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## The Effects of the Calcimimetics May Different in Action Depend on Calcium (Ca) Concentration of Dialysate

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### Background;

There are three calcimimetics, evocalcet (EV), etelcalcetide (ET) and upacalcet (UP), currently available in Japan for the treatment of secondary hyperparathyroidism (2HPT) in HD patients, but the differences in bone metabolism of each reagent are unknown. In addition, there are no reports on whether the effects of these calcimimetics are affected by difference in calcium (Ca) concentration.

### Purpose and methods;

The purpose of this study was to investigate the effects of these calcimimetics in various Ca concentration of dialysate.

Ninety patients on HD with relatively controlled 2HPT (i-PTH 50-400 pg/ml) by each calcimimetics for more than 1 year were enrolled in this study. The subjects were consequently treated two different Ca concentration of dialysate, 2.5 mEq and 2.75 mEq. Changes in bone mineral density (BMD) at 6 months of each calcimimetics treatment were evaluated by using the Dual-Energy X-ray Absorptiometry Imaging Protocol (DEXA) in 6 groups with 2 different dialysates (Ca concentration at 2.5 mEq or 2.75 mEq) and 3 different calcimimetics (EV, ET or UP).

### Results;

As shown in figure, in patients treated with dialysates at 2.5 mEq of Ca, the increases of BMD by EV, ET and UP were +4.4%, +1.3% and -3.3% respectively, whereas the increases of these three calcimimetics by the dialysates at 2.75 mEq of Ca were +0.7%, +0.5% and -2.3% respectively

### Conclusion

The effects of the calcimimetics may different in action depend on various Ca concentration of dialysate. Further investigation in these findings is warranted.