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	9/30/17
Clinician Name & Credentials	Judy Pruzinsky, L.Ac.
Email	judy@judypruzinsky.com

Describe Your Patient (Please SUMMARIZE and use economy of words. You will have 15 minutes to present)

Age, Gender & Ethnicity	67 yo, Male, Caucasian
Body Type	short medium build
Values *What is most important to this patient? (Quality of Life, Decision Making, Side Effects?)*	Misses freedom of movement Looking forward to rejoining socity
Stress Resilience	
Other	
Primary Diagnosis & Date *(ex. Breast Cancer L, T3 N1 M0, BRCA1 positive, grade 3, Ki67 > 45%)*	6/21/2017 Low-grade or follicular non-Hodgkin's lymphoma, stage 3. Primary group of nodes affected: from groin to sternum left side same as the TKR (Total Knee Replacement) and a node in arm pit Biopsy done by ultra-sound on largest 6 cm. node in groin
Secondary Diagnosis *(ex. Diabetes Type 2, Obesity)*	High cholesterol, LDLs, and Total cholesterol/HDL

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)*	
Adverse Effects of Cancer or Cancer Treatments *(ex. anxiety-depression, diarrhea, peripheral neuropathy)*	see attached in email Lymphoma symptoms
Relevant Laboratory, Pathology & Medical Reports *(attach a PDF with patient identifying information removed or summarize)*	2nd PET CT scan 8/17 1. Favorable interval response to therapy, with significant decrease in extent and FDG avidity of hypermetabolic adenopathy above and below the diaphragm compared with the prior study. Lugano response category for NHL interim scan: Responding disease, 5-PS score = 3 2. No evidence of new or progressive FDG avid lesions. 3. Incidental CT and PET findings as detailed in report, including aortic atherosclerosis.

Brief Summary of Recent History

DIVERTICULOSIS OF COLON 5/3/2004
HYPERLIPIDEMIA 2/2/2009 Cardiovascular risk score 2016 - 15.1% advised meds
ASTHMA, MILD PERSISTENT 2009 - see below for details showing severity

RETROPERITONEAL MASS 6/2017
HYPERCALCEMIA 6/2017
FOLLICULAR LYMPHOMA GRADE 2, MULTIPLE LN SITES 6/2017
AORTOILIAC ATHEROSCLEROSIS 7/2017 noted on CT

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

1986 Major reaction to MOLD from remodeling home and local fora
- Asthma acted up really bad, requiring continuing medication to control - 3 years of allergy shots which proved to be successful
2011-2017 Severe upper respiratory infection - No medication taken Stress induced;
- Bedreddin for 6 weeks - Several Blackouts from Vegus Nerve (coughing) , once requiring stitches

Other Relevant Information

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

Exercise: Exercise - used to do gym / crossfit training (about 2-3 times per week) Now walking or golf (2/week)

Brief Summary of Relevant Past Oncology or Medical Treatments

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

Chemotherapy Regime - BR - Bendamustine and Rituxan (Rituximab)Therapy 4-week cycle for 6 cycles (24 weeks)
Day 1 Rituxan and Bendamustine and Day 2 just Bendamustine

Summary of Recent and Current Treatments

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

see attached in email Med list

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

Reiki - wife does

Your 2 Core Questions (stated clearly and succinctly)

1. Since lymphoma is a recurring event, how to delay (or possible to stop) recurrence.
   Can•t take Rituxin, as we build immunity,
2. Has been told WBC should get better within 30 days and fatigue and brain fog should abade in 90 days. Your experience?

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

I attached in email the blood tests that were preformed.
The results that were out of range were high Calcium, low Lymphocytes, and lipids mentioned elsewhere.
There•re low/high normals which I can send to you electronically if helpful.

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Foundations of Integrative Oncology
COURSE

CASE STUDY
Treatment Plan Recommendations
From November 15th, 2017 Grand Rounds Call

Treatment Plan Recommendations
Patient 67 M "JT" - Follicular (Non-Hodgkins B Cell) Lymphoma Stage 3 - Submitted by Judy Pruzinsky
Background: CT + Rituxan completed, recent scans NED
Neutropenic diet guidelines are for stem cell transplant patients and pts with WBC below 2.5 Caution Resveratrol **Acupuncture** **Botanicals-Nutriceuticals** Green Tea EGCG can induce apoptosis Curcumin RANKL (osteoporosis) inhibits NFkB (inflammation), inhibits tumor metastasis, invasion, and angiogenesis, promotes apoptosis VIT D optimize — maintain bone integrity, modulate immunity and cell adhesion, antiviral Ganoderma anti inflammatory and immune modulating Scutellaria baicalensis: Berberine and Baicalein NFkb, TNFa, Bcl-2 Honokiol promote PTEN expression -suppression of oncogenes and PI3K-AKT-mTOR pathway Vitamin A 5000-10,000 iu 3x/week (monitor blood levels) antiviral Zinc 30-120mg (antiviral) Andrographis (antiviral, anti-proliferation, anti-inflammatory) 2-3g/day Salvia milthirorrhiza modulate coagulation, anti-proliferative Oldenlandia (Heydotis) Ursolic acid, promotes apoptosis, inhibits proliferation, initiation, progression Proteolytic enzymes: inflammation, coagulation, Bcl-2 **Inhibit Blc-2** EPA, DIM, Sulphoraphane, Rabdosia (Oridonin), Ganoderma, Chaga, Quercetin, Gingko, Thymoquinone (Nigella seed oil), Ashwaganda (withanolide), Panax Ginseng FATIGUE assoc with abnl CBC and with increased inflammation - Ashwaganda, Panax Ginseng, Ganoderma **LAB** CBC+Diff, ANC, NLR, LDH, Uric Acid (uricemia), LFT (biliary obstruction), Creatinine (renal obstruction) as reflection of inflammation and tumor load and prognosis *Inflammation markers* CRP, IL1B, IL6, IL2, TNFa, INF, (IL-5 assoc with B cell lymphomas) **Monitor ANC** One measure of risk is the absolute neutrophil count (ANC). The ANC is calculated by multiplying the total white blood count by the percent of neutrophils (also called segmented neutrophils, segs, polymorphoneucleated cells or PMNs, polys) Total white blood count x % neutrophils* = ANC * Neutrophils may be reported as segs & bands (a band is slightly less mature form of a seg). In this case add the % of segs to the % of bands then multiply by the total number of white blood cells.

(% segs + % bands) x Total white blood count = ANC

Patients with Low WBC/Low ANC do NOT present with typical S&S of infection. Such as:

- Redness
- Swelling
- Pus formation (at the site of an injury or incision)
- Cough
- Sputum
- Nasal drainage (from a sinus or respiratory infection)

Be on the alert for:

- A temperature greater than or equal to 100°F. Chills (rigors) or shakes
- Sudden onset of a new unexplained pain.
- Sore throat
- Sores in mouth
- A white coating in mouth-tongue, especially
- Signs of a bladder infection

Risk of Infection based on Absolute Neutrophil Count (ANC)

- ANC greater than 1500 - No increased risk of infection
- ANC 1000-1500 - Slight increase in risk of infection
- ANC 500-1000 - Moderate increase in risk of infection
- ANC 100-500 - High risk of infection
- ANC less than 100 - Extremely high risk of infection

Post-Call Follow-up Q&A:

Are most hematologic cancers virally induced?
An ONCOGENIC virus is a virus that can induce tumorigenesis and cause cancer
An ONCOLYTIC virus can lyse tumor cells and kill them and can be used therapeutically (theoretically)

What differences and similarities are there between treatment protocols for lymphocytic leukemia and follicular non-Hodgkin's lymphoma?
In "Integrative Oncology" in the context of this course, we are not TREATING cancer. We are transforming the tumor microenvironment to change signalling and exert epigenetic effects on the behavior of tumor cells. In this context, the approach to altering the tumor microenvironment is quite similar. In conventional oncology today there are excellent targeted treatments (such as Rituxamab that bind to a CD20 receptor) that TREAT the cancer cells.

I didn't catch what you were saying about interferon nor interleukin 5 re: B cell lymphoma. I know of the connection to allergic rhinitis and asthma. Is there something specific to JT's case as he has such an extensive aggressive history of asthma?
Cancer is complex and each tumor cell line is unique and exists within the physiology of each unique patient.
There are different patterns of pro-inflammatory cytokines expressed by different cancers and in different individuals. We also know that individuals who have SNPs and histories of producing more inflammation (good studies on IL1B, IL6, TNFa) will have more inflammation as cancer patients as well. IL-5 stimulates B cell growth and is linked to eosinophil activation in both normal and malignant cell lines.