

Overdiagnosis: A Consequence of Commercial Influence

The phenomenon of *overdiagnosis* is receiving increasing attention in medicine, and is indeed the subject of an international conference to happen in a couple of weeks at Dartmouth. Last year, Ray Moynihan, the Australian journalist well known to readers of HOOKED as the author of a great book on “disease mongering,” along with Jenny Doust and David Henry, prepared a nice summary of overdiagnosis for the *BMJ* in advance of the conference (subscription required).

Overdiagnosis is defined as *“when people without symptoms are diagnosed with a disease that ultimately will not cause them to experience symptoms or early death.”* I think it important to distinguish overdiagnosis (which most people have never heard of) from false positive test results (which most people have at least some idea about). Let’s take breast cancer as an example. If you have a false positive mammogram, it shows a shadow suggestive of cancer, but when you do a biopsy or more definitive test, they see no cancer cells. But if you have overdiagnosis, the shadow on the mammogram actually has cancer cells when looked at under the microscope. The problem is that some cancer cells never grow very fast or spread, and if you have that form of indolent cancer (these authors call it “pseudocancer”), finding out about it early produces no benefit for you. You’ll have treatments to attack the cancer, and those treatments will cause serious side effects, and you’ll be forever labeled a “cancer patient,” but if the “disease” had simply been left alone, you’d never have known the difference. (Most lay people, I would wager, have no idea that there exists a form of “cancer” that can act like this.)

The authors list a number of causes of overdiagnosis: while one big one is screening tests, others are increasingly sensitive tests that find smaller and smaller abnormalities, and redefinitions of “disease” that include more people with milder cases. The authors mention a study of asthma which found that nearly 30% of people diagnosed as such did not really have asthma after all, and 66% of those diagnosed did not need any medicines for it. (The irony here is that we also know that there are people with true asthma who remain underdiagnosed and untreated, too often fatally so.)

The authors list these conditions as currently subject to overdiagnosis (again, not to deny that at least some people with these conditions are currently underdiagnosed

and/or lack access to proper care):

- Asthma
- Attention deficit-hyperactivity disorder
- Breast cancer
- Chronic kidney disease
- Pregnancy-related diabetes
- High blood pressure
- High cholesterol
- Lung cancer
- Osteoporosis
- Prostate cancer
- Pulmonary embolism (blood clots in lung)

- Thyroid cancer

So why does all this happen? Improved technology is one big reason, along with our love affair with screening and “prevention” and our near-religious faith that early diagnosis is always good. But coming right up next on the list is commercial influence, with the companies that make money off the screening tests and the companies that make money off the drugs and devices that are then prescribed when more people are labeled as sick doing everything they can to move the curve in the direction of overdiagnosis. (Indeed, if you look back at Don Light’s and my article on the Inverse Benefit Law:

<http://brodyhooked.blogspot.com/2011/01/inverse-benefit-law-making-sense-of-how.html>

--and review the forces that produce what we called the “left shift” that categorizes more and more previously healthy people as candidates for drug therapy, you’ll see a lot of overlap with the factors described in this paper.)

Moynihan R, Doust J, Henry D. Preventing overdiagnosis: how to stop harming the healthy. *BMJ* 2012; 344:e3502.