A 47-year-old woman presented to our orthopedic clinic with a right thumb mass that had been slowly growing for two years. The patient experienced mild intermittent pain with the mass but denied any antecedent trauma to the thumb. Physical examination revealed enlargement of the distal part of the thumb with clubbing of the fingernail. There was an associated ulnar-sided nodule located adjacent to the nail bed that measured approximately 0.5 cm in size. The mass was not tender to palpation, and there were no deficits in sensation or strength.

Initial radiographic examination of the right thumb demonstrated a focal soft-tissue prominence from the mass over the distal phalanx associated with pressure erosion of the underlying cortex (Fig. 1). No calcifications were noted. Subsequent investigation was performed with contrast-enhanced MRI. This revealed a lobulated 15-mm soft-tissue mass involving the distal part of the first digit that appeared isointense to skeletal muscle on T1-weighted images and hyperintense on T2-weighted images. Postcontrast images showed central enhancement of the mass (Figs. 2 and 3).

We present a case of a superficial acral fibromyxoma (SAFM) of the distal aspect of the thumb with radiographic evidence of extrinsic pressure erosion of the underlying cortex. This 47-year-old woman presented with a slow-growing mass over the distal aspect of the right thumb that proved to be SAFM on surgical pathology. This is a relatively rare mesenchymal neoplasm of the periungual and subungual regions of fingers and toes.

Case report
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Figure 1. 47-year-old female with acral fibromyxoma. Plain radiograph showing a small soft-tissue nodule at the tip of the thumb, with smooth scalloping of underlying cortex of the distal phalanx.
The patient underwent surgical resection of the mass. On pathology, the mass turned out to be an acral fibromyxoma, predominantly a myxoid type.

**Discussion**

Superficial acral fibromyxoma (SAFM) was first described as a unique tumor in 2001 by Fetsch et al in a study that documented 37 cases of the fibromyxoid tumor (1). Since that time, the tumor has been more frequently identified (2). SAFM classically presents as a slow-growing, painless, solitary mass or nodule located over the subungal and periungal regions of the fingers and toes. The tumor typically ranges in size from 0.6 to 5.0 cm in maximum diameter, extending throughout the entire dermis. The mean age at diagnosis is 43 years, and men are more affected than woman in a ratio of 2:1. Antecedent trauma has been attributed to the mass in only a few cases, and radiographic imaging usually does not reveal the type of bone alterations that were documented in our case (1, 3).

The immunohistologic features of SAFM have been well documented in previous studies. The tumor is composed of stellate-shaped and spindled fibroblast-like cells in a myxocollagenous matrix (4). Mast cells can be readily identified in the lesion, and the tumor cells demonstrate immunoreactivity for CD34, CD99, and epithelial membrane antigen (EMA). Cells are notably negative for S100, distinguishing it from myxoid neurofibroma (2). Nuclear atypia and mitotic figures are rare findings since the tumor is typically benign (3).

A handful of case reports regarding SAFM have been published in the radiology literature, but to our knowledge, only one study has documented radiographic findings asso-
associated with the tumor. The report by Varikatt et al in 2008 described two cases of SAFM with erosion of underlying cortical bone of the distal phalanx (5).

Apart from SAFM, other well-known considerations for a slow-growing, soft-tissue neoplasm in the tip of a finger or a toe are glomus tumor, epidermal inclusion cyst, giant-cell tumor of tendon sheath (GCT-TS), soft-tissue/periosteal ganglion, and chondroma. MRI can possibly help distinguish these lesions from giant-cell tumors of the tendon sheath, as GCT-TS typically demonstrate low-intensity signal on both T1- and T2-weighted images due to the presence of hemosiderin (6). This is in contrast to glomus tumor, epidermal inclusion cyst, SAFM, and periosteal ganglion, which all demonstrate homogeneous hyperintensity on T2-weighted images (7). However, it may be possible to differentiate superficial acral fibromyxomas from glomus tumors, as the latter usually present with debilitating pain and have a mean tumor size of 13 mm, much smaller than that of SAFM (8). Unlike SAFM, epidermal inclusion cysts are usually associated with antecedent trauma, and periosteal ganglia do not demonstrate enhancement on postcontrast images (9, 10).

There is general agreement that SAFM will persist if not excised. Complete excision is the treatment of choice in order to prevent recurrence. There have been no documented cases of malignant transformation in the literature. However, the original case report in 2001 by Fetsch et al did demonstrate increased cytological atypia in 5 of the 37 cases. Although highly unlikely, transformation of SAFM into a low-grade neoplasm remains a possibility, and thus complete excision of the tumor is recommended (11).

In summary, SAFM should be included in the differential diagnosis of any slow-growing mass or nodule located in the periungal or subungal regions of the fingers and toes. The soft-tissue mass typically demonstrates no calcification on plain radiographs; however, it can cause erosion of the underlying cortical bone, as documented in our case. SAFM classically demonstrates homogeneous hyperintensity on T2-weighted images and enhancement on postcontrast MRI. Complete surgical excision is the recommended treatment of choice in order to prevent recurrence.

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