Screening for cancer in nursing home patients: Almost always a bad idea

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What is cancer screening?

Cancer screening is testing an individual with no symptoms suggestive of cancer.

So getting a mammogram because you feel a lump is not screening. Neither is getting a PSA in a man with trouble urinating, or a colonoscopy in someone with weight loss and anemia.
Why screen for cancer?

The goal is to diagnose a cancer before it causes symptoms, and is smaller and easier to treat.
Screening for cancer:  
It can’t hurt. 

Can it?
Potential Benefits and Harms of Cancer Screening

Potential Benefits:
- Find it early, when it is more treatable.
- For colon and cervix, find and eliminate at a pre cancer stage.
- Both could result in lower deaths from cancer.

Potential harms:
- False positive screening tests, leading to further tests.
- Complications (side effects) of screening or subsequent evaluations.
- Overdiagnosis, resulting in diagnoses and treatment of cancers that would never have bothered the patient.
False positive screening mammography rate in a population based sample of women aged 67-74 without breast cancer.

<table>
<thead>
<tr>
<th>Further Diagnostic Testing</th>
<th>Percent receiving (95% CI)</th>
</tr>
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<tbody>
<tr>
<td>Diagnostic mammogram</td>
<td>5.5 (4.9;6.1)</td>
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<tr>
<td>Ultrasound</td>
<td>2.9 (2.4;3.3)</td>
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<tr>
<td>Biopsy</td>
<td>1.0 (0.7;1.3)</td>
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<tr>
<td>Any follow up</td>
<td>7.4 (6.7;8.1)</td>
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A woman receiving yearly mammograms for 10 years has a 70% chance of at least one false positive test and a 10% chance of at least one biopsy.
Screening for cancer results in overdiagnosis – finding a cancer that would otherwise not have bothered the patient.

This has been found in the randomized trials of screening and also in population-based studies.
The spectrum of cancer growth rates. Slow growing cancers may never cause problems during a person’s lifetime. Diagnosing them by screening and then treating the patient for them causes harm.
Current Recommendations of the US Preventive Services Task Force and American Cancer Society on Receipt of Cancer Screening for individuals at average risk.

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<td>Mammography: Biennial, age 50-74</td>
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<td>Prostate: Age &lt; 75, insufficient evidence.</td>
<td>In men age &gt;50 with life expectancy &gt; 10 years, discuss pros and cons</td>
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<td>Age &gt;75, do not screen</td>
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The problems with PSA screening

• It is widespread in the US.

• The American public totally believes in the PSA test

But:
• Survival after a diagnosis of stage 1, 2, or 3 prostate cancer is so good, there is little advantage to diagnosing it early.

• Two large randomized controlled trials of PSA testing found little benefit and much over diagnosis.

• The number of men diagnosed and treated for prostate cancer almost doubled after the PSA test was introduced.
In Texas, more than 40% of men aged 85 and older receive a PSA test each year.
For prostate cancer, the survival of men diagnosed with stage 1, 2, or 3 prostate cancer is virtually identical to men with no prostate cancer, so there is little benefit of diagnosing at stage 1 versus stage 3.
Figure 4. Prostate cancer in the United States, 1973-2000; new cases. The introduction of screening for prostate cancer resulted in a near-doubling of the number of men diagnosed and treated for prostate cancer.
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Cumulative Risk of Cancer Dx During Follow-up of Unresected Polyp ≥ 10mm in size

(from Stryker et al. Gastroenterology 1987; 93: 1009-13)
The fundamental argument against cancer screening in the nursing home

The sad fact is, older patients in a nursing home will not live long enough to benefit from cancer screening tests — but they will be subjected to the harms of side effects, more testing, and over diagnosis.
Size

Size at which cancer causes death

Size at which cancer causes symptoms

Abnormal cell

Time

Death from other causes

Size

Fast

Slow

Very slow

Nonprogressive
Figure 1. Survival curves for the CHESS scale.
Figure 2. Survival curves for residents’ ADL scores by quartiles
Figure 3. Survival curves for the Index of Social Engagement scale
Cancer screening in patients with cognitive impairment

Patients with dementia will likely not remember whatever they were told about the reasons for getting a mammogram, or a colonoscopy, or even a blood draw.

For the demented patients, such tests can be experienced by them as an assault.

In such a situation, we should have a very very very good reason before we get any test — much less a cancer screening test.
The challenges in trying to reduce overtreatment (like cancer screening in nursing home patients)

• The arguments are usually framed in economic terms, like “it’s a waste of money,” so the patient gets the message that we are trying to save money by withholding care.

• The great majority of patients who have been overtreated do not experience it that way. They are likely to be grateful “that the doctors found it and treated it in time.”
Some Issues in Cancer Screening

- Increasing public ownership of all aspects of cancer care.

- Public and providers learn of new findings or recommendations at the same time.

- Increasing patient autonomy.

- Strange attitudes and beliefs abound
Attitude about Cancer Screening in the U.S.

• Conducted in 2002
• Random sample of men ≥50

Specific questions about PSA:

1. Do you think there will be a time when you should stop having the test? No 73%

2. If a physician recommended that you stop having the test, would you agree? No 73%

3. Do you feel that an 80 year old man in average health who did not have the test was irresponsible? Yes ~38%
Lessons from the US experience with cancer screening

- Prostate cancer screening resulted in a doubling of the number of men who were diagnosed and treated for prostate cancer, with little or no reduction in deaths for prostate cancer.

- Mammography in women aged 50-70 reduces deaths from breast cancer by 20% but at a cost of a 10-20% increase in the number of women diagnosed and treated for breast cancer. Reducing the screening interval to every two years reduces the overdiagnosis.

- Screening colonoscopy every 10 years should result in substantial reductions in colon cancer, but more frequent use (like every 5 years) or use in very old or sick populations increases the harm without increasing the benefit.
Conclusion: How to reduce cancer screening in the nursing home.

• Public and physician education about the harm of over diagnosis.

• It’s not about the money. It’s about doing what’s best for the patient.