

# **The Role of Salvestrols in the Management of Cancer Patients at the Schachter Center in New York**

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# Disclaimer

- According to federal law, the Federal Food & Drug Administration is responsible for determining claims for any substance used to treat, prevent or mitigate any disease or condition, such as cancer
- No such claims are being made during this lecture
- Information from this lecture is purely for informational purposes and no claims are being made

# Conflicts of Interests

- At our Center, we do have a dispensary from which we offer patients the option of buying supplements that are recommended.
- They are free to buy most of these supplements elsewhere, such as at a Health Food Store or on the Internet
- Among the supplements, we recommend are Salvestrols, which are discussed in this lecture
- Patients may also purchase most of the recommended supplements online
- On Xymogen Board of Advisors & minor stock holder, but Xymogen products not mentioned in this lecture

# References Available from Reference List and from Websites

- References for this lecture are available from the reference list provided with this lecture. Numbers of references on slides refer to the number on the reference list
- Many references are linked to websites
- Some references are on some slides
- A more complete list of references related to CYP1B1 and Salvestrols are available to health care practitioners at the website: [www.salvestrol.ca](http://www.salvestrol.ca)

# How Professionals Can Get Information on CYP1B1 and Salvestrols at [www.salvestrol.ca](http://www.salvestrol.ca)

- Call 250 483-3640 to get a User Name & Password
- State your credentials and request a User Name and Password
- Once these are obtained, go to the website : [www.salvestrol.ca](http://www.salvestrol.ca)
- Click on Practitioner Login and enter your user name and password. A variety of articles, videos & other information on this subject can then be accessed.

# Goals of Lecture

- Overall **approach to the cancer patient NOT addressed in this lecture**
- Focus will be on an **innovative theory involving a relatively non-toxic approach to preventing and treating cancer** that should be carried out **within the context of a broader approach to lifestyle changes and the elimination of toxins**
- **Exciting, but very preliminary suggestive positive** clinical results will be reviewed
- Material should be considered **controversial**

# My Interest in CYP1B1 and Salvestrols

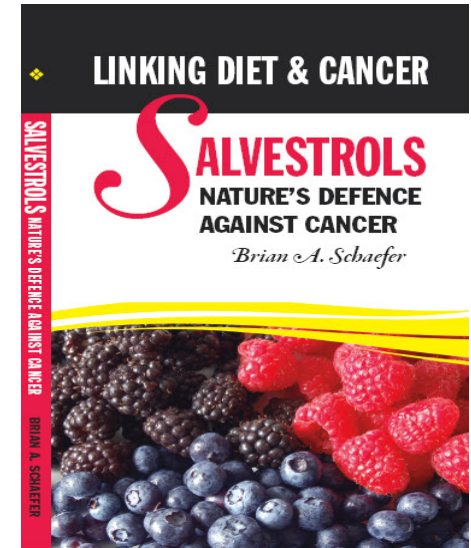
- International Society for Orthomolecular Medicine conference in Toronto 4 or 5 years ago
- Theory looked great and I thought about it
- **Discouraged because patients taking Salvestrols COULD NOT take B17, Laetrile, amygdalin**
- Most of my cancer patients were taking B17 orally or IV at the time
- **Received Brian Schaefer's book on Salvestrols-2012**
- Studied it carefully, spoke to Brian-became convinced this is a major breakthrough for understanding CA

LOE B and C

# Book by Brian A Schaefer-2012

- Paperback book-highly recommended
- **Discusses in depth the history of the discovery of CYP1B1 & Salvestrols**
- Case histories of patients using salvestrols
- Use of CYP1B1 to help to **detect cancers**
- Maximizing effects of salvestrols
- Met Burke, Potter & Daniels in the early 2000's & fascinated with CYP1B1 and Salvestrols
- **Distributes the Salvestrol supplement in North America**
- **Thanks for permission to use several of his slides for this presentation**

LOE B and C; Ref 4





# CYP1B1 Gene, Messenger RNA & Enzyme

- CYP1B1 **gene** is found in every cell in the body
- **Messenger** CYP1B1 is found both in cancer cells and **some non-cancer cells**
- CYP1B1 **enzyme** is found almost exclusively in **cancer cells or precancerous cells**
- **Confusion** in medical literature about where CYP1B1 resides is largely based on confusion between the **messenger form of CYP1B1 and the enzyme form** (References 22-26)

Level of Evidence (LOE) B; References 6 through-26

# Essentials of the **Protein-Enzyme** CYP1B1

- The **protein-enzyme** CYP1B1 is present in **all cancer cells, but in no normal cells or in tiny quantities in some normal cells**, which may be in the process of becoming cancerous Ref 6-22
- CYP1B1 is considered a **universal cancer marker** by some (e.g. researchers at the Dana Farber Cancer Center in Boston) Ref 9
- Research showing the presence in brain cancer cells has been done at MD Anderson Cancer Center Ref 18
- **No mention of this concept at NIH website Ref 3**

Level of Evidence (LOE) B

# Essentials of **Salvestrols**

- Salvestrols are a group of relatively inert substances found in **organic** plants
- Salvestrols are **converted by CYP1B1 to metabolites that induce death (apoptosis) in cancer cells**
- Most people suffer from a **deficiency** of salvestrols, which predisposes them to cancer
- **Salvestrols have no effect on normal cells** which do not have CYP1B1

Level of Evidence (LOE) B & C; References 2, 4, 5, 32-35

# Correcting Salvestrol Deficiencies

- By eating **organic** fruits and vegetables high in Salvestrols, a person will convert the Salvestrols to metabolites, which are capable of inducing apoptosis in any cancer cells lurking in the body
- For this to work properly, **inhibitors of CYP1B1 need to be avoided**
- Salvestrol deficiency can be corrected with a diet rich in salvestrols or with a **salvestrol supplement**
- **The CYP1B1-Salvestrol system may be nature's rescue mechanism from cancer**

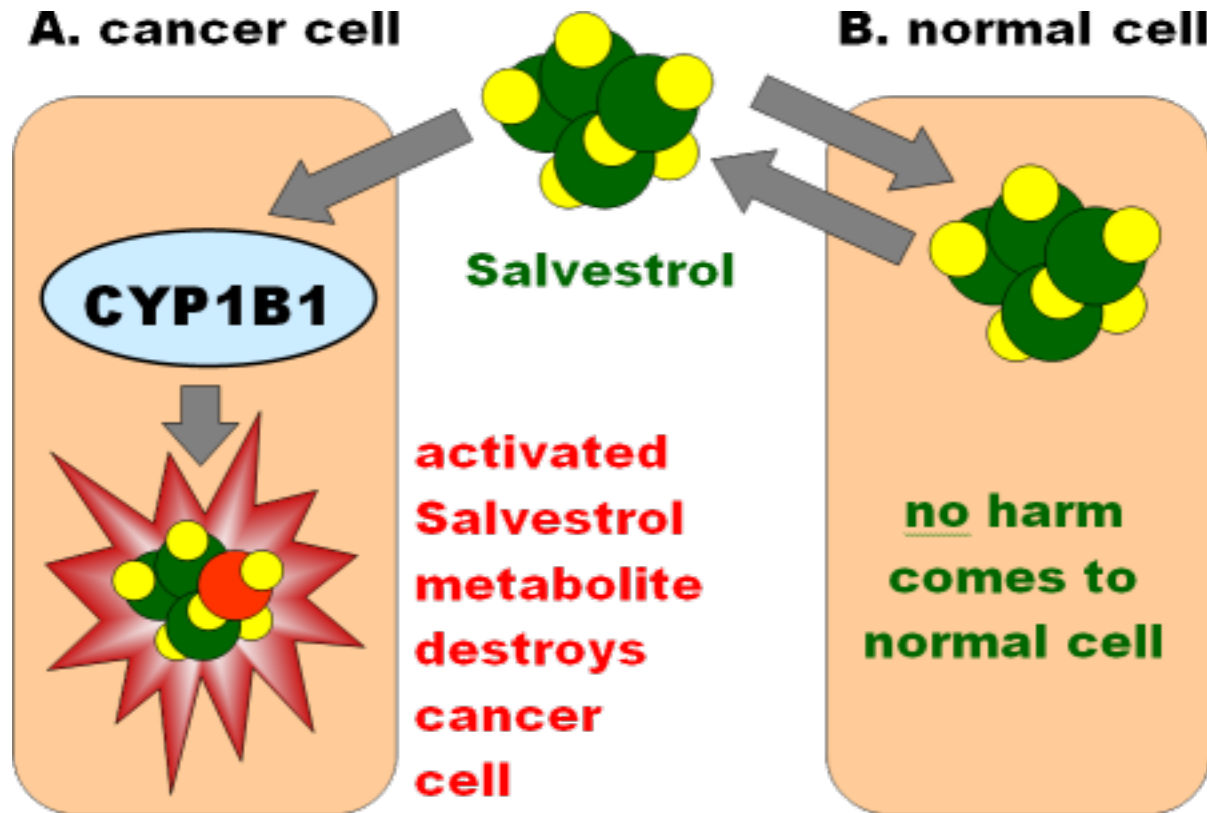
LOE B and C; References 2, 4, 5, 32-35

# CYP1B1 Inhibitors

- **Resveratrol in high doses**; will be discussed Ref 4
- **Amygdalin=Vitamin B17 = Laetrile or sources** like bitter apricot kernels Ref 4
- Citrus flavanone **naringenin** from grapefruits Ref 28
- **Carbon monoxide** (present in cigarette smoke) Ref 4
- Various **herbicides and pesticides, such as Roundup, as well as many household chemicals** Ref 29
- Need to avoid CYP1B1 inhibitors for them to work properly (avoiding toxins in the diet)

LOE B and C

# Effects of **Salvestrols on Cancer Cells & Normal Cells**



LOE B; References 4, 5, 32-35

# Salvestrol Rich Organic Fruits, Vegetables & Herbs

- **Fruits**-blueberries, blackberries, strawberries, black currants, figs, tangerines, lemons
- **Vegetables**-avocado, artichokes, chard, peas, green beans, garlic, olives, onion
- **Herbs**-basil, milk thistle, mint, parsley, rosemary, sage, thyme

# How Were Salvestrols Discovered?

- Team of scientists working together, including Dan Burke PhD, Gerald Potter PhD and Anthony Daniels
- Well documented observation that CYP1B1 was present in cancer cells, but not normal cells
- **Haunting question: Why CYP1B1 in cancer cells and not in normal cells**

LOE B and C; Ref 6-22



# Dan Burke & Gerald Potter Work Together

- Burke asks Potter to **design an anticancer prodrug activatable by CYP1B1** in cancer cells & he does this, but
- They wonder **is CYP1B1 there to protect the body from cancer?**
- Dr. Potter finds that many **natural** substances when added to **cancer cells suppressed their growth**; calls them **salvestrols**, a derivative of the Latin word “salvia” to save; 20 have been found; about 50 expected (various types of substances do this)

LOE B and C



**Dan Burke PhD**



**Gerald Potter PhD**

# Development of Salvestrols

## Supplements

- **Organic produce** and particularly **heritage (non-hybridized)** varieties produced high quantities' of Salvestrols.
- Salvestrols-part of the plants defense against fungus (**Phytoalexins**)
- Help required to make supplements & teamed up with Anthony Daniels, a mechanical engineer & herbalist
- Company Natural Defence established
- Decided to use fruit instead of herbs



Anthony Daniels

# Salvestrols-Relative Effectiveness: **Effect on Cancer Cells vs Normal Cells**

Compound:	Classification:	Selectivity score:
Methotrexate	chemotherapy	= 1
S40	salvestrol	= 10
S31G	salvestrol	= 22
S52	salvestrol	= 32
S54	salvestrol	= 1,250
Stilserene	synthetic salvestrol	= 4,304
S55	salvestrol	= 23,000

Phytonutrients found in fruit & vegetables	+	Enzyme intrinsic to cancer cells	=	Apoptosis – cell death
Salvestrols	+	CYP1B1	=	Anticancer agent

LOE B; Ref. 4

# Salvestrol Point System & Dosages

- Based on the **selectivity of action** on CA vs NL cells
- **Excellent organic food diet** contain **300 points daily**
- **Each Salvestrol Platinum** Capsule™ contains 1000 or 2000 points [4 extracts (blueberry, blackberry, strawberry, peel of tangerine)]; Taken after meals
- Also a **topical cream is available with 1 salvestrol**
- **Approximate dosages:** preventive 2000; moderate deficiency 4,000 to 8,000; Severe deficiency 12,000 to 20,000; maintenance (history of cancer) 4,000 points daily

LOE C Ref 4

## Known Supportive Nutrients to increase CYP1B1 or help Convert Salvestrol to Metabolite

- **Iron**-Check Hgb and Ferritin; the backbone of every cytochrome P450 Enzyme contains iron
- **Magnesium**-400 mg Enhances conversion of salvestrol to metabolite
- **Niacin or niacinamide-100** mg twice daily; Enhances conversion of salvestrol to metabolite
- **Biotin** 1 mg to 5 mg daily-stimulates CYP1B1 production
- **Selenium** at least 200 mcg
- **Vitamin C** 1 to 3 grams daily in divided dosage; helps with detoxification

LOE B and C; Reference 4

# What is the Evidence that Salvestrols Work in People?

- **No clinical trials or controlled studies; but there are reported and documented case histories**
- There are case studies, reported in 3 journal articles by Brian Schaefer LOE B; References: 33, 34 & 35
- There are intriguing case histories reported by patients on Salvestrol blogs on the Internet LOE C
- Informal case reports given to developers of Salvestrol LOE C
- New reports from China LOE C
- My initial **very preliminary** case reports LOE C

# CASE STUDIES-Reported in **Journal of Orthomolecular Medicine** (3 papers)

**2007**

**Lung cancer**

**Melanoma**

**Prostate Cancer**

**Breast Cancer**

**Bladder Cancer**

**2010**

**Breast cancer**

**Liver cancer**

**Colon cancer**

**Prostate cancer**

**Hodgkin's lymphoma**

**Prostate cancer**

**2012**

**Breast cancer**

**Squamous cell carcinoma of anus**

**Chronic Lymphocytic Leukaemia**

**Benign Prostatic Hyperplasia**

**Peritoneal cancer**

Schaefer B, Tan H, Burke D, Potter G, (2007) Nutrition and Cancer: Salvestrol Case Studies.. *Journal of Orthomolecular Medicine*, 22, 4: 177-182.

Schaefer B, Dooner C, Burke D, Potter G, (2010) Nutrition and Cancer: Further Case Studies Involving Salvestrol. *Journal of Orthomolecular Medicine*, 25, 1: 17-23.

Schaefer, B., Potter G., Wood R., Burke D. (2012) Cancer and Related Case Studies Involving Salvestrol and CYP1B1. *Journal of Orthomolecular Medicine*, 27: 131-138.

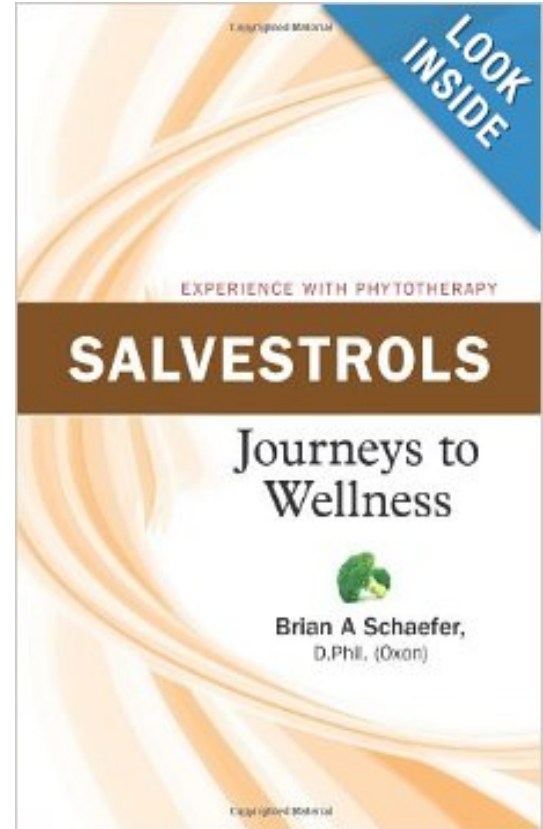
LOE B; References 13, 14 and 15



# Book: *Salvestrols: Journey to Wellness* by Brian A. Schaefer PhD

- Published late 2013
- Mainly **follow-up on cases** described in 3 papers published in the Journal of Orthomolecular Medicine; including several tables showing variety of cases, dosages used, if conventional Tx used, months to remission, rapid responders, low dose responders and follow-up results
- Description of diagnostic tests for cancer utilizing CYP1B1 and metabolites of Salvestrols

LOE B and C





# Suggested **Principles** from Follow-ups for Remissions

- Several recurrences; though some remained in remission for some time
- **All of the patients with recurrences abandoned Salvestrols** & did not engage in dietary changes after the all-clear signal was given
- **Dietary changes, lifestyle changes (including exercise) & salvestrols should be continued for life**
- **Long-term positive effects unclear** because several patients stopped taking them
- Little or no evidence on how well salvestrols work when patient has had **a lot of conventional treatment**

LOE B; Ref 5

# Limitations to Book *Salvestrols: Journey to Wellness* by Brian Schaefer

- Medical records unavailable
- Reports based on what primarily patients said
- Other treatments given with salvestrols; so hard to determine how much salvestrols helped
- Particularly true with prostate cancer patients
- Follow-up quite limited in some cases (breast cancer patient's death)

LOE B and C: Reference 5

# Case Histories from **Brian Schaefer** and from the **Schachter Center**

- Two cases from 2007 paper in **JOM** Ref 33
- Two cases from the **Schachter Center**
- Can frequently learn a lot from case histories;  
**WE SHOULD NOT DEPEND SOLELY ON CLINICAL TRIALS** for clinical decisions and actions with our patients Ref 5
- **Salvestrols seem to not interfere with conventional treatment and in some cases enhanced it**

LOE B and C

# Metastatic Melanoma: Truly Amazing Case (Schaefer Case)

- 93 year-old woman who couldn't walk
- Workup revealed malignant melanoma in one leg
- **Numerous black spots on skin indicating widespread metastases**
- Told to make her as comfortable as possible; **no conventional treatment would help**
- Family gave her Salvestrols-about 3,000 points daily

LOE B; Ref 33 and 5

# Metastatic Melanoma: Truly Amazing Case (2)

- Followed by naturopath and given a number of other supplements
- Within a few months, patient able to walk and black spots fading
- **End of year, walking; no more black spots**
- **Physician could find no evidence of cancer**
- Died a year or two later, supposedly as a result of complications of medical treatment for AD

LOE B; Ref 33 and 5

# Lung Cancer-Stage III or IV

- 69 year-old male in Canada began to cough up blood
- Bronchoscopy and biopsy confirmed squamous cell carcinoma of lung
- The tumor was 7 cm and adhered to the sternum and chest wall
- Lymph nodes about 3 cm were also detected
- **Tumor was deemed inoperable**
- **No chemotherapy or radiation recommended**

LOE B; Ref 33 and 5

# Lung Cancer-Stage III or IV (2)

- **Life expectancy estimated to be 8 to 18 months**
- **At the urging of his stepson**, he started a diet of organic fruits, vegetables and juices; meat, refined sugar and dairy were eliminated
- **Salvestrols (4,200 Points) spread out throughout the day started was given**
- **In one week, he stopped coughing up blood**

LOE B; Ref 33 and 5

# Lung Cancer-Stage III or IV (3)

- **Within 3 weeks**, diagnosis changed **from inoperable to operable** lung cancer, with the suggestion that the affected lung be removed
- Within another 3 weeks, a biopsy of the largest affected lymph node by PET scan was biopsied and negative for cancer
- Surgical treatment now recommended was removal of one lobe of affected lung
- Six weeks after beginning Salvestrols, surgery was performed

LOE B; Ref 33 and 5



# Lung Cancer-Stage III or IV (4)

- **Instead of removing a lobe of the lung, only the shrunken tumor was removed**
- All lymph nodes removed surgically were negative for cancer
- Patient deemed cancer-free
- **Salvestrol dosage reduced to 2,000 Points daily AND stopped when he ran out; also returned to previous lifestyle**

LOE C

# Lung Cancer-Stage III or IV (5)

- Subsequently, the patient remained in **remission for almost 5 years (59 months)**
- In the spring of 2012, he was diagnosed with recurrent squamous cell cancer of the lung
- Stepson had moved out of the area
- He **decided to pursue conventional treatment** and did not restart Salvestrols or change his dietary habits or lifestyle.
- Current status-Unknown

LOE C

# Non-Hodgkin's Lymphoma with Brain Involvement: SCCM Case

- 62 year-old, married psychotherapist first seen in **Nov 2007 with a marginal B Cell Lymphoma** first diagnosed in Dec 2005 with CT scan and inguinal lymph node biopsy
- Six months of Rituxin and CHOP chemotherapy; **many adverse reactions, including chemo brain**
- **Cancer getting worse at time of 1<sup>st</sup> visit with us** after a remission of 6 months (involved hilar lymphadenopathy of the lungs)
- Followed by Dr. Kopelson at our Center; patient was looking for an alternative to more chemotherapy

LOE C

# Non-Hodgkin's Lymphoma with Brain Involvement-2

- **Treated with dietary suggestions, IV vitamin C and amygdalin** and many supplements
- Received IV hydrogen peroxide in another office
- Received many supplements and low dose naltrexone
- **Did extremely well for five years without conventional treatment**
- Refused CT and PET scans

LOE C

# Non-Hodgkin's Lymphoma with Brain Involvement-3

- Overall the patient **did well up through the middle of 2012** (5 years) with some tweaking of her thyroid, continued C drips with B17, dietary changes
- **July 2012**-Developed cognitive abnormalities, slurred speech and loss of balance; an MRI showed a **mass in her brain consistent with a lymphoma**
- Consults with Neuro-oncologist at major NYC cancer center
- August: 2012 Chemotherapy regime started, but she **continued treatment at our Center** as well

LOE C

# Non-Hodgkin's Lymphoma with Brain Involvement-4

- **In between chemo treatments, did get C drips and B17; many supplements continued**
- After 5 rounds of chemotherapy, **mass shrunk by 95% and cognition became normal; oncologist thrilled with results**
- Oct 2012: Began Donnie Yance protocol (extensive herbal program) along with our program
- **Oncologist recommends more chemotherapy** starting in Dec 2012 or Jan 2013; **warned of a rapid recurrence if this is not done**

LOE C

# Non-Hodgkin's Lymphoma with Brain Involvement-5

- **Dr. Schachter consulted with patient & husband in January 2013**
- Discussed Salvestrols in depth and supplied written material including Schaefer's book and articles
- Dr. S suggests a trial of high dose Salvestrols, along with IV C drips and continued nutritional support
- Monitor carefully for evidence of brain recurrence
- Can always restart chemotherapy if cognitive problems reappear and/or abnormalities on MRI

LOE C

# Non-Hodgkin's Lymphoma with Brain Involvement-6

- **Patient seems satisfied** with this plan; but, **oncologist and husband unhappy**; both wanted her to do chemotherapy
- Against the wishes of her oncologist and husband, patient begins the salvestrol program
- **B17 was stopped and Salvestrols were started at 5000 points daily & later increased as high as 16,000 points daily**
- Donnie Yance protocol drastically reduced after energy testing with Salvestrols indicated that some of the herbs might interfere with the salvestrols

LOE C



# Non-Hodgkin's Lymphoma with Brain Involvement-7

- At 3 months after chemo recommended, oncologist still pushing chemotherapy, but patient resistant
- **1<sup>st</sup> MRI** at about **3 months** after chemotherapy was recommended is **negative** (oncologist surprised)
- **At 6 months**, patient still has **no neurological symptoms & 2<sup>nd</sup> MRI negative**, though she reacted to gadolinium (extensive hives)

LOE C

# Non-Hodgkin's Lymphoma with Brain Involvement-8

- By 8 or 9 months after chemotherapy has been recommended, still no return of neuro sx's
- A **3<sup>rd</sup> MRI was done** (without gadolinium) and was again negative
- **Oncologist amazed she has had no recurrence** and is no longer pushing chemotherapy; she continues to get a brain MRI every 3 months
- Now, 15 months from time chemo recommended feels great (nutritional program tweaked with recommendations of high doses of vitamin D and K2 (MK4); Asymptomatic; seems fine

LOE C

# Stage II Breast Cancer (SCCM Case)

- 75 year-old, divorced grandmother with large 6 cm right breast cancer (ER & PR + and Her2/ Nu negative) first seen Jan 2013
- Generally felt poorly, bad eating habits
- Went on Femara: Plan on Femara for 3 months to shrink CA; then lumpectomy and radiation or mastectomy
- **Started on salvestrols in Jan 2013**

LOE C

# Stage II Breast Cancer (2)

- Follow-ups: **Tumor slightly shrinking, feels much better, more energy, sleeping better, following somewhat better diet**
- Only complaint is **pain in her right arm associated with aromatase inhibitor**; drastically improves when she reduces frequency of this drug
- **Seen at SKI in Feb 2014-Doing so well, MD suggests another 6 months of Femara treatment before any surgery.** Using Arimidex which does not cause are pain
- May consider not doing any surgery
- On 12,000 points of salvestrols

LOE C

# Salvestrols at Schachter Center for Complementary Medicine (SCCM)

- Using them for only about 15 months; some patients using as preventive 1 or 2 capsules daily
- 200 or 300 patients taking salvestrols at SCCM
- **No apparent side effects noted even in very sensitive people**
- **Not a panacea**: Two patients with extremely extensive metastatic disease started on Salvestrols, but succumbed within 2 months
- Much more work needed to see limitations of treatment; but results so far very promising

LOE B and C

# Terminal Brain Cancers Responding in New Zealand

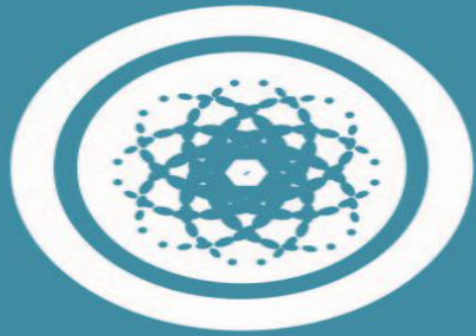
- Communication with New Zealand distributor of Salvestrols
- Supplying Salvestrols to adults, adolescents and children with terminal brain or spinal cord cancer; told no further conventional treatment available
- **All patients appear to be responding at 16,000 points daily**
- There are at least 8 patients in all

LOE C Ref Personal Communication-Ref 36

# Need for Better Tools for Diagnosing Cancer & Monitoring It

- Current conventional test for the diagnosing of cancer and monitoring it are relatively crude
- Mostly involves various imaging techniques (CT Scans; CT/PET Scans, MRIs)
- CT scans and PET scans result in a lot of radiation
- Biopsies and examination under the microscope
- Cancer blood markers sometimes helpful in monitoring some cancers

LOE B and C



CARE  
Biotechnologies

**Starting point:**

**CYP1B1 – universal cancer marker**

**Salvestrols – metabolized by CYP1B1**

Two directions to take:

- Detect and measure CYP1B1 directly
- Detect and measure the metabolic output of CYP1B1 and Salvestrols

Active research being done now

LOE B Ref 4, 5, 39



# Salvestrol Research in China at Renkang Hosp- Southern Med. University (Near Hong Kong

- Official in Australia did well on salvestrols & was a consultant to this Hospital in China
- Oncologists Dr. Zhao and Dr. Wang began using salvestrols & have been doing this for the past year
- Now, they say they use it all cancer patients along with conventional treatment and some other alternative treatments like SPDT (Sonophotodynamic Therapy



**Dr. Zhao**



**Dr. Wang**

# Salvestrol Research in China at Renkang Hosp- Southern Med. University (Near Hong Kong) 2

- “Salvestrols have enabled the team to bring about reversal of the disease in very late stage cancers where previously the greatest success with earlier stage cancers”
- Prof. Wang has said that “all our patients are in better stable response to our treatment after adding salvestrol”

LOE B and C-Personal Communications



# CYP1B1 & Salvestrols: Possible Major Breakthrough in Understanding CA

- CYP1B1 Enzyme Protein in all cancer cells and very minimally in normal cells
- Salvestrols found in organic plants are converted to metabolites that induce apoptosis (programmed cell death) in cancer cells
- Salvestrols appear to be applicable for all cancers at all stages
- May be useful for prevention, diagnosis & management of patients with cancer

LOE B and Mostly C Ref 4-36, 38, 39