


MOSES CONE  
HEALTH SYSTEM  
REGIONAL  
CANCER CENTER 

2002 ANNUAL REPORT  
WITH STATISTICAL DATA FROM 2001

# CANCER COMMITTEE.

The Cancer Committee is a multidisciplinary group comprised of physicians and dentists from various specialties, as well as representatives from the departments of Nursing, Care Management, IV Therapy, Rehabilitation Services, Hospice and Palliative Care of Greensboro and Administration. The committee guides the identification and implementation of cancer-related policies and programs at Moses Cone Regional Cancer Center. The committee meets bimonthly to accomplish these activities.

The Oncology Executive Committee, comprised of physician leaders and senior administrators, provides strategic and clinical direction for the Moses Cone Regional Cancer Center. It meets every two months to review progress and set new priorities.

## CANCER COMMITTEE

Gustav Magrinat, MD – Chairman, Cancer Committee  
Patrick Burney, MD – Cardiac Thoracic Surgeon  
Gilda Cardenosa, MD – Radiology  
Daniel Clarke-Pearson, MD – Gynecologic Oncology (ex-officio)  
Steven Fore, MD – Gynecologic Oncology  
Peter Mark Gallerani, MD – Radiology  
William "Randy" Harris, MD – Family Practice  
Sera Jacob, MD – Otorhinolaryngology  
Houston Kimbrough Jr., MD – Urology  
James Kinard, MD – Radiation Oncology  
Ronald Kulinski, DDS – Dentistry  
Lennis Livesay, MD – Medical Oncology  
John Lusk, MD – Medical Oncology (ex-officio)  
Matthew Manning, MD – Radiation Oncology  
Matthew Martin, MD – Surgeon  
David Newman, MD – Surgeon  
C. Stewart Rogers, MD – Internal Medicine  
Jefry Rosen, MD – Otorhinolaryngology  
Peter Rubin, MD – Medical Oncology  
Jo Ann Shaw, MD – Pathology  
G. Brad Sherrill, MD – Medical Oncology  
Candace Smith, MD – Family Practice  
Justin Wu, MD – Radiation Oncology  
Peter Young, MD – Surgeon

Renee Augiulli – Case Manager, Care Management  
Pam Barrett – CEO, Hospice and Palliative Care of Greensboro

Lew Iacovelli – Pharmacist, Medical Oncology Pharmacy  
Kelly Johnson – Supervisor, Oncology Outreach  
Tom Dorle – Vice President, Marketing  
Terry Moore-Painter – Chaplain, Pastoral Care Services  
Barbara Neff – Clinical Nutritionist, Dietary  
Christine Poll – Educator, Oncology Outreach  
Vivian Sheidler – Manager, Oncology Research  
Steven Shore – Vice President, Oncology Services  
Kate Sullivan – Cancer Control Manager, American Cancer Society  
Laura Thomas – Director, Inpatient Rehabilitation  
Chuck Wilcox – Director, Hematology/Medical Oncology  
Youland Williams – Director, 6700/Hospice  
Anita Williamson – Administrative Director, Radiation Oncology  
Loretta Wise – Service Director, Wesley Long Community Hospital  
Deann Gilliam – Registrar, Cancer Registry

## ONCOLOGY EXECUTIVE COMMITTEE

Steven Shore – Vice President, Oncology Services  
David C. Clark Jr., MD – Radiologist  
Daniel Clarke-Pearson, MD – Gynecological Oncologist  
James Granfortuna, MD – Medical Oncologist  
Gustav Magrinat, MD – Hematology/Medical Oncology  
Matthew Martin, MD – Surgeon  
Robert Murray, MD – Radiation Oncologist  
Jo Ann Shaw, MD – Pathologist  
Peter Young, MD – Surgeon  
James Whiting – Executive Vice President, Moses Cone Health System

# CANCER COMMITTEE CHAIRMAN LETTER.

**T**he past year has seen the long-awaited move of medical, radiation and gynecologic oncology to the new Regional Cancer Center adjacent to Wesley Long Community Hospital. This is a dedicated building housing not only the nine medical oncologists, five radiation oncologists and part of the gynecologic oncology program, but also supportive services, such as the Cancer Registry, clinical research and community outreach. As part of the move, Radiation Oncology has been upgraded with state-of-the-art equipment, which will allow us to serve our patients more effectively – and with few side effects. The chemotherapy area is not only much larger but also open to outside light. The patients may choose to sit in a group, separately in a single patient cubicle (with a view of the garden below), privately in a closed room or outside on the second-floor terrace.

The number of new patients continues to increase and now exceeds 2,250. Many patients are choosing to enroll in research protocols available for a variety of cancers, and the Protocol Office is being upgraded to offer new studies that provide more choices after standard treatment. We are in the final process of recruiting for a Medical Director, who will accelerate this process. The goal is to develop a clinical research base second to none in North Carolina. We also are developing multidisciplinary subspecialty clinics to facilitate the care of particularly complex cases.

The outreach clinic in Eden has been strengthened by the recruitment of Dr. Kenneth Karb. The cooperative ventures at Annie Penn Hospital (with Dr. Eric Neijstrom) and Randolph Hospital in Asheboro (with Dr. Chris McCarty) also continue to grow. In the past year, 248 new patients were seen at Annie Penn Hospital and 311 at Randolph Hospital.

This is an exciting time for all of us who are dedicated to the care of patients with cancer. Advances in molecular biology, immunology and genetics are reaching the clinic, and a revolution in cancer therapies is under way. We will continue to bring these developments to our patients in our new state-of-the-art setting, never losing sight of the non-quantifiable healing that comes from close personal support and committed care.

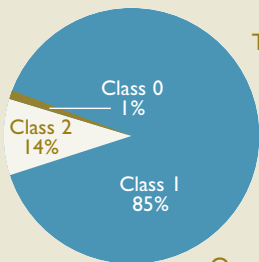
Gustav C. Magrinat, MD  
Chairman, Cancer Committee

# 2001 STATISTICAL REVIEW.

The Cancer Registry maintains a statistical database for malignancies diagnosed and/or treated within Moses Cone Health System. Registry staff enter all reportable tumors and conditions into a permanent data repository. With this database system, the Registry can provide sophisticated statistical analyses which allow medical and allied health professionals to track trends in incidence and treatment. The Registry also oversees the Quality Management program for the cancer program. In addition, registry staff responded to 32 requests for data.

After 12 years of data collection, the oncology database contains more than 21,000 cases, including 2,414 cases added in 2001. Of this annual total, 2,260 were newly diagnosed incidences of cancer (analytic), and 154 were recurrences (non-analytic cases). All registry cases are reported quarterly to the North Carolina Central Cancer Registry, and all analytic cases are reported yearly to the National Cancer Database.

Of the analytic cases, 85 percent were diagnosed at Moses Cone Health System, and patients received all or part of their first course of treatment here (Class I). Fourteen percent were diagnosed elsewhere and received all or part of their first course of treatment here. The remaining one percent were diagnosed at System facilities and received the first course of treatment elsewhere (Class 0). Beginning with cases diagnosed in January 2001, cancer cases at Annie Penn Hospital were added to this database; they totaled 140 newly diagnosed cases.



The age distribution of analytic cancers shows a rising incidence as individuals enter their 50s, 60s and 70s. We had about the same percentage of patients in their 80s as we did patients in their 40s. Stage II malignancies were slightly more prevalent than Stage I, which comprised almost a quarter of new diagnoses. Stage III and IV, representing regional and distant disease, were 12 percent and 13 percent respectively. Our goal remains to reduce the number of late-stage disease at diagnosis, although this is more difficult with a large percentage of lung cases and other cancers that are often late-stage at diagnosis.

Once a patient has been entered into the cancer database, annual follow-up information is obtained. This includes: (1) information on any recurrences and any additional treatments received, (2) current cancer status, (3) vital status and cause-of-death information on deceased patients whenever possible, (4) new names and addresses, (5) new or additional physicians, and (6) the last date of patient contact. This information is collected by medical record reviews, follow-up letters to physicians/patients/next-of-kin, and review of death and other indices.

Follow-up information is added to each patient's abstract and is used to evaluate the effectiveness of various treatments and survival rates for the many types and stages of cancer. The American College of Surgeons Commission on Cancer required that an accredited facility maintain at least a 90 percent follow-up rate. At the completion of 2001 reporting, the follow-up rate at Moses Cone Health System was 93.3 percent.

# 2001 STATISTICAL REVIEW.

(CONTINUED)

## AJCC SITE DISTRIBUTION

	TOTAL NEW CASES	WHITE	BLACK	OTHER	MALE	FEMALE	STAGE 0	STAGE I	STAGE II	STAGE III	STAGE IV	UNK	N/A
LIP	3	3	0	0	1	2	2	1	0	0	0	0	0
TONGUE	13	10	3	0	12	1	1	1	4	0	5	2	0
GUM	4	4	0	0	3	1	0	0	1	1	2	0	0
FLOOR OF MOUTH	4	4	0	0	3	1	0	1	1	1	1	0	0
PALATE	4	2	2	0	3	1	0	2	0	1	1	0	0
OTHER/UNSPECIFIED PARTS OF MOUTH	5	4	1	0	4	1	0	1	0	0	3	1	0
PAROTID GLAND/OTHER SALIVARY GLANDS	6	4	1	1	2	4	0	1	2	1	1	1	0
TONSIL	3	2	1	0	3	0	0	0	0	0	3	0	0
OROPHARYNX	4	2	1	1	4	0	0	1	0	1	2	0	0
NASOPHARYNX	3	3	0	0	1	2	0	0	1	0	1	0	1
PYRIFORM SINUS	1	1	0	0	1	0	0	0	0	1	0	0	0
HYPOPHARYNX	2	2	0	0	1	1	0	0	0	0	1	1	0
OTHER ORAL CAVITY	2	1	1	0	2	0	0	0	1	0	1	0	0
ESOPHAGUS	24	19	5	0	16	8	0	3	10	2	4	5	0
STOMACH	15	9	6	0	9	6	0	1	2	3	4	5	0
SMALL INTESTINE	3	1	2	0	2	1	0	0	2	1	0	0	0
COLON/RECTUM	224	164	53	7	106	118	19	45	57	54	39	10	6
ANUS & ANAL CANAL	10	7	3	0	4	6	1	2	5	1	1	0	0
LIVER & BILE DUCTS	13	7	4	2	9	4	0	0	0	2	7	4	0
GALL BLADDER/OTHER BILIARY TRACT	6	5	1	0	3	3	0	1	0	2	1	2	0
PANCREAS	37	28	9	0	17	20	0	9	1	2	25	0	0
NASAL CAVITY & MIDDLE EAR	2	1	0	1	0	2	0	0	0	0	0	0	2
LARYNX	24	15	9	0	19	5	3	6	2	6	5	2	0
BRONCHUS & LUNG	316	259	52	5	176	140	2	86	30	85	95	14	4
THYMUS	1	1	0	0	0	1	0	0	0	0	0	0	1
HEART MEDIASTINUM PLEURA	3	3	0	0	3	0	0	0	0	2	0	0	1
BONES JOINTS & ARTICULAR CARTILAGE	3	3	0	0	2	1	0	0	1	0	1	1	0

# 2001 STATISTICAL REVIEW.

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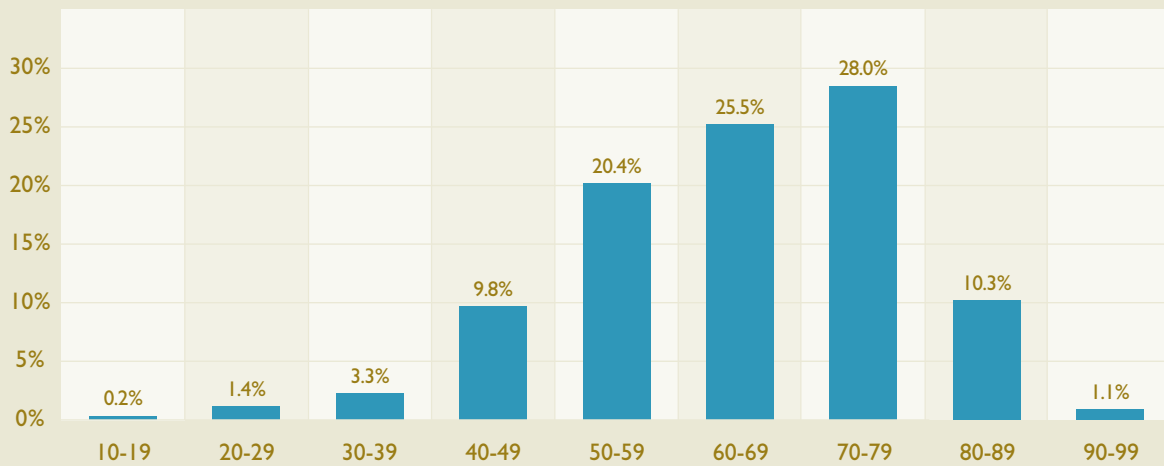
## AJCC SITE DISTRIBUTION (CONTINUED)

	TOTAL NEW CASES	WHITE	BLACK	OTHER	MALE	FEMALE	STAGE 0	STAGE I	STAGE II	STAGE III	STAGE IV	UNK	N/A
BLOOD & BONE MARROW	82	49	19	14	52	30	0	0	0	0	1	1	80
MELANOMA	39	39	0	0	26	13	7	11	9	9	2	1	0
RETROPERITONEUM & PERITONEUM	5	3	2	0	1	4	0	0	0	0	0	2	3
CONNECTIVE SUBCUTANEOUS OTHER SOFT TISSUE	6	6	0	0	3	3	0	1	2	0	1	1	1
BREAST	494	404	84	6	6	488	74	203	171	30	15	1	0
VULVA	18	16	2	0	0	18	14	1	1	1	0	1	0
VAGINA	4	3	1	0	0	4	1	2	1	0	0	0	0
CERVIX UTERI	17	11	5	1	0	17	0	6	2	2	4	3	0
CORPUS UTERI	65	55	8	2	0	65	0	48	1	7	5	3	1
OVARY	28	25	1	2	0	28	0	7	2	8	8	2	1
OTHER FEMALE GENITAL ORGANS	2	1	1	0	0	2	0	0	0	0	1	1	0
PENIS	3	2	1	0	3	0	1	1	0	1	0	0	0
PROSTATE GLAND	369	290	67	12	369	0	0	1	317	36	15	0	0
TESTIS	14	12	2	0	14	0	0	9	2	1	0	2	0
OTHER & UNSPECIFIED MALE GENITAL ORGANS	2	2	0	0	2	0	0	0	0	0	0	0	2
KIDNEY	61	50	9	2	31	30	0	32	6	7	8	8	0
RENAL PELVIS/URETER	8	5	2	1	6	2	2	2	0	1	3	0	0
URINARY BLADDER	92	84	6	2	72	20	57	11	12	2	5	5	0
ORBIT, NOS and OVERLAPPING LESION	2	2	0	0	2	0	0	0	0	1	0	0	1
BRAIN/OTHER NERVOUS SYSTEM	21	17	2	2	10	11	0	0	0	0	0	1	20
THYROID GLAND	39	31	6	2	8	31	0	18	9	5	2	5	0
ADRENAL GLAND	1	0	1	0	0	1	0	0	0	0	0	0	1
OTHER ILL DEFINED SITES	9	9	0	0	3	6	0	0	0	0	0	2	7
LYMPH NODES	102	80	20	2	54	48	0	34	20	15	26	3	4
UNK PRIMARY	42	33	9	0	18	24	0	0	0	0	1	0	41
OVERALL TOTALS	2,260	1,793	402	65	1,080	1,174	184	548	675	276	300	90	177
CASES EXCLUDED FROM ANALYSIS	10												

# 2001 STATISTICAL REVIEW.

(CONTINUED)

2001 MOSES CONE HEALTH SYSTEM ANALYTIC CASES



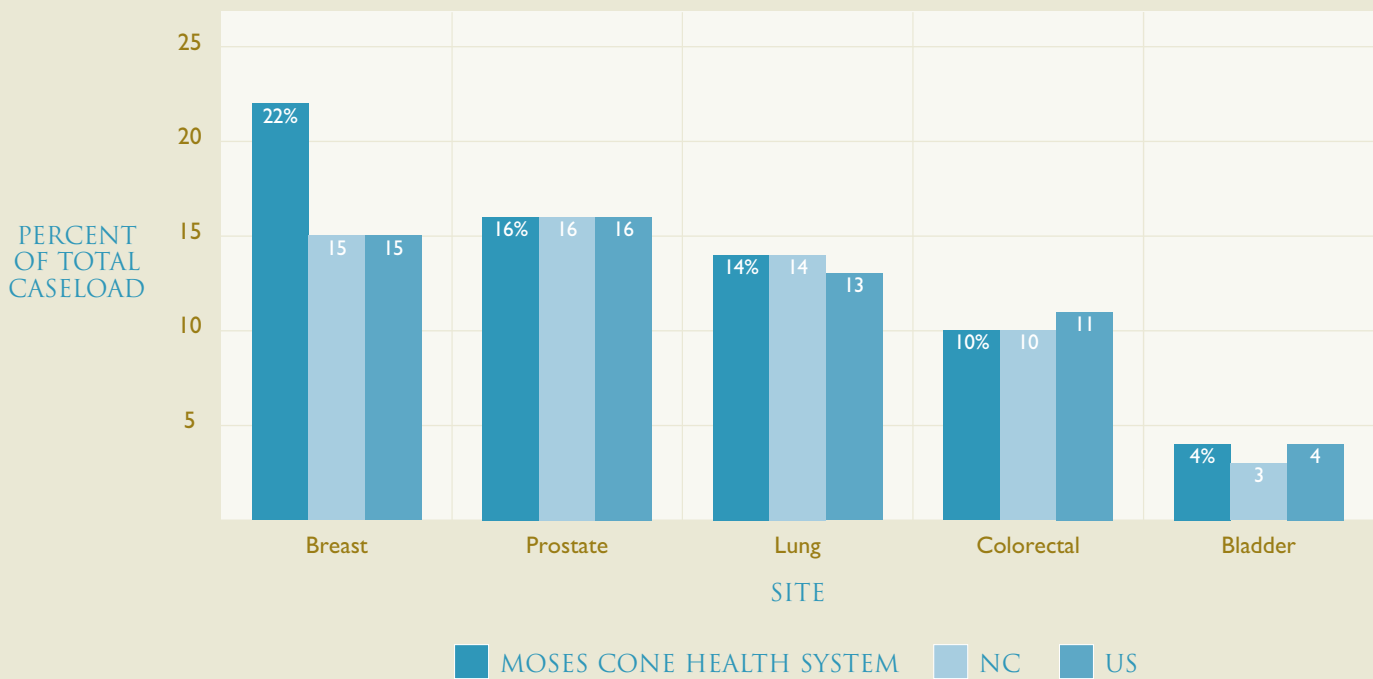
AGE DISTRIBUTION AT DIAGNOSIS

Total cases = 2,260

# 2001 STATISTICAL REVIEW.

(CONTINUED)

MOSES CONE HEALTH SYSTEM 2001 TOP 5 SITE COMPARISON  
(NC & US STATISTICS FROM ACS FACTS & FIGURES 2001 ESTIMATES)



Note: Top five sites comprise 66% of total analytic caseload

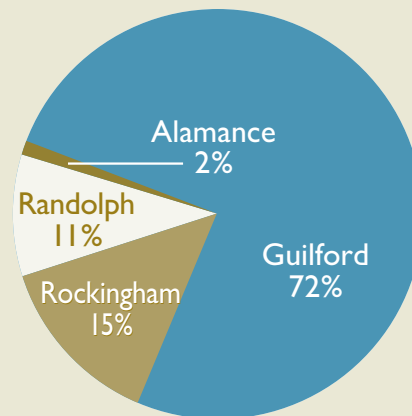
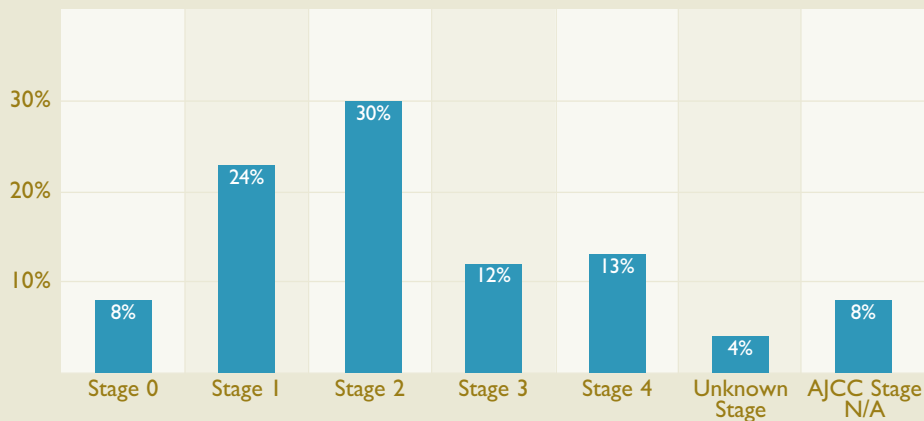
# 2001 STATISTICAL REVIEW.

(CONTINUED)

County of residence at Diagnosis  
Cases Diagnosed in 2001

COUNTY	TOTAL
GUILFORD	1,534
ROCKINGHAM	307
RANDOLPH	231
ALAMANCE	37
CHATHAM	14
CASWELL	13
DAVIDSON	12
FORSYTH	9
MOORE	8
STOKES	8
MONTGOMERY	7
SURRY	4
CUMBERLAND	3
WATAUGA	3
WILSON	3
ALLEGHANY	2
ASHE	2
AVERY	2
BUNCOMBE	2
ORANGE	2
WILKES	2
BEAUFORT	1
CABARRUS	1
CALDWELL	1
CARTERET	1
CATAWBA	1
GRANVILLE	1
GREENE	1
HARNETT	1
IREDELL	1
LEE	1
NASH	1
NEW HANOVER	1
RICHMOND	1
WAKE	1
YADKIN	1
VIRGINIA	30
OUT OF STATE	12
TOTAL CASES	2,260

2001 ANALYTIC CASE AJCC TNM STAGE AT DIAGNOSIS



# PROSTATE SITE STUDY AND PATIENT CARE EVALUATION WITH BRACHYTHERAPY REVIEW.

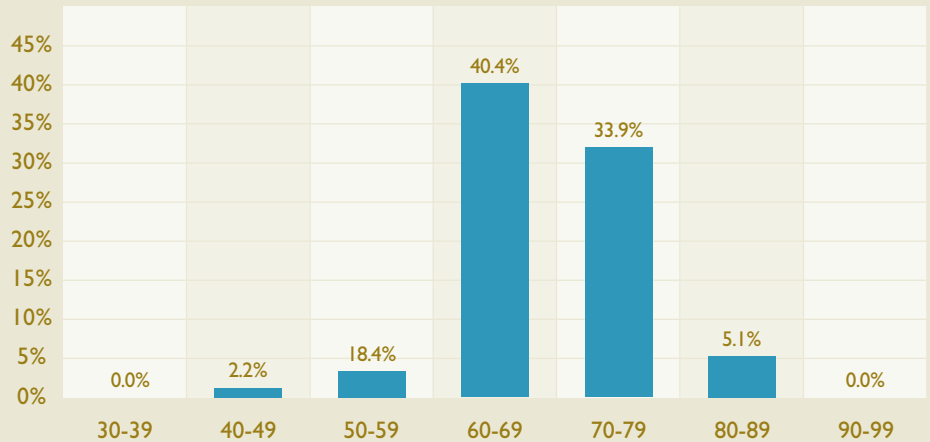
**N**early 15 percent of all cancer expected in the United States in 2002 was prostate cancer; certainly it is the most common cancer for men and the second most common cause of cancer death among men. In the Moses Cone Health System, prostate cancer at 16 percent of the total was consistent with national statistics. It was second only to breast cancer (at 22 percent) as the most common malignancy treated at Moses Cone Health System in 2001. Of course many factors affect the incidence of various cancers treated at a specific institution. A total of 395 prostate cancer patients were diagnosed and/or treated here. Of those, 369 (93 percent) were new cancers (analytic cases). African-American men have the highest rate of prostate cancer in the world, but they constitute only 18 percent of 2001 prostate cancer cases at Moses Cone Health System, although that rate has been higher in the past. Only one Native American patient was treated for prostate cancer, and 78 percent of Moses Cone Health System cases occurred among white males. The age distribution of Moses Cone Health System prostate cancer patients shows a standard profile: more than 40 percent of patients in their 60s and 34 percent in their 70s. The average and median age at diagnosis was 67. It is interesting to see that 2.2 percent (eight patients) were only in their 40s.

With better diagnostic tools such as the PSA test, earlier diagnoses are common now, as our TNM stage chart demonstrates. Eighty-six percent of patients were diagnosed at Stage II, which means that a tumor may be palpable but it does not extend beyond the prostate gland itself. The tumor extended beyond the prostate itself in only 10 percent of cases, and only 4 percent of cases had distant metastases. Many factors besides the stage of the cancer affect the choice of treatment: the patient's age, his health status, his preferences and other factors. The treatment combinations chart reveals a variety of therapy patterns; however, three-quarters of 2001 cancer cases were treated by either surgery only (31.4 percent) or radiation only (44.4 percent).

The above figures were derived from the Cancer Registry database. In order to compare prior prostate cases and to look at survival, we have selected more than 1,000 cases diagnosed and treated here from 1992 to 1996. Looking at the graphs for age, stage and treatment distributions, we observe a very similar population. However, 8 percent more (26 percent) African-American patients were treated in the historical group. Looking at survival curves for Stages II and III, we see nearly identical results compared to the downward curve for Stage IV. Although the lack of cause-of-death information makes it difficult to be exact, our results appear to be consistent with the improved survival of prostate-cancer patients nationwide.

# 2001 PROSTATE SITE STUDY/PATIENT CARE EVALUATION.

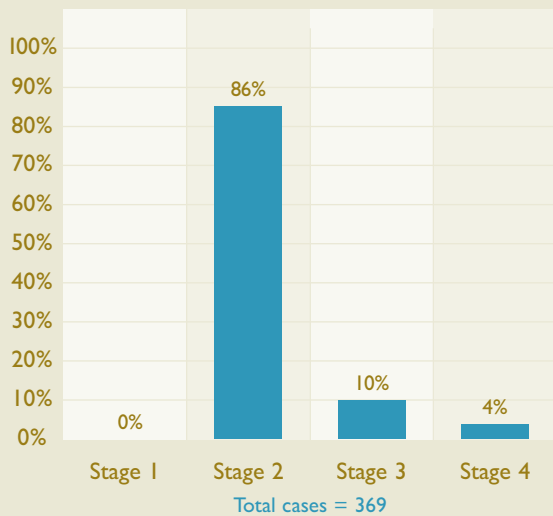
2001 ANALYTIC PROSTATE CASES



AGE DISTRIBUTION AT DIAGNOSIS

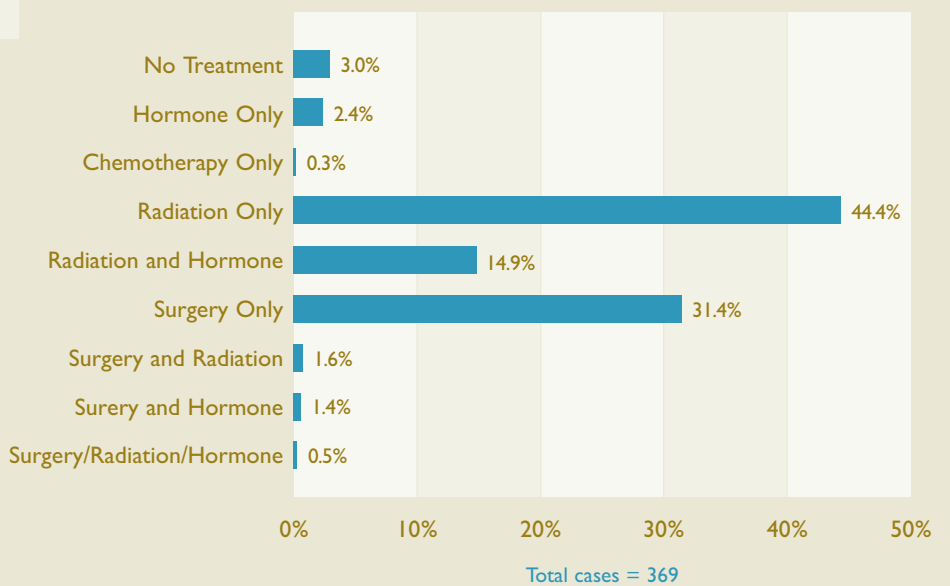
Total cases = 369

2001 PROSTATE CANCER AJCC TNM STAGE DISTRIBUTION



Total cases = 369

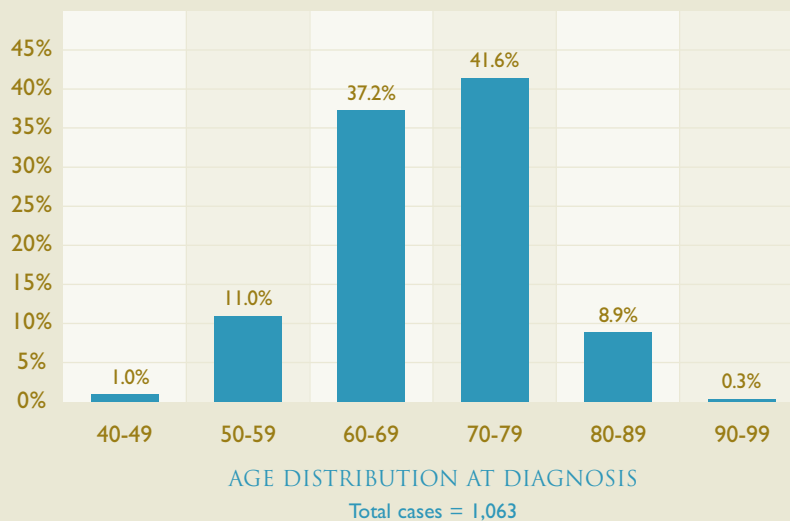
2001 ANALYTIC PROSTATE CANCER TREATMENT COMBINATIONS



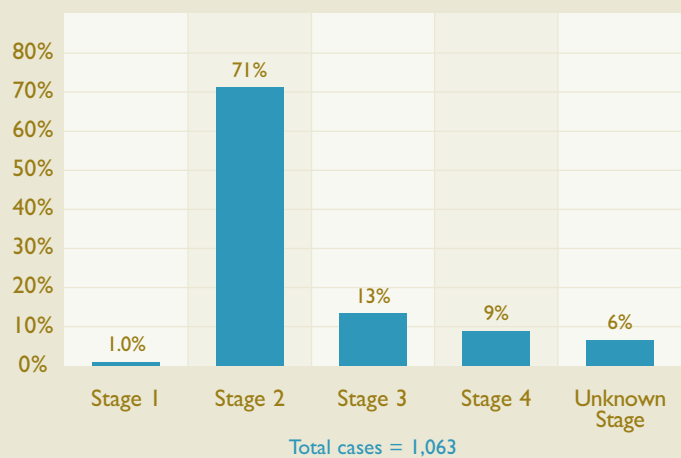
Total cases = 369

# 1992-1996 PROSTATE SITE STUDY/PATIENT CARE EVALUATION.

1992-1996 ANALYTIC PROSTATE CASES

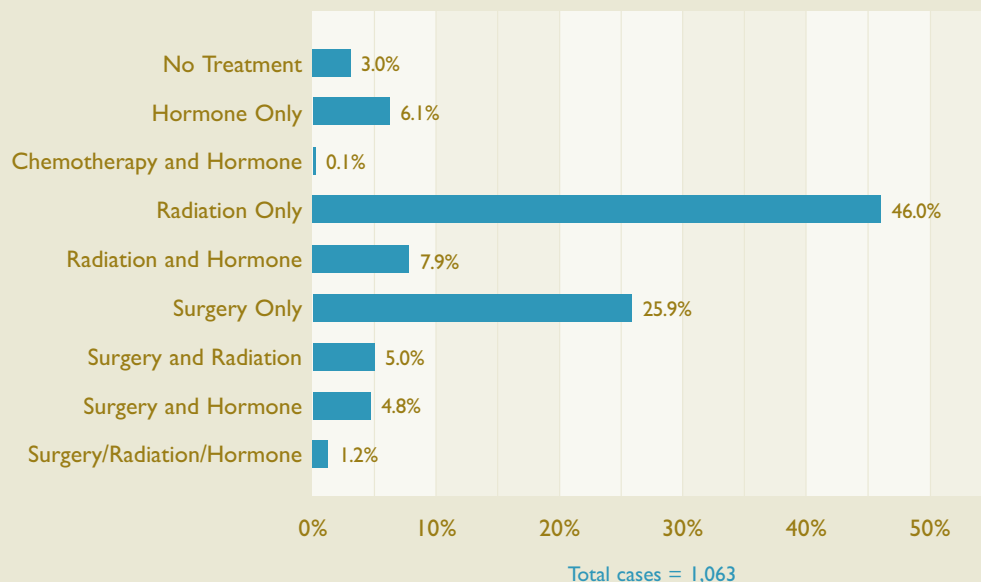


1992-1996 PROSTATE CANCER AJCC TNM  
STAGE DISTRIBUTION

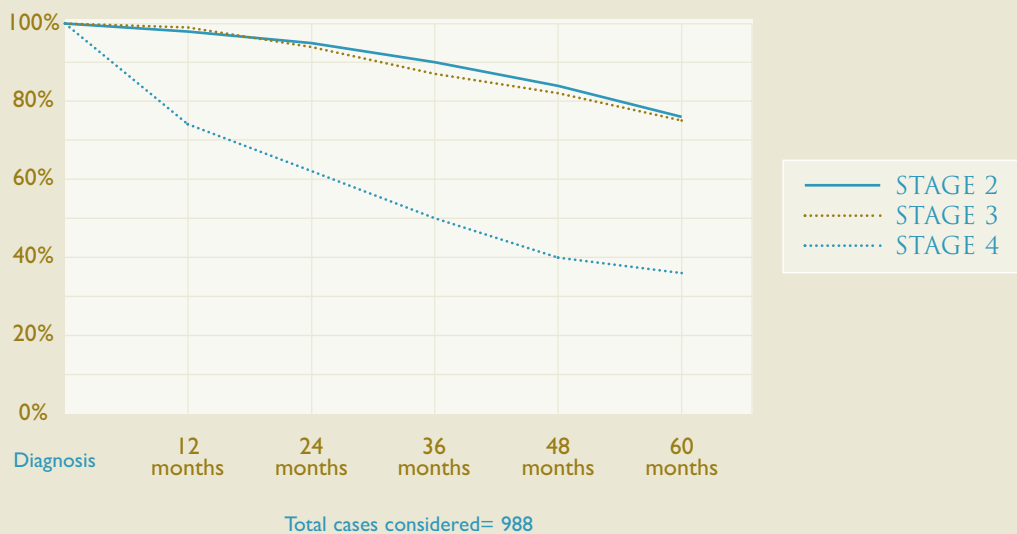


# 1992-1996 PROSTATE SITE STUDY/PATIENT CARE EVALUATION.

1992-1996 ANALYTIC PROSTATE CANCER  
TREATMENT COMBINATIONS



1992-1996 PROSTATE CANCER SURVIVAL



# PROSTATE BRACHYTHERAPY REVIEW.

This is a preliminary review of prostate cancer cases seen at Moses Cone Health System and treated with radioactive seed implant compared to some published data. The results include all cases implanted since the inception of the brachytherapy program, including those treated with a combination of external radiation or hormonal therapy. The results are reported using, as closely as possible, the ASTRO consensus definition of failure. The implantation was either Iodine-125 or Palladium-103, although during the last three years, Iodine-125 has been used in the majority of cases. That is because the availability of Rapid Strand has minimized the risk of seed embolization of the lungs, which occurs in 25 percent of our cases implanted with free seeds. The database from which these results are generated has been maintained in the Department of Radiation Oncology since the inception of the program on Feb. 14, 1993. The PSA results are a combination of reports from in-house patient follow-up, phone call follow-up to the patient and mail follow-up from the urologists. Dosimetric evaluation of the implants relative to failure and complications of treatment has not been analyzed at this time.

## GLEASON SCORE 2 - 6. PSA <10.1

GROUP	INITIAL PATIENT	PATIENT 5 YEARS	PROSTATE CONTROL 5 YEARS
Moses Cone Health System	453	25 months	87 percent
Mark Storey, MD, Anderson 1999	206	35 months	76 percent
Gregory Merrick, Wheeling Hospital 2001	76	37 months	97.7 percent
Gordon Grado Mayo Scottsdale 1998	490	26.8 months	88 percent

# COLORECTAL PATIENT CARE EVALUATION.

## FREQUENCY OF COLORECTAL CANCER IN PATIENTS OVER 50

Nationally, an estimated 130,200 new cases of colorectal cancer were diagnosed in 2001, including 93,800 cases of colon cancer and 36,400 cases of rectal cancer. At Moses Cone Health System, the total number was 212 newly diagnosed cases.

Colorectal cancers are the third most common cancers in men and women. Incidence rates declined significantly between 1992 and 1996. Research suggests that these declines may be the result of increased screening and removal of polyps, preventing their progression to invasive cancers.

Beginning at age 50, men and women should have one of the following diagnostic tests: a fecal occult blood test (FOBT) and flexible sigmoidoscopy (if normal, repeat FOBT annually and flexible sigmoidoscopy every five years); or colonoscopy (if normal, repeat every 10 years); or double-contrast barium enema (if normal, repeat every five to 10 years). Digital rectal examination should be done at the same time as the sigmoidoscopy, colonoscopy or double-contrast barium enema. These tests offer the best opportunity to detect colorectal cancer at an early stage when successful treatment is likely and to prevent some cancers by detecting them and removing polyps.

People should begin colorectal cancer screening before age 50 and/or undergo screening more often if they have a personal and/or strong family history of colorectal cancer or adenomatous polyps; a personal history of chronic inflammatory bowel disease; or if they are a member of a family with hereditary colorectal cancer syndromes.

To better determine if colorectal cancer screening had been done within a three-year consecutive period for patients diagnosed with colorectal cancer and treated at Moses Cone Health System, we analyzed data from 41 patient records from January to May 1999. As expected, the majority of the patients was over age 65. We found it very difficult to come to any conclusion, as there was a lack of screening information in the patient's inpatient record. This was not surprising because these screening exams are typically done on an outpatient basis and never become part of the patient's inpatient medical record.

### OUR RECOMMENDATIONS FOR IMPROVING THIS DOCUMENTATION ARE:

- To encourage physicians to document prior cancer screening activity in the records of patients admitted for treatment of colorectal cancer.
- To ask physicians to inquire about and report family history in the medical record. Some patients with a family history of colon cancer may be at a greater risk of developing colorectal cancer and could benefit from more intensive screening.