Effective, non-toxic anti-cancer treatments:

In January 2025, famous actor/director Mel Gibson appeared on Joe Rogan's podcast. Mel said that three of his friends had stage 4 cancer but that all of them are cancer-free today. He said that each of them took **ivermectin**, **fenbendazole**, **hydroxychloroquine** and **methylene blue**. See the following video link on Youtube: https://www.youtube.com/watch?v=PK4NoBqHFQ4

Online, there are many similar reports from people who are experiencing complete tumor disappearance after taking the substances listed below. I include peer-reviewed scientific/medical data confirming the anti-tumor effects of the treatments listed below.

1. Fenbendazole

Fenbendazole is an inexpensive, non-toxic, anti-cancer treatment. Cancer researchers discovered that it inhibits cancer growth and leads to cancer cells dying through 3-4 different mechanisms. For example, it is believed to activate a p53 anti-cancer gene, disrupts the microtubules that cancer cells use for replication, inhibits glucose uptake by cancer cells, creates oxidative stress in cancer cells, prevents tumor growth, etc. For many people, the results have been stunning. Even in cases of terminal diagnosis, stage 4 cancer, metastasis throughout the body, people are seeing tumor shrinkage, then disappearance of all tumors, leading to 100% NED (no evidence of disease), continuing for years afterwards.

Scientific journal *Nature* states that fenbendazole is a "safe and inexpensive drug" that "possesses a potent antitumor effect". See:

Fenbendazole acts as a moderate microtubule destabilizing agent and causes cancer cell death by modulating multiple cellular pathways
https://www.nature.com/articles/s41598-018-30158-6

> *"Our results indicate that FZ (fenbendazole) exerts its antitumor effect through the disruption of microtubule dynamics, p53 activation and the modulation of genes involved in multiple cellular pathways. FZ treatment also resulted in reduced glucose uptake in cancer cells due to down regulation of GLUT transporters and key glycolytic enzymes."*

If you scroll to the bottom of the article, you can read a comment by cancer researcher Tapas Mukhopadhyay who is one of the authors of the Nature article,

and one of the authors of the PubMed article published on the National Institute of Health's website:

> https://pubmed.ncbi.nlm.nih.gov/30093705/

Tapas Mukhopadhyay worked at the MD Anderson Cancer Center and in response to a post by Joe Tippens, Tapas said:

> *"Our earlier work in 2002 on Mebendazole (an anthelmintic drug for pinworm infection approved for use in humans) revealed its potential application as an anti-cancer agent while I was working at the department of Thoracic Surgery in MD Anderson Cancer Center. In our present report and our previous work,* ***we provided sufficient pre-clinical data on the anti-cancer effect of fenbendazole*** *(FZ) using mouse model. It is very encouraging for us to know its significant effect on a patient diagnosed with metastatic lung cancer. [...]* ***We strongly believe that anthelmintic drugs can effectively inhibit the tumor cell growth which has a long safety track record.*** *In our preclinical studies we have shown that it is* ***as effective as cisplatin and related chemotherapeutic drugs*** *with* ***least toxicity to the host****. [...]* ***Thank you once again for your efforts in bringing awareness about the anti-cancer effect of FZ*** *through your blog."*

Next is a peer-reviewed, clinical observation of patients having 100% cancer remission after receiving fenbendazole therapy. Published February 2021:

Fenbendazole Enhancing Anti-Tumor Effect: A Case Series
https://www.scitechnol.com/peer-review/fenbendazole-enhancing-antitumor-effect-a-case-series-2Kms.php?article_id=14307

> *"In summary, we have three patients with different primary genitourinary tumors* ***who demonstrated complete response after receiving FBZ therapy.****"*

> *"Fenbendazole (FBZ) is ..* ***cheap and readily available****. ... FBZ belongs to the benzimidazole drug class which* ***destabilize microtubules*** *through a mechanism similar to the anti-oncogenic vinca alkaloids. Although there are no reported cases in the literature, there have been several anecdotal stories published on website blogs with* ***individuals praising its ability to treat a wide variety of cancers.****"*

> *"****No side effects from FBZ were reported****."*

> *"Conclusion:* ***FBZ appears to be a potentially safe and effective*** *antineoplastic agent that can be* ***repurposed for human use*** ***in treating genitourinary malignancies.****"*

> *"**Given evidence of high tolerability and applicability to a wide range of malignancies**, this warrants further investigation for FBZ and other benzimidazoles as **safe chemotherapeutic options.**"*

Fenbendazole acts as a moderate microtubule destabilizing agent and causes cancer cell death by modulating multiple cellular pathways
https://pubmed.ncbi.nlm.nih.gov/30093705/

Unexpected Antitumorigenic Effect of Fenbendazole when Combined with Supplementary Vitamins
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2687140/

Impairment of the Ubiquitin-Proteasome Pathway by Methyl N-(6-Phenylsulfanyl-1H-benzimidazol-2-yl)carbamate Leads to a Potent Cytotoxic Effect in Tumor Cells
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3436308/

> *"Fenbendazole is a member of the benzimidazol group, which are shown to be **safe for use in humans**. Other benzimidazol derivatives, such as mebendazole and albendazole are widely used in humans safely. "..benzimidazoles have a good track record as anthelmintic agents and have a **wide margin of safety in humans**."*

The next study below supports the use of benzimidazoles as potent anticancer therapy for humans: https://apps.dtic.mil/dtic/tr/fulltext/u2/a545657.pdf

> *"We identified benzimidazoles, a class of anti-parasitic drug, in a drug screening process for preferential anti-tumor activity on metastatic prostate cancer cells. We have data indicate that benzimidazoles have **potent anti-tumor activities**, mediated through cell cycle arrest and induction of apoptosis."*

One doctor from the world-famous MD Anderson Cancer Center pointed out that it would cost millions of dollars for a company to go through the FDA process to reclassify fenbendazole for human use. There is no financial incentive to do this. It's long out of patent, and as soon as FDA approval was granted (after a slow, expensive, lengthy process), many generic competitors could immediately compete with them, having shouldered none of the cost of seeking FDA approval.

Fenbendazole's anti-cancer properties were initially discovered when a researcher for the Merck pharmaceutical company was experimenting on mice, injecting them with cancer cells, resulting in tumor growth, then testing different therapies. She observed that with fenbendazole, they were seeing 100% disappearance of cancers

in each mouse. Around the same period of time, she developed a brain tumor. It was a terminal diagnosis, with no treatment options available. She figured, "What do I have to lose?" She started taking fenbendazole, her brain tumor shrank, then disappeared. She shared her findings.

This was discovered by a man named Joe Tippens, who had himself been diagnosed with stage 4 lung cancer that had metastasized throughout his body. He had 50+ tumors, was given a terminal diagnosis and was told by multiple doctors that he should go to hospice, that he had zero chance of survival. He was actively researching alternative treatments, and figured similarly to the Merck researcher, "What do I have to lose?" Doing nothing was guaranteed death. He took fenbendazole, all his tumors shrank, eventually disappeared and he was told by doctors that he has 100% NED (No Evidence of Disease). This happened years ago, he is still alive today. Below is an ABC News report about him (YouTube video title: ***Edmond man says cheap drug for dogs cured his cancer***):
https://youtu.be/HYILnjc_wuY

It can't be denied that Joe Tippens actually had stage 4 cancer. This is acknowledged and confirmed in the video above by Stephen Prescott, who was the president of the Oklahoma Medical Research Foundation.

After experiencing those results, Joe Tippens created a Facebook group that a lot of people are using who are interested in treating cancer. Many have reported 100% remission of cancer.

> www.facebook.com/groups/mycancerstoryrocks/ (password: Slice)

On that list, the only side effect I have seen listed is that a very small percentage of people experienced decreased liver function. For example, in people with existing kidney problems or liver disease. But their liver function recovered after they stopped taking fenbendazole. Others found that taking fenbendazole along with a liver/kidney supplement like milk thistle or TUDCA (which naturally occurs in the body), completely avoided any decreased liver function. Fenbendazole's effectiveness is enhanced by combining it with various vitamins as listed on that group.

Oral Fenbendazole for Cancer Therapy in Humans and Animals (Peer reviewed, published in medical journal *Anticancer Research*, Vol. 44, Issue 9, in September 2024): https://doi.org/10.21873/anticanres.17197

> *"Given the **low cost of fenbendazole**, its **high safety profile**, **accessibility**, and **unique anti-proliferative activities**, **fenbendazole would be the preferred benzimidazole compound to treat cancer**."*

*"This review focuses on the pharmacokinetics of orally administered fenbendazole and **its promising anticancer biological activities**, such as inhibiting glycolysis, down-regulating glucose uptake, inducing oxidative stress, and enhancing apoptosis in published experimental studies."*

*"The **anti-cancer activity of fenbendazole** has been studied across many cell lines, **demonstrating anti-tumor effects against multiple cancer types** (Table I). Additionally, fenbendazole has shown efficacy against 5-FU, paclitaxel, and docetaxel-resistant cancer cells."*

*"Studies attribute the anti-cancer mechanisms of fenbendazole to increasing p53 activation, inhibiting the GLUT1 transporter and hexokinase, and reducing glucose uptake in cancer cells. [...] ...**fenbendazole can serve as a viable treatment for drug-resistant cancer cells**."*

*"Fenbendazole exhibits several other mechanisms contributing to its anti-cancer effects, primarily by disrupting energy metabolism. [...] Thus, through targeting GLUT1, HKII, and glycolysis, **fenbendazole can lead to cancer cell starvation and reverse drug resistance, aiding cancer treatment**."*

*"Safety and Toxicity: In animals, fenbendazole demonstrated a **high safety margin** and **low toxicity**. A safety profile study of fenbendazole administered to cattle found that fenbendazole was well-tolerated, even when administered at six times the prescribed dose and three times the recommended duration. In rodents, its lethal dose (LD50) exceeded 10 g/kg, which is **1,000 times the therapeutic level**. Lifetime studies in rats indicated no maternal or reproductive toxicity and no carcinogenesis. [...] **Oxfendazole, a major metabolite of fenbendazole, is well tolerated in humans**. A randomized, double-blind, placebo-controlled, phase I study conducted in 70 healthy participants evaluated multiple ascending oral doses of oxfendazole, from 0.5 to 60 mg/kg. The dose study found acceptable safety and tolerability profiles, even after 5 repeated daily doses of up to 15 mg/kg. This clinical trial also characterized the disposition of fenbendazole, describing the drug as a one-compartment model with formation rate-limited elimination."*

*"**Fenbendazole's disruptive effects on energy metabolism** are fascinating areas of study that could lead to **significant advancements in cancer treatment**. Various studies in cell lines and animals have demonstrated the efficacy of fenbendazole in **inhibiting tumors** and **targeting drug-resistant cancer cells** through glycolysis inhibition. By increasing p53 expression and impacting multiple cellular pathways that act on GLUT and HKII, fenbendazole down-regulates glucose uptake, **causing cancer cell starvation** and **enhancing***

> ***apoptosis***. *Through this mechanism,* ***fenbendazole effectively eliminates cancer cells while exhibiting no or acceptable minimal toxicity to normal cells***."
>
> "***With its high safety profile, affordability, and minimal side effects, fenbendazole stands out as a potential option for cancer therapy***. *Moreover, fenbendazole is easy to acquire and can be administered orally, offering* ***a less invasive treatment*** *that can increase patient adherence. Furthermore, by inhibiting glycolysis in cancer cells and preventing lactate buildup, fenbendazole surpasses albendazole and mebendazole in treating drug-resistant cells, making it* ***the benzimidazole of choice for cancer therapy***."

Fenbendazole can be purchased from places like Walmart for around $9 for three 222mg treatments (search Walmart for: “Panacur C” and in the results, look for the yellow box with three packets). They also sell Panacur C in paste form in a tube on Amazon.com.

This treatment cures cancer in animals too:

> https://www.prairiedoghall.com/curing-my-dogs-cancer/
> https://www.prairiedoghall.com/update-to-curing-my-dogs-cancer/
> https://vitalityscience.com/could-fenbendazole-treat-cancer-in-dogs-and-cats/
> https://aetapet.com/treating-canine-parasites-fenbendazole-dog/
> https://www.dogcancerblog.com/articles/full-spectrum-cancer-care/supplements/panacur-cancer-dogs-dewormer-work-dogs-cancer/

The Joe Tippens protocol recommends a dosage of 222 mg of fenbendazole per day, taken for three consecutive days, followed by four days off, repeating this cycle weekly. (One packet of Panacur C, as listed above, contains 222 mg of fenbendazole). Some variations of the protocol suggest taking it daily without breaks or at higher doses (222 mg for low-grade cancer, 1,000 mg for high-grade cancer. Some state that 888 mg daily is a sweet spot), depending on the cancer type, stage, or individual response.

> https://i2b.us/fenbendazole-from-md-anderson-to-joe-tippens/

Conclusion: Since it has been widely reported to be extremely effective for many people, it is non-toxic, and peer-reviewed literature confirms its potent anti-cancer properties, what does a person have to lose in trying it? Many who would otherwise be dead right now are living cancer-free today because of this treatment. Why not take an evidence-based approach, try it out and look at the results?

2. Ivermectin

Ivermectin has been proven to have anti-cancer effects in numerous preclinical studies across various cancer types, including breast, colorectal, pancreatic, leukemia, melanoma, lung cancers, etc.

Ivermectin prevents cancer cell proliferation, metastasis and angiogenesis (formation of new blood vessels) by targetting multiple pathways (like WNT-TCF, Akt/mTOR, and PAK1). It promotes programmed cell death (apoptosis, autophagy, and pyroptosis), disrupts mitochondrial function, increases reactive oxygen species (ROS) and reduces mitochondrial membrance potential.

It can reverse multidrug resistance in cancer cells by reducing P-glycoprotein (p-gp) expression via the EGFR/ERK/Akt/NF-kB pathway, making other treatments much more effective.

Ivermectin reverses the drug resistance in cancer cells through EGFR/ERK/Akt/NF-κB pathway
https://doi.org/10.1186/s13046-019-1251-7

> *"Our results indicated that ivermectin at its very low dose, which did not induce obvious cytotoxicity,* ***drastically reversed the resistance of the tumor cells to the chemotherapeutic drugs*** *both in vitro and in vivo. [...] These findings demonstrated that* ***ivermectin significantly enhanced the anti-cancer efficacy of chemotherapeutic drugs*** *to tumor cells, especially in the drug-resistant cells. Thus, ivermectin, a* ***FDA-approved*** *antiparasitic drug, could potentially be* ***used in combination with chemotherapeutic agents to treat cancers and in particular, the drug-resistant cancers****."*

Peer-reviewed medical studies show that **ivermectin enhances the effectiveness of chemotherapy and immunotherapy.** For example, a 2022 study combined ivermectin with anti-PD1 antibodies to treat triple-negative breast cancer in mice, turning "cold" tumors (low immune cell infiltration) into "hot" tumors (high t-cell infiltration), improving outcomes.
(See: https://www.cityofhope.org/breakthroughs/drug-combo-shows-promise-against-triple-negative-breast-cancer)

A 2022 study found that ivermectin combined with gemcitabine suppressed pancreatic cancer growth more effectively than gemcitabine alone by causing G1 cell cycle arrest and mitochondrial dysfunction. (See: https://www.frontiersin.org/journals/pharmacology/articles/10.3389/fphar.2022.934746/full)

Peer-reviewed medical journal "*Drug Design, Development and Therapy, Volume 14*" (January 2020) published a medical review that cites many peer-reviewed studies showing **ivermectin has strong anti-cancer properties**, and that it fights cancer by multiple mechanisms. It is called: ***Progress in Understanding the Molecular Mechanisms Underlying the Antitumor Effects of Ivermectin***: https://doi.org/10.2147/dddt.s237393

> *"[...] ..ivermectin has also been used to control other human diseases and **has exerted a significant effect on human health and welfare**. [...] **Ivermectin causes cell death in cancer cell lines** by inducing PAK1-mediated cytostatic autophagy, caspase-dependent apoptosis and immunogenic cell death (ICD) through the modulation of some pathways, including the WNT-T cell factor (TCF), Hippo and Akt/mTOR pathways. **Ivermectin can affect the growth and proliferation of cancer cells and plays several different roles**, such as its functions as an RNA helicase, a small-molecule mimetic of the surface-induced dissociation (SID) peptide, an activator of chloride channel receptors, and an inducer of mitochondrial dysfunction and oxidative stress. In addition, **ivermectin induces the multidrug resistance protein** (MDR), **has potent anti-mitotic activity, targets angiogenesis and inhibits cancer stem-like cells** (CSCs). **Many studies have proven that ivermectin exerts antitumour effects**..."*
>
> *"Over the past few years, **increasing numbers of studies have indicated that ivermectin might have extensive uses as an anticancer agent for the treatment of different types of cancers**, such as glioblastoma, breast cancer, ovarian cancer, leukaemia and neurofibromatosis type 2 (NF2) tumours, and thus might have strong potential as an anti-carcinogen. [...] In this review, **a great quantity of data showing that ivermectin exerts antitumour effects against a wide range of cancers were collected**. Because **ivermectin has already been registered for human use by the Federal Drug Administration (FDA), it will not be long before it is adopted as an anticancer drug**."*
>
> *"To manage patients with cancer in a more effective way, **ivermectin can be adopted together with other medications**. The **combination of ivermectin with medications** that are currently being used might result in **more favourable prognoses for patients** with certain types of cancer. For example, when combined with daunorubicin/cytarabine, tamoxifen, paclitaxel and anti-BRAF V600 inhibitors, ivermectin exhibits a **more powerful anticancer effect** against leukaemia, TNBC, EOC and melanoma, respectively. **Oral ivermectin has been widely used at clinical doses** for the treatment of human parasitic infections **with no discernible side effects**."*

Its section titles (peppered with citations to peer-reviewed medical studies) are:

Ivermectin induces cell death in cancer cells
- Ivermectin induces PAK1-Mediated Cytostatic Autophagy
- Ivermectin Induces Caspase-Dependent Apoptosis
- Ivermectin Induces Immunogenic Cell Death (ICD)

Ivermectin Modulates Several Pathways
- Ivermectin Inhibits Proliferation by Inhibiting Yea-Associated Protein 1 (YAP1)
- Ivermectin Serves as a WNT-T Cell Factor (TCF) Pathway Response Blocker
- Ivermectin Increases TFE3 Activity
- Ivermectin Serves as an RNA Helicase Inhibitor
- Ivermectin Serves as a Small-Molecule Mimetic of the SID Peptide
- Ivermectin Inhibits Mitochondrial Respiration
- Ivermectin Activates Mammalian Chloride Ion Channels

Other Novel Molecular Mechanisms of Ivermectin
- Ivermectin Is an Angiogenesis Inhibitor
- Ivermectin Exerts Anti-Mitotic Activity
- Ivermectin Is a P-Glycoprotein (P-Gp) Inhibitor
- Ivermectin Is an Inhibitor of CSCs

Other articles:

The multitargeted drug ivermectin: from an antiparasitic agent to a repositioned cancer drug
https://pmc.ncbi.nlm.nih.gov/articles/PMC5835698/pdf/ajcr0008-0317.pdf

Ivermectin, a potential anticancer drug derived from an antiparasitic drug
https://pmc.ncbi.nlm.nih.gov/articles/PMC7505114/

Antitumor effects of ivermectin at clinically feasible concentrations support its clinical development as a repositioned cancer drug (peer reviewed, published May 2020 in medical journal *Cancer Chemotherapy and Pharmacology*)
https://doi.org/10.1007/s00280-020-04041-z

Ivermectin has New Application in Inhibiting Colorectal Cancer Cell Growth
https://doi.org/10.3389/fphar.2021.717529

Ivermectin as an inhibitor of cancer stem-like cells
https://doi.org/10.3892/mmr.2017.8231

Online, there are large numbers of anecdotal reports of people taking ivermectin along with other anti-cancer drugs like fenbendazole who are experiencing complete cancer remission. For example, many people are combining ivermectin with fenbendazole and compounds like Vitamin E (which reduces oxidative stress and protects cells from damage), curcumin (anti-inflammatory and anti-oxidant, slows cancer progression), Zinc, Vitamin D, Vitamin C, Methylene Blue and Hydroxychloroquine for a combined effect that is much more powerful against cancer than individual compounds alone.

See more links here:
https://internalhealingandwellnessmd.com/groundbreaking-study-on-ivermectin-and-fenbendazole-in-cancer-treatment/

Recommended doses:

Low-grade cancers: Dose of 0.5mg/kg, 3x per week.
Intermediate-grade cancers: Dose of 1mg/kg, 3x per week.
High-grade cancers: Dose from 1 mg/kg/day to 2 mg/kg/day.

(All these doses have been established as tolerable for humans.)

3. Metabolic Therapy

Renowned cancer expert Professor Thomas Seyfried explains that cancer is a mitochondrial metabolic disease, and explains the effective, non-toxic metabolic treatment that has resulted in people becoming 100% cancer free. Largely through diet (i.e., keto with intermittent fasting), by avoiding foods that feed cancer cells.

Synopsis of Professor Seyfried:

> *A normal cell becomes cancerous after it loses the ability to convert oxygen (from the blood) into energy. The cell then reverts to an alternate source of surviving by converting glucose into fuel through fermentation. However, at this point, the mitochondria that control cellular function have been damaged to where they cannot control cellular reproduction rates, and as a result, the cell multiplies rapidly, passing on the same damaged mitochondria to the cells it produces and the process replicates from there, forming a tumor. Metastasis happens when a T-cell tries to "eat" the defective "cancerous" cell, and unintentionally inherits the mitochondrial defect, which the T-cell then passes on to other cells elsewhere in the body.*

Cancer Breakthrough: How Metabolic Therapy is Changing Lives
https://www.youtube.com/watch?v=A5ONwV1FU_c

https://healinghumanity.movie/cancer/

Professor Seyfried:
-Website: https://www.tomseyfried.com
-Foundation for Metabolic Cancer Therapies:
https://foundationformetaboliccancertherapies.com/
-The press-pulse therapeutic strategy for cancer management:
https://nutritionandmetabolism.biomedcentral.com/articles/10.1186/s12986-017-0178-2
Ronnie https://ronniecampbellauthor.com/
Brad: https://cancerevolution.film/

YouTube videos:

60 Minutes: Killing Cancer with a Breakthrough Therapy
https://www.youtube.com/watch?v=FEA6BQARqE8

"Cancer is a metabolic disease" – Dr Thomas Seyfried reveals stunning non-toxic cancer therapies.
https://www.youtube.com/watch?v=2az_igDfXjQ

The Metabolic Treatment for Cancer with Dr. Thomas Seyfried
https://www.youtube.com/watch?v=a6bqSMOMQN0

#1 Cancer Expert: The WORST Food That Feeds Cancer Cells
https://www.youtube.com/watch?v=pwhRskOPwVk

Top Cancer Expert: This Is The WORST Food To Feed Cancer!
https://www.youtube.com/watch?v=1ebPZP9hBPA

Shocking Truth About Cancer: Fix Your Diet & Lifestyle To Starve It For Longevity | Thomas Seyfried
https://www.youtube.com/watch?v=MakS2iRkj1Q

4. Hydroxychloroquine

According to Dr. Paul Zhang (oncologist, Yale), "***Using hydroxychloroquine in treating cancer is one of the most significant discoveries in oncology***." "***The most significant advantage of using HCQ*** [hydroxychloroquine] ***in treating cancer is keeping chemotherapy from failing***."

https://i2b.us/repurposing-drugs-as-expanding-cancer-treatment-palette-hydroxychloroquine/

He points out that, "*Research showed hydroxychloroquine (HCQ) affects cancer cells by increasing tumor sensitivity. Cancer is typically resistant to existing therapies.* ***The discovery of HCQ in treating cancer could not have come at a better time***."

Hydroxychloroquine (HCQ), a drug commonly used for malaria and autoimmune diseases, has gained attention in cancer treatment due to its ability to block a process called autophagy, which cancer cells use to survive stress from treatments like chemotherapy and radiation (https://doi.org/10.3390/curroncol29030141). By stopping autophagy, **HCQ makes cancer cells more sensitive to these treatments, helping them die off more effectively** (https://doi.org/10.3332/ecancer.2017.781).

Lab studies have shown that adding HCQ to chemotherapy can lead to **enhanced tumor cell kill** like pancreatic cancer, breast cancer, lung cancer, colorectal and multiple myeloma (https://doi.org/10.3390/ijms25020945). For example, combining HCQ with a chemo drug called gemcitabine in pancreatic cancer models has led to better tumor response and survival outcomes by inhibiting the tumor cell's protective autophagy that normally causes chemoresistance (https://doi.org/10.3332/ecancer.2017.781). Early clinical trials have tested HCQ's safety, finding that doses up to 600 mg daily are generally well-tolerated, though long-term use can risk eye damage, so regular eye checkups are needed (https://doi.org/10.3332/ecancer.2017.781).

Researchers are also exploring HCQ alongside new cancer drugs, like immune checkpoint inhibitors, to boost the immune system's ability to fight tumors (https://doi.org/10.3332/ecancer.2017.781). Overall, HCQ has been observed to be a helpful addition to cancer treatments by targeting autophagy, increasing pH in lysosomes and preventing the degradation of

cellular components, which starves cancer cells. It has been observed to disrupt signaling pathways PI3K/AKT/mTOR, which are connected to cancer progression. HCQ makes other therapies work better and being relatively safe when monitored closely. Its role is typically a side-role that enhances other treatments, not as a stand-alone cancer treatment.

(This treatment is typically taken by mouth as a pill called "hydroxychloroquine sulfate".)

5. Methylene Blue

Originally a synthetic dye, this was found to have antimalarial properties and was successfully used to treat malaria during World War 1. In the following decades, it has been used as an antibacterial treatment and is used to treat a variety of conditions including a blood disorder (methemoglobinemia), carbon monoxide poisoning, glaucoma, and Alzheimer's disease. It is used with photodynamic therapy to treat skin cancer, pulmonary cancer, esophageal cancer and cervical cancer. It is also known to have antiseptic properties.

Studies have shown that taking it can hinder tumor growth and reduces the spread of cancer cells. It does this by disrupting the energy production process inside cancer cells (*i.e.*, mitochondrial function), particularly the electron transport chain, leading to reduced ATP production, leading to cancer cell death. It has also been shown to inhibit heat shock protein 70 (Hsp70), which is overexpressed in some cancers like lung cancer, which potentially slows tumor growth. Data indicates that it also increases the oxygen levels in a tumor, making it harder for cancer cells to survive. When this over-the-counter treatment is *combined with other anti-cancer treatments*, the anti-cancer effectiveness of those treatments increases, compared to other treatments being used alone.

https://cancercenterforhealing.com/methylene-blue-and-cancer/

6. Zinc

Zinc inhibits cancer proliferation and induces apoptosis (cancer cell death) in various cancers, including prostate, breast, lung, and colorectal. See peer reviewed articles:

Role of Zinc in Immune System and Anti-Cancer Defense Mechanisms:
https://pmc.ncbi.nlm.nih.gov/articles/PMC6835436/

Roles of Zinc in cancers: From altered metabolism to therapeudic applications:
https://onlinelibrary.wiley.com/doi/10.1002/ijc.34679

Zinc supplementation induces apoptosis and enhances antitumor efficacy of docetaxel in non-small-cell lung cancer
https://pmc.ncbi.nlm.nih.gov/articles/PMC4524380/

Influence of zinc deficiency on Akt-Mdm2-p53 and Akt-p21 signaling axes in normal and malignant human prostate cells:
https://journals.physiology.org/doi/full/10.1152/ajpcell.00042.200

Memorial Sloan Kettering Cancer Center - Zinc Information:
https://www.mskcc.org/cancer-care/integrative-medicine/herbs/zinc

Zinc dysregulation in cancers and its potential as a therapeutic target:
https://www.cancerbiomed.org/content/17/3/612

Studies show that zinc suppresses prostate cancer cell growth by downregulating the AKT/mTOR pathway and increasing p21 expression. Zinc stabilizes p53 (a tumor suppressor protein), and inhibits NF-κB, reducing inflammation-driven carcinogenesis. It also disrupts cancer cell migration and invasion by modulating matrix metalloproteinases (MMPs). Zinc oxide nanoparticles show promise in targeted cancer therapy, selectively killing cancer cells (e.g., breast, liver) via reactive oxygen species (ROS) generation, as reported in a 2023 study in *Frontiers in Oncology*.

See:

Cutting-edge nanotechnology: unveiling the role of zinc oxide nanoparticles in combating deadly gastrointestinal tumors (Frontiers in Bioengineering and Biotechnology, 2025):
https://www.frontiersin.org/journals/bioengineering-and-biotechnology/articles/10.3389/fbioe.2025.1547757/full

Zinc oxide nanoparticles selectively induce apoptosis in human cancer cells (Particle and Fibre Toxicology via PMC, 2012):
https://pmc.ncbi.nlm.nih.gov/articles/PMC3289443/

Autophagy-mediated nanomaterials for tumor therapy (Frontiers in Oncology, 2023):
https://www.frontiersin.org/journals/oncology/articles/10.3389/fonc.2023.1194524/full

Recent Advances in Zinc Oxide Nanoparticles (ZnO NPs) for Cancer Theranostics (International Journal of Nanomedicine via PMC, 2021):
https://pmc.ncbi.nlm.nih.gov/articles/PMC8468934/

Advancements in research on the precise eradication of cancer cells utilizing highly efficient metal oxide-based nanophotocatalysts (Frontiers in Oncology, 2025):
https://www.frontiersin.org/journals/oncology/articles/10.3389/fonc.2025.1523444/full

Clinical Studies:

A 2020 pilot study in Journal of Clinical Oncology found zinc supplementation (30 mg/day) improved immune function and reduced fatigue in head and neck cancer patients undergoing radiotherapy. Observational studies link low serum zinc levels to increased risks of prostate, breast, and esophageal cancers. A 2021 meta-analysis in *Nutrition and Cancer* associated zinc deficiency with higher cancer incidence, particularly in gastrointestinal cancers.

See also:

> ***Zinc Deficiency as a General Feature of Cancer: a Review of the Literature***
> https://doi.org/10.1007/s12011-023-03818-6

7. Curcumin

Curcumin and cancer: barriers to obtaining a health claim (Published in journal *Nutrition Reviews*, Volume 73, Issue 3, March 2015, Pages 155-165): https://doi.org/10.1093/nutrit/nuu064

> *"Curcumin is a highly pleiotropic molecule found in the rhizomes of Curcuma longa (turmeric). It is responsible for the yellow color of turmeric and* ***has been shown to inhibit the proliferation of cancer cells*** *and to be of use in preventing or treating a number of diseases. Curcumin has been shown to modulate multiple cell-signaling pathways simultaneously, thereby* ***mitigating or preventing many different types of cancers****, including multiple myeloma and colorectal, pancreatic, breast, prostate, lung, head, and neck cancers, in both animal models and humans. Current therapeutic approaches using a single cancer drug for a single target can be expensive, have serious side effects, or both. Consequently, new approaches to the treatment and prevention of cancer, including the* ***integration of curcumin as a viable treatment strategy*** *where dysregulation of many pathways is involved,* ***are warranted****."*

Curcumin and Cancer (peer-reviewed article published in the medical journal Nutrients in 2019): https://doi.org/10.3390/nu11102376

> *"...curcumin represents a promising candidate as* ***an effective anticancer drug to be used alone or in combination with other drugs****. It affects different signaling pathways and molecular targets involved in the development of several cancers."*

Recommended dose: 600mg daily. Joe Tippens used a product called Theracumin HP by Integrative Therapeudics.

8. Vitamin D

Association between vitamin D supplementation and mortality: systematic review and meta-analysis (Published in medical journal BMJ in August 2019)
https://doi.org/10.1136/bmj.l4673

> "***Vitamin D supplementation statistically significantly reduced the risk of cancer death***."

> *"Evidence from observational studies indicates that* ***low vitamin D status is associated with higher mortality from life threatening conditions such as cancer*** *and cardiovascular disease."*

> "***Vitamin D supplementary was associated with significant reduction in cancer mortality***. *However, benefit was only seen in participants receiving vitamin D3 supplementation.."*

9. Vitamin C

Targeting cancer vulnerabilities with high-dose vitamin C (Published in Scientific Journal *Nature*, April 2019, cited by 409 other studies):
https://doi.org/10.1038/s41568-019-0135-7

> *"Studies have shown that pharmacological* ***vitamin C targets many of the mechanisms that cancer cells utilize for their survival and growth***. *[...] we discuss how* ***vitamin C can target three vulnerabilities many cancer cells share****: redox imbalance, epigenetic reprogramming and oxygen-sensing regulation."*

The Effect of Vitamin C (Ascorbic Acid) in the Treatment of Patients with Cancer: A Systematic Review (Peer reviewed, published in *Nutrients*, April 2019): https://doi.org/10.3390/nu11050977

> "***Many cancer patients on intensive chemotherapy lack vitamin C. Vitamin C stimulates the production and activation of immune cells***, *so perhaps supplementation could be used to improve the immunity in those patients. [...] There seems to be a better effect with intravenous than*

oral administration. Nevertheless, ***treatment with vitamin C is safe with minimal side effects****."*

"There are multiple hypotheses about the way ***vitamin C has anti-tumor effects****. An important possible mechanism of action is that in pharmacological concentrations (especially after intravenous use) vitamin C functions as a pro-oxidant and stimulates the formation of hydrogen peroxide. This hydrogen peroxide can create reactive oxygen species (ROS), that* ***directly have cytotoxic activity on cancer cells****. Another important hypothesis is that vitamin C can create important epigenetic changes due to its effect on 2-oxoglutarate-dependent dioxygenases, like histone and DNA demethylases. In preclinical studies investigators also show that* ***vitamin C can have a synergetic effect with some types of chemo- and immunotherapy****.*

Additionally we showed in pre-clinical studies that vitamin C has an important role in the immune system, as ***it stimulates the production and/or activation of immune cells****, like T-lymphocytes and natural killer cells, that have a function* ***in fighting against pathogens and cancer cells****.*

In our previous research on vitamin C we noticed that many of our patients receiving intensive chemotherapy and/or stem cell transplantations for hematological malignancies have low vitamin C plasma concentrations. This could be the result of low dietary intake of these patients or of an increased need for vitamin C in tumor cells or in immune cells. In extension of our results, other researchers observed that ***low vitamin C plasma levels in patients with various types of advanced cancer were associated with worse survival****.*

Patients that receive intensive chemotherapy and/or stem cell transplantations are prone for infectious complications. ***Boosting their immune system with vitamin C to hasten immune recovery and thereby prevent infectious complications is attractive, since vitamin C is cheap and generally available****."*

10. CBD (Cannabidiol)

Clinical results have shown that CBD is an anti-tumor compound that prevents growth of various cancer cells, for example, lung cancer, glioma (brain cancer), breast, pancreas, prostate, colorectal, and lymphoma. It also induces cancer cell death, and can inhibit cancer cell migration, invasion and metastasis.

Cannabidiol (CBD) as a Promising Anti-Cancer Drug (peer-reviewed article, published in medical journal *Cancers*, in October 2020): https://doi.org/10.3390/cancers12113203

> *"In this review, we will discuss the most recent findings that strongly support the further development of CBD as a promising anti-cancer drug. [...] The utility of cannabinoids in the treatment of cancer has long been of great interest. [...]*
>
> *"**CBD, alone or with other agents, has been shown to successfully induce cell death, inhibit cell migration and invasion** in vitro, **decrease tumor size, vascularization, growth, and weight, and increase survival and induce tumor regression** in vivo."*
>
> *"Figure 5. CBD's effects on cancer cells and infiltrating immune cells. (A) Through its interactions with the CB1, CB2, and TRPV1 receptors, **CBD induces cell cycle arrest and apoptosis in cancer cells.** (B) CBD also binds the CB1 and CB2 receptors on the infiltrating inflammatory cells and disrupts the pro-tumorigenic cytokine production, thus leading to ineffective immunosuppression and **promoting tumor cell death**. ROS production by phagocytic cells **disrupts the ER and mitochondrial homeostasis in tumor cells leading to apoptosis**. "*

[Apoptosis is programmed cancer cell death.]

> *"As evidenced by the large volume of literature reviewed above, **CBD has demonstrated robust anti-proliferative and pro-apoptotic effects on a wide variety of cancer types** both in cultured cancer cell lines and in mouse tumor models. In comparison, CBD generally has milder effects on normal cells from the same tissue/organ. **The anti-tumor mechanisms** vary based on tumor types, **ranging from cell cycle arrest to autophagy,***

> ***to cell death, or in combination.*** *In addition,* ***CBD can also inhibit tumor migration, invasion, and neo-vascularization*** *(Figure 5A), suggesting that* ***CBD not only acts on tumor cells but can also affect the tumor microenvironment****, for example by modulating infiltrating mesenchymal cells and immune cells. […]* ***CBD may have multiple cellular targets and/or different cellular targets in different tumors*** *(Table 1). Mechanistically, CBD seems to disrupt the cellular redox homeostasis and induce a drastic increase of ROS and ER stress, which could then exert the cell cycle arrest, autophagy, and cell death effects (Figure 5A)"*

Mechanisms of Cannabidiol (CBD) in Cancer Treatment: A Review (a peer reviewed article published in science journal *Biology* in May 2022): https://doi.org/10.3390/biology11060817

> *"Emerging evidence suggests that* ***CBD and other cannabinoid treatments may relieve cancer pain and ease the side effects of chemotherapy****. […] it is possible that complex and diverse molecular mechanisms are involved in the anticancer activity of CBD. Among the most commonly reported are the activation of the CB1, CB2, and TRPV1 receptors, the* ***induction of apoptosis in cancer cells, the suppression of the invasiveness, migration, and metastasis of tumors, and the enhancement of the effectiveness of chemotherapeutic drugs*** *(Figure 1). […] Overall,* ***the current study supports the notion that CBD can offer positive outcomes in cancer treatment****."*

Recommended dose: Joe Tippens used 25 mg daily.

11. Chlorine Dioxide

Chlorine dioxide (ClO_2) is a small, reactive molecule best known for killing germs, but this treatment also has a **cytotoxic effect on cancer cells**. It functions as a **potent oxidant** that generates ROS that disrupts the redox balance in cancer cells, which are more vulnerable due to their altered metabolism. It appears to lower intracellular pH, countering the alkaline pH of cancer cells, **reducing their ability to replicate**. Cholorine dioxide is believed to enhance metabolic treatments.

In early lab studies, injecting chlorine dioxide directly into tumors creates a highly oxidative microenvironment that damages cancer cell membranes

and DNA, rapidly killing cancer cells (https://doi.org/10.1101/2023.11.24.568512). Beyond just destroying cancer cells, this treatment also helps healthy tissue regrow and boosts the body's immune system to fight the tumor further (https://doi.org/10.1101/2023.11.24.568512).

Recent studies have tested a stabilized form of chlorine dioxide, called LTSCD, in small-cell lung cancer models. These experiments showed that LTSCD slowed cancer cell growth and caused cancer cells to die in a controlled way (apoptosis), while being less harmful to healthy cells, like those lining blood vessels (https://doi.org/10.7759/cureus.29989). The studies found that higher doses of chlorine dioxide were more effective at reducing cancer cell survival and triggering cell death, with minimal effects on normal cells. Scientists think chlorine dioxide works by creating oxidative stress, which disrupts cancer cell growth and leads to their death through specific chemical pathways.

A 2016 study from Korea University found chlorine dioxide showed cytotoxicity against five human cancer cell lines: (breast cancers and colorectal cancers). See: https://pure.korea.ac.kr/en/publications/anticancer-and-antiviral-activity-of-chlorine-dioxide-by-its-indu

A 2024 peer-reviewed case report shows a metastic prostate cancer patient using chlorine dioxide (3 mg/kg daily via oral, enemy, or IV routes), alongside a ketogenic diet and intermittent fasting, who reported tumor reduction at distant sites without side effects. The dose was 1/100th the lowest observed adverse effect level (LOAEL), indicating safety at low concentrations. See: https://www.researchgate.net/publication/377163369_Case_Report_Compassionate_application_of_chlorine_dioxide-based_solution_in_a_patient_with_metastatic_prostate_cancer

A 2017 publication in the *Journal of Cancer Treatment and Diagnosis* suggests chlorine dioxide reduces intracellular pH, potentially enhancing metabolic treatments. https://www.cancertreatmentjournal.com/articles/chlorine-dioxide-as-a-possible-adjunct-to-metabolic-treatment.html

12. Monoclonal Antibody Treatment

100% of Cancer Patients in Remission After Monoclonal Antibody Trial: 'Tumors just vanished'
https://www.youtube.com/watch?v=uBtS7d_QbM0

Monoclonal antibodies (mAbs) are lab-made proteins designed to target specific markers or growth signals on cancer cells. By attaching to these targets, **mAbs can block cancer cell growth, trigger cell death, or help the immune system attack the tumor**. (https://doi.org/10.1007/978-1-4939-8958-4_4) For example, in multiple myeloma, mAbs target specific proteins in the blood or cancer cell survival signals, **directly killing cancer cells** or activating immune responses like antibody-dependent cell-mediated cytotoxicity (ADCC) and complement-dependent cytotoxicity (CDC). (https://doi.org/10.20944/preprints201810.0577.v1) Well-known mAbs include trastuzumab for HER2-positive cancers (like some breast cancers), rituximab for CD20-positive blood cancers, and ramucirumab, which **stops tumor blood vessel growth**. (https://doi.org/10.1002/prp2.535, https://doi.org/10.1038/s41523-020-0153-3)

mAbs work by blocking the signals that cancer cells need to grow or by preventing cancer cell receptors from working properly, which slows tumor growth and causes cancer cells to die.
(https://doi.org/10.3390/cancers13081781) Some mAbs, called antibody-drug conjugates (ADCs), carry powerful drugs directly into cancer cells, delivering the treatment right where it's needed while avoiding healthy cells. (https://doi.org/10.1007/978-3-030-23765-3_1) Combining mAbs with chemotherapy or immune-boosting drugs (like checkpoint inhibitors) can make treatments even more effective, helping patients live longer without their cancer worsening (https://doi.org/10.1016/s1470-2045(17)30006-2).

mAbs are prescription-only medications in the U.S. These treatments are usually obtained through hospitals, clinics, or infusion centers. mAbs are generally administered intravenously (IV) in a clinical setting, for example an infusion center, under medical supervision. Others may be given via subcutaneous injection, which can sometimes be self-administered at home after training. Due to risks like infusion reaction or allergic responses, administration often requires monitoring by healthcare professionals.

They are expensive, often costing thousands of dollars per dose, though insurance or government programs may cover them for approved uses. Availability depends on the condition, location, and healthcare system.

Hybrid (Combination) Approach:

In September 2024, the *Journal of Orthomolecular Medicine* (Volume 39, Number 3) published a peer-reviewed article titled "**Targeting the Mitochondrial-Stem Cell Connection in Cancer Treatment: A Hybrid Orthomolecular Protocol**".

See: https://isom.ca/wp-content/uploads/2024/09/Targeting-the-Mitochondrial-Stem-Cell-Connection-in-Cancer-Treatment-JOM-39.3.pdf

It recommends a hybrid approach:

Intravenous Vitamin C:
Intermediate and high-grade cancers: Dose of 1.5kg/kg/day, 2-3x per week. Established as a non-toxic dose for cancer patients.

Oral Vitamin D:
All cancer grades: Dose of 50,000 IU/day for patients with a blood level less than 30ng/mL; 25,000 IU/day for levels 30-60ng/mL; and 5000 IU/day for levels 60-80ng/mL. Established as a non-toxic dose. "It is necessary to reach a blood level of 80 ng/mL of vitamin D (25-hydroxyvitamine D (25(OH) D). This level is non-toxic. Once this level is reached it must be maintained with a reduced daily dosage of 2000 IU/day. The vitamin D blood concentration should be measured every two weeks for high doses and monthly for lower doses.

Zinc:
All cancer grades: Dose of 1 mg/kg/day is established as a non-toxic dose for cancer patients. The reference range for serum zinc concentration is 80 to 120 ug/dL. Once this level is reached it must be maintained with a reduced daily dosage of 5mg/day. The zinc blood concentration should be measured monthly.

Ivermectin:
Low grade cancers: Dose of 0.5mg/kg, 3x per week.

Intermedia-grade cancers: Dose of 1mg/kg, 3x per week.
High-grade cancers: Dose from 1 mg/kg/day to 2 mg/kg/day.
All of these doses have been established as tolerable for humans.

Benzimidazoles and DON:
Low-grade cancers: Mebendazole: Dose of 200mg/day.
Intermediate-grade cancers: Mebendazole: Dose of 400 mg/day.
High-grade cancers: Mebendazole dose of 1,500 mg/day or Fenbendazole 1,000 mg 3x per week.

All of these doses have been established as tolerable for humans. Benzimidazoles can be replaced or combined with DON, administered without toxicity; intravenously or intramuscularly: 0.2 to 0.6 mg/kg once daily; or orally: 0.2 to 1.1 mg/kg once daily. Benzimidazoles are much easier to obtain than DON. However, for metastatic cancers, which rely heavily on glutamine, a combination of DON and Benzimidazoles should be considered.

Dietary Interventions:
All cancer grades: Ketogenic diet (low carbohydrate-high fat diet, 900 to 1500 kcal/day). Ketone metabolic therapy consists of approximately 60-80% fat, 15-25% protein and 5-10% fibrous carbohydrates. Adequate hydration and single-ingredient whole food ketogenic meals are necessary to achieve a glucose ketone index (GKI) score of 2.0 or below. GKI should be measured 2-3 hours postprandial, twice a day if possible.

Intermediate and high-grade cancers: The ketogenic diet should be coupled with a water fast for 3 to 7 consecutive days in advanced cancers. The water fast should be repeated several times (ever 3-4 weeks) throughout the treatment, but fasting needs to be understaken cautiously in individuals using certain drugs and those with less than 20 BMI, to prevent loss of lean body mass. For patients who cannot fast, the Fasting-Mimicking Diet (300 to 1,100 kcal/day of broths, soups, juices, nut bars, and herbal teas) can be used.

Additional Therapeudics:
All cancer grades: Moderate physical activity, 3x per week. Increased heart and respiratory rate for a period of 45 to 75 minutes with activities such as cycling, running, swimming, etc.

Intermediate and high-grade cancers or individuals who are unable to engage in physical activity: Hyperbaric oxygen therapy, 1.5 to 2.5 ATA for 45 to 60 minutes 2-3x per week.

"This protocol should be followed for an average duration of 12 weeks, regardless of cancer type. The analysis of the interactions between each of the molecules revealed no contraindications to the combination of these substances. The treatment dosage and duration can be adjusted by the physician according to the individual patient, their ability to obtain the various molecules, and the treatment results. Adaptation of the protocol to include additional molecules to restore health, could be considered by the physician. These may include: vitamin K2, vitamin E, coenzyme Q10, methylene blue, niacinamide, riboflavin, Artemisinin + 5-aminolevulinic acid (to cause porphyrin accumulation), melatonin, NADH, and magnesium, as examples. However, antioxidant dosages should be avoided."

Hurdles for Some Doctors:

Doctors often err on the side of caution when recommending treatments, particularly due to concerns about their own personal liability, professional standards, and regulatory constraints.

Key Factors Influencing Doctors' Caution:

Liability and Malpractice Risk:

- Recommending unapproved or non-standard treatments (e.g., those lacking FDA approval or robust clinical trial data) increases the risk of malpractice lawsuits if the treatment fails or causes harm. Doctors are held to a "standard of care" defined by what a reasonably competent physician would do in similar circumstances. Deviating from this standard, like prescribing a treatment based solely on anecdotal evidence, could expose them to legal scrutiny.

- Even if a treatment shows promise anecdotally, without peer-reviewed, large-scale studies, doctors may fear being unable to defend their decision in court.

Regulatory Oversight:

- The FDA regulates drug approvals in the U.S., and off-label use (using approved drugs for unapproved purposes) or unapproved treatments can attract scrutiny from medical boards or regulatory bodies. For example, the hybrid orthomolecular protocol includes repurposed drugs like mebendazole and non-standard therapies like high-dose vitamin C, which may not have FDA approval for cancer treatment. Doctors may hesitate to recommend these due to potential regulatory repercussions.

Evidence-Based Medicine Standards:

- Modern medical practice prioritizes evidence-based medicine, relying on randomized controlled trials (RCTs) and peer-reviewed data. Anecdotal evidence, while compelling, is considered low-quality evidence and insufficient to justify widespread adoption. The protocols recommended above, while supported by case studies, clinical observations, mechanistic rationale, lacks large-scale RCTs, which may hinder most physicians from endorsing it.

- Medical guidelines (e.g., from the American Medical Association or oncology societies) typically align with FDA-approved treatments, further hindering doctors' willingness to deviate.

Professional Reputation:

- Recommending unconventional (non-standard) treatments can risk a doctor's credibility among their peers or institutions they are connected with. Hospitals and clinics often have protocols aligned with standard care, and straying from these could lead to professional ostracism or loss of privileges.

Patient Safety Concerns:

- Beyond liability, doctors prioritize "do no harm." Unapproved treatments may have unknown risks or interactions, especially in

complex cases like cancer. For instance, the hybrid protocol's use of fasting or high-dose vitamin C could pose risks for certain patients (e.g., those with kidney issues or malnutrition), making doctors nervous without clear safety data.

Most doctors would likely avoid recommending a treatment like the hybrid orthomolecular protocol for cancer, even if anecdotal or clinical evidence suggests success, for the following reasons:

- **Lack of FDA Approval:** Components like DON (6-diazo-5-oxo-L-norleucine) or high-dose intravenous vitamin C are not FDA-approved for cancer treatment. While off-label use is legal, it's riskier without strong evidence.

- **Insufficient Clinical Data:** Case studies and mechanistic studies are not equivalent to Phase III clinical trials. Most doctors would prefer to wait for more robust data to ensure its effectiveness and safety.

- **Liability Concerns:** If a patient experiences negative side effects or the treatment fails, the doctor could face lawsuits or disciplinary action, especially if the treatment deviates from standard oncology protocols (e.g., chemotherapy, radiation).

- **Institutional Constraints:** Doctors in hospitals or large practices often face pressure to adhere to institutional guidelines, which rarely include orthomolecular or alternative protocols.

Exceptions to the Rule:
Some doctors may be more open to recommending or exploring such treatments under specific circumstances:

- **Integrative or Functional Medicine Practitioners:** These doctors are more likely to embrace orthomolecular or alternative therapies, since their practice philosophy often includes non-standard approaches. However, they still face liability risks and must justify their recommendations.

- **Terminal or Refractory Cases:** In patients with advanced cancer unresponsive to standard treatments, doctors may be more willing to discuss experimental or anecdotal treatments, especially if the patient is informed and consents to the risks.

- **Patient Advocacy and Informed Consent:** If a patient actively requests a treatment and signs a waiver acknowledging its experimental nature, some doctors might consider it, if they believe it's safe and potentially beneficial.

- **Off-Label Use of Approved Drugs:** Drugs like mebendazole, already FDA-approved for other uses, might be prescribed off-label by adventurous physicians, as this is legally allowed and carries less regulatory risk than unapproved substances.

Broader Context:
The hybrid orthomolecular protocol, as described in the Journal of Orthomolecular Medicine, is compelling for many reasons and its case studies, but because it uses non-standard therapies (*e.g.*, fasting, hyperbaric oxygen, high-dose vitamin C) is placed outside mainstream cancer treatments. Doctors' hesitancy isn't only about liability—it's also about the lack of integration into medical training, guidelines, and reimbursement systems. For example:

- Insurance rarely covers unapproved or experimental treatments, making it harder for patients to access them.

- Medical education emphasizes FDA-approved protocols, leaving many doctors unfamiliar with orthomolecular approaches.

Most doctors would err on the side of not recommending a treatment like the hybrid orthomolecular protocol, even with anecdotal and clinically observed success, due to liability risks, regulatory constraints, and the standard of evidence-based medicine. However, integrative medicine practitioners or doctors treating terminal cases might be more open, especially with informed patient consent. If you're considering this treatment, discussing it with a doctor who is open to integrative approaches and ensuring thorough documentation of risks and benefits is helpful.

I have personally spoken to multiple oncologists about fenbendazole. Each doctor initially reacted with some form of anger and dismissal. They assumed it was snake oil, despite not having read any information about it. After showing them printouts of peer-reviewed clinical data (which they did not have access to in the medical databases they were using), each of their attitudes changed. They became very friendly and even told me I was doing a very good job. Multiple doctors told me privately that they agreed it was worth taking and were willing for the patient to take the treatment privately, but that they would never be able to prescribe or officially recommend fenbendazole for liability reasons because it wasn't FDA approved. Fortunately, fenbendazole (like ivermectin) is cheap and easy to get from Walmart or Amazon.

Conclusion

The treatments and supplements mentioned are being combined to create a synergistic effect that targets tumors, leading to outcomes where many patients have achieved NED (No Evidence of Disease). Each component targets specific vulnerabilities in cancer cells, boosting the immune system, blocking or hinders cancer cell proliferation, and/or causes cancer cell death. These non-toxic therapies can be used alongside chemotherapy or independently. Many patients who used these treatments without chemotherapy have also experienced full cancer reversal. Given the limitations of conventional cancer treatments and the promising outcomes of these alternative methods, I would strongly recommend exploring these options.