PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330
International Journal of
HUMAN GENETICS

© IJHG 2021
Int J Hum Genet, 21(1): 23-29 (2021)
PRINT: ISSN 0972-3757 ONLINE: ISSN 2456-6330
DOI: 10.31901/24566330/21.01.772

Association of MMP-9 and PCNA Protein Expression in Osteosarcoma are Associated with Clinical Stage, Metastasis, and Prognosis

Xiaohu Wang[1] and Bo Zhao[2*]

[1]Department of Orthopaedics, Hanchuan People's Hospital, Hanchuan, PR China
E-mail: [1]<jnbv8956@126.com>, [2]<hcd89569@126.com>

KEYWORDS Biomarkers. Clinical Stage. Matrix Metallopeptidase 9. Proliferating Cell Nuclear Antigen. Osteosarcoma. Prognosis

ABSTRACT Present work studies the expressions of MMP-9 and PCNA in osteosarcoma patients and its correlation with clinical stage. 53 specimens of osteosarcoma were surgically removed and 28 osteochondroma tissues were used for immunohistochemical staining to detect the expression of proliferating cell nuclear antigen (PCNA) as well as matrix metalloproteinase-9 (MMP-9). The expression rates of MMP-9, as well as PCNA, were 75.5 percent and 86.8 percent in osteosarcoma, while were 10.7 percent and 7.5 percent in osteochondroma, respectively, which was statistically significant ($P<0.05$). The expression levels of MMP-9, PCNA, and the total survival time were connected with the Enneking stage. It shows an upward trend for the expression levels of PCNA and MMP-9 in osteosarcoma tissues. The expression levels of MMP-9 and PCNA are related to the clinical stage, metastasis, and prognosis.