

NCI ORAL HISTORY PROJECT

INTERVIEW WITH

ALAN S. RABSON, M.D.

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National Cancer Institute Oral History Project
Interview with Alan S. Rabson, M.D.
conducted on July 11, 1997, by Gretchen A. Case
at Dr. Rabson's office at the NCI in Bethesda, Maryland

GC: This is Gretchen Case talking to Dr. Alan Rabson. Today is Friday, July 11th, 1997. It's about 9:30 a.m., and we're talking in Dr. Rabson's office at the NCI in Bethesda, Maryland.

I usually start out just by asking you a little bit about your background and how you came to work at the NCI.

AR: I was born and brought up in New York City, and went to medical school in Brooklyn at a school that was at that time called the Long Island College of Medicine. While I was in medical school, I became interested in cancer and cancer research.

My first contact with the NCI began in 1947 when I was in my second year of medical school, and I decided I wanted to come to the National Cancer Institute to spend the summer as a student. I wrote to the head of Biochemistry, a very famous biochemist named Jesse Greenstein, and Jesse wrote me back saying that what I didn't understand is how hot it was in Washington in the summertime. There was no air conditioning at the NIH at that time, and he said he personally never spends summers here, that he spent his summers in Berkeley. And he thought it would be nice if I did the same thing. So that was my first attempt to get to the NCI.

Then after I graduated, I interned in medicine in Boston and then had a year of pathology residency at a hospital in New York City. At this point, the Korean War was raging, and my draft board was urging me to accept a commission in the Army or someplace so I could serve. They told me at the end of my residency that was all the deferment I would get, and I found out

about the Commissioned Corps of the Public Health Service which could be used in lieu of going to Korea in the Army, so I signed up for that.

I tried to get to the NCI at that point but there were no positions and no possibilities. I spent two years doing epidemiology at CDC which I was upset about because I wanted to work in a lab, but actually it turned out to be two of the most wonderful years of my life.

I had another year of pathology residency in the Public Health Service hospital in New Orleans, and after all of this, in 1955 I finally made it to the NIH and to the NCI. So I started by finishing my last year of pathology training in the Clinical Center starting in 1955. My wife and I got to like the place so much that we stayed here for the next forty-two years.

GC: What your resume says is you came in as a resident in pathological anatomy.

AR: Correct.

GC: Is resident different than clinical associate?

AR: Most of the people who came here were clinical associates. The Pathology Department had an approved residency where you could get board credit for this, and we were called residents, not clinical associates. And indeed we were not out on the wards seeing live patients, but we were doing autopsies and surgical pathology. So I was a resident for one year. I had only needed one more year to complete my training.

GC: Can you tell me what the Clinical Center was like? This was right at the beginning. It had

only opened in 1953, right?

AR: Oh, it was a wonderful place. It really was. It opened in '53 and really by 1955 it was still half empty, people weren't crowded. They were this brilliant group of young clinical people, whom you've heard about from other people you've interviewed now. This was again the fruits of the doctor draft. The best and the brightest came from all over the country and fought to get in here.

Most of them had not really done lab research. They had not had any opportunities to do it, and what they found here was a chance to do clinical and laboratory research, with good support that universities did not have at that time, and unlimited opportunities. As I think Tom Frei or one of them said, "The only limit was your own imagination and ability."

It was a glorious time. In Pathology it was great because we got to meet all of these people. The medical people, the surgeons, they all came to see us in Pathology.

At that time I was the only resident. And then subsequently I became a junior staff member, and we ran the whole department with three people. There was a chief, an assistant chief, and the one resident. We had a most unusual arrangement. One day a week you ran pathology for the whole hospital. The next day you signed out all the cases, with one of the other three. Each one of us, even though I was the resident, were chiefs in a way. One day you'd be the resident doing the case, and then you would sign out with the staff man, and then the next day you would be the staff man.

So you really ran the hospital one day out of every three, and the rest of the time you supposedly were free to do whatever you wanted in terms of scholarly pursuits. So it was a fantastic

opportunity for me. We now have something like twelve or fifteen residents, but we used to do the whole thing just the three of us. It was just wonderful. My two colleagues were very remarkable people.

GC: And who were your two colleagues?

AR: Someone named Louis Thomas. Not the famous Lou Thomas of Memorial Sloan-Kettering, but this was a folksy westerner from Idaho, and I shared an office with him. He was an excellent pathologist. He retired at a very early age, and went to live in Colorado. He was always telling me about how glorious it was to live in the West and he actually does nothing medical in his retirement. He's still living there.

Then the other person of the triumvirate was a very interesting man named John Edgecomb who was from the University of Chicago. An extremely cultured and erudite man who knew not just medicine and pathology but art, music, literature. He was just a truly wonderful person, and is now retired in New York somewhat disabled following a stroke but still alive.

GC: What kind of space did you have in the Clinical Center? How big was your laboratory or how big was your area?

AR: Initially I didn't have a laboratory. All I had was a desk and a microscope. In the Path Department, we had a large autopsy room. At the time it was the most elegant autopsy room that had ever been built, and I had never seen anything quite like it. It also was very remarkable because generally in hospitals, the autopsy room is somewhere in a deep basement, that's in the places I had been. Whoever designed it decided to put the autopsy room right in the middle of

the Path Department, so we were on the second floor with all of the technical staff and a lot of the people who were doing research.

So then in my second year after I finished the residency, I actually was given a laboratory. Fortunately one of my colleagues decided to leave and go to a university, so there was an empty room, a single module, and I inherited the module and his technician, a wonderful lady who unfortunately is dead already.

GC: What was her name?

AR: Her name was Frances Legallais.

GC: What kind of research were you conducting in those early years?

AR: Just before I came to NIH I had had an assignment to the University of Michigan to the virus laboratory there, and again this is why that two years in CDC was so important for me, and it was my first real opportunity to do lab research. I did virology and tissue culture and learned how to do that sort of research. So when I got my first laboratory, the fellow who had been there before had had a tissue culture operation, cell cultures and tissue culture, and Fran Legallais was a master technician at doing all these things. So I went back and started doing things very similar to what I had done in Ann Arbor working on viruses, except in Ann Arbor I had worked on polio and here I tried to work on tumor viruses.

GC: And so when the Virus Cancer Program came about a little bit later, were you involved in that?

AR: Yes. I was always involved in advisory committees and helping the leaders of the Virus Cancer Program to decide how to spend this large influx of money. But my own research just continued independently.

GC: So it wasn't part of the—

AR: We all thought we were. You know, we were part of this overall effort and what was very nice is the Virus Cancer Program made a lot of resources available. Antibodies, cell cultures, things like that, which made it possible for me to do a lot of the things that I did do.

Meanwhile, through all of this I continued being actively involved in the diagnostic pathology service. At this point we had enough staff that we used to each take one day a week, so I was the Thursday person, but that still gave you ample time to work in the lab.

GC: Now in your duties at the Clinical Center, when I was talking to Dr. Zubrod he mentioned that at the Clinical Center every institute kind of took responsibility for certain operational functions, like the National Cancer Institute was in charge of dermatology and surgery, for example.

AR: And pathology.

GC: And pathology was under that, too?

AR: We did the pathology for the whole Clinical Center. There were a few exceptions. The Neurology Institute hired its own neuropathologist, but we prepared the slides and the neuropathologist would come and teach our residents and do the parts of the autopsy that involved the brain and the spinal cord. We had a very congenial relationship with them.

And subsequently the Heart Institute wanted its own pathologist. They felt that none of us knew enough clinical cardiology to adequately study the hearts that were coming out of their fatal cases of surgical attempts to correct valve defects and things.

They took one of our residents, a very bright guy who liked doing cardiac pathology, and they sent him to Hopkins for a year to do clinical cardiology. And then they brought him back to the Clinical Center and they made him spend a year working in the cardiac catheterization lab and scrubbing on all the operations so that he was able to learn all of the things that they did clinically, and then he combined that with his ability to do pathology.

He went on to become probably the world's leading cardiac pathologist. His name was William Roberts. He left here a little while ago, a couple of years ago, and is now down at Baylor, I think. It was a wonderful decision on their part to do that, and he was the right person and he emerged as a major figure in cardiology.

GC: Did the various institutes work pretty well together in terms of sharing the Clinical Center and using resources and that kind of thing?

AR: Yes. We were this intersection of all of them. The heart people, the diabetes, everyone. So as far as I was concerned, it was just a wonderful congenial relationship. They needed us, and we went all out to provide them with the very best service.

I don't know if Zubrod or anybody told you about this, but the person who really conceived the Clinical Center was Jack Masur. There's a gorgeous picture of him at the entrance of the Masur

auditorium over in Building 10. Jack had this idea when I came that we were asking people to come to the Clinical Center to be subjects in our experiments, that they were risking their lives for us, and therefore we owed them the very, very best we could give them in terms of medical care to back up what experiments were being done.

So the whole essence of things was "nothing was too good for patients," and from the standpoint of our budget then, it was taken from the top of the NIH appropriation, and anything that was patient care we could have. So we were really supported in our surgical pathology service and autopsy pathology in a way that is very difficult to match now because there is so much—a concern about costs. The rest of NIH was always short of money, but no one ever said to us, "Couldn't you do this more cheaply?" And it was nice. Unfortunately, it couldn't continue.

GC: Can you tell me about the general atmosphere at the Clinical Center? How people worked together?

AR: Well there was this tremendous excitement and it fulfilled just what the founding fathers had hoped. It brought together people with patients on one side of the corridor and people with laboratories on the other side. They had hoped that they would interact, and indeed they did.

And many of the advances came from this interaction between clinical people and laboratory people. New diseases were discovered, some of the genetic diseases were first characterized in there, and it was this proximity of a bright young clinician meeting and talking in the halls to respected biochemists—it was before molecular biologists—and indeed some of the greatest advances in cancer took place because of this interaction.

Freireich has probably told you. The whole concept of combination chemotherapy came out of Freireich living near Lloyd Law who was doing combination chemotherapy in animals. J tells the story very well. But it was really an example . . . it wasn't even that they met—Lloyd Law's lab was in another building, but all thrown together in Bethesda as fate would have it, J and Lloyd lived near each other in a house where the backyards had no fence. So when J's kids played out in the backyard, he and Law would sit and talk. And Law was telling him about the use of combination therapy in animals, and J said, "We'll try it in people."

And that was probably the most significant advance in the treatment of cancer for which both J and Tom Frei shared the General Motors prize and have received many accolades, all of which they deserve.

And at the top of it all was Gordon Zubrod who brought these people together and supported them and made it all happen. But what's sort of sad is that the others, the younger people who made these advances, have received a lot of recognition, and Gordon who really was the soul who made it all work, nobody even knows anymore. And it's really a shame. He was such a wonderful man. He guided all of this and put it together, brought the right people together. It was a good time and he was a great man.

GC: He seemed like he really believed in the research that was being done and was willing to protect and support as much as necessary.

AR: Oh, he really was. He was a kind and decent man in a sea of aggressive young people. These were the most competitive, best and brightest out of the Ivy League medical schools. I think half of them must have come from Harvard. It was dominated by the Harvard group. When

you walked through the halls, I got the feeling at times that every third person came from Harvard. And I wouldn't be surprised if it wasn't like that.

What happened was the big professors at Harvard had connections with people who were the senior people here. And what they did was as their best and brightest young students received their notices from their draft boards, they would pick up the phone and say, "I've got a real winner here." So this was a collection of winners and high achievers. These were people who had always been number one, and we had a collection of all number ones. It was really a fantastic time.

It hasn't been matched and I suppose—well it was a product of the war. In fact the whole thing, I'm sure Nat Berlin must've told you, too, that the country was going from war to war. During World War II, a nucleus, some of the original people came. Not in the Clinical Center. There was no Clinical Center, but Arthur Kornberg who subsequently won the Nobel Prize was doing biochemistry here, and there were a whole series of the greats. American biochemistry really was advanced in the most significant way by this group who came during World War II.

And then next, just when we thought that World War II was over, came the Korean War which brought this whole influx of people. About the time that subsided and the doctor draft slowed down, we got the Vietnam War. So we have constantly brought the best and the brightest here.

GC: At some point you became Deputy Chief of the Laboratory.

AR: The Laboratory of Pathology. That was interesting. The Chief of the whole laboratory was this wonderful man, Harold Stewart. Did anyone talk to you about Stewart? Have you talked to him?

GC: I would like to talk to him. At this point he wouldn't talk to me.

AR: He probably won't talk to you. He's very negative about it. Let's see, he was born in 1899, so he is now ninety-eight. He was actively working doing things—he's a master microscopist—and he was doing pathology up until I guess a year or so ago. And finally his vision began to fail. At ninety-eight, his retinas began weakening and he couldn't do microscopy anymore. He still gets around, I mean he's not blind. When you do microscopy you need a full macula to do it, and he's had enough so he actually only stopped last year. He's a most amazing man.

He was the real Chief of the whole laboratory. Lou Thomas, John Edgecomb, and I were doing the diagnostic work, and the rest of it was a big experimental lab and Harold Stewart was our Chief. He was called the Chief always. He really put together one of the most amazing organizations.

When Stewart hit seventy, there was a compulsory retirement. It was before all these laws that permit you to keep working forever. At the age of seventy, we had a big birthday party for him, and he was gone. He wanted to keep working, and Nat was very anxious that he not be around us because he was a bad influence on us.

He loved fighting. He still does, even at ninety-eight. He used to tell me that a man can be judged by the quality of his enemies. He's a war-like Scot. I think his family had a long tradition of killing the English. The English are the enemies. He's a little more tolerant of the Irish, but I think mostly it was the English that they hated, but they fought with everyone. It was most interesting to watch him. We were always at war with somebody, and he's continued that way.

So anyway, Nat wanted to get him away from us because he was a bad influence on us. He was always fighting with Nat. They let him set up a registry of animal pathology, and they put him in another building far away from us so that he wouldn't be able to influence us as much. That was at seventy, and he stayed there doing that from seventy until ninety-eight, so he had another good twenty-eight years.

GC: Amazing.

AR: He really is an amazing person. And the thing about him is that he has always been a heavy smoker. He told me he began smoking behind the barn in Houtzdale, Pennsylvania, at the age of twelve or thirteen, and he continued to smoke heavily. Totally addicted to nicotine. Can only go for a few hours without replenishing his nicotine receptors. He gets twitchy if he doesn't have any nicotine.

He told me that the pleasure that he had derived from tobacco far exceeded any risks, and at ninety-eight I think that's probably true for him. And the other thing is he told me that "if people have trouble from alcohol, it's not the alcohol," he said, "it's impurities in cheap whiskey. If you drink high-quality single malt scotch whiskey, you will never have any trouble at all."

And I think he's close to proving that one, too. He's most amazing—although not exactly a role model for young people.

GC: Did you work closely with him or—

AR: Well actually I never really worked in a lab with him. He did a different kind of research but he was always very, very supportive of what I was doing.

But the reason I got to be very close to him was that he liked to do things that he called geographic pathology. He was trying to unearth the causes of cancer in populations that have high risk.

And when I came there, my last assignment had been in New Orleans at the Public Health Service hospital there, and I knew the medical community in New Orleans. Well, he wanted to do a study on bladder cancer in New Orleans. New Orleans had a very high rate of bladder cancer. There were epidemiologists who collected all sorts of data and thought that there was something about the dark roast coffee in New Orleans that caused bladder cancer. Stewart wanted to review all the slides of every bladder cancer in the city of New Orleans. So twice a year, he wanted to go down there and look at all of the cases to make sure they were truly bladder cancer.

He started that study about the time I got there, and he asked me the first time would I go down with him and introduce him to the pathologists. So we went down to New Orleans together, we spent a couple of hours on the plane and we spent about three or four days, and I took him to

every hospital and introduced him to all the pathologists, all of whom I had gotten to know in my one year there.

We had four nights in New Orleans, and had four of the most wonderful dinners I've ever had in my life. We went from one great New Orleans restaurant to the other, and when it came time to go back again for the next check on the cases, he said, "Why don't you come with me?" So for about five years, I guess it was twice a year, I used to go down. We used to spend about three or four days in New Orleans, and three or four wonderful dinners together in which he would tell me all sorts of stories about the history of the Cancer Institute. He was here almost at the very beginning.

GC: Yes, he came down with the Harvard group because I understand—

AR: Yes. He was with the Harvard group and he was hired up there. He was, I think, about the third person that Schereschewsky hired. He hired a biologist, Howard Andervont; a physicist, Egon Lorenz; and a chemist, Murray Shear. Did someone tell you all of this?

GC: I've read it in Shimkin's book.

AR: And then he decided that they needed a pathologist. He ran an ad. This is a great story. They ran an ad, and Harold Stewart was down at Jefferson Medical College in Philadelphia. He's a real Pennsylvania person from Houtzdale, and he went to undergraduate school at Dickinson and to medical school at Jeff. And then he just stayed on. He didn't have a pathology residency, he just did pathology.

And after about six years he was making something like two thousand dollars a year. Eleanor, his wife, was pregnant and was going to have a child. He went in to see the chairman of Pathology at Jefferson, and asked if he could possibly have a pay raise. The chairman looked at him and said, "A pay raise? You've only been here six years and you already want to get promoted?"

So he was very despondent, he told me. He went to the library and on the bulletin board was a notice that the National Cancer Institute in Boston needed a pathologist, and it was a civil service job and the pay was three thousand dollars a year. So he figured "nuts to them," and he went up and interviewed for this. He left Jefferson only because of the money. [Laughs] And he went from two thousand something to three thousand. I think those are the numbers. I could be wrong. But it was a wonderful story.

So the laboratory of Pathology began with one person, as the whole Cancer Institute did. It started with Schereschewsky, and Shimkin was one of the Fellows that was brought in. He was one of the brightest of the Fellows.

GC: Did you know Shimkin?

AR: Oh yes. Very well. I liked him. He was one of Dr. Stewart's enemies. Stewart hated him. We were not supposed to openly admit that we liked Michael Shimkin, but he was really nice to me. In fact, in one of the books he mentions me as one of the bright young pathologists that Stewart had collected. He also had some things about how we had lunch every day in Stewart's office and we all had to pay obeisance to the master or something. [Laughs] Shimkin really was an interesting guy, but Stewart did not like him one bit.

GC: Do you know why he didn't like him?

AR: I think it was very important for him to have enemies in this world of his. [Laughs] I don't know that there was any specific thing. I don't know what Michael did to get him so mad. He didn't like Zubrod either, you know.

GC: I didn't know that.

AR: He didn't like Zubrod and he hated Nat. Who else? He had a handful of friends, and they were very good people. But it was a funny thing. We used to sit in this lunchroom and talk about the enemy. And you know again, this business, he used to write these vicious memos and he used to take great pride in writing the most vicious memos. As much as I love him, I don't write mean memos to people.

But it was a most interesting experience, and I don't think anyone spent as much steady time with him as I did on these trips which persisted. The study ran for five years, and I think at least—so three or four days a week, twice a year we would actually be together constantly almost. And it was wonderful.

GC: Thelma Dunn. She was also in the lab?

AR: Thelma Dunn was his closest associate. You've seen these pictures of the two of them at the lunch table. Thelma was everything that a Southern lady should be. She was Thelma Brumfield-Dunn, and she was a true Southern aristocrat. She was more than a Southern lady,

she was what makes Virginia great. Thelma was the world's expert on the pathology of the laboratory mouse, and Stewart was the world's expert on the pathology of the laboratory rat.

When I came, I started working in hamsters, and neither of them knew—I would show them a slide and they would say, "I don't know anything about hamsters." They could tell you every tumor that had ever been seen in a mouse and every tumor that had ever been seen in a rat, but the hamster really threw them. And it turned out in viral oncology; the hamster was the most valuable of all of the animals.

Anyway, Thelma was wonderful, and we all used to bring her slides. She would sit in a little office and we would just pass slides to her. She helped a number of the biology people understand what they were doing. People who weren't pathologists, from all over the Cancer Institute, would come to her and show her slides and she would tell them what type of tumor it was and when it was a tumor and when it wasn't.

It was just a wonderful era, the two of them holding court. But she was totally subservient to him, I think, because in that era a Virginia lady took second place to a gruff old man.

GC: But she was just as well known as he was?

AR: Oh, I think so. In fact, in many ways, since the laboratory mouse turned out to be a much more important animal in research in general I think I never really thought that through, but that must be why I mean he was well known for his political skills.

He had become the president of almost every organization in pathology at one point, and he was the president of every major society. Once she did become president of the American Association of Cancer Research, but she was a very shy woman, and he was the most outgoing. I always think about what these fierce Scot warriors coming down from the hills to kill the English.

GC: And that makes you think of him?

AR: Dr. Dunn became world renowned. You couldn't do anything in the laboratory mouse without checking the pathology with Thelma Dunn. And the laboratory was world renowned for studies of animal pathology.

And now, what has happened is sort of an ironic twist. In the Laboratory of Pathology, there's nobody who does mouse pathology. They all retired, went away, and people do human pathology and molecular pathology. And now what has happened because of the advent of transgenic mice and knockout gene mice, there's been a resurgence of interest in animal pathology, and there are only a handful of people left. That's one of the things we're going to have to do is train more people to be able to do mouse and rat pathology, but mostly again mice.

GC: So Dr. Dunn's legacy will live on eventually.

AR: Oh absolutely. She would be very thrilled now because it used to be that only she knew every spontaneous tumor that had ever arisen in a mouse and everything that had been induced with a carcinogen. But the things we can do now with adding genes and subtracting them, she would be in awe of all of this. And he's lived to see it all.

GC: Now eventually, I guess in 1975, you left the Pathology lab or you moved to become—

AR: I took Nat's place. Nat was the Chief of a division called General Laboratories and Clinics. I guess it had already become the Division of Cancer Biology and Diagnosis under Nat, and Nat left and went off to Chicago, primarily because he needed to earn more money for his family. Nat picked me to succeed him, which I thought was just wonderful.

It was all done with no search committees or anything. Nat went to Dick Rauscher, the Director, and said, "Al will take my place." And Dick wrote me a most lovely letter telling me that he, I forget what he said, but something about the effect that they all were just so excited that I was willing to do this. It was really one of the wonderful events in my life.

Dr. Stewart was very disappointed. He felt that I had become a traitor. I had joined the enemy, because the enemy was always Nat's office. And the idea that he had trained me to be a pathologist and that I ended up in this terrible place, he just felt it was a tremendous loss for pathology.

GC: Was it difficult for you to move away from the lab?

AR: We all do it with sort of a transition. I kept my lab for a number of years, and had a technician. And finally I began to realize that—well, the division got bigger and bigger. We had a large grant program, and I began to realize first of all that I couldn't take post-docs because it wasn't fair to them. And I ended up with a technician, and when she quit I just closed the lab.

I did a lot of things. But I was so busy with the other things, I really felt I wasn't devoting enough time and finally I just decided to close it up. That must've been in the eighties. I did keep it going for a while. So it was a nice transition.

And Diagnostic Pathology I used to go over very regularly and look at cases. They didn't trust me to sign anything out anymore, but I kept looking and I've continued. I still have a microscope here and I get a lot of cases in consultation from patients. I usually go over them myself and then I go over and show them to the pros.

If you don't do it every day, you're just not that good anymore. But it is fun and it's one of the great, great joys of my life. I've spent forty-something years learning. I started my pathology in '51, so I've got about forty-six years of experience doing it and I'm not about to give it up. It just doesn't drift away completely, particularly since I do see a lot of cases.

GC: So as Director of the Division now, what were your duties? What would a typical day be like?

AR: There were twelve laboratories, twelve laboratory chiefs, and when we acquired the extramural part, there were another six or seven branch chiefs. All of them reported to me, and mostly it was a problem-solving thing. They were all very good. I had twelve wonderful lab chiefs that I had inherited from Nat, a couple of them dropped out and I had a chance to make a few key appointments.

For a while I was Acting Chief of the Laboratory of Pathology. The great thing I did was pick Lance Liotta as my successor, and that was a wrenching thing because there were a couple of

other people who were very disappointed. But Lance has turned out to be one of the giants of American pathology. He just gets better every year.

I had another chance when the head of Biochemistry left to appoint Maxine Singer, the first woman lab chief, and when Maxine left to appoint Claude Klee, her successor (a woman also with a unisex name).

So the labs are really terrific. We had twelve labs for many years, and when Harold Varmus came he wanted to have a lab here, too, and he wanted it to be in our division, which I thought was very nice. So I was Harold's Lab Chief and he was the Director of NIH. He used to come to our lab chiefs meetings. So it was really mostly that, and we used to meet together, the lab chiefs, and intramurally my goal was to try to help them to have the things they needed to do wonderful, creative science.

The extramural group was also outstanding. We all had this feeling that extramurally we were facilitators. Again, there were great scientists out in the world and our goal was to help them to do the most wonderful science.

AR: I tell people that I divided my career into twenty-year periods. I spent twenty years in Building 10, from '55 to '75, and then I spent twenty years as a Division Director on the third floor of Building 3, and my goal is to spend another twenty up here on the eleventh floor.

GC: Now I noticed on your c.v. that at the same time you were Division Director, or approximately, you were Assistant Surgeon General.

AR: That is a funny thing. You have to understand the Commissioned Corps. In the Commissioned Corps of the Public Health Service, we have these military ranks. And the Surgeon General is a Three-Star Admiral, and then there are a series of other people who become Admirals.

Your title on your ID card is Rear Admiral or something like that, because we used Navy ranks. But in the Public Health Service, they had—for each one of the Navy ranks we had a Public Health Service designation.

When I first started I was an Assistant Surgeon. That was like a Second Lieutenant. When you become a First Lieutenant, that was called a Passed Assistant Surgeon. Then you become a, I can't remember what the next one is, you go up, but when you have four stripes, the equivalent of a Navy Captain, that is called in the Public Health Service Commissioned Corps a Medical Director, for some reason. So everybody who was four stripes was considered a Medical Director. When you entered the flag ranks, everybody became an Assistant Surgeon General. So for everybody who gets promoted beyond four stripes, becomes flag rank and is called an Assistant Surgeon General.

GC: Okay. How did the division, in your twenty years as Director of that division, how did the division change? Did you reorganize? Did you—

AR: It grew. It started out when Nat ran it, it was primarily intramural, and there was a very small contract program. Shortly after Nat left, the contract program increased a bit. We were a biology and diagnosis division, but all of the extramural grants (the bulk of the Institute budget is in grants), that was all the grants for everything were in a single division.

Dr. Upton became the Director, and he decided that this was an unsatisfactory situation and he put all of the grants into the divisions.

So overnight we went from an intramural division with a small contract program to a division that had millions of dollars in grants. It was very exciting for me. I'd always been interested in the extramural program, so I had all of the grants in biology, and that included tumor biology and immunology and all of the grants in diagnosis, which of course as a pathologist was my big interest. It made the job really much more time-demanding, and you had the whole nation calling you about grants and other things. So the division changed, underwent these

And when Broder came, he did a really wonderful thing. He moved the Cancer Centers Program to our division. So we became DCBDC, the Division of Cancer, Biology, Diagnosis and Centers. And that was absolutely fabulous for me. I really got to know and work with all of the center directors in the whole country, and it's something that, of all of the things—well Sam did a lot of things that helped me—but this was the most wonderful thing. I still have a great fondness for the Centers.

GC: Can you tell me a little bit about working with each of the directors you worked with? I guess when you came in, Heller was the Director. Is that right?

AR: Heller was our first Director. A long way from me, but actually a nice Southern gentleman who used to come down and visit us, so I did know Rod. And I got to know him even better after he came back here.

He retired, went to Sloan-Kettering, and shortly after had a stroke, and came back then, partially paralyzed, but used to work up here on the eleventh floor helping with the international programs. A truly wonderful man. And very supportive of Stewart. That was nice. But he was gone fairly quickly. So then who was next after him?

GC: Endicott?

AR: Endicott. Endicott was, I felt, one of the greats. Ken again gets very little credit for what he did. Ken did two major things. He launched the Special Virus Program and got us this additional money, told the Congress that they were going to find the cause of human cancer. It took much longer than he thought, but he was right.

So he did the Special Virus Program which really made it possible to do much of what we do in molecular biology. Without reverse transcriptase, there'd be no molecular genetics, and it was really a monumental contribution. These momentous discoveries in fundamental biology have opened up everything we do in recombinant DNA technology. If Ken had not done this, pushed for this additional money, it's hard to know when this would've happened. It would've happened eventually, of course, but it was the catalyst that made it all work.

That was the first thing, and the other thing he did was he set up this chemotherapy screening program. It was called the National Center for—

GC: The CCNSC?

AR: Yes, CCNSC. And this really has led to most of the drugs that we have that, combined with Frei and Freireich's discovery of combination chemotherapy, are the things that have made cancer treatable. And Ken was instrumental in that.

I remember we used to sit around in the Stewart lunchroom thinking about what a crazy thing this is, screening drugs off the shelf, and yet they had a number of hits. Some of them very, very important, and even ones that they didn't discover, he set up the machinery for developing. So he was truly a great man.

After leaving the NCI Ken subsequently did a number of other things. He ended up as the staff person in the American Society of Pathologists, or whatever it was called, in the Federated Societies in this building up Rockville Pike. And when he retired from that, which was shortly before he died, they gave him an award.

The young pathologists who were running the Society came and asked me if I would say a few words about Ken, because none of them knew who he was. All they knew was he was running the office for them up there.

So at this dinner of the pathologists, I was able to get up and tell them who this man was. They had been dealing with him for a number of years, and none of them understood what he had done. He was absolutely thrilled.

And then right after that, he went in to have some sort of simple leg surgery for a blocked artery, and he died during the operation or afterward of post-operative complications. But I did have a chance—I guess the thing I've always felt is it's important to say nice things about somebody

before they die when they can at least know it. [Laughs] He was so pleased, and his family was, so it worked out well.

So anyway, Endicott was great, and then he was followed by Carl Baker when he left. Ken left because he wanted to be the Director of NIH. When they passed him by for that, he quit and he became the director of something, Health Services or something.

GC: Health Resources Administration.

AR: HRSA or whatever it was called. It was a big job. It was the equivalent of being Director of NIH. Carl was his deputy. They put Carl in charge. Carl is a nice man. Still comes around here, a dear old friend. He only lasted a very short time because he was quickly—when Benno Schmidt took over the management of the Institute, he wanted somebody other than Carl, and he replaced him with Dick Rauscher.

Dick had been a real scientific colleague. We had both worked on tumor viruses, we were good friends, and that was a wonderful period for me. Dick was so supportive of everything I wanted to do, and it was just really, really great. And he was one of the kindest, nicest people. And did a lot of things. It was hard to—Benno was actually running everything from New York, and basically it was one of the things, I don't know if Gordon told you, but what I was told is Gordon, when he left, said he was tired of being a staff man for Benno Schmidt. But Benno was a most remarkable intellect, truly one of the smartest people I've ever known or dealt with.

GC: Is Benno Schmidt still alive?

AR: Yes. Well he must be in his nineties, too, by now. He still comes around occasionally. He's truly one of the greats and remains just a real hero of cancer research.

I mean here's this lawyer investment banker. He'd been a law professor at University of Texas, Austin, and he got interested in cancer because his congressman, Ralph Yarborough, who he was very friendly with, had put him onto one of NIH Committees.

He had great vision. He had all these advisors who were Nobel laureates. He used to go to Arthur Kornberg and all of the giants of modern science, and they would advise him. And I think this is how he got rich in business, too. I mean you don't try to know everything and do everything yourself. What you try to do is you try to identify the very best people and get their advice and then act on it. And that's something I have tried to do. He was a wonderful influence.

When I became a Division Director—because I didn't know who he was till in '75 when Nat left, Benno was holding fort running everything. He was the chair of the President's Cancer Panel, Nixon had appointed him, and at that point the Panel met once a month. And it was a wonderful thing.

Benno would fly in from New York and be met by a long black limousine which would bring him here. We would have about an hour or two-hour meeting where he would ask us what problems we were having and what he could do to help us. Then he would get back into his big black limousine and go right to the White House. And Nixon's chief, not his chief of staff, but the one who was assigned to health matters and things, would meet with him, and Benno would tell him what we needed or what problems we were having with the rest of the bureaucracy, and

the White House would straighten them out. And this happened every month, twelve meetings a year, by law.

So that was really a great experience. It was Dick and Benno who were running the Institute.

So then after Dick, there was a short interval where the Acting Director was Guy Newell. He was a genial Southerner who had gone to Tulane. He lasted only a relatively short period until—I mean Benno was not satisfied with having him there. He subsequently went to M. D. Anderson. I think he's dead now.

But then came the search for Rauscher's successor. Benno had somebody in mind, but Benno began to lose influence here I think. The administration had changed, and he had been appointed by Nixon and I guess when the Democrats came in, that was not a good thing to have. And although he kept emphasizing that Ralph Yarborough, a Democrat, had gotten him into all of this, they were not moved and he lost most of the power he had here.

And they ended up with a search committee and they picked Arthur Upton, who had also been one of my pathology colleagues and a dear friend. Arthur moved here from New York, and he was just wonderful for me. He only stayed about two years. One of the shortest tenures.

At that point whoever was the Secretary just decided Vincent wanted the job, and they just appointed him. So then came eight years of Vincent. And we had an interesting working relationship.

Vincent liked to appoint all his own people, and in very rapid order, everyone on the eleventh floor and all of the division directors were gone and replaced by his own appointees. And there I was still there. I made it a point, I never went—as we had some rather tense interactions, I always made it a point never to go in and say, "Do you want me to leave?" because I had a feeling I knew what the answer was. So I waited, and after a year, a couple of years I think, he decided that I wasn't leaving and we then from that point on had a wonderful working relationship.

And I must say, I learned more about medical oncology from Vincent as a pathologist. I mean he was and still is probably the best cancer therapist in the country, if not the world. He really understands the disease, and he really understands how you treat cancer. Whatever else, even if at times he was trying to drive me away, I can't help but like him and respect him. So that was a wonderful eight years.

And then came Sam. Sam had been one of our clinical associates. He was in the Metabolism Branch, and he was one of Tom Waldmann's favorites. We actually sent him off to finish up medical oncology under Vincent in the Treatment Division.

Sam I had always thought was just one of the kindest, nicest doctors. We had a technician who had lung cancer, and she was treated on the medicine ward when Sam was a clinical associate. She was a wonderful lady from Kentucky. I went up one night to see her in the ward, and she wasn't in her room. And there she was out in the hall, and Sam was her doctor, and she had her arm over Sam and she was very frail at this point dying of lung cancer, and Sam was walking her up and down the hall. And she just loved him.

So whatever happened to him here in all of his tribulations, which you probably have heard some of them, he basically is a good person. He just really is. And part of the stress of this job, I think, can influence people. Apparently he's doing well again now.

GC: I just saw him last week.

AR: Oh you did. He had a lot of good years here as the Director, and he did some wonderful things, too. He'll get no credit for them, but he created the SPORE program. It was his program. And it has turned out to be extremely helpful and important in a number of cancers.

And the other thing is Sam is the one who developed taxol, one of the truly important drugs. And if it hadn't been for Sam, I don't know when, if ever, taxol would have been developed. Because the people in the Treatment Division did not think it was that good and they resisted. They had a couple of other drugs they wanted to develop, and Sam insisted that they drop everything and do a crash program because there wasn't enough of it. You couldn't kill all the California yew trees. I don't know if he told you any of this.

GC: No. He didn't mention this at all.

AR: It was just—watching it at the executive committee and watching Sam push these people in Treatment. They used to, in the developmental therapeutics program, they used to say that "nothing is certain but death and taxol." He diverted them away from everything else, and intuitively he thought this drug was going to be important.

And I remember one day he said to Dan Ihde, a wonderful guy who used to live in this office, we were all sitting around, and he said that "I think that taxol is the single most important drug to come up in our drug development program in the past ten years." And Dan Ihde looked at him and said, "But Sam, you know it really isn't much of a drug." And Sam smiled and he said, "I stand behind my original statement."

AR: And he set up this thing with Bristol and they figured out—I mean he said that there's got to be a way to make taxol other than killing every yew tree. It was just a matter of putting the best chemists and people on it, and that's what he—you know he gave them seed money. And taxol has indeed emerged as, once again not the cure of all cancers, but it has given more people years of life with their families than anyone would have guessed.

He picked up the AZT, and of course AZT he'd done before he became the Director. He played a major, major role in the development of AZT and then quickly went ahead and developed DDI and DDC. Most of what is used in AIDS treatment, at least up until recently, was all his. And then the taxol, he just had this way of being able to see how important this drug was. I must say I didn't understand, and Bruce Chabner I think didn't, but Bruce then became an ardent taxol convert.

GC: That's amazing intuition to have.

AR: Yes. Well, he's just good. Sam and his colleagues developed an assay to detect anti-HIV drugs.

I remember one day he said he had one that was working. And having worked in anti-virals myself, it was a field that was littered with bodies of people who had staked their careers on it, and Sam knew nothing about anti-virals, he didn't know anything about viruses. But he knew how to set up the screen, and he used to tell me that he's got this thing that "it's working, it's working."

I used to meet him in the evenings coming home, and I used to think, "Oh God, what does he know about an anti-viral." And he didn't know what it was, he got it with a BW Burroughs Wellcome code number, and it turned out the next thing he told me it's in patients and then he came and said, "They're getting better. They're getting better." And I thought, "Oh, he's such an enthusiast." And he was right about everything. He has an amazing intuition for this sort of thing.

But taxol, I think, is something—and I don't think anybody, other than sitting there watching him do this, will ever understand what he did. And he didn't even claim credit for it then when you talked to him.

GC: No. He didn't mention it at all.

AR: I used to have a quote from one of my board members, "All is ephemeral, fame and the famous alike."

AR: So I think he's not done yet. He's still a young man. There's more coming out of Sam. So that was a great, great period. And Rick [Klausner], of course, is so wonderful. Rick was a research associate in one of my labs.

GC: Oh really.

AR: Yes. And truly a wonderful story. This was in the seventies when he came, and everybody who dealt with him told me about how terrific he was. I actually wanted to keep him, and I was going to make him a Lab Chief. The Chief of his lab died where he worked and I was going to appoint him as the Lab Chief.

This was two years out of coming here as a research associate, and the people in the lab were angry with me. They said, "He's too young. He's too inexperienced." And I said, "I'm going to do it." I said, "You know, I'm the Division Director. You may not like it. I'm going to do it." And then he came back to me, and he said that he didn't think it could be workable. That they would be so negative, and they would oppose him on everything.

And meanwhile, Ed Rall who was in the Arthritis and Diabetes Institute offered him a lab and he went over there. But I have followed his career through all of this, and known him, so it's kind of nice to have him as Director of NCI.

In fact, one of the things I use in my introductions often is I tell people, and it is true, that I've always tried to be nice to the people who work for me, and I said it's an important thing to be nice to people who work for you because you never know when you're going to be working for them.

GC: Yeah, that's come true!

AR: Rauscher was a colleague, Upton was a colleague, and DeVita had been a colleague. But Sam worked for me, and Rick worked for me.

GC: That must make you very—

AR: Oh it makes me feel very good because actually at this point, there are four institute directors, all of whom were in our programs. Steve Katz, who was our Chief at Dermatology, is head of the Arthritis Institute. Richard Hodes, who is head of the Aging Institute, was in our Immunology branch. And Ken Olden, who is the Director of the NIEHS, was a fellow in our Laboratory of Molecular Biology. Anyway, it's very gratifying.

GC: You saw it coming?

AR: Yes. Not only are they institute directors, but they're the stars. They really are doing the most wonderful things. It's been gratifying.

GC: So you moved up to become Deputy Director when Dr. Klausner—

AR: He's a fantastic intellect. It's just awesome. Absolutely awesome to watch how quickly he's taken hold of the entire Institute.

GC: So when he asked you to become—did he ask you to become his deputy?

AR: He came down to my office on the third floor and he said, "Would you be willing to be my deputy?" And I said, "I can't think of anything nicer."

GC: So that was an easy decision to make.

AR: Oh, it took less than two seconds.

GC: And now that you're here, what are your typical duties? What's a typical day?

AR: Well mostly I just fill in for him. Periodically he will ask me for some advice based on my forty-two years here. That's really all. It's a fun job. But it's mostly, I keep up with everything he knows and is doing so that if he's not here, I can fill in. And trying to keep up with him is not easy. He is most amazing, most energetic. It's just a very nice job to have. And I'd like to keep it for twenty years.

GC: It sounds like you probably can.

AR: I'm going to try. So now you know everything.

GC: Well one thing I wanted to go back to for a minute is the National Cancer Act, 1971.

AR: I was still in the lab then, and it sort of, I didn't understand a lot of it until afterward. What is the question?

GC: Well that was the question. How did it impact you or did you know about it?

AR: Back at that point I was Deputy Chief of the Laboratory of Pathology. And really we were in the trenches doing diagnostic pathology in the lab trying to learn something about tumor viruses, and the Act never really interested me very much. I didn't understand the impact of it. I didn't really begin to understand what it was until Nat brought me over here just before he left.

Nat, before he left, had me come over and just sit in his office, this was for about three or four months, and just watch everything he did. And that way, when he walked out the door, I understood the whole job and the division and everything. It was really very nice. I didn't do everything the way he would've done it, but just getting a grip on how you—to come out of the lab and become a division director of a large division is a pretty big step. But it was so nice that he did this and gave me a chance to watch what he did and how he did it.

GC: So at least you saw the workings of the job.

AR: Yes. And the office. Did he tell you about the office? I told him when he left—the first time we went to France, we went to Louis Pasteur's laboratory and the Pasteur Institute, and when he died, they closed the door and they've left everything just as it was the day he died. So I always told Nat that I would leave everything the way it was. Because when Vincent took over from Zubrod, the first thing he wanted to do was remove all traces of Zubrod and redecorate everything in his own way. So I kept that office exactly as Nat had.

Then one day there was a flood and unfortunately I had to replace his tattered worn rug. I had Nat's desk, that was falling apart, it was a grand old desk. And I had this wonderful table of Nat's. It was his conference table. It was a great big conference table.

I'll tell you this story and then we'll stop. I loved that whole suite we had down there, and my staff, though, told me they wanted to renovate it. It had not been renovated since the building was built. And I told them, "Look. You can do anything you want. I don't believe in it. I think it's wrong, I think it's a beautiful suite." And they said, "We're tired of living in a dump." And so I said, "Go ahead, but leave me alone." I said, "Leave my office alone and I'm going to stay in that office."

So they used to humor me. They would say, "Don't worry, you can do that if that's what you want." And they were walking around with all these plans and I said, "I don't want to see them. I don't want to know what you're doing."

And then one day, they broke this news to me. Well first they told me that there was going to have to be an asbestos removal, but they would do it in two stages. First they would do one half and put up these curtains, and then I would sit on the other side and then when that was done, I would move across to the matching office, the mirror image office on the other side that had been the deputy's office down there, and they would do my side. And then the whole thing would be done, I would never leave. So I said, "That's nice."

Then one day they came and they told me that because it was an asbestos site, they weren't sure that would be possible. That I would probably have to move out. And I said, "I really don't want to do that. You've got to figure out some way to do it." Then what they explained to me later on—oh, so I tell them, "Okay. I will move out. But what I want to do is I want to lock the door and leave everything just the way it is, and I'll go wherever I can find a place to sit. I'll take a few papers with me, and when it's all over, you guys will be renovated and we'll go into this suite and I will open the door and Nat's office will be just as Nat left it and I left it."

So they said, "Well, sounds a little crazy. We really ought to do something in there." So I said, "No. I want it just the way it is." But then what they explained to me was in the course of doing—oh, and I said to them, "I don't want you to take any space away from me." It turns out that in the course of the renovation and these plans, they were actually going to take six inches away from my office. But not only I was going to lock the door and leave everything okay, but they were going to tear out a wall. So the door would be locked, but a whole wall would be removed.

So off I went. So I said, "What can I say?" And we moved our stuff out. They didn't have any space for me. They all moved up to Executive Plaza and I said, "I refuse to do that." But then one of my old friends was running space here. The Cancer Institute couldn't get any space, but because this fellow was in charge of all space on the [NIH] campus, he said, "I'll find you space." So he found me a couple of rooms in the sub-basement here, and I spent ten months down there while they were—.

And then Larry, my administrative officer, said, "While we're doing it, would you like us to put in a few bookcases or something?" Well I didn't realize—it turned out it was the most gorgeous renovation that's ever been done here. It's a showplace. It's where Vande Woude is now. So I went through all of that to make an office for George Vande Woude. I only lasted about less than a year after I went back. But I always had to admit to Larry it was really a beautiful renovation, and people come and pattern other renovations after it. They did it. They did it with great style, and my office, I mean he did more than a few bookcases.

The thing I was so mad at them about, though, was Nat's long, big table and when they took away the six inches, you couldn't get past the end of the table. So I told them that I didn't want to give up the table and I wanted them to take the table to some cabinetmaker in Frederick or something and I wanted them to take out the middle, shorten the table so it would fit. And they looked at me and they'd think, "Are you crazy?" So finally we found we couldn't do that. We gave the table to somebody else, but I had Nat's original desk.

And then I found I liked the room without a table. Everybody else had a conference table. So when I used to have people come, we used to get chairs and sit in a circle like a campfire.

AR: And we had meetings and people would get thoroughly dismayed because they had no place to put their papers, and they had to sit with things in their lap as we sat in this campfire style meeting. And they kept saying, "We'll get you something." And I was, "No. I don't want anything. I like it the way it is."

And then when I came up here, no sooner did Rick move in than he wanted to renovate this place. And I said to them, "Absolutely not this office. You're going to have to leave this office the way it is." And I went through my same thing. "I'm going to lock the door when the renovation starts," because again it was going to be asbestos, "and when it's all over, I'm going to come back, open the door, and everything's going to be here just like I left it." And I actually did it this time.

GC: Well, our tape is ending.

AR: Okay, so we've done it, you and I.

GC: We have. I think so. I just have a question for you but I can ask it off the tape. I wanted to ask you who else I should talk to.

AR: You've talked to so many of the right people already. Stewart won't.

GC: I would love to talk to him but—

AR: He really won't. I don't think he will. Frank Mahaney did a story on him. He wouldn't let him publish it.

GC: I talked to Frank about that. It's too bad. Let me go ahead and stop this since we're at the end.

End of interview

INDEX

- Aging Institute, 43
- AIDS treatment, 40
- American Association of Cancer Research, 22
- Andervont, Howard, 18
- animal pathology, 21-23
- anti-HIV drug assay, 40-41
- anti-virals, 40-41
- Arthritis Institute, 43
- AZT, 40
- Baker, Carl, 33
- Berlin, Nathaniel, 24, 45-46
- biochemistry
influence of NIH on American, 13
- bladder cancer (study in New Orleans), 17-18
- Broder, Samuel, 30, 37-41, 43
- Brumfield-Dunn, Thelma, 21-24
- Cancer Chemotherapy National Service Center (CCNSC), 31
- Chabner, Bruce, 40
- clinical associate
defined, 3
- Clinical Center, NCI
atmosphere of early years of, 3-4, 11
conception and early years of, 9-10
interactions between clinical and laboratory people in, 11
operational functions of, 8
wars as cause of "best and brightest" staff of, 13-14
- combination chemotherapy, 12, 31
- DDC, 40
- DDI, 40
- DeVita, Vincent T., 36-37, 43, 46
- Division of Cancer, Biology, Diagnosis and Centers, 30
- Dunn, Thelma, 21-24
- Edgecomb, John, 5, 14
- Endicott, Kenneth, 31-33
- Frei, Emil (Tom), 4, 12, 31
- Freireich, Emil J, 11-12, 31
- General Motors, 12
- Greenstein, Jesse, 1
- Harvard Medical School, 12-13

- Health Resources Administration, 33
- Heart Institute, 8
- Heller, Rod, 30
- Hodes, Richard, 43
- Ihde, Dan, 39
- Jefferson Medical College, 18-19
- Katz, Steve, 43
- Klausner, Rick, 41-44
- Klee, Claude, 27
- Kornberg, Arthur, 13, 34
- Law, Lloyd, 11-12
- Legallais, Frances, 6, 7
- Liotta, Lance, 26
- Lorenz, Egon, 18
- Masur, Jack, 10
- National Cancer Act, 1971, 45
- National Cancer Institute (NCI), *see*
Clinical Center, NCI; Pathology
Department, NCI
- Neurology Institute, 8
- Newell, Guy, 35
- NIEHS, 43
- Nixon, Richard, 35
- Nobel Prize, 13
- Olden, Ken, 43
- Pasteur, Louis, 46
- Pathology Department, NCI
areas of responsibility, 8-9
autopsy room of, 6
early years of, 4
- Public Health Service (PHS)
ranking system of, 28-29
- Rabson, Alan S.
CDC years of, 2, 6-7
as Deputy Chief of Laboratory of
Pathology, 14, 45
as Deputy Director, 44
diagnostic pathology service of, 8
extramural facilitation by, 27
heads General Laboratories and
Clinics, 24-26, 29
medical training and early career of,
1-2
office renovations, 46-50
phases of career of, 27-28
work at University of Michigan, 6-7
- Rall, Ed, 42
- Rauscher, Dick, 33, 35, 43
- Roberts, William, 9

- Schereschewsky, Joseph W., 18, 19
- Schmidt, Benno, 33-36
- Shear, Murray, 18
- Shimkin, Michael, 19-20
- Singer, Maxine, 27
- Special Virus Program
contribution to molecular biology,
31
- Stewart, Harold "Red," 14-22
- taxol, 38-39, 41
- Thomas, Louis, 5, 14
- Upton, Arthur, 29, 36, 43
- Varmus, Harold, 27
- Virus Cancer Program, 7
- Waldmann, Tom, 37
- Woude, George Vande, 49
- Yarborough, Ralph, 34, 36
- Zubrod, Gordon, 12, 20, 46