Parosteal Osteosarcoma

The parosteal osteosarcoma (OGS) is a low-grade variant arising from the surface of a long bone that presents as an exophytic mass with dense fibro-osseous tissue. It carries an excellent five-year survival prognosis of 85 per cent and accounts for about 4 per cent of all osteosarcomas. That this tumor has very little, if any, medullary involvement clearly separates it from the classic OGS. It is seen more commonly in females than males and is found in a slightly older age group than the classic OGS. By far, the most common location for this tumor is in the posterior aspect of the distal femur where it presents with minimal symptoms of pain but with a palpable tumor mass that might have been present for many years before medical advice was sought. Histologically, this tumor has a very low mitotic index and in many cases can be confused with a normal healing fracture callous with occasional areas of cartilage being seen. Because this tumor is extremely low-grade, it is not responsive to adjuvant therapy such as chemotherapy or radiation therapy. The treatment is wide surgical resection that must have safe margins, otherwise the recurrence rate will be quite high. Recurrence can occur as late as 10 or 15 years after the surgery. In many cases the lesion can be resected without sacrificing the adjacent joint, but in larger lesions the best approach is a total joint replacement similar to that used for the classic osteosarcoma.