

NNECOS

**Northern New England
Clinical Oncology Society**



**Annual Meeting
Program & Abstracts**

**Burlington, VT
October 12-13, 2007**

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Welcome to Burlington and NNECOS' 2007 Annual Meeting!

Thank you for joining us for our expanded annual meeting at the picturesque Sheraton Burlington. In addition to the fabulous slate of speakers presenting the latest in clinical advances and practice updates, we invite you to also take advantage of the opportunity to network with colleagues from across the region. Now is the time to band together as a profession as we participate in the political, economic, and scientific debates that challenge cancer care communities nationwide.

On Saturday, please be sure to visit with the representatives of the companies who have helped to support this event and our society throughout the year. Exhibits will be located in the Emerald Ballroom III, along with delicious refreshments.

At the conclusion of the meeting, please take the time to complete and submit your evaluation. (*This is a requirement if you wish to receive CME's/CEU's.*) Your feedback is important to us, and plays an important role in planning future events.

2007 Annual Meeting Planning Committee

*Chris Nunnink, Emma Dann, Steven Grunberg, Dan Hayes,
Anne Ireland, Ken Meehan, Linda Patchett, Elaine Towle*



Commercial Support

NNECOS gratefully acknowledges the following companies for their support of the society throughout the year. Companies marked with an asterisk* have provided educational grant funding specific to the 2007 Annual Meeting.

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Commercial support by these organizations does not influence the objectives and content of this activity.

2007 Annual Meeting Agenda

Friday Sessions

- 1:00 – 2:15 p.m.** **Teamwork: Strategies to Success in the Oncology Practice** **Emerald III**
M.L. Hannay, BS, MEd, *M.L. Hannay Associates Training and Development*
An innovative, informative and interactive session designed to give you practical skills to help you build the team you want as you work with others to achieve exceptional outcomes. Included will be the 4 steps to success, a team Development Assessment, how to apply the model to your existing team, and ideas on how to influence the “difficult” team member to help produce more positive patient care and quality.
- 2:15 – 2:35 p.m.** **Refreshment break**
- 2:35 – 4:05 p.m.** **Breakout A –Measurement of Chemotherapy-Induced Peripheral Neuropathy** **Emerald III**
Ellen M. Lavoie Smith, PhD(c), MS, APRN-BC, AOCN, *DHMC/Norris Cotton Cancer Center*
Chemotherapy-induced peripheral neuropathy (CIPN) has been inadequately quantified due to patient report and provider assessment barriers. In addition, the lack of clinically useful, valid, and reliable measurement approach has not been discovered nor employed in everyday clinical oncology settings. This presentation will highlight CIPN measurement challenges, as well as the advantages and disadvantages of several approaches to quantifying this extremely distressing complication of neurotoxic chemotherapy. Recent research investigating new CIPN measurement approaches will be presented.
- 2:35-4:20 p.m.** **Breakout B – 2 Parts** **Diamond I**
- 2:35-3:15 p.m.** **Part 1: State Cancer Planning Collaborative Panel**
Panelists: Melanie Feinberg, BA, *Maine Medical Center*
 Ali Johnson, CTR, BS, *Vermont Department of Health*
 Nancy Kane, MS, RN, AOCN, *Payson Center for Cancer Care*
Moderators: Anne Ireland, MSN, RN, AOCN, *Fletcher Allen Health Care*
 Paul Harrington, BA, *Vermont Medical Society*
- 3:20-4:20pm** **Part 2: Effectively Integrating Non-physician Practitioners in Oncology Practice**
Elaine L. Towle, CMPE, *Oncology Metrics, llc*
Ms. Towle will speak to all aspects of nonphysician practitioners’ integration into the oncology practice, and help participants identify the important elements of state scope and practice, and the specifics in their state.
- 5:00 - 6:30 p.m.** **Cocktails, Hors D’Oeuvres, Poster Session** **Promenade**
- 6:30 - 7:30 p.m.** **Welcoming Remarks & Dinner** **Emerald I&II**
- 7:30 – 8:30 p.m.** **Evolution of Oncology Through One Man’s Eyes** **Emerald I&II**
George P. Canellos, MD, *Dana Farber Cancer Institute*
Dr. Canellos will discuss the evolution of oncologic care as it applies to current practice.
- 8:30 - 9:00 p.m.** **Business meeting** **Emerald I&II**
- 9:00 p.m.** **Networking**

Saturday Sessions

7:15 - 8:00 a.m.	Continental Breakfast, Exhibit	Emerald III
8:00 – 9:00 a.m.	Washington Update; Christian G. Downs, MHA, JD, <i>Association of Community Cancer Centers</i> <i>Mr. Downs will address regulatory and legislative issues affecting patient access, and review appropriate responses</i>	
9:05 – 10:05 a.m.	Survivorship Care Patricia O'Brien, MD, <i>Fletcher Allen Health Care</i> Dr. O'Brien will present information to increase therapeutic understanding of lymphedema neurocognitive changes, and needs of long term cancer survivors.	Emerald I & II
10:05 – 10:25 a.m.	Morning Refreshment Break, Exhibits	Emerald III
10:25 – 11:25 a.m.	Abstract Presentations Southern Maine Colorectal Cancer Screening Project Susan Miesfeldt, MD, <i>Maine Center for Cancer Medicine</i> Breast MRI in a Rural Community Hospital: Collaboration with Blue Cross/Blue Shield of VT Allan Eisemann, MD, <i>Community Cancer Center</i> Transplantation in the Elderly: The Affect of Age on Clinical Course and Outcomes Marcy Canary, MD, <i>Dartmouth Medical School</i> Vaginal testosterone for atrophic vaginitis in breast cancer patients on aromatase inhibitors: a pilot study Sabrina Witherby, MD, <i>Memorial Hospital of Pawtucket</i>	Emerald I&II
11:30 a.m. – 12:30 p.m.	Breakout A: Targeted Therapies in the Treatment of Lung Cancer Jim Rigas MD, <i>Dartmouth Hitchcock Medical Center</i> Dr. Rigas will discuss the value of targeted therapies in the treatment of lung cancer. Breakout B: Hazardous Drug Safe Handling Martha Polovich, MN, RN, AOCN, <i>Duke Oncology Network</i> <i>It is nearly 30 years since the first reports of adverse effects in health care personnel from exposure to hazardous drugs and 20 years since the first safe handling guidelines were published by the Occupational Safety and Health Administration (OSHA). Despite the passage of time and the availability of guidelines, the potential for exposure in oncology practice still exists. This presentation will review the potential health effects of exposure to hazardous drugs. The current recommendations outlined in the NIOSH alert will be discussed.</i>	Emerald I&II Diamond
12:30 – 1:30 p.m.	Lunch, Exhibits	Emerald III
1:30 – 2:30p.m.	Breakout A: Radiofrequency Ablation for Lung Tumors Jeff Klein, MD, <i>Fletcher Allen Health Care</i> Dr. Klein will review the indications of, describe the technique of, and review the published results from Radiofrequency Ablation (RFA) Breakout B: Pain and Symptom Management in the Era of Assisted Suicide Zail Berry, MD, <i>UVM College of Medicine, Hospice of the Champlain Valley</i> <i>Dr. Berry will address the issues of uncontrolled pain on cancer patients' decisions about treatment and their will to live, and how to heighten the finesse of participants' pain management strategies to achieve maximum quality of life for their patients.</i>	Emerald I&II Diamond
2:30 - 3:30 p.m.	Breast Cancer Update Hyman Muss, MD, <i>UVM and Vermont Cancer Center</i> Dr. Muss will discuss new advances in Adjuvant Systemic RX in breast cancer.	Emerald I&II

Thank you for attending our 2007 Annual Meeting. Please remember to complete and submit your evaluation!

NNECOS 2007 Annual Meeting

Needs Statement

In 2007, an estimated 6,980 people in Maine, New Hampshire, and Vermont will die from cancer, and an estimated 18,980 new cancer cases will be newly diagnosed.¹ Access to medical care is more limited in rural settings than in urban or suburban environments.² This limited access to cancer care includes barriers such as, health status of the patient and the time and money required to travel long distances to obtain health care for the patient living in a rural area. Not only can routine cancer care be limited in more sparsely populated areas, but the availability of multi-specialty care, innovative cancer treatments, clinical trials, and updated technologies may also be restricted. All of these factors combined may contribute to deny access to standard oncology care for people living with cancer in a rural setting. As the only tri-state organization in our region dedicated to ensuring the availability of and access to high quality oncology care, NNECOS members look to their society to provide clinical education and updates, information on important regulatory and legislative issues, and a forum for information sharing, networking, and exchange of best practices information to improve the delivery cancer care for all in the region. Based upon a combination of previous educational meeting evaluations, journal articles, and the expertise of its planning committee members, the Northern New England Clinical Oncology Society presents the 2007 Annual Meeting.

¹ American Cancer Society. Cancer Facts & Figures 2007. Atlanta: American Cancer Society; 2007.

² Amey CH, et al J Rural Health 13:19-108, 1997; Higginbotham JC et al RAM Community Health 24:1-9, 2001

Continuing Education

Accreditation Statement

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the American Society of Clinical Oncology and the Northern New England Clinical Oncology Society. The American Society of Clinical Oncology is accredited by the ACCME to provide continuing medical education for physicians.

Credit Designation Statement

The American Society of Clinical Oncology designates this educational activity for a maximum of *10.0 AMA PRA Category 1 Credit(s)*[™]. Physicians should only claim credit commensurate with the extent of their participation in the activity.

CEU Information

Application has been made for 10.0 contact hours to the ONS Approver Unit. ONS is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

Objectives

Upon participation in this activity, attendees will be able to:

- Apply advances in scientific and translational research in the care of their patients
- Evaluate the role of new diagnostic techniques and therapeutic strategies as applied to the care and treatment of patients with cancer
- Implement new practices or review existing ones to improve the quality of care delivered, based upon knowledge gained at the 2007 NNECOS Annual Meeting
- Discuss legislative and regulatory issues that have an effect on cancer care and oncology practice in our region
- Develop and implement strategies to improve communication within practices to enhance patient care
- Enhance patient care through collaboration with other practices within the region
- Recognize the importance of an integrated multi-disciplinary system of care for the patient with cancer

Northern New England Clinical Oncology Society

Business Meeting October 12, 2007

AGENDA

1. **Call to order** – *Dr. Nunnink*
2. **Committee Reports** – *Dr. Nunnink*
 - a. Membership – *Dr. Meehan*
 - b. Finance – *Dr. Hammond*
 - c. Nominating – *Dr. Crow*
 - d. Website – *Dr. Briccetti*
 - e. Clinical Practice Committee – *Dr. Hayes*
 - f. Carrier Advisory Committee – *Dr. Hayes*
3. **Member Educational Activities** – *Dr. Nunnink*
 - a. May 2008 Reimbursement Seminar Tuesday May 20, 2008
~ request for planning committee members
 - b. Plans for 2008 Annual Meeting
~ request for planning committee members
4. **Election of Board of Directors** – *Dr. Nunnink*
As presented by Nominating Committee Chair – *Dr. Crow*
5. **Other business** – *Dr. Nunnink*
6. **Goals for next year** – *Dr. Meehan*
7. **Adjourn**

NNECOS Annual Meeting Faculty

Faculty Disclosure Statement: The Planning Committee has reviewed all presenter disclosure reports, identified potential conflicts of interest and implemented strategies to manage those areas of conflict, where they exist. Individuals marked with an asterisk* have no significant financial relationships to disclose.

Zail Berry, MD*	Palliative Medicine Consultation & Home Medical Services
Marcy Canary, MD*	DHMC, Dartmouth Medical School and Norris Cotton Cancer Center
George Peter Canellos, MD	Dana Farber Cancer Institute <i>Consultancy: Celgene; Stock Ownership: Abbott Labs; Other: Up-to-date, author, editor</i>
Christian G. Downs, MHA, JD*	Association of Community Cancer Centers (ACCC)
Allan Eisemann, MD*	Community Cancer Center, Rutland Vermont
Melanie Feinberg*	Maine Medical Center
M.L. Hannay, BS, MEd*	M.L. Hannay Associates Training & Development
Paul Harrington*	Vermont Medical Society
Anne Ireland, RN*	Fletcher Allen Healthcare
Ali Johnson, CTR*	Vermont Cancer Registry
Nancy Kane, RN*	Payson Center for Cancer Care
Jeffrey Klein, MD*	Fletcher Allen Health Care
Ellen M. Lavoie Smith, PhD(c), MS, APRN-BC, AOCN*	DHMC/Norris Cotton Cancer Center
Susan Miesfeldt, MD*	MCCM
Hyman B. Muss, MD	University of Vermont and Vermont Cancer Center <i>Consultancy: Pfizer DSMB, Ortho Biotech, Genentech, Amgen, Ro CPLS (Steve Madison)</i> <i>Stock Ownership: Amgen ; Honoraria: Network Oncology Communication Research, Research to Practice, American Pharmaceutical, Meditech, LTD, Medidigms</i> <i>Research Funding: Merck, AstraZeneca, Genentech, GSK, Sanofi-Aventis, Ortho (Tibotech), Pfizer</i> <i>Expert Testimony: RMF/Harvard Medical; Other: Fellowship Support: AstraZeneca</i>
Patricia O'Brien, MD	Dept of Hem/Onc; Fletcher Allen Health Care <i>Honoraria: Flexitouch - corporation that make lymphedema pumps</i>
Martha Polovich, MN, RN, AOCN	Duke Oncology Network <i>Consultancy: Cardinal Health; Honoraria: Carmel Pharma</i>
James Rigas, MD	DHMC <i>Consultancy: Adler Pharmaceuticals, Amgen, Bayer, GlaxoSmithKline, Ligand, Sanofi-Aventis</i> <i>Honoraria: Genentech; Research Funding: to the Trustees of Dartmouth College from: Abbott, Amgen, Cell Therapies, Eisai, EMD Pharmaceuticals, Genentech, GlaxoSmithKline, ImClone, Ligand, Merck, Novacea, Novartis, Novelos, OrthoBiotech, OSI, Pfizer, Roche, Sanofi-Aventis</i>
Elaine L. Towle, CMPE*	Oncology Metrics, llc
Sabrina Witherby, MD*	Memorial Hospital of Pawtucket

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NNECOS Annual Meeting Planning Committee Members

Planning Committee Disclosure Statement: Financial relationships reported by members of the Planning Committee are provided below. During all phases of planning for the 2007 Annual Meeting, areas of conflict were managed through a peer-review process and/or through individual recusal when appropriate. Individuals marked with an asterisk* have no significant financial relationships to disclose.

Emma Dann, RN*	Daniel M. Hayes, MD*	J. Chris Nunnink, MD, Chair
Maine Medical Center	Maine Center for Cancer Medicine	Vermont Cancer Center
Steven M. Grunberg, MD	Anne Ireland, RN*	<i>Stock Ownership: Amgen, GSK, J&J</i>
University of Vermont	Fletcher Allen Healthcare	Linda J. Patchett, RN, MBA*
<i>Consultancy: Merck, MGI Pharma, Valeant, GSK,</i>	Kenneth R. Meehan, MD	Dartmouth Hitchcock Medical Center
<i>Schering; Ownership: Schering</i>	Dartmouth Hitchcock Medical Center	Elaine L. Towle, CMPE*
<i>Honoraria: Merck, MGI Pharma</i>	<i>Stock Ownership: Eli Lilly & Pfizer</i>	Oncology Metrics
<i>Research Funding: MGI Pharma</i>	<i>Honoraria: Berlex (Seminar Presentation)</i>	
<i>Expert Testimony: Valeant, Prostrakan</i>	<i>Research Funding: Berlex(Lab Research Grant)</i>	

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NNECOS 2007 Annual Meeting Abstracts

The Northern New England Clinical Oncology Society (NNECOS) is pleased to present the following abstracts from across the region, in this our second year of the abstract program. These abstracts have been reviewed by NNECOS' grant committee and approved by the NNECOS Board of Directors for presentation at this year's meeting. Thanks to all who took the time to share information and ideas with colleagues through this means. We'll look forward to another group of abstracts for presentation at our 2008 Annual Meeting

A Hospitalist Program for the Community-Based Oncology Practice Setting

R. Barkley, R. Falk

NH Oncology Hematology, Hooksett, NH

Background: In the busy setting of a community-based oncology practice, it is often difficult for the practicing oncologist to find truly adequate time to serve patients who are hospitalized. The logistics and time consumption of seeing inpatients and then racing back to the office to face the day's outpatient load can be a daunting. Are there any viable options for the community-based oncology practice to break this cycle of "double tasking" overload? An approach to this dilemma taken by New Hampshire Oncology Hematology was to implement an oncology-specific "hospitalist" program, essentially deploying an experienced internist to conduct inpatient visits for NHOH inpatients on behalf of the oncologists.

Methods: : Feasibility: analysis of inpatient volumes, oncologist time consumed in "rounding" and billing offset using a hospitalist. Gauge patient and primary care physician receptivity. Refine the clinical communication mechanics. Contract with qualified and motivated internist. Launch program.

Results: One year into the NHOH Hospitalist Program, NHOH physicians have been able to concentrate on outpatient responsibilities with less logistical disruption, inpatients have expressed satisfaction with the attention that they receive and referring physicians have been satisfied with results. The cost of the NHOH hospitalist Program has been budget neutral, that is the program essentially pays for itself.

Conclusions: An oncology-specific hospitalist program has is a valuable niche service in the community-based oncology practice setting.

Author Disclosure: none

Brain tumor epidemiology and management: MCCM experience in 2001-2006

C. Battelli, I. Emery

Maine Center for Cancer Medicine, Scarborough, ME

Background: Gliomas account for almost 80% of adult primary brain tumors and have a high degree of related morbidity and mortality, with the median survival time not exceeding 15 months. The cytotoxic agent, temozolomide, has shown a modest survival benefit in clinical trials and has recently become part of the standard of treatment for these patients. Between 2001 and 2006, 92 patients with invasive brain cancer were treated at MCCM's Scarborough campus. We have analyzed the management of this population and their response to chemotherapy, specifically temozolomide, in an effort to understand the role of this therapy and to identify areas of research that will be productive in improving clinical outcome.

Methods: VMO and FileMaker Pro8 software programs were used to extract and analyze clinical information including demographic data and cancer characteristics, as well as information about treatments, side effects, responses, time to progression (TTP) and overall survival (OS). TTP and survival rates were calculated using the Kaplan-Meier method. Univariate analyses used the long rank test to examine the effects of age, histology and best response on clinical outcome.

Results: 91% of patients had a diagnosis of glioma. Of these, 65% were glioblastoma multiforme (GBM) and 13% anaplastic astrocytoma (AA). Resection of the primary tumor was feasible in 65% of the cases. These patients received an

average of 1.3 lines of chemotherapy. Concomitant radiation therapy with temozolomide followed by temozolomide was the choice for 1st line therapy. Second line therapy, after temozolomide failure, was offered to 1/3 of patients. The most frequent side effects following temozolomide were nausea/vomiting and fatigue. This therapy was equally well tolerated in all age groups.

Conclusion: Among the GBM/AA patients that received temozolomide, the one-year survival rate was 64% and the two-year survival rate was 13%. This is in agreement with published national survival data and underscores the need for new treatment modalities and agents. 60% of these patients achieved disease control after temozolomide (TMZ) treatment although these responses were maintained for a relatively short time and by one year, more than half of the patients showed disease progression. Best response was a highly significant ($P < 0.0001$) prognostic indicator for both TTP and OS. This research is guiding our efforts to develop a molecular method to stratify glioma patients into TMZ-responders and TMZ-nonresponders in order to offer TMZ to those patients that will benefit from it and not delay alternative treatment to those who are not going to benefit from this agent.

Author Disclosure: none

Transplantation in the Elderly: The Affect of Age on Clinical Course and Outcomes

M. Canary, J. Hill, K. Meehan

Dartmouth Hitchcock Medical Center, Dartmouth Medical School and the Norris Cotton Cancer Center, Lebanon, NH

Background: Hematopoietic stem cell transplant (HSCT) is often the treatment of choice for a number of hematologic malignancies at the time of relapse. Historically, older patients have been excluded from receiving HSCT due to concerns about the potential for increased toxicity and treatment related mortality (TRM).

Methods: We performed a retrospective analysis of patients undergoing autologous HSCT over a six year time period at our institution, evaluating age as a prognostic factor. Adult patients (18 years and over) who received a HSCT between the years 2000 and 2006 were evaluated. The patients were divided into two cohorts based on age, the "senior" cohort (≥ 62 years) and the "younger" cohort (≤ 61 years). Individual patient chart reviews yielded pertinent information.

Results: Of the 181 patients who received a transplant during this time period, 131 patients (median age of 50 years: range 19-61) comprised the "younger" cohort and 50 patients (median age of 66 years: range 62-73) were included within the "senior" cohort. There was no statistical difference between these two groups when the following were

evaluated: time to engraftment (p values of 0.13 for neutrophils and 0.2 for platelets), length of hospital stay (p = 0.5), incidence of infection (p = 1), transfer to the ICU (p = 0.08) or treatment related mortality (p = 0.3). This analysis is the largest study of its size evaluating outcome of autologous HSCT based on age using current transplant protocols, including primarily peripheral blood stem cell transplants. It is also the first study to specifically address incidence of infection in older patients, which has been suggested by other studies to increase treatment related mortality in elderly patients.

Conclusions:

Our data indicate that toxicity of autologous HSCT is similar in older patients when compared to younger patients and that this treatment should be offered to selected elderly patients with hematologic malignancies who may benefit from autologous stem cell transplantation.

Author Disclosure:

Kenneth R. Meehan, MD, Dartmouth Hitchcock Medical Center
Stock Ownership: Eli Lilly & Pfizer; Honoraria: Berlex (Seminar Presentation); Research Funding: Berlex (Lab Research Grant)

Preoperative chemotherapy prior to resection of pulmonary metastasis from soft tissue sarcoma.

K.Dittus, S. Burdette-Radoux

University of Vermont, Vermont Cancer Center, Burlington, VT

Background: Resection of pulmonary metastases can provide long term disease free survival in patients with metastatic soft tissue sarcoma. However, preoperative chemotherapy to treat unresectable pulmonary metastasis is not established. We present two cases of pre-operative chemotherapy for unresectable pulmonary metastasis followed by metastatectomy with pathological complete response.

Results:

Case 1: 72 yo male diagnosed with pleomorphic sarcoma of the left upper extremity treated with wide local excision and adjuvant radiotherapy. Thirteen months later a left lower lobe pulmonary nodule was identified and he received 8 cycles of gemcitabine. Pathology from a left lower lobectomy showed no viable residual tumor.

Case 2: 63 yo male diagnosed with a myxofibrosarcoma of the left thigh treated with wide local excision and adjuvant radiotherapy.

Fifteen months later a right upper lobe metastasis was identified. He received two cycles of ifosfamide and doxorubicin. Progression was noted and two cycles of temozolomide were provided with good response. Pathology from a right upper lobectomy showed no viable residual tumor.

Conclusions: While surgical resection of pulmonary metastasis can lead to long-term survival in metastatic soft tissue sarcoma, resection is only feasible in approximately 30 percent of patients. Increasing the number of patients

eligible for surgical resection with preoperative chemotherapy may improve long term survival. To our knowledge there are no published cases of inoperable pulmonary metastatic sites due to soft tissue sarcoma rendered operable with preoperative chemotherapy. These two patients continue disease free 18 and 35 months after resection.

Author Disclosure: None

Breast MRI in a Rural Community Hospital: Collaboration with Blue Cross/Blue Shield of Vermont

A. Eisemann, S. Eisemann

Breast Care Program at Rutland Regional Medical Center, Rutland, VT

Background: In 2002, Blue Cross/Blue Shield of Vermont (BCBSVT) denied coverage for breast magnetic resonance imaging (MRI) deeming it experimental for all indications. However, numerous publications were confirming that with the proper technique, breast MRI could significantly complement x-ray mammography for three groups of patients: 1) women with newly diagnosed breast cancer who had not yet undergone definitive local therapy, 2) women having a 15-20% lifetime risk of developing breast cancer based on personal or family history and 3) women with suspicious or indeterminate mammograms who were being considered for biopsy. In 2003 medical directors at BCBSVT agreed to a research protocol written by the Breast Care Program at Rutland Regional Medical Center (RRMC) designed to study the benefits of breast MRI in these three groups.

Methods: From 2003 until 2006 women with BCBSVT insurance were eligible for breast MRI if they had a personal history of breast cancer, a family history of breast cancer which suggested the lifetime risk of developing breast cancer was at least 15-20%, a suspicious mammogram (BI-RADS category 4 or 5), an indeterminate mammogram (BI-RADS category 0) with dense breast tissue or a new breast cancer based on fine needle aspiration

biopsy or stereotactic biopsy. Breast biopsies were ordered based on mammographic interpretation and were not withheld based on MRI findings.

Results: 514 women were eligible for and enrolled on this study. 152 women were enrolled based on family history, 150 based on abnormal mammograms, 152 women based on personal history of breast cancer, 62 women had not yet undergone definitive local breast surgery. 14 breast cancers were mammographically occult yet detected by MRI and confirmed by biopsy. The sensitivity of breast MRI was 100% for patients with preexisting breast cancer. At two years follow-up the specificity of breast MRI is 99%. False positive rate for mammographic biopsy was 71%. MRI accurately predicted negative biopsy results in 100% of cases.

Conclusions: BCBSVT and RRMC Breast Care Program were able to successfully complete a breast MRI research protocol. In 2006, BCBSVT published new guidelines authorizing breast MRI for specific subgroups of patients based on the results of this study.

Author Disclosure: None

Gefitinib vs. Erlotinib in Non-Small Cell Lung Cancer

I. Emery, C. Battelli

Maine Center for Cancer Medicine, Scarborough, ME

Background: Agents that target specific molecular defects in cancer cells are gaining importance in the field of medical oncology. In the case of NSCLC, an overactive epidermal growth factor receptor (EGFR) pathway is often a principal cause of the malignant phenotype. Two specific, small molecule inhibitors of EGFR's tyrosine kinase domain (TKI), gefitinib and erlotinib, have been used in NSCLC patients with questionable overall clinical benefit. We have analyzed the outcome data of a large population of NSCLC patients that received either gefitinib or erlotinib as part of their oncology treatment, with the goal of determining the benefit derived from this type of agent. In addition, tumor tissue from a subset of these patients was analyzed to determine the status of 4 proteins, all members of the EGFR signal transduction pathway in order to evaluate their utility as predictors of response to anti-EGFR therapy.

Methods: A population of 160 patients with a histologically confirmed NSCLC diagnosis that received either gefitinib or erlotinib was selected for this study. VMO and FileMaker Pro8 software programs were used to extract and analyze relevant clinical information. TTP and survival rates were calculated using the Kaplan-Meier method. Univariate analyses used the long rank test to examine the effects of type of medication, smoking history, performance status and best response, among others, on TTP and OS. Protein level determinations were carried out by immunohistochemical analyses on 40 paraffin-embedded tumor samples and were scored by two independent microscopists.

Results: Among our population of 160 NSCLC patients, 72% received gefitinib and 28% received erlotinib. This reflects the timing of their respective FDA approvals. The demographical properties of the two groups were similar, although not identical. The vast majority of the patients were past smokers, with stage III-IV disease. They received the TKI agent most commonly as 2nd line therapy and had approximately 25 weeks before documented progression. There was a slight advantage in the group that received erlotinib over gefitinib. For the patients that had sufficient tissue to conduct molecular analyses, the levels of total EGFR as well as the levels of phospho-EGFR, phospho-AKT, phospho-ERK1/2 and phospho-STAT3 were determined.

Conclusions: There is a slight TTP and survival advantage to receiving erlotinib vs gefitinib although the statistical significance of this finding is being evaluated in regards to differences in the demographical characteristics of each of the two populations. The response to this type of medication could not be predicted by the level of any single protein member of the EGFR signal transduction pathway, although there is some indication that an algorithm that takes into account several proteins at the same time may be useful. This research has paved the way to new studies focused on prospectively identifying NSCLC patient population likely to respond to not only anti-EGFR agents but also to agents not previously used against NSCLC.

Author Disclosure: None

Quinine-induced Intravascular Coagulopathy with Features of both Thrombotic Thrombocytopenia Purpura and Disseminated Intravascular Coagulation: A Case Report

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Background: Quinine is a commonly used drug that has been reported to induce both thrombotic thrombocytopenic purpura (TTP) and disseminated intravascular coagulation (DIC). In most patients, only one of these diagnoses is present. We describe the case of a 72 year old female who presented with nausea, vomiting, shortness of breath and renal failure. The laboratory studies and clinical presentation of this patient were consistent with both DIC and TTP with thrombocytopenia, schistocytes, prolonged PT and PTT, hypofibrinogenemia and evidence of hemolytic anemia. The patient improved following treatment with plasmapheresis, steroids, and supportive care. The patient was found to have positive quinine-dependent platelet antibodies.

Conclusion: Though quinine-dependent TTP and DIC have been described as separate entities, here we describe a case that shows an overlap between these two processes. Patients with complex intravascular coagulopathies should be queried as to their recent use of quinine.

Author Disclosure: None

The change in fatigue, strength and quality of life following an exercise program for a heterogeneous group of individuals with cancer: A final analysis.

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Background: The benefits of exercise for individuals with cancer are well documented; however, few studies have determined how those benefits are related to differences in diagnoses, disease stage, gender and age.

Methods: This repeated measures study examined the change in fatigue, strength and quality of life (QOL) following a twice weekly 10-week, physical therapist prescribed, supervised exercise program in a heterogeneous group of 200 volunteer subjects (142 females, 58 males, age 18-89 years, mean age 57.5). Individuals who received treatment for stage I (n

=56), II (n = 52), III (n = 46) and IV (n = 40) cancer within the previous year (154 in active treatment at the time of enrollment) were recruited and 132 (66%) completed the protocol. The most frequently seen diagnoses were breast (n = 92), lung (n = 18), colorectal (n = 16), ovarian (n = 13) and prostate (n = 11) cancer. Dependent variables were perceived level of fatigue as reported on a visual analog scale, lower extremity and hand grip strength, and QOL on the SF-36 questionnaire. Data were analyzed by correlations and t-tests with SPSS.

Results: The intervention was well tolerated in all diagnostic, stage and age groups. Groups with the highest completion rate were the 81-90 year age range (83.3%), stage II disease (71.2%), male gender (70.7%) and those with ovarian cancer diagnoses (84.6%). Significant improvements in fatigue were noted in the 61-70 year age range ($p < .01$), stage II disease ($p = .016$), female gender ($p = .016$) and in those with lung ($p = .033$) and ovarian ($p = .020$) cancer diagnoses. Lower extremity strength improved in all age groups ($p < .01$), stages ($p = .000-.03$), genders ($p < .01$) and diagnostic categories ($p = .000-.013$) except lung cancer ($p = .113$). Non-dominant grip strength improved in the age range of 41-70 years ($p < .01$), stages I-III disease ($p < .01$), female gender (p

$< .01$), and in those with breast ($p < .01$) and ovarian ($p = .012$) cancer diagnoses. QOL on the SF-36 improved in the age range of 41-70 years ($p = .001-.037$), both genders ($p < .01$), all stages ($p = .000-.029$), and in those with breast ($p = .003$) and ovarian ($p = .002$) cancer diagnoses.

Conclusions: Safe, therapeutic exercise prescription can play a pivotal role in assisting heterogeneous groups of cancer patients with the goal of mitigating symptoms. Further randomized, controlled trials are needed.

Author Disclosure: None

Southern Maine Colorectal Cancer Screening Project

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Maine Center for Cancer Medicine and Blood Disorders; Maine Breast and Cervical Health Program; Maine Comprehensive Cancer Control Program; Portland Gastroenterology Associates

Background: Although there has been a recent overall decline in colorectal cancer (CRC) morbidity/mortality nationally, these statistics are overshadowed by the greater disease burden among underserved populations with limited access to effective screening services. Our overall goal was to offer women enrolled in the Greater Portland Breast and Cervical Health Program (BCHP) CRC-related informational resources as well as free CRC screening (fecal occult blood testing- FOBT).

Methods: Women were mailed an initial contact packet that included a) general information regarding the benefits of CRC prevention/early detection; 2) a letter outlining the FOBT screening process to include the risks of screening as well as the need for follow up of abnormal results; c) a postcard with preferences regarding the offer of free FOBT screening (yes, no, need more information); d) a stamped return envelope. Women were asked to return the postcard identifying their screening preferences to BCHP staff. Those wishing to be screened were contacted/past screening practices addressed. Women eligible for

screening were mailed a FOBT kit with collection instructions. Kits were returned in a stamped, addressed envelope to BCHP staff for development. Individuals with positive results were referred to gastroenterology for colonoscopy (services donated by clinicians and hospital).

Results: Three hundred women were invited to participate in the program. Of these, 87 (29%) requested FOBT kits; 52 (60%) returned completed kits, all negative. Another 42 (14%) women requested additional educational information regarding CRC prevention/screening.

Conclusions: Through the volunteer efforts of clinicians and institutions, it is feasible to offer free/low-cost FOBT to the under- or un-insured in Maine. Interest in CRC screening services and prevention-related materials was high among women enrolled in the Greater Portland BCHP. This project serves as a pilot relevant to other regions statewide.

Author Disclosure: None

Quality of Life Survey of People Treated with High Dose Chemotherapy with Autologous Hematopoietic Progenitor Cell Support-Long Term Follow-Up

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Background: High Dose Chemotherapy with Autologous Hematopoietic Progenitor Cell Support (HDC/AutHPCS) is a cancer treatment providing potential for improved survival and risk for short and long term treatment side effects. Self report of QOL outcomes can guide risk assessment and system improvements to optimize care and rehabilitation.

Methods: A mailed quality of life survey was conducted of all surviving patients in 1997 and 1999, 2006. Instruments included: (1) Functional Assessment of Cancer Therapy-BMT v.3 (FACT-BMT) (McQuellon, 1997), (2) Eastern Cooperative Oncology Group (ECOG) performance status rating scale (0-4); (3) demographics (4) 2006, American Heart Association Performance Status (5) 2006, 4 short answer questions to elicit good and bad experiences and information regarding sleep patterns and exercise.

Results: Response rates in 1997, 1999 and 2006 were 51%(54/105) and 54%(68/119), and 57%(81/141%) respectively. Performance status scores were high. FACT Quality of life scores were favorable and equivalent to people in rural Maine

who have cancer (Winstead-Fry & Schultz, 1997). All FACT-BMT total mean scores were as good or better than scores reported for other participants who have had similar treatment (McQuellon, et al., 1997, McQuellon, et al., 1998).

Conclusions: These findings support that over time, our patients treated with HDC/AutHPCS report favorable quality of life outcomes as measured with the FACT-BMT. Further analysis regarding multiple time responders, performance status, interest in an exercise program post treatment, and survivorship issues such as sleep disturbances and pulmonary problems, will be discussed.

Author Disclosure: None

Table 1.	FACT-BMT SCORES		
	1997 (n=54)	1999 (n=68)	2006 (n=81)
Fact G Score (Mean±SD) Range (0-112)	90.57 ±18.7 31-112	90.38 ±16.4 37-112	89.24 ±17.32 45-112
Physical WB Subscale Range 0-28	23.30 ±5.44 4-28	22.99 ±5.58 5-28	23.50 ±5.30 7-28
Social WB Subscale Range 0-28	21.77 ±5.14 5-28	21.40 ±5.10 6-28	20.33 ±6.22 6-28
Emotional WB Subscale Range 0-20	16.20 ±3.77 4-20	16.25 ±3.24 8-20	16.16 ±3.56 5-20
Functional WB Subscale Range 0-28	21.98 ±5.85 5-28	22.16 ±5.51 6-28	21.67 ±5.89 6-28
Relationship with Doctor Range 0-8	7.23 ±1.41 1-8	7.39 ±1.19 2-8	7.50 ±1.17 3-8
Fact BMT Score (Mean±SD) Range (0-40)	28.78 ±6.92 13-40	29.62 ±6.89 9-40	29.14 ±6.37 16-40
Fact G/BMT Total (Mean±SD) Range (0-152)	119.3 ±25 44-152	120.11 ±22.06 47-152	118.29 ±22.78 61-152

MMC Adult oncology nursing chemotherapy verification tool

J. Robert, E. Dann, M. Nesbitt

Maine Medical Center

Methods: At Maine Medical Center on the adult oncology unit, with collaboration with the Oncologists, Clinical Pharmacists, and the Nursing staff, we have made a safer model for our patient population to receive their chemotherapy in a safer, clear manner. In 2003 it began with the physicians performing (CPOE) complete physician order entry. This drastically diminished the chance of errors with writing orders and other professions transcribing them into the computer system. Now every chemotherapy order is placed in the computer by the ordering physician. Next, we are fortunate enough to have clinical pharmacists that perform the second check of verification by looking at MD's orders and patients labs and checking all calculations for the ordered chemotherapy agent. Finally, in the past two years, the nursing staff has had a pilot project, which is now standard of care for any adult oncology patient who is going to receive chemotherapy a nurse chemotherapy verification tool. Nursing is the last phase in this verification process, and since nurses are the ones who administer the chemotherapy agent, I feel is the most important step in the whole verification process. The first nurse check is by a charge nurse, another nurse then the one who will administer the drug. Their role is to get adequate height and weight, re-calculate BSA, check daily labs and

question any labs that should or could prohibit the patient from receiving their chemotherapy agent. Next, the nurse then calculates the intent to treat which is provided by the prescribing MD, keeping in mind reasons for a reduction dose could be given. Now that the initial nursing verification is completed by the RN, the next check is by the Registered Nurse who is Chemotherapy qualified and will infuse the chemotherapy agent. This nurse performs the same verification as the charge nurse independently. When the nurse has medication in hand and is in the room, two nurses verify the patient's name, medical number, the drug, dose, amount, route, and rate at which drug is to be given.

Results: By performing nurse chemotherapy verification, nurse at MMC feel safer in the administering of chemotherapy, patients are receiving their treatment regimen after at least four checks have been done. The verification process enhances the knowledge, understanding and elevates the quality of care we give to our unique patient population.

Author Disclosure: None

Syngeneic Peripheral Blood Stem Cell Transplant : a unique treatment for elderly patients diagnosed with mantle cell lymphoma

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Background: Mantle cell lymphoma (MCL) is an aggressive lymphoma with a median survival of 3 years. However, autologous peripheral blood stem cell transplants (PBSCT) performed in the first remission may improve 3 year survival to > 70%. We report the use of syngeneic PBSCT in a 71-year-old man with relapsed, but chemosensitive MCL.

Due to the rarity of identifying an elderly patient suitable for transplant who also has an identical twin, this is only the 4th syngeneic transplant ever performed for the treatment of MCL (CIBMTR database). (This patient represents the eldest of the 4 patients).

Methods: A 71-year-old male presented with stage IVA MCL. After failing 3 chemotherapy regimens, he demonstrated chemo-sensitive disease to an ARA-C based regimen. He received high dose chemotherapy with CBV (cyclophosphamide, BCNU, Etoposide) followed by a syngeneic PBSC infusion using cells obtained from an HLA-matched twin brother.

Results: The patient tolerated the transplant and the subsequent clinical course extremely well without any significant complications. Engraftment of neutrophils and platelets both occurred 12 days following transplant. There were no signs or symptoms of graft versus host disease and, 19

days after transplant, he was discharged from the hospital. Follow up evaluations with radiographs have demonstrated that the patient remains in complete remission over 3 years from the time of transplant.

Conclusions: For patients with chemo-sensitive mantle cell lymphoma, if a twin is available, we recommend considering the use of high dose chemotherapy followed by a syngeneic stem cell transplant. This report confirms the role of this type of transplant for MCL.

Author Disclosure: None

The Medicare Modernization Act of 2003 (MMA): Impact on Pharmacy Services in Community-based Oncology Practices

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Background: The Medicare Modernization Act of 2003 (MMA) created the most sweeping reforms to Medicare since the inception of the program in 1965. MMA is most well known for the initiation of a prescription drug benefit for Medicare beneficiaries. Provisions of the MMA also added coverage for screenings and other preventative care services, and created health savings accounts. The most significant provisions to the medical oncology community, however, concern payment for drugs and drug administration services, and the changes implemented by MMA have had a dramatic impact on the practice of medical oncology in the community setting.

Methods: Oncology Metrics (OM) has collected data from two independent data sources from 2004 – 2006. The Oncology Circle is a knowledge-sharing national network of community-based oncology practices facilitated by OM. Oncology Circle practices provide financial and operational data to OM twice a year; OM aggregates this practice management and financial information and provides benchmarking services to enable members to improve their operational and financial performance. In addition to the Oncology Circle, OM has implemented a benchmarking survey for community-based oncology practices on behalf of a national drug distributor. Both the Oncology Circle and the benchmarking survey rely on self-reported data from community oncology practices.

Results: Survey results show an annual increase in the cost of drugs per full time equivalent (FTE) medical oncologist of approximately 20% from 2005 to 2006. Drug cost as a percentage of total practice cost has also risen, although at a less dramatic rate. Drug margin as a percent of drug cost began to drop when MMA was implemented in 2004. We saw gradual drops from 2003 to 2004 and 2004 to 2005. The change from 2005 to 2006 was far more dramatic, averaging 16 – 18%. Nationally we have observed a decrease in drug margin as a percent of drug cost of approximately 30% from 2002 to 2006. Practices have implemented a variety of strategies in response to these changes including decreasing inventory levels, more aggressively managing drug purchasing, closing satellite offices and staffing changes.

Conclusions: Community-based oncology practices continue to respond to the impact of the Medicare Modernization Act of 2003. Data from national surveys shows a dramatic impact in drug margin with a corresponding impact on operations and the practice bottom line. Practices must continue to monitor these issues closely and make changes in their practice in response to these economic pressures.

Author Disclosure: None

An evaluation of the mechanism by which an edible triterpene overcomes resistance to relapsed and refractory and primary, refractory multiple myeloma.

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Background: We observed 4 year remission of plasma cell leukemia following 3 months of dexamethasone monotherapy. The patient ingested a supplementary extract of Reishi mushroom.

Methods: We performed CHCL₃:MEOH extraction of Reishi (*Ganoderma Lucidum*) spore, suspended it in ethanol and made a 1:200 dilution of the extract in RPMI, ("spore-RPMI"). We incubated myeloma cell lines in this media with and without 1 μ M dexamethasone. Control: 1:200 dilution of plain ethanol in RPMI. Viability was assayed by standard 64 well plate assay.

Results: 88-90% cell death was achieved in two glucocorticoid resistant cell lines, MM.R1 cells and OPM6, by 72 hours in spore media, compared to 10-12% in control media. Viability in both cell lines was further decreased to 4-5% at 72 hours by co-incubation with 1 μ M dexamethasone. Spore-

RPMI decreased viability of glucocorticoid sensitive (MM.S.1) cells 40%. Western blots of MM.R and OPM.6 cell extracts obtained following 2 hours of incubation in RPMI-spore were blotted with antibody to the phosphorylation site of threonine 24 of the FKHR protein or with antibody to Mcl-1. Phosphorylation of FKHR in MM.R.1 and OPM-6 cells was reduced 80% following 120 minutes. Mcl1 expression was decreased by 90%, consistent with inhibition of PI3K-Akt signaling. 3 patients with primary refractory myeloma or refractory relapsed myeloma were treated with this edible extract added to their prior therapy in a pilot study. Each achieved remission, including discontinuation of dialysis.

Conclusions: Lipid extract of Reishi inhibits PI3K mediated resistance in myeloma, the basis for a clinical trial in integrative medicine.

Author Disclosure: None

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Survey of primary care providers accessing cancer services at a rural, tertiary care cancer center in northern New England

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Fletcher Allen Health Care Cancer Committee, Burlington, VT

Background: We developed a questionnaire to determine the quality of cancer services and referral process to support the needs of an expanding array of cancer services at FAHC.

Methods: A 5 page anonymous survey covering 13 departments and 10 cancer sites was mailed to 700 primary care providers (PCPs) in Vermont and northeastern New York. Likert scale assessments (Excellent/Good/Fair/Poor or Always/Often/Occasionally/Never) and comments were tabulated.

Results: The survey response rate was 13%. PCPs placed a very high/high value on a simplified referral process (94%) and having access to a disease-specific nurse coordinator (68%). Referrals are arranged most often by the office scheduler (52%). PCPs ability to identify the appropriate department for referral Always/Often, ranged from 64% (pancreatic cancer) to 87% (breast cancer).

Their rating of the referral process as Excellent/Good ranged from 53% (Pulmonary) to 82% (Breast Care Center). Their rating of coordination of care as Excellent/Good ranged from 66% (pancreatic cancer) to 82% (breast cancer). The majority of PCPs prefer to receive feedback within one day of referral (56%) and the remainder within 1 week. The preferred method of communication ranged from 14% (e-mail) to 66% (note). Referrals to FAHC (versus other hospitals) across cancer types ranged from 63-79% and was associated most strongly with geographical location.

Conclusions: PCPs valued a simplified referral process for an office scheduler, timely feedback in the form of a note, and a disease-specific nurse coordinator. Location was the primary factor for referring patients to other institutions rather than quality of cancer services or ease of referral.

Author Disclosure: None

Vaginal testosterone for atrophic vaginitis in breast cancer patients on aromatase inhibitors: a pilot study.

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Background: Treatment of atrophic vaginitis (AV) in post-menopausal breast cancer patients on aromatase inhibitors (AIs) is difficult, as even topical estrogen therapy may raise systemic estradiol levels. We hypothesize that topical testosterone could be a safe, effective alternative treatment.

Methods: To date, we have treated nine symptomatic, post-menopausal women on AI's for early breast cancer with 300mcg of vaginal

testosterone daily for four weeks. We followed AV symptoms (three symptoms, scale of 0 to 3), serum estradiol and testosterone levels, and gynecologic examinations.

Results: Serum estradiol remained low in the first four women. Testosterone rose in one (see table). Assays on the remaining women are pending. Gynecologic and cytopathologic evidence of AV improved. Symptoms improved in eight of nine women (mean 2.7 points). Vaginal dryness decreased most, followed by dyspareunia and vaginal itching/irritation. Side effects were minimal.

Conclusions: Vaginal testosterone improves the symptoms and signs of AV without increasing serum estradiol levels. Confirmation of these findings in a larger population will be necessary.

Author Disclosure: None

Pt	Estradiol pg/ml		Testosterone pg/ml	
	Pre-tx	Post-tx	Pre-tx	Post-tx
1	<5	<5	<15	113
2	<5	7	<15	29
3	5	<5	29	21
4	<5	<5	<15	<15

Immune Mobilization of Autologous Blood Stem Cells: Effective Mobilization with Direct in vivo Immune Effects

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Background: A Prospective Phase I trial was initiated using dose escalation of IL-2, in combination with GM-CSF and G-CSF in an attempt to mobilize autologous "killer" cells, along with CD34+ hematopoietic progenitor cells.

Methods: In order to collect autologous blood cells for transplant, IL-2 began on Day 0 and continued as a daily SQ injection for 11 days. On Day 7, GM-CSF (7.5 mcg/kg/d) and G-CSF (5 mcg/kg/d) were initiated for 5 days (Days 7-11). On Day 11, leukapheresis was performed. After collection, patients received melphalan (200 mg/m²) followed by infusion of collected autologous cells.

Results: To date, 12 patients have been treated (myeloma, n =11; NHL, n = 1). Dose escalation of IL-2 continues since the MTD has not been reached. The first two dose levels of IL-2 have been well tolerated: Dose Level 1 (6 x 10⁵ IU/m²/d; n = 6 pts); and Dose Level 2 (1 x 10⁶ IU/m²/d; n = 6 pts). One patient (NHL) was removed from the study due to progressive disease. The remaining 11 patients completed the regimen. Toxicities have been mild and have included Grade 2 fever (n=1) on Dose Level 2. Phenotypic analyses of the patients' blood during mobilization demonstrated that T cells (CD3+CD8+) increased from 17.5% (baseline) to 22.7% (day 11; p = 0.01). CD56+ NK cells increased from 18.9% (baseline) to 36 % (day 11; p = 0.002). and NKT cells (CD8+CD56+) increased from 8.2% (baseline) to 18% (day 11; p = 0.01) Cytotoxicity against human myeloma

cells using peripheral blood lymphocytes was 8.6% at baseline and increased to 43% on day 11 (p = 0.03). All patients successfully mobilized and received an autologous transplant. Following transplant, the neutrophils recovered on Day 13 (median; range: 10 – 14 d) and platelets recovered on Day 12 (median; range 0 – 13 d).

Conclusions: These results demonstrate a well tolerated treatment regimen with minimal toxicities. Patients mobilize hematopoietic stem cells and the laboratory results indicate marked enhancement of the patients' immune system in vivo, as demonstrated by an increase in the percentage of cytotoxic killer cells and enhanced killing of myeloma cells. Follow-up of these patients continues to determine the effect of this treatment on patient survival.

Author Disclosure: None

NNECOS Annual Meeting Faculty

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Dr. Zail S. Berry, MD, MPH is an internist, geriatrician, and palliative medicine specialist providing home medical care to persons with serious illness in Chittenden County. She serves as Co-Medical Director of the Hospice of the Champlain Valley and is Clinical Associate Professor of Medicine at the University of Vermont College of Medicine.

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Christian G. Downs is the Executive Director of the Association of Community Cancer Centers (ACCC) in Rockville, Maryland. Christian leads the nearly 750 institutional members of the association on both policy and educational efforts. He serves as the principal coordinator of political advocacy efforts for the association. In addition, Christian performs practical economic analysis on industry and political trends and advises the membership on appropriate responses. Before coming to ACCC, Christian worked in the Public Policy Department at the American Society of Clinical Oncology (ASCO) and managed a large multi-specialty practice. Christian received his Bachelor of Arts in Political Communications from the George Washington University, his Masters in Health Administration from the Medical College of Virginia, and his law degree from George Mason University.

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ML (Mary Lin) Hannay, M.Ed. is a leadership consultant, group facilitator, motivational speaker, coach, mediator, and management and staff development trainer. She is also a mother, marathoner, cyclist and adventure-lover! ML's consulting practice, M.L. Hannay Associates Training & Development, has been providing customized programs and services to diverse organizations throughout the United States, Canada, and Europe since 1980. She is known for her high energy, down-to earth approach to helping her clients find practical solutions to their complex personal and organizational needs. ML received her Bachelor of Science degree from the University of Texas and her Masters of Education degree from

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Paul Harrington, BA

Paul Harrington is the Executive Vice President of the Vermont Medical Society, an organization that has represented the interests of Vermont physicians and their patients for over 200 years. Prior to joining the medical society, he served as the Majority Health Policy Director for the US Senate Committee on Health, Education, Labor and Pensions under the chairmanship of Senator James M. Jeffords (R-VT). Previously, Harrington was appointed by Governor Howard Dean, MD, to serve as a Board Member of the Vermont Health Care Authority, and as Deputy Commissioner of the Vermont Department of Labor and Industry. Harrington also served three terms in the Vermont House of Representatives -- where he Chaired the House Commerce Committee. Paul Harrington is a graduate of the University of Vermont. He and his wife Elaine are the parents of two daughters, and they have one grandson.

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Susan Miesfeldt, MD is Board-Certified in Internal Medicine and Medical Oncology with the Maine Center for Cancer Medicine and Blood Disorders. Dr. Miesfeldt earned her MD at Tufts University School of Medicine, and completed her Internship and Residence with the University of Virginia Health System, and her Hematology/Oncology Fellowship at the University of Michigan Medical Center.

Hyman Muss, MD

Hyman Muss, MD is currently Professor of Medicine at the University of Vermont College of Medicine. In addition Dr. Muss served for ten years as Director of Hematology/Oncology for Fletcher Allen Health Care. Dr. Muss is currently a member of the Board of Directors of the American Society of Clinical Oncology and chairs their task force on Geriatric Oncology and their Audit Committee. He has also previously served as Chair of the Medical Oncology Board for the American Board of Internal Medicine (ABIM), and as a member of the ABIM Board of Directors. Dr. Muss is a current NNECOS member. He and his wife Loretta live in Shelburne, VT and have three adult children.

Patricia O'Brien, MD

Patricia O'Brien, MD is Clinical Assistant Professor at the University of Vermont College of Medicine. She has clinical expertise in Lymphedema Care, and received Lymphedema Specialty Training at the Foldi School in Germany. Dr. O'Brien's academic interests include Lymphedema, Long term needs of persons with cancer, Life style issues, and Environmental exposure risk factors for cancer. Dr. O'Brien is an active member of Cancer and Leukemia Group B (CALGB) - Active member, and the Lymphedema Network, as well as a member of the National Lymphedema Network .

Martha Polovich, MN, RN, AOCN

Martha Polovich, MN, RN, AOCN, is Associate Director of Operations for the Duke Oncology Network. She has been an oncology nurse since 1980, and an oncology clinical nurse specialist for 20 years. Ms. Polovich served coeditor of ONS Chemotherapy and Biotherapy Guidelines and Recommendations for Practice (2005), and has been an ONS representative on NIOSH Hazardous Drug Safe Handling Working Group since 2000. She holds a BSN and MN from Louisiana State University, and is currently enrolled in a PhD Nursing program with Georgia State University.

James Rigas, MD

James Rigas, MD is the Medical Director for the Comprehensive Thoracic Oncology Program at the Norris Cotton Cancer Center, Dartmouth-Hitchcock Medical Center, Lebanon, NH where he holds clinical appointments as an Associate Professor of Medicine at Dartmouth Medical School. Dr. Rigas received his Bachelor of Science from Cornell University, Ithaca, New York, and his Doctorate of Medicine from the Medical College of Pennsylvania, Philadelphia, PA. He completed his training in Internal Medicine at Dartmouth-Hitchcock Medical Center, Hanover, New Hampshire and his Medical Oncology training at Memorial-Sloan Kettering Cancer Center, New York, NY. His main clinical research interest is in thoracic oncology. As an Attending Physician in both Thoracic Oncology and Developmental Chemotherapy Services at Memorial-Sloan Kettering Cancer Center, New York, NY, Dr. Rigas has had extensive experience in the development of chemotherapy programs for the treatment of lung cancer. In 1983, the American Cancer Society honored Dr. Rigas with a Career Development Award.

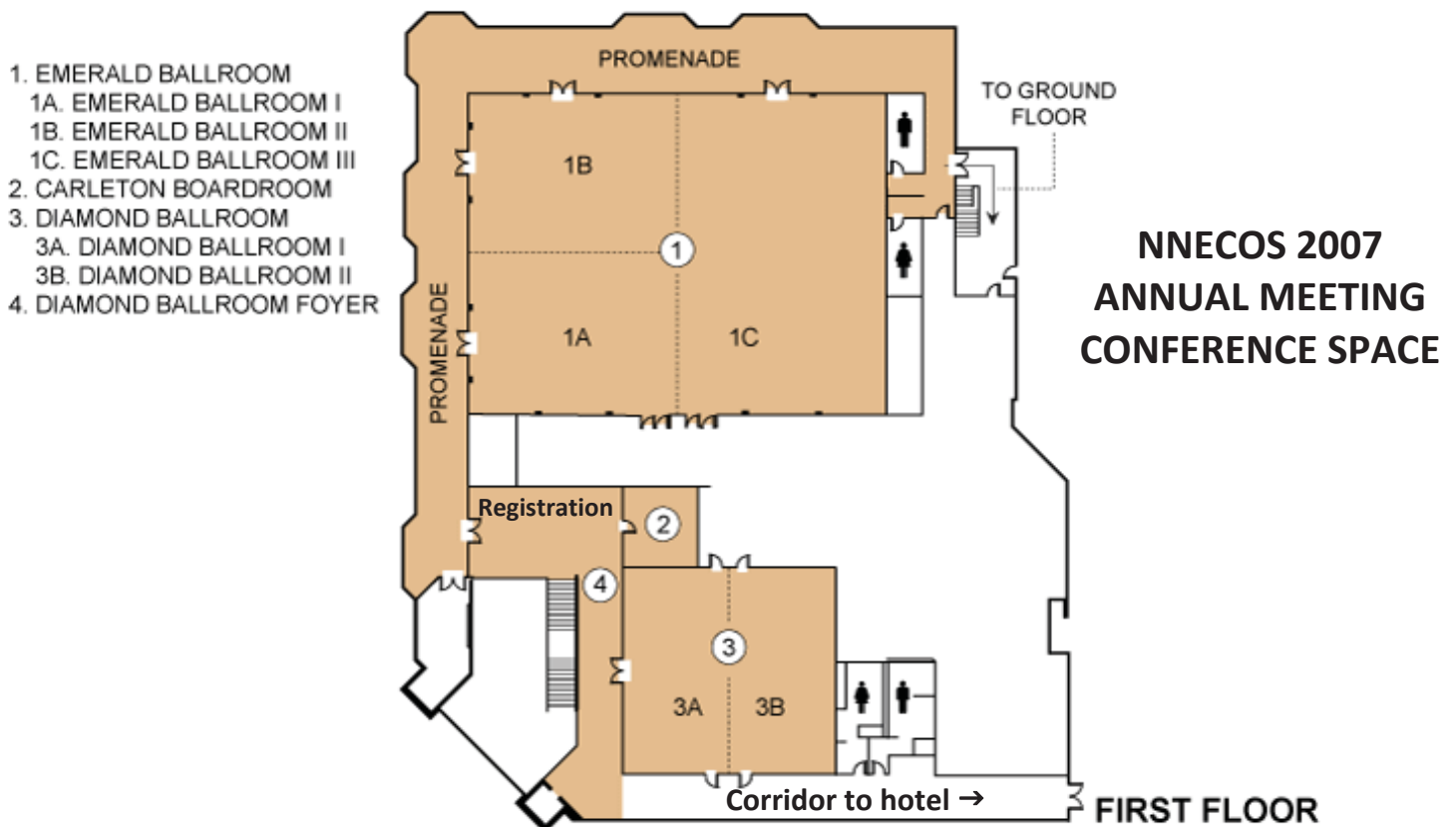
Elaine L. Towle, CMPE

Elaine L. Towle, CMPE, is the Director of Consulting Services for Oncology Metrics, a leading provider of data-driven education, tools and knowledge for the oncology community. She has over 25 years of experience in oncology practice management and was formerly practice administrator for a 15 provider medical oncology group practice in New Hampshire. Elaine is a member of the Medical Group Management Association, the American Society of Clinical Oncology and the Association of Community Cancer Centers. She is a past president of the Administrators in Oncology-Hematology Assembly of MGMA and served as a founding member of the ASCO/AOHA liaison committee. Elaine is on the Editorial Board for the Journal of Oncology Practice and is a member of the program committee for the Association of Community Cancer Centers. She also serves as on the Board of Directors of the Northern New England Clinical Oncology Society, representing physicians, nurses and administrators in Maine, New Hampshire and Vermont. She holds a graduate certificate in Community Health Care Management from Antioch New England Graduate School. Elaine and her family live in New Hampshire.

Sabrina M. Witherby, MD

Sabrina M. Witherby, MD is Clinician Educator, Department of Medicine, Division of Hematology/Oncology, Memorial Hospital of Rhode Island and Clinical Instructor, Department of Medicine Hematology/Oncology, University of Vermont Medical School. Dr. Witherby is a member of the American Society of Clinical Oncology, the American Society of Hematology, the American Medical Association, and the Massachusetts Medical Society. Dr. Witherby earned her BA from Wesleyan University, and her MD from University of Massachusetts Medical School. Her Internal Medicine Internship and Residency were at Rhode Island Hospital/The Miriam Hospital, Brown Medical School, Providence, Rhode Island and her Hematology/Oncology Fellowship at Fletcher Allen Health Care/University of Vermont.

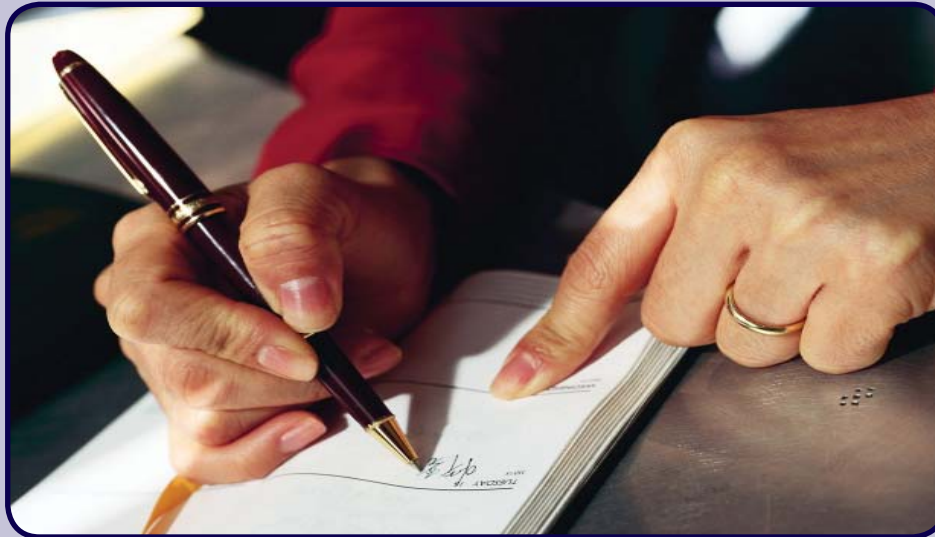
Updated information about next year's meetings, including the call for abstracts for our 2008 annual meeting, will be posted at www.nnecos.org as it becomes available.



SAVE THE DATE

NNECOS 2008

Spring Practice Management Meeting



Tuesday May 20, 2008
The Grappone Center, Concord, NH

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