

To screen, or not to screen

David H. Henry, MD, FACP, Editor

One of the most exciting developments in oncology in recent years has been the advent of targeted therapies, which have paved the way for personalized medicine. These therapies have been developed specifically to take advantage of a mutation or deficiency in a tumor or a surface characteristic that make it susceptible to the targeted therapy. This is even more exciting given that for the past 50 years, we have been delivering therapies that affect all of the cells in the body (often with substantial toxic effect) in the hopes that we will hurt the cancer cells the most and perhaps even kill them off. This, of course, is chemotherapy, and while it will not be going away any time soon, the prospect of personalized and targeted cancer therapy promises better outcomes with fewer toxicities since the cancer cells are the sole focus of the treatment.

As exciting as these new therapies might seem, we must be mindful that our ultimate goal should be to prevent cancer through early detection. Mammograms, pap smears, and colonoscopies are all proven strategies for detecting cancers and precancers at an earlier stage when they can be more easily cured, and the positive effects and outcomes of these prevention efforts have been well documented.

Early detection vs cost-effectiveness in screening for lung cancer

On page 441 of this issue of *COMMUNITY ONCOLOGY*, we highlight another early detection screening strategy—for lung cancer—that is bound to change practice. In a study of more than 50,000 persons aged 55 years and older and at high risk for lung cancer (a history of smoking of 30 pack-years), participants were randomized to receive low-dose CT screening or chest radiography annually for 3 years. The investigators found that lung cancer was detected at an earlier stage in the CT-scan group for a 20% reduction in mortality compared with the radiography group.

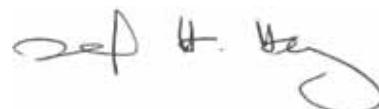
It is estimated that some 8 million Americans might be eligible for such CT screening. However, before we adopt this strategy unilaterally, it will be important to discuss the costs—both financial and from the perspective of patient inconvenience. Some 96% of the positive CT scan findings for lung

cancer were false positives, so they needed to be pursued to verify if they were true or false positives. If all 8 million eligible patients were CT scanned for 3 years as in this study, how much would that cost in work-up of false positives with its attendant morbidity versus how many lung cancers would be detected early and cured. The answer will depend on which is more cost effective: to screen, or not to screen. Nevertheless, this is an exciting development in that we finally we have a technique that can detect this very common cancer in a high-risk population at a much earlier and presumably more curable stage.

PSA testing comes under scrutiny

As we weigh these new findings on the benefits of screening and early detection in lung cancer and the cost-effectiveness of incorporating such screening into routine practice, the US Preventive Services Task Force has come out with an update to its guidelines for screening for prostate cancer (page 475). It recommends against prostate-specific antigen (PSA) tests to screen for prostate cancer in men of all ages who have do not have symptoms for the disease, arguing that the accuracy of the test is not supported by the scientific evidence. The task force calls for research on new diagnostics technologies that could help reduce the existing tendency for overdiagnosis and overtreatment of the disease as a result of screening with the PSA test.

Some medical societies and patient advocacy groups have already voiced concern about the guideline update, which has echoes of the reaction to the task force's 2009 recommendation against routine breast cancer screenings for women under the age of 50. But whatever the response to the recommendations, they highlight the importance of us routinely questioning our screening practices in our day-to-day practice, and doing so from a range of perspectives: how accurate and discriminating is the test; how will it affect my patient, am I over diagnosing or overtreating, and will this be cost effective over time?



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