the same patients an extremely small dose of estrogen over that period of time hyperplasia would not have been produced.

You see, it is very difficult, if you are not a pathologist or a physician, to understand exactly what goes on. When you give estrogen, you supply estrogen to the endometrium, this is the growth, this is the food, this provides the energy for growth of the endometrium, that makes the glands grow, and the stroma, the supporting latticework of the blood vessels, this causes it to grow and if you give large doses of estrogen it will overgrow and for that reason women who don't ovulate regularly and who bombard their lining of their womb for years and years and years without progesterone have hyperplasia and have an increased incidence of cancer. The lining of the womb is supposed to be stimulated by estrogen and then changed by progesterone and at certain intervals to undergo pregnancy. That was the purpose of the womb, and if you don't have that purpose fulfilled things can go wrong.

Senator McINTYRE. Is it your position, Doctor, that large doses of estrogen will cause carcinoma in situ?

Dr. KISTNER. In a certain group of individuals if large doses of estrogen are given for prolonged periods of time, human females, carcinoma in situ may be produced, absolutely, but not cancer.

Senator McINTYRE. Pardon me?

Dr. KISTNER. But not cancer. We have never been able to produce cancer in the human female.

Senator McINTYRE. Could you for the benefit of the committee briefly explain the difference between cancer and carcinoma in situ?

Dr. KISTNER. Yes.

Carcinoma in situ is a, this is difficult because even the professor of pathology at Johns Hopkins doesn't believe what the professor of pathology at Harvard defines as carcinoma in situ and if you give it to a group of pathologists you will get different answers. But in general, if the change in the gland looks like the change that you see in cancer, but this gland is localized in an area that does not move out, it does not get into the outlying tissues, it is confined, it is in situ, it stays right where it is supposed to be, it looks like cancer but it isn't cancer. I would have to show you morphologically on a slide. It is impossible to describe it.

Senator McINTYRE. Well, actually, Doctor, is it not a form of cancer, whether it spreads or not?

Dr. KISTNER. No.

Senator McINTYRE. It is not?

Dr. KISTNER. No, not a form of cancer, the premalignant lesion is not cancer.

Senator McINTYRE. All right, finally.

Dr. KISTNER. It is the truth, it isn't.

Senator McINTYRE. My law degree doesn't help me too much on that. Dr. Kistner, the labeling of all oral contraceptives now contains a long list of side effects of varying severity and a listing of certain conditions under which the drug should not be used. In your own practice do you regularly inform a woman of these potential side effects and question her concerning any of these preexisting conditions before starting her on the pill?

Dr. KISTNER. Yes.