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A FINE SPECIMEN

THE EVANGELICAL PATHOLOGIST

BY HATTIE FLETCHER

A slide pops up on the screen in a dimmed study room. To the untrained eye, it looks like modern art, a blobby arrangement in ketchup red, mustard yellow, and rusty brown. Students sitting around a table squint up at the image.

"Jane?" the instructor, Bernard Klionsky, prompts. He sits near the computer—a small man in baggy short sleeves and a bow tie. His thick beard and full head of black hair belie his age; he turned 80 in October.

"Well..." a young woman in a T-shirt begins, stalling for time. "It's cardiac related—because you just said the whole disk is hearts." She giggles. This course is a summer elective, filled mostly with medical students who

have just finished their first year. A couple of undergraduate students sit in as well. Even if they can't quite keep up with the medical students, they're welcome; Klionsky gives no tests and no final grade. Still, there is pressure to come up with an answer.

"Yes, it's a heart," Klionsky agrees with a smile. "But what is the slide showing?"

"It appears to be a thrombus," Jane [not her real name] says hesitantly.

"Yes," Klionsky says. "But that's opinion. First, describe it. Give me a description a blind man could understand."

On one level, this is a lesson about cardiac pathology, about recognizing abnormalities in hearts. Klionsky, who has been a professor of pathology at the University of Pittsburgh School of Medicine for 44 years, is fond of saying, "To most students, 'heart attack' is just a word. And it's not enough just to know the word." To become effective doctors, he believes, students need to be able not just to diagnose a heart attack (or any other medical condition), but to recognize where each particular patient falls along the spectrum of a disease's possible outcomes.

Ultimately, though, this lesson—like all of Klionsky's—is really about how to approach problems. He is teaching his students pathology; but more importantly, he, like any good

teacher, is showing them how to think, how to become, as he puts it, "highly trained problem solvers."

"What else could it be?" he pushes each student in turn. "Answers have to come at least in threes."

Through the years, Klionsky has pursued more than a few problems in depth. He identified the structure of Fabry's disease. He figured out how to end an epidemic of yellow hyaline membrane disease and low bilirubin kernicterus, a disease that was once a major cause of death among premature infants. He became an expert in the pathology of the cervix and chaired the U.S. Public Health Service Committee on Reproducibility of Diagnosis. Once, he did an autopsy on a lactating dolphin. He made a synthetic formula of dolphin milk, but failed to keep the calf alive.

Sometimes, Klionsky says, he regrets not having become one of the country's leaders in a particular area of pathology, as many of his colleagues and some of his former students have. The trouble was, his definition of "problem" was always too broad: Developing computer programs, finessing budgets, figuring out how to make residencies more productive and satisfying—to Klionsky, these issues were almost as interesting as lab work. Besides, he doesn't like to do the same thing even two years in a row.

A stint in the navy during World War II convinced him that he was capable of repairing almost anything mechanical. (He trained as an electronic technician and shipped out for the South Pacific on August 1, 1945, landing in Okinawa just after the signing of the terms of Japan's surrender.) That skill came in handy. Early in his career, Klionsky invented the open-top cryostat for collecting samples in the OR. It forever changed surgical pathology. The horizontal door on earlier models let cold air spill out, and the cryostat could not be used until it re-equilibrated—which usually meant an unacceptable delay for the patient. (Klionsky never profited from this invention, as he wanted it to be widely available.)

In the '70s, residents at Magee-Womens Hospital taught him how to program on the Apple II, and he built systems to track and share test results across the hospitals more effectively. Later, he collaborated on a program with Howard Seltman, faculty in Pitt's central chemistry lab, that would allow even techno-

logically illiterate professors to put together lessons on the computer. At one time, it was the best teaching tool in the field. (Ironically, Klionsky, the former technophile, fears that the dusty computer in his cluttered office might be in its final resting place—the computer worked last year but now seems to be dead.)

He stepped down as vice chair of pathology in 1995. Although technically retired, Klionsky works almost five months a year. He's trying to cut back; his wife would like him to spend more time at home. He teaches the summer course (part of the Klionsky Summer Fellowship Program, which he supervises) and interviews med school applicants. His interviews are famous for running twice as long as others. He follows up with pages of meticulous, single-spaced notes, including quotes from the conversations and exquisitely detailed descriptions.

"Students come out of it, and they say, 'That was long, but it was really cool,'" says Linda Berardi-Demo, former director of admissions. She says the candidates are inspired by Klionsky's dedication, especially if they learn his work for Pitt nowadays is free.

Yes, free. Klionsky would rather the department put what it would be paying him to use elsewhere—like offering more financial support to students. (There's a Bernard L. Klionsky fund, which supports students who take on pathology-related projects.)

Part of the reason his admissions interviews take so long is his tendency to extol the virtues of a career in pathology to anyone who will listen: the luxury to pursue interesting problems, the freedom that comes from not billing patients directly, the flexibility to spend time with family, the ability to combine teaching with research and practice. Klionsky makes his case with the enthusiasm of a recent convert, though it has been nearly 50 years since a compulsory rotation at a crucial point in his own medical school experience "saved" him from following a favorite uncle into pediatrics.

He warns students who show up for his classes that they have just increased their odds of going into pathology by a factor of 10. Certain that he himself has had the most satisfying career in the world, Klionsky is letting others in on the secret. It's hard not to think that, if students who take his courses end up as pathologists—and over the years, many have—it's not just because he's a passionate advocate. He's also exhibit A. ■



Bernard Klionsky, shown left, in the 1966 *Hippocratean*. The caption reads, "May I interest you in a career in pathology?"