The CHAIRMAN. Thank you very much, Doctor. Our next witness is Dr. Paul Meier, Department of Statistics, University of Chicago. Dr. Meier.

STATEMENT OF PAUL MEIER, PH. D., PROFESSOR OF STATISTICS, UNIVERSITY OF CHICAGO, CHICAGO, ILL.

Dr. MEIER. Mr. Chairman, I speak as a member of the Biometric Society Committee on biometric aspects of controlled clinical trials of hypoglycemic agents, which report is under discussion today.

Professor White has outlined our problem and our findings. Professor Zelen will speak about some of the particular criticisms made of the UGDP report. I shall speak a little more generally about the role that I see for clinical trials in guiding our decisions about modes of therapy.

It happens that in March of 1970 I testified before this committee on the subject of risks of thromboembolism due to the use of oral contraceptives. I spoke then of the deplorable lack of prospective controlled clinical studies on the effects of oral contraceptives. I discussed possible reasons for that lack. Let me quote a few lines from that earlier testimony.

I said:

> Frankly, the required research, although important, is not especially appealing to scientists. It is not fundamental and it is not exciting. It is difficult, it is expensive, and it is fraught with the risk of attack from all sides. Who would willingly prepare himself for such a study, make an application to be weighed competitively with others on scientific merit, and risk the loss of support halfway through the study when a review committee with different views or priorities comes to consider renewal of support, all this when he stands to gain so little in scientific recognition or otherwise?
>
> Evidently, for whatever reasons, there is no sound body of scientific studies concerning these possible effects available today, a situation which I regard as scandalous. If we proceed in the future as we have in the past, we will continue to stumble from one tentative and inadequately supported conclusion to another, always relying on data which come to hand, and which were not designed for the purpose. The planning of better studies is difficult, and the recruitment of investigators willing to commit their efforts to these purposes may be more difficult still. I believe both are possible and essential to the public welfare.

At the time those words were written, I had no knowledge of the UGDP, but they could scarcely have been more apt.

Let me interpolate in my prepared statement my warm commendation for the group of physicians and statisticians who undertook the UGDP study. With whatever limitations, this is far and away the best evidence we have to date on tolbutamide toxicity. It is an excellent study. No one study can answer all of the relevant questions, but that is scarcely the fault of these investigators, and I am led to modify my statement about the lack of excitement and interest that such studies could generate.

I think this group has shown us that there is new ground to be broken through some of the work that they have done in the theory of the conduct of controlled clinical trials, and they have also contributed substantial new knowledge to an important medical problem.

I return to my statement.