

## Death's Other Kingdom: Reflections on Uncertainty in Pathology

By Benjamin Mazer

### *The firefighters*

Pathologists are the firefighters who arrive after the house is charred. The call is unceremonious. Sometimes the written autopsy request is taped to the body as it is pushed into the morgue on a stretcher. Other times, requested by a brief phone call with another physician or a grieving family – each word to them a sort of apology. Families come to us knowing we momentarily increase their pain with the hope that such a study may provide a step toward closure.

The organs are removed, either individually or together en bloc. The cutting, pulling, and scraping is unequivocally physical and laborious even as the pathologist's educated eye scans the anatomy. The body is now hollow, and can be returned readily for funeral proceedings. At the end of each autopsy, I recite T.S. Eliot's poem "The Hollow Men" to myself as a private joke. *We are the hollow men. We are the stuffed men.* But thinking on it now, I realize the metaphorical death in Eliot's poetry, in opposition to the real one in front of me, allowed heavy and symbolic stanzas to alleviate some of the individuality of *this* death, *this* tragedy. Human suffering is irreducible, so instead the pathologist abstracts and rationalizes it. I have no qualms about this. Far worse is the feeling that death is routine, an obvious event.

Once the organs are out, the physical work is mostly over but the intellectual work has just begun. The tissue sampling, the microscopic examination, and other special procedures are intriguing and careful. Weeks later the report is completed and signed out, sent off to physicians and families. The families, just beginning to cope, are asked to return to the antemortem world and listen to the pronouncements of a stranger. The mystery of a death could be solved, and there is definitive relief. Alternatively, the autopsy could turn out to be only one piece of a fragmentary puzzle. I've talked to some families who nevertheless take comfort in having "done everything they could," even at the end of the end.

### *The soothsayers*

Like most pathologists, the autopsy is not enough for me. I cannot be a forensic pathologist dedicated to the act. To live in the postmortem mode is to sit "under the twinkle of a fading star" (Eliot). I am instead training to become a surgical pathologist, a doctor who examines tissue from patients still very much alive and in need of help.

Surgical pathologists simultaneously know more and less of death than the forensic pathologist because they look at it very closely. They meticulously examine tumors in isolation after the surgeon removes it, deriving a story from first principles. Through surgical pathology we are expected to predict demise or ward it off, stage a cancer or dismiss it as benign. Pathologists hold stories of suffering in their heads and the cause in their hands. These stories now partly come from electronic medical records, which have unintentionally turned into

private chronicles of tragedy and comedy that we are compelled to read. The man whose finger has bulged for months with a tumor, but who calmly shakes the doctor's hand as if this were a friendly, chance encounter. The old woman who shyly admits to constipation, portending a belly caked with cancer.

But then it comes to us: that spontaneous mass, a collection of cells turned foul by chance mutations, is a unique manifestation in each patient despite recurrent genetic and biochemical patterns. The surgical pathologist is meant to tell you what it has done and what it will continue to do. Even after we've read these unique and evocative stories, we must arrogantly work backward and forward in biological time.

Some stories are frank cliché. The aged smoker with widely metastatic small cell lung cancer has a sealed fate, and the pathologist can confidently deliver the news. But today with widespread cancer screening the pathologist is asked to prognosticate on ever smaller and more curious tumors. There is such inherent uncertainty in these acts that we will have moved on long before the outcome for that patient becomes known.

#### *Putting your money down*

At the end of "The Hollow Men," Eliot writes that "between the idea and the reality, between the motion and the act, falls the shadow." Surgical pathology is a shadow world, not one dark with death like autopsy but grey with uncertainty. Decades after Eliot, essayist Joan Didion was less opaque: "It is easy to see the beginnings of things, and harder to see the ends." So too pathologists end up spending more time trying to study the biology of how a disease began, hoping they may wind up saying something – anything – about how it will end for a patient. Unlike the forensic pathologist, as a surgical pathologist you turn in your answer somewhere in the middle. You have to put your money down.

Pathologists hide the arrogance of their prognostication in the shifting language of diagnosis. If changing a word could change an outcome, pathologists would be powerful indeed. Instead, through each new curvature in our diagnostic framework, we contribute a little more divination, another hint about what might come next for the patient. In rare, brilliant years, the discovery of some protein or gene in a tumor leads directly to an effective treatment. We feel compelled to keep chasing after this. In the meantime, we tweak the phrasing of the fortunes in the cookie.

I believe in science, but I wouldn't have paid much attention in medical school if I didn't also believe in intuition, if I hadn't seen the seemingly-well patient who walks into the emergency department and declares, "Something just doesn't feel right." That is someone who has seen what is coming next, and she had no need for a microscope.

#### *The weight of history*

Perhaps my uncertainty about prognostication arises from an inherently uncertain time. Like quietly metastasizing tumor cells, we watch impulsive and wry political maneuvers upend the daily configurations of our lives. Sometimes these moments intersect, and the weight of history emphasizes how much turns on something as small as a cell or as large as a government. They intersected, for example, when aging Supreme Court Justice Ruth Bader Ginsburg was revealed to have had a cancer removed from her lung just at the moment the government shut down over an apparently improvised squabble (Liptak). For a news cycle, the most anticipated read in Washington was a pathology report. But is the pathologist's guess as good as the pundit's? With the staging of a cancer, can a pathologist predict not only the fate

of a patient, but the direction of our legal system? Medicine and politics, however, crave a dangerous certainty.

Even the rigor of an autopsy can leave the course of a disease unclear. Astronomers seem better at reversing the cosmological clock to describe the Big Bang than doctors are at playing out chronic illness in reverse. Yet to non-medical professionals, our cause of death determinations can seem just as wed to physical laws. Autopsy reports, subsequently, contain creativity and nuance. But the machinations of public policy cannot handle that meandering artistry. Instead, filling out a brief death certificate is what leads to the cause of death of record. List the sequence of events, don't embellish.

Death certificates have felt like one of the most poignant parts of my job as a pathology resident. While many of our reports lead to immediate action, the death certificate is what gradually becomes historical. Two hundred years from now, my autopsy or biopsy reports will probably have gone missing, but the recorded cause of death will likely remain somewhere in a dusty vital statistics office.

In fact, filling out a death certificate is perhaps the most common way someone as humble as a pathology resident makes it into the press – Justice Ginsburg's tumors excepted. It is a confusing rush to see one's determined cause of death listed in a published obituary. The first time I saw this, my heart skipped a beat. A death certificate is one thing – but a newspaper! I reflected on the certainty of my pronouncements, not wanting to be responsible for delivering “fake news” about life's real conclusion.

#### *The hollow men*

It is sadly the fate of much of humanity to die from something mysterious. It is the patients who suffer most, but there is also a certain aching that comes from a doctor's incomplete understanding, our necessary ellipsis. I try to ignore it, focus on the advances doctors and scientists have made. The most experienced pathologists seem to revel in such ambiguity, perhaps recognizing that new knowledge always arises out of this world. But as a doctor in training, it still unsettles me when prophesying forward or explaining backward, the pathologist comes up empty. Maybe *we* are the hollow men.

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