American Institute of Integrative Oncology
RESEARCH & EDUCATION

CASE STUDY SUBMISSION

Important: In observance of HIPAA and the sacred trust between care giver and patient, absolutely no patient names or identifying information is to be disclosed. Patient privacy is to be preserved. If you attach any medical records, pathology, surgical or laboratory reports, all names are to be removed.

Date	5/9/17 RESUBMITTED ON 10/14/19 ****
Clinician Name & Credentials	Judy Pruzinsky, L.Ac.
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Describe Your Patient (Please SUMMARIZE and use economy of words. You will have 15 minutes to present)

Age, Gender & Ethnicity	59 yr old woman of Scottish and Slovakian descent
Body Type	5'7" medium build
Values *What is most important to this patient? (Quality of Life, Decision Making, Side Effects?)*	Feeling good - clear, healthy. Understanding when something is not "right" in body, mind
Stress Resilience	She can take on a lot, and let go of a lot when stress builds up too much
Other	
Primary Diagnosis & Date *(ex. Breast Cancer L, T3 N1 M0, BRCA1 positive, grade 3, Ki67 > 45%)*	4 Mohs surgeries, March 2017, after almost two years of not going to Dermatologist. Two yrs ago patient hit a wall, after hx of 9 Mohs and didn't feel surgeries were sustainable health care, but couldn't deny suspected growths. SHE HAS NOT BEEN TO THE DERMATOLIGIST FOR 2.5 YEARS AND NOW FEELS SHE PROBABLY HAS SEVERAL NEW SITES ON HER FACE. ****
Secondary Diagnosis *(ex. Diabetes Type 2, Obesity)*	Background hx: -1999 to present 13 Mohs surgeries for basal and one squamous cell carcinoma, all on face, the majority were within 2011 and 2017, usually having at least one every six months around 1993, first basal cell - treated with alternative therapy (Compound X - a formula of Native American botanicals) biopsy negative twice then positive one year later - 1st Mohs surgery

Patient Status

☐ New Diagnosis ☐ Recurrence ☐ In Treatment ☐ In Recovery ☐ In Remission ☐ At Risk

Concomitant and/or Complicating Factors *(ex: poorly controlled diabetes, insomnia, poor support system)*	Even maintaining good diet, struggles with gas and bloating and cravings. Recently did Organix test, shows high bacterial growth, energy markers (citrate, succinate, hydroxymethyglutarate), ox. stress (8-Hydroxy-2-deoxyguanosine) and NT (5-hydroxyindoleacetate) Will be starting on gut cleanse soon. Hx of osteoporosis, maybe first dx 10 yrs ago. Has tried TRF, now on Osteoben
Adverse Effects of Cancer or Cancer Treatments *(ex. anxiety-depression, diarrhea, peripheral neuropathy)*	With dx of last 4 basal cells patient went into a fair amount of fear and resistance. First time I saw this to such an extent
Relevant Laboratory, Pathology & Medical Reports *(attach a PDF with patient identifying information removed or summarize)*	Standard blood test- low Vit D, even taking 5K IU daily, low Total Protein and Free T3 (first time)

Brief Summary of Recent History

Mostly paleo since 2011
(Mostly) gave up sugar, deeply into good nutrition mid '90s
Vegetarian (some of the years as vegan) 18 years, completing in mid '90s

Brief Summary of Additional Relevant Health, Medical, Psycho-Social and/or Family History

Lots of sunbathing as pre-teen into teens, whole body tanned easily except face (and to a lesser extent chest)
lots of sugar, and some fried foods as a child even through early 20s teen year snacks: french fries and milkshake
smoked cigarettes from age 12-22 (one to two packs per day)

Other Relevant Information

Such as Chinese or Ayurvedic diagnosis, Naturopathic/Homeopathic Information, etc. *(ex. Liver Qi Stagnation, Dysbiosis)*

Earth- Sp/St imbalance-dampness leading to yin deficient, some Liver-Gallbladder involvement, more in past presenting as stagnation (don't know if earlier in life this might have presented as Liver fire rising - easy to anger, rebellious)

Brief Summary of Relevant Past Oncology or Medical Treatments

(ex. surgery, radiotherapy, chemotherapy, immunotherapy, hormone therapy, drug therapy)

Summary of Recent and Current Treatments

Medical Oncology Care *(surgery, radiotherapy, chemotherapy, immunotherapy, hormone therapy, drug therapy)*

Integrative Oncology Care *(nutraceutical, botanical, phytochemical, acupuncture, energy medicine, other)*

Metabolic Synergy 4-6, Osteoben 2, B Supreme 1, Vit D Synergy 2, NeuroMag 2, Iodine Synergy 1, Brain Vitale 2, Digestyzme and HCl 1 each w meal, Omega Synergy 2 At Night: melatonin 2, magnesium malate 2 Recently: Niacinamide 500 mg TID
Rotates in / out: Immunitone, Broccoprotect, Zinc, PMeal or Cleanse and Greens Recently Acnutrol - thinks caused on-going diarrhea

Your 2 Core Questions (stated clearly and succinctly)

1. IS WONDERING IF THERE IS ANY NEW WISDOM IN THE WORLD OF INTEGRATIVE ONCOLOGY FOR SKIN CANCERS THAT ARE NOT MELANOMAS. ***
2. I SEE THE IMIQUIMOD CREAM TX NOW HAS FIVE YEAR FOLLOW-UP STUDIES SHOWING LOW RECURRENCE. IS THER MUCH NEGATIVE SIDE EFFECTS FROM THIS TREATMENT AND IF SO, WHICH BOTANICALS / NUTRACEUTICALS WOULD BE BEST TO MINIMIZE SUCH? *** I ALSO FOUND CLINICAL STUDIES CURRENTLY GOING ON AT SLOAN KETTERING. DO YOU

Attached Medical Records for Reference (with patient identifying information removed)

Case study submitted by Judy Pruzinsky L.Ac

Overview:

59-year old woman, who has numerous basal cell carcinomas.
She has not been able to bring herself to a dermatologist for 2.5 years, after having her last 4 Mohs surgeries (and 9 surgeries prior to that). She now feels she probably has several new sites on her face (always on her face) and is wondering if there is any new wisdom in the world of integrative oncology for skin cancers (non-melanoma).

Core Question:

1. Is wondering if there is any new wisdom in the world of integrative oncology for skin cancers that are not melanomas
2. I see the imiquimod cream tx now has five year follow up studies showing low recurrence. Are there much negative side effects from this treatment and if so which botanicals/nutraceuticals would be best to minimize such?
3. How would you view the benefits and disadvantages to certain forms of radiotherapy currently being piloted - Electronic Skin Surface Brachytherapy for Treating Basal Cell and Squamous Cell Skin Cancers and Photo Beam Radiotherapy?
4. **Lastly have you ever heard about Novadermy?** I am trying to get the exact steps to the treatment, but there are proprietary aspects that are not released. It is a process starting with a deep peel, followed by stem cells as part of the rejuvenating process. Unlike most deeper peels that I have heard of taking weeks to heal, complete with scabs, this process is a 10 day intensive and leave one only with some redness and sometimes swelling.

Judy Pruzinsky, L.Ac.: 2017 Case Notes

What is of most important in managing the terrain of basal cell carcinomas? Although one of the most benign forms of cancer, after 13 Mohs surgeries, the patient doesn't feel that way.

Most basal cell carcinomas: DNA damage occurred 10-20+ years prior

- Assess Tumor Microenvironment: ALWAYS assess factors identified

- Consider new immune therapies-
  - Topical - such as ZYCLARA Imiquimod which can also reveal subclinical lesions (approved for Actinic Keratoses and HPV Skin lesions (warts but also many studies on BCC) increases Interferon-*a,* CD3, CD4, CD8, CD11c, and CD68 T cells
  - Oral-Systemic Therapy Odomzo® (sonidegib) Tyrosine Kinase inhibitor: inhibits Hedgehog signaling pathway involved in BCC (many adverse SE) ***Resveratrol and Curcumin and Oridonin from Rabdosia rubescens also inhibit Hedgehog Signaling Pathway***

- Nutraceutical-Botanical Systemic Therapy must include inflammation control. Decrease NFkB (curcumin, Boswellia, Scutellaria baicalensis, O3FA), inhibit Hedgehog signalling pathway (Yu Jin Curcuma longa>curumin, resveratrol,

- Rabdosia rubescens), immune modulation (Ganoderma, astragalus, Coriolus, cordyceps), support for epithelial repair (Vit A), and specific targeted botanicals and phytochemicals (Parthenolide -Tanacetum parthenium -Feverfew), EGCG from Green Tea (Camellia sinensis, Tanshinones and Salvionolic acid: Salvia Milthiorhizza-Dan Shen), Scutellaria baicalensis-Huang Qin

- Acupuncture LI 4, LI 11, Sp10, St 36, GB 41, SJ5 (Lu 1, Lu 10)

- Example of Custom Compounded Formula from CHILKOV CLINIC

240ml	480ml	
20	40	**Salvia Red Sage** (Dan Shen)
40	80	**Tumeric Yu Jin** Curcuma longa
40	80	**Scutellaria baicalensis** Huang Qin
10	20	Oldenlandia(aka Heydotis) Bai Hua She She Cao
30	60	Gotu Kola Centella Asiatica
10	20	**Green Tea** Camellia Sinensis Cha Ye
10	20	**Tangerine peel** Citrus Reticulata Chen Pi
20	40	**Rabdosia rubescens Dong Ling Cao (oridonin)**
20	40	Cordyceps fungus Dong Chong Xia Cao
20	40	Ganoderma lucidum fungus Ling Zhi Reishi
10	20	Astragalus membranaceus Huang Qi

https://www.aad.org/media/stats-skin-cancer

Incidence rates

- Skin cancer is the most common cancer in the United States.[1-2]
- Current estimates are that one in five Americans will develop skin cancer in their lifetime[3-4]
- It is estimated that approximately 9,500 people in the U.S. are diagnosed with skin cancer every day.[5-7]
- Research estimates that nonmelanoma skin cancer, including basal cell carcinoma and squamous cell carcinoma, affects more than 3 million Americans a year.[5, 8]
- Research indicates that the overall incidence of BCC increased by 145 percent between 1976-1984 and 2000-2010, and the overall incidence of SCC increased 263 percent over that same period.[9]
    - Women had the greatest increase in incidence rates for both types of NMSC.[9]
    - NMSC incidence rates are increasing in people younger than 40.[9]
- More than 1 million Americans are living with melanoma.[10]
- It is estimated that 192,310 new cases of melanoma, 95,830 noninvasive (in situ) and 96,480 invasive, will be diagnosed in the U.S. in 2019.[6-7]
    - Invasive melanoma is projected to be the fifth most common cancer for both men (57,220 cases) and women (39,260 cases) in 2019.[6-7]
- Melanoma rates in the United States doubled from 1982 to 2011 and have continued to increase.[1, 7]
- Caucasians and men older than 50 have a higher risk of developing melanoma than the general population.[6-7, 11]
    - The incidence in men ages 80 and older is three times higher than women of the same age.[6]
    - The annual incidence rate of melanoma in non-Hispanic Caucasians is 26 per 100,000, compared to 4 per 100,000 in Hispanics and 1 per 100,000 in African Americans.[6]
- Skin cancer can affect anyone, regardless of skin color.
    - Skin cancer in patients with skin of color is often diagnosed in its later stages, when it's more difficult to treat.[12]
        - Research has shown that patients with skin of color are less likely than Caucasian patients to survive melanoma.[13]
        - Twenty-four percent of melanoma cases in African American patients are diagnosed at the regional stage, while 16 percent are diagnosed at the distant stage.[7]
    - People with skin of color are prone to skin cancer in areas that aren't commonly exposed to the sun, like the palms of the hands, the soles of the feet, the groin and the inside of the mouth. They also may develop melanoma under their nails.[12]
- Before age 50, melanoma incidence rates are higher in women than in men; however, rates in men are twice as high by age 65 and three times as high by age 80.[6]
    - It is estimated that melanoma will affect 1 in 27 men and 1 in 40 women in their lifetime.[7]
- Melanoma is the second most common form of cancer in females age 15-29.[14]
    - Melanoma incidence is increasing faster in females age 15-29 than in males of the same age group.[15]
- Research indicates that the incidence of melanoma in women 18-39 increased 800 percent from 1970 to 2009.[16]

    - Melanoma in Caucasian women younger than 44 has increased 6.1 percent annually, which may reflect recent trends in indoor tanning.[11]

Survival rates

- Basal cell and squamous cell carcinomas, the two most common forms of skin cancer, are highly curable if detected early and treated properly.[6, 17]
- The five-year survival rate for people whose melanoma is detected and treated before it spreads to the lymph nodes is 99 percent.[6-7]
- Five-year survival rates for regional and distant stage melanomas are 64 percent and 23 percent, respectively.[6-7, 15]

Mortality rates

- The vast majority of skin cancer deaths are from melanoma.[6]
- Nearly 20 Americans die from melanoma every day. In 2019, it is estimated that 7,230 deaths will be attributed to melanoma — 4,740 men and 2,490 women.[6-7]
    - Research indicates that men diagnosed with melanoma between the ages of 15 and 39 were 55 percent more likely to die from melanoma than females diagnosed with melanoma in the same age group.[18]
- People with SCC have a higher risk of death from any cause than the general population.[19]
- An estimated 4,420 deaths from skin cancers other than melanoma and NMSC are expected to occur in the United States in 2019.[6-7]

Risk factors

- Exposure to natural and artificial ultraviolet light is a risk factor for all types of skin cancer.[6]
- The majority of melanoma cases are attributable to UV exposure.[20-22]
- Increasing intermittent sun exposure in childhood and during one's lifetime is associated with an increased risk of squamous cell carcinoma, basal cell carcinoma and melanoma.[23]
    - Research suggests that regular sunscreen use reduces melanoma risk.[24-25]
    - Higher melanoma rates among men may be due in part to lower rates of sun protection.[1, 26]
- Even one blistering sunburn during childhood or adolescence can nearly double a person's chance of developing melanoma.[27]
    - Experiencing five or more blistering sunburns between ages 15 and 20 increases one's melanoma risk by 80 percent and nonmelanoma skin cancer risk by 68 percent.[27]
- Exposure to tanning beds increases the risk of melanoma, especially in women 45 and younger.[29-30]
    - Researchers estimate that indoor tanning may cause upwards of 400,000 cases of skin cancer in the U.S. each year.[31-32]
- Risk factors for all types of skin cancer include skin that burns easily; blond or red hair; a history of excessive sun exposure, including sunburns; tanning bed use; a weakened immune system; and a history of skin cancer.[6]
- People with more than 50 moles, atypical moles or large moles are at an increased risk of developing melanoma, as are sun-sensitive individuals (e.g., those who

sunburn easily, or have natural blond or red hair) and those with a personal or family history of melanoma.[6, 33]
- Melanoma survivors have an approximately nine-fold increased risk of developing another melanoma compared to the general population.[34]
- Men and women with a history of nonmelanoma skin cancer are at a higher risk of developing melanoma than people without a nonmelanoma skin cancer history.[35]
    - Women with a history of nonmelanoma skin cancer are at a higher risk of developing leukemia, breast, kidney and lung cancers, and men with a history of nonmelanoma skin cancer are at a higher risk of developing prostate cancer.[35]
- Caucasian individuals who have had more than one melanoma have an increased risk of developing both subsequent melanomas and other cancers, including those of the breast, prostate and thyroid.[36]

Prevention and detection

- Because exposure to UV light is the most preventable risk factor for all skin cancers, the American Academy of Dermatology encourages everyone to stay out of indoor tanning beds and protect their skin from the sun's harmful UV rays by seeking shade, wearing protective clothing and using a broad-spectrum, water-resistant sunscreen with an SPF of 30 or higher.
    - Because severe sunburns during childhood may increase one's risk of melanoma, children should be especially protected from the sun.[6]
- Skin cancer warning signs include changes in size, shape or color of a mole or other skin lesion, the appearance of a new growth on the skin, or a sore that doesn't heal. If you notice any spots on your skin that are different from the others, or anything changing, itching or bleeding, the American Academy of Dermatology recommends that you make an appointment with a board-certified dermatologist.
- The American Academy of Dermatology encourages everyone to perform regular skin self-exams to check for signs of skin cancer.
    - About half of melanomas are self-detected.[37-41]
- A dermatologist can make individual recommendations as to how often a person needs a skin exam from a doctor based on individual risk factors, including skin type, history of sun exposure and family history.
- Individuals with a history of melanoma should have a full-body exam by a board-certified dermatologist at least annually and perform regular self-exams to check for new and changing moles.[42]

Cost

- About 4.9 million U.S. adults were treated for skin cancer each year from 2007 to 2011, for an average annual treatment cost of $8.1 billion.[2]
    - This represents an increase over the period from 2002 to 2006, when about 3.4 million adults were treated for skin cancer each year, for an annual average treatment cost of $3.6 billion.[2]
- The annual cost of treating nonmelanoma skin cancer in the U.S. is estimated at $4.8 billion, while the average annual cost of treating melanoma is estimated at $3.3 billion.[2]
- Researchers estimate that there were nearly 34,000 U.S. emergency department visits related to sunburn in 2013, for an estimated total cost of $11.2 million.[43]

Learn more about skin cancer:

Basal cell carcinoma Melanoma Squamous cell carcinoma Skin Cancer Resource Center

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