

Review Article

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Tailored Holistic Medicine, Enzymatic Therapy, Detoxification and Biophysical Field Therapies as the Next Integrative Frontier in U.S. Medical Care

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ABSTRACT

Modern medicine has transformed acute care. Surgery, infectious disease control, oncology, immunology, imaging, and molecular therapeutics have all advanced dramatically over the past half-century. Yet the burden of chronic illness in the United States keeps growing. Cancer, degenerative disease, autoimmune disorders, metabolic dysfunction, chronic fatigue, neuroimmune conditions, and complex inflammatory syndromes rarely trace back to a single defect; they emerge instead from interacting networks of genetics, epigenetics, toxicant exposure, microbiome disturbance, immune dysregulation, mitochondrial stress, autonomic imbalance, unresolved psychological strain, nutritional depletion, and environmental mismatch. Addressing that complexity will require a tailored holistic, or wholistic, model of care: one that preserves everything conventional medicine already does well while widening the therapeutic map to include individualized nutrition, detoxification, microbiome restoration, mind-body regulation, traditional medical systems, and biophysical modalities such as electromagnetic, millimeter-wave/extremely-high-frequency, scalar-field, and biofield-oriented therapies, all studied with the same rigor applied to any other intervention.

This review proposes a framework for bringing personalized holistic protocols and biophysical field-based interventions into U.S. medical care as complements to, not replacements for, conventional treatment. Cancer, degenerative disease, and autoimmune disease receive particular attention, since conventional treatment in these fields often targets pathology at the organ, molecular, or immune level while the patient's broader biological terrain goes largely unaddressed. Klinghardt's Five Levels of Healing is examined as a practical clinical framework spanning the physical body, the energy body, the mental-emotional field, the intuitive/dream-symbolic field, and the spiritual/family-system field. Detoxification is treated as a foundational pillar, given how routinely today's patients encounter heavy metals, endocrine-disrupting chemicals, persistent organic pollutants, solvents, pesticides, microplastics, air pollution, mold-related biotoxins, and pharmaceutical residues in daily life.

The review's conclusion is a modest one: holistic medicine will matter clinically only to the extent that it is personalized, measurable, ethically grounded, and scientifically accountable. The task ahead is not to challenge conventional medicine but to build integrative systems that pair conventional diagnostics and therapeutics with individualized terrain assessment, detoxification, immune-metabolic support, autonomic regulation, and rigorously tested field-based therapies - moving U.S. medicine a step closer to care that is predictive, preventive, personalized, participatory, and restorative.

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Introduction

The United States operates one of the most technologically advanced medical systems in the world, capable of high-level surgery, emergency medicine, targeted oncology, immunotherapy, biologics for autoimmune disease, transplantation, intensive care, genomics, and precision diagnostics. And yet the burden of chronic disease keeps climbing. Cancer survivorship, autoimmune

disorders, neurodegenerative conditions, metabolic syndrome, chronic fatigue, chronic pain, inflammatory bowel disease, cardiovascular disease, and environmentally mediated illness are all becoming more common, not less - and these are rarely isolated organ problems. They are whole-system diseases.

The dominant biomedical model has long centered on diagnosis, pathology, pharmacology, and disease suppression, and that model remains essential and, often, life-saving. But suppressing a pathway is frequently not enough in chronic, complex illness. What these patients often need instead is restoration of regulatory capacity - immune tolerance, mitochondrial energy production, detoxification, microbiome integrity, autonomic balance, emotional coherence, sound sleep architecture, a working circadian rhythm,

adequate nutrients, and an environment the body can actually tolerate.

A new medical model is needed, then - not one that rejects conventional medicine, but one that extends it. The future of U.S. medicine is likely to be integrative, personalized, systems-based, and biologically measurable, whether it ends up being called tailored holistic medicine, wholistic medicine, or personalized integrative systems medicine [1].

In a sense, this is a return to an older instinct. Traditional Medicine and Chinese Medicine have always treated disease as an imbalance among systems rather than a single isolated defect - an intuition that modern science now describes in different language: network medicine, systems biology, psychoneuroimmunology, exposomics, metabolomics, bioenergetics. The old wisdom and the new science are converging. What remains is to build the clinical bridge between them: one that is scientifically responsible, ethically safe, and credible to conventional practitioners [2-6].

From Disease-Centered Medicine to Terrain-Centered Medicine

Conventional medicine tends to ask a narrow set of questions: What is the diagnosis? Which drug, surgery, radiation, antibody, or procedure targets this disease? Holistic medicine asks a different, complementary set: Why did this patient's regulatory system fail in the first place? What biological terrain did the disease develop in? Which toxic, nutritional, microbial, emotional, autonomic, energetic, and social factors are keeping the illness in place? What has to be restored before the patient can recover real resilience - and which interventions make sense for this patient, at this moment, in this sequence?

This terrain-centered lens is especially useful in cancer, autoimmune disease, and degenerative disease. In cancer, the tumor sits inside a microenvironment shaped by inflammation, hypoxia, lactate metabolism, immune exhaustion, stromal signaling, angiogenesis, microbiome status, mitochondrial dysfunction, and psychological stress; conventional treatment can shrink the tumor while leaving that surrounding terrain largely untouched [7-12]. In autoimmune disease, the autoantibody or the inflammatory pathway under attack is rarely the whole story - barrier dysfunction, dysbiosis, toxic metals, viral burden, endocrine disruption, chronic stress, trauma, nutrient deficiency, and failures of immune tolerance often contribute as well. And in degenerative disease, the tissue damage clinicians eventually see is frequently the end product of years of mitochondrial stress, oxidative damage, inflammation, impaired detoxification, vascular dysfunction, glycation, excitotoxicity, infection burden, and a gradual loss of regenerative signaling [13-16].

Personalized Protocols: The Core of Future Medicine

No two cancer patients are identical. Neither are any two patients with autoimmune disease, neurodegeneration, chronic fatigue, or metabolic disease - each carries a different combination of genetics, exposures, microbiome, emotional history, diet, medications, infections, toxicant burden, trauma, and resilience.

A standardized protocol can be a reasonable starting point, but personalized medicine ultimately requires dynamic assessment: conventional diagnosis and staging; a current treatment and safety review; laboratory evaluation of inflammation, metabolism, immune status, detoxification capacity, anemia, oxidative stress, and nutrient status; assessment of the microbiome and gut barrier;

toxicant and heavy-metal risk assessment; autonomic evaluation, including heart-rate variability; assessment of emotional state, stress, trauma, sleep, and circadian rhythm; nutritional and digestive evaluation; environmental assessment; and, finally, individualized sequencing of whatever interventions follow.

That sequencing matters more than it might seem. A patient carrying a severe toxic burden may not tolerate aggressive immune stimulation. A patient with ongoing mold exposure is unlikely to improve until the exposure itself is removed. A patient with low albumin, cachexia, or anemia may need nutritional restoration before any deeper detoxification work begins. A patient in sympathetic overdrive may need nervous-system regulation before strict metabolic therapies make sense. The medicine of the future, in other words, will not simply ask whether a given therapy is good - it will ask good for whom, at what dose, in what sequence, under what monitoring, and measured against what outcome.

Autonomic individuality may also provide a physiologic axis for personalization. In *Nutrition and the Autonomic Nervous System: The Scientific Foundations of the Gonzalez Protocol*, Nicholas J. Gonzalez argued that inter-individual differences in sympathetic and parasympathetic physiology may help explain why patients respond differently to dietary patterns and nutritional supplementation. A recent review by Isaacs revisits the historical physiologic literature and contemporary evidence linking diet and mineral balance - particularly calcium, magnesium, and potassium - with autonomic tone, and proposes that diet and mineral supplementation can be studied as tools for adjusting autonomic physiology [17,18]. This should be regarded as a hypothesis-driven framework rather than a validated disease-treatment algorithm, but it offers a testable bridge between individualized nutrition and objective measures such as heart-rate variability, resting heart rate, blood pressure, sleep, inflammatory markers, and treatment tolerance.

Detoxification as a Foundational Pillar

Detoxification is often treated as a wellness-culture buzzword, invoked more than it is defined. In a medically serious holistic model, it has to mean something more precise: measured, monitored, and safe. No modern patient can fully escape toxicant exposure - heavy metals, pesticides, endocrine disruptors, solvents, persistent organic pollutants, particulate air pollution, mold-related compounds, plastics, flame retardants, personal-care chemicals, industrial residues, contaminated water, and food-chain pollutants are simply part of daily life now [19-21].

Heavy metals such as mercury, lead, cadmium, arsenic, and aluminum deserve particular attention, since they can interfere with enzymes, membranes, mitochondria, nervous-system function, immune tolerance, methylation, glutathione metabolism, and renal or hepatic detoxification. Persistent organic pollutants and endocrine-disrupting chemicals tend to accumulate in fat tissue, where they can quietly influence hormone signaling, immune balance, and metabolic regulation for years [22-26].

A holistic detoxification program should therefore include a real exposure history, source control, safe water and air strategies, nutritional support across phase I, II, and III detoxification, attention to bile flow and bowel clearance, lymphatic support, sweating where clinically appropriate, mineral repletion, glutathione and antioxidant support when tolerated, microbiome support, careful use of binders, and medically supervised chelation

only when it is genuinely indicated.

In cancer patients, this work demands particular caution: aggressive detoxification during chemotherapy, radiotherapy, immunotherapy, or significant cachexia can be unsafe, and the goal should be to reduce toxic burden without compromising treatment efficacy or patient stability. Autoimmune patients need similar individualization, since mobilizing toxins faster than the body can eliminate them risks aggravating the very symptoms the protocol is meant to relieve.

The Five Layers of the Healing Pyramid

Klinghardt’s Five Levels of Healing offer a useful clinical map for understanding why purely physical interventions sometimes fall short in complex chronic disease. The model comes out of an integrative and bioregulatory tradition rather than conventional biomedical classification, but it serves a real clinical purpose: reminding clinicians that patients are not simply biochemical machines [27].

Table 1: Klinghardt’s Five Levels of Healing: Clinical Meaning and Examples of Interventions.

Layer	Clinical meaning	Examples of interventions
Level 1: Physical body	Anatomy, physiology, biochemistry, nutrition, hormones, immunity, infections, toxicity, genetics, epigenetics, microbiome, metabolism, mitochondria, and structural integrity.	Conventional diagnostics and therapeutics, nutrition, herbal medicine, detoxification, physical therapies, surgery, pharmaceuticals.
Level 2: Energy body	Regulation, bioelectricity, meridians, electromagnetic fields, autonomic rhythm, coherence, and subtle energy flow.	Acupuncture, qigong, electroacupuncture, HRV training, PEMF, EHF/millimeter-wave therapy, photobiomodulation, biofield therapies.
Level 3: Mental-emotional field	Emotions, trauma, fear, grief, depression, hope, compliance, and meaning.	Psychotherapy, breathwork, mindfulness, trauma-informed care, hypnosis, prayer, music, family support.
Level 4: Intuitive, dream, and symbolic field	Subconscious patterns, dreams, archetypes, intuition, symbolic meaning, and inner guidance.	Meaning-centered care, dream work, narrative medicine, guided imagery, symbolic exploration.
Level 5: Spiritual and family-system field	Transpersonal identity, family systems, ancestral patterns, belonging, forgiveness, and existential orientation.	Spiritual care, family-system work, forgiveness practices, existential counseling, community reconnection.

Why All Five Layers Matter in Cancer, Degenerative, and Autoimmune Disease

Cancer treatment tends to focus on the tumor. Autoimmune treatment tends to focus on suppressing or modulating the immune system. Degenerative disease care tends to focus on symptom control. All of this is necessary - none of it is complete. A five-layer model widens the treatment map to include the physical, energetic, emotional, symbolic, and spiritual-family dimensions of illness alongside it.

Consider a breast cancer patient undergoing chemotherapy: she may benefit from conventional oncology, anti-nausea medication, nutritional support, careful detoxification timing, microbiome support, acupuncture for nausea, HRV training, trauma-informed therapy, spiritual counseling, and family-system support, all at once. Another patient with the identical diagnosis may need an entirely different combination. The point is not that every patient needs every therapy - it is that the practitioner should assess every level and build the plan around what this particular patient actually needs [28,29].

Field, Scalar and EHF Therapies: Scientific Promise and Necessary Caution

Field-based therapies span pulsed electromagnetic fields, millimeter-wave or extremely-high-frequency (EHF) therapies, photobiomodulation, electroacupuncture, biofield therapies, scalar-field devices, and other frequency-based interventions. They remain controversial - understandably so - yet the underlying biological questions are plausible enough to justify careful study, because living tissue is electrically, optically, mechanically, and electromagnetically active in ways that are easy to overlook [30].

Cells maintain membrane potentials. Neurons, cardiomyocytes, immune cells, epithelial tissue, mitochondria, and healing wound fields all display measurable bioelectric behavior; calcium channels, redox state, proton gradients, mitochondrial voltage, and ion fluxes sit close to the center of how life actually works. EHF and millimeter-wave therapies have been studied for non-thermal biological effects, tissue repair, immune modulation, pain, stress reactions, and other supportive applications, though the evidence base is uneven - better dosimetry, stronger controls, and independent replication are all still needed [31-33].

Scalar-field therapies are harder still to evaluate, in large part because terminology, device mechanisms, dosimetry, and biological endpoints are so poorly standardized across the field. Before any of this can enter mainstream discussion, it needs to be translated into measurable parameters: device output, exposure duration, target population, sham control, safety outcomes, biomarkers, reproducibility, and independent replication. Claims need to stay proportional to evidence - not the other way around [34,35].

A recent 12-week prospective controlled exploratory study by this author illustrates both what that kind of methodology looks like and how cautiously its early results should be read. The study evaluated blank homeopathic-carrier granules exposed *ex vivo* to a participant’s own coded blood fractions using a low-intensity EHF/millimeter-wave device, comparing this active preparation against an indistinguishable matched control in adults with cancer in clinical remission, alongside a parallel cohort of healthy adults receiving the active preparation only [36-39]. Over the twelve weeks, the active cancer-remission group showed greater movement than the control group in hemoglobin,

lymphocyte and natural-killer-cell counts, heart-rate variability, sleep, fatigue, and several inflammatory and metabolic markers, with no adverse events in either arm; healthy adults showed smaller but directionally favorable shifts across the same measures, consistent with a narrower physiological gap to close. The study did not assess tumor response, progression-free survival, or overall survival, and its authors were careful to state that the device was used only for ex vivo preparation of the granules, that no biophysical storage or transfer mechanism was established, and that the intervention was evaluated strictly as supportive care rather than cancer treatment. Findings like these belong in the same evidentiary category as the enzyme-therapy case series discussed later in this review: a signal worth pursuing in a larger, independently monitored, sham-controlled replication — not a result that should be marketed or adopted clinically ahead of that replication [40].

Traditional Medicine and Chinese Medicine as Systems Medicine
Traditional Chinese Medicine has always been systems-based at its core. Concepts such as Qi, blood, essence, yin-yang, the five phases, organ networks, meridians, phlegm, dampness, stagnation, heat, cold, deficiency, and excess describe pattern recognition rather than isolated disease labels. Modern medicine is arriving at similar logic through a different vocabulary: network medicine, systems biology, multi-omics, exposomics, immunometabolism, psychoneuroimmunology, microbiome science, circadian biology, bioenergetics, personalized medicine [41-43]

None of this points toward a simple return to tradition, or a naive faith in technology — it points toward synthesis. Traditional pattern recognition is good at generating whole-person hypotheses; modern diagnostics are good at testing and monitoring them. Dampness, for instance, may correspond clinically to metabolic dysfunction, lymphatic stagnation, dysbiosis, or inflammatory edema. Qi deficiency may track with mitochondrial dysfunction, anemia, autonomic weakness, or endocrine depletion. Blood stasis may correlate with hypercoagulability, microcirculatory impairment, platelet activation, endothelial dysfunction, or fibrosis. The old language and the new physiology are, more often than not, describing the same thing.

Application in Cancer Care

Cancer is not one disease - it is a family of diseases shaped by genetic instability, epigenetic change, immune evasion, altered metabolism, remodeling of the tissue microenvironment, angiogenesis, inflammation, hypoxia, fibrosis, and systemic host dysregulation. Conventional oncology remains essential here, and integrative medicine should never encourage a patient to decline appropriate treatment without a proper oncology consultation.

That said, cancer patients also need support for the underlying terrain. A tailored holistic cancer program might reasonably include personalized nutrition, digestive support, carefully timed detoxification and toxicant reduction, microbiome restoration, mitochondrial support, immune-terrain monitoring, inflammation reduction, autonomic regulation, HRV training, adapted exercise, sleep restoration, acupuncture for symptom control, mind-body interventions, spiritual and family-system support, and, where the evidence supports it, biophysical therapies used adjunctively.

The near-term future of integrative oncology should focus on measurable supportive endpoints -fatigue, sleep, HRV, inflammatory markers, anemia tendency, lymphocyte recovery, NK-cell trends, quality of life, treatment tolerance, neuropathy,

appetite, cachexia risk, pain, anxiety, depression, microbiome diversity, and detoxification capacity. Tumor shrinkage and survival remain the ultimate goals, but they require rigorous oncology trials of their own; supportive-care endpoints are the more realistic first bridge. Preliminary, unpublished observations from the author's own practice illustrate what one such supportive-care endpoint can look like in the clinic [44-47]. A retrospective analysis of 52 patients with heterogeneous malignancies receiving an individualized metabolic-typing, autonomic-balancing, and detoxification protocol (in press) found aggregate, illustrative trend estimates shifting from approximately 30% beneficial/commensal and 70% pathogenic/proteolytic organisms at baseline to approximately 78% beneficial/commensal and 22% pathogenic/proteolytic by twelve months, with keystone taxa such as *Faecalibacterium prausnitzii*, *Akkermansia muciniphila*, *Roseburia* spp., and *Butyricicoccus* spp [48]. moving in the favorable direction while *Escherichia/Shigella*, *Klebsiella* spp., and proteolytic pathobionts declined. These directional shifts were accompanied by lower C-reactive protein and interleukin-6 and by patient-reported improvement in gastrointestinal function, fatigue, and quality of life. Because sequencing depth and platforms were not standardized across this cohort, the values are best read as aggregate trend estimates rather than per-patient inferential statistics, and because the protocol is multicomponent, no single element can be credited with the observed change. The findings are hypothesis-generating only, reported here to motivate rather than substitute for the prospective, standardized-sequencing trial proposed in Section 18.

Enzyme Therapy, the Trophoblast Model and the Case for Renewed, Unbiased Trials

Pancreatic proteolytic enzyme therapy occupies an unusual place in the history of integrative oncology, and it illustrates both the promise and the difficulty of moving a biologically individualized hypothesis into mainstream research. The historical rationale traces to the British embryologist John Beard, who proposed a trophoblast model of cancer in the early twentieth century. In this model, trophoblastic tissue and malignant cells were considered to share invasive and proliferative characteristics, and pancreatic proteolytic enzymes were hypothesized to participate in the regulation of trophoblastic behavior. Ross later reformulated the model as a set of explicit, scientifically testable predictions, while also emphasizing that individual components could prove incorrect even if pancreatic enzymes ultimately showed biological activity through other mechanisms. Beard's standing as an embryologist is independently documented in the Nobel Foundation's official nomination archive: he was nominated for the 1906 Nobel Prize in Physiology or Medicine for his embryological work. Importantly, that nomination was for his embryological discoveries, not for proof of an enzyme-based cancer treatment[49,50].

The clinical record should be described with similar precision. Nicholas J. Gonzalez published extensive case documentation in two posthumously issued volumes: *Conquering Cancer: Volume One*, which presents 50 pancreatic and breast cancer patients treated on the Gonzalez nutritional protocol, and *Conquering Cancer: Volume Two*, which presents 62 additional patients across a broader range of malignancies and includes a diabetes case. These two books therefore document 112 detailed cases from Gonzalez's practice rather than a single jointly authored series of more than 160 cases. Separately, Linda Isaacs reported two metastatic cancer case reports - one colon cancer metastatic to liver and lung and one non-small-cell lung cancer metastatic to brain - treated with an individualized nutritional protocol that included high-dose

pancreatic-enzyme products. Case reports and case series can identify unusual clinical trajectories and generate hypotheses. The biologic rationale has nevertheless been strengthened by a growing preclinical literature. Isaacs reviewed modern evidence on pancreatic proteases and protease-activated signaling in cancer, while Novak and Trnka summarized antitumor and antimetastatic observations with pancreatic proenzymes, Peran and colleagues reported antiangiogenic, anti-invasive, and antitumor activity of a trypsinogen/chymotrypsinogen formulation in experimental pancreatic and ovarian cancer models, Kaiserova and colleagues reported reduced tumor growth and prolonged survival in mouse sarcoma and melanoma models, and Hernandez-Camarero and colleagues reported suppression of BxPC-3 pancreatic cancer stem-cell features and impaired tumor engraftment in experimental systems. These studies provide mechanistic and preclinical support for renewed investigation [51-58].

Prospective human evidence remains limited. Gonzalez and Isaacs reported a small prospective pilot study in pancreatic adenocarcinoma in 1999, followed by the later trial comparing pancreatic proteolytic enzyme therapy with gemcitabine-based chemotherapy, which reported substantially worse survival in the enzyme arm [59-60].

That negative trial cannot simply be ignored. At the same time, Gonzalez provided a detailed first-person critique of its design and implementation in *What Went Wrong: The Truth Behind the Clinical Trial of the Enzyme Treatment of Cancer*, and Ross separately published a methodological critique addressing patient selection, adherence, design changes, and trial conduct [61]. These critiques do not themselves overturn the published outcome, but they make a reasonable scientific case for not treating one disputed study as the final word on the entire mechanistic hypothesis [62]. A useful interim step would be to expand the case-report literature specifically to biopsy- or imaging-confirmed malignancies, with pathology, staging, and outcomes documented to the same standard expected of any oncology case series, so that the hypothesis continues to accumulate evidence even before a definitive trial becomes possible.

The longer-term need is for an adequately powered, prospectively registered, independently monitored trial with agreed enrollment criteria, objective adherence verification, standardized staging, transparent data access, and governance shared by conventional oncology investigators and clinicians experienced with the protocol. Such a trial would test the therapy rather than the controversy surrounding it. A classic randomized, double-blind, placebo-controlled design is, however, genuinely difficult to apply to tailored holistic therapies: the intervention is individualized, multi-component, and adjusted over time, which makes it hard to define one fixed “active treatment” and construct an identical placebo against it [63]. Blinding is equally difficult in practice, since patients and practitioners generally know whether dietary changes, detoxification, lifestyle interventions, or counseling are being used; expectation, adherence, and the practitioner-patient relationship then become part of the therapeutic effect rather than nuisance variables to be controlled away.

practitioners generally know whether diet, detoxification, lifestyle changes, counseling, - expectation, adherence, and the practitioner-patient relationship then become part of the therapeutic effect rather than a nuisance variable to be controlled away. The more realistic path forward is not to abandon rigor but to adapt it: pragmatic or stepped designs that randomize timing or dose rather than presence or absence of the protocol, blinded and independently adjudicated outcome assessment even where the intervention itself cannot be blinded, and pre-registered objective biomarkers as co-primary endpoints alongside survival. That combination preserves most of the protection against bias that blinding is meant to provide, without pretending that a therapy built on individualization can be tested as though it were a single pill.

Application in Degenerative Diseases

Degenerative diseases - Alzheimer’s disease, Parkinson’s disease, osteoarthritis, cardiovascular degeneration, neuropathy, macular degeneration, chronic kidney disease - tend to develop slowly, over years, and tend to involve oxidative stress, mitochondrial dysfunction, inflammation, glycation, vascular impairment, toxin accumulation, protein misfolding, impaired autophagy, microbiome disturbance, and a gradual loss of regenerative capacity.

A holistic model for degenerative disease should include vascular and metabolic optimization, mitochondrial support, glycemic control, anti-inflammatory nutrition, toxin reduction, heavy-metal evaluation where clinically indicated, sleep and glymphatic support, movement and strength preservation, neuroplasticity training, photobiomodulation or PEMF where the evidence and safety profile support their use, and ongoing attention to emotional engagement, social connection, and a sense of purpose.

Application in Autoimmune Diseases

Autoimmune disease reflects a breakdown in immune tolerance. Corticosteroids, immunosuppressants, biologics, JAK inhibitors, disease-modifying agents, and targeted immune therapies remain essential - sometimes life-saving - tools, but two patients with the same diagnosis can have very different triggers and maintaining factors.

A tailored holistic protocol should investigate gut permeability, dysbiosis, viral or microbial triggers, toxic metals, mold exposure, silica or occupational exposure, gluten or food immune reactivity, vitamin D and omega-3 status, stress-axis dysfunction, trauma history, sleep disruption, hormonal influences, mitochondrial dysfunction, glutathione depletion, and lymphatic stagnation [13-16,28,29].

Field and EHF therapies, in this context, should be studied as regulatory rather than suppressive interventions, with endpoints such as pain, fatigue, HRV, inflammatory markers, cytokine profiles, autoantibody trends, sleep, quality of life, and medication burden. Trial design here needs particular care, since an unstable immune system can be overstimulated as easily as it can be calmed.

What Must Be Done to Bring These Therapies into Conventional Care

Bringing these therapies into conventional care is less a matter of persuasion than of infrastructure. The table below sets out what that infrastructure needs to include.

Table 2: Requirements for Integrating Tailored Holistic and Biophysical Therapies into Conventional Care.

Requirement	Practical meaning
Establish clear language	The term “alternative” creates unnecessary conflict. “Integrative supportive care” or “personalized adjunctive care” are better framings: these therapies should be positioned as complements, not replacements.
Define scope and indications	Each therapy must define what it is intended to support: fatigue, pain, neuropathy, sleep, inflammation, HRV, detoxification, treatment recovery, immune resilience, digestive function, and quality of life.
Standardize protocols	Protocols must define device type, frequency, intensity, exposure duration, treatment schedule, patient selection, contraindications, safety monitoring, biomarkers, outcome measures, and practitioner training.
Use biomarker-based monitoring	Useful markers include CBC, CRP, ESR, fibrinogen, D-dimer, ferritin, vitamin D, homocysteine, glucose-insulin indices, albumin/globulin ratio, liver and kidney function, lymphocyte subsets, NK-cell count, autoantibodies, microbiome, HRV, sleep metrics, and validated quality-of-life scales.
Conduct sham-controlled trials	Field therapies require randomized allocation, sham devices or placebo procedures, blinded participants, blinded assessors, predefined endpoints, safety monitoring, a statistical plan, and independent replication.
Build integrative boards	Cancer centers and chronic disease clinics should include conventional specialists, integrative physicians, nutritionists, acupuncturists, psychologists, environmental medicine experts, and rehabilitation specialists.
Train practitioners	Practitioners must understand red flags, drug-supplement interactions, oncology safety, autoimmune flare risk, detoxification risk, device safety, ethics, informed consent, evidence grading, and communication with conventional physicians.
Create registries	Real-world registries can track diagnosis, conventional treatment, integrative therapies used, adverse events, laboratory changes, quality of life, fatigue, pain, HRV, medication changes, and long-term safety.
Protect patients from false claims	Ethical integrative medicine must be hopeful but honest. Vulnerable patients should never be promised a cure or encouraged to abandon necessary conventional care.

A Proposed Model for Future U.S. Integrative Medical Centers

A future medical center might reasonably be organized around three integrated arms: a conventional medical arm, a holistic biological-terrain arm, and a biophysical/consciousness-medicine arm. The conventional arm would include oncology, rheumatology, neurology, cardiology, imaging, pathology, pharmacology, emergency care, surgery, immunotherapy, biologics, and targeted therapies. The terrain arm would include nutrition, detoxification, microbiome support, mitochondrial support, immune-terrain monitoring, autonomic regulation, sleep, exercise, environmental medicine, and functional laboratory testing. The biophysical/consciousness arm would include acupuncture, electroacupuncture, qigong, meditation, breathwork, HRV biofeedback, PEMF, EHF/millimeter-wave therapy, photobiomodulation, biofield therapies, scalar-field research platforms, trauma-informed care, and spiritual care.

The patient would receive one coordinated plan, not three fragmented opinions. The goal is neither to medicalize spirituality nor to spiritualize pathology - it is to bring a patient's biology, regulation, environment, meaning, and conventional diagnosis together into a single coherent strategy.

Ethical and Regulatory Considerations

Integrative therapies have to meet the same ethical bar as any other treatment: informed consent, no coercion, no substitution for necessary conventional care, transparent evidence grading, safety monitoring, financial transparency, no exaggerated claims, respect for patient autonomy, and real collaboration with conventional providers [64,65].

Field and scalar devices deserve particular scrutiny. Manufacturers and practitioners should be explicit about whether a given therapy is experimental, supportive, wellness-oriented, or medically approved for a specific indication, and device outputs and

mechanisms should be described as plainly as the technology allows. Detoxification programs need similar caution - chelation, fasting, binders, sauna use, enemas, and aggressive supplement protocols can all cause real harm when they are poorly supervised.

Economic and Budgetary Rationale for Tailored Holistic Medicine in the United States

The case for tailored holistic medicine is not only clinical - it is economic. Chronic disease already consumes the overwhelming majority of the American healthcare budget, and the trend shows no sign of reversing. Federal data indicate that more than three-quarters of national healthcare spending goes toward people with chronic conditions, and government analyses put U.S. spending on chronic disease at close to \$800 billion a year, or more than four-fifths of all government healthcare expenditure. The scale becomes clearer when broken down by disease: cardiovascular disease costs the country roughly \$363 billion annually in healthcare services, medication, and lost productivity; diabetes and its complications exceed \$400 billion a year; and chronic pain - the single most common reason patients seek care at integrative medicine clinics - is estimated to cost up to \$635 billion annually. Chronic disease also drains an estimated \$260 billion a year in lost workforce productivity. A medical model built primarily around late-stage disease suppression is, almost by definition, an expensive one [66].

There is growing evidence that terrain-centered, personalized, nutrition-based interventions can meaningfully offset these costs, provided they are rigorously designed and properly targeted. A widely cited analysis of Washington State - where complementary and alternative medicine providers have been a mandated part of the insurance system for two decades - found that patients under CAM-inclusive care had lower prescription drug costs, lower hospitalization costs, and lower total costs than comparable patients receiving conventional care alone, despite starting treatment in poorer health. A systematic review of economic

evaluations of complementary therapies and integrative care reached a similar conclusion: patients with the greatest disease burden saw the largest reductions in total medical expenditure once integrative strategies were introduced [67]. Food-based interventions offer a particularly clean example - an analysis of a national produce-prescription program for patients with diabetes projected net savings of \$13.6 billion in the first year alone, and roughly \$185 billion over a decade, while averting an estimated 292,000 cardiovascular events [68]. None of this proves that every holistic or biophysical therapy discussed in this review is cost-effective [69]. It does show that terrain-based, whole-person strategies are already saving money in the specific domains - cardiovascular disease, metabolic disease, chronic pain - where they have actually been studied rigorously.

Realizing that savings potential at national scale will take sustained research investment, not intuition or wellness marketing. The National Institutes of Health has funded complementary and alternative medicine research since 1991, when Congress authorized the Office of Alternative Medicine, later reorganized in 1998 as the National Center for Complementary and Alternative Medicine and known today as the National Center for Complementary and Integrative Health (NCCIH). NCCIH's appropriations increased from \$50.0 million in fiscal year 1999 to \$170.3 million in fiscal year 2023, with additional CAM-relevant funding spread across the National Cancer Institute, the National Institute on Aging, the National Institute of Environmental Health Sciences, and more than a dozen other NIH institutes and centers. That growth reflects a slow but genuine institutional acceptance that terrain-based and integrative approaches deserve the same rigorous, sham-controlled, biomarker-driven research described earlier in this review [70,71]. Cutting this pipeline would not only slow the discovery of new cancer and autoimmune treatments - it would just as directly stall the research needed to validate, standardize, and eventually secure reimbursement for the holistic interventions that already show the clearest early evidence of reducing downstream costs.

This is not a hypothetical concern. Recent reductions and terminations of federal biomedical research grants, along with proposed cuts to the infrastructure that keeps academic laboratories running, threaten to weaken the same NIH-funded research ecosystem - spanning NCCIH, NCI, and NIEHS - that produced the cost and efficacy evidence cited above [72]. Decades of NIH-supported research sit behind nearly every modern medical advance, including the near-eradication of smallpox and polio and the transformation of HIV into a manageable chronic condition; the same infrastructure will be needed to determine, with equal rigor, which holistic and biophysical interventions genuinely reduce hospitalization, medication burden, and total cost of care, and which do not. A U.S. medical system that wants both better outcomes and a smaller chronic-disease bill cannot treat integrative-medicine research as an optional line item. It has to be funded with the same seriousness as oncology drug trials - precisely because the return, in avoided hospitalizations, reduced polypharmacy, and restored productivity, may ultimately be measured in the same billions of dollars now spent on disease suppression alone.

Application in Pandemic and Emerging Infectious Disease Preparedness

Cancer, autoimmune disease, and degenerative disease are not the only domains where a terrain-centered model is relevant. Pandemics and emerging infectious diseases depend as much on host resilience - immune regulation, autonomic balance,

nutritional sufficiency, microbiome integrity, sleep architecture, stress physiology - as on the properties of the pathogen itself. Two patients infected with the same virus at the same viral load can have markedly different clinical courses, and part of that difference comes down to the same regulatory capacity - immune tolerance, inflammatory control, mitochondrial reserve - already described in this review as the terrain underlying cancer and autoimmune disease. A tailored holistic framework therefore has a natural, if still underdeveloped, role to play in pandemic preparedness and in the supportive care of patients recovering from viral illness. The COVID-19 pandemic stimulated interest in complementary and alternative medicine in many settings. However, cross-national European data indicate that overall CAM use remained broadly stable between 2014 and 2023, with increases in some countries and decreases in others [73]. That is a useful precedent - it suggests the same integrative infrastructure proposed elsewhere in this review, spanning conventional, terrain-based, and biophysical arms, could be mobilized for pandemic-related supportive care without requiring an entirely new institutional model [74].

Future research in this area should extend the same rigorous methodology already proposed for cancer and autoimmune disease to infectious and post-viral illness: HRV-guided autonomic training as adjunctive support for post-viral fatigue and long-COVID-type neuroimmune syndromes; microbiome restoration protocols following antibiotic or antiviral courses, where dysbiosis can prolong gastrointestinal and immune recovery; nutritional and detoxification terrain optimization ahead of seasonal respiratory virus surges among older adults and other high-risk populations; psychoneuroimmunology-informed stress-reduction interventions designed to modulate cytokine responses during acute viral illness rather than simply improve comfort; and sham-controlled studies of photobiomodulation, PEMF, or biofield therapies tracking fatigue, HRV, and inflammatory-marker trajectories during recovery from confirmed viral infection. Each of these studies would draw on the same biomarker-based monitoring, sham control, and registry infrastructure outlined earlier in this review, so that pandemic-related findings could feed into the same evidence base as the rest of the paper rather than sitting apart as a separate track.

As in oncology and autoimmune disease, the central caution applies with even more force during an active pandemic. Vaccination, antiviral therapy, and public-health measures remain the primary tools for preventing severe illness and death, and no amount of terrain optimization or biofield research should be presented to patients as a substitute for them. The appropriate role for holistic and integrative approaches during a pandemic is the same supportive, adjunctive role described throughout this review — reducing symptom burden, supporting recovery, and restoring regulatory capacity in patients who are also receiving, or have already received, standard medical care.

Research Agenda

The future of tailored holistic medicine depends on better research, and each priority area below is more useful anchored to a concrete, testable study design than left as a general aspiration.

Personalized detoxification protocols deserve controlled study in autoimmune and neuroinflammatory disease. A randomized trial, for instance, could compare a structured toxicant-reduction protocol - source control, nutritional support across phases I through III of detoxification, and monitored mineral repletion - against usual care in patients with Hashimoto's thyroiditis or multiple sclerosis, tracking urinary heavy-metal excretion, oxidative-stress markers, and validated fatigue and quality-of-

life scales over six to twelve months. Microbiome restoration deserves similar rigor in both cancer supportive care and autoimmune regulation; a plausible study would enroll breast-cancer patients undergoing chemotherapy in a placebo-controlled trial of targeted prebiotic and probiotic support, measuring gut microbial diversity, chemotherapy-related gastrointestinal toxicity, and fatigue alongside standard oncology outcomes. Preliminary, unpublished observations from the author's own retrospective cohort, described in Section 9, point in a similar direction and would benefit from exactly this kind of prospective, standardized-sequencing confirmation [48].

HRV-guided autonomic interventions are a natural next study for cancer-related fatigue and autoimmune flares - a biofeedback program teaching paced breathing and vagal-tone training could be tested in rheumatoid arthritis patients, with flare frequency, C-reactive protein, and HRV trends as primary endpoints. EHF and millimeter-wave therapy warrants sham-controlled study for pain, fatigue, neuropathy, and tissue recovery, for instance in chemotherapy-induced peripheral neuropathy, where objective nerve-conduction measures could sit alongside patient-reported symptom scores. PEMF and photobiomodulation fit naturally into oncology rehabilitation trials as well - post-mastectomy lymphedema or radiation-associated wound healing, say, where imaging and volumetric measurement offer objective endpoints beyond self-report.

Biofield therapies should be tested with sham controls and biomarker endpoints - a trial in cancer-related fatigue, for example, measuring cortisol rhythm, HRV, and inflammatory cytokines alongside quality-of-life scales. Scalar-field devices need an earlier stage of work still: engineering-level characterization of device output, dosimetry, and reproducibility has to come before any clinical claim, since terminology and mechanism remain poorly standardized across manufacturers. Integrated five-layer healing programs - combining physical, energetic, emotional, symbolic, and spiritual-family support - could be piloted as a structured cancer-survivorship cohort tracking fatigue, HRV, psychological distress, and family-system functioning over one to two years post-treatment. Environmental toxicant-reduction programs deserve dedicated study in chronic inflammatory disease, such as a trial of structured mold and air-quality remediation in patients with treatment-resistant inflammatory bowel disease or chronic sinusitis. And multi-omics studies that combine exposomics, microbiome, metabolomics, and immunology with longitudinal symptom outcomes offer the clearest path to testing whether the terrain-centered model - and the pattern language of Traditional Medicine and Chinese Medicine described earlier - corresponds to measurable, reproducible biological states, rather than remaining a descriptive metaphor.

The Personalization Paradox: Testing Protocols That Are Never Given Twice in the Same Form

A structural obstacle runs through every research recommendation in this review, and it deserves to be addressed directly rather than left implicit. The randomized controlled trial assumes an intervention that can be specified once and then delivered identically to every participant in the treatment arm. Tailored holistic protocols are built on the opposite premise: two patients with the same diagnosis, the same age, even the same laboratory profile at intake, may receive different sequencing, different dosing, and different combinations of nutritional, detoxification, autonomic, and biophysical support - because the entire point of terrain-centered assessment is to keep adjusting the plan to

each patient's toxicant burden, microbiome, autonomic tone, and psycho-emotional state as those things change over the course of treatment. Force such a protocol into a single fixed arm for the sake of trial design, and one of two things happens: either the individualization that is supposed to be the source of benefit is destroyed, or the resulting "intervention" is so heterogeneous from patient to patient that no efficacy result can be attributed to any specific, reproducible treatment. Neither outcome is acceptable - and neither failure means personalized medicine cannot be studied rigorously. It means the standard drug-trial template is the wrong tool for this particular job.

Several existing research designs are better suited to the problem, and none of them is exotic or unproven elsewhere in medicine. Sequential multiple assignment randomized trials, already used to develop adaptive treatment algorithms in psychiatry and oncology, randomize patients not to a fixed regimen but to a decision rule - which biomarker threshold triggers a change in detoxification intensity or autonomic support, for example - so that what gets tested is the algorithm generating the personalization, not a single static protocol. Aggregated N-of-1 trials, in which each patient serves as their own control across alternating exposure and washout periods with predefined biomarker and symptom endpoints, allow individualized regimens to be evaluated with real statistical rigor and can be pooled across patients using Bayesian hierarchical models to estimate a population-level effect without requiring any two patients to receive an identical intervention. Single-case experimental designs with multiple baselines, long used in behavioral medicine and rehabilitation research, offer a comparable framework when a full crossover isn't feasible - in a slowly progressive degenerative disease, say. Basket and umbrella trial architectures, already standard in precision oncology, can be adapted so patients are stratified by terrain profile - toxicant burden, dysbiosis pattern, autonomic phenotype - rather than by diagnosis alone, letting a shared control group and shared infrastructure support several personalized-protocol arms at once. And target-trial emulation using structured real-world registries, where every patient's individualized protocol, dose adjustments, and outcomes are captured prospectively and analyzed with propensity-score matching against comparable patients on usual care, can generate comparative-effectiveness evidence at a scale and cost a conventional fixed-regimen trial could never match.

The rule that follows from all this is easy to state and easy to overlook in practice: a personalized protocol should be judged on the reproducibility of its assignment logic and its measured outcomes, not on whether any two patients received the same combination of therapies. Funders, journal editors, and institutional review boards evaluating proposals in this field should be asking whether a study design accounts for legitimate patient-to-patient variation in a structured, prespecified way - rather than assuming, by default, that any protocol not delivered identically to every participant is untestable. Holding personalized holistic medicine to the letter of a drug-trial template that was never built for it is not scientific rigor. It is a category error, and in practice it has made large parts of this field harder to fund and easier to dismiss than the underlying clinical questions actually deserve.

Discussion

The medical future will not be purely pharmaceutical, purely technological, purely traditional, or purely energetic. It will be integrative. The patient of the future will need tumor boards, genomic sequencing, immunotherapy, and advanced imaging - and, alongside them, microbiome restoration, detoxification,

emotional regulation, autonomic training, nutrition, traditional medicine, and biophysical therapies where appropriate.

The point is not to dilute science but to enlarge what counts as science. Measurement doesn't have to stop at drug trials -it can extend to fields, frequencies, HRV, inflammation, lymphocyte subsets, quality of life, toxicant burden, mitochondrial function, and whole-system change. Traditional Medicine and Chinese Medicine bring pattern recognition and whole-person logic; conventional medicine brings diagnosis, acute care, molecular targeting, and safety standards; systems medicine is the bridge between them. Klinghardt's Five Levels of Healing are a useful reminder that illness is not only molecular. Patients suffer physically, energetically, emotionally, symbolically, spiritually, and relationally, and a medicine that ignores those layers will stay incomplete no matter how sophisticated its molecular tools become. Detoxification, in particular, needs to be elevated from wellness marketing to serious environmental medicine - heavy metals, plastics, solvents, pesticides, air pollution, and endocrine disruptors are part of the exposome now, and the exposome has to become part of ordinary medical history-taking [75,76].

Conclusion

Cancer, degenerative disease, and autoimmune disorders demand more than disease suppression - they demand restoration of biological regulation. Tailored holistic medicine offers a model that integrates conventional care with personalized nutrition, detoxification, microbiome restoration, autonomic regulation, emotional healing, traditional medical systems, and emerging biophysical therapies.

Field, scalar, and EHF therapies may turn out to be part of that future, but their acceptance will depend on rigorous standardization, safety assessment, sham-controlled research, biomarker tracking, and honest communication with patients. Detoxification, meanwhile, should become a core pillar of chronic-disease care simply because modern toxicant exposure is unavoidable and biologically consequential.

The next era of U.S. medicine should stop asking whether conventional or holistic medicine is superior. The better question is how the two can be integrated safely, intelligently, and scientifically for the benefit of patients.

None of this requires, or benefits from, portraying conventional medicine as inadequate. Surgery, chemotherapy, immunotherapy, biologics, and intensive care save lives every day and remain the backbone of safe, effective treatment for cancer, autoimmune disease, degenerative disease, and infectious illness alike. The argument here is narrower, and I think less contentious, than it may first appear: promising terrain-centered and biophysical approaches - enzyme therapy, EHF-imprinted preparations, and the wider integrative repertoire discussed throughout this review - have rarely received the scale of unbiased, adequately funded trial infrastructure that pharmaceutical candidates get as a matter of course, and several have been judged, favorably or not, on the strength of a single contested study rather than a body of independently replicated evidence. Giving these approaches equal research opportunity, under the same sham-controlled, biomarker-driven, jointly governed standards described throughout this review, is not a concession to alternative medicine. It is a direct route to reducing the nearly trillion-dollar annual burden of chronic disease on the U.S. economy, since every therapy that gets properly validated, standardized, and reimbursed is one fewer source of unmonitored out-of-pocket spending, undisclosed drug-supplement interaction, and downstream hospitalization. The goal is not to re-litigate old disputes but to fund the next trial well

enough that the dispute no longer needs arguing at all.

Declarations

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Conflicts of interest: A.S.D. is the developer of the EHF-imprinted preparation methodology discussed in Section 7 and holds the DARE® trademark; he is Co-Founder and Medical Director of the OVITAL Institute, which offers integrative protocols related to approaches discussed in this review, and Chair of the Scientific Advisory Board of the Nicholas Gonzalez Foundation, a nonprofit that promotes awareness of the enzyme-based protocol discussed in Section 10. No other financial, device-manufacturing, or commercial conflicts are declared.

Ethical Approval: Not applicable - this is a review article and does not report new human or animal research.

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References

1. National Center for Complementary and Integrative Health. Complementary, alternative, or integrative health: what is in a name? NCCIH. <https://www.nccih.nih.gov/>.
2. Loscalzo J, Barabási AL, Silverman EK, editors (2017) *Network Medicine: Complex Systems in Human Disease and Therapeutics*. Cambridge, MA: Harvard University Press.
3. Barabasi AL, Gulbahce N, Loscalzo J (2011) Network medicine: a network-based approach to human disease. *Nature Reviews Genetics* 12: 56-68.
4. Auffray C, Charron D, Hood L (2010) Predictive, preventive, personalized and participatory medicine: back to the future. *Genome Medicine* 2: 57.
5. Hood L, Friend SH (2011) Predictive, personalized, preventive, participatory medicine. *Nature Reviews Clinical Oncology* <https://www.semanticscholar.org/paper/Predictive%2C-personalized%2C-preventive%2C-participatory-Hood-Friend/287ade419de9e4df9fca6915e93da73b9bba1f10>.
6. Wolkenhauer O, Auffray C, Brass O, Jean Clairambault, Andreas Deutsch, et al. (2014) Enabling multiscale modeling in systems medicine. *Genome Medicine* 6: 21.
7. Cryan JF, O'Riordan KJ, Cowan CSM, Kiran VS, Thomaz FSB, et al. (2019) The microbiota-gut-brain axis. *Physiological Reviews* 99: 1877-2013.
8. Belkaid Y, Hand TW (2014) Role of the microbiota in immunity and inflammation. *Cell* 157: 121-141.
9. Wallace DC (2012) Mitochondria and cancer. *Nature Reviews Cancer* 12: 685-698.
10. Hanahan D (2022) Hallmarks of cancer: new dimensions. *Cancer Discovery* 12: 31-46.
11. Miller AH, Raison CL (2016) The role of inflammation in depression: from evolutionary imperative to modern treatment target. *Nature Reviews Immunology* 16: 22-34.
12. Furman D, Campisi J, Verdin E, Pedro CB, Sasha T, et al. (2019) Chronic inflammation in the etiology of disease across the life span. *Nature Medicine* 25:1822-1832.
13. Pollard KM (2015) Environment, autoantibodies, and autoimmunity. *Frontiers in Immunology* 6.
14. Selmi C, Leung PSC, Sherr DH, Marilyn D, Jennifer FN, et al. (2012) Mechanisms of environmental influence on human autoimmunity: a National Institute of Environmental Health Sciences expert panel workshop. *Journal of Autoimmunity* 39: 272-284.
15. Fenga C (2016) Occupational exposure and risk of

- autoimmune disease. *Autoimmunity Reviews*.
16. Somers EC, Richardson BC (2014). Environmental exposures, epigenetic changes and the risk of lupus. *Lupus* 23: 568-576.
17. Gonzalez NJ (2017). Nutrition and the Autonomic Nervous System: The Scientific Foundations of the Gonzalez Protocol. New Spring Press ISBN:9780998546001.
18. Isaacs LL (2026) Adjusting autonomic physiology with diet and minerals to improve health. *Integr Med (Encinitas)* 25: 20-28.
19. Wild CP (2005) Complementing the genome with an exposome: the outstanding challenge of environmental exposure measurement in molecular epidemiology. *Cancer Epidemiology, Biomarkers & Prevention* 14: 1847-1850.
20. Rappaport SM (2016) Genetic factors are not the major causes of chronic diseases. *PLoS ONE* 11: e0154387
21. Vermeulen R, Schymanski EL, Barabasi AL, Miller GW (2020). The exposome and health: where chemistry meets biology. *Science* 367: 392-396.
22. Bjørklund G, Dadar M, Mutter J, Aaseth J (2017) The toxicology of mercury: current research and emerging trends. *Environmental Research* 159: 545-554.
23. Valko M, Morris H, Cronin MTD (2005) Metals, toxicity and oxidative stress. *Current Medicinal Chemistry* 12: 1161-208.
24. Flora SJS, Agrawal S (2017) Arsenic, cadmium, and lead. In: *Reproductive and Developmental Toxicology*. Academic Press 2: 537-566.
25. Miller GW, Jones DP (2014) The nature of nurture: refining the definition of the exposome. *Toxicological Sciences* 137: 1-2.
26. Genuis SJ (2006) The chemical erosion of human health: adverse environmental exposure and in-utero pollution-determinants of congenital disorders and chronic disease. *Journal of Perinatal Medicine* 34: 185-195.
27. Klinghardt D. The Five Levels of Healing. Klinghardt Institute <https://klinghardtinstitute.com/the-5-levels-of-healing/>.
28. Tracey KJ (2002) The inflammatory reflex. *Nature* 420: 853-859.
29. Thayer JF, Sternberg E (2006) Beyond heart rate variability: vagal regulation of allostatic systems. *Annals of the New York Academy of Sciences* 1088: 361-72.
30. Jain S, Mills PJ (2010) Biofield therapies: helpful or full of hype? A best evidence synthesis. *International Journal of Behavioral Medicine* 17:1-16.
31. Pakhomov AG, Akyl Y, Pakhomova ON, Stuck BE, Murphy MR (1998) Current state and implications of research on biological effects of millimeter waves. *Bioelectromagnetics* 19: 393-413.
32. Belyaev I (2005) Non-thermal biological effects of microwaves. *Microwave Review* <https://www.mtt-serbia.org.rs/files/MWR/MWR2005nov/Vol11No2-03-IBelyaev.pdf>.
33. Mattsson MO, Simko M (2019) Emerging medical applications based on non-ionizing electromagnetic fields from 0 Hz to 10 THz. *Medical Devices: Evidence and Research* 12: 347-368.
34. Rubik B (2002) The biofield hypothesis: its biophysical basis and role in medicine. *Journal of Alternative and Complementary Medicine* 8: 703-717.
35. Oschman JL. *Energy Medicine: The Scientific Basis*. Churchill Livingstone <https://www.amazon.in/Energy-Medicine-Scientific-Basis-275p/dp/0443062617>.
36. Markov MS (2007) Expanding use of pulsed electromagnetic field therapies. *Electromagnetic Biology and Medicine* 26: 257-274.
37. Zimmerman JW, Pennison MJ, Brezovich I, Yang CT, Ramaker R, et al. (2012) Cancer cell proliferation is inhibited by specific modulation frequencies. *British Journal of Cancer* 106: 307-313.
38. Barbault A, Costa FP, Bottger B, Reginald FM, Bomholt F, et al. (2009) Amplitude-modulated electromagnetic fields for the treatment of cancer: discovery of tumor-specific frequencies and assessment of a novel therapeutic approach. *Journal of Experimental & Clinical Cancer Research* 28: 51.
39. Vadala M, Morales-Medina JC, Vallelunga A, Palmieri B, Laurino C, et al. (2016) Mechanisms and therapeutic effectiveness of pulsed electromagnetic field therapy in oncology. *Cancer Medicine* 5: 3128-3139.
40. Diler AS (2026) EHF-Imprinted Autologous Blood-Fraction Blank Granules and Biological-Parameter Improvement in Cancer-Remission Patients and Healthy Adults: A 12-Week Prospective Controlled Exploratory Study. *Journal of Traditional Medicine and Chinese Medicine* 4(3):1-9. doi:10.47363/JTMCM/2026(4)131.
41. World Health Organization (2019) WHO global report on traditional and complementary medicine. World Health Organization <https://www.who.int/publications/i/item/978924151536>.
42. Kaptchuk TJ (2000) *The Web That Has No Weaver: Understanding Chinese Medicine*. McGraw-Hill https://books.google.co.in/books/about/The_Web_That_Has_No_Weaver.html?id=6BiGI562OgEC&redir_esc=y.
43. Maciocia G (1989) *The Foundations of Chinese Medicine*. Churchill Livingstone <https://archive.org/details/foundationsofchi0000maci>.
44. Bower JE, Lacchetti C, Alici Y, Debra LB, Deborah B, et al. (2024) Management of fatigue in adult survivors of cancer: ASCO-Society for Integrative Oncology guideline update. *Journal of Clinical Oncology* 42: 2456-2487.
45. Mao JJ, Ismaila N, Bao T, Debra B, Eran BA, et al. (2022) Integrative medicine for pain management in oncology: Society for Integrative Oncology-ASCO guideline. *Journal of Clinical Oncology* 40: 3998-4024.
46. Carlson LE, Ismaila N, Addington EL, Gary NA, Chloe At, et al. (2023) Integrative oncology care of symptoms of anxiety and depression in adults with cancer: Society for Integrative Oncology-ASCO guideline. *Journal of Clinical Oncology* 41: 4562-4591.
47. Greenlee H, DuPont-Reyes MJ, Balneaves LG, Linda EC, Misha RC, et al. (2017) Clinical practice guidelines on the evidence-based use of integrative therapies during and after breast cancer treatment. *CA: A Cancer Journal for Clinicians* 67: 194-232.
48. Diler AS, et al. (2026) Host-Directed Microbiome Restoration in Cancer Patients Following an Individualized Metabolic, Autonomic-Balancing, and Detoxification Protocol: A Retrospective Observational Study. *Journal of Traditional Medicine and Chinese Medicine*. In press.
49. Ross CA (2015) The trophoblast model of cancer. *Nutrition and Cancer* 67: 61-67.
50. Nobel Prize (2026) Nomination for Nobel Prize in Physiology or Medicine, 1906, No. 64-0: John Beard. Nobel Prize Nomination Archive. <https://www.nobelprize.org/nomination/archive/show.php?id=12012>.
51. Gonzalez NJ. *Conquering Cancer: Volume One - 50 Pancreatic and Breast Cancer Patients on the Gonzalez Nutritional Protocol*. New Spring Press; 2016.
52. Gonzalez NJ. *Conquering Cancer: Volume Two - 62 Patients on the Gonzalez Protocol*. New Spring Press; 2017.
53. Isaacs LL (2019) An enzyme-based nutritional protocol in metastatic cancer: case reports of a patient with colon cancer and a patient with lung cancer. *Altern Ther Health Med* 25: 16-19.

54. Isaacs LL (2022) Pancreatic proteolytic enzymes and cancer: new support for an old theory. *Integr Cancer Ther* 21: 15347354221096077.
55. Novak JF, Trnka F (2005) Proenzyme therapy of cancer. *Anticancer Res* 25: 1157-1177.
56. Peran M, Lopez-Ruiz E, Garcia MA, Shorena NH, Ralf B, et al. (2017) A formulation of pancreatic pro-enzymes provides potent anti-tumour efficacy: a pilot study focused on pancreatic and ovarian cancer. *Sci Rep* 7: 13998.
57. Kaiserova P, Kalferstova L, Marsikova H, Bartoňová I, Konik P, et al. (2014) Proenzyme therapy of sarcoma S-180 and melanoma B16-F10. *J Appl Biomed* 12: 39-47.
58. Hernandez-Camarero P, Lopez-Ruiz E, Grinan-Lison C, María ÁG, Carlos CW, et al. (2019) Pancreatic (pro)enzymes treatment suppresses BXPC-3 pancreatic cancer stem cell subpopulation and impairs tumour engrafting. *Sci Rep* 9: 11359.
59. Gonzalez NJ, Isaacs LL (1999) Evaluation of pancreatic proteolytic enzyme treatment of adenocarcinoma of the pancreas, with nutrition and detoxification support. *Nutr Cancer* 33(2):117–124. doi:10.1207/S15327914NC330201. PMID:10368805.
60. Chabot JA, Tsai WY, Fine RL, et al. (2010) Pancreatic proteolytic enzyme therapy compared with gemcitabine-based chemotherapy for the treatment of pancreatic cancer. *J Clin Oncol* 28(12):2058–2063. doi:10.1200/JCO.2009.22.8429. PMID:19687327; PMCID: PMC2860407.
61. Gonzalez NJ (2012) *What Went Wrong: The Truth Behind the Clinical Trial of the Enzyme Treatment of Cancer*. New York, NY: New Spring Press <https://booksrun.com/9780982196533-what-went-wrong-the-truth-behind-the-clinical-trial-of-the-enzyme-treatment-of-cancer>.
62. Ross CA (2015) Methodological problems in the Chabot trial of pancreatic enzymes for pancreatic cancer. *Int J Cancer Prev Res* 1: 1-4.
63. Ross CA (2018) Future research directions for the trophoblast model of cancer. *Nutr Cancer* 70(5):755–760. doi:10.1080/01635581.2018.1470652. PMID:29746191.
64. Golden J, Kenyon-Pesce L, Robison J, Grady J, Guerrero MP (2023) Disclosure of complementary and alternative medicine use among older adults: a cross-sectional study. *Gerontology & Geriatric Medicine* 9: 23337214231179839.
65. Ventola CL (2010) Current issues regarding complementary and alternative medicine (CAM) in the United States, part 1: the widespread use of CAM and the need for better-informed health care professionals to provide patient counseling. *P&T* 35: 461-468.
66. Centers for Disease Control and Prevention. Health and economic costs of chronic disease. CDC <https://www.cdc.gov/chronic-disease/data-research/facts-stats/index.html>.
67. Sarnat RL, Winterstein J, Cambron JA (2007) Clinical utilization and cost outcomes from an integrative medicine independent physician association: an additional 3-year update. *J Manipulative Physiol Ther* 30(4):263-269. doi:10.1016/j.jmpt.2007.03.004. PMID:17509435.
68. Herman PM, Poindexter BL, Witt CM, Eisenberg DM (2012) Are complementary therapies and integrative care cost-effective? A systematic review of economic evaluations. *BMJ Open* 2: e001046.
69. Tufts Food is Medicine Institute (2024) Produce prescriptions for diabetes: projected health and cost outcomes. Tufts University <https://now.tufts.edu/2023/07/07/produce-prescription-programs-patients-diabetes-could-save-billions-healthcare-costs>.
70. National Center for Complementary and Integrative Health (2023) Complementary and Alternative Medicine Funding by NIH Institute/Center. National Institutes of Health <https://www.nccih.nih.gov/>.
71. National Center for Complementary and Integrative Health, National Institutes of Health (2002) Funding research on complementary and alternative medical approaches. *Science*. As reported at [science.org](https://www.science.org/content/article/funding-research-complementary-and-alternative-medical-approaches-nih). <https://www.science.org/content/article/funding-research-complementary-and-alternative-medical-approaches-nih>.
72. Fuller D, Mitchell P (2025) Cuts to science research funding cut American lives short: federal support is essential for medical breakthroughs. *The Conversation*. <https://theconversation.com/cuts-to-science-research-funding-cut-american-lives-short-federal-support-is-essential-for-medical-breakthroughs-252150>.
73. Kemppainen LM, Kemppainen TT (2025) Changes in complementary and alternative medicine use from 2014 to 2023: findings from a cross-national population-based survey in Europe. *J Public Health* doi:10.1007/s10389-025-02494-1.
74. National Cancer Institute (2024) Complementary and Alternative Medicine for Health Professionals. NCI, National Institutes of Health. <https://www.cancer.gov/about-cancer/treatment/cam>
75. Rakel D (2022) *Integrative Medicine*. Elsevier. <https://shop.elsevier.com/books/integrative-medicine/rakel/978-0-323-77727-8>.
76. Weil A (1995) *Spontaneous Healing*. Knopf. <https://www.amazon.in/Spontaneous-Healing-Discover-Enhance-Maintain/dp/0679436073>.