

HAHNE REGIONAL CANCER CENTER

2008 Annual Report of 2007 Cancer Data



Hahne Regional
Cancer Center

A service of DuBois Regional Medical Center

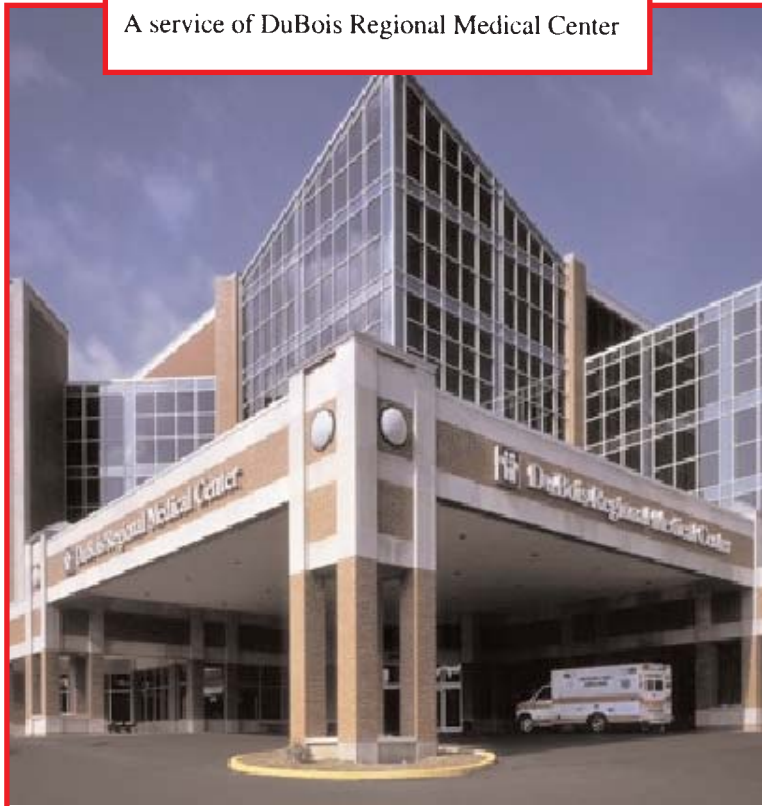


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Cancer Committee

2007 Committee Chairman

Albert Lee, MD, Radiation Oncology

2007 Committee Members

Carmine Marchioli, MD, Medical Oncology

Edward McVay, MD, Occupational Medicine,
Cancer Liaison Physician

Kevin Mullins, DO, Medical Oncology

Joseph Pedersen, MD, Radiation Oncology

Larry Schachter, MD, General Surgery

G Ali Shah, MD, Diagnostic Radiology

Gregory Suslow, MD, Pathology

Bea Anderson, RN, 3rd Floor Unit Manager

Joan Barr, CTR, RN, Cancer Registry Coordinator

Nancy Brush, BS, Social Services

Rose Campbell, RN, Oncology Program Director

Mary Day/Theresa Ledney, American Cancer Society

Beth Goldbach, Nutritional Service

Francis Iorfido, Pharmacy

Lori Kaizer, CCS, Cancer Registrar

Jean Levin, CRNP, Medical Oncology

John Sutika, V-P Finance

Chairman's Report



Albert Lee, MD
Radiation Oncology
Committee Chairman

The Cancer Program continued to move forward during 2007 with significant advances in the ability of the Hahne Regional Cancer Center to provide state-of-the-art comprehensive cancer care. Our focus continues to be providing oncology patients within our service area quality care as it pertains to their disease. Remembering that the disease is only one aspect of our patients, we continue to address their overall needs with services provided through pastoral care, social services, and nutritional counseling.

In 2007, DRMC collaborated with Clearfield Hospital to open the Nathaniel D. Yingling MD Cancer Center. This venture opened a Cancer Center in Clearfield with the Radiation Area being staffed by the Hahne Regional Cancer Center Staff. This opening allowed patients in Clearfield to avoid the need to travel daily 25 or more miles for radiation treatment. The Nathaniel D. Yingling Cancer Center (Radiation) treated 95 patients in the first year. We believe that this collaborative effort will benefit the patients we serve.

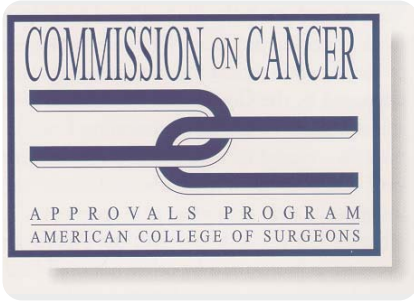
In collaboration with Oncology Hematology Associates of Northern Pennsylvania, P.C. (OHANP), we provide hematology and medical oncology services on site.

The Cancer Program provides outreach services including:

1. Professional, community and patient/family education
 - Community education was provided to approximately 1780 individuals through outreach activities coordinated by Sandra Stom, RN, BSN, Breast Care Services Case Manager.
2. Cancer prevention and detection screenings
 - Provided to all Medical Staff the 2007 Cancer Screening Guidelines
 - Provided Sunblock sun safety education to teams at the Relay for Life in June
 - Provided pamphlets and sunblock to the participants in the Hahne Regional Cancer Center (HRCC) Golf tournament
3. Hospital sponsored door to door transportation service
 - Available free to patients who choose to receive care at the center and have no means of transportation.
4. Screenings for cancer of the cervix and breast
 - Offered to women who have no insurance or inadequate insurance for these services during October.

Our goal, since inception, has been to provide quality care on a warm personal level, in a community setting, utilizing state of the art technology. As we accomplish our objectives, we continue to realize that while statistics are very important; the individual patient is the most vital component of our program.

Oncology Scope of Services



Accredited by the American College of Surgeons as a comprehensive, multidisciplinary cancer program, the oncology program at DuBois Regional Medical Center (DRMC) uses a multidisciplinary team approach to the care of cancer patients and their families. Services are provided through the Hahne Regional Cancer Center, Third Floor inpatient unit, Home Care and Hospice programs and the Cancer Registry. The multidisciplinary team includes, but is not limited to: board certified physicians, nurse practitioners, physician assistant, certified inpatient and outpatient oncology nurses, home health/hospice nurses, a cancer registrar, physicists, certified dosimetry staff, certified radiation therapists, social service, pastoral care, nutritional counseling, rehabilitation, behavioral health, pain management and pharmacy services.

The Hahne Regional Cancer Center provides, either through its own resources or in collaboration with other facilities or programs, comprehensive oncologic and hematologic care to a primary service area encompassing Clearfield, Elk, and Jefferson counties. In collaboration with Oncology Hematology Associates of Northern Pennsylvania (OHANP) hematology and medical oncology services are provided on site at the Hahne outpatient center. Radiation oncology services are provided as a program offered by DuBois Regional Medical Center. Our cancer program provides outreach services, professional, community and patient/family education, cancer prevention and detection screenings and a clinical trials program. Hospital sponsored door to door transportation service is also available free to patients who have no other means of transportation and choose to receive care at the center.

In support of our mission to provide comprehensive cancer care close to home, medical oncology services are provided by OHANP in the neighboring communities of Brookville and Ridgway. The services provided include physician consultation, follow up visits, chemotherapy administration and access to clinical trial information. DRMC and Clearfield Hospital worked together to provide radiation oncology services to Clearfield and surrounding communities. The Nathaniel D. Yingling Cancer Center opened in January of 2007 to provide radiation oncology services. These services include physician consultative visits and external beam therapy including 3-D Conformal Therapy, IMRT (Intensity Modulated Radiation Therapy) and the latest imaging technology IGRT (Image Guided Radiation Therapy). IGRT is a technology designed to improve the precision and effectiveness of cancer treatments by giving doctors the ability through imaging to target and track tumors more accurately, allowing radiation to be delivered to tumors with more precision than was previously possible. The enhanced accuracy of our treatment system benefits a wide range of malignancies including: prostate, lung, intra-abdominal, pelvic, breast, and head and neck sites.



- continued on the next page -

- Scope of Services continued -

The technology available to treat patients in the Hahne cancer center is state of the art including a Varian 2300CD Linear accelerator with 120-leaf multileaf collimator with IGRT (Image Guided Radiation Therapy) and Philips ACQ Sim dedicated oncology 3D CT simulator. DRMC continues a strong commitment to providing the best in cancer care to the community it serves. This market leading technology allows us to treat cancer by providing the most accurate delivery systems with new energy options concentrating the radiation dose on cancer cells, fighting tumor growth while lowering the dose to surrounding normal tissues. Radiation therapy treatment options provided at Hahne include external beam therapy: 3-D Conformal and Intensity Modulated Radiation Therapy (IMRT).

The third floor inpatient unit is an adult care medical/surgical unit providing 24-hour quality care to address the acute care needs of patients and families. The unit specializes in the care of oncology/chemotherapy and hospice patients, urology patients, renal failure patients and patients requiring peritoneal dialysis and hemodialysis.



The Home Care oncology service is comprised of an array of highly skilled professionals who collaborate to meet the multiple needs of patients with cancer in the home setting. Registered Nurses, Physical, Speech and Occupational Therapists, Medical Social Workers, Health Care Assistants, Nutritionists and other disciplines make it possible to provide care in the comfort of the patient's home. These services are provided to patients of all ages living in Clearfield, Jefferson, Elk and Indiana counties.

DRMC Home Care also provides a Medicare Certified Hospice Program to terminally ill patients who reside in Clearfield, Jefferson, Elk and Indiana counties including residents of area nursing homes. The mission of DRMC Hospice is to enable patients to live an alert, pain free life and to manage other symptoms so that the patient's last days may be spent in comfort and dignity with quality of life at home or in a home-like setting. Bereavement services are also provided to families or friends of hospice patients. The multidisciplinary team of professionals includes the Hospice Medical Director, Registered Nurses, Social Service Professionals, Pastoral Counselors, Health care Assistants and other ancillary disciplines and trained volunteers. Collaboratively, these professionals work together to meet the physical, psychosocial, spiritual and emotional needs of the patients and their families.

This multidisciplinary, collaborative interdepartmental approach to care enhances the overall quality of services provided for patients and their families along the cancer care continuum right here at home.



Cancer Registry

During the past year 2007, 564 people utilized the Cancer Program at DuBois Regional Medical Center (DRMC) and Hahne Regional Cancer Center (HRCC). That first visit set the tone for their treatment experience and placed them on the Cancer Registry To Do list. The registry at DRMC collects, reviews and reports on the cancer treatments at DRMC comparing the information locally, statewide and nationally. The registry collects data including biographical information, medical information, treatments, disease status and length of survival. The American College of Surgeons, Commission on Cancer requires an active cancer registry for all approved Cancer Programs.



Cancer Registry Coordinator, Joan Barr, CTR, RN and Cancer Registrar, Lori Kaizer, CCS

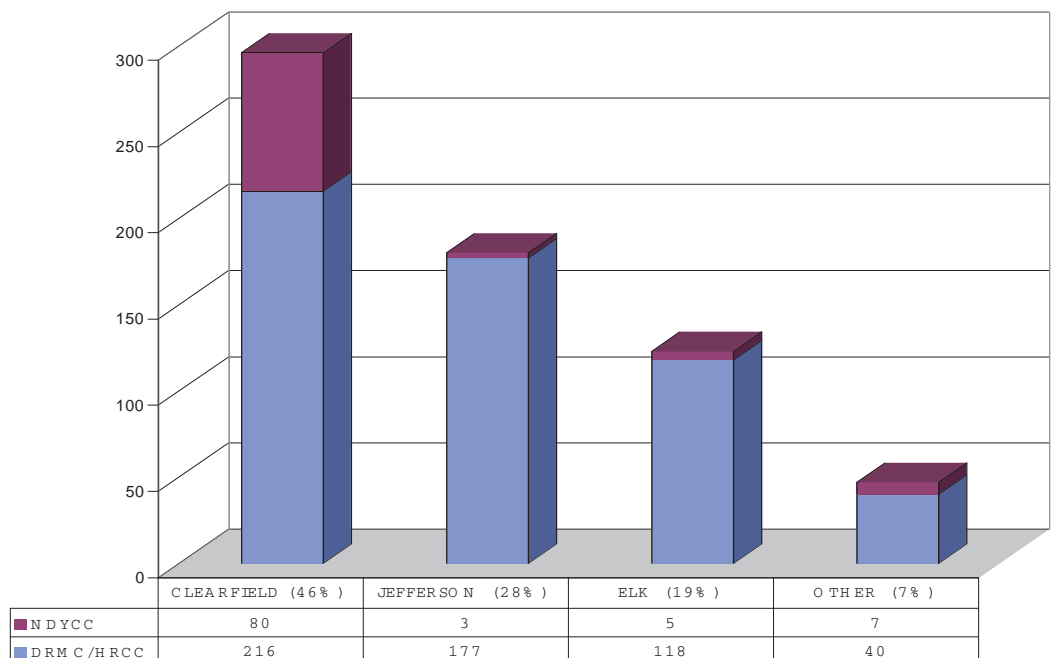
The registry at DRMC is staffed by two full time employees, Cancer Registry Coordinator, Joan Barr, CTR, RN and Cancer Registrar, Lori Kaizer, CCS. Together they compile the cancer statistics for DRMC, including those cases seen by the Radiation Oncology Department and the office practice of Oncology Hematology Associates of Northern Pennsylvania, PC. The Registry contributes information monthly to the Pennsylvania Cancer Registry and annually to the National Cancer Data Base. In 2007, with the opening of the Nathaniel D. Yingling Cancer Center (NDYCC) the registry begin reporting all Radiation Oncology patients seen at NDYCC, which totaled 95 for the year.

The collected work is utilized to prepare this portion of the annual report of the cancer program and in other studies conducted by physicians and clinical leaders. When requested the registry sends data to the Commission on Cancer for Specific studies

The cancer program at DRMC has a reference date of January 1, 1989, with 10,667 patients accessioned into the registry. The tracking of data for patients included in the registry occurs for the remainder of their lives. A follow up rate of greater than 80 % is required for all patients in the registry and a follow-up rate of greater than 90% for patients treated in the last five years. Currently follow-up is 86.42% for all patients and 92.09.% for the past five years

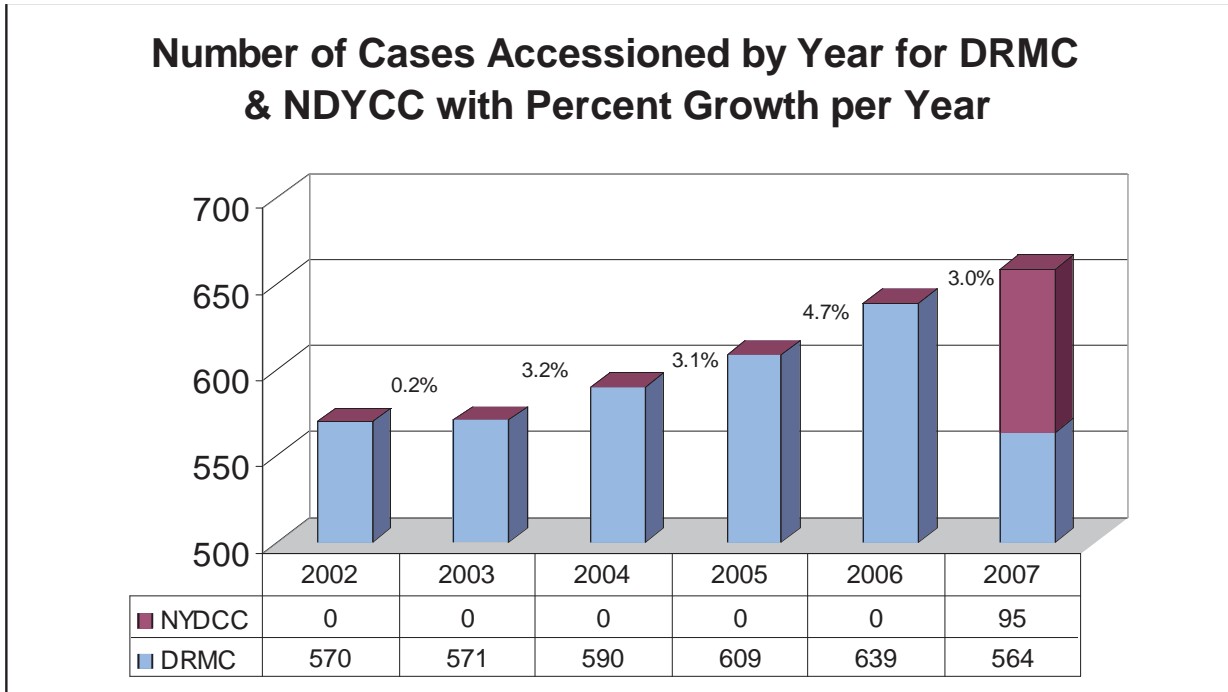
During 2007, 564 people were diagnosed and/or treated for cancer at DRMC and HRCC. During 2007, 95 people were treated at NDYCC. The data shown is the three highest counties of residence at diagnosis: Clearfield 296, Jefferson 180, Elk 123 and all other counties 47 cases.

County at Diagnosis for 2007 Cases Accessioned into the Cancer Registry



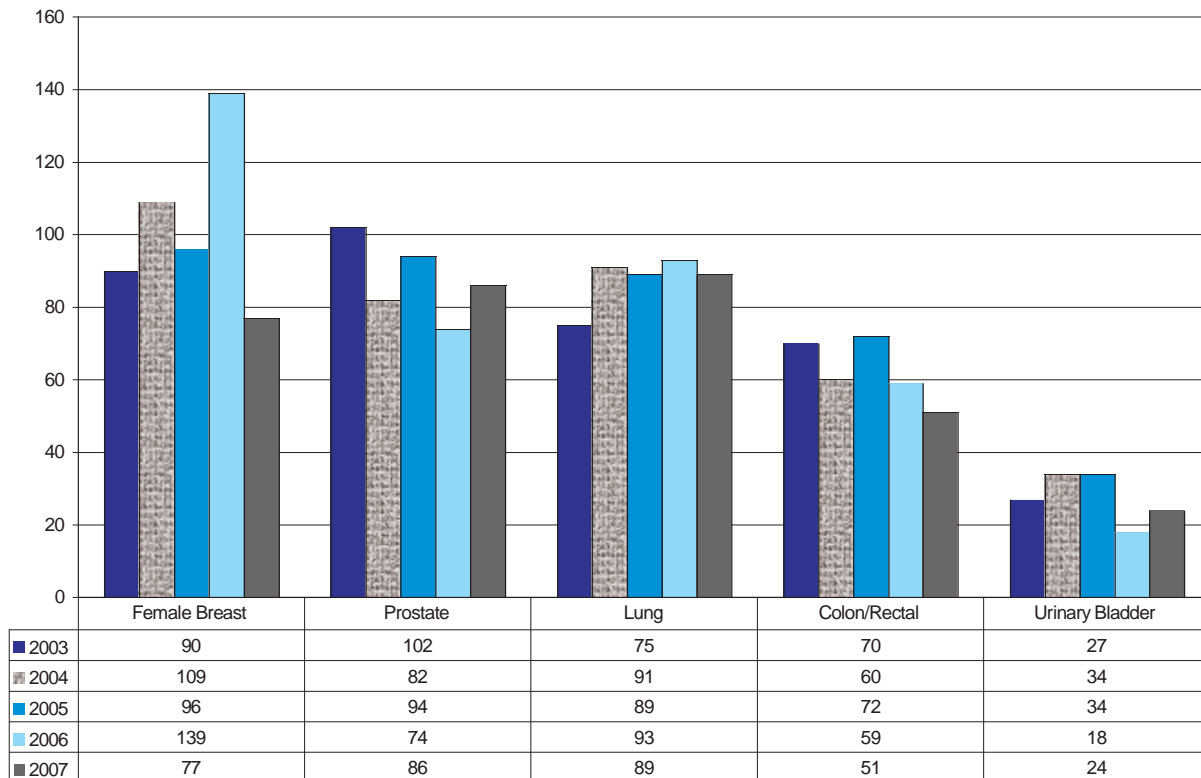
Cancer Registry continued

The cancer registry at DRMC uses the statistics obtained from data collected to demonstrate increases in the number of cases accessioned each year. The following chart shows the growth of accessions over the past 6 years.



Three of the five years reviewed had female breast as the site most often diagnosed and treated. The next most frequent cancers were prostate, lung, colon/rectal and urinary bladder in that order. These five sites are also among the top five sites at the state and national level.

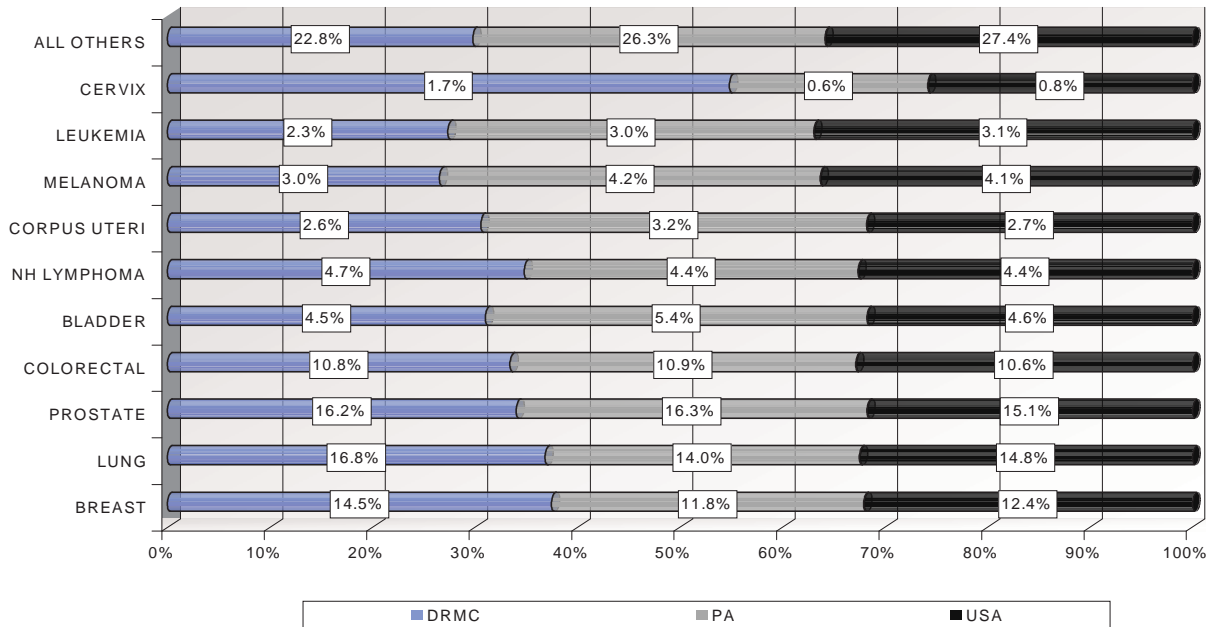
Top Five Primary Sites for the Years 2003, 2004, 2005, 2006 and 2007



Cancer Registry continued

Data collected on the most prevalent analytical cancer sites at DRMC is compared to the 10 Most Prevalent Cancer Sites as estimated by the American Cancer Society "Cancer Facts & Figures for 2007 for Pennsylvania and the United States.

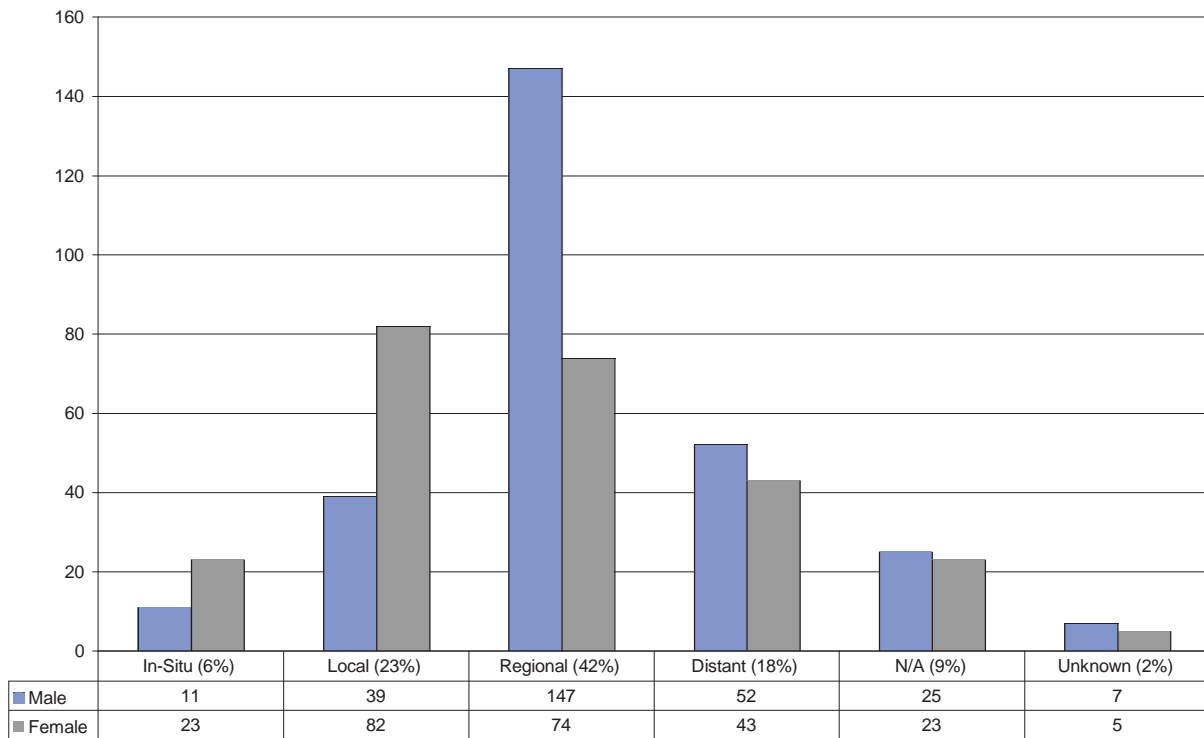
Ten Most Prevalent Cancer Sites 2007 DRMC, PA, USA



DUBOIS REGIONAL MEDICAL CENTER CANCER ANALYTICAL CASES ACCESSIONED IN 2007						
*NATIONAL COMPARISON OF THE TEN MOST PREVALENT CANCER SITES						
*Estimated Cancer Cases from: The American Cancer Society Cancer Fact & Figures 2007						
PRIMARY SITE	DRMC		PENNSYLVANIA		USA	
	CASES	PERCENT	CASES	PERCENT	CASES	PERCENT
BREAST	77	14.5%	8,860	11.8%	178,480	12.4%
LUNG	89	16.8%	10,500	14.0%	213,380	14.8%
PROSTATE	86	16.2%	12,230	16.3%	218,890	15.1%
COLORECTAL	57	10.8%	8,220	10.9%	153,760	10.6%
BLADDER	24	4.5%	4,030	5.4%	67,160	4.6%
NH LYMPHOMA	25	4.7%	3,330	4.4%	63,190	4.4%
CORPUS UTERI	14	2.6%	2,400	3.2%	39,080	2.7%
MELANOMA	16	3.0%	3,120	4.2%	59,940	4.1%
LEUKEMIA	12	2.3%	2,240	3.0%	44,240	3.1%
CERVIX	9	1.7%	420	0.6%	11,150	0.8%
ALL OTHERS	121	22.8%	19,780	26.3%	395,690	27.4%
TOTAL CASES	530	100.0%	75,130	100.0%	1,444,920	100.0%

Cancer Registry continued

Collaborative Stage of Disease for Analytical Cancer Cases in 2007



There are several reasons for staging cancer cases prior to definitive treatment:

- The need for staging places a responsibility on the medical practitioner to adequately assess the extent of cancer in order to treat the disease in the most appropriate manner.
- Knowing the extent of disease assists the physician to determine the most appropriate treatment to cure the disease, decrease the tumor burden, or relieve symptoms.
- Staging is also used to indicate prognosis for an individual patient.

Data from historical sources can provide an estimate of the expected survival rate for a particular cancer with a corresponding extent of disease. Of course, histology and grade of tumor, patient demographics such as age, sex, and race, and the efficacy of therapy all play a part in determining the patient's prognosis and quality of survival.

Staging provides a means of comparing local treatment results with national data based on common criteria for the extent of disease. Staging expedites the exchange of data and assists in the continuing research on cancer. Health information records are the primary source of documentation for staging information.

The patient's treatment is based on the extent of the disease. The prognosis of the disease can be estimated by the stage and other factors such as age, aggressiveness of tumor, and the presence or absence of other medical conditions. In certain stages of disease, quality of life issues may influence treatment decisions. The stage of disease is used in research studies and in the analysis of cancers.

Statistical Analysis of 2007 Analytical and Non-Analytical Data

A frequency report follows for all cases analytical and non-analytical abstracted to the cancer registry in 2007. The registry accessioned 566 cases, 533 (94.2%) were newly diagnosed and/or treated cancer patients, while 33 (6%) were patients with recurrent disease. Primary site, class, sex and stage at diagnosis give the distribution of cases.

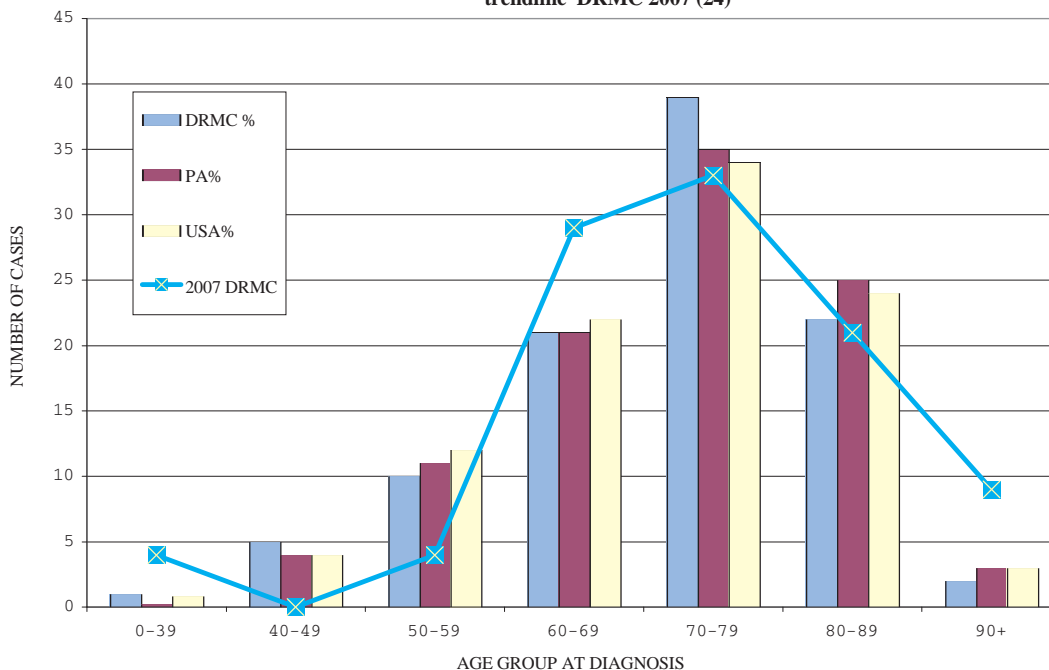
	TOTAL	CLASS		SEX		CS SUMMARY STAGE 2007					
		A	N/A	M	F	INS	LOC	REG	DIST	BEN	UNK
ALL SITES	566	533	33	298	268	36	247	120	147	1	15
ORAL CAVITY	20	20	0	16	4	1	5	10	4	0	0
LIP	2	2	0	2	0	0	2	0	0	0	0
TONGUE	7	7	0	4	3	1	2	1	3	0	0
OROPHARYNX	2	2	0	2	0	0	0	2	0	0	0
OTHER	9	9	0	8	1	0	1	7	1	0	0
DIGESTIVE SYSTEM	89	81	8	54	35	1	39	28	18	0	3
ESOPHAGUS	9	8	1	8	1	1	3	1	4	0	0
STOMACH	5	5	0	4	1	0	1	2	1	0	1
COLON	41	37	4	22	19	0	21	12	8	0	0
RECTUM	16	14	2	10	6	0	9	5	0	0	2
ANUS/ANAL CANAL	5	5	0	4	1	0	2	3	0	0	0
LIVER	1	1	0	1	0	0	0	1	0	0	0
PANCREAS	8	7	1	4	4	0	1	3	4	0	0
OTHER	4	4	0	1	3	0	2	1	1	0	0
RESPIRATORY SYSTEM	97	95	2	58	39	1	18	24	53	0	1
NASAL/SINUS	1	1	0	1	0	0	0	1	0	0	0
LARYNX	3	3	0	2	1	1	2	0	0	0	0
LUNG/BRONCHUS	92	90	2	54	38	0	15	23	53	0	1
OTHER	1	1	0	1	0	0	1	0	0	0	0
BLOOD & BONE MARROW	27	26	1	14	13	0	0	0	27	0	0
LEUKEMIA	13	12	1	8	5	0	0	0	13	0	0
MULTIPLE MYELOMA	9	9	0	4	5	0	0	0	9	0	0
OTHER	5	5	0	2	3	0	0	0	5	0	0
CONNECT/SOFT TISSUE	5	5	0	3	2	0	3	1	1	0	0
SKIN	22	18	4	10	12	6	13	2	0	0	1
MELANOMA	20	16	4	9	11	6	11	2	0	0	1
OTHER	2	2	0	1	1	0	2	0	0	0	0
BREAST	83	77	6	0	83	13	45	19	4	0	2
FEMALE GENITAL	39	37	2	0	39	2	15	12	10	0	0
CERVIX UTERI	10	9	1	0	10	0	3	5	2	0	0
CORPUS UTERI	16	15	1	0	15	0	11	3	1	0	0
OVARY	7	7	0	0	7	0	1	0	6	0	0
VULVA	5	5	0	0	5	2	0	3	0	0	0
OTHER	1	1	0	0	1	0	0	1	0	0	0
MALE GENITAL	92	89	3	92	0	0	81	7	4	0	0
PROSTATE	89	86	3	89	0	0	78	7	4	0	0
TESTIS	3	3	0	3	0	0	3	0	0	0	0
URINARY SYSTEM	36	34	2	20	16	12	16	3	5	0	0
BLADDER	25	24	1	15	10	12	10	2	1	0	0
KIDNEY/RENAL	9	8	1	3	6	0	5	1	3	0	0
OTHER	2	2	0	2	0	0	1	0	1	0	0
BRAIN & CNS	10	10	0	4	6	0	7	2	0	1	0
BRAIN (BENIGN)	2	2	0	1	1	0	0	1	0	1	0
BRAIN (MALIGNANT)	8	8	0	3	5	0	7	1	0	0	0
ENDOCRINE	9	7	2	1	8	0	2	3	1	0	3
THYROID	9	7	2	1	8	0	2	3	1	0	3
LYMPHATIC SYSTEM	32	29	3	21	11	0	3	9	19	0	1
HODGKIN'S DISEASE	5	4	1	4	1	0	0	3	2	0	0
NON-HODGKIN'S	27	25	2	17	10	0	3	6	17	0	1
UNKNOWN PRIMARY	2	2	0	2	0	0	0	0	0	0	2
OTHER/ILL-DEFINED	3	3	0	3	0	0	0	0	1	0	2

This report EXCLUDES CA in-situ cervix cases, squamous and basal cell skin cases, and intraepithelial neoplasia cases

Urinary Bladder Cancer

An estimated 67,160 new cases of urinary bladder cancer will be diagnosed in the United States (50,040 men and 17,120 women) in 2007, making the disease the fourth most common cancer in men and the ninth most common neoplasm in women. During that same period, approximately 13,750 deaths (9,630 men and 4120 women) from bladder cancer are anticipated. Bladder cancers are rarely diagnosed in individuals younger than 40 years. Because the median age of diagnosis is 65 years, medical comorbidities are a frequent consideration in patient management.

Bladder Cancer Age at Diagnosis 2000 - 2005
Community Hospital Comprehensive Cancer Program
All States 1349 Hospitals (239,617 cases)vs Pennsylvania 30 Hospitals (14,661 cases)
vs DuBois Regional Medical Center (146 cases)
trendline DRMC 2007 (24)



AGE	DRMC #	DRMC %	PA #	PA%	USA#	USA%	2007 DRMC	2007 DRMC
0-39	2	1%	62	1%	1233	8%	1	4%
40-49	7	5%	254	4%	4744	40%	0	0%
50-59	14	10%	821	11%	13968	12%	1	4%
60-69	31	21%	1514	21%	26655	22%	7	29%
70-79	57	39%	2542	35%	40329	34%	8	33%
80-89	32	22%	1794	25%	29109	24%	5	21%
90+	3	21%	189	26%	3481	29%	2	9%
TOTAL	146	100%	7176	100%	119519	100%	24	100%

The clinical spectrum of bladder cancer can be divided into 3 categories that differ in prognosis, management, and therapeutic aims. The first category consists of noninvasive tumor, for which treatment is directed at reducing recurrences and preventing progression to a more advanced stage. The second group encompasses the invasive lesions, and the goal of therapy is to determine if the bladder should be removed or preserved without compromising survival, and to determine if the primary lesion can be managed independently or if patients are at high risk for distant spread requiring systemic approaches to improve the likelihood of cure. The critical concern of therapy for the third group consisting of metastatic lesions, is how to prolong life. Numerous agents with different mechanisms of action have antitumor effects in this disease. The issue has become how to use these agents to achieve the best possible outcome.

Urinary Bladder Cancer Continued

Histology

More than 90% of urothelial tumors originate in the bladder, 8% in the renal pelvis, and the remaining 2% originate in the ureter and urethra. Urothelial (transitional cell) carcinomas, the most common histologic subtype in the United States, may develop anywhere transitional epithelium is present, from the renal pelvis to the ureter, bladder, and proximal two thirds of the urethra.

The systemic chemotherapy regimens used to treat urothelial carcinomas (transitional cell tumors) are generally ineffective for tumors with pure non-urothelial (non-transitional cell histology, such as adenocarcinoma or squamous carcinoma. In some cases with a mixed histology, only the non-urothelial (non-transitional cell) component remains after systemic treatment.

Clinical Presentation and Workup

The most common presenting symptom in patients with bladder cancer is microscopic hematuria, although urinary frequency from irritation or a reduced bladder capacity can also develop. Patients presenting with these symptoms should be evaluated with cystoscopy to determine if a lesion is present. If one is documented, the patient should be scheduled for a transurethral resection of the bladder tumor (TURBT) to confirm the diagnosis and determine the extent of disease within the bladder.

If the cystoscopic appearance of the tumor is solid (sessile), high grade, or suggests invasion into muscle, a computed tomographic (CT) scan of the abdomen and pelvis is recommended before the TURBT. Because the results of a CT scan rarely alter the management of tumors with a purely papillary appearance or cases in which only the mucosa appears abnormal, suggesting the carcinoma in situ (CIS), a CT scan is not recommended in these situations. Additional workup for all patients should include evaluation of the upper tracts with an intravenous pyelogram (IVP), retrograde pyelogram, CT urography, renal ultrasound, or MRI urogram, and urine cytology. Additional diagnostic test, such as a bone scan, should be performed if elevated levels of alkaline phosphatase are seen in the blood. Treatment decisions are then based on disease extent within the 3 general categories: noninvasive, invasive, or metastatic.

Management of bladder cancer is based on the pathologic findings of the biopsy specimen, with attention to histology, grade, and depth of invasion. These factors are used to estimate the probability of recurrence and progression to a more advanced stage.

Pathology and Natural History

Approximately 70% of newly detected cases are exophytic papillary tumors confined largely to the mucosa (Ta) (70%) or, less often, to the submucosa (T1) (30%). These tumors tend to be friable and have a high propensity for bleeding. Their natural history is characterized by a tendency to recur in the same portion or another part of the bladder overtime, and these recurrences can be either the same stage as the initial tumor or at a more advanced stage.

Papillary tumors confined to the mucosa or submucosa are generally managed endoscopically with complete resection. Progression to a more advanced stage may result in local symptoms or, less commonly, symptoms related to metastatic disease. An estimated 10% to 70% of patients with a tumor confined to the mucosa will experience a recurrence or a new occurrence of urothelial (transitional cell) carcinoma within 5 years. These probabilities of progression vary as a function of the initial stage and grade. Refining these estimates for individual patients is an area of active research.

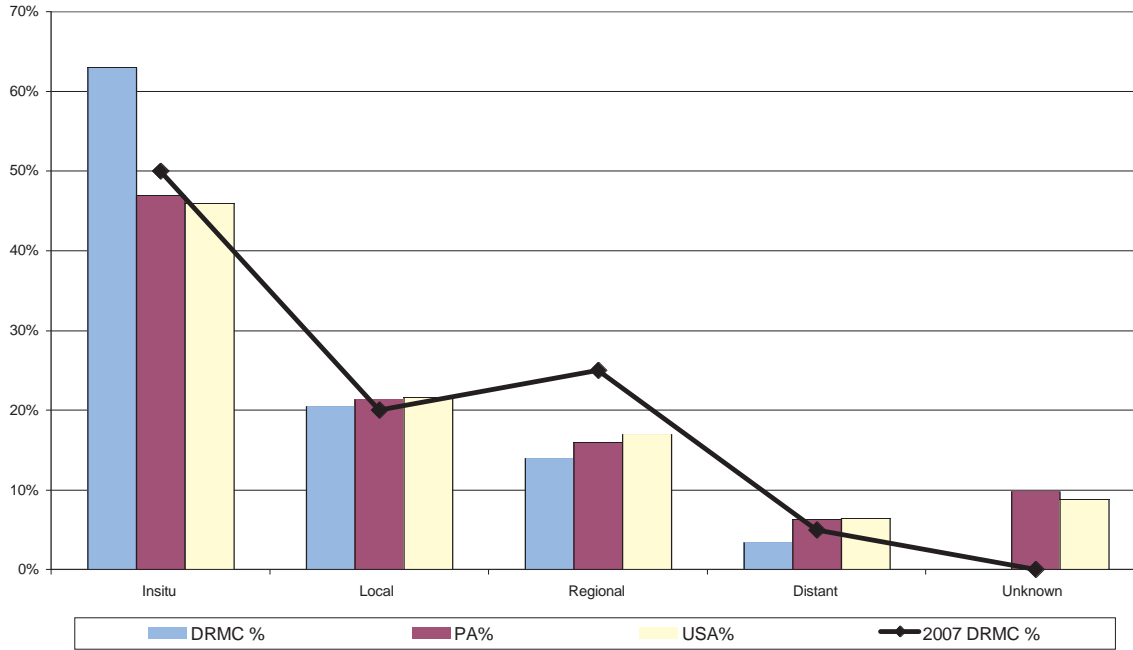
Staging and Grading

The most commonly used staging system is the tumor, node, metastatic (TNM) system. Bladder carcinomas are graded as differentiated (G1), moderately differentiated (G2), or poorly differentiated or undifferentiated (G3-4). However, determining grade has a greater impact on the management of noninvasive tumors because most muscle-invasion tumors are G3.

Urinary Bladder Cancer Continued

A frequency report follows for all cases analytical and non-analytical abstracted to the cancer registry in 2005. The registry accessioned 606 cases, 552 (91%) were newly diagnosed and/or treated cancer patients, while 54 (9%) were patients with recurrent disease. Primary site, class, sex and stage at

Bladder Cancer Stage at Diagnosis 2000 - 2005
Community Hospital Comprehensive Cancer Program
 All States 1349 Hospitals (239,617 cases)
 vs Pennsylvania 30 Hospitals (14,661 cases)
 vs DuBois Regional Medical Center (146 cases) trendline DRMC 2007 (24 cases)



diagnosis give the distribution of cases.

	DRMC #	DRMC %	PA #	PA %	USA #	USA %	2007 DRMC	2007 DRMC %
Insitu	92	63%	6888	47%	110191	46%	12	50%
Local	30	21%	3129	21%	51715	22%	5	20%
Regional	19	13%	2285	16%	41084	17%	6	25%
Distant	5	3%	924	6%	15499	6%	1	5%
Unknown	0	0%	1435	10%	21128	9%	0	0%

Urinary Bladder Cancer Continued

Treatment of non-muscle-invasive tumors are divided into noninvasive papillomas or carcinomas (Ta), those invading the lamina propria (T1), and CIS. In some cases, a papillary or T1 lesion will be documented as having an associated in situ component (TIS). Standard treatment in these cases is repeat transurethral resection. However, depending on the depth of invasion and grade, intravesical therapy may be recommended.

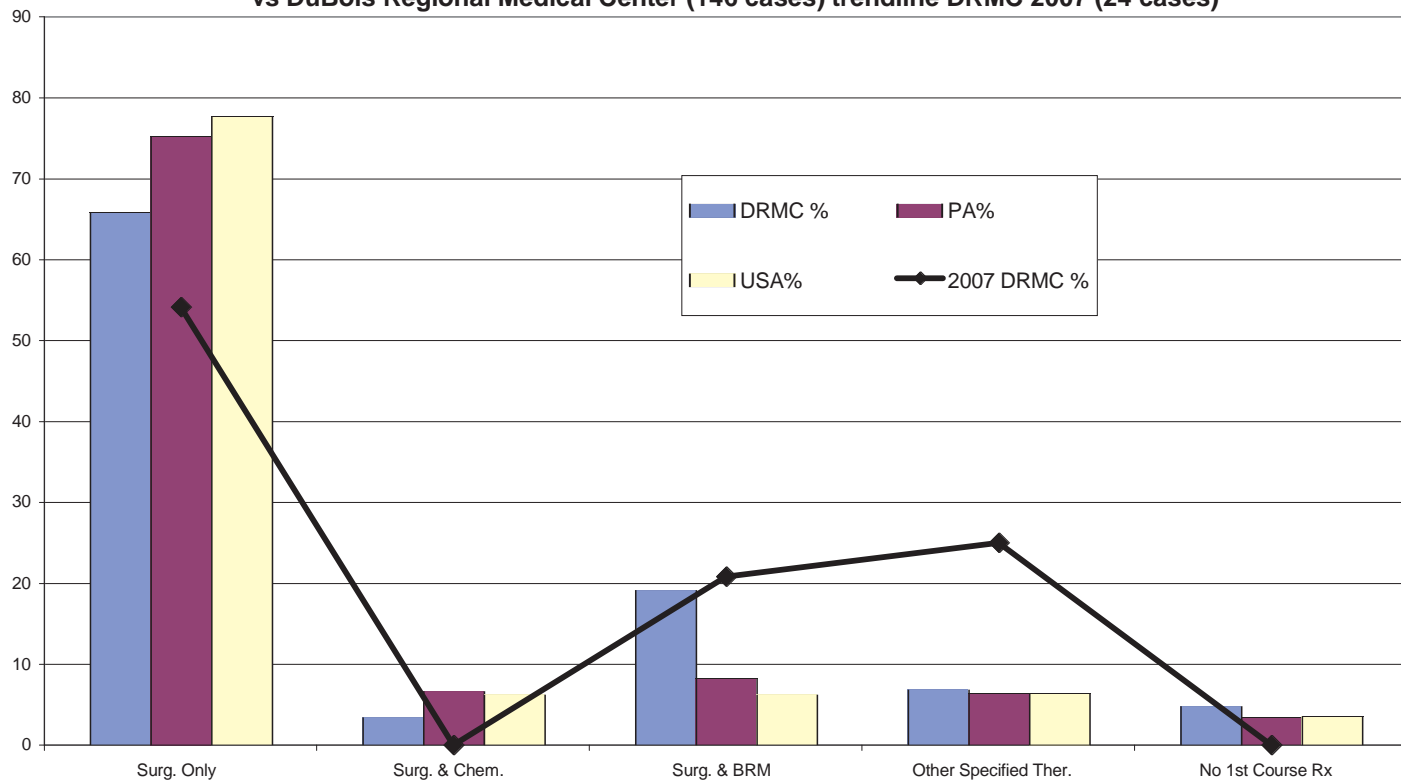
Intravesical therapy is used in 2 general settings: as prophylactic or adjuvant therapy after complete endoscopic resection or, rarely, as therapy with the goal of eradicating residual disease that could not be completely resected.

Management of the different histologic subtypes or different grades is outlined below:

Histologic Subtype	Management
Papilloma/Ta. G1, or G2 lesions	Transurethral resection without intravesical therapy; close followup
Ta, G3 lesions	Transurethral resection with intravesical bacillus Calmette-Guerin (BCG), or mitomycin C (MMC); close followup
Tis lesions	Complete endoscopic resection followed by intravesical therapy with BCG or mitomycin; close followup
T1 lesion low risk G1, G2, or solitary	Transurethral resection - observation or intravesical therapy with BCG or MMC
High risk G3 or multifocal	Transurethral resection – with intravesical therapy with BCG or MMC, or radical cystectomy
T2a, T2b lesions	Surgical treatment with radical cystectomy with the consideration of neoadjuvant chemotherapy
T3a, T3b lesions	Radical cystectomy with neoadjuvant chemotherapy
T4a, T4b lesions	Chemotherapy alone or chemotherapy with radiotherapy followed by cystoscopy and CT scan. If the tumor responds , options include surgery or consolidation chemotherapy with radiotherapy or a new chemotherapy regimen.
Unresectable Metastatic disease	Systemic therapy or radiotherapy.

Urinary Bladder Cancer Continued

Bladder Cancer Treatment Summary at Diagnosis 2000 - 2005
Community Hospital Comprehensive Cancer Program
All States 1349 Hospitals (239,617 cases)
vs Pennsylvania 30 Hospitals (14,661 cases)
vs DuBois Regional Medical Center (146 cases) trendline DRMC 2007 (24 cases)

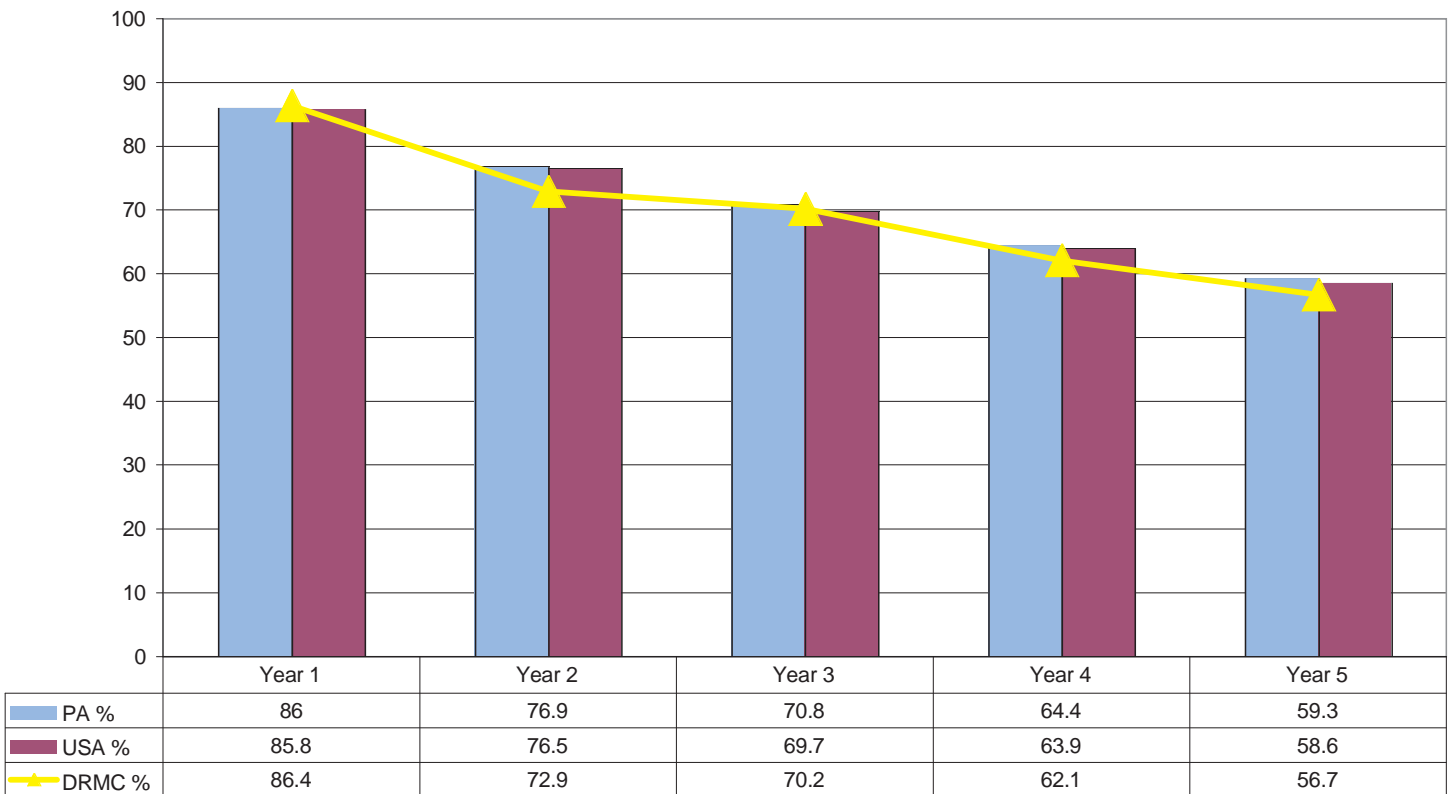


	DRMC #	DRMC %	PA #	PA%	USA#	USA%	2007 DRMC	2007 DRMC %
Surg. Only	96	65.75	5,404	75.31	92,837	77.68	13	54.17
Surg. & Chem.	5	3.42	478	6.66	7,433	6.22	0	0
Surg. & BRM	28	19.18	593	8.26	7,472	6.25	5	20.83
Other Specified Ther.	10	6.85	459	6.4	7,553	6.31	6	25.01
No 1st Course Rx	7	4.79	242	3.37	4,224	3.53	0	0
Total	146	100	7,176	100	119,519	100	24	100

Urinary Bladder Cancer Continued

Risk factors: Smoking is the most important risk factor for bladder cancer. Smokers have twice the risk of bladder cancer than that of nonsmokers. Smoking is estimated to cause about 48% of bladder cancer deaths among men and 28% among women. Workers in the dye, rubber, or leather industries and communities with high levels of arsenic in drinking water also have increased risk. Drinking more fluids and eating more vegetables may lower the risk of bladder cancer.

Urinary Bladder Cancer Five Year Survival for cases diagnosed in 1998 and 1999
Community Hospital Comprehensive Cancer Program
All states 526 hospitals (35579 cases) vs Pennsylvania 30 hospitals (1988 cases)
vs Dubois Regional Medical Center (37 cases)



The overall five year observed survival for urinary bladder cancer is DRMC 56.7% vs PA 59.3% vs USA 58.6%. There is no statistical significance in the five year survival rates for bladder cancer.

Glossary of Cancer Terms

Accessioned: Entered into the Tumor Registry by the year in which the patient was first seen at DuBois Regional Medical Center.

Analytic Cases: Cases which were first diagnosed and/or received all or part of their first course of treatment at DRMC.

Benign Tumor: An abnormal growth that is not cancer and does not spread to others areas of the body.

Biopsy: The surgical removal of a small piece of tissue for microscopic examination to determine if cancer cells are present.

Cancer: A general term for a large group of diseases (more than 100), all characterized by uncontrolled growth and spread of abnormal cells. Cancer cells are abnormal and eventually form tumors that invade and destroy surrounding tissue; they may even spread via the lymph system or bloodstream to distant areas of the body.

Chemotherapy: Treatment of disease with drugs.

Combined Modality: Two or more types of treatment-surgery, radiation therapy, chemotherapy, or immunotherapy-used alternatively or together for maximum effectiveness.

Distant Spread: Disease has spread beyond the immediate organs or tissues by direct extension and/or has either developed secondary or metastatic tumor or metastasized to distant lymph nodes or has been determined to be systemic in origin.

First Course of Therapy: The initial cancer-directed treatment or series of treatments, usually initiated within four months of diagnosis.

Follow-up: Lifetime monitoring of cancer patients for evaluation of patient care, treatment, survival, and early detection of recurrence of disease.

Hospice: A concept of psychosocial and supportive care to meet the special needs of patients and their families during the terminal stages of illness.

In Situ: In place; localized and confined to one area. A very early stage of cancer. **Incidence:** the extent to which disease occurs in the population. Cancer incidence is the established number of new cases of cancer diagnosed each year.

Localized Cancer: A cancer confined to its site of origin.

Malignant Tumor: A mass of cancer cells. A malignant tumor may invade surrounding tissues or spread to distant areas of the body.

Metastasis: The spread of cancer cells to distant areas of the body by way of the lymph system or blood stream.

Non-Analytic: Cases diagnosed elsewhere and receiving all of their first course of treatment elsewhere or diagnosed at DRMC prior to our reference date of January 1, 1989. Also, cases first diagnosed at autopsy with unsuspected malignancy.

Primary Site: The anatomical location within the human body considered the point of origin for the malignancy.

Radiotherapy: Treatment of cancer with high-energy radiation. Radiation therapy maybe used to reduce the size of a cancer before surgery, or to destroy any remaining cancer cells after surgery. Radiotherapy can be helpful in shrinking recurrent cancer to relieve symptoms.

Regional Involvement: The spread of cancer from its original site to nearby surrounding areas. Regional cancers are confined to one location in the body.

Screening: The search for disease in individuals without symptoms.

Staging: An evaluation of the extent of disease. A classification based on stage at diagnosis helps determine appropriate treatment and prognosis.

ACCREDITATIONS

American College of Surgeons
Commission on Cancer
American College of Radiology
Joint Commission on Accreditation of
Healthcare Organizations

AFFILIATIONS

Clinical Trials Support Unit,
National Cancer Institute

REFERENCES

Standards of the Commission on Cancer,
American College of Surgeons Commission
on Cancer Chicago, 2004

AJCC Cancer Staging Manual, Sixth
Edition, American Joint Committee On
Cancer, Executive Office, 55 East Erie
Street, Chicago, Illinois 60611

Cancer Facts & Figures 2007, American
Cancer Society, Inc. Atlanta Georgia, 2007

NCCN Practice Guidelines in Oncology
Bladder Cancer, 2008 National
Comprehensive Cancer Network, Inc.



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