

The facts of death

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I have lost two friends to pancreatic cancer in the past few months. Two other friends are in the middle of cancer treatment and unsure what the outcome will be for them. From all these friends, and from many others who have had cancer in the past, I have heard the same stories. Their medical care has been excellent in technical terms, but on a personal level it is stony cold. However often we remark on the fact, it still remains true that doctors are mostly not good about death and dying. Although death is the sole certainty for every patient that we see, and very few people will die without a doctor in attendance during their final days, we still treat the whole business as if it is an aberration, a failure, or something that doesn't really belong to medicine at all.

SPEAKING THE TRUTH

In cancer clinics and on the wards, the ethos still appears to be efficient at best, or defensive and avoidant at worst. Different members of the medical teams come and go, often without any introduction or explanation of their role in the system. Each doctor delivers a partial message—a test result, or a new treatment option—but no-one appears to hold the whole case together. Nobody, least of all the senior consultants, ever seems to sit down and take time to speak the truths that really matter: “You may die”, “Our treatment may delay your death but it cannot prevent it”, “I’m sorry but our treatment hasn’t worked”. It doesn’t matter whether patients are attending district hospitals or major teaching centres, or even whether they are doctors themselves. Only when people reach a hospice—if they are lucky enough to do so—does it seem as if most professionals start to shed their embarrassment, annoyance or fear, and start to behave like human beings.

Hospices, of course, place death and dying at the centre of their work, but I wonder what would happen if we did this for all of medicine. It would certainly make sense to see everything that we do

as doctors in terms of managing mortality, or as deferring death, rather than defeating it. In reality, all medical interventions are merely attempts to buy time, or to make time pass more comfortably. Even that claim is often an exaggeration. These days in particular, we deal far more in lowering risk than in offering guarantees of a longer life or greater comfort. It might be a good discipline if we learned to think of all our work as falling essentially into three categories: almost certainly futile for the patient (most preventive treatment, for example), possibly futile (most other medical treatment), and futile in the long term (operative surgery and everything else).

THE FACTS OF DEATH

If we put death at the centre of medicine, we would need to give the facts of death a proper place in medical training. We would then learn that, in evolutionary terms, death is just as crucial to our existence as sex. There is in fact an increasing amount of evidence that the two are interdependent. Primitive creatures like bacteria multiply without sex, but they don't die natural deaths in the way that higher organisms like human beings do. They perish only as a result of external physical changes such as changes in temperature or salinity. It was only when sexual reproduction arrived, about a billion years after the bacteria, that programmed cell death, and hence the inevitable death of each sexual organism, also appeared on the scene. When genes from separate individuals evolved so that they could splice with each other through sex, they also evolved the ability to kill the creatures they made. Genes aren't just selfish in the sense that they will find every possible means to promote their own replication. They are also selfish in their capacity to destroy their temporary hosts—ourselves—once we have fulfilled our task of reproducing them.

The question as to why older people die should, we now know, be turned on its head if we want a satisfactory answer. The real explanation lies in the corollary: young people, generally speaking, almost never die. This is because the more deadly genes that we carry, and that will see all of us off, are counteracted by other, protective genes that keep them at bay

until we have done our reproductive duty—or at least had a decent chance of doing so. If our protective genes were less effective they would by definition have become extinct. Equally, if they were more effective and operated over a longer period of the life cycle, they would also have become extinct. Otherwise they would have left the world cluttered up with individuals past their reproductive potential, but consuming resources no longer necessary for gene propagation. The death genes and the protective genes keep the balance between sex and death permanently at just the right level.

As far as cancer is concerned, it seems a fair guess that each of us is born with the genetic potential for some of our cells to run out of control and proliferate through uncontrolled mitosis. What holds this at bay in most of us probably has little to do with our physical lifestyle, let alone our moral attitude, and far more to do with the imperative needs of our germ cells—our sperm or eggs. Since the distinction between germ cells and somatic cells was discovered in the 19th century, we have found out a huge amount about the difference between the two. One of these differences is that our somatic cells are equipped with far less molecular apparatus to repair their own DNA than our germ cells are. As we age, this apparatus also becomes less and less effective, so that the chances of runaway mitosis originating in any somatic cell become more and more likely. By the time we are old, a very small selection of our sperm or eggs may have departed elsewhere to perpetuate some of our genes, but these genes will be totally indifferent to the havoc they have left behind as our neoplastic cells escape inhibition, multiply and kill us.

ORIGINS OF DEATH

This is a sombre view of life. In a book entitled *Sex and the origins of death*, the immunologist William Clark sums it up as follows: “We want so desperately to be more than just a vehicle for DNA, and at least transiently we are. Yet somatic cells will die at the end of each generation, whether they are part of an insect wing or a human brain. We may come to understand death, but we cannot change this single, simple fact: in the larger scheme of things, it matters not a whit that some of these somatic cells contain all that we hold most dear about ourselves; our ability to think, to feel, to love—to write and read these very words. In terms of the basic process of life itself, which is the

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transmission of DNA from one generation to the next, all of this is so much sound and fury, signifying certainly very little, and quite possibly nothing".¹

There is a danger that such a view might lead many doctors to take an even more indifferent and unfeeling approach to their dying patients than they already do. Yet perhaps if it were taught more widely, the same view could also form the basis of greater compassion, and a greater sense of

participation in the face of the one fate we all share. Some of the best doctors I know have always understood the dubiety of much that passes for medical treatment. They have had no illusions about the temptation we face every day to imply—through omission, distortion, or downright lies—that we can avert the inevitable. A better knowledge of the nature and purpose of death might help more doctors to see medicine in its rightful perspective,

and to talk straightforwardly to their patients about what we can and cannot do. It is medicine that is peripheral to death, not the other way around.

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REFERENCE

1. **Clark WR.** *Sex and the origins of death.* Oxford: Oxford University Press, 1996.

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