Surgeons are frequently referred patients for the evaluation of a soft tissue mass. Given that “common things occur commonly,” the majority will be benign entities such as a lipoma, epidermal inclusion cyst, hematoma, abscess, ganglion cyst, and such. Surgical excision is often the definitive treatment. However, when the mass is a sarcoma or some other soft tissue neoplasm, surgery as the initial treatment can be suboptimal. Consequently, when the clinical history or physical examination does not fit with a more common benign process, one should pause to consider further workup of the mass prior to surgery. Features associated with a higher risk of a mass being a sarcoma include size greater than 5 cm, deep to the muscular fascia, and lower-extremity anatomic location. Rapid enlargement as reported by the patient would also be atypical for a lipoma or other benign entities. In this situation, obtaining high-quality 3-dimensional imaging and considering image-guided core needle biopsies if there are suspicious radiographic features before proceeding to the operating room would be the ideal approach.

The purpose of this issue is to provide a general overview of the current management of soft tissue sarcomas as well as some other more common soft tissue tumors (dermatofibrosarcoma protuberans, desmoid, and benign neurogenic tumors). For sarcomas, a preoperative diagnosis is critical for determining the sequencing of multimodality therapy (radiation, chemotherapy), the planned extent of the wide resection, and reconstruction options (including upfront involvement of plastic surgery). Not only does unplanned excision of a soft tissue sarcoma preclude the ability to administer preoperative radiation or neoadjuvant chemotherapy but also seeding of the surgical site with microscopic sarcoma cells from tumor spillage can significantly decrease the likelihood of obtaining long-term local control. In the modern era, the initial management of some benign tumors, such as desmoids and neurogenic tumors, is often nonsurgical.
As soft tissue sarcomas are rare, one should not be scared into approaching every single soft tissue mass encountered in practice as if it could be a sarcoma. Rather, the intent is to create a broader differential diagnosis that includes a sarcoma and other soft tissue masses when the clinical presentation is not typical for a benign process. To take the advice from the world of carpentry (another profession that combines judgment and craftsmanship), “measure twice, cut once.”

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