POEMs

Patient-Oriented Evidence That Matters

Bone Mineral Density Testing: One and Done

Clinical Question

Is repeat bone mineral density (BMD) testing necessary to identify women who are susceptible to fracture?

Bottom Line

Rechecking BMD after three years does not add additional prognostic information. Serial BMD testing is not useful in estimating fracture risk and assessing the need for treatment because BMD does not change much within three years. Another study found similar results in older patients, and a third study found that BMD monitoring is not necessary after starting treatment with a bisphosphonate. (Level of Evidence = 1b)

Synopsis

This study evaluated 7,419 women who were enrolled in the Women's Health Initiative study. The postmenopausal women, between 50 and 79 years of age (mean age 66.1 years), had a baseline BMD measurement and a second BMD measurement in three years and did not have treatment other than calcium and vitamin D supplementation in the intervening years. Follow-up was an average of 12.1 years after the initial test. Over this time, 1.9% of the women experienced a hip fracture, and 9.9% had a major osteoporotic fracture, defined as hip, clinical spine, forearm, or shoulder fracture. Compared with the baseline BMD test result, a change in BMD over three years or the combination of change in BMD with baseline BMD did not predict subsequent hip or major fracture to a greater degree. The follow-up BMD testing after three years did not provide any more clinical information. Associations between bone density and fracture risk were the same when analyzed by risk factors such as the presence of diabetes mellitus, age, race and ethnicity, body weight, and baseline T-score.

Study design: Cohort (prospective)

Funding source: Government

Setting: Outpatient (any)

Reference: *Crandall CJ, Larson J, Wright NC, et al. Serial bone density measurement and incident fracture risk discrimination in postmenopausal women.* JAMA Intern Med. *2020;180(9):1232-1240.*

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Better Primary Care Continuity Is Associated with Lower Mortality Risk

Clinical Question

Is continuity of care associated with decreased mortality?

Bottom Line

Most studies in this systematic review found a protective effect of greater primary care continuity and all-cause mortality. (Level of Evidence = 2a)

Synopsis

The authors searched several databases and the gray literature to identify 13 empiric studies that reported measures of continuity and mortality in patients seen in primary care settings. All of the studies evaluated continuity of care via care-use patterns or patient report. Only two of the studies included nurse practitioners or physician assistants. The nature of the studies and their data prevented formal meta-analysis. A limitation of this review is that the studies evaluated only personal continuity (ongoing relationship with a health care professional), not informational continuity (accessibility of records) or management

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continuity (coordination between all groups involved in care). Twelve studies evaluated all-cause mortality, nine of which found a statistically significant lower mortality risk associated with greater continuity, two found no association, and one found that the association changed based on the measure of continuity used. Two studies found lower risks of coronary heart disease mortality with greater continuity, and one found lower mortality risks from cancer or chronic obstructive lung disease. The authors extracted potential mechanisms to explain the associations, but it is all speculation and begs the real questions: how can more primary care physicians be cultivated, and how can health care systems be encouraged to prioritize the delivery of primary care?

Study design: Systematic review

Funding source: Self-funded or unfunded

Setting: Outpatient (primary care)

Reference: *Baker R, Freeman GK, Haggerty JL, et al. Primary medical care continuity and patient mortality: a systematic review.* Br J Gen Pract. *2020; 70(698):e600-e611.*

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HPV Vaccine, Especially Before Age 17, Is Associated with a Large Reduction in Invasive Cervical Cancer

Clinical Question

Is the human papillomavirus (HPV) vaccine associated with a lower risk of invasive cervical cancer?

Bottom Line

HPV vaccination is associated with a significant reduction in the likelihood of invasive cervical cancer (adjusted incidence rate ratio [IRR] = 0.37; 95% CI, 0.21 to 0.57). The magnitude of this reduction was greater in women who were vaccinated before 17 years of age (adjusted IRR = 0.12; 95% CI, 0.00 to 0.34). (Level of Evidence = 2b)

Synopsis

There are limited data regarding whether HPV vaccination prevents invasive cervical cancer. This Swedish study used data from a national health registry of more than 1.6 million girls and women who were between 10 and 30 years of age from 2006 to 2017. In Sweden, HPV vaccination was offered to girls 13 to 17 years of age starting in 2007, with expansion to younger and older girls in 2012. Cervical cancer screening in Sweden begins at age 23 and is performed at intervals of three to seven years, depending on age. A quadrivalent vaccine (types 6, 11, 16, and 18) was used. The researchers reviewed registries with information about cancer diagnoses and vaccination. A total of 1,145,112 patients did not receive an HPV vaccine, whereas 527,871 received at least one dose during the study period. At baseline, girls who were vaccinated were more likely to have a Swedish-born mother and come from a high-income family. The primary outcome was the IRR for invasive cervical cancer between vaccinated and unvaccinated girls and women, adjusted for age, calendar year of immunization, and parental and residential characteristics. The crude incidence rates were 5.3 per 100,000 person-years for unvaccinated participants and 0.73 per 100,000 person-years for those who had been vaccinated. The fully adjusted IRR was 0.37 (95% CI, 0.21 to 0.57) for invasive cervical cancer. For girls vaccinated before 17 years of age, the IRR was 0.12 (95% CI, 0.00 to 0.34), and for those vaccinated between 17 and 30 years of age, it was 0.47 (95% CI, 0.27 to 0.75).

Study design: Cohort (retrospective)

Funding source: Foundation

Setting: Population-based

Reference: *Lei J, Ploner A, Elfström KM, et al. HPV vaccination and the risk of invasive cervical cancer.* N Engl J Med. *2020;383(14):1340-1348.*

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Low-Dose Edoxaban Effective for Stroke Prevention in Older Patients with Atrial Fibrillation

Clinical Question

Is low-dose edoxaban (Savaysa) safe and effective for stroke prevention in older patients with atrial fibrillation?

Bottom Line

A lower dose of edoxaban is effective in decreasing stroke and systemic embolism in older patients with atrial fibrillation compared with placebo

(number needed to treat = 23). Although the difference in major bleeding rates with edoxaban vs. placebo did not reach statistical significance, edoxaban use led to higher rates of gastrointestinal bleeding (number needed to harm = 83) and clinically significant nonmajor bleeding (number needed to harm = 18). This study was completed in Japan, and the mean body mass index of participants was 22 kg per m^2, which may not generalize to the population in the United States. (Level of Evidence = 2b)

Synopsis

Many older patients with atrial fibrillation may not be prescribed standard doses of anticoagulation for stroke prevention because of a perceived higher risk of bleeding. In this Japanese study, investigators enrolled patients 80 years and older with nonvalvular atrial fibrillation and a $CHADS_2$ (congestive heart failure; hypertension; age 75 years or older; diabetes mellitus; prior stroke, transient ischemic attack, or thromboembolism [doubled]) score of 2 or more for whom standard doses of oral anticoagulants were considered inappropriate (e.g., those with a history of critical bleeding, severe renal impairment, low body weight, continuous nonsteroidal anti-inflammatory drug use, or antiplatelet drug use). A total of 984 patients were randomized to receive edoxaban, 15 mg daily (standard dose is 60 mg or 30 mg daily), or a matched placebo. The two groups had similar baseline characteristics: mean age of 86.6 years, mean body weight of 111.5 lb (50.6 kg), and a mean $CHADS_2$ score of 3. The annualized rate of stroke or systemic embolism was lower in the edoxaban group than in the placebo group (2.3% vs. 6.7%; hazard ratio [HR] = 0.34; 95% CI, 0.19 to 0.61; $P < .001$). The incidence of major bleeding was higher in the edoxaban group, although this difference did not reach significance (3.3% for edoxaban vs. 1.8% for placebo; $P = .09$). The edoxaban group had statistically significant higher rates of gastrointestinal bleeding (2.3% vs. 0.8%; HR = 2.85; 95% CI, 1.03 to 7.88) and clinically relevant nonmajor bleeding (14.5% vs. 8.9%; HR = 1.62; 95% CI, 1.14 to 2.30).

Study design: Randomized controlled trial (double-blinded)

Funding source: Industry

Allocation: Concealed

Setting: Outpatient (any)

Reference: *Okumura K, Akao M, Yoshida T, et al.; ELDERCARE-AF Committees and Investigators. Low-dose edoxaban in very elderly patients with atrial fibrillation.* N Engl J Med. *2020;383(18):1735-1745.*

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