

# IUSCC PINK

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Dear friends,

Radiation therapy is part of the multidisciplinary approach to treating breast cancer.

It is my experience that radiation treatments can cause tremendous amounts of apprehension in some breast cancer patients. By the time breast cancer patients are being evaluated by a radiation oncologist, they have demonstrated a significant amount of strength and perseverance. Oftentimes patients have made difficult decisions regarding mastectomy vs. breast conservation or chemotherapy vs. hormonal therapy. It is often the fear of the unknown that really gives patients pause about radiation oncology. Most patients just do not know what to expect and the thought of radiation can conjure up all sorts of negative imagery. The purpose of this article

is to give a general introduction into radiation oncology and to discuss the different radiation therapy options available to early stage breast cancer patients.

Radiation therapy's role in breast conservation is to help decrease the risk of local recurrence in the treated breast by addressing potential microscopic cells that may remain after surgery. Radiation therapy is a local treatment that is targeted to the breast. Today, radiation therapy is increasingly becoming more tailored to the patient. For patients that are appropriate candidates for breast conservation there are several radiation options.

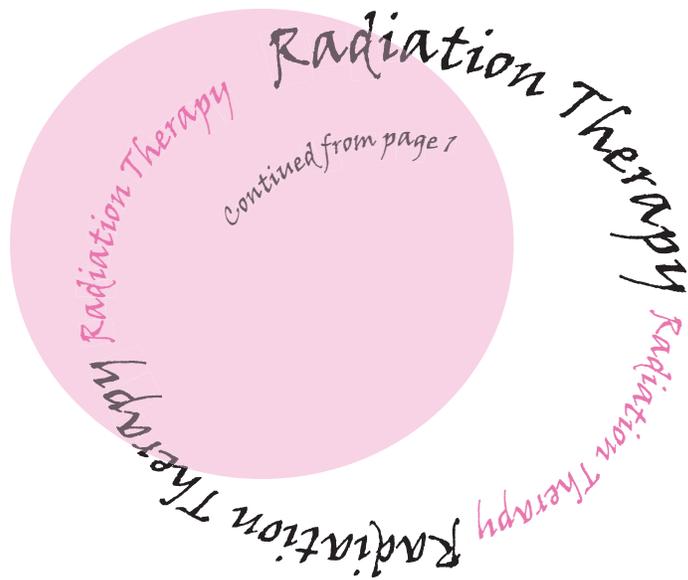
The most traditional form of radiation for breast cancer is radiation given to the whole breast using external beam irradiation. This regimen involves roughly six weeks of radiation treatments, Monday through Friday with weekends off. The initial 28 treatments target the whole breast. The final five give additional dose specifically to where the cancer was located in the breast. The radiation is not painful to the patient and the patient is not radioactive following the treatment. It is typical for skin irritation and fatigue to develop. Because this regimen treats the whole breast, there is also a small amount of radiation dose to the lungs and for left-sided lesions, to the heart. Dose to these critical structures is minimized to help prevent long-term complications.

A newer approach, the Canadian regimen, is similar to the traditional regimen but treats the whole breast in less time. This regimen uses larger doses daily in four weeks instead of the usual six. The concern with using larger doses daily is that the cosmetic outcome may be compromised. When compared, the risk of local recurrence is just about equivalent, and the cosmetic outcomes appear equivalent. Similar side effects with skin irritation, lung or heart dose and fatigue can be expected.

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Partial breast irradiation is a relatively new option for highly selected patients with very early stage breast cancer. Partial breast irradiation can be given in several different ways. It can be given with either external beam irradiation, with a catheter placed in the tumor bed, or with protons. Partial breast irradiation is not the standard of care for patients with early-stage breast cancer. Single institution studies, however, have demonstrated promising results in terms of local control. There is currently a study accruing patients to answer the question definitively. At this time, this study has accrued enough early-stage patients and is now asking whether partial breast radiation can be used for node positive patients. Whether given with external beam radiation or with an intracavitary catheter, partial breast radiation is often given twice a day for five days. For intracavitary radiation a catheter is placed in the tumor bed then inflated with saline, usually as an outpatient procedure. The radiation is then delivered by introducing radiation into the catheter and then removing it once an adequate dose has been delivered. This is performed twice a day. Side effects with partial breast radiation depend on the method of delivery. Skin toxicity can be seen with external beam but because the whole breast is not the target, lung and heart tissues are often able to have more sparing. With intracavitary partial breast radiation, skin toxicity can be less of an issue. Patients can develop firmness around the area of the tumor bed 25 percent to 30 percent of the time. Normal tissues such as lung and heart are spared.

One of the newest ways to deliver partial breast radiation for early-stage breast cancer patients is with protons. Protons offer a unique way to treat breast cancer because protons have a unique dose distribution. Because of this dose distribution protons are a feasible alternative to deliver partial breast while sparing

normal tissues like heart and lung. There are very few radiation oncology centers around the country that have proton facilities. Places like Loma Linda in California and Massachusetts General Hospital in Boston have begun to assess whether protons are a reasonable option for the delivery of partial breast irradiation. This is also a potential question being asked at Indiana University Melvin and Bren Simon Cancer Center. Partial breast irradiation with protons is delivered over twice a day over 10 fractions. One of the initial issues discovered utilizing protons for partial breast was skin toxicity. This issue is being addressed by changing the technique in which proton radiation is delivered.

The different treatment options and modalities discussed in this article are all available at IUSCC. For select early stage breast cancer patients, all four options are reasonable ways to achieve local control. Partial breast radiation with protons will be offered to the select appropriate patients as a novel new approach in an effort to individualize breast cancer treatment further. Please feel free to call Radiation Therapy at 317-274-2524 with any questions.

**-Janna Andrews, MD**

## Featured Web Site

[www.Facingourrisk.org](http://www.Facingourrisk.org)



FORCE (Facing Our Risk of Cancer) is a site that is designed for those affected by familial cancer, most commonly BRCA1 and BRCA2. The mission of this Web site is to improve the lives of individuals and families affected by hereditary breast and ovarian cancer. Some of FORCE's mission objectives are:

- To provide women with resources to determine whether they are at high risk for breast and ovarian cancer due to genetic predisposition, family history, or other factors.
- To provide information about options for managing and living with these risk factors.
- To provide support for families facing these risks.
- To raise awareness of hereditary breast and ovarian cancer.
- To promote research specific to hereditary cancer.

This site has wonderful information on managing risk, publications related to genetic cancer, and stories from survivors.

# In the News....

Dr. Schneider recently received a \$5.8 million Promise Grant from Susan G. Komen for the Cure for his research that attempts to predict who will benefit from the powerful breast cancer-fighting drug bevacizumab (Avastin). For those of you who donate to Susan G. Komen for the Cure through Race for the Cure, this is one of the ways your donation is put to work! Of your donation, 75 percent will stay in Central Indiana to fund screenings and follow-up care for underserved

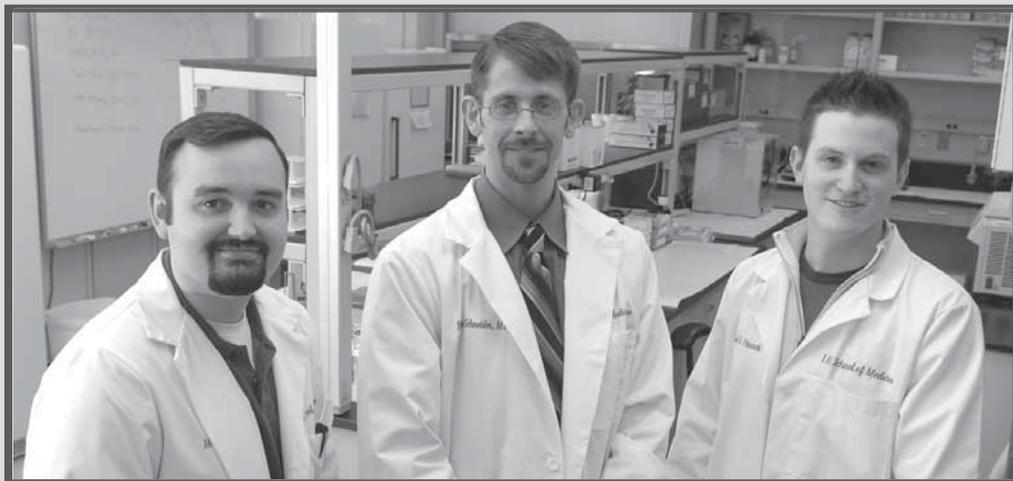
women. The remaining 25 percent helps fund the national Susan G. Komen Breast Cancer Research Program. The Promise Grant is a piece of the research program, which provides large-scale grants up to \$7.5 million each during a five-year period, targeted to research that brings science to the bedside more quickly than ever before. IU was one of four prestigious groups to receive a Promise Grant this year.

With the Promise Grant, Dr. Schneider and colleagues will try to establish biomarkers that physicians can use to better predict which breast cancer patients will benefit from bevacizumab and which cancer patients will suffer significant side effects.

The researchers will study genetic biomarkers in the ongoing IU-based E5103, a phase III trial that is evaluating whether adding bevacizumab to standard chemotherapy will improve disease-free and overall survival for women with potentially curable disease.

The Promise Grant will allow Dr. Schneider to use a cutting-edge genetic platform (a Genome Wide Association Study) to uncover the most clinically accurate biomarkers possible. Schneider and team also will include quality of life studies to better understand the physical and psychological effects women face.

"The time is ripe to apply cutting-edge therapeutic individualization to an important and emerging novel therapy, decreasing morbidity, decreasing cost, and improving quality of life for women with early-stage



*Pictured from left Milan Radovich, Dr. Bryan Schneider, Brad Hancock and (not pictured) Nawal Kassem laboratory researchers for the Promise Grant.*

breast cancer," Schneider said. Schneider's grant is part of \$60 million in research that Komen is set to fund this year to scientists worldwide who are seeking cures for breast cancer.

"Promise Grants are designed to bring the world's best minds together, to provide those experts with the resources to focus and solve one serious problem in breast cancer, and to get results to patients quickly," Hala Modellmog, president and CEO of Susan G. Komen for the Cure, said.

## Strawberry Fruit Dip

- 1 quart strawberries, stemmed and finely chopped
- ¼ cup light brown sugar
- ¼ cup orange juice
- 1 cup nonfat vanilla yogurt
- ½ teaspoon grated orange rind

In a bowl, mix all ingredients. Cover and refrigerate.

This dip is high in vitamin C and a great light snack at 16 calories per tablespoon. It also makes an awesome smoothie, when thrown in the blender. Avoid fresh fruit if you have a low white blood cell count.

Reprinted from: Eating Well Through Cancer

By: Holly Clegg & Gerald Miletello, M.D.

# DANGER Radiation



The Monday before Thanksgiving I had my first mammogram and breast ultrasound. The mammogram technician asked if I had done this before. I was incredulous. Of course I hadn't. I was only 36 years old! Two days later I had a very painful needle biopsy of my breast. The surgeon said it was very suspicious, but he couldn't confirm that it was cancer until after Thanksgiving. As you can imagine, this news was very scary and upsetting. My husband, Jeff, and I were having the family Thanksgiving on Thursday. Could I still do it? We decided that we would because we wanted to be surrounded by family. The subject came up in conversation some, but we tried not to dwell on it. A part of me was still hoping for the best. Friday was a hard day for us too because we attended a memorial service for Jeff's aunt who had recently passed away.

Finally, on Monday morning the surgeon confirmed that I had invasive ductal carcinoma. Surgery for my lumpectomy was scheduled for that Friday. Things were moving pretty rapidly. I was still trying to get my brain wrapped around the concept that I had cancer. After surgery we were all thankful that the tumor was small and the lymph nodes were all clear. Next came the incomprehensible, mind-boggling period of time meeting with doctors, discussing treatments, doing research, and making decisions. I was thankful for my many supportive family members and friends.

In the middle of January, I was to start radiation treatment. First, you are simulated for the process. A mold is created to keep your body still and in the same position for each treatment. You are given tattoos, so that they can precisely line you up with the radiation beams. I was to have 33 days of radiation – every day except on the weekends. I asked for a tour of the facility, which ended up being a very helpful thing.

It makes you feel a little funny to go through a big door that says DANGER – RADIATION on it. You take off your gown, lay on a table in your mold, and the technicians line you up. You just look at the ceiling, because you can't move around. This ceiling was a basic white drop ceiling – nothing pretty or peaceful to look at. I started out trying to think of healing thoughts as I heard the sound of the machine and knew the radiation was

4 going into my body.



Then I got an idea. A counselor from a cancer center recommended a book to me, "There's No Place Like Hope," by Vickie Girard. The author of this book, who had also been a cancer patient, put stickers inside the CAT scan machine so that patients would have something to look at during their scan. I wondered if I could somehow put stickers on the ceiling above the radiation table so there would be something to look at.



I found brightly colored smiley stickers at my mom's and asked her if I could use them. She is into scrapbooking, so she had lots of various stickers and materials. I mentioned my idea to her, and she was all for it. I began to measure how much time there was between the machine stopping and the technicians coming back in the room, just by counting in my head, "One-one thousand, two-one thousand," etc.



Not much time! I would have to be quick. I decided the day I was going to do it. It was actually the last chance I had, for the next day the table and the machine would be in a different location, and I wouldn't be able to do it. You see, they had simulated me again that week for the last eight days of treatment. The machine would focus just on the surgery site, which called for a different set-up.

I decided against putting the actual stickers on the metal part of the drop ceiling and put them on an index card size of paper instead. I wrote "SMILE" on it. I hid the paper down my pants so they wouldn't see it. (You have to undress from the waist up.) I hadn't told anyone how I was going to pull this off. It just kind of came to me. I acted like normal the whole time, but my heart was racing on the inside. I was really nervous. I waited until the machine shut off, and then I jumped up on the table (they raise the table up for radiation, so I could reach the ceiling) and crammed my paper under the metal piece directly above my head. It didn't go under



By: Amy Eberly Baumann

as far as I would have liked, and it blew a little in the breeze, but I didn't have much time. I sat back down, and began putting on my gown like nothing happened. The techs came in and didn't say a word about it. I didn't dare look at the ceiling. We exchanged our normal



pleasantries – "See you tomorrow." I had to sit down and breathe deeply before getting dressed again because my heart was still racing so fast. But

I had gotten away with it. Nobody knew any different! My friends would be impressed, because I really am not a risky person.

The next day, however, I got BUSTED. They were getting me ready for radiation and said, "Thanks for the stickers, Amy." I said,

"What makes you think I did it?" And they replied with, "Well, we do have



cameras in here!" Which, by the way, I knew, but every time I looked at the computers on my way in and out of the radiation room they were never showing the inside of the room. I wondered how often they actually looked in the room.

This is the funny part. One of the techs watching the monitor that day had glanced away for a moment. When she looked back, she saw me standing on the table and thought, "What in the world?!" She asked the other two if I had said or done anything. They said, "No, she wasn't standing on the table, she was just sitting there. You must have been seeing things." She thought she was losing her mind. Then they said the patient after me didn't say a word, but the gentleman after her said, "Thanks for putting these stickers up here for us to look at," and they went, "Ahhh." They thanked me, and said it was a great idea. They left the paper up there and I got to see my stickers every day. They made me smile!

On my last day of radiation, the techs told me that I had inspired them so much that they had their manager talk to the high school art class about painting a mural on the ceiling. I was very touched; I almost started crying. I had made a difference. And I felt good about it!



**About Amy:** She was 36 when she was diagnosed with invasive ductal carcinoma. She wants to help others when they are newly diagnosed because it is a scary time. She was treated in northern Indiana where she lives with her husband Jeff and cat Tiger.

## Komen Tissue Bank: Upcoming Tissue Collection Events

**Saturday June 13, 2009, 8 am to 3pm** at the IU Simon Cancer Center on the IUPUI campus

At this particular tissue donation event, we are targeting the African-American population in our efforts to recruit donors. We are not limiting donors to African-American women, just trying to make them aware of this opportunity. Other donors are welcome as well.

**Saturday, August 8, 2009** at the IU Simon Cancer Center

This event will be targeting the Hispanic community, but again donors are not limited by their ethnicity everyone is welcome.

If you are interested in donating, volunteering or would just like more information contact the Susan G. Komen for the Cure Tissue Bank via the Web at [www.komentissuebank.iu.edu](http://www.komentissuebank.iu.edu) or call 317.274.2366

# The Caring Presence of a Chaplain

"You have cancer." Those words turn life topsy-turvy. Strong emotions such as shock, panic, anger, resentment, despair, and even self-blame suddenly consume us. New questions grip our minds: "Can I survive this?" "Why me?" "Why now?" What used to seem important becomes inconsequential. Our sense of inner peace and harmony evaporates, perhaps being replaced by mind-numbing terror. We may feel a new kind of separateness, even from those who are dear to us. Each of these responses demonstrates that cancer isn't something that happens only to our bodies. It affects all dimensions of life. Learning that you have cancer is like being thrust into a wilderness. The journey through this wilderness is not only physical. It is emotional and spiritual as well.

That's where I can help. As the chaplain on the CompleteLife team at the IU Simon Cancer Center, I accompany patients and families trekking through this wilderness. *My goal is to be a caring, compassionate presence in the midst of the ups and downs of the journey.* I am here to nurture, support, and sustain the patients, families and staff I travel with, celebrating with them during the "ups" and helping them find comfort and peace during the "downs." How I do this varies, depending on their needs. Most often it involves listening, deeply, to what is stirring inside. Inviting the expression of what is on someone's mind and heart. Allowing whatever needs to come.

I met with a young mother as she was receiving chemotherapy in the Infusion unit of the cancer center. This was our first meeting, although she has been coming to this place for awhile. She wears a wig in place of her own hair. We talked for a time about her life and family. Then she looks up at the bag of fluid that is gradually flattening as its contents flow

into her. She sets her jaw, then says resolutely: "I'm fighting this and I'm going to win." A little later tears flow as she agonizes, "What if I die? What will happen to my children?" Even later, "I want them to remember me." Finally, with a deep sigh, she whispers, "I haven't said this to anyone else." She is quiet now. Her soul has spoken. And we have both heard.

When I tell people I am a chaplain, they often ask, *"What do you do?"* If I were truly honest and direct, I would say, "I listen from my soul...I listen from my soul for what the other's soul needs to say." When I do this, the response varies. Sometimes the other soul is silent. It can be a scary thing to let your soul speak with authority the truth of your life. At other times truth breaks forth. Sometimes it names the suffering. Sometimes it searches for meaning. Sometimes it proclaims the love. Sometimes it reveals a yearning. Whatever the message, we experience the power and mystery of life when a soul speaks. That moment is like arriving at a lush oasis in the desert. And we can pause and be renewed for the rigors of the journey yet to come.

Rev. Janice C. Kemp MDiv, PhD  
Chaplain, Complete Life Program,  
IU Simon Cancer Center



Rev. Kemp, a former hospice chaplain, has recently come to IUSCC to establish spiritual support services for outpatients, their families, and the staff who serve them. Her work is funded by a grant from the Daniel F. Evans Center for Spiritual and Religious Values in Healthcare. You can contact Janice through Email ([jkemp@clarian.org](mailto:jkemp@clarian.org)), by phone (317-278-6056), or by having her paged while you are at the IUSCC.

# Breast Cancer



**Q:** Are there certain tests and at what intervals are the tests given to breast cancer survivors to provide some reassurance that she/he is definitely cancer free?

We schedule testing according to the Follow-Up Care Test Recommendations from ASCO

## **Medical history and physical examination**

Visit your doctor every three to six months for the first three years after the first treatment, every six to 12 months for years four and five, and every year thereafter.

## **Post-treatment mammography**

Schedule a mammogram one year after your first mammogram that led to diagnosis, but no earlier than six months after radiation therapy. Obtain a mammogram every six to 12 months thereafter.

## **Breast self-examination**

Perform a breast self-examination every month. This procedure is not a substitute for a mammogram.

## **Pelvic examination**

Continue to visit a gynecologist regularly. Women

taking tamoxifen should report any vaginal bleeding to their doctor.

## **Coordination of care**

About a year after diagnosis, you may continue to visit your oncologist or transfer your care to a primary care doctor. Women receiving hormone therapy should talk with their oncologist about how often to schedule follow-up visits for re-evaluation of their treatment.

## **Genetic counseling referral**

Tell your doctor if there is a history of cancer in your family or risk factors may indicate that breast cancer could run in the family (see [www.cancer.net](http://www.cancer.net) for details)

The following tests are not currently recommended by ASCO for regular follow-up care because they have not been shown to lengthen the life of a person with breast cancer: A complete blood count (CBC) test and liver and kidney function tests, Chest x-ray, Bone scan, Liver ultrasound, Computed tomography (CT or CAT) scan, Fluorodeoxyglucose-positron-emission tomography (FDG-PET) scan, Breast magnetic resonance imaging (MRI) test, Breast cancer tumor markers, such as CA 15-3, CA 27.29, and carcinoembryonic antigen (CEA)

## Night Shift and Breast Cancer

Dr. Kathy Miller spoke with Dr. Scott Davis, who chairs the Department of Epidemiology at the University of Washington School of Public Health and Community Medicine on "Sound Medicine". Three years ago, researchers at the Fred Hutchinson Cancer Research Center in Seattle found that women who work the night shift have a higher risk for breast cancer than women who work the day shift. At the time, more research was needed to interpret these results. Now, that same team has published a study that suggests the reason for that difference has to do with hormone levels and their link to sleep patterns. Davis and colleagues found that women who worked the graveyard shift at least once during the decade before breast-cancer diagnosis were at approximately 60 percent increased risk for breast cancer compared with those who did not work the graveyard shift.

Davis said that nighttime sleep deprivation or exposure to light at night somehow interrupts the production of melatonin, a hormone produced at night by the brain's pineal gland. Melatonin production in turn prompts the ovaries to make extra estrogen — a known hormonal promoter of breast cancer. The findings may explain why nurses who often work the night shift have high rates of breast cancer. One of the future goals of the study is to understand who is most at risk for development of problems in order to prevent development of diseases such as cancer. If you would like to listen to the full interview, visit [www.soundmedicine.iu.edu](http://www.soundmedicine.iu.edu) (air date 3/29/09).

Summer 2009

IUSCC Pink

Our next edition of IUSCC Pink is going to be dedicated to our nurses. We couldn't do what we do without them. If you have a story, note, or just a thank you message to an IUSCC nurse please Email them to [calallen@iupui.edu](mailto:calallen@iupui.edu) by June 30, 2009.

*Shhhh it's a surprise!*

## ARE YOU INTERESTED IN LEARNING MORE ABOUT BREAST CANCER?

Sign up to receive the *IUSCC Pink* Newsletter

Name: \_\_\_\_\_ \*E-mail: \_\_\_\_\_

Street: \_\_\_\_\_ City/Zip: \_\_\_\_\_

\*Newsletters will be sent by e-mail when applicable.

Return to Casey Allen at:

IU Simon Cancer Center  
535 Barnhill Drive, RT 473  
Indianapolis, IN 46202

INDIANA UNIVERSITY  
MELVIN AND BREN SIMON  
CANCER CENTER



Or send an e-mail to [calallen@iupui.edu](mailto:calallen@iupui.edu) with the above information.

Do you have a story idea or just something to say about a story you've read in *IUSCC Pink*? Tell us about it! Would you like to share a personal experience? Contact us via e-mail [calallen@iupui.edu](mailto:calallen@iupui.edu), call 317-274-0594 or send mail to the address above.

Past editions of *IUSCC Pink* can be viewed at the IU Simon Cancer Center Web site, [cancer.iu.edu](http://cancer.iu.edu), by selecting breast cancer in the cancer type section (<http://cancer.iu.edu/programs/breast/iuccpink/>).