Virtual Mentor
American Medical Association Journal of Ethics
January 2011, Volume 13, Number 1: 10-15.

CLINICAL CASE

The Debate Over Prostate Cancer Screening Guidelines

Commentary by Karen E. Hoffman, MD, MHSc, MPH, and Paul L. Nguyen, MD

Dr. Johnson had been in the private practice of primary care and internal medicine with four other internists for 15 years. Dr. Johnson and her four partners had built a flourishing practice based upon the shared ideals of evidence-based medicine, prevention, and chronic disease management. In fact, the group had monthly conferences devoted to general practice guidelines, an innovation that Dr. Johnson believed helped the group keep up to date in an ever-changing medical environment.

After 2008, though, a good deal of argument and conflict developed regarding screening for prostate cancer. In August of that year, the U.S. Preventive Services Task Force (USPSTF) issued a statement concluding that "current evidence is insufficient to assess the balance of benefits and harms of prostate cancer screening in men older than age 75 years" and "the USPSTF recommends against screening for prostate cancer in men age 75 years or older."

Dr. Johnson and three of her colleagues adhered closely to the USPSTF guidelines, but one did not. This lone physician, Dr. Smith, thought the guideline was bogus. As a result, Dr. Smith tested each of his male patients—including the elderly—annually for prostate cancer with PSA and digital rectal exam. More of his patients underwent biopsy and subsequent surgery as a result of their PSA screening, and a higher incidence of prostate cancer was diagnosed among them. Two patients had died as a result of prostate cancer in Dr. Johnson's time with the practice; one was Dr. Smith's patient and one was the patient of another partner.

Dr. Johnson was concerned because it seemed unlikely that Dr. Smith's screening had saved any lives, and a number of Dr. Smith's patients suffered from impotence or incontinence as a result of biopsy and surgery.

One morning, Dr. Johnson and her colleagues confronted Dr. Smith about his screening practice, citing the USPSTF guideline. "I don't believe in that hogwash," Dr. Smith snapped. "My patients want to know if they have cancer or not, and I'm not about to start denying them that knowledge." Deeply unsettled, Dr. Johnson and her colleagues agreed to meet in private to discuss this disagreement, and whether or not anything should be done about it.

Commentary

Opinions vary regarding the appropriate age to stop screening men for prostate cancer in the United States. Therefore it is not surprising that Drs. Johnson and Smith have different approaches for screening men age 75 and older. In our opinion, neither the policy of screening all men age 75 and older advocated by Dr. Smith nor the policy of screening no man age 75 and older advocated by Dr. Johnson is appropriate. Blanket approaches that use a strict age cutoff do not individualize cancer screening decisions and do not respect patient autonomy.

The inconsistencies among clinical practice guidelines developed by medical groups on the appropriate age to stop screening men for prostate cancer make it difficult for primary care physicians to determine when to stop. While the American Urological Association (AUA) and the American Cancer Society (ACS) guidelines recommend that screening be considered for men with an estimated life expectancy of longer than 10 years, the 2008 USPSTF guidelines recommended against screening any man 75 years old or older for prostate cancer regardless of life expectancy [1-3].

Dr. Johnson and Dr. Smith strive to practice evidence-based medicine but find limited data on screening older men for prostate cancer. Three published clinical trials have evaluated the benefits and harms of the screening. Two demonstrated that it lengthened patient survival, but none offer guidance on whether or not to screen men age 75 years or older for prostate cancer because none of the three trials enrolled men in this age group [4-6].

Proponents of halting PSA screening at age 75 rightly point out that many older men diagnosed with prostate cancer will never develop symptoms from it, since they have multiple comorbid conditions and will die from something else [7, 8]. We agree that it is important to curtail PSA screening in men with short life expectancies because these men will be exposed to the risks of the screening and treatment but will likely die before gaining any benefit from it.

Although complications are infrequent, screening can cause hematoma from the prostate-specific antigen (PSA) blood draw and infection and urinary difficulties from the diagnostic prostate biopsies. If they are diagnosed with early prostate cancer, these men may also be subjected to complications from overtreatment of indolent prostate cancer. Treatment can cause urinary incontinence, urinary retention, erectile dysfunction, and bowel dysfunction, all of which can adversely impact quality of life [9]. Men who are not treated for their early prostate cancer may experience the anxiety and uncertainty that comes with a cancer diagnosis. Efforts to curtail unnecessary PSA screening in men with short life expectancies are advocated based on the tenets of beneficence, taking action to serve the best interests of the patient, and nonmaleficence, not causing harm to the patient.

Those who disagree with the USPSTF recommendation for a strict age cutoff argue that, while many older men have multiple comorbid conditions and a relatively short life expectancy, some healthy men aged 75 years or older can be expected to live 10

or more years and may benefit from early detection of prostate cancer. The recommendations by the AUA and ACS to consider screening for men with life expectancies of at least 10 years are based in part on studies that suggest it takes 10 years to realize a survival benefit from prostate cancer treatment [10].

Older men are diagnosed with higher grade and higher stage prostate cancer than younger men [11]. These aggressive cancers can cause symptoms such as urinary retention and bone pain and can result in prostate cancer death sooner than lower grade, earlier stage cancers. Studies indicate that men older than age 75 may obtain a benefit from curative treatment of localized aggressive cancer [12-14]. If a strict age cutoff of 75 years is used, these men would not be offered PSA screening and therefore would not benefit from the early detection and treatment of aggressive prostate cancer.

While healthy older men may obtain a benefit from treatment of aggressive prostate cancer, early indolent cancers may not require treatment and instead can be monitored with serial testing, thereby avoiding the adverse effects of treatment. Proponents of using life expectancy rather than a strict age cutoff of 75 years stress the importance of considering the clinical situation of individual patients and advocate their stance based on the principle of beneficence, taking actions that serve the best interests of the patient.

The Institute of Medicine (IOM) defined clinical practice guidelines as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances" [15]. They can serve as a guide for busy general practitioners who do not have the time to review all of the primary information that form the basis of the guidelines. However, the key word of the IOM definition is that the guidelines should *assist* practitioners in their decision making. Guidelines require interpretation and should not be mindlessly applied as a template of care for all patients, particularly when there are inconsistencies between clinical practice guidelines developed by medical groups. As Battista et al. have written, "Guidelines should enhance clinical judgment, not replace or stifle it" [16]. When employing guideline recommendations, physicians must remember their responsibility to individual patients and be mindful of their values and unique clinical situations. In the case at hand, while Dr. Smith can be faulted for completely disregarding guidelines to the potential detriment of his own patients, Dr. Johnson can also be faulted for adhering to guidelines without considering their applicability to the individual patient before her.

When a man aged 75 years or older presents to the clinic, should Drs. Johnson and Smith screen him for prostate cancer? In our opinion, a strict age cutoff should not be used to make that clinical judgment. Instead, physicians should consider the patient's life expectancy, values and unique clinical situation to arrive at individualized screening decisions. For men with a short life expectancy who are more likely to be harmed than to benefit from prostate cancer screening and subsequent treatment, prostate cancer screening should not be recommended. For

men with a life expectancy of more than 10 years, prostate cancer screening should be considered. This does not imply all men aged 75 and older with at least 10 years of life expectancy should have a PSA test. Given the uncertainty of the benefit of prostate cancer screening for healthy older men, physicians should discuss the potential beneficial and adverse effects of prostate cancer screening. This information together with personal preferences should be used to arrive at a shared decision with the patient regarding screening. We acknowledge that having a conversation about whether or not to pursue prostate cancer screening requires additional clinical time; however, it is essential for individualized cancer screening decisions that respect patient autonomy.

Another dilemma faced by Dr. Johnson and colleagues is whether or not to confront Dr. Smith with their concerns about his practice. They may hesitate because they are uncomfortable about challenging his perceived authority with his own patients. However, if a physician believes that patients are being harmed by the practices of another physician, then he or she cannot be a passive bystander; there is a duty to intervene. Therefore, we hope Dr. Johnson and colleagues will discuss their concerns with Dr. Smith. The process of peer review and peer feedback that commonly takes place in large practices and medical centers is a safety net that helps ensure that physicians provide high-quality care that is within acceptable standards of practice. Ideally, the discussion between Drs. Johnson and Smith will lead to a review of the primary literature and improvement in patient care for both of them.

References

1. American Cancer Society. Guidelines for the early detection of cancer. http://www.cancer.org/Healthy/FindCancerEarly/CancerScreeningGuidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer. Accessed December 9, 2010.
2. Screening for prostate cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2008;149(3):185-191.
3. Carroll P, Albertsen PC, Greene K, et al. Prostate-specific antigen best practice statement: 2009 update. http://www.auanet.org/content/media/psa09.pdf. American Urological Association. Accessed December 9, 2010.
4. Andriole GL, Crawford ED, Grubb RL 3rd, et al. Mortality results from a randomized prostate-cancer screening trial. *N Engl J Med*. 2009;360(13):1310-1319.
5. Hugosson J, Carlsson S, Aus G, et al. Mortality results from the Goteborg randomised population-based prostate-cancer screening trial. *Lancet Oncol*. 2010;11(8):725-732.
6. Schroder FH, Hugosson J, Roobol MJ, et al. Screening and prostate-cancer mortality in a randomized European study. *N Engl J Med*. 2009;360(13):1320-1328.
7. Sung JC, Kabalin JN, Terris MK. Prostate cancer detection, characterization, and clinical outcomes in men aged 70 years and older referred for transrectal ultrasound and prostate biopsies. *Urology*. 2000;56(2):295-301.

8. Newschaffer CJ, Otani K, McDonald MK, Penberthy LT. Causes of death in elderly prostate cancer patients and in a comparison nonprostate cancer cohort. *J Natl Cancer Inst*. 2000;92(8):613-621.
9. Sanda MG, Dunn RL, Michalski J, et al. Quality of life and satisfaction with outcome among prostate-cancer survivors. *N Engl J Med*. 2008;358(120)1250-1261.
10. Bill-Axelson A, Holmberg L, Filen F, et al. Radical prostatectomy versus watchful waiting in localized prostate cancer: the Scandinavian prostate cancer group-4 randomized trial. *J Natl Cancer Inst*. 2008;100(16):1144-1154.
11. Cooperberg MR, Cowan J, Broering JM. Carroll PR. High-risk prostate cancer in the United States, 1990-2007. *World J Urol*. 2008;26(3):211-218.
12. Alibhai SM, Naglie G, Nam R, Trachtenberg J, Krahn MD. Do older men benefit from curative therapy of localized prostate cancer? *J Clin Oncol*. 2003;21(17):3318-3327.
13. Nguyen PL, Chen MH, Renshaw AA, et al. Survival following radiation and androgen suppression therapy for prostate cancer in healthy older men: implications for screening recommendations. *Int J Radiat Oncol Biol Phys*. 2009;76(2):337-341.
14. Hoffman KE, Chen MH, Moran BJ, et al. Prostate cancer-specific mortality and the extent of therapy in healthy elderly men with high-risk prostate cancer. *Cancer*. 2010;116(11):2590-2595.
15. Field MJ, Lohr KN, eds; Institute of Medicine. *Clinical Practice Guidelines: Directions for a New Program*. Washington, DC: National Academies Press, 1990.
16. Battista RN, Hodge MJ, Vineis P. Medicine, practice and guidelines: the uneasy juncture of science and art. *J Clin Epidemiol*. 1995;48(7):875-880.

Further Reading

Hoffman KE, Nguyen PL, Ng AK, D'Amico AV. Prostate cancer screening in men 75 years old or older: an assessment of self-reported health status and life expectancy. *J Urol*. 2010;183(5):1798-1802.

Karen E. Hoffman, MD, MHSc, MPH, is an assistant professor in the radiation oncology department at the University of Texas MD Anderson Cancer Center in Houston, where she treats patients with genitourinary and breast cancer. Her research interests include large database and outcomes research, with an emphasis on treatment decision making and the impact of cancer and cancer therapies on long-term health and quality of life.

Paul L. Nguyen, MD, is an assistant professor of radiation oncology at Harvard Medical School and director of prostate brachytherapy at the Dana-Farber/Brigham and Women's Hospital Cancer Center in Boston. His clinical and research efforts focus on optimizing the care of patients with prostate cancer.

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