

Innovations in Cancer Care

Bryn Mawr Hospital Cancer Program



Annual Report Based on
2005 STATISTICS



Main Line Health
Cancer Center
Bryn Mawr Hospital

The mission of Main Line Health is to provide a comprehensive range of health services, complemented by related educational and research activities, that meets community needs and improves the quality of life in the communities we serve.

Message from the Chairman of the Cancer Committee

The Bryn Mawr Hospital Cancer Program significantly enhanced its efforts in cancer prevention, treatment and research in 2005. Bryn Mawr Hospital provided diagnosis and/or treatment to 1,050 patients in 2005. This is a slight decrease compared to 2004. Approximately one-quarter of our patients had breast cancer, a proportion nearly twice the national average, making our breast cancer program among the largest in the metropolitan area. Our cancer program recently received another full accreditation by the American College of Surgeons with numerous commendations.

The Cancer Center now includes a state-of-the-art Comprehensive Breast Center with breast diagnostic services led by a team of breast health experts including Medical Director, Thomas Frazier, MD, breast surgeon, and John Stassi, MD, Director of Breast Imaging. Key elements in making this among the most comprehensive breast centers around, include dedicated breast imagers, a nurse coordinator, a high-risk genetic assessment program and weekly multidisciplinary breast cancer conferences.

The Cancer Center is also comprised of an inpatient unit, operating suites for specialized cancer surgery (including laparoscopic, thoracoscopic, and cryosurgery) and new state-of-the-art facilities for radiation therapy, including HDR (high dose rate) Brachytherapy, 3-D conformal radiotherapy, IMRT, stereotactic radiation, and partial breast radiation. Also provided are areas for

outpatient chemotherapy administration, complete diagnostic and therapeutic radiology services (including chemoembolization facilities, and now PET/CT), fertility counseling for chemotherapy recipients and endoscopic laser surgery. A team of more than 40 specialists, oncology nurses, technicians, research, nutrition, and psychosocial specialists provide care for our patients.

The primary focus in 2005 continued to be clinical cancer research. Bryn Mawr Hospital, along with Lankenau and Paoli Hospitals, is in the fourth year of our third National Cancer Institute Community Clinical Oncology Program (CCOP) research grant. Bryn Mawr Hospital's Cancer Program continued its participation with the National Cancer Institute's major cooperative research groups, including the Eastern Cooperative Oncology Group (ECOG), National Surgical Breast and Bowel Project (NSABP), Radiation Therapy Oncology Group (RTOG), Gynecology Oncology Group (GOG), and has added the Fox Chase Cancer Center. In 2005, we experienced a very successful clinic research year with 24 patients enrolling in one of the CCOP research protocols.

The Bryn Mawr Hospital Cancer Program, through its facilities and available resources, is able to provide virtually every cancer care and support service to cancer patients and their families along Philadelphia's Main Line.



Steven C. Cohen, MD
Chief, Hematology-Oncology
Chair, Cancer Committee

Oncology Research at Bryn Mawr

The clinical trials program of Main Line Health was awarded the designation of Community Clinical Oncology Program (CCOP) by the National Cancer Institute in 1994, and has consistently met the high standards of the NCI. The CCOP designation is a prestigious one, as there are only 50 CCOPs across the country. We are currently in our 13th year of this grant and looking forward to continuing our affiliation with NCI, as we await review of our new grant application. Medical, surgical and radiation oncologists and our research staff accrue patients to both prevention and treatment studies provided by six research bases: M.D. Anderson Cancer Center; Eastern Cooperative Oncology Group; National Surgical Adjuvant Breast and Bowel Project; Fox Chase Cancer Center Research Base, Gynecology Oncology Group and Radiation Therapy Oncology Group.

As a research center, we also participate in multiple pharmaceutical research endeavors, as well as clinical trials sponsored by other professional organizations, such as the American College of Surgeons Oncology Group. All studies continue to accrue patients with the assistance of the medical and research staff.

Rosemarie A. Tucci RN, MSN, AOCN
Manager, Main Line Health Oncology Research & Data Services

Report on Lung Cancer – 2005

Only 100 years ago, at the dawn of the last century, lung cancer was considered rare. Only approximately 200 cases had been reported worldwide. It was difficult to diagnose lung cancer during an individual's life, and any case report without autopsy evidence was viewed with suspicion. Ominously, the number of cases reported in the literature and the frequency with which the disease was found during autopsies steadily escalated. Even at this early time, it was apparent an epidemic had begun.

Today, lung cancer is one of our country's greatest health problems. It is the most common fatal malignancy for both men and women, accounting for more cancer deaths each year than the combined total for breast, colon and prostate cancers. An estimated 170,000 new cases of lung cancer are expected this year, accounting for 13 percent of all cancers diagnosed in the United States. The incidence of lung cancer in men has been declining from a high of 102 cases per 100,000 in 1984 to 81 in 1999. The incidence of lung cancer in women has been, until very recently, increasing. Since 1987, more women have died each year from lung cancer than from breast cancer, which for the previous 40 years had been the major cause of cancer deaths in women.* Women also appear to be more sensitive to tobacco smoke, with a greater number of lung cancers occurring in women with the same tobacco exposure. Unfortunately, diagnosing lung cancer at an early and potentially curable stage is often difficult. Today lung cancer is most often detected on the basis of symptoms of advanced disease or when chest x-rays are taken for an unrelated reason.

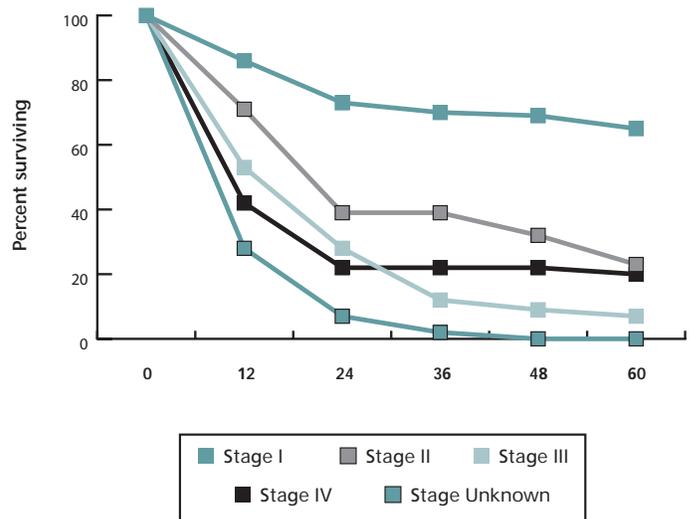
Perhaps the major advance in lung cancer over the past 20 years has been the improvement in our ability to "stage" the disease. Prognosis can be directly correlated with the patients accordingly. The greatest improvement in staging has been for locoregional disease in the mediastinum—particularly nodal metastases. This is the result of improved imaging techniques (particularly CT scanning, MRI and PET scanning) and the selective use of invasive staging with mediastinoscopy. Improved staging has resulted in a marked reduction of unnecessary procedures for patients with incurable tumors. Accurate staging also allows for more efficacious comparison of new treatment modalities.

Early detection of lung cancer offers the best opportunity for cure. Patients with lung cancer confined to the lung (Stage I or II) have an expected five year survival rate of 60 to 85 percent. This group unfortunately represents only a small percentage of all patients with lung cancer. Surgery remains the mainstay of treatment for these early stage patients. Lobectomy is considered the definitive procedure for most early stage lung cancers because it is an anatomic resection to remove the regional lymph nodes coursing along the

lobar bronchus. Doing less than a lobectomy must be considered a compromise. Advances in anesthesia, pulmonary medicine, critical care and pain management allow for more complex procedures to be performed safely and less invasively than ever before.

Identification of early pre-malignant changes in high risk groups, such as former smokers, and workers with environmental exposures to known carcinogens, such as asbestos, may offer a chance to interrupt the progression to invasive carcinoma through local ablative measures. Though 87 percent of all lung cancers are attributed to cigarette smoking, only a small fraction of smokers in fact develop the malignancy during their lifetime. Despite the public awareness of lung cancer and smoking, tobacco consumption has recently

Five Year Relative Survival Best AJCC Stage *Non-small Cell Lung*



increased in certain groups. The incidence of lung cancer is approximately 10 percent in non-smoking men and 20 percent in non-smoking women suggesting that there may be other factors involved with development of some types of lung cancer in women. Although there are effective screening modalities for breast, colon and prostate cancer, in the United States no organization or government agency has recommended any screening method for lung cancer. This, however, may change with recent reports suggesting an improvement in survival with screening and early detection of lung cancer in high risk patients. There is a continued search for novel screening methods and evaluation of molecular events or intermediate biomarkers, not only to detect the "susceptible" individuals but also to target therapies. Chemoprevention studies are ongoing and may be useful in preventing primary and secondary lung cancers.

Unfortunately, most patients with lung cancer present with locally advanced disease (Stage IIIa or IIIb) or with distant metastases (Stage IV). Medical and radiation oncology,



pulmonary medicine, surgical oncology, nursing and social services evaluate each patient as a team and provide comprehensive care at Bryn Mawr Hospital. Aggressive treatment with chemotherapy and radiation therapy is the standard for patients with locally advanced disease. Occasionally we are able to "down stage" some tumors and provide an opportunity for resection for cure. At Bryn Mawr, we are occasionally using brachytherapy in combination with surgical resection in some patients with locally advanced lung cancer who are at high risk for local recurrence.

In 2003, there were 73 cases of lung cancer at Bryn Mawr Hospital. There were an equal number of males and females. More than 80 percent of the cases were non-small cell lung cancers. Interestingly, over 70 percent of patients treated at Bryn Mawr were 70 years old or over, compared to the National Cancer Database** figure of 46 percent. In both groups the majority of patients presented with Stage III or IV tumors. Therapy for non-small cell lung cancer was individualized and included: surgery (33 percent); radiation (16 percent); radiation and chemotherapy (21 percent); surgery, radiation and chemotherapy (7 percent); other modalities (16 percent); and no treatment (7 percent). Over 43 percent of non-small cell lung cancers were either Stage I or II. Nationally only 30 percent are identified at these earlier stages.

The advent of national cooperative oncology groups has significantly advanced our knowledge of the treatment of lung cancer. At Bryn Mawr Hospital, we continue to participate in and benefit from these consortiums of excellent academic institutions and community hospitals. Accrual of patients can proceed much more rapidly, and questions can be answered quickly in these multi-institutional trials. Our hope for innovation and discovery comes through the cooperative group effort that can build on preliminary data accumulated by a single institution to rapidly answer a therapeutic question. It is imperative that we continue this support in the future.

Advances in molecular biology, along with our understanding of oncogenesis at the molecular level will, it is hoped, lead to new therapeutic approaches in the coming years. Efforts in gene therapy, specifically in immune modulation or oncogene targeting will contribute significantly to the treatment of lung cancer in the near future, rendering many of our current therapies obsolete. Molecular markers have been identified that are predictive of future lung cancer. These will likely improve the effectiveness of screening strategies for lung cancer. Clinical advances in chemotherapy, radiation therapy and surgery offer hope for battling this disease today.

Arthur T. Martella, MD
Cardiothoracic Surgery

Oncology Data Services

In FY 2005, the Oncology Data Services Department at Bryn Mawr Hospital accessioned 1,050 new cancer cases. Among these, 845 were analytic (diagnosed and/or treated at BMH) and 205 were non-analytic (diagnosed and/or treated elsewhere and receiving subsequent treatment at Bryn Mawr). Oncology Data Services maintains a database of 12,000 cases accessioned since our reference date of January 1, 1992. Lifetime follow-up, as required by the American College of Surgeons (ACoS) for approved programs, ensures continuity of patient care, and provides a tool for comparison of patient outcomes against regional and national data.

As an approved program of the ACoS, Oncology Data Services is responsible for continuity and quality of the database, coordinating the Cancer Conferences, Cancer Committee meetings, and Quality Improvement and Outcome Analysis studies.

Oncology data is submitted annually to the National Cancer Data Base (NCDB) where it is used for comparative analysis with similar facilities and national organizations, and to the Facility Information and Profile System (FIPS) of the American Cancer Society for use in tracking trends in cancer research. Direct monthly reporting of registry data is mandated by the State of Pennsylvania, Department of Health and Statistics.

The Oncology Data Services staff at Bryn Mawr Hospital is credentialed in the management of oncology patient data. To keep abreast of the latest innovations in oncology data management, annual educational programs for maintenance of these credentials are mandatory, and are provided on local, regional and national levels.

Karen Dysleski, RHIA, CTR
Cynthia Linsinbigler, RHIT, CTR
Jane Palumbo, CTR

*Cancer Facts and Figures, 2005

**National Cancer Database, Commission on Cancer, ACoS. Benchmark Reports, v7.0

Site Distribution Report – AJCC Staging for Bryn Mawr Hospital

Study Group: 2005 Analytic Cases (newly diagnosed)		AJCC Stage											
Primary Site	Cases	0	1	2	3	4	Unk	N/A	B/B**	Male	Female	% BMH Database	ACS Est. Figures*
Bladder	42	29	6	4	0	3	0	0	0	30	12		
Brain/CNS	29	0	0	0	0	0	0	14	15	11	18		
Breast	267	48	131	62	22	1	3	0	0	4	263	32%	15%
Cervix	0	0	0	0	0	0	0	0	0	0	0		
Colon/Rectum	63	2	17	14	14	14	2	0	0	40	23	7%	11%
Esophagus	5	0	2	2	0	1	0	0	0	2	3		
Kidney	29	1	19	1	1	7	0	0	0	20	9		
Larynx	6	0	1	1	1	3	0	0	0	5	1		
Leukemia/Hematopoietic	2	0	0	0	0	0	0	2	0	1	1		
Lip & Oral Cavity	7	1	2	2	0	2	0	0	0	5	2		
Lung	80	0	18	6	33	22	0	1	0	30	50	9%	13%
Lymphoma	23	0	5	6	6	4	2	0	0	14	9		
Melanoma	62	28	27	4	1	1	1	0	0	35	27	7%	4%
Myeloma	8	0	0	0	0	0	0	8	0	5	3		
Other	25	3	6	3	1	2	2	4	4	15	10		
Ovary	4	0	1	2	1	0	0	0	0	0	4		
Pancreas	18	0	1	10	1	6	0	0	0	9	9		
Pleura	0	0	0	0	0	0	0	0	0	0	0		
Prostate	121	0	0	111	4	5	1	0	0	121	0	14%	17%
Stomach	5	0	2	0	0	1	1	1	0	3	2		
Testis	5	0	5	0	0	0	0	0	0	5	0		
Thyroid	15	0	11	1	3	0	0	0	0	6	9		
Unknown Primary	19	0	0	0	0	0	0	19	0	10	9		
Uterus	10	0	6	1	1	2	0	0	0	0	10		
Total	845	112	260	230	89	74	12	49	19	371	474	69%	60%

The most frequent cancer sites for 2005 are highlighted in the above table and represent the percentage of cancer incidence seen at Bryn Mawr Hospital as comparable to the American Cancer Society's national estimates. They are in descending order: Breast, Prostate, Lung, Colorectal, and Melanoma.

In addition, 205 cases were diagnosed in a staff physician's office or elsewhere and received ongoing treatment at Bryn Mawr Hospital for a total of 1,050 newly diagnosed cases in 2005.

* Cancer Facts and Figures 2005, American Cancer Society

** BB=Benign/Borderline

Bryn Mawr Hospital Cancer Committee – 2005/2006

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 Women's Board
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 Oncology Data Services
 Oncology Data Services
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 Radiation Oncology
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 Susan Graham
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 Tracy d'Entremont, MD

Social Work
 Radiation Oncology
 Radiology
 Nutrition
 MLH CCOP
 Community Services
 Comprehensive Breast Center
 Pharmacy
 Colorectal Surgery
 Women's Board
 Public Relations/Marketing
 Radiation Oncology
 MLH CCOP
 Medical Oncology
 PM&R
 PM&R
 Public Relations/Marketing
 Nursing
 American Cancer Society
 Medical Oncology



Breast Prosthesis Program

800-227-2345

Free breast prosthesis program co-sponsored by the American Cancer Society.

Cancer Risk Assessment and Genetic Testing Programs

610-645-8150

Offers genetic assessment, counseling and testing for high risk individuals.

Clinical Trials and Cancer Prevention Research

610-526-3686

Provides patients access to NCI sponsored clinical research and prevention trials.

Community Education and Screening

610-526-8720

Provides educational programs and cancer screenings to the community.

“Look Good, Feel Better”

866-225-5654

American Cancer Society sponsored program, providing cosmetic instruction for women during and after cancer treatment.

Lymphedema Management Program

610-526-8744

Provides early and continuing treatment for patients with Lymphedema.

Nutritional Services

610-526-3207

Registered Dietician counsels individuals and support groups during cancer care.

Oncology Data Services

610-526-3727

Comprehensive data management system for the collection of malignant or neoplastic disease. Oncology Data Specialists provide monitoring, analysis and lifetime follow-up of patients diagnosed with cancer.

Physical Medicine and Rehabilitation

610-526-3360

Advice and instruction concerning exercises and/or ambulation for patients undergoing treatment.

Radiation Oncology

610-526-3370

Advanced, comprehensive, state-of-the-art treatment of cancer in the community setting.

Social Work

610-526-3594

Social workers provide psychosocial support and counseling for patients and their families.

Support Groups

610-526-3594

Information, education and support to patients recovering from cancer.

Wig Program

610-526-8720

Free wig program for women who are anticipating or experiencing a change in their physical appearance.

Women's Health Source

866-225-5654

A free membership club offering information on a wide variety of health issues important to women.

Main Line Health

Cancer Center
Bryn Mawr Hospital

130 South Bryn Mawr Avenue, Bryn Mawr, PA 19010

1-866-CALL-MLH

www.mainlinehealth.org