

# **Effect of switching branded risedronate to branded or generic alendronate on medication compliance with weekly bisphosphonates: a cohort study utilizing the DAPI prescription claims database**

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## **Introduction:**

Weekly oral bisphosphonates are the most widely used medications for the treatment of osteoporosis. However, medication adherence with these drugs is suboptimal. The availability of the first generic alendronate products at the end of 2005 in Germany led to frequent generic substitution of patients previously treated with branded risedronate. The aim of this study was to explore whether switching from branded risedronate to generic or branded alendronate would affect medication adherence (refill compliance).

## **Methods:**

A cohort study was performed utilizing the DAPI database, containing reimbursement data for ambulatory prescriptions within the statutory health-insurance system from more than 80 % of German community pharmacies. The study cohort included all patients with a first (= index) prescription of a weekly oral bisphosphonate product (risedronate, branded alendronate or generic alendronate) during the period of October 2005 to March 2006. Patients were required to be prevalent patients (i.e., pre-treatment with risedronate for at least 6 months). During 12 months after the index date, non-compliance was determined from the medication possession ratio (MPR < 0.8). Multivariable logistic regression models were employed to adjust for potential confounding variables.

## **Results:**

A total of 73,446 prevalent risedronate patients were included, of which 67,194 (91.5 %) continued branded risedronate, 5,251 (7.1 %) switched to generic alendronate and 1,001 (1.4 %) switched to branded alendronate. In patients receiving branded risedronate, the median MPR was 0.838 compared to 0.742 in patients switched to generic alendronate and 0.693 in patients switched to branded alendronate. The odds for non-compliance were slightly increased in patients switched to generic alendronate (adjusted OR 1.13 [99%CI 1.05-1.22]) but were unaffected in patients switched to branded alendronate (adjusted OR 1.08 [0.91-1.29]) compared to patients continuing branded risedronate.

## **Discussion:**

Switching patients from branded risedronate to generic alendronate might negatively affect refill compliance.