Question: Past what age does the American College of Physicians recommend no screening for colon cancer?

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<th>Option</th>
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Screening and Over-diagnosis

There are a couple of old axioms declaring that one should “Leave well-enough alone” or “If it ain’t broke, don’t fix it.” I have violated these axioms far too many times when doing home projects. A small job, which did not really have to be done, became a big job when I broke something in route to completing a non-essential “repair.” Unfortunately, these axioms are often ignored by the American medical industry. Far too often we are led to believe that a screening result demands action on the part of the physician to solve the “problem” that was never a problem in the first place. In this article I have included some fresh findings and expert opinions on screening and over-diagnosis. You must remember that if your doctor is paid on a fee-for-service basis, then he has a strong incentive to over-diagnose you.

Let’s begin with what primary-care doctors do and do not understand about cancer screening. Screening by definition leads to earlier diagnosis of cancer. Let’s suppose there are two groups of men who are destined to have prostate cancer. One group is never screened and all members get clinically-evident cancer at age 68, and then die from it at age 70. But suppose the second group is screened at age 60 and this turns up evidence of early cancer and the patients are all treated. None-the-less, the patients die at 70, just like their counterparts who did not have screening. In this situation the 5-year survivals for the unscreened men is 0% and for the screened men 100% - an apparently dramatic improvement. But the mortality is no different.

Let’s look at this from another angle, knowing full well that many “cancers” are not destined to kill a person. Imagine a group of 1000 men who are never screened for cancer, but develop clinical symptoms of cancer and 600 die within 5 years as a result. The 5-year survival rate is 40%. Now, suppose these same men had received screening for cancer along with an additional 2000 men who had non-progressive cancer. If that same 600 die as a result of their cancer, then the survival rate looks like 2400/3000, or 80%. As measured by 5-year survival, that appears to be an improvement, but in terms of raw mortality and time to death, there is no difference.

Primary care physicians were presented with a chance to offer tests to their patients. One test had demonstrated an improved 5-year survival (an irrelevant statistic) and the other test had demonstrated a 20% reduction in mortality (a relevant outcome). By a margin of 3 to 1, physicians recommended the first test over the second one. The authors conclude that: “Most primary care physicians mistakenly interpreted improved survival time and increased detection with screening as evidence that screening saves lives. Few correctly recognized that only reduced mortality in a randomized trial constitutes evidence of the benefit of screening.”

In an editorial comment on the study above, an MD, surveys the barriers to a rational understanding of the benefit of screening tests.
These include influence from advocacy groups that promote screening, promotion from companies that make screening tests, financial pressures on clinicians who seek to diagnose and treat conditions, and a misunderstanding by patients that many screen-detected cancers (e.g. breast cancer or prostate cancer), would never have killed them in the first place. Furthermore, excessive screening can lead to harm through overly aggressive “treatment.”

The editorialist asks how patients are supposed to get reliable information about the efficacy of screening. Her answer is that primary-care physicians, by and large, are not prepared to provide such information. The authors of the original study propose that journal editors eliminate spurious statistical information from articles they publish on the value of screening, and medical educators should improve students’ understanding of screening statistics. The editorialist further pleads with medical journalists who write for the public to better understand and present the value of screening-test statistics so their readers do not misunderstand the value of screening. \(^1\) The editorialist further pleads with medical journalists who write for the public to better understand and present the value of screening-test statistics so their readers do not misunderstand the value of screening. \(^2\) Another editorial, this time specifically on over diagnosis from breast cancer screening, calls for better tools to discriminate between those cancers that are life threatening and those that can be followed over time without any intervention. \(^3\) Without this ability to discriminate, the writers postulate that we can expect the problem of over diagnosis to get worse as more sensitive imaging techniques become available for routine mammography.

As for you, the patient considering cancer screening, there are no easy answers. I have written before that PSA screening led me to a biopsy, and then a prostatectomy, but to this day I do not know whether my life was prolonged by this surgery, or I mistakenly bought into a set of life-long complications that I could do without. The cost of screening is also likely to increase, and it is already pretty steep. A woman I know was a bit outraged to see that the total bill for her recent mammography screening was $1400, although her insurance company had certainly negotiated a somewhat lower payment, and her co-pay was only $23.

**New Guidelines on Screening for Colon Cancer**

At least for colon cancer, the approach to screening seems to be more firmly grounded in wisdom than PSA screening for prostate cancer or mammography screening for breast cancer. The American College of Physicians has adopted a new guidance statement on screening for colon cancer. \(^4\) There are four steps, which I summarize here: 1) with your clinician’s guidance, decide if you are average-risk or high-risk for colon cancer; 2) if you are at average risk then start screening at 50 years, and at 40 years if you are at high-risk; 3) if you are at average risk, then screen with a stool-based test, flexible sigmoidoscopy, or optical colonoscopy, and high risk only with the latter; and 4) stop screening at 75 years or when the person’s life expectancy is less than 10 years.

This is only a top-level summary, please ask your doctor for more details about this new guidance. The guidance also calls for the clinician to respect the preferences of the patient.

**Potentially Dangerous Devices**

There are two levels at which the FDA can protect you from potentially harmful medical devices. The first is by carefully considering the benefits and risks of a device before it is approved for general use in patients. The second is monitoring the incidence of harmful events associated with use of that device after approval. A perspective article in the New England Journal written by an MD pounds the poor quality of safety monitoring after approval; this is called “post-marketing surveillance.” \(^5\)
The title of the article expresses the writer’s attitude about device surveillance: “Here we go again – Another failure of post-marketing device surveillance.” The focus of the failure is the fact that 79,000 patients have received cardioverter-defibrillators (ICDs) that have leads made by St. Jude medical. The coatings on certain leads may wear through exposing the patient to risk that the ICD will fail when needed. It is not so much that these leads could fail, the author contends, it is the intolerable situation that there are no data to guide us on what to do about the issue. Post-marketing surveillance is “notorious for underreporting.” The author calls for an immediate improvement in the surveillance system because more than 150,000 patients depend on life-saving devices and we are not paying enough attention to their failures.

I would propose to any reader that if they have a critical device implanted, such as a heart valve, a stent, or an ICD, they ask their doctor how to specifically identify the device and how to report any failures in it. There is plenty of background information on how to do this at http://www.fda.gov/Safety/MedWatch/HowToReport/ucm053074.htm. The system encourages you to report through your doctor, but I would encourage you to do your best to report independently of your doctor. He’s probably too busy to make the report anyway. It is far past time that patients start looking after each other. If you have a device failure and do not report it, then you have become part of the problem, not part of the solution.

A follow up perspective to the one above declares that one of the problems in reporting device failures is that devices, unlike drugs, do not have a unique device identifier (UDI). The FDA has been developing a UDI system for 5 years since Congress authorized it, but it has not yet seen the light of day. Without such a system in place, we will continue to say “Here we go again.”

Polyparmacy: Danger for the Young and Old

A study described in the JAMA involving New Zealanders reported a surprising result: the notion that falls due to polypharmacy (taking 2 or more drugs) is confined to the elderly is wrong; young and middle aged adults have 2 ½ times greater risk of taking an injurious fall than those taking less medication. The medications most associated with falls in this age group were blood pressure reducers and lipid-lowering medications. Always take as few medications as you can, using, wherever possible, exercise and diet to control illnesses. If you must take several medications, then restrict your activities to those that are not high risk for serious falls. For example, climbing around on roofs, climbing on ladders, or walking up steep steps should be avoided in those of any age who are taking more than one medication.

Healthcare Changes since 1950

I’m old enough to remember 1950 as a time of adventure and discovery as I lived with my parents in a tiny house in Kansas and walked to school. There I fell in love with my kindergarten teacher, who had the gall to get married later that year. Life is full of disappointments. In that year the per capita cost of healthcare in the U.S. was about $500 (in 2009 dollars), whereas by 2009 the per capita cost was about $8200 (in 2009 dollars). For comparison, the cost of the average new car in 1950 was $13,000 in 2009 dollars, and the average cost of a new car in 2009 was $20,000 in 2009 dollars.

Why has the cost of healthcare skyrocketed? Healthcare expenditures go primarily to hospitals, physicians, and drugs in a ratio of approximately 3:2:1, respectively. These ratios have been fairly constant since 1950. New medical technology (including drugs) and the spread of public and private health insurance have been behind this dramatic increase. As new technology becomes available it is expensive and individuals seek to protect themselves from financial risk should they need use of that technology; however, an insured person who does not pay directly for use of new technology is much more likely to expect that technology to be used for his benefit because he
does not pay for it out of pocket. The two forces are mutually reinforcing and have been largely left alone by government regulators (my opinion), at least until the Affordable Care Act came along. Technology has also driven more physicians to specialize, increasing their payments for services.

The author, a Stanford economist, points out that the percentage of gross domestic production consumed by healthcare in the U.S. has grown from 4.6% in 1950 to 17% in 2009, while the percentage in most other large developed countries is now about 10%. He concludes with a pessimistic outlook on whether we will ever improve the way we do healthcare in the U.S. He points out that there is no consensus on how to provide care for the poor and seriously ill, and there is no consensus on how to improve the efficiency of healthcare. In my opinion, most Americans have simply accepted this “monkey on our back” even as it has grown to a gorilla. The amount we spend on healthcare undermines our ability to compete in the world economy and it undermines our ability to educate our children and maintain infrastructure. We may carry this gorilla for a while longer, but we are already staggering under its weight, and we are doomed to fall completely one day.

Get off your Butt
We have all seen older adults who exude energy and seem to never quit getting things done. In contrast, we have seen others of the same age whose major activity is moving from the couch, to the refrigerator, and then back to the couch. Although there are never guarantees of longevity, if you were to bet who would live longer, you would be wise to bet on the energetic person. New research reports have underscored the wisdom of that bet.

A research letter by 5 experts published in the Archives this past month asked what the risk of death was in community-dwelling older adults (mean age 82 years) based on their daily physical activity. The 893 participants wore wrist devices that compiled their activity each day. The range of activity was remarkable – from 6,000 movement counts to 1,356,000 movement counts per day. The investigators found that the death rate was four times higher in people in the lowest 10% of activity counts when compared to those above the 90% level for activity counts. The authors point out the importance of measuring exercise activity and non-exercise activity using a motion-counting device.

Another article from a group of Australian investigators asked whether sitting time, regardless of one’s activity level, was associated with increased risk of death in individuals over 45 years of age. The investigators linked data on self-reported sitting time of more than 220,000 Australians with the risk of death for a mean follow-up time of almost 3 years. The sitting times were placed into 4 groups as follows: less than 4 hours, 4-8 hours, 8-11 hours, and more than 11 hours per day. On average the mortality ratios were 15% higher in the “8-11” group and 40% higher in the “more than 11” group when compared to the group with the lowest sitting time (less than 4). The “4-8” group was no different than the “less than 4 group.” The authors conclude that “Prolonged sitting-time is a risk factor for all-cause mortality, independent of physical activity.”

Sinus Infections
Most of us have been diagnosed with a sinus infection at one time or another and most of us received an antibiotic prescription to help us with our recovery. A new meta-analysis of 10 research reports in the “Less is More” category of the Archives journal suggests that using antibiotics in the first week of a sinus infection is ill advised. The authors assert that antibiotic prescriptions for sinus infections amount to nearly 1/5th of all antibiotic prescriptions. Between 7 and 15 days after taking a prescribed antibiotic or a placebo, the cure-or-improvement rate averaged only about 10% higher for the antibiotic groups compared to the placebo groups. Those taking antibiotics had considerably more diarrhea reported. There are other factors that bear on the need for antibiotics, so talk to your clinician about whether you really need an antibiotic for your sinus infection. But be prepared for him to say “no.”
Tobacco Use – Will Hospitals Help?

According to a perspective article in the New England Journal written by three experts, the Joint Commission, which is the consortium of hospitals that regulate hospitals, has just issued an optional performance measure that their members should provide support for tobacco-use cessation in patients admitted to their facilities if those patients use tobacco. The Joint Commission is not my favorite outfit in the medical industry because it keeps far too many secrets and is built around hospital self-regulation, which is fundamentally flawed from a patient safety perspective.

The performance measure calls for systematically identifying hospitalized tobacco users, to whom must be given smoking cessation counseling, medication support, and a follow up contact 30 days after discharge. There is a strong emphasis on using evidence-based care in the directive; however, according to the authors, the directive is seriously flawed because its adoption is optional. The authors fear that hospitals will ignore it because it is troublesome. If you have a loved one who uses tobacco and is hospitalized, ask doctors in the hospital to provide tobacco-use cessation procedures for that person. Tell the doctors that you are aware of the Joint Commission’s performance measure and you want a healthier loved one.

Fascinating Book: Ellen in Medicaland

I have recently had the pleasure of getting to know the author of this Kindle book through a couple of her interviews. I can tell you that it is not easy to put humor and charm into a story of medical harm, but she has demonstrated in her writings that she can certainly do that. In her book she takes on some highly-placed folks at one of the Harvard teaching hospitals and describes her search for a competent primary care physician. It’s rare that such an informative narrative can also be humorous. Give Ellen’s book a try. $4.99 at Amazon

References

2) Moyer VA. What we don’t know can hurt our patients: Physician innumeracy and overuse of screening tests. Ann Intern Med 2012;156:392-393
7) Slomski A. Falls from taking medications may be a risk for both young and old. JAMA 2012;307:1127-1128

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Answer to question this month: c) stop screening at 75 years of age, or when patient has less than a 10-year life expectancy.