

cated are necessary in order to obtain definitive answers concerning the relationship of oral contraceptive use to cancer or thromboembolic disease in humans?

Dr. CORFMAN. No; they are not. These studies are in the second category of research that I outlined earlier. These are clinical studies of the effects of these agents in certain patient populations or in animals. The epidemiological studies have been undertaken by our Institute.

Senator McINTYRE. Do I take that answer to mean they are not the type of controlled studies that our witnesses have said we need, and need badly?

Dr. CORFMAN. Yes, and for good reasons. The studies at the Cancer Institute are undertaken to help understand the cancer process. They are not undertaken because of concern for oral contraceptives. They are done in a different context.

Studies at the Heart Institute are undertaken to understand the blood clotting process, not to understand necessarily the effects of the oral contraceptives on women who are using them for contraceptive purposes.

Senator McINTYRE. With respect to the work supported by your own Center, would you tell us what proportion of your funds has been devoted to research on the metabolic and other side effects of current contraceptives, including the pill, as opposed to research designed to discover a new chemical or other methods of contraception?

Dr. CORFMAN. I am pleased to give you that.

Our total population research budget for fiscal year 1970 is to be \$15.6 million. This money will be used for projects, for training, for the support of population centers, and for staff support.

Of that \$15.6 million, \$12.9 million will go for specific research projects. Of this \$12.9 million, \$1.7 million is for studies on the medical effects of oral contraceptives and \$9 million is for contraceptive development.

Senator McINTYRE. \$9 million for development?

Dr. CORFMAN. Yes. The remaining \$2.2 million is for population research in the social sciences.

Senator McINTYRE. Doctor, you mentioned specific studies of the metabolic effects of oral contraceptives which are being supported by your own Institute.

Which, if any, of these studies are prospective as opposed to retrospective in nature?

Dr. CORFMAN. The Kaiser Permanente study, our big one, is prospective in nature. We are following women through time and monitoring the effects of these drugs.

Professor Wynn's work is also prospective in nature.

Dr. SEIGEL. I think it would be a mistake for your committee to come to the conclusion that the only appropriate studies are prospective studies.

The justification for these other studies, those reported by the British and by Dr. Sartwell, which are called retrospective or case control studies, is that one is dealing with rare diseases like pulmonary embolism or breast cancer in young women.

If you are dealing with rare diseases of this type it is extremely difficult to bring together a sufficient number of women to study the problem and to follow them for a number of years. It is an enormously difficult administrative undertaking.