Top POEMs of 2017 Consistent with the Principles of the Choosing Wisely Campaign

Roland Grad, MD, MSc, McGill University, Montreal, Quebec, Canada
Mark H. Ebell, MD, MS, College of Public Health, University of Georgia, Athens, Georgia

This article discusses the POEMs (patient-oriented evidence that matters) of 2017 judged to be most consistent with the principles of the Choosing Wisely campaign. A POEM is a synopsis of a research study that reports patient-oriented outcomes, such as improvement in symptoms, quality of life, or mortality; is free of important methodologic bias; and recommends a change in practice for many physicians. We selected these POEMs through a crowdsourcing strategy of the daily POEMs information service for physician-members of the Canadian Medical Association. Recommendations are presented from these top POEMs of primary research or meta-analysis as interventions to consider avoiding in practice. The recommendations cover musculoskeletal conditions (e.g., avoid arthroscopy for initial treatment of a meniscal tear), respiratory disease (e.g., avoid screening for lung cancer without informing your patient of the risk of a false-positive test result), infections (e.g., do not routinely add trimethoprim/sulfamethoxazole to cephalexin for nonpurulent uncomplicated cellulitis), and cardiovascular disease (e.g., do not prescribe niacin, alone or in combination with a statin, to prevent cardiovascular disease). These POEMs describe interventions whose benefits are not superior to other options, are sometimes more expensive, or put patients at increased risk of harm. Knowing more about these POEMs and their connection with the Choosing Wisely campaign will help clinicians and their patients engage in conversations that are better informed by high-quality evidence. (*Am Fam Physician*. 2018;98(2):93-98.

A POEM (patient-oriented evidence that matters) is a synopsis of a research study that reports patient-oriented outcomes, such as improvement in symptoms, quality of life, or mortality; is free of important methodologic bias; and recommends a change in practice for many physicians. In a popular continuing medical education program, physician members of the Canadian Medical Association receive the daily POEM and rate each one using a brief validated questionnaire. From these ratings, each year we select the daily POEMs that are most consistent with the principles of the Choosing Wisely campaign, an international effort to reduce unnecessary medical tests, treatments, and procedures. Unlike articles where experts choose the top research papers of the year,[1] this crowdsourcing method allows us to identify new research studies about clinical actions most consistent with Choosing Wisely, from the perspective of physicians in everyday practice.[2]

This is the third installment of an annual series[3,4] summarizing the actions to consider avoiding in clinical practice as identified from the POEMs rated in 2017. These data provided an average of 1,532 ratings on each of the 247 unique POEMs of the year.

Additional content at https://www.aafp.org/afp/2018/0715/p93.html.

POEMs are provided by Essential Evidence Plus, a point-of-care clinical decision support system published by Wiley-Blackwell, Inc. For more information, visit http://www.essentialevidenceplus.com.

The full text of the POEMs discussed in this article is available at https://www.aafp.org/afp/poems-cw-2017.

CME **This clinical content** conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 82.

Author disclosure: Dr. Grad has no relevant financial affiliations. Dr. Ebell is cofounder and editor-in-chief of Essential Evidence Plus, published by Wiley-Blackwell, Inc. See Editor's Note on page 97.

TABLE 1

Musculoskeletal Disease

POEM title	Clinical actions to consider for Choosing Wisely
Arthroscopic meniscal surgery = nonoperative management[6]	In patients with knee pain and a degenerative meniscal tear, do not recommend arthroscopic surgery for the outcomes of improved long-term pain or function before a trial of conservative management.
Radial extracorporeal shock wave therapy = sham therapy for subacromial shoulder pain[7]	In patients with subacromial shoulder pain receiving supervised exercise therapy, do not add radial extracorporeal shock wave therapy to improve their symptoms.
Long-term use of bisphosphonates increases the risk of fractures in older women[8]	In elderly women already receiving bisphosphonates for primary prevention of fragility fracture, do not recommend such treatment for more than five years.
Placebo more effective than glucosamine plus chondroitin sulfate for knee degenerative joint disease[9]	In adults with radiographically moderate to severe knee degenerative joint disease and moderate to severe pain, do not expect glucosamine plus chondroitin to improve pain and function more than a placebo.
Diazepam adds little to NSAID treatment for acute low back pain[10]	In patients with uncomplicated low back pain of less than two weeks duration; do not add diazepam to naproxen, 500 mg twice daily, to further reduce pain.

NSAID = nonsteroidal anti-inflammatory drug.

Information from references 6 through 10.

From the data, we identified the top POEMs of primary research or meta-analysis where physicians said that study findings would help them to reduce overdiagnosis or overtreatment in clinical practice. We excluded 13 of the most relevant POEMs of 2017 because they were previously discussed in *American Family Physician*.[5] However, to highlight their importance, these POEMs are available online *(eTable A)*. Below, we organize the top POEMs for Choosing Wisely by condition and accompany each one with a brief discussion. We also discuss implications for decision making based on one of the most relevant clinical practice guidelines of 2017.

Musculoskeletal Conditions

The first group of POEMs focuses on the treatment of musculoskeletal conditions: meniscal tears, shoulder pain, osteoporosis, osteoarthritis of the knee, and low back pain *(Table 1)*.[6-10] In 2017, a systematic review of nine clinical trials confirmed that arthroscopic meniscectomy for a degenerative tear is no better than a nonoperative approach involving exercise or physical therapy.[6] This finding is consistent with the bottom line of POEMs from 2015 and 2016, as summarized in the previous installments of this series.[3,4] Despite this knowledge, surgeons continue to perform the procedure in older persons.[11]

Subacromial shoulder pain is common in middle-aged persons. It is located near the top and lateral side of the shoulder. A properly conducted randomized controlled trial (RCT) showed no benefit to symptoms from adding radial extracorporeal shock wave therapy to supervised exercise therapy.[7]

A 2017 guideline from the American College of Physicians that was endorsed by the American Academy of Family Physicians (AAFP) recommends treating adults who have osteoporosis and no known fragility fracture with a bisphosphonate for no more than five years.[12,13] An observational study using data from the Women's Health Initiative supports this recommendation. This cohort study found a higher risk of clinical fracture among women who used bisphosphonates for 10 to 13 years compared with women who received bisphosphonates for two years (hazard ratio = 1.29; 95% confidence interval, 1.07 to 1.57).[8]

Many patients with osteoarthritis of the knee self-medicate with glucosamine and chondroitin. An industry-funded RCT of glucosamine plus chondroitin was stopped after six months when the data safety monitoring board judged the placebo intervention to be better at improving pain or function.[9] Harms were similar in both groups. Because glucosamine and chondroitin are sold as herbal supplements and are not regulated by the U.S. Food and Drug Administration, some preparations may be more effective than others.

Given the muscle spasm that accompanies acute low back pain, a common practice is to prescribe muscle relaxants such as cyclobenzaprine (Flexeril) or diazepam (Valium). In persons already taking naproxen for acute low back pain, adding diazepam does not improve disability or pain scores.[10]

Respiratory Disease

Two POEMs focus on screening for lung cancer and overtreatment of asthma *(Table 2)*.[14,15] The National Lung Screening Trial found a reduction in disease-specific and all-cause mortality with lung cancer screening.[16] Subsequently, the Canadian Task Force on Preventive Health Care[17] and U.S. Preventive Services Task Force[18] voted in favor of lung cancer screening in select high-risk populations (e.g., older adults with at least a 30 pack-year smoking history), although the AAFP found insufficient evidence to recommend screening.[19] Some family physicians have started to offer lung cancer screening, but concern about the high rate of false-positive results (and other harms, such as radiation exposure, overdiagnosis, and incidental non-lung findings) suggest that there is no single correct choice. In a cohort of primary care patients in the Veterans Health Administration system, 97.5% of patients with an abnormal computed tomography result did not have lung cancer.[14] This finding suggests that shared decision making is appropriate given the burden of false-positive results and subsequent follow-up.[20] High-quality lung cancer screening decision aids for patients and clinicians are available from the Agency for Healthcare Research and Quality at https://effectivehealthcare.ahrq.gov/decision-aids/lung-cancer-screening/home.html.

Uncertainty about a patient's diagnosis of asthma should increase in the absence of formal testing with spirometry. In a population-based study of 613 adults 18 years or older who were thought to have asthma, 203 patients (33%) had a formal diagnosis of asthma ruled out after spirometry and bronchial challenge testing.[15] Those confirmed not to have asthma after spirometry or serial bronchial challenge testing had their asthma medications gradually tapered and discontinued, if possible, over four study visits. After one year of follow-up, only six (3%) of these patients returned with respiratory symptoms and resumed treatment. The take-home message is to confirm the diagnosis of asthma in patients who have never undergone formal testing.

Infections

Three POEMs about infections (or their sequelae) identified clinical actions that we should consider avoiding in practice *(Table 3)*.[21-23]

In patients with respiratory tract infection, it is tempting to treat symptoms of wheezing in the outpatient setting. A well-designed RCT identified 401 patients with respiratory tract infection and at least one other lower respiratory tract symptom (e.g., phlegm, chest pain, wheezing, shortness of breath). These patients had no evidence of chronic obstructive pulmonary disease and no prescription for asthma in the previous five years. They were randomized to 40 mg of prednisolone daily for five days or placebo. Treatment yielded no difference between

TABLE 2

Respiratory Disease

POEM title	Clinical actions to consider for Choosing Wisely
High false-positive rate with lung cancer screening[14]	Do not order low-dose computed tomography to screen for lung cancer without informing your patient of the risk of a false-positive test result.
One-third of adults with diagnosed asthma can be weaned off all asthma meds[15]	In patients not confirmed to have asthma with either baseline spirometry or serial bronchial challenge testing, as many as one-third can be safely weaned off their daily asthma medication.

Information from references 14 and 15.

TABLE 3

Infections

POEM title	Clinical actions to consider for Choosing Wisely
Oral steroids not helpful for acute lower respiratory tract infection in nonasthmatic adults[21]	In adults 18 years or older with no chronic pulmonary disease or asthma seen in the outpatient setting, do not prescribe prednisone for an acute cough (28 days or less) and at least one other lower respiratory tract symptom (e.g., phlegm, chest pain, wheezing, or shortness of breath).
Tubes ineffective for treating otitis media in children[22]	Do not recommend tympanostomy tubes for sustained improved hearing in children with recurrent otitis media with effusion.
No benefit with addition of TMP/SMX to cephalexin for nonpurulent cellulitis[23]	Do not routinely add TMP/SMX to cephalexin (Keflex) for nonpurulent uncomplicated cellulitis.

TMP/SMX = trimethoprim/sulfamethoxazole.

Information from references 21 through 23.

groups in duration of cough or severity of symptoms, even in those who had wheeze on presentation.[21]

For children with recurrent otitis media or chronic effusion, many of us were taught that tympanostomy tubes are indicated to prevent delay in language acquisition. However, a meta-analysis of 16 RCTs with children who had otitis media with effusion found no hearing benefit from this surgical intervention after 12 to 24 months.[22] Will this contribute to a change in otolaryngology referral for our preschoolers? At the very least, we should share this information with parents who ask about tympanostomy tubes.

Given the prevalence of methicillin-resistant *Staphylococcus aureus*, trimethoprim/sulfamethoxazole is increasingly prescribed in some communities for patients with skin structure infections. In an RCT of 500 patients who presented to the emergency department with nonpurulent uncomplicated cellulitis, covering for methicillin-resistant *S. aureus* and streptococci with trimethoprim/sulfamethoxazole did not improve rates of clinical cure compared with cephalexin (Keflex) alone.[23] Of note, physicians in this study used bedside ultrasonography to exclude patients with abscess. Providing early follow-up for patients in the emergency department who do not respond to cephalexin is an approach consistent with antimicrobial stewardship.

Cardiovascular Disease Prevention

Two POEMs focus on preventing cardiovascular disease *(Table 4).*[24,25] Although niacin may increase high-density lipoprotein cholesterol levels, no patient-oriented outcomes are improved by adding this treatment in the statin era. This was the finding of a meta-analysis of trials comparing niacin with placebo, either alone or in combination with statin treatment.[24] The test of time has confirmed these results, which are consistent with other meta-analyses of niacin or fibrates.[26] However, in patients with intolerance to statins, the American College of Cardiology/American Heart Association still recommend that nonstatin drugs be considered.[27]

As briefly mentioned in the top 20 research articles of 2017,[5] one of the most highly rated guidelines of the year for relevance to practice was from the U.S. Preventive Services Task Force.[28] This guideline recommended that adults without a history of cardiovascular disease (CVD) use a low- to moderate-dose statin for the primary prevention of CVD events and mortality when all of the following criteria are met: (1) they are 40 to 75 years of age; (2) they have one or more CVD risk factors (i.e., dyslipidemia, diabetes, hypertension, or smoking); and (3) they have a calculated 10-year risk of a cardiovascular event of 10% or greater.

Many persons 65 to 74 years of age have an estimated 10-year CVD risk greater than 10%, using the Framingham calculator.[29] Yet the top POEM of 2017 consistent with Choosing Wisely, which was also one of the top 20 research articles of 2017,[5] was the lipid-lowering trial component of the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial. In a post-hoc analysis, there was no benefit to statins for primary cardiovascular prevention in persons 65 to 74 years of age.[25] This finding, with the absence of direct trial evidence of benefit from statins for primary prevention of CVD in older persons, may have an impact on future guidelines. For now, a shared decision about initiating statin treatment in patients older than 65 years and no clinically apparent coronary disease seems most reasonable.

Miscellaneous

The remaining two POEMs do not fit neatly into one category but provide useful guidance for Choosing Wisely *(Table 5).*[30,31] First, adding prednisone to antihistamines offers no added benefit for the acute treatment of simple urticaria. This finding came from an RCT of 100 adults who presented to an emergency department with a generalized rash for less than one day characterized by fleeting wheals and itching but without angioedema or anaphylaxis.[30] All patients were treated with the antihistamine levocetirizine (Xyzal), 5 mg daily for five days, and randomized to additionally receive placebo or prednisone, 40 mg daily for four days. On follow-up by telephone, 62% of patients treated with antihistamine/prednisone and 76% receiving

TABLE 4

Cardiovascular Disease Prevention

POEM title	Clinical actions to consider for Choosing Wisely
Niacin does not decrease mortality in patients with CAD or low HDL[24]	In patients with or at risk of coronary artery disease, do not prescribe niacin, either alone or in combination with a statin, to prevent cardiovascular mortality, nonfatal myocardial infarction, stroke, or the need for revascularization.
Lipid treatment for primary prevention not effective in older adults[25]	Do not initiate a statin in persons older than 65 years with no clinically apparent cardiovascular disease without an attempt at shared decision making.

CAD = coronary artery disease; HDL = high-density lipoprotein.

Information from references 24 and 25.

TABLE 5

Miscellaneous

POEM title	Clinical actions to consider for Choosing Wisely
Steroid treatment adds no benefit to antihistamines for acute hives[30]	Do not add prednisone to an antihistamine for simple acute urticaria.
The Quick-Wee method gets infant urine flowing[31]	In infants from whom a clean-catch urine sample is needed, do not attempt catheterization without at least considering the Quick-Wee method (gentle cutaneous suprapubic stimulation using gauze soaked in refrigerated saline).

Information from references 30 and 31.

antihistamine/placebo were asymptomatic (difference not significant). Relapse of urticaria was similar in both groups.

Finally, is there an effective, noninvasive way to quickly collect a successful urine sample from infants? An RCT of 354 infants one to 12 months of age showed the Quick-Wee method to be simple and effective while avoiding a catheter for a urine sample. Compared with the wait-and-catch strategy, the Quick-Wee method (gentle cutaneous suprapubic stimulation using gauze soaked in refrigerated saline) improved the chance of successfully collecting a urine sample in a specimen cup (30% vs. 9% of the time), with no change in the rate of contamination.[31]

Editor's Note: This article was cowritten by Dr. Mark Ebell, Deputy Editor for Evidence-Based Medicine in *AFP*, and cofounder and Editor-in-Chief of Essential Evidence Plus, published by Wiley-Blackwell, Inc. Because of Dr. Ebell's dual roles and ties to Essential Evidence Plus, the article underwent peer review and editing by three of *AFP*'s medical editors. Dr. Ebell was not involved in the editorial decision-making process.— Sumi M. Sexton, MD, Editor-in-Chief, *American Family Physician*

See the Top POEMs of 2016 and 2015 consistent with the Choosing Wisely campaign at https://www.aafp.org/afp/2017/0815/p234.html and https://www.aafp.org/afp/2016/1001/p566.html.

The Authors

ROLAND GRAD, MD, MSc, is an associate professor in the Department of Family Medicine at McGill University, Montreal, Quebec, Canada

MARK H. EBELL, MD, MS, is a professor in the Department of Epidemiology at the University of Georgia in Athens.

Address correspondence to Roland Grad, MD, MSc, McGill University, 3755 Cote Sainte Catherine Rd., Montreal, Quebec, Canada H3T 1E2 (e-mail: roland.grad@mcgill.ca). Reprints are not available from the authors.

References

1. Morgan DJ, Dhruva SS, Coon ER, Wright SM, Korenstein D. 2017 Update on medical overuse: a systematic review. *JAMA Intern Med*. 2018;178(1):110-115.
2. Grad R, Pluye P, Tang D, Shulha M, Slawson DC, Shaughnessy AF. Patient-oriented evidence that matters (POEMs)™ suggest potential clinical topics for the Choosing Wisely™ campaign. *J Am Board Fam Med*. 2015;28(2):184-189.
3. Grad R, Ebell MH. Top POEMs of 2015 consistent with the principles of the Choosing Wisely campaign. *Am Fam Physician*. 2016;94(7):566-570.
4. Grad R, Ebell MH. Top POEMs of 2016 consistent with the principles of the Choosing Wisely campaign. *Am Fam Physician*. 2017;96(4):234-239.
5. Ebell MH, Grad R. Top 20 research studies of 2017 for primary care physicians. *Am Fam Physician*. 2018;97(9):581-588.
6. Monk P, Garfjeld Roberts P, Palmer AJ, et al. The urgent need for evidence in arthroscopic meniscal surgery. *Am J Sports Med*. 2017;45(4):965-973.
7. Kvalvaag E, Brox JI, Engebretsen KB, et al. Effectiveness of radial extracorporeal shock wave therapy (rESWT) when combined with supervised exercises in patients with subacromial shoulder pain: a double-masked, randomized, sham-controlled trial. *Am J Sports Med*. 2017;45(11):2547-2554.
8. Drieling RL, LaCroix AZ, Beresford SA, et al. Long-term oral bisphosphonate therapy and fractures in older women: the Women's Health Initiative. *J Am Geriatr Soc*. 2017;65(9):1924-1931.
9. Roman-Blas JA, Castañeda S, Sánchez-Pernaute O, Largo R, Herrero-Beaumont G; CS/GS Combined Therapy Study Group. Combined treatment with chondroitin sulfate and glucosamine sulfate shows no superiority over placebo for reduction of joint pain and functional impairment in patients with knee osteoarthritis: a six-month multicenter, randomized, double-blind, placebo-controlled clinical trial [published correction appears in *Arthritis Rheumatol*. 2017;69(10):2080]. *Arthritis Rheumatol*. 2017;69(1):77-85.
10. Friedman BW, Irizarry E, Solorzano C, et al. Diazepam is no better than placebo when added to naproxen for acute low back pain. *Ann Emerg Med*. 2017;70(2):169-176.e1.
11. Stahel PF, Wang P, Hutfless S, et al. Surgeon practice patterns of arthroscopic partial meniscectomy for degenerative disease in the United States: a measure of low-value care. *JAMA Surg*. 2018;153(5):494-496.
12. Qaseem A, Forciea MA, McLean RM, Denberg TD. Treatment of low bone density or osteoporosis to prevent fractures in men and women: a clinical practice guideline update from the American College of Physicians [published correction appears in *Ann Intern Med*. 2017;167(6):448]. *Ann Intern Med*. 2017;166(11):818-839.
13. American Academy of Family Physicians. Clinical practice guideline. Treatment of low bone density or osteoporosis. https://www.aafp.org/news/health-of-the-public/20170511acposteoguide.html. Accessed June 2, 2018.
14. Kinsinger LS, Anderson C, Kim J, et al. Implementation of lung cancer screening in the Veterans Health Administration. *JAMA Intern Med*. 2017;177(3):399-406.
15. Aaron SD, Vandemheen KL, FitzGerald JM, et al.; Canadian Respiratory Research Network. Reevaluation of diagnosis in adults with physician-diagnosed asthma. *JAMA*. 2017;317(3):269-279.

16. Aberle DR, Adams AM, Berg CD; National Lung Screening Trial Research Team. Reduced lung-cancer mortality with low-dose computed tomographic screening. *N Engl J Med*. 2011;365(5):395-409.
17. Canadian Task Force on Preventive Health Care. Lung cancer. 2016. https://canadiantaskforce.ca/guidelines/published-guidelines/lung-cancer/. Accessed June 2, 2018.
18. U.S. Preventive Services Task Force. Lung cancer: screening. December 2013. https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lung-cancer-screening. Accessed June 2, 2018.
19. American Academy of Family Physicians. Clinical preventive service recommendation. Lung cancer. https://www.aafp.org/patient-care/clinical-recommendations/all/lung-cancer.html. Accessed June 2, 2018.
20. Grad R, Légaré F, Bell NR, et al. Shared decision making in preventive health care: what it is; what it is not. *Can Fam Physician*. 2017;63(9):682-684.
21. Hay AD, Little P, Harnden A, et al. Effect of oral prednisolone on symptom duration and severity in nonasthmatic adults with acute lower respiratory tract infection: a randomized clinical trial. *JAMA*. 2017;318(8):721-730.
22. Steele DW, Adam GP, Di M, Halladay CH, Balk EM, Trikalinos TA. Effectiveness of tympanostomy tubes for otitis media: a meta-analysis. *Pediatrics*. 2017;139(6):e20170125.
23. Moran GJ, Krishnadasan A, Mower WR, et al. Effect of cephalexin plus trimethoprim-sulfamethoxazole vs cephalexin alone on clinical cure of uncomplicated cellulitis: a randomized clinical trial. *JAMA*. 2017;317(20):2088-2096.
24. Garg A, Sharma A, Krishnamoorthy P, et al. Role of niacin in current clinical practice: a systematic review. *Am J Med*. 2017;130(2):173-187.
25. Han BH, Sutin D, Williamson JD, et al. Effect of statin treatment vs usual care on primary cardiovascular prevention among older adults: The ALLHAT-LLT Randomized Clinical Trial. *JAMA Intern Med*. 2017;177(7):955-965.
26. Keene D, Price C, Shun-Shin MJ, Francis DP. Effect on cardiovascular risk of high density lipoprotein targeted drug treatments niacin, fibrates, and CETP inhibitors: meta-analysis of randomised controlled trials including 117,411 patients. *BMJ*. 2014;349:g4379.
27. Stone NJ, Robinson JG, Lichtenstein AH, et al. 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines [published corrections appear in *J Am Coll Cardiol*. 2015;66(24):2812 and *J Am Coll Cardiol*. 2014;63(25 pt B):3024-3025]. *J Am Coll Cardiol*. 2014;63(25 pt B):2889-2934.
28. U.S. Preventive Services Task Force. Statin use for the primary prevention of cardiovascular disease in adults: preventive medication. November 2016. https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/statin-use-in-adults-preventive-medication1. Accessed June 2, 2018.
29. D'Agostino RB Sr, Vasan RS, Pencina MJ, et al. General cardiovascular risk profile for use in primary care: the Framingham Heart Study. *Circulation*. 2008;117(6):743-753.
30. Barniol C, Dehours E, Mallet J, Houze-Cerfon CH, Lauque D, Charpentier S. Levocetirizine and prednisone are not superior to levocetirizine alone for the treatment of acute urticaria: a randomized double-blind clinical trial. *Ann Emerg Med*. 2018;71(1):125-131.e1.
31. Kaufman J, Fitzpatrick P, Tosif S, et al. Faster clean catch urine collection (Quick-Wee method) from infants: randomised controlled trial. *BMJ*. 2017;357:j1341.

eTABLE A

Additional Top POEMs from 2017 Consistent with the Principles of the Choosing Wisely Campaign

Clinical question	Bottom-line answer	Clinical actions to consider for Choosing Wisely
Is confirmatory diagnostic testing cost-effective for the management of clinically suspected onychomycosis?[A1]	The most cost-effective approach to a patient with clinically suspected onychomycosis is empiric therapy with oral terbinafine (Lamisil). The chance of liver injury is estimated to be only one in 50,000 to one in 120,000, so testing to confirm the diagnosis would cost tens of millions of dollars per case of liver injury avoided. If you plan to prescribe the less effective and much more expensive topical solution efinaconazole (Jublia), then confirmatory testing with periodic acid-Schiff stain reduces costs.	If you are going to prescribe oral terbinafine, consider empiric therapy without confirmatory testing because it may be just as safe and is more cost-effective.
Is pregabalin (Lyrica) an effective treatment for the pain of acute or chronic sciatica?[A2]	Pregabalin does not relieve pain in patients with sciatica. This study randomized 207 patients with moderate to severe sciatica, and followed them for one year. The authors concluded that pregabalin does not relieve pain, improve function, or improve any other outcomes in patients with sciatica.	In patients with sciatica, do not routinely prescribe gabapentinoids such as pregabalin.
Do intra-articular corticosteroids improve pain and function and decrease cartilage loss in adults with osteoarthritis of the knee?[A3]	This well-done study found that regular three-month intra-articular injections of triamcinolone for two years resulted in no significant difference in pain and function assessments compared with saline. However, a significant increase in cartilage loss and damage occurred in patients receiving corticosteroids compared with saline.	In patients with knee osteoarthritis, do not routinely inject triamcinolone every three months to improve pain or function.
Is there a clinical benefit to treating subclinical hypothyroidism in older adults?[A4]	Treatment of patients with a minimally elevated thyroid-stimulating hormone (TSH) level did not result in any improvement in symptoms. If patients present with a TSH level between 4.6 and 10 mIU per L, repeat the test because levels often normalize (this occurred in 60% of the patients initially referred for the study). Only consider treatment if levels increase to greater than 10.0 mIU per L.	In adults 65 years and older, do not routinely treat subclinical hypothyroidism.
What is the best way to measure blood pressure?[A5]	To get the most accurate measure, let patients relax for a few minutes, and then measure their blood pressure on a completely bare arm. Does a difference of 4 mm Hg systolic and 6 to 7 mm Hg diastolic matter? It might, especially when deciding whether to add a second or third drug.	In older patients, do not measure blood pressure over an arm covered by a sleeve or with the sleeve rolled up.
Does home monitoring of blood glucose levels improve glycemic control or quality of life in patients with type 2 diabetes who are not taking insulin?[A6]	Lots of numbers, money, and strips in landfills, with little to show for it. Home glucose monitoring of patients in primary care does not improve A1C levels or quality of life over one year in patients who are not taking insulin. Patients did not feel more empowered or satisfied as a result of home monitoring, nor did they have fewer hypoglycemic episodes. Additionally, their physicians did not seem to respond to the home glucose levels to any beneficial effect.	In most persons with type 2 diabetes, do not routinely recommend home monitoring of blood glucose levels.

continues

Note: These POEMs were not discussed in this article because they previously appeared in "Top 20 Research Studies of 2017 for Primary Care Physicians" at https://www.aafp.org/afp/2018/0501/p581.html.

eTABLE A *(continued)*

Additional Top POEMs from 2017 Consistent with the Principles of the Choosing Wisely Campaign

Clinical question	Bottom-line answer	Clinical actions to consider for Choosing Wisely
In patients with mild to moderate ankle sprain, does physical therapy (physiotherapy) hasten or improve recovery?[A7]	Physical therapy (up to seven sessions) does not hasten resolution of symptoms or improve function in adults with ankle sprain. Approximately 60% of patients who receive usual care or physical therapy do not achieve excellent resolution. Send patients home with the usual RICES protocol: rest, ice, compression, elevation, and splinting.	In adults with mild to moderate ankle sprain, do not refer all patients for physiotherapy.
Are gabapentinoids safe and effective in treating patients with chronic low back pain?[A8]	The existing data on gabapentinoids for chronic low back pain are limited in number and quality. The amount of pain reduction is low to moderate, whereas the rate of adverse effects is high. The few studies that assessed function found no improvement.	In adults with back pain of at least three months duration, do not recommend gabapentinoids to improve functional outcomes.
Does positive airway pressure for adults with sleep apnea reduce cardiovascular disease morbidity and mortality?[A9]	The use of positive airway pressure in adults with sleep apnea does not reduce adverse cardiovascular events or mortality. Patients who experience daytime fatigue at baseline benefit from reduced sleepiness and improved physical and mental well-being. Order sleep testing only in patients with signs or symptoms of sleep apnea who also experience clinically significant symptoms of daytime fatigue.	In adults with sleep apnea, do not recommend continuous positive airway pressure to reduce cardiovascular events or mortality.
When should treatment be initiated in older patients with hypertension, and what are reasonable goals?[A10]	Try to remember 60–150–140: In patients older than 60 years, consider treatment if the systolic blood pressure is 150 mm Hg or higher, or 140 mm Hg or higher in patients with a history of stroke or transient ischemic attack and in those at high cardiovascular risk. The guideline suggests initiating therapy only after a discussion of the benefits and risks with each patient; physicians should avoid making treatment decisions based just on the numbers.	In adults older than 60 years, do not routinely initiate antihypertensive treatment when systolic blood pressure is between 140 and 150 mm Hg.
How do older patients react to the idea of stopping cancer screening toward the end of life?[A11]	When bringing up the idea that cancer screening may no longer be beneficial given a patient's limited life expectancy, using direct language such as "You may not live long enough to benefit from this test" is perceived by many patients as overly harsh. Instead, statements such as "This test will not help you live longer" may be better received. Although not studied, this same approach may be helpful for deprescribing efforts.	In older patients, do not discuss the idea that cancer screening may no longer be beneficial using language such as "You may not live long enough to benefit from this test."
Does screening of asymptomatic men for prostate cancer improve mortality?[A12]	There is still no evidence of mortality benefit from prostate cancer screening in the PLCO Cancer Screening Trial. After nearly two decades of follow-up from the PLCO Cancer Screening Trial, there appears to be no mortality benefit to screening asymptomatic men for prostate cancer. These findings are limited to some extent by contamination. (About one-half of the men assigned to no screening had at least one prostate-specific antigen test during the study period.)	In asymptomatic men 55 to 69 years of age, do not recommend screening for prostate cancer unless the patient understands the limitations of prostate-specific antigen screening and makes a personal decision that a small possibility of benefit outweighs the known risk of harms.

continues

eTABLE A *(continued)*

Additional Top POEMs from 2017 Consistent with the Principles of the Choosing Wisely Campaign

Clinical question	Bottom-line answer	Clinical actions to consider for Choosing Wisely
What is the long-term effect of intensive blood glucose control in patients with type 2 diabetes?[A13]	The initial Action to Control Cardiovascular Risk in Diabetes (ACCORD) study, which compared standard treatment (A1C target of 7.0% to 7.9%) with intensive control (A1C target of 6.0%), found that, despite good intentions, cardiovascular and overall mortality are significantly higher when blood glucose levels are lower. This study, which followed patients for an additional five years, found that patients in the intensive treatment group continued to keep their A1C levels lower than in the standard care group; however, they also continued to be at increased risk of death from a cardiovascular event.	In adults with type 2 diabetes, do not recommend intensive control of blood glucose to prevent cardiovascular disease.

Information from:

A1. *Mikailov A, Cohen J, Joyce C, Mostaghimi A. Cost-effectiveness of confirmatory testing before treatment of onychomycosis.* JAMA Dermatol. *2016;152(3):276-281.*

A2. *Mathieson S, Maher CG, McLachlan A, et al. Trial of pregabalin for acute and chronic sciatica.* N Engl J Med. *2017;376(12):1111-1120.*

A3. *McAlindon TE, LaValley MP, Harvey WF, et al. Effect of intra-articular triamcinolone vs saline on knee cartilage volume and pain in patients with knee osteoarthritis: a randomized clinical trial.* JAMA. *2017;317(19):1967-1975.*

A4. *Stott DJ, Rodondi N, Kearney PM, et al.; TRUST Study Group. Thyroid hormone therapy for older adults with subclinical hypothyroidism.* N Engl J Med. *2017;376(26):2534-2544.*

A5. *Ozone S, Shaku F, Sato M, Takayashiki A, Tsutsumi M, Maeno T. Comparison of blood pressure measurements on the bare arm, over a sleeve, and over a rolled-up sleeve in the elderly.* Fam Pract. *2016;33(5):517-522.*

A6. *Young LA, Buse JB, Weaver MA, et al.; Monitor Trial Group. Glucose self-monitoring in non-insulin-treated patients with type 2 diabetes in primary care settings: a randomized trial.* JAMA Intern Med. *2017;177(7):920-929.*

A7. *Brison RJ, Day AG, Pelland L, et al. Effect of early supervised physiotherapy on recovery from acute ankle sprain: randomized controlled trial.* BMJ. *2016;355:i5650.*

A8. *Shanthanna H, Gilron I, Rajarathinam M, et al. Benefits and safety of gabapentinoids in chronic low back pain: a systematic review and meta-analysis of randomized controlled trials.* PLoS Med. *2017;14(8):e1002369.*

A9. *Yu J, Zhou Z, McEvoy RD, et al. Association of positive airway pressure with cardiovascular events and death in adults with sleep apnea: a systematic review and meta-analysis.* JAMA. *2017;318(2):156-166.*

A10. *Qaseem A, Wilt TJ, Rich R, et al. Pharmacologic treatment of hypertension in adults aged 60 years or older to higher versus lower blood pressure targets: a clinical practice guideline from the American College of Physicians and the American Academy of Family Physicians.* Ann Intern Med. *2017;166(6):430-437.*

A11. *Schoenborn NL, Lee K, Pollack CE, et al. Older adults' views and communication preferences about cancer screening cessation.* JAMA Intern Med. *2017;177(8):1121-1128.*

A12. *Pinsky PF, Prorok PC, Yu K, et al. Extended mortality results for prostate cancer screening in the PLCO trial with median follow-up of 15 years.* Cancer. *2017;123(4):592-599.*

A13. *ACCORD Study Group. Nine-year effects of 3.7 years of intensive glycemic control on cardiovascular outcomes.* Diabetes Care. *2016;39(5):701-708.*