# Trial of the New Hydroxyapatite Artificial Bone Grafting for the Finger Enchondromas with Pathological Fracture

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The finger enchondroma, which is occupied about two-thirds of the long bone tumors of the hand, which chief complaint at first visit is symptom of pathological fracture. Lesion curettage is essential in the therapy of finger enchondroma with pathological fracture. There are several fillable materials after curettage. Regenos® is a unidirectional porous hydroxyapatite (UDPHAp) bone substitutes, and the most distinctive feature of UDPHAp is its interconnected porous structure. We used Regenos® for the bone defect while finger enchondroma with pathological fracture surgery without metal fixation implant. The purpose of this study was to clinically and radiologically evaluate the availability, osteoconductivity.

Five patients (2 men and 3 women aged 31-42 years, Four proximal phalanx and one metacarpus, All case had pathological fracture) who underwent tumor surgery and were followed up for more than 3 months were retrospectively studied. The skin longitudinal incision was incised in central line on the finger back side, the extensor tendon was longitudinal incised, cut thin cortical bone in a rectangle shape on the lesion, and curetted the tumor. The created gap was filled with UDPHAp block. No internal fixation was added. Scheduled radiography was performed. At six weeks post-operation, there was no limitation of finger ROM. At two months post-operation, Radiography revealed the Regenos® implant was uniformly composed of cortical bone adjacent to the trabecular bone. No adverse event was detected in this study.

Our findings demonstrate that Regenos® is a useful bone substitution material in the defect, resulted as finger enchondroma curettage.