Radiation Litigation: Future Issues

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Scientists and regulators have successfully been able to control exposures to man-made ionizing radiation so that mankind has been able to enjoy its vast benefits without experiencing the significant harm which would occur from high doses. However, thousands of lawsuits have been filed claiming that low occupational levels of ionizing radiation have caused cancer and other illnesses. It will be decades before the legal system determines the rules of law which will apply to this new type of lawsuit and the effects which these cases will have upon those persons who work with sources of ionizing radiation. This article explores some of the issues which are expected to arise as these cases work their way through the courts. © 1989 Academic Press, Inc.

We are now living in a time when the hazard from mankind’s peaceful uses of ionizing radiation has been controlled. Exposure standards are in place and have functioned effectively for decades. The ALARA philosophy encouraged the development of better ways to do the same work with less exposure. Epidemiologic studies and animal experiments have increased our confidence that our present risk estimates are not far from the mark. Even the unexpected accidents which have scared a large percentage of the population have actually proven that mankind’s peaceful uses of ionizing radiation are safer than mankind’s use of automobiles or airplanes. In short, the radiation hazard is under control.

But now we face a new hazard, the “litigation hazard.” There is no question about the fact that ionizing radiation can cause most forms of cancer and that science assumes that there is no exposure threshold below which the risk is zero. We also know that about 30% of all workers who ever wore a film badge will eventually get some form of cancer because that is the natural incidence of cancer in the United States. Epidemiological studies to date and exposure records do not suggest that a significant proportion of radiation workers will show an excess of radiation-induced cancer. What we do not know is what portion of nuclear workers with natural cancer (or their heirs) will associate that cancer with the past exposure to ionizing radiation. Even if the present regulations and ALARA planning actually keep the doses down

to a level where absolutely no excess cancers will be observed in the exposed work force, the 30% natural incidence rate remains. What percentage of the 30% will sue?

There are three factors which have influenced the answer to that question. First, massive accidents which attract negative media attention have resulted in a significant number of lawsuits even if the actual doses were minute. Three Mile Island (TMI) is an example. There are presently over 2000 lawsuits filed even though the doses were less than one year’s natural background radiation in Pennsylvania. Second, a public perception of wrongdoing or callousness has resulted in litigation. The “Utah Downwinders,” the “Pacific Islanders,” and the “Atomic Soldiers” are examples. Thousands of cases have been filed by these people. Although legal defenses result in dismissals prior to trial in these cases, a general public perception that these people have been wronged and deserve compensation creates pressure for some form of legislative compensation system if the courts do not provide a means of compensation. Third, a perception that there is money to be made by filing such lawsuits has encouraged plaintiffs’ lawyers and potential plaintiffs to try for their “piece of the pie.” This is just normal human character. If any of these factors are present, a larger percentage of exposed people with natural cancer are likely to sue. If they are missing, fewer exposed people with natural cancer are likely to sue. It is interesting to observe that most scientists cannot influence even one of these factors. They cannot prevent accidents such as TMI, they cannot influence how the media portray past or present events, and if a suit is filed over an exposure incident in their laboratory, they will not be able to control the settlement or trial of that case. Yet there is one very important thing which they can do. They can keep good records so that when a lawsuit is filed 20 years after the exposure, the lawyers will be able to retrieve sufficient data to try the case on the true facts.

As the exposed work force reaches the cancer-prone age, which is 50 and over, more lawsuits are likely to be filed because the pool of potential lawsuits will be much larger than it is today. For example, if graduate students were exposed in the 1960s they will be expressing their natural cancers around the year 2000. One cannot take much comfort in the fact that no cases have been filed against their institution when it is realized that the people which have been exposed in the program are not yet old enough to develop cancer.

As more radiation cases are processed through the legal system and through workmen’s compensation systems, a number of legal, practical, and scientific issues will eventually have to be resolved. The following are just 20 examples. First, what protection, if any, is provided by federal and state regulations? If an employer follows all applicable regulations, will that be enough to prevent him from being held liable? Second, are all uses of ionizing radiation “ultrahazardous” under tort law, such that a company can be held liable even though it was not negligent? How can yearly doses in the range of natural background radiation be deemed “ultrahazardous?” Third, will the tort rules applied to commercial nuclear reactors also be applied to small amounts of radioactive materials used for laboratory experiments or the manufacture of consumer products such as smoke detectors and Coleman lantern mantles? Will law create distinctions between large sources and small sources? Fourth, will an alleged radiogenic cancer be treated as an accident or as an occupational disease under state workmen’s compensation law? Most of these laws were enacted long before
current epidemiological results of exposed individuals became available. Fifth, will a sincere, but mistaken, fear of cancer from a small exposure be compensable? Will the test for “fear of cancer” be subjective or objective, if recognized? Sixth, will courts find a good way to separate the sheep from the goats among the ranks of expert witnesses? If courts cannot do this, case decisions will not be consistent. Seventh, can a jury of lay people be taught enough science to resolve a case the same way a jury of health physicists would resolve it? If not, the cases are likely to be resolved unscientifically. Eighth, is ALARA a philosophy of excellence or is it a tort standard of care? If it is the required standard of care, can it ever really be met since someone can always argue later that the dose could have been reduced somehow? Ninth, is Probability of Causation going to become a useful tool in resolving the causation question? Tenth, what is it going to cost a defendant to defend himself in one of these cases? Eleventh, what types of records should be made and kept in order to properly defend future cases? Twelfth, what types of records should be made and kept in order to properly defend future cases? Thirteenth, will any education be provided to the exposed work force to reduce the number of claims filed when naturally occurring cancers appear? Fourteenth, will there be a spillover effect that will result in an increase in medical malpractice cases for X-ray exposure? Fifteenth, will individuals, such as Campus Radiation Safety Officers, ever be held personally liable? Sixteenth, will the existing insurance network be sufficient to provide for the payment of defense costs and for the payment of judgments? Seventeenth, if judgments are obtained for doses below the regulatory limits, as a practical matter will the latest jury verdict become the new standard of care rather than the applicable NRC and NCRP guidelines? Eighteenth, will a legislative scheme be created to provide compensation to those who have not been able to win in the courts, such as “Utah Downwinders” and “Atomic Soldiers?” Nineteenth, will this new “litigation hazard” and its economic cost make new commercial nuclear power plants uneconomic? Twentieth, are we entering an era which will witness this country’s demise as a leader in nuclear technology, not because of any lack of scientific expertise, but because of the “litigation hazard”?

The legal system will have its hands full as it resolves these new cases. If it runs amuck it will do more social harm than good. Tort law was not originally designed to be a welfare system. It was designed to compensate a person who was injured as a result of the fault of another person. To that extent it served two purposes. One was to provide compensation for the harm which would not have naturally occurred. The other was to regulate human behavior. In the radiation field sufficient regulations presently exist to protect workers from the harmful effects of ionizing radiation. More regulation through the tort system is not needed. Moreover, natural cancer is not the type of harm which would not have existed except for the fault of someone. It is a natural process which occurs as mankind ages. To use the tort system to provide compensation for the natural result of old age would create a form of welfare system financed through private insurance.

Tort law functions best as originally designed. If our society desires more radiation regulation and more financial assistance to those with cancer, those goals can be accomplished through existing regulatory and medicare systems. It does not make any sense that one American with lung cancer should receive compensation through the tort system simply because he worked at a nuclear power plant while his neighbor
with lung cancer receives no compensation through the system even though he has a 40 pack/year smoking history. The social need of these two Americans is the same. The social utility of the defendants is not equal because nuclear power plants do more for this country than cigarette manufacturers.

The future is unclear and uncertain. Certainly, all of us would want to have a legal tort system which compensates a person who has developed a radiogenic cancer due to another person’s negligence and a workmen’s compensation system which compensates a person who developed a radiogenic cancer due to an occupational exposure. By the same token, all of us would not want a tort or workmen’s compensation system which compensates a person who has a naturally occurring cancer which has nothing whatsoever to do with radiation exposure. The difficult task for the legal system over the next few decades is to realize those goals.

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