Bone and soft tissue tumors can be sometimes visualized by intravenous injection of Tl-201 chloride. However Tl-201 accumulation in the tumor mainly depends on the initial focal blood flow and active transport ability of the tumor. This came to the idea of the intraarterial injection of the agent from femoral artery to evaluate various bone and soft tissue lesions of lower extremities. This study was performed in 32 cases of 10 malignant tumors, 14 benign tumors and 8 inflammatory conditions. All of 10 malignant tumors showed intensive Tl-201 accumulation corresponding to the lesions. Of 14 benign tumors, only one case of osteoid osteoma showed intensive Tl-201 accumulation but other 13 cases showed such as osteoid osteoma, giant cell tumor, hemanglioma showed positive, but not intensive concentration, while most tumors with cystic lesions, such as bone cyst, fibrous dysplasia did not show any specific accumulation. One case of Brodie's abscess showed intensive accumulation but other inflammatory conditions such as osteomyelitis or fasciitis showed positive. This method can be easily performed and seems to be useful to differentiate benign lesions from malignant ones.