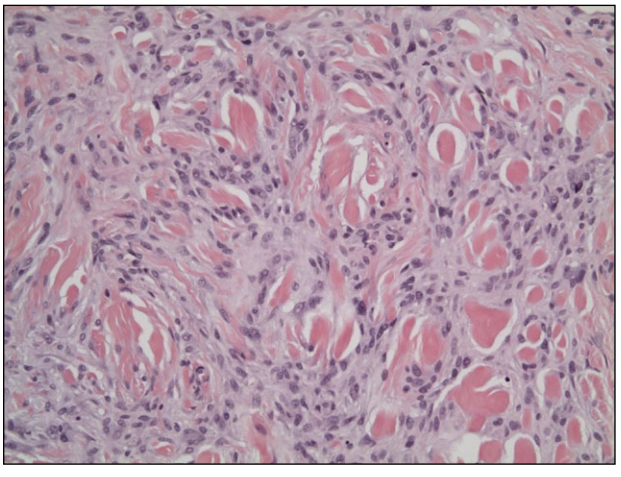

Figure 3. Collagen trapping with fibrohistiocytes percolated around individual collagen bundles of dermatofibroma (H&E, original magnification ×200).

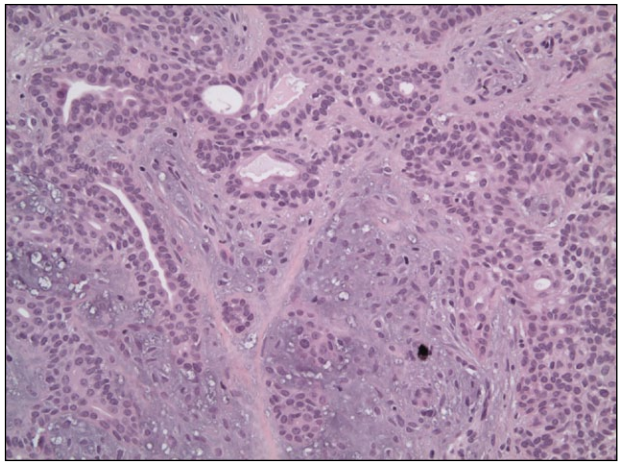

Figure 4. Tubuloglandular component admixed with hypocellular chondroid stroma of syringoma (H&E, original magnification ×200).

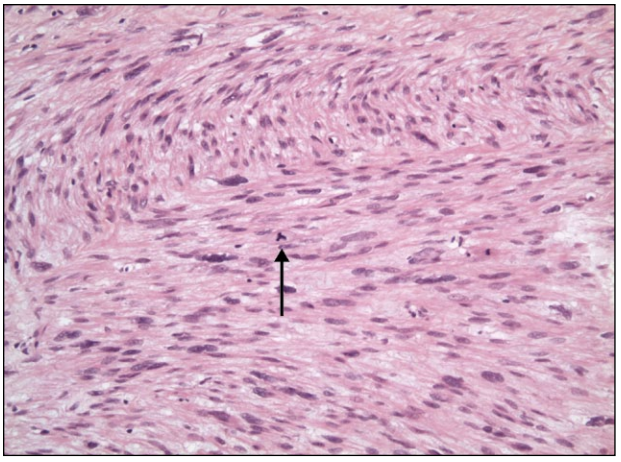

Figure 6. Pleomorphic nuclei and mitotic figures of leiomyosarcoma (tripolar mitotic figure [arrow])(H&E, original magnification ×200).

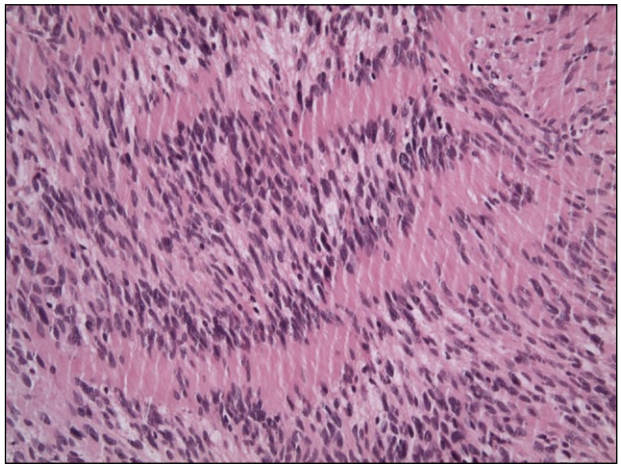

Figure 5. Parallel array of spindled nuclei spaced between a hypocellular stromal matrix of schwannoma (Verocay bodies)(H&E, original magnification ×200).

outer myoepithelial cell layer typically shows reactivity to S-100 and desmin, while the inner cell layer shows reactivity to cytokeratins, carcinoembryonic antigen, and epithelial membrane antigen. Areas of cartilaginous differentiation may appear similar to the chondroidlike areas of myofibroma.

Schwannomas (neurilemmomas) are benign dermal tumors arising from the sheaths of the cranial or peripheral nerves. Clinically, schwannomas present as smooth solitary nodules with no overlying epidermal changes. They may be asymptomatic but often are painful, arising due to compression and displacement of axonal elements.[2] Histopathologic examination may show Verocay bodies with layers of spindled and wavy nuclei separated between acellular, highly hyalinized areas (Figure 5).[2] Unlike myofibromas, schwannomas demonstrate reactivity with S-100.

Leiomyosarcomas present clinically as firm, often tender, red-brown papules or plaques with occasional ulceration, predominantly on the lower extremities of adults.[3] Histologically, they demonstrate characteristic cigar-shaped nuclei and perinuclear vacuoles. As with other smooth muscle neoplasms, leiomyosarcomas demonstrate increased nuclear pleomorphism, infiltrative growth, atypical mitotic figures, and reactivity with desmin (Figure 6).[4]

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