

Picking a cancer

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We'll start with the statistics, taken from this table on incidence¹ and this table on mortality², both from the National Cancer Institute (which is one of the NIH).

In both cases, you're looking at the age-adjusted rate per 100,000, for all races/all genders, 2002–2006, USA only. Click through the above links for footnotes and details. This here is just a quick manual merge of two tables; you'll see that their reported categories don't mesh perfectly.

	incidence	mortality
All Sites	462.9	186.9
Prostate	70.6	9.8
Breast	67.1	13.8
Lung and Bronchus	63.1	53.4
Colon and Rectum	49.1	18.2
Urinary Bladder	21.0	4.3
Melanoma of the Skin	19.6	.
Non-Hodgkin Lymphoma	19.5	7.1
Kidney and Renal Pelvis	13.6	4.1
Corpus and Uterus, NOS	12.5	.
Leukemia	12.2	7.3
Myeloma	.	3.6
Pancreas	11.7	10.7
Oral Cavity and Pharynx	10.4	.
Esophagus	.	4.4
Thyroid	9.6	.
Stomach	7.9	4.0
Ovary	7.1	4.9
Brain and ONS	.	4.3
Liver and IBD	.	5.1

The table is ordered by incidence, but if we ordered by mortality, the big winner would be lung cancer. Fortunately, there is a known means of preventing 'most all lung cancer: stop smoking. We have no idea how to truly cure any of these cancers, so if

¹http://seer.cancer.gov/csr/1975_2006/browse_csr.php?section=1&page=sect_01_table.23.html

²http://seer.cancer.gov/csr/1975_2006/browse_csr.php?section=1&page=sect_01_table.26.html

your goal is to bring down that mortality rate in the top of the last column, then public health campaigns entreating people to stop smoking is a clear and obvious first step.

In fact, it's so obvious that I'll be leaving lung cancer out of the rest of this. That brings us to prostate and breast cancer, which top the incidence list, and happen to be the two cancers that are gendered.³

Paying for research For my next table, I looked at the two largest non-profits focusing on breast cancer and prostate cancer: the Susan G Komen for the Cure⁵ foundation, and the Prostate Cancer Foundation⁶.

Let's have a look at their 2008 assets and contributions, from their annual returns (linked from the pages above):

[thousands of \$]	Komen	Prostate
Cash	319,229	27,895
Receivables	65,090	4,043
Total assets	390,167	32,044
Donations	368,640	36,721

This snippet from the balance sheets retains a neat ratio: for every dollar the prostate cancer foundation has or is given, the breast cancer foundation gets about ten.

This is partly a demonstration of the effective marketing power of the Komen folks, and we could have put a lot of different foundations on the right-hand side of the table to demonstrate Komen's fundraising acumen. But I'm talking prostate cancer because it is as close to analogous to breast cancer as it gets, yet the contributions are not at all symmetric.

Going back to the first table, the incidence of prostate cancer is a little larger, and the mortality rate from breast cancer is noticeably larger, by about 40%. That's significant, and is one hint as to why breast cancer is a salient problem that deserves attention and funding. But does it justify ten times the funding?

If you answered yes to that question, then let me show you another quirk in the mortality tables, broken down by race, pointed out to me by my personal epidemiologist [Master BCOH of Baltimore, MD]. The prostate cancer rate among white men is 9.0 per 1,000; among black men it is 20.0 per 1,000. So prostate cancer is primarily about black men, who die from it at a 44% higher rate than women of all races die of breast cancer.⁷

³Several people have pointed out that men can get breast cancer too. This is technically true, but only a few thousand men/year get it, out of the 150e6 odd men in the USA. The NCI tables above don't even bother to list breast cancer on the male break-out table⁴.

⁵<http://ww5.komen.org/AboutUs/FinancialInformation.html>

⁶http://www.prostatecancerfoundation.org/site/c.itIWK2OSG/b.4980403/k.DE87/About_PCF.htm

⁷What about breast cancer by race? There's a disparity there too, but not as great. Here are the white/black figures for incidence: 127.8/117.8, and for mortality: 23.9/33.0. I.e. black women die from breast cancer 38% more often than white women [(33-23.9)/23.9, for those of you playing along at home.], but white women find themselves with the disease more often. A lot goes into such a racial disparity: inequitable treatment, personal habits, genetics, and a hearty dose of et cetera; disentangling it all is left as an exercise to the reader.

For comparison with the ladies, the white/black ratio for prostate cancer incidence is 153.0/239.8, so the story here is simpler: black men are 57% more likely to get the disease and then more than twice as likely to

We can enumerate the similarities and differences between breast and prostate cancer all day long. But I can't come up with any way of looking at it to say that non-profit donations for one of these cancers should be ten times larger than for others.

So, why the disparity?

Yes, I know what you're thinking, because every person with whom I discussed this said the same thing: boobs sell. In any context, people would rather talk about boobs than colons and rectums. Nobody is walking around with a brown ribbon pinned to their lapel.

And back to the primarily African-American prostate problem, if an advertiser is choosing between associating a product with a black man or women's breasts—well, walk through the market and see how many cans of soup are pledging money toward research on prostate cancer.

The unified breast cancer campaign (of which Komen is a primary member) has chosen Pantone 237 CVC, aka pink, for its campaign color. Yeah, that same color that is avoided by the gender-conscious everywhere else because it is a blatant label and reminder of girlhood, even in situations where personhood is more important. The campaign managers know this, and chose to play up girlhood, thus distinguishing this type of cancer from those others which affect personhood.

Thanks, Pantone 237, for pressing how people with breast cancer are not just people with breasts, but are girls. Thanks also to the many makers of painfully girly and/or kitschy girl toys decorated with a pink ribbon.

Women's issues still count as special-interest, even though women are the majority in most places, and special-interest sells. We want to have an image of whom we're helping, and the more specific the issue, the better the image. You probably have some image of a typical-in-your-mind breast cancer sufferer, but probably don't have much image of the typical person with cancer of the urinary bladder. Appeals to tribalism extend throughout the charitable world, which is filled with African-American, Jewish, women's or Philadelphians' charities doing things for their group even though the problems faced may cut across all such divides.

It's not necessarily efficient to break up charitable giving into a million fiefdoms. The Komen foundation is to some extent getting people who would otherwise just spend their money on booze to give to cancer research, but they are also to some extent convincing people to give them money instead of giving it to the American Cancer Society.⁸ The first sort of influence is productive, the second is just rent-seeking. The two are inextricable, and we can't have more organizations pushing you to give without having organizations exert time and effort pushing you to give to them in particular. I'm not just saying this because of the amount of time I've wasted filling in grant applications.

¿Is this the optimal allocation? If we were social planners, we might want to spend more money on charitable causes, because we know that there are collective action

die from it.

⁸From their annual report: 2008 assets= 2,317,471 thousand; 2008 donations=1,008,462 thousand. So the Komen foundation scored about a third as many donations for its specific type of cancer as the ACS did for its work in all types. The difference in asset base is probably more about the ACS's longer history.

problems that the market can't solve. Having established that, we as imaginary social planners still need a rule about how to best allocate funds among the many nonprofits. Should we allocate in proportion to incidence? To mortality? Should the most lethal issue get more-than-proportionate funding? Maybe we should allocate to the most likely to be cured, or the one furthest from a cure. We can't come up with a perfect need-and-utility function, but we can get a solid start on determining where the money will do the most good. [I've been talking about cancers in the USA because it's as close as possible to comparing like to like, but let's not forget that the incidence of AIDS among adults in Sub-Saharan Africa is still around 5,000 per 100,000.]

The Komen foundation is half an inspiration to me, because it's managed to get people and corporations to overcome the collective action problem and give 0.3 billion dollars last year to help those who are suffering one specific type of problem. But it's half a disappointment, because the immense success of the breast cancer campaign shows us how readily people throw out the premise that all people are equal and of equal value. There is no Platonically perfect means of operationalizing any of the heuristics above, let alone just picking one, so the current system of charitable contribution goes back to the free market: contributors use the same rough and emotional decisionmaking tools that consumers of soup have, and the end result is that funding goes not to the greatest need, however measured, but to the causes with the most saleable associations and the best marketing flair.