

Bisphosphonates and DEXA scans: how do you prescribe and order?

Based on the best evidence, oral bisphosphonates **do not reduce fractures** for women without a prior fragility fracture.

Bone mineral density (BMD) measured by a dual energy X-ray absorptiometry (DEXA) scan **does not reliably predict who will or will not fracture**. Population screening using the Fracture Risk Assessment Tool (FRAX) +/- DEXA scans to identify and treat 'high-risk' patients **does not reduce fracture rates** for post-menopausal women.

This Portrait shows your 2021 prescribing patterns of bisphosphonates and ordering of DEXA scans. Included are patients aged 50 years or older.

Don't use oral bisphosphonates for primary prevention of fractures.

Number of patients who were prescribed bisphosphonates for **primary** prevention of fractures, 2021.

* Precise number concealed to protect privacy due to small numbers

You

1-5*

Optimal
0 PATIENTS

Median BC prescriber with a similar practice¹

15

Reconsider the role of dual-energy X-ray absorptiometry (DEXA) scans.

Number of patients referred for a DEXA scan, 2021

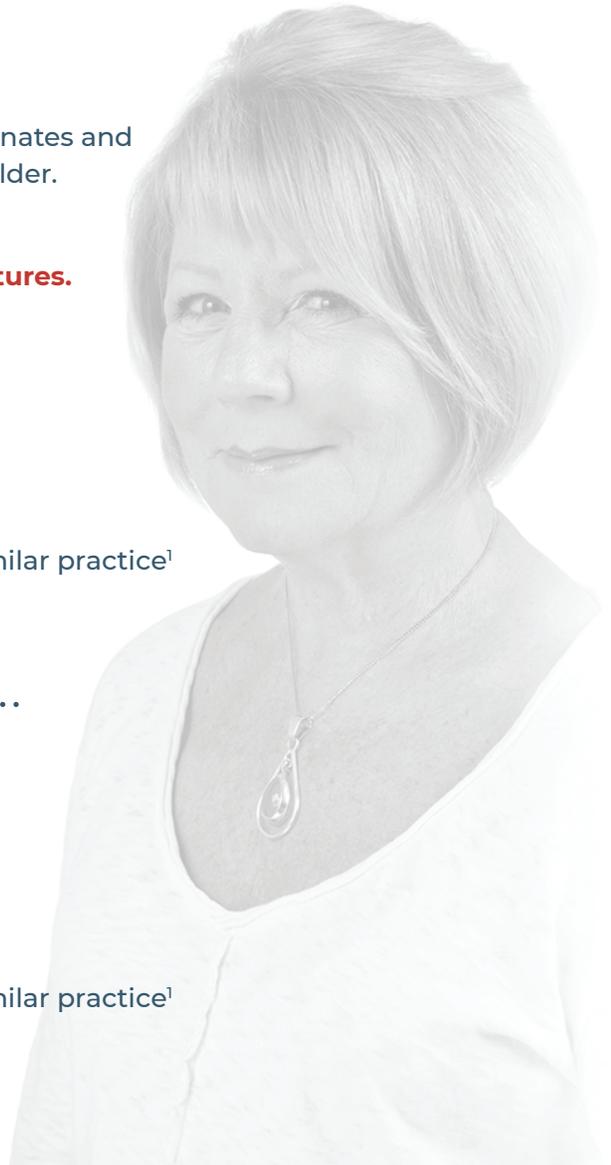
* Precise number concealed to protect privacy due to small numbers

You

1-5*

Median BC prescriber with a similar practice¹

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Details on bisphosphonate treatment



The TI performed a systematic review and meta-analysis of randomized controlled trials (RCTs) in women (mean age 68 years) who had no prior fragility fracture. Oral bisphosphonates did not produce a statistically significant difference in hip or wrist fractures, the main reported benefit outcomes.²

There are no primary prevention RCTs of oral bisphosphonates in men; men are at lower risk of fracture than women so the magnitude of benefit of bisphosphonates for men is likely smaller than for women. Men are included in this Portrait.

Details on screening, which may include DEXA scans



As screening tools, BMD and FRAX do not reliably predict who will experience fragility fractures. In studies of programs that screen for risk of fragility fracture, the screening/treatment groups were assessed by FRAX, and offered BMD testing if considered 'high risk.'

Treatment of high-risk patients was recommended in accordance with national guidelines and included (but was not limited to) oral bisphosphonates. Control groups received 'usual care.' None of the RCTs of screening programs found a statistically significant reduction in total osteoporotic fractures or major osteoporotic fractures. See TI Letter 147 for more information.³

There is insufficient evidence to determine the role of BMD testing in the management of secondary prevention patients or in people already taking oral bisphosphonates.

¹ Based on the median for Portrait prescribers, adjusted to gender and age distributions and prescriber visits in 2021.

² Therapeutics Initiative. *A Systematic Review of the Efficacy of Bisphosphonates*. Therapeutics Letter. 2011 (Sept-Oct); 83:1-2.

³ Therapeutics Initiative. *Screening to reduce fragility fractures: new trials, still ineffective*. Therapeutics Letter. 2024 (Jan-Feb); 147:1-2.

PLEASE NOTE: The accuracy of your prescribing Portrait is dependent on the completeness of patient visit data and precision of diagnosis coding. FRAX is not recorded as part of the Medical Service Plan administrative data, so we cannot provide information on your usage of this tool.

DATA & DEFINITIONS

Patients included: Bisphosphonate users were patients aged 50 and older with at least one prescription for an oral bisphosphonate that was prescribed by you and filled in a community pharmacy in 2021. BMD patients were 50 years and older, with at least one BMD test recorded in MSP in 2021 and referred by you.

Patients excluded: Bisphosphonate users with a history of pamidronate use, cancer, hypercalcemia, Paget disease of bone, Osteogenesis imperfecta, chemotherapy or radiotherapy. Patients treated following a fragility fracture were excluded (see webpage for more details). Data for individuals enrolled in the BC First Nations Health Authority were not available.

Drugs included: alendronate, etidronate, and risedronate.

Gender & sex terminology: We note the limitations of our use of the words 'women' and 'men' in this Portrait. In the RCTs reviewed and in MSP data, sex and gender are often conflated and codified as binary states. We acknowledge that sex and gender may influence health in different ways and that conflating these is problematic.

FOR DETAILED DEFINITIONS AND REFERENCES SEE: WWW.TI.UBC.CA/PORTRAIT-FRACTURES