When Ms. Sadako Sasaki, one of my friends in the elementary school in Hiroshima, died of Acute Granulocytic Leukemia at the age of 11 years old, I decided to be a researcher of Leukemia or a Physician to help somebody like her in the future.

Now I am a professor of Radiation Oncology at the UT M. D. Anderson Cancer Center to treat patients with thoracic malignancies. I am interested in clinical trials, multidisciplinary treatment, normal tissue toxicities and translational research.

While I was growing, my hero was Marie Sklodowska-Curie who received two Nobel Prizes: one was for Physics based on discovery of radioactivity in 1903 and the other one was for Chemistry based on identification and production of metallic radium and description of the transmutation of one element into another element in 1911. She was a scientist, wife and mother of two daughters. Pierre Curie who shared his work with his wife and Novel prize in Physics, died by an accident when their daughters were still small. In 1904, Pierre was given a chair at the Sorbonne and promised a new laboratory. The laboratory was never forthcoming, and tragedy struck on April 19, 1906 are rainy day in Paris, Pierre was run over and killed by a horse-drawn wagon while walking from his laboratory. I have read Marie Curie’s biography so many times that I have memorized a part of her life story. Her background in Poland where she grew up was fascinating to me. Whilst Russia occupied Poland, children were forced to read their textbook in Russian in front of Russian soldiers when they came to their school to observe the
students performance under Russian rule. She was usually picked up by her teachers to read textbooks in Russian, since she was the best student in her class or school. I am certain that her desire to be free from communists and enthusiasms to learn more science, made her escape from Poland to France to continue her education and be a leader of scientific society. Her older sister was in Paris for her education, which helped Marie to follow her sister’s step. Because of her father being a teacher, she was always interested in education. Reading about her persistence to discover Polonium from the large amount of pitch black fascinated me. Her passion to discover the Radioactive Material based on the theory developed by Pierre and herself never destroyed her persistence in spite of her husband’s unexpected sudden death.

During my childhood in Hiroshima, I have heard so many terrible stories of deaths related to the Atomic Bomb, which were due to acute or late effects including malignancies, psychological depression and suicides. I started to think who discovered radiation, how the radiation was used for human beings and how the radiation affects human beings. It is ironic that the discovery of radioactive material eventually killed Marie Curie, but her persistence to achieve her goal and Sadako’s death lead to my life to become a scientist, clinician and educator.

My father was the youngest among the twelve children of Sake brewing company in one of small islands near Hiroshima. His father died when he was ten years old. And his oldest brother had succeeded to their family business. When a severe typhoon hit the inland-sea, the

*My Father and My Mother*
family owned ship carrying Sake Barrels sunk and his family became bankrupt without any insurance coverage. My father had to work in his oldest brother’s new small liquor store in Hiroshima when he was 13 years old by delivering Sake bottles, so he could stay in his house. He decided to get scholarship in the Hiroshima University School of Education which means he had to commit himself to teach children between ages of seven and twelve in a small village for four years after completion his education at Hiroshima University. He saved his money during the most boring time of his life and he developed a peptic ulcer in this tiny village. But he could save money and passed the entry examination to go to Kyoto University where he majored in economics. After his graduation from Kyoto University, he got married to my mother through arranged marriage and worked in Osaka, the second biggest city in Japan after Tokyo, approximately 250 miles east and north of Hiroshima. He started to work for one of the prestigious companies 'Hanshin'. Then the Atomic Bomb was dropped on Hiroshima at 8:15 am on Aug.6th, 1945. He walked into Hiroshima city the day after. And he was exposed to the black rain containing high dose of radiation. He lost many of his family members, but some of the survivors in his family were exposed to high radiation. He decided to move back to Hiroshima to help his and my mother’s family and took a job at Hiroshima Bank. Every time he was promoted to be a chief of Hiroshima Bank’s branch, we had to move to different cities. I had to change my school 4 times during elementary school, although I never complained. When we moved to Matsuyama City a small city on Shikoku Island, my teacher always asked me to read the textbook in our class. My classmates laughed at me because of my Hiroshima accent, which made me angry. My father was always busy and came home around 2 am. Being a banker, he had to entertain his customers after 6 pm every night. I never saw him other than Sunday. I always missed
him and was puzzled about Japanese working system. He was the leader of the workers' union and eventually retired when he was fifty five instead of being promoted to be the executive members of Hiroshima Bank. According to his educational background, he was supposed to be one of the executives, but the rest of the executive members were afraid of his idealism or his education. He eventually died of disseminated Bladder Cancer at age of 72, possibly due to exposure to the Atomic Bomb and tobacco smoking. He smoked one to two packs of strong cigarette per day for at least forty years. I was so afraid that he might develop lung cancer, but he developed, diabetes, bladder cancer and peripheral vascular disease. My father was a hard-working man who was so disappointed by his first child’s and only one son’s incurable illness, which kept him very distant from his three daughters. I was the middle of these daughters and felt that the presence of daughters did not mean much for him and wished I were born as a boy to complete my father’s wishes.

My mother was the oldest daughter of Samurai family. Her father graduated from Tokyo University and served once as chief officer of the ministry of Agriculture in Japan. After he retired, he served as secretary to Mr. Asano who was the lord of Hiroshima Prefecture. My grandparents had a huge samurai house with several maids and secretaries to serve them. My mother was raised by a baby sitter, since her mother (my grandmother), was too busy visiting temples and shrines. My grandmother was the second wife to my grandfather after he lost his first wife due to tuberculosis. He decided to get married to the strongest woman in town. My grandmother was 6 feet tall and no man wanted to marry her because she was too tall. She had red hair and fair skin and everybody said that she had one-eighth Russian blood. My mother was so proud of her samurai family background and blamed that her marriage to a lower class person, my
father, was due to the first world war. She talked about her grandmother named “Chika” who was the most elegant and caring person for her. My mother truly loved me and hugged me when I had a good grade in school, which I never got from my father or anybody else. My mother read almost all books in her father’s library by the age of seven. Because of her father being the secretary to the Lord, he had so many books of European and Asia history, which she read and memorized. When my husband and I took my mother to France and Vienna, she was the guide for us concerning the Royal Family’s Trees in Europe. She read many Chinese History and Russian History Books and all of the twelve volume book “Big Earth” by Pearl Buck regarding China. However her incredible knowledge of worldwide history did not help to support family members when everything was destroyed by the A.B. She wanted her three daughters to become more capable women to support their family in case any tragedy would happen to their spouses. My mother had high pride but was always kind to poor people such that she told me to give my extra pencils and notebooks to some of my classmates who were orphans after their parents died due to the A.B or had only mothers because of their fathers died due to the war. She loved to cook for us and to write Haiku (Japanese Poem) her entire life. Also she traveled with us after my father died. Her knowledge about histories of European Countries and Japan and beautiful Haiku amazed us wherever we traveled. My mother died of stomach cancer when she was 80 years old. I still miss her so much.

I was born in Amagasaki City, Hyogo prefecture between Osaka and Kobe in Japan while my father was working in Osaka. I was the third child for my parents and my
family decided to move back to Hiroshima when I was four years old, since my parents originally came from Hiroshima and had to help their family members whoever survived after the AB. However, we had to move around so many times in Hiroshima after we moved back to Hiroshima due to the lack of houses and my father’s promotion in the Hiroshima Bank. I had to change my elementary school four times within six years.

I met Sadako Sasaki in the Nobori-Cho elementary school when I was in the fifth grade, ten years old. We were the same age but we were in different classes to compete for running in the fall athletic meeting. Sadako was very fast and I had a tough time to beat her. She eventually became shortness of breath due to anemia and was found to have Leukemia. She was hospitalized and died of Leukemia nine months after the diagnosis, although she has registered to attend to the Nobori-Cho Junior High school she could not make it. Sadako was exposed to the radiation from AB when she was two years old. While Sadako was hospitalized because of her Leukemia, she tried to fold one thousand Origami Cranes. In Japan, the crane is a symbol of “Longevity and Happiness”. If you could fold one thousand Origami Cranes, you will recover from your illness. After she took medication, she folded her Origami Carnes from the wax paper, which wrapped her medication. Sadako wanted to live! In spite of our prayers and folding origami cranes, she passed away before she entered junior high school. She had registered to enter the Junior High School where I became Student Council President two years after her death. When she died, all our school kids expressed sincere sorrow to her brothers and parents.

I started to communicate more often with Sadako’s older brother when I became president of the Nobori-Cho Junior High School Student Council. Her brother and I started to initiate the idea of a memorial statue for Sadako.
We decided to stand on the streets to get donations from the citizens of Hiroshima and wrote many letters to deans of schools in Japan asking for funding contributions.

Also, we got a young gentleman, Mr. Kawamoto, to help us to make a public educational film "One Thousand Cranes" which became a big hit and was shown in many movie theatres. Within two years, we collected enough funding to get an architect who created “AB Children’s statue in the center of the peace memorial park in Hiroshima which was the hypo-center of AB.

Sadako’s death had a very strong influence on me. Since I was very sad but had a definitive idea that I had a mission to the world not to forget her death and not to repeat the war to destroy so many lives. I was very curious about the effects of the AB, since my grandmother was in Hiroshima when the AB was dropped and her house collapsed due to the suction effect from AB.

She was underneath her house, but was saved from her collapsed house and taken away outside of the city. The following few months, she had all side effects of total body radiation such as losing all her hair, severe diarrhea, anorexia and bone marrow suppression. But she recovered from this acute total body radiation effect and lived an almost normal life without having leukemia or any malignancy. My grandmother died of severe dementia and osteoporosis at age 72. I always puzzled by the question as to why my grandmother did not develop leukemia like Sadako. Now I do understand much better.

I am standing in front of AB Children’s statue and Thousands Origami Cranes came from all over the world.
by learning about the higher susceptibility to carcinogens in the dividing cells of the younger generation.

I decided to go to medical school and my parents wanted me to stay in Hiroshima, since it takes six years to graduate. My parents did not want me to separate from them. While I was a medical student, I volunteered to perform physical examination of people who were exposed to the AB at the Atomic Bomb Casualty Commission (ABCC) during summer vacation. Now it is called Radiation Effect Research Foundation (RERF).

I became very interested in hematology and chromosome abnormality while I was working at the RERF where I met Dr. Awa who was one of the world experts in chromosome abnormality caused by Radiation. Also I met Dr. Bloom who was a hematologist and Dr. Bell who was a thyroid specialist. Dr. Robert was a cardiologist who was checking cardiac effects on human beings from exposure to the AB.

I had a great opportunity to meet with great scientists and clinicians who were interested in Radiation effects on human being at the RERF. When I graduated from medical school, a tour of Hiroshima University Hospital took all university hospitals, all interns and medical students decided to go on strike. We were protesting the government to pay

internships and improve the medical

system at the University Hospitals and Medical School Curriculums. We had to
go outside of University Hospitals

Dr. Ritsuko Komaki at Medical School
We had to go outside of University Hospitals to get postgraduate education by ourselves. I went back to RERF and worked one year and came to the United States to continue my postgraduate education.

I started my internship at St. Mary’s Hospital where I met Dr. Guenninger who had double specialties, one Internal Medicine and the other Radiation Oncology. He was well respected by the surgeons and the Medical Oncologists whom I was working with.

I started to think about the Radiation Oncology, but because of my original interest in Hematology Oncology, I started work at a VA hospital as a Hematology Oncology fellow. However, the results of patients treated by chemotherapy around that time were not great. Most of the time I had to deal with anemic patients at the VA hospital. When I saw some patients who were cured by radiotherapy for their early laryngeal cancer or Hodgkin’s disease, I decided to go to Radiation Oncology Residency program. From my background in Hiroshima, the Radiation Oncology was a fascinating area for me. I have learned so much about surgical oncology from Dr. William Donagen, about Gynecologic Oncology from Dr. Richard Mattingly, Pathology Dr. Lawry Clowry, Pediatric Oncology from Dr. Larry Kun and Dr. Donald Pinkel, Lung, Head /Neck, GU and Lymphoma from Dr. James D. Cox, Roger Byhardt, and Dr. Donald Eisert, Breast and Brachytherapy from J. Frank Wilson and physics from Dr. Michael Gillin. I was the first and only resident when I started the residency program under the new Chairman, Dr. James D. Cox. I was well taught by famous Radiation Oncologists who were all interested in multidisciplinary approach and teaching. When I came to MDACC as an observer for three month in 1980, Dr. Gilbert H. Fletcher was still chairman at the Department of Radiation Oncology at MDACC.
I wanted to be expert of GYN and came to follow Dr. Fletcher’s clinic. His knowledge in the Head/Neck and GYN was truly impressive. Again, I met so many great Radiation Oncologists (Drs. Gilbert Fletcher, David Hussy, Nora Tapley, Eleanor Montague, Lillian Fuller, Luis Delclos, Thomas Berkley, Robert Lindberg, Rodney Withers) GYN and Head/Neck Oncologists at the MDACC.

I never imagined working at such a prestigious institution such as the MDACC at that time, but now I have been here almost twenty years. I completed my Radiation Oncology Residency program at the Medical College of Wisconsin (MCW) in 1979 and did my fellowship in 1980. I stayed at the MCW and became an associate professor of Radiation Oncology. My specialty was GYN oncology and was interested in predictors of the GYN malignancies including histological grading, ploidy, DNA index, anemia and other factors.

I have taught medical students during summer and many of them have now become professors of Radiation Oncology at the MCW including Beth Erickson Colleen Lawton, and Chris Shultz.

Because of Dr. Eric Hall’s reputation on Radiation Effects on human being and persistent recruitment by Dr. Chu Chang who was one of the kindest physicians we have met in NYC. Dr. James D. Cox took a chairman position of the Radiation Oncology Department at the Columbia Presbyterian Medical Center in 1985.

This new department was created 40 years after the last Department of Anesthesiology. I tagged along with him, since we had married in 1980.

I got a clinical chief and associate professor of Radiation Oncology at the Columbia Presbyterian Medical Center. I treated many Breast Cancer patients, GYN and Lung Cancer patients. I introduced conservative surgery followed by Radiotherapy for
early Breast Cancer, which was not routine there at that time. Dr. Gump was one of open-minded Breast Cancer surgeons and became very collaborative with us.

Jim and I worked so hard to make the Radiation Oncology department better. We met great people there, but clinical trials and studies were very difficult to accomplish. We decided to move to MDACC when Jim was offered a vice president patient care and physician in chief of MDACC in 1988. Dr. Peter Peters Division Head of the Radiation Oncology at that time recruited me as a section chief of Thoracic Radiation Oncology and an Associate Professor of Radiation Oncology. I have learned so much about Radiation Pneumonitis from Dr. Elizabeth Travis, Radiation Time/Fractionation on the Head/Neck Cancer from Drs. Lester Peters and Kian Ang and Translational Research from Dr. Luca Milas.

Highlights in my life are becoming president of American Association of Women Radiology (AAWR) in 2001, president of American Radium Society 2007-2008, receiving an award from Texas Women Business in 2005, Marie Sklodowska-Curie Award in 2005, and receiving The Society in Tribute to Maria Sklodowska-Curie in Warsaw, Poland in 2006. I wish my mother were with us when I received the Marie Curie Award. She would have been so proud of me and hugged me saying “Ri-chan (my nickname), you have done a great job!”

One more highlight for me with Jim Cox and others was opening Proton Center in May 2006. Proton treatment has been one of our dreams to reduce side effects to normal tissue especially for Children. After being raised in Hiroshima, I always felt that Radiation is double-edged sword as Eric Hall said.

If low dose of Radiation was scattered over the body, incidence of the second malignancy will increase especially among children or long-term cancer survivors. On
the other hand, Proton with active scanning to remove neutron, will give very sharp beam edge without scattering Radiation which will reduce the chance of the second malignancies.

In my personal life, the highlight was getting married to Jim Cox who has been my mentor, friend, advisor, supporter and a wonderful husband. My hobbies are traveling, Japanese gardens, orchid and flower arrangement. Also, I love to talk to children about Sadako and how to make Origami Cranes. I would like to let them know how terrible a nuclear war would be and why it must be prevented.

There were many sad memories in my life including my brother’s illness, Sadako’s death, my parents’ deaths due to cancer, Valerie Cox’s death due to automobile accident when she was 18 years old.

Whenever I faced those tragedies, Marie Curie words encouraged me. As Marie Curie said, “Life is not easy to anybody. But what of that? We must have our perseverance and above all confidence in ourselves. We must believe that we are gifted for something and this must be attained.” “Nothing in life is to be feared. It is only to be understood.” “One never notices what has been done; one can only see what remains to be done.”

At the end, I thank all great clinicians, managers, nurses, therapists, physicists, dosimetrist, dietitians to care patients, scientists, and educators to take care of trainees and fellows at the MDACC. I will continue to learn science, care for patients, teach others and give messages from Sadako, Marie-Curie, my mother and my patients who all still live in my mind always.

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