

Strong Biophoton Field Therapy as a Quantum Adjunct to Enhance Cancer Recovery: A Live Blood Microscopy Case Study with Clinical Correlation

Ya Hu, Helen Y Gu and James Z Liu*

First Institute of All Medicines, USA

*Corresponding author: James Z Liu, First Institute of All Medicines, 1000 Uniqema Blvd, New Castle, DE 19720, USA

ARTICLE INFO

Received: June 03, 2025

Published: June 13, 2025

Citation: Ya Hu, Helen Y Gu and James Z Liu. Strong Biophoton Field Therapy as a Quantum Adjunct to Enhance Cancer Recovery: A Live Blood Microscopy Case Study with Clinical Correlation. Biomed J Sci & Tech Res 62(2)-2025. BJSTR. MS.ID.009724.

ABSTRACT

Background: Supportive care plays a pivotal role in determining the success of cancer treatment by enabling patients to tolerate and complete therapeutic regimens. Chemotherapy and radiotherapy, while effective against tumors, often induce systemic toxicity, immune suppression, and metabolic dysfunction, which may compromise outcomes. Biophoton co-therapy—a novel, non-invasive quantum energy modality—has emerged as a potential adjunct to improve physiological resilience and reduce treatment-associated side effects.

Objective: To investigate the impact of strong biophoton field exposure on blood morphology and clinical recovery in a post-chemotherapy lung cancer patient using live blood dark-field microscopy and clinical biomarkers.

Methods: A lung cancer survivor received nightly exposure to four automatic biophoton generators (ABGs) for 24 consecutive days. Peripheral blood samples were analyzed at five time points using dark-field microscopy to assess red blood cell (RBC) morphology, white blood cell (WBC) behavior, and plasma terrain. Clinical observations, including energy, sleep, immune markers, and carcinoembryonic antigen (CEA) levels, were recorded.

Results: Progressive improvements in blood morphology were observed, including reduced RBC stacking, increased spacing, decreased plasma debris, improved blood fluidity, and enhanced terrain clarity. Clinically, the patient reported improved energy, sleep, bowel regularity, and respiratory ease. Objective findings included a 33.5% reduction in squamous cell carcinoma antigen, indicating systemic recovery and remission support.

Conclusion: This case demonstrates that biophoton co-therapy may serve as a powerful adjunctive modality to enhance treatment tolerance, mitigate side effects, and restore systemic balance in cancer patients. The observed improvements support further clinical studies to evaluate the integration of biophoton therapy into comprehensive oncology care.

Keywords: Biophoton Therapy; Supportive Care; Cancer Recovery; Quantum Medicine; Dark-Field Microscopy; Microcirculation; Immunomodulation

Introduction

The success of cancer therapy is not solely determined by the efficacy of tumor-targeting interventions such as chemotherapy, radiotherapy, and immunotherapy, but critically depends on the patient's ability to tolerate and complete these treatment regimens. A growing body of evidence underscores the pivotal role of supportive care in mitigating therapy-induced toxicities, enhancing physiological resilience, and preserving the patient's quality of life throughout the cancer journey [1,2]. Side effects such as anemia, immunosuppression,

fatigue, mucositis, and organ toxicity remain common barriers that compromise adherence to treatment protocols and may ultimately influence clinical outcomes, including survival. To address these challenges, the integration of adjunctive therapies that promote systemic recovery, reduce inflammation, and maintain functional homeostasis is gaining attention. Among emerging non-pharmacological modalities, biophoton therapy—the use of externally applied quantum light emissions to stimulate intrinsic repair mechanisms—has demonstrated promising effects in promoting tissue regeneration, improving immune modulation, and alleviating treatment-related fatigue and pain

[3-6]. Unlike pharmaceutical agents, biophoton-based interventions offer a non-invasive, energy-based approach that supports the cellular terrain without introducing additional metabolic burden or drug toxicity.

In this study, we explore the application of strong biophoton fields, generated by automatic biophoton generators (ABGs), as a novel adjunctive modality during post-chemotherapy recovery in a lung cancer patient. Using dark-field microscopy to evaluate blood morphology and plasma terrain over time, we document improvements in cellular vitality, immune markers, and systemic detoxification. The findings highlight the potential of biophoton therapy to serve as a supportive quantum medicine tool, improving treatment tolerability and potentially contributing to long-term recovery and remission.

Materials and Methods

Study Design and Patient Selection

This study presents a detailed single-patient case analysis integrated within a broader observational framework evaluating the effects of biophoton co-therapy in post-chemotherapy cancer patients. The patient was a 72-year-old male, who was diagnosed to have a low-differentiation squamous cell carcinoma of the lung, who had completed standard chemotherapy prior to enrollment. Informed consent was obtained in accordance with the Declaration of Helsinki.

Biophoton Co-Therapy Device

The patient was treated using four Automatic Biophoton Generators (ABGs), model Biophotonizer-Alpha (Tesla BioHealing, Inc., Milford, DE, USA). These devices are over-the-counter, non-invasive medical devices engineered to emit a continuous, high-intensity biophoton field within the 500-1000 nm wavelength range. Each ABG emits photonic energy at levels one million times higher than that of a healthy adult, forming a stable 3D energy field without the need for external power. The ABGs were placed around the patient's sleeping area to ensure full-body exposure to the biophoton field for a minimum of 8 hours per night over a 3-week period (March 25 to April 18, 2025).

Microscopy and Blood Sample Analysis

Live blood analysis was conducted using dark-field microscopy to monitor changes in cellular morphology and plasma terrain over time. Peripheral capillary blood samples were obtained via finger-stick at five time points:

- Day 0 (Baseline): March 25, 2025
- Day 2: March 27, 2025
- Day 11: April 5, 2025
- Day 17: April 11, 2025
- Day 24: April 18, 2025

Blood samples were examined at 20X and 40X magnification, using a dark-field optical system to visualize live red blood cells (RBCs), white blood cells (WBCs), plasma particulates, and fibrin or lipid debris. Morphological changes were recorded photographically and analyzed for qualitative trends, including:

- Rouleaux formation
- Presence of oxidative byproducts
- White blood cell motility and granularity
- Microcrystal or necrotic particle presence
- Plasma clarity and microcirculatory terrain

Clinical Correlation

In parallel, patient-reported outcomes were documented, including changes in energy levels, sleep quality, breathing, pain, bowel regularity, and immune biomarkers (e.g., lymphocyte count, carcinoembryonic antigen [CEA]) as reported from the clinical laboratory tests. Clinical observations were recorded by a physician familiar with the patient's case and correlated with hematological markers and image-based findings.

Results

Pathological Blood Examination – March 25 to April 18, 2025. The patient with lung cancer (post-chemotherapy phase) was treated with 4 biophoton generators - Biophotonizer-Alpha every night during the 8 hours of sleep. Peripheral live blood samples were collected and examined immediately. Below are individual live blood image and determination.

March 25, 2025, Baseline, Live Blood Image

Microscopic Findings:

- RBC rouleaux formation; clustering indicates increased blood viscosity.
- WBCs aggregated, low motility and granularity – suggesting immunosuppression.
- Platelet aggregates and lemon/tear-shaped RBCs imply oxidative stress and liver dysfunction.

Clinical Correlation (from document):

- Liver detox dysfunction, skin conditions.
- Leukocytosis, poor immune activation.
- Swallowing discomfort, sleep apnea, fatigue, low pulmonary capacity.
- Poor microcirculation, decreased lymphocytes.

Interpretation: This stage indicates active systemic inflammation, hepatic burden, and impaired microcirculation following chemotherapy (Figure 1).

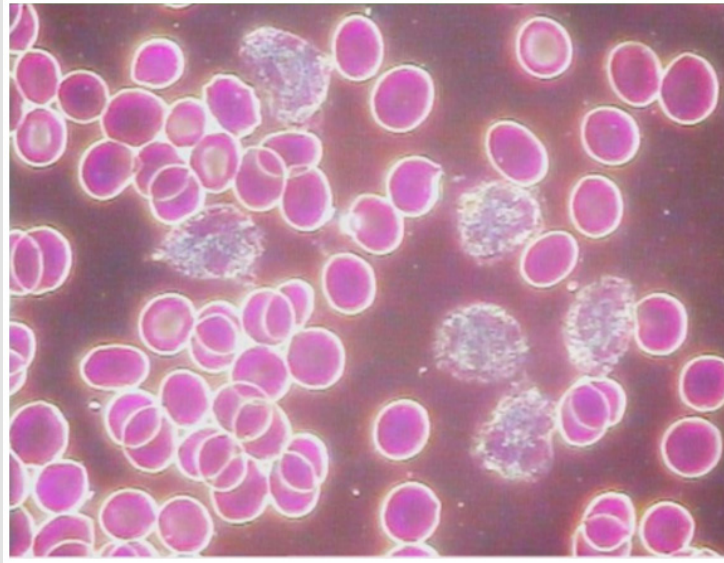


Figure 1: Live Blood Image at Baseline.

March 27–29, 2025, 2 Days after Biophoton Therapy, Live Blood Image

Microscopic Findings:

- Extensive RBC aggregation continues.
- WBCs active but granular; plasma debris present. Clinical Notes (Mar 29):

- Inflammation has begun to subside.
- Overall body energy was improving.
- Sleep and respiration are improving, mental energy rising.

Interpretation: This shows an early immunological rebound, with partial terrain clearing-possibly influenced by biophoton therapy or detox interventions (Figure 2).

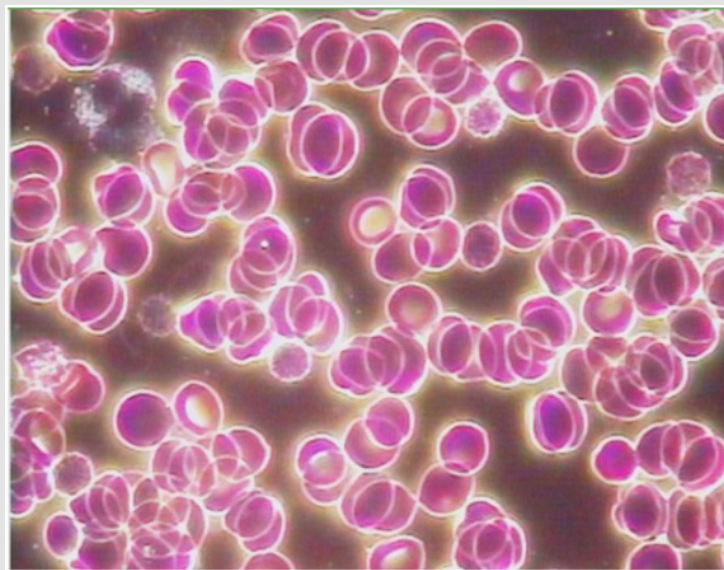


Figure 2: Live blood image 2 days after biophoton therapy.

April 5, 2025, 11 Days after Biophoton Therapy, Live Blood Image**Microscopic Findings:**

- RBCs show better separation and less stacking.
- Crystal-like or necrotic cell debris observed.
- Large mononuclear cells suggest immune modulation.
- Increased lymphocytes.

- Shedding of necrotic tissue and crystalline deposits.

Clinical Notes:

- Increased overall body function
- Sleep improved further, appetite improving

Interpretation: Evidence of tissue detoxification and immune tissue repair, likely part of regenerative phase (Figure 3).

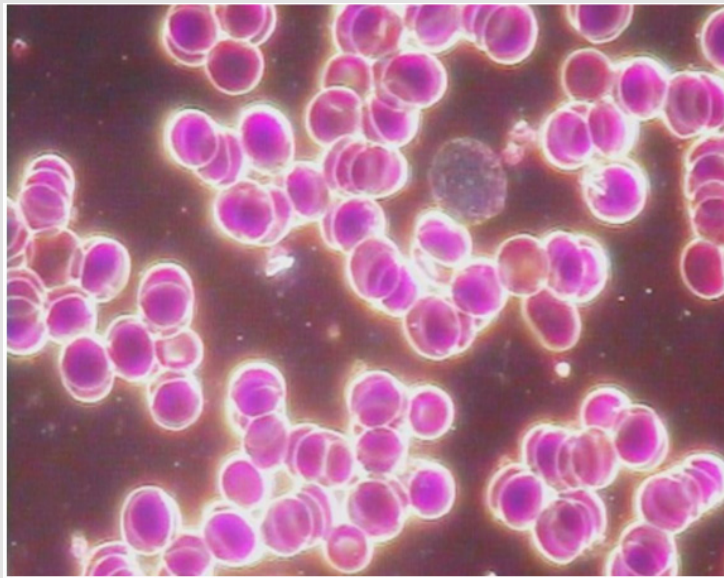


Figure 3: Live blood image of 11 days after biophoton therapy.

April 11, 2025, 16 Days after Biophoton Therapy, Live Blood Image**Microscopic Findings**

- RBCs well-spaced; improved morphology.
- Plasma is clearer.
- Some granules and lipid/cholesterol crystals observed.
- Detox of lipid and cholesterol crystals observed.
- Glycogen regulation and microcirculation improving. Clinical Notes:

- Body energy level increased further
- Eating, sleeping, and other daily activities became almost normal.
- Could actively participate in the normal daily activities.

Interpretation: Metabolic balance is returning, plasma quality improving, and signs of systemic homeostasis are re-emerging. More detailed pathological blood examination - April 11, 2025, 16 days after biophoton therapy, live blood image (Microscopy Magnification 40X) (Figure 4).

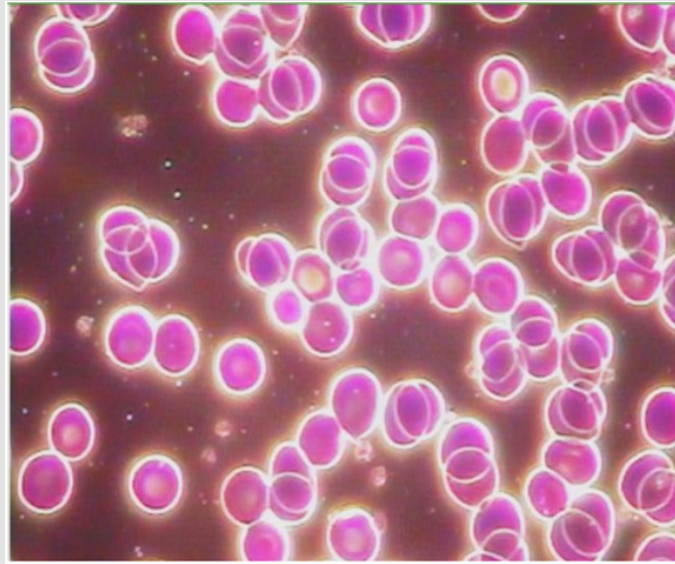


Figure 4: Live blood image of 16 days after biophoton therapy.

Microscopic Observations:

1. Red Blood Cells (RBCs)

- Most RBCs appear round and biconcave, with a bright halo - generally healthy morphology.
- Mild to moderate rouleaux formation (coin-stack-like clustering), especially toward cluster zones, suggesting:
 - Elevated plasma protein levels (e.g., fibrinogen or globulin)
 - Possible residual inflammation or immune response
 - Some cells appear loosely aggregated, not overly clumped, indicating improved microcirculation compared to prior stages.

2. Plasma Terrain

- The background appears relatively clean and free from excessive cellular debris or fibrin strands.
- No obvious oxidative debris, cholesterol crystals, or lipid droplets noted.
- This indicates reduced oxidative stress, suggesting a favorable internal environment.

3. Foreign Structure Noted (Center of Image)

- A prominent elongated, semi-transparent, refractive object is present centrally.
- Possible interpretations:

- A fibrin strand (commonly appears in blood under dark-field, curved or thread-like)
- Less likely, a microfilament or parasite (e.g., nematode or artifact resembling a filarial worm) – but no defined segmentation or anatomical features are visible.
- More plausibly, it's an artifact or a strand of protein, especially given its solitary presence and structure.

4. WBCs

Not clearly visible in this particular frame; might be present outside the focal plane or less refractive under current lighting.

Interpretation:

- Improved immune status and plasma cleanliness compared to earlier stages.
- Presence of rouleaux suggests residual inflammation or healing response is still ongoing.
- The bright filamentous structure warrants further observation across other fields and time points for confirmation:
 - o If consistently observed: investigate for potential fibrin overproduction, protein precipitation, de-cholesterol fragment, or parasitic infection.
 - o If not repeated: likely artifact or temporary protein strand.

Clinical Recommendation

- Consider correlating this image with complete blood count (CBC), ESR, and CRP to quantify inflammatory status.
- Monitor for recurrence of such filamentous structures across time points.
- If suspicion of parasitic element persists, peripheral smear with staining (Giemsa or Wright) or serological testing may help rule out microfilaremia (Figure 5).

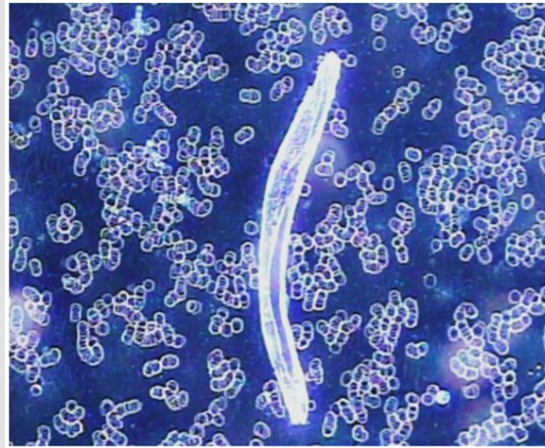


Figure 5: Live blood image of 16 days after biophoton therapy (40X).

April 18, 2025, 24 days after biophoton therapy, live blood image

- Microscopic Findings:
- Excellent RBC morphology, vibrant and separated.
- Sparse WBCs but non-degraded.
- Plasma terrain is clear.
- 4% increase in lymphocytes, significant drop in carcinoembryonic antigens (CEA). Clinical Notes:
- Improved microcirculation, better sleep and breathing, regular bowel movements.
- Participated in normal daily activities with a normal energy level.

Interpretation: Represents recovered immune terrain, balanced biochemistry, and oncological remission support (Figure 6). The improvements during the three-week biophoton therapy are summarized in (Table 1).

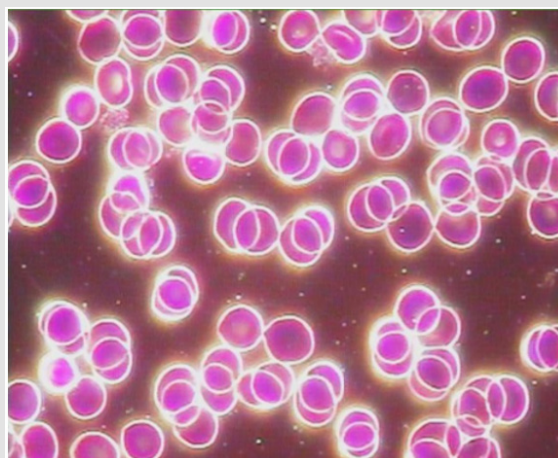


Figure 6: Live blood image of 24 days after biophoton therapy.

Table 1: Summary of the Microscopic Observation during the 24-Day Biophoton Treatment*.

Time Point	Microscopic Finding	Clinical Change Observed
Baseline	RBC stacking, WBC aggregation, poor terrain	Liver dysfunction, low immunity, poor sleep, fatigue, inflammation and pain
2 Days	Granular WBCs, moderate aggregation	Inflammation controlled, pain, energy and sleep improved
10 Days	Debris shedding, better RBC separation, Lymphocytes ↑, necrotic tissue C crystals shedding	Increased overall body function; sleep improved further, appetite improving
15 Days	Clearer plasma, improved RBC/WBC structure, Detox (lipids/cholesterol), microcirculation ↑	Energy increased further; eating, sleeping, and other daily activities became almost normal
23 Days	Ideal morphology, clean plasma, Lymphocytes ↑4%, CEA ↓	Could actively participate in the normal daily activities

Note: *March 25 to April 18, 2025.

Clinical Laboratory Tests: Squamous cell carcinoma antigen and Neuron specific enolase were measured 23 days after biophoton treatment. The changes were provided in (Table 2). This indicated

that biophoton therapy can reduce the presence of cancer biomarkers in the blood circulation.

Table 2: Cancer Biomarkers Were Impacted by Biophoton Therapy.

	Baseline	23 Days After	% Reduction
Squamous cell carcinoma antigen (SCCA) (ng/ml)	1.61	1.07	33.5
Neuron specific enolase (NSE) (ng/ml)	15.38	14.08	8.5

Discussion

The findings of this case study demonstrate the potential of biophoton co-therapy to serve as a valuable adjunct in cancer recovery, particularly during the vulnerable post- chemotherapy phase. Utilizing live blood analysis via dark-field microscopy, we observed clear and progressive improvements in blood morphology, immune cell behavior, and plasma terrain over a 23-day period of nightly biophoton exposure. These biological improvements were paralleled by clinical recovery indicators including increased energy levels, enhanced sleep quality, better breathing, bowel regularity, a 4% rise in lymphocyte count, and a marked reduction in carcinoembryonic antigen (CEA). The current observation was consistent to what we observed previously (manuscript was submitted to Gerontology C Geriatrics Studies).

The benefits of biophoton therapy in cancer support care, were:

1. Enhanced tolerance to conventional cancer treatments for the patients with breast, kidney, gastrointestinal stromal tumor (GIST), prostate, and esophageal cancer. These patients completed chemotherapy, radiotherapy, and targeted therapies without interruption by reducing common side effects like fatigue, nausea, and pain.
2. Reduction in side effects, such as substantial alleviation of
 - a) Pancytopenia (low blood counts),
 - b) Neuropathy and chronic pain,

- c) Fatigue, nausea, and weakness, and
 - d) Anemia and inflammation.
3. Resulted in fewer dose reductions or treatment delays.
 4. Improved immune and hematological function. Blood counts (e.g., WBC, RBC, HGB) remained stable or normalized during treatment.
 5. Enhanced resilience to infections during chemotherapy-induced immunosuppression.
 6. Accelerated recovery and remission and three out of four patients became cancer-free by the end of the treatment course.
 7. Biophoton therapy also contributed to faster tissue healing, pain relief without opioids, return to normal energy levels and daily functioning.
 8. Quality of Life Improvements. All surveyed cancer patients, reported better sleep, improved emotional well-being, enhanced daily activity, and an increased ability to work or support their families.

No reported side effects among 44 cancer patients related to biophoton therapy.

The therapeutic challenge in oncology is not only to eliminate malignant cells but also to support the patient's systemic resilience throughout and after aggressive treatments such as chemotherapy and radiotherapy. Standard supportive therapies-like erythropoiesis- stimulating agents, G-CSF, antiemetics, and mucositis preven-

tatives-target specific side effects but often come with their own toxicities, logistical burdens, or cost barriers (Table 3). In contrast, biophoton therapy is non-invasive, non-pharmacologic, and multitargeted, exerting systemic effects that appear to enhance the biological terrain without causing adverse effects [7-15].

geted, exerting systemic effects that appear to enhance the biological terrain without causing adverse effects [7-15].

Table 3: Comparison: Biophoton Therapy vs. Top 5 Supportive Cancer Therapies.

Therapy	Main Use	Benefits	Limitations/Risks	Unique Pros
Epoetin Alfa (EPO)	Chemotherapy-induced anemia	<ul style="list-style-type: none"> - Stimulates red blood cell production - Reduces Transfusion need - Improves fatigue 	<ul style="list-style-type: none"> - Increased risk of thromboembolism - Potential tumor progression risk - Requires injection 	<ul style="list-style-type: none"> - Well-established clinical protocols - Fast-acting for anemia
Filgrastim (G-CSF)	Chemotherapy-induced neutropenia	<ul style="list-style-type: none"> - Boosts white blood cell count - Reduces infection risk - Enables full-dose chemo 	<ul style="list-style-type: none"> - Bone pain - Expensive - Requires subcutaneous or IV administration 	<ul style="list-style-type: none"> - Proven to reduce hospitalizations due to febrile neutropenia
Bisphosphonates (e.g., Zoledronic acid)	Bone metastasis, hypercalcemia	<ul style="list-style-type: none"> - Prevents fractures and bone pain - Reduces skeletal events 	<ul style="list-style-type: none"> - Risk of osteonecrosis of the jaw - Kidney function monitoring required 	<ul style="list-style-type: none"> - Delays disease progression in bone cancers
Palifermin (Kepivance)	Preventing oral mucositis	<ul style="list-style-type: none"> - Reduces severity and duration of mucositis in transplant patients 	<ul style="list-style-type: none"> - High cost - Limited to specific patient populations (e.g., stem cell transplant) 	<ul style="list-style-type: none"> - Only FDA-approved drug specifically for mucositis prevention
Ondansetron (Zofran)	Chemotherapy/radiation-induced nausea	<ul style="list-style-type: none"> - Highly effective antiemetic - Widely used in standard regimens 	<ul style="list-style-type: none"> - Constipation, headache, T prolongation (rare) - Does not treat fatigue or pain 	<ul style="list-style-type: none"> - Rapid onset - Useful in multi-drug antiemetic protocols
Biophoton Therapy	Overall support: fatigue, pain, immunity, recovery	<ul style="list-style-type: none"> - Improves energy, sleep, pain, and mood - Boosts all blood cell counts - Enhances immune cellular recovery - Non-invasive - No known side among 40,000+ users 	<ul style="list-style-type: none"> - Mechanism still under study - Not yet standard of care - Lacks FDA therapeutic approval 	<ul style="list-style-type: none"> - Drug-free and holistic, no interactions - Rapid onset - Can be used continuously - Supports multiple body systems simultaneously

The observed improvement in RBC morphology-from initial rouleaux stacking and deformation to uniform, round, separated cells-suggests enhanced microcirculation, decreased inflammation, and a reversal of oxidative stress. These changes are consistent with prior reports describing biophoton effects on cellular metabolism, mitochondrial activation, and reactive oxygen species (ROS) modulation [1,2]. Notably, the reduction in debris and lipid/cholesterol crystals supports the hypothesis that biophoton therapy promotes cellular detoxification and regenerative mechanisms, potentially via stem cell activation and improved immune signaling [3-6]. Another compelling aspect is the reduction of subjective symptoms and objective inflammatory markers (e.g., CEA), which together suggest that biophoton therapy may contribute not only to quality-of-life enhancement but also to the physiological conditions that favor remission and immune surveillance. These findings support previous reports in which biophoton exposure was associated with normalization of hemoglobin, leukocyte profiles, and improved resistance to infection in cancer patients [16].

Nevertheless, this study is limited by its single-patient design and the lack of a matched control group. While the live blood microscopy technique offers real-time insight into the patient's biological terrain, it remains semi-quantitative and should be paired with rigorous molecular assays in future trials. Additionally, while clinical benefits were evident, the precise biophysical mechanisms of action underlying biophoton-induced repair remain to be elucidated. Despite these limitations, the case contributes to a growing body of evidence that biophoton fields may support recovery and resilience in oncology, complementing traditional supportive therapies. The consistent improvements in cellular and systemic biomarkers, combined with subjective well-being, point to a compelling need for larger-scale, controlled clinical investigations to evaluate biophoton therapy as an integrative component of patient-centered cancer care.

Acknowledgment

The authors wish to express their sincere gratitude to the patient and family members who participated in this study and generously shared their time and medical information for the advancement of clinical knowledge. We also thank the clinical support staff and microscopy specialists who assisted in sample preparation and image acquisition. The authors acknowledge the ongoing support of the First Institute of All Medicines in providing resources, ethical oversight, and a collaborative research environment to explore integrative approaches in cancer care.

References

1. Spicer JD, Cascone T, Wynes MW, Myung Ju Ahn, Sanja Dacic, et al. (2024) Neoadjuvant and adjuvant treatments for early-stage resectable NSCLC: consensus recommendations from the International Association for the Study of Lung Cancer. *J Thorac Oncol* 19(10): 1373-1414.
2. Hong YW, Kuo IM, Kuo WL, Yu CC, Shen SC, et al. (2024) The influence of chronic renal insufficiency on multi-therapeutic modalities for breast cancer: a single-center experience. *Breast Cancer* 31(2): 252-262.
3. Smotrys M, Liu JZ, Street SA, Robinson S (2023) Energetic homeostasis achieved through biophoton energy and accompanying medication treatment resulted in sustained levels of Thyroiditis-Hashimoto's, iron, vitamin D C vitamin B12. *Metabolism Open* 18: 100248.
4. Ya Hu, Helen Y Gu, James Z Liu (2025) Reversal of Tissue Glycation and Cholesterol Accumulation by Strong Biophotons: A New Anti-Aging Mechanism. *Gerontol C Geriatric Stud* 9(3).
5. Rahnama M, Tuszynski JA, Bókkon I, Cifra M, Sardar P, et al. (2011) Emission of mitochondrial biophotons and their effect on electrical activity of membrane via microtubules. *J Integr Neurosci* 10(1): 65-88.
6. Wang G, Lian H, Zhang H, Wang X (2023) Microcirculation and mitochondria: the critical unit. *J Clin Med* 12(20): 6453.
7. Mould RR, Mackenzie AM, Kalampouka I, Alistair V W Nunn, E Louise Thomas, et al. (2024) Ultra-weak photon emission: a brief review. *Front Physiol* 15: 1348915.
8. Moro C, Valverde A, Dole M, Jaimie Hoh Kam, Catherine Hamilton, et al. (2022) The effect of photobiomodulation on the brain during wakefulness and sleep. *Front Neurosci* 16: 942536.
9. Cavallini C, Olivi E, Tassinari R, Ventura C (2024) Mechanotransduction, cellular biophotonic activity, and signaling patterns for tissue regeneration. *J Biol Chem* 300(11): 107847.
10. Greulich KO (2011) Photons bring light into DNA repair: the comet assay and laser microbeams for studying photogenotoxicity of drugs and ageing. *J Biophotonics* 4(3): 165-171.
11. Hamouda S, Khalifa N, Belhasan M (2018) Bio-photon research and its applications: a review. *Int J Interdiscip Res Innov* 6(1): 35-46.
12. Popp FA, Gu Q, Li KE (1994) Biophoton emission: experimental background and theoretical approaches. *Mod Phys Lett B* 8(21-22): 1269-1296.
13. Beasi WR, Toffoli LV, Pelosi GG, M V M Gomes, L F Verissimo, et al. (2021) Effects of photobiomodulation and swimming on gene expression in rats with tibialis anterior muscle injury. *Lasers Med Sci* 36(7): 1379-1387.
14. Greulich KO (2011) Photons bring light into DNA repair: the comet assay and laser microbeams for studying photogenotoxicity of drugs and ageing. *J Biophotonics* 4(3): 165-171.
15. Bedathuru D, Rengaswamy M, Channavazzala M, Ray T, Packrisamy P, et al. (2024) Multiscale, mechanistic model of Rheumatoid Arthritis to enable decision making in late stage drug development. *Rheumatology* 63(1): 12-20.
16. Andreis DT, Singer M (2016) Catecholamines for inflammatory shock: a Jekyll-and-Hyde conundrum. *Intensive Care Med* 42(9): 1387-1397.

ISSN: 2574-1241

DOI: 10.26717/BJSTR.2025.62.009724

James Z Liu. Biomed J Sci & Tech Res



This work is licensed under Creative Commons Attribution 4.0 License

Submission Link: <https://biomedres.us/submit-manuscript.php>



Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles

<https://biomedres.us/>