Osteoporosis drug prescribing often does not follow guidelines

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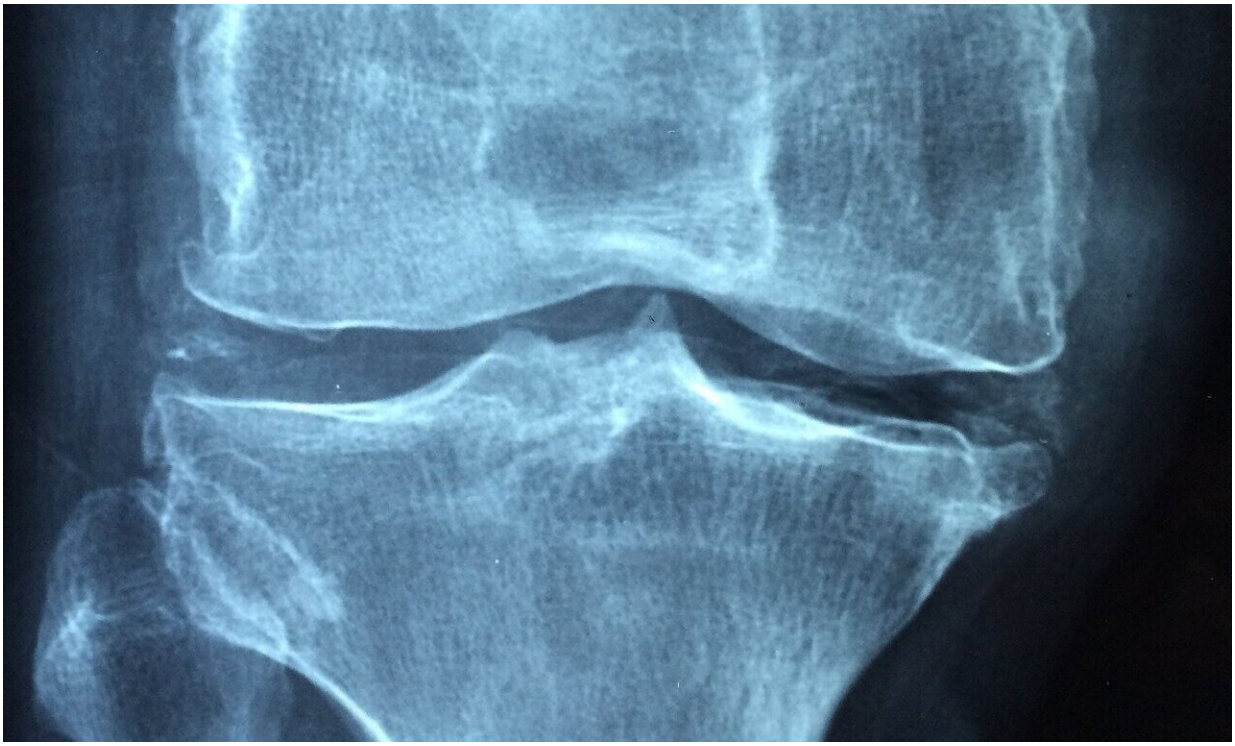

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Less than one in 10 commercially insured patients in the United States who broke a hip, a major complication of osteoporosis, receive any osteoporosis medical treatment within two calendar quarters of their fracture, according to a study whose results will be presented at ENDO 2021, the Endocrine Society's annual meeting.

Rates of treatment with osteoporosis, or bone loss, medicines dropped dramatically over the past decade from 15 percent to 8 percent, a new analysis of a large nationwide private insurance database found. The decrease comes despite fractures often being the first sign of osteoporosis, said the study's lead author, Sara Cromer, M.D., an endocrinology fellow at Massachusetts General Hospital in Boston, Mass.

"This very low rate of treatment with bone-directed medications to prevent future fractures is concerning," Cromer said. "This is analogous to providing no therapy to lower blood pressure or cholesterol after a heart attack."

Medical associations recommend osteoporosis evaluation and treatment after a hip fracture. Osteoporosis medications, also called bone-directed or bone-modifying drugs, prevent bones from getting weaker by slowing the natural breakdown of bone or by stimulating new bone to form.

Some 54 million Americans—primarily women—have osteoporosis or are at risk of the bone-weakening disease, putting them at increased danger of broken bones, according to the Hormone Health Network. Each year, more than 300,000 older adults nationwide sustain a hip fracture requiring hospitalization, according to the U.S. Centers for Disease Control and Prevention.

The new study involved more than 15 million prescription claims and reviewed trends in U.S. prescribing of bone-directed therapies from 2009 to 2020. Although the study data do not address possible reasons for the decrease in bone-directed treatment of hip fractures, Cromer said the diagnosis of osteoporosis is often overlooked, even in patients who experience disease-defining fractures.

Another reason could be public concerns about the side effects of some

common osteoporosis drugs, including bisphosphonates, she suggested. These include the very rare chance of either osteonecrosis of the jaw, which is a severe breakdown of bone in the jaw, or of fractures of the thigh bone.

The Society's Clinical Practice Guideline on osteoporosis treatment in postmenopausal women state that the benefits of bone-directed medications outweigh their risk for women at high risk of breaking a bone, especially those who recently experienced a fracture.

"The risk of second fracture is higher without osteoporosis medications," Cromer said. "Also, a hip fracture can be deadly, with approximately 20-30 percent of people dying within a year after a hip fracture, and studies show that some medications for osteoporosis can even lower this risk of death."

Another trend that their study identified that Cromer said seems out of proportion to the Society's guideline recommendations is the rapid rise in use of denosumab, which became available in 2010. This medicine, which is given twice a year as an injection in the doctor's office, is a monoclonal antibody that works similar to bisphosphonates. The guidelines recommend denosumab as an alternative to bisphosphonates for the initial treatment of osteoporosis if they cannot take bisphosphonates or are at high risk of osteoporotic fractures.

By 2017, use of denosumab surpassed all other bone-directed drugs except the bisphosphonate alendronate for the treatment of osteoporosis, the study data showed. Furthermore, Cromer said by 2013 denosumab became the most commonly used drug for the prevention of fractures related to cancers that have, or are likely to, spread to the bone.

"While denosumab is highly effective at improving bone density and preventing fracture, it has also been known for several years that there is

an increase in spinal fractures if denosumab is discontinued without follow-up treatment, and sometimes even with follow-up treatment," Cromer said. "This safety concern does not seem to be reflected in medication use as of early 2020, the end of our study."

Cromer hypothesized that the popularity of denosumab over other effective medications may be because its form of administration—twice-a-year injections—is more convenient than that of oral bisphosphonates that patients take once a week. However, she said denosumab was used more often than zoledronic acid, an intravenous bisphosphonate that requires only once-yearly dosing. The reasons for the rapid increase in use of denosumab remain unclear, she noted.

She encouraged patients with osteopenia or osteoporosis to discuss their risks and benefits of treatment with their doctor and to ask which medicine is best for them.

More information: Richard Eastell et al. Pharmacological Management of Osteoporosis in Postmenopausal Women: An Endocrine Society* Clinical Practice Guideline, *The Journal of Clinical Endocrinology & Metabolism* (2019). DOI: 10.1210/jc.2019-00221

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