



Assessing cancer risk must take into account the vitality of the immune system and ecology of the individual's microenvironment. The immune system must be in a strong position to attack rogue tumor cells before they proliferate and the individual's internal biochemical terrain and microenvironment must not be conducive to tumor development.

A detailed cancer risk assessment is considerably more involved than the information provided in this short paper but I have created a basic set of laboratory biomarkers that everyone over 35 years of age should begin to assess in an effort to minimize risk factors. Establishing base-line levels of key biomarkers identifies areas of need early but also provides a reference for monitoring over time. Deviations from the base-line may enable early detection and the option to provide early support at a stage when conservative and natural options are likely to have greater success.

Women Specific

- Cancer markers like CA 125, CA 15.3, CA 27.29 and CA 19.9 are not used for initial diagnostic purposes but can be helpful when performed serially and monitored over time. Recognizing changes in normal levels can lead to early detection. These tests help monitor for breast, ovarian and endometrial cancers. I recommend testing annually.
- Breast Thermography can be useful for early detection. Establish a healthy base-line and perform annually to monitor for change.

Men Specific

- Prostate Specific Antigen (PSA) should be in the low normal range. Any upward trends over time should prompt more aggressive conservative and natural methods to reduce PSA levels before cancer develops.

Laboratory Biomarkers in Cancer Risk Reduction

- Routine **complete blood count** (CBC) is essential in monitoring an individual's health. High or low levels of platelets, abnormal levels of neutrophils and lymphocytes or their ratio can be an indication of cancer development and risk.
- Routine **comprehensive metabolic panel** (CMP) is necessary to monitor liver and kidney health, electrolyte, serum calcium and protein levels.
- **Fibrinogen** is a key risk factor for cancer development and progression. High levels enshroud cancer cells and hide them from immune attack. Botanical and specialized nutraceutical supplements can normalize fibrinogen.
- **High Sensitivity CRP** (HS-CRP) is important in the assessment of inflammation. Inflammation is tumor promoting.
- **Insulin** (fasting levels) should be monitored. Many people are diabetic or trending toward diabetes and have a condition called insulin resistance. Insulin resistance increases circulating insulin levels which is tumor promoting.
- **Vitamin D** levels should be optimized for its wide ranging impact on hormonal health, immune function and blood sugar control. Low levels of vitamin D are a cancer risk.
- **pH** – Salivary or urine pH should be monitored periodically. Individuals who are acidic are at a higher risk for cancer.
- **Zinc** levels should be monitored and optimized. Zinc antagonizes copper which means if zinc is low, copper is allowed to increase. Elevated levels of copper are a particular concern because this condition promotes angiogenesis - the formation of new blood vessels that nourish an area of tumor growth.

Basic Dietary Guidelines in Cancer Risk Reduction

- Raw food diet in summer and or raw/cooked diet in winter are optimal
 - Lots of leafy green vegetables
 - Lots and lots of cruciferous vegetables (broccoli sprouts & watercress in particular). If you have a thyroid condition you will need to cook these vegetables and avoid excess.
 - Healthy fats like coconut oil, olive oil and omega 3 fatty acids (fish oils preferred over flax oil)
 - Flax seed (ground) in smoothies or cereal daily
 - Lots of organic red onions and garlic
 - Lots of cooked mushrooms
 - Prefer organic, Non-GMO foods. Locally grown and seasonal
 - Fruit should be limited to 2-3 servings per day with preference for fresh or frozen organic blueberries, other berries, tart apples, lemon and lime (with peel) and cranberries (try raw – tart but good)
 - Protein sources like goat yogurt, cage-free organic eggs, sardines or wild salmon
 - Limit animal meat (especially red meat) and prefer grass fed organic. Portions should be as a condiment, the size of your palm or less
 - Avoid all processed foods – if you couldn't get it 100 years ago it probably isn't good for you now
 - Organic poultry to avoid arsenic exposure and copper of commercial birds
 - Whole grains should be organic and non-GMO with small portions
 - Use only traditional fermented soy products (not refined soy) like tempeh and miso
 - Limited alcohol. Red wine has been shown to have some cancer preventive properties but use in moderation
- Exercise
 - Obesity is a risk factor. Target a body mass index (BMI) of less than 25
 - Inactivity promotes blood stagnation which increases cancer risk and progression
- Stress control
 - Modulating cortisol levels can influence insulin and the sympathetic nervous system. Use prayer or meditation for relaxation daily
- Key supplements with chemopreventative properties for everyone
 - **Turmeric.** I recommend Dr. Roach's Turmeric with curcuminoids and black pepper. Turmeric has been studied for its anti-cancer influences in over 2000 scientific studies. Take 3-4 grams per day for anti-inflammatory and anti-cancer properties. Discuss with Dr. Schimp if you have a gallbladder condition.
 - **Green Tea Extract (EGCG)** has been well studied and is protective in both breast and prostate cancer. Drinking green tea daily is helpful but supplements enable higher doses with less effort. I recommend 3-6 tablets per day which is equivalent to about 20 cups of green tea. If you drink green tea it must be organic and should not be decaffeinated.
 - **Natura brand vitamin D-A-K** combination. Virtually everyone that I test for vitamin D is deficient or low normal. If you live in Wisconsin you most likely need this supplement which is protective against cancer.
 - **Natura brand Zinc.** Zinc is critical for hundreds of reactions in the body, diminishes with age, is strongly immune supportive and antagonizes copper. Elevations of copper promote new blood vessel formation which is not desirable when cancer is a concern.

We live in a time when cancer is sweeping out of control. The adage, "it is easier to stay well than to get well" is never truer than with regard to cancer - prevention is key. Don't wait for a cancer diagnosis before you start making changes to your lifestyle. I genuinely believe that if you want to live cancer free you must start living as if you have cancer.

If you or someone you know would benefit from a more detailed discussion and evaluation regarding cancer risk reduction, prevention and support, please contact the clinic 262-673-2341 to schedule a comprehensive evaluation.

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