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**Incidence of Medication-Related Osteonecrosis of the Jaw in Finland**

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**Objectives** This retrospective study aimed to evaluate the incidence of medication-related osteonecrosis of the jaw (MRONJ) and associated antiresorptive drugs in Finnish population.

**Methods** All the Finnish adult patients (aged 18 years and older) who were prescribed with antiresorptive drugs (AR) during 2013-2015 were included in this study. A total of  $n=58367$  patients met the inclusion criteria and were followed up until 2020 for between 5 to 7 years. The outcome variable was the diagnosis of MRONJ during the study period. Patients' age, gender, type of AR prescribed, reason for using AR drugs, route of administration, use of corticosteroids, use of vascular endothelial growth factors (VEGF) were used as covariates.

**Results** The incidence of MRONJ was 0.8% in this study population. The risk of developing MRONJ among denosumab users was 5.6 times higher (HR 5.57, 95% CI 2.60 – 11.96,  $p$ -value  $<0.001$ ) compared to bisphosphonates users. Patients diagnosed with cancer had a 10.8-folds risk (HR 10.75, 95% CI 8.06 – 14.34,  $p$ -value  $<0.001$ ) of developing MRONJ compared to those diagnosed with osteonecrosis. Simultaneous use of corticosteroids and VEGFs in addition to AR drug increased the risk of developing MRONJ by 3.6 and 1.5 times, respectively corticosteroids users: HR 3.58 95% CI 2.78 – 4.64,  $p$ -value  $<0.001$ ; VEGF inhibitor users: HR 1.47, 95% CI 1.03 – 2.10,  $p$ -value 0.033).

**Conclusions** In conclusion, male, denosumab, any type of cancer diagnosis, simultaneous use of corticosteroid and VEGF were the most noteworthy risk factors for MRONJ.