JOHN RICHARD KRAUSE, MD: a conversation with the editor

John Richard Krause, MD, and William Clifford Roberts, MD

John Krause (*Figure 1*) was born on February 1, 1940, in Pittsburgh, Pennsylvania, and that is where he grew up. In 1962, he graduated from Pennsylvania State University and in 1966, from the University of Pittsburgh School of Medicine. His postgraduate training was entirely in pathology at the Presbyterian University Hospital in Pittsburgh. After finishing his training and 2-year military service, he went to the Medical College of Pennsylvania in Philadelphia as assistant professor of pathology. In 1975, he returned to the University of Pittsburgh, where he remained until 1992. He rose in rank from assistant to full professor of pathology. In 1992, he moved to New Orleans and the Tulane University Medical Center as professor of pathology and director of laboratories. In 1996 he became vice chairman of the department and in 1997 chairman of the department of pathology, where he remained until 2009, when he became director of hematopathology at Baylor University Medical Center at Dallas (BUMC).

Dr. Krause has published extensively, including 154 articles in peer-reviewed medical journals and 14 chapters in various books. He and his lovely wife, Paulette, are the parents of two. Both John and Paulette are delightful human beings and a pleasure to be around. BUMC is fortunate to have recruited him.

Figure 1. Dr. John Krause during the interview.

Figure 2. At age 6, 1946.

Figure 3. With his sister, Norma, and brother, Bob.

William Clifford Roberts, MD (hereafter, Roberts): *Dr. Krause, I appreciate your willingness to talk to me and therefore to the readers of BUMC Proceedings. Could you describe your upbringing, what it was like growing up in your hometown, your parents, and your siblings?*

John Richard Krause, MD (hereafter, Krause): I was born in Pittsburgh, Pennsylvania, on February 1, 1940. Pittsburgh in the early 1940s was a good steel town with many steel mills. At 9:00 AM it was still pitch black due to the smoke from all the steel mills. It's no longer that way. I spent all my youth in Pittsburgh, grade school through high school (*Figure 2*). I am the oldest of three siblings. My sister is 3 years younger and my brother is 7 years younger than I am.

Roberts: *What are their names?*

Krause: My sister is Norma and my brother is Robert (*Figure 3*). My father worked for Oliver Iron & Steel Corporation. My mother was a housewife. We were a very middle-class

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Figure 4. Starring as John Alden in the eighth-grade performance of *The Courtship of Miles Standish*, 1952.

family. Our first automobile was purchased in 1948, and what a thrill that was. We got our first television set in 1953. We spent a lot of time playing sports outside. From grade school on, I was always interested in music, particularly singing. I participated in a number of singing events and with others in the class wrote a play for our eighth grade. It was broadcast on one TV station in Pittsburgh in the first days of TV. It was *The Courtship of Miles Standish*, and I played John Alden (Figure 4). I went to public high school and was particularly interested in the choir in high school. I was elected school president my senior year.

Roberts: *How big was your high school?*

Krause: There were 350 students per class.

Roberts: *Were you first academically in your class?*

Krause: I ranked second. A good friend of mine ranked first. I played on the tennis team in high school, and a good friend and I won the city's double championship our junior and senior years. Tennis was my claim to athletics in high school. I met my wife in high school during our junior year.

Roberts: *What is her full name?*

Krause: Paulette Lucille Schultz. We've been married for 48 years (Figure 5).

Figure 5. Dancing with Paulette, his wife of 48 years.

Roberts: *How did you happen to meet in high school?*

Krause: We were in the choir together. She was 1 year behind me.

Roberts: *When did you get married?*

Krause: In 1963, just after my first year in medical school.

Roberts: *What were some characteristics of Paulette that appealed to you?*

Krause: She was pretty, cute, and very smart. She ranked very high in her class. Besides being in classes together, we often double-dated with my tennis partner.

Roberts: *What happened to him?*

Krause: He went to Princeton University as a physicist and now works at Mellon Super Computer Center in Pittsburgh.

Roberts: *He was smart too?*

Krause: Yes. We were probably neck-and-neck at number 2 in class standing.

Roberts: *Did you have hobbies other than singing and playing tennis?*

Krause: I've always liked to read, and that blossomed into a passion for Civil War history. I did several presentations after high school on various aspects of the Civil War. I have bookshelves of Civil War books. My hobbies included softball also.

Roberts: *Did you have any teachers during school that had a major effect on you?*

Krause: Probably not until medical school, and there I had several mentors who have played major roles in my life. I always respected my teachers, but there wasn't one who was especially influential until medical school.

We had a very close family. In addition to my parents, I had a number of aunts and uncles who lived in the Pittsburgh area. Family was very important, and every holiday was spent with 20 to 30 of them.

Roberts: *Where was your mother from?*

Krause: Both of my parents were born and raised in Pittsburgh. Although my father was born in Pittsburgh, he was sent to Austria at the age of 3. Just before the First World War broke out, he was sent back to the USA at age 8 by himself. He went through Ellis Island and then traveled back to Pittsburgh. My maternal grandmother came from Germany.

Roberts: *How many siblings did your mother have?*

Krause: Five: two brothers and three sisters.

Roberts: *And your father?*

Krause: He had three: two brothers and one sister. My immediate family was much closer to my mother's side than to my father's side.

Roberts: *When did your parents live?*

Krause: My mother, Helen Anna Loew, was born in 1910 and died in 1990 (Figure 6). My dad, John Krause Jr., was born in 1911 and died in 1993 (Figure 7).

Roberts: *What was your mother like?*

Krause: She was very smart. She graduated first in her high school class. She had a scholarship to college, but my maternal grandfather, whom I never met, died of Bright's disease and

Figure 6. His mother, Helen Krause, in 1982.

Figure 7. His father, John Krause Jr., celebrating his 80th birthday, shown with Bob (left) and John (right).

since she was the oldest she had to work to help support her siblings immediately after high school. She was a very good singer, which is probably where I got my talent.

Roberts: *What did she do?*

Krause: She was a secretary.

Roberts: *Who dominated in your family, your mother or your father? Did they have a good relationship?*

Krause: They had a very good relationship. On day-to-day activities, my mother dominated because my dad was away working. When he was home he spent time with us, especially playing sports outside. My dad had only an eighth-grade education. At that time he was expected to go to work at a steel mill at an early age, and he did. My dad was not a heavy laborer at

the steel mill; he got into the sales side of the business. He lived a block away from my mother when growing up.

Roberts: *When did they get married?*

Krause: Around 1937 or 1938. I was born in 1940.

Roberts: *Although neither parent went to college, they obviously were smart. Were there many books, magazines, or newspapers around the house?*

Krause: My mother read a lot, including to us three children. My dad was more interested in sports. Both of my parents were very religious. We grew up in a Methodist church. My mother was very active in Sunday school and in the choir. I went to Protestant churches as far back as I can remember. In 1993, my wife and I converted to Catholicism when she became a counselor at a Catholic high school in New Orleans.

Roberts: *When you had dinner together, your family prayed before eating? Was the evening dinner a big deal for your family?*

Krause: Yes, there was always prayer before dinner. Dinner was a bigger deal on the weekends. My dad didn't necessarily get home early, so we kids often ate earlier than he. On weekends, particularly Sundays, the major meal was a sit-down affair.

Roberts: *Often you had extended family join your family for that Sunday meal? What was the conversation like when you had the entire family together at a meal?*

Krause: We talked about sports, religion, what we children were going to do in life, and what things were happening presently in our lives. We discussed many different topics.

Roberts: *Your mother's or father's siblings didn't have an opportunity to go to college either?*

Krause: Correct. I was the first person in my family—on either side—to go to college and graduate.

Roberts: *Did you have a scholarship to college?*

Krause: No. I went to Penn State University (Figure 8). It was so inexpensive at that time that Penn State didn't offer much in the way of scholarships.

Figure 8. With Paulette at Penn State, 1961.

Roberts: *Where did your brother and sister go?*

Krause: My brother also went to Penn State. My sister went to the University of Pittsburgh and became a physical therapist. My brother worked for General Motors, and both he and my sister are retired.

Roberts: *Where do they live now?*

Krause: My brother lives outside of Atlanta, and my sister, who married a fellow high school student, lives in Clarion, Pennsylvania. He's the chairman of the English department at Clarion State University.

Roberts: *You had a good relationship with both of your parents. Was it a very pleasant home? Were your parents strict with you?*

Krause: No, they weren't strict. I did very well in school and didn't cause any problems. If I wanted to do something, I usually was allowed to.

Roberts: *Did your parents push you academically, or did you just realize that this was your duty?*

Krause: I realized it was my duty. Early on I realized that if I wanted to get ahead I would have to do it on my own. I went to Penn State because it was what we could afford. I initially started in history but later switched to chemistry. In my senior year in college, I decided to try for medical school but I had not had any biology classes. I asked the college dean if I could enroll in biology I and II at the same time so that I could get all my required classes my senior year. He had never had anyone ask him that before and since my grades were good, he allowed me to do so. I crammed all my medical school biology requirements into 1 year.

Roberts: *How did you do in college?*

Krause: I graduated first in the science school. I received the John White Medal, which is usually given to the senior who has the highest ranking in the College of Science (Figure 9).

Roberts: *Did studying and intellectual endeavors come easy for you, or did you really have to work hard to make those A's?*

Krause: I probably had to work harder than some people. I don't think I'm the greatest of intellects, but with some perseverance I was able to get the A's. Looking back, it seemed that it came a lot easier to others. I had to work for it pretty diligently.

Roberts: *What was your grade-point average in college?*

Krause: It was in the 3.8's.

Roberts: *Did Paulette go to Penn State also?*

Figure 9. Accepting the John White Medal, one of the highest awards conferred by Pennsylvania State University.

Krause: No. She went to Chatham College in Pittsburgh.

Roberts: *How far was Penn State from Pittsburgh?*

Krause: It was about 120 miles away, about 3 hours by auto.

Roberts: *How did you get back and forth?*

Krause: I came home on weekends or my parents would visit me and Paulette would come with them. It was a long-distance relationship for quite a few years.

Roberts: *Did you have a car in college?*

Krause: Only during my senior year.

Roberts: *How did you travel before that?*

Krause: Either my parents would pick me up or I'd take the bus.

Roberts: *What activities did you participate in during college?*

Krause: I played intramural sports, tennis and softball. I was a member of several scientific societies.

Roberts: *Were you a member of a fraternity?*

Krause: No.

Roberts: *So you had plenty of opportunity to really study in college?*

Krause: Yes, that was it!

Roberts: *Did you enjoy college?*

Krause: It was all right. It was intense and basically was something I had to accomplish to get on with life. I would have preferred to be closer to home, but I had a good roommate and a couple of good friends.

Roberts: *What years were you in college?*

Krause: 1958 to 1962.

Roberts: *When did the idea of becoming a physician come into your mind?*

Krause: Eighth grade.

Roberts: *What happened in the eighth grade?*

Krause: I was fascinated with medicine in terms of the science of it, the idea of helping people.

Roberts: *Did you have contact with a physician in early life?*

Krause: A physician lived a few doors down from us. I respected what he did.

Roberts: *Did you have any illnesses as a child?*

Krause: I had bad sinus trouble as a child and an episode of pneumonia, but that was my only illness. My only broken bone was my wrist, and that injury occurred during a soccer game.

Roberts: *Were your brother and sister and parents healthy? Did your parents smoke?*

Krause: My family was very healthy. They didn't smoke cigarettes or drink alcohol.

Roberts: *They probably approved of the prohibition era (1920 to 1933).*

Krause: My paternal grandfather was an alcoholic. My dad said he wouldn't do that in his house.

Roberts: *Were both parents relatively health conscious? Did your father do any physical activity to stay in shape?*

Krause: My father was a very good softball player and played on several teams. They always made sure we went to the dentist or physician when needed. They were healthy until late in life.

My father developed coronary disease and my mother died of liver cancer. We never knew the etiology of the latter.

Roberts: *When you first went to college, you weren't a premed student.*

Krause: Correct.

Roberts: *You decided during your junior year that you wanted to go to medical school?*

Krause: I decided I didn't want to be a chemist for the rest of my life. I had always wanted to be a physician but was concerned about the costs. My father indicated that he would get the necessary monies if I got into medical school. My dad had very few luxuries in his life.

Roberts: *Did your family go on vacations in the summer time?*

Krause: Yes. We would drive about 2 hours to Lake Erie and rent a cottage there for 2 weeks.

Roberts: *What did you do there? Swim? Fish?*

Krause: Yes. We would take my maternal grandmother or other members of the family.

Roberts: *Did she live with you?*

Krause: No. She lived with one of my unmarried aunts. I was quite close to my maternal grandmother. During my first year of medical school, I lived with them since they lived near the University of Pittsburgh.

Roberts: *Did you apply to any medical school other than the University of Pittsburgh?*

Krause: I applied to Temple University, the University of Pennsylvania, and the University of Pittsburgh and got accepted to all three. I decided to go to Pitt since my roots were in Pittsburgh.

Roberts: *How far was the commute to medical school from your grandmother's house?*

Krause: About 5 miles.

Roberts: *How many students were in your medical school class?*

Krause: Probably 150.

Roberts: *Is the University of Pittsburgh a private school?*

Krause: It was at the time, but later it became a partial state school.

Roberts: *When you entered medical school, were there any surprises?*

Krause: I liked it from the first day on, from the cadaver work in anatomy on up.

Roberts: *Did you feel any difference in the quality of the students at Penn State and the quality of students in medical school?*

Krause: All the medical students were bright. Penn State had a mixture.

Roberts: *Who had a major impact on you in medical school?*

Krause: It was a pathologist, Robert Edward Lee, who was at the Pittsburgh Medical School all his professional life. I encountered him my second year in medical school in the pathology course. He was a young man at that time. He was enthusiastic and instilled the desire to learn and ask questions. I thought he was a wonderful instructor. He was a major influence in my going into pathology. We became very good friends and later colleagues. He was my early mentor and guided me (*Figure 10*).

Roberts: *What did you like about pathology?*

Krause: I thought pathology was fascinating. I enjoyed looking at a piece of tissue under the microscope and making a diagnosis. It often begins with the pathologist making the right diagnosis so that proper treatment can be given.

Roberts: *Pittsburgh for years had a reputation for having an excellent pathology department.*

Krause: Correct.

Roberts: *Did you have a difficult or easy time deciding on a specialty?*

Krause: I briefly considered pediatrics, but I liked pathology and the diagnostic aspect so much that I rather quickly settled on that specialty. During medical school I got to know the people in the pathology department pretty well. The pathology department at Pittsburgh guaranteed me a position as an intern.

Roberts: *Did surgery appeal to you at all?*

Krause: No. I didn't mind dissecting or doing autopsies and trying to investigate the cause of death. Autopsies were very important at that time and played a major role in determining the causation of death. The chairman of medicine would come down every week and we would present autopsy cases to him and discuss the clinicopathologic correlations, and that was exciting. Pathologists had a major influence. Pathology just seemed so natural to me. I didn't give a great deal of thought to doing anything else.

Roberts: *How did you finish in your class of 150?*

Krause: I was probably second or third. They never told us exactly.

Roberts: *Did you have to study hard in medical school? Again, did it come easy to you?*

Krause: The subject of medicine was so appealing to me that it did come relatively easy.

Roberts: *Did you have any classmates who later became very prominent in medicine?*

Krause: A number of my classmates have held major positions in various universities.

Roberts: *When you interned in pathology, the focus was mainly on anatomic pathology?*

Krause: Yes, but we did spend time in laboratory medicine because we had to take the boards in clinical pathology as well as anatomic pathology.

Roberts: *What years were you a resident?*

Krause: 1966 through 1970 (*Figure 11*).

Roberts: *When did you get interested in hematology and bone marrow?*

Krause: During a hematology rotation as a resident. I was fascinated by the number of diseases that could be diagnosed from examination of the cells in the bone

Figure 10. With Dr. Robert E. Lee, lecturing in Williamsburg, VA, in 1985.

Figure 11. The internship class at Presbyterian University Hospital, 1966–1967. Dr. Krause is third from the right on the top row.

Figure 12. Lecturing in Taiwan.

marrow. Bob Lee was a hematopathologist, and we looked at slides together. We developed courses together. Early on we were cohorts in teaching these particular courses at national meetings, particularly at the American Society of Clinical Pathologists.

Roberts: *You've done a lot of those workshops?*

Krause: I have now taught close to 200 workshops and am still doing so (Figure 12). Education is very important to me. Recently I was honored to receive the 2010 H. P. Smith Award for Distinguished Pathology Educator from the American Society of Clinical Pathologists (Figure 13).

Roberts: *You stayed at the University of Pittsburgh on staff when you finished your residency?*

Krause: I was chief resident at Pitt and stayed on as an instructor mainly doing surgical pathology, knowing that I would have to go into the service in 1971. It was obligatory at that time. One week before I was to be shipped out to Vietnam via San Antonio, I was told that I had been diverted to Fort Lee, Virginia, located about 30 miles south of Richmond. It's the quartermaster corps. I was the only pathologist in that area. They told me I was going to be the pathologist at Kenner Army Hospital and that I wasn't going to Vietnam after all. I thought that was wonderful. I was the

Figure 13. Receiving the Distinguished Pathology Educator Award from the American Society of Clinical Pathologists, 2010.

Figure 14. Discussing a malaria slide with two colleagues at Kenner Army Hospital, 1971.

pathologist for the hospital and also the medical director of the hospital for 1½ years (Figure 14).

Roberts: *How big was the hospital?*

Krause: About 200 beds. I did general pathology there and would also cover pathology services for the pathologist at Petersburg General Hospital and John Randolph Hospital.

Roberts: *You must have been pleased to be in that area since you were by then an avid Civil War buff.*

Krause: Yes. There was a lot to see in the area. Petersburg had that famous crater that developed when the Union Army tried to undermine the Confederate lines by exploding a mine. We were close to Antietam and Appomattox. It was a great experience both within the hospital and within the surrounding area.

Roberts: *Not only did you keep your hand in pathology in those 2 years but you picked up some administrative skills.*

Krause: Yes, it was interesting. I was the acting chief medical officer for Kenner Army Hospital for 1½ years.

Roberts: *After fulfilling the service obligation, what did you do?*

Krause: We moved to Philadelphia. One of the pathologists from the University of Pittsburgh had become the chairman at the Department of Pathology at the Medical College

Figure 15. Receiving the Laboratory of the Year award from the Pittsburgh County Board of Commissioners, 1977.

of Pennsylvania (formerly an all-female medical school but coed beginning in 1973). I directed the clinical pathology/hematology division. Thus I moved a bit away from the surgical pathology area into the clinical hematology area. There were four Pittsburgh pathologists there at that time, so it was a nice environment. I stayed there for 2 years and then moved back to Pittsburgh to direct the hematology division (Figure 15).

Roberts: *That was in 1975?*

Krause: Right.

Roberts: *How did you like living in Philadelphia?*

Krause: We lived in Bryn Mawr, a beautiful area. My wife and kids loved it. Probably we would still be there if the Pittsburgh offer hadn't come along.

Roberts: *After you had been there for a while, were you glad you made the switch? What happened? How did things develop?*

Krause: I went as the director of hematological pathology in a major institution with a number of well-known hematologists. I wrote one of the first books on bone marrow biopsy (Figure 16). Max Westerman and Wally Jensen, at the University of Pittsburgh, had developed the first bone marrow core biopsy needle. As a result, Pittsburgh became one of the major sites where we actually did the bone marrow core biopsy and not just the aspirate. That led to a lot of experience with bone marrow core biopsies, and the book I wrote on the bone marrow biopsy came from all this experience I got at Pittsburgh.

Roberts: *Did you do the biopsies?*

Krause: I did a couple but predominantly the clinicians did them in Pittsburgh. At some centers, the pathologists do the bone marrow biopsies. The hematologists at BUMC do the bone marrow biopsies.

Figure 16. The textbook he edited.

Figure 17. The pathology staff at Presbyterian University Hospital in Pittsburgh, 1975.

Roberts: *Most bone marrow aspirates consist of how many milliliters?*

Krause: Usually about 1 to 2 mL. The aspirate from the syringe is smeared on a slide. The core biopsy is produced by a needle with cutting blades. The core biopsy is retrieved after punching the marrow through the aspiration site.

Roberts: *What do you get from the core biopsy that you don't get from the aspirate?*

Krause: It allows us to determine the total cellularity of the bone marrow. There are some conditions that are much easier to diagnose from the core than from the aspirates—granulomas, for instance. The core provides overall orientation. Both are complementary and play an important role in the workup of patients.

Roberts: *Wally Jensen became chairman of medicine at George Washington?*

Krause: Wally was there when I was there early on. Max Westerman and Dane Boggs were very prominent hematologists. Boggs was one of the authors of *Wintrobe's Hematology*.

Roberts: *How big is the University of Pittsburgh Hospital?*

Krause: At that time it was a 500-bed hospital. I trained at Presbyterian Hospital, Children's Hospital, and Magee Women's Hospital and did hematology for all three hospitals, including both adult and pediatric cases. I also developed and became the director of one of the first fellowship programs in hematopathology. Over the years, the University of Pittsburgh has affiliated with about 35 hospitals in western Pennsylvania, and it is the biggest employer in Pittsburgh now.

Roberts: *How long were you on the staff there?*

Krause: From 1975 to 1992 (Figure 17).

Roberts: *Then you went to New Orleans? How did you make the decision to leave Pittsburgh and go to Tulane?*

Krause: It was a major decision for us to leave Pittsburgh because I had been there most of my life. My mother had died and my father was having repeated episodes of heart failure. He lived by himself, and I was his major caretaker. His health was a major concern for me. But to become the director of laboratories was a great opportunity. We had visited New Orleans before and were charmed and delighted by it. I had gone as far as I would ever go in Pittsburgh. I knew this opportunity was a way to grow in an administrative role. I discussed this with Paulette,

my kids, who were in college by then, and my dad. It took almost 10 months to make the decision. I went to New Orleans in 1992, and Paulette, who was finishing the last class of her master's degree, joined me later.

Roberts: *What was the hospital's name?*

Krause: Tulane University Hospital and Clinic. It's about a 300-bed hospital in downtown New Orleans. Since I had been director of the residency program in Pittsburgh, I assumed that role as well as the laboratory directorship. I later established the hematopathology fellowship program there.

Roberts: *Is that a 1-year fellowship?*

Krause: Yes. It has a separate board qualification examination. My father died about 4 months after we moved to New Orleans.

Roberts: *Did you bring him to New Orleans?*

Krause: No. He wouldn't come. He was hospitalized for heart failure from coronary heart disease several times those last few months. His deteriorating health was the worst thing we faced those first months in New Orleans.

I was very involved in the medical community of the hospital. The chairman at that time was Michael Gerber, who came from Mt. Sinai, and he specialized in liver pathology. In 1997, after I had been there 5 years, Michael was killed in an automobile accident. On his passing, the dean asked if I would take the interim chair while they searched for a permanent replacement. I also threw my hat into the ring to be considered for the permanent chair. I was selected in 1998 and stayed in that position until 2009. It was a fruitful time in developing my own program, hiring individuals, and developing a research group. It was very rewarding.

Roberts: *How many faculty members and residents did you have in your department?*

Krause: We had 30 faculty members, 14 residency positions, and 3 fellowship positions.

Roberts: *If you take all those faculty members, residents, secretaries, and lab technicians together, how many people were under your leadership?*

Krause: Approximately 100 people, about 55 in the medical school and 45 to 50 in the hospital laboratory.

Roberts: *How long were you chairman?*

Krause: Ten years (Figure 18).

Roberts: *When Hurricane Katrina hit in August 2005, how were you, your family, and your department affected?*

Krause: We had hurricane warnings off and on often when in New Orleans. The warnings suggested evacuating, but we always rode them out at home. Some people would go to the hospital. Then along came Katrina. Katrina was supposed to hit on Sunday, and we had an emergency meeting on Saturday. They said that this hurricane was going to be devastating. It was agreed upon to evacuate the hospital and keep only a few essential people here. So, most of our team left. Paulette and I decided Sunday not to go to the hospital but to leave the city. We had to go all the way to Chattanooga before finding a hotel room. It was about a 10-hour drive.

Figure 18. As chairman of pathology at Tulane, during a gathering of faculty and residents, 2004.

Hurricane Katrina hit on Sunday evening. On Monday morning we turned on the TV and it looked like wind damage and some water, but it didn't look like the city got hit as bad as we expected. As we continued to watch, however, water started coming into the city. We didn't realize until later that the levee had broken and that the city was in dire straits with people trapped on their roofs and in the Superdome. We had set up an emergency call system where the dean would let us know what was going on because the university's internet went down and other communication was lacking. Soon we got the news that Tulane Medical School and Hospital had taken in about 10 to 12 feet of water and flooded up to the second floor. All the electrical equipment and computers were in the basement, so everything was gone.

A number of issues came up: 1) locating your people, and 2) deciding what to do about residency programs and research programs (and specimens). We couldn't get back into the city, and my closest relative was my daughter in Boston. The medical school decided to relocate to Baylor College of Medicine in Houston. Baylor Houston gave them facilities to set up shop. I sent a number of my Tulane faculty there to teach. A number of my residents went to Houston since it was the closest big city to New Orleans. I was able to get most of them into either Baylor or Methodist Hospital in Houston. The Accreditation Council for Graduate Medical Education allowed these programs to exceed their quota due to the extenuating circumstances. All my residents except one came to Texas.

I eventually located and contacted my entire faculty. Everybody was on their own since we couldn't return to New Orleans. Fortunately, my laboratory administrator had a list of everyone's cell phone numbers. All had survived. It took about a month before we could return to the city, but we were unable to return to the medical school as there was no power and fungus and mold were prevalent. Tulane graciously covered our salaries during this time.

Paulette and I started driving to New Orleans just as Hurricane Gustave came through, and we got detained for a week in Alabama because they had closed New Orleans again due to all the water from the rain. Finally, we got back into New Orleans, and as we drove into our neighborhood, an armored vehicle with two soldiers carrying automatic weapons stopped

us. They wanted to know who we were and where we were going. Once we explained that we had lived there, we were cleared. It was another 6 months before we were able to go back into the medical school following the restructure of electrical facilities and clean-up. In the interim we had to set up shop in a small community hospital in Metairie that was owned by Hospital Corporation of America, which also owned Tulane Hospital. We continued teaching our pathology course. I had selected some of my better teachers to go to Houston and relocate there for the time being.

During this time, all the department chairs were assembled by the dean, and each of us was given a brown envelope. In it was bad news. It told us how many faculty members we were allowed to keep and how many we had to let go. Of my 30 faculty, I was allowed to keep only 10. It made no difference whether they had tenure or not. Later, a lawsuit was filed, but since there weren't resources to cover their tenure, it didn't succeed. Almost all the PhDs had to go, and with them went the research programs too. Their rationale was to keep those people who could get the hospital up and running the quickest. That meant that the physicians would stay. I had to call 20 faculty members and tell them that their services were no longer needed. This was an extremely difficult time for me. These individuals experienced significant trauma, and now they were told that they were losing their positions.

It wasn't until late April or May 2006 that we were able to get back into the medical school. The hospital had opened about 2 months earlier. We reestablished the laboratory. Almost every piece of laboratory equipment in the hospital had been damaged and had to be replaced. We had to rebuild the laboratory from scratch. My office in the medical school was on the sixth floor and there wasn't any elevator power, so we had to lug everything up 6 flights of stairs. Also, we were without air-conditioning. A number of people stood by me and helped out. My laboratory administrator lost her house but stayed. Eventually, things did calm down. Over the years we rehired some of the people who had been let go. By the time I left in 2009, most everything had been reestablished. One of my top researchers never came back. His loss hurt the research program.

Roberts: *Was your house damaged in New Orleans?*

Krause: Yes. The roof was badly damaged and had a big hole in it. One chimney was blown off, creating the hole. The resulting water damage ruined our wooden floors. All the floors had to be replaced. It was very difficult to get repairs done then because every house had so much damage and there were few contractors.

Roberts: *Did you live near the river?*

Krause: No.

Roberts: *Where did you live?*

Krause: It's called English Turn. We lived in a gated community, and there were a lot of lagoons that all drained into the river. We didn't get water from that but from the actual hurricane Gustave. (When the French owned New Orleans the British were going to attack New Orleans, but they were met by the French on the Mississippi River. The French beat them

back so they had to turn around; hence the name English turn.) Eventually, we got the house repaired.

Roberts: *Did you have a problem selling your house?*

Krause: Yes. With the demise of both the Charity Hospital and the Veterans Administration Hospital, a lot of physicians left the city. (However, there are plans to rebuild the Veterans Administration and Louisiana State University hospitals eventually.) It took a year to sell our house. It is going to take New Orleans time to recover.

Roberts: *Do you think it will recover?*

Krause: To some extent, but to get back to what it was will depend on tourism. People are hesitant to move back there permanently, but hopefully over time this will improve.

Roberts: *Safety is a problem.*

Krause: Yes, it's a big problem. For the older citizens, evacuations are really hard. It's hard to get out of the city. In our last hurricane warning, it took 12 hours to go 5 miles! That was the hardest thing to endure. Every fall there is the threat of hurricanes with the potential damage and safety concerns.

Roberts: *How has BUMC in Dallas impacted you? Have you been happy here?*

Krause: We have been very happy and impressed with the care that has been offered here at BUMC. Everyone is courteous, and whatever we need has been fairly easy to get. My wife volunteers in the operating room area and has been impressed with the care and consideration to the patients.

Roberts: *You are pleased to get back into the day-to-day pathology?*

Krause: Yes. Also, it's a relief not to have the administrative duties to deal with. But I'm still very interested in hematopathology work and teaching.

Roberts: *You've been impressed with the quantity of work?*

Krause: Quantity and quality in terms of the physicians and physician support. I'm very impressed with BUMC.

Roberts: *I came directly from the National Institutes of Health in Bethesda, MD, and I have been incredibly happy here. Do you have a lot of interaction with other members of the pathology department?*

Krause: We get consultations from surgical pathology on hematologic cases. This is an excellent pathology group at BUMC. I am proud to be a part of it.

Roberts: *Where did you move to in Dallas?*

Krause: We live in the Lakewood area. It's a 1950s house with a creek view. I like to garden. I like to be outside, planting, doing some yard work. I like the closeness to the hospital.

Roberts: *Have you been able to start up your research?*

Krause: Basically, my research is clinicopathological correlations rather than basic research. During this past year I've had the time to complete a book.

Roberts: *Let's talk about your running and exercising. How did that come about?*

Krause: I always had some speed. I became interested in running while in the army in 1971. I would run religiously. When I went to the University of Pittsburgh in 1975, I started to use their indoor track and got to know a number of other runners. We would meet every day. We formed a running

club. Over time my progress improved and I got interested in running road races. By the time I reached the age of 40, I was the top masters runner in western Pennsylvania. I ran for a local running club called the Allegheny Running Club. Five of us formed a team, and we won the US Masters 5K Cross-Country Championship (Figure 19).

Figure 19. The Masters 5K National Championship team, 1983.

Roberts: *How long were the races?*

Krause: I would run anything from 5K to 10K to marathons (Figure 20). Most were 5K or 10K.

Roberts: *How many miles would you run a week to stay in good form?*

Krause: Usually my average at that time was 70 to 80 miles a week.

Roberts: *How fast would you run each mile?*

Krause: Between 5:40 and 5:45 minutes, although in my good days my 5K time was 5:10 to 5:15 minutes per mile.

Roberts: *You started as an athlete after leaving college? Did you know you had this ability?*

Krause: We had local races in high school. I knew I could run. I was much better at distance than in the 100-yard dash.

Roberts: *Why didn't you try out for the track team in high school?*

Krause: We didn't have much of a team in high school. The main sports were football, baseball, and basketball. Tennis wasn't even that big.

Roberts: *What was the name of your high school?*

Krause: South Hills High School. Paulette was a runner too.

Roberts: *When you were running 70 to 80 miles a week, you were averaging about 10 miles a day?*

Krause: At least 7 or 8 miles a day plus about 15 on the weekends.

Roberts: *When did you run?*

Krause: From about 11:30 AM to 12:45 PM.

Roberts: *Did you do any other exercise besides running?*

Krause: Weights and stretching, mainly for conditioning.

Roberts: *How many miles do you run now?*

Krause: I only do about 4 miles a day, and sometimes on weekends I'll do 8 to 10 miles. The old joints aren't as good as they used to be.

Roberts: *That's still a lot. Have you ever had an injury?*

Figure 20. Running the Montreal Marathon, 1979.

Krause: I've had numerous aches and pains.

Roberts: *How many miles have you run in the past 35 years?*

Krause: About 90,000 miles. I'm now running an 8½- to 9-minute mile, not a 5½-minute mile.

Roberts: *What time do you get up in the morning?*

Krause: 4:00 AM.

Roberts: *What time do you go to bed?*

Krause: Probably 10:00 to 10:30 PM.

Roberts: *You do okay on 5½ to 6 hours of sleep?*

Krause: I sometimes take a 15- to 20-minute nap after supper. I've done this ever since medical school.

Roberts: *When you get in bed, do you generally fall right to sleep?*

Krause: I usually will read until I get sleepy.

Roberts: *Do you read every day? And what type of books?*

Krause: I try to read every day and read a wide variety of topics.

Roberts: *What are you reading right now?*

Krause: A book about Mickey Mantle. I'm about three quarters through it. He was an amazing player.

Roberts: *I just got that book yesterday.*

Krause: I read mostly historical books or autobiographies.

Roberts: *What about your wife?*

Krause: She reads nonfiction. She's reading Stephen Ambrose's *How the West Was Won with the Railroad*.

Roberts: *When my kids were young, we went to the movie How the West Was Won and as we were walking out, my older boy, who was quite young at the time, said, "Dad, I can't wait to see How the West Was Two." What are your plans for the rest of your time on planet Earth?*

Krause: I hope to make the best of it and continue to work as long as I am able to.

Roberts: *What are your kids doing?*

Krause: My son is a pharmacist in Cleveland, Ohio. My daughter trained as a chef in Boston, but she married

Figure 21. The Krause family at John and Paulette's 40th anniversary, 2003.

and has three children. My son-in-law is a car dealer in Massachusetts.

Roberts: *Is your son married?*

Krause: No.

Roberts: *How old are your children?*

Krause: My daughter was born in 1967 and my son in 1969 (*Figures 21 and 22*). My grandchildren are all boys and their ages are 12, 10, and 6 (*Figure 23*). They are quite active.

Roberts: *Are they interested in running?*

Krause: Only in the sports they are involved in—baseball, soccer, and basketball.

Roberts: *What do you and Paulette do in your free time?*

Krause: We go to museums and the symphony. We are members of the Art Museum. We go to the Fort Worth museums. We are members of the Kalita Humphreys Theater and like theater productions.

Roberts: *How much time do you spend gardening?*

Krause: Probably about an hour a day. On weekends it may be more like half a day. I focus on flowers rather than a vegetable garden (*Figure 24*). I love being outside. Paulette was a high school counselor at Archbishop Hannah, which is a Catholic school, when we lived in New Orleans. She got interested in Catholicism while working there. After many years of being Protestants we joined the Catholic Church and now go to St. Thomas Aquinas. We are involved in Bible study and go one day during the week.

Roberts: *Do you have alcohol in the house?*

Krause: Yes.

Roberts: *Do you have a glass of wine at night?*

Krause: I either have a beer or a glass of red wine.

Roberts: *Your research work has been a very important part of your life. That's always been a high priority?*

Figure 22. Daughter Jennifer and son Jonathan.

Figure 23. His three grandsons.

Figure 24. A past award-winning garden.

Krause: Yes. I've always been involved in the academic community. I write and I still teach. That is my number one priority. That keeps me up to date. I do lots of reading, and that keeps me intellectually stimulated.

Roberts: *Do you and Paulette travel much? How much time do you take off?*

Krause: Not much. In our early years we traveled a lot, with trips to Europe (England, Scotland). Now we travel to visit family in San Francisco or Boston. We mainly go for 1- or 2-day trips (*Figure 25*). We don't fly very much anymore.

Roberts: *But if you wanted to take off more you could?*

Krause: Yes, the opportunity is there.

Figure 25. With Paulette hiking in the Grand Canyon.

Roberts: *Is there anything else that we haven't talked about that you would like to discuss?*

Krause: There is one aspect that we may want to hit upon. When we lived in Pittsburgh I was involved with an organization, the South Hills Chorale, for 15 years (*Figure 26*). I was one of the lead singers and we would perform with citywide musical productions. I also directed a barbershop quartet, which was a subdivision of the chorale.

Roberts: *How many were in the chorale?*

Krause: There were 50 to 60.

Roberts: *You were a soloist?*

Krause: Yes.

Roberts: *How often did you perform?*

Krause: Once a week.

Roberts: *And you practiced how often?*

Krause: We practiced every Monday night, and the barbershop quartet would meet before the chorale to practice.

Roberts: *So you've always stayed active in other activities outside of medicine?*

Krause: I've tried to.

Roberts: *Do you play an instrument?*

Krause: The piano.

Roberts: *Did you start when you were young? Did you practice a lot? Do you enjoy it?*

Figure 26. The South Hills Chorale.

Krause: Yes, and I practiced a lot.

Roberts: *Do you still play?*

Krause: I currently don't have room for my piano keyboard, which is in storage.

Roberts: *How good are you?*

Krause: I'm decent. I have to read the music; I can't just play by ear.

Roberts: *Did your son or daughter run or sing?*

Krause: They run. My son can't carry a tune, but my daughter sings.

Roberts: *What's your weight and height? Have you always worn bow ties?*

Krause: I weigh 165 pounds and stand 70 inches tall. I've worn bow ties since I realized that regular-length ties got in the way in aspects of my pathology work.

Roberts: *John, thank you, and I am glad that you came to BUMC.*