A 16-year-old female with Osteosarcoma of left femur; status post amputation and on Methotrexate chemotherapy was admitted for pain management and underwent Whole Body Bone Scan (WBBS) to evaluate for metastases. Scan showed no evidence of osteoblastic metastases; however, diffuse hepatic uptake was seen with no structural abnormality on SPECT-CT images (Figure). Liver function tests showed rapid derangement over less than 24hrs. At the time of scanning ALT was 1689U/L, AST 1775 U/L and total bilirubin was 1.3mg/dL. INR prolonged at 1.79. Hepatitis panel was negative. Patient subsequently developed hepatic encephalopathy and died of hepatic failure. Tc99m-MDP not only accumulates in the bones but also in soft tissues structure. In patients with known malignancies, increased MDP activity in the liver raises suspicion of possible hepatic metastases.\(^1\)\(^2\) However, elevated hepatic radiotracer activity can be seen in several nonmalignant etiologies\(^3\) including acute hepatitis, hepatic failure, IV gadolinium administration\(^3\) and amyloid.\(^4\) In addition, technical causes like; Aluminum breakthrough from Molybdenum generator can result in colloid formation and result in artifactual diffuse liver uptake. Diffuse hepatic uptake on bone scan is an important finding and
whenever present should be further investigated to find out the cause of uptake. This is of particular importance if no evidence of hepatic metastases is seen on correlative imaging. In our patient rapid deterioration of hepatic function with resulting hepatic failure was presumed to be secondary to chemotherapeutics and uptake in the liver was likely due to hepatic failure as also reported by Chen et al.\(^5\)

No conflict of interest.

**References**