

# Nutrition and Cancer: Salvestrol Case Studies

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## Introduction

Salvestrols are a class of phytonutrients that, in humans, are metabolized by the tumour-specific CYP1B1 enzyme in cancer cells<sup>1-8</sup> to initiate a cascade of processes, including apoptosis, that result in the arrest or decline of the cancer. In this way Salvestrols are natural prodrugs as their activity hinges on activation by CYP1B1.<sup>9,10</sup>

In their natural source Salvestrols form part of a plant's defence mechanism. Some are hydrophilic while others are lipophilic but all are phytoalexins that are elicited by invading pathogens. For example, when a ripe fruit comes under attack by fungus the synthesis of a pathogen-specific Salvestrol is induced. The Salvestrol is synthesized at the site of the attack, typically the skin of the fruit or the root of the plant, and enters the pathogen.

Through our long history of co-evolution with dietary plants we appear to have developed a different defensive use for Salvestrols from our foods. We use them in helping to rid our body of cells that have become cancerous.<sup>10</sup> Unfortunately, our recently introduced processed foods are very low in Salvestrols and other beneficial phytonutrients and this depletion may underlie the ever increasing cancer rate in the developed world. Furthermore, modern agricultural methods

have significantly depleted the Salvestrol levels in our foods making it more and more difficult for us to benefit from this natural anticancer mechanism through diet alone.<sup>12,13</sup>

This natural defence mechanism has a variety of pleasing attributes. First, it is not harmful. The toxins produced through the metabolism of Salvestrols by CYP1B1 are confined to the cancer cells and are exhausted through the destruction of the cell. Second, it is a food-based mechanism that relies solely on enzymatic activation and certain co-factors that should also form part of one's daily nutrition. Third, this mechanism provides a clear and easily understood link between diet and cancer that can serve as an impetus for dietary change. Fourth, CYP1B1 is now widely regarded as a universal cancer marker due to its pervasiveness throughout the various cancers and stages of cancer.<sup>14</sup> Given this universality the same defence mechanism can be used regardless of the oncogenic origin of the cancer.

Our nutritional requirements are complex and a food based rescue mechanism cannot operate in absolute isolation. Consequently, co-factors become important to maximise the effectiveness. First among these is a change in diet towards organic produce. This not only reduces intake of potential cytochrome P450 inhibitors, it supplies an additional host of Salvestrols, beneficial nutrients and cofactors. Second is exercise to provide much needed oxygen for optimal metabolic activity of CYP1B1. Biotin (vitamin H) will stimulate production of CYP enzymes including CYP1B1 while magnesium and niacin will stimulate the Salvestrol activation mechanism. Iron forms the core of the CYP1B1 enzyme and vitamin C serves to preserve Salvestrols from premature

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oxidation as well as potentially supplying CYP1B1 with electrons needed for metabolism. In short, attention to one's nutrition will greatly assist the rescue mechanism.

In this article we report on a variety of case studies to highlight both the impact of dietary change and phytonutrients on the progress of disease and to show the breadth of applicability of this food based defence mechanism. Cases involving lung cancer, melanoma, prostate cancer, breast cancer and bladder cancer are discussed.

Two separate product formulations have been used in these cases: the original high dose formulation will be indicated as having 1,000 Salvestrol points while the new lower dose formulation will be indicated as having 350 Salvestrol points. Salvestrol points constitute a metric of the amount of a given Salvestrol in a capsule. It is estimated that the minimum recommended daily intake to maintain wellbeing is 100 points. An individual with a body weight between 77-84 kg should consume a daily intake of 4200 points as a maximum for therapeutic use.

### **Case #1. Lung Cancer**

A 69-year-old male was diagnosed, via bronchoscopy and confirming pathology, with inoperable, stage 2-3 squamous-cell carcinoma of the lung. A seven-centimetre tumour was detected that was adhering to the sternum and chest wall. Further to this, enlarged lymph nodes were also detected, one of which was approaching 3 centimetres in diameter. This patient was experiencing no pain and had reported to his doctor due to coughing up blood. No chemotherapy or radiation therapies were recommended. He was given a life expectancy of eight to eighteen months and sent home.

This patient immediately commenced a diet of fresh, organic fruit, vegetables and juices. Meat, refined sugar and dairy

products were eliminated from his diet. As diet and lifestyle may well have contributed to his condition dietary change was strongly recommended with an emphasis on organic fruit and vegetables. Along with the dietary change he began taking 12 (350 point) Salvestrol supplements per day, commensurate with his body weight. This comprised six Salvestrol Professional (hydrophilic - 350 point) capsules and six Salvestrol Gold (lipophilic - 350 point) capsules, spread through the day by taking two of each capsule after each of the three daily meals. This level of Salvestrol supplementation was carried out for six weeks.

At the end of the first week of dietary change and Salvestrol supplementation he was no longer coughing up blood. Within three weeks his diagnosis had been changed from inoperable to operable lung cancer requiring removal of one lung. At the end of three weeks a biopsy of the largest lymph node was taken following a PET scan and it was found to be negative. The diagnosis was again changed to operable lung cancer requiring removal of one lobe of the affected lung.

Six weeks after commencement of dietary change and Salvestrol supplementation surgery was performed. Rather than removing the one lobe of the lung as planned, the surgeon simply removed the shrunken tumour and a couple of suspicious lymph nodes. During surgery the tumour was found to be clear of the sternum and chest wall.

Postoperative analysis of the lymph nodes proved that they were not cancerous. This patient was deemed cancer free. Subsequent to the surgery he has reduced the amount of Salvestrol supplementation to six capsules per day, spread across the daily meals and has also maintained a diet rich in organic fruit and vegetables.

### **Case #2. Melanoma**

A 94-year-old woman was diagnosed

with stage 4 melanoma on her foot following a biopsy. At time of diagnosis the woman was unable to walk and black spots had appeared on her body. The cancerous sore had not responded to any treatments that had been provided by her doctor and the nurses at her nursing home prior to diagnosis. The melanoma was deemed to be inoperable as the surgeons felt that a skin graft would be required and that, given the patient's age and condition, the graft was not likely to take. Amputation of the foot would result and chemotherapy would be required. It was determined between the attending physicians and the family not to proceed with the treatment course that had been outlined as the patient was unlikely to survive the treatment. The family asked what alternative procedures might be followed and were told none. She was given a life expectancy of two weeks and returned to the nursing home with her family. The family was advised that if she lived longer than the two weeks she would require morphine to control the pain.

Upon returning home the family started her on a course of Salvestrols. She began to use Salvestrol Gold Cream three times per day on the melanoma. The Salvestrol Gold Cream is a cream infused with the lipophilic Salvestrol found in the Salvestrol Gold supplement (T31G). In addition, a course of Salvestrol supplementation was also started. Four (1,000 point) Salvestrol Gold capsules were taken per day, spread throughout the day for seven months. Subsequently four (350 point) Salvestrol Gold capsules were taken per day. The family also changed her diet from that served at the nursing home to an organic, wholesome diet.

In addition, she was seen by a naturopathic physician and an complementary treatment plan was prescribed:

Anti inflammatory diet (minimal dairy; no tomatoes; no red meat; rice protein in a shake and/or UltraimflammX

as a protein source; substitute berries for sugar and simple carbohydrates; fruit juice); Fish Oils 1 g EPA/day; Modified Citrus Pectin 10 g/day; Quercetin 6 capsules/day; Curcumin 4 capsules / day; Vitamin D<sub>3</sub> 1000 – 1200 IU/day; Reishi 2 g/day; Metagenics-Inflamed/UltraInflam 2 scoops/day; buffered vitamin C up to 10 g/day or to bowel tolerance; IV vitamin C 2 times/week up to 50 g/session.

Contrary to expectation no pain medication was ever required. After a few months the melanoma was healing sufficiently that she was able to put some weight on it. The black spots that had appeared on her body stopped developing further and were contained. A few months later she began walking and was pushing her wheelchair rather than being pushed in her wheelchair. A slow and steady progress was observed.

No contact with physicians was made for a period of one year. After one year elapsed one of the physicians involved in the original diagnosis visited the woman and performed an examination. The melanoma was gone and the foot completely healed. The woman was deemed to be cancer free and it was noted that she had an extremely strong immune system.

At the age of 95 she is now enjoying walks with her friends although not for as great a distance as she once enjoyed. She experiences no pain that could have resulted from her prior melanoma.

### Case #3. Prostate Cancer

A 74-year-old gentleman received a PSA test result indicating a level of 11 ng/ml in the blood following his annual check-up. His previous PSA result had been 4 ng/ml. The consulting surgeon suspected cancer. A follow-up magnetic resonance scan and full body X-ray confirmed a diagnosis of prostate cancer. Surgery or radiation were both ruled out and the patient was prescribed a course of the synthetic hormone leuprorelin ac-

etate (Prostap®) on a quarterly basis. The patient was advised that this treatment would be required for the rest of his life.

Subsequently this gentleman spoke with his cousin, a university lecturer, who told him that one of his students was diagnosed with a terminal cancer of the brain and after taking Salvestrols had proved to her doctors that 'terminal' seemed to be an overstatement. He decided to begin a course of Salvestrol supplementation taking two (350 point) Salvestrol Professional capsules per day.

Six months after receiving his diagnosis his PSA level had dropped to below 1 ng/mL. However, during this time the patient suffered from breast development, complete loss of body hair, impotence and a complete lack of libido as a result of the synthetic hormones. The patient moving to another country necessitated a change of doctors. At this point the patient switched Salvestrol products and began taking one (1,000 point) Salvestrol Professional capsule per day and one (350 point) Salvestrol Professional capsule three times per day. Twelve months after receiving his diagnosis his PSA level had dropped to 0.2 ng/mL.

The new doctor continued with the PSA monitoring and quarterly injections of Lupron® (a different brand of leuporelin acetate). Upon receiving a subsequent PSA test result for this patient the attending physician said that the PSA level received was as low as it could be and asked if the patient was sure that he had not had surgery. Given the physician's surprise that such a result could be attributed to leuporelin acetate alone the patient confessed to taking Salvestrols. The physician then stated that he had a patient that he would like to start on Salvestrols and asked the patient to supply him with background information. The physician decided to 'wean' the patient off of the quarterly Lupron® injections.

This patient has not had a Lupron®

injection for six months and continues to receive PSA test results at the 0.2 ng/ml level. The patient continues to take one (350 point) Salvestrol Professional capsule per day and has embarked on a fitness program and change in diet.

#### **Case #4. Breast Cancer**

A 36-year-old woman sought medical attention after pain in her right side interfered with her ability to carry on with her fitness class. Aggressive, stage 3 breast cancer was diagnosed following mammography and additional medical imaging. The diagnosis was subsequently confirmed through biopsies and blood tests. A 3-5 cm tumour was found under the right breast and a larger tumour was found in an underarm lymph node. The breast tumour looked the size of a golf ball on the image. She was told that her situation was 'really, really serious.' An aggressive treatment plan was devised consisting of eight sessions of chemotherapy (four of intravenous adriamycin one every three weeks plus four of intravenous docetaxol one every three weeks) to be followed by surgical removal of the tumours, radiotherapy and Tamoxifen.

The patient responded to the proposed treatment plan with trepidation but through befriending a woman that was diagnosed the same day with a less aggressive, stage 2 breast cancer, she summoned the courage to commence treatment. Shortly thereafter the chemotherapy sessions began.

Before her second chemotherapy session she learned about Salvestrols and began taking one (1,000 point) Salvestrol Gold capsule per day. Feeling 'rock bottom' at the time she skeptically wondered how on earth these capsules were going to help. Consequently she was very surprised to find that the pain associated with the tumours soon disappeared and the tumours began to shrink quickly. She began to feel that 'she was going to be OK.'

This prompted her to learn more about Salvestrols and after learning more she switched to a completely organic diet and began using organic deodorant, shampoo, soap, etc. This simultaneously minimized her exposure to CYP1B1 inhibitors and increased her intake of Salvestrols and their cofactors.

Prior to her third chemotherapy session she was examined by her oncologist who remarked that she thought that the tumours were gone. Ultrasound and mammography were scheduled to verify and to identify placement of titanium markers to assist the surgeons. To everyone's surprise the radiologist could find no trace of the tumours through ultrasound and only a shadow was visible on the mammogram. They were consequently unable to place the titanium markers.

She told her new friend about Salvestrols and how her tumours appeared to be gone. Her friend preferred to stay the course with the medical professionals she was dealing with. Just after her fifth chemotherapy session she learned that her new friend had died. The death of her new friend and the shock expressed by her medical team at her recent mammography result caused her to lose faith in her physicians. If the physicians were not anticipating such a mammography result with these drugs why were they administering them? At this point she had completed five chemotherapy sessions. She compared the proposed treatment plan to 'Russian Roulette' and refused further conventional treatment. The medical staff tried to barter with her to get her to proceed with radiotherapy. An MRI scan was scheduled. Upon receipt of the results they announced to her that she had 'active cancer cells' although the shadow that had been seen on the prior mammogram was no longer visible. She called another hospital to find out if 'active cancer cells' could be detected through MRI imaging. They replied that

they could not be detected in isolation only inferred by the presence of a shadow or tumour. Her medical team argued that she should proceed with radiotherapy and surgery although no tumours were present. She declined.

Concerned about the wear and tear on her body from the chemotherapy she increased the dosage of Salvestrol supplementation to include one capsule per day of Salvestrol Professional (350 point). Almost immediately after she increased the dosage her periods resumed. Four months after refusing further chemotherapy her hair had grown back and she reported that she looked and felt wonderful. Presently, she actively assists people with cancer in their struggle to regain their health.

#### **Case #5. Bladder Cancer**

A 55-year-old male presented to his physician with blood in his urine. He was diagnosed with superficial bladder cancer following a cystoscopic examination of his bladder. Hundreds of small tumours were found. The treatment consisted of scraping the cancerous tissue away. Cystoscopic examinations were scheduled at six month intervals to monitor disease progression and to perform subsequent scraping of further cancerous tissue. No other form of treatment was prescribed. This cycle of cystoscopic examination and scraping every six months was carried on for six years before this gentleman learned about Salvestrols.

Upon hearing about Salvestrols he began taking one (1,000 point) Salvestrol Gold capsule per day and three (1,000 point) Salvestrol Professional capsules per day. The four capsules were taken at different times throughout the day to maintain a consistent level of salvestrols in the blood stream. This gentleman did not engage in any dietary change, lifestyle change and did not include any other supplements or treatments into his daily regimen.

Five months after starting the Salvestrol regimen a cystoscopic examination was scheduled. No tumours or cancerous tissue were found and he was deemed to be cancer free. Shortly after he stopped taking Salvestrols. One year after being declared cancer free a tumour was located in his kidney.

It can be very difficult to determine the full extent of one's cancer and tumours can be missed. Given this it is important to continue taking a maintenance level of Salvestrols after being given the 'all clear' to ensure that undetected metastases are dealt with. This gentleman has now received further Salvestrols to resume his regimen.

### Conclusion

These cases help to illustrate the role of nutrition in cancer. Salvestrols and the CYP1B1 enzyme form a food based rescue mechanism that spans the full array of cancers regardless of oncogenic origin. As a food based rescue mechanism it relies on food based nutrients to serve as cofactors to facilitate the beneficial reaction. Combining Salvestrol supplementation with dietary change can provide positive outcomes for patients. For patients that have recovered from cancer incorporating this food based rescue mechanism into their daily nutrition by way of dietary change or supplementation is well advised.

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