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AN INTERVIEW WITH DR. HERMES GRILLO

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INTERVIEW BY
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KURT PIEHLER: This begins an interview with Dr. Hermes Grillo on July 8, 2002 at Massachusetts General Hospital in Boston, Massachusetts with Kurt Piehler and …

CRYSTAL DOVER: Crystal Dover.

PIEHLER: And I'd like to just begin by asking you: when did you know you wanted to be a doctor?

DR. HERMES GRILLO: Well, I should have a quick answer for that, because I've certainly been … asked that before and I can't really quite tell you. I think … it began really in high school. I didn't have any very clear ideas of what I wanted to do; a lot of things interested me. I had at least a modest talent in drawing and painting and so on, and so I at times thought of that as a career…. The only other career that I think interested me, attracted me, I'd say, deeply, was architecture. But I … liked the idea of medicine. I read a lot of the usual books that kids read who were interested in medicine in those days, you know, Man, the Unknown by [Alexis] Carrel and [Paul] de Kruif's book, Microbe Hunters and all of that, and [Sinclair Lewis'] Arrowsmith. And so on, you know. (Laughs) And it attracted me in that way, but it was not that strong. But I decided that I would start in that way in college as a premedical student. And in those days you could major in anything, of course, but it made sense to major in one of the sciences. And I also had to be somewhat practical. I wasn't totally sure that the family would have the resources to put me through medical school. I had a brother one year ahead of me. He was in college one year ahead. I was right behind him. And so I picked chemistry as a major, not because it I liked it, but because it was practical. I think my thinking was, if I finished and couldn't go on to medical school, at least I could get a job.

PIEHLER: As a chemist.

GRILLO: As a chemist. If you majored in biology, there was nothing you could do except teach it, really. Or, as one physician I knew said, go work for the milk commission or something. You know, you have to remember it was a different era from what it is now. I grew up in the Depression. And when I talk about the Depression to young people like Crystal Dover, they have no concept of what it was. It was just—it was a totally different world. It was really, let's say, the ideal world of Ronald Reagan, at the other extreme, in which people didn't have jobs. They didn't have food. There was no relief. There was no government support. There were no doles. There was nothing. They were on their own. The idea was, if you couldn't make it, you starved, okay? That was your problem. And that was the problem with the whole—the attitude of the whole society. And so you thought … about practical matters in those [days]. Nor were you certain that when you finished college there was going to be a job. Now there's a bit of a dip now, and a certain amount of panic, but it's not total panic. But those days were—in fact, we never came out of the Depression until we prepared for World War II. That finally did the job. But anyway, apart from that, that was the reason I became a chemistry major. And I didn't really like it. (Laughter) But I graduated summa cum laude with honors in chemistry.

PIEHLER: But did not like …

GRILLO: But I didn't like it. In fact, at one point I do recall going, talking with … various people, and I began to think, "Well, now, if I really don't like this [chemistry] this much, maybe I should go back to my other love," which I knew I liked, which was architecture. And I began to think about changing my curriculum and swinging into engineering and then … planning eventually to go into a school of architecture. And then I talked to some physicians I knew, and one was a young surgeon practicing in Providence, and he just laughed. He said, "Well, you know, you certainly need to know chemistry. You'll need to know Biochem as a basis of biochemistry, but that has nothing to do with the practice of medicine and surgery … and dealing with patients and dealing with people." I wasn't at all thinking about any branch of medicine at that point, you know. It was just medicine as a whole. And so I talked with him. I talked with another old physician in our health service who I knew at Brown, and so on, so I decided I'd stay with it. And that was how I ended up continuing.

PIEHLER: But you didn't know whether … you could—at that point you could have been a surgeon, you could have been a general practitioner …

GRILLO: It was just medicine.

PIEHLER: It was medicine.

GRILLO: Undifferentiated medicine. The choice of surgery came a little later on.

PIEHLER: You mentioned you'd sort of read a lot, some of these—well, for example Sinclair Lewis's Arrowsmith. What was your image of medicine, and how quickly did you learn that the reality was somewhat different?

GRILLO: Well, you know …

PIEHLER: Or is it, in fact, some of the reality—some of these works, in fact, were true to form?

GRILLO: I was—well, I think I was naïve enough then, and I think I am maybe now, too, to think that medicine at its best really is a little the way it's pictured in books like that. And I'll say this, I'm very heartened these days when there's so much negativity about medicine and the problems and managed care and all the rest, to say that, although it's discouraged young people from going into medicine—the applications are down 20 percent nationally—it hasn't bothered us at Harvard. We're still skimming the best, but it's going to bother us eventually. It's going to bother everybody. It's going to bother the country, ultimately. But the students I see are wonderful. I mean, they're … bright, … they're interested in being physicians. They're not thinking about a blue Cadillac at the end of the line or something like that. (Laughter) I mean, really, seriously.

PIEHLER: Yeah.

GRILLO: They're going into it because they're interested in medicine and they want to do something good in medicine. And they're not the least bit disenchanted, and they shouldn't be. Because I—well, I'll give up being on a soapbox in a moment, because I think it's a wonderful profession.

PIEHLER: Well, one of the things that struck me when I—and this, to me, was such a revelation. When I started interviewing doctors as part of my World War II project at Rutgers, I remember going to visit these two retired general practitioners in York, Pennsylvania, and to me it was just eye opening. One, even as late as the '50s, how problematic being a doctor was, that it was really very difficult to make a living in a lot of places as a doctor. I mean, this one doctor that said to me, "I lost money my first year. My accountant said, 'You didn't make any money this year.'" And some of the things he would do. Did you have a sense in the late thirties that it was a problematic profession?

GRILLO: Well, I think—no. I think—yes and no. I mean, it was not a profession where people got rich or made …

PIEHLER: Yes, in that sense …

GRILLO: … or made the kind of money they did a couple of decades ago. At least some of them did. Doctors, however, always managed to make a living.

PIEHLER: Yeah.

GRILLO: Put it that way. I mean, a house call in Providence when I was a boy was three to five dollars. But then on the other hand, if someone was making, you know, three thousand dollars a year, that was considered to be a very healthy middle-class income. And I remember a group of us walking home from high school. I went to Providence Classical High School, which was an unusual high school in that it was the only four-year school left in Providence. You know, you took four years of Latin. And unfortunately, the year I went there, they no longer required three years of ancient Greek and I didn't take it and I'm sorry to this day I didn't. Almost all the students went to college. And it was … often to Brown. They swept all the entrance prizes, even from the kids who had gone to these elegant prep schools and so on. So it was a special school. And we were walking home and these were friends, who, actually, I'll say that I'm still friends with. A couple of them, I remember I've seen only recently this past year. And they were talking about this and that, and one of them's father was a treasurer at one of the big banks in town, and one's father was an engineer and so on, so they were saying, well, you know, they didn't really want to make a lot, but they wanted to be comfortable. They'd like to make about three thousand dollars a year. Well, in those days I think the national income average was probably five hundred dollars a year or something like that for people working in factories and farms, and so on. And I was a little greedy, and I said, "Well I'd like about five thousand. [I have] some things I'd like to do." That just puts things in perspective.

And so doctors, the GPs [general practitioners], lived comfortably. They had a … modest little house, but at least they owned a house, and they had a car, and they always had some

income coming in…. But physicians lived that way in the country. If you read some of Lewis Thomas's work, he describes making rounds with his father as a country physician. And it was a … totally different life. I mean, a few physicians, certain major surgeons and so on, maybe made a lot of money, but not very many. I think—on the other hand, there were unquestionably—one of the things that I remember—I'm just rambling now, I know—[that] discouraged me is that some local physicians I had met, I didn't think very much of at the time, because they were sort of in it as businessmen. They were clearly drumming up trade and sort of pretending they were doing surgery. And in those days, you could still become a surgeon by desiring to be one, basically. That's how simple—I mean, what American medicine and surgery were like. The only standard—I really am roaming now—was the College of Surgeons, which had been started by Franklin Martin in … 1918 or '16 or something like that, to try to have some kind of standards. And the standards were that you had to have some kind of training in surgery after one year of internship. Later on, believe it or not, they actually—1920, they said that you had to have graduated from medical school. Up to that point you didn't even have to have graduated from medical school. It was preceptorships. And then you had to list, I think, fifty cases and the outcome of the fifty cases and then, if you were considered to be a reasonable fellow, you got to be a Fellow of the college. Well, at least it was a start. And the way they exerted their influence, their reforming influence, was by reviewing hospitals and requiring certain standards. Somewhere in 1920, 1919, they looked over 671 American major hospitals of over a hundred beds, and they wanted to see if they met certain criteria. And the stringent criteria were [that] there had to be a record on the patient before he was operated on. A written record. They didn't exist in most places. There had to be basic blood work. There had to be a couple lines of operative note describing what was done. Only something like not quite ninety hospitals met these criteria in the whole country. So they published the number rather than the list because some of the so-called best hospitals didn't have written records. That's where things were at.

This was almost still going on when I was a young fellow, in the sense that I knew one general practitioner, whom I didn't think very much of, by the way, … who was doing a little bit of surgery. And his wife worked in the office, and they always talked about, on the phone, doctors and surgeries and so on. And he wanted to drum up his trade and build up a little surgery, and he learned as he went along. Another one who was very discouraging, too—in fact, he knew nothing about anything, and my father used a wonderful phrase to describe him. This fellow had gone to good schools, went to Brown, went to Columbia. Dad said, "Well," he said, "I think he is one of those people who went through school and through his education like a closed valise. It never opened the entire time he went through." It was a wonderful phrase. Some of the premedical students, some of them, in my class at Brown, were also always grumbling about things. "Why do we have to do all this physical chemistry," and so on. "What has that got to do with the practice of medicine?" And it seemed to me so strange that they were uninterested in anything except the idea of hanging out a shingle and picking up a stethoscope and "practicing medicine." And you could see what the levels, their attitude was, about the profession. Fortunately—we don't, at least that I'm aware, still have people like that in the profession. I certainly don't see them in our medical students who come through. I think they're a wonderful group. And it really encourages me, and I hope we keep them coming, that's the only thing.

PIEHLER: You mentioned—I just wanted to ask a little bit about the high school, because you said it was very unique, this—the Providence Classical.

GRILLO: Well, it was unique in a sense that in the old days, like so many cities, they had an English high school, commercial high school, trade high school, and then they had Providence Classical High School, which was college preparatory, and classical in the sense that Latin was required. In fact, I had two years of ancient history and only one year of American history, and that was because the state law required it. (Laughs)

PIEHLER: It sounds like it was very much modeled after a school like Boston Latin.

GRILLO: Well I don't know if it was modeled after it …

PIEHLER: Exactly, but …

GRILLO: … Boston Latin was certainly an older school.

PIEHLER: Yeah.

GRILLO: Many New England cities had these. Springfield had a classical high school, and a number of these places [existed]. And then when they went into the modern system of junior high schools, and three-year high schools, they built three large regional high schools in Providence. And in those schools they had every curriculum: so-called college preparatory, and commercial, and all the others. But then this old Classical high school remained, and every time they tried to close it, to regularize public high school education, the alumni who ran Rhode Island and Providence would simply say "No." So they had to leave it, and it remained a four-year school. So … I left junior high school a year early, because if you took—if you went to Classical in your second year, you were already so far behind, that there was no point in even … taking that kind of a handicap. So if you went, you went in the first year.

PIEHLER: It sounds like you very much wanted to go to this school.

GRILLO: Well, I never thought of anything else. My brother had gone there a year ahead of me.

PIEHLER: Oh, Okay. So …

GRILLO: And so he sort of paved the way and learned about all these things as he went along.

PIEHLER: And it sounds like you enjoyed your Latin quite a bit.

GRILLO: Oh, I did. I'm delighted that I took it. I—it was one of the sadnesses that none of my four kids ever took Latin, but I guess I didn't lean on them hard enough. I still think that it's … an enormously enriching part of a person's education. You know, in our Western—I

know we're not even supposed to talk about it anymore, but I … do think we are living in a Western cultural tradition, and while we should—we want to accept all of the world and know about the rest of the world, [but] there is a milieu that we are in. It's a pity not to know about it, or to know about some area intensively.

PIEHLER: And Brown University—why Brown, as a college?

GRILLO: Very simple. First of all, it's an excellent school. Secondly, I was living in Providence then, and with our income, family income, it was almost the only choice that made sense. I had excellent grades in high school, and I probably could have gotten into most places in those days, although there were other—things were very different in those days. Let's say it wasn't quite as open as it is now. There were all sorts of ethnic prejudices, and so on. But nonetheless, I'm sure I could have gotten in most places, and probably gotten some pretty good scholarships, but then when you added the living expenses and all, it would—it just didn't compute to go anywhere else, really. I think I ended up applying there [Brown] only.

PIEHLER: Did you live at home during …

GRILLO: Yes, unfortunately. There weren't any choices.

PIEHLER: So it very much—I mean, the question of money really was a major …

GRILLO: Oh yeah. Oh, yes. It was an important factor. I know my parents would have put us—allowed us to go to college or supported that, in any case, but this made perfectly good sense, and so my brother went there and I went there. And it was a good choice. One of my four children did, too. I wish more of them had. (Laughs)

PIEHLER: And before I forget to ask, you got to know Roger Wilcox at Brown?

GRILLO: No.

PIEHLER: No, okay, it's Harvard.

GRILLO: I didn't even—no, I didn't even know him at Harvard.

PIEHLER: Okay.

GRILLO: I knew him here. He went to Harvard Medical School.

PIEHLER: Okay, that's where …

GRILLO: Mass[achusetts] General, in the surgical training program.

DOVER: So why did you decide to go to Harvard?

GRILLO: Well, time came for medical school, and Harvard was one of the leading schools. At least they consider themselves to be, and I think many others do, too, … sometimes with a certain amount of hostility. I didn't realize the size, the magnitude of that until I went in the Navy. (Laughter) [Because] I was in this atmosphere. It was a leading school. It was nearby. And so I applied, I got applications for about half a dozen schools. I guess about as far south as I went was Johns Hopkins. I didn't go very far west, I got applications from—and didn't complete them all—from Harvard and Yale and Columbia, and I had the others in my desk. It was a somewhat chaotic time, because the war had started. And I went to high school—I went to college at sixteen, so I was still—when I finished, the accelerated program came along. I finished college. It took four years, academic years, but finished under [age] twenty, so that I was still—the draft age hadn't been dropped yet, and I was not about to sort of pick up a gun and go volunteer. I thought the war, you know, was … inevitable and had to be fought, but I was not looking for trouble.

So I was still there at that point, and so it was somewhat chaotic and I applied to these schools. So I applied to three schools that I was surely interested in, and then I did apply to Tufts, which was an excellent medical school, but if you're going to be frank about it, it [would] be a notch below the three I applied to, which were Columbia, Yale, and Harvard. And I got invitations fairly promptly to come for interviews at Yale and Harvard, and I went to both of them, took the train and went up to one and I think the following week went to the other. And they were both good schools. At Yale they were exceedingly cordial, and the assistant dean I interviewed all but told me I was in, basically, if I wanted to be in. So that made me feel pretty good. And it was a good school, a pleasant smaller school. And I went up to Harvard and I was interviewed by a guy who had been to the Harvard business school. He went into medicine, I later learned, because his father was a physician and he had no choice. So he … became an administrator, later on, was an administrator at this hospital [Massachusetts General] where he also had sort of a gray career and finally left, went somewhere else. He was not loved any. But he was very sort of matter-of-fact, so the interview went well enough, and I received admissions to both of those schools. Actually, Tufts wrote me and said, "If you remain interested in our medical school, write to us at a later date." I realized later, it was the grades that I had from Brown. They knew they'd never gotten anyone with those grades from Brown at Tufts, so it was pretty much—they were just being realistic, and they didn't want to waste time. And I never heard from Columbia, so that was the end of that. And so I decided … I'd go to Harvard. Why not, you know?

There was one other thing, which I brought up at not this reunion, but one time at one of the Harvard alumni day[s]. I was talking with Dan Federman, who was one of the deans there, and I said, "Well Dan," I said, "another factor in my coming to Harvard was that in those days the tuition at Harvard was fifty dollars a year cheaper than Yale." I said, "So that clinched it. It was a bargain." (Laughs) Of course, he told that to the whole assembled multitude. So it's kind of funny. But actually, it was true. Tuition—it would seem like a joke to you now—at Brown, was the highest in the Ivy League in those days, four hundred and fifty dollars. Harvard was four hundred, and of course, other schools would be two hundred or so. And Yale was—medical school was four fifty, and Harvard was four hundred. So I said, "Well, this is fine. I'll save a little money here, too." So I came to Harvard.

DOVER: What was the curriculum like at Harvard?

GRILLO: Well it was pretty much, I think, pretty much the standard for medical schools in those days. The first two years were pre-clinical years, so-called, in which you—the first half of the first year was gross anatomy and microscopic anatomy, and some neuro anatomy. And so it went. You know, you took courses in bacteriology and in pharmacology, physiology, and pathology, and so on. So you went through all the basic sciences over the first two years. And then they began to introduce, in the second year, the courses in examination of the patient and history taking. We went, of course, to hospitals for that. And there were—even in the first year, there were some anatomic clinics given, where they showed some clinical things that would be illustrative of anatomical findings, and so on. But there wasn't a great deal of clinical material, certainly. And then the second two years, the remaining two years, were clinical years, and the third year was broken up into trimesters, in which you covered all of the various specialties, and there were still … lectures every day, and then you would go to the various hospitals where [you took] your course in medicine or surgery and so on. And in those years, you saw patients that were assigned to you, you examined them, and you dealt with instructors. And then in the last year, you took clinical clerkships. For example, I took three months at the Mass General in surgery, where you simply worked, as students do, as clinical clerks, along with the house staff. And there were a few conferences during the week where you would meet with senior faculty and discuss problems and cases, but the rest of the time was largely working on the wards, making rounds, working up patients, and in surgery, going to the operating room, and so on. And that actually—those courses had a lot to do with my final selection and specialty, because that's where you learn the content of these fields was of course, now it's totally revolutionized in, let's say, layout of curriculum.

DOVER: Did you have any particular professors that influenced your decision to go into surgery, or …

GRILLO: Well, the decision on surgery, I—as I told you, I had always worked a lot with my hands, in some ways, and I did a lot of drawing and some painting. I built ship models, did all that sort of thing. I always loved doing things of that sort. I modeled in clay, and did all kinds of things. I guess I had an interest in visual things. I was interested in architecture, which has some of the same use of materials and forms and requires reasonable three-dimensional sense. And then, this may sound very simplistic, but no reason not to say it, we had a course, two courses, one was in those days required and then the next one was elective, which we used to call "dog surgery." And you would group in little groups of students and there were five of us, I guess, in a group, and we'd have a laboratory and we'd have a dog. One of them would serve … as an anesthetist, drop ether anesthesia, one would be surgeon, one would be nurse, and one would be first assistant, so I guess there were one, two, three, four of us per team. And this was to teach, basically, teach the students sterile technique, how to scrub, how to gown, and what a concept of sterility is, and asepsis, and teach them a little bit about tissue repair and basic notions about … surgical instruments. And I thought it was an excellent course. Unfortunately, it's now been dropped [from the] curriculum to make room for things of a more molecular nature. And I think it's unfortunate, in a way. In

fact, I enjoyed it so much that I took the elective course the following year. Which was an additional little course you could do once a week or so. And I found I enjoyed it enormously, just as I had enjoyed dissecting in comparative anatomy at Brown, and I had enjoyed preparations in physiology. Just the sheer technique of it. I admit it frankly. I just liked doing these technical things.

And I remember in comparative anatomy in college, the professor must have spotted that I … was interested in what I was doing, and they had one monkey that somebody had used as an experiment and [it had] died, so he gave me the monkey to dissect. And everybody else was green with envy. This is the closest thing to—you know, it's another primate. (Laughs) There you were. So I enjoyed that, and the notion of surgery began to creep into my mind. And then the third year I paid close attention and I had medicine at the Boston City Hospital, which in those days was a hospital with over two thousand beds. Three medical schools had services there in medicine, not in surgery: Tufts, B.U. [Boston University], and Harvard. The Harvard service was outstanding. It was world famous. A couple of Nobel Prizes had the Thorndike laboratories, which were one of the first biochemical medical research laboratories in the country. Minot won the Nobel Prize. It was wartime now, and so he came back, a lot of the fellows, old fellows came back and used to teach our section, in the third year section, just as one of the instructors. Nice, old, wonderful old gentlemen. And in charge of the course and in charge of our section was a man named William B. Castle, who is another one who shared a Nobel Prize. And he was a man of commanding presence, tremendous force of personality, wonderful human being, excellent physician, smart as hell, and there he was. I mean, he was a kind of a model, if you had to add to the charisma. There were little things. He was famous for the fact he drove a Model A that he had driven for years because he couldn't afford anything else, working at the city hospital. And if the pipes leaked, he would be known to grab a pipe wrench and go down and fix the plumbing. He was so involved in what he was doing that that was what mattered to him, talking about physicians, and you know, these pictures in the books.

PIEHLER: This was a living example of …

GRILLO: Well, Max Finland was another. We didn't see much of him. He's a quiet little guy. There is an exhibit in his honor, in his memory, in the Countway Library right now. And he was a little man who came from the West End here in Boston. [He] came up the hard way and did some of the most—let's say, imaginative, pioneering work in the typing of pneumococcus and development of antisera. He developed these effective antisera against pneumoccus, which would save people's lives when they're dying of pneumonia—they'd give them a shot and see them turn around [in] twenty-four hours. And he probably would have gotten the Nobel Prize, except at this point antibiotics came along, and so the work lost its importance, you know. But he was devoted. He was a bachelor and he lived in the hospital. Because he was so tied up with his work, they gave him an apartment there. We didn't see much of him, but he was around. So this was a place where people fought to get residencies and internships. The wards were full, the corridors were full, there were patients everywhere. It was just overwhelming. And the city supported it because of the politics and the ethnicity and so on. And that was when it was filled with lots of patients, particularly Irish-Americans. The Irish-Americans ran the city of Boston, Mayor [James] Curly and so

on, so it was supported heavily, you know, and it was strongly backed. That changed as the …

PIEHLER: Over the years.

GRILLO: As ethnicity changed, politics changed, everything changed. Now it's a relatively small hospital, with a—it's an excellent hospital, but it's of a totally different character. Also, I don't think anyone would have the money to support it now, an urban municipal hospital. But anyway, I had a fascinating time there, and—I'm smiling—if you don't mind a little digressions here, but I think of my recent class reunion. I saw my old friend Holly Smith, Lloyd Hollingsworth Smith, who has retired as the Professor of Medicine at the University of California, San Francisco. And he's one of the leading internists in the United States, I would say, and certainly anyone—everyone knows him and his work. He was an endocrinologist. And we worked a lot together in medical school in our groups, and he reminded me, he said, "Well you know, you remember in that first operation you did as surgeon in the dog lab?" He said, "There was absolutely no bleeding whatsoever." He said, "That's probably why you went into surgery." He was kidding me, he said, "What you remember," he says, "is that I killed the dog with anesthesia." (Laughter) So—and I reminded him of the fact that he and I did our first physical examination in the second year on a patient together, after we'd learned how to take histories, and put on our white coats, you know. And he had a real sense of the drama of it. He's a great big guy from the South, you know, and has a lot of charm and so on. He [took my] arm and he said, "This is it, you know. We're beginning our career in medicine." So we walked in, one of us took history and the other did the physical, very professional. And we finished and this old professional patient, nice old gent, you know, a Boston Irishman, said, "Well," he said, "I hope you boys learned something. You got to start somewhere." (Laughter) Deflated completely!

Anyway, so then, unfortunately, in the third year my course in surgery, which happened to be at the Brigham—it's nothing against the Brigham, but it was just, wasn't a very good course. Didn't have a lot of patients, the instructor we had was not interested, really, and a sort of dull individual. We saw a few fistulas, an inguinal hernia, and not much of anything went on and I began to wonder, I said, "My God, … if this is surgery, I don't know if I really want to do this." And so Holly, my friend Holly Smith, who was one of those guys who always knew everything about everything, said, "No. You know, you ought to take the course at the General. They say it's pretty good." I didn't know much about it. So we went up to Building A and signed up for courses for the next year. And he had charmed the lady who took care of the courses. Anyway, so we—instead of just going on a list and hoping you could get it, we sort of knew we were going to get it. (Laughter) That's the way life is, I guess. And sure enough, I came down to the General. This was before a choice of internships. And I took surgery here and I just loved it. It was a—you know, I couldn't get enough of it. The house staff was superb. The visiting staff had lots to teach and did teach, and that's where I first met Dr. Edward D. Churchill. This is 1945, I guess, maybe '46 by then, '46. And he had just come back from the war. He spent a good part of the war as a special type of roving consultant. He did an enormous amount in World War II, having to do with the standardization of treatment of wounds, setting up the chest centers, the idea of getting surgeries far to the front as possible, and just amazing. He pushed the business of

using blood [for] shock and stopping all this mystery about schock—shock is blood loss. In a trauma situation, you put blood in, they come back. In fact, they had such a problem with some of the—I'm trying to think of who it was who was so obstructive. That they simply collected blood in the field and used it there. And they had nothing to put it in, so they went around collecting old Coke bottles, and they sterilized the coke bottles and used those for blood, you know. You did what you had to do. And in any case, he came in and he used to spend at least one session a week with us as medical students. And he was very interesting, the way he went at it, you know, in the Socratic method, but in a very nice way. So, there was such a wealth of interesting material in the operating room. I just loved it. You know, seeing what is being done, and this is a kind of place where the house staff also were very good to students. You know, not sort of carrying them around, hand carrying them and trying to be attractive to them, but … if they saw you wanted to work, there was a lot of work to be done, so you could do it, you know. And if you were there, you were there. So that settled my desire to go to surgery, in fact.

So I applied to, actually, four hospitals, as I remember. In those days there was no matching plan, which was chaos. You know what a matching plan is, don't you? Well, when you finish your medical school and you decide to go on, say, in medicine, you go around and visit hospitals and you pick the ones you like. Let me give you a something, a tip, now, which you'll—I don't have to tell you about—you'd figure it out anyway, by that time. When you go to those hospitals, you not only talk to the faculty members, you get hold of some of the residents and you go talk to them quietly somewhere else and they'll tell you what's really going on. (Laughter) I have a funny story about that one, too. And then you—it's run through a computer—national, a national matching program in Chicago. You list your hospitals in the order in which you want them. The hospitals submit a list of all the people they want to list, that they've interviewed, or gone through applications on. And the computer matches as closely as possible. It's pretty fair. It's very fair. It has saved the lives, and the—I'd say the anxieties of medical students for a generation now. Incidentally, guess what someone told me? This group of lawyers are challenging the matching plan concept—that it is restraint of trade or, not restraint of trade, but it is monopoly. Can you imagine that? I mean, it's the way they challenged—a while back—challenged the Board in Plastic Surgery as restraint of trade. And these are, you know, notions that have grown up the hard way, painfully. And the boards are there to protect the public. And they want to tear it down. I mean, just an incredible notion. There must be money in there somewhere or, you know, why else would they do it? But anyway, so that's the matching program.

Well, when they didn't have a matching program, what happened is you'd interview and apply to hospitals, and they all made choices at different times. And the Boston hospitals, for some reason, always chose late in the year. And so people who were very good students, who held out and wanted to go, say, to the Brigham or the Mass. General or the Boston City—[those] were the three main choices, and the BI would not get on the list. There were only a limited number at each hospital. And there they were with no job, and ready—school ending in a couple months. So many of them used to go to other good but sort of second line hospitals, like the Faulkner Hospital and Hartford Hospital and places like that, which had good material, but they were not top line teaching hospitals. And those hospitals profited by getting excellent students. So, when they finally set the matching program up, it … just

saved the students' lives. I mean, in my year, they tried to do it—in a sense. Within one week—all the major hospitals agreed they would make their decisions all within the given week. Well, of course what happened is on Monday morning of that week of decision, I got a telegram from a hospital in New York that was very high on my list, but not at the top, saying, "You've been selected. We want to know the answer immediately." And good old Boston, Mass General, and Brigham, where I'd applied, were going to announce on Friday. So I was right back, you know, except my agony was four days long instead of months. I had to say no to them, to New York, and then wait to hear what happened on the other two. And they only took six interns in surgery here. I think there were about eight in medicine, and there were—I think there were maybe four or five at the Brigham. So it wasn't a very large number and you were competing, obviously, with a large number of people, so it was kind of agonizing. But I wanted to come here as my first choice and the Brigham as second choice. And I do remember when I was interviewed by Franny Moore, who just died, by the way, but he was then running the house staff program here. Franny was great—have you ever met him?

PIEHLER: No.

GRILLO: He's a great big guy with a—he was a force. I mean, when he came in the door, I mean he just took over the place, socially or any other way. He was just like that. And he sort of plowed his way into everything. And he was one of America's outstanding surgeons. He did a lot of the first work in taking the new work that the pediatric—Gamble and the other physicians were doing on body composition, electrolyte distribution, and body chemistry, and he transferred that thinking to surgery. He began to look at surgical patients and the response to the trauma of surgery and nitrogen metabolism. I've got one of his first books here, The Metabolic Response to Surgery, and it's a famous book. And he did that work here when he was a young staff member, just came on the staff. He didn't go to war. He was a big healthy-looking guy, but he had asthma, so he stayed here, which lead to a certain amount of resentment, because his colleagues went off to war and came back four years later and then he was the big cheese around here. You know, the young staff person, and they were back in residency again and so on. But, that nonetheless—so then he, [at a] very, very young age, about thirty-eight, was chosen as the professor at the Brigham when Cutler died. So he was over there. When I started, he was here, and I went to interview [with] him. He asked me the usual question, which I was naïve enough not to have thought through in advance, "Well, why do you want to go into surgery?" That's about the way he talked. Well, I can't remember exactly what I said, but I fumbled around, you know, with this and that, and the interest and the technical aspect, and so on. And he kind of put it all together quickly. [He] said, "What you're trying to tell me, Grillo, is that you think it's fun. There's nothing wrong with that." (Laughter) And that was exactly what I was trying to tell him, you know. And all I could say is, it has been fun all these years. I've had a very good time, very good time in surgery. Makes me laugh when I think about that. So that's how I went into surgery. And I had no specific type of surgery in mind at that point.

PIEHLER: So in a sense, some of your career is in sort of seeing—letting things happen. I mean, not in a complete haphazard way, but not sort of saying, "I'm going to do this at age …"

GRILLO: Well, I didn't have it figured out.

PIEHLER: Yeah.

GRILLO: You know, I [was] just interested in many things. That's a problem I've had, and continue to have, is that I'm interested in lots of things. My wife is like that, too. We sit there, you know, we could be—we're both book nuts. We have a small house now and it's just—the place is like this, only worse. There are books on the tables and books on the floor and we buy, and we keep making solemn promises we won't buy any more books, and then we go somewhere and I look at her and she looks at me or I come home with a little bag, and [she says], "What have you got there?" "Well, I couldn't resist." (Laughter) We're interested in just about everything. I read the New York Review of Books as it comes through and I always see about three books I'd like to buy. Often, I do buy at least one of them. So they sit there and some get read. I'll read part. I've got two of them going now at one time, and I read a little short thing in between that, so—one of which, by the way, has gotten wonderful reviews, but it's not very good, I don't think. It's just a book stuffed with a lot of filling, the one about the Black Death.

PIEHLER: Oh, yes. It [has] gotten very well reviewed.

GRILLO: Well, it's fun to read and it's got a lot of—but it's as if—to me, it's as if a skilled historian decided to do something for the public. And he—so he sort of stuffed it with all kinds of things that are more or less pertinent, and it's discursive and it's sort of interesting. I like history anyway. But I wouldn't give it to anybody as a gift, except to get rid of it. (Laughs)

PIEHLER: I'm curious about the war, because I never thought of this before. Because often in my interviews, I'm so focused on what's going on in … the military or in the war zones. But then, in fact, in some ways in your medical education, for part of it, there was sort of—you skipped a generation. The generation that would have been your initial teachers were overseas or in the military. And so some older, sort of …

GRILLO: Yes and no. Not everyone went.

PIEHLER: Not everyone, but …

GRILLO: Now, Churchill went because he wanted to.

PIEHLER: Yeah.

GRILLO: And he discusses his motivations in one of his books, the one—called Surgeon to Soldiers. If you don't know it, you should read it. It's an interesting collection, sort of essays. A large group went from Mass. General, and in those days they still had institutional units, which is a bad thing, of course, but they went. I mean bad in a sense that you could have … disasters where a whole unit is wiped out. As the way they used to put whole

families on ships, and so on, like the Sullivan brothers, and that regiment of Texans who were destroyed somewhere in Italy. What's that river? General [Mark] Clark couldn't set his foot in Texas. They would have shot him, because he—it was his command, he was to blame, they felt.

PIEHLER: Or near here there's Bedford, Virginia, which had a similar experience.

GRILLO: But they had a big unit from the MGH [Massachusetts General Hospital] that went to North Africa and then from Africa to Italy. A lot of them were overseas, a great many…. So we didn't know them necessarily in medical school. We met them later on. They all had come back, you know, the surgeons who were here after the war. And my crew, of course, we were all in the service technically. Essentially when I—I was still a civilian when I went to medical school, and they said, "Well, you … should get in one of these units." So I went down and joined the Navy with a letter of directed assignment, reported to medical school, got my midshipman's uniform, and went through the first two and a half years at government expense, which was an unexpected and very welcome happening. And then I stayed, and I had to stay in the reserve for a while. And then somewhere in my internship year I got a letter from the Navy saying that if I wanted to stay in the Navy Reserve, I had to be in the active reserve and go at least once a week to some kind of a session. Well, there was no way, working a hundred and twenty hours a week as a resident that I was going to do it. I'd have to say, "I can't be on tonight, Joe," the chief resident, you know. "Sir, I'm going to be off at my Navy meeting looking at movies about venereal disease, or whatever…." We had—in medical school, one night a week, ... the Navy unit met, and there was a nice commander there who had a sense of humor, and he'd show these training movies about everything from how to avoid VD to landing barges, and so on. (Laughter) We always sort of laughed. They tried marching us a of couple times, and they gave up. It was hopeless. The army unit, … they did beat them into a little better shape, but we were all medical students, and you know …

PIEHLER: And the Navy just, just didn't really …

GRILLO: Well, they tried marching twice, and they gave it up. I mean, it was just really complete chaos. And we liked our little Navy uniforms. When the war ended, we went to inactive duty and finished medical school. So then I—at that point, I resigned from the Navy in 1948, it must have been.

PIEHLER: But when you initially signed up, the Navy was—I got a sense from the article Dr. Grillo did that appeared in Navy Medicine that you were attracted to the Navy, though. There was some …

GRILLO: Well, my brother was in the Navy in the war and, you know, it was one thing or the other and it was sort of six and half a dozen, and the Navy appealed to me, so I joined the Navy. And the second time—I can go fast-forward if you want. Maybe I could tell you a story about that, because I was a resident then. And of course I came here and started in July 1947 as an intern, and with a plan of spending five years as the basic surgical training program. And then the Korean War started, and they started the doctors' draft. I finished

medical school, as a result of the accelerated medical school—[it] was partly accelerated. Actually, I had four and a half years of medical school. Of course, when the war ended, to get back onto register of a normal year, they gave us—we were there in the middle of the year when we finished our four years. Rather than graduate us, they gave us six months extra of electives with no tuition charge. So we stayed on and took, you know, six extra courses. It was wonderful. A month of cardiology, month of this, month of that, you know. And so we finished, and then went on. So I was twenty-three at that point, and had finished everything: medical school, four and a half years of medical school, college. I had my degree from college and all. And then I started here.

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PIEHLER: You mentioned you were still at a relatively young age.

GRILLO: Well, yes. Not as young as some in my—there were two members in my class in medical school who were not quite twenty-one, and in Massachusetts, it was illegal to give them the M.D. degree. They were about a month or two short. One of them, Johnny Littlefield, had spent two years in college, when they took him in medical school. They sort of fell back to a pattern of many years ago because they were trying to get people in and through. And so he finished, you know, with the acceleration he finished at just barely twenty-one. But, so I was twenty-three and there were a few older ones. Normally, you know, you finish a little bit later than that in medical school. So I started in here and was working away and the war came along, the new war, and it was very clear that they were going to come and get us. So I remember I decided to just get it over with. I didn't like the idea of waiting around to see what would happen. And so I went to see Dr. Churchill, and I told him that I had decided to go into service. Volunteer and go into service. And he, I remember, he said, "Well, why don't you wait? What's the hurry?" And I said, "Well," I said, "you know, I just feel uncomfortable waiting for it to happen. I'd just as soon make the break and do it and get it over with and then come back and finish." All we had to do was two years. So he said, "All right," you know, sort of, "blessings on you." And the advice he gave me, one thing he said, "Don't expect anything and then you won't be disappointed. In the service," he said, "you can never tell what's going to happen. And even if you know somebody and someone promises you a particular job, you'll go into that office the next week and there'll be a different person at the desk and he won't know anything about it." (Laughter) So, you know, he'd been in the service at a different level, but—so it was very good advice. And he gave me a letter saying what my Army number rating would have been for World War II in case it would do any good.

Of course, it never did any good. No one asked for it, and if they looked, they wouldn't have looked at it anyway in the Navy, especially. But, so that was how I … went into the Navy. And the reason I chose the Navy is we had—there were four choices: it was either Army, Navy, by this time the Air Force, and Public Health Service. And we used to jokingly call the Public Health Service the Yellow Berets, because, of course, they never went anywhere. And it was not a bad service to go into because you probably, if you were lucky, could even have gone to one of the laboratories at the NIH [National Institute of Health], but it didn't seem to be … the right thing to do. And I wasn't a hero. I wasn't looking for

trouble. I didn't win a Medal of Honor, but on the other hand I sort of hated to tell my friends that I was going to Public Health Service. "You're what?" (Laughs) You know. Because there is a sort of shooting police action going on over there, which was very remote in all of our minds. Well, I remember talking to Roger Wilcox, who was a year behind me in surgical training …

PIEHLER: Okay.

GRILLO: I hadn't known him in the medical school, but he was here now and he was a—a group of us were talking one evening and he was in the Army Reserve, anyway, so he was going to go in the Army. And I said, "Well, Roger," I said, "you know, I can't go in the Public Health Service." I said, "The Air Force, the surgeons, don't have anything to do, because your patients are either burned to a crisp or they have appendicitis."

PIEHLER: Yeah.

GRILLO: So you sit around, basically, being flight surgeon. "The Army," I said, "is probably where I ought to go." I said, "But, you know, Roger, I like clean sheets, showers, and a frosted drink." (Laughter) So I said, "I think I'll take the Navy. It's a gentleman's service." And, of course, what I had in mind, really, seriously had in mind: a year at sea. I liked the sea and used to do a lot of sailing, and I figured—and I actually started buying paperback copies of all these books I had wanted to read for a long time. You know, Manhattan Transfer, Jurgen, all those, the great American novels of the '20s that I missed and [had] not read. And I actually bought about … fifteen of them, and I was going to take them on the ship with me. And, of course, in my secret mind that ship was going to be in the Mediterranean Fleet, and there I was going to be going ashore in Naples and Marseille, you know. So anyway, that was one part, and the other half would be in a Naval Hospital where maybe I'd find something interesting to do. So I told him that's why I had picked the Navy. So I went down and joined the Navy. And jumping ahead, of course, when I got in the Navy it wasn't too long before I got sent—got orders to the Marines, and I, you know, was still in Boston and assigned with Chelsea Naval Hospital briefly. And one evening, I do remember Roger laughing, and he was just saying, "Oh, clean sheets, showers!" He didn't know I was going to Korea then. I didn't either, just the Marines. [He said,] "The Marines? Ho, ho, ho!" (Laughter) I said, "I don't like this guy." (Laughter) But it was—actually, it turned out very well as far as I was concerned. So, I don't know which I should tell you about. The surgical training here was everything I expected it to be. I had a wonderful time. In those years, you worked like hell. Everyone worked together very hard.

There was, you know, a typical hierarchical setup in a surgical service where the chief resident was chief. And they were then all fellows who had been in the war, and were five, eight years older, because they had finished school much later and had been to war. And so we called them "Doctor So-and-So," not "Joe" or "Bill" or so on, and "Sir." And no-nonsense type of guys. One was Phil Giddings. When I was a medical student, he had been at Anzio. In fact, he took a hit and ended up with a colostomy. On the beaches, you know. Anzio was probably one of the bloodiest landings in American history. Their casualties there were phenomenal, like the Civil War. And, anyway, it was a wonderful time, and we had,

you know, very close companionships. I'm going to have lunch tomorrow with another one of my friends whom I went through school with, and—medical school and residency, and remained friends ever since. And I learned an enormous amount. And in this place, very quickly, if you showed any talent at all, you got to start doing things. For a young surgeon, doing surgery is it, you know. As Franny Moore once said when [he] interviewed our whole group when we were starting, "Well, I won't guarantee you'll be doing something fascinating every hour you're here, and that means two hands in the belly." (Laughter) That was Franny Moore, typically. It sounds terrible, but surgeons are like that. And so you had this opportunity to do lots of things, and by the end of my first year I had done, not a lot of operation, but herniorraphy and choleystectomy and hysterectomy and lots of pretty major stuff, but [it was] because I had residents ahead of me who thought I had some sort of talent, and they were generous enough, they'd done enough to pass it on, that way, and take you through a procedure step by step. So it was—there was certainly every opportunity to learn here, and the senior visiting staff were very helpful, too, in every way, but most of your learning is from your contemporaries and the people just above you, whom you work with every day. It's changed a little bit. There's more association now [between] residents, surgical residents, with their visiting staff because of the nature—well, socioeconomics of medicine have changed.

One of the strengths of the training program is that we had the ward services and we had the private services and you alternated back and forth, as well as into specialties, and of course that to me was extremely valuable in every way. It was a cultural exposure, in a sense, doing neurosurgery, orthopedics, and urology and all of the different specialties that were not part of general surgery, which included plastic and vascular surgery, and so on later. But also, for me it was very practical exposure. It turned out to be of great, enormous practical importance when I was in Korea, because I ended up using just about everything I'd ever learned. Poor kid that stepped on a land mine, and we—every day we had a couple of those—and a fragment went up into his perineum and severed his urethra. Well, I'd—I hadn't done it, but I'd watched transperineal prostatectomies. I knew the approaches, and I just put him up, and he had other wounds, too, but then I made the incision, isolated the urethra, sewed it together, and he did fine, you know.

PIEHLER: That would have been a fatal …

GRILLO: Well, it would. Nobody would have known what to do with it, stick a tube in the bladder here and that sort of thing, you know. But this way I did a repair. I put a catheter—I remember the job I had doing it—we had catheters, but they had no stylets. A stylet is a metal guide you put inside a catheter to stiffen it, and you can bend it and make it curve and you can thread it that way. Looked around, you know, "Go get some ammunition cases there," which we put our operating tables on these because they were too low. And I said, "Get a wire cutter." We cut a piece of wire off, and I'd bend it and we wiped it down with alcohol and made a stylet. I mean, this is how you did it. (Laughter) It was like the Coke bottles, you know…. But if I hadn't had that little rotation through urology, I wouldn't have had the faintest clue. I would have been trying to get that catheter in.

PIEHLER: Because you, in some of your writing about education, you mention how important breadth is, that that—it sounds like your emphasis on [the fact that] it's still very important to have a breadth of education, even if you're trying to specialize.

GRILLO: Well, I think so. And, you know, I'll quote Churchill again in that he once said—he was quoting Alfred North Whitehead, who pointed out, he said that specialization, as specialization is apt to, in the process of becoming a specialist—a technical specialist, not just in surgery (Whitehead was talking about education in general). There's a danger of losing breadth of view and the, let's say, the qualities of imagination which should direct what you're doing. In other words, you just learn how to do it and you don't learn—you're not about to innovate or change anything. And so he said there are two kinds of specialization. One is learning the techniques of a given specialty, as they exist, to perfection. And the other is concentrating in a specialty, but admitting to it everything that you see in any other area that is of—could be of some value, and possibly also contributing from your specialty to other specialties. So I think that kind of a linkage is extremely important. And God knows there are enough examples of it. I was going on the other day about some the things I still see in otolaryngology. I don't mean to point to them, but because of the work I've done, I've been involved with them a lot. Now, here … we have no trouble at the Mass. Infirmary. We've had wonderful working relationships over the years, but I see some of the things that appear in their literature, or their cases, patients that get sent here, and I can't believe what I'm seeing. Well, I can, because I've been used to it for so long.

One of my colleagues asked me to come down the other [day] to the operating room. I only go down when they invite me now, because I stopped operating. And he wanted me to look at this patient with him who was referred here by a very prominent otolaryngologist in New York, who's at one of the big academic institutions, who operated on this patient about six times for laryngeal tracheal stenosis, and had done so many operations you can't believe it. Just the description of them made me know that it was going to be a—and it was really a super disaster, so he had some questions about what the next step should be. And we, together—I was able to pitch in and give a few words of advice, curbside advice. I trained them all, so we have good working relationships. You know, it's nothing, it's not a consultation or anything; it's just very informal. But what they had done was these, I'd say, ancient operations for a problem that we started solving twenty-five years ago. The work has published, it's been described, it's all there. I'm not the only one. There's a fellow in France, a good friend of mine, who's now also retired, another good friend of mine in Canada, who's also retired, who published similar operations, and we've all had very good results, and we continue to have good results. And why these other guys haven't adopted it, or if they can't do it, well, send the patient somewhere else. That's the thing that really gravels me about that is when people look at it with their hammer in their hand and say, "It looks like a nail. Wham!" They say, "What can I do for this patient?" rather than "What does the patient need?" That's the thing you—I can't tell you how many times I've mentioned this to residents and medical students. You always look at what you think the patient needs and get consultation, get advice, and send them somewhere else. I've seen so many patients over the years that came here, who were sent by another thoracic surgeon. And the patients think very highly of that man. They don't think less of him for sending them to another

thoracic surgeon in another city. They say, "We're very grateful to him." But the ones who have been mucked up, and now you have to redo it, "Why didn't he send me here in the first place?" (Laughs) So they don't lose anything by it. Well, that's a lesson that somehow seems to be difficult to learn.

PIEHLER: I have observed—just as a layperson, it's been interesting what I've observed different doctors. Because some doctors, I got a sense that they knew their limitations. I don't know…. Because I remember one doctor, one of my first [interviews], he said, "You know, I tried to read literature every week…." And I got a real sense he was very aware what he could do and what he couldn't do. And other doctors I've just felt like they were convinced they could do almost anything. And … those are the doctors—it was almost like, they certainly—I thought to myself, and all these were retired, but I almost would have backed off.

GRILLO: You were frightened by those people. That's right.

PIEHLER: Yeah, because they really, you know, because … in any profession, you have to know your limitations. And … it's hard, though, because you want to think …

GRILLO: Well, it's hard, and it's even maybe even harder for surgeons because there is a—outside of the so-called surgical personality, and there may be a certain amount to that, they sort of are in charge, and some of them do have tremendously large egos. And the notion of sending a patient to someone else, it's like admitting … that they're not good enough. There's somebody better than them, than they are. They're also—some of them are even worried about the business aspect of it. They may lose referrals. The referring doctor may send the next one somewhere else. And so there are all sorts of things of that sort that come into it that should have nothing to do with the sending patients, where patients are sent. And I don't know, even if you took the financial part of it out, whether it would help that much, because it would still be the personal ego aspects of it that would have to be settled. And I don't know. I think a certain amount of it is what they can learn during their period of education, what kind of models they see, too.

PIEHLER: But it does strike me as a useful lesson to impart to students, in terms of know[ing] your limitations—that's there's nothing …

GRILLO: Well, in that sense, we've all got enormous limitations in all sorts of respects. And there are some things you just decide you won't do. And even in thoracic surgery, I decided early on—I've forgotten exactly how I decided that I wouldn't do thoracic outlet. It's not that it's that difficult, but it's got its tricky spots like everything does, and I wasn't that interested in it and I did have a lot of other things to do, and I thought, "Either I'm going to really work at this intensively, or I'm not going to do it." And I think that's especially true with areas where there is not—where it's not a common condition or disease. And I'm very—I have very distinct feelings about it. In this area that I've been so interested in, tracheal surgery, there just aren't that many cases. They just don't—there's no reason for there to be that many cases. So therefore, the basic challenge is limited in numbers. That makes it more interesting to a lot of surgeons because they've read about it, they've heard

about it, and say, "Oh, boy, I finally got one. Let me go to it. You know, roll up my sleeves, because it's a great opportunity to do something brilliant."

And if I had my way, I would like to see all these cases regionalized. I think the United States maybe needs, [at] the most, six places that do this work. And in each place just one hospital, and [in] that hospital a couple of people. And results would just improve. And those people could meet once a year and discuss their problems and their mistakes and what can be done about it, and really be more [like] the way I used to talk with Pearson in Toronto. The two of us were very close friends and we'd talk about everything. If I had something I hadn't published yet, I didn't mind telling him about it and he had the same feeling. The main thing was to exchange the information and learn from one another. And I think that would be—centralization. There is this huge literature now growing up about … the comparative results at high volume and low volume institutions for various surgical procedures. For example, pancreoatectomy, to pick one procedure, and esophagectomy are the two that stand out, because while operations can be done in low volume, with fairly good results, those two are procedures which have enormous potential for disaster, technical disaster. Enormous. There are so many figures now that show your chance of dying from esophagectomy in a low volume hospital goes up from something like 2 percent to 14 percent. And it's even worse than that in some cases. Hugo Matthews in England, who is now retired and was one of their major esophageal surgeons, did a study in the Midlands of England, and he found the mortality in the occasional operator, who did one in a year, was 50 percent for esophagectomy. In the people who did three or four a year it was 25 percent. In his university hospital it was 12 percent. Of course, I shot him down when I went there and told him it was 2.5 percent here, (laughter) which it is. But there's a very real reason for it. Part of it is … those two guys on the wall back there, Churchill and Sweet, who taught us how to do the operation, devised the methods and worked it out. Same with pancreotectomy here and at Hopkins, very low mortality, extremely low. But most other places, it's a very high mortality operation. And I think some of those procedures just simply shouldn't be done widely. It's a matter of learning about it, learning everything about it, even having the adjunctive teams, the people who work with you. If I had done carinal resections in the Salem Hospital they probably would have had much higher mortality.

Now we've been asked, because of regionalization—it's a terribly hard time, a confusing time to do the thoracic surgery for two hospitals, good community hospitals. They wanted us to do it…. but they don't want the patients to leave the hospital, and with this Partners business with the Brigham they're part of it now, the North Shore and the Newton-Wellsley Hosptials. A couple members of our staff go to Salem, (they alternate to cover it) and they do all the thoracic surgery up there. But if they get a complicated case, either esophageal or airway, or bronchoportal fistulas, for example, they send the patient here. And the hospital trusts them, so they know they're not losing patients, except the complex patients they want to lose anyway, because they could lead to deaths and complications there, high risk. It is the same thing in Newton-Wellsley. And it's working out, I think. It's better for the patients. But it's a pain. The people who are paying for it are the surgeons who are in their damned automobiles going back and forth through Boston traffic, which is getting to be worse, as bad as New York.

DOVER: Back to the idea of knowing your limitations—when you got to Korea, you were the only surgeon. So did you feel kind of like, maybe you were taking on something you weren't prepared for, or did you feel like, you know, your education here and your three years, three and a half years of training had prepared you for that experience?

GRILLO: Well, I'll … reply to that. First of all, when I went in the service I had three and a half years of surgery under my belt. Internship is just the first year of surgical training. They had disposed of the rotating internships in many places by then. You know, there used to be a thing called a rotating internship where you—usually a two year internship, which most hospitals had—where you rotated from one service to another. Pediatrics and medicine, and maybe three months or six months of surgery if you were interested in it. That was basically the standard American internship. And in fact, in some states, like Pennsylvania, until … [the] 1950s, you could not legally get a license to practice unless you had had a rotating internship. But of course, people would go into surgical training after that. But in a few hospitals, like this one, very few, they had a surgical house officer in 1830 when they had the first two "house pupils." Actually, they were called "house officers" then, and they made them "house pupils" later to cut them down a notch, because they said they were getting too "cocky." They changed the name to "house pupil," and they also took them right out of medical school or even a notch lower, as senior medical students. They said, "What we will lose—" the phrase is wonderful; Bowditch or somebody described it: "What we will lose in … their knowledge and experience will be more than made up for by their docility, and willingness to say, 'Yes, sir.'" (Laughter)

But anyway, … they had a straight internship, and I took a straight internship, because it was really a waste of time to spent time going through a rotating [internship]. You learned all the medicine you needed to know taking care of a surgical patient with diabetes or congestive failure, with consultants, of course.

So I had had three and a half years, which consisted of rotations in general surgery and some of the specialties I mentioned: orthopedics, neurosurgery, urology, and so on. So I had a little touch of this and that. And I'd reached a point where I was doing some major surgery at that point, because in this program you don't have to wait for the end like some of them. You start right away doing operation—and I'd seen a lot more than I had done. I had done no thoracic surgery, but I had spent my second year—I was rotated through the private services, so-called, the Baker and Phillips House, and one of the teams I went on—[they] had teams of several visiting surgeons (you would take care of all their patients and assist) was that of Richard Sweet and Churchill. Churchill wasn't doing much surgery. He came back from the war and his practice never really picked up again. But Sweet [had an] enormous thoracic practice. He always had a private assistant, but I was his … second assistant. I would stand and just watch what he was doing. And that was actually where I became very much interested in thoracic surgery. Part of it was, I think, I was just seduced by the elegance of his technique. He was superb. He did everything. He did hemorrhoids, you know, anything you want to mention, but everything he did was just elegant, like watching a great sculptor, you know, or musician. The tissues just fell apart for him as if they knew he was there and they had to do the right thing, you know. (Laughter) He made it look like that. So, anyway, so I watched his technique in thoracic surgery. It was also [that] I liked

the anatomy of the hila of the lungs. It was mostly lung surgery and esophageal. Churchill had been one of the pioneers in thoracic surgery. Anyway, so I had that experience under my belt, but I was far from fully trained. Usually the basic training is five years, and of course, in any program you do the most complicated cases in your last year, so that's when you really get seasoned, to a great degree.

I didn't know what I should expect in the Navy. I … reported to Chelsea Naval Hospital, and they had two jobs open. They said, "You can have your choice." One was general surgery and the other was neurosurgery. Well, general surgery in a naval hospital, here in the United States, is largely, gallbladders, hernias, hemorrhoids, maybe a few old dependents, but not usually. They were in the Veteran's Hospital. So there wasn't an awful lot going on. And the neurosurgeon took me around. He was a hard charger, Commander Luce. I remember him. Everyone seemed to be afraid of him. But he was just an intense guy, but I had worked [with] so many intense guys here that he didn't seem very frightening. He seemed like people I'd been with all the time. And he showed me this and he showed me that. In one ward, he stuck his head in the door, and there were about twenty-five Marines in there, you know, like this with their arms and legs, and he said, "They've all got peripheral nerve injuries." The war had been going six months. It started, you know in the summer of '50 and this was now February '51. And he says, "They've got peripheral nerve injuries, I haven't got time to treat them. We've got to get going one of these days on them, but I'm so busy with brain injuries from automobile accidents and with brain tumors, and one in a day is about all of those you can do…." And I looked at him and after I talked with him I said, "Could I take those over?" "They're all yours." (Laughter)

The reason I said that is that then when I was somewhere in my residency, I had read the papers of an engineer-turned-biologist down at Yale—his last name was Gross—in which he—when you cut a peripheral nerve, you sew it together. Then, you know, the axones have to grow down from the main nerve cell all the way to the end before the inervation starts again. It goes a millimeter a day at the best, once healing starts. And often when the regenerating nerve fibers come out into this area where there's been a separation microscopically, they form little twists and turns, and only a few of them find their way into the nerve beyond. That's why regeneration is never that good. And one of the efforts over the years of peripheral nerve surgeons has been to try to work out better and better ways to get the approximation so they'll grow down there. Well, he took a sleeve in rats, … a little sleeve of artery, which is very elastic, and threaded it over the nerve. He cut nerves and put them together without any sutures, and then he put the sleeve over it, which exerted an elastic compression on the … area of space between the ends which is microscopic. But his reasoning—he was very interested in the paths that cells followed depending upon structures that were already there, in the substances deposited in the gap, so that there would be pathways that the cells would crawl along, which they do, of course. If you … watch cells growing into these modern so-called tissue engineering, they lay down these fabrics, synthetic fabrics, and if you look at the microscopy the cells follow along these lines. So he was convinced that if you could apply this elasticity you could therefore organize the liquid between the two ends and make it become linear, and the cells would grow down and, by God, they all grew back beautifully in the rats—end of story.

So I had, I think, two patients—one was a nurse; I can't remember the other one—with an ulnar nerve division at the elbow, and I was given the job of repairing her. I had done enough with other people, so I knew what I was doing. So I asked permission. I was first going to do a standard repair with fine stitches. I wasn't going to take an artery out, obviously. That's not something you do, but I took a piece of antecubital vein. Well, you know, you've got lots of veins here and nobody misses a little piece of vein, and I threaded it over her nerve, and I did the sutures and I pulled the vein sleeve out over tightly. It's probably pure happenstance, but she got a very prompt and almost perfect regeneration. And that doesn't prove anything, because she could have gotten that if I spit on it or, you know, didn't look at it—looked the other way. I did one other that was very good, too. So I thought to myself, well, … something intrigued me, all these patients here and he says, "Take them over," and I could just see myself going to work on this. I would have been working there twenty-four hours a day, you know, treating these guys, studying them, and doing tests and what. And probably, as I jokingly said, I probably today would be a peripheral nerve surgeon. (Laughs) You know, you start on something like that, one thing leads to another and then you get interested. I might even have become a neurosurgeon. I don't know, that I'm not sure about. Putting a sucker in somebody's brain doesn't appeal to me. So much for delicate neurosurgery, but anyway.

So he said, "Okay, fine." I helped him with a few brain tumors and head injuries, I'd had one, two months of neurosurgery with Bill Sweet here and J.C. White, and Sweet was very demanding and very precise, and so I knew all the moves, and Dr. Luce was just so pleased to have somebody helping him who knew what the hell he was doing. Because it is—it makes all the difference, your assistant makes a huge difference, you know. So, I was happy as a clam. He was happy as a clam. And then I got my orders for the fleet Marine force, when these came through, he was fit to be tied, but there was nothing he could do about it. And the orders are just a list of numbers and names. They didn't … know anything about me. It was just that they needed twenty-five more guys for the Marine Corps, send them down to the field medical school, my number comes up, I'm on the list. I was supposed to go down there and [had] orders to a month in field medical school at Camp Lejeune. What—something Point, used to be the black Marines training camp before …

PIEHLER: I know …

GRILLO: Before they desegregated them, so they … Montford Point.

PIEHLER: Yes. Someone's actually doing a documentary on the Montford Point …

GRILLO: Yeah, yeah. Have you seen the book by the daughter of Lena Horne?

PIEHLER: No, I haven't. I've heard about it. I've heard reviews.

GRILLO: The name is something totally other. It's Gail Connoly—not Connoly—something like—I don't know. She spoke one night at a book presentation at the Boston Athenaeum, held at the African meetinghouse, which is one of the oldest African meetinghouses in the country.

PIEHLER: I've passed by it, yeah.

GRILLO: And it's a nice little building inside, and she spoke there and she gave a fascinating talk. She's a very good speaker, and then we had a book signing, and I bought—we bought a couple, actually. We gave them as gifts. And it's fascinating to pick through. It's about blacks in the American armed forces from the Revolution on. And if you're interested—it isn't about war medicine, but it's about war background. It's fascinating to read it. She writes it without anger. It's obvious she's incensed about some of the things, and you become incensed reading them.

PIEHLER: Oh, yeah. No, it …

GRILLO: But, anyway, I digressed, but whatever it is, I got the orders to go down there, and to be in the Second Division, which I later learned would have meant about eighteen months' assignment, at Camp Lejeune. And to tell you what that meant is that if you were, say—as I would have been a battalion surgeon—obviously, so you go out on maneuvers and so on. If one of your Marines got appendicitis, which in an eighteen-year-old healthy guy is about the only thing that happens. Automobile accidents killed them—a few people died every weekend on the highways between Lejeune and wherever they were going, and they always sort of had the wreck of the week outside the gates of the camp, just a twisted mass of steel that somebody died in. But they were usually dead, and you wouldn't treat them or they would go to the Naval Hospital at Camp Lejune where somebody else would treat them. So I would have gone stark raving mad.

PIEHLER: Just, just …

GRILLO: [I was] a compulsive hard worker. They had a couple golf courses and about six officers' clubs, so I'd have become either an alcoholic or a golf-o-maniac or something awful, you know. (Laughter) I brought a number of books down there with me, and it's the only time I ever played hooky from school. I stopped going to some of their classes, because they were so dull.

PIEHLER: I was curious to ask you, what was the training? What did they teach you?

GRILLO: I'll tell you about it. So I went down there, but something happened. The hand of the Lord reached in (laughter) and I got the flu. And I got sick as a dog, and I ended up, of course, in Chelsea Naval Hospital for about a week. And I got better, as you do, and then I took the train and arrived down there, maybe—it was almost two weeks late at that point. So I went through the course, but when it came time for the assignments, they said, "Gee, we'd love to have, you know, with all this surgical background … but we're all full up, so you're going to go to the First Division." Well, by that time I had had it up to here with Camp Lejeune. I was delighted to go to Korea. I really was delighted. You know, I wasn't delighted to go to war, but I was delighted to get out of Camp Lejeune. It was that simple. I would have gone to Ultima Thule, the air base. In fact, I had a chance to go there, by the way, but I didn't go. My friend, Bob Hopkins, did. We were going to go in the Navy. Stone

and Webster Engineering were making an airbase at Thule, up north in Greenland, as far as you can go without being on being out on an ice floe, and so they wanted doctors up there. He went because he liked the adventure of it and I was tempted, but I didn't want to take another six months. So I went directly into the Navy and he went up there. And he got to Korea later to a hospital ship. It was very different. So there I was in Lejeune. What they had was—it was very pleasant. They had a faculty of guys who had been doctors with the Marines, and a couple of them had been to the Reservoir. The Reservoir, they …

PIEHLER: Just out of residency?

GRILLO: Just over. One of them had been there. And they were nice enough guys, one was a dermatologist. The others, I think, were general doctors. There wasn't anybody with any training in war wounds, who knew anything about war wounds. I knew more than they did just by osmosis, listening to people like Churchill. And half my senior residents, like Bill McDermott, who wrote that book Combat Surgeon, in World War II. He was in Europe … shortly after the first landings and went all the way through into Germany. And there were a good many of them who had worked and done this, so we had talked a lot about it. You do a lot of chatter over the operating table, when the work is just routine. And I remember Bill saying, "War surgery is simple: small bowel, resect or repair, large bowel, repair and/or colostomize." It really is pretty straightforward. Peripheral wounds, you debride them, clean them up, cover over nerves and arteries. There isn't a heck of a lot to it. Well, in an individual case there's a heck of a lot to it, but the theory of it is pretty straightforward. Notions of delayed primary closure came out of work by people like Churchill. It was all very … well worked out, and so I knew a little bit about that. The principles are all pretty clear. There was no training, no discussion, really, about war wounds at all at Field Medical School.

And so what do we do? We had lectures. Well, some were important, you know, like field sanitation and sterilization of water by chlorination, and slit stenches and latrines, and all the things you need to know in the field. And then there was some stuff about bugs and what not. I still remember that they had all these handouts, which were mostly mimeographed from, World War II. You know, lectures on, on … Japanese scrub typhus in the South Pacific. Well, I suppose it's interesting, but why not tell you about Trypanosoma gambiense, and African sleeping sickness? It was about that unrelated. And, of course, some of the things they might have told us about, they didn't even know about, like epidemic hemorrhagic fever. The Russians knew about it, the Japanese knew about it, the Koreans knew about it; we never heard of it. The only reason I knew about it was … somewhere I got an Army brochure with articles about different problems like gas gangrene. I'd never heard of epidemic hemorrhagic fever. What's that? So I read it, and sure enough I saw a couple of cases not too long after I'd been in Korea. The course at Lejeune was really kind of pointless.

Some landing exercises were fun; that's when I learned that with Marine pilots, you know, you'd better flatten out real flat, if you would have raised your head up you'd likely get a haircut. They were notorious. I mean this in the good sense, because as was pointed out, there was every reason for continuing to have a Marine air wing. Army pilots, the Air Force

pilots, would also give close support, but when Marines gave close support they were part of the infantry unit when they came down. (Laughs) They really were part of it. Then we had a few days on the rifle range, which was good fun, but the rest of the course was just very dull. And I remember going down—we could walk down to the beach, the shore of Piney Woods, and I would sit under a pine tree and read. Not medical stuff. I was fed up with the whole thing. (Laughter) And I felt a little guilty, because I had never done that before, ever missed a class anywhere, you know, but I just couldn't see wasting any more time on that course.

And then, I went to Korea. I was out of phase with everybody, because I had been sick, and so I didn't go with a draft of Marines, I went by myself. I went out to San Francisco and found a ship eventually. I didn't have all of my shots yet, so I couldn't leave at once. Going by air meant you might get bumped somewhere and spend a week in Guam, so I thought I'd find a ship, which was great. I'd report in and they'd say, "Well, nothing here, Lieutenant. Why don't you come back in about, oh, four days?" So I'd rent a car and go up to Yosemite or something . I met a naval officer who was there also killing [time], waiting also for a ship, so we did this sort of thing together.

And eventually I got out there and I arrived, and I won't dramatize it, because I related this to a naval historian who wrote it up to some extent. I had no idea what I'd be doing in Korea. I reported to a navy commander in the forward area. At that point, the front was very fluid, and he was in a sandbagged dugout with a kerosene lantern. Everything was very mixed, I guess war is always mixed up. A lot of noise, too, you know, artillery and machine gun fire right over the hill. I arrived with Dave Stephenson, who was a little out of phase, too. He had been sick also. He was a nice guy. He's retired now. He's a radiologist, his father had been a radiologist, and he had had one year of radiology residency. So we walked in and the commander said, "Oh, new men." He asked, "What's your training?" They had no records of any sort in the Navy. And Dave said, "Rotating internship and one year of radiology residency, sir." "Such and such Battalion in such and such regiment" and that was it. He was a battalion surgeon. "What's your training?" I said, "Three and a half years surgical residency, sir." He just stopped. His eyes got big, and he said, "All surgery? Three and a half years?" I said, "Yes sir." [He said], "Company D!" So okay, I picked up my stuff and I started to walk out. He said, "You can't get there walking." (Laughs)

So they Jeeped me up and [drove] through mud up to Co. D. It was cold mud. It was March, I believe. And into this little tent. I reported in not knowing what I was going to do, and you've heard—you've read this, perhaps—but anyway, I walked in there, and I always remember the day, because it was dark by this time, and it had been a long trip. We flew to Masan from Japan, we left Masan by air, we landed at K something or other, and then took an open truck for miles and miles and miles. Seemed very slow—and rain pouring down, and walked into this tent, it was dark, and a kerosene lantern, and I said, "I was told to report here." And somebody sitting in this tent said, "Commanding officer's over there." So I went over to this cot, and I could just see a gray belly sticking up, and I didn't know anything about anything, so I said, "I was told to report here, sir." And there was no … answer, so I just sort of stood there for a while, thinking, "Something's going to happen sooner or later." And then a voice came out of the dark dripping with sarcasm, "So you're the new surgeon."

I didn't know what this meant. I thought maybe he's the big surgeon and I'm going to be helping him, and he is just one of those surgeons who are bastards, because there are a fair number of them. (Laughter) We all have a little bit of it in us. I've tried to cure most of mine over the years, but it comes out once in a while. So I just stood there. I didn't know what the hell he meant. And then a voice said, "How much training have you had?" I said, "Three and a half years, Sir." And the voice said, "Jesus Christ. Another one." (Laughter) Then he starts lambasting me for being untrained. He said, "We don't need boys like you, wet behind the ears. We need men. We need board-trained surgeons. These kids are getting shot up bad. They need …" I still remember thinking, it's noisy as hell out there, and that rat-a-tat-tat-tat, which sounds pretty close. I said to myself, "It's cold. It's rainy. It's miserable. He's obviously a son of a bitch. I'd like to go home." (Laughter) I almost felt like saying, "If you don't want me, I'll leave. I'll take the next truck out of here." I knew better than to say that. Anyway, he went on like that for a while and then somebody finally, somebody else said, "Well, your cot's over there."

And about five minutes later or less a corpsman stuck his head in the tent and said, "We got a guy with a belly wound out here." And the fellow I relieved, who was—I met him then. I didn't see him again until, perhaps six years, seven years later. He showed up at a course here at MGH. He remembered my name, for some reason, and he came up to introduce himself. Later I found out what the problem was, but he was gone by the next morning, so I never really saw him then. He said, "It's all yours." It was a kid with a belly wound. Fragments, you know, something often. He wasn't in shock, he was just—had to fix him up! So I still had no idea what my place was in this whole outfit. So I walked back to this commanding officer, and I said, "There's a Marine out there with an abdominal wound, sir, and it needs to be taken care of." No answer, just silence. Being a good well-trained resident, I thought, "Well, maybe he's like a chief resident." "Do you want to check him over, sir?" And I remember the voice said, "Check him over? Hell no." He then said, "You want anesthesia, I'll give you anesthesia. You don't want anesthesia, I'll stay in the sack." Those were his exact words. I remember this mixture of kind of annoyance and relief, because, one, I now knew he was the anesthetist, B, I knew I was the surgeon, C, I knew he was going to stay out of my hair on medical decisions. I said "I want anesthesia." And he put the kid to sleep and I fixed him. It didn't take long, you know they're lean. You're used to the kind of bellies you run into in a civilian hospital. This kid's all muscle. You open him up, run the bowel, debride and close a hole, run the bowel, close another hole, close another hole, count as you go so they come out even, you hope. Sometimes they don't for other reasons. Then, clean out the belly. Of course, we didn't have any suction. You just took big gauze sponges …

DOVER: That amazes me.

GRILLO: It's with sponges that you clean out the abdomen. You just slosh everything out on the dirt floor, make sure the cavity is as clean as possible, mop it all up, and then sew him up, and that's all there is to it. Irrigate the wound and finish closing it and the anesthetist watched very closely and didn't say a word. When we finished he said just about three words, "I think we're going to get along." Well, I learned what the problem was. The problem was the guy I relieved had only had one year of training somewhere, but he was the

best they had, so they put him in there. You see, I would explain this to you if I didn't go into it in that article. You know all this anyway if you're interested in war and medicine, how the Marines functioned medically. The notion was that they would land on a beach, they would have a hospital ship offshore for definitive surgery. They had a Company A medical company, part of the medical battalion, on the beach, from which patients were taken to the ship. Up front, you had two regiments in the line, in action, and one regiment in reserve somewhere. And for each of these regiments in action there was to be a "collecting and clearing" company…. In the aid stations where the battalion surgeons were, they would just do first aid and send the person back to "collecting and clearing," from all of the different, say, two or three companies that were on the line. And then you would get these people back as fast as possible to A, and A would get them out to the ship for surgery. Well, in this case they're in the mountains, the ship was in Pusan, two hundred and some odd miles away, so they realized they had to do surgery up forward. And somebody with some smarts, I would say, instead of saying, "We'll make a hospital out of Company A," which maybe would have made sense considering the lack of personnel, but they decided to make two of the three "collecting and clearing" companies into surgical hospitals for primary surgery. Some of the stuff that wasn't that urgent, they might send back to A for debridement, for example.

----------END OF TAPE ONE, SIDE TWO----------

PIEHLER: This continues an interview with Dr. Hermes Grillo on July 8, 2002 in Massachusetts General Hospital in Boston, Massachusetts with Kurt Piehler and …

DOVER: Crystal Dover.

PIEHLER: And you were saying—you were outlining …

GRILLO: Well, I was saying that one of the principles that was pretty much established in World War II, and it may seem obvious, but it was a step forward, was the notion that the closer you can get definitive surgery to the front, the more people will be saved, whose lives will be saved. Transportation back from the front was, let's say, episodic and unpredictable transport … [which] allows a lot of people to die. In fact, that's what led eventually to the concept of the M.A.S.H. hospital, the Mobile Army Surgical Hospital, now which has, I guess, gone through another transmogrification to something else now, but the idea is to get real definitive surgical care [as] close to the front as you can safely. And so that's what they were trying to do in a different way. Now, it actually was the Army going one step better, because in the Army, a mobile surgical hospital covers a division, an entire division, and therefore since all lines of communication are perpendicular to the front. The MASH has to be back a little further, fifteen miles or something like that. In fact—later on we had one point when there was an army regiment on one flank of the Marine regiments that we were taking care of, and they had a collecting and clearing station for that regiment that was actually a little bit further to the rear than we were. And so if they got a really bad wound or two, they would send them up to us because it was too far back to the MASH. In the mountains there with these bulldozed roads, and if there was a lot going on—if they were moving, say, more tanks or troops up to the front, the ambulance would have to wait. So it

could be … several hours getting back. While helicopters were being used, a lot of times helicopters couldn't fly, or they weren't available. Nighttime, heavy fog 'til ten or eleven in the morning in the mountains, so on. Being right up close had a lot of advantages, and so this was a good idea. Then came the loose link in the thinking. Having set up a surgical unit three or four miles from the front, which is an ideal … place to have it, they never got to the next step in recognizing that you have to have a surgeon and an anesthetist as a bare minimum in a surgical unit! They just never got to that point.

DOVER: And top of the line equipment …

GRILLO: Well, equipment was pretty, pretty thin, too. I'll tell you about that in a moment. So to come back to your question, I was therefore seized on as the best they had at the moment. There was also a fellow named Howard Sirak, from the Cleveland Clinic, whom I met later on. And he had about the same amount of training, and he ended up in Easy Medical Company, the other one. So there was one of us in each. It just happened. We weren't sent out there with any deliberate plan. We just happened to …

PHEILER: This was accidental …

GRILLO: Purely, totally accidental. And I can tell you how accidental it was, is that when I left, the person that took my place was a nice guy from Iron Mountain, Michigan, Arthur Anderson, who was a great kid, and had had a rotating internship, and he liked surgery when he was a rotating intern, about three months, four months, six months. And so he took a year of pathology to learn some anatomy, and he planned to be [a] surgeon. That was his surgical training. And I trained him out there, and when I left, he was the surgeon, which put him in way over his head. But, yes. Did I feel not fully equipped? Of course I did. You know, I knew I wasn't fully trained. There were a lot of things I didn't know, technically and otherwise. And after I had been there a little while, my commanding officer, who was the anesthetist, who was a Board anesthetist, by the way, regular Navy—the only regular Navy people out there were the commanding officers of the units, because the regular Navy doctors did not like to go to Korea. They didn't join the Navy to be Marine doctors. They didn't join the Navy to have their heads blown off, and to sleep without showers in mud and so on, so they stayed back home and they sent the reservists out there. When I got back to Saint Albans Naval Hospital, they had surgeons coming out their ears and wondering—looking for something to do. And all they had to have sent out there at any one time would be two of those guys. Two. And two anesthetists, or even residents in anesthesia, and they would have covered all the needs perfectly.

But—so the fellow who relieved me, as I said, had no surgical training, except for what I taught him in about eight months of training. I had him do as much as he could do, and he was a very … orderly kind of Middle Westerner and so when I started training him to do cases, actually have him do them while I helped him, he wouldn't operate on the Marines at first, so he started off on Korean and Chinese prisoners, and then he worked on Korean laborers and ROK troops, R-O-Ks, and then Korean Marines, and finally I knew I'd about made it toward the end when I had him do a couple of Marines. And then we had a Marine colonel come in one time who had a bullet wound in his buttocks. I mean, a big ugly wound

like this. And he, the Marine colonel, was so embarrassed. It was a most undignified place to have a wound, because he was obviously diving for cover when they got hit. And I thought, "Wasn't he smart?" Because if he was standing up like this it would have been right through his chest, you know? He was really embarrassed…. But … Anderson debrided him. It wasn't a big operation, but now he's operated on a colonel, so he's …

PIEHLER: He's graduated.

GRILLO: He's graduated. (Laughter)

PIEHLER: So, for Anderson, this was very much a residency. I mean, in the sense [that] many of the things you would learn in a residency, he was learning in a very compressed …

GRILLO: Yeah, because I had to teach him everything about opening bellies, how to close them, … how to handle sutures, how to close intestine. They are special technical things, and so it was a residency. And I could see that he would succeed me. Dan Pino, my anesthetist, was an excellent man, excellent anesthetist. He was board trained. The reason he was out there actually was that when the division was up at the Reservoir, they apparently realized they didn't have any anesthetists at all—so he was sent out there. He arrived up there [by] helicopter, and the next day they were surrounded. He was a man of few words, but later he got to talking—and we got to be good friends, actually. "Gees, Hermes," he said, "You know," he said, "the first night I got there it was late and I slept in this cot, and I saw they were all sleeping on the floor. In the morning I found out why. There were a couple of bullet holes in the tent." (Laughter) He said, "I gave my first anesthesia and somebody went over and put the flaps back and looked out," and they could see the hills up north in the road to Chosin Reservoir. Then somebody said, "Well, here they come." And they could see Chinese hordes pouring over the hills. They poured over by the hundreds. And I said, "What did you do, Dan?" He says, "Jesus, what could I do? I kept giving anesthesia and tried not to wet my pants." (Laughter) He was a guy of very few words, very phlegmatic. His nephew is an anesthetist here at MGH, Dick Pino, a similar guy.

As he got closer on the rotation list—we had a rotation list. You came in, you went on the list, your name moved up, and when you got to the top, then out you went and someone else came in. So he said, "I think I'm getting pretty close to the top." He said, "They're not going to send us an anesthetist, you know." He said, "We ought to do something about it." So we got a volunteer, a very nice fellow from West Virginia, Perkins, his last name, who volunteered to do anything. He'd been a GP [general practitioner] at home and he was a great guy. I taught them all how to do debridements because when we were busy I couldn't do everything, obviously. I did the big cases and they learned how to trim tissues and so on. We had corpsmen doing that, too. They weren't always the best jobs, but it was the best we could offer. And, so he took it on. He said, "Okay, I'll be an anesthetist." He even became out VD [venereal disease] officer for a while, because as each group of Marines came into Korea, they stopped in Japan, just long enough for about 30 percent of them to get infected. And then they would come out. They had to get cleaned up before they want to fight. So, you know, so we had them walking around the compound there by the dozens. So Perkins

took over being the anesthetist, and Pino taught him very simplified anesthesia. You know, with young, healthy men, you don't have to do a history and a physical and find out if they have diabetes and heart trouble, and this and that. You know they haven't got anything but a wound.

PIEHLER: They've been screened.

GRILLO: "Previously healthy male, age—fill in between eighteen and twenty-five was hit this morning, GSW [gun shot wound] 0800," sort of thing. There's no other history. And so they were in good shape. Pino taught him very simplified anesthesia. It was to get them induced—I've forgotten whether he—no, I don't think he used pentothal for that. Maybe he did, yes. Rather than nitrous oxide, certainly. And then it was … a machine using anesthesia. I made the decision to carry the patients light, because as you get deeper there's more and more danger of losing them, especially with an unskilled person who doesn't know what the hell depth they're in anyway. He was totally unskilled, but he was doing the best he could. And instead we had a big box of syncurin, which is a synthetic curare-like drug. After Pino left, for example, with a belly wound, I would open every patient from the xiphoid bone to the pubis, the entire belly, slit them open like that. And then I basically eviscerated them as needed, and just did everything on top of the table. If they were straining and coughing, it didn't matter. I just kept working. And then I'd get everything cleaned up and be ready to close up. I'd say, "Okay," and then Perkins would give them a shot of syncurin, the patient limp. They weren't intubated, so there was a little risk there. You couldn't ventilate them very well, but with a tight-fitting mask and him squeezing the bag, I would sew up as fast as I could. The long incision was a good trade off for a deep anesthesia, and it took a short period to close them up. And we didn't lose anybody with this technique. Somebody was lost under anesthesia later, but that was a different story. It was a very sad story, during a big attack. But that was the way we handled that, and we did pretty well. So it was, it was an amateur show all around. I had a lot of times when I felt a little inadequate. And one time I asked Pino, after I'd been there a while, and I felt I could talk to him, I said, "Commander Pino"—at that point he was still "Commander." I said, "If I run into something that's over my head, is there somebody I can call?" Get a little field telephone, you know, you crank it up, and so on. He looked thoughtful for a moment. "No," he said, "there's nobody." And I couldn't quite believe it then. Here was a whole division with 25,000 men.

PIEHLER: You would think, yeah, there would be someone.

GRILLO: The only U.S. Navy in combat, except for some pilots, and a few ships. The ships used to come in on the thirty-first of the month to drop a few shells in, hang around, drop a few more on the first. And then everybody on the ship got four hundred dollars income untaxed, because if you were one day in the combat zone, and two hundred dollars of your income was tax-free. So all of the visiting people, like the admirals, arrived on the last day of the month and left on the next day. And the enlisted men would sit there, "Here they come." You know, you can just picture it. "Bastards, here they come." (Laughter) And the visitors wouldn't do anything. They'd just come over, so-called consultants, and it was awful. And that's … when I realized what the overall staffing problem was. Finally I knew, figured out, my diagnosis of why this problem existed in the way it existed.

Now, my friend, Bob Hopkins, with whom I'm going to have lunch with tomorrow, who later came to a hospital ship when the ships were close after the division had moved west. We were in the mountains on the east, but they later moved over to the west near Seoul. [Hopkins] said that things got much better, because they brought some good people in. And maybe it was luck and maybe somebody even thought about it. They sent out people, like Frank Spencer, who were as well trained as I was, and a couple who [had] probably even completed training. But for that period anyway, that year, and in the time before that, it was almost a disaster, and totally unnecessary, because as I say, when I got to Saint Albans the next year, there was so many people there with talent who would have gone if they were asked. They wouldn't have fought about it, you know. And they would have done a good job and come back feeling they had done a good job, and very pleased for what they did. I used to tell Captain Story, my chief at the thoracic unit at the Naval Hospital the following year, about this. He would be upset, you know. He loved the Navy and he loved Navy medicine and he said, "This really hurts me to hear this." He knew I was telling the truth. Other guys, if the topic came up at the luncheon table, would get up and leave, because they're not supposed to be around when anyone criticizes anything in the Navy.

PIEHLER: Rosemary Mariner, our retired naval captain, she's sort of—it's very interesting talking to her, because she said she very much believed until Tailhook that what was good for the Navy was good for the country. It was what was good for the Navy, and that very—I'm not surprised at that.

GRILLO: No, literally, if you were ever sitting around at a cocktail reception at the officer's club, if I even dropped something that was mildly critical, all of a sudden I'd be standing alone with one other reservist. All of the regulars had vanished because they just didn't want to be associated. Because as somebody said there, there are two rules you follow: one, you don't make waves, and the other is you cover your ass, and then you do well. Captain Story said to me, "Well, I'll never make admiral," and I knew why. He was very outspoken about everything. He wanted things to be right. And he didn't stand for nonsense. Very tough guy, and I learned a lot from him, too. He was a very knowledgeable thoracic surgeon, and had trained in Michigan. So I learned a lot from him. But I lost two patients in Korea. I've never forgotten them. Because of ignorance. Some … relatively minor thing I didn't do in each case that would have made the difference. And I think a year later I probably would have had the sense to do it.

PIEHLER: But that's not very many—I mean, given the number of cases you were doing, that's not a lot of losses.

GRILLO: We had—well, very few of them died.

PIEHLER: That's remarkable.

GRILLO: Remember this, the worst wounds never make it; they're dead. And then a lot of the others die in transport. But some of them were very nip-and-tuck. I recall, I've told that story before, I'm sure…. I was finishing a belly would and one of the other doctors came in.

There were about six of us in this unit, the anesthetist, myself, Anderson would be helping me, and … there was a dentist and a couple of others, none of them had surgical training, so I'd teach them to do debridements, but they really couldn't help much. They were around. They wanted to be helpful, but they were not. So one of them came in, who was doing triage as the new patients came in, and he said, "We got a kid in here. They just brought him in by helicopter." He said, "He's hit in the chest. He couldn't breathe so I tapped a couple of liters of blood out of his chest, and he can breathe now, but he's in shock and we're pumping blood into him, got him tipped way up." Incidentally, the first place I got to was—later it got a little better—was so primitive that they basically were on a hill there, and if a patient came in, low blood pressure, you put him with his head down the hill and if he had good blood pressure his head was up the hill, the stretchers on the ground. (Laughter) Otherwise, what we used to have in the receiving triage tent was a—they take these canisters that the big shells come in, they're metal canisters, tubes, and put … four of them in the ground at the right places. You could put the stretcher, which has little rests to set it down, you could set them on the four canisters and often do the debridements right there … on that stretcher….

But let's see, I was telling you about this kid whom they brought in. I said, "Well, get him the hell on the operating table, I'll be right in to have a look at him." And sure enough, it was clear he had massive bleeding going on inside his chest. I mean, massive, whatever it was. We had no X-ray machine, by the way. That's why my radiologist friend went straight up as a battalion surgeon. And when I told Dr. Churchill that when I came back, and he said, "Well, if you didn't have an X-ray machine, you weren't doing good surgery." I felt like saying, "What the hell was I supposed to do, fold my arms, say, 'I'm not operating until you get an X-ray machine?'" (Laughter) But there was no good reason not to have one, but they didn't have one. And we lost another patient for that reason postoperatively. That's another story. It was obviously unnecessary.

So, anyway, this kid, I said, "Okay, let's operate on him." And … so I turned to Perkins, who by that time was the anesthetist—the other fellow had gone home—and by way of starting, I said, "Well," as I was getting things ready, "Now you've seen chest anesthesia given?" And I still remember, with his drawl, Perkins said, "Where I went to medical school, they didn't do chest surgery." That's over in West Virginia, you know. This was a long time ago, remember. It was the same time I went to school, 1944, you know. I said, "Okay, alright." So I put the patient to sleep. I had had two months of anesthesia, so in the country of the blind, the man with one eye is king. That kind of training in a little bit of everything was helpful. So I put him to sleep, and we had a couple of endotracheal tubes, with no cuffs. When you put a patient to sleep for a chest operation, you put in an endotracheal tube. It goes in to the trachea, but it has a balloon on the end. You can blow up the balloon and it seals the trachea. If you don't seal it, then you can't keep the pressure up to keep the lungs expanded, and when you open the chest the lung collapses and they die. So that was the whole secret of chest surgery, which they worked on for in Germany and everywhere else for a long time. That's a fascinating story by itself, by the way. Negative pressure chambers and positive pressure chambers and all kinds of things of that sort, but finally an endotracheal tube with a seal.

So I intubated him myself, and then I took a lot of sponges, and I jammed then in, sealed him off just by packing his pharynx full of sponges. And then I turned to Perkins and said, "Now just keep squeezing that bag like hell." And so he started in pumping. I ran around the other side and opened his chest. I had taken one medical book to Korea with me. It's this one here. Made the full trip. (Laughs) It's a little book by Richard Sweet, who was my great teacher in thoracic surgery. I figured I could carry it, and read it while I was in Korea during a quiet time. (Laughter) So I remember opening it to whatever page it was, which showed the hilum of the lung, and I propped it up on an ammunition case. I said, "Don't turn those pages. Leave them there." And then I went into his chest and, of course, the first thing I encountered was a massive outpouring of blood from the hilum of the lung. I could put my fingers on and squeeze the lung root to stops it, except for the back bleeding. And once I had it stopped, then I could get some sutures into the pulmonary vessel. In order to clarify things and get a little better control, we had to do a little dissection. I knew some lung anatomy, but I wanted to be sure. So I remember, after I had the bleeding controlled I went over to look at the book …

PIEHLER: So you, in essence, were operating by the book.

GRILLO: By the book. And the kid did very well. He did just fine, which led to another bit of improvisation. It was the wintertime. During the night, I decided to give him some oxygen by running oxygen from a tank through a bottle of water into a nasal catheter. I also needed chest suction. When you do a chest operation, the lung's always torn. You leave a tube in the chest to a suction set-up, so all the air that leaks out won't collapse the lung. Well, we had no suction machine, but you can—if you take a couple of bottles—I won't take the time to draw it; I've probably forgotten how, anyway—and rig them up on a turntable and with the proper tubes in the right direction, when you turn it, then the water goes out, it creates suction and it sucks on … whatever you attach it to. So I made one of those out of a couple of old IV bottles and I had a corpsman sit there all night turning this thing every few minutes, "As soon as the water hits there," I said, "you turn the damn thing." And he just did this all night long, and that was the suction machine. (Laughter) And these guys are young, and the patient did very well, and he sealed up pretty nicely, but when I came by in the morning to see him, with the oxygen flowing through this thing and the tent was cold as hell, it was all one big block of ice in the humidifier for the oxygen. He was doing fine. I got very annoyed. I went in to see the commanding officer, who was—of course, Pino was gone by this time. We had a new commanding officer, who was a nice fellow from Marble Head, but he was an internist, and having an internist out there is about—you know, it's useless. I mean, absolutely useless. In fact, he never left the tent. As soon as he got three other people together who could play bridge, he would start a bridge game. He meant well, but there was nothing for him to do, so he just sat in the tent. He was also frightened. He was afraid of getting hit.

Nobody shot into our compound except once. One night somebody probably—I don't know what was going on. We never figured that out. But … he wouldn't go on the road because occasionally there were infiltrators [who] would put a mine in the road and a Jeep would go up in the air, so he just stayed put. I was furious with the whole situation. I said, "It's freezing out there. All of these wounded Marines with blankets on were shivering, and one

kerosene stove in the center of a squad tent doesn't really do much for a … North Korean winter. So I said, "We got to do something…." He said, "What can you do? What can you do?" I said, "Well, if we could get some canvas or blankets, we could double-wall the tents, and that should … be some help." We didn't have floors at that point, wooden floors. It was just brown dirt on the ground. So he said, "Well, … we can't get them…." And he just kept being negative, and I just kept badgering and badgering him. And finally he got irritated with me. He was a really nice fellow, but…. I said, "Well, can we try to do something?" And he said, "Do anything you want! It's all right with me, just do anything you want." I said, "Okay…." I took him literally.

So I went over to the supply tent. I said, "Hey, do you have some small bottles?" And they did. I said, "Fill up about a dozen bottles with alcohol, ethyl alcohol, the little four ounce bottles." There was no isopropyl alcohol in the navy, because they knew that personnel would drink it. They'd drink anything that says alcohol, so why poison them? So instead, they used ethyl. At least they wouldn't lose anybody that way. So a lot of that used to find its way to cans of grapefruit juice, as you know. And so I had put these bottles in a box and I got my supply sergeant, and off we went down the road. Actually, it was a supply corpsman…. We had a truck. And one other doctor came with me, and we stopped at different units on the MSR, main supply route. And I would go in the supply tent, and one was an army guy, and I told him about these poor wounded Marines freezing up the road … toward the front. "You know, we just gotta get some blankets and try to warm up the tents a little bit." And he said, "Oh, geez, Doc, I wish I could help you, you know. It's tough, you know. I haven't got anything." I said, "Sergeant, I appreciate your interest. Here." I put a bottle on the table, on the counter there, and he looked at it very suspiciously. He asked, "What's that?" I said, "It's ethyl alcohol." [He said], "Can you drink it?" I said, "Boy, can you drink it! You mix that with grapefruit juice. Terrific!" "Hey, you know, Doc," he said, "I just remembered!" (Laughter) Goes to the back and gets a pile of blankets. He said, "You got anymore of that?" I said, "Yeah, I got a little more of it." He found another pile of blankets, "Just remembered." And I said, "Thanks very much." And that same scenario was repeated about four times, and every place, almost as if it was a script. "Oh, gee, I wish I could help you doc, you know." "Well, thank you very much. Here's some ethyl alcohol, you know, for your trouble." "Wait a minute, I think there's—I think there's a pile back there." Then the guys went to work with their hammers and tacks and nails. By that evening, with the stove still going, they were sitting around in their skivvy shirts, warm, toasty. Of course, you always had to have one person watch the stove all night long, or else the tents could go up like that. So we solved that problem.

Improvisation was a constant business. In abdominal surgery you do need some times to retract deeply, if you also have a shattered kidney, for example. You want to get down there if a missile went into the pancreas. We had wretched little retractors that they had sent us. They're about this deep. I would put my assistant in there with a big sponge and a hand pulling the bowel back, but the bowel would sneak out like a worm around it, so we needed some deep retractors. I took 155 brass shell cases, this tall, and I a pattern on it, and then on a piece of paper I drew a curve. The corpsmen took it down to the engineers and they jigsawed out these big pieces of brass and bent them and filed them, and so we had these beautiful big abdominal retractors. They weighed a ton, but that was the problem for the

corpsman holding it. That wasn't my problem. I wanted to take one home for a souvenir, but I had to leave them. The next guy would need them. So it was a constant business of making do with things. For me, it was a great education in terms of making do, improvising, solving problems. It was … an interesting time in so many ways.

We lost that one man I mentioned after he had stepped on a mine, another mine injury. You have overwhelming numbers of casualties, and then the pace would slack off, because no unit can attack for longer than a week at the most, usually four or five days, whether it's the enemy or yourselves. Everything goes that way. And, of course, in between, sometimes I wouldn't have much to do. Then I'd go into the dentist's tent when the regiment was in reserve, and there'd be a mile long line of guys waiting to have their teeth pulled. I went to Herb Schwartz, the dentist, and I said, "Hey, can I help you Herb?" So he showed me how to pull teeth. So I sat there and pulled teeth. (Laughter) Then when we were busy, I had him doing debridements. So, you know, we kept everybody busy.

But, this Marine had stepped on a mine and one piece hit him here. Laid him open like this, chin to forehead, everything in his face, just everything was open all the way up and down. But he wasn't in bad shape. He was conscious. By this time we had no anesthetist and, of course, to give anesthesia for that injury with a tube, it's tricky because you don't have access to the mouth. That tube has got to work just right. I knew it was too risky. So I decided to do him with local anesthesia. We used buckets of local. The Marines are pretty tough. They've been through a hell of a lot. So I just kept squirting more and more local anesthetic in, and carefully debriding the wound and sewing it up. I wanted to do primary closure on this wound because it was his face. And he was awfully worried about it. I put his lips together, and I put his nose together, I put his forehead together. When I finished, it had gone very well. I was very pleased. And the next day he was—somebody had loaned him a little mirror when I went on rounds. He was so pleased with the way it looked. His face was swollen and bloody a bit, but he was back together again, and I was sure he was going to get a very good result. About a day later or so, he suddenly ran a high fever. And then he went out of his head, and before we could sort it out, he died. And Anderson, who'd done pathology, did a post-mortem on him, and he found that in addition to the piece of steel that made the face wounds, a second fragment had gone inside the nose, through the ethmoid plate, behind the nose and up into the frontal lobe of the brain, a little tiny piece, and he had a big abscess in there. Then he got cerobritis and died very quickly. And if we had an X-ray machine …

PIEHLER: Yeah, because you would have …

GRILLO: See, I had had a couple of months of neurosurgery. I could have turned a bone flap. We didn't have neurosurgical instruments, but I would have figured something out. A chisel, or a hammer. You know, I could get him open and I'd get the fragment out, and he would have been fine. And it was just a crime.

PIEHLER: Because that was really just an X-ray machine.

GRILLO: That's all we needed was an X-ray machine. There was no way we could know it clinically. And to make … that worse, I'll backtrack to the summer before that. This was the fall. We got word that the Surgeon General of the Navy was coming for a visit. And so, sure enough, he turns up the last day of the month and with him is—with him is—let's see now. What was his name now? Surgeon General—it's old age, blacking out. This maybe doesn't matter.

PIEHLER: This was the Surgeon General in 1951.

GRILLO: '50.

PIEHLER: '50.

GRILLO: '51.

PIEHLER: '51.

GRILLO: Yeah, I could—I remember—I'm … probably trying to forget him, because I don't really want to recall—even though he was a pleasant enough fellow. With him is his second in command, another admiral. And he had been—I guess, as a young fellow in World War I—as a Marine. I don't think he ever saw any combat, but he loved the memory. Then he went to medical school and became a doctor, went into the Navy. He was now Surgeon General. He was a jolly fellow. We thought, "Here's our chance." We were prepared to tell him what we needed. And we needed a lot of things. But all he kept saying is, "This is wonderful out here. It's like camping. I wish I could be out here with you." Well, you know, we weren't complaining. We were doing fine. It wasn't exactly the Ritz, but we were doing all right. But this is not what we wanted. Then we came around to the operating room lighting. He said, "Oh, well, yeah, … we've got all these portable lights in Washington. There's no problem. Yeah, no problem." And we don't have, you know, proper retractors, and so on. "Oh, well, we've got all this equipment, you know." The implication was that all this would be coming, we thought, when he left. But it was very "soft." I think … we were realistic enough to figure, "There's something rotten here." I tell you, our morale, which had been pretty good, went downhill like this when the two of them left, because we had this feeling that the problem was at the top. This is why we don't have anesthetists, and we don't have surgeons, because they don't understand the problem, and they don't want to understand it. And we tried to point these things out to them politely. The Surgeon General wasn't the least bit interested.

And I confirmed this later on, in fact, just … about a year or two ago. I saw in one of these catalogs of old medical books, I saw Admiral Pugh's autobiography listed, and I spent seventy-five bucks and I bought it. (Laughter) I read the chapter on Korea, and I felt sad for him, sad for the Navy, sad for the guys that died out there, because all he had to say was about his travels. "Then we flew to Masan. Then we flew to so and so. Then we visited—I visited"—he's very proud—"every Navy installation in Korea. And then we saw so and so, and then we went back to Japan. And then we had dinner at the such and such." And not a word about statistics even, about reports, about figures, or that a good job was being done or

a bad job was being done, or about the evacuation patterns. It was so totally different from something like Edward Churchill's book, Surgeon to Soldier, about World War II, which was packed with meat about the care of the wounded. And this guy never even knew!

But that November, when I was operating on that Marine, with the split [face], I operated under a bulb, an electric light bulb, maybe sixty watts, maybe eighty. I don't know what it was. And that was all we had. I did take a reflector out of a search light and I put it on top of the light bulb, so it gave a little more light, but not much. The Assistant Surgeon General walked in. He said, "It's not a very good light you have there, Lieutenant." This was Admiral Broadus. I said, "No, it isn't, sir." I looked around and I could recognize through the mask who it was. I began to seethe inside, you know. [He said], "Why don't you use that light over there?" There was an engineer's search light in the corner, which I had borrowed and tried, and it was so hot, it would—you know, you could watch the tissues cook, I couldn't use it. I said, "It's too hot. Cooks the tissues." "Well, we have all these lights back in Washington. "It's the same line," I thought, "Well for God's sakes." This was an insult, really, and as if it was our fault for not having the equipment. I remember I put my instruments down, and I turned to him. I was a lieutenant, junior grade, but I turned to him and I said, "Admiral Broadus, you don't seem to remember. You were here six months ago. We told you about all the things we don't have, like lights. We haven't seen a goddamned thing since then." And I used just those words. And I thought, "Jesus, here it goes." (Laughs) Then I quietly thought, "What's he gonna do? Send me to Korea?" (Laughter) He said, "Well I—I—I," and mumbled something else. "Look," I said, "this man's being done under local anesthesia. I'd like to get finished with this job." [He said], "Oh, I see you're busy," and he walks out. End of visit. Nothing ever happened. It was inexcusable. Inexcusable.

And later on they had some very good people like Admiral Brown, who was a Navy captain and on one of the hospital ships. And I had a letter from him when I was in Korea, because when I first got there, one day they brought in this Marine who was just wounded everywhere you could imagine. Everywhere. And I opened his belly, I did this, I did that, I did the other. And then he also had his femoral artery shot away. I didn't know what to do, so I went in and I—in those days—this was 1951—they weren't doing much arterial repair. But I had seen one done here by Dr. Linton, in an urgent situation where he normally didn't do repairs. And nobody was then doing them at MGH either. But he knew about it. He was a vascular surgeon. And after that, I'd gone to the library and read Guthrie and Carrel's work about arterial repair, that elegant work on animals. So I remembered what it looked like. I went ahead and plugged a vein graft in, using crude instruments; and I found some eye silk sutures, or at least it was 5-0 silk or something. And it worked, but everything else was bad about him. He was in terrible shock. We got him out of there as fast as we could to the hospital ship [by] helicopter after a few days. His urine output was dropping, and he died on the ship. I guess, when they posted him there on the ship, the Captain, … Robert Brown, realized that this was something very unusual. In fact, I later learned this had never been done in the U.S. Armed Forces before. That was the first arterial graft ever done. Captain Brown wrote me a letter. He didn't know who I was, but the letter came up through the field mail eventually. I still have it here. It's very nice. He said, "Unfortunately he died," he said,

"but you'll be pleased to know that the graft was open." You know. Guy's dead, but the graft is open.

PIEHLER: But that must have, in terms of morale—I mean, that was a very nice gesture that someone was …

GRILLO: Well, it really was nice to know *somebody* down there gave a damn about patients, and it was a captain, too. I mean, I began to think that anybody other than the few reservists who were in Korea just didn't give a damn. That was the feeling I had of course, I knew Pino. He had a different feeling about it. He recognized that the system was a failure. Actually, later on, Frank Spencer came out there. He was about my age, and he was in training at Hopkins. And he was interested especially in vascular surgery, and he did a series of thee or four grafts and published them, so he always gets credit for doing the first arterial grafts in the armed forces.

DOVER: So before this, it was just amputation. That was all?

GRILLO: Amputation. They tried Blakemore tubes, which were little metal tubes you clipped together from the ends, but that didn't work, so basically it was amputation.

DOVER: So this must have been a big morale booster for the men who profited.

GRILLO: No. Nobody knew about it. Nobody knew about it. The guy was sick as hell when he left and he was sick as hell when he was there, and then he died, and that was it. I did some other repairs later on. The enlisted men didn't know what was happening. They thought they were getting the world's best. One time—maybe I mentioned this to you—I felt a little bit like a charlatan. One time we were sitting there, we weren't terribly busy, and the field telephone rang and they called for Pino. And they said, "They're bombed with casualties at Company A, they're overwhelmed." They said they need help. There was some big attack hitting us from the other side. So he said, … sort of proudly over the phone, he said, "Yes, I'm coming and I'll bring my surgeon." We got in the Jeep, and we drove down there, and they set us to work in a tent. And … to me, it seemed like about three days, probably was two, but it just went on and on. They just kept bringing them in. It was springtime and I remember they had a slope outside of the various operating tents, and stretchers were on the ground as far as the eye could reach. It reminded me of a scene in … the movie version of …

PIEHLER: Gone with the Wind?

GRILLO: Gone with the Wind. Just like that Civil War battlefield, all these guys lying there. And, they just … kept bringing them in to me. They picked the bad ones, and they brought them in one after another, and I just kept operating. And every so often I had to leave the tent and they'd either bring me some coffee or a hamburger or I'd go off to pee or something like that. Sometimes it was day; sometimes it was night. And but you didn't have any options, except to keep going.

At Company A, they had a nice fellow who was their chief surgeon. He was probably about my vintage, but he obviously had not had that rich a training. He said, "Would you come look at this patient?" and this fellow had a hole here and a huge hematoma about this big, obviously had a lot of blood in there. He wasn't in shock. I said, "Well, you gotta explore it, and if it's an arterial injury, you need to repair it." [He said], "Well, would you mind doing it?" "Okay." So I started in, I made a linear incision like this, since the wound was here to start with. And he said, "What are you doing with that incision?" Well, you know the principle is that if you're … dealing with an arterial possible vascular injury, you make a linear incision, because you don't know how far you're gonna go up and down. It's a basic principle, but he was—and then I … learned something from that, incidentally, which I re-learned later on at St. Albans, too, watching people work, and I really began to appreciate … principles of a surgical education, simple as they may be. Then I got down there and, of course, there's a big hematoma, so I detached the tendons of the pectoralis and turn them back. He said, "What are you doing?" I said, "It's the pectoralis major and then we'll detach the pectoralis minor and we'll get down to the artery." [He said], "Oh." I said, "You know, just like a radical mastectomy." [He said], "Oh yeah. Yeah." I mean, his brain had to connect to a standard operation he learned. Step one, step two, step three, step four, step five, step six, you know. It's a way of training which is as unintelligent as it can be, because what you want is—yes, surgeons do have to learn operations, but they have to learn the principles, anatomic and physiologic and pathologic, of what they're trying to do. And I saw this again. St. Albans, people would talk about these things. "Oh yeah, such and such," you know. And something would click on. And they … had learned this and learned this and learned that. They couldn't connect the pieces. And of course, those guys are never gonna do anything that's different. And faced with a different situation, they don't know what to do. And it's just not the way you should teach people to do surgery. But anyway, I had a very interesting time there, but it went on and on and on. I think the one thing I can say about this period in my life is that it was only time I was ever really necessary. I don't know what else I can tell you about it. It was always a very, very interesting time. Talking about being necessary, I learned out there rather quickly that everyone, all the men, whether corpsmen or doctors, everybody judged everybody else on what they actually did. There wasn't unreal expectations, but nobody had much respect for people who sloughed off. And I, one time, got very upset, actually. We had a … wonderful medical service officer initially, who was a—heavens, we're getting toward one o'clock. We'll have to leave to make my one-thirty luncheon—but a medical service officer who was very compulsive. As Pino said, "He eats himself." He took care of every detail about the moves of the company and this and that and the other. I've forgotten what him name was. It was a Scandinavian name, nice fellow. The next medical service officer was the sort of classic cartoon of the Navy long-termer, who knows all the angles and is not gonna do any more work than he has to and is gonna ride along. He's just there …

PIEHLER: Because he knows the whole system.

GRILLO: He's gonna just get through and collect his pay and get his retirement and get out. He was a bit of a slob. I had very little to do with him. One day he walked in the tent. I'd just come back from the operating tent. And Perkins had come back from something else. We were going to our bunks. And he came in from a meeting he'd been to up at battalion or

division, or whatever. He was grinning away, and he couldn't wait to share it with us. He says, "Well, gee, you know, they're setting up a court martial board, and they … wanted to put me on it, but I got out of that. I put Perkins on it." I'd been working like hell, you know…. I couldn't stand it any more. And Pino was over in the corner, so I should have shut up. I turned to him, I said, "Nagel, you shouldn't have done that." He says, "Why? What's the matter?" I said, "Well," I said, "first of all, we need Perkins around here." No, I said, "First of all," I said, "you know more about the administrative stuff, anyway…. That's your job here. Secondly," I said, "we need Perkins around here, because he's very useful around here." And I said, "And you're no goddamn use at all. We wouldn't miss you if you were away. We'd be glad to be rid of you," something like [that]. I just got hotter and hotter. And Pino's eyes lit up, and I said, "Oh, he's gonna cut in." Nagel put this stupid grin on his face and didn't say a word, just went to his bunk and stretched out, because he—I think basically he knew that it was true, and he didn't care. (Laughs)

PIEHLER: Do you think—you probably reflect on—do you think the Marines would have been better off with their own organic in Korea, with their—because in some ways, they're serviced by the Navy, and in an invasion in the Pacific, that hospital ship made perfect sense. But the kind of war, particularly after the beach landing at Inchon, they probably were the orphans. You've very much indicated that you were the orphans, you know, of the Navy medical.

GRILLO: Definitely. Definitely.

PIEHLER: And if they had an organic Marine—if you had been a Marine surgeon, not a Navy surgeon …

GRILLO: I don't think so. Frankly … I think it's almost too small a unit to build something that would—maybe I'm wrong. I'm saying this off the top of my head. To build something that would work you'd have to have the right personnel at the right place at the right time. And then how the heck could you keep a trained surgeon trained, when most of the time the Marines move from one camp to another, and march around. This is a fighting war. So, in a sense, what you need is—for a specific situation, you need an infusion. Now as I say, I don't know who made this decision to set up two small surgical units. I think that was brilliant. And if they took the very next step and just picked up the phone, and called BuMed in Washington and said—what I would have said, for example, with two units, I would have [said], "Send me two board surgeons, good ones, who really know how to operate and are willing to put out. And then look through the reservists you've just got in, and get a couple of guys in the fourth year of training, like me. Send them out." So you'd have four, two seniors, and two juniors. If you really wanted to get lush about it you could say, "And send me a couple of anesthetists."

----------END OF TAPE TWO, SIDE ONE----------

GRILLO: And they could … meet those needs for ad hoc situations with just a little intelligence at the top, because they had endless resources. It wasn't as if they were fighting the Pacific War with people everywhere all over the world. The Navy had one commitment,

the Marine division plus a few pilots. That was mostly a Marine air wing, anyway. Now here is another example of disintelligence. At one point we were planning a major attack. The enemy had been dug in for a long time, and we were now gonna start, up after the peace talks had started, the so-called peace talks. So we could therefore get prepared. They were gonna jump off at four o'clock in the morning. The night before, or the day before, late in the day, two helicopters came in with two surgical teams [that] they'd sent from Yokuska Naval hospital to beef us up because, I was the only surgeon. You've got a whole Marine regiment fighting, plus a regiment of Korean Marines so that you can hardly keep up with. We'd been told about this so we had a couple of extra tents set up with operating tables. They were miserable little wire things with no adjustability at all. We put them up on boxes. You turn the patient; you couldn't adjust the table. We had no lights. It was terrible. But anyway, we were gonna do the best we could.

Well, the first team comes across, gets out the plane, and the guy, I see him coming. He looks familiar, and he is a resident that was in Roger Wilcox's class, Sig Gundersen, who is the salt of the earth. His … father and uncles and everybody were doctors in the family. The Gundersens at La Crosse, Wisconsin. At least three of them came through our surgical program at MGH. Every one of them was a gem, dependable, hard-working, nice to get along with, perfect. The best of the Middle West. And so, Sig Gundersen is there. I could have kissed him on both cheeks when I saw [him]. He was a year behind me, but my troubles were over. He had with him a guy who poured a little anesthesia, so they were all set. And they worked all night, and they really … did a great job.

Then the other helicopter lands, and three guys get out. Someone says, "These guys want to meet the surgeon." So they came over to meet me. And these three guys had this terrible worried look, and the leader of the group has his face hanging down. He says, "You know," he says, "they sent us out as a surgical team," he said, "but none of us are surgeons." They just took three doctors, said, "You're a surgical team. Go." And I said, "Well, have you had any surgery?" And I think he said, "Well, I had a little as a rotating intern." I said, "Well, alright." You know, he … thought I was gonna chew his head off, but I said, "Okay." I said, "Well, maybe you can do some debridements. Anybody done any anesthesia?" "Well, I gave a few…." You know, it used to be a requirement in medical school. I had to give twelve anesthesias—drop ether anesthesias. And they'd sign a little card for you to graduate, so he probably had done that. Well, that night—it's the only night in the nine months or whatever it was I was in Korea that I ever saw acute appendicitis. Three cases, one Marine and two Koreans! I forgot whether they were Korean Marines, or ROKs, or what they were. And there was no question about the diagnosis: Bing! McBurney's point. It was straight out of a textbook. They had it. And so we put the three amateurs to work, and they spent the entire night—probably, ten or twelve hours doing three cases of appendicitis.

PIEHLER: Which isn't—I've been told it's not a major …

DOVER: No, it shouldn't take that long.

GRILLO: Well, with a healthy guy—these were early cases. It would probably be fifteen minutes per case.

PIEHLER: Yeah.

GRILLO: Or maybe thirty if you're inexperienced. They just took forever. But if you don't know how, you don't know how. I tried once when—before I went into the service, one of my very good classmates, who is one of the most brilliant physicians in the United States, who was here in the Medical Service, said, "You know, Hermes, I'm going in the Army soon, and I have never even seen an appendectomy." I said, "I'll tell you what"—we were both residents. We had lots of appendicitis. "Well, I'll give you a call next time we have one." So one night I called him and he came down. We put the patient to sleep. It was a straightforward—no problem. I said, "Why don't I take you through this?" I tried to help him with it. Well, I tell you, it was just—you know, it was like an ape assembling a watch! Here's a guy with a brain that is absolutely incredible, but he just not had the basic training, just where you start. You can't just do it. So, unfortunately, that was the night one of those patients died. One of the Koreans died. I know how: under anesthesia. Probably poured too much anesthesia for him. They didn't know what they were doing. Awful.

PIEHLER: Which is fortunate that at that point you hadn't had a wave of casualties where you might have really needed these three.

GRILLO: Well, we couldn't have—I wouldn't have …

PIEHLER: Yeah, you wouldn't have …

GRILLO: … I would never let them do a laporotomy or anything important. Appendectomy is so simple. He'd done them as an intern. So, I figured, "He'll figure—it'll come back to him. He'll find it." They were not cases with appendiceal abscesses or anything, and he could call me in the next tent if he needed to, but he didn't. When we got working around the clock like that everybody would pitch in. I remember the corpsmen had shifts. We didn't, because there wasn't anybody to shift with. In the M.A.S.H.s they did. They had regular shifts, and they could come on, be off duty, on duty, on duty, off duty. But I noticed one of the corpsmen who had been there continuously. A couple had been there forever. I said, "Hey, … [isn't it] time for your time off?" The guy said, "Well, if doctors can do it, we can do it too." (Laughs) And they just did that.

PIEHLER: So you were very impressed—in your article, you really spoke very highly of you corpsmen …

GRILLO: Oh, God, yeah.

PIEHLER: They were really top notch.

GRILLO: They put out, and we had a couple of operating room corpsmen who were excellent. Instruments were in my hand, and immediately. They were real pros. And everybody worked very, very hard. I'd say this, you know, there's no holding back on things. And they were proud of it, you know. Things got better and better. We started—it's

silly, we mimeographed paper records at least, a kind of hospital records, TPR sheets and the rest. And we'd make rounds every morning if we weren't operating. And the corpsmen were proud of this, sort of like a real hospital. I also became the official sign painter. I painted a big sign at one point that said, "U.S. Naval Medical Center, Inje," Inje, Korea.

PIEHLER: But, it sounds like, they appreciated this sort of professionalism.

GRILLO: Sure they did.

PIEHLER: That that was really—and that they were part of it.

GRILLO: That's what they appreciated. They said that. One of them said, "Well, seems like the doctors are getting better and better." And the word got out pretty quickly that things were going well.

PIEHLER: And the corpsmen, what were their backgrounds? Were they … also all reservists, too, or …

GRILLO: No, no. These were regular Navy corpsmen.

PIEHLER: They were regular Navy, so they …

GRILLO: Well, they were regular Navy in the sense that they were—probably some them … were drafted in the Navy and were made corpsmen. So, but they were in the Navy at that point. And I … really don't know anything much about their backgrounds, come to think of it. I did talk to one fellow, because I took along with me some small pieces of canvas board about this size, and a small set of oil paints. I don't know what I had in mind. I think I knew what I was going into, but I thought, "Why not, what the heck, I'll take it." I got the materials in San Francisco. One quiet day I was doing a landscape of the mountains, trying to ignore everything in front of me, mud, dust. And this guy came by and was very interested and obviously knew something about it. He was one of our cooks. And it turned out he was an artist from San Francisco. So we chatted a long time, and he showed me some of his sketches. He was heavy into modern depictions of the crucifixion, and very serious. So we chatted a little bit, but I don't know anything more about him than that. And the rest of them were just ordinary corpsmen.

PIEHLER: Did you ever get … a furlough or any leave while you were in Korea?

GRILLO: Yes. Yes, at one point we … were, I think, in reserve with the whole regiment we were in with. A whole group of us went over to Japan. There must have been ten of us, you know, from different units, not all from my unit. We went down to somewhere, sort of headquarters, where they had a lot of Marine uniforms around. We were in fatigues, we wore field clothing, which, by the way, we had to buy ourselves. [We] had sent our Navy uniforms back home. So we had nothing nice to go out into the world in. They had a lot of these uniforms. I'm sure some of them were probably for either dead or wounded Marines.

There were just great piles. We put our Navy insignia on the uniforms, which you were allowed to do, obviously, medical insignia on and so on, and went off.

First place we got to was Yokosuka Naval Hospital, which is the old Japanese Imperial Naval Hospital. And they had an officer's club at the base. We were walking in with our duffel bags. A rough and ready guy from Chicago was with us, who … generally had a sort of sour—he was a nice enough fellow, was a doctor—sour disposition about most things. A Navy officer walking by with a drink in his hand saw this bunch of Marines coming with our field clothing. Most of us still wore field shoes. We hadn't had a chance to buy shinier shoes yet. And he made some sort of comment, "Hey, the front is that way." And the doctor immediately replied, "How the hell would you know?" (Laughter) And the other just quailed and got out of the way. There was a funny atmosphere, a little bit electric.

At one point I went into the washroom with another Marine. He was a—[had] been a guard or tackle at Oklahoma, a solid brick. Nice fellow. First name was Randy. Two Naval officers, flyboys, walked in with their wings and all. We had had a fair bit to drink by then, and they had had a little more to drink. One of these pilots, looks over and sees us. "Hey, gyrines." You know, that's the word they use. Neither of us said anything. And then he looked at the insignias, and said, "Gyrine." No, "Jarheads," he said, "jarhead doctors." Well, you know, I would have said, "Okay, so what? I don't give a damn about this, you know, I'm just passing through." But Randy turns around, and I saw he had his fist down and his knuckles were white in his great big hand. I said, "That poor pilot's gonna have a broken jaw in about a minute. He doesn't know it's coming." (Laughs) And he made some sort of comment to him, and this other guy made a flip comment. I was, you know, also a little bit drunk enough to try to help out. (Laughter) And my tactful way to handle the situation, and I really was trying to help, I went over to him and said, "Flyboy," and I ticked his wings like this. I said, "Why don't you take your little wings and just fly away?" I didn't want him to get decked. And his friend saw what was going on and he took my comment to be aggressive. It sure as hell must have sounded that way, I would say. (Laughs) I could have gotten my jaw broken, too, I suppose. We were both, fairly weathered because we were out there all the time and we had a couple rows of ribbons by that time. We were in Marine uniforms with our field shoes on, and the other guy said, "This is trouble." He doesn't know the difference between a Marine doctor and a Marine. And so he got out. And so they both left in a hurry, and I think Randy was disappointed. (Laughter)

It reminded me of when I was in medical school and there was a group of guys in the dormitory at Vanderbilt Hall, upperclassmen, who were great party guys. And they came back after one weekend all in various stages of disarray, because apparently they had a—they were in a car and were driving down Huntington Avenue and there was a carload of Marines, and they started joshing them. They were wearing their Army ASTP uniforms and they [were] making sorts of cavalier comments, and the Marines didn't like that. And at the next light, the Marines apparently got the medical students out of the car, and one them had a broken jaw, and one of them had a broken arm, and the other guys were black and blue, except for the one who started it, who was Barney Stoll, who was sound asleep in the back. (Laughter) But you don't, you don't mess around with those fellows, you know. Well, you want to have some lunch?

PIEHLER: Yeah, that would be great.

(Tape paused)

PIEHLER: I wanted to—we really, in a sense, finished Korea, but I guess one sense, connecting both what you were saying about your training and then … Korea is, you said that the World War II people coming back—you learned a lot about what—this had clearly strengthened a lot of their abilities as a surgeon. How do you think your experiences in Korea strengthened your abilities as a surgeon and as a physician?

GRILLO: Well, … I can think of a number of things. It's not so much a matter of—people always presume you must have learned to do a lot of new things in war. Well, actually you don't, because what you do out there is what you brought to that scene in dealing with a wound. Now granted, the more you deal with wounds, you run into special little problems and how to avoid those, but they're more or less really minor things. What I learned in the situation I was in, particularly where I was completely on my own, was a kind of independence, because I had no choice. It wasn't irresponsibility of saying, "I'm gonna try to do this on my own," which a certain number of residents do to a certain degree. We all do it to a certain degree, but you try not to let it get out of hand and hurt anyone. But here in this situation, you have no choice, and you might hurt someone, but on the other hand, a lot of people will be alive that won't be otherwise, and have to do it. Inevitably that, I think, gives you a kind of confidence. Maybe it's something you develop anyway, but this … came along a lot sooner, in that way, for me. Secondly, just the huge amount of technical experience is, I think, of some benefit, in terms of your own surgical technique and abilities.

And of course, the other thing for me was, I'd say, was just general experience, it didn't even necessarily have to be medical, just the experience of being out of an institutional protective framework. You wouldn't think of a surgical residency as being protected, but it is to some degree, and just meeting a lot of people and doing a lot of different things in a lot of different constraints, and dealing with the military mind that inflicts itself on medical military medicine, even for that matter in the hospital setting in which I was in St. Albans. There's always that—I won't say intrusiveness. It's a different kind of administrative view of things that you have to deal with and the people you have to deal with. All of these were just a maturing experience. I suppose if I'd spent two years abroad in a clinic in England I might have learned a great deal, too, of a similar sort, and also something very different, depending on the specifics of what I was involved in doing. You know, had it been surgery of the heart, I would have learned heart surgery. So I think it's more in these general aspects than any specifics, I would say.

PIEHLER: I also—Crystal and I were talking at one point about your experiences. I was sort of saying after you came home, and you did regular surgery—you know, you became a civilian again, you know, you don't do surgery for twenty-four hours in a stretch. I mean, I would imagine it's a very different—I mean, how does that experience, you had so much surgery …

GRILLO: Well, it's not that different, for this reason. In Korea, it was hot and cold.

PIEHLER: Yeah.

GRILLO: You start an attack and you may operate for the next couple of days. And then you're fairly busy. There's fighting going on, and you'll be busy more or less continuously. At other times things quiet down completely. The front quiets down. They aren't attacking, we aren't attacking. But usually there was at least one amputation a day, somebody coming back on a trail, patrols have to go out all the time. Somebody steps one footstep to the right or the left of the step he took coming out and there's a mine there. Nobody knows it's there. And there's a guy with a leg shattered. I remember one time when a Marine captain, who was our security—he was a Marine captain reservist— was brought back. He had been an enlisted man in World War II. And he had fourteen men and two fifty-caliber machine guns and they would set up our perimeter. If it was a pass, they'd be up on the hill. The front was so fluid, you never knew what was happening, and they didn't want to take a chance of having their wounded massacred. He'd been through all sorts of close fighting in the South Pacific. And he said, "Doc, do you mind if I watch an operation some time? Is it possible?" I said, "Of course." I said, "Come on in." And I said—almost sounds like the wrong thing to be jocular about—I said, "Probably around four o'clock this afternoon we'll take somebody's leg off." Sure enough, four o'clock there was somebody in there with his leg shattered and had to be cut off at the knee. So, he came in and I went ahead with the job. I think I made the initial incision, which is old fashioned like this, and I heard a thump. (Laughs)

PIEHLER: He had …

GRILLO: And he had seen things that would probably make me turn green, but he was out cold on the floor. And he didn't even get to listen to the bone saw. (Laughter) But you know, it's just a matter of experiences, that sort of thing. But you could time it all in that way. Just knew it was going to happen.

PIEHLER: Some of your work was very regular.

GRILLO: Well, in that sense.

PIEHLER: In that sense.

GRILLO: Well, in the sense that it was hot, and it was cold, it was hot, and it was cold. Back in residency, I was back to the same old sort of drill, and your rotations varied in intensity depending what … service you happen to be on. But by and large, I would say there probably wasn't a week in my residency where I didn't work seventy hours as a minimum. You go to work early in the morning. When you were an intern, five o'clock, to get everything ready before rounds. You know, put the intravenouses in, get the blood counts done, and so on. But you'd get up and the latest you'd start would be around seven o'clock, because you want to be in the operating room at seven-thirty. And then the day would go on, and if you were a resident and you were on that night, you'd certainly work almost without fail until about ten o'clock, and often to eleven or twelve. And if something

really was going on, then there were calls at night, and you'd have to get up and get out and go see the person. You can't truly trust things on the phone. And then if you were in the emergency room, you'd probably be awake all night until the next morning. Then you start the next morning's work and finish that. In the emergency room, you'd get off at about one o'clock, so you would have gone around the clock that way and then come back the next morning. In the regular wards, you'd work through the whole day until the work was done. You didn't quit at five o'clock, but six or seven o'clock at night, and you'd be through, then you had your night off. Weekend, you worked through Saturday morning 'til about middle of the day, and then take off some time, one o'clock, two o'clock, three o'clock, four o'clock, and then come back Monday. And then on another service I worked on a pattern, which they finally changed, you'd work all day Saturday and then you come in in [the] morning on your "weekend" off. You'd make rounds in the morning and finish about ten o'clock in the morning, and then eleven o'clock, that was your weekend, from then until Monday morning.

PIEHLER: So in other words, I mean a residency was a pretty….

GRILLO: Yeah, it was hard going, but nobody ever complained about it. You wanted this, and of course, your learning opportunities were so great that you—that's what you valued. And if somebody said you could work half as long, do half as much operating, see half as much, you'd say no. "Why should I drag it out—I'd have to take another couple of years doing this." And you know, you're young, and you're full of bananas, and you keep going. You just … don't stop. And when it comes to fatigue, yeah, you get very fatigued. If you're sitting, you could fall asleep. I mean, sitting talking to someone or watching a movie or something, you'd go to sleep. But if something comes up, and there's a patient with a problem or you're in the operating room, the old adrenaline flow is on—see, I don't believe any of this nonsense that's going on now from New York, started there with that Libby Zion business. I don't know all the merits of that case, but she died, as far as I could see, not because of fatigue on the part of her resident, but apart from her drug addiction and all the lack of information and all that, it was principally that somebody didn't know what to do, which was a matter of depth of education or the degree of supervision, which is another whole discussion—not fatigue. Fatigue was the last thing involved. And there have been studies that demonstrate that, as far as they can—I don't think you can prove that fatigue has been the cause of error making among physicians.

DOVER: Doesn't Harvard—didn't Harvard, at one point—I think it started around 1927, have a fatigue lab?

GRILLO: They probably did. I can't tell you that. But I know that there were some specific studies, and I can't cite them, references, to this very question of judgment and fatigue. And I can't think that I ever made bad judgments because of extreme fatigue. Bad judgments resulted from a lack of information, a lack of maturity, or just making the wrong choice, because sometimes there—only after the fact—you always, in medicine, as you know, and especially in surgery, you are forced to act definitively on insufficient information, almost always. You always wish you had more information. And the more you get, the better it is, but it still—I mean, you think now with CT scans you know before you go in what you're going to find, but a lot of the time in those days you didn't. Just to figure it out, and you'd

open up and say, "My God, look at that." I think those are the problems. And then you have judgments to make, and then after the fact somebody sitting in a courtroom or whatever can say, "Well, now, doctor, did you consider such and such?" "God damn it. I didn't," or "I did, and I discarded it for this reason or the other." It's—they say in an old story, the most accurate instrument in medicine is a thing called a retrospectoscope. And you can always know exactly what should have been done.

So I don't—I really have a very short temper with that, and this whole business of the outsiders, legislators, regulating how to run residency programs, and the number of hours you can work and how many hours you have to have off and so on, who have no concept or understanding of how a surgeon is trained. It doesn't affect internists as much, frankly, but it affects surgeons a great deal. It would mean people having to leave, basically, in the middle of operations, to be consistent with the law, of not seeing a patient whom they operated on themselves and were deeply involved in, and if they come in to see the patient they're breaking the law, the next day, being forced not to be there when they should be there, complicating coverages, breaking up the continuity. We used to feel badly enough about being off every other night. Now … they're only on every third night. Because you lose—out of that half-evening you're away, you lose contact. You come in the next morning, and you find Mrs. So and So died during the night or this one had an acute emergency and had to be operated on, and you figured, "Gee, I should have been there." You couldn't be on all the time, but it was—even that, there was this break, and you learn an awful lot. And it's also better for the patients if there's continuity of care. And what they're forcing things into is this punch-the-clock business. You know, Joe comes in and I say, "Hey Kurt, I'm leaving, you're on. The patient in so and so is looking pretty bad. The one down there may cool tonight. That one over there you might or might not have to operate on. Seemed like a pretty tender belly. You never examined him before, so you don't know if it's getting better or worse." Then I say, "Okay, good luck. I'll see you in twenty-four hours. Tell me how it comes out." That's not the way you practice medicine. It's the way … you run a factory. And I think it's part—well, I'm getting myself on my soapbox. It's part of this general deterioration in the United States of treating everything like a business operation.

PIEHLER: It's an interesting point, because my stepfather, a couple years ago, had an operation. I was just—for patient morale, and even for the family, I mean, when his surgeon stopped in on a Saturday morning to see how he was doing with his wife, you know, I just thought this was just—I just couldn't believe he did this. And, but it showed me a lot about his dedication to medicine.

GRILLO: Well he wanted to. You know, he wanted to.

PIEHLER: Yeah, it was very impressive. I mean, I really—and I thought, for morale purposes, for the patients, this was … really not just—you know, he really cares about his patients.

GRILLO: Well, if a surgeon is any good, he really gets involved with his patients. And I tell you one of the things I just—I probably talked to you about this, and it sounds a little maudlin, but it's absolutely true, is that after—I should have known better, you know, but

after all, since 1947 I've been taking care of patients surgically in one way or another, and when I stopped operating, after a week or two I suddenly began to feel as if literally a lead weight was off that I didn't know I had, was off my shoulders. And I no longer—you'd wake up, you know, three in the morning, no matter how many years you've been at this, and you say, "Now, why the heck—what went wrong? Why is that patient on a respirator even though we operated on him three days ago? What could we have done differently?" And you feel awful when things happen, even though you're not—you can't—there's no culpability, but there's—it just doesn't, isn't right. Or you say, I'll say, … driving into work, you know, Tuesday, "I'm going to operate on this patient," and the night before I find myself sitting down with a paper and pencil and trying to figure out, "This is a different situation. Should we do A? Should we do B?" And all this concern and worry that you get involved in, it's part of taking care of patients decently. On rare occasions Cam Wright will say, "Well, would you mind scrubbing in with me on that patient you sent to me?" I still get calls and I funnel them, farm them out to the various people I think can do the job, and if a patient wants, I will stick my nose in, too. They say "Would you?" And sometimes, I've been there six hours, you know, not very often, but once in a while. And … when I take my gloves off, I don't operate anymore because I don't have insurance coverage. Sometimes I want to say, "Give me the instrument. I want to just show you how to get around this corner," but it's not legal, so I don't, and lawyers have seen to that. If a patient was gonna die, I couldn't save his life legally. I could just talk to him about it. Fortunately, that's not going to happen, because these guys are good. When I take my gloves off, I'm through with the case, and I walk out. And two days later I bump into him and I say, "Hey Cam, how's that patient doing that I helped you on two days ago?" Or—I haven't thought about it. Otherwise I would have thought about it a lot—come in on Saturday to see what's going on.

PIEHLER: Yeah, to see, if that had been your patient.

GRILLO: I hate to see that kind of commitment broken. What you do in a residency is you teach them that their work is episodic. And that's why so many young doctors now are going into emergency medicine [and] radiology. I hope they'll go back into anesthesia. They got frightened out for a while. There was some bad propaganda that there are too many of them, but there aren't. There's a shortage, because it's episodic work. They can punch the clock in the morning, work through a hard-working eight or ten-hour day, and punch the clock and leave. Or they can work Monday and Wednesday and Friday, in those cases, and there's no continuity. But I hate to see that happen in surgery.

Now some of it has become necessary, and part of it—and this is not a sexist remark—has to do with a large number of women in medicine, because 50 percent of students now in medical school are women, and that's good. And they're great physicians. And we have a lot of female surgical house officers now and it's creeping up to greater numbers all the time, and they're great, they're wonderful. But some of them, and you can't blame them for it, when they come on the staff, they come on part-time because they're at the age when they want families, and you just can't work ten hours a day. Because when I went on the staff I did the same thing. I used to come in in the morning. I was in here every morning by seven, in here, at my desk at seven, look through things, make rounds, and be in the operating room at seven-thirty. And then you'd work through the day, and sometimes I'd get out at six,

sometimes at seven, sometimes at eight. I'd come in on Saturdays to do the paperwork and leave about four o'clock. And that's tough on my family. From my end as a father, I certainly wasn't home as much as I should have been…. You can't quite split it evenly. Even though they talk about it, it doesn't work out somehow that way. At least no one's figured it out.

PIEHLER: Or it's very, very difficult.

GRILLO: So, it's not fair to the kids for a woman to be that devoted to her work, which, in a way, also inhibits them somewhat from, let's say, rising to the same point, if you call it rising, or achieving whatever staff position. And everyone's very understanding about this, but it's still—the fact is they can't do it unless they're willing to give that aspect of life up. And so it's a tough decision, and it's getting better and better because there are places where women do a certain amount and they're only there a certain amount of time. For example, Fred Frigoletto, who runs our OB [obstetrics] service, not GYN [gynecology], almost all of his staff are women. And he told me he says, "You know," he said, "we got a little problem with the young ones who all want to be at home on the weekend with their kids." He said, "But I couldn't say anything about it because I would become a sexist male chauvinist pig." He said, "But now we have enough senior women. It's been going on long enough," he said, "that they're carrying that battle. They're working it out. They're going to battle it out among themselves and see how they're going to handle this." And they'll handle it. They'll work it out. I think that part will work out, and I don't think that's a big problem. But I would hate to see just the basic ethos of a situation be that you're doing a part-time job and you just put in a few hours. My friend, Mikhail Perelman, who is a famous Russian surgeon, a tracheal surgeon—he's still practicing. He's my age. When I first met him in Germany, we were talking about things and working conditions and somebody says, "Well, what happens in Russia, Professor Perelman?" And he said, "Well," he says, "they work six hour shifts, everybody in the hospital…." "What, in the middle of an operation?" "Oh, yeah." You walk in and you say, "Okay, here's where I am right now." You hope you don't just have your finger in a bleeder and take it away. And you say, "Okay, take over, Ivan," and "Okay, … see you tomorrow." And of course, then I asked him the critical question. In those days he didn't know English, so in German I said, "How many hours a day do you work?" I smelled that one out right. He said, "Oh, about thirteen." (Laughter)

DOVER: One thing that interested me is that when you decided you wanted to go into thoracic surgery, Dr. Churchill told you that it's all been done.

GRILLO: Yeah.

CRYSTAL: So, you know, did you already have ideas at that time of stuff that you wanted to do, or …

GRILLO: No, no. I knew that I just liked the field, by that time, and I was interested in general thoracic, not cardiac, surgery. So I wanted to do that as my life work. I had no ideas about contributions, or trying to become famous, or anything else. I just wanted to work in that area and do as scholarly a job as I could and see what comes along. I had no special new

ideas or anything of that sort. And he, in a sense, was right, because he came with that generation in the 1930s who really made thoracic surgery worldwide. The history goes way back and I could go on and on about that, but he was one of the people who developed individual ligation techniques which made it safe to take out lobes by dividing tiny arteries and the veins and the bronchi separately, and so on, which … sounds fundamental, but it was … And he was one of the great contributors. And he did a lot of things. He had series of patients with lobectomies with a 3.4 percent mortality, which in those days, when you consider the anesthesia, no antibiotics, no blood transfusion, the general state of things, … that's a very good rate right now. He was just good. He and Richard Sweet together, did the first, some of the first successful series of esophogectomies without leaks. It was unheard of then. It's still almost unheard of. And they taught all of us how to do it. And so a lot of that work has been done, and so in his sense, that was just his view of the field.

Now, he was a very wise man and very far-seeing man, but he also had blind spots the way we all do. For example, was somehow very negative about heart surgery, though he was the first American to do a decortication of the pericardium of the heart. But he just was negative about it, and he held back heart surgery at MGH, in a sense, for that reason. And he was wrong about that, and certainly so. In this sense, … what he was trying to do was to help me and say, "Why don't you look in some area where not much has been done, where there is a lot to be done?" And so he made some suggestions about that, but I stuck to this. But I wasn't strictly—in those days the organization, this hospital, was such that there was no thoracic service as such. It was part of general surgery, as was vascular, and plastic, and all these other things. So basically, I came on as a general surgeon, but I made it my business to stick my snoot into thoracic, and he agreed I could visit on the thoracic service, and so on. And then the tracheal thing was—I just backed into [it]. I don't know—did I send you that?

DOVER: Yeah, you sent me that.

GRILLO: Notes on the Windpipe. You know, well, that basically is how I got into that field. It was due to a case that was interesting, and I had a nutty idea, and nobody was interested, so I thought I'd follow it myself.

DOVER: And you started getting cases then, because people knew about it.

GRILLO: Well, what happened is—the first thing I did was just to go to the autopsy room and did a lot of anatomic studies, which showed, to me, that this was feasible, because I knew that replacement of the trachea hadn't worked up to that point, 1960. You can take that reprint and if you want to wade your way through it a little, you'll see that replacement hasn't worked yet, and now it's 2002. And it still hasn't got much promise. Maybe something will work it out eventually. So I said that we—I'll forget replacement, although I did, over the years, made different types of replacement attempts, too. Everybody says, "Well, maybe this will work." And none of it has really worked. What you need for a tracheal operation is something that's dependable. It must works most of the time. I used to say my rule about dog surgery experiments is that if you can find something that works 100 percent of the time in a dog, there's a bare chance that it will work in a human being. If it only works 40 percent of the time in a dog, don't even try it in a man. So staring with that belief, I explored an

anatomical approach, and that seemed to make sense. And so when I thought we actually could do this type of work, that's when I lined up an anesthesiologist and we worked out on the blackboard how we were going to keep these people alive during surgery. And then just as if the timing were right, that's when Dr. Earle Wilkins came up with that patient with the carinal tumor, and we took that on, and fortunately it worked, or I probably would have been discouraged and said, "I'm not going to kill anybody else." I thought she was going to die when I finished the operation, but the anesthetist said, "Oh, she'll be fine." And she was fine. And so then we did a couple of other tumor cases, because nobody else knew what to do with them, so they were happy, and the word got around a little that we had done some of this type of surgery. And then … just by coincidence, is a time when people started surviving respiratory failure on respirators, which then meant they were getting tracheotomies and endotracheal tubes and resultant tube damage. That began to appear as an epidemic.

DOVER: Right.

GRILLO: I had to deal with those lesions. And then we went back to the laboratory and we obtained information on mobilization of the upper trachea. Data on the region below the larynx with Mulliken, and that worked. We started seeing more and more of those cases. I became curious—where are they coming from? How can we prevent it? I went back to the autopsy room with Cooper and got him snagged into it this study, starting his career in investigation. We did experimental work, and then developed a cuff to prevent the injuries, One thing led to another. And then, of course, we dealt with the upper trachea and had to work out new operations for that region. Different cases came along, carinal cases. It … begins to grow. I do remember giving a lecture once. I was invited down to Norfolk, Virginia to talk to this group on tracheal stenosis due to intubation. I discussed the lesions and how they form, and the treatment and our results of surgery and I also discussed the new methods of prevention that we were working on and had developed. After the meeting, a doctor came up to me with a quizzical look on his face. He said, "You do quite a few of these tracheal operations on these patients with stenosis, don't you?" I said, "Well yes, I've told you about them." "Yeah, I know," he says, "not many other people doing them, are there?" I said, "Well, no." He said, "Well, what's all this prevention stuff?" He said, "You'll stop having cases." I thought he was putting me on. He was dead serious. He just couldn't understand why I was talking about prevention when I had a good thing going. (Laughter) Well, how can you pervert medicine worse? I almost laughed. Of course, he was more interested in my welfare and he probably figured this egghead from Harvard doesn't understand how the world …

(Tape paused)

So anyway, that's how that developed. And then of course, the minute you get into something like that, then you start seeing more clinical problems, because people send you all their problems. And that's when you get things like postpneumonectomy syndromes, and congenital malacia, and the problems of congenital stenosis, and all these other cases. The more you do, the more you become known. And then we started getting all types of patients.

When other people started doing these operations, we began getting their bad results to re-operate. It was another great challenge.

DOVER: Right.

GRILLO: It was not planned. It just happened. And of course, that also was very helpful because about that point, when Austen became chief of surgery here after Russell, he decided to reorganize the department of surgery and have subdivisions of gastrointestinal, and vascular, and plastic, and pediatric, and cardiac, and then thoracic surgery. So he asked me to head up the thoracic section. Gordon Scannell once said, "A better mouse trap," the tracheal thing, brought in the patients. Physicians got to know that we did complicated cases. We started getting a lot of referrals of other problems, like brochopleural fistulas that people tried to fix twice and it wouldn't work, and then we'd get them. We also got a lot more primary cases, too, and people got to know we had a functioning thoracic unit, you know, with a label, and so the volume began to increase. Now there are six surgeons in the department, and all busy. Those things are so unpredictable. To some degree they are predictable. The tracheal business turned out to be also a lead-in to more rapid development of a thoracic surgical unit, which has gone along very well, I think, in that sense of being productive and a good place for young men to get educated—young men and women, too, now, to get educated.

DOVER: So the cuffs that you and Dr. Cooper designed, those are still—those are the main ones in use today? Nobody is still using the old ones that cause all the damage?

GRILLO: Well, no. No. We designed that large volume cuff. Other people worked on about half a dozen different solutions to the problem. But I'd say what it's shaken down to now are the large volume cuffs, basically. Other people developed large volume cuffs of different types, so I'm not going to claim—I think anybody claiming priority for anything in medicine is a fool, because there's always someone in 1890 in the German literature who did something like that, you know, and, and the last thing you want to do is get into an argument of who poured ether first. So I just say it was one of the original—it was a good piece of work because we did the pathological work, then we reproduced the lesions in dogs and then … from that we built a model that didn't produce the lesions, and then we developed a clinical cuff. We did a randomized study in patients, which turned out well, and it's borne up over the years. In this hospital we've not produced a cuff stenosis now in thirty years, forty years.

Strangely enough, the principal reason we keep operating on tracheas—there aren't huge numbers but every month we do some, is stenosis due to cuffs. They come from all over the world. I just had one, whom I referred to Cam Wright to do it. The relative of an Indian thoracic surgeon from India who, he called me about two years ago and I told him what needed to be done. And I told him also, (I figure I'm old enough now to say that) for God's sakes, be sure he found somebody who really knew what he was doing. So he found somebody in India who did an operation, and didn't know what he was doing, so then here two years later, she came up here and she got fixed the way she should have been fixed, only

it's twice as hard a second time. The reason … that they develop those lesions is that they don't use cuffs properly.

It is very simple. The original cuff we developed, unfortunately, isn't made anymore. It was made of latex, which is infinitely extensible, so to speak—as you put more air in, the pressure goes up very, very slowly. You can't go beyond a certain amount or the cuff will burst, or it will occlude. The plastic ones that are the same shape, like this, you fill them up like this, there's no rise in pressure. If you put a few more cc's of air in, [the pressure goes up] like this because the plastic is non-distensible. What happens is that people taking care of patients don't realize that, or there'll be a few cc's of air left in the cuff when they deflate it, and then they put in up to twelve—before they put in twelve, there are four more in there, now they've got sixteen and the pressure instead of being here [low] is up here [high]. It's a misuse of the cuff. That is a constant educational problem, and you can talk yourself blue in the face and write it and publish it. It just doesn't get out there somehow. Constant lag.

DOVER: I've read something that you wrote recently about stents.

GRILLO: Oh, God.

DOVER: You didn't sound …

GRILLO: There's a paper coming out very shortly. I don't know where it will be published, but Henning Gaissert, one of our young fellows, has written [it]. He put together about twelve or fourteen patients who had been sent here who had stents put in for benign disease of the trachea. They were all sent here because they had such horrible complications that the original people who put the stents in didn't know what to do with them anymore. I wrote an editorial about expandable stents because I had seen several of these disasters. "My God, how are we going to stop it?" Well, so he's put the cases together. Now, it's only a dozen cases, but they're so horrible; you can't imagine them. It's not a matter of re-operating the way it is with a failed stenotic resection. This is a matter that they've taken a correctible lesion, say, that's this long, put in a stent that's this long [longer than the lesion], gotten a stenosis here and a stenosis here [at either end]. You can't get the stent out, so you now have a lesion so long that nobody can resect it and put the trachea together again. So you then have to deal with getting the stent out and putting in a permanent silicon T-tube, so the person has to live with a prosthetic gadget and a hole in his neck for the rest of his life. You can't put in more stents because then you just get the problem again at the other end. It's the way the stents are constructed. Maybe someday they'll work it out so this won't occur, but right now they're dangerous. They shouldn't be used in benign disease, but you can't stop it. Why? You can't stop it because they're put in mostly by pulmonologists and by surgeons who don't understand the problem. They see a lesion and they say, "Ah ha! Put a stent in."

When they put the uncoated stents in, the granulations grew through it, so they finally learned to put a coated stent in. Well, at the ends of each of them is a fringe of little wires sticking out, so patients get a ring of stenosis here, a ring of stenosis here, and the original stenosis remains in the middle. And you cannot correct all of that. If it's a silicone stent you can take it out sometimes and re-operate. But with these other stents you have to put in a

permanent tube. In one man, I had to split his whole sternum, open his trachea from the top to the bottom, carve out the stent, and cut it off. You can't take the back part out or you may get a TE-fistula. You're down to bare cartilages, and then you put in a long T-tube, which he'll have to have for the rest of his life. And he had a perfectly resectable little lesion originally. We could have had him in here and out in five days and he would have been cured for the rest of his life.

So this paper is an effort to try to get the word out there. In fact, we want to try to send it to a medical journal, but I don't think it's going to work, because you have a bunch of people now, [who] are procedurally directed in medicine, pulmonologists (not in this hospital) who see a patient with a stenosis and say, "Ah ha! There are two things I can do for him." One is laser, which they've got. By the way, the equipment costs about $150,000. So you have to amortize your laser, and the more you use it the better it is, about a thousand bucks a crack. Or I can put in a stent, which commands a similar type of fee, and then if it doesn't work we'll send them somewhere else. The laser at least is often reversible, but the stents are not. I don't know where we're going to go with this and how we're ever going to stop it. Stents should not be FDA approved, as far as I'm concerned, for benign disease. If you've got cancer and you're going to die from it and it's the only thing you can do for an airway, fine, why not? I have very strong feelings about that, but I don't know how we're ever going to get the word out.

----------END OF TAPE TWO, SIDE TWO----------

GRILLO: There's a famous French surgeon—he's now retired, too, Dumon. Not really a surgeon, I don't know what he was, exactly, but he was a laserologist, one of the fathers of the laser, and contributed a lot to it. And there are places where the laser can be used in airway work. At an international meeting … about four years ago, in—well, it doesn't matter where—Treviso, he presented about two hundred and fifty patients who had been treated for post-intubation stenosis with radial lasering and dilation with modest results. They weren't all that great. I had given a paper a little earlier on five hundred cases of stenosis treated surgically with 94 percent success rate, including the fact that a lot of them were second-time-arounders who had been sent to us—rather difficult cases. The fellow who was chairing the session was Philippe Dartvelle, who's a French thoracic surgeon, brilliant surgeon. He's got a sort of a little puckish grin, attitude about things. So when Dumon finished his paper, he said, "Professor Dumon, we've just heard Professor Grillo give his paper about the surgical treatment of these with really very excellent results." He asked, "Why do you do these things?" (Laughter) Well, Dumon was actually taken aback. He didn't know what to say, and he fumbled around for a while and then he came up with a statement. "Well, these patients are very sick and they can't … withstand the stress of major surgery, and it's better to treat them this way." Well, Dartvelle wouldn't let that go by, and he says, "What do you have to say, Professor Grillo?" So I pointed out in my most polite manner that in all these years, we had seen very few patients who could not be operated on, because operations for stenosis, the first time around especially, are done through the neck or the upper sternum, an approach which is external to the body cavities, [and] has very little physiological impact on a patient, if the anesthesia is good anesthesia. And you can operate on people with high blood pressure, with bad coronary disease, with chronic obstructive pulmonary disease, and

if you just manage the operation correctly, they wake up and they're fine. They can now breathe, so they're much better. It isn't a very painful incision, and we hardly ever have to turn a person down for medical reasons. Well, that's the truth of the matter. The answer is, he's got a laser and he's going to use it. One of his disciples from Brescia in Italy, produced at the same sort of big series, which is utterly useless.

The first time I met Professor Dumon he came to my office. I had a different office then. He was going to Arizona or somewhere to give … a lecture and a course, and he just thought he'd stop in, in Boston. He was a pleasant man. He had some X-rays with him of a young woman from Naples who flew to Marseille, came to Marseille periodically for lasering of an adenoid cystic carcinoma of the trachea. He had been lasering her for almost three years, and now it was quite a long lesion. He asked, "Can you do anything surgically?" I looked at the X-rays and I said, "Well, looks to me as if maybe it's too long to be resected," but I said, "I can't really be absolutely sure. I would have to bronchoscope her myself. If she wants to come this far it would have to be with the knowledge that probably we would turn her down and recommend radiation." And then I couldn't resist. I said, "You know, you've been lasering her for three years. Why did you do this, instead of considering surgery three years ago?" You know what his answer was? This isn't any good for your recording. His answer was [a shrug].

PIEHLER: He just shrugged his …

GRILLO: A Gallic shrug, and sort of grimace on his face, and he just basically—he had no answer. The answer was she came from Naples to Marseille, to the clinic where they do laser work, [so] he did laser work. This is the hammer and the nail again. And then six months later she was obstructed—"Well, send her back." And he opened up her trachea again, and sent her back. It's like shaving, you know, the weeds in a field, and the weeds keep growing, you shave them, and meanwhile they spread and take over more of the field. And there's so much of this I just get so tired of it, you know. I feel as if—sometimes I feel as if I've wasted my time.

PIEHLER: But it … now gives me a better sense—when, in your calls, why it's so important to have a breadth in training residents, why that breadth of training is so important, because if you just learn a few procedures, even if you're … technically very good at them, you don't see the forest.

GRILLO: I think that's right. You don't see the forest for the trees, and you see, you know, your particular brand of trees, and that's all. You've got a gadget and you want to use it, and that's all there is to it. And it's very … intriguing, too. There's a certain—it's almost like an addiction when you're a surgeon, or whatever procedure you do, maybe. And I think enough medical people now do procedures—cardiologists, pulmonologists, and so on, so they're now addicted in the same way. You see somebody and you do an angioplasty, [and the] cardiac surgeon does a bypass. And the question is which is better, and it hasn't been settled. And … the long-term results, both of them are quite comparable. And there used to be a time when a lot of the cardiologists and internists were critical of surgeons for their lack of statistical data, you know, rigid studies, which are also very hard to do in human beings.

But when you see them with their gadgets, they're worse than anybody. You don't know what's happening. And there are no follow up data, or "Three months later the patients were fine." And yet you know, for example—I know nothing about cardiac surgery … or coronary treatment, but you know if you rupture something, you're creating scar, the potential for building scar. I mean, that's a basic rule of biology, and no matter how it epithelializes over, you start that way, so therefore you have a problem. And you'd expect it. So now, this business of using radiation—I'm aghast. I know that radiation will stop proliferation of cells and maybe it will stop this scar from going in and closing off the coronary, but it also, you know, it does a lot of damage to vessels, and you also know they thrombose more easily when they're radiated, certainly. You know, you don't beat basic biological rules. You've got to work with the rules in developing procedures. And somebody gets a bright idea—boom! They go at it now, and then there it is, without figuring out what might happen.

DOVER: So, you mentioned the replacements earlier. Do you think that there will ever be a time when they do tracheal replacements successfully?

GRILLO: Well, when you ask it that way, I would have to say yes. Someday I think there will be a way to do it successfully. I really am enormously confident that there'll be … things happening in medicine that I can't even conceive of. If you asked me how—now, I'm impressed, for example, with the attempts they make at tissue engineering. The problems—there's a new paper that just came out in Journal of Thoracic and Cardiovascular Surgery; I wrote a letter to the editor about it, not to condemn the paper, but just to point out a large number of things that the writers seem to have ignored or not even considered. What troubles me is that the paper they've written is to me a preliminary scientific study, which, if they didn't need to produce papers to get the next grant, I would say they shouldn't have published it. They should have kept it to themselves and said, "Ah, now here are … three or four holes in our work, and let's go to work and try to plug those, and someday we'll produce a report"—but this preliminary paper, this constant business of issuing preliminary papers—I realize the impulse to that. It's to get something out to show progress, so when you write your next grant they'll say, "Ah, they're making some progress."

PIEHLER: Since you raised the grant, I mean, one of the things that struck me is when you started in medicine, my sense is agencies like the NIH were not as important to hospitals or to doctors. I mean, they were there. You were starting to get some of that, but they've increasingly become very important. I mean, I—for a lot of hospitals and a lot of career. In fact, as you've mentioned, getting that next grant becomes …

GRILLO: You know, I remember Dr. Churchill making a comment very early on. I can't tell you exactly when it was, probably 1950s—late '50s, early '60s, when that process was just beginning to boil up. "Well," he said, "as far as I can see, the federal government is committing itself to supporting the junior faculty of the medical schools." He saw exactly what was coming, and that's, in a way, how it was. And I must say it was a wonderful development, because it certainly was extremely helpful.

I did some work in wound repair. Nothing, you know, earth shaking, but the NIH supported the work with a small amount of salary for the time I was putting into it for fifteen years. Then I stopped the work. Otherwise, they were perfectly willing to continue on in that. The work dealt with wound contraction and tissue reabsorption, and that sort of thing. Actually, when I started simultaneously working on the trachea, going down on my on own [to] the autopsy room and doing anatomic studies, and then starting in the dog lab, I scruffed together some funds from institutional grants, a few thousand here and there, and started looking around for more support. At one point I put together a grant request to the surgical branch of NIH. Now, it probably wasn't a very good grant, because it was turned down. But it also was a very practical sort of grant, for just doing these very pedestrian things you have to do to go from step A to step B in a surgical procedure. And I said at the time, and I still think it's the case, if I had put in a grant to study the motility of the cilia following interruption in tracheal reconstruction, I probably would have gotten the grant immediately. But because I was trying to just find a way to do a surgical procedure, the answer was no.

Well, at that time, actually, we had a very helpful fellow working at the hospital, who was a fund raiser and so on, who'd been in the OSS during the war, a nice old Yankee type, David Crockett. And somebody said, "Why don't you go see David?" So I went to see David. "Well, I tell you, Hermes," he said, "I think," he said in his in old Boston accent, "I'll tell you, … I think that the Hartford Foundation is the place to look. They're interested in things that are going to actually get into the clinic soon." So I wrote out a grant request and sent it to the Hartford to the right person. He told me, "We should go down there and see them together." (Laughter) So, sure enough, he made the appointments, and I met him at an office building downtown in New York. We took the—no I took the elevator and went up, and there was David sitting in the office of the head man. I came in and shook hands all around, and there was a lot of chit-chat about this and that, nothing to do with my grant request. And after a while, he got down it, "Oh yes, yes. The request here, yes. Well, this looks very good. We looked it through." He asked me a couple of questions, and then basically that was it. It was done. (Laughter) After the project really worked, a couple of times I saw David Crockett [and] thanked him profusely. I once wrote him a letter about it, too. I said, "You got me started on this. You at least had faith that we had something in mind that might work." (Laughs) But certainly, you are quite right, the NIH grant process has been tremendously helpful in fundamental science, which is what they really are interested in.

PIEHLER: So you think it's been a positive—you, overall, a positive …

GRILLO: I think so. Yes. I think, well, definitely. So many of the things that are going on nowadays are supported by NIH. There's a huge amount of work that's done which doesn't amount to much, but that's the way experimentation is. If you knew what was going to work, you wouldn't have to almost do the experiments. You'd just pick the things that work. It has been very useful—and I guess they haven't really cut down very much on the funding. They're always concerned about it, but certainly—there is forward movement. It often seems to be very slow, and I think there is an awful lot of research that probably never amounts to very much in a practical sense. Now, I don't know—I'm not the person really to discuss this particular topic, but I think that there are accretions, there are accretions of information that build on one another. At what point something contributes, say, practically

to the treatment or the cure or the diagnosis of patients is another question, almost. The results are out there as scientific information.

Right now, everyone's expecting so much out of genetics and molecular medicine. I think we're going to see a lot from it eventually, a huge amount, but I think it's going to be a while—we're at a primitive state, you know. They've worked out the genome. So what? It's the beginning. It's a descriptive beginning. Then there are all the questions of protein synthesis and manufacture of proteins, and I'm—I can't make any profound statements about that, but then the question will be, how does it happen? How does it function? How do you alter it? And somewhere along the line there'll begin to be spin-offs that have to do with taking care of Mrs. Blats, and diagnosing what she has, and maybe changing something to make her better, and it will eventually enter surgery, too. And so you hate to see the information for information's sake stopped, choked off, and just say, "We want to do something that works," you know.

PIEHLER: But it's also interesting, because the human genome—I think some Wall Street people think it's going to, you know, in two years there's going to be the big, you know …

GRILLO: Cash …

PIEHLER: … The big payoff, yeah.

GRILLO: I don't really almost expect to see it in my lifetime. My lifetime won't be that long, but I certainly don't.

PIEHLER: Well, I don't even necessarily expect to see it in mine.

GRILLO: (To Crystal) I think you will. You certainly will. (Laughter)

PIEHLER: Crystal, yeah.

DOVER: Well, this is just another kind of a side question that I wanted to ask you about. I know it might not have quite the ramifications in surgery as it would have in, you know, general practitioner, but I want to talk to you about the change in the patient and physician relationship from the type of paternalistic relationship to, now, it's trying to move into more, almost like a partnership.

GRILLO: Well, I think I understand what you're saying, is the notion that the patient has more autonomy and makes his own decisions. I'm all in favor of that as a general principle, but I'm not sure I believe it's possible. I'll be perfectly candid with you. The patient—it's difficult enough for a physician to weigh the problems and the evidence and to come to a recommendation that is … the best. And you can take two or three people in the same field and present the same problem to them, good people, who are trying to think of the patient's best interest, and they'll come up with either slightly different, or sometimes very different, approaches to a particular patient's problem. So to begin with, there isn't a single answer.

The next thing is, how can you instruct a patient, the most intelligent patient who's even studied some life sciences in college, but who's now—what?—a businessman or whatever, and instruct him, even in your own limited extent of information? We have very limited knowledge as physicians, but we have a fair bit. And how to give him a real sense of the problems without skewing it, first of all, but even if you try to give him a real sense, you'll be here for hours, and you'll have him totally confused when you finish. And I'm not sure you'll do very much good for him in that fashion.

Of course, I grew up with a paternalistic approach, to a fair degree, but I always spent a lot of time with patients, especially new patients, and always went through everything, all the information I had before, just to give you a personal view of it, before I saw them, and then I went over it with them. Then we collected everything. Then when it came time for recommendations, one thing I always made clear to them is that I would recommend to them what I thought was best for them, but the final decision about whether they wished to go ahead with it or not would be theirs. And if it was something with a lot of vagueness to it, I'd say, "And, you know, if you wish to go over this with another physician, that's fine with me. I'll be happy to talk with him [and] send him all the data I have." You have to say that, because there a lot of doctors who are very mean and nasty, and feel insulted if a patient wants another opinion or goes elsewhere. And I've seen them become obstructionists, and the patients get very upset, and it becomes a mess. And on the other hand, if they know that that problem is one that they don't even have to worry about, you see, you take that off their shoulders. And then if you answer all their questions patiently, and you present the reasons why you are recommending a certain course, and if they say, "Well, how about such and such?" and I tell them why I think that's not a good alternative or I think, well, it is a reasonable alternative, I would say that—I never kept score, but I would say about 99.9 percent of patients have done what I've recommended.

Because I think they also—they get a pretty good view, feeling—I think a couple things happen when you dealing with a patient. One is, they get a feeling about, "Do you know what you're talking about?" And secondly, "Have you had any experience?" And if it's something I've never seen before, I've told them that. And I've seen some—the first patient I did a trachea on, I told her, "We have not done this operation before, but I think we have an answer for it. I think it's going to work." And she just—well, of course, she had—poor woman was just sitting over the edge of the bed [gasping]. She was so obstructed. Well, she said, at that point, "Do anything, just do something." So that wasn't exactly fair. The final thing they want to know and feel is, do you have their welfare at heart, and that you're not just promoting something which you want to do or you think is profitable, or whatever. We are talking about patients now who are sophisticated. Others will say to you, "Doctor, whatever you say."

Some of them don't even want to know what they've got, and so I never tell them. But the ones who want to know, I tell. And the patient lets you know whether he wants to know. It's very simple. You never have to make a decision—am I going to tell him he's got cancer or not? He'll let you know if he wants that information. He'll say, "Well, doctor, what is it?" "Well, you appear to have a tumor in your lung." "Is it cancer?" "Yes, it is cancer." "What kind is it?" Some of them will say, "What stage is it?" Some of the knowledgeable ones, but

others … will say—well, you'll say, "You've got something in your lung that needs to come out, there's no question about that." And some of them say, "That's fine, doctor. I don't want to know anything else about it. When can you do it?" Then you say afterward, "Well, I'm afraid you're going to need some radiation once you heal up." "Oh, well, alright. You make the recommendation." They never ask you if they've got cancer. They know they have cancer. They don't want to hear the dirty word, so you don't tell them the dirty word. It's very simple. On the other hand, the ones who want to know—I've never had anyone ask me about cancer who couldn't take it, and wasn't prepared to take it. If they're not ready for it, they won't ask you. It's so simple.

I've never understood these reams and reams of writing that go on about what you tell patients about malignancy and fatal diseases or death, for that matter. Some will ask you, "Well, how much time have I got?" That sort of—that's a thing you can't answer. But you can also, the way you answer—I'm getting off the subject now a little bit—the way you answer makes an enormous difference. You can hit somebody in the head, or you can be gentle and say the same thing. I had this lovely man, who was a well-known Turkish artist. He had a big studio in New York, too. He worked, oscillated between Istanbul and New York. He had a nasty kind of thyroid cancer, very nasty, Hurthle cell, but it was small. It was beginning to invade his trachea, so he was sent to me. People with this disease almost always die. It's a poorly differentiated cell, actually. But in his case, it made sense to try to remove it, even palliatively, and maybe even more so. How do you know? Because we have had strange cases. We'd never seen a case so limited before. So I did the whole operation on him and put him back together, and he kept his voice. Clearly it was a nasty tumor when we got the final reports on him. It was a nasty histology, and so we said, "Well, you probably should have chemo and radiation, too."

He had a studio in New York, so he asked, "Could you recommend someone to me down there?" He had a certain hospital in mind, major cancer hospital. And I said, "I don't know an oncologist there, but I do know a surgeon." So I called the surgeon up to get the name of an oncologist, "Oh," he said, "Hermes, I'd be glad to see him myself." I said, "Oh, well, you don't want to go out of your way, do you?" [He said], "Oh no, that's fine." Well, later on this patient comes back to me and says—this is a diversion but, you know, I'll get to the main story in a minute. And he says he went to see this doctor. He waited about four hours, and finally the guy came out and grabbed his X-rays and held them up and put them back down and said, "Well, I have nothing to do. I'm a surgeon. You've been operated on already, I have nothing to offer for you." So they gave him the name of an oncologist. So he went to the oncologist the next day, and he walked in the guy's office and the man said, "You know, you're going to die from this cancer." And he suspected that by now, but he said, "You know, every time I went to see the oncologist—I finally found a good psychiatrist. I would have two appointments. I would go to see the oncologist, who would tell me each time I was going to die, and then I would go to see the psychiatrist to bring my spirits back up." So then when it was time for his radiation, he said, "That's it." He came to Boston and stayed here for three weeks and got his radiation. He says, "I had it with New York." (Laughter) I mean, I had never lied to him when he asked me. I told him what it was, but it's just the way you say it. It's just that you can take something and hit somebody in the head with it.

PIEHLER: Well also, I mean, it sounds like, you don't need to dwell on the obvious. I mean, it almost sounds like this doctor was …

GRILLO: Well, I don't know what he was thinking when he said that to him.

PIEHLER: Yeah.

GRILLO: Why would he have to say that to him? Well, you know, he could, say, tell him what the plans are, "We've had some response to these drugs," and let the patient ask you, "Well, can I be cured?" And the answer is, "Well, it's highly unlikely, you know, because of the nature of the disease, but we can slow it down and buy some time and make you more comfortable." And, you know, there's a way of doing that, rather than just—you don't have to lie, either, because misinformation is a bad thing. I've had so many go-arounds with European—with European, especially Southern Europeans and South Americans on that subject. A family member will come in and say, "I don't want you to tell daddy that he's got cancer." And I'd say, you know, "I'm not going to tell him, but if he asks me, I'm going to give him an honest answer." [They say], "You can't do that." Funny, it's so simple. I had to say to them, "Well, now, tell me. If you were the patient and you asked me if you had cancer," I said, "what would you want me to do, tell you the truth or lie to you?" "Oh, I'd want you to tell me the truth." "Why can't your father be told, handled the same way?" "Oh." I mean, it's so incredibly simplistic, but these are sophisticated people that—you go through this catechism of leading them through this, step, by step, by step. (To Crystal) So you're going into a very complicated profession. (Laughter)

DOVER: Well, thanks. (Laughter) I don't have anything else, unless …

PIEHLER: Well we've—it's a quarter to five, so I think we …

GRILLO: Well, it's quitting time at five. Nobody, no—even doctors aren't supposed to work after five anymore. The state will end up—invade us and fine us. (Laughter)

DOVER: Confiscate our tapes …

PIEHLER: Well, I wanted to just say thank you very much. It's really been a real pleasure. I mean …

DOVER: Thank you.

GRILLO: I had a very good time meeting you (Crystal) and seeing you again, Dr. Piehler, and enjoyed talking. You know, the chance to … talk all day and have two people listening as if they're really interested! (Laughter)

PIEHLER: Well it's really—I want to say, I mean, it was a real pleasure to give up a day of vacation, and really, really thoroughly enjoyable. And plus, I have to say, for giving me a great excuse to have a great lunch.

GRILLO: Well, I'm glad you liked it. You know, that's my favorite place in Boston, so I thought I'd take you there.

PIEHLER: Oh I—I'm really glad. I think my wife will be very jealous, so I'll have to take her very soon.

GRILLO: My wife and I go there for our anniversaries. I take her there for her birthday, she takes me there for my birthday. We go to other places and we always end up going back there again.

PIEHLER: Well, I just want to put on tape: This concludes an interview with Dr. Hermes Grillo on July 8th, 2002 in Massachusetts General Hospital in Boston, Massachusetts with Kurt Piehler …

DOVER: And Crystal Dover.

----------END OF INTERVIEW----------

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