

The End of Critical Thinking

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It was only a matter of time before enough nonsense had been published in the medical literature concerning screening for breast cancer, that analyses would begin to appear that were based, exclusively, on the methodologically unsupportable arguments used by those who are determined to reduce or eliminate access to screening for women (1). The paper by Amir, et al (2) in the Journal of the National Cancer Institute (which is not the National Cancer Institute's journal) is astonishing in the fact that it does nothing more than summarize and try to legitimize the scientifically unsupportable papers that have been published by a small group of individuals who are on a crusade to end support for screening. The Editor of the JNCI has been an opponent of mammography screening, particularly for women ages 40-49, since the early 1990's. It is not surprising that he would publish back to back articles by the same author attacking mammography screening (3). In fact, the arguments used in both papers are almost close enough to be self plagiarism.

This is a crusade because not only does it involve fanatical adherence to methodological nonsense falsely claiming to be science, an effort highly criticized by more than 40 experts in breast health care (4), but it involves attacking women, and cancer advocacy groups. The effort to deny women access to screening is led by the so called Nordic Cochrane Center. I say "so called" because the Cochrane Collaboration used to be a highly respected organization that objectively reviewed randomized controlled trials. Unfortunately, it has been co-opted by those with an agenda that has discarded real scientific analysis and substituted nonsense analyses to justify their position. Despite the fact that the arguments made by the Nordic Cochrane Center have been, repeatedly, refuted (5,6,7,8), they are in the literature, and can be referenced by those who would promote their non-scientific arguments. The effort to reduce access to screening in the United States has been led by the Dartmouth Institute for Health Policy and Clinical Practice. This group has published papers that claim that there is massive overdiagnosis of breast cancer by using fundamentally flawed analyses (9,10,11). Even though arguments in support of screening have always been based on science, the Dartmouth group, publishing in the medical literature in an unconscionable fashion, attacked women who claimed that their lives had been saved by mammography (12). They then attacked advocacy groups claiming that they exaggerated the benefit of screening (13,14). Their goal is clearly to try to box in all of the arguments used to urge women to participate in screening in an effort to reduce or eliminate access.

In this most recent paper the authors have done nothing but cite the methodological nonsense from the Cochrane and Dartmouth groups. They have completely ignored the massive amounts of data that support mammography screening

(15,16,17,18,19,20,21,22,23). When those who support science address the issues surrounding screening they address the opposition arguments and refute them (24). Opponents of screening ignore those refutations, and simply repeat their arguments that have been shown to be unsound, in the hope that repetition will be mistaken for facts (the "big lie").

It is impossible short of a small book to address all of the misinformation in this latest article so I will list a few.

1. The authors suggest that the guidelines promulgated in 2009 by the US Preventive Services Task Force (USPSTF) were based on an independent review. They ignore the fact that none of the members of the Task Force had any experience in caring for women with breast cancer and only one member had any knowledge of breast cancer screening. They fail to point out that the USPSTF was clearly "guided" by non-member "advisors" who presented the data to the members to direct them toward their nihilistic goal.
2. The Canadian group followed the USPSTF and admitted to accepting its analysis (25). The Canadian Task Force was clearly influenced by the Nordic Cochrane group as evidenced by the accompanying editorial (26).
3. The authors' attacks on the randomized controlled trials are directly from the Nordic Cochrane group. The supposed methodological limitation, cited by the authors, "such as including women with prior breast cancer" alludes to the HIP study in the 1960's. In that study the women offered screening were asked if they had had a prior breast cancer and if they had, they were excluded from the trial (screening cannot prevent death from a cancer that had been diagnosed before screening was instituted). The unscreened women did not even know there was a study (they received the usual care) so that their medical histories were not reviewed until an "event" occurred. When they died of breast cancer their records were reviewed, and if they had had a cancer prior to the trial, they were excluded. Much has been made of this by opponents of screening, but it has the exact same effect as if it had been known ahead of time that these women had preexisting cancer. They would have been excluded. The Cochrane group clearly doesn't understand how RCT's function and have made a mountain out of this nonexistent mole hill. Amir et al simply, and uncritically, catalogue the nonsense, regardless of what actually was done, as if it is a legitimate list in an effort to, illegitimately, denigrate the RCT's.
4. They add to the list by saying that the RCT's are unreliable in that there was "nonconcealed randomization". It would be nice if those who hold themselves out as having expertise in an area were actually familiar with the data. In fact, the only trial with "unconcealed [non-blinded]" randomization was the Canadian National Breast Screening Study (CNBSS1). All of the women in CNBSS1 had a clinical breast examination before allocation and were assigned on open lists where one had only to skip a line to be certain that someone with a large or advanced cancer got placed in the mammography arm. By knowing who had advanced cancers before they were assigned to be in the screened or unscreened group, the trial loaded women with advanced, incurable cancers onto the screening arm (27) resulting in a statistically significant excess of women who were destined to die being placed in the screening arm of the trial at the outset (28). This is, indeed, a major reason to exclude the results from CNBSS1, but the authors are ignorant of the fact that the CNBSS1 was judged by the so-called Nordic

Cochrane Center, the group they are parroting, as being one of the two fairly well done trials.

5. The authors clearly do not understand “contamination”. All of the trials had "contamination" (women assigned to the unscreened control arm who, on their own, got screened outside of the trial), but the only effect that this could have was an underestimation of the benefits of screening. Women in the supposed unscreened control arm whose lives were saved by screening are still counted as unscreened controls. Contamination reduces the apparent effects of screening which was opposite to what the uniformed authors thought it meant.

5. The authors once more take up the mantra that the major decline in breast cancer deaths is due to improvements in therapy, yet none of the opponents of screening, prior to Dr. Amir, actually provides care for women with breast cancer. None of the major oncology organizations supports the USPSTF guidelines. Knowledgeable oncologists support screening because they know that therapy saves lives when cancers are found earlier.

6. The authors cite a paper that argued that screening had not had much impact on the death rate in Norway. The authors clearly had not even read the article. It was based on 2.2 years of follow-up (29). This is a totally inadequate follow-up given that screening does not begin to reduce deaths before 5-7 years after it is instituted (30).

7. The authors continue to display their lack of knowledge by spouting the nonsense that the screening trials do not show a decline in all cause mortality. They try to equate screening trials where only a tiny fraction of the population will develop and die from breast cancer, with therapy trials where all of the participants have the cancer and most deaths are due to the cancer. It is not reasonable to suggest that a 30% reduction in breast cancer deaths should be evident as a reduction in all cause mortality when breast cancer makes up only 3% of deaths each year in the general population.

8. The authors further display their lack of knowledge by stating that "Randomized screening trials are also susceptible to participation bias, a type of selection bias that can enrich trials with motivated and health-seeking individuals". The only trial that recruited volunteers was the CNBSS1 (the trial that the Nordic Cochrane Center felt was well done). All the other trials were population based and not susceptible to “participation bias”. Once a woman was randomly assigned to be invited to be screened she was counted in that group, regardless of whether or not she agreed to be screened. If she died from breast cancer she was still counted with the screened group. Along with contamination, “non-compliance” can only dilute the benefit of screening contrary to the authors’ misguided assertion. Furthermore, they clearly do not understand randomized, controlled trials. Selection bias is eliminated by properly performed RCT and is one of the major reasons for undertaking RCT.

It goes on and on and on, and I am only half way through the paper.

It is time to realize that the JNCI is a completely biased and uncritical journal that should have little scientific credibility since it has, unethically, misled to the world for almost 20 years by suggesting (despite its fine print disclaimer) that it represents the NCI. It is simply supporting the bias of its editor. This paper was written by "disciples" who are clearly uncritical in their analyses and whose only goal is to further the agenda of the so

called Nordic Cochrane Center and the Dartmouth Institute. They should be ashamed to promulgate this nonsense.

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