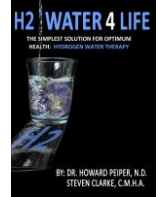


*“Enjoy science made simple.”*

An **Abbreviated Scientific Essay** written 12.23.2025 by: **Steven Clarke**, 2025 Certified **H2** Advisor, 2018 C.M.H.A., Quantum Medicine Level One Graduate, Complementary & Alternative Medicine (CAM) Liaison, Biology / Chemistry / Biochemistry Student, Lab Technician, Human-Case Studies Conductor, Nutritionist, Mineral & Electrolyte Science Specialist, Advisor, Consultant & Coach to Celebrities, Pro Athletes, VIPs & Global Companies

With **3,000+ scientific studies**, H2 water has the attention of millions worldwide because it possesses anti-cancer properties. It is vital for more of us to learn about H2 because approximately 1 in 2 (**50%**) men and 1 in 3 (**33%**) women in the United States will develop cancer in their lifetime (American Cancer Society). Cancer may be the most **frightening** disease **diagnosis** for someone to ever receive. **Why? First** and foremost, it is due to cancer’s ability to attack virtually every corner of a human or animal body. It can inflict an extreme **pain** and **suffering** on its victims which only gets worse before it finally ends. \*\*



Here are **13 main cancer** categories: blood, brain, breast, gastrointestinal, genitourinary, gynecologic, head/neck, leukemia, lung, lymphoma, sarcoma, skin/melanoma and thyroid. Added to these are childhood and rare cancers. Some people react with fear, shock, anger, anxiety, worry, sadness or grief.



**Second**, improved science-based research spans the last 300+ years. Cancer could be the number one most researched disease topic of this era. Yet a 2018 nih.gov article reported that **global** cancer research from 2012-17 was only in the thousands ... indicating a **decline**.

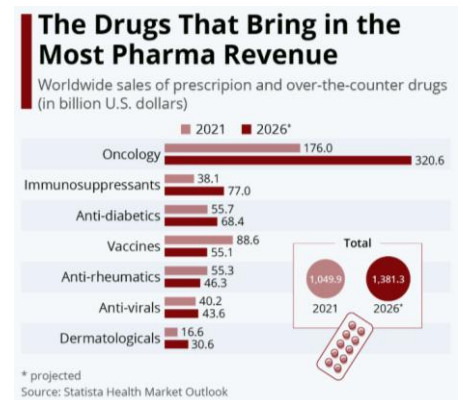
To give us a historical context, we need to go back thousands of years. Earliest known descriptions of cancer appear in several papyri from ancient Egypt. Fast forward to the 1800s. Specialists using microscopes proposed a theory that “cancer poison” slowly **spreads** from a primary tumor through lymph nodes to other sites. This view was formulated by English surgeon Campbell De Morgan from 1871 to 1874. It seems that throughout its history, the prevalent understanding of cancer kept evolving and changing. Now let us jump to today.

The **third** reason why a cancer diagnosis feels like a kick to the gut is limitations of current conventional treatment options. Modern medicine **cannot guarantee** its complete removal from all body areas. Many cancers have a **recurrence rate**. Yet we should recognize the dedicated men and women who try their best to help patients. They possess a vast knowledge of biology. We must applaud their heroic efforts. Without them, it could be hopeless. Nonetheless, today’s three most common treatment tools are both **invasive** and a bit **barbaric**, which are: (1) surgery, (2) chemotherapy and (3) radiation. The after effects of these often render the cure to be worse than the disease. Thankfully, less harmful methods with fewer side effects are now available such as hormone therapy, immunotherapy and stem cell transplant. A specific treatment plan can be tailored to each individual and their unique cancer.

A **fourth** reason is the **shortage** of cancer professionals. There are only about 27,000 U.S. oncologists. Healio.com reported on 2/11/25 that the **burnout** rates among them increased from 45% in 2013 to **59%** in 2023. Such emotional depletion coupled with fewer medical students entering this complex field continues to produce a shortage of primary specialists.



**Fifth**, it is an extremely competitive **multi-billion dollar industry** dominated by pharmaceutical giants. Sometimes a patient can feel like they are being **shuffled** between combative companies and competing cancer camps. People can experience a **revolving door** for years that is mentally, emotionally and physically exhausting. Please notice this five-year chart from Statista. Oncology drugs alone are projected to reach **\$320.6 billion** by 2026. All others are only 24% of to as little as 9.5% of cancer meds. A rule of thumb in business due diligence is to follow the money. It is clear to see that profits drive much of the time and energy invested into cancer.



### Do You Want to Understand the Basics of Cancer Genesis, Metastasis and Remission?

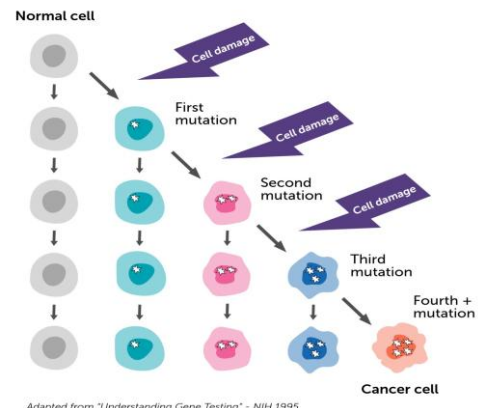


There are some who just want their doctors to tell them what to do. That is a personal decision and should be respected. However, there is a **growing trend** of more patients that want to explore all options including healthier holistic alternative therapies. This can involve employing a **complementary** and **alternative medicine** (CAM) liaison to help combine these in an effort to treat the whole person. Early data indicates higher long-term success rates when this approach is wisely implemented.

Before we share information about many alternatives that are available, I will try to explain three basic causes of cancer. But remember that these are not all the factors.

**Basic #1.** Every cancer is caused by a **different set** of **mutations**. As a cancerous tumor grows, more and more mutations accumulate with a momentum and risk of metastasizing. This also means that every tumor has an individual set of mutations. A **drug** that works for one cancer patient will frequently have **no effect** on most other patients due to their unique biologies and tumors. In a sense, using a majority of common treatments is like shooting at an extremely fast moving and changing target.

In 2018, the Mayo Clinic published, *“Cancer is caused by changes (mutations) to DNA within cells. DNA inside a cell is packaged into a large number of individual genes – each contains instructions telling the cell what functions to perform, as well as how to grow and divide. Errors in the instructions can cause the cell to stop its normal function and may allow a cell to become cancerous.”*



**Basic #2:** What is one **cause** of DNA mutations leading to “errors in the instructions” which allows cells to become cancerous? MIT researchers in 2019 published in *Cancer Research* journal, *“Acidification of the micro-environment plays established roles in tumor progression and provides a hostile milieu that advantages tumor cell survival and growth compared to non-cancerous cells.”* They further added, *“Tumor acidosis gives rise to the expression of molecules involved in cell invasion and migration.”*

Studies in **disrupted body pH** and electrolyte disparity suggest they can lead to cellular mutagenicity. Notice a 2020 scientific review, **The Interplay of Dysregulated pH and Electrolyte Imbalance in Cancer**. It was compiled by 16 academics on three continents from the USA, UAE, UK, Sudan, Saudi Arabia, Italy and Spain with 220 referenced articles/studies. In part, they stated: *“Dysregulated pH dynamics influence cancer cell biology, from cell transformation and tumorigenesis to proliferation, local growth, invasion, and metastasis ... Furthermore, cancer cells have very **dysregulated electrolyte balances** ... many effects on biologic processes of a cell are generated as a result of pH-sensitive functions ...”*

In the conclusion of this 2020 review, notice how pH impacts cellular functions: *“Therefore, to **target the intra-cellular alkaline pHi** of cancer cells as **adjuvant therapy** with several other chemotherapeutic drugs holds promise as a practical approach. Importantly, cancer also has another crucial dimension in that it can be seen as a disease of unusual electrolyte levels. For instance, increasing the sodium level supports tumorigenesis, while a higher level of potassium interrupts it.”* Thus, the overall body **pH**, especially when it remains **acid-dominant**, greatly **influences body homeostasis**.

Accordingly, an acidic micro-environment can lead to tumor progression, growth and metastasis. Over-production of lactate by glycolysis can lead to lactic acidosis – which reduces our immune system’s T



and NK cells’ ability to kill tumor cells. Hence, an **acidic microenvironment** and **high glucose uptake** has been shown to be associated with increased tumor cell mutagenesis, sustained proliferation and drug resistance, ... leading to more aggressive behavior. When cancer cadavers are pH tested in a controlled lab, their **tumor tissue** itself tends to be **more acidic** than surrounding healthy tissue.

Some scientists have long known that cancer tumors have **pockets of high acidity** that are found deep inside them where little oxygen is available. Researchers have recently discovered that **tumor surfaces** are also **highly acidic** and this acidity aids tumors to be more invasive and metastatic. \*

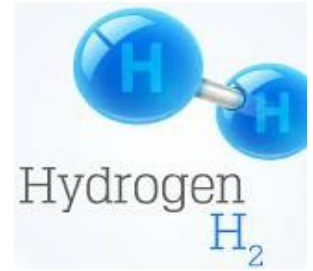
\* For more details, please read my 2nd edition **H2 Water 4 Life** chapter: *“Can an Acidic Environment Lead to Cancer?”*

**Basic #3:** Are **genetics** a major causality factor? No. They play a relatively **small role** in the overall development of cancer with only about 5 to 10 percent of cancers being hereditary. This means that 90 to 95 percent of cancers are caused by factors such as environmental exposures, lifestyle choices that include poor long-term dietary/hydration habits and the natural aging process.

### ***What are Some Best Complementary & Alternative Medicine (CAM) Choices Available Today?***

There are many. Some are **legitimate** and **effective**. Others are **not**. For example, there are “me-too” companies with no 3rd-party verifications and take-out-of-context quotes from a few studies. They appear to have profit-making as their primary goal. At best, their products may produce a placebo effect. To keep my answer simple, let us look at, perhaps, a top four that have science, research and ample testimonials to support their efficacy. Regarding individual experiences, it is often observed that a patient and their loved ones can verify that the **only changes** made were one or more of the below.

In the **FIRST** position is **molecular hydrogen (H<sub>2</sub>) medical gas**. It is the lightest and smallest molecule of neutral gas on Earth and can quickly penetrate the blood-brain barrier (BBB). As early as 2004, focused research revealed its anti-cancer properties in animal models. Chinese-based Lee and colleagues published **Anticancer Effect of Alkaline Reduced Water** that said: *“alkaline reduced water [ARW] with high pH and low ORP ... showed significant anticancer effect ... showed **tumor growth delay** ... [and] also showed the **inhibition of metastasis**.”* Since then, a multitude of scientific studies have been conducted with most peer-reviewed. From 2007 onward, dozens of these discovered even more anticancer benefits.



In 2021, a review of 88 studies spanning 46 years of research concluded: *“**H<sub>2</sub> shows excellent anti-tumor efficacy** in cellular models, animal models, and **human clinical trials** ... [this could] carve out a **new path** in the field of **cancer treatment**.”* In 2024 at the Molecular Hydrogen Institute/H<sub>2</sub> Summit, international experts from most areas of biology and biochemistry declared that H<sub>2</sub> has *“therapeutic potential in **200+** animal and human disease models ... and in essentially **every organ of the human body**.”*

Here are **15 samples** of these in relation to specific cancer types and body organs: bladder, bones, brain, ear, eye, heart, intestine, kidney, liver, lung, ovary, pancreas, spine, stomach and testicle.

There is one North American company with a combination 0.01 micron filtration system and certified medical device that infuses fresh therapeutic levels of H<sub>2</sub> via electrolysis into water. They have **500+ testimonials**. Their units connect to the cold water valve of almost any home or office sink.

In **SECOND** position is increasing intake of more **alkaline** foods and beverages. As we live longer, there is danger of an **acidic over-load** if our diet becomes acid dominant. An improved pH-balanced diet and healthy hydration habits are two major components of slow-aging. Premature aging can be a result of **dehydration** and internal **progressive acid saturation**. The highly respected Dr. Bernard Jensen, D.C., Ph.D., N.D. suggested a diet of **80% alkaline** foods and 20% acid foods to achieve his “green inside” goal. Even a ratio of **70-60% alkaline** and 30-40% acidic foods may help us reduce the risk of getting cancer.

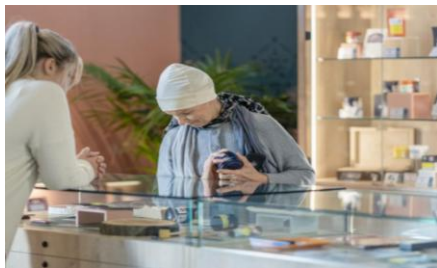


In **THIRD** position are specific **herbs, spices** and **plants**. (1) **Turmeric** (*Curcuma longa*) is a functional food (FF) plant that possesses anticancer properties. Like many spices, it has been used for thousands of years because curcumin possesses a wide spectrum of innate self-healing compounds. (2) **Ginger** (*Zingiber officinale*) is next on our list. At least 115 phytonutrients in fresh and dried ginger varieties have been identified. 222 clinical studies, scientific papers and references demonstrate that it possesses anti-cancer, anti-tumor and other abilities. Raw, fresh ginger is the most effective form. (3) **Oregano** is a mint family herb with studies that anchor its medicinal qualities and anticancer benefits. Upon request, we can provide more herbs, spices and plants as well as research sources.

A **FOURTH** alternative may surprise many readers. What is this mystery medicine? It comes from a plant used for thousands of years. Yes, we are referring to **medical-quality cannabis**. Whatever your present view may be, ... please consider this condensed data and research **without** a preconceived bias.

**Ancient cultures** like Assyria, Egypt, China, India, Greece, Rome, medieval North Africa, Spain and Portugal used cannabis for medicinal purposes. **195 years** (1829-2024) of nearly **42,300** cannabis-related **studies** confirm its multitude of benefits. It was used in the 1970s and 1980s by cancer and AIDS patients. In 2022, the U.S. federal government granted funding opportunities for cancer research.

In 2025, the **largest ever study** investigating medical cannabis as a treatment for cancer was published in **Frontiers in Oncology**. It found overwhelming scientific support for cannabis' potential to treat cancer symptoms and potentially fight the disease itself. Ryan Castle is research director at the Whole Health Oncology Institute and was lead author of this study. He wrote, "[We analyzed] nearly every major medical cannabis study to find the actual points of scientific agreement." They looked at "more than **10,000 studies** on cannabis and cancer."



The study overwhelmingly supported cannabis as a treatment with an amazing **75-25 pro-consensus**. In conclusion, Ryan stated, "We are not arguing that the standards for adopting new cancer treatments should be lower. We are arguing that **medical cannabis meets or exceeds** those **standards** often to a greater extent than current pharmaceutical treatments." Future research will likely establish guidelines for dosage levels in relation to each individual's

unique patient profile and diagnosis. A prescription could eventually be written for patients under a doctor's supervision to buy their cannabis medicine at a qualified medically-approved dispensary.

Let us now review some testimonials and clinical studies to further highlight the hope that cancer victims can try to hold on to. Please remember that testimonials do not guarantee future results.

### ➤ TESTIMONIALS

**RARE STRAIN OVARIAN CANCER – Peg & Barry Barassi (El Dorado, CA)**. "My wife went through ovarian cancer surgery and full chemo last year. [She had] a rare strain that is extremely resistant to chemo. They told us if chemo [did not work], she had **10 months** to live. We got our [water ionizer] 6 weeks later and just 3 weeks before chemo was to restart. The oncologist kept looking back and forth at the 2 reports and **was speechless**; he finally said: '**This is unprecedented**.' I [assumed] the tumor was [still] growing during those 6 weeks and yet the Cat Scan showed the tumor was the **same size**, the spot on her lung was **gone** and the 4 spots on her liver had **not grown**. Since chemo had not started, I credit the 3 weeks of alkaline water; the [doctor] was flabbergasted. We are convinced that [it was] our [ionizer] machine that made [H2] alkaline water that saved her life. After continually drinking level pH 9.2, Peg's **tumor is down** from 6+cm to 1.4cm [.55 inch] which is probably just **scar tissue**. She is now off chemo and doing great." (Tyent website)

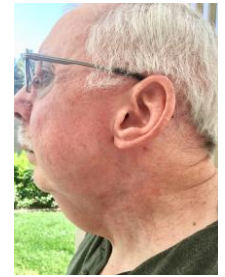




**STAGE IV THROAT CANCER – Andrew.** “I had Stage IV throat cancer with **3 months** to live. I started heavy duty chemo and was sick from the onset. I developed severe mouth sores; my hair and beard fell out. I was terribly fatigued, food had no taste and I lost over 60 pounds. I started drinking **[H2] alkaline antioxidant water**. After 48 hours, my mouth sores were gone. I could [now] eat and drink without using my feeding tube. Doctors were in awe of my progress and they stopped my cancer treatment. [Later], I had 3 biopsies to look for abnormalities. My lab report was astonishing. **Biopsies**

**showed no cancer** and tumor necrosis was 100%!” (Health News Volume 21, #3)

**SQUAMOUS CELL CARCINOMA – Robert R.** “I was diagnosed at **70-years-old** with squamous cell carcinoma. Sadly, three surgeries, radiation and meds failed – [and] a **‘ping-pong ball’** size tumor pushed out my neck. A neighbor told us about H2 hydrogen water. [We immediately attended Steven’s] H2 therapy class and our ionizer system [was installed the next day]. After 3 months of daily drinking **1 [gallon] to 1-1/2 gallons** of H2 alkaline water [+ H2 tablets], my tumor disappeared. A PET scan confirmed my cancer [was] gone.” (H2 WATER 4 LIFE 2018 beginner book – Chapter 22)



Robert – Before

Robert 3-months After

## ➤ SCIENTIFIC or CLINICAL STUDIES and BOOK

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JUN, Y., TERUYA, K., KATAKURA, Y. OYSUBO, K. (2004) **Suppression of invasion of Cancer Cells by electrolyzed-reduced [H2] water.** *In Vitro Cellular & Developmental Biology-Animal*. 40, 79A

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SAI LI, et al; (2019) Hydrogen Gas in Cancer Treatment *Front Oncol.* Aug 6; 696. PMID: PMC6691140/PMID:31448225

LIU, MY., XIE, F., ZHANG, Y. et al. (2019) Molecular hydrogen suppresses glioblastoma [malignant brain tumor] growth via inducing the glioma stem-like cell differentiation. *Stem Cell Res Ther.* 10, 145. <https://doi.org/10.1186/s13287-019-1241-x>

SHIN-ICHI HIRANO, et al; (2021) Dept of R & D, MiZ Company, Japan, Dept of Molecular & Cell Biology, USA "Molecular Hydrogen as a Novel Antitumor Agent ..." *Int J Mol Sci.* 2021 Aug 22(16): 8724.



LUC ROCHELLE, et al; (2021) Univ. Bourgogne-Franche Comte, Dijon, France. Antitumor Activity of Protons and Molecular Hydrogen: Underlying Mechanisms *Cancers (Basel).* 2021 Feb 20;13(4):893. PMID: 33672714

MUHAMMAD NOORAIMAN ZUFAYRI MOHD NOOR, et al; (2023) A Systematic Review of Molecular Hydrogen Therapy in Cancer Management *Asian Pac J Cancer Prev.* Jan 1;24(1):37-47. doi: 10.31557/APJCP.2023.24.1.37. "H2 plays a promising therapeutic role as an independent therapy as well as an adjuvant in combination ... resulting in an overall improvement in survivability, quality of life, blood parameters, and tumor reduction ... H2 is worth considering for use as a complement to current cancer therapy."

ZHOU, W., ZHANG, J., CHEN, W. et al; (2024) Prospects of molecular hydrogen in cancer prevention and treatment. *J Cancer Res Clin Oncol.* 150, 170 (2024). <https://doi.org/10.1007/s00432-024-05685-7>.

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**IMPORTANT NOTE:** Most seniors love children and teenagers. So, they are very careful to keep all their cannabis plants and inventory secure to prevent minors from accidentally gaining any access.



**FDA DISCLAIMER:** Statements made have not been evaluated by the U.S. Food and Drug Administration. No information or therapy offered is approved to diagnose, treat, cure or prevent any disease. Content presented is compiled to provide research that has potential complementary and alternative health benefits for the general public. Consult a licensed physician or board-certified healthcare practitioner before trying any of our tips, ideas, comments, opinions, suggestions, 3rd-party products or therapies. Results usually vary depending on the individual.

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**\*\* Important Final Note:** Death with Dignity is available in some U.S. states. Please visit: [deathwithdignity.org](https://deathwithdignity.org) for more details. **Death with Dignity laws**, also known as physician-assisted dying, allow terminally ill but mentally competent adults to request and self-administer prescribed medication to end their lives. These laws emphasize patient autonomy and provide a legal framework for those seeking a peaceful and humane death. Since 1994, these laws allow the terminally ill to legally obtain medical-aid-in-dying (MAID) medication. On the day a patient ingests the MAID med(s), they are often surrounded by loved ones at a location and time of their choosing. While a patient must take the medication themselves without any assistance, a medical professional or death doula can also be present to help the process run smoothly. We take a neutral position regarding this difficult decision out of respect for each patient's and their family's right to choose.