

OREGON HEALTH & SCIENCE UNIVERSITY

ORAL HISTORY PROGRAM

INTERVIEW

WITH

Kenneth R. Stevens, Jr., M.D., F.A.C.R.

Interview conducted January 8, 2014

by

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[Begin Track One.]

Holland: Good morning. I'm John Holland. I'm an associate professor in the department of radiation oncology. And this morning I'm interviewing my old boss, Dr. Kenneth Stevens. He's the professor and chairman emeritus for the Department of Radiation Oncology here at OHSU. And we're doing this interview for the OHSU Oral History Program. Today's date is January 8, 2014. And we're in the basement of the BIC building here at OHSU.

So Kenneth, I'd like to start off, you've been a doctor for 48 years.

Stevens: 48 years.

Holland: So we'll start off maybe at the beginning. And if you could give us some of the background from your life and some of the things that might have inspired you to go into medical school and what your life was like even before medical school.

Stevens: John, it's good to be here. I'm a junior. My father was Kenneth R. Stevens. And when I was born, I was given the name of Kenneth R. Stevens, Jr. And I was born in Tahiti. My parents were missionaries for the LDS Church in Tahiti from 1938 to 1940. And I was born in 1939.

It's kind of interesting that Tahiti is a French colony. And when I was born in October of '39, France had fallen to the Nazis. So Tahiti was a French colony without a mother country.

My father was a bacteriologist, PhD. He had received his PhD under Selman Waksman who was a very famous bacteriologist back at Rutgers University. In fact, Dr. Waksman discovered streptomycin and actinomycin D. Dr. Waksman received the Nobel Prize in 1952 for his streptomycin research work. Streptomycin was the first antibiotic that cured tuberculosis. It was a big deal in the world.

I returned home with my parents in 1940. I had three older sisters. I was only ten months old when I came home, so I don't remember anything of Tahiti. I grew up in Logan, Utah, a college town. My father was professor at Utah State University from 1931 until the time he retired in 1965. I went to high school in Logan. I had two younger brothers and three older sisters. There was a seven-year gap between the three girls and the three boys. Although, I did have a brother who would be three years older than me; but he died at one year of age of equine encephalitis. So I had three older sisters and two younger brothers. And we lived in a small town of around 15,000 people.

We had a little bit of acreage. We had Jersey milk cows. It was interesting that my father was a bacteriologist but we did not pasteurize our milk. We actually sold milk to family and neighbors. But we handled the milk in a clean manner, so it was safe to drink.

I remember delivering the milk to some neighbors and to an aunt and uncle that lived in the area. I had a bicycle and I had glass gallon jugs full of milk in a little wire basket in front of my bike. Sometimes they would break, but usually I got them there okay.

So I went to Logan High School and I had two years of premed at Utah State University.

Then I went on an LDS mission to the Midwest United States. Toward the end of that mission, I was given permission to take the MCAT. So it was kind of interesting. I was out of school for about a year and a half when I took the MCAT. I came back, took one more year of premed at Utah State University and was accepted into medical school.

At that time, you could go into medical school just after three years of premed. So the first year of medical school actually counted as my fourth year at Utah State. So I didn't attend my college graduation because I was still in my first year of medical school at that time.

Holland: Did you have a major at Utah State?

Stevens: I had a bachelor's degree at Utah State.

Holland: And was it like in biology?

Stevens: In biology, a premed type of major. Then I went to University of Utah. It was a wonderful experience with wonderful faculty. Dr. Max Wintrobe was in charge of the medicine department. He's the one that discovered the hematocrit in the 1930s and he was a very famous hematologist. Dr. Goodman of Goodman and Gilman fame taught us pharmacology, so we had an excellent experience there.

The county hospital down on the south side of Salt Lake City was the hospital for the medical school, University of Utah Medical School. I remember when patients would go from the ward to surgery, they would go outside between the old buildings in a gurney. Sometimes even in the snow.

During the start of my fourth year of medical school, they had completed a brand new hospital and medical school buildings on the hill behind University of Utah.

I enjoyed medicine. I enjoyed neurology. I really thought I was going to go into neurology. And in order to get into that training trail to neurology, it really required a straight internal medicine internship, which I signed up for.

I found that neurology was very fascinating because you could make the diagnoses based on the physical abnormalities. We really didn't have much imaging at that time.

But then during my senior year of medical school, I became somewhat disillusioned with what I'll call chronic diseases, especially chronic neurologic diseases. It might be fascinating to make the diagnosis, but you really couldn't do much about it. So I started investigating other specialties.

And I considered what I was going to do, I remember, in fact I still have a little three by five card on which I evaluated neurology, internal medicine and radiology. Radiology was fascinating to me. And I gave them numbers of plusses to rank them.

Holland: You did like a pros and cons list?

Stevens: Yeah. It was a list, you know, these are the things I want. I want it to be intellectually stimulating. I want to be able to have time for my family. I want it to be satisfying. I want to have patient interaction. And then I gave them different numbers of pluses. Based on that list I chose to go into radiology. And that really disappointed Dr. Wintrobe and the neurologists at Utah, because they thought I was going to go into neurology.

And things are different now. Again, you have to realize that I graduated from medical school in 1966. And I had married Shannon Kramer in 1964. Her father was a golf pro at the big city golf course in Salt Lake, the Bonneville Golf Course, for about fifty years. Maybe that's why I didn't take up golfing. (laughter) I did golf a little bit, but throughout my life, I just haven't had time to golf.

So anyway, I decided I'll go into radiology. So I applied to UC San Francisco, to Stanford, and up here at Oregon. I did not visit any of them, which is very different then how residents and residencies are selected now.

Oregon was a school of medicine under the University of Oregon. This place is now a university. But at that time, the medical school was considered a college of the University of Oregon down in Eugene.

So I was accepted here without a personal interview. I had talked by phone to Dr. Marcia Bilbao, who was in charge of the radiology residency program. She's still alive. She was a diagnostic radiologist.

And so when I arrived here in July of 1967, Shannon and I had a two year-old and a four month-old sons. And we rented a little house out in Tigard, near where Washington Square shopping center is now. Although Washington Square didn't exist. It was just an open field.

And when I arrived here I was planning to go into diagnostic radiology. I almost gave away my black bag and all my instruments, because radiologists don't examine patients. At least, I didn't think they examined patients. At that time, they didn't really examine patients.

After I arrived I was informed that this was a time of transition for radiology. That previously, when a person would be trained in radiology, they'd have two years of diagnostic radiology and one year of therapeutic radiology. Then you could practice both. Either or both diagnostic and therapy. I remember talking to Dr. Horowitz, a radiation oncologist. And he said that at that time, the important stuff the diagnostic radiology would be done in the morning. And the "leftover stuff", the therapy, would be done in the afternoon, if you were a general radiologist. And that was really not good for the specialty of radiation oncology, that type of situation.

But at that time, in 1967, it was a time of transition for radiology. So you could take the "classic residency" of two years of diagnosis and one year of therapy, or they said you can take three years straight diagnosis, or three years straight radiation therapy. The radiology faculty suggested "take a month of each, and then decide what you want to do".

Holland: So you started off in 1967?

Stevens: 1967.

Holland: With a month of diagnosis.

Stevens: A month of diagnosis and a month of radiation therapy.

Holland: Had you had any exposure to radiation oncology?

Stevens: A little bit. I know at the University of Utah they had a Van de Graaff machine. There was a Dr. Brown that was in charge of radiation therapy at University of Utah. I also had talked to Dr. Plenke at the LDS hospital in Salt Lake City. So I had some sense of radiation oncology.

So I took a month of diagnosis. And I really realized I missed the patient contact. And then I took a month of radiation oncology with Dr. Clifford Allen.

Holland: Sure.

Stevens: And I just fell in love with radiation therapy. What I found fascinating was that, and I think it was especially the skin cancers and the oral cancers, tumors that you can actually see with your eyes. I remember a fellow with a large, destructive tumor back on the left side of his tonsil. Just a big, destructive, exophytic, and ulcerative tumor. And to watch that tumor melt away in the face of radiation was just fascinating. And the tumor would go away. The normal tissues would be preserved. And I said, "this is a specialty for me".

Dr. Allen was 59 years old at that time. He had received his medical degree at University of Iowa. He came to practice in Longview, Washington, in the late 1930s. And was a GP up in Longview for many years. And then he wanted, and I'm not sure now really why he chose this, but he decided to go into radiation oncology, or radiation therapy as we called it at that time. And he was a resident here at Oregon starting in 1952. So he had training here in 1952. They had no megavoltage radiation machines at that time. It was orthovoltage radiation that would cause severe skin burns in order to get a dose deep into the tissues. He also had some additional training with Drs. Milton Hyman and Selma Hyman. And then also had some training with Dr. Cantrell and Dr. Buschke, who were up at the Swedish Tumor Institute in Seattle. Dr. Franz Buschke then went on to become chair of the radiation oncology department at UCSF later on.

Holland: So in 1967, that's when you decided to pursue radiation oncology?

Stevens: Right.

Holland: And Dr. Allen was your chair. How long was your residency and what was it like?

Stevens: It was a three-year residency. The, radiation oncology or radiation therapy at Oregon was a one-man department. Dr. Allen was the chair of the radiation therapy

department. Dr. Dotter was chair of the diagnostic radiology department. Prior to January 1967 radiation therapy was a division in the radiology department.

Dr. Dotter had arrived as chair of the radiology department in 1952, the same year that Dr. Allen started as a resident. But you have to realize that Dr. Allen had had sixteen years training and experience as a GP.

In 1966 Dr. Allen, as head of the radiation therapy division, was having a hard time under Dr. Dotter. Dr. Allen didn't think he was getting the equipment or materials or support that he needed. And so he went to Dean Baird, for whom Baird Hall is named, and told Dean Baird that he would leave if he wasn't given a separate department of radiation therapy. Dean Baird created a separate department of radiation therapy.

And so in January of 1967, the department of radiation oncology, or the radiation therapy as it was known at that time, became a one-physician department. It was the first academic radiation therapy department in the whole country; in the whole U.S. Tufts University became a separate department later that year, but Oregon was the first.

There had been some previous residents who had gone into radiation therapy. John Gallucci had finished a three-year residency about a year before I came here, so he was really the first three-year resident in radiation therapy. Dr. Norm Aarestad had taken training about six years before in the general radiology program; then he eventually went into radiation therapy after further radiation therapy training.

When I arrived in July 1967, we had a two million volt Van de Graaff generator. It was on the fourth floor of the hospital. What we now call the C Wing of the hospital didn't exist at that time. The Van de Graff was in a little outbuilding on the west side of the A wing of the hospital. What we now call University Hospital, we then called South Hospital. And Multnomah Pavilion was called the North Hospital at that time. The Van de Graaff was a big machine. It was in a big vault room. It was a machine that stood two stories high and was very difficult to move. With its large size it wouldn't rotate around the patients. The patients had to rotate their position in order for treatment from different directions. The machine could treat vertically and it could be laid down in a horizontal position and you could treat with a lateral field.

If you treated a patient front and back, then the patient had to turn over. The patient would be laying on a gurney with wheels that you could then lock. So that you would put the patient on the gurney and you would wheel the gurney underneath the machine. And the Van de Graaff had a light field that corresponded to the radiation field. So you would align the patient to the area you wanted to treat and lock the wheels. Sometimes you had to be careful because sometimes in locking the wheels, that might make a little movement in the patient's position.

They found that when the machine was in a horizontal position, there was a five-millimeter misalignment between the light field and the radiation beam field. And so you had to correct for that, if it was horizontal. And you had to know which in which direction to make that five-millimeter adjustment.

The offices of the radiation therapy department were on the eleventh floor of the A wing. We had the conference room up there. We also had an orthovoltage machine up there to treat superficial tumors and we also treated bone mets with it.

We shared that eleventh floor wing with diagnostic radiology and with OB/GYN offices. So we didn't have much space up there. So residents would see a patient in consultation up on the eleventh floor exam room and evaluate them. Usually, but not

always, with Dr. Allen. And then every morning between eight and nine o'clock, we would have a morning conference to discuss new patients. And this is really where much of the teaching occurred. And Dr. Allen was very strict at starting it at eight. And I remember there were times if I was late; I found that the conference door was locked. (Holland laughs) And so I had to go ask Paul Jenkins, Dr. Allen's secretary, to get the key to let me in the small conference room. I learned to be on time, because I didn't want to have to approach a locked door recognizing that I had not arrived on time.

We had a rotation of residents from other departments. We had rotations from residents from surgery, from ENT, from OB/GYN who would spend anywhere from a month to two or three months in the department to get training in radiation therapy.

Holland: How many radiation oncology residents were there in the department at any time?

Stevens: Well, I was there all by myself for my first year. The next year, there were two additional residents, Dr. Dick Lehfeltd and Dr. Carl Simonton. And then during my third year, Dr Dale Ostlund came as a resident. Since I started my residency in 1967, we've had continuous residents. But you have to realize that I was the only one there for my first year.

The Van de Graaff machine had been installed in 1959. That was a big deal to have megavoltage radiation. It was a two million volt machine. It had a very sharp penumbra. In order to take treatment field images, we had to put a film cassette underneath the patient. And then expose the beam. So we didn't have simulators or KV equipment at that time to take images. It was a two MEV beam. And then because it was a high-energy beam, the X-ray cassettes had metal foil adjacent to the film. I think it was probably aluminum in it so that the radiation would hit the aluminum and then they would get scattered onto and expose the film.

And then the films were processed in a water bath. It was not an Exomat, it was not automatic. And the films would basically be processed and hung up to dry. So in the morning conference, we would review the port films. We did take port films initially and took port films on a weekly basis.

The Van de Graaff machine had a treatment distance of 100 centimeters. You have to visualize machine. There was a transparent tray at the lower end of the machine on which we put the large lead blocks. The blocks would rest on the tray. We would adjust the size of the rectangular field by moving the big lead collimators inside the machine with knobs. Then you could put these corner lead blocks on and other blocks like that. We didn't have custom blocks.

Sometimes you would stack blocks on top of each up to modify the shape of the radiation field a bit more. But you had to be careful. You didn't want the blocks to fall over.

The treatment distance was determined from the source, the target of the VDG machine, to the patient's skin surface; it was 100 cm. There was a transparent Lucite tray that the lead blocks rested upon. In order to have the patient at that distance we used a wooden dowel 41.5 centimeters long that we would put up against the bottom of that tray. And then you would crank the gurney up until the lower end of the dowel touched the patient's skin surface. So the treatment distance was 100 from the target to the skin

surface. a target to skin distance. Then you determined the radiation depth dose based on different tables that we had.

We didn't have TV cameras or monitors to watch the patients. In the side wall of the VDG room, next to the control panel, there was a large block of glass filled with mineral oil. So we could sort of see the patient through that transparent mineral oil. To make sure they hadn't jumped off the table or whatever.

Holland: Can you explain what the advantage of the Van de Graaff is over orthovoltage?

Stevens: Well, what we called orthovoltage, was radiation energy in the hundreds of thousands of volts. There was superficial radiation, which is about 120 KV radiation, X-ray radiation. And then the orthovoltage or what we called deep therapy, going up to around 280 to 300 KV energy. And that was called deep therapy. Because that was radiation that really got you into the deep tissues. The problem was that the maximum dose was at the skin surface. There was high absorption in bone. So that if you were treating around the mouth, the mandible and maxilla got a high dose and you could damage the bone.

With megavoltage radiation, the maximum dose did not occur at the skin surface, but it occurred about five or six millimeters into the skin surface. You actually spared the skin. The radiation dose at depth was greater with megavoltage radiation from the VDG than it was with orthovoltage radiation. The nature of the megavoltage radiation was such that the absorption in bone and absorption in soft tissue were pretty much the same. Whereas with orthovoltage, you got maybe two or three times the absorbed radiation dose in the bone as compared to soft tissues.

Radiation was measured in the roentgen, which was a dose of exposure. And then we later started using the rad, which was the roentgen absorbed dose or rad. And then later used the term centiGray for it.

In 1968, which was during the first year of my residency, we got a Picker 9 cobalt 60 machine. That was rotational. And that had an 80-centimeter source to axis distance. SAD. And that machine could rotate around the patient. I remember treating some patients with cancer of the esophagus with rotational fields.

Cobalt 60 was a wide source of radiation and had a wide penumbra, whereas the Van de Graaff had less penumbra from its pinpoint source of radiation. The cobalt had about a one and a half to two centimeter diameter source of radiation. So the edge of the Cobalt 60 radiation field had a wide penumbra. And sometimes it was difficult to see the edge of the field on the film.

So during my residency, the offices and the conference room were on the eleventh floor of the hospital. The Van de Graaff machine was down on the fourth floor. And the cobalt machine was over in the clinic building located in the back area of where nuclear medicine is now. So we did a lot of running around, running around there at that time.

We had a physicist. Harry Shaich. We had technologists. Nellie, Juanita "Nellie" Nelson had been a TB nurse in her early years. She was the one who really ran the Van de Graaff machine. She was an older, matronly lady. And I learned a lot from her.

In fact, one of my recollections is she would set up the radiation field and then ask me as a resident or Dr. Allen, if he happened to be there, to double check. And I can

recall that I went up to do something and she said, “Don’t touch that block.” (laughter)
She didn’t want me interfering that much.

Holland: What were the cases like then? Did you treat similar type of cases then as you do now?

Stevens: Well, we treated lung cancer. We treated ENT tumors,

[End Track 1. Begin Track 2.]

Stevens: cancer of the larynx. We treated a lot of endometrial cancers at that time. Almost every patient with endometrial cancer received pre-op radiation. After a few years we realized that we didn’t need to do that for most patients with endometrial cancer. We treated a lot of metastatic disease. Bone mets and brain mets. We did not treat cancer of the prostate. We treated breasts, but we treated breasts after mastectomy. It was post-mastectomy radiation. It was not breast-preserving radiation. So breast-preserving surgery and radiation has been a big change that has occurred over the years.

Holland: How was your boarding process? So after you finished it, you did three years of residency?

Stevens: I did three years of residency.

Holland: And then did you do boards?

Stevens: Yeah. This was the time of the Vietnam War.

Holland: Yeah.

Stevens: So I was in what they called the Berry Plan. So that my going into the military was deferred until after the completion of my residency. So at the completion of my residency, I went in the Army Medical Corps. I was assigned to Letterman Hospital on the Presidio in San Francisco. It was a wonderful place to practice after my residency. During my first year there, I practiced with Dr. Norm Aarestad, whom I mentioned before, who was also there as a radiation oncologist. So there were two of us together during that year.

It was like a fellowship for me. Because Letterman Hospital had a radiology residency program, the residents would train for two years in diagnosis and then have a year of therapy. So I would train them, it was a training program.

Drs. Jerry Vaeth and Jerry Green from Mount Zion Tumor, Tumor Institute, would come on Wednesday mornings. And the residents would do a presentation to them and to the colonel who was the head of general radiology at Letterman Hospital. After the presentation and discussion and teaching, all of us would go to Fort Baker on the North San Francisco area, and we’d have wonderful roast beef sandwiches. (laughter)
I remember that. So it was like a fellowship.

And then we were close there to UC San Francisco radiation therapy. And they had a lot of conferences. I remember Dr. Juan del Regato came and gave a presentation at Letterman Hospital. I remember we had doctors from England that would come and give presentations which we attended.

One of the things I forgot to mention is that during the third year of my residency, I took a one-month rotation at UC San Francisco. So I was able to have one-month of training under Franz Buschke and Ted Phillips at that time. And they were very clinically oriented. They were very good at examining patients. And I learned from that as well.

Holland: Sure.

Stevens: And then the second year when I was in the army, I was there all by myself as a physician in radiation therapy.

Holland: So was this like 1971?

Stevens: This was 1971-72. So during that time, I took my written boards and also my oral boards. I remember the oral boards were in Dallas, Texas. And this was a few years after Kennedy had been assassinated.

Holland: Hoping that the Texans treated you better than they treated Kennedy?

Stevens: Anyway, I remember being in the taxi in Dallas headed to the boards, thinking this was where Kennedy was assassinated.

So I had the oral boards. That's where I first met Dr. Moss. He examined me in ENT cases. And he was very friendly. I took my written boards in San Francisco and the oral boards down in Dallas.

Holland: Then after you finished your training at Letterman and you were board-certified, what was next in your career?

Stevens: Well, Dr. Allen asked me to come back and join him in practice, which I was pleased to do. And when I arrived in July of 1972, he said, "I'm leaving the end of September." (Holland laughs)

I said, "Really?" (laughs)

So in October of '72, I became the interim chairman of the Department of Radiation Oncology here.

In the meantime, during that two years that I was gone, from '70 to '72, the C wing of the OHSU hospital was built. And on the fourth floor of the C wing of the hospital, they had built a new radiation oncology department. They brought the Van de Graaff machine in. it was kind of a challenge to bring it in. This little outbuilding from the hospital actually had a removable flat roof. So they actually took the machine out, brought it around the hospital building, and then if you remember where my office was at the end of the hall, before they finished that office, they actually brought the machine in horizontally through that and down the hall. And then put it into the area where you knew the 6100 Linac was located.

The Picker cobalt machine was also brought over. And the Van de Graaff machine. A new 25-Mev betatron machine was also installed.

The Van de Graaff machine had been installed in 1959 and it was a donation from the Donner Foundation. I think the same Donner family, Donner Pass.

Holland: Oh, okay.

Stevens: Anyway, the Donner foundation had purchased and donated about ten of these VDG machines to different departments throughout the country in about 1958-1959. They cost \$90,000 each.

The betatron was the benefit of a \$250,000 donation for cancer care. I don't know who did it, who donated that. But again, that was a big deal. That's a lot of money in those days.

So we had three machines. We had the betatron, which would produce 24 million volts of radiation. It would also produce a range of electrons. We were the only place in Portland that had electron capability at that time. And we had the Van de Graaff machine which, again, was not rotational. Then we had the rotational cobalt machine, and had the orthovoltage machine.

There was also an orthovoltage machine over at the VA Hospital during this time. And so there were some VA patients who were treated with orthovoltage for metastatic diseases or skin cancer over at the VA Hospital.

Holland: How many patients would you treat a day back then?

Stevens: It was about probably twenty to twenty-five patients. And we had no computers, all of the calculations were done by hand. When I was a resident and I think in the army, I did all my calculations on a slide rule because handheld calculators didn't exist. I know that in about 1973 or '74 the department purchased some radiation equipment, treatment planning equipment. And I think it was a rad 8 that had 25K memory. cost about \$25,000. Dollar a byte, or dollar a bit, was the cost.

In addition to the machines that we had, we also did brachytherapy. We had radium. So we actually used radium capsules. And the radium capsules would go inside a little rubber sleeve and we'd put those inside the uterine cervix and we would suture them in place. It was not after loading. We had radium needles that we would use to put into the tongue and other sites. I remember using radium needles for some to some perianal tumors.

We also were treating cancer of the ovary with intraperitoneal P32. And during my practice, we treated over 200 patients with intraperitoneal P32, and really had good results with that.

One of the other things I should mention is that in 1959, Dr. Englebert Dunphy had arrived as head of surgery here from Boston. And he brought Bill Fletcher as a resident. Dr. Dunphy was interested in combining radiation with surgery for rectal cancers. So Dr. Dunphy wanted Dr. Allen to give 2,000 centigrade pre-op radiation. And Dr. Allen said, "I'm not going to give something that's not going to be effective. If we're going to use radiation, I want radiation to be credible."

And Dr. Allen was very definite. And so Oregon was really the first institution to do high-dose, what we call 5,000 centigray pre-op radiation for rectal cancers. So we've been known for that.

Dr. Moss came in July of 1974. And he was a very well known, this is his, the second edition of his book that I trained with. His third edition came out later. And Dr. Moss was very important to our specialty. He had been president of ASTRO, our national organization. He was in charge of the radiation therapy boards for many years. And had He's now ninety-five years old and still very mentally alert.

Holland: I was going to say, what are some of the major changes? You've been practicing radiation oncology, we used to say, since the Beatles were a band. And you're still practicing.

Stevens: Yeah.

Holland: What have been some of the major changes here at OHSU? Some of the major changes within the specialty?

Stevens: There has been a big change in medical imaging and computerization. We did not have CT scans. We didn't have MRI scans. We didn't have PET scans. So all of that imaging has come about. When we would determine the anatomic area we wanted to treat with radiation, we would use just a plain radiograph. We had angiography because of Dr. Dotter and Dr. Melvin Judkins; we had world-class angiography here. Many times we would use angiography either in the truncal area or in the brain to determine where the tumor was located. We planned the radiation volume based on that information.

When I started here, most patients only got one radiation field a day. So one day you'd treat in the front. And the next day you'd turn them over and then you'd treat from the back. The treatment planning has become much more precise and complex so that we have a much better sense of where things are. We have much more and precise chemotherapy. Again when I started, the chemotherapy was methotrexate 5FU and nitrogen mustard. We treated patients with Hodgkin's Disease. I remember that in the early '70s there was a child with rhabdomyosarcoma. And we treated that child for palliation. Because at that time, we didn't think we could cure a patient rhabdomyosarcoma. But the chemotherapy was just coming into effect, the good chemotherapy. And so I remember a patient that I thought we were just treating for palliation actually survived and was cured.

One of the things that I said initially, that one of the reasons I didn't want to go into neurology was because you could make the diagnosis but you couldn't cure a patient of neurologic problems.

But in radiation, we do cure patients. We have patients that are surviving many, many years.

Holland: How have things changed over at OHSU? Have there been any, what are the most dramatic changes here at OHSU over the forty plus years?

Stevens: When I came, the hematologists were treating leukemias and lymphomas with chemotherapy. The solid tumors' chemotherapy was being given by the surgeons. Dr. Fletcher. We had the old VA Hospital. And for many, many years we would evaluate the patients at the VA Hospital. Which meant you either, you had to walk around the old road, the old campus road or there was a bus that would go around that you would take. And the new VA Hospital wasn't there. The sky bridge wasn't there. So it was a chore to get over there.

We have had good interactions with different departments. Lots of interaction with all those departments that deal with cancerous surgery; general surgery, ENT, OB/GYN. I don't know if it's done so much now, but there was a time when we would have, there would be a surgery clinic and I would attend the surgery clinic. And it gave us a chance to talk to the surgeons. Or the GYN clinic would see our follow-ups together. Or the ENT clinic.

Holland: So you did multidisciplinary clinics back then?

Stevens: Right. In fact, one of the things that I was, I wanted to make sure that radiation oncology was visible. And so many times if a patient was referred, I would actually go on the ward and see the patient there. Just because I didn't want to stay in the basement, as it were, although fourth floor wasn't the basement. But I wanted to make sure we were visible.

And it was always helpful to, especially for head and neck cancers, when the head and neck cancer patient came, or especially if they came with a recurrence and you were trying to figure out what to do, I would take the patient. I would call Jamie Cohen or Pete Anderson or Ed Everetts. I'd say, "I need to bring this patient over. Do you have time that we can talk about this?" So we were examining the patient together. Tumor boards, where actually patients would actually come to the tumor board and be examined at the tumor board. And this would be both here and at the VA Hospital.

I remember Harvey Baker was a very famous surgeon from downtown who did a lot of work at the VA Hospital and also here. He was a smoker. And I still remember him examining a patient with head and neck cancer in the tumor board and then just saying to the patient, "You need to stop smoking!" And as he was saying you need to stop smoking, Dr. Baker had this cigarette in his hand.

You know, there was a time in the late '60s and '70s where cigarettes were provided to VA patients free of charge. The ladies would go around with their carts. And it would have some books and it would have other things, candy, and they'd have cigarettes that they'd pass out to the patients. That has changed.

Holland: What do you think are the major contributions that OHSU radiation oncology has made nationally or internationally over the forty plus years?

Stevens: I think that over the years we've probably trained 50 residents. And a lot of those have had a big effect on the specialty. I think the fact that we had Dr. Moss here as chair from '74 until '89 was a big factor. He continued to write, his book continued to be published.

Holland: Dr. Stevens, you were talking about Dr. Moss and how he had a national and international impact.

Stevens: Yeah. Dr. Moss in 1959 wrote his first book on radiation oncology, radiation therapy. And his genius in putting that book together was that for each chapter talking about a cancer or a particular organ or tissue, he first described the effect of radiation on the normal tissues in that area. And that was very important. Because in order to give a dose of radiation, you need to know what the tolerance of the normal tissues are in that area.

In fact I remember thinking when I was going into my boards that radiation oncology is really pretty simple. All you need to know is where's the tumor, and how much dose you need to give to cure the cancer, what normal tissues are in that area and what is the tolerance of those tissues. It's very simple. That was the basic information that you needed. What dose you need to do on the high side to treat the cancer, to destroy the cancer cells, and what's the tolerance of the normal tissues, to be the dose on the low side.

Also at that time, in the late '60s, early '70s, we began to understand what we called the TDF, the time dose fraction equation. So that for different fractions of radiation, what was effect and their relative radiologic biologic effectiveness.

Some of the other things that our department's done, as I mentioned, is the rectal cancer high-dose radiation. And it's a very large series. And the mid 1970s, I recognized that there were some patients that had received high-dose pre-op radiation who didn't have the abdominal perineal resection that we had recommended. But we had a dozen patients where they had done an anterior resection and reanastomosis. So I thought, boy, I need to investigate and write about that. which I did. So our department had the first, not only the first high-dose radiation, but also the first to show that you could do an anterior resection and reanastomosis after surgery. This is also a time when the EEA stapler device for colorectal surgery came into use.

And so in 1977, I was invited to go to Tel Aviv, Israel, to present that information. So Dr. Charles Moertel represented medical oncology, chemotherapy. There was a Dr. Ellis from England that represented surgery. And I represented radiation oncology. I was in my mid-thirties. (laughter) And again, I wasn't really representing myself. I was representing the department.

I also gave a presentation in Padua, Italy, in 1983. My first wife had died a year before that of lymphoma. And in 1983 I had received word, and I had been dating Peggy, my current wife. And in early May, 1983, I received word that my paper had been accepted for presentation in Padua, Italy.

So I called up Peggy and I said, "I want to take you to Italy on a honeymoon." That's how I proposed to her. I said, "Do you have a passport?" She didn't have a passport. So she got a passport and we went to Padua, Italy in June 1982 on our honeymoon.

And then we also, we had the intraperitoneal P32 experience. I presented that information in Istanbul to the European Society of Therapeutic Radiology in 2000. We did the ENT re-radiation paper in the mid 1990s, where we wrote about our experience in retreating 100 patients with head and neck cancer. People didn't think you could re-treat. But we learned that if you're careful, you can actually re-treat radiation.

In 1982, we had a lot of dissatisfaction among radiation therapy technologists in the state. A lot were leaving the field. So I did a survey and determined some of the causes of their dissatisfaction and tried to find some solutions for that. And I gave a presentation at that the National Radiation Therapy Technology conference, and that got people's attention. So I was actually appointed to American College of Radiology to be on the ARRT board, which is American Registry of Radiology Technologists. And for six years, from 1986 until 1992.

And that was a time of change. Because before, physicians were called radiation therapists. At that time there was a transition where physicians were starting to take the title of radiation oncologists, to show that we were oncologists. And as we were moving from radiation therapist to radiation oncologist, the technologists said, "why don't we become radiation therapists"? Well, it took a while for that transition to occur. I was president of the ARRT board at the time when I said okay in 1991, let's make the change so that in 1992, we'll now call the field of technology radiation therapy and they are called "radiation therapists".

And we also had, we also established, we had a radiation therapy technology training program here since the early '70s. 1972 is about the first time we had that. and it's become a baccalaureate program under Ann Maddeford, so that's been a big deal. We've had a lot of involvement with a lot of the national cancer groups.

One of the things that Dr. Moss did that worked for a while was that we had Oregon statewide phone conferences. So we would ask a visiting speaker to get on the phone line with us. And then we would send them X-rays and charts of different patients. And we'd also send this information to all the radiation oncologists in the state. So we'd have a statewide phone conference so that at each institution in the state, people could put up the X-rays. And then they could all be tied in by phone to this national expert. Head and neck experts, breast experts. You know, various experts. So that was one of the things that we had done in the 1980s.

Holland: What would you say have been some of the greatest challenges that you've experienced in your career as chairman and as a radiation oncologist.

Stevens: We are a credible specialty now. I think when we started there were real questions. Is radiation therapy really something that can do what it says it can do, that we say it can do? As you work with others, there's a saying "that to he who has a hammer, everything looks like a nail". Surgeons want to do surgery. radiation oncologists want to do radiation and medical oncologists want to do chemotherapy. So you have to work with the other specialties to know what you can do and what you can't do.

I don't like to injure patients. And I find that I, I am somewhat cautious. Although we do high doses of radiation. It's hard when you had a child with cancer. I think I did most of the childhood radiation when I was here. It is challenging to treat a child that has like a cancer, especially if the cancer comes back. That was very hard. Or young parents.

I faced a personal situation when my first wife Shannon was diagnosed with a lymphoma in early 1981. She had had had some brachial plexopathy, or problems with her right arm. And then finally after that went on for a number of months, she felt a lymph node in her right axilla in January 1981. It was diffuse histiocytic lymphoma and

treated with chemotherapy and went into remission. And then in December that year, she was having—

[End Track 2. Begin Track 3.]

Stevens: --neurologic abnormalities. And they found that the tumor had come back in multiple areas of her brain and spinal cord. So she was treated on—remember the Van de Graaff was replaced with the 6100 machine in the fall of 1981. And she was treated on that machine. And then her health eventually deteriorated and she died in our home on June 1, 1982. So that was a challenge for our family. Obviously. Leaving me with six children ranging in age from five up to seventeen.

Happily, as I mentioned, a year later I married Peggy. She had four children ranging in age from three to fourteen. And so when we came home from the Italian honeymoon, she was faced with ten children in the house. (Holland laughs) And we added two more, who are now twenty-nine and twenty-seven. The twenty-seven year old son, K.R., he's Kenneth Stevens III, we call him K.R., is now a third-year medical student.

So it's been a good specialty. It combines everything. Because what I find is that I see the patient. I talk to them. I get involved with them personally. I examine them. I look at all of the imaging. I look at the reports. I talk to pathology. I put the whole picture together. What I find is that some other specialties don't do that. Many times, other specialties are interested more in the blood counts than they are in the physical examination. So I think that in our specialty, we really have the opportunity to put the whole picture together.

And then you follow the patients. You follow them for years. One of my stories, and I tell a lot of stories. A lot of our training needs to be with stories. During my residency I treated a little six year-old boy with Hodgkin's Disease in the supraclavicular area. He was living in a foster home at the time. Just a little cherub of a child. Just a beautiful little boy.

And then because we had treated this area, and he didn't grow as much in that irradiated area, I took photographs of him over time. So that when he's eleven years old, you can see him and he's still kind of happy. But he was going from foster home to foster home. When he was fifteen, he was really scowling. And he was starting to get in trouble with the law. When he was twenty-one, the picture shows some tattoos. He was spending time in prison at that time. The photographs in his chart showed a lot

He came back, oh, about thirty years later and had developed a meningioma of the thoracic spine. Possibly related to radiation, radiation-induced. And I remember him still, he was in prison. And I remember him, he was partially paralyzed. Couldn't walk. And I remember him, and I was examining him, and he was in a wheelchair. His hands were handcuffed to the wheelchair. His feet were shackled to the wheelchair. And this was a guy who couldn't walk.

So I got out his chart. And I said, I called him by name. I won't mention it here. But I said, "Look, I remember all of these pictures over the years." Because it did document, he did not grow as much in in the neck and shoulder area.

And he said, "Dr. Stevens, can I have copies of those pictures? I don't have any childhood pictures." And it really made me realize that cancer was a big deal in his life.

But the bigger deal in his life was the fact that society had let him down. That he had gone from foster home to foster home. He didn't have any continuity in his life.

And so even though he was in prison, I had an address of some of his friends. And so I copied those pictures and sent them to him.

Later, in following up on him, I found that he had come into the ER because of a bicycle accident. So that meant that he had gained some neurological function.

Again, it's been a wonderful specialty. I continue to enjoy what I'm doing. To me it's incredible that at my age, people still want me to see patients and evaluate them. Although I have to say that Dr. Selma and Milton Hyman are very pioneers in our field. They came to this department and the VA Hospital in 1943 as fulltime radiation oncologists, or radiation therapists. And I learned yesterday that they are still living. He's 102 years old. She's 101 years old. They still live in their own home. And they had the first cobalt machine on the west coast. It was established here in Portland in 1956.

And Dr. Moss is ninety-five years old and still very capable. So it seems that the radiation can provide longevity.

Holland: (laughs) I don't know about that. What would you say, what have you learned over all these years? What have you learned from your patients? What have you learned from your experiences?

Stevens: I've learned to listen to the patient. I'll give you two stories again to sort of illustrate this. I remember as a resident a patient with a large lung cancer. And telling him that the tumor was really too large to treat with radiation to benefit him. I remember telling him that we can't really, radiation really wouldn't be of effect for you, but we might be able to help you in the future.

He said, "Well, what might happen?"

I said, "The tumor might go to bones and we could treat your bones."

He said, "Well, what else might happen?"

"Well, it could go to your brain. We could treat your brain."

"What else might happen?"

"It might go to your liver and we could treat your liver if you were symptomatic."

And he said, "Well, if all that's going to happen to me, I might as well go out and shoot myself." I realized in that situation I was giving the patient more than he wanted to know.

The other side of that is there was a thirty-nine year-old sheriff from over in eastern Oregon, and this is before they had radiation therapy in Bend, that was diagnosed with oat cell cancer of the lung, metastatic to the brain.

So when he came over, I examined him and evaluated him. And in sort of sitting down with him, I was trying to ease into what I was going to recommend. I said, "In these situations, we have to determine when we evaluate a patient if we're going to treat for cure or if we're going to treat for palliation."

He said, "Well, I'm here for the cure." (Holland laughs)

And, okay. I wish I could do that.

So that resulted in me falling back to two questions. The first question that I ask the patient after I've, well, sometimes I do this first, sometimes I do it somewhere in between. I say, "What have you been told? What have you been informed about your

condition?” And the second question is what more do you want to know? And by doing those questions, it really has kept me, I’m able to provide the proper evaluation of a patient. I know where the patient is. I’m not telling the patient too much or too little. And I think that’s, so again, if we would just as doctors learn those two questions. What do you understand about your condition? And what do you want to know? and then understand the limits of what you can do, the benefits of what you can do. Work with other doctors in other specialties. Because things are continually evolving. And work together.

Medicine changes. One of the stories that Dr. Moss would tell is that when he was still back at Northwestern University, he had trained a resident who, and this would have been back in the probably ‘50s or maybe in the ‘60s. And he had trained a resident who had gone up to Wisconsin and was there for about eight years. Came back to visit the department at Northwestern.

And after being in the department for a day, he said, “Dr. Moss. You’ve changed how you’re treating patients. When you trained me, I continued to treat patients as you trained me eight years ago.

Dr. Moss told me, he said, “You know, I failed that resident because I didn’t teach them to change.”

If I practiced now as when I started, I would never look at a CAT scan. (laughs) I wouldn’t use computers.

One of the other things that I did is I am a collector. I collect articles. And people knew I collected articles. And in my office I had a large bank of lateral files, as you remember. And people would come and know I had these articles. So they’d ask me a question. And as I was on the phone, I knew where things were. So I could pull out this. I was a Google (laughter) for radiation oncology at that time. Because again, nowadays if I want to look up a question, or if I have a question, I just Google it. I don’t even look at medical, I just Google it. And it’s just interesting how that is.

Holland: Well I just wanted to thank you for, gee, first of all for hiring me back in 1994.

Stevens: Yeah. That was a good choice. Both you and Carol in ‘93 and you in ‘94. Good choices.

Holland: And I’d like to thank you for all the services you’ve provided for OHSU. For attending here as an instructor, as a chairman. And most importantly, for all the care that you’ve provided to Oregonians since the ‘60s. And continue to provide. So thank you.

Stevens: Thank you. Okay. Thanks, John. [pause]

Frances Storrs: My name is Frances Storrs. I’m interviewing Ken Stevens for the OHSU Oral History Program. The date is January 8, 2014, and we’re in the BIC building at OHSU. And Ken, this is a fun thing to do. I guess we were residents at about the same time in the late ‘60s. I was a resident ‘65 to ‘68. And I think we overlapped there.

Stevens: Right.

Storrs: And you came back and we were both young faculty people together. And we actually had lots of interactions, which I think will be a fun thing to talk about. How do you think OHSU's changed since, say, the late '60s, '67?

Stevens: Well I can remember as a resident, we didn't have a lot of the parking structures that we had. So as a resident, I would park over where the CDRC is. Walk down those wooden steps down into what do you call, the gully. Then up the other side. and there was kind of wooden steps. This is before we had the C wing of the, we called it the South Hospital at that time. And Multnomah Hospital was the north hospital. So there was operating rooms in both the Multnomah, what we called Multnomah Pavilion, then called the North Hospital, and this was called the South Hospital.

VA Hospital was an old VA hospital. We didn't have the connecting bridge. We didn't have a lot of the buildings (laughs) first of all that are through here. We had much more open space.

A lot of our patients, probably about 40 percent of our patients were VA patients, although VA patients were first seen over at the VA Hospital. So we would walk over and see the, or take, remember that shuttle bus that would go around?

Storrs: Yeah.

Stevens: And we would see the VA patients there. We did a lot of walking around. Our department was sort of scattered all over, because we had our offices and the orthovoltage machine up on the eleventh floor of the South Hospital, University Hospital, in the A wing. We didn't have the C wing at that time. And then we had the Van de Graaff machine down on the fourth floor and then the cobalt machine was down on the other side of the campus in the basement of the clinic building where the nuclear medicine department is now. So we did a lot of walking around.

I know that dermatology had a superficial machine to use for treating skin cancers with radiation. And then there was a time, I think just because some of the regulations, that that unit came over to our department.

Storrs: Right. I think we gave it to you. Just weren't using it that much.

Stevens: Yeah.

Storrs: Did you ever use it?

Stevens: I think we used it for some superficial patients. I think that one of the concerns that I've had that relate to dermatology is again, skin cancers can be treated surgically. Again, probably most commonly with what we call the Mohs technique. And also treated with radiation. And I think that there are patients that—radiation can preserve tissue. And around the center part of the face – lips, nose, and even ears – that I see a lot of what I call destructive surgery. (laughter) If you don't mind me saying that. Where they go in and they take out the cancer and then more and more tissue. And the patient's left with a big hole. And you have to do reconstruction. And I guess I'll use the word alarms me where I could have treated this patient and preserved the tissues.

Storrs: Well do you remember how we interacted? How your department and our department interacted? To deal with some of these specific--

Stevens: I think we saw patients together.

Storrs: Right.

Stevens: We had clinics together.

Storrs: Yup.

Stevens: We had conferences. Because I remember giving presentations in the amphitheater type room over in the clinic building.

Storrs: Right. Well I actually ran a tumor board. I don't know if you remember that. Once a month.

Stevens: Yeah.

Storrs: And you and your fellows and Dr. Moss came to that. And so did all--

Stevens: And we would examine patients together.

Storrs: We did indeed.

Stevens: Yeah. Yeah.

?: Could I just interject, could you be careful overlapping your voices?

Storrs: Yes.

Stevens: Okay. Okay.

Storrs: (laughs) Then we would have these tumor boards where we would discuss the patients. Do you remember those at all?

Stevens: Mm hmm. Yes. It was very useful to identify where the patient should go. If they should go to surgery or radiation. Nowadays, the radiation oncologists don't get the opportunity for their input. In fact, one of my recent publications is a, I wrote a chapter in a book, a textbook, on skin cancers with radiation. Actually my last major publication actually was published three years ago. And it had to do with treatment techniques, or radiation treatment techniques for skin cancers.

Storrs: How many skin cancers do you think the radiation oncology department treats now?

Stevens: Very few.

Storrs: Very few.

Stevens: Yeah.

Storrs: So those conferences were amazing.

Stevens: Yeah. I think if you have lesions out on the cheeks, it's very useful to do surgery. But around the nose, we can preserve that contour. We can preserve the lips. Even the external ear, ear treatment.

Storrs: I think those interactions were instructive. But also fun. Did you have any interactions with other departments?

Stevens: We had a lot of interactions. We had tumor board, the general tumor board. We had breast conference. We had GYN conferences. Had ENT conferences. Urology conferences. Medical oncology conferences. Pediatric oncology conferences. So we probably had a conference at least every day. Sometimes two conferences a day. Many times those conferences were early in the morning.

And we would have visiting people come from downtown. Harvey Baker would come up for the VA conferences.

Storrs: And we had the people from town and from here, ENT and surgery people come to the conference that you came from so that all disciplines were represented.

Stevens: Right.

Storrs: Now I think that's different. I'd like you to reflect on that. Do you think that those interactions happen as much anymore?

Stevens: I'm not sure. I'm not fulltime here. I'm still in practice. And I know that they're, but I'm practicing helping the department in the clinic that we have out at Tuality/OHSU Cancer Center. I know that they have periodic conferences. Some conferences are—you need to, we shouldn't be practicing in a vacuum. We need to be aware and, in a sense, advertise what we can do and find out what others can do. And learn from that experience.

Storrs: I think it's sad that there aren't those interactions. And I think we all lose because of that.

Stevens: Yeah.

Storrs: Do you recall a patient that you showed me once who had had radiation to his head and the hair on the side of the portal turned white.

Stevens: Yes. In fact, I remember that, and in fact, one of the things I had noticed is that many times when we would treat for brain, it might have been for brain mets, that the patient had had white hair and the white hair had actually regained its pigmentation, which I thought was kind of striking.

I remember treating a woman with a cancer on the eyelid. And her eyelashes actually returned. Which kind of surprised me that the eyelashes would return after that dose of radiation.

Storrs: Tell me some of the diseases and tumors that have been treated by radiation in the past that aren't anymore.

Stevens: When I was a resident, and early in my career, most women with endometrial cancer would receive pre-op radiation. And then we realized that these were low-grade tumors. All you need is surgery. You don't need to give radiation treatment to them.

One of the things that has happened is that there were patients that were not treated in the past that are treated now. We did not treat prostate cancer. If we treated a breast cancer, it was always after a mastectomy. There was no breast preservation treatment 40 years ago. A woman would have a mastectomy, it would be a very radical mastectomy. They would take off the breast and all of the pectoralis major and minor muscles, all the way down to the intercostals. At least, on the left side. Many times after a mastectomy you'd see the heart beating through the intercostals space. So that, again, that change has occurred. We preserve tissues more.

Storrs: How about skin things? Like I'm so old, I remember some of the unusual things—

Stevens: Mycosis fungoides is very sensitive to radiation. And we'd treat that with total body radiation, where we'd have the patients sort of stand in different positions while we treated the whole surface.

One patient, I remember, had Sézary syndrome, where they have circulating mycosis fungoides cells. And she was actually unable to stand. She was just bedridden. And I thought that I could help her. And those that I was working with, the technologists, said, "Why are you treating this woman? She's never going to make it." Because she was just sore all over. Just raw sores, open sores all over.

And I said, "Well, let's start her laying down. We'll just sort of rotate her on a table, gurney." She started to improve so that she was able to stand. And she was a ten-year survivor, even with that diagnosis.

Storrs: I remember.

Stevens: Came up from northern California, is my recollection. So many times there were patients that you just felt you could do. And then some of them were challenging. Mycosis fungoides patients were patients where they had them sort of all over. And especially if they had intergluteal folds. You had to sort of boost that area, the perineum and maybe boost the feet.

I know that there were some individuals with the basal cell nevus syndrome. That's where it would be the hereditary type and they'd get all these skin cancers. And I remember some of what I'll call Stevens-Johnson syndrome type thing.

I remember one patient that I treated that had lung cancer and brain mets. And he was getting Dilantin. And after about a week or two of radiation to both the chest and the scalp, his Stevens-Johnson Syndrome just kicked in and he desquamated his skin. You know, when the skin would just lift off, the bolli. And his whole head, over the calvarium and here in front and here in the back, he had the target spots on the palms of his hands and his feet. And he didn't live very long after that. And I thought boy, that was a very dramatic late effect, or an acute effect, of the radiation and the Dilantin resulting in what we call a Stevens-Johnson Syndrome.

Storrs: Well there's certainly lots of inflammatory things that you all used to treat and we did, too, that everyone stopped.

Stevens: Yeah.

Storrs: Like fungus and some of the—

Stevens: Acne?

Storrs: Acne.

Stevens: Yeah.

Storrs: That's right. Even bacterial. And fortunately, I think all that was stopped.

Stevens: One of the, I never treated, but I was involved as a medical legal expert in treating, were patients that had received radiation for warts on the hand or the feet. And I saw a lot of injuries where people didn't really know what they were doing.

And one of the things I learned from that is if you are a, new in practice and you're asked to do something that you didn't see when you were in training, there's probably a reason for that. (laughs) You know, if a person—

I know that the Hymans would have patients referred to them to treat a plantar wart. And in talking to them, they wouldn't use radiation, but they would try to do a little bit of local surgery on it.

I did some quirky things, I guess you'd say. And I remember a fellow that had a squamous cell cancer up here on the top of his head. And it was hyperkeratotic and very cornified. And obviously it was cancer, it was a biopsied cancer. But he had a cornified area about a centimeter thick on it. And I wanted to treat that, but I wanted to get that cornified area out of there. And so I prescribed salicylic acid on that for about two weeks. And then, we had horses at the time. And I had a farrier's tool. If you know what a farrier's tool is, where you clip the hooves. And the blade sort of comes in like this.

Well, after that had softened up, I brought my farrier's tool in. And I just clipped off that cornified area. Didn't charge him for doing a surgical procedure. (Storrs laughs) The technologists were just horrified at what I was doing. But that was the thing to do

because I had to get that cornified area out of there and then we were able to treat the skin cancer.

Storrs: Do you have any thoughts on how different disciplines in medicine might do a better job of talking with one another again? Particular in medical centers? I think I miss that as much as anything. And you were involved in those interactions. And I'd be interested in how you think some of those things might be...

Stevens: Well I think that tumor boards, where you meet together as a tumor board, one of the things, one of the challenges that we have is that we are limited in the time that we have. Many times my schedule might not overlap with your schedule. But to bring a patient in and to see them together and to evaluate them together, I know that is very useful to—I remember patients, there was one patient that had, came up, a patient of Dr. Moss's that had come in with an enormous—

[End Track 3. Begin Track 4.]

Stevens: --squamous cell cancer on the side of his head that actually had maggots in it. Just spontaneous maggots. Which is probably a good thing. And this fellow had been, had got into the medical area because he was going to the grocery store. Started picking up the grocery store and scratching his head. And they almost arrested him. And Dr. Moss said well he was arrested and his sentence was radiation. He had almost a platter-sized tumor up here.

And we could shrink them down. And then many times there was some surgery that was required or some reconstruction that was required.

In some of the sarcomas, there was a time when they would amputate, like for a Ewing's sarcoma. And we realized that we could do some, we could do radiation. You could preserve the tissue. But I think you need to understand what you can do, what the limits are of your specialty, or the tool that you use, as well as what others. And you learn from that, and things evolve.

One of the other things that have happened in medicine is that all of our records used to be on paper. And we had X-rays. We now have the electronic medical record.

One of the things that I find frustrating is that I'll look at the information in the electronic medical record. There will be a consultation twelve pages long because they have just copied things from other things. So it takes twelve pages to do what I could do in one or two pages. There's really no reason for more than a two-page consultation. Examine the patient. Determine the important things and say what it is.

I worry, I'm currently involved in doing a review of patients who were treated with radiation for rectal cancer from 1959 to the year 2000. It's all on paper records. We're able to get those records from the Iron Mountain. And the X-rays, when we did take X-rays, the X-rays were put in a manila envelope inside the paper chart.

If I now want to review charts now, I've got to go into the electronic record. What's going to be the ability forty years from now to bring up that electronic medical record that we have now into the systems that they have then? I worry that they'll, it will be lost. I don't know how we're going to be able to transfer all of that information.

Storrs: It's certainly different.

Stevens: Yeah.

Storrs: What are some other, can you think of some other good and bad changes since you've been doing all this?

Stevens: Well, the imaging. We have CAT scans. We have MRI scans. We have PET scans. And it's all electronic. And so, in the past, only one person could look at an X-ray at a time. The X-rays were in a big envelope. And so you would request the X-ray. And if you had the X-rays, then the other doctors couldn't see it at that time. The same with the hospital chart. You couldn't see the hospital chart. So the electronic medical record permits everybody to look at the information at the same time.

We have much more computerization of things. When I was early in my career, all of my calculations were done on a slide rule, because a handheld calculator didn't even exist at that time. We didn't have the ability to access things on the internet. We did talk to people. I know many times if I had a case that I didn't know what to do with, many times I would, I knew some of the experts around the country and I'd call them up and get their opinion. "What do you think of this unusual situation?"

And conversely, many people would call me, knowing that I had some experience in various areas.

Storrs: Those are good changes. What are some bad things? Are there some bad changes in your view—

Stevens: Well, as I mentioned before, the fact that it's easier to copy and paste. So that—

Storrs: That's again the electronic records.

Stevens: Electronic medical records. Rather than saying what the pathology is, you copy the path report. You copy the X-ray report. Rather than give the concise analysis of what it is.

I worry that we are losing the ability to examine a patient. We're very poor at listening to the lungs now. I know that the internists that were here when we were young in our training could put a stethoscope on the chest and they could hear lots of things. I know that I went to University of Utah Medical School, where Max Wintrobe was the head of hematology. And he would teach us to percuss the sternum. And by percussing the sternum, we would identify a mediastinal mass, just because of the dullness behind the sternum.

Examining super clav nodes, examining the spleen. We depend so much on the imaging now. We've lost the ability to examine a patient.

One of the things I—

Storrs: Good comment.

Stevens: One of the things I've found in the imaging is that if you have a tumor in the thoracic inlet, or the super clav area, and you order a CAT scan, the head/neck CAT scan might not include the whole thing. A chest CAT scan might not include the whole thing. The same thing is true, I've seen tumors, perianal tumors, or perineal tumors where you order a pelvic X-ray. Well the pelvic X-ray or the CAT scan will cut off and exclude an important part of that anatomy.

So if you want, I've learned that if I want to see that, I will say, "When you do the scan, make sure you go from this level to this level to make sure that you have that."

Storrs: Is this still a satisfying work for you, Ken?

Stevens: Yes. I'm still working three days a week. Which at my age is amazing.

Storrs: Yeah. Wow. So even with these changes in medicine, you still find it satisfying.

Stevens: The hardest part is the computerization. I retired from the medical school in 2005. And I know the electronic medical record was just sort of evolving at that time. I know that there were a lot of, I didn't retire because of this, but I know there were faculty who did retire because they didn't want to go through the epic training. You know, the many hours of epic training. They wanted to be able to do something in paper and hand.

I'm going to tell a fable. And this is a fable that's been around for a long time. About the king that went out with his court down the royal road. And they saw a side road. And he said, "What's down the side road?"

And they said, "King, we don't know. All we have is a map of the royal road."

And he said, "Next time you go out, I want a map of these side roads."

And they put that map together. They went out again. Went down the royal road, went down the side road. There was a path. He said, "What's down that path?"

"We don't know, King. It's not on the map."

So he said, "I want all the paths in the kingdom on the map."

So they did that. and so they went down the royal road, went down the side road, walked down the path. Tripped on a log."

"Is that obstruction on the map?"

"No, King."

"Before I go out again, I want anything on the map that's going to trip me up on the map."

They never went out again. They couldn't carry the map. But now we have Google Earth. (laughs)

But I'm concerned that we're collecting all this information. And a lot of it, I'll have to say, is due to finances. And has nothing to do with medical care. It has to do with documentation. We have all of these—

I want to talk about some things about regulations and that sort of thing. When I was 14 years old, my father was head of the faculty organization at Utah State University at a time of great turmoil. The board of trustees and the governor of Utah wanted to get rid of the president of that university. But my father and others were very supportive of him. And my father's university phone was even being wiretapped. This was in the mid '50s. And I was fourteen.

And I remember him telling me to, he said, “Ken, to into medicine so you don’t have to worry about politics.”

So I come to a medical school. (laughs) Probably nothing more political than a medical school. And then think of what has happened in governor regulations.

When Dr. Moss came here in 1974, after being here a few months, Dean Holman, Charles Holman, called him into his office and said, “Dr. Moss, I understand that you’re billing for Medicare patients. We are a state institution. We don’t bill for Medicare patients. Because we’re a state institution.” And this is in 1974.

And Dr. Moss said, “Really? Well, when I was at Northwestern, we billed Medicare. And they paid.”

And Dean Holman said, “Really?” (laughter)

And before that time, the medical school, faculty, was not billing Medicare patients.

Storrs: That’s correct.

Stevens: So based on that, they realized that here this is a financial resource for physicians. And Dr. Moss has said that Medicare was the salvation of radiation therapy. Because before that time, the patients had spent all their money seeing the GP, and then the surgeon. And by the time they got to radiation therapy, they had no money left. So Medicare, he felt, was really, and I agree that there’s now money to pay for radiation therapy. There’s money to pay for—

You know, it’s interesting. And I’m going to be talking about another specialty. I hope they don’t mind. But it’s interesting how costs increase. For instance, in medical oncology, chemotherapy can be fairly expensive. And chemotherapy has side effects. So they give them anti-nausea medications. Which cost. And then, another cost is you need to give the bone marrow stimulating drugs that again cost. So you have not only the cost of the chemotherapy, but the cost of the anti-nausea medicine. You need to get Decadron and other things, the Zofran. And then you have the cost of all these other medications to build up the blood.

But medicine has become much more specific. We are more able to define a population that will benefit from radiation or chemotherapy or even from surgery.

When I was a resident, I think probably the most common operation was an exploratory laparotomy. Or a vagotomy and pyloroplasty for stomach cancer, or for stomach ulcers. Because we didn’t have CAT scans. You know, a person would come in with belly complaints. Well, we have no CAT scan to look inside your body. We’ll open it up and see what’s there.

We have the capability to treat much older and frailer patients than we used to do, because we have more support for them. but again, an eighty year old or a ninety year old is still an eighty year old or a ninety year old. And I remember Bill Fletcher would say you operate on these old people, and you open their belly and their soul escapes. (laughter)

Storrs: Well I know you really respected Dr. Moss, and you mentioned Bill Fletcher, a general surgeon and cancer surgeon. Are there other people you remember over the course of your [unclear] discuss, or you’ve already discussed them.

Stevens: Not really. But just like in ENT, Ed Everetts. Jim Smith, Jamie Cohen, Pete Anderson. Urology currently, Mark Garzotto. Pediatrics, Bob Neerhout, Larry Wolff. In the surgery department—

Storrs: And did you interact with all these people?

Stevens: Yeah.

Storrs: See, that's amazing.

Stevens: And Bill Krippaehne, Bill Fletcher, Mark Vetto, his son John Vetto, Rich Palmier, Eugene Woltering, Dr. McConnell. In your department, Jon Hanifin, Frank Parker, you, Neil Swanson. Nuclear medicine had Bob Nance and Jeff Stevens. Medical oncology, Keith Lanier, Cathy Rickard Beau. We did a lot with the pathologists. Vince Sneedeen, Karen Ireland, Pete Stenzel, Frank Vellios, Don Houghton. And your dermatology pathologist—

Storrs: Cliff White.

Stevens: Yeah, Cliff White.

Storrs: Uh huh. Do you think those kind of interactions still happen? I mean, [unclear]

Stevens: I don't know. I found it very valuable. They'd say, "There's a close margin." And it was very helpful for me to go over and look through the microscope lens at the slide that he was looking at and determine, really, what is that.

Well the other thing I was very open about doing was that if I saw something on a study that somebody would miss, I would tell them about it. Just as far as their education. I wasn't complaining. It might be a CAT scan that they had identified abnormalities in the central part of the chest, but they had missed that there was an axillary node or some other areas.

The, I mean, it's just been a wonderful experience to be here. Again, sometimes an institution gets so big that you lose contact with people.

Storrs: Do you think that's happened?

Stevens: I think so.

Storrs: Yeah.

Stevens: I wish that there was more clinical basic science interaction. We were sort of two separate areas. You know, the basic area and the—

Storrs: Ken, do you remember how we all used to eat together?

Stevens: Yeah, down in the cafeteria. We actually had a—

Storrs: All Gone. That's gone. I think that made a big difference.

Stevens: Yeah. Yeah. Just to bring people together. Or there's a collegiality that comes from being with people one on one.

I remember Dr. Allen and one of his characteristics was that when he would get mad, he would get very red in the face. I don't know if you remember that.

Storrs: Oh. (laughs) Dr. Allen.

Stevens: Cliff Allen.

Storrs: Where was he?

Stevens: He retired in '72. He trained me.

Storrs: Oh!

Stevens: You may not have—see, when I came back from the army in 1972, he asked me to join him on the faculty. Then he left. So I was here all by myself from '72 until Dr. Moss came in '74.

Storrs: Wow. Anything else that you wanted to say or comment on that has been missed this morning? People? Events? Changes?

Stevens: Just, I've learned that it requires more knowledge and skill and experience to treat a patient with palliation than it does for a cure. Always talk to the referring doctor if you have any questions. Many times a patient would be referred and as far as I could tell, there was really no reason to be referred, because it looked like the surgery had gone okay. But then in talking to the surgeon, I said, "You know, the surgery report looks like everything went okay."

He says, "Well, all hell broke loose." But he was not going to document it .

Patients can encourage us to do things that we have not done before. And medical advances because of that. I've had patients where they've had one head/neck cancer that's been treated with radiation. And they didn't want surgery. They didn't want a laryngectomy. And so I re-treated. And we learned that we could re-treat patients.

Storrs: You learned that from a patient.

Stevens: Yeah. Some patients should not be treated with radiation. When I, sometime during my, I had trained under Dr. Wintrobe at the University of Utah. And sometime during my residency, I had what I called a significant dream. It was a night dream. And in that dream, Dr. Wintrobe said that you could judge a radiation oncology department by the patients they did not treat. Which meant that they were, if a patient wouldn't benefit from radiation, then there's no reason to do it.

Storrs: Great.

Stevens: And that, I learned that a specialty becomes credible when you have proper selection of patients for treatment. You treat those you can help. You don't treat those that you can't help. Although you can always, even if you can't provide help with radiation, there are other things that you can do.

One of the experiences I had, or dealt some more with psychological or social, there was a woman that I had treated who had had lung cancer and had bone mets. So it treated her both for the bone cancer and for bone mets. And she had her daughter were always in conflict with each other when they were present.

And a while later, the daughter called me and said, "Would you go see my mother in the King City nursing home? Because she's in a two-bed room. She's having a hard time getting along with other person. You know how hard it is for her to get along with other people."

So I went out and saw her. And she was on oxygen. She was in this two-bed room. I spent some time with her.

And I called the daughter the next morning. I said, "I don't know your—I"

I'm sorry. I told the mother, I said, "You and your daughter have got conflicts that you need to work out."

The next morning I called the daughter and I said, "I don't know how long your daughter, your mother has to--" They wanted her to move into a one-bed room, but it would cost more. So that's why they wanted to know how long she'd have to live.

So I said, "You and your mother need to make up."

And two weeks later, which is probably uncommon. I have visited a number of people as they are dying in their home. I visit people in their homes, which is kind of unusual. I've even done that within the last couple of months, out at Hillsboro.

But two weeks later, the daughter called and she said, "Dr. Stevens, the most wonderful thing happened. My mother died."

This is on the phone. I said, "Really? What do you mean?"

She said, "Well, I thought about what you said. And I wrote a love letter to my mother. And I took it to her and we reconciled. And my mother said, 'This is so wonderful, I'm going to put this in a special place. I'm going to take it to heaven with me.'" Then she died two days later. So you have those kinds of interactions with patients.

I've had patients that I didn't think would be cured, and they've lived decades. And other—

Storrs: That is wonderful.

Stevens: One of the things I've also learned is I don't like to have patients die during the course of radiation. So I think we have to be very careful about the patients that we treat. Sometimes you're treating for palliation. You don't want to take all of their life in doing that. Sometimes it's just best for them to go back home.

Storrs: You've had a really rich experience. I think that many people have no idea that a radiation oncologist could be such a full and participating physician.

Stevens: It's been a wonderful experience.

Storrs: I congratulate you on your career and—

Stevens: Okay.

Storrs: --this was a lot of interest and fun to talk to you again.

Stevens: Okay. Thanks. Thanks, Fran.

Thanks so much, Fran.

Storrs: Very, very interesting. My gosh. I think people just don't—

[End Interview.]

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