children may be the victims. Should there be a recall of all people who have worked with asbestos; if there would be recall, what could be done with them?

DR. SELIKOFF: You have asked the most embarrassing of all questions. What we are doing is collecting information, but so far we are only counting the bodies.

We are going to notify, educate people concerning that which they have been exposed to in the past, but what they should do about it, every one of the scientists that I have been dealing with looks at one another: What are we going to do? What are we going to advise these people? We haven't solved that one.

MISS YUNCKER: What do you tell them?

DR. SELIKOFF: First of all, you have got to tell the truth, and the truth is when someone has been exposed inadvertently to asbestos, during the days of our ignorance, inattention, unconcern, they were, unfortunately, exposed to amounts that we now know can cause trouble, cause cancer, various kinds of cancer.

How do they handle themselves? Well, this is something for the future. The medical profession is not yet equipped to do this.

MISS YUNCKER: For the future—for those of us who have not been exposed and for our children, should we ban asbestos?

DR. SELIKOFF: Banning is something that our country has not done. In large part, we have gone the route of controlling, and I think that asbestos can be rigorously controlled. It will be expensive, and, in some cases, so expensive it will have to be abandoned. Well, that is up to the industry. They have to have the ingenuity to do this, and if they don't, then—(shrug).

MR. SPIVAK: Dr. Upton, the war on cancer which the National Cancer Institute has been directing since 1971 has been referred to as the nation's medical Vietnam. I believe you are spending now about $800 million a year on that war. Will you give us your appraisal of what has been accomplished since 1971?

DR. UPTON: I think it is a most unfortunate parallel to compare the nation's war on cancer with the war on Vietnam. I don't know anyone who doesn't want to see us win the war on cancer. Everyone admits that it is a laudable goal, and as for accomplishments, we are very much further along now than we were just a few years ago in regards to our knowledge of the causes of cancer. The meeting that is to take place this week under the auspices of the New York Academy of Sciences will review advances in our knowledge of cause and opportunities to take preventive measures, today, that simply weren't available a few years ago.

As concerns treatment, there have been remarkable advances in the treatment of cancer.

MR. SPIVAK: Can you tell us anything about what important causes you have found?

DR. UPTON: We know very much more today about asbestos. This was discussed just a moment ago. And standards for controlling exposure to asbestos are being reduced and made more rigorous. There are many chemicals that are identified today as hazards in the workplace, hazards in the environment. Many of them, through the work of the National Cancer Institute. These have been reflected in regulatory actions to protect the public, so I think there are a number of things that we are doing now that augur well for cancer prevention.

As concerns treatment, we are able to save now about 20,000 lives a year more than we would have saved before the National Cancer Act was passed, thanks to advances in treatment. These 20,000 people will enjoy about half a million productive work years, which returns to the economy billions of dollars each year. These are real people. These are real advances. Certainly we haven't the magic bullet, but I don't think anyone in their right mind would have predicted that we would have "the" cure by this time.

MR. MAZZOCCHI: It is Dr. Upton's answer that frightens us, those of us who

represent people at the point of risk. Dr. Upton has said, "Well, we know a great deal about asbestos." That is true, but the question is what are we doing about asbestos and other carcinogens, and the answer is nothing. Less than one percent of the employers in our industry are in compliance with the asbestos standard. That means 99 percent of them are still inflicting cancer upon their workers. That is a fact we can document.

DR. UPTON: When I became aware last December of the magnitude of the risk, the cancer risk associated with heavy asbestos exposure, through the work of Dr Selikoff, I went directly to the Secretary of the Department of Health, Education and Welfare, Mr. Califano, and recommended that the department take a strong position in this matter, develop a departmental strategy, and that, in fact, has ensued. So I reject the contention that our department has been standing pat on this issue.

MR. GREENBERG: Dr. Kotin, given what we know about the extremely dangerous aspects of asbestos, wouldn't it be prudent simply to phase the material out of the American economy?

DR. KOTIN: It would be if it didn't serve some very useful and important social needs. I notice that every time I cross Fifth Avenue, the cars were able to stop and not hit me, and I could go on and be trivial, but I won't.

MR. GREENBERG: You are talking about asbestos in brake linings?

DR. KOTIN: Exactly. Asbestos has gotten where it has in the environment by virtue of the fact that it has met certain needs.

There are responsible uses and trivial uses of asbestos. I would defer to nobody in my attacking trivial uses of asbestos. I would be equally energetic in maintaining my position that responsible uses of asbestos can be measured in terms of lives saved, in terms of trauma averted, of significant contributions to the economy, not at the cost of lives and limbs, as has been said.

DR. SELIKOFF: I agree with Dr. Kotin about the essential uses. Until we get a replacement for asbestos in brake linings, I see no alternative to its use, but is that any reason not to protect the one million Americans who are working in brake repair and break maintenance work?

DR. KOTIN: I would agree with Dr. Selikoff.

May I make one quick comment? I would be outraged if I weren't amused by Mr. Mazzocchi. Having sent millions of mice to their makers in the 20-year career of using animals for testing carcinogens, to suddenly be accused of having no faith in animal testing is something that I just can't let go by. It is the bum science related to the use of animal tests in the generic standard. It isn't the use of animal tests in the generic standard—

MR. GREENBERG: Dr. Kotin, are you suggesting that if nature hadn't put asbestos on earth, we wouldn't know how to stop cars?

DR. KOTIN: I wouldn't know how to answer that but I do know that and am reiterating, if it didn't meet certain needs and meet them in a way that warrants at least the examination in relation to the perpetuation in commerce or not, I would be singling that out from all other agents in our environment where—and now you come to it again, the old cliche of risk/benefit, cost/benefit, with all the hyperbole that goes with that.

MR. MAZZOCCHI: I will agree with Dr. Kotin, for a change. We cannot ban asbestos overnight. There is sufficient in place to kill millions and millions of Americans. We are saying control it, and we are asking industry to support this contention.

I was at an international conference with Dr. Selikoff, and I believe Dr. Kotin might have been there, a World Health Organization conference, where I suggested one very simple fact, that we label a bag of asbestos dangerous to your health, it causes cancer, and what to do about it when you are using it.

Uniformly, industry at that conference resisted that very fundamental suggestion.