Cost benefits of cancer screenings get political in the UK

This week, British politicians are debating the relative difference between a 47 year-old women and 50 year-olds. Same with 70-year-old women and 73-year-olds. Specifically, these politicians are asking the National Health Service, the UK's healthcare provider, why it's funding studies to increase the number of years women are annually screened for breast cancer. Do these six years of a women's life include a risk of breast cancer that would significantly change detection and survival rates and be worth the cost?

The NHS pays for screenings for women 50 to 70 years old. The expansion would include women 47 to 73 years old. But critics are arguing that the expansion hurts women instead of helping them, according to New Scientist:

> Critics say the trial is unethical and must be stopped. They say the women in the younger and older age groups are not being told that the dangers of screening may exceed those of not screening… The main concerns are false positives and over diagnosis – detecting and treating small cancers that, if left alone, might in fact regress or grow so slowly as to do no harm. So women are having their breasts removed and radio and chemotherapy unnecessarily, or as Michael Baum of University College London puts it, "The commonest cause of breast cancer is screening."

At the same time screenings increase the risks of false positives, they also catch cancers. Earlier this week a report was released showing how screenings had further decreased incidence of colon cancers. But the same report showed that colon cancers are on the rise in younger populations that aren't included in standardized screenings. And, these cancers seem to be more aggressive, faster-growing and more fatal.

The colon cancer study piggybacks on a widely-publicized breast cancer study that showed that Jewish women without a family history of breast cancer often carried the BRCA mutations that made them more susceptible to aggressive breast cancers. Before this study, it was common for Jewish women to be screened for the mutations if they had a relative who'd suffered from breast cancer. The finding was hailed as proof that screening should be extended to all women:

> "This should be offered as a universal screening test," said Dr. Ephrat Levy-Lahad, director of the Medical Genetics Institute at Shaare Zedek Medical Center in Jerusalem and the senior author of the study… "We should be testing people who are still healthy at a stage when we can prevent the disease," Dr. Levy-Lahad added. "And we don't have many diseases with a mutation that so clearly affects risk as BRCA."

With genetic testing, screening identifies a risk rather than the disease itself. With an elevated risk profile, women can opt for advanced surveillance, meaning more mammograms a year, or other prophylactic and controversial measures like preventative mastectomy or oophorectomy.

But screening for cancers themselves don't seem to be helping patients make smart decisions, according to Melissa Beck at the Wall Street Journal. Expanding screenings seems to be picking up on more and more tiny, slow growing cancers rather than aggressive ones. As in the colon cancer screenings studies, the most virulent cancers still escape the expanded screening profiles. "We're not finding enough of the really lethal cancers, and we're finding too many of the slow-moving ones that probably don't need to be found," says Laura Esserman, a breast-cancer surgeon at the University of California, San Francisco.

Many cancers grow slowly enough that they won't become fatal.That is part of the calculus the British government must consider as they debate expanding screenings. The basic questions: Will the cost of more surveillance and treatment outweigh the value of the potential lives saved. The case will be interesting to follow as the debate, which has been widely discussed by cancer researchers, moves into the political arena.

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Additional Resources:

- Fatal Retraction: Downside of early cancer detection, Genetic Literacy Project
- Advanced cancer screenings find early, slow growing cancers more often than fast aggressive ones, Genetic Literacy Project
- Beyond family history: Should all women be screened for BRCA breast cancer genes? Genetic Literacy Project