ONCOLOGY
Connections
SEPTEMBER 2007
SALEM HOSPITAL
DEDICATED TO KEEPING PHYSICIANS INFORMED

SCI Team pictured left to right: Kathy Wolfe, R.N.; Liz Colwell, R.N., O.C.N.; Chris Murrell, R.N.; Nancy Boutin, M.D.; Lea Ann Morrow, R.N., O.C.N.

The Long Haul

Chris Murrell, R.N., is a former competitive marathon walker. She understands the importance of pacing, discipline, and pushing through when you hit the wall. These attributes will be crucial as she assumes the title of Salem Cancer Institute (SCI) Clinical Operations Manager. It will be her job to implement the programs and processes conceived by the SCI Steering Committee over the last couple of years. Because, although the new Board and the Medical Director may lay out the course, man the aid station, and design a commemorative t-shirt, Chris and her staff will be walking the race day in and day out.

"All are extremely excited about designing a new way to coordinate cancer care in Salem, making the process easier for both patients and clinicians."

Clinical Coordinators Lea Ann Morrow and Liz Colwell joined Chris in early August. Both are Oncology Certified Nurses. All three women have worked on the 5 South oncology floor at some point in their careers. All have worked in Care Management at Salem Hospital. All are extremely excited about designing a new way to coordinate cancer care in Salem, making the process easier for both patients and clinicians.

In addition to her inpatient oncology experience, Chris has been a Willamette Valley Hospice nurse and has developed programs at other hospitals. As owner of Seams Sew Right Quilt Shop in Lincoln City—run by her husband and daughter—she brings a practical business perspective to her new role.

Liz and Lea Ann will job-share the first coordinator position, something they have done successfully as inpatient care managers. Like Chris, Liz and Lea Ann enjoy getting outside for a good hike and both are gardeners. Lea Ann has kids, Liz has cats. They both have husbands who help with the kids and cats.

The three will be joined in October by Kathy Wolfe, R.N., who will continue her roll as Breast Care coordinator, but under the SCI umbrella.

Salem Cancer Institute is a joint effort by Salem Hospital and local doctors of all specialties to enhance our multi-disciplinary "cancer center without walls." The Institute will strive to provide the highest quality oncology care to patients and their families in an efficient and supportive manner, and to do so seamlessly.

(Continued on page 2)

Oncology Connections
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Nancy Boutin, M.D., and the Marketing and
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to *nancy.boutin@salemhospital.org*.

The Long Haul *(Continued)*

Nancy Boutin, M.D., the SCI Medical Director, and Bill Beck, Pharm D, Cancer Service Line Director, round out the current team. Board members include physicians Bud Pierce, Arnella Hennig, Eric Laro, Mike George, and Evelin Dacker, plus administrative members Aaron Crane, David Holloway, Pat Harger, and a community member to be named later.

Hooray for Hot Flashes

Many breast cancer patients on tamoxifen complain about the sudden and significant increase in hot flashes. They tell of pulling off clothes in the middle of a business meeting, of kicking off the covers in the middle of the night, and of sweat soaking their scalp in the middle of a conference with their children's teacher.

We prescribe drugs to ameliorate our patients' symptoms because they don't get any extra credit for being miserable, right?

Turns out, they probably do. In a report from the WHEL (Women's Healthy Eating and Living) Study Group presented at the 2007 ASCO meeting, women on tamoxifen who self-reported hot flashes had fewer recurrences or new breast cancers than women who did not, with a p value at seven years of 0.1.

The authors state, "Hot flashes were more predictive of breast cancer specific outcome than age, hormone receptor status or stage (Stage I vs. II)."

The proposed mechanism linking cancer control and unpleasant side effects involves an important step in the metabolism of tamoxifen to its most active form, although more research is necessary. The take-home message from the presenters was to avoid giving patients drugs that interfere with tamoxifen metabolism, including most SSRIs, but not Effexor.

For more information, go to *www.ASCO.org*

Digital Mammography

What's all the fuss about?

Good quality screening mammography saves lives. Can prettier pictures save more? Digital mammography was introduced to the Salem community last year and there's no going back. What does this change mean for patients?

Breast compression, a source of low energy x-rays, and a friendly technologist to position the patient and apply "the squeeze" all remain the same. The difference is in the image receptor. Rather than film, the image is formed when x-rays interact with a special plate, typically selenium, which converts and transmits the latent image to electronic signals. This raw digital data can be processed, enhanced, and massaged for optimal contrast and density display. Think of the difference between your digital camera and your old 35mm camera.

A digital mammogram, displayed after tweaking the raw data, does a better job showing the radiologist all parts of the imaged breast, from the thicker and denser portions to the thinner components, with an equally beautiful display of skin and retroareolar areas. Improved contrast resolution reveals microcalcifications and subtle distortions previously unseen.

Computer assisted detection (CAD), the "spell checker" of mammography, can be used more readily since the image exists from inception, in digital format. With adequate transfer mechanisms, images can be moved from one geographic site to another (telemammography). Or the images can be printed for transport when needed.

However, digital units cost four times the price of a film system. Additional training is required for all involved, and connectivity and work-flow headaches abound. The pictures are better looking and deliver a lower radiation dose to the patient, but verification of clinical superiority remained in question. So, why switch?

In 2005, the New England Journal of Medicine published a long-awaited, large-scale clinical trial (49,528 enrolled) known as DMIST (digital mammographic imaging screening trial). Women were imaged with both digital and film technique and tracked for cancer detection rates. The huge group was segmented in several non-exclusive sets to determine if additional benefit existed and for whom.

Digital mammography performed significantly better in women with dense breasts, patients younger than 50 years old, and the pre- and peri-menopausal group.

In summary, digital mammography offers prettier and more informative images at a lower radiation dose with improved cancer detection in a large segment of the population. The transition to digital mammography is challenging but may ultimately be worth the fuss.

For more information, see N.Engl J. Med 2005;353;1773-83
www.NEJM.org

Hormone Therapy for Breast Cancer

What you need to know

The majority of patients with breast cancer whose tumors express estrogen and/or progesterone receptors will be placed on "hormone therapy" by their medical oncologist after completion of surgery, chemotherapy and/or radiation therapy. Hormone therapy is also used in the metastatic setting, where it can be highly effective at controlling the disease, frequently delaying the need for chemotherapy.

There are two main classes of hormone therapy used in this setting: selective estrogen receptor antagonists (SERMs) and the aromatase inhibitors. The classic SERM is tamoxifen (Novaldex), which acts as an estrogen receptor antagonist, preventing estrogen from stimulating growth of any remaining tumor cells. Tamoxifen is effective in both the pre- and post- menopausal settings. The aromatase inhibitors include anastrozole (Arimidex), letrozole (Femara) and exemestane (Aromasin). These medications block the enzyme aromatase, which is required to convert androstenedione to estrone, and testosterone to estradiol. The aromatase inhibitors are ineffective in pre-menopausal women and are only prescribed to post-menopausal women.

The side effect profiles and risks associated with these two classes of medications differ and some of the more common or potentially dangerous side effects are summarized here. Those in bold are the most important to be aware of.

Table 1: Comparison of medication side effects

ADVERSE REACTION	TAMOXIFEN	AROMATASE INHIBITORS
Cardiovascular	Hypertension Flushing/vasodilatation **Thromboembolic events**	Hypertension Flushing/vasodilatation Low risk of thrombo-embolic events
Central Nervous System	Mood swings Fatigue **Increased risk of stroke**	Mood swings Fatigue Headache
Endocrine/Metabolic	**Hot flashes** Amenorrhea Fluid retention	**Hot flashes** **Decrease in bone density** **Increased risk of fracture** **Increased cholesterol**
Gastrointestinal	Nausea	Nausea
Genitourinary	**Endometrial cancer** **Vaginal dryness** Vaginal bleeding/discharge	**Vaginal dryness**
Hematologic	Anemia	Anemia Leukopenia
Musculoskeletal	Athralgias Myalgias	**Athralgias** Myalgias
Ocular	Cataracts (slight risk)	
Potential drug interactions	paroxetine (Paxil), fluoxteine (Prozac), buproprion (Wellbutrin), sertraline (Zoloft) multiple other medications **Check new medications for potential interaction**	Less likely to have drug interactions than tamoxifen

Table 2: Recommended Monitoring for Women on Hormone Therapy

MONITORING	TAMOXIFEN	AROMATASE INHIBITORS
Bone Mineral Density	No additional monitoring needed. Tamoxifen may increase bone density	Baseline bone density test, then yearly or every other year.
Fasting Lipid Panel	No additional monitoring needed. Tamoxifen may improve lipid panel	Baseline, then as needed and at least once yearly.
Opthamology Exam	Recommended periodically while on tamoxifen due to slight increase in risk of cataract formation	No additional monitoring needed
Papanicolaou and pelvic exam	Yearly while on tamoxifen, and for any unusual vaginal bleeding	No additional monitoring needed

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Breast cancer treatment and heart damage?

Probably not in Salem

A study done at the University of Michigan, Ann Arbor, retrospectively reviewed 961 breast cancer patients treated at that institution between 1977 and 1995. The women all underwent stress testing to assess coronary artery damage. Women with left-sided lesions had significantly more coronary artery disease than women with right sided lesions, 59% versus 8%. The article appeared in The Journal of Clinical Oncology on July 20, 2007. It has been summarized in print and on the Internet. It is not clear whether the summaries have all included information regarding the years of treatment or the evolution of technology for both treatment planning and delivery over the last decade. The headline alone may worry some women or their doctors about the risks of current radiation treatment and heart health.

This study has not been repeated at Salem Hospital, but the physicians treating here during that time, and the years since, have all been cognizant of the risk of coronary artery damage by radiation. Therefore, fields have been shaped to spare myocardium.

In January, 2000, a new treatment planning system was installed which has allowed three dimensional planning on 100% of the patients undergoing breast treatment in our facility. All women with left-sided breast cancers have the cardiac silhouette contoured for treatment planning and dose-volume histograms are generated. The myocardium is excluded to the greatest extent possible and women are offered the opportunity to view their treatment plans.

Any patient, or physician, who has a question about coronary artery radiation dose can call any of the doctors in Radiation Oncology at Salem Hospital. The information should be easily retrievable.

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