Charles Staley, M.D., ’87: An orderly career

By Rosemary Lunardini

There have been no roads diverging in the wood of Dr. Charles Staley’s career as a physician. Ever since he was in high school, he has been unwavering in his course—planning his education around his early interest in medicine and carefully charting each step in his training. Today, he’s chief of the Division of Surgical Oncology at Emory University School of Medicine and its Winship Cancer Institute, where he works on improving the treatment of rare and difficult cancers.

Raised in small-town Connecticut, Staley explains that he owes his early attraction to medicine to a friend of his parents, a general surgeon. When the family friend learned of Staley’s scientific bent, he encouraged his interest in becoming a physician.

Even after Staley enrolled at Choate, a private high school in Wallingford, Conn., the family friend’s mentorship continued because he practiced at a hospital near the school. So Staley had a chance to shadow him on rounds and even observe him in the operating room. “That got me fascinated with medicine,” Staley recalls. “I’m the first physician in my family.”

When it came time for college, Staley broke ranks with his classmates and headed south to Emory. In fact, he believes he was the first Choate graduate ever to go there. He found the university, the city of Atlanta, and the South in general to his liking. Before long, other Choate graduates were following in his footsteps to Emory.

After college, it was back to New England, first for a year at Yale University to do research in human genetics, and then to Dartmouth Medical School. Though he had enjoyed Atlanta, Staley felt immediately at home again in the small-town environment, and he says there were definite advantages to being part of a small class at DMS. With only 60 or so classmates, he was able to get to know everyone personally. And he found the mountain environment of northern New England—and the chance to ski and hike—“phenomenal.”

It was Staley’s experience at DMS that convinced him to pursue surgery. He was particularly impressed by a retired surgeon, Dr. William Mosenthal, who after leaving the OR taught anatomy for many years. “He had a great way of applying anatomy and explaining it to us in a way that made sense from a clinical surgeon’s standpoint,” Staley says.

During his clinical rotations, Staley also learned a lot from Dr. Thomas Colacchio—now the president of Dartmouth-Hitchcock Health. “He really made you prepared every day for whatever he was going to throw at you,” Staley says. “He had more to prepare than picking on someone who didn’t know their assignment.” At the same time, Staley adds, “he was also a very encouraging person who would say to you, ‘Job well done.’”

After DMS, Staley went on to a residency in surgery at the University of Pittsburgh. He wasn’t yet sure what surgical specialty he wanted to go into, and at Pittsburgh he found an academic setting with a lot of possibilities. “I got to be involved in a lot of complex cancer surgery,” Staley says. “That’s how I became interested in a career in cancer surgery.”

The National Surgical Adjuvant Breast and Bowel Project—a large cancer trial—was, and still is, based in Pittsburgh, making the academic medical center there a great place for anyone interested in cancer surgery. “When I saw a lot of the cancer patients come in, each one had numerous things that were unique, that made the decision-making a true challenge,” Staley recalls. “Once you mastered a surgical technique, the real challenge was to figure out the best treatment, whether it’s surgery, chemotherapy, or radiation—and in what order to do it.” Before long, Staley’s specialty choice was clear. “I just felt surgical oncology was a field that would keep challenging me all the way until I retire,” he says.

Becoming a surgical oncologist meant three more years of training in a fellowship. When deciding where he might like to spend those years, Staley thought big. “When I was applying, the two best surgical-oncology programs in the country were at M.D. Anderson [at the University of Texas] and Sloan-Kettering, so I decided to apply to just those two,” he says. While he was waiting for the results of the fellowship match, a physician at Pittsburgh told Staley that he had heard, unofficially, that Staley was among the top 10 choices of each program—making his acceptance highly likely.

But then the letter arrived. Staley’s wife, Kim, a nurse anesthetist, was home the day the results came in the mail. It turned out Staley...
had not matched at either program. “I was depressed,” Staley says, remembering the phone call he got from his wife. Fortunately, a few hours later, he got another call—from the head of surgery at M.D. Anderson. Staley recounts the good news he shared: “He said, ‘Oh, Charlie, I’m so sorry. This is the first year we’ve done the computer match. The computer made numerous errors. You actually did match at M.D. Anderson.’”

“It was quite a day,” recalls Staley. “First to think I was not going to have a career in surgical oncology, then to learn I had matched at one of the best cancer centers in the country.”

So once again, Staley headed south, this time to Houston for 18 months of clinical work and 18 months of basic cancer research. He found success as a researcher. “I was very lucky to come upon some very important discoveries in colon cancer,” he says. “We showed in the lab I was working in that there are key oncogenes responsible for the progression of colon cancer.” He identified a family of genes called tyrosine kinases that are involved in promoting the growth of cancer cells and angiogenesis, which creates new blood vessels to bring nutrients to those cells.

The next step, Staley says, was to develop a way to inhibit those genes. Further work led to the development of treatments for colon cancer, a number of which are now in clinical trials. By now, Staley was committed to continuing his work on cancer surgery of the gastrointestinal system. But as his fellowship came to an end, the question was, where would he go next?

The answer was a familiar one. “To Atlanta,” he says. “I just loved Atlanta and Emory, so it was my first choice.” Despite his excitement, returning to Emory meant taking on some serious challenges. Emory is the only academic medical center in an area that is home to more than 5 million people, so it serves a large and socioeconomically diverse population. There was another challenge, too—helping to get Emory’s Winship Cancer Institute added to the National Cancer Institute’s prestigious list of comprehensive cancer centers (a list that Dartmouth’s Norris Cotton Cancer Center has been on since 1990). Staley and his colleagues recently achieved that goal at Emory.

Staley is currently the Holland M. Ware Professor of Surgery and chief of the Division of Surgical Oncology at Emory. In his busy clinical practice, he spends much of his time treating rare and difficult cancers, such as of the pancreas. “We have made virtually no headway in the care of pancreatic cancer, even though we can do the operation faster, safer, and with less mortality than we ever did 15 years ago,” he says. “The problem is that we cannot fight tumor biology, no matter how good we are at removing tumors.”

Indeed, although pancreatic cancer strikes only about 42,000 Americans each year, about 35,000 die from it annually; the five-year survival rate is less than 5%. Staley says that there’s a need for a new diagnostic tool to identify pancreatic cancer earlier in its development—something he’s currently working on, using a nanoparticle designed to target a cellular receptor that is highly expressed in pancreatic cancer. Staley and his colleagues have shown that these nanoparticles accumulate in human pancreatic cells grafted into mice. Iron oxide is bound to the nanoparticles, acting as the imaging agent that allows magnetic resonance imaging to spot the tumors.

Through similar technology, it may also eventually be possible to load nanoparticles with therapeutic drugs to attack even the tiniest tumors. “The hope is that we can couple these nanoparticles with either radiation or chemotherapy that can be targeted right at the tumor cells,” he says.

“Things are coming along,” Staley says of the research. “We’re getting closer to clinical trials, but some kinks remain.” He believes the first clinical trials resulting from this work will focus on the diagnostic potential of nanoparticles, with therapeutic trials coming later.

Those challenges are part of the reason Staley finds surgical oncology so fascinating. And he’s happy to be pursuing the work in a city he loves. With free time hard to come by, he appreciates the fact that in Atlanta he can do things outside year-round with his family. On Sunday afternoons, he, his wife, and their two children—16-year-old son Chris and 14-year-old daughter Kelley—have a standing date for nine holes of golf. And he and Chris are loyal fans of Atlanta’s professional hockey team, the Thrashers.

In his own professional life, Staley’s role has changed since he was named division chief. Today, he says, “my biggest mission is to facilitate young people’s careers.” He’s now trying to follow in the footsteps of those who guided him along his own path into medicine.