# Essiac and Cancer: What Does the Research Say?

Proponents claim that Essiac tea is a cancer cure. It's used as an alternative cancer treatment and discussed in many cancer forums. Skeptics are quick to say that there's no proof it has any effect on cancer and that endorsing its use in cancer patients is dangerous. But what does the actual research say? Who is right? Read on as we dive deep into the scientific and historical data to uncover the truth.

Disclaimer: This article is for informational purposes only. Please discuss your health concerns with your doctor. The FDA has not approved Essiac for treating cancer or any other medical condition. Essiac is sold as a herbal dietary supplement.

### An Overview of Essiac and Cancer

### Summary

- Essiac tea is a four-ingredient herb mixture from Canada
- There is not enough clinical trial data to support the use of Essiac tea in cancer patients
- Essiac has anti-cancer potential based on preclinical studies and case reports
- More research is needed to assess the potential benefits and side effects of Essiac on people with cancer
- Cancer patients should consult their doctor before use

## Who uses Essiac tea and why?

People use Essiac either as a health tonic, cleanse, or complimentary add-on to treatment for various health conditions.

Proponents say Essiac tea can help eliminate toxins from the body, reduce inflammation, boost antioxidant defense, and support immunity.

#### People with cancer use Essiac because they want to:

- Strengthen their immune system
- Feel better
- Increase appetite
- Reduce chemotherapy or radiation side effects
- Control or cure their cancer

If you're not familiar with Essiac tea, read more about its uses, ingredients, and potential benefits in this unbiased review.

Most cancer patients use Essiac in addition to conventional treatment. Others turn to Essiac in end-stage disease when no other medical intervention is available to them.

A minority of cancer patients take Essiac or other alternative treatments in place of conventional therapy. Cancer centers and institutions warn about using alternative cancer treatments in place of approved ones.

The U.S. Food and Drug Administration (FDA) has not approved Essiac for treating cancer or any other medical condition. Essiac is classified and sold as a dietary supplement. The FDA regulates dietary supplements as foods, not drugs. Manufacturers are responsible for ensuring that the product is safe and that the label claims are truthful and not misleading.

## Why is Essiac use so controversial?

Ever since Rene Caisse popularized its use about 100 years ago, Essiac has been a polarizing topic in the world of alternative and complementary cancer treatments.

Since no alternative cancer treatments have received FDA approval, their use is considered highly controversial. They've been called "pseudo cures," "snake oil," "fake cancer cures," and dismissed as quackery.

Many bogus treatments do fall into this category. But legitimate natural products that warrant further investigation for their anticancer potential or other health benefits end up in the same bucket. The baby gets thrown out with the backwater. Sadly, this makes any further scientific research and discussion difficult.

For example, the existing Wikipedia page on Essiac that readers will see on the first page of Google states that the FDA described Essiac as a "Fake Cancer 'Cure' Consumers Should Avoid." Yet, this is an incomplete fact.

The FDA did make a list of fake cancer cures on <u>this page</u>, but only one highly questionable Essiac manufacturer (Christopher Gussa, Plant Cures Incorporated) is on it. No other Essiac formulas, including the ones from Canada, are listed.

## Why you need to do your own research

Always check the sources of each claim about Essiac that you find online. Even credible sources can make mistakes, which is why it's important that you do your own research.

Skeptics also point out that manufacturers tend to misinterpret scientific, historical, and anecdotal data for marketing purposes.

No credible company will claim that Essiac can cure cancer.

However, many conventional sources are afraid to talk about promising preclinical research and unpublished data simply because Essiac has been linked with unfounded cancer claims. These

sources tend to overemphasize failed and contradictory studies and downplay studies showing antitumor potential. This is another form of bias.

For all these reasons, Essiac use remains so controversial even one century after its first mention.

We strongly believe that the data on Essiac and cancer should be analyzed in an unbiased manner and made available to everyone. We encourage you to read through each reference we bring up in this article and decide for yourself.

### Rene Caisse and early Essiac uses

According to historical records, Rene Caisse first heard about Essiac in 1922 while she was working in a hospital in Ontario (please see LeMoine, 1997 as a reference for this section).

Caisse began to offer the herbal formula to terminal cancer patients for whom there were no medical interventions. The first to receive it was her aunt in 1924, who allegedly lived for another 21 years.

Dr. Fisher, her aunt's doctor, took an interest in the treatment. He and Caisse began to administer Essiac to patients who didn't qualify for any medical treatment. Over the next few years, Caisse's work started gaining recognition from medical doctors.

She also started getting the attention of health authorities, which first charged her with practicing medicine without a license. They let her continue her work once they realized that she was only offering the herbal formula to terminal cancer patients who had no other options.

She treated many patients in the 1930s, first at her home in Toronto and then at the Bracebridge clinic (an old hotel that was turned into a cancer clinic).

However, it wasn't until the mid-70s that the first official research on Essiac took place. This was shortly before Caisse died in 1978. One year prior, she sold the original formula to the Resperin Corporation for one dollar in the hope that it would be properly researched after her death.

## **Unpublished Essiac Research (A Critical Overview)**

## Interpreting Flawed Study Findings

Skeptics are quick to point out that the unpublished preclinical and clinical trials of Essiac were a failure. Yet, the data are inconclusive. Human trials were either stopped by government authorities or kept hidden from the public.

If you're more interested in the published cancer studies, jump ahead to this section.

The 1930s-1970s

**Human studies from the '30s and '40s are rarely mentioned**, although there are records of doctors describing good results with Essiac on over 400 patients (<u>LeMoine, 1997</u>).

In 1938, Canada's Health Minister established a commission for investigating unproven cancer treatments. The commission concluded that some benefits were noted with Essiac but the evidence wasn't strong enough to approve it as a remedy for cancer (<u>LeMoine</u>, 1997).

Official animal studies were first done in the mid-'70s at the Memorial Sloan-Kettering Cancer Center (MSKCC), but **the mixture they used was likely not properly prepared**. These studies found no effect on cancer or immunity (<u>PDQ</u>, 2015; <u>LeMoine</u>, 1997).

Many sources don't mention that Caisse discovered the researchers were freezing instead of boiling the mixture. She refused to supply the cancer center with more herbs afterward (<u>LeMoine</u>, 1997).

All subsequent studies were conducted after Rene Caisse's death.

The early 1980s

Clinical studies in the '80s were run by the company Caisse sold the formula to.

**Again, the research was faulty**, being guilty of variable production of Essiac batches, breaking clinical trial rules, and a lack of transparency. The government stopped the trials before completion. Yet, their incomplete study results are often used to interpret the effectiveness of Essiac in humans (PDQ, 2015; LeMoine, 1997).

Researchers at MSKCC tested Essiac again in 17 animal studies in the '80s and purportedly found no anticancer activity. The results were never made available to the public and the exact samples used were never specified (PDQ, 2015).

The National Cancer Institute (NCI) tested liquid Essiac in 1983 and reported no anticancer activity. Allegedly, very high doses killed the animals. These results were never published either (PDQ, 2015).

Around the same time, the Canadian government reviewed case studies written by doctors on 86 cancer patients who had taken Essiac. They concluded that it was unclear whether the improvements in the patients' conditions were caused by Essiac or something else (PDQ, 2015).

The late 1980s

In the late 1980s, Canadian health officials allowed family practitioners to supervise Essiac treatment in terminal cancer patients. From their reports, Health Canada concluded that "no

clinical evidence exists to support claims that Essiac is an effective treatment for cancer" (LeMoine, 1997).

The results of this attempt were published in a 1989 statement titled "Essiac - an ineffective cancer treatment." This document also notes that Essiac isn't harmful as long as it's not taken in place of approved treatments and that it may have positive psychological effects. In turn, Health Canada allowed for Essiac to be used on compassionate grounds (<u>LeMoine</u>, 1997).

This family-physicians study has been criticized. Richard Thomas, a journalist, claims that the participating doctors weren't able to get Essiac when they needed it and that the quality of the product was unpredictable. He also states that the doctors didn't seem to keep proper patient records, weren't monitored, and some didn't get a chance to send in their results (<u>LeMoine</u>, 1997).

Health Canada recognized the study's limitations. Critics have questioned the government's rationale in making statements about the effectiveness of Essiac based on faulty research.

#### Summary

To sum it up, findings from unpublished human and animal studies are still unclear. The data are low-quality, flawed, unverified, and biased, and insufficient to properly assess the effectiveness of Essiac.

Many books discuss these and other historical documents. Have in mind that all archive records are unverified and can be interpreted in various ways. That's why the proper, peer-reviewed, published scientific data on Essiac are so important.

## A Gap in the Research

Further research came to a standstill until the 2000s. Only in 2004 did a lab study at Indiana University-Purdue University report that Essiac slowed the growth of prostate cancer cells. This marks a new era of published Essiac research. Several other animal studies were published soon after (Ottenweller et al., 2004).

In 2007, a clinical trial of 20 women undergoing treatment for breast or ovarian cancer aimed to evaluate whether Essiac can improve the overall quality of life. The results were never published (ClinicalTrials.gov).

Some reputable web sources falsely claim that there have been no published research studies on Essiac since 2007.

Yet, one of the best animal studies on Essiac was published in 2018. Another important study of Essiac on roundworms and 5 cancer cell lines was published in 2021 (<u>Kabeel et al., 2018</u>; <u>Ruiz et al., 2021</u>).

## **Essiac Tea Cancer Research (Published Data)**

#### Scientific Review

A scientific review of the published research concluded that high-quality clinical trials are lacking to back up Essiac's traditional uses. One incomplete clinical trial and one review of reports on cancer patients who took Essiac have been published (Ulbricht et al., 2009).

Evidence from case reports, lab and animal studies is inconclusive but warrants discussing Essiac's use for cancer. Interpreting the data is challenging since different Essiac preparations are noted in the literature (Ulbricht et al., 2009).

#### Small Human Studies:

### 1) Cancer Patients General Survey

One study sent out a survey to North American Flor-Essence consumers in 1998 and 1999. Out of 5051 users, 1,577 were cancer patients included in the study; 85.3% took and 36.8% were currently taking conventional medicine for breast, prostate, or lung cancer (Richardson et al., 2000).

Over half of cancer patients reported symptom improvement. Most used the tonic long term (~44% for over a year, ~16% for 6 to 12 months).

About 71% of cancer patients rated the benefits as very good/excellent, while 27% found them okay. Less than 3% rated the perceived benefits of the tonic as poor.

Patients who reported **positive effects** said they experienced the following:

- Feeling better (53.2%)
- No cancer progression (40.6%)
- Able to carry out daily activities (34.0%)
- More energy/less fatigue (30-31.5%)
- Coping better with the disease (26.3%)
- Improved cancer symptoms (22.3%)
- Perceived cancer cure (16.2%)
- Improved appetite (15.0%)
- Less nausea (8.4%) and vomiting (4.1%)
- Less pain (11.6%)

Around 6.6% of patients experienced adverse events. These included the following:

- Diarrhea (1.9%)
- Constipation (1.2%)
- Nausea (1.1%)
- Fatigue (0.9%).

Although the majority mentioned using the tonic with their physicians, about a tenth exceeded the recommended dose.

All in all, most cancer patients expected the tonic to support their immune system and improve survival and quality of life. Since the majority subjectively felt better from the tonic but scientific evidence to support its use is lacking, further controlled clinical trials are critical.

### 2) Breast Cancer

Canadian survey finds no link, received with criticism

A Canadian survey study of 510 women with breast cancer did not find a link between the use of Essiac and improvements in quality of life or mood. Essiac users reported beneficial effects, and only two women reported minor adverse events (<u>Zick et al., 2006</u>).

About 8% of women diagnosed with breast cancer used Essiac. Surveyed women took Essiac wanting to feel better, reduce the side effects of conventional breast cancer treatment, and stay healthy as cancer survivors. Few side effects were reported (Zick et al., 2006).

Yet, this study has seen a fair amount of critique.

For one, **Essiac nonusers had less developed cancer** (44% were stage I) than Essiac users (only 29% were stage I—see table below).

Also, **most Essiac nonusers didn't yet undergo chemotherapy**, unlike Essiac users with more advanced disease

That means that these two groups likely couldn't have been properly compared to start with. Also, only 41 out of 510 patients were Essiac users, making statistical analysis somewhat unreliable.

| Characteristics                       | Essiac nonusers $(N = 469)^a$ | Essiac users $(N = 41)^a$ |
|---------------------------------------|-------------------------------|---------------------------|
| Stage at diagnosis, no. (%)e          | .,                            |                           |
| Stage I                               | 207 (44)                      | 12 (29                    |
| Stage II                              | 109 (23)                      | 15 (3)                    |
| Stage III                             | 57 (12)                       | 6 (1:                     |
| Stage IV                              | 5 (1)                         | 2 (5)                     |
| Freatments for breast cancer, no. (%) |                               |                           |
| Surgery                               | 429 (91)                      | 36 (88                    |
| Radiation                             | 312 (67)                      | 31 (70                    |
| Tamoxifen                             | 245 (52)                      | 19 (40                    |
| Chemotherapy <sup>b</sup>             | 198 (42)                      | 28 (68                    |

Table excerpt taken from Zick et al., 2006

In response to the study's design, Suzanne Diamond of the American Botanical Council commented the following (HerbClip News, 2007):

"Comparing women with early stage cancer who had not undergone chemotherapy with late stage cancer patients who were suffering the devastating effects of their late stage cancer compounded by their harsh chemotherapy cancer treatments and then noting that ESSIAC doesn't improve HR-QOL or mood states based on comparisons between these two disparate groups is very misleading."

Therefore, we are yet to see unbiased, well-designed Essiac studies in cancer patients.

Cellular study showed breast cancer growth, implications for humans unknown

Both Flor-Essence and Essiac stimulated the growth of breast cancer cells isolated from human breast tumors in one test-tube study. The formulations had the same unwanted effect on both estrogen receptor (ER) negative and positive cells. However, Flor-Essence had a stronger estrogen-like effect than Essiac (Kulp et al., 2006).

Let's take a closer look at this study's design and results.

"Low" concentrations (1% to 8% Essiac) increased the growth of breast cancer cells 1.2- to 2.1-fold after 24 hours. A "medium" concentration of 4% had the same effect after 24 hours.

An interesting finding is that 72 hours after Essiac treatment, most breast cancer cells seemed to shrink closer to their pretreatment number. We don't know what would've happened to these cells with more time and treatment.

Also, high doses (16%) didn't have a significant effect on cancer cell growth, while mega doses (32%) were toxic to all cells.

There are no reports of Essiac worsening breast cancer in humans or animals.

#### What are the limitations of this cellular study to have in mind?

**Dosage**: Researchers used 1-32% concentrations of the tonics directly on cells. It's unknown how these concentrations would translate to human doses. It's equally unknown how exposing cells to a mixture once can be compared to long-term use in humans.

**Time**: In cellular-study language, 72 hours is considered "chronic exposure." Yet, we know that most cancer patients use Essiac for years. We know that often cancer takes years to develop, and it often takes months (if not years) to see the results of any cancer treatment.

**Human metabolism**: Let's also remember that Essiac likely goes through some enzymatic and metabolic changes in the human body (as all herbs, supplements, and medications do). These metabolic changes could activate or deactivate certain active compounds, which may be relevant to breast cancer.

**Target tissues**: A certain active compound may be able to penetrate into one type of tissue in the live human body and not into another. Active compounds may concentrate in some tissues and move through others.

All the factors above are specific to living beings and can't be observed in cells.

**Replicability**: This study has not yet been replicated. Replicated findings are a sign of robust findings in science.

2021 study

A 2021 study discovered that exposure to higher concentrations of Essiac liquid extract exposure was associated with **reduced cell proliferation in breast, prostate, myeloma, lymphoma, and leukemia cancer cells** (Ruiz et al., 2021).

The study used three different models to assess the effects of Essiac on cancer cell survival and division. Exposure to 24% Essiac over 48 hours reduced the division of all five cancer cell lines. This antiproliferative effect was maintained over a 72-hour exposure period (Ruiz et al., 2021).

Summary

To sum it up, we don't know whether Essiac has positive or negative effects on breast cancer based on the existing findings. Controlled human studies are needed.

#### Case Studies:

Case studies are considered weak scientific evidence. They can be useful to clinicians and health enthusiasts for keeping track of unusual cases that may otherwise pass unnoticed. However, case studies can't be used to assess the health benefits and side effects of any supplement.

## 3) Pancreatic cancer

Pancreatic adenocarcinoma is considered deadly. Most patients live under 2 years past diagnosis, while the 5-year survival rate is less than 5% (Gralow et al., 2018).

One case report describes a 73-year-old man in Utah who was diagnosed with advanced-stage pancreatic adenocarcinoma. The patient wasn't a candidate for surgery. He started conventional radiation and chemotherapy but withdrew after 7 months because he couldn't tolerate the side effects (Smiley et al., 2016).

He then turned to self-medication with herbal remedies. Shortly after withdrawing from the chemotherapy trial, **he began long-term daily supplementation with Protandim and Essiac Tea**. Protandim is an antioxidant herbal dietary supplement.

Doctors checked upon him for 3 years, after which he was lost to follow-up. Unexpectedly, he appeared at the facility with abdominal pain 8 years after his initial diagnosis. That's when the doctors did a CT scan and found no evidence of pancreatic cancer.

This man is considered to be the longest known pancreatic cancer survivor who didn't undergo surgery to have cancer removed.

The authors point out that caution should be exercised in drawing conclusions about the efficacy of Essiac tea based on this case study but that clinical trials are warranted.

### 4) Prostate cancer

One Canadian report describes the case of a 64-year-old man whose hormone-refractory prostate cancer responded well to Essiac tea (Al-Sukhni, 2005).

The patient was diagnosed with prostate cancer in 1999 and treated conventionally with Casodex, a drug that blocks male hormones.

His prostate-specific antigen levels (PSA—a tumor marker) went down after 4 months, but the patient stopped responding to the treatment soon after. His cancer grew. After 21 months of treatment, his PSA tumor marker levels also went up significantly (to 87.19 ng/mL).

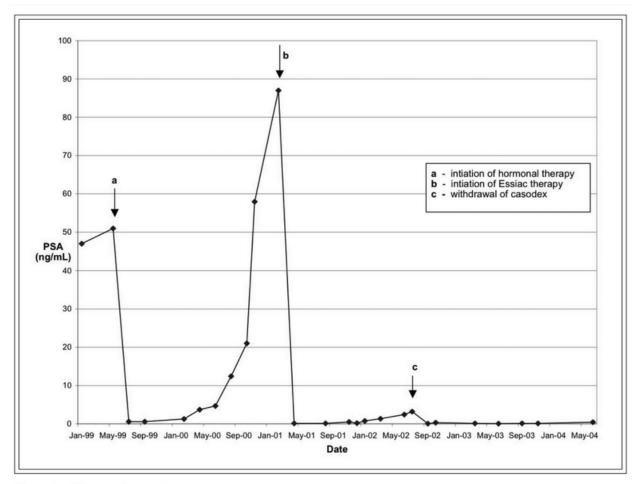


Figure 1. PSA trend over time.

At that point, he began to drink Essiac tea (2 oz, once or twice daily) and experienced a rapid drop in PSA (to 0.12 ng/mL). His results are presented in the figure above. In July 2002, his PSA level rose a bit (to 3.21) and doctors decided to take him off drug treatment. His PSA dropped. In 2005, he remained in good health with low PSA levels.

The author didn't want to jump to any conclusions based on this case but stresses that clinical studies would be essential.

Studies on prostate cancer cells yielded conflicting results. In one cell-based study, Essiac tea extracts blocked prostate tumor cell growth while enhancing the immune response. Yet, in another study, Essiac has **no effect on prostate tumor progression** in cells or mice compared to standard chemotherapy (paclitaxel) (Ottenweller et al., 2004; Eberding et al., 2007).

The most recent study once again suggests cancer-fighting effects of Essiac on prostate cancer cells (Ruiz et al., 2021).

All in all, there's not enough evidence to say whether Essiac can be helpful for prostate cancer patients.

### 5) Lung Cancer

One case report describes spontaneous regression in an 84-year old woman with advanced non-small cell lung cancer and early-stage breast cancer. The patient was diagnosed in 2009 and told that no treatment is indicated for her progressive condition (Gladwish et al., 2010).

She continued to show up for routine follow-ups and the doctors were surprised to observe a spontaneous reduction in lung tumor size. The patient then started taking Essiac tea. Her tumor continued to shrink. As her lung cancer greatly improved, doctors started her on breast cancer chemotherapy in 2010 (Arimidex).

The patient continues to take one serving (4 oz) of Essiac daily.

It's uncertain what contributed in this case, since the patient's tumor already started shrinking in June 2009, while she started taking Essiac in September 2009.

Preclinical Studies (Animals & Cells):

Clinical evidence is lacking to support the use of Essiac for any of the conditions listed below. The existing animal and cell-based research is outlined to direct future research but cannot be interpreted as supportive of any health benefit.

#### Leukemia & Other

In one cellular study, both Essiac and Flor-Essence stopped human cancer cells from dividing, but only at high doses. Essiac had somewhat of a stronger effect than Flor-Essence

at the same concentrations. The authors concluded that further research in animals and humans is needed (<u>Tai et al.</u>, 2004).

In a recent study on mice with leukemia, a water extract containing the four Essiac herbs (with sorrel leaves, *not* roots) **recovered weight loss and normal blood markers**. Essiac improved total white blood cells (WBC), lymphocyte and neutrophil counts. It had a stronger effect than a neutral carrier. The mixture also decreased abnormal leukemia blood cells by two-thirds (<u>Kabeel et al., 2018</u>).

Essiac liquid extract reduced the proliferation of myeloma, lymphoma, and leukemia cancer cells in the most recent cellular experiment. These cancers are classified as "non-adherent" since they can grow without being attached to a surface. This was the first study to explore the effects of Essiac on myeloma and leukemia cells (B-cell myeloma and Chronic Myeloid Leukemia) (Ruiz et al., 2021).

People have also reported giving Essiac to pets with lymphoma, but further studies are lacking to support them.

According to cell-based experiments, high concentrations of Essiac contain **antioxidants that protect against DNA damage** (<u>Leonard et al., 2006</u>).

Antioxidants support general wellness and may play a role in cancer and chronic disease prevention. Antioxidant and DNA-protective activity is common to natural anti-cancer agents, but human studies are lacking to confirm the clinical benefits (Willcox et al., 2004).

Essiac is also being investigated for balancing and strengthening the immune response in cells (Seely et al., 2007).

## **Special Precautions in Cancer Patients**

Cancer patients should consult their doctor before using Essiac tea or any other dietary supplement to avoid drug and disease interactions.

You can read more about the potential side effects and drug interactions of Essiac tea in this post.

If you want to learn about using Essiac alongside chemotherapy, go here.

### In Conclusion

Despite its long history of use, many questions about Essiac tea and cancer remain unanswered.

Several case reports and animal experiments show promise. Cell-based research reports conflicting findings. Unpublished research remains unclear and biased. And, above all, no proper clinical trials in people with cancer have yet been carried out.

To sum it up, there is not yet enough evidence to recommend Essiac tea to cancer patients. Limited data suggest that Essiac may have positive psychological effects and support general health.

Essiac is likely safe if used alongside conventional therapy under medical supervision, but drug interactions are possible. Please talk to your doctor before use.