Explaining the Latest Achievements in Cancer Research and Therapy: between Hype and Hope

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Le vostre opinioni

Finaziamenti AIRC e FIRC 2009

Grazie alla generosità dei soci, volontari, aziende sostenitrici e al supporto dei mezzi di comunicazione, nel 2009 AIRC e FIRC hanno deliberato la somma totale di **68.578.264 Euro** alla ricerca.

Di cui, **28.027.149 euro** derivanti dalla raccolta del 5 per mille dell'anno fiscale 2006 (€ 23.332.225) e 2007 (€ 4.694.924).

Nello specifico i finanziamenti sono stati destinati a:

Programma di Oncologia clinica molecolare 5 per mille	**14.694.924 Euro**
Progetti di ricerca (di base, translazionale, clinica ed epidemiologica)	**38.176.160 Euro**
Sostegno ai giovani (borse di studio, MY First AIRC grant, Start Up)	**5.621.000 Euro**
IFOM (Istituto FIRC di oncologia molecolare)	**9.400.000 Euro**
Progetti regionali speciali	**450.000 Euro**
Enti, istituti, fondazioni nazionali e internazionali	**236.180 Euro**
Totale	**68.578.264 Euro**

AIRC e FIRC nel 2009 hanno dedicato all'informazione scientifica 2.140.000 Euro.

Which are the constraints in reporting on cancer research for AIRC

- We need to inform patients about cancer prevention, diagnosis and therapy but also on the latest achievements of basic reaserch
- As we have to collect money from our readers, we cannot induce too much fear:
  - It's difficult to report exact survival statistics
  - It's better to focus on research successes than failures
  - Screening tests and all kinds of prevention, especially by lifestyle changes, are often welcomed acritically

Le giovani promesse dell'oncologia ITALIANA

di Daniela Ovadia

Il primo incontro di tutti i titolari di un finanziamento quinquennale start-up è stato un vero successo. Altissimo il livello scientifico delle ricerche ma grande anche la voglia di fare network

Associazione Italiana per la Ricerca sul Cancro

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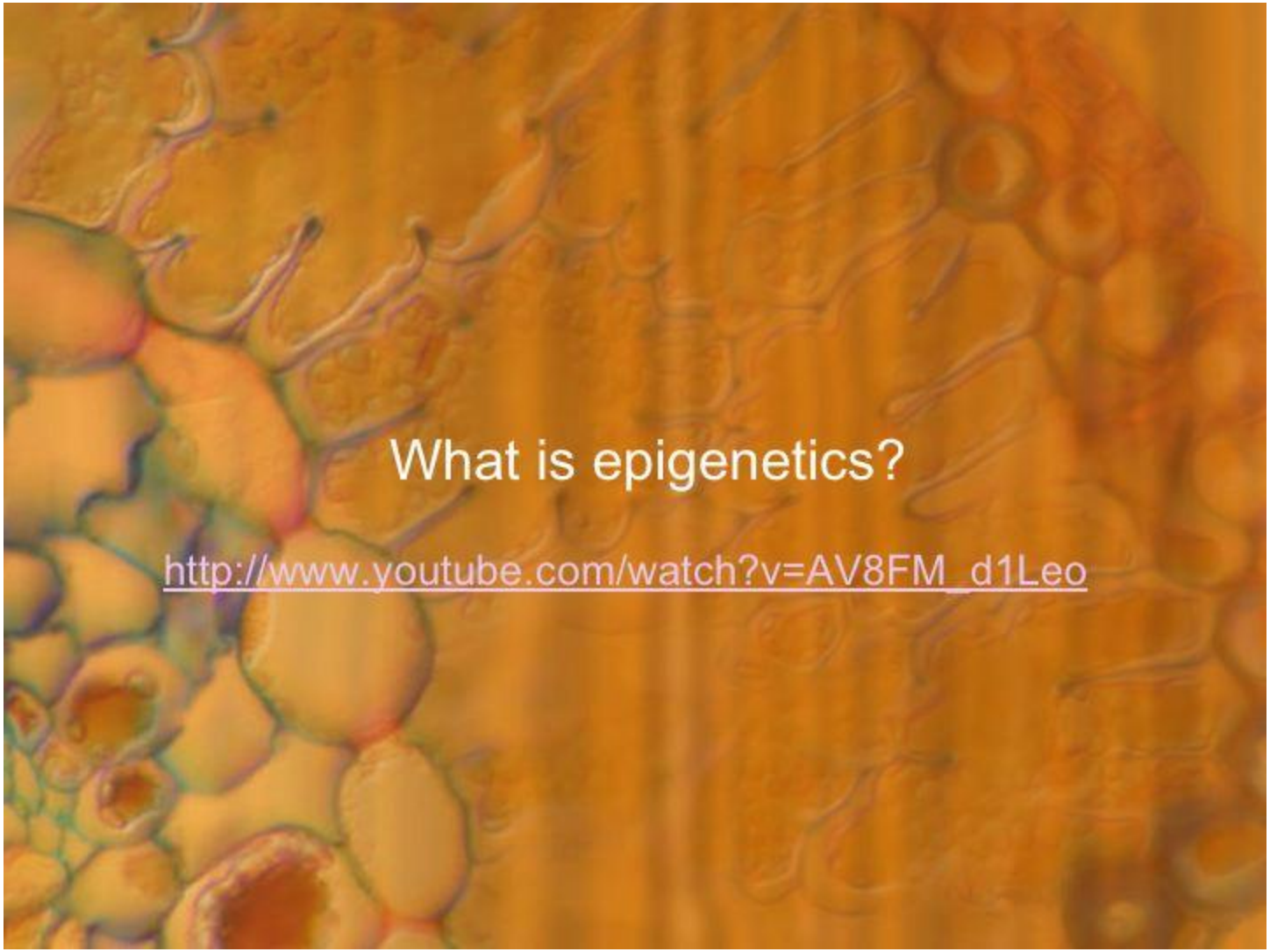
EVENTI LOCALI

How to explain basic research

http://www.airc.it/ricerca-oncologica/dal-laboratorio-alla-cura.asp

Some aspects of cancer research which are difficult to explain on newspapers

- Cancer is not considered a single disease anymore but rather a cluster of diseases with some common etiology and great differences
- Cancer is a genetic disease but in most cases not an inherited disease
- We cannot classify cancer on the basis of the affected organ but on the basis of the genetic pattern of the disease
- Cancer is induced not only by DNA mutations but also by epigenetic mutations. This is the scientific basis of lifestyle prevention


What is epigenetics?
http://www.youtube.com/watch?v=AV8FM_d1Leo

Some aspects of cancer prevention and diagnosis which are difficult to explain on newspapers

- Early detection of cancer is not always good for health (ductal carcinoma in situ of the breast - DCIS)
- Early diagnosis of cancer is not always important for overall survival (prostate cancer, small cells lung cancer)
- Diagnostic procedures can be harmful in some categories (mammography)

News Media Coverage of Screening Mammography for Women in Their 40s and Tamoxifen for Primary Prevention of Breast Cancer

Lisa M. Schwartz, MD, MS
Steven Woloshin, MD, MS

MANY PEOPLE BECOME ACquainted with important health care issues through the news media. Several recent studies, however, raise questions about how well the press covers medical issues. Moynihan et al,[1] for example, found that news stories reporting on the benefits and harms of 3 popular medications

Context In the late 1990s, 3 events pertaining to breast cancer prevention received considerable attention in the US news media: a National Institutes of Health (NIH) consensus panel recommended against routine screening mammography for women in their 40s (January 1997), the National Cancer Institute (NCI) subsequently reversed the recommendation (March 1997), and an NCI-sponsored study demonstrated the efficacy of tamoxifen in the primary prevention of breast cancer (April 1998).

Objective To examine how the major US news media covered the potential benefits and harms of 2 breast cancer preventive strategies.

Design and Setting Content analysis of US news stories reporting on the breast cancer prevention events. We used Lexis-Nexis to search for print news stories in the 10 highest-circulation US newspapers and requested transcripts from 3 major television networks to obtain all relevant news coverage in the 2 weeks following each event.

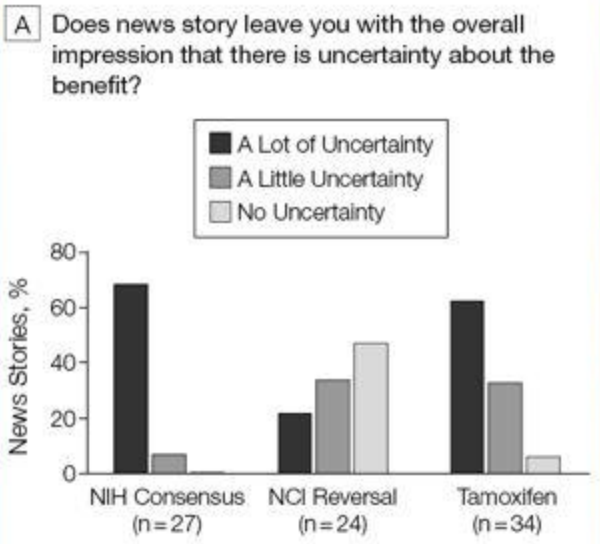
Results Twenty-seven stories about the NIH consensus panel, 24 about the NCI reversal, and 34 about tamoxifen appeared in high-profile news media within 2 weeks of each event. Sixty-seven percent of NIH consensus panel stories left the impression that there was a lot of uncertainty about whether women aged 40 to 49 years should undergo screening, but 59% suggested that women should probably or definitely be screened. Only 4 stories suggested that women faced a genuine decision about what to do. The level of uncertainty reported was substantially lower following the NCI reversal (21% suggested a lot of uncertainty), and most stories (96%) suggested that women should be screened. In contrast, tamoxifen stories highlighted uncertainty about what women at high risk should do (62% suggested there was a lot of uncertainty), and none left the impression that women should definitely take the drug (24% suggested they probably should). Sixty-five percent of these stories suggested that women faced a genuine choice and would have to weigh the risks and benefits themselves.

Conclusions Most news stories favored routine use of screening mammography and urged caution about using tamoxifen. Almost all noted the potential harms of each preventive strategy; however, the negative aspects of tamoxifen received greater emphasis. Whereas taking tamoxifen was presented as a difficult decision, having a mammogram was presented as something women ought to do.

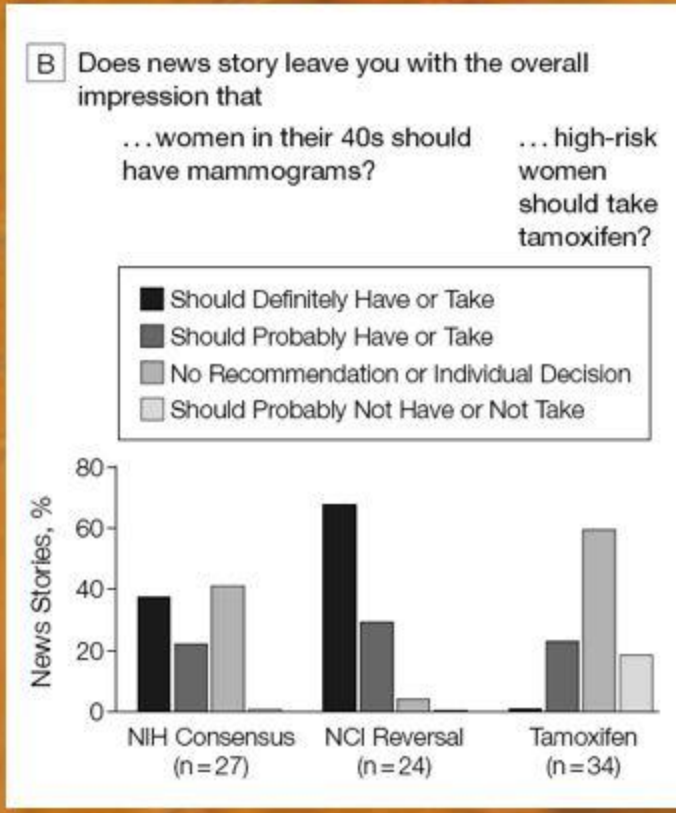
JAMA. 2002;287:3136-3142 www.jama.com

"We reviewed news coverage about screening mammography for women in their 40s and tamoxifen for the primary prevention of breast cancer. We found differences in how the news media reported on these issues. Stories about the NIH consensus panel were generally enthusiastic about mammography, most left the reader with the sense that women in their 40's should undergo screening. In many cases there was a sense of anger (10 of the 27 stories included the words anger, angry, furious, outrage or upset) directed at the consensus panel for failing to recommend screening and concern about uncertainty surrounding the idea that women should decide for themselves."

Figure 1. Overall Impressions of News Stories for Each Event



Stories following the NCI reversal in favor of screening were almost uniformly supportive; many expressed a sense of relief that the NIH consensus panel had been refuted and their "error" corrected. These stories were also remarkable for the extent to which politicians and advocacy groups were represented and for a new focus: ensuring that mammograms were covered by insurance. In contrast, stories about the use of tamoxifen for primary prevention of breast cancer were almost all cautious.The stories quoted scientists, few advocates, and no politicians. Rather than reflecting uncertainty, the stories accepted it, and nearly all suggested that women would have to weigh the risks and benefits of taking tamoxifen and decide for themselves about its use.



ELSEVIER

Social Science & Medicine 59 (2004) 541–551

SOCIAL SCIENCE & MEDICINE

www.elsevier.com/locate/socscimed

A comparison of breast, testicular and prostate cancer in mass print media (1996–2001)

Juanne Nancarrow Clarke*

Department of Sociology and Anthropology, Wilfrid Laurier University, 75 University Ave., Waterloo, Ont., Canada N2L 3C5

Table 1
Rankings of manifest themes for breast, testicular and prostate cancer

Breast cancer	Testicular cancer	Prostate cancer
1. Medical treatment/medicine	1. Medical treatment/medicine	1. Medical treatment/medicine
1. Gender	2. Age	2. Gender
3. Age	2. Death	3. Early detection
4. Family	4. Sport, competition, war, money	4. Age
5. Sport, competition, war, money	4. Gender	5. Side effects of medical treatment
6. Fear, language of fear	4. Emotion	5. Sport, competition, war, money
7. Emotion	7. Celebrity	7. Experts
8. Types of prevention	7. Social class (i.e. job, education)	7. Cure
9. Death	9. Early detection	9. Death
9. Experts	9. Side effects of medical treatment	9. Family

Breast cancer key messages

- "If we catch it early, we can cure it. We can cure most of breast cancers".
- If you are dealing with smaller cancers, you are dealing with more cures.
- The best use for money raised for breast cancer is "research for a cure"

Testicular cancer messages

- It is fairly easy to treat and have a 95% survival rate
- We need more prevention and self-examination for early detection
- Emphasis on the possibility to be treated without loosing “masculinity”

Prostate cancer messages

- Early detection improves cure (implicitly survival)
- PSA is a good screening test that should be prescribed every year after 50
- New therapies and surgical techniques have no adverse effects on sexual activity and continence

STUDY

A Content Analysis of News Coverage of Skin Cancer Prevention and Detection, 1979 to 2003

Jo Ellen Stryker, PhD; Benjamin A. Solky, MD; Karen M. Emmons, PhD

Objective: To analyze newspaper coverage between 1979 and 2003 to understand how print coverage may affect primary and secondary skin cancer prevention in the US population.

Design: Content analysis of 921 skin cancer articles released by the Associated Press during the study period.

Main Outcome Measures: Amount of attention given to primary and secondary prevention practices and to risk communication.

Results: Media attention to skin cancer has not increased since 1986. Neither prevention (31.8% of all stories) nor detection (24.4% of all stories) received as much attention as treatment (47.0% of all stories). Specific sun protection practices were mentioned infrequently. Dermatologic detection (6.6%) or self-detection (5.5%) of skin cancer was rarely discussed. Risk communication about skin cancer was suboptimal: articles rarely presented absolute and relative risk.

Conclusions: The media pay little attention to skin cancer, and, in general, stories do not contain important educational information. Strategies for generating increased media attention are discussed.

Arch Dermatol. 2005;141:491-496

ORIGINAL INVESTIGATION

Cancer and the Media

How Does the News Report on Treatment and Outcomes?

Jessica Fishman, PhD; Thomas Ten Have, PhD; David Casarett, MD, MA

Arch Int Med 2010; 170 (6) - published online march, 16.

Trained coders determined the proportion of articles (on 436) reporting about:

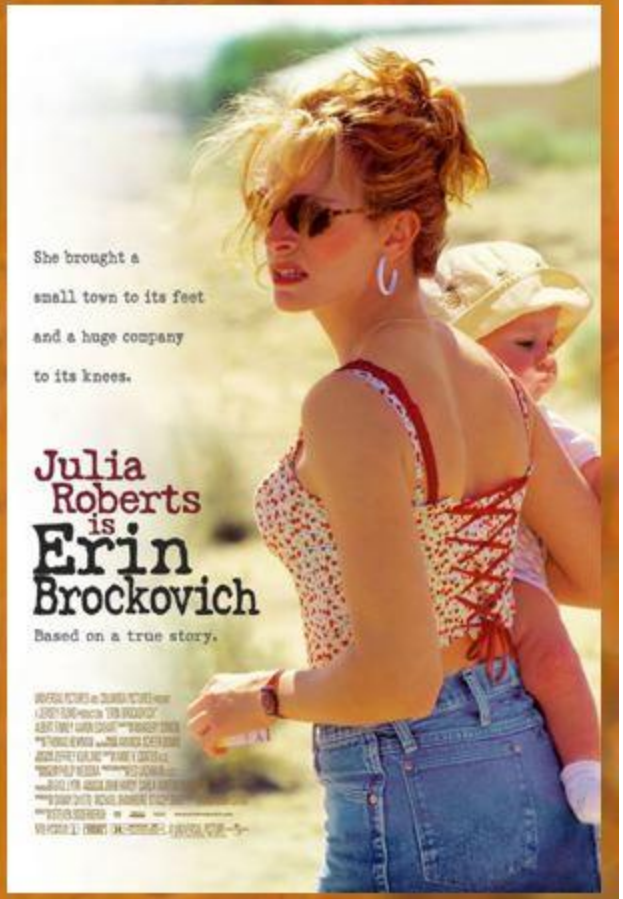
- cancer survival - 32.1%
- cancer death and dying - 33%
- aggressive cancer treatments failure - 13.1%
- adverse events of aggressive cancer treatment - 30%
- end-of-life palliative or hospice care - 0.5%.

Conclusions

"Very few news reports about cancer discuss death and dying, and even those that generally do not mention palliative and hospice care. It is surprising that few articles discuss death and dying considering that half of all patients diagnosed as having cancer will not survive. The findings are also surprising given that scientists, media critics, and the lay public repeatedly criticize the news for focusing on death. Indeed, as documented by several classic studies, the news often equates misfortune with significance, dedicating a disproportionately large share of coverage to mortality and other bad events".

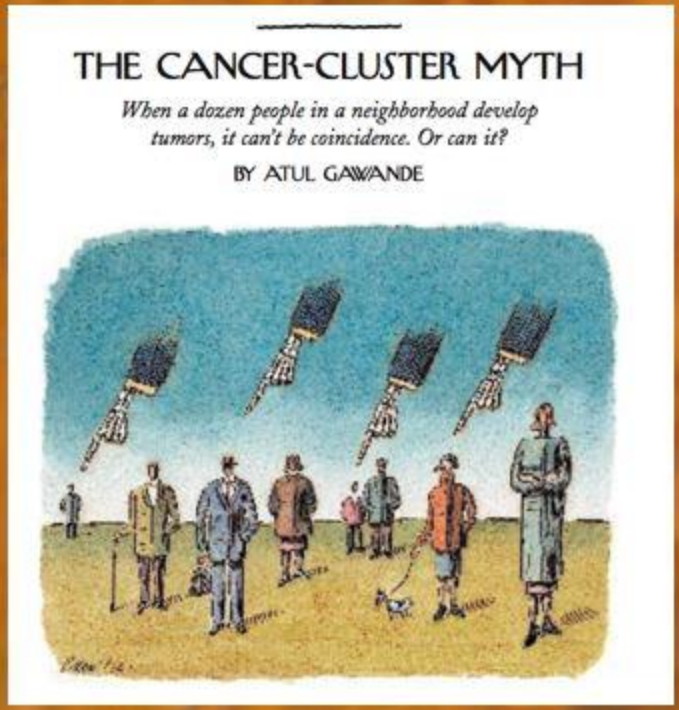
Cancer clusters

A disease cluster is the occurrence of a greater than expected number of cases of a particular disease within a group of people, a geographic area, or a period of time.



Cancer cluster can occur by chance

People assume that the pattern of disease in a large population will be replicated in all subsets. But cancer clusters can occur by chance. After seeing a long sequence of red on the roulette wheel, people find it hard to resist the idea that black is “due”. We assume that the sequence of R-R-R-R-R is somehow less random than R-B-R-R-R-R-B. But the two sequences are equally likely



THE CANCER-CLUSTER MYTH

When a dozen people in a neighborhood develop tumors, it can't be coincidence. Or can it?

BY ATUL GAWANDE

Facts people should know about cancer / 1

* Each type of cancer has certain known and/or suspected risk factors associated with it.

* Cancer is almost always caused by a combination of factors that interact in ways that are not yet fully understood.

* Carcinogenesis (the process by which normal cells are transformed into cancer cells) involves a series of changes within cells that usually occur over many years. More than 10 years can go by between the exposure to a carcinogen (any substance that causes cancer) and a diagnosis of cancer, which makes it difficult to pinpoint the cause of that cancer

Facts people should know about cancer / 2

Cancer is more likely to occur as people get older; because people are living longer, more cases of cancer can be expected in the future. This increased life expectancy may create the impression that cancer is becoming much more common, even though an increase in the number of cases of cancer is related in large part to the growing number of elderly people in the population.

* Some ethnic groups have higher rates of cancer than other. Such differences may be due to multiple factors, such as late stage of disease at diagnosis, barriers to health care access, history of other diseases, biologic and genetic differences, health behaviors, and other risk factors.

* Cancer, in general, is common. More than 17 million new cases of cancer have been diagnosed since 1990 in USA.

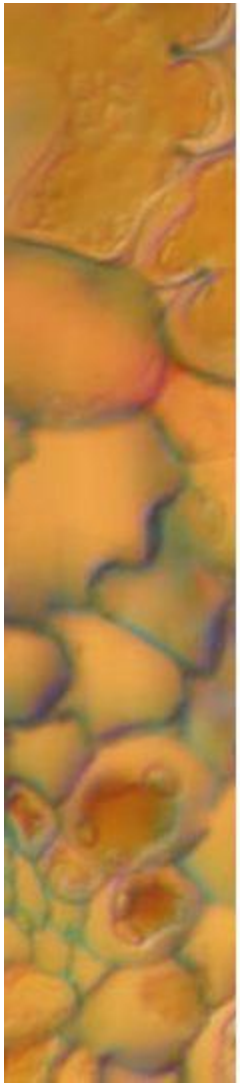
INVITED COMMENTARY

Covering Cancer

On April 13, 2008, *60 Minutes* aired a segment touting a new radio wave machine that "may be one of the most promising breakthroughs in cancer research in years." The device had "cooked cancer to death" in mice, with "no side effects." Although human trials were at least 4 years away, Dr Steven Curley of the MD Anderson Cancer Center in Houston, Texas, told correspondent Lesley Stahl that "in 20 years of research, this is the most exciting thing I've encountered."[1]

The history of cancer news reporting in the United States is replete with similar examples. Whether in 1949, when *Time* magazine put the inventor of the first Food and Drug Administration–approved cancer drug on its cover, or in 1998, when the *New York Times* offered up its Sunday front page to the "cautious awe" greeting the first anti-angiogenesis drugs because they "eradicate tumors in mice,"[2] the nation's leading media institutions have set a low bar for routine coverage of the nation's long-running war on cancer. Hype is the norm.

Merrill Goozner, MS



And where do the hopeful stories to feed that audience come from anyway? In an era of diminished resources for primary news reporting, they increasingly come directly from the medical literature, which has a well-oiled machine for getting its most promising "breakthrough" research into the nation's premier newspapers and news magazines. The leading medical journals routinely issue press releases well in advance of publication to give reporters adequate time to accurately report stories. Some hold briefings that can be accessed via the Internet.

But instead of improving coverage, this public relations machinery has fed a proliferation of news services that provide short synopses of the latest clinical trials, which, in turn, fill shrinking news holes that once held enterprise stories by reporters no longer given the time and resources to put the latest research in a larger context. How accurate are these study stories that rely on press releases? A 2002 survey that looked at 127 press releases issued by 9 leading medical journals found that fewer than one-quarter noted study limitations, more than half did not report the difference between the treated and untreated groups, and more than three-quarters of the studies that were industry funded did not note that fact.[8]

Alternative sources of information for the press perform no better. A recent survey of 20 academic medical centers found that only 17% of press releases for human research involved either randomized clinical trials or meta-analyses. Most were cohort studies or nonrandomized trials. Yet, 42% of press releases contained no caveats about the research's implications. Most animalstudies drew unwarranted implications for human health, and 29% of quotes from investigators in animal and human studies exaggerated the finding's importance.[9] In another recent study,[10] most industry press releases highlighted results presented at scientific meetings, but sometimes without presenting the underlying data and almost always without noting the study's limitations.

This does not absolve the news establishment for failing to see through this corporate, institutional, and journal hype. Even before the recent wave of cutbacks, the news industry underinvested in training and failed miserably at adopting best practices developed by professional organizations, such as the Association of Health Care Journalists. That group's statement of principles calls on health care journalists to avoid emphasizing animal studies, to avoid sensational language, and to always present an accurate portrayal of a therapy's risks and benefits.[11] Yet, those lofty goals are difficult to achieve in newsrooms where 83% of journalists, according to one survey, never received training in interpreting health statistics.[12]

World Health Organization

- Cancer is a leading cause of death worldwide: it accounted for 7.9 million deaths (around 13% of all deaths) in 2007.
- Lung, stomach, liver, colon and breast cancer cause the most cancer deaths each year.
- The most frequent types of cancer differ between men and women.
- About 30% of cancer deaths can be prevented.
- Tobacco use is the single most important risk factor for cancer.
- Cancer arises from a change in one single cell. The change may be started by external agents and inherited genetic factors.
- About 72% of all cancer deaths in 2007 occurred in low- and middle-income countries.
- Deaths from cancer worldwide are projected to continue rising, with an estimated 12 million deaths in 2030.

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