

Putting Prevention into Practice

An Evidence-Based Approach

Screening for Cognitive Impairment in Older Adults

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Case Study

L.C. is a 70-year-old Asian American woman who retired from teaching middle school five years ago. She lives independently and has a daughter and grandchildren who live within 30 miles of her. She presents for a follow-up visit to renew her hypertension medications. Her blood pressure is well controlled by an angiotensin receptor blocker, and she takes no other medications. She does not smoke, and she drinks two or three glasses of wine per week. She states that she is trying to stay active but is finding it difficult to make new friends and learn new skills. She is worried about her memory and wants to know whether she should be screened for cognitive impairment.

Case Study Questions

1. Based on the U.S. Preventive Services Task Force (USPSTF) recommendation on screening for cognitive impairment, what would you recommend for L.C.?

- A. L.C. should be screened because the USPSTF found convincing evidence that the net benefit of screening in adults 65 years and older is substantial.
- B. L.C. should be screened because she has hypertension.
- C. L.C. should not be screened because the USPSTF recommends screening only in older adults who are current smokers.
- D. It is uncertain whether L.C. should be screened. The USPSTF found insufficient evidence to assess the balance of benefits and harms of screening for cognitive impairment in older adults.
- E. L.C. should not be screened because the USPSTF found adequate evidence that screening for cognitive impairment is of no net benefit.

See related U.S. Preventive Services Task Force Recommendation Statement at <https://www.aafp.org/afp/2020/0615/od1.html>.

This PPIP quiz is based on the recommendations of the USPSTF. More information is available in the USPSTF Recommendation Statement and supporting documents on the USPSTF website (<https://www.uspreventiveservicestaskforce.org>). The practice recommendations in this activity are available at <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/cognitive-impairment-in-older-adults-screening#fullrecommendationstart>.

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CME This clinical content conforms to AAFP criteria for CME. See CME Quiz on page 719.

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2. According to the USPSTF recommendation statement, which of the following statements about screening tests for cognitive impairment are correct?

- A. Some screening tools have relatively high sensitivity and specificity for the detection of dementia.
- B. Screening tools have a positive predictive value approaching 80% for people who are in their 60s.
- C. Screening tools generally have lower sensitivity and specificity for the detection of mild cognitive impairment than for the detection of dementia.
- D. A positive result on a screening tool confirms the diagnosis of dementia.

3. Based on the USPSTF recommendation, which one of the following statements about cognitive impairment is correct?

- A. Mild cognitive impairment almost always progresses to dementia.
- B. Increasing age is the highest risk factor for cognitive impairment.
- C. Cardiovascular risk factors (e.g., hypertension, diabetes mellitus) are not associated with risk of dementia.
- D. Mild cognitive impairment and dementia interfere with independent daily functioning.
- E. Dementia currently affects an estimated 8 to 9 million people in the United States.

Answers

1. **The correct answer is D.** The USPSTF found insufficient evidence to assess the balance of benefits and harms of screening for cognitive impairment in older adults (I statement).¹ The USPSTF's recommendation applies to community-dwelling adults 65 years or older without recognized signs or symptoms of cognitive impairment. The USPSTF's I statement is not contingent on the presence or absence of factors that may be associated with dementia (e.g., cardiovascular risk factors, smoking). The I statement is neither a recommendation for nor against screening for cognitive impairment but is rather a call for more research.

2. **The correct answers are A and C.** The USPSTF found adequate evidence that some screening tools have relatively high sensitivity

and specificity for the detection of dementia.² The USPSTF found that the sensitivity and specificity of screening tools are generally lower for the detection of mild cognitive impairment than they are for the detection of dementia. Based on the sensitivity and specificity of screening tools, the USPSTF estimates that when the prevalence of dementia is high (e.g., in adults 85 years or older), positive predictive values can be greater than 50%. However, because of lower prevalence, the positive predictive value can be closer to 20% in unselected populations of adults 65 to 74 years of age. Screening tools are not intended to diagnose dementia. A positive screening test result should lead to additional testing that can include blood tests, radiology examinations, and a medical and neuropsychological evaluation to confirm the diagnosis of dementia and to determine its subtype.

3. **The correct answer is B.** Increasing age is the highest known risk factor for cognitive impairment. Cardiovascular risk factors (e.g., diabetes, hypertension, hypercholesterolemia), depression, physical frailty, low education level, and low social support level have also been associated with risk of cognitive impairment. Mild cognitive impairment differs from dementia in that the impairment is not severe enough to interfere with independent daily functioning. Some people with mild cognitive impairment progress to dementia, but some do not. One systematic review found that 32% of people with mild cognitive impairment develop dementia over five years.² However, studies have also shown that 10% to 40% of people with mild cognitive impairment may return to normal cognition over approximately four to five years. Dementia currently affects an estimated 2.4 to 5.5 million people in the United States.^{1,2}

The views expressed in this work are those of the authors and do not reflect the official policy or position of the Department of Defense, the Uniformed Services University of the Health Sciences, the U.S. Department of Health and Human Services, or the U.S. government.

References

1. U.S. Preventive Services Task Force. Screening for cognitive impairment in older adults: US Preventive Services Task Force recommendation statement. *JAMA*. 2020; 323(8):757-763.
2. Patnode CD, Perdue LA, Rossom RC, et al. Screening for cognitive impairment in older adults: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2020;323(8):764-785. ■