WNY ONS Newsletter

Western New York Oncology Nursing Society Newsletter

Where Oncology Nurses Connect

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Updates in Radiation Therapy New Technologies Limit Side Effects and Spare Healthy Tissues

[**By Hanan Saca-Hazboun**, RN, MSN, Contributing Editor ONS Connect]

Radiation technology has witnessed several groundbreaking advancements in recent years, benefiting patients by eliminating the need for incisions, reducing pain, and improving quality of life. Changes have occurred as a result of advanced computer applications, electronic software, and digital technology. Equipment designs have improved over the past several years, with linear accelerators (LINACs) replacing the old cobalt machines. Today, patients are receiving higher doses but with targeted beam directions through intensity-modulated radiation therapy, thus increasing dosages to tumors but reducing toxicity to healthy tissues.

New Technologies

Three new technologies have emerged in community settings. First is the new "robotic" LINAC, referred to as CyberKnife® (Accuray Incorporated), a frameless, image-guided stereotactic radiosurgery (SRS) system. The CyberKnife system allows for exceptional precision, which can treat intracranial and extracranial tumors (e.g., lung, liver, pancreas).

The Gamma Knife® (Elekta AB) system, an earlier SRS system, attaches a helmet frame to the skull and treats only intracranial tumors. Both SRS systems deliver three-dimensional radiation treatments with surgical precision but without incisions (Chang & Timmerman, 2007).

ONS member Marilyn L. Hass RN, PhD, ANP-BC, a nurse practitioner at Mountain Radiation Oncology in Asheville, NC, says that SRS is a technique that is an alternative to surgery or adjunct to external-beam radiotherapy, with excellent patient outcomes.

Haas explains that the patient benefits of CyberKnife are numerous: "It requires no surgical incisions or general anesthesia, the procedure is essentially painless, and tumors located next to critical structures and organs can be safely treated with lower risk of complications, improving patients' quality of life."

Finally, the Novalis TX™ (Varian Medical Systems and BrainLab) is a LINAC with unique technologic features that enhance planning and treatment accuracy required for delivery of SRS as well as stereotactic body radiotherapy (SBRT).

ONS member Karen J. Allen, RN, MSN OCN ®, coordinator for the Center for Stereotactic Radiosurgery at Duke University Medical Center in Durham, NC, says "The Novalis TX affords us excellent flexibility and capability in treating a wide variety of intracranial and extracranial lesions, especially those with very irregular shapes," Allen says." The system is also used for tumors requiring multiple fractions such as primary gliomas and meningiomas, with the increased precision protecting adjacent critical intracranial structures."

Benefits to Patients

Haas and Allen say that the new systems have improved on the original arc-centered device developed by Dr. Leksell in 1949 (Chang & Timmerman, 2007). For intracranial delivery with these procedures, patient comfort is also enhanced by use of a custom, plastic mesh, head-

See "Radiation" page 2

News Alert! Academic Scholarships Are Now Available

(Information provided by: Theresa Zielinski, RN, MS, OCN)

Good news for or all who are going back to school for a degree in Nursing. There are 2 different types of scholarships that have been newly implemented for members of the WNYONS. These award scholarships include:

A MASTERS, POST MASTERS CERTIFICATE AND DOCTORAL SCHOLARSHIP-This Award is for $500.

A BACHELORS SCHOLARSHIP-This Award is for $250.

The PURPOSE of the Awards are:

1-To provide scholarships to registered nurses who are interested in and committed to oncology nursing.

2-To facilitate the process for members to continue their education by pursuing a Degree

The Chapter is very proud to have reviewed and accepted it's first recipient to receive the first Award for a 2009 Master's Scholarship. This Award has been given to Lisa Boris.

Lisa applied for the Master's Scholarship and in her pursuit of this award she stated;

> "oncology nurses have encompassed the roles of direct caregiver, educator, consultant, administrator, and researcher. Oncology nursing extends to all care delivery settings where clients experiencing or are at risk for developing cancer receive health care, education, and counseling for cancer prevention, screening and detection." (as extracted from the ONS website 2009 by Lisa)

It is clear that the goals presented by Lisa exemplify what it means to be an oncology nurse. These goals are not only beneficial within the profession of nursing, but hold great meaning for our local chapter. Therefore, let's all congratulate Lisa for this award. There is no doubt that she is most deserving of it!

General information about the Award and DEADLINE DATES:

The WNY ONS, regardless of postmark or other circumstances, must receive 2 plus copies of completed application packet or electronic version by October 15, for the Fall Semester or December 1, for the Spring Semester. If you have any questions, please contact a WNY ONS Board member. Contact list is located on the WNY ONS Chapter website @ westernnewyork.vc.ons.org

You can also address any questions you have via e-mail to:

Theresa Zielinski @ zfamily7@verizon.net

Barbra Dodds @ Barbra.Dodds@roswellpark.org

Darryl Somayaji @ darrylynn4@yahoo.com

We hope WNYONS members who are enrolled in an academic program take advantage of this wonderful opportunity!

Special points of interest:

- Would you like to honor an Oncology Nurse? Oncology RNs who've made a difference in the lives of people with cancer and their families through the ONS Honor Someone Special program.
- Oct. 5-6:30pm Dinner. Treatment of patients with advanced Renal Cell Carcinoma. Held at Tempo Delaware Ave. Speaker: Dr. Michael Wong
- Oct 14 6:00pm Dinner. Chophouse. "Her 2 + metastatic Breast Cancer". Dr Amy Early.
- Oct 27, 7:30am-12 noon. Hohn Auditorium. Breast Cancer Education Day. "What Every Nurse Should Know". Dr Stephen Edge.
- We are still collecting non-perishables at every meeting.

Inside this issue:

Safety Devices Help Prevent Needle-Stick Injuries

Needle-stick injuries can result in potential exposure to pathogens such as HIV and hepatitis B and C. According to the Centers for Disease Control and Prevention (2008), an estimated 385,000 sharps-related healthcare injuries occurred in 2008. Data from the Exposure Prevention Information Network ([EPINET], 2006), which collects data from a sampling of 33 U.S. hospitals, showed that 36% of the injuries involved nurses.

In oncology, sharps-related injuries can occur in any number of ways. Needle sticks have been reported with the insertion of brachytherapy cannulas or needle biopsies, insertion of peripheral IVs, or accessing of implanted ports. Rebound punctures from huber needles can occur during deaccessing. Large-bore needles used during therapeutic phlebotomy for sickle-cell treatment pose an especially high risk.

Administration of oncologic medications, such as subcutaneous 5-azacitidine, which often requires multiple injections per dose, carries a special risk. Some cancers are being treated with investigational vaccines; the implications of needle sticks are readily apparent.

Safety devices themselves can lead . to injury. Most of the mechanisms operate differently. A lack of adequate training on use of safety devices was responsible for 36% of the injuries reported by EPINET. However, training for such devices is not always practical because different drugs come with different safety devices. Nurses who float in a hospital may be unfamiliar with some of the devices. Educating residents or visiting staff on how to use safety devices also presents a special interdisciplinary challenge.

Oncology nurses should be aware of the devices used in their practice. If you currently do not have safety needles, check with your vendors. A listing of manufacturers can be found at www.ONSConnect.org under "Connect Extras." ∗

Centers for Disease Control and Prevention. (2008). *Workbook for designing, implementing and evaluating a sharps injury prevention program.* Retrieved July 22, 2009, from http://www.cdc gov/sharpssafety/pdf/sharpsworkbook_2008.pdf

Exposure Prevention Information Network.(2006). *Official summary report for needlestick and sharp object injuries, 2006.* Retrieved July21, 2009, from http://www.healthsystem.virginia.edu/internet/epinet/2006-EPINet-Needle-Stick-Data.pdf

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Fighting Radiation-Induced Fatigue

Nearly all patients who are treated with radiation experience feelings of fatigue and tiredness. Research-based evidence indicates that exercise can help. Some suggestions for patients include walking, cycling, swimming, resistive exercise, or combined exercises. The patient's goal should be to exercise at least several times thr0ughout the week during and after the course of radiation treatment to help fight fatigue.

Checkout the ONS Putting Evidence Into Practice resources on fatigue at www.ons.org/outcomes/volume1/fatigue.shtml for more interventions that are likely to be effective in preventing and treating fatigue, such as energy conservation, relaxation, and massage therapy.

Online Courses@ons.org/ceCentral

October 6: Breast Cancer, Head & Neck, Cancer, Basics, and Cancer Biology
October 13: Gastrointestinal
October 17: Breast Cancer
November 3: Lung Cancer

2009 Conferences Tampa FL

November 12-14: APN
November 13-15: IOL

Ons National Membership:

membership@ons.org membership@ons.org

If you're not an RN but work in oncology or you are a student ☐ ONS offers student discounts and support through Student Virtual Community, many scholarships and grants available.

Western New York ONS membership:

westernnewyork.vc.ons.org

Click 'Join Our Chapter' and follow link

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immobilization device instead of a stereotactic frame screwed into the skull.

According to Allen and Haas, patients are happy to learn that no surgical incisions need to be made for these procedures. Haas added that some of her patients have received SRS with the fixation method (frame that was screwed into the skull) as well as the new frameless method, and all praise the new robotic, frameless LINAC system. Patients no longer experience the pain usually associated with attaching the frame to their skulls. Moreover, the time for treatment has significantly decreased.

Allen agrees. "SRS given as a boost immediately following whole-brain radiation therapy for metastatic disease can increase local control, especially in radio-resistant diseases like melanoma." She also says that SBRT is excellent for treating medically inoperable early-stage lung cancers and lung, liver, and spinal metastases.

Implications for Radiation Oncology Nurse

Radiation oncology nurses are specialists within their field. With the addition of these newer technologies, nurses are refocusing their radiation knowledge. Beyond general radiation responsibilities, radiation oncology nurses find themselves coordinating and managing care from initial referral for SRS through treatment and follow-up.

"Nurses communicate and coordinate the process between all team members depending on the site being treated: radiation oncologist, specialist physicians (e.g., neurosurgeon, pulmonologist, thoracic surgeon), physicist, radiation technologist, and radiology," Haas explains.

Radiation oncology nurses have new opportunities to participate in research to help define clinical guidelines, to ensure evidence-based practice, and to educate on-in the community

"Patient evaluation by nursing and education for patients prior to receiving SRS or SBRT are essential to ensure smooth and successful delivery of therapy," Allen adds.

Finally, although SRS can be delivered via different machinery and is a highly technical and automated procedure, it requires human attention by highly trained multidisciplinary team members.

"We have many quality-assurance review procedures in place to ensure accuracy of treatment planning and delivery," Allen says. ∗

Chang, B.K., & Timmerman, R.D. (2007). Stereotactic body radiation therapy: A comprehensive review. *American Journal of Clinical Oncology, 30*(6), 637–644.

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Full Article available from ONS Connect.

Western New York ONS President's Message– Darryl Somayji

September 22, 2009

Dear Members

At the end of 2008, the WNY Chapter of ONS Board members put together an outline of our strategic plan for 2009-2011 which coincides with our national organization. The chapter strategic plan represents three main areas of focus for our organization. The first strategic goal is *Advocacy* throughout the cancer care and nursing profession continuum. Oncology nurses have a "voice" in many different arenas (e.g. legislation, employers, and community organizations) that impact patient and family care, nursing practice, and nursing workforce. We are advocates for our patients, family, and ourselves establishing a noticeable presence that is valued in the local as well as global community regarding cancer care. We are advocates for equity in access to care for all patient populations from cancer prevention through end of life care. Please take some time to review the national as well as the chapter strategic plan. It's up to us to fill in the blanks under Outcomes 2009-2011. Together we can produce measurable outcomes that demonstrate our commitment to providing optimum cancer care in Western New York and our extended community.

1) Strategic Goal: *Advocacy* throughout the cancer care and nursing profession continuum.

Strategies	Action Proposals 2009-2011 (In progress)	Outcomes 2009-2011
Giving voice to oncology nursing	**Advocate for nurses to have a voice in legislation that impacts patient care and nursing practice, nursing workforce. Advocate for nursing presence in the local as well as global community.**	
Access to care	**Advocate for adequate resources for prevention, early detection, intervention, supportive, and survivorship care. Advocate for access to clinical trials.**	
Health disparities	**Advocate for adequate resources for prevention, early detection, intervention, supportive, and survivorship care.** **Advocate for access to clinical trials.**	
Cancer Prevention	**Advocate reducing tobacco use, advocating for cancer screening, and early detection resources.**	
Nursing Practice	**Preserve and promote oncology nurses' scope of practice; reimbursement issues; education , research, and workforce shortage**	

Please check our website for strategic goals 2 and 3.

Thank you for being an Oncology Nurse!

Darryl Somayaji

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We're on the web
westernnewyork.vc.ons.org

Western New York Oncology Nursing Society

Our Mission: To promote excellence in oncology nursing and quality cancer care.

Our Vision: To promote education and encourage development of oncology nursing.

Our Goals: To enhance research utilization and provide knowledge and skills to prepare nurses to lead and participate in cancer related care.

Chapter Meetings Ethel Chandler Room 8th Floor RPCI:

September 24-5:30pm, October 5-5pm, November 2-5pm,

December 7-5pm

Policy for Meetings: $10.00 checks will NOT be returned and there is a $15.00 fee for non members.

Contact pookiejones76@yahoo.com for volunteer opportunities. Watch for upcoming Thanksgiving and Christmas special events.

Next Issue December 2009. Submission deadline November 30, 2009

New Class of Drugs May Benefit Triple-Negative Breast Cancer

A new class of drugs showed promise in phase II clinical studies against two types of breast cancer. The compounds, known as PARP inhibitors, work by obstructing the ability of cells damaged by chemotherapy to repair themselves, causing tumors cells to die.

The randomized, phase II clinical trial studied BSI-201, a poly ADP-ribose polymerase inhibitor, in combination with gemcitabine and carboplatin chemotherapy in patients with metastatic triple-negative breast cancer (TNBC). In the study, 116 women with metastatic TNBC were randomly assigned to receive chemotherapy alone, or in combination with BSI-201. BSI-201 prolonged survival by 3.5 months, to 9.2 months, when added to the standard regimen of chemotherapy, with limited side effects. Complete or partial tumor response was observed in48% of patients who received BSI-201 combined with chemotherapy, whereas patients receiving chemotherapy alone had a response rate of 16%. The most common side effects included neutropenia, thrombocytopenia, and anemia.

TNBCs lack receptors for the hormones estrogen and progesterone and the protein HER2, each of which are targets for many current therapies, making them difficult to treat with existing therapies. The researchers said that the results are promising but need to be confirmed in larger trials.

O'Shaughnessy, J., Osborne, C., Pippen, J., Yoffe, M., Patt, D., Monaghan, G., et al. (2009). Efficacy of BSI-201, a poly (ADP-ribose) polymerase-1 (PARP1) inhibitor, in combination with gemcitabine/ carboplatin (G/C) in patients with metastatic triple-negative breast cancer (TNBC): Results of a randomized phase II trial [Abstract 3]. *Journal of Clinical Oncology, 27*(18, Suppl.).

Cervical Cancer Helped by "Surgery Boost"

Small changes to surgery for cervical cancer could improve survival by as much as 20%, according to researchers in Germany. For some women, the only option is a radical hysterectomy, but he disease may still come back. The new, more highly targeted method was more effective and resulted in fewer complications.

Radical hysterectomy involves removal of the uterus, cervix, a small portion of the upper part of the vagina, and some soft tissue from the pelvis. The new surgical technique called total mesometrial resection (TMMR) removes a specific, more defined section that includes the fallopian tubes, uterus, and certain parts of the vagina, which the researchers said are the main areas of local tumor spread.

The idea behind the surgery is to prevent damage to nerves in the pelvis that can cause problems with bladder and bowel function after the operation. Patients are also spared radiotherapy, which can cause further side effects.

In the study, 212 patients underwent TMMR from 1998–2008. After 41 months, the cancer returned in only 10 patients. Even in high-risk patients, the recurrence rate was 5%, better than the 28% overall recurrence rate seen in similar patients treated with normal surgery, according to the researchers. The five-year survival in patients with positive lymph nodes undergoing the new technique was 91%, compared with 68%–78% previously reported with standard surgery. Researchers also reported that 63% of patients had no treatment-related complications. According to the researchers, TMMR without adjuvant radiation has the potential to improve survival by 15%–20%.

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Hockel, M., Horn, L.C., Manthey, N., Braumann, U.D., Wolf, U., Teichmann, G., et al. (2009). Resection of the embryologically defined uterovaginal (Mullerian) compartment and pelvic control in patients with cervical cancer: A prospective analysis. *Lancet Oncology, 10*(7), 683–692.

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