The aim of this research is to know the changes of bone density and the possibility of osteoporosis in castrated cats. Twenty cats were used and grouped according to how long castration had been performed and intact cats. The first, second and third groups were castrated for ± 3, 4 and 5 years respectively. The changes of bone density in cats were observed based on radiological image interpretation focused on proximal end of the femur. Data were scored using Singh Index. Kruskal-Wallis H Test showed a significant difference (p < 0.05) on bone density loss. Further analysis using Mann Whitney (Independent Sample T-Test) showed that cats that have been castrated for ± 3 years and ± 5 years, ± 4 years and intact cats and ± 5 years and intact cats had significance different. In addition, cats that had been castrated for ± 3 years and intact cats, ± 3 years and ± 4 years and ± 4 years and ± 5 years had no significance different. It could be concluded that there was no sign of osteoporosis in castrated cats, only decreasing radiopacity but still in normal stage.

**Key words:** radiology, castration, osteoporosis, cats