CHAPTER 10

UNIQUE SCENARIOS

Novel Mistletoe Administration Routes and Understanding Tissue-origins of Specific Cancer Types

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"Give me the power to produce a fever and I'll cure all disease."
—PARMENIDES

Throughout this book, we've primarily looked at subcutaneous and IV-administered mistletoe as therapies that awaken the immune system during cancer care. There are alternate administration routes for VAE therapy that trigger even stronger immune activity, either as a fever therapy or through intratumoral injection (high doses injected directly into the tumor itself) and other variations of these therapies provided in certain European clinics. We'll first look at these less common VAE administration methods. Then we'll look at several complex cancer types that require greater scrutiny in determining how mistletoe may best serve as an appropriate adjuvant (additional supportive therapy).

Most practitioners who provide mistletoe therapy in the U.S. focus primarily on standard (not fever-inducing) subcutaneous (SC) and supportive IV infusions. But as a curious practitioner or patient, it's good

to at least know of other options. These high-intensity administration routes should be provided only by a physician who has completed additional training and mentoring in these methods.

Fever induction: A case for controlled and guided fever

In chapter 1, we considered a brief history of cancer research, including a look at the medical community's evolving understanding of immunotherapy. This included reports, particularly in the nineteenth century, noting spontaneous remission of cancer linked to resolution of an acute infection. More recent studies have found anywhere from 28 to 80 percent correlation between febrile illness and cancer remission.[1,2] In 2001, European researchers noted that patients who had never experienced a fever were at least 2.5 times more likely to develop cancer at some point in their lives than those who'd had fevers in the past.[3]

As uncomfortable as it can be, there's something immensely important about experiencing a fever. It has a crucial role in training and exercising the immune response.[4] In the early twentieth century, Rudolf Steiner and Dr. Ita Wegman had an understanding of this when they first used mistletoe in cancer treatment and referred to the importance of creating a "mantle of warmth" around the tumor.[5] Even conventional medicine is aware of the value of medical hyperthermia and its documented cytotoxic and immune-stimulating effects (see chapter 9).

That said, Mistletoe Fever Induction Therapy (MFIT) is far more intense than the effects experienced with SC injections at conventional dosages. Keep in mind, this does not necessarily mean that MFIT's oncological impacts are always better than those provided by SC therapy. As with all mistletoe therapies, it's far more important to evaluate the patient's constitution, condition, and goals. There are situations where lower-dose SC mistletoe is more effective than MFIT. The goal is to match the patient to the best therapy, in that moment in the patient's journey. MFIT is powerful, but it's not for everyone.

It takes effort to experience a fever! In fact, the energy required to raise the body temperature a single degree is equivalent to the energy required to complete a four- to five-kilometer walk (about two miles).[6]

There's a reason that MFIT has been referred to as *High-Challenge Induction Therapy.* When screening patients for fever therapy, we say "no" far more often than we say "yes." Fever induction therapy is not as hard on the body as most chemotherapies, but it is work and it is often uncomfortable. Patients need the vitality to endure a fever for up to three days. They need to have a strong desire and will to fight, and to clearly understand the value of therapeutic fever for its immunostimulatory effects.

MFIT is generally contraindicated for: glioblastoma prior to surgery; brain edema; most patients with less than a six-month life expectancy; those with heart conditions or severe co-morbidities; and patients currently undergoing chemotherapy, radiotherapy (in many cases), and other conventional immunotherapies. (Although it might well be that fever-inducing therapy would enhance the efficacy of checkpoint inhibitors and other immunotherapies; research in this field is urgently needed.) Also, patients with extensive liver metastases often lack the vitality needed for this kind of treatment. Fever therapy can alter PET scans and other conventional monitoring, so it is best to schedule MFIT with at least six weeks between the end of the fever therapy and diagnostic imaging.[7]

In addition to assessing the patient's overall vitality and screening for any serious contraindications, in the U.S. we also need to confirm there is a supportive home life for the patient. In Germany and Switzerland, MFIT patients can be admitted to an anthroposophic hospital and provided their treatment and follow-up monitoring there. In the U.S., we don't have that option. The MFIT injection is provided in clinic, but then patients go home with aftercare instructions. The fever often does not appear until the next day. It's crucial that they have at least one loved one who can care for them appropriately in that time and is willing to connect with the overseeing practitioner regarding any fever care questions that come up. It is the doctor's responsibility to ensure availability any time by phone in the days following the injection.

For the right patient, MFIT is intense but worthwhile. When Dr. Hancock speaks with patients and their loved ones, he describes the

cancerous state as characterized by *chronic inflammation.* This chronic inflammation is like a truck spinning its wheels in the mud and getting nowhere. With fever therapy, we are causing a heightened and useful immune crisis, a healing crisis, with a high level of *acute inflammation.* This is active, organized inflammation that brings about substantial change. It's like putting that truck into four-wheel drive. It may make a big mess in the moment, but it gets you out of trouble quickly!

Mistletoe fever induction therapy (MFIT)

MFIT involves subcutaneous mistletoe doses high enough to induce fevers of 100.4 to 104.0 Fahrenheit (38.0 to 40.0 degrees Celsius). Fever induction works particularly well for patients who are "mistletoe naïve," meaning they have never been administered mistletoe before or have had only very low doses in the past. MFIT is usually provided using a high-lectin mistletoe,[8] although occasionally a lower-lectin mistletoe (such as Helixor A®) has, unintentionally, evoked fever in highly sensitive patients.[9] For the majority, we typically use the highest-lectin option, namely AbnobaViscum Fraxini®. If provided after chemotherapy, sufficient time should be allowed for recovery before administering the fever therapy. MFIT is more effective with an intact immune system. Fever therapy may be provided a couple of weeks *before* chemotherapy to enhance the effects of the conventional treatment. It is a powerful adjuvant in this regard.

When practitioners are trained in fever therapy, they're given guidelines and starting points for developing the treatment plan. But much like the SC injection "protocol," we hold two factors equally: the plan and the patient response. Typically, an initial injection of 10 mg AbnobaViscum Fraxini is sufficient to spark a fever. (In contrast, typical supportive SC injections usually start at 0.2 mg to 1 mg, depending on brand, to achieve the desired small local reaction.) A week later, we may increase to 20 mg to induce a second fever. Or we may keep it at 10 mg if the patient's initial response was dramatic. The patient's response always takes precedent over the initial dosage plan.

In lead up to the initial 10 mg fever-inducing injection, Dr. Hancock often provides 60 mg of IV mistletoe for three consecutive days. Because the mistletoe lectins have a half-life of 24 hours in the body, these IV infusions build up and prime the body for the 10 mg injection on the third day. Dr. Debus also encourages timing the MFIT injection based on biorhythm cycles, as first discovered and proposed by Dr. Reiner Penter. Ideally that injection is provided around 3:00 p.m. There are clear day and night warmth cycles in the body, and this afternoon injection time results in a fever peak at about noon the next day, which is an optimal time for that peak when working with the body's normal temperature cycles.[10]

Though adjustments will likely be made because of patient response, there needs to be some sort of rhythm to MFIT administration. It should not be chaotic. Patient and practitioners need a span of time to work with this and create that rhythm. For instance, fever therapy might be provided once a week for four weeks as an "induction phase," followed by "maintenance therapy" every three or four weeks until the fever reaction subsides. In between, we might provide supportive SC mistletoe, often from a different host tree and at a dose low enough that it does not trigger fever. We want to ensure a true rhythm and resolution in the fever cycle and avoid creating a rollercoaster of fever. As long as the dose is low enough, supportive SC VAE therapy between fevers can actually enhance the effects of the high-dose MFIT.

What happens in the body during MFIT

The fever will reach about 103.0 degrees Fahrenheit (39.5 Celsius). This is not as hot as medical hyperthermia (see chapter 9), and that's good from a safety standpoint. But it is hot enough to cause some tumor cell death—it just won't happen at the same fast rate as medical hyperthermia. Any increase in dead tumor cells means the immune system can come in, clean up the dead cells, and begin to recognize them as cancer. This cascade is characterized by *immunogenic cell death.* That means the cancer cells die in a process that activates the immune system. When that happens, the immune system learns to recognize

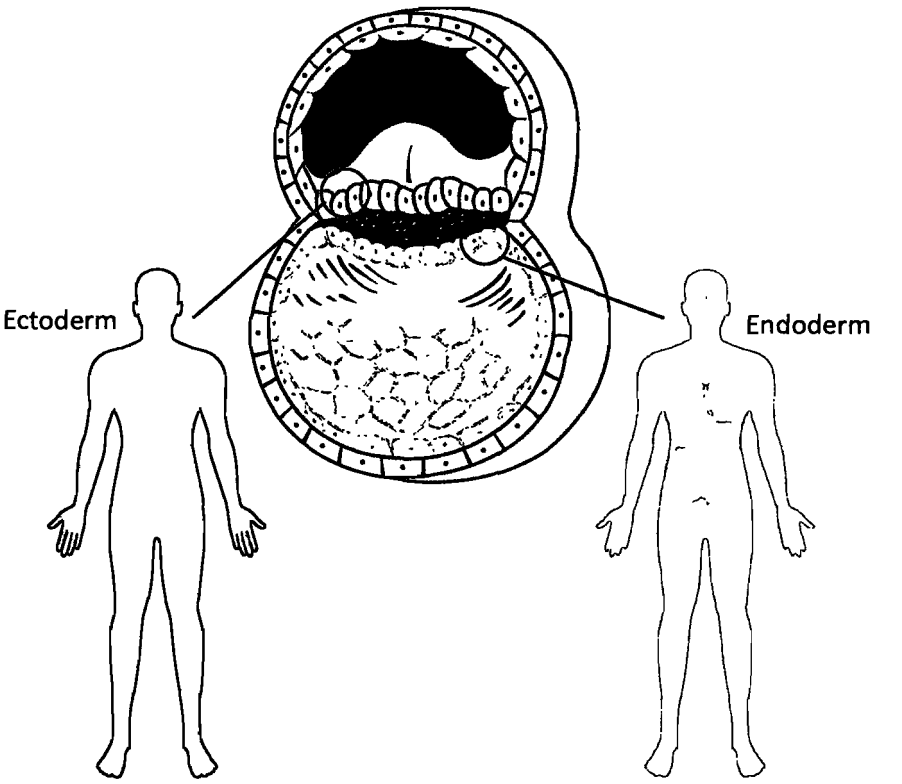
the cancer cells as cancer and step into action. That is a powerful self-healing process, which we try to elicit as an immune-educating effect in all immunotherapies. If you can breach the immune-evading wall around the tumor, kill some of the cells, and allow the immune system to handle those dead cells, you give the body a chance to start eliminating the cancer cells on its own. During fever, heat shock proteins (HSPs) also form on the surface of stressed tumor cells. These HSPs act like a highlighter circling the troubled cells. These marked cells are not dead yet, but HSPs attract immune system cells to come over and eliminate them.

The fever, the dying tumor cells, and the HSPs all translate into a lot of heightened immune activity. In all honesty, that can feel awful. There may be some swelling of the tumor itself (see appendix A). Lymph nodes may swell too. These are normal signs that MFIT is working. The most common side effect is a raging headache, followed by nausea (sometimes vomiting), and significant soreness at the injection site. All of these are normal and not cause for concern. If the injection site becomes incredibly painful, it's fine to apply some *Aloe vera* or the AM topical preparation of Arnica Nettle Gel from Uriel Pharmacy.

It's important to let patients know that past, present, and future often unite within the increased warmth of fever therapy. Old or recent traumatic experiences can be stirred up during a fever and, ultimately, released.[11] This is good, but not always comfortable! On a more positive note, difficult decisions regarding the future can sometimes be facilitated through the fever experience. In our experience, patients sometimes come out of fever therapy with greater certainty about a major decision (such as whether to do chemotherapy or not) or newfound inspiration about their life purpose. Both fever and these inner experiences are hard work. If patients have jobs, we encourage them to take several days off to allow enough time for both the fever therapy and recovery time afterward.

On the whole, most patients tolerate MFIT well and describe it as more manageable than chemotherapy. In over twenty combined years of guiding MFIT, we've never seen a fever get out of hand or

ECTODERM AND ENDODERM:
THE BOUNDARY/SHEATH AND METABOLIC ORGAN SYSTEMS



turn non-physiologic. MFIT is safe. It does not degrade into malignant hyperthermia and does not cause organ toxicity. The body remains in control of the response. For patients who are ready for the exertion of dealing with a fever, it's very effective.

Mistletoe intratumoral injections

Intratumoral (or *intralesional*) injections are, as they sound, high-dose injections (usually starting at 10 to 20 mg) of VAE directly into or around the tumor area. Most often, these are injections to easily accessible sites (for example peripheral lymph nodes or breast lumps).[12] Like MFIT, this is a therapy that is provided only by practitioners who have received special instruction and mentoring. It is primarily provided in

European clinics, but also practiced worldwide by experienced doctors in their outpatient clinics.

Intratumoral (IT) injection is, of course, a powerful way to introduce viscotoxins (VTs) and lectins directly to the tumor itself. This can lead to immediate breaching of the tumor microenvironment, death of some of the cancer cells and, most importantly, education of immune cells in the region. IT injection is not for everyone. Like fever therapy, it can be quite uncomfortable. Patients need to know that. Though the injection site does not show the same reaction as an SC injection, there can be some tumor swelling due to the increased immune activity. Occasionally we have seen the tumor area get quite inflamed for days after the injection. This therapy is best for patients with a strong will and a desire to fight the cancer in their own way.

What happens in the body during intratumoral injection

With the tumor's defenses breached and many of the tumor cells experiencing stress, healthy immune cells can rush in and learn about the tumor. The mistletoe lectins act like a beacon, drawing more and more T cells and natural killer cells into the area. The immune system is finally able to educate itself about the tumor and take that information throughout the body. Potentially, it could use that information to address metastases.[13]

That latter step is known as something called the *abscopal effect.* This is an effect occasionally seen in radiation treatment: *Irradiate one tumor and the other metastases shrink or disappear.* It's not incredibly common, but it does happen.[14] We're not sure of the exact method of action, but it probably has to do with immune cell recognition and flagging. Irradiating the tumor results in some breaching of its immune-evading barriers. The immune cells come in, deal with the dying tumor cells, and learn about them in the process. They take that knowledge with them to other parts of the body where they're able to address metastases. Once again, this is a process defined by immunogenic cell death, which also can be evoked and enhanced by fever therapy, as we have seen above, or by hyperthermia.

Ultimately, the goal of any immunotherapy is to breach the walls of the tumor's microenvironment. It's not the tumor that paralyzes the immune system; it's actually the obscuring wall around it that causes the failure of the body's surveillance systems. In a sense, IT injection is an *in-situ* vaccination. It not only kills some of the cancer cells, but also educates the immune system by enhancing antigen presentation. As Dr. Debus puts it: *We have to make the cancer visible in some way, at the same time that we strengthen the body's metabolic warmth-producing forces and immunologic resources.*

Combining therapeutic synergies for best personalized care

It's often the combination of multiple forms of mistletoe application that mobilizes a whole-body response. Whichever administration routes are available in a patient's situation, it can be most effective to combine two or three and use more than one host tree. Always include SC injections in some way. As powerful and directed as these alternate approaches are, a profound *immunogenic* effect comes from simple SC injection.[15] After all, the skin is an extensive immune system organ. Even if a patient wishes to try IT injections, they should combine it with SC therapy as well. All the routes have a place and a purpose. IV therapy is highly supportive. MFIT awakens the whole system and heightens all immune activity. IT injection focuses and directs that immune activity. Each method allows the mistletoe to work at different points within the immune response.

Advanced uses of mistletoe in European clinics

In addition to MFIT and IT injections to easily accessible sites, there are a few other IT mistletoe administration routes that European practitioners are exploring right now (i.e., intrapancreatic injection).[16] Many of them are described in detail in the *Vademecum of Anthroposophic Medicines*.[17] These are not practiced in the U.S.; a patient interested in these therapies would need to travel to receive them. The following clinics in Germany regularly provide such therapies for

international patients: Gemeinschaftskrankenhaus Havelhöhe (Berlin), Gemeinschaftskrankenhaus Herdecke (near Dortmund), Filderklinik (near Stuttgart), Paracelsus Krankenhaus (in Unterlengenhardt near Bad Liebenzell), Klinik Öschelbronn (near Pforzheim), as well as Klinik Arlesheim (near Basel, Switzerland).

Mitigating cancer-related fluid build-up

Malignant pleural effusion refers to a build-up of fluid in the space between the lungs and the chest cavity. It is a challenging problem in many advanced cancers. Fortunately, mistletoe has demonstrated significant success as an adjuvant therapy in this situation. In one comparison study, mistletoe extracts injected into the pleural cavity outperformed standard treatments by 15 percent and led to complete resolution in 79 percent of the treated patients.[18] Another study concurred that mistletoe was both better than talc and had fewer side effects, with a 96 percent success rate.[19]

Ascites refers to build-up of fluid in the abdominal cavity, often due to cancer that has spread to the abdominal lining. The use of mistletoe injected into the abdominal cavity to treat recurrent ascites is another advanced use.[20] There is one published case report of a woman with recurrent ascites from her cancer. She had the ascites resolve after instillation of mistletoe into her peritoneum.[21–23]

Novel bladder cancer adjuvant

VAE can be administered via bladder instillation, during which a high dose of mistletoe is periodically instilled through a catheter into the bladder and held there for several hours. This has been highly effective in caring for patients with bladder cancer. It appears to enhance immune stimulation directly at the tumor site. In a German study (see chapter 3 for study summary), a camera examination was performed and noted that marker tumors had disappeared in over half of the cases. In the remaining cases, surgical resection was performed. All the patients received additional bladder instillations and were followed

carefully. In all the mistletoe-treated patients, the rate of recurrence was below the expected rate.[24] A Phase III study using this technique is currently underway.[25] The technical procedure is described in the *Vademecum of Anthroposophic Medicines*.[26]

Understanding organ system origins: Lymphoma, sarcoma, and glioma

Anthroposophic and integrative practitioners personalize the treatment plans for every cancer patient but also take into consideration the characteristics of the organ system from which the malignancy originates. Most cancers (solid tumors) originate from the epithelium of the glandular system, arising from the *endoderm*. However, lymphoma and sarcoma arise from the mesenchyme, which develops out of the *mesoderm*, and gliomas (brain/CNS cancers) originate in the glial cells arising from the *ectoderm*. Treatment decisions are better informed when we have a deep understanding of the organ systems from which each cancer arises. Let's learn more about those organ systems, how they form, and then discuss these cancer types as well.

Embryonic origins: Development of body systems, connections to cancer types

In embryonic development, when organs begin to form, there are two basic gestures in organ formation:

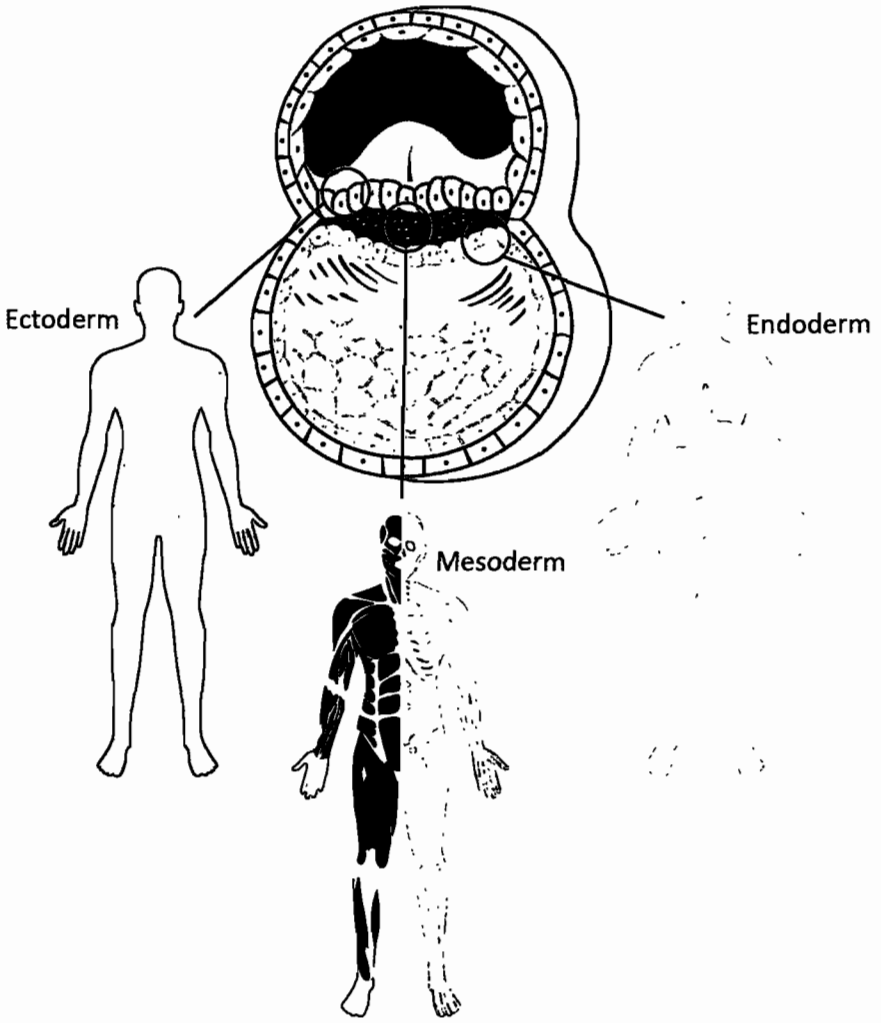
> One is directed inwardly, originating from the endoderm, forming the organs of the gastrointestinal tract, from the mouth to the intestines, with all its associated glands, including the liver and pancreas. The lungs are included here too. These organs and body tissues, though diverse, hold in common the quality of taking in a substance from outside the body and metabolizing it in some way, whether food or water or air.
>
> The other is directed outwardly, forming boundaries to the outside world and a protective sheath around the inner space of the body. The skin forms a palpable, physical barrier to the outside world, while the immune system, as it manifests itself in

> all our lymphatic tissues, represents an invisible, functional skin. Throughout life, this immune "skin" matures with each infection that it overcomes. The immune system represents a highly personalized sheath.[27]

These differences in the gesture of organ formation (inward vs. outward, metabolic vs. boundary-forming) are also reflected in the cancer risk factors for the associated body systems. The major risk factors for solid tumors, which predominantly affect organs associated with metabolism, tend to be lifestyle-oriented, such as: lack of exercise, metabolic syndrome associated with poor diet, and depression.[28,29] (The latter often appears long before cancer diagnosis has been made; the cancer-depression correlation is as high as 60 percent for hepatocellular carcinoma and 78 percent in pancreatic cancer.) It's more commonly known that Type 2 diabetes is a risk factor for pancreatic cancer,[30] and fatty liver is the most common cause of liver cancer.[31] These conditions are generally associated with metabolic syndrome and unhealthy Western dietary and lifestyle choices.

With all these factors, metabolic processes experience a certain stagnation. This lack of movement is physical, but also reflects in the soul life, which manifests as depressive tendencies. The soul does not connect properly to the body, causing a sense of stuck-ness, both physically and psychologically. One of Dr. Debus' patients described it as, "Standstill at high velocity." The dynamic and speed of modern city life not only prevent us from moving physically, but often also distract us from tackling biographic (life story) issues that are urgently calling for change. Instead of cultivated inner development, tumor development starts in the parts of the body that aren't really being organized by the body-oriented aspect of soul and spirit. We have mentioned earlier the resulting "cool-down" phenomena; our modern-day reduction in average body temperature and the rarity of febrile diseases. These patients greatly benefit when they cultivate more movement in their lives,[32] both in terms of physical exercise and inwardly by inciting enthusiasm for the truly important issues in life. Thus, soul warmth and physical

THE THREE ORGAN SYSTEMS:
ECTODERM, MESODERM AND ENDODERM



warmth will develop. Mistletoe treatment enhances and facilitates this warmth-generating process.

Both cancers of the skin (namely melanoma) and lymphoma originate in the different "sheaths" of the body. With these cancers, we see a unique gesture. Some of the known risk factors for these cancers include emotional shocks and traumas.[33] Somewhere in the person's

story, there might be a major shock—a divorce, a physical injury, a death, a natural disaster, or an assault. Something broke through the patient's skin literally, figuratively, or both. Unlike the cancers associated with the metabolic organ systems, lack of movement or depression are not typically associated with lymphoma and, in clinical observation, are not characteristic for melanoma patients either.[34,35] Lüder Jachens, an anthroposophic dermatologist, describes the soul qualities of many melanoma patients as empathetically taking on a lot of social responsibility for others.[36] They may begin to transgress certain soul boundaries, in their frequent focus on being available to others. Eventually this allows outside forces to breach their soul boundaries. This might show in their warmth organism; melanoma patients tend to have exceptionally low body temperatures, often around 95.0 to 96.8 Fahrenheit (35.0 to 36.0 Celsius). One gets the impression that the warmth-generating, metabolic process is working, but energy (heat) is given away constantly to the outside world. Think of a house that is heated well, but all the windows are open. For both lymphoma and melanoma patients, there is a sense that the boundary system is broken.

From the perspective of the warmth organism, if we looked at the gesture of these two general types of cancer, we could say that solid tumors are more associated with *metabolic warmth production that has become stuck*. With cancers that involve the body's protective sheath, *warmth is lost because of injury to the sheath.*

Now breast cancer, which is the most common cancer in women,[37] can bear within itself both gestures. Being a gland, the breast has a strong relationship to the inner *metabolic system.* Yet it is a cutaneous gland and thus also belongs to the *skin* (sheath or boundary system). Patients with postmenopausal breast cancer tend toward more metabolic-type risk factors, whereas young, premenopausal women often have a constitution more associated with the boundary system type.

Lymphoma and other "body boundary" cancers

There are dozens of types of lymphoma and other blood cancers. They all stem from the progenitor *hematopoietic* stem cells in the bone

marrow. About 178,000 people in the U.S. were diagnosed with leukemia, lymphoma, or myeloma in 2020, and these cancers were responsible for almost 10 percent of all cancer deaths in the same year.[38,39] Survival rates have definitely increased in the past 40 years, but treatment regimens are typically highly aggressive and hard on the patient. Blood cancers tend to affect people at the extremes of age—either the very young or the elderly. In both cases, there is a sense that the person's inner immune sheath is vulnerable, either from being newly incarnated or from the stress of the aging process. Integrative care can be especially nurturing for these patients.

Immune system development: It is helpful here to look at the immune system as an "interior skin" with which we meet the world. When we think of newborns, we see how they are entirely open to the world—both with their sense organs and more inwardly with their immune systems. At that age, the immune cells have yet to meet the world. As children grow, their immune cells encounter infections with viruses and bacteria, as well as pollen and food. This interior skin of the immune system becomes fuller and more multifaceted. The immune system includes all these "naive" B lymphocytes, which are not fully mature until they meet their antigen match. When a B lymphocyte meets an antigen match, it enters a process in the germinal center of the lymph nodes where the lymphocyte rearranges its genome to produce the best matching antibody for that antigen. These mature B cells propagate so that during an infection, millions of antibodies of the same type are produced to fit that precise antigen. After the infection resolves, these B lymphocyte cells then must die back and reduce in number. In the antigen-matching process, B lymphocytes open themselves up and physically cut their own DNA to produce a precise, high-affinity antibody. *This is a vulnerable process in which the cell opens itself to the outside world.* This could be one reason why we see so much greater vulnerability to B-cell lymphoma over T-cell lymphoma—95 percent of lymphomas originate from B lymphocytes.

Regardless of that risk, whenever infections resolve appropriately, each exposure to a childhood illness directs our forces inward, forming and maturing the differentiated "vital skin" of our immune system. The lymphatic tissue in children is very active and dynamic (hyperplastic) because it is dealing with infections all the time. Children are strikingly open toward the outer world—both in terms of their immune system development and in their impulse to imitate the adults around them. The more the lymphatic system matures toward puberty, the more an inner soul space develops (with all the unpredictable emotional states that go along with it). The hyperplastic lymphatic tissues recede, being shaped and formed by the soul and "I"-organization that have intensely worked through them during childhood infections.

The question may be asked, "Are there instances where this maturing process has not taken place properly during childhood?" There is some evidence pointing in this direction. For example, one study has noticed that self-reported history of measles or whooping cough during childhood seems to convey a 15-percent risk reduction for Non-Hodgkin-Lymphomas (NHL) later on in life.[40] In another recent study of 1,102 NHL cases and 1,708 population-based controls, researchers found that people who had rubella, whooping cough, and other childhood infectious diseases had lower incidence of B-cell NHL occurrence later on and, conversely, those who had not experienced such childhood illnesses, had a higher incidence of B-cell NHL later on (inverse association).[41]

That's a challenging way to acquire immune system strength, and there may be additional ways to nurture the immune sheath. Recent research has found that such protection may also be developed through artistic and educational means. A multicenter cross-sectional study of 84,000 students found a protective trend for a whole array of health issues in adult life for children who attended a Waldorf school. (Waldorf schools use a holistic pedagogy, based on Rudolf Steiner's work, providing academic, artistic, and physical activities in a balanced form.) Although continued studies are needed, the initial study saw a 20 percent protective effect against cancer later in life.[42] This study was not

solely looking at lymphoma and boundary system cancers, but all cancers. Regardless, it would seem that there is some significant crosstalk between intensive soul-nurturing (strengthening the child's personal identity and boundaries) and healthy development of the immune system (a cellular sense of self and non-self).

Constitutional qualities: We cannot universally generalize the constitutional predisposition of a lymphoma patient. But some constitutional tendencies appear more pronounced in a number of the patients we encounter in our clinics. Again, the maturing of the immune system (during the course of various childhood infections) walks hand-in-hand with the maturing of soul life in later childhood and puberty. Thus, an inner space is created not only in terms of immune function, but also in terms of self-reflection and starting to live one's own individual biography (or life story).

In lymphoma patients, the lymphatic system seems to regress to the hyperplastic (immune naïve) state of childhood, quite often including enlarged cervical lymph nodes or mediastinal mass. Associated with this, we sometimes find a wonderful childlike openness, an outwardly directed, loving soul life that touches many people. These patients also like to explore all the varied, original, and adventurous possibilities that life can offer. Simultaneously, they might show a certain insecurity as to which passion they ought to pursue as "their own" within their distinctive biography. Their caring nature is beautiful. But taken to an extreme, it leaves them with a dysregulated balance between "becoming one with the world" and "being present with oneself." It can be especially nourishing for these patients to begin inner work using adjuvant anthroposophic soul care therapies. Biographical journaling can be overwhelming but also deeply healing for them.[43]

The most extreme and studied example of this constitutional quality is found among people with Down syndrome. In this condition there is a ten- to twentyfold greater risk of acute lymphoblastic leukemia and acute myeloid leukemia and a much lower risk of solid tumors.[44] In statistically supported medical literature, people with Down syndrome are typically described as "affectionate, sociable, and cheerful."[45] This

is a strong, outwardly oriented soul tendency. This outward-focused self can find it challenging to form an "inner skin." Correspondingly we see a much higher risk of severe infections as well as blood cancers. However, this constitutional imbalance does not seem to be associated with a higher risk for solid tumors—the cancers that arise from being stuck both metabolically and biographically.

Lymphoma care strategies: The general therapeutic approach in lymphoma is to use remedies that help form boundaries and define an inner space.[46] This often translates into rhythmic administration of both mistletoe and *Helleborus niger.* Unfortunately, many integrative practitioners believe that mistletoe is contraindicated for lymphoma. The concern is that if mistletoe stimulates the immune cells, wouldn't it stimulate lymphoma growth? On the contrary, several retrospective analyses suggest a significant extension of survival time for lymphoma resulting from mistletoe therapy.[47] Furthermore, complete and incomplete remissions have been described when VAE therapy was used.[48,49] Mistletoe therapy can be safe and beneficial alone or alongside chemotherapy for lymphoma patients. It is, however, important to distinguish between high-grade and low-grade lymphomas when determining the best VAE administration route, dosage, and rhythm.

Low-grade non-Hodgkin lymphoma: Includes chronic lymphatic leukemia (CLL), follicular lymphoma grade 1 and 2, Waldenstrom's Disease and marginal-zone lymphoma. These are slow-growing and either symptom-free or present few symptoms. Conventional oncology often adopts a "watch and wait" strategy here, since the natural course of the disease is, in many cases, only slowly progressive and is not likely to lead to any severe impairments in the long term. In this situation, chemotherapy is usually unnecessary and is used only at a later stage, as the patient gains no prognostic advantage from it. In this waiting time, the scope opens up for mistletoe therapy's immune-stimulating function to delay progress or even to achieve remission

High-grade lymphoma: This refers to highly malignant, aggressive, non-Hodgkin lymphomas (i.e., diffuse large-cell B-cell lymphoma). Chemotherapy is the primary recommendation,

and in most patients, this leads to remission and healing. Here mistletoe therapy has a predominantly supportive character, as adjuvant treatment alongside chemotherapy and as follow-up treatment to maintain remission and to improve fatigue and susceptibility to infection.[50]

Regardless of low- or high-grade status, the most appropriate host trees are pine (pini) and fir (abietis).[51,52] These coniferous trees give structuring and focusing forces that are needed in lymphoma. Iscador® P (pini) is the most well-reported for lymphoma care in Europe. But Helixor A (abietis) or P (pini) are also useful for either high- or low-grade lymphoma. Helixor products are often more readily available in the U.S. With slow-growing tumors, we tend to provide supportive intravenous Helixor A or P or Iscador P.

In low-grade lymphomas such as CLL, where there is no excess proliferation, we may use MFIT with due caution. In these cases, the fever can improve fatigue and lead to stabilization or even remission of the disease.[53] IT therapy combined with MFIT has also been applied successfully in primary cutaneous B-cell lymphoma.[54] When providing normal, low-dose, SC mistletoe, significant fatigue sometimes responds better to deciduous, higher-lectin host trees, such as AbnobaViscum Fraxini or Helixor Mali. These more nuanced treatment choices typically are not provided for fragile patients or in aggressive cancers.

When lymphoma patients begin to understand the need for boundary-building as part of their entire treatment plan, they become curious about other adjuvants. *Helleborus niger* is especially helpful. If a patient is anxious or otherwise seems poorly grounded, *Helleborus niger* helps them feel more comfortable within themselves. It also fosters rhythm and a harmonious distribution of warmth within the warmth organism. Mistletoe helps to *generate* needed warmth, while *Helleborus niger* helps to structure and *retain* that warmth (see chapter 8). In addition to VAE and *Helleborus niger*, we encourage lymphoma patients to explore adjuvants that are more focused on soul development. Anthroposophic art therapy and biographical journaling are especially useful.

Leukemia care strategies: Many practitioners who provide VAE therapy for other cancers (including lymphoma) may not provide it for *acute leukemia* (AML and ALL). Practitioners who do provide VAE tend to direct the mistletoe in a more constitutional way, as a low-dose remedy. Iscucin® A through D are helpful here. A large skin reaction is not always necessary or desired. However, there is precedent for use of more substantial dosing of mistletoe in leukemia. One preclinical study found a therapeutic synergy in dosing mistletoe alongside doxorubicin in chronic myeloid leukemia (CML) cells. Six times more cancer cells were killed when mistletoe was added to doxorubicin than when doxorubicin was used alone.[55] A similar synergy was found between mistletoe extracts with high triterpene levels and cytarabine in acute myeloid leukemia cells.[56] In clinical practice, with CML (which is usually well-controlled with tyrosine kinase inhibitors), higher doses of lectin-rich mistletoe preparations, from deciduous trees like AbnobaViscum Fraxini or Helixor M (mali), can be very helpful and strengthening.

Clearly, we are still learning how VAE interacts with leukemia. Conservative practitioners will likely look for other adjuvant options that have more research and case reports associated with them. Integrative and anthroposophic practitioners frequently recommend *Helleborus niger* alongside conventional treatment for leukemia. This is a safe and gentle starting point that can be helpful in addressing anxiety and conventional treatment side effects. It also cares for that deeper need for boundary-creation seen in most patients with blood cancer.

Melanoma care strategies: Melanoma is obviously not a lymphoma. But as mentioned earlier, it does display some constitutional similarities with lymphoma. Both of these cancer categories involve a boundary, either the body's inner or outer sheath. Our colleague Dr. Nasha Winters once said, "A lot of people get confused about melanoma, and it overwhelms them. I don't consider melanoma a skin cancer; I consider it a *systemic cancer* very much like blood cancers. When I approach it that way, I have much more positive outcomes."

There are notable intersections between melanoma and lymphoma. Certain lymphomas can appear as dermal nodules, lesions, or rashes,

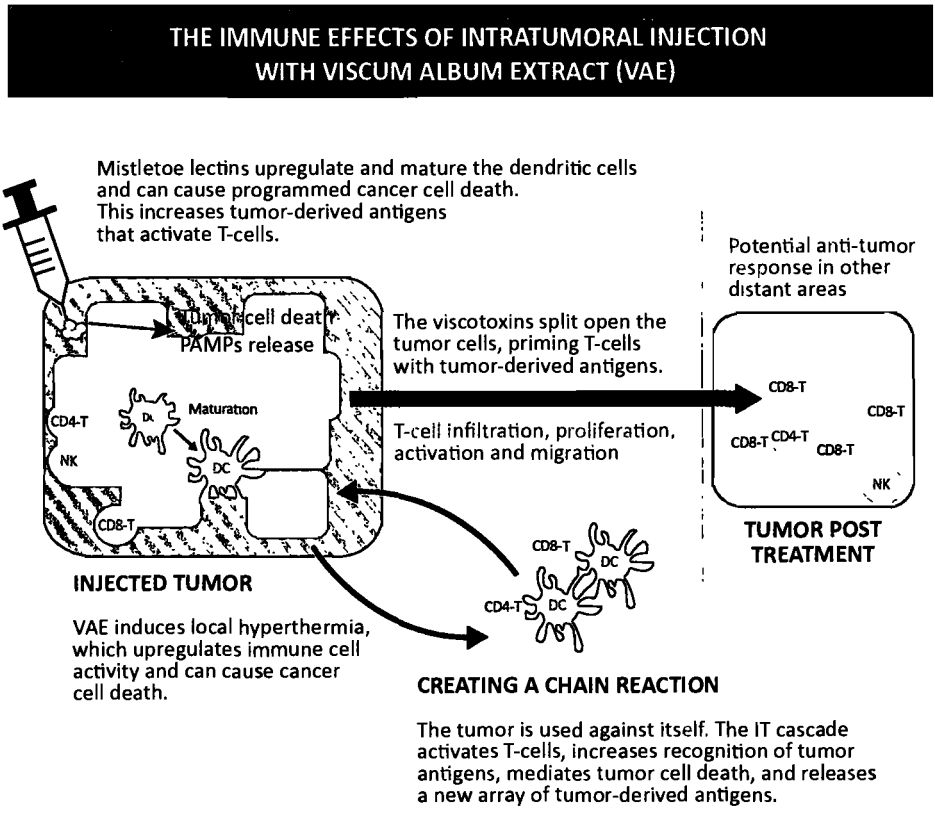
and melanoma patients often have the same constitutional characteristics as lymphoma patients. In our clinics, we've seen melanoma and blood cancers respond exceptionally well to the boundary-forming effect of *Helleborus niger.* The patients who try *Helleborus niger* often report inner experiences of greater wellbeing and feeling more centered. We've also found mistletoe therapy to be essential in melanoma, particularly the supportive administration of SC VAE from birch (betulae), almond (amygdali), and pine (pini) host trees. Melanoma is well-known as responsive to immune-enhancing treatments, such as PD1 inhibitors, which take the brakes off the cancer-killing T cells.[57]

Sarcoma: The cancer "in between" the inner and outer body

Earlier we looked briefly at embryonic development and how that development differentiates between inner and outer body systems. In biology, we actually refer to three layers of cells in that differentiation stage. The *endoderm* gives rise to those inner organ systems, and the *ectoderm* develops into the skin and nervous system. A third cellular category resides between those two layers: the *mesoderm.* This middle layer develops primarily into the muscles, connective tissue, bones, and the reproductive and urinary tracts. Sarcomas develop within these tissues of the mesoderm.

Generally, sarcomas are divided into tumors arising from bone or from soft tissue. They make up less than one percent of all adult cancers, but up to 15 percent of pediatric cancers.[58] Sarcoma is lightly related to leukemia and lymphoma, which arise from myeloid progenitor cells. These ultimately originate from the mesoderm. This relationship can be seen in the fact that there can be transformation between lymphoma, leukemia, and sarcoma. Sarcoma's statistical tendency toward pediatric patients indicates that this cancer tends to be a cancer of youth. From an anthroposophic perspective, we notice what we call "unrestrained youth forces"—growth and vitality that lacks balance and boundaries.[59]

Constitutional qualities: For patients with sarcoma, there is often a history of one distinct instigating trauma, while in carcinomas (solid tumors), there is more often a history of repetitive "mini



traumas."[60] The latter might be felt as the monotonous daily grind of everyday life, out of alignment with the soul and spiritual direction of the individual. Sarcoma is a cancer of incarnating (feeling one is not "in life" enough) while the solid tumors are cancers of excarnating (feeling too "stuck" in life).

The mesoderm, or *mesenchyme* (from which sarcomas arise), is the "glue" that holds the bodily organism together, structurally and functionally. It includes connective tissue, as well as interstitial fluid. It is responsible for providing structure, as well as all the processes that are necessary for information exchange between organs. In its intense fluid exchange, the etheric forces (life forces) prevail, whereas all the messenger substances that circulate in this fluid, regulating cell growth and differentiation, as well as metabolic processes, are part of the forming principle of the astral body (soul).

From an anthroposophic perspective, we look for how we may support connections within the fourfold human. One other anthroposophic remedy provided for patients who have sarcoma is *Cetraria islandica* (Icelandic moss—a lichen, which is composed of a symbiosis of fungus and algae). This remedy is provided to help regulate the connection between the astral and etheric body—which strengthens the mesenchymal tissues.[61]

Warmth is also crucial for patients with sarcoma. When the "I"-organism has a healthy connection to the bodily processes, this manifests as warmth. Through this insight, we can also understand why enkindling warmth is such a key to successful therapy for sarcoma. There is much evidence for this in conventional therapy, and mistletoe can also help enkindle such warmth.

Sarcoma care strategies: Sarcomas, depending on the type, are often resistant to chemotherapy and other standard of care (SOC) modalities. They are stubborn cancers! However, even conventional medicine acknowledges that therapeutic medical hyperthermia (see chapter 9) has been found to improve survival.[62] With this finding in mind, it is not so surprising to note that Coley's successes with early forms of "fever therapy" involved patients with sarcoma. Warmth enhancement is indeed a powerful component in sarcoma care. So, yes, there is a definite role for VAE therapy, especially fever therapies and IT injection.

A compelling European case series described remissions and robust tumor responses in six sarcoma patients with varied mistletoe extracts.[63] In this case series, there was a patient on a high-lectin mistletoe who declined chemotherapy. With the high-lectin mistletoe, the patient experienced reduction in tumor size. The practitioner changed host trees, and the regressed tumor began to grow again. The doctor changed back to the high-lectin mistletoe and this patient achieved a complete and durable remission of over 16 years.

Another illustrative case from Tbilisi, Georgia involved a 58-year-old patient with an inoperable sarcoma after multiple failed conventional treatments. AbnobaViscum Fraxini, initially in a low dose of 0.2 mg, was injected into the tumor (IT therapy), followed a few days later by a 2 mg injection. Initially the tumor was expectedly inflamed, and

later it became markedly smaller. The dose was gradually increased and the injections continued until the twelfth dose, after which the patient experienced a remission. An ultrasound found an area of necrotic tissue where her tumor had been. The tissue was biopsied and found to be composed of fibrotic tissue, white cells, and no tumor cells.[64]

In a small, randomized study looking at osteosarcoma (see chapter 3 for summary), patients who were given mistletoe therapy as a sole maintenance therapy after surgery for second relapse, showed a considerably longer post-relapse, disease-free survival (PRDFS) compared to those who received oral etoposide only, as seen 12 years after the start of the trial. A trend for an advantage in overall survival (OS) was also evident. The mistletoe therapy group also had notably improved immune parameters.[65] It is worth noting that this study used the lectin-free Iscador P, whereas in clinical practice and published case stories a high-lectin mistletoe is typically used, such as AbnobaViscum Fraxini or Quercus, or Helixor P (pini).[66]

Sarcoma presents a compelling case for the use of IT therapy and MFIT in carefully selected patients. Sarcomas have a clear relationship to the immune system. There are several documented sarcoma cases showing an abscopal response to conventional radiation therapy, in which only one tumor was treated but the entire tumor load regressed.[67,68] These responses show the importance of the immune system in sarcoma elimination. Even the conventional cancer research community has documented the value of medical hyperthermia for sarcoma.[69] Local hyperthermia also significantly prolongs survival in this tumor type.[70]

Warmth is powerful. Both IT mistletoe and MFIT can increase warmth. That's an obvious assertion regarding fever therapy, but IT therapy produces warmth, too. It causes an acute inflammatory response inside the tumor, which is a kind of local hyperthermia. At the same time, the high viscotoxin content of the mistletoe will cause cancer cell necrosis. This involves release of many inflammatory compounds as the cell splits apart and breaks down. As mentioned earlier, this is when immune system education can finally occur as specific cancer cell markers become visible.

Glioblastoma and other cancers of the CNS

Only about 24,000 adults in the U.S. are diagnosed with a primary central nervous system (CNS) tumor each year, which is less than one percent of annual cancer diagnoses.[71] For glioma (brain tumor) and glioblastoma (Stage IV glioma) the annual incidence is six in 100,000.[72] Gliomas make up 81 percent of all malignant brain tumors. Unfortunately, SOC treatment for these tumors has advanced little in recent decades. In glioblastoma, average survival with treatment is about 14 months.[73] There is clearly a lot to be gained from integrative therapies that do more than just focus on the tumor. We need to expand our focus to include addressing underlying causative factors in these cancers.

Constitutional qualities: From an anthroposophic threefold perspective, it is understandable that tumors in the restful, quiet area of the CNS are very rare. The nerve cells themselves have little to no metabolic activity in an anthroposophic sense. A nerve cell works hard—that is for sure—but its main function of polarizing and depolarizing is itself like a mini death process.[74] One way to determine if a cell is alive or dead is to find the difference between inside and outside concentration charge. Nerve cells depolarize as part of their activity—so by this definition they are undergoing tiny death-like states on a continuous basis. Nerve cells do not move and have little regenerative capacity, and so, they almost never become cancerous.

Though other brain tumors can arise from other tissue types, gliomas arise from the more metabolic *glial cells* in the brain, which arise out of the *ectoderm*.[75,76] Glial cells are not nerve cells. Glial cells exist solely as metabolic helpers to the nerve cells.[77] It is fascinating that primary brain tumors are far more common in pediatric populations—where the etheric life forces are still stronger. It is usually embryologic cells, or cells lining or supporting the nerves, that are affected.[78]

Glioma care strategies: Due to glioma's location in the center of the nerve–sense system, we tend to select mistletoe from tree types that are more *structuring* and less *metabolic*. Usually these are the coniferous trees—pine and fir. Fir (abietis) mistletoe is more supportive and

indicated when undergoing brain irradiation. It is also used for support during chemotherapy, though pine mistletoe can often be transitioned to during this time. Generally, in the U.S., only low-dose, low-lectin mistletoe therapy is provided when caring for CNS tumors.

A significant reason for using these lower-lectin, more structuring host trees is that the brain is an enclosed space. Swelling is a crucial concern. With any space-occupying lesion, mistletoe therapy should be utilized only under the direction of a clinician whose training and mentorship has focused on this skill. One clinician in Prague uses fever induction with high-dose mistletoe and has several case reports of long-term survival.[79] But this approach is not available in the U.S. In Europe, this therapy is provided only within a participating hospital center with supportive care that can quickly address any transient tumor swelling. In the adjuvant situation, when the actual tumor has been removed, lectin-rich mistletoe preparations may be considered if scans confirm there is no longer any brain edema (swelling), and the location of the tumor is not critical (i.e., brainstem).

In case of edema, boswellia—also known as frankincense (*Boswellia serrata*)—can be helpful as it possesses strong anti-inflammatory properties. It may be used in high doses (several grams per day) to more quickly wean off of the steroids that are often needed for swelling related to surgery and radiation.[80] Steroids can have marked side effects if used over a longer period of time (diabetes, immune suppression, sleeping disorders, etc.) Ironically, this only promotes cancer growth further and diminishes treatment efficacy. Ultimately steroids are known to reduce survival in glioma and glioblastoma.[81] There is a need for strategic balance here, as steroids are often necessary, but it is best to aggressively wean off them. It's good to know that boswellia can help make that possible.

In addition to boswellia, *Helleborus niger* (see chapter 8) is another effective adjuvant. It is used when we see brain edema. It's also extremely useful for mitigating cognitive issues associated with the tumor or resulting from chemotherapy or radiation. It seems to take the edge off memory, concentration, and cognition challenges. Indeed,

one of the more common uses of *Helleborus niger* is for the "brain fog" associated with chemotherapy in any cancer, not solely brain cancers. It also seems to help some patients with cancer-related fatigue, whether stemming from the disease or its treatment.

In addition to these adjuvant therapies, a therapeutic ketogenic diet is emphasized as essential in GBM care by many practitioners in the U.S., including Dr. Hancock and Dr. Winters. Dr. Hancock understands the ketogenic diet as regulating or even "pruning" the etheric body. As discussed in greater depth in chapter 9, ketosis induces several effects simultaneously on immune, metabolic, and genetic aspects of the cancer process. A therapeutic ketogenic diet is particularly beneficial as a foundational therapy for brain cancer because of its ability to reduce inflammation, enhance anti-tumor immune system activity, and make tumor cells more vulnerable to many other SOC and adjuvant therapies.[82]

Researchers have found that a therapeutic ketogenic diet creates metabolic conditions that restrict the growth of tumor cells, while supporting immune function in the brain.[83] Though large clinical trials finding significantly improved survival are currently limited to animal trials,[84] human studies are accumulating, including a small trial with several long term (three to four-year) survivors,[85] and a long-term survivor with GBM recurrence treated with ketogenic diet as a standalone therapy.[86] Dr. Winters has over 50 long term survivors with GBM largely due to the ketogenic diet working in conjunction with addressing the terrain of each patient. Dr. Hancock has an esteemed conventional neuro-oncologist colleague who refers patients to him specifically for the integrative approaches he is able to employ, including the ketogenic diet. Ketogenic diets have long been used as a natural method to prevent seizures, which are common with brain tumors.[87] This is a fascinating "side benefit" of implementing a ketogenic diet during brain cancer care.

Concluding thoughts

In this chapter we've shown that it is possible to use mistletoe to vigorously upregulate the immune system, prompt a transformative

fever, and even direct the body's anticancer forces with IT injections of mistletoe. This is the strongest, most dramatic mistletoe administration route and is only for carefully selected patients. Most patients will find that supportive SC or IV mistletoe therapy provide transformative benefits on their own, but it's still empowering to know about less common VAE therapy methods. We also looked at novel uses of mistletoe in problematic situations such as pleural effusion and ascites. By varying the host tree type and manufacturer, mistletoe therapy can be used in practically every therapeutic situation in integrative oncology.

We've expanded our understanding of different cancer types, recognizing the constitutional tendency of patients with lymphoma, leukemia, and sarcoma to be "too open" and "not grounded enough." This differs from patients with solid tumors where the opposite tendencies are present. We also looked at the constitutional aspects of glioma and glioblastoma. For all these unique cancers, we explored how integrative care fits into the therapeutic picture, including: mistletoe, *Helleborus niger*, boswellia, and therapeutic dietary change. When SOC has a poor prognosis, it is heartening to know there are other options that can provide the unexpected positive results we all hope for. May some of these new options bring healing!

CASE STORY ONE: ROBIN

Fever Therapy as Primary Treatment Strategy				
Physician: Dr. Mark Hancock	**Patient**: Robin	**First seen**: (May 2018)	**Age:** 45 (at first visit)	**Sex:** Female
Cancer Type & Stage:	Left breast cancer (ER-, PR-, HER2-negative). One involved left-side axillary node, and involvement of left anterior mediastinal nodes; Stage 3c at time of recurrence in 2018.			
Risk Factors:	High stress work environment; high anxiety. Severe childhood trauma.			

When Robin came to my clinic, Humanizing Medicine, in May of 2018, she was already well into a journey of battling breast cancer. In 2016, she'd been diagnosed with Stage II left sided triple negative (ER- PR-, HER2-negative) breast cancer. This is a very aggressive cancer. She opted for a lumpectomy and, due to her personal beliefs, she declined radiation and chemotherapy. She did go to

Mexico for four rounds of dendritic cell therapy followed by two months of intravenous vitamin C (IVC, see chapter 9).

Robin worked on an inner spiritual practice and focused on healthy eating and managing her stress response in a healthier way. Prior to her diagnosis, she was employed in a high-stress position as an insurance executive, so these soul- and spirit-care practices were likely very needed. Robin was disease-free from this aggressive cancer for several months. She tried to put it all behind her; she did not do any follow-up imaging but focused on a healthy lifestyle.

Her efforts had been helpful, but only to a point. Unfortunately, Robin had a recurrence in the same breast in July of 2017. Because of her beliefs and previous difficult encounters with medical doctors, she attempted to manage her cancer on her own focusing on her diet and self-treating with dozens of supplements. Still her tumor continued to grow. By the time she met with me in May 2018, she had a fist-sized tumor in her left breast. Despite this situation, Robin remained insistent that she would not under any circumstance do chemotherapy or radiation. As she put it, "I would rather die than do those treatments." This is a deeply personal choice, and we respect and support patients, whatever course they choose.

A PET CT showed a centrally necrotic 4.2 x 6.7 cm tumor in the left breast, with one involved left-sided axillary node and involvement of the left anterior mediastinal nodes. There was no evidence of bone or organ metastasis. A Biocept cancer biomarker test showed: 0 cytokeratin + circulating tumor cells and 19 cytokeratin positive cells in her blood. This meant that Robin was Stage 3c ($T_3N_3bMo(i+)$) with the most aggressive form of breast cancer. I explained this clearly: "With the best of all conventional care, long-term survival is estimated to be less than 50 percent."

After careful discussion with Robin, she opted for fever therapy with IV AbnobaViscum Fraxini via IT injection. She initially declined not only chemotherapy and radiation, but also surgery. She demonstrated a good understanding of the risks that she was taking on. So, we proceeded.

In the first week, I provided three days (spaced three to four days apart) of IV and IT therapy, building from 10 mg to 40 mg IT. For the next three weeks, Robin came in once a week for similar IV

and IT therapy, working up to 110 mg IT injection. After the second injection, she reported that her breast was sore and inflamed. The IT injections successfully provoked fever, initially 100.9 degrees Fahrenheit (38.3 Celsius) and then reaching up to 104.3 Fahrenheit (40.2 Celsius). During her first fever, Robin reported a lucid dream where she began turning into a mistletoe plant. She also said that she worked through some severe childhood trauma during this fever.

After the first four weeks, Robin had a two-week break from this therapy course. Then we began another three-week, once-per-week therapy course, again with IV and IT together. By day 63, we had worked up to 200 mg for the IT injection. During this series, her fevers held at about 102.3 to 102.6 F (39.1 to 39.2 C). From day 3 to 63, Robin's tumor was notably enlarged and inflamed, up to 9 cm on exam. I explained that this is a normal response and a sign of enhanced immune activity. But we also decided to pause therapy for a few weeks to let the immune response resolve.

At this point, we once again discussed the possibility of surgery. The tumor was obviously stressed by the treatment, and this could be a highly effective moment to remove it. We managed to persuade Robin to pursue lumpectomy with a surgeon. A week later, just prior to surgery, Robin was excited to report that her tumor was much smaller, 6 x 6 cm by palpation. Ultrasound confirmed a 4.3 x 4.8 cm mass with prominent nodes.

The lumpectomy was completed on day 98, a little over three months after starting VAE fever therapies. The pathology report described a *"well circumscribed cavity with necrotic center 2.8 x 2.2 cm.... Breast tissue with abscess cavity, abundant necrosis, numerous histiocytes, dense fibrosis and fibroblast proliferation admixed with recent and old blood. Remaining breast tissue shows fibrocystic changes."* In other words, no evidence of malignancy!

Robin was understandably elated. We discussed and decided on a post-surgery clean-up therapy strategy. For the next four weeks, she came in for IV mistletoe (working down from 200 mg to 100 mg) plus IVC (working up from 30 g to 90 g). The first two weeks, she experienced fevers of 102.0 and 99.7 F. respectively. The final two weeks, the therapy did not provoke any fever. This is expected

as we increased the dosage of the IVC—the cooling therapy in this warm-cool therapy combination.

In the long-term, Robin continues SC mistletoe three times per week at home and comes into the clinic every six to eight weeks for IV mistletoe. In her third year of remission, we added breaks between her SC mistletoe injections. She obtains yearly ultrasounds which show resolution of her previously enlarged lymph nodes. Robin is still cancer-free and living an active life.

CASE STORY TWO: MAX

Fever Therapy for Stage IV Hodgkin's Lymphoma				
Physician: Dr. Mark Hancock	**Patient:** Max	**First seen:** March 2020	**Age:** 29 (first visit)	**Sex:** Male
Cancer Type & Stage:	Refractory Stage IV Hodgkin's Lymphoma (with lung metastases), at time of diagnosis in 2017.			
Risk Factors:	Alcohol and tobacco exposure, stress, diet high in processed foods and sugar.			

When Max first came to my clinic, he had been living with his lymphoma diagnosis for two years. Originally, he was diagnosed upon experiencing an inexplicable 30-pound weight loss and night sweats. After his diagnosis of Stage IV Hodgkin's Lymphoma (with lung metastases), Max initially declined chemotherapy and started a therapeutic ketogenic diet and took several supplements instead. He did find that his B symptoms diminished with those self-treating choices. But this self-care was not enough. A year later, a CT scan showed progression, and Max opted to start the chemotherapy combination ABVD (Adriamycin, Bleomycin, Vinblastine, Dacarbazine). That did not provide a complete response, and he started on brentuximab vedotin. He also had radiation on one remaining area in his mediastinum. This is when Max met with me.

Max was only 29. As I got to know him during patient intake interviews, he shared that he was a musician. Before cancer, he was in a band and he taught; he was just starting his career. He wanted to do everything he could to maximize his chances of success.

We discussed some integrative and anthroposophic options he hadn't tried. We began with high-dose melatonin at 300 mg per

day, to synergize with his radiation. Max also started mistletoe therapy: Helixor Pini IV, to which he responded with fever to 101 F. He transitioned to SC Helixor Abietis (5 mg, two times per week) and *Helleborus niger* 4x (three times per week). Max also took stibium powder three times per day.

Within six weeks of beginning these therapies, Max reported that his neuropathy was 95 percent better. His energy had improved. He felt "more secure in life." Soon Max was able to work again, as well as play in his band. After six months, Max had a follow-up scan and a biopsy of a small area that was found to be benign. After a secondary follow-up scan, he was declared to be in full remission by his oncologist. Max continues using both the *Helleborus niger* as well as the Helixor Abietis, with a one-week break between series.

CASE STORY THREE: LUCY

SC Mistletoe & Ketogenic Diet for GBM				
Physician: Dr. Mark Hancock	**Patient:** Lucy	**First seen:** October 2019	**Age:** 65 (at first visit)	**Sex:** Female
Cancer Type & Stage:	Glioblastoma Multiforme of the right temporal lobe. Wild type IDH1 unmethylated tumor at time of diagnosis in 2019.			
Risk Factors:	High carbohydrate diet, alcohol use, stress, pesticide exposure, turbulent divorce.			

When Lucy came to me in 2019, her life had been completely upended by a sudden and highly aggressive cancer diagnosis. Three months earlier, she had gone to the ER with a severe headache. A scan was ordered, and it showed a brain hemorrhage with a tumor being the cause. She underwent an emergency craniotomy with resection of her tumor. Lucy was diagnosed with glioblastoma multiforme of the right temporal lobe. Pathology revealed a wild type, IDH1, unmethylated tumor. Tumors with this genetic profile tend to be the least responsive to conventional treatment.

Lucy was 65. In a matter of 24 hours, she'd gone from being a small business owner of a trucking company, who loved caring for her three dogs, to having a cancer diagnosis that left her fighting for her life. In the days that followed, Lucy began subsequent

radiation therapy for six weeks, two months of Temodar, and dexamethasone to control inflammation. She decided to stop the Temodar due to her unfavorable tumor genetics and the side effects. She established care with us three months out from her diagnosis.

At least Lucy had supportive family members. Her two sisters were caring for her extensively, but it was clear that all three women felt lost and overwhelmed. Lucy had already started a whole-food plant-based diet, and she had successfully weaned off the dexamethasone. I saw room for improvement in her diet, and she was willing to try other therapeutic approaches. At my suggestion, she began a therapeutic ketogenic diet, restricting carbohydrates to 20 grams per day and protein to 1 gram per kilogram per day and increasing her fat intake to meet her core caloric needs with healthy fats. She tracked her macronutrient intake on an online app, and her sisters regularly reported her numbers to me.

Lucy's two sisters became integral to her recuperation. She still had severe fatigue and needed full assistance to move about her house. Lucy suffered from debilitating nausea and severe brain fog after her radiation treatments and chemotherapy. Fortunately, she showed no neurological deficits.

I recommended *Helleborus niger* injections twice per week for the brain fog and brain edema. Lucy also started on SC Helixor Abietis three times per week, for the sheltering and supportive effects of this host tree. She was very sensitive to this mistletoe and had robust skin reactions. She also started taking boswellia in high doses and several repurposed off label meds: mebendazole, metformin, atorvastatin, and niclosamide. These were used to block key metabolic pathways of cancer cells and ideally trigger apoptosis (healthy cell death).

Over the first six weeks, Lucy's nausea abated, and her brain fog lifted. Over the next few months, her strength returned to the point where she became independent again. She could walk easily, dress on her own, and make her own meals. She was able to start IVC infusions. Lucy also strategically used her diet and a ketone supplement prior to several weeks of hyperbaric oxygen therapy (HBOT), to address any residual microscopic disease.

After 20 months of these therapies, her inflammatory markers showed a marked reduction in C-reactive protein (CRP), from 7

down to 0.4. A recent MRI (at 18 months out) showed no recurrence of her glioblastoma. Lucy is once again leading an active life—something she thought would never be possible. She continues with the SC Helixor Abietis. Lucy's story is a striking turnaround that demonstrates the power of implementing the best combination of therapies in an appropriate order and rhythm. In her case, some conventional therapies (such as chemotherapy) played little role, due to the genetics of her tumor. Finding a synergy with natural and conventional therapies was key to her success. Above all, her two loving sisters stayed by her side through thick and thin. They were the support circle that held her when she could not care for herself.