

THE LAST WORD

by George Poste

HYPE, HOPE AND HONESTY

Over the last few years I believe that there has been a disturbing trend in the way in which discoveries in fundamental cancer research are reported, giving the general public an unrealistic picture of the time needed to convert today's discoveries into effective treatments. The public, increasingly accustomed to the seemingly inexorable advance of science, is fed a regular diet of media reports of progress against cancer, even though the obituary pages convey a different message. In any presentation of science to the public, perceptions of what has been said will vary enormously. The motives and abilities of the reporters and scientists involved will embrace the shoddy, the self-serving, and the sensationalistic as well as those who seek to offer informative and balanced accounts. Many scientific advances that affect society receive scant attention from the media; they are either too complex or, more likely, too remote from the day-to-day lives of the general readership. Cancer is different. The dread of this disease—and that each of us has known, or will know, or will be, someone who will succumb to cancer—ensures that cancer research receives widespread publicity.

The campaign to promote public awareness of cancer, particularly early detection of the disease, began in 1913 with the American Society for the Control of Cancer, the antecedent of the American Cancer Society. The tangible benefits of such programs are well known. The other, less attractive side of cancer publicity is a barrage of reports of research "breakthroughs" and treatments that will "revolutionize" cancer treatment. This is not new. However, public interest in science, and the expanding media dedicated to satisfying this interest, are very different today than even a few years ago.

Far too many publications that do not depend on sales at supermarket checkouts have rushed headlong to describe the pending demise of cancer. They have reported such recent discoveries as interferon, oncogenes, and monoclonal antibodies as "magic bullets" that seek out tumor cells. The cancer research community, many in the media, and some segments of the public, can accord such claims the respect, cynicism, or incredulity they deserve. Cancer patients and their families do not have this luxury. Well publicized, well intended, yet unrealistic, statements about cancer can have a devastating effect on those affected by the disease. Every report of a cancer "breakthrough", no matter how well qualified as "experimental" or "years away" from human trials, creates unrealistic hopes and expectations in cancer patients and their families.

My comments are not meant to be pious or to detract from the intellectual achievements responsible for these discoveries and their conceptual or practical value. Rather, it is a plea to reduce the hyperbole until their significance can be assessed. The research community may argue that such "hype" is the product of poorly informed or overly enthusiastic reporting. No one, least of all the media, would contend that such deficiencies do not exist. However, the research community is no less to blame. The media have had no difficulty finding scientists or institutions eager to offer unrealistic statements about how the latest discoveries in molecular biology or drug delivery (to

cite two topics that are currently receiving considerable publicity) will lead to striking improvements in cancer treatment or prevention. I object to the failure of both scientists and reporters to inform the public, and cancer patients and their relatives in particular, about the lengthy time needed to translate such discoveries into routine clinical practice.

This aspect of the cancer story is part of the larger problem of the lack of understanding—by the public, the media, and also a substantial segment of the academic research community—of the complexity of bringing a drug to the marketplace. Currently, developing a typical systemically administered drug costs \$70–90 million and takes 8–10 years before gaining final approval to market. Even if this time lag is understood, it is rarely stated. This has created a situation in which the public, and also many in the research and medical communities, have come to treat new drugs as a matter of routine while the number of new drugs in development in all therapeutic categories continues to fall.

It is appropriate that the public, who fund the majority of cancer research, have the opportunity to sense the scale and excitement of progress in modern molecular biology. Public support for cancer research has not been eroded by the lengthy list of publicized "breakthroughs" that have failed to fulfill their promise. This support will not evaporate as long as cancer maintains its place in the mortality statistics. This should not, however, lessen the responsibility of the cancer research community to inform an interested public of the realities of unsolved problems.

I do not accept the views of the Director of one prestigious British cancer research center. Researchers and the public relations office from his institution had stated, in the press and on television, that a new cancer vaccine would be available within a year and that other rapid treatment advances would quickly follow. The center's Director reacted to criticism published in *Nature* by urging in the same journal that "proper presentation of scientific results (in a scientific journal) . . . not be confused with their presentation to the general public." I reject this view. The prose will be different in professional and lay publications but the facts must be identical.

Without such standards the unfortunate, if unintentional, trend towards hyperbole in the reporting of cancer discoveries will continue unabated. This will not only exacerbate the cycle of raised and dashed hopes in cancer patients, but also erode the credibility of the investigators involved and their institutions or companies. Worse still, the cynicism created within the scientific community by repeated exaggerated and premature claims can only detract from the legitimate research progress being made in the same area by investigators with a less developed penchant for publicity.

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