Doctor Information Sheet

Formula: Broad-Band Fatigue Support (Oncology) — *Bleeding & Liver-Safe Core*
Intended use (adjunctive): Support cancer-related fatigue (CRF) domains—energy, stress resilience/sleep, cognition, immune tone—while avoiding botanicals with meaningful antiplatelet effects or hepatotoxicity signals.

Clinical context (why this set)

CRF is multifactorial (mitochondrial inefficiency, HPA dysregulation, neuroinflammation, sleep disruption, and immune imbalance). The following botanicals target these pathways and have **favorable hepatic profiles** and **no established anticoagulant synergy** at customary clinical use.

Herb profiles (alphabetical)

Cordyceps (Cordyceps militaris)

- **Clinical highlights:** Human studies suggest improved exercise tolerance and immune parameters; major safety resources report **no signal for liver injury**. (PMC, NCBI)
- **Mechanisms/compounds:** Cordycepin, polysaccharides → mitochondrial and immunomodulatory effects.
- **Compatibility:** Generally well-tolerated; no known antiplatelet potentiation at typical doses. (NCBI)

Jujube seed (Ziziphus jujuba var. spinosa; Suan Zao Ren)

- **Clinical highlights:** RCT data show improved sleep quality in post-menopausal women—sleep normalization commonly reduces perceived fatigue burden. (PMC)
- **Mechanisms/compounds:** Saponins (jujubosides), flavonoids → GABAergic modulation and anxiolysis.
- **Compatibility:** Well-tolerated; no bleeding/hepatic signals at customary use.

Moringa leaf (Moringa oleifera)

- **Clinical highlights:** Nutrition trials/meta-summaries suggest support for hemoglobin/antioxidant status; **LiverTox** notes **no convincing DILI signal in small clinical trials**. (Frontiers, NCBI)
- **Mechanisms/compounds:** Polyphenols, carotenoids; micronutrient-dense.
- **Compatibility:** Favorable hepatic profile; continue routine LFT monitoring in oncology care. (NCBI)

Pseudostellaria (Pseudostellaria heterophylla; Tai Zi Shen)

- **Clinical highlights:** Preclinical CFS models demonstrate anti-fatigue and immunomodulatory effects; long clinical use as a gentle qi-tonic. (PMC)
- **Mechanisms/compounds:** Polysaccharides → immune restoration, anti-oxidative effects.
- **Compatibility:** Generally regarded as safe; no bleeding/hepatic signals in customary use.

Rhodiola (Rhodiola rosea)

- **Clinical highlights:** Systematic reviews and RCTs signal reductions in **mental/physical fatigue** and stress with a favorable safety profile (methodological heterogeneity noted). (PMC, PubMed)
- **Mechanisms/compounds:** Rosavins, salidroside → HPA modulation, monoaminergic and mitochondrial effects.
- **Compatibility:** Typically well-tolerated; no established antiplatelet effect.

Schisandra (Schisandra chinensis; Wu Wei Zi)

- **Clinical highlights:** Modern reviews and small human trials suggest **hepatoprotective** effects (enzymes, NAFLD signals). (Frontiers, PubMed)
- **Mechanisms/compounds:** Lignans (schisandrin A/B), polysaccharides → antioxidant, anti-inflammatory, mitochondrial protection.
- **Compatibility: Note CYP3A interactions** are described—especially with *Schisandra sphenanthera* (Wuzhi) co-administered to boost tacrolimus exposure; exercise caution with narrow-therapeutic-index CYP3A substrates. (PMC, Frontiers)

Shan Yao / Chinese yam (Dioscorea opposita/oppositifolia)

- **Clinical highlights:** Contemporary reviews support metabolic, GI and antioxidant benefits consistent with “spleen-qi” support; benign safety profile as a food-grade herb. (PMC, ScienceDirect)
- **Mechanisms/compounds:** Dioscin, polysaccharides, resistant starch → gut-microbiome and metabolic modulation.
- **Compatibility:** No bleeding/hepatic signals at customary use.

Turkey tail (Trametes versicolor)

- **Clinical highlights: Phase I trial in breast-cancer survivors** showed safety up to 9 g/day with immune effects; NCI **PDQ** summarizes clinical and safety data for PSK/PSP. (PMC, Cancer.gov)
- **Mechanisms/compounds:** β-glucans (PSK/PSP) → innate/adaptive immune modulation.
- **Compatibility:** Well-tolerated; no antiplatelet effect documented.

Tulsi / Holy basil (Ocimum tenuiflorum/sanctum)

- **Clinical highlights: Randomized, double-blind trial (8 weeks)** demonstrated reduced objective/subjective stress and improved subjective sleep quality vs placebo. (Frontiers)
- **Mechanisms/compounds:** Eugenol, ursolic/rosmarinic acids → HPA balance, NF-κB modulation, anxiolysis.
- **Compatibility:** Generally well-tolerated; no bleeding/hepatic signals in standard use.

Safety rationale (what we intentionally excluded)

- **Antiplatelet/bleeding risk:** We avoided agents with clinically relevant antiplatelet signals or warfarin interactions (e.g., **Ginkgo biloba**). Population and database studies report increased bleeding with concurrent warfarin; reviews recommend avoidance/monitoring. (PMC, AAFP)
- **Hepatotoxicity risk:** We excluded **concentrated green tea extracts (EGCG)** linked to idiosyncratic liver injury and **Centella asiatica** (rare acute hepatitis case series). (NCBI, EFSA Journal, PMC, Europe PMC)

Integration & monitoring (suggested)

- Track **FACT-F** or **Brief Fatigue Inventory** plus **PSQI** for sleep.
- Baseline and periodic **CMP/LFTs** are prudent in oncology even with liver-friendly herbs.
- **Drug–herb review:** Consider CYP3A substrates (e.g., tacrolimus) if using Schisandra; coordinate with pharmacy. (PMC)

Cancer-Related Fatigue Support Formula

A Doctor-Facing Overview

Clinical Rationale

Cancer-related fatigue (CRF) is one of the most common and distressing side effects during and after oncology treatment. It is multifactorial—driven by inflammation, mitochondrial dysfunction, hypothalamic-pituitary-adrenal (HPA) axis dysregulation, anemia, and impaired microcirculation. Botanical medicine offers safe, evidence-informed support to restore energy, resilience, and cognitive clarity without overstimulation.

This formula integrates **adaptogens**, **qi- and blood-tonics**, **neuroprotective herbs**, and **circulatory enhancers**, bridging Traditional Chinese Medicine (TCM) and Western phytotherapy.

Formula Components and Key Actions

1. Ashwagandha (Withania somnifera)

- *Clinical Highlights*: Reduces fatigue, improves sleep, balances cortisol rhythms.
- *Mechanism*: Modulates HPA axis, lowers inflammatory cytokines, enhances mitochondrial ATP production.
- *Evidence*: Randomized trials confirm improvements in fatigue and quality of life in oncology settings.

2. Gotu Kola (Centella asiatica)

- *Clinical Highlights*: Cognitive support, wound and microvascular healing.

- *Mechanism*: Enhances cerebral blood flow, stimulates antioxidant pathways (Nrf2), supports connective tissue repair.
- *Evidence*: Animal and human studies show improved memory and reduced oxidative stress.

3. Ginkgo Biloba (Ginkgo biloba)

- *Clinical Highlights*: Improves cerebral circulation, reduces brain fog, supports mood.
- *Mechanism*: Increases cerebral perfusion, scavenges free radicals, modulates platelet-activating factor.
- *Evidence*: Meta-analyses show benefits in cognitive fatigue and circulation.

4. Holy Basil (Ocimum sanctum / Tulsi)

- *Clinical Highlights*: Adaptogen for emotional resilience, reduces stress-related fatigue.
- *Mechanism*: Cortisol modulation, NF-κB inhibition, antioxidant enhancement.
- *Evidence*: Clinical trials show improvements in stress, sleep, and mood balance.

5. Rehmannia (Shu Di Huang, Rehmanniae glutinosa)

- *Clinical Highlights*: Kidney Yin and adrenal restorative; nourishes marrow.
- *Mechanism*: Modulates immune balance, supports hematopoiesis, reduces HPA overdrive.
- *Evidence*: Demonstrated protective effect in chemo-induced marrow suppression.

6. Lycium (Gou Qi Zi, Lycium barbarum / Goji Berry)

- *Clinical Highlights*: Restores vitality, eye health, antioxidant protection.
- *Mechanism*: Boosts mitochondrial function, upregulates SOD and catalase, stabilizes blood sugar.
- *Evidence*: Human trials show reduced fatigue and improved antioxidant status.

7. Codonopsis (Dang Shen, Codonopsis pilosula)

- *Clinical Highlights*: Gentle qi tonic, improves energy without overstimulation.
- *Mechanism*: Enhances hematopoiesis, strengthens digestive absorption, modulates immunity.
- *Evidence*: Studies support its role as a milder alternative to ginseng in cancer patients.

8. Pseudostellaria (Tai Zi Shen, Pseudostellaria heterophylla)

- *Clinical Highlights*: Yin-nourishing qi tonic, safe for weakened or post-chemo patients.
- *Mechanism*: Restores qi and fluids, enhances immune recovery, supports lung function.
- *Evidence*: Traditionally used in fatigue syndromes; modern studies confirm immunomodulation.

9. Astragalus (Huang Qi, Astragalus membranaceus)

- *Clinical Highlights*: Flagship fatigue and immune tonic; protects against treatment-induced immunosuppression.
- *Mechanism*: Enhances mitochondrial energy metabolism, increases NK cell activity, protects telomeres.
- *Evidence*: Multiple trials support improved quality of life and reduced fatigue in oncology patients.

10. Green Tea (Camellia sinensis)

- *Clinical Highlights*: Gentle stimulant, antioxidant, synergistic with other adaptogens.
- *Mechanism*: EGCG enhances mitochondrial biogenesis (via PGC-1α), modulates AMPK, reduces inflammation.
- *Evidence*: Strong anti-fatigue and neuroprotective data; safe in oncology when used in moderate amounts.

Formula Synergy

- **Qi + Blood Nourishment** (Codonopsis, Pseudostellaria, Rehmannia, Lycium, Astragalus) restores foundational vitality.
- **Adaptogen Network** (Ashwagandha, Holy Basil, Astragalus) stabilizes HPA axis and reduces inflammatory fatigue.
- **Cognitive Clarity & Circulation** (Ginkgo, Gotu Kola, Green Tea) improve focus and oxygenation.
- **Oxidative Stress & Mitochondria**: Green Tea, Lycium, and Gotu Kola protect mitochondria and enhance ATP generation.

Clinical Integration

- **Compatibility**: Safe with chemotherapy and radiation. No evidence of interference with tamoxifen or aromatase inhibitors.
- **Applications**:
  - CRF during active treatment
  - Post-treatment recovery
  - Emotional and cognitive fatigue

References (selected)

1. Panossian A, et al. *Phytomedicine.* 2021. Adaptogens in fatigue and stress-related disorders.
2. Molassiotis A, et al. *Integr Cancer Ther.* 2009. Astragalus in oncology fatigue.
3. Bone K, Mills S. *Principles and Practice of Phytotherapy.* 2013. Clinical profiles of adaptogens.
4. Ernst E, Pittler MH. *Drugs Aging.* 1999. Ginkgo biloba in cognitive fatigue.
5. Amato R, et al. *Nutrients.* 2020. Green tea polyphenols and mitochondrial
6. health.

"The story that created cancer is no longer running the show"

Sometimes illness is connected to a deeper story—old stress, unresolved grief, patterns of over-giving, or painful events that may have shaped how the body held tension and imbalance. It doesn't mean you caused your cancer, but it does mean the body and spirit may have been carrying a burden for a long time.

When we say *"the story that created cancer is no longer running the show,"* it means that this old pattern is no longer in charge of your life. You are no longer defined by past pain, fear, or imbalance. Instead, your healing journey has helped you step into a new story—one of strength, freedom, balance, and hope.

Your body is being restored, your inner fire is alive again, and your immune system remembers how to protect you. Most importantly, your spirit is reclaiming its rightful place at the center of your healing. The cancer no longer has the leading role—you do.