

## EDITORIAL

# THE VULNERABILITY OF RADIATION ONCOLOGY WITHIN THE MEDICAL INDUSTRIAL COMPLEX

THOMAS E. GOFFMAN, M.D.,\* AND ELI GLATSTEIN, MD<sup>†</sup>

\*Department of Radiation Oncology, Eastern Virginia Medical School, Norfolk, VA; <sup>†</sup>Department of Radiation Oncology, University of Pennsylvania Medical Center, Philadelphia, PA

Between the Health Insurance Portability and Accountability Act (HIPAA) and the Center for Medicare and Medicaid Services (CMS), radiation oncologists may well take a dim view of further rules, regulations, and paperwork. However, it is our very innocence, or lack of enticement, that leaves us somewhat less mindful of potential conflicts of interest in our field.

Without open discussion and some filling out of forms, the problems with potential bias in peer-reviewed radiation oncology journal articles is likely to be removed from its historic center—the journals themselves—and turned over to the media (1) or potentially a government agency. We are at special and unusual risk both because our forays into research often involve highly expensive equipment on which the hospital expects a return and because other medical specialists do not hesitate to speak for us.

The problem in theory is a great deal clearer than the problem in reality (i.e., vast numbers of experts in medicine earn money from sources other than their salary or federal grants in some form at some time); this can potentially lead to bias in research. If all of this bias were stacked like bricks, it would probably be dwarfed both by the bias of journals to favor positive over negative results and also the extreme pressure under grant funding to publish or perish. And even the most well-intentioned of meta-reviews watching for negative findings and rewarding evidence-based medicine, such as the Cochrane efforts, may have their own biases—after all a considerable amount of funding comes from nongovernmental sources that are usually not identified.

In short, it may be healthy to view all publications with a somewhat jaundiced eye. At the same time, faculty members may join a speaker's bureau because they truly believe in a product or want to see their excellent work get greater exposure. Readers may not be able to discern the differences among those who became involved with industry because their own research pointed them toward a product vs. those

simply biased by reward for a service rendered. Our field is particularly vulnerable because purchases of high tech equipment involves enormous resources and the hospital-based pressure to use these resources to generate more revenues can be quite formidable.

The American Society of Clinical Oncology, the American Medical Association, and local internal review boards have made significant strides in vigilance. Yet, shrinking hospital profits and extramural National Institute of Health grants with an increase in bureaucratic paperwork make the researcher all the more dependent on outside sources. It might stagger the hard-working radiation oncologist to know of the golf equipment, free trips to Las Vegas, and other perks to those who dispense expensive medications.

From an international view, American oncology literature might be considered more biased toward overplaying advances than bias directly from financial ties. At least since the establishment of the National Cancer Act of 1971 and the "War on Cancer," American oncologists of any ilk might well be accused of trumpeting the wins in battles against rarer cancers (e.g., leukemias, lymphomas, testicular cancers) while avoiding the far more modest results of battles against the far more common epithelial carcinomas, such as lung, gastric, and pancreatic, ovarian, and even breast cancers (2).

We may have won some battles, but we have hardly won the war. Other partial victories, such as those won against prostate, cervix, and bowel cancer can perhaps be as much ascribed to early detection as revolutionary treatment; moreover, treatment successes have been incremental, not overwhelming as statements to the press might make the public believe.

Just as with the military-industrial complex, advances in the oncologies are now often made by commercial outfits with profit as a bottom line. Galen to Koch to Osler to the Curies to Best and Banting to Farber all seem like innocents compared with recent significant advances made within

Reprint requests to: Thomas Goffman, M.D., Department of Radiation Oncology, EVMS/Sentara, 600 Gresham Drive, Norfolk, VA. Tel: (757) 668-2075; Fax: (757) 627-0334.

Dr. Glatstein is an advisor to the Corixa Corporation and Dr.

Goffman accepts CME and untold breakfast monies for morning cancer conferences.

Received Aug 27, 2003, and in revised form Nov 5, 2003. Accepted for publication Dec 17, 2003.

pharmaceutical and technical corporations. Companies have often made progress making money and made progress paying doctors money. Raw ambition and promotion can bias as well; the Salk/Sabin controversy regarding the polio vaccine is often used as a model. Sheer ruthless competitiveness can win out, as J.D. Watson has himself published (3).

However, the bias or conflict of interest under the public spotlight currently regard ties between physicians and the pharmaceutical and technologic corporations as relations that mandate public scrutiny.

A decade ago, one saw salesmen when deciding on purchase of a new accelerator or simulator perhaps every several years; now they can be seen as often as every week with a gadget or drug that will intensify or modify radiation response.

Yet, it must be admitted that it is largely from these industries that new advances are available. Negotiations become complex and industry often negotiates better.

Although radiation oncologists have not been the major figures examined, they increasingly use products of commercial chemistry and molecular biology, as well as industrial technology, to try to improve results. Our clinical results have in general been less heavily scrutinized for fiscal bias than material routinely published in the *New England Journal of Medicine*, *Science*, *Nature*, or even the *Journal of Clinical Oncology*, for example, in large part because such biases were less often a potential risk in our field. We may be at a slightly different risk: for investing in high technology and publishing positive preliminary results that are in turn being used as a magnet both for grants and for patients. We also can increasingly be tempted to use extremely expensive antiemetics, drugs such as Viagra, Zithromax, Proctofoam, or, novel skin lotions and a range of products for which there can be a cheaper alternative. A modest radioprotector can seem critical until one learns that its cost is almost as much as a full course of radiation.

With some agents or treatment techniques, the long-term results are not yet published in peer review journals but speakers, believing in their findings, are hired by companies to give talks around the country. Meanwhile, a sales representative never leaves a department without giving out well-labeled gifts to the secretaries and nurses—another source of subtle influence. All of this nonclassical presentation of data and “generosity” requires reexamination. One is reminded of the untold trials and off-protocol treatment with multiple expensive drugs for non-Hodgkin lymphoma, to the delight of drug companies, only to end up back with good old CHOP. Hundreds of centers likewise invested in expensive hyperthermia units, which, in all but a few programs, now have little role.

It can be almost refreshing to see occasional publications questioning of what had seemed to be exciting technologic advances by excellent authors (4–6).

It may help us as a field and help the reputation of our field to increase scrutiny of financial ties in our literature as a sign of transparency.

Recommendations, especially in review articles, from an authority concerning new drugs or technologies need to be carefully evaluated if the authority has a financial relationship to the manufacturer (1), or else the newspapers or government may take over the job. Investment in or income from a given industry needs to be made clearer on the first page of a publication.

Many of us sit on boards or act as advisors to private companies or may be paid on the lecture circuit by corporations. Stooping to conquer with a little additional paperwork may help control any future controversy because many such roles are absolutely above-board and honest. Yet, a “true believer,” speaking of “early” results of a treatment not yet fully evaluated can cause as much harm as someone motivated simply to add to his or her income.

Amazingly, there are a remarkable numbers of peer-reviewed journals that do not require disclosure of commercial ties or do not print them routinely with their published articles. Other journals sideline these ties, making them difficult to find when starting to read a new article or just as often simply the abstract. However, oncology in general appears under considerable scrutiny from the public and federal sector. Although it might be said we have vastly fewer ties to industry than some in medical oncology, it behooves us to prove it, setting a higher standard rather than having others set it for us.

Many have repeated the adage that if all you have is a hammer, the whole world looks like a nail. Unfortunately, if what the hospital has purchased for you is expensive intensity-modulated radiation therapy or stereotactic gear, marginally or unproven treatment can be hammered for profit. This situation is in significant contrast to medical oncology, which can turn abruptly from a platinum derivative to Navelbine without a large investment having been made by the institution.

As for the commercial sector paying oncologists for everything from cabs, air travel, dinners, hotels, and talks, it would seem likely corporations continue to do it because it has more impact on sales than we wish to acknowledge. As well, these activities are no free lunch any more than are television drug ads: the cost of such advertising adds directly to the cost of the cancer therapies, costs that often prove beyond the ability of some of our patients to pay.

## REFERENCES

1. Undisclosed financial ties prompt reproval of doctor. *New York Times* August 2, 2003, Section 1, p. 18.
2. Devita VT Jr. Hodgkin's disease—clinical trials and travails. *N Engl J Med* 2003;348:2374–2376.

3. Watson J. The double helix: A personal account of the discovery of the structure of DNA. New York: W. W. Norton & Co, 1981.
4. Larson DA, Gutin PH, McDermott M, *et al.* Gamma knife for glioma: selection factors and survival. *Int J Radiat Oncol Biol Phys* 1996;36:1045–1053.
5. Verellen D, Vanhavere F. Risk assessment of radiation-induced malignancies based on whole-body equivalent dose estimates for IMRT treatment in the head and neck region. *Radiother Oncol* 1999;53:199–203.
6. Potters L, Steinberg M, Wallner P, *et al.* How one defines intensity-modulated radiation therapy. *Int J Radiat Oncol Biol Phys* 2003;56:609–610.