Thank you, Linda, for this special honor and Ina, thank you for nominating me and to the board, thanks for supporting my nomination. I am thrilled to receive one of two Cornell University-New York Hospital School of Nursing Distinguished Alumnus Awards of 2019. We join many distinguished graduates who have been honored over the years since the award was first created in 1974. As I looked over the list of awardees, it was very meaningful to me to receive an honor previously awarded to Ms. Louise Hazeltine who made such a difference during my days as a nursing student.

Ina's surprise led to my thinking of all the diverse, exciting and challenging experiences that followed my decision to study for a second Cornell degree. As I explored where I might study nursing,

One of my strongest incentives to study nursing followed the death of my closest childhood friend. We had shared a desire to become nurses and, as youngsters, we played the role with each other. But my dear friend, Ronnie, did not live to have that opportunity. She had a liver problem that required surgery. After an unsuccessful operation, she was in a coma for several days. Ronnie told me that while comatose she could hear the doctors and nurses talking about her

dying - but she couldn't respond. Although she survived that surgery, she lived only a few years afterward. I think of her very sad experience every time I look at the photo of us on my dresser. I wanted to become a nurse partly to fulfill Ronnie's dream. Cornell's new two-year bachelor's program tailored for college grads provided that opportunity. I chose this program partly because of my loyalty to Cornell and because of the outstanding reputation of the nursing program offered here at NY Hospital.

So, two decades after beginning my freshman year in Ithaca, I became an older student living in the Cornell nursing school dormitory disrupting my family by living alone in NYC while my husband and sons remained in the small town in Massachusetts. I returned each weekend to be together and restock the freezer. I wasn't the only older student enrolled in 1973, there were several of us. That is when Ms. Hazeltine was especially important in helping me bridge the distance between my home and school. She understood what I had given up to become a student nurse.

When Lasdon house was completed and offered nursing students apartments, my sons David and Daniel were able to join me. We were a family

during our second year. One of my son's is here today with my granddaughter. Thanks, David and Cordelia, for coming to our reunion.

My memories of the two years of nursing school remain very vivid, especially the cardiac patient who was in a coma when he arrived in the CCU and I was assigned to provide his care. I was thinking of Ronnie's experiences as I softly spoke with him about his improving health and I advised his family to do the same. A few days later when he opened his eyes and simply said "thank you!" I knew I had made the right professional choice.

During nursing school, I was considering studying further to become a midwife and I asked a NY Hospital midwife if I could spend the month with her during our January break in 1975. Holly accepted by interest and I learned a great deal from her, but I thought she was mistreated. After she followed her patients through their pregnancies, she was often pushed aside at delivery when a doctor would step in. She was told they needed the experience and there were too few deliveries that month.

Sometimes chance has a strong influence on a developing career path. After graduation I was hired by Memorial Sloan Kettering, just across the street, as a

staff nurse assigned to the breast floor. Fortunately, rotation was not a requirement which enabled me to reestablish family life. Early each morning I was required to prepare patients for the operating room and to welcome them back to the floor after either a simple biopsy that ruled out cancer or after the trauma of mastectomy. This was the standard of care in the 1970s.

During nursing school, the epidemiology course had kindled my interest in potential risk factors for breast cancer. One of the primary factors was having a family history which brings to mind my patient whose mother and grandmother had had mastectomies. Post-op all the patient could say to me was "I have been waiting for the ax to fall". When I questioned the surgeons about the likelihood of their patients having benign versus malignant disease, they encouraged me to attend their weekly breast conference when their patients were presented.

Since I was on the day shift, I began studying in the evenings at Teachers College for a master's in nursing education. In 1976 when adjuvant chemotherapy was first being tested at Sloan Kettering, I became a member of the chemo nursing team responsible for mixing and administering IV meds to patients throughout the hospital. My task with breast cancer patients was to educate

them about the potential preventive role of adjuvant chemotherapy. Forty years ago, when chemotherapy was prescribed, it was considered the last resort. But by the 1970s research indicated that surgery alone was insufficient to prevent breast cancer from spreading. I helped patients understand and accept this additional treatment. As a chemo nurse administering very potent drugs, I felt very stressed with each venipuncture. Each morning as I walked to the hospital, I thought I was either going to save a life or cause a death. Today, indwelling ports lower some of the stress chemo nurses experience.

I think chance played a role in my transition from being a clinical nurse to a researcher. That occurred when a noted Memorial Hospital breast pathologist was funded to study epidemiologic differences among patients with different types of breast cancer. I was selected to be the project coordinator because of my interest in research and familiarity with the breast service surgeons and nurses. Our research office was located right on the patient floor where I would conduct interviews and computerize the personal history data that could then be linked to the pathology findings and treatment data.

I thought I would mention a few of our interesting publications that received attention. In our first paper we reported the greater frequency of left sided breast cancer that our Memorial patients had noted. We also found national data revealed the same excess of left sided disease. We speculated about factors that might be associated. Some women thought their left breast was larger and therefore at greater risk. Using measurements from mammograms we learned the left breast was often larger but not necessarily the breast with the malignancy. Surprisingly, Dr Rosen was willing to help with the measurements. But we have yet to answer why left sided disease is more common.

Another study that received attention when I first presented the results at the annual San Antonio breast conference addressed the timing of breast surgery during the menstrual cycle. The issue was raised by British researchers who had studied fewer than 50 premenopausal patients when they encouraged surgery midcycle. The Sloan Kettering breast surgeons questioned those results and asked that the study be repeated among their patients. Our clinical pre-op records provided date of last menstrual period enabling us to determine that survival was enhanced when tumors were removed during the luteal phase of the cycle, after

ovulation, when progesterone levels are high and estrogen levels low. Since chemotherapy is now quite routinely given to premenopausal patients, timing of surgery is no longer a major factor. But this research led to my dissertation which addressed multiple factors that affected long term survival of women in our patient cohort. We noted that one of the greatest hazards for breast cancer recurrence was obesity at the time of diagnosis.

After I completed my doctorate in epidemiology, the epidemiology department at Sloan Kettering did not have an opening so I applied for and was invited to join Beth Israel Medical Center to direct the small department of Community Medicine. I had the responsibility of assisting many clinicians with their research throughout the medical center. Dr. Robert Newman, hospital president, was known in New York City for establishing drug treatment programs and he requested that I study the outcomes of a newly developed residential drug treatment program – a new area for me.

These were the years of high incidence of HIV/AIDS among IV drug users although most research was conducted among gay men. But Beth Israel clinicians guided by Dr Newman received CDC funding for an HIV/AIDS project that was

aimed at reducing HIV transmission among IV drug users by providing methadone to assist the patients in discontinuing needle use.

As we prepared to publish our findings, CDC requested our BI team including Dr. Newman, Don Des Jarlais, a distinguished substance abuse researcher, and me to present our results in Atlanta at CDC headquarters. During that visit I was invited to join the Women's Health and Fertility Branch of CDC to contribute to studies designed to prevent AIDS transmission to women and their children. I could not resist that unique opportunity! CDC was an exciting environment with weekly conferences presenting epidemiology studies from around the country.

While I was at CDC I was very excited to be invited to the May 4th, 1991 nursing school alumni reunion organized by President Patti Altman. She titled the program "Ethical Issues in Health Care Delivery" which included the presentation of several scenes from Dr. David Feldshuh's play, "Miss Evers' Boys" about the Tuskegee Study. Some of you may have seen this play on TV. It was introduced in Atlanta while I was on staff at CDC. Patti cleverly created a bag with the program and theatre tickets – suggesting we were attending the play. I was a member of the panel discussion that followed. I related the treatment disparities

for syphilis portrayed in the play to the disturbing treatment differences occurring in those early days of HIV/AIDS. I was pleased when David Feldshuh asked me to participate in a repeat of the program during my 35th Cornell reunion on the Ithaca campus in 1992.

Although I found CDC very exciting, I missed New York City and was pleased to have the opportunity to return to MSKCC when the chief of the Breast Service, Dr. David Kinne, created a research epidemiology position for me. In addition to developing studies with the surgeons, I was asked to teach epidemiology to Cornell medical students. Among the research projects for which I sought funding with Dr. Jeanne Petrek, a gifted Memorial Hospital breast surgeon, was a study of the safety of pregnancy after breast cancer treatment. We convinced Kaiser Permanente in California with their incredible long term records to enable a collaborative study that was funded by the U.S. Dept of Defense. We learned that stage at diagnosis remained the most important prognostic factor but among patients who chose to have a baby, waiting a year after treatment for early stage disease was safest.

While I was on MSKCC staff in 1994 the National Cancer Institute issued a request for application to create a cohort of high-risk families with multiple cases of breast and ovarian cancers. This was before *BRCA1* and *BRCA2* were identified. The blood samples and personal history data were needed to identify the suspected high-risk genes. My proposal benefited from New York collaborators who had received federal funding for the Long Island Breast Cancer Study Project. The initial five million dollar award supported the creation of our New York Registry of Breast Cancer Families, a collaboration of six New York medical centers, including the Mailman School of Columbia where I moved in 1997.

I am very proud of our registry which recruited more than 1800 families of more than 5000 women and men. Hundreds of studies have now been published by our NY team alone and in collaboration with the five international research teams of the NCI funded Breast Cancer Family Registry. Studies using the massive data have contribute to the growing literature linking breast and ovarian cancer risk to the interactions of genetics and the environment. When I became emeritus, I requested a younger faculty member approved by the NCI to direct the family Registry which has continued to receive funding to maintain contact with family

participants and to monitor changing family histories as additional relatives are diagnosed. The researchers are now supported to study the daughters of the participating families in hopes of identifying risk and protective factors that may begin early in life, especially before puberty. A recent Columbia PhD graduate used the data from the daughters for her dissertation.

Columbia has been an exciting setting for public health teaching and research. My focus expanded from breast cancer to include developing a women's health course with a colleague which subsequently led to an invitation from a book publisher. I edited the "Epidemiology of Women's Health" with 41 chapters including many addressing health maintenance and disease specific topics. The last chapter presents the influence of genetics on women's health.

While writing several chapters for this text, I decided to research the history of diethylstilbestrol or DES which was prescribed to pregnant women for more than 30 years without research showing its efficacy. This synthetic estrogen was created in a laboratory in London in 1932 primarily to help women during the menopausal transition. Some American clinicians believed prescribing this synthetic estrogen during pregnancy would benefit women who had

experienced miscarriage and problems during pregnancy. The strong belief in the value of DES which was frequently advertised in journals for gynecologists and obstetricians resulted in millions of women being prescribed the drug. The total number of exposed pregnancies is unknown – no records were maintained. Two shocking reports were published in the New England Journal of Medicine in 1971 that linked vaginal cancer among some young adult women with prenatal exposure to DES. Subsequent research has resulted in more than 2,000 publications documenting long-term health problems of women and men who were exposed to DES in utero. Now abnormalities among some grandchildren have been reported. This tragic misuse of an inexpensive medication has affected the lives of an unknown number of women and men. Many people have encouraged me to complete this historical review. I am steadily working on this book.

One last word - In the New England Journal I found an advertisement from the Historical Society of Roosevelt Island. They are interested in hearing about experiences nursing students had at the former hospitals on the island. I created a flyer with a photo on the cover of the book about Roosevelt Island. Although the ad in the journal was directed at doctors, the chair of the society was

especially pleased to know I would be sharing with you today their eagerness for stories from former Cornell nursing students.

Thank you again for selecting me for this distinguished alumnus award and for letting me share my personal experiences. Over discussions during lunch and after reading the history of our school, I think most of you have had or are still enjoying unique and exciting stories that should be combined into another exciting book about our Cornell University-New York Hospital School of Nursing.