

Science & Society
Beating A Killer

Cancer was once the end of the line. Today, it can be managed and defeated
By Marianne Szegedy-Maszak and Katherine Hobson

In 1997, Joe Fred Starr was a vigorous and successful 63-year-old businessman in Fayetteville, Ark., when he became one of the 200,000 men who are diagnosed every year with prostate cancer. Starr knew prostate cancer was a killer. Each year nearly 30,000 men die of the disease, and among cancers it's second only to lung cancer in claiming male lives. So he opted for the most aggressive treatment possible. "I was chemically castrated," he says simply, when describing the hormonal ablation treatment that made his PSA level drop to zero. "It was a choice between a knife and an old man's ego."

The first year after diagnosis, Starr was so busy reading everything and finding the right doctor that he didn't have time to think of much else. But then, he says, "a kind of sadness built": The treatment "makes you feel kind of grubby, you gain weight, and they take all the testosterone out of you." Two years passed, each one cancer free, yet the second more desperate than the one before. He remembers driving around southern Colorado visiting family, in such despair that he couldn't sleep and was crying uncontrollably. At one point, Starr walked into a pawnshop, not having slept for days, unshaven, his face streaked with tears. He asked to buy a gun. The owner looked up and said, "You crazy son of a bitch, you are buying a gun to kill yourself, and I am not selling you one. If you want to kill yourself, go drive into that lake back there." Starr didn't drive into the lake but headed home instead. Finally, he found a psychiatrist who could address his depression, the price he paid for surviving his cancer.

The stories of cancer victims vary widely, but the basic scenario is always the same. First comes the terrifying diagnosis: cancer, the big C. The news is followed by some combination of surgery and/or chemotherapy and radiation treatments. Then there's the fear and the terrible sadness, compounded by the nausea and bone-wearingly fatigue. And, of course, there's the existential loneliness at 3 in the morning.

And yet, after all that, perhaps in six months or a year, life once more begins to lose its blur and hold promise. Hair, scorched by chemotherapy, returns--though sometimes with a surprisingly different color and texture. The birthday party that was an impossible dream six months before is now a treasured gift. The return to normal life comes with visits to the oncologist's office and the unavoidable counting: six months later, one year later, two years later, and, finally, the triumphant five years later--the marker of a successful cure. Case closed. Another cancer patient, miraculously, has become a survivor.

Sea change . But can life after cancer ever be said to be truly normal? It's not just the emotional stress of living beneath a diagnostic sword of Damocles. Even

after cancer no longer inhabits the body, the treatments that conquered it often leave in their wake debilitating physical and emotional scars. Or simply a profoundly changed approach to life.

Nearly 10 million Americans, from the halls of the Supreme Court to the pueblos of New Mexico, are living with cancer. Most were diagnosed five or more years ago; many who would have died just 15 or 20 years ago are alive today, raising families, leading productive lives. Yet doctors are only now beginning to study these survivors and to understand how the very therapies that cured them can also create a whole new set of problems--some, many years later. Joe Fred Starr never seemed to have had a melancholy moment in his life until after his cancer treatments. A young man in his 20s might beat testicular cancer only to have heart problems in his 40s. A 65-year-old breast cancer survivor might experience confusion and memory problems. Not to mention the fatigue, pain, and sexual dysfunction that can haunt survivors of all ages.

In response to the burgeoning needs of cancer survivors, the federal Centers for Disease Control and Prevention and the Lance Armstrong Foundation will release in April a public-health blueprint for addressing the needs of cancer survivors. New York's Memorial Sloan-Kettering and Boston's Dana-Farber have both launched "survivorship" programs in the past six months. M. D. Anderson and the University of Pennsylvania have had such centers for a few years. The field is still in its infancy, but such programs are sensitizing more doctors to the demands of cancer survival.

One major source of later problems is radiation. In 1981, researchers at the University of Pennsylvania reported that kids with leukemia suffered significant drops in IQ when their treatment regimen included head irradiation, the standard of care at that time. Mark Kieran, director of pediatric neuro-oncology at Dana-Farber, remembers walking into a clinic in 1992 to see a 20-year-old follow-up patient who was "cured" of pediatric brain cancer 15 years before. He was rocking back and forth in a chair, sucking his thumb. "From a statistical point of view, he was a survivor," Kieran says. "But when we treated him, we just didn't know what the damaging effects of the therapy would be, because no one survived." As evidence mounted, however, doctors found it wasn't necessary to radiate the entire head. Today, happily, such patients have a much better prognosis.

Brain cancer accounts for approximately 17 percent of all cancers among those under age 20, which means there will be more than 2,000 new cases diagnosed this year. Between 1974 and 1976, about half of the children with brain cancer survived; between 1992 and 1998, nearly 70 percent did. A child's developing brain is highly vulnerable to the assault of radiation, because new neural connections are occurring so rapidly. Indeed, Lisa DeAngelis, head of neurology at Sloan-Kettering, says that today, even if radiation is deemed the best treatment for a child under 2, "we still don't do it, even if we are buying time."

Researchers have found that the brain's white matter--the region most involved in higher cognitive function--takes the brunt of the damage from radiation. Radiation works by damaging a tumor's genetic material so it can't continue growing. It was once thought that healthy tissue surrounding the tumor would survive such a chemical assault, and in some parts of the body that's true. But it turns out that the delicate white matter of the brain is not so resilient.

There are other problems associated with radiation. A recent study of nearly 1,400 kids diagnosed with Hodgkin's disease between 1955 and 1986 shows they have 18 times the risk of developing another cancer--most commonly breast or thyroid tumors--as do healthy people. Again, radiation was the culprit.

Research on young survivors has also shed some light on the unanticipated hazards of chemotherapy. Testicular cancer, for example, which usually strikes men in their 20s, is 95 percent curable. But the chemo regimen used, which includes an ingredient called cisplatin, has some bad effects on the kidneys and, perhaps, the heart.

While most of the insights into long-term survivorship come from children, adults offer another useful perspective on these late effects. In 1971, Ellen Stovall was 24 years old and had just given birth four weeks before when she was diagnosed with Hodgkin's disease. This cancer starts in the lymph system and attacks the body's immune and blood production systems. At its worst, the cancer spreads and can destroy the lungs and the liver. Stovall was told that she could hope, at best, to see her daughter's second birthday.

With massive radiation treatment, Stovall survived. What she was not told, however, was that the treatment that saved her life would also throw her into immediate menopause. There was no discussion of banking her eggs--it simply wasn't an option at the time. Indeed, no one thought that she would live long enough to suffer any long-term consequences that come with 30 years of menopause. She developed both cardiac arrhythmia from radiation and premature aging of her organs. And on top of that, she watched her friends have their second and third babies, and became more and more disconsolate. She found herself feeling forgetful, disorganized, generally less competent.

Stovall isn't alone. It's not just the trauma of cancer but also the long-term effects of the chemotherapy and radiation. Once it was believed that the brain was protected from the toxins of chemotherapy by the "blood-brain barrier," a layer of cells that, theoretically, prevents large molecules in the bloodstream from invading the brain. But this protective barrier isn't foolproof; it can be broken down by, among other things, radiation and inflammation that many of the chemotherapies cause. The result is called "chemo-brain," characterized by maddening memory loss and compromised "executive function"--that is, as Stovall recognized, the ability to organize and juggle tasks.

Puzzles. None of the results of the chemo-brain studies are crystal clear. No one really knows, for example, why the cognitive problems show up. Is the impairment the result of the chemotherapy or of the stress and anxiety associated with simply having a cancer diagnosis? Or are some people simply predisposed genetically to suffer cognitive decline? A recent study suggests that one possible risk factor for chemotherapy-induced cognitive decline is the presence of a gene called APOE, which is also associated with increased risk for Alzheimer's disease.

Clearly, it's not just the brain's cognitive functions that are affected. As with Joe Fred Starr, depression for cancer patients and survivors is another serious problem. In the past, depression in cancer patients was underdiagnosed and undertreated. "There was a popular misconception that everyone who gets cancer gets depressed," says William Breitbart, the chief of psychiatry at Sloan-Kettering. But in fact, he points out, the kind of depression experienced by Starr is shared by just 15 to 25 percent of other cancer patients. Some cancer patients do become sad, some become anxious, while others go through what can only be called a grief reaction. But a large majority of cancer patients don't suffer clinical depression at all. And when they do, it can be successfully treated. "I can honestly say now that I am happier than a lot of my friends are," Starr says. "And they don't have anything wrong with them." He exercises; he travels; he lives a full life with his wife. And while he acknowledges that some days are better than others, "it was just time to stop feeling sorry for myself and realize I didn't want to take that old man's advice and drive into a lake."

Starr's experience is repeated often by cancer survivors and the psychiatrists who treat them: The depression itself can often be worse than the disease, and once the depression is under control, life as a cancer survivor gains hope and meaning. A number of provocative research avenues are being explored in the area of depression and cancer. Often the listlessness, the lack of appetite, poor concentration, and sleeplessness can be part of a depressive illness, but they can also be symptoms of the cancer itself--what's called a "sickness syndrome." But could that syndrome respond to antidepressant medication? Can depression be considered a risk factor for cancer? Does the disease of cancer itself, like in pancreatic cancer, set off mechanisms that trigger depression? These are all questions still unanswered.

Clues. In trying to answer these questions, scientists have come up with some fascinating findings. One possibility has to do with body chemicals called cytokines, which are secreted by the immune system to fight off infection and disease, including cancer. Researchers at Emory University have found elevated levels of cytokines in medically ill patients with depression, and those levels correlate with symptoms of sickness behavior. Cytokines are ingenious in the ways they can cause depression or sickness behavior, insinuating themselves in a number of different brain pathways and wreaking biochemical havoc. It's not entirely clear, however, what comes first. In pancreatic cancer, for instance, one

theory is that the cancer itself creates the cytokines. Nearly half of people with pancreatic cancer are depressed, and not just because they found out they have a disease with a poor prognosis. Indeed, the depression precedes the cancer diagnosis and is one of the symptoms of the illness.

A number of cancer treatments are based on cytokines. As Andrew Miller, director of psychiatric oncology at Winship Cancer Institute at Emory University, says, "What is clear is that there seems to be a connection between circulating levels of cytokines and behavior, but we don't know the directionality of that relationship."

Interferon is one of the usual treatments for melanoma, and it also triggers these cytokine storms. In one of Miller's studies, half of the 40 patients soon to be treated with interferon were given an antidepressant, and the other half were given a placebo. After three months on interferon, 45 percent of those on the placebo developed clinical depression, while only 11 percent of those on an antidepressant did. Does that mean a better long-term prognosis for those patients? No studies prove this, and doctors are emphatic about pointing out that succumbing to the disease cannot be seen as representing a failure of will on the part of the patient. "There have been headlines for many years that you needed to cope better if you wanted to live longer," says Dwight Evans, professor of psychiatry and neuroscience at the University of Pennsylvania School of Medicine. "As important as coping may be, I have had patients whose surviving family members actually felt responsible for their loved one's death, as if something had gone awry in family home relations. And in the end, you have two victims: one who succumbed to cancer and the other who tried to help but believed he failed."

Quality time. Even if treating depression does nothing to improve long-term survival, it goes to the heart of improving the quality of a cancer survivor's life. Miller and others would like to have depression, fatigue, and cognitive problems considered as a sixth vital sign in patient care--along with respiration, blood pressure, pulse, temperature, and pain level. Says Miller: "When we think of vital signs, we should include all behavioral signs, so that patients who are having symptoms can be referred to an appropriate physician."

Pain in itself may not stop when treatment ends. "You can have symptoms that go on for years, whether from the tumor itself, chemo, radiation, or surgery," says Ada Jacox, professor of nursing at the University of Virginia and director of clinical practice guidelines for the American Pain Society. Shingles can flare up in older cancer survivors and become a chronic problem. Nerve pain, called neuropathy, can occur if you're placed a certain way on an operating table during surgery. Women can have long-lasting pain from constricting tissue after a mastectomy.

The feedback loop between pain and depression is sometimes difficult to untangle. Indeed, the nerve tracks that receive pain and those that channel emotion are very closely connected in the brain. Studies have shown that previous episodes of depression predispose a patient to the development of chronic pain, and preliminary evidence suggests that pain may indeed become chronic because of the close connection between these two tracks. University of Miami psychiatrist David Fishbain says, "There is good evidence that if you treat patients who are depressed, you will make them less sensitive to the pain stimuli. They may focus on it less, and they will just tolerate their pain better."

Fatigue is another complication. Pam Massey, who runs the rehabilitation center at M. D. Anderson in Houston, says her team has found that the severe fatigue experienced by bone-marrow-transplant patients can be lessened with exercise. Massey's team added carefully supervised conditioning to its regular outpatient therapy sessions. "You'd see patients on treadmills," she says, "or sitting on exercise bikes with IV poles and five or six bags hanging from them."

Massey also helps patients handle their lymphedema, the painful and disfiguring limb swelling reported by nearly half of breast cancer survivors treated with radiation who are at least 15 years beyond treatment, as well as survivors of melanoma, cervical, and prostate cancer. "We can't tell whether it will start or when," she says. The disruption of the lymphatic system, which can come either from pressure from the tumor or from treatment like surgery or radiation, can be treated, she says, with special exercises, physical therapy, and compression bandages.

Survivorship. The main message from doctors to patients is: Speak up. And sometimes it's imperative to raise questions before treatment begins, as in the case of patients concerned about their future fertility. Many women can bank eggs, and even young boys can have sperm banked. The bad news: Surveys show about half of men and women don't remember being warned about infertility at the time of diagnosis or treatment. Lindsay Nohr, diagnosed with tongue cancer in her 20s, found it frustratingly difficult to explore all her options under time pressure. After doing her own research, she had her eggs frozen, then founded Fertile Hope as a source of information for other young patients. About 100 babies worldwide have been born following egg freezing. Even more cutting-edge techniques are on the horizon.

With this host of potential long-term effects--from depression to fertility, from cognitive impairment to cardiac problems--one of the biggest questions for cancer survivors is who should provide follow-up care after the regular oncologist visits end. The new survivorship centers aim to serve as one-stop shopping, with monitoring of recurrence and late effects, psychologists and social workers, genetic counselors and fertility experts all in one place. But they aren't accessible to most Americans, who are treated in their communities, not in major cancer centers.

Primary-care physicians and specialized nurses may be the best bet for most people, but whoever ends up providing the care needs to know what to look for. Once again, while there's a thick sheaf of recommendations for following up children, there's not much for adults. "One of the areas still lagging behind is research looking at least five years post diagnosis, about which we know very little," says Julia Rowland, director of the Office of Cancer Survivorship at the National Cancer Institute. It's starting to happen: The National Institutes of Health has increased funding of survivorship studies, and there's new interest in the field. And the president's cancer panel will issue its first report this year. But the primary source of information on late effects is, for now, the survivor community itself.

Jay Goldberger is just one beneficiary of this new expertise. At 27, he was told that the avocado-size tumor lodged between two major arteries in his nasal passage was a rare, inoperable pediatric sarcoma with a prognosis of six months. Desperate for time, Goldberger and Esther, his wife of two years, moved from Minneapolis to Houston for treatment at M. D. Anderson. The doctors gave Goldberger a powerful, experimental wallop of chemotherapy. "The doctor told me I'd keep getting the first round of chemo until I told him to stop," says Jay. "He said, 'You'll know when to tell me to stop because you'll feel like you're about to die.'" One day, that's exactly how he felt.

The Goldbergers stayed in Houston for six months. When they returned home, Jay weighed 130 pounds, down from his usual 200. The chemotherapy had so weakened the healthy tissue in his neck and jaw that he was left with persistent jaw pain, and the drugs so damaged his salivary glands that he must chew gum constantly. But the couple had banked sperm, and after Jay improved, Esther conceived and gave birth to twin girls. When the girls were just 2, Esther was diagnosed with non-Hodgkin's lymphoma. She was also successfully treated at M. D. Anderson, and after finishing chemo she got pregnant the old-fashioned way and gave birth to a boy. Now she's pregnant again, with their fourth due in July.

Those conceptions should have been impossible. But their story shows that what happens on a physiological level may be only partially understood and impossible to predict. In the end, when the diagnosis is given to you or to someone you love, it changes everything. Says oncology nurse Catherine Harvey: "We are now only beginning to understand that how you live with the experience is more important in many ways than how you die."

That's exactly the way Joe Fred Starr sees it. "I have been alive for almost seven years," he says, a ring of modest pride in his voice. "There is no cure for prostate cancer, but I have a decent prognosis, and mentally I am clearheaded, even happy. I am almost what they call a poster child."

Science & Society
Cancer's fearsome travelers
By Katherine Hobson

It's a not-so-fantastic voyage. A single cell somehow breaks off from a tumor and makes its way into the bloodstream, traveling through dark arteries and capillaries until it finds a resting spot in some far reach of the body. Once situated, it might immediately invade the surrounding tissue, replicating itself in a frenzy. Or it might just lie dormant--for as long as a decade, long after the original tumor is gone--until a mysterious signal tells it to start growing.

These cellular ramblings and sojourns are technically known as metastasis, and they are what make cancer a killer. Surgeons can often remove a tumor. That's the easy part. But the invisible spawn of this tumor may have already infiltrated the body. Indeed, much basic cancer research in recent years has focused on these minuscule but deadly cells.

The focus of metastasis inquiry is shifting. As important as these "seeds" are to metastasis, equally as important is what physician Stephen Paget called the "soil"--the varied environments that tumor cells encounter as they travel. Paget's pathbreaking thesis, published in the *Lancet* in 1889, is that metastasis involves a complicated biochemical "conversation" between the seed and soil--cell and host--at every step along the way. Scientists are now taking a harder look at how the body itself can lure, influence, and even hide the errant cell. Though much of the research is still being done in petri dishes and small animals, researchers believe it offers hope for new targets for cancer therapies. "The time has come to put the major emphasis on the soil," says researcher Isaiah Fidler of the M. D. Anderson Cancer Center in Houston.

Traveling long distance through the body is not easy and requires some physiological cleverness. A breakaway tumor cell must invade the surrounding tissue to find either the bloodstream or lymphatic system--the most uncongested avenues of transport. One way to do this is for the cell to cultivate its own lymphatic vessels from the surrounding tissue. Indeed, research has shown that a malignant cell's ability to commandeer the body's lymph system is a good predictor both of later metastasis--and poor prognosis for survival.

Battered. The cells that actually make it to the bloodstream still face long odds. Like small boats in a storm, they have a good chance of being battered to pieces by the currents in the bloodstream. "A tumor may be releasing millions of cells per day, but we don't see patients with millions of metastases," says Joan Massague, head of Memorial Sloan-Kettering's cancer biology and genetics program. But some do survive. And research published in the *Proceedings of the National Academy of Sciences* in November raises the possibility that these stalwarts are helped in their odyssey by platelets, the saucerlike, clot-forming bodies in the blood. Just how is unknown, but Washington University's Katherine

Weilbaecher speculates: "What we think is happening is that the cancer cells actually activate the platelets, get stuck to them, and the platelets form webs over the cancer cells." The platelets might even be nourishing the tumor cells, protecting them from detection or helping them to get a foothold in the blood vessels. This is all based on experimental animal work, but it's promising because there are many anticlotting drugs--including simple aspirin--available right now. Weilbaecher is designing a study to examine the phenomenon in humans.

So how do those circulating tumor cells find the best soil in which to pitch their tent? Researchers from Paget on have noted that certain cancer cells prefer certain organs. Breast cancer cells, for instance, often spread to bone, brain, and liver, while ovarian cancer cells almost never lodge in the lungs. No one knows for sure why this is the case, but research now suggests that it has to do with signaling between the invading cells and the host. A research team at M. D. Anderson has identified what it calls "ZIP codes" on blood vessel walls that may help cellular explorers find a hospitable home. Says M. D. Anderson's Wadih Arap: "Cells in the blood vessels aren't generic. Cancer may be using the vasculature as beacons." If this theory is borne out, ZIP codes might someday offer the hope of delivering drugs in a very targeted way.

Once a wandering cancer cell finds the right address, it still has to infiltrate the organ itself. The thought is that different cancers carry different sets of keys, and they can gain entry only if there's a matching lock. That helps explain why some cancers pass harmlessly through the lungs without lodging there. In 2001, researchers showed that the preferred lodgings of breast cancer and melanoma were basically "advertising" themselves with chemicals called chemokines. Guest and host, in other words, were on the same wavelength. And once they find each other, the deadly dance begins. Breast cancer cells, for example, stimulate cells that break down bone. The more the bone breaks down, the more the cancer can grow.

So get them on the wrong wavelength; mangle their communication. That's in fact what drugmakers have in mind. Drugs capable of doing that might have to be taken indefinitely, since tumors can lurk undetected in the body for years. Research has even shown that tumor cells can mimic other kinds of cells by taking cues from their environment. Indeed, there is much to be learned about how the tumor's soil influences the progression of metastasis, and few of these discoveries are yet ready to translate to treatment. Thinking of the body as an unwitting but active participant in the process raises the intriguing question: Could our own chemical signals someday be used to block metastasis? After years of trying to crack the seed, many cancer researchers are now sifting through the soil in search of the answer.

Science & Society
E-Comfort, Online Help

One of the many unfair aspects of cancer is that when treatment is finally finished, patients often find that the side effects are replaced with lasting aftereffects that can include fatigue, cognitive issues, depression, and sexual dysfunction. As doctor visits become fewer and farther between, survivors often turn to the Web, Googling for answers, advice, and a compassionate ear in the night.

Remember that all sites are not created equal, says medical oncologist Gisele Sarosy at the National Cancer Institute. The Web is "like a big city. There are good and bad neighborhoods."

The bad ones trade in myths (underwire bras cause breast cancer), peddle false hope for big bucks (exercise programs promising to prevent recurrence), or unintentionally fan fears.

The many good sites offer solid information, sound advice, and the reassurance that you are not alone. Jerry Liebermann, who has been fighting chronic myelogenous leukemia for more than 25 years and works as the volunteer technology director at Gilda's Club in Seattle (<http://www.gildasclubseattle.org>), looks for answers at www.cancer.gov (which offers a directory of cancer sites) and <http://www.Medlineplus.gov>. "There are some very good resources," he says, "but sometimes the Internet technology world can feed you too much data." Too much can be overwhelming.

Though five-time Tour de France champion Lance Armstrong is a survivor of testicular cancer, the recently launched and still-growing Web site sponsored by his foundation (<http://www.livestrong.org>) has stories from survivors of many different cancers, detailing hard-learned lessons and suggestions for coping with and after cancer. Accompanying this is straightforward advice from experts broken into three categories: physical, emotional, and practical.

Many survivors, wanting to consult with others who have walked the difficult walk, turn to chat rooms. "Online, you're just a name," says Mikkael Sekeres, an oncologist and coauthor of *Facing Cancer: A Complete Guide for People With Cancer, Their Families, and Caregivers*. The anonymity makes it easier to discuss the big issues like sex and death. "Some people are embarrassed to ask those questions in front of family," he says. The Web "gives them the freedom to be a little more candid."

E-chats are too impersonal for Liebermann. "If I was having trouble with lymphedema," he says, "I would want to get together with other people with the same problem and give everyone a big hug afterwards. You can't really do that on the Web."

Hester Hill Schnipper, author of *After Breast Cancer: A Common-Sense Guide to Life After Treatment*, adds a caveat: "Most chat rooms and bulletin boards are not monitored or professionally facilitated. There is so much misinformation and fear circulating. They may read things that are truly terrifying."

Surf with care and before sunset, Hill Schnipper adds: "The middle of the night is when you are most likely to find something that scares you to death." Night terrors are best weathered "with a cup of herbal tea and a good book." -Marc Silver

Science & Society Survivor Sex?

While there's abundant evidence for good living after cancer, it's less clear if that includes good sex. Dry vaginas, limp penises, scarred bodies, perhaps incontinence--not to mention baldness, anxiety, nausea, and fatigue--do not exactly inspire a chorus of "I'm in the Mood for Love." The results of diminished desire can be profound, impairing both the emotional and physical well-being that is so crucial to coping with cancer.

Sexual complaints can be the consequence of the diagnosis, the disease itself, or the treatments. Stress hormones are elevated at the moment of diagnosis and long after, and these biochemicals quash libido. Among breast and prostate cancer survivors, it is estimated that 90 percent have some form of sexual complaint. And the problem rarely gets better by itself. Increasingly cancer centers are including a sex therapist and psychologist in the patient's treatment team.

Teasing out the root cause of sexual dysfunction may be difficult. But there's a lot that can be done, including lubricants and moisturizers for women suffering from vaginal dryness, hormone therapy for low libido, and different sexual positions to compensate for pain or shortness of breath. Sloan-Kettering has a "penile rehab" program, which helps men exercise their erectile tissue with regular erections. Ninety-five percent of men respond to drugs if needed.

The key for couples is to discuss all this early, says Michael Krychman, who is with the sexual health program at Sloan-Kettering. "It's OK to talk about sex. And on the flip side, we have to educate clinicians that it's OK to ask about it."

Science & Society
By Bernadine Healy, M.D.
Yes, I am still here!

I need your love, your prayers, and your encouragement, but please don't bury me before my time. Don't medicalize me or make me prove to you that I am doing well. For I'm here just as you are, and we both have some important living to do. That pretty much sums up how I struggled through my bout with a nasty cancer five years ago. I'm not going to say it was easy, and as a physician I often knew too much. But I always focused on the bright side of any statistic that was dished out to me. And I have learned firsthand something my patients taught me years before--that overcoming or learning to live with a major illness is just one more life-affirming demand in the course of our existence on this Earth.

Almost 40 percent of us will get cancer, an illness of many colors in which perceptions have not always kept up with reality. To be sure, cancer is the one medical diagnosis that always brings shivers and a gut-wrenching sense that your time is up: "So this is how I die." Whether or not you have peered across the River Styx, the facts are that today you are vastly more likely to survive than not, and very well, thank you--joining the legion of some 10 million people in this country called cancer survivors.

The field of cancer medicine is nothing short of breathtaking. After decades of major research investment in the war on cancer, we are now seeing more tailored treatment plans emerge from the clinics and whole new classes of cancer-fighting drugs pour out of pharmaceutical houses. These are drugs like Herceptin and Gleevec that show we can target cancers with laserlike precision based on molecular or genetic type. And with earlier detection and more successful treatment, quality of life--not just its quantity--is getting better.

Here we can learn from the younger generations and the great successes we have seen with their remarkable recoveries from childhood cancers. I recall one of my daughters bringing a college friend home, and this young woman noticed that we had Neupogen in our refrigerator. That's the medicine that builds up your white cells when you're in the depths of bone marrow suppression from cancer treatment. Bubbling with life and enthusiasm, she proudly told me of her own self-injections with the drug years before and her magnificent recovery from Hodgkin's disease. Indeed, if you ever want to be inspired, touch a young person who has scaled this mighty mountain.

Blackberry winter. But sometimes people are afraid to extend a hand to others who have borne this illness. One oncologist who had her own bout with cancer told me that the scarlet C can be a stigma socially and in the workplace. It can place you in a lesser category of being, one that discounts your value and isolates you to a class defined by illness, not wellness. If that thinking is lurking

out there, as it may well be, I can say only that it calls for radical excision. Cancer may be scary, but it's not catching.

Indeed, the scarlet C's are more likely to rest on some seasoned survivors who have overcome fear and marshaled inner strength that perhaps even they didn't know they had. They have gone through the proverbial blackberry winter--that time of bitter frost that singes the blackberry's bloom but brings forth a sturdier fruit. And that's the real message. It's not about the cancer as much as it is about living through a time of peril with loved ones--and prevailing.

Lingering in my heart is a tender note that came to me early in my illness from a Johns Hopkins colleague. She lives with a serious heart condition and has survived deadly rhythms and a cardiac arrest. She wrote: "All of the odds have been staked against my survival, even worse, against my survival with everything intact. But here I am writing yet another grant, going to work . . . visiting my daughter in Western Samoa five thousand miles from good medical care. I have learned to approach each day as a gift, although at first that was quite difficult. I've come to realize what incredible courage it takes to go through a serious illness."

Every one of us becomes a survivor of sorts the moment we enter this world and have our first cry. Each of us will encounter many who have endured a time of mortal danger, be it from cancer or something similar. Gain strength from them. Sooner or later, they will be you.

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