

2006 CANCER OCCURRENCE

CANCER REGISTRY REPORT

FOCUS: LUNG CANCER

Accessioned (New to EMMC) Cancer Cases: 2006 Analytic/Non-Analytic Comparison

	2003	2004	2005	2006
Total Analytic Cases	1465	1568	1647	1719
Cancer diagnosed and/or treated at EMMC	781	891	863	943
Cancer diagnosed elsewhere with first treatment at EMMC	684	677	784	776
Total Non-Analytic Cases	143	151	232	205
Cancer diagnosed and treated elsewhere, follow up at EMMC				
Total Accessioned Cases	1608	1719	1879	1924

Primary Site Frequency Distribution: 2006 Accessioned Cases

Primary Site	Total	# Analytic	% Analytic	# Non-Analytic	% Non-Analytic	Male	Female	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Not Staged
Oral	17	15	1%	2	1%	12	5	0	1	1	2	10	1
Esophagus	29	27	2%	2	1%	12	7	0	4	8	3	10	2
Stomach	16	16	1%	0	0%	14	2	0	1	5	2	8	0
Colon	130	119	7%	11	5%	58	72	2	25	36	27	26	3
Rectum	53	49	3%	4	2%	34	19	0	9	11	14	14	1
Liver/Biliary	27	26	2%	1	0%	11	16	0	4	4	7	10	1
Pancreas	35	33	2%	2	1%	15	20	0	1	12	4	13	3
Larynx	26	25	1%	1	0%	21	5	2	8	6	4	4	1
Lung	343	328	19%	15	7%	191	152	0	98	12	63	134	21
Connective	6	6	0%	0	0%	4	2	0	0	3	1	1	1
Melanoma	47	38	2%	9	4%	22	16	11	11	7	5	4	0
Breast	341	309	18%	32	16%	1	340	76	119	75	29	9	1
Cervix/Uteri	10	8	0%	2	1%	0	10	2	2	1	1	1	1
Corpus Uteri	30	29	2%	1	0%	0	30	0	23	2	1	2	1
Ovary	17	14	1%	3	1%	0	17	0	4	3	4	3	0
Prostate	237	198	12%	39	19%	237	0	0	0	153	29	12	4
Testis	10	8	0%	2	1%	10	0	0	7	0	1	0	0
Bladder	55	40	2%	15	7%	45	10	9	15	5	5	4	2
Kidney/Ureter	43	37	2%	6	3%	25	18	2	19	3	4	8	1
Brain/CNS	60	51	3%	9	4%	27	33	0	0	0	0	0	51
Thyroid	32	31	2%	1	0%	6	26	0	18	4	5	3	1
Leukemia	75	63	4%	12	6%	45	30	0	0	0	0	0	63
Lymphoma	100	88	5%	12	6%	52	48	0	21	15	22	27	3
Other	185	160	9%	25	12%	111	83	1	2	6	8	8	135
Total	1924	1718	100%	206	100%	963	961	105	392	372	241	311	297



Margaret Chavaree, BA, CTR

The Cancer Registry, an integral part of the cancer program at EMMC, is staffed with four cancer registrars who report EMMC cancer statistics. Their primary role is the collection and management of demographic and clinical cancer data, beginning at diagnosis and continuing throughout the cancer patient's lifetime. Cancer registrars develop a case abstract (summary) for each person diagnosed and/or receiving his or her first course of treatment at EMMC. They complete annual lifetime follow-up – monitoring diagnostic and treatment results. Successful follow-up provides accurate data for calculating survival rates. EMMC's lifetime follow-up is maintained at 98% for cases since 1998 (ACOS-COC standard is 90%).

Physicians utilize American Joint Committee on Cancer (AJCC) staging to stratify patients and to determine optimal treatment decisions. EMMC initial physician compliance with staging form completion requirements has been consistently above the 90% standard at 96 % (with registry follow up at nearly 100%). Collaborative staging is completed by the registrars as well.

Tables reflecting cancer case accessions, disease frequency and stage at presentation and prevalence for 2006 at EMMC are included for your review.

Per regulatory compliance, data are collected, maintained, and reported to the Maine State Cancer Registry and the National Cancer Data Base (NCDB). Aggregate data assists public health professionals to better understand and address the cancer burden. EMMC's clinicians, research staff and administrators use the data in review of clinical outcomes assuring quality care; grant preparation and strategic planning aimed at improvements in cancer treatment, prevention and control. The Registry responded to 55 requests for information in 2006 with a time expenditure of 287 hours.

Cancer Conferences are held weekly on Wednesday mornings, 7:30 to 8:30.

They provide physicians the opportunity to discuss diagnostic dilemmas and treatment options for patients. Both imaging and pathology are reviewed as a core component of the meeting. Topics covered include all major sites of cancer seen at this institution. The discussions are multi-disciplinary with representatives from pathology, imaging, surgery, medical and radiation oncology, internal and family medicine, genetics and the registry present. Throughout the year 198 cases (including 49 from Breast Correlation review) representing 12 % of analytic case accessions were presented (ACOS-COC standard is 10%). Our visiting professor program under the direction of Merrill Garrett, MD, and in conjunction with Partners Institute (Boston, Massachusetts) featured oncology experts in cancer treatment. Participation is open to medical and allied health professionals, both on site and via interactive television connection - NNETS. If interested in participating or making a referral, contact us at 973-7483.

2006 Most Prevalent Analytic Cases @ Eastern Maine Medical Center Compared to American Cancer Society (ACS) Estimates

Site	EMMC Analytic Cases	% of Analytic Cases	ACS National Estimates	% of Cases
Lung	328	19%	174,470	13%
Breast	309	18%	212,920	15%
Prostate	198	10%	234,460	17%
Colon & Rectum	168	7%	148,620	11%
Lymphoma	88	6%	58,870	4%
Leukemia	63	4%	35,070	3%
Melanoma	38	3%	62,190	5%
Brain/CNS	51	2%	N/A	
Kidney/Ureter	37	2%	N/A	
Top Case Totals	1,284	74%	926,590	67%
Total Cases	1,718		1,377,718	
Nationally, additional cancers in the top ten include: cervix, bladder and uterus				



Philip Peverada, MD, FACS, FACC

The epidemic of smoking and thus lung cancer continues unabated in the world in 2007. There have been some inroads in the United States in the form of tobacco cessation efforts. Most recently in Maine we have seen a small decline in smoking rates for adults from 26% in 1996 to 22% in 2004; with better results for youth going from 39% to 16%. Changes are attributed to increased taxes on cigarettes, use of \$50 million dollars annually aimed at tobacco control from Tobacco Settlement Funds through statewide partnerships, youth advocacy programs, and restrictions on public smoking. World Health Organization (WHO) data count 4.9 million tobacco related deaths in 2005 and project this will double to close to 10 million tobacco related deaths by 2020. This compares with total annual world-wide tuberculosis related deaths of 3.1 million in 2005, HIV related deaths of 2.9 million in 2006, and annual world-wide breast cancer deaths of 474,000 in 2005. Nationally, Maine has the dubious distinction of ranking sixteenth in lung cancer deaths for men and fourth for women.

It is estimated that by 2025 there will be 1.6 billion smokers world wide. Globally 80-100,000 youth begin smoking daily. 90% of lung cancers and 50% of bladder cancers are directly related to smoking tobacco.

The five year survival of lung cancer continues to remain at 15%, a number unchanged in the last 40 years. This compares with colon cancer at 61%, breast cancer at 86%, and prostate cancer at 96%. Since our efforts at cure are so dismal to date, it is imperative that any project to eradicate lung cancer be integrated with a strong preventive initiative as well as an aggressive, multi-modality approach.

Aimed at prevention through cessation, in conjunction with statewide education efforts, EMMC's Family Medicine program has adopted a "hard-wired" approach to assessing tobacco use and readiness for change at each visit. Interventions are designed to assist patients in developing a "quit plan," providing ongoing support and medical management. The Maine Tobacco Helpline – 1-800-207-1230 – can be an important resource to patients and providers alike – fax them a referral and they'll contact your patient. As a "No Smoking Campus," brochures can be found throughout EMMC highlighting steps individuals can take to quit smoking.

Maine lung cancer rates are 14% above the national average. We rank ninth in the country for lung cancer incidence. Looking at counties within our own region some rates are even higher – Washington County 50% above the national average, Penobscot 33%, Piscataquis and Aroostook 22%. Hancock at 13%, Somerset at 15%, and Waldo at 7% are lower. Nationally, death rates are declining slightly in men, with death rates for women rising. In Maine, while declining somewhat, lung cancer death rates for all our counties are higher than the national rate. In Washington county the rate is both higher and rising.

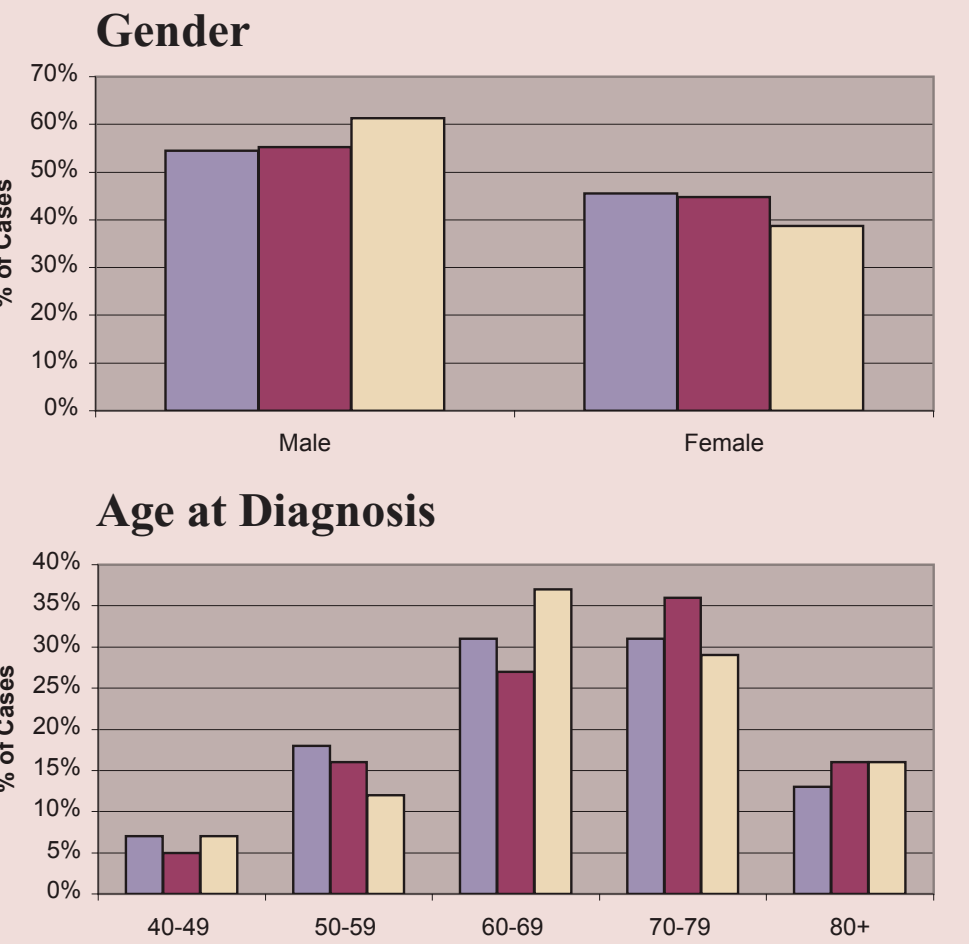
Looking at the cases diagnosed at EMMC when comparing them to the National Cancer Database (NCDB) for 2004 data we find that our population is slightly older with a statistically larger portion in the 60-69 age group, less in the 50-59 group and has more men diagnosed. Reviewing stage at diagnosis, EMMC's rate of stage I diagnosis (29.5%) is statistically higher than Maine (18.48%) or national (23.55%) rates with fewer diagnosed in either stage III or IV than nationally. As a first course of treatment, patients at EMMC received surgery alone or radiation therapy alone at significantly higher rates than other institutions reporting through NCDB and for surgery alone higher than the rest of Maine. This can be partly explained by the greater incidence of "early" or resectable lung cancer. Our rate of "no treatment" was significantly lower than the NCDB group or Maine. Our 5-year survival rates by stage at diagnosis parallel national rates for cases diagnosed in 1998 & 1999 (the most currently available data).

Lung cancer, if found at an early stage, can be cured. National survival by stage is as follows – O = 70-80%, I = 50%, II = 30%, III = 5-15%, IV = 2%. The steep drop off in survival would suggest that early detection and treatment would result in increased survival. Unfortunately that is a difficult premise to prove. Based on the fact that about three quarters of lung cancers are advanced, Stage III or IV disease, when they present, a program that expedites the treatment process could potentially yield survival dividends.

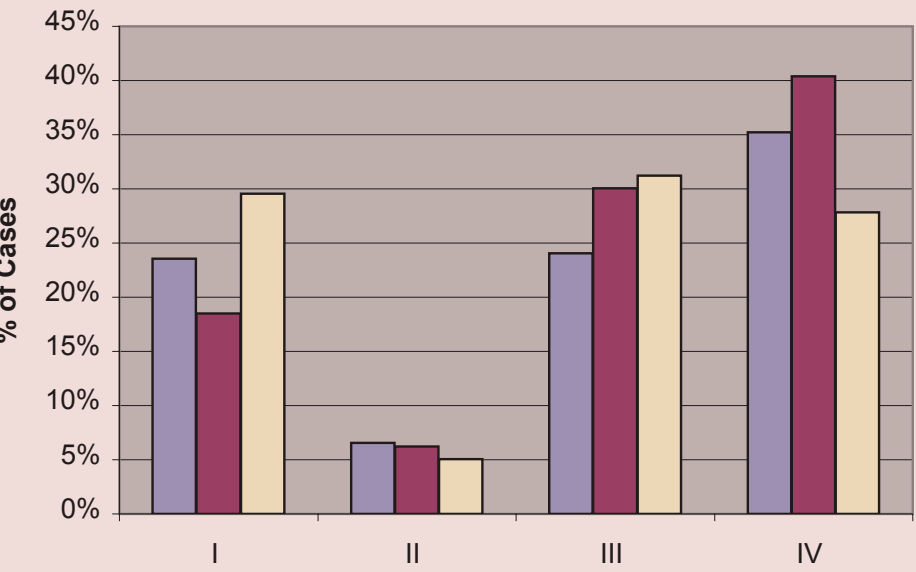
The Eastern Maine Medical Center Thoracic Oncology Clinic is designed to promote early detection, intervention and treatment. Any patient with a known or suspected intra-thoracic malignancy can be referred to the clinic via the hotline (1-877-366-2862). The patient will be triaged to the appropriate specialist, and every attempt will be made to continue the staging work up either at the referring hospital or with imaging appointments at EMMC around the time of the physician appointments. Once evaluated, the patient will be presented at the weekly Thoracic Tumor Board – every Thursday from 7 - 8 am in the Radiology Conference Room at EMMC. Telemedicine participation is also available by prearrangement. The board is composed of medical and radiation oncologists, pulmonologists, thoracic surgeons, radiologists, pathologists and the cancer research specialists. Each patient is presented, a course of action determined and a responsible physician named to see that the plan is communicated to the patient and carried out. Once treatment is complete, each patient is re-presented with the results reviewed so that further care can be recommended as appropriate per the National Cancer Institute and the American College of Chest Physicians guidelines. If desired by the primary care provider, the patient can then be followed through the clinic using the latest recommendations of the above organizations. Given that there is a 2.5% yearly chance of developing another tumor in a completely resected lung cancer, life-long surveillance is necessary.

Although the focus of this annual report has been lung cancer, the Thoracic Oncology Clinic also deals with esophageal, thymic, chest wall and other intra-thoracic malignancies. We appreciate and welcome your referrals.

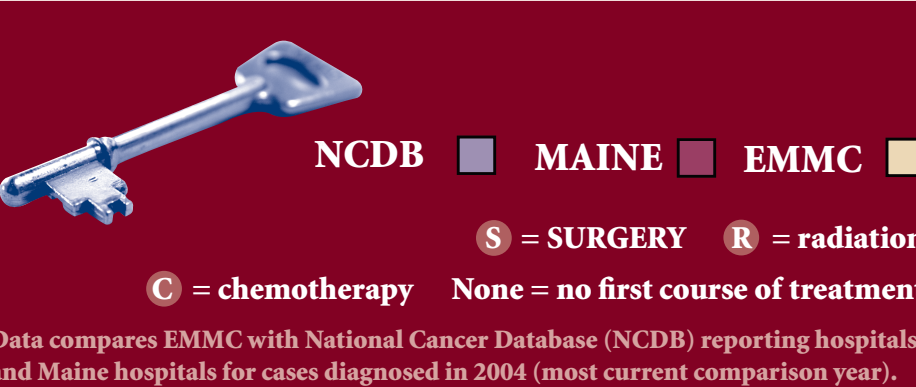
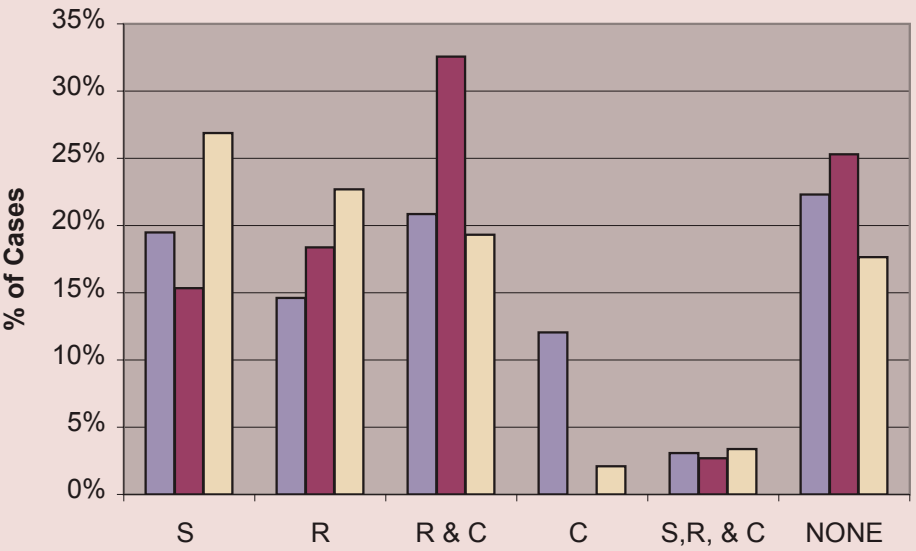
LUNG CANCER DATA: EMMC, MAINE, NATIONAL



Stage at Diagnosis



First Course of Treatment



BREAST & OSTEOPOROSIS CENTER UPDATE



Elaine Chambers, RN, MS

The Breast and Osteoporosis Center continues to serve a large and growing number of women from our two locations: The Breast and Osteoporosis Center on the EMMC campus and the Screening Mammography site at the Eastern Maine Healthcare Mall on Union Street. Both services offer high quality digital mammography certified by the United States Food and Drug Administration (FDA) and accredited by the American College of Radiology (ACR) and all of our mammograms receive a Computer Aided Detector (CAD) review. By offering state of the art digital technology combined with our highly skilled compassionate staff and an excellent team of radiologists, our patients receive the best possible mammogram. We continue to provide same day results for our diagnostic mammography patients at the Breast and Osteoporosis Center site.

Early detection is still the best tool in the battle against breast cancer, so along with high quality mammography we are committed to community education. *Caring Connections*, a cooperative program between EMMC and The Bangor Y, provides community education – 674 women attended educational programs, thousands more received brochures and information.

Through our partnership with WLBZ/Channel 2's *Buddy to Buddy* program, women are encouraged to participate in a supportive approach to breast health, by enlisting a "buddy" to help remember to do a regular breast self exam as well as practice age appropriate screening mammography. Women's Week offered many opportunities to celebrate and educate women in our community on key health-related topics.

The Prosthetics and Apparel Shop in the Breast and Osteoporosis Center, has one of the most complete and diverse selection of bra's, prosthesis, scarves, hats, hairpieces and swimwear in the State. This service is available by "appointment only" to ensure that women receive individual attention by our Certified Fitter. Every other month, we have the pleasure of hosting the American Cancer Society *Look Good, Feel Better* program providing women going through treatment a positive upbeat preparation for the side effect of hair loss, tips on skin care and make up. EncorePlus support groups served women in six Maine counties, sending out newsletters every other month to over 400 breast cancer survivors.

On December 31, 2007, William Horner, MD will retire after many years of service. He leaves our center and the women he has cared for the legacy of his skill, hard work, and compassion. Our high quality comprehensive service has grown in depth and scope through his guidance and vision. As of January 1, 2008, Susan O'Connor, MD will carry on that vision and work, as she steps into the role of Medical Director for the Breast and Osteoporosis Center. It is with great respect and fondness that we wish Dr. Horner health and happiness as he enters this new journey of retirement.

Thank you for the privilege of caring for so many amazing women and men this year. We look forward to continuing to serve both your patients and ours through all of our various efforts.

EXECUTIVE DIRECTOR'S REPORT



Greg Fecteau, RN, MHA

Our physicians and staff are to be congratulated for their ongoing commitment to excellence and compassion in care. I especially want to acknowledge a few individuals whose dedication has provided key leadership – each instrumental in enhancing care throughout the region.

William Horner, MD, Medical Director of the Breast and Osteoporosis Center pioneered the creation of an expedited service for women facing a possible cancer diagnosis at the same time raising the bar for delivery of high quality breast care throughout the region. Both he and Elaine Chambers, RN, MS were recognized for their important state-wide contributions receiving the 2007 *Maine Breast Health Leadership Award* this October. We congratulate them both. Celebrating a life-time of caring and to continue his good works, an endowment has been established in Dr. Horner's name at Healthcare Charities to support the ongoing efforts of the Breast and Osteoporosis Center at EMMC. We wish Dr. Horner the very best in his retirement. In January, welcome Susan O'Connor, MD to her new role as Medical Director.

Since 1998 Thomas Openshaw, MD as CancerCare of Maine's Medical Director has helped to grow and sustain all aspects of CancerCare's service through his leadership and commitment to caring. As we work to build a new center, he will assume a leadership role in our Champion the Cure campaign. In January, welcome Dr. A. Merrill Garrett to her new role as Medical Director.

Our annual report focuses on lung cancer. I personally want to thank Philip Peverada, MD, and acknowledge his pivotal role in the development of the Thoracic Oncology Clinic. The Clinic is designed to improve patient care, assure collaboration among specialists, and shorten time between the suspicion of a diagnosis and definitive treatment.

At our 2007 celebration of Cancer Survivors, we recognized a very special family and team with the 2007 *CancerCare of Maine Community Support Award*. The Dysart family and employees received the 2007 award in recognition for their exemplary leadership in supporting EMMC's CancerCare of Maine for the benefit of all throughout the region. Our sincerest thanks for their many years of generous support go out to the Dysart family and their staff.

This year our signature event – *Run for Hope* – hosted by the Lafayette family raised over \$25,500 to support patient participation in clinical trials and research. Their enduring commitment to this effort is a true gift to the region. Gratefully, *Beach to Beach*, the *EMMC Auxiliary Kitchen Tour*, and *Lights of Hope* each also enjoyed outstanding community support.

Looking ahead, site preparations got underway this fall for our new CancerCare center in Brewer. Ground breaking is anticipated for early spring with a target of opening fall 2009. Watch for the launching of our capital campaign – **Champion the Cure – Advancing Care and Leading Research.**

CANCER LEADERSHIP COMMITTEE 2007

Eastern Maine Medical Center and EMHS Staff

(continued)
Wendy Lagasse, MSB, CHES*
Director Community Wellness
Patricia Miles, RN*
Department Head, Inpatient Oncology Unit
Nadine Tasker, RN*
Department Head Palliative Care
Maggie Wiken
Budget Manager

www.emmc.org

CancerCare of Maine Staff

Nadine Bullion, LCSW**
Support Service Manager
Carol Guptill, RTT*
Manager,
Radiation Oncology
Ambie Hayes-Crosby, RN*
Manager, Clinical Research

Cancer Registry - Margaret Chavaree, BA, CTR*
2007 Annual Report – * Contributors ** Editor

Registry Statistical Information Referenced –
January 1 to December 31, 2006

Statistical Analysis – **Pat Hofmaster**, PhD, Director,
Performance Improvement and Data Management

December 7, 2007

Paul Szal, MD*
Radiation Oncology
Committee Chair
Greg Fecteau, RN, MHA*
Executive Director
CancerCare of Maine

Medical Staff

Judith Allen, MD*
Pediatric Oncology
Kathryn Bourgoin, MD
Family Medicine
William Horner, MD
Surgery
Medical Director, Breast &
Osteoporosis Center

Peter Huang, MD*
Surgery
Liaison, ACOS-COC
Mayur Movalia, MD
Pathology
Thomas Openshaw, MD*
Medical Oncology
Medical Director
CancerCare of Maine
Philip Peverada, MD*
Surgery
Medical Director
Thoracic Oncology Clinic
Karl-Heinz Spittler, MD
Anesthesiology
Paul Templeton, MD
Chief, Medial Imaging

Eastern Maine Medical Center and EMHS Staff

Nancy Alyward, RN
Care Management
Diane Bubar
Director, Quality Improvement
Elaine Chambers, RN, MS*
Department Head, Breast &
Osteoporosis Center
Helen Genco, RN*
Chief Operating Officer,
Eastern Maine HomeCare



Cover Photo – **Susan L. Garland**, Operations Coordinator, CancerCare of Maine



EMHS members work
together to bring quality
healthcare to you.
TOGETHER WE'RE STRONGER

Pediatric Oncology
(207) 973-7520

Cancer Registry
(207) 973-7483

Clinical Research at CCOM
(207) 973-4249

CancerCare of Maine (CCOM)
(207) 973-7478
(for Medical & Radiation Oncology)

Breast & Osteoporosis Center (BOC)
(207) 973-8108

CancerCare of Maine
417 State Street, Suite 20
Bangor, ME 04401

Bringing Hope to Life



CancerCare of Maine Report on Cancer 2007

Bringing Hope to Life



CANCER COMMITTEE CHAIR REPORT



Paul Szal, MD

Each year as I reflect back, I am grateful for the continued commitment of dedicated physicians and staff in the delivery of excellent care. Our patients and their families show their gratitude through countless thank you notes and positive patient satisfaction survey returns. We appreciate your support in caring for patients throughout the region – together we offer the best!

SERVICE

In 2006, 76% of those diagnosed underwent some form of surgery. At EMMC both the number of procedures (1316) and the number of patients (980) completing surgery were up by 10% from last year. For those having biopsies elsewhere 25% received their definitive surgery at EMMC with 66% of all definitive surgeries occurring at EMMC. Daily over 275 patients/families are seen at CancerCare of Maine. During 2007, 1480 patients and families began care in medical oncology; 773 in radiation oncology and 14 in pediatric oncology. At the end of FY 2007, growth was 7% & 4% in medical oncology and radiation oncology respectively. Grant 6 Oncology admissions were slightly less than in 2006. Along the continuum of care, EMMC's Palliative Care Consultation team completed 719 consultations (up nearly 90% from last year) while Hospice of Eastern Maine cared for 54 cancer patients & their families (up 10% from last year).

RESEARCH

In 2006, 69 patients were enrolled in clinical trials – 4% of our analytic cases, exceeding the American College of Surgeons-Commission on Cancer (ACOS-COC) standard of 2%. In 2007, Astrid Andreescu, MD assumed the role of principal investigator for CancerCare's clinical research program. Actively collaborating with the Maine Institute for Human Genetics and Health, the program will serve as a primary link between surgeons and patients interested in participating in a cancer tissue repository supported through a recently approved grant from the Department of Defense. The Institute's aim is to create both a regional and national resource for research looking at environment, cancer development, and treatment.

NEW TECHNOLOGY –

Over the past year IMRT, Intensity Modulated Radiation Therapy, has been fully implemented. This technology is most helpful in treating select prostate, head and neck, and breast cancers. Radiation therapy procedure volume is the best indicator of the utilization of technology. In fiscal year 2005, 245 procedures were completed, in fiscal year 2006, 866, in fiscal year 2007, 4278 for a procedure increase of over 16.5 times since the initiation of this service. The treatment is designed to more closely target therapy to the cancer while minimizing dose delivery to surrounding tissue. We expect outcomes will be better with less impact to healthy tissue.

With technology sometimes comes controversy, the question of best use of MRI for breast screening was raised by primary practitioners in our community. Our Breast Health Task Force, a collaborative working group of radiologists, pathologists, surgeons, and medical and radiation oncologists, responded. Guidelines were established and sent out to community providers emphasizing the indication in only the "highest risk" patients – carriers of BRCA1 (breast cancer gene one) or BRCA2 (breast cancer gene two) mutations, first degree relatives of a carrier, family history of breast or ovarian cancer in at least two generations with two or more events in one generation, particularly if pre-menopausal at age of diagnosis. Others may qualify for screening breast MRI, but the decision should be made only after a risk assessment from a breast clinician. The result has been appropriate use of this important technology.

QUALITY

Our commitment to excellence includes peer review, comparison to national standards, and program enhancements to assure our patients receive the best care possible. Each year we review the four major cancer sites, comparing stage at diagnosis and survival with most currently available data from the National Cancer Data Base (NCDB). For cases diagnosed in 2005 when comparing EMMC with NCDB data for stage at diagnosis for breast, colon, lung and prostate cancer the rate was the same statistically. For cases diagnosed in 1998 and 1999, the five year survival rate was statistically higher than national rates for breast cancer diagnosed at stage zero and for colon cancers diagnosed at stage three. Other survival rates for breast, colon, lung and prostate cancer by stage were statistically the same as national rates.

In this report you will find our focus on non-small cell lung cancer. I want to personally thank Philip Peverada, MD for his excellent report. I encourage you to take a moment to review his work. Under the leadership of Dr. Peverada, clearly, the addition of the Thoracic Oncology Clinic is the programmatic improvement highlight of the year.

EDUCATION

We hosted two multi-disciplinary conferences this year: *Neoadjuvant Therapy in Breast Cancer: A Clinical and Investigational Assessment of Past, Present and Future Applications* – under the guidance of William Horner, MD and the *Third Annual Lung Cancer Update*: My patient has a solitary nodule, what do I need to do? – under the guidance of Philip Peverada, MD, FACS, FCCP. Both programs integrated the work of clinicians and basic scientists, enhancing the collaboration between EMMC based services and the Maine Institute for Human Genetics and Health.

Two important innovations are under development and will be launched in early 2008. A recent American Cancer Society grant will allow us to develop an on-site resource library for patients undergoing treatment and their families. We look to open its virtual doors in mid-February 2008. Nursing staff in CancerCare of Maine is set to launch a comprehensive new patient education program in January designed to help patients and families identify themselves as survivors from the start of care and learn skills necessary to assure optimal treatment outcome.

COMMUNITY

Through its *Community Wellness Program*, EMMC screened over 1,600 community members and business employees. As part of this program, basic cancer risk items are reviewed, including indicators of potential genetic risk. Our genetic counseling referrals are steadily increasing. Smoking cessation initiatives have been "hard-wired" into EMMC's Family Medicine service and are a key part of Thoracic Oncology Clinic patient education. Again this year, EMH was a key force behind *Move & Improve*, a community wide effort engaging over 6,500 people (over 20 % youth) to promote physical activity, stress reduction and healthy eating and lifestyle habits (including smoking cessation) with over 52% completing the program.