Purpose: The purpose of the study is to determine the diagnostic accuracy and evaluate various techniques of percutaneous CT guided spine biopsy as well as the factors that may influence its success.

Method: We retrospectively reviewed results of 44 consecutive percutaneous CT-guided spinal biopsy procedures of osseous spinal lesions. Spine biopsy was performed using Cook, Osteo-Site bone biopsy needle – Murphy M2™ in 128 slice GE Optima MDCT unit. All cases were done under local anaesthesia. Bone and bone marrow were acquired in all the patients for histopathological analysis. Paravertebral abscess was aspirated in selected cases for microbiological analysis.

Results: Out of 44 patients, 28 were male and 16 were female patients with ages ranging from 13 to 75 years. There were 2 cervical, 15 dorsal, 22 lumbar, 3 dorso-lumbar and 2 sacral vertebral lesions which were biopsied. Histopathologically confirmed reports were 40 in number and biopsy inconclusive were 4 in number with a diagnostic accuracy 90.9%.

Conclusion: CT guided biopsy is safe and when done with good technique has good accuracy in the evaluation of spinal lesions thus ensuring the correct treatment at the earliest and has minimal complications. Higher diagnostic accuracy rates can be obtained by obtaining two or more bone specimens and adjunctive aspiration of bone marrow & paravertebral abscess wherever necessary. It is the procedure of choice in definitive diagnosis of pathologic lesions of the spine.