

中文題目：骨質疏鬆症治療藥物對於預防類風濕性關節炎患者骨質流失的效用：一個3年期長期性、真實世界、前瞻性、觀察性的世代研究

英文題目：The effectiveness of anti-osteoporosis therapies on preventing systemic bone loss in rheumatoid arthritis: a 3-year longitudinal, real-world, prospective, observational, cohort study

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Object:

To explore the effectiveness of anti-osteoporosis therapies in preserving bone mass in rheumatoid arthritis (RA) patients and to compare the efficacy among the regimens.

Method:

The participants of this RA registry study were recruited in the outpatient department of Kaohsiung Chang Gung Memorial Hospital since September 1st, 2014. Dual-Energy X-ray absorptiometry (DXA) was used to measure bone mineral density (BMD) at the femoral neck (FN), total hip (TH), and lumbar spine (L1-4) at enrollment and three years later. Participants were grouped into receiving anti-osteoporosis therapy (AOT) during 3-year observation period with medication possession rate over 50% (AOT+ group) and not receiving AOT (AOT- group). Participants in AOT+ group were subdivided into group Ibandronate, Alendronate and Denosumab according to the regimen they received. The percent change of BMD at FN, TH and L1-4 from the baseline between AOT+ and AOT- groups and among 3 regimens was compared.

Results:

A total 680 participants were enrolled in this RA related osteoporosis/fracture registry since 2014. And a total of 574 participants completed the 3-year observation period and received BMD measurement at baseline and 3 years later. After excluding not eligible participants, a total of 141 and 391 participants were allocated to AOT+ group and AOT- group, respectively. (Fig. 1) The participants in AOT + group were sub-grouped into Ibandronate (n= 47) group, Alendronate (n= 44) group, and Denosumab (n= 18) group, respectively, after participants received switched regimen or other regimens been excluded. The percent change of BMD after 3 years in AOT + group was significant different from AOT- group at FN (1.1 ± 9.4 vs. -2.9 ± 7.2 , $p < 0.0001$), TH (2.3 ± 9.3 vs. -1.8 ± 8.0 , $p < 0.0001$), and L1- L4 (4.2 ± 12.2 , vs. -2.0 ± 6.6 , $p < 0.0001$). Meanwhile, the 3-year percent change of BMD among Ibandronate, Alendronate, and Denosumab group was 1.0 (11.1), 0.2(9.5), 3.0(5.7) ($p=0.295$) at FN, 0.3 (12.9), 2.6(11.0), 2.6(11.4) ($p= 0.186$) at TH, and 3.6(13.7), 1.9(10.5), 6.6(7.6) ($p= 0.148$) at L1- L4, respectively.

Conclusion:

The RA patients received anti-osteoporosis therapies with good compliance would have

systemic bone loss protection effect than those who did not, irrespective of regimen patients received

Key words: Rheumatoid arthritis, Bone mineral density, Anti-osteoporosis therapy

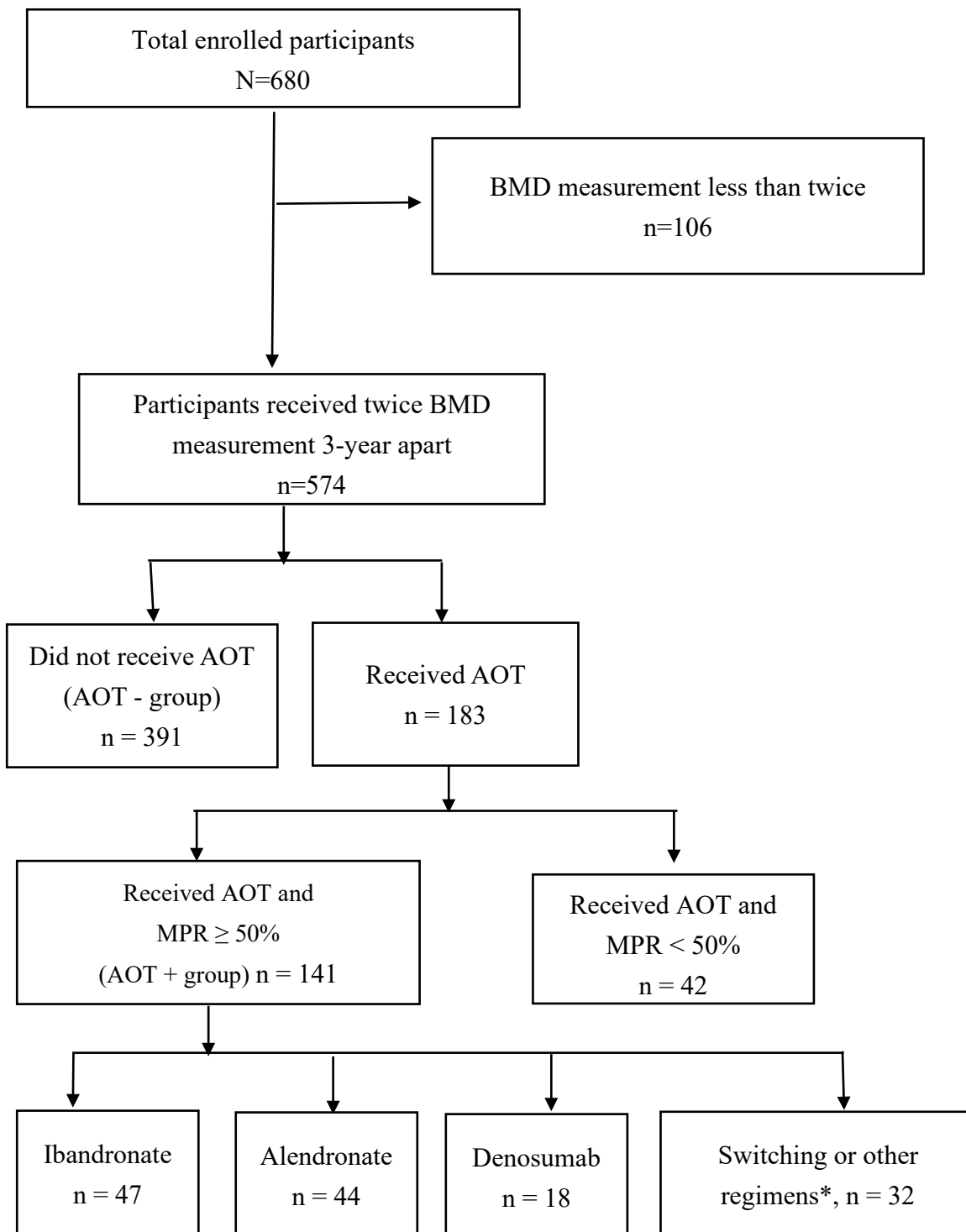


Fig. 1 Disposition of participants

BMD, bone mineral density; AOT, anti-osteoporosis therapy; MPR, medication possession rate

*, including Zolendronic acid, Estrogen, Raloxifene, Teriparatide