RESEARCH LITERACY IN A CAM CURRICULUM • REIKI IN THE ELDERLY WITH DEMENTIA • PROBIOTICS FOR NECROTIZING ENTEROCOLITIS • THE ECOLOGY OF EATING • STINGING NETTLE CREAM FOR OSTEOARTHRITIS • YOGA FOR RHEUMATOID ARTHRITIS • CONVERSATIONS/TIMOTHY BIRDSALL, ND
Donovan, naturopathic physicians in the Seattle area, were the first NDs to be hired by CTCA at our clinic in Seattle. I was familiar with CTCA—only peripherally—based on their involvement. I had the opportunity to meet a couple of folks from CTCA at a conference that I was attending, and that turned into an invitation to come to the Midwestern Regional Medical Center just outside of Chicago to present a grand rounds.

I did that in the spring of 1998, and at that time, based on the experience in the Seattle clinic, the CTCA leadership had made the determination that they wanted to add naturopathic positions at all of their facilities. The hospital in Illinois was in the process of figuring out how to add naturopathic medicine there, which would have been the first inpatient facility at CTCA to have naturopathic physicians. I just happened to be in the right place at the right time.

I was so impressed by what I saw, by the level of care that was being provided to patients, by the openness to alternatives to conventional therapy. One thing led to another very quickly. I found CTCA very interesting and exciting, and they were looking for a naturopathic physician to provide some leadership for that program. By summer, I had relocated to Illinois and was working at CTCA.

I started as the director of naturopathic medicine at the hospital in Illinois and also as the national director of naturopathic medicine for the entire corporation and stayed in that role until about 2003. At that point, I was promoted to vice president of integrative medicine, which is the role that I’m currently in. In this role, I have responsibility for all of the integrative medicine modalities programmatically at CTCA. That includes nutrition, naturopathic medicine, mind-body medicine, pastoral care, oncology rehabilitation, acupuncture, and chiropractic. I have responsibility for those programs around the enterprise.

ATHM: In addition to your corporate role, you are a practitioner on staff at the Phoenix facility. How does that benefit you and the organization?

Dr Birdsall: I’m a clinician at heart. Seeing patients is a vital part of making me effective as a leader. Frankly, it’s a vital part of me
staying sane. As a matter of fact, if I get a little cranky, my wife is likely to suggest that I need to see a few more patients because I love working with patients. Far too often in medicine, healthcare decisions, particularly in large organizations, are made by non-clinicians or by people who are no longer active clinicians.

I value being able to sit in a room with a patient, listen to her story, make suggestions and recommendations, and manage complex medical problems and then walk out of the room, go into a meeting, and talk about how we can improve our system of care or delivery of care from a very different perspective than if I was just an administrator looking at a sheet of facts and figures.

** ATHM:** When CTCA decided to bring on NDs, was it focused specifically on NDs, or was it bringing on other practitioners with an integrative medicine focus as well?

**Dr Birdsall:** For a long time, CTCA has had an approach of utilizing all of the appropriate resources to deal with cancer and to assist cancer patients. We spend a lot of time talking to our patients and determining what they value. There are many integrative approaches at the CTCA that have been around for a long, long time and that certainly predate naturopathic medicine. That would include intensive nutritional intervention, as well as a variety of mind-body therapies including everything from psychotherapy to Reiki therapy and biofeedback—a whole variety of approaches like that. So naturopathic medicine is certainly not alone.

Integrative medicine at CTCA is not an add-on. At many other places, particularly large academic medical centers, especially with inpatient-based medical care, my experience has been that integrative medicine is an add-on. It’s an afterthought. CTCA is completely committed to an integrative approach. Integrative medicine actually formed the foundation of CTCA in terms of what we believed that we wanted to provide.

CTCA is now 20 years old, and some of the predecessor organizations go back another decade or so before that. It is such a deep part of what we do. It’s imbedded into our mission statement and into what we call our promise to our patients. Our mission statement says, “CTCA is the home of integrative and compassionate cancer care. We never stop searching for and providing powerful and innovative therapies to heal the whole person, improve quality of life, and restore hope.” So “integration” is right there in the first sentence of the mission statement.

It is who we are, and I find that to be truly unique. Our promise to our patients says, “You and your healing are at the center of our hearts, minds, and actions every day. We rally our team around you, delivering compassionate, integrative cancer care for your body, mind, and spirit. We offer clear information, powerful and thorough treatment options, all based on your needs. We honor your courage, respect your decisions, and offer to share your journey of healing and hope.” Integrative care is right there at the front and center of what we promise we’re going to deliver to our patients.

** ATHM:** During all of the years that you have been at CTCA and working as a clinician, what kind of changes have you observed in oncology with regard to patient care?

**Dr Birdsall:** There are some very dramatic and exciting changes in oncology. A couple of major shifts have occurred in the last decade. First of all, oncology care itself was limited from a conventional standpoint to the 3 traditional pillars of cancer care: surgery, radiation therapy, and chemotherapy. On the conventional side, there have been some dramatic breakthroughs. They haven’t translated yet to anything that would approach a cure, in general, but nonetheless, there have been significant breakthroughs in the areas of what we’re calling targeted therapies, such as monoclonal antibodies that are specifically targeted to cancer cells, drugs like Rituxan and Herceptin, and some of the other therapies that are targeted to specific receptors on cancer cells, such as epidermal growth factor receptors and vascular endothelial growth factor receptor.

We are becoming much more specific. We’re starting to use data from the Human Genome Project to help predict who will respond to conventional treatment. There is a new test available called Oncotype DX, which looks at a panel of genes in a patient’s cancer and determines from their analysis whether that patient will benefit from receiving chemotherapy. We can now individualize our therapies, whereas in the past, conventional approaches to oncology just categorized people into big groups and said, “You’ve got stage II breast cancer, so you need to get X.” Or, “You’ve got stage III colon cancer, so you need to get Y.”

Now we can individualize therapies much more precisely. I would predict that in another 10 years, most cancer therapy will be driven by molecular and genetic analysis of the tumor, not by the organ system where it starts. Currently, we categorize cancer as breast cancer, lung cancer, colon cancer, or prostate cancer, and we treat cancers in each of those categories more or less the...
same. We’ve gotten a little bit more sophisticated in the last few years, but we are now at the point where we know that there are common genetic mutations that cross those organ system lines.

What we’re seeing now is testing that says, “Your cancer is either positive or negative for this genetic abnormality. That means you are either a candidate for or not a candidate for drug X.” It doesn’t matter whether you’re talking about a patient with breast cancer or ovarian cancer or colon cancer. If your cancer exhibits this abnormality, we’re going to give you the drug. If you don’t have this abnormality, we won’t.

Oncology is going to become a very individualized approach to medicine. That fits right in with an integrative model on a philosophic level anyway. I’m very excited about that change.

On the integrative side of things, we have seen a lot of major cancer centers starting to pay attention to patients’ needs in the areas of integrative medicine. We’re seeing major cancer centers like Memorial Sloan-Kettering Cancer Center in New York City and MD Anderson Cancer Center in Houston with integrative medicine clinics as part of their centers. They are offering therapies like nutritional counseling and acupuncture.

That’s also very exciting to me. As a matter of fact, there was a new organization formed about 5 years ago called the Society for Integrative Oncology with the sponsorship and support of major cancer organizations in the United States like the American Society for Clinical Oncology and the American Society for Therapeutic Radiation and Oncology. It is great that major organizations sponsored the founding of a new professional society that is totally focused on integrative oncology.

ATHM: Is CTCA the only group of care centers that has an integrative approach to oncology? Or are we starting to see more of this in other facilities?

Dr Birdsall: I feel confident in saying that CTCA is the only nationwide, hospital-based oncology provider that programmatically includes integrative medicine as its underlying philosophy and where integrative options are offered to every single patient. Right now, to the best of my knowledge, every other cancer facility that’s offering any type of integrative services makes them available only when ordered by the attending physician or only if patients request the services. But patients are not automatically offered integrative options at most other centers.

At CTCA, every single patient walking in the door is going to speak to a nutritionist, meet with a naturopathic physician, be told about acupuncture, have conversations about mind-body techniques. We’re not here to force any integrative therapies down anyone’s throat. A patient can say, “I don’t want acupuncture” or “I’m not interested in herbs.” That’s fine. But we feel it is our obligation to educate patients and to present that information. I believe that CTCA is the only hospital-based provider in the country that is programmatically offering those kinds of options to every cancer patient who walks in the door.

ATHM: CTCA founder Richard Stephenson has been quoted saying, “What were regarded as world-renowned cancer treatment facilities were singularly focused on the clinical and technical aspects of cancer treatment, ignoring the individual needs of the patient and the multifaceted nature of the disease.” Do you feel this is still the case?

Dr Birdsall: In my experience dealing with thousands of cancer patients over the last decade, unfortunately, the answer is still yes. The care that most patients get is very much focused on a tumor. There is very little focus on the individual who has the tumor. There are exceptions to that, but they are few and far between, and the vast majority of the patients I talk to come to CTCA because they are looking for something that hasn’t been offered to them in their local facilities. So while there has been much change and there is a lot more discussion about addressing the larger needs of cancer patients, oftentimes we fall short in the delivery of services targeted toward that.

ATHM: Has the CTCA model influenced patient care at other centers?

Dr Birdsall: I honestly believe that CTCA is a change agent. That’s part of what attracted me to CTCA—I felt like I could participate in the process of changing healthcare. My secret agenda is to revolutionize healthcare in America. I see cancer treatment as a place from which I can do that.

CTCA has been very public about what we do. We advertise directly to patients, to consumers. We are not structured in the
typical referral patterns that govern most specialty care in America. We don’t have a group of local primary care doctors who refer their patients to us and therefore to whom we are beholden. We are beholden to one person: the patient.

Because we advertise our services directly to consumers, consumers get educated. Even people who don’t choose to come to CTCA are a little bit more educated about some of the questions they should be asking and push their local providers to add more of the services that that cancer patients need.

ATHM: In CTCA’s model of care, you offer something that you call “comfort rounds.” What is it, and how does it affect patient care?

Dr Birdsall: Comfort rounds is an interdisciplinary approach to dealing with issues that cause patients discomfort. It grew out of a more traditional pain rounds type of an approach. But we quickly realized that if all we did was deal with patients’ physical pain, they oftentimes were still uncomfortable but for other reasons.

So we have a multidisciplinary team that includes pain management physicians and nurses or physician assistants, naturopathic physicians, acupuncturists, mind-body therapists, pastoral care staff who round on our inpatients and ask the simple questions, “Are you comfortable? What can we do to make you more comfortable?”

The answer may be, “I’m in a lot of pain.” We can address that in a variety of ways. We may change their dose of narcotics. We may have the massage therapists come in to provide some musculoskeletal relaxation. We may have the acupuncturist do acupuncture. Or we may do a combination of all of those things.

The patient may say, “I’m really uncomfortable; I could use another pillow.” Our job is to get the pillow. Or it may be, “I’m really uncomfortable because I love my dog and I have been here for 10 days without my dog, and I miss her.” In that case we might arrange for one of our therapy dogs to visit the patient or perhaps have a friend or family member at home e-mail us some snapshots of the dog.

Sometimes people are concerned about end-of-life issues. Cancer is an interesting disease because unfortunately, even in 2009, about 50% of people diagnosed with invasive cancer this year will die from that diagnosis. But the vast majority of them will not die quickly and will live for years, knowing that most likely the disease will ultimately take their life.

Cancer forces us to confront our own mortality and to maybe ask questions about the nature of life and death that we would not have thought to ask previously. At CTCA, we take the opportunity to provide patients with a forum to discuss those issues with someone from our pastoral care staff or our mind-body medicine.

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Comfort rounds is really designed to look at the entire gamut of discomfort—all the way from straightforward, physical pain to psychological, emotional, and even spiritual discomfort and to make sure that we’re creating an environment where those things can be addressed.

**ATHM:** You use what you refer to as the “Mother Standard.” What is it, and why does CTCA believe it is important?

**Dr Birdsall:** The Mother Standard is a very simple concept: it is treating every single patient the way you would want your mother, your father, your brother, or your sister to be treated. At CTCA, it comes directly from the circumstances that surrounded our founding. Our chairman, Richard J Stephenson, tragically lost his mother to cancer. She was not offered the type of care, options, or support that would have been most helpful for her.

At its core, CTCA really is about a son taking care of his mother. And as a clinician, that’s how I see every one of our patients. I am going to do for that patient exactly what I would do if that patient were my mother. If you think about it in those terms, it has a profound impact on how we treat people. They’re no longer patients; they’re family. They’re no longer a diagnosis; they’re people. They’re no longer your 2:30 appointment that you have to rush through because you have another one at 2:45. It’s taking care of that person the way you would take care of a loved family member.

**ATHM:** Treating patients in that manner must lead you to get emotionally involved with them. That must be difficult.

**Dr Birdsall:** For a long time in medicine, there has been a perception that we need to distance ourselves from our patients, that we should not get emotionally involved. There are some risks with getting emotionally involved with your patients. The risk is that you may lose some of your objectivity. You also risk losing someone to whom you have become close. But the benefits to both patient and provider far outweigh the risks. For me, it is a unique privilege to embrace my patients, both physically and metaphorically, and to walk their journey hand in hand with them.

We take extraordinary means to be very careful in making hiring decisions at CTCA. Patients and others who visit and tour our facilities—particularly if they’ve interacted with any of our stakeholders, which is what we call our employees—ask questions like, “Where do you find these people?,” “Do you have some sort of a special training program you put them through?,” “Do you feed them happy pills?”

We don’t give them happy pills, but we do diligently search out people who are compassionate and who will engage and interact with and develop relationships with patients. That’s not just the clinicians. It’s not just the nurses. We use those same standards for hiring people in our housekeeping department, our food service department, and our maintenance department because those people are going to interact with patients all the time.

It is not unusual to see a housekeeper in an inpatient room cleaning the room and having a conversation with the patient. We facilitate and encourage that.

There is one statement that is always considered to be the highest priority. If I walk into a meeting late, even a meeting with the chairman of the board, because I’ve been with a patient, all I need to say is, “I’m sorry I’m late. I was with a patient,” and that answers all questions. If there is a question about whether or not we should do something, the question that stops the debate and just moves the conversation along down the road is, “Is this best for the patient?”

When you hire the right people and put them in an environment that not just allows but encourages them to develop that kind of relationship with a patient, you create a place that becomes a home away from home for patients. Do we get too close to our patients sometimes emotionally? It can be a challenge. Working with this patient population, we have patients who die.

If you’ve worked at CTCA for very long at all, you’ve got 1 or 2 or 3 or a long list of patients whom you really cared about, whom you really connected to who have passed away. That’s the nature of life; that’s the nature of humanity. I consider it a huge privilege to be able to interact with patients in that way at a point in time when they have such significant, sometimes even desperate, needs. It’s not always easy, but for me, it’s very rewarding.

**ATHM:** Can you put a value on how important “whole-person cancer treatment in a compassionate, nurturing environment,” is in terms of effecting positive outcomes?
Dr Birdsall: From a purely analytical standpoint, doing a controlled trial of compassionate, nurturing care from a whole-person perspective is a difficult thing because you would have to come up with whatever the opposite of that is and provide it to half the people. What we can demonstrate is that our patients achieve some very dramatic outcomes, particularly in the areas of optimism and quality of life.

We have published several dozen articles and abstracts in the medical literature on our outcomes using this model in looking at objective quality-of-life measures. We published an abstract on naturopathic interventions for pancreatic cancer and their ability to improve both pain and fatigue scores in patients. We see some very dramatic results in that regard.

On a philosophical level, I don’t see any other way to provide care, particularly for a disease like cancer. You have to look at the entire person; you have to look at the entire family system and the entire dynamic going on with that person to be able to treat it effectively.

Obviously, cancer is not something that we can say we have reached the zenith of our ability to treat. If 50% of the people who contract cancer are going to die from it, we’ve got a long, long way to go.

We are figuring out the technical, scientific, and biologic pieces of that, but as we go, it seems incomprehensible to me that we wouldn’t do that in a compassionate, nurturing environment. If you can’t guarantee that you can cure someone, at the very least, you can be compassionate and understanding and supportive.

ATHM: With 50% of patients diagnosed with cancer likely to die from the disease, how does CTCA measure success in terms of the patient outcomes?

Dr Birdsall: There are a variety of ways to measure success. Outcomes is certainly one of them. You have to be careful about which outcomes you look at and how you track and define them. We have looked at a variety of outcomes in different cancer types.

For example, we’ve talked about some of the quality-of-life issues that we have been able to identify and drill down on. Pancreatic cancer is the one that comes to mind. Pancreatic cancer is probably the most lethal common cancer. We have published quite a bit of data looking at pancreatic cancer and outcomes, and we’ve compared our outcomes to other publicly reported data in the SEER—Surveillance, Epidemiology and End Results—database at the National Cancer Institute and looking at survival. In the study, we demonstrated that pancreatic cancer patients treated at CTCA live significantly longer than similar stage pancreatic cancer patients reported in that national database. We are tracking a variety of things like that.

There are a lot of other kinds of intermediate endpoints other than just survival. As I mentioned, quality of life is certainly a huge one. If all we did was improve pain and fatigue in cancer patients—and we’ve been able to demonstrate in several different groups that we can do that—that would be major news.

Outcomes are an appropriate way to measure how facilities perform. For us, probably the most important measure is what our patients tell us. We have what we call patient loyalty surveys that we use with all of our patients to survey their reactions to their visit with us. We learn a lot about what we could do better. We also learn a lot about how our patients perceive us and whether they would recommend us to a friend or family member.

We’ve used data-gathering tools that have been used by many other companies, including the net promoter score, which is a concept that originated with Bain and Company on the East Coast with Fred Reichheld. Our net promoter scores, which represent patients who are incredibly loyal, vocal supporters of CTCA, are higher than the net promoter scores for world-class companies such as Ritz-Carlton or some of the luxury automakers. They tell us how well we’re doing, but they also tell us where to improve. We listen to our patients, and ultimately, that’s the biggest measure of success.

ATHM: One criticism that has been leveled against CTCA is that it offers false hope to very ill patients who have been offered no further conventional treatment. How do you respond to that?

Dr Birdsall: CTCA’s approach has been to evaluate every patient as an individual and to determine what other therapies might be appropriate. From my perspective, there’s no such thing as false hope for a cancer patient unless you’re lying to them. If you tell a patient that something is going to work when there’s no reason to suspect that it will, that would be offering false hope, and we would never do that to a patient. However, many patients who have been told elsewhere that there were no other options left for
them come to us, we treat them, and they have remarkable results. In some cases, frankly, they are cured. I have 4 or 5 patients now, long-term cancer survivors with no evidence of disease, who were told elsewhere that there were no other treatment options for them. We treated them, and they’re disease-free today.

Even if a patient ultimately succumbs to the disease, oftentimes we provide them with a much longer life than they were told to expect. A very dear friend of mine who passed away recently had been diagnosed with metastatic breast cancer—widely metastatic to multiple internal organs and multiple bones—and was told that there were no treatment options available for her. She went to several major medical centers in the United States. You would recognize all of their names if I told you what they were. She was told by all of them, “There’s nothing else that can be done.”

She came to CTCA, we treated her, and she lived 16 years. Did she ultimately die from her breast cancer? Unfortunately, she did. But, in her words, “CTCA gave me 16 more years.” Was that false hope? I don’t think so. Had she been told by very reputable oncologists at leading institutions that there was nothing that could be done? Yes, she had. Were they wrong? In retrospect, yes, they were. Do we have that kind of result with every patient? Absolutely not, unfortunately. But we treat patients as individuals. Oftentimes when a patient’s told, “There’s nothing more that can be done,” what is really being said is, “There are no standard protocols for your situation. You have X cancer, you’ve been on 3 chemotherapy regimens, and your disease has progressed through each one of those. There are no other regimens that are routinely used if you have gone through 3 things that don’t work; there is no regimen number 4 that’s generally agreed upon as a national guideline, what we would call fourth-line chemotherapy. There is none.”

That doesn’t mean that there aren’t chemotherapy regimens that can be used. It doesn’t mean that there aren’t techniques that can be employed. What most cancer patients don’t realize is that what some facilities—particularly small community hospital–based centers or outpatient medical oncology offices—can do is very limited based on the technology that’s available.

For example, there are wonderful, interventional radiology techniques available now that allow us to target chemotherapy directly to the tumor. But in order to do that you need a high-tech approach, including a very skilled interventional radiologist and a medical oncologist who is comfortable with administering chemotherapy in that way.

We can target specific, even metastatic, cancer lesions in the liver, for example. They can be treated very effectively, but only if you’ve got the technology available to do that. So I don’t think that the false hope criticism is a valid one. Are there times when patients come to us and we tell them, “There’s nothing that we can do for you”? Yes, there are times like that. What we do pledge to our patients is that we’ll evaluate them as individuals, and we will be unceasing in our efforts to identify something that might help. We will stand shoulder to shoulder with them as long as they want to fight this disease, and we will work to find ways to treat it. We will respect their decisions. We will never push them for treatment when they don’t want to be treated. If we have options and it’s feasible for us to treat them, we are going to offer those and let them make the decision.

**ATIM:** Are there any natural therapies that CTCA uses that have been shown to be effective in oncology and cancer treatment?

**Dr Birdsall:** We do not do alternative cancer therapy in the standard sense of it. That is, all of our patients are receiving an appropriate standard of care: surgery, radiation therapy, chemotherapy. There are times with some diseases when a patient is known to have cancer but when treatment may not be appropriate. Watchful waiting in prostate cancer, for example, is a well-accepted approach in certain age groups. At certain PSA levels, it’s appropriate to simply observe the disease.

Do we observe? Yes. Do we stop at observation? No. We are doing a whole variety of nutritional interventions and naturopathic interventions and other things to attempt to change the course of the disease. But we don’t do alternative medicine to the exclusion of conventional approaches. I would be hard-pressed to give you a single example in nearly 11 years where it was appropriate to treat a patient with conventional therapy and the patient only received a naturopathic orientation.

Certainly, we have found some things to be very effective: a whole variety of natural therapies, some of them aimed at reducing side effects of treatment or symptoms of the disease itself, some at improving the patient’s ability to tolerate other treatments, some at stabilizing metabolism or boosting immune function. There are a whole variety of things.

We carry well over 150 natural products plus a couple hundred homeopathic remedies in our hospital pharmacy to be dispensed to inpatients and available for outpatients. We use those frequently, as they are appropriate for the patient’s situation.

Some botanical products have very interesting research behind them: green tea; black cumin; some of the medicinal mushrooms: the Coriolus, reishi, shiitake, maitake—all have some areas where we would use them. Even things like ginger for nausea can be very effective.

We typically look at the kind of disease the patient has, the kind of treatment he is going to be receiving, and what else is going on with him medically, and then we weigh all of those factors as we determine what kind of natural product recommendations to make.

**ATIM:** In the model of care at CTCA, do the naturopathic physicians and the oncologists offer joint visits to patients? And if so, what have you learned from that?

**Dr Birdsall:** We function in a very integrative team environment. We are currently involved in the early phases of a project that will completely reframe and restructure the way that we provide care for our patients. We do joint visits with patients occasionally, but...
that is not the norm. We have a comprehensive electronic medical record system at CTCA, and all of our practitioners chart in that. We meet together as a large team 3 times a week and talk about patients.

Going forward with this new team model that we're implementing—which, by the way, we have been using at our hospital in Arizona for about 4 months—the team will actually sit down every morning and talk prospectively about the patients that are coming in that day.

That team is made up of a medical oncologist, a clinic nurse, 2 nurse care managers who provide continuity of care when our patients are at home, a naturopathic physician, a nutritionist, and a mind-body therapist. They are all part of that discussion. We literally talk about every single patient coming into the clinic that day.

It is a sort of rotation system. In Arizona, for example, the medical oncologist goes in to see the patient. The naturopathic physician follows him into the room. There is a verbal hand-off between the medical oncologist and the naturopathic physician. They may interact with the patient simultaneously for a brief period of time. We do try to have joint visits in the initial treatment planning session where treatment options are being laid out for patients, but that doesn’t necessarily occur every time. It doesn’t need to occur every time because the providers are talking multiple times about every patient every day.

**ATHM**: One of CTCA's calling cards is its involvement in and support of research. Please discuss the center's research efforts.

**Dr Birdsall**: CTCA supports research in a couple of different venues. We underwrite all of the operating expenses of Gateway for Cancer Research, which is a 501(c)(3), nonprofit philanthropic organization that supports cancer research around the globe. Some of those funds support cancer research at CTCA, but most of them support cancer research at other institutions, including major institutions around the world. And we have funded research at most of the major universities in the United States.

The research that we fund through Gateway is focused on translational research—that is, taking good ideas from the laboratory and moving them to the bedside. That's an area of research in oncology that has not traditionally been well funded or supported in other venues. If you've got a pharmaceutical drug, obviously, the pharmaceutical company has a lot of interest in moving it to the bedside and will support that. But there is not a lot of funding in support of nonpharmaceutical approaches.

I'm very excited about a couple of Gateway-funded trials that we have done at CTCA. One is a trial of high-dose melatonin in non–small cell lung cancer. We have completed enrollment in that trial and anticipate having data analysis on that later this year.

Another is an FDA-monitored phase I trial on the use of intravenous vitamin C. Vitamin C has been around for a long time, obviously, but has never undergone a well-designed, formalized phase I trial. Once we have completed gathering the data from the phase I approach, we hope to enter a phase II trial.

CTCA also does self-funded research. We have research activities in all of our facilities that run the gamut—conventional drug trials to some very innovative things. We currently have an innovative ovarian cancer vaccine trial underway at our facility in Illinois. We are looking forward to expanding that to our other hospitals as well. It is an individualized vaccine that is made from the patient’s own tumor cells. We do surgery on the patient and remove the cancer, and knowing that ovarian cancer patients are at a very high risk for recurrence, we take the cancer cells and develop a vaccine against that patient’s own tumor. We are developing a drug that will only ever be used by one person. We are actually immunizing the patient against her tumor with the intent to reduce the risk of recurrence down the road.

**ATHM**: Regarding the intravenous vitamin C trial you mentioned, what kind of dosage are you working with?

**Dr Birdsall**: It is a dose-escalation trial using a modified Fibonacci schema, which means we keep increasing the dose until we see problems with the patient tolerating the dose. The maximum dose that the trial has planned to go to is the equivalent of about 300 grams.

**ATHM**: How does CTCA evaluate cost effectiveness? How do the outcomes compare to those of other cancer treatment systems?

**Dr Birdsall**: We get asked that frequently, as you can imagine, by third-party payers and others. We have looked at this question from many different perspectives, and there are some interesting data...
that support CTCA as a very efficient provider of oncology care.

CTCA has hired what is probably the world’s premier health-care actuarial firm, Milliman and Company, to run numbers for us and tell us how we’re doing in terms of efficiency. The data from the Milliman study indicates that if you look at what’s called a risk-adjusted patient sample—that is, take our patients and adjust for how sick they are and that type of thing—and then do a similar comparison for other publicly available information, including Medicare data, you will find that CTCA is a very efficient healthcare provider. We provide more service for a dollar than you will get from other standard and academic center–based cancer centers.

We have a huge orientation toward being efficient providers of care, but we do it from a totally different perspective. We have adopted the Lean Six Sigma methodologies for reducing waste in our system. Most places that adopt Lean Six Sigma do so from the perspective of trying to reduce cost. We do it from the perspective of trying to increase service to the patient. If we can find a place where we can reduce wasted time by staff or reduce dollar expenditures, then we pump those resources back into providing the things that patients value.

We end up providing better care and more care, as opposed to the typical model in healthcare, which is cutting costs, which means cutting service. You end up with continually declining service provision in most places, whereas at CTCA, we have been able to increase the amount of service provided while becoming more efficient.

ATHM: In a challenging time for the hospital industry, how has CTCA been faring? Is the organization seeing any growth?

Dr Birdsall: CTCA continues to grow at dramatic rates. CTCA has grown at nearly a 20% compound growth rate in the 10 years that I’ve been here—year over year, 20% growth.

ATHM: How would you describe the current state of oncology within the practice of naturopathic medicine?

Dr Birdsall: Oncology is very complex. And, what I’ve observed in helping to build the naturopathic program at CTCA is naturopathic oncology is a specialty in and of itself.

As a matter of fact, the Oncology Association of Naturopathic Physicians was formed to provide a venue to create a professional specialty in naturopathic oncology for naturopathic physicians. The average naturopathic physician is well equipped to provide general support for cancer patients, but cancer treatment is very complex and requires detailed knowledge of therapies and drugs and interactions between drugs and natural products that the typical naturopathic physician just isn’t going to have.

ATHM: CTCA works with postgraduate medical education and also the Oncology Association of Naturopathic Physicians. Can you tell us a bit about that?

Dr Birdsall: CTCA offers a naturopathic oncology residency training program at 3 of our hospitals. We started that because we saw the need for advanced training. It is a very unique opportunity for naturopathic physicians to be trained in a hospital environment, to learn that side of medicine firsthand, as well as to get a firm grounding in oncology—specifically, naturopathic oncology.

I see the development of residency training in naturopathic medicine as a logical, almost inescapable conclusion going forward. There have been multiple discussions about requiring residency training for licensing. It has been part of the discussion in many of the states that are considering licensing naturopathic physicians. It’s one of those unfortunate chicken-or-the-egg kind of dilemmas where if you don’t require it, it won’t spontaneously develop, but you can’t require it until it’s established.

I truly believe that the naturopathic profession is moving toward a system that will provide postgraduate training for the majority of its graduates. And I believe that ultimately it will become required.

ATHM: After graduating from Bastyr, you taught there for 5 years. Based on your experiences since then, what would you change about naturopathic education to best prepare clinicians for their work?

Dr Birdsall: The changes that we’ve seen in medicine over the last 10 years have been to move conventional allopathic medicine to much more of an evidence-based approach to practice. I think that naturopathic physicians need to be better trained to read and understand research studies and trials and to understand the implications of their therapies.

Until very recently, naturopathic physicians were trained on the healthy end of the spectrum. If you think about health as a spectrum, from vibrant health on one end to near death on the other end, naturopaths have tended to function more on the healthy end of things, whereas medical doctors tend to be trained and to function more on the severe disease end of that spectrum. Naturopathic physicians need more training in advanced disease and serious medical conditions to enable them to provide more continuous care for their patients at whatever point they are at in that spectrum.

ATHM: Working with cancer patients on a daily basis, how do you—both personally and professionally—heal the healer?

Dr Birdsall: When I went to naturopathic medical school and after I graduated, my focus was on natural childbirth. I ran a birth center in the Seattle area for several years. After I came to CTCA and had been here a while, I was speaking at a naturopathic conference. In the question-and-answer session, someone who knew me stood up and said, “Tim, I know that you were involved in natural childbirth for a long time. What is it like for you kind of working at the other end of life?” I gave an answer that was probably a little too pat. A very good friend of mine in the audience stood up and said, “Tim, I don’t think that it’s different at all. I think you’re just midwifing a different kind of transition.”

That really struck me. When I started at CTCA, I never sat down and outlined what my clinical goals were or what my goals...
as a provider were for this patient population. I was excited to be at CTCA, and I was happy to be seeing patients in this environment and working on building a program.

About a year into it, I realized that I was really depressed. I took a step back, reassessed things, and came to realize that, number one, I was going in with a goal—though I had never verbalized it—of curing these patients. And I was failing at that because I wasn’t curing them. When I realized that and was able to verbalize it, I realized how stupid it was. I don’t know how to cure cancer. I don’t know anybody who does. I was setting myself up for failure.

But what I realized I can do, in any situation, with any patient, is I can make things better today. Maybe it’s because I prescribe an herb that’s going to relieve their nausea. Or I give them an amino acid that’s going to reduce their peripheral neuropathy. Or maybe it’s that I sit and hold their hands and I chat with them. Or maybe I put my arm around them and cry with them. But I can make things better for them today. I have learned to live in the moment and to be okay with mourning losses. Sometimes I’m mourning losses with my patients, mourning their losses with them. Sometimes I’m mourning my own losses, my loss of the friendship and relationship with someone.

That’s part of human existence. There’s the old saying about the only things that are certain are death and taxes. That’s true. We will all die. There is nothing that any of us can do to prevent that. We can change the course, we can change the circumstances to some extent, but in fact, we will all die. I can make things better for patients today. I can help ease their discomfort. I can help give them a good death. We talked about hope earlier. Sometimes hope is hope for a cure. Sometimes hope is hope for less pain. Sometimes hope is hope for a better day. And sometimes it’s hope for a good death. I can facilitate those for people.

ATHM: You were appointed to serve a 4-year term on the National Advisory Council for Complementary and Alternative Medicine of the National Institutes of Health (NIH) a little over a year ago. What are your impressions of NIH’s initiatives around integrative medicine at this juncture?

Dr Birdsall: I have been very impressed with the dedication of the NCCAM staff and very impressed with Dr Josephine Briggs, the new director of the center. She has taken an approach of listening very carefully. She has a large constituency to listen to, and she has been talking to and listening to all of them. I find her to be very responsive to input and criticism.

I think we’re going to see significant changes in direction and orientation out of NCCAM over the next couple of years. Unfortunately, the process moves slowly, and if you want to change direction, you have to figure out what that direction is and then you have to create initiatives and program announcements to tell people what you’re looking for. Then you have to give them enough time to create and submit the proposals. The proposals then go to scientific review. And then, eventually, we on the advisory council get to look at them. So it takes a while for change to happen.

But we are seeing a shift to much more meaningful CAM research as opposed to the pharmaceutical methodology that has been funded up until now. In many cases we have been funding the equivalent of drug trials using natural products. Oftentimes, those natural products are being applied in the research setting in ways that they would not be used in clinical practice. I think the focus right now is on designing more meaningful trials looking at whole-systems research approaches and asking very specific, meaningful questions that will help us find answers to significant questions down the road. Part of NCCAM’s charter is to help inform the American public about the things that they may be choosing to do.

The challenge is not to do investigative discovery kinds of research about new natural product uses or applications but rather to evaluate and assess the way natural products are currently being used and asking whether it makes sense. For example, is chiropractic effective for low back pain? We ought to be able to answer that question. Is acupuncture effective for migraine headaches or for nausea? We should be able to answer that question so that people will know how best to approach their healthcare. I think NCCAM has got its eye on that ball, and I think it will be effective long-term in providing those kinds of answers.

ATHM: If you were in charge of the national effort to fight cancer, what would be your top priorities?

Dr Birdsall: It depends on how you define fighting cancer. To reduce deaths due to cancer in the United States, there are some very clear things that need to happen. I don’t believe I know how to make them occur, but it is very clear that diet and lifestyle choices, including exercise choices, are hugely important both in terms of the risk of developing cancer and in effectively treating it.

Improving the diet of this nation, getting rid of the junk food that is advertised as “cholesterol-free, no trans fatty acids” but contains 12 pounds of sugar, as an example, are things that we simply have to deal with. Tobacco use—my gosh—the numbers vary, but the best statistics I can find say that about 30% of all cancer in the United States can be traced to tobacco exposure.

You look at the billions of dollars we spend fighting this disease that could be dealt with by addressing the tobacco issue. Obesity is now identified as a major risk factor for cancer. We have suspected it for a long time, but I think we have overwhelming proof at this point, and yet, as a country, we grow more and more obese every year.

If we could address diet, lifestyle, exercise, and tobacco use, we would dramatically reduce the incidence of cancer. If we can prevent it from starting, then we don’t have to worry about how we treat it.

Cancer is a difficult, complex disease. Based on my experience, I believe that taking an integrative approach to cancer treatment is the best way to not only optimize outcomes but also to improve quality of life and provide individualized care that truly meets the needs of each patient.