

## Wine and Breast Cancer the Potential Risk

***“This is the most important chapter in your excellent book. Women need to know that there is an important connection between drinking wine and breast cancer.”***

***Kara Farchione, M.D., OB/GYN***



## **The Medicine of Wine VII**

***Wine and Breast Cancer the Potential Risk***

### ***Wine and Breast Cancer: The Potential Risk***

Lisa is a 49 year old female who has been a patient in my OB-GYN practice since she was 22. We have been through abnormal Pap smears, delivery of her two children and, six years ago, at age 43, she had a mastectomy for breast cancer (ductal cell carcinoma).

Lisa has recovered, is doing well, and owns her own successful small business. During her annual exam last week, Lisa commented that she relaxes in the evening by enjoying 2 glasses of wine (white-chardonnay).

### ***How to Enjoy Wine and Minimize Breast Cancer Risk***

For years, there has been a debate in the scientific community over whether drinking wine by women prevents breast cancer or is a risk factor for breast cancer. For some time it had been theorized that red wine and red wine organic chemicals are a potential breast cancer preventative. Indeed, some recent research has shown that the red wine polyphenol resveratrol, when isolated and tested in test tubes with breast cancer tissue, that it prevented the breast cells from becoming cancerous. Another study showed that resveratrol acts as an anti-estrogen in breast tissue, and suppresses the metabolism of estrogen, thereby protecting the cells from becoming cancerous.

However, many other scientists argue that resveratrol is not present in high enough concentration in a single glass of wine to make a meaningful contribution to cancer prevention in the breast. Others point out that resveratrol in

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wine is likely completely deactivated in the mouth before it is even swallowed and absorbed

### *The Studies Can Be Confusing*

A recent (2008) study conducted by the Institut de Recherche Clinique in Montpellier, France, identified alcohol as a risk factor for breast cancer. However, after examining a subpopulation of women in their study – a population of women living in the south of France, "where drinking wine is an integral part of the population's dietary habits," the researchers in this study found that one glass of wine per day in this healthy subpopulation was associated with a 40% lower risk of breast cancer!



They concluded that "low and regular wine consumption may not increase breast cancer risk."

However **there were only 1,359 women in this study.**

On the other hand, a very large research study (2008) from The National Cancer Institute examined the drinking patterns of 184,418 postmenopausal women. After following these women for seven years, the researchers identified 5461 cases of invasive breast cancer and compared the rate of cancer versus alcohol consumption habits.

**They found that the regular consumption of alcohol, even in moderate amounts, resulted in an increase in relative risk of breast cancer, regardless of the beverage of choice.**

Careful reading of their study however showed that the risk increase may be slightly less for wine drinkers but they found that women who drank 1 to 3 glasses of wine per day had a 20% increase risk in breast cancer, and those who drank three glasses or more per day, had a 41% increase risk.

***The Many Studies from the Last Ten Years Conclude:  
There Is a Small Increased Risk***

**In the last 10 years, there have been several population studies which have looked at the effect of drinking wine and the risk of breast cancer. The results generally show the same picture: there is a slight increase risk breast cancer (about 10%) with moderate alcohol/wine intake.**

Moderate wine intake was in general defined by the studies as drinking 1 to 7 glasses of wine per week, but not all at once – usually one 5-ounce glass per day.

***The majority of the studies drew the same conclusions.***

A few of them, such as The National Cancer Institute study described above, the Million Women Study (1.3 million women) in the United Kingdom, and the most recent publication from Harvard from the Nurses' Health Study (105,986 women) had a large enough group of women in the studies for a long enough period of time so that reasonable statistical conclusions could be drawn.

This data indicates that in general if a woman drinks one – 5 ounce glass of wine per day, she will statistically have a 10% increase risk of breast cancer over her lifetime. In all

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of the studies, drinking more than this amount increased the risk significantly.

Some statistical analyses of many studies have concluded that the equivalent of two glasses of wine per day will increase the risk of breast cancer by another 10%, but three or more glasses of wine per day increases the risk much more than just another 10%.

### *Exactly What Does a 10% Increase in Risk Mean?*

**Exactly what does a 10% increase risk mean? In general, the AVERAGE woman has a 9.5% chance of getting breast cancer before age 75. A 10% increase risk means that this risk will increase from 9.5% to 10.45%.**

### *Consider These Statistics for Comparison*

Some important comparisons: women who gain 20 to 30 pounds after high school have a 40% increase risk of breast cancer and even higher risk with more increase in weight. Smoking increases the risk of breast cancer by 32%. Having a close relative (mother, sister, or daughter) with breast cancer is associated with a 200% higher risk.

### *Important Facts When Considering Population Studies of Wine and Alcohol Use*

When large enough, population studies can be very useful in trying to gather information about people in those populations. The studies are usually done by defining the population, and sending an involved questionnaire asking specific questions about themselves and then specific questions about the issue to be investigated.



Specifically with regard to the question of the risk of breast cancer and wine, the population studies

quoted above, and many other studies which found similar results, often were done completely, or at least with an excess number of postmenopausal women (80% of women who develop breast cancer are over 50 years of age), and with women who were on the average heavier (women who develop breast cancer are more often heavier).

These characteristics are important when evaluating the data. But most of all, when men and women are asked how much alcohol and/or wine they drink and are specifically asked how many drinks per day or week, how often do you think they are completely accurate – even anonymously? Health care providers in general consider that the intake is probably at least double that amount, and likely higher! So, you can assume that this is probably the case also for many of the respondents in these studies.

***What does this mean for you? It means that it is likely that the risk for you – if you really only drink one 5 ounce glass of wine per day, that the risk is really less than reported.***

### ***What Causes An Increase In Breast Cancer in Women Who Drink Wine?***

The exact mechanism causing the increase in breast cancer in women who drink wine is not known. However, the change in the body's metabolism of hormones is highly suspected.

It is thought that ethyl alcohol increases the liver metabolism of testosterone and other androgens and converts them (known as aromatization) to estrogen, thereby increasing the woman's estrogen levels. It is the effects of the increased estrogen levels on the breast cells, especially in the postmenopausal woman that increases the

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risk of breast cancer. Recall that the role of alcohol in increasing the levels of estrogen in women was first reported in 1996 in a study from Harvard (page 73). For women who have or have been treated for breast cancer, drugs called aromatase inhibitors are often given to prevent this conversion of testosterone to estrogen, thereby keeping the woman's body estrogen levels to essentially zero. It would be interesting to see a study of women on aromatase inhibitors and who drank wine, to see if their estrogen levels continue to be zero.

### *What Does All of This Mean To You?*

The first thing is to recognize that drinking wine can be a risk for breast cancer. Government research reveals that 80% of women are ignorant of this breast cancer risk.

The second thing is to acknowledge that **one – 5 ounce glass** of wine per day should be the maximum amount. The tendency in today's world is to supersize this in many ways. This is clearly obvious in our current culture.

Finally, it is important to remember that for women, responsible wine drinking is not without substantial other benefits. The net beneficial effects can be striking, as **small amounts of wine lower the risk** of the more common causes of **death among women**, such as:

-  Heart disease
-  Stroke
-  Hip fracture and
-  Dementia

## *How to Maximize the Health Benefits of Wine and Reduce the Risk of Breast Cancer*

The rules for the health the enjoyment of wine are highly dependent on your individual circumstances. Here are my recommendations for women to maximize the health benefits of wine and reduce risks, especially of breast cancer:

1. Drink no more than one-5 oz glass of red wine daily!  
Absolutely!
  - a. Sip the wine very slowly and with a meal.
  - b. Drink a glass of water before the meal; this helps dilute the alcohol in the stomach as well as decrease alcohol's dehydrating effects.
  - c. Take a multivitamin with at least 800 mcg of folic acid daily. This has been shown to reduce the risk of breast cancer by the wine.
  - d. **Don't smoke** – it further changes the liver's metabolism.
  - e. Eat a healthy (Mediterranean style) diet and exercise regularly.
2. If you have a strong family history of breast cancer (mother, sister, daughter), I recommend that either you do not drink alcohol, or at most, have one glass of wine per week, following the above rules.



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3. If you are breast cancer survivor, I recommend that either you do not drink alcohol, or at most, have one glass of wine per week, following the above rules.
4. If you are post-menopause and overweight, your risk of breast cancer with daily alcohol intake may be **too high**. Consider losing some weight before enjoying wine. Before shedding those pounds, limit your wine intake to one – 5 ounce glass per week.
5. If you are post-menopause and are on hormone therapy, your risk of developing breast cancer may be increased with the enjoyment of wine, even more than you might think. Consider the following options:

 **Don't drink wine or alcohol.**

 Stop the hormone therapy.

 Change your hormone therapy.

**R<sub>x</sub>** First, if you are on an oral estrogen, change to a transdermal estrogen (transdermal patch, cream, or gel). Oral estrogens have been shown to significantly increase the estrogen levels immediately after ingestion of wine. Transdermal estrogens increase the estrogen levels much less.

**R<sub>x</sub>** Second, consider reducing your estrogen dose to the lowest possible dose. There are extremely low doses available today.

**R<sub>x</sub>** Third, keep your enjoyment of wine to one-three 5 ounce glasses of wine per week.

- **And, don't take your estrogen (or use 1/4 to 1/2 the dose) on the day of enjoyment of the wine (yes – you can cut the patch in half).**
- Finally, don't forget to follow all the above rules.

Not only are the benefits and risks of drinking wine different for men and women, but they are different for different women in different circumstances. It's all about the individual woman.

Also, remember that when a new study comes along about anything, experts need to weigh in on this study and put it into perspective. This is certainly true about the issue of wine and the risks of breast cancer.

Here is a perfect example. In response to the Journal of the American Medical Association report of November 2, 2011 regarding a slight increase risk of breast cancer and wine consumption, Dr. Cary Presant M.D., an oncologist, wrote in an editorial online....

*"Well, every one of my breast cancer patients that week asked me if she should avoid drinking. Even my wife asked me. All these women were intent on becoming abstinent, despite the known protective effect of mild drinking in reducing cardiovascular disease, and possibly increasing life span as with the Mediterranean diet.*

*But were there other factors in (this) study that could have caused this apparent increase in breast cancer incidence? Yes! ... so my conclusion for my patients is to avoid drinking heavily, but continue mild alcohol intake (especially wine) to reduce cardiovascular risks. And of course, don't smoke or take hormone replacement therapy*

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*(unless absolutely needed for quality of life), and do continue to have mammograms and clinical breast exams"*

In the next chapter, we discuss the special situations of women who are pregnant or breast-feeding.

