

# Lack of Knowledge Regarding Prostate-Specific Antigen Screening Is Ignorance Bliss?

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In this issue of the *Journal*, O'Dell and colleagues<sup>1</sup> provide important information about deficits in patient knowledge concerning prostate-specific antigen (PSA) screening. They conclude that "this knowledge deficit is a barrier to making informed decisions about PSA testing and may also be a barrier to the early detection of prostate cancer." The authors posed a series of questions about prostate cancer to a group of 160 male primary care patients who answered most of the questions incorrectly. The authors refer to this knowledge deficit as "worrisome" and "disconcerting." They point out that physicians cannot assume that even those patients who ask for PSA tests are really knowledgeable about them, and I agree wholeheartedly.

Although the study population included a diverse ethnic and educational mix, the authors do not offer any information about whether their results are generalizable to the entire adult population. Clearly, similar studies are warranted. If we assume that the knowledge deficit is ubiquitous (and I believe it is), 3 questions arise: (1) Was the knowledge test used by the researchers relevant to informed decision making about PSA testing? (2) Is the lack of knowledge of PSA screening really a bad thing? and (3) Should we as physicians be offering unsolicited PSA screening? These questions may appear absurd, since early detection seems like an indisputably good thing and knowledge is essential to making informed decisions, but read on.

## WAS THE KNOWLEDGE TEST RELEVANT TO INFORMED DECISION MAKING?

The framework in which information is presented influences decisions. The current debate about PSA screening involves different world-views that focus on process-oriented versus outcome-oriented thinking. Only 1 randomized controlled trial<sup>2</sup> comparing radical prostatectomy with placebo in early-stage prostate cancer has been published. It showed no statistically significant differences in survival after 23 years, but the study was small (142 patients), did not use PSA detection, and cannot be considered conclusive. Since definitive outcome evidence from randomized controlled trials is not available, physicians must develop an opinion about screening on the basis of incomplete

data.<sup>3</sup> Advocates focus on an intermediate end point (the ability of PSA to detect histologic cancer) to argue that screening should be performed.<sup>4</sup> Skeptics argue that evidence of benefit to patients must be proved before screening should be undertaken.<sup>5</sup> The current process-oriented evidence is indeterminant,<sup>3</sup> and process is often confused with outcome, as illustrated in this statement by one of the most enthusiastic proponents of screening: "Although there are many critics of PSA screening, there is no question that it is more effective than mammography."<sup>6</sup> This process-oriented thinker will provide information to patients using different terms than those of an outcome-oriented thinker. As physicians, we must ask ourselves: Which kind of thinking do I do? Is my information presentation ethical? Is it in the best interests of my patients?

I categorized each of the 10 questions O'Dell and coworkers used as either process or outcome oriented and concluded that only question 1 (How many untreated men with early-stage prostate cancer will die of it?) was outcome oriented. Question 7 (If found at an early stage, how often is prostate cancer curable?) was particularly tricky, because it looks like an outcome-oriented question but is not, since having a radical prostatectomy to remove histology that would never become symptomatic can hardly be called a cure. I was particularly struck by the omission of the question most relevant to informed decision making: Has PSA screening been scientifically proved beneficial? The majority of my patients who inquire about screening express surprise that the answer is no; they assume that this heavily advertised test has been verified. The idea that most current patient information is biased toward process data and away from outcome information is supported by the results of randomized controlled trials of balanced information about screening<sup>7-9</sup> and an implementation study of a PSA guideline.<sup>10</sup> In the studies,<sup>7-9</sup> men who were given balanced information were significantly less interested in being screened than those in an uninformed control group. In the implementation study,<sup>10</sup> the introduction of a guideline focusing on a model of shared decision making resulted in more than a 50% decrease in PSA test ordering.

## IS A LACK OF KNOWLEDGE OF PSA SCREENING REALLY A BAD THING?

In the current American health care system, the outcome of a lack of knowledge depends on whose ignorance we discuss: the patient's or the physician's.

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## PATIENT IGNORANCE

Since the results of definitive randomized controlled trials are not in, we cannot yet know whether PSA screening decreases morbidity and mortality resulting from prostate cancer. We can, however, discuss alternatives.<sup>3</sup> I believe that screening may identify a small group of men who will benefit, but the majority will only be harmed. So, if PSA testing is ever proved effective, patient preference will remain important in the decision to undergo this procedure. At that time, solid information from the studies will be available for use in patient education.<sup>11</sup> But another equally likely scenario is that PSA screening will be proved ineffective or even harmful when known diagnostic and therapeutic morbidity and mortality are factored in. If this second scenario is correct, men who currently avoid contact with the medical profession and remain ignorant of enthusiastic recommendations for screening will have proved that ignorance is bliss regarding PSA screening.<sup>12</sup>

## PHYSICIAN IGNORANCE

Studies show that the majority of American primary care physicians believe that PSA testing decreases morbidity and mortality,<sup>13</sup> and these physicians are increasingly recommending screening.<sup>12</sup> If physicians are not knowledgeable about PSA screening, then ignorance is not bliss, since it will inhibit their ability to provide patients with a balanced discussion of PSA screening.<sup>14</sup>

## SHOULD PHYSICIANS BE OFFERING UNSOLICITED PSA SCREENING?

The American Cancer Society and the American Urological Association recommend annual screening, with patient-informed consent after the results are known.<sup>15</sup> The American College of Physicians and the American Academy of Family Physicians call for patients to be educated about the potential harms and benefits of early detection before screening is performed. In the past, urologists had either implied or stated outright that it is malpractice not to perform PSA screening, but it is now clear that the majority of responsible thinkers adhere to the opposite viewpoint: that it is unethical to offer tests of known harm and unknown benefit, such as PSA screening, without first providing full informed consent as for any other experimental procedure.<sup>3,16-18</sup>

To inform patients, physicians must be thoroughly informed.<sup>17</sup> With the intent of providing easily understandable information for both physicians and their patients, Dr Richard Roberts and I<sup>19</sup> created a patient-information handout that serves as a model for balanced outcome-oriented patient education. In discussions of PSA screening with patients, I outline the problem as follows: "PSA screening is unproved and controversial, and physicians disagree about its value.

Until the results of scientific studies are available, we will not know whether PSA screening is a good thing or a bad thing. The problem is not the PSA test, which is one of the best tests we have to detect cancer cells. The problem lies in the fact that men in your age group have at least a 30% chance of having cells in the prostate that look like cancer, but only a 3% or less chance of dying of prostate cancer. Add to this the facts that we do not know which 3% to treat and that we are not even sure which treatment is best for them even if we could identify them, and you begin to understand the problem."

In another recently published article, Volk and colleagues<sup>9</sup> recommend incorporating PSA education into the periodic health examination for asymptomatic men aged 50 years and older. Other authorities argue that clinicians should provide a balanced discussion of the uncertainties surrounding PSA screening to all men aged 50 to 75 years. I disagree with both of these recommendations. In addition to my ethical misgivings about soliciting such a test, discussion of any screening test of unknown benefit competes with access to clinical preventive services of proven benefit that should be provided first. In my practice, I systematically offer clinical preventive services of proven effectiveness (rated A or B by the United States Preventive Services Task Force<sup>20</sup>), whether the patients are part of the two thirds who are seen for acute care visits only or the one third who have scheduled periodic health examinations.<sup>21</sup> If a man inquires about PSA testing or makes a statement indicating that he wants every test done, I provide him with the PSA handout.<sup>19</sup> If he asks my opinion I tell him that I do not recommend PSA screening, but I would be willing to order the test if he still wants it after reading the handout. I do not raise the issue of PSA testing myself. I believe our ethical burden is to offer only tests of proven benefit, and that argues against offering routine PSA screening in primary care practice.

Physicians who aggressively advocate screening (and patients who inquire about it) should understand that physicians and patients may both be reluctant to admit that they lack important information (and may be powerless to influence a bad disease), and thus they may overemphasize the potential benefits and ignore the known harms of PSA screening.<sup>22</sup> Patient education about PSA screening should be solicited by the patient, balanced, and outcome oriented. We as physicians should not be hesitant to use those 3 little words we most avoid ("I don't know"). Admitting that we do not know whether PSA screening is beneficial is one step we can take toward educating patients to make truly informed decisions.

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