

# Integrative Oncology: A Healthier Way to Fight Cancer

By [Pamela Weintraub](#) / [May 2013](#)

Integrative oncology enhances conventional treatment strategies. And its lessons could help more of us avoid cancer entirely.

DeAnne Salmon, a product designer from Jacksonville, Ore., comes from a family plagued by cancer. Her mother died from colon cancer at age 54. Salmon's sister died from breast cancer at age 52. It's no surprise that Salmon became something of a health fanatic, turning to exercise, [organic foods](#) and a raft of supplements in order to thwart the disease. "It never occurred to me that after doing everything right, I could get cancer, too," she says.

But in 2011, right on schedule at age 52, Salmon was diagnosed with breast cancer. Her stage 2A invasive ductal carcinoma wasn't necessarily a death sentence, but doctors were concerned after finding a second tumor behind the first. Salmon followed her doctor's advice, opting for a mastectomy followed by a short-course chemotherapy regimen to kill malignant cells. The side effects were not for the faint of heart: high levels of pain, hair and fingernail loss, constipation, diarrhea, unrelenting fatigue, and memory loss.

"I had to do something to help myself through the chemo," says Salmon.

Her acupuncturist recommended the Mederi Centre for Natural Healing in nearby Ashland, where master herbalist Donald Yance Jr., MH, CN, RH (AHG), has spent decades collaborating with conventional oncologists, integrating botanicals not just to offset the side effects of traditional cancer treatment but also to boost overall [immunity](#).

In the face of a cancer diagnosis, most people understandably head straight to surgeons who cut out tumors and to oncologists who use potent chemotherapies and radiation to root out disease. For many, the treatment ends there. But many experts are now saying that it's time to take a more holistic, long-term approach to the disease, and to pay closer attention to the overall health of patients suffering from cancer. That is why many practitioners, including medical doctors, have embraced the rapidly expanding field of integrative oncology, which fuses the best of conventional and alternative treatments.

Pursued with care, integrative-oncology strategies such as nutrition, exercise, stress management and targeted supplements can reduce inflammation and boost immunity, which can reduce the risk of relapse.

Even better news? Many of the same protocols integrative oncologists use to protect survivors from a cancer recurrence can help lower cancer risk in the rest of us, too. That's important because, as integrative oncologist Dwight McKee, MD, puts it, "we are all potential cancer patients."

Conventional oncology, McKee says, has primarily been focused on finding "better and better ways to kill a tumor — usually with great, and sometimes lethal, toxicity to the host as well."

Integrative oncology, on the other hand, focuses on the interplay between the tumor and its immediate biochemical environment within the body, often referred to as "the terrain."

"For almost any chronic disease, [inflammation](#) is at the root," says University of Texas cancer researcher and biochemist Bharat Aggarwal, PhD. "Most cancer starts by the age of 20." As the body ages, he explains, toxic exposures mount and genetic damage accrues. Depending on inflammation and the overall condition of a person's terrain, that deterioration may eventually result in a life-threatening cancer, perhaps many years or decades later.

Thankfully, says McKee, a thought leader in the field, "the microenvironment within which tumor cells live is finally becoming a focus for laboratory researchers. We are at the dawn of a new era in helping patients survive."

As positive reports about integrative-oncology approaches roll in, renowned teaching hospitals are increasingly launching integrative programs of their own. Over the past 15 years, most major cities have established significant integrative programs at mainstream treatment centers, from Memorial Sloan-Kettering in New York City to MD Anderson Cancer Center in Houston to the University of California's Simms/Mann Center for Integrative Oncology in Los Angeles.

Along with greater acceptance comes greater accessibility for patients. Many integrative tools, such as acupuncture, nutritional counseling and stress management, have qualified for insurance coverage in recent years because a substantive body of research has validated the methods and results.

Another level of integrative care, more personalized but also more experimental (and thus less likely to be covered by insurance), exists beyond mainstream walls. At the Block Center for Integrative Cancer Care in Skokie, Ill., for example, patients are treated with a tailored program that includes therapeutic nutrition, exercise, mind-spirit care, and a variety of emerging anti-tumor therapies. In Utah, nutritionist Jeanne Wallace, PhD, CNC, customizes a nutrition plan based on each individual's cancer profile, lab tests and biomarkers of survival.

What all of these integrative strategies have in common is the idea that just attacking the tumor is often not enough because inflammation could, at any time, set the stage for cancer to relapse.

“Cancer is like a weed,” says oncologist Donald Abrams, MD, director of clinical programs at the University of California, San Francisco's Osher Center for Integrative Medicine. Conventional oncologists try to destroy the weed — even if it means using the oncological equivalent of Roundup.

Abrams, by contrast, sees his job as using a variety of [integrative](#) tools to take such good care of the garden that the weed cannot grow back.

## **Eat to Beat Cancer**

One of the most critical tools integrative practitioners use to quell inflammation and boost immunity is also the simplest: basic nutrition.

In addition to increasing our consumption of anti-cancer foods such as cruciferous veggies, [garlic](#) and onions, one of the most important dietary changes any of us can make, notes Wallace, is to drastically cut down on refined sugars and refined carbohydrates which directly fuel the cancer growth.

Dozens of herbs and spices also have anti-cancer potential (for a full list, see the online version of this piece at [ELmag.com/integrativeoncology](http://ELmag.com/integrativeoncology)), but the science around curcumin — a component of the spice turmeric — is the most advanced.

In a study published in the March 2012 issue of *Molecular Nutrition & Food Research*, Bharat Aggarwal and his colleagues established that turmeric can block cancer-causing metabolic pathways, stopping tumor proliferation. As a bonus, the spice also sensitized tumor cells to the chemotherapeutic agents capecitabine and taxol.

In his latest book, *Inflammation, Lifestyle, and Chronic Disease: The Silent Link* (CRC Press, 2011), Aggarwal highlights other dietary recommendations, including consuming fresh orange juice (not from concentrate), which has “profound anti-inflammatory effects.” Other studies point to the potent anti-inflammatory power of resveratrol, found in red wine and grapes, which suppresses dangerous inflammatory biochemicals called cytokines.

One of the hallmarks of integrative oncology is that each cancer patient is unique and needs a specific botanical-nutritional plan for success. DeAnne Salmon sought the counsel of Mark Bricca, ND, LAC, a Chinese medicine expert and naturopath from the Mederi Centre, who has recently moved his practice to nearby Portland, Ore. He recommended a regimen of supplements and smoothies containing, among other things, turmeric; isothiocyanates (chemical compounds found in high concentrations in cruciferous vegetables); green-tea extract, resveratrol, grape seed and quercetin; anti-inflammatory botanicals, like frankincense; and immunomodulators, including turkey tail mushroom.

When Salmon’s mainstream oncologist prescribed hormone therapy for her estrogen-positive breast cancer, Bricca treated her with a series of synergistic herbs, including asparagus tuber and wild yam to mitigate the side effects. “At every visit, tests were done and the protocols were changed,” she explains.

Wallace honed *her* approach to the terrain in the face of a looming tragedy: One day in October 1997, her partner, Cheryl Clark, collapsed and was diagnosed with glioblastoma multiforme, the most aggressive form of brain cancer. Doctors removed a tumor the size of a lemon, but when it began to rapidly regrow, Clark was given between three and six months to live.

Wallace hit the medical literature, reading everything she could about the metabolic pathways and prognostic biomarkers associated with the disease, reasoning that nutritional strategies to alter these pathways could help improve the chance of survival.

She had Clark reduce sugar and carbohydrate intake, both of which contribute to insulin resistance, which promotes inflammation and can foster tumor progression. She also gave Clark anti-inflammatory agents, including omega-3 fatty acids, boswellia and bromelain. Another crucial part of the protocol was berberine, a natural chemical found in the Chinese herb coptis, which can help normalize blood sugar and act as a radiosensitizer — a drug or natural food compound that makes tumor cells more sensitive to radiation therapy.

Thus fortified, Clark went for radiation therapy. She also took supplements, including melatonin and vitamin E, to both magnify the therapeutic force of the treatments and protect the health of the brain.

Defying her deadly prognosis, Clark remains well, and Wallace, who today is considered an expert in integrative care for malignant brain tumors, brought her strategies to the wider world of cancer, where, she says, no two patients are ever the same.

“People ask if I can give them a nutrient to cure cancer, and I tell them no,” Wallace says. “But I can teach them how to create an anti-inflammatory environment within their bodies so it’s less of a conducive host to tumor growth and production.”

## **De-Stress Your Cells**

A spate of new research shows that chronic stress, which unleashes damaging fight-or-flight hormones, can be as inflammatory as bad nutrition, leaving cancer patients at greater risk.

Over the past decade, University of California–Irvine psychologist Lari Wenzel, PhD, has played a significant role in clarifying the benefits of stress reduction for cancer patients.

In a 2008 study published in *Clinical Cancer Research*, for example, Wenzel reported that cervical cancer patients have “severely compromised quality of life” and experience significant [stress](#) as a result. She found that by providing counseling over the phone, her team could teach patients coping mechanisms that significantly improved their quality of life, reduced their chronic stress response and improved their immune function.

Keith Block, MD, medical director of the Block Center for Integrative Cancer Care and author of [Life Over Cancer](#) (Bantam, 2009), emphasizes mind-body care as part of the center’s comprehensive approach to treatment. “Research demonstrates that chronic unrelieved stress can impact patients’ biochemical terrain and, if not addressed, can leave their immune system and biology in turmoil.”

Simple relaxation techniques complement more advanced strategies taught at the Block Center. The starting point of many relaxation regimens is deep abdominal breathing, practiced simply by finding a comfortable position sitting or lying down, and taking deep, slow, rhythmic breaths.

The next step generally involves progressive muscle relaxation. Starting with the toes and moving gradually upward to the head, patients methodically tighten and relax all their muscles, focusing on one muscle at a time until it is relaxed, then moving up to the next.

Block often has patients practice a form of guided imagery while in this deeply relaxed state. They might visualize themselves in a quiet, idyllic space they associate with peace.

To the extent that you can leave your anxiety behind, even for a while, says Block, you ease chronic tension and reduce cortisol and other stress hormones that can contribute to disease progression.

In line with this goal, any technique that helps the patient focus on the here and now, drowning out stressors to achieve deep relaxation, can work: yoga, meditation, tai chi and journaling, just to name a few.

Block also recommends cognitive reframing — an approach that supports patients in shifting the way they typically react to physical symptoms, social interactions, worrisome communications and even negative self-talk.

## **Fight the Tumor, Nourish the Patient**

As powerful as complementary tools are in battling cancer, they work best, integrative doctors believe, when combined with conventional oncology techniques.

For integrative oncologist Dwight McKee, MD, this means doing a careful analysis of each tumor. He has learned to reject outmoded and general designations based on the organ or tissue type where the cancer first developed, like breast cancer or lung cancer.

“The important thing isn’t where the tumor started,” he says, “but the tissue it currently resides in, as well as its gene expression, signaling networks and drug sensitivities.” Breast cancer that has moved to the bones is qualitatively different, he notes, than breast cancer that has moved to the brain.

McKee also strives to determine the aggression with which a cancer spreads: “Some tumors are pretty indolent and spread slowly. In such cases, simply changing the terrain — the biology of the tissue surrounding it — can stop it from progressing. Some people do well with nutritional interventions and alternative treatments alone. But on the other end of the spectrum are tumors that are so aggressive they will take over no matter how you alter the terrain.”

Determining the treatment means analyzing every tumor in the lab. Mainstream practitioners typically do this through a technique called “target profiling,” which attempts to link gene or protein biomarkers with a statistical potential for drug activity. This is often a crude estimate, leading to trial and error because, despite theoretical predictions, the drugs may not work. The number of drugs tied to gene targets, moreover, is small. McKee’s approach is far more extensive, personalized and precise.

Working with laboratory oncologist Larry Weisenthal, MD, PhD, of the University of California–Irvine, McKee tests tumor samples through a technique called cytometric profiling: Tumor biopsies from the patient are exposed to dozens of candidate chemotherapy drugs and targeted agents along with some botanical isolates like artemisinin or oleander extract, immune mediators, and chemotherapy-enhancing drugs. Then the tumor-killing ability of each drug and combo is quantified in the lab.

Using the technique, McKee has often helped patients defy grim prognoses. His wife’s cousin, for instance, was diagnosed with late-stage ovarian cancer and told she had just months to live in 2011. “She was near the end,” McKee explains. “She had fluid pockets in her belly and complete bowel obstruction, a situation that caused vomiting and excruciating pain.”

McKee had the fluid tapped and sent to the Weisenthal Cancer Group lab, where the cancer cells were tested and determined to respond best to a certain combination of chemotherapies and herbs. Conventional chemotherapies using the chemotherapy agents gemcitabine and platinum were found to work best, and Weisenthal found that the cancer cells were also uniquely vulnerable to a lung cancer treatment called Iressa, the anti-inflammatory Celebrex and artemisinin, an anti-malarial herbal extract.

“After three to four treatments, her [blocked] gut opened up,” McKee notes. Added to the arsenal was a bone marrow broth and herbs to boost her immune system, a copper reduction protocol that blocked blood vessels feeding the tumor, and a lifelong commitment to anti-inflammatory botanicals and food. This strategy gave her back a high quality of life until she suddenly contracted a severe case of influenza and died unexpectedly in January.

Controlling inflammation is often at odds with aggressive conventional interventions — surgery, radiation, chemotherapy — creating a deadly catch-22. The most aggressive tumors require invasive and toxic treatments. Yet the treatments produce inflammation in the terrain, setting the stage for the cancer to recur up the road.

One strategy McKee uses to keep inflammation down is the small-but-growing practice of tumor ablation, which lacks the extreme pro-inflammatory effects of cutting someone open. Ablation involves getting a needle into every deposit of the tumor that you can find and killing it by either freezing it or heating it. (The only place this can’t be used is the brain. There, a form of ultrasound may be used for ablation instead.)

Another theoretical benefit of ablation is that it leaves behind tumor antigens, which McKee suspects could create a kind of vaccine effect — an antibody and immune cellular response that would mop up any remaining cancer cells, much like infections provide immunity in the wake of a disease.

“We have seen multiple cases where large tumors were ablated by heating or freezing, and then distant metastases disappeared in the subsequent several months,” McKee says.

## **Practice the Art and Science of Prevention**

Integrative oncology has tallied real success in extending mainstream strategies, but its most important advances stem from preventing recurrence once conventional practitioners declare their work done.

“Just because you have achieved remission through elimination of the primary tumor does not mean you are home free,” Keith Block explains. “While conventional cancer treatments often remove much of the disease burden, micro-metastases may already have migrated to and seeded other parts of the body.

“That’s why, for my patients, complete remission does not mean the end of treatment. Instead, it means the start of the containment phase, when we focus on stopping or slowing further growth.”

This post-treatment period, with a focus on monitoring biomarkers and nutritional intervention, is often particularly aggressive. It can also last for years. In the integrative realm, a cancer patient isn’t sent home for watchful waiting — only to be told of the alarming emergence of a malignancy on a body scan after months or years of growth. Instead, the patient in remission continues to pursue a treatment strategy focused on containing inflammation, mitigating stress and promoting overall health.

“The mainstream docs just give you a stack of prescriptions to deal with the pain and nausea,” says Mark Bricca’s patient DeAnne Salmon, who says she got much better results from the nutrient-dense, botanical-packed smoothies that Bricca prescribed for her.

“I had energy and I never had any side effects,” Salmon says of Bricca’s regimen. “In many ways I felt healthier and looked better than before I ever got sick. Mark made me feel like I had an active role in my treatment and control over the disease.”