



Centra Health
cancer care services

ANNUAL REPORT 2002

BASED ON 2001 STATISTICS

The 2002 Annual Report on Cancer Care Services at Centra Health is presented for your review. The statistics reflect the experience of Centra Health's patient care during the year 2001. Once again, I think the statistics reflect positively on the state of cancer care in the Lynchburg community and are reflective of national norms.

The report itself carries a great deal of information of interest regarding the multifaceted aspects of cancer care that Centra Health supports. By now, I believe that everyone is familiar with the excellent breast cancer program that has evolved over the past 10 years under the influence of a number of medical staff leaders and with the support of Centra Health. Our breast cancer program, which includes an outstanding weekly Breast Cancer Conference, has been well supported by all members of the medical staff and is reflected by the respect of the community.

Many other aspects of cancer care are also presented in our annual report. Direct patient care services, such as the nursing care given on the oncology unit on Mundy 5 at Virginia Baptist Hospital, support services given through physical therapy, dietary, social services and chaplaincy of course are essential components of the cancer patient's care.

As we move forward with plans to take on the new challenges of cancer care in the 21st century, Centra Health looks forward to exploring with the medical community and the community of Central Virginia at large, new ways of detecting, preventing and controlling cancer diseases. Centra Health has demonstrated a deep commitment to the fight against cancer and it has been manifested in many ways and reflected in this Annual Report.

I encourage all medical members of the community to thoroughly review the report. I also encourage their participation in cancer care conferences for their own patients and wish to emphasize again the broad availability of cancer care education provided by Centra Health at all levels.

Thank you,

A handwritten signature in black ink that reads "John J. Halpin M.D." The signature is written in a cursive, flowing style.

John J. Halpin, M.D.



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CANCER CARE SERVICES/ANNUAL REPORT 2002

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Overview of Cancer Services

BREAST IMAGING SERVICES

Centra Health's breast imaging services are multifaceted and led by dedicated radiologists and mammography and ultrasound technologists. Services are provided to patients through facilities at the Oak Vassar medical building adjacent to Virginia Baptist Hospital, Timberlake Mammography Center, Tate Springs Mammography Center, a mobile mammography van and a satellite unit at Women's Health Services of Central Virginia. The mammography and ultrasound technologists are all board certified or board eligible. Currently, Centra Health's breast imaging services perform approximately 20,000 screening studies and over 15,000 diagnostic studies annually.

Months of planning and building have brought great improvements to our breast imaging facilities. In May 2001, Centra Health opened a beautiful, spacious screening facility on Timberlake Road. This facility houses three mammography rooms, a public meeting room and a library. In early 2002, our facility at Tate Springs Road was refurbished. It reopened with one mammography room on June 24, 2002. With the reopening of this facility, patients have the convenience of choosing the screening center located closest to their home or place of employment. Centra Health's breast imaging relocated to Oak Vassar medical building in June 2001 with four mammography units and three ultrasound units. This is Centra Health's site for diagnostic mammography and breast ultrasound. This service is for women with breast symptoms and problems and to further investigate abnormal or suspicious screening mammograms. Services provided at Centra Health's breast imaging department include ultrasound, needle localizations, ultrasound guided core biopsies, stereotactic biopsies, fine needle aspirations and cyst aspirations.

Breast imaging and Timberlake Mammography Center feature private registration areas and gown/waiting rooms for the comfort of our patients. The library at the Timberlake center has informational pamphlets on various medical subjects and is open to the public. Various groups within the Centra organization use the meeting room, which features a computer with Internet access.

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Screening exams for women without symptoms or breast problems can be performed at the Tate Springs and Timberlake Mammography Centers, the mobile van and the satellite unit. Centra Health's screening facilities offer women in Lynchburg and surrounding counties a program of low cost mammography.

To encourage patients to return annually, scheduling secretaries at the Timberlake and Tate Springs Road offices make patients' next mammography appointments before they leave the facility. Patients also receive reminder cards in the mail one month before their scheduled appointments.

A new mobile mammography van was placed in operation on September 17, 2001. This van travels to various businesses, industrial sites and physician offices to accommodate women who want yearly mammograms without missing time from work. It also makes mammography more accessible for women in counties surrounding Lynchburg.

The R2 ImageChecker, a computer-aided detection system, is an important addition to Centra's breast imaging services. Mammograms are reviewed first by the radiologist. The R2 ImageChecker then analyzes the content of mammograms and highlights possible suspicious areas on the images. The radiologist then reviews highlighted areas to determine if further evaluation is necessary.

Centra Health is committed to providing women in central Virginia with the highest quality, most convenient and compassionate breast health care possible.

BREAST HEALTH EDUCATORS

The role of the breast health educators continues to expand due to the continued growth and development of the comprehensive breast program. These educators serve as liaisons between physicians and patients, facilitating the plan of treatment from diagnosis through the end of treatment and beyond. Within this scope of care, the educators perform the following services:

- Assist with core biopsies
- Make all surgical referrals
- Provide preoperative teaching
- Provide resource material such as hats, wigs, prosthesis, turbans
- Provide education for everyday changes that occur as the result of breast cancer



*Centra Health
is committed to
providing the
highest quality,
most convenient
and compassionate
breast health care
possible.*

- Provide emotional support to the family and patient during treatment and recovery. This includes providing patients with their home phone numbers, going with them to the operating room, X-ray, doctor's visits and more.
- Facilitate three support groups
- Conduct newspaper/television interviews, articles and information as requested
- Partner with the American Cancer Society, The Free Clinic and The Public Health Department
- Provide outreach to the community through the Witness Project providing 41 programs for the year 2002 and reaching 2,483 women
- Provide resource information for under-served and uninsured populations



WITNESS PROJECT

The Witness Project began in February 2000 and continues to provide a valuable addition to the comprehensive breast program. The Witness Project is comprised of volunteers who give their time speaking in the community setting and educating the public on the importance of early detection and treatment of breast and cervical cancer. One hundred fifty mammograms have been provided annually for uninsured women along with clinical exams.

MAAM

MAAM (Mammography Annually A Must) is a local volunteer group associated with the Centra Health Foundation with a mission to raise awareness of the importance of screening mammograms. MAAM members have been touched by breast cancer and want to make a difference in the health of the region. The MAAM group increases awareness and promotes screening mammography by ensuring access to mammograms and providing education about them.

Since it was established in 2001, MAAM has offered three free mammography screening days for the community and launched a media campaign to build awareness about mammography. Through the free mammography screening days in 2002, 287 mammograms were given to women in our community who otherwise might not have received this important health screening.

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CENTRA HEALTH BREAST SCREENING MORTALITY BENEFITS

James L. Lynde, MD, FACS

The size of breast cancer at diagnosis is the single most valuable prognostic indicator. The smaller the cancer the better the chance for ultimate cure. This is the rationale for screening mammography. Many times, the finding and removal of a lesion before it can be felt will alter the course of an otherwise fatal disease. The mortality benefits of screening, while intuitively accepted by most physicians, continues to be controversial in some circles. Varying mammographic expertise with excessive false negatives or unnecessary biopsies, inconsistent cancer therapies, modern population shifts and spotty patient compliance, all make the quantitative evaluation of service screening death benefits elusive. Service screening refers to organized screening mammography outside the research setting.

Dr. Laszlo Tabar's Swedish Two County Randomized Trial remains the screening advocate's gold standard for demonstrating mortality benefits. Here breast cancer deaths from a screening exposed population were compared to those from a screening denied population. His results, adjusted by S.W. Duffy et al. to fit clinical organized service screening, document a 63 percent reduction in breast cancer mortality over 29 years. Dr. Tabar, a pioneer, full-time dedicated mammographer, works within a defined population where accurate long-term follow-up and consistent breast cancer treatment regimens are assured.

In Lynchburg, an early 1990s movement towards full-time dedicated mammography led to a 1997 Centra Health endorsement. While not without

controversy, this action came with an administrative and medical staff commitment, resulting over time in three full-time dedicated mammographers, a weekly multidisciplinary breast treatment conference, the concentration of breast surgery at one location, the upgrading of an existing tumor registry, the development of a comprehensive breast pathology data base and the creation of an active, hands-on oncologic breast nursing service.

*Screening in Lynchburg
reduces breast cancer mortality
by 55 percent.*

*This equates to 24 lives saved
over the study period.*

Our program serves a well defined geographic area and a stable, non-transient population using limited out-of-area medical services. Breast cancer treatment is uniform by consensus and accurate medical follow-up is assured. While randomized screening/non-screening death benefit trials are no longer feasible, our local program does supply the elements necessary to duplicate the Scandinavian screening success, though the women are fewer and, to date, the data are immature.

A verification study, using Duffy's service screening mortality benefits methodology, was undertaken last year. Essentially the death rates for those with screening-exposed breast cancers are compared to those with non-exposed breast cancers. Screening-exposed detections are defined as those within one year of a screening mammogram. These include both immediate true positives and delayed false negatives. All other detections are non-exposed. Death rates are expressed in screening-exposed and non-exposed woman years. Screening-exposed and non-exposed woman years together make up total woman years or the entire female population age 40 and above observed over the study period in years. The exposed woman years equal the cumulative study period mammograms (one screening mammogram constitutes one year of screening exposure or one exposed woman year). The non-exposed woman years make up the difference between the total woman years and the screening-exposed woman years.

Our study encompasses all breast results over the seven years from January 1, 1995 through January 1, 2002. The 1999 census records 52,160 screening eligible women 40 years of age or above. This population, over seven years, represents 365,120 total woman years of observation and is made up of 128,890 screening-exposed woman years and 236,230 non-exposed woman years. Exposed cancer detections and subsequent lead time corrected cancer deaths are 696 and 20.8 respectively.

Non-exposed detections and deaths are 581 and 82. Exposed or non-exposed death rates are 15.7 and 34.7/100,000 woman years. The screening exposed relative risk for breast cancer death is 15.7/43.7 or 0.45.

Service screening in Lynchburg reduces breast cancer mortality by 55 percent at five years for those women with screening-exposed breast cancers. This equates to 24 lives saved over the study period. With total population compliance, 69 breast cancer deaths could have been avoided. Furthermore, 5,370 screening-exposed woman years are necessary to prevent one breast cancer death (5,370 screening mammograms for one year, or 1,074 for five years, or 537 yearly for 10 years).

In Lynchburg, the average size of invasive breast cancer is now 1.9 cms. The average size of a non-exposed breast cancer is 2.9 cms., and the average size of a screening exposed cancer is now less than 1.0 cms.

The strongest deterrent to breast cancer death is early detection, and this appears best accomplished by a focused, dedicated screening effort.



INPATIENT ONCOLOGY UNIT

The oncology unit is dedicated to caring for cancer patients in a holistic way—body, mind and spirit. The unit provides a range of care from diagnosis and treatment to palliative. Our specially trained staff works with patients and families in various stages of the disease process and takes pride in providing “Excellent Care...Every Time.” Their dedication is evidenced by a patient satisfaction score of 87.5 percent for 2002. In addition to this score, many patients and their families keep in contact with the staff through personal visits, cards, flowers and food. We were privileged to provide care for 1,321 patients on our inpatient unit this year. Our top admitting diagnosis was respiratory neoplasm. Plans of care are discussed in weekly cancer conferences and breast conferences.



Our clinical coordinator works with staff and physicians to meet the educational needs of patients and their families. The coordinator has developed various educational materials and uses many resources to assist patients with their home care and medications. Her work with the interdisciplinary team has helped to reduce our length of stay from 5.33 days in 2001 to 5.18 in 2002. Her role also includes coordinating the care of all hospitalized cancer patients in both of our hospitals — not just on our unit. This provides patients and families a more coordinated course of care.

Nurses on the oncology unit are certified in several areas: oncology, medical-surgical and gerontology. Their combined years of nursing experience exceeds 410 and their average age is 39. Some staff nurses are pursuing advanced degrees and several of our CNAs are nursing students. Many nurses are members of the Oncology Nursing Society and our local ONS chapter.

There have been many opportunities for our staff to participate in community events promoting cancer screening and awareness. We work in conjunction with our local American Cancer Society to develop and identify these opportunities. Many of our staff have promoted nursing at career days in local schools.

Our oncology staff use their hands and their hearts to provide the special care that cancer patients and their families need and deserve. Their pride in their profession and dedication to their patients makes oncology nursing rewarding and our oncology unit a special place to work.

*The oncology unit
is dedicated to
caring for cancer
patients in a
holistic way—body,
mind and spirit.*

COMMUNITY EDUCATION AND PROGRAMS

Educating the community is important both to Centra Health and to Cancer Care Services. Working with our local American Cancer Society, the oncology nursing staff have participated in many cancer screenings and cancer awareness events within the community, including speaking to area businesses, organizations and churches on selected topics related to cancer. As an organization, we have worked with our local churches and those within our surrounding counties to offer screenings such as PSA levels, colon cancer screening, mammograms and skin assessment for possibility of skin cancer.

STAFF EDUCATION AND DEVELOPMENT

Staff development and continuing education is committed to assisting the nursing staff in maintaining current knowledge level and delivering the highest quality of care possible. Programs and information are made available for all oncology staff members to aid them in the care of oncology patients, including assessment, treatment regimens, pain management, symptom management and oncology related issues. Emphasis is placed on training the staff in delivery of care and identifying the needs of the patient as an ongoing process. A chemotherapy administration course is taught to all new oncology nurses with at least one year of oncology experience. The course is aimed at teaching the fundamentals of administering chemotherapy and in identifying symptoms associated with chemotherapy.





FEBRILE NEUTROPENIA STUDY

LaVerne Jordan, RN

Time is one of the most important factors in the care of the oncology patient with febrile neutropenia. The faster the patient has blood cultures drawn and antibiotics started, if appropriate, the quicker the recovery process. Our goal during the study was to have the patient assessed by a registered nurse within 20 minutes of admission to the unit, blood drawn by the lab within 20 minutes of admission and antibiotics started within 60 minutes if appropriate.

PURPOSE

The study's purpose was to identify the following:

- Length of time the patient stays in admissions
- Time patient arrives on the oncology unit
- Time the blood work is drawn
- Time results are called to the physician to receive orders for antibiotic therapy
- Time antibiotics started

All information was gathered both by direct observation and by unit chart reviews. The study was conducted over four months from April through July 2002.

FINDINGS

- Sixty percent of the patients were admitted directly to the oncology unit from the physician's office, bypassing admissions
- One hundred percent of the patients were assessed by a registered nurse within 20 minutes of arrival

- Sixty percent of the patients had a two to three hour delay in getting antibiotics started due to difficult IV sticks, predefined order entry administration times in the pharmacy, or administration times entered to avoid nursing staff shift changes.
- Blood work draw times were inconsistent, ranging from 20 to 90 minutes.

PROPOSED CHANGES

To better comply with the standard of care and recommendations of the Oncology Advisory Board, the following guidelines were proposed:

- Patients with the admitting diagnosis of febrile neutropenia should be admitted to the neutropenic wing on the oncology unit.
- Patients with febrile neutropenia should be directly admitted to the oncology unit, bypassing the admissions department to decrease the time to treatment.
- Institute a standard physician order set for the febrile neutropenia patients from the medical oncologists. This will provide improved patient care after office hours, decrease the time from admission to blood draws and antibiotics started, if appropriate.
- Provide ongoing education to all departments involved to quickly and efficiently provide care to the febrile neutropenia patient.

RADIATION ONCOLOGY

The radiation oncology department offers a comprehensive approach to cancer treatment with a full complement of services available. We deliver external beam radiotherapy using two linear accelerators. In 2001, our department treated 531 patients.

Many of our patients benefit from high dose localized therapy delivered with the aid of three-Dimensional conformal CT- based treatment planning. This computer-assisted planning can deliver higher doses of radiation to tumors while sparing the surrounding normal tissue. We also perform interstitial and intracavitary GU and GYN brachytherapy to treat most cervical, endometrial and prostate cancers. In conjunction with our urologists, we have an active prostate brachytherapy service to offer patients an alternative to prostatectomy or conformal external beam treatment. Our goal is to offer a comprehensive, multidisciplinary approach to each patient. In accordance with this, we participate in a weekly tumor conference covering each individual disease site on a monthly basis (GYN, GI, head and neck, thoracic and skin cancers). A separate breast conference is held weekly to review every positive biopsy and to make treatment recommendations for each patient.

Radiation therapy was recently brought to the cardiac cath lab at Lynchburg General Hospital to aid in the treatment of coronary heart disease. The FDA has recently approved radiation therapy in the treatment of in-stent re-stenosis (when patients have recurring blockages in their coronary arteries following the placement of stents). The procedure, called intravascular brachytherapy, involves threading a catheter containing radioactive sources into the blocked artery. The treatment helps prevent scar tissue from re-forming and has been shown to reduce re-stenosis by approximately 50 percent. Under the leadership of our nationally recognized cardiology team at Centra Health's Stroobants Heart Center, we were the first institution in central Virginia—and one of only two in the state—to offer this form of therapy.



*Centra Health was
the first institution
in central Virginia—
and one of only two
in the state—to offer
intravascular
brachytherapy.*



CLINICAL MEDICAL PHYSICIST

Centra Health employs two full-time medical physicists and a physics technologist whose responsibilities include quality control of medical imaging and therapy equipment and management of the hospital's radiation safety program. The physicists are responsible for the techniques used to standardize and calibrate this equipment and for staying abreast of the research and development of new techniques, physical methods and equipment. The latter includes educating and monitoring staff members who work in radiation areas and assuring that the hospital's program is in compliance with state and national regulatory bodies.

The physicists play an important role through indirect patient care. They assure that all physical data being used to treat patients is accurate and appropriate by routinely reviewing all records and treatment plans for patients undergoing radiation therapy. In addition, the physicists are called upon to contribute scientific advice and resources to solve numerous and diverse physical problems that arise in many specialized medical areas of the hospital. The physicists' decisions contribute to optimal, safe and effective patient care.



The physicists' decisions contribute to optimal, safe and effective care.

PATHOLOGY DEPARTMENT

Pathology Consultants of Central Virginia provides pathology services to all Centra Health facilities and is an integral part of the cancer program at Centra Health. The physicians and staff of the Department of Pathology are dedicated to providing the highest quality services in a timely fashion.

In 2002, over 6,500 surgical specimens were received at Virginia Baptist Hospital, and just over 4,300 were received at Lynchburg General Hospital. Over 96 percent of cases were completed within 48 hours and over 85 percent in 24 hours. The histology laboratory provides a flexible menu of immunohistochemical stains that aid in the diagnosis and characterization of cancers. In 2002 we added the ACIS system, a computer-assisted digital image analyzer that allows reproducible quantitation of specific immunoperoxidase stains. This system is currently used to standardize the evaluation of breast cancers for the production of the Her-2/neu protein, which aids in establishing prognosis and directing therapy. In the future, new antibodies are expected to have similar applications in treating cancers from other primary sites, such as the lung.

In addition, the department is proud to be the only community-based practice in the United States to provide large format histologic sections to aid in the evaluation of surgical pathology specimens from the breast.

Quality assurance is a fundamental aspect of the diagnosis and treatment of cancer. The Lynchburg Breast Pathology Database, created by Karl Biesemier, MD, in 1999, allows ongoing data analysis. The multidisciplinary breast cancer conference, which is moderated by a physician from the department, has become a model for similar case-based conferences. The pathologists contribute to all of the multidisciplinary cancer conferences by assisting with case selection, reviewing the cases for discussion, and presenting the pathologic findings using digital images during the weekly cancer conferences. At the start of each day, an intra-departmental meeting is held where challenging cases are reviewed at a multi-headed microscope to help assure an accurate diagnosis. In 2002, 1,165 cases were reviewed in this manner. John Salmon, MD, assists the cancer liaison by serving as an on-site consultant to the Cancer Registry. All of these efforts combine to provide strong support for the cancer program at Centra Health and the outstanding care of patients in central Virginia.

PHARMACEUTICAL SERVICES

The pharmacy staff provides timely, safe and efficient pharmaceutical distribution services to our oncology patients. Licensed pharmacists do chemotherapy preparation in the sterile, protected environment of the main pharmacy. All medications for oncology patients are prepared and dispensed from the central pharmacy. Clinical pharmacists monitor patients for drug/drug interaction and appropriate dosing of chemotherapeutic drugs based on patient-specific parameters such as height, weight, lab values and renal/hepatic function. Clinical pharmacists are always available to assist nurses and physicians with drug-related questions, dosing and monitoring and to counsel patients regarding any of their medications. Clinical pharmacists are also available to physicians for pain management consults. The pharmacists are considered experts in drug pharmacology and are respected throughout our organization for recommending and monitoring a wide range of medication options for our patients with pain.





DIETITIAN

A patient's nutritional status can affect how they feel and how well they cope with medical treatments. A well-nourished body can aid in recuperation from surgery, radiation therapy, chemotherapy and stress, as well as build new tissues and prevent tissue breakdown and weight loss.

Nutritional intervention is an essential component of care for oncology patients. Clinical dietitians offer information to oncology inpatients and outpatients, which is integral to understanding, minimizing and possibly overcoming the components of cancer that affect nutritional status. Information is offered during counseling sessions and individual meal plans may be provided to meet a person's specialized needs.

Dietitians also provide appropriate medical nutritional therapy to combat the ill effects of cancer. They may suggest providing smaller, more frequent meals, nutritional supplements and alternative food choices (foods from home or additional foods from the kitchen). Nutrition assistants are available to assist patients with menu selections and offer other foods which are not listed on the menu but are available within the department or from the kitchen. The clinical dietitian offers education and support for both inpatients and outpatients who require tube feedings for nourishment. Community programs are presented regarding eating habits that can help prevent cancer or delay disease.



*A well-nourished
body can aid in
recuperation.*

SOCIAL WORK

As part of its multidisciplinary approach to patient care, Centra Health employs an oncology social worker who is trained to meet the special needs of the oncology patient. A primary area of support is aiding patients and families with discharge planning. This may include securing equipment, home health, hospice or outpatient services and alternate living arrangements as needed. The social worker connects patients to community-based resources (such as transportation services and medication funding assistance), and may also provide assistance in applying for disability or Medicaid as indicated. In general, the oncology social worker provides support and guidance throughout the patient's treatment.

PASTORAL CARE

The department of pastoral care at Centra Health is dedicated to helping patients and their families regain their sense of “wholeness.” In fact, that is the very essence of what “pastoral” means.

Centra Health’s commitment to holistic care is evident in its support of pastoral care. Chaplains are available to oncology patients and family members to provide emotional and spiritual support. Centra Health chaplains are part of a vital interdisciplinary health care team and are available to visit with patients anytime they are needed. Chaplains seek to help patients and their families draw strength from their own spiritual resources and faith community. Additionally, our chaplains work closely with local clergy and encourage the involvement of congregation members and clergy in the pastoral care of patients and their family members.

Centra Health chaplains work beside other oncology team members to create an environment of comfort that facilitates healing—physically, emotionally and spiritually.


HOSPICE OF THE HILLS

Hospice of the Hills was established in 1983 by a group of dedicated volunteers. Its mission is to provide quality of life to the terminally ill, their families, significant others and those in the community affected by death and dying. It has developed into a comprehensive interdisciplinary team of health care professionals composed of physicians, registered nurses, certified nursing assistants, social workers, chaplains and volunteers.

In 2001, the hospice program served over 200 patients and their families. Cancer remains the top diagnosis of the patients admitted to hospice, cancer of the lung being the leading diagnosis. Congestive heart failure is the leading non-cancerous diagnosis.

Volunteers still remain the foundation of hospice, providing patient/family support, bereavement, fundraising, clerical support and community education. Volunteers donated more than 2,000 hours to hospice last year.





In October 2000, the Hospice House was opened as an option of care for terminally ill patients. End-of-life needs are met in a home-like environment where personal independence and quality of life are priorities. The 3,000 square foot house is centrally located and accommodates four patients with around-the-clock care. It has provided services to almost 70 individuals since opening.

To educate the community and health care fields about our program of care and services, Hospice of the Hills participates in many health fairs and community activities. Our bereavement coordinator and specially trained volunteers offer bereavement workshops to families in the community. Hospice of the Hills continues to recruit volunteers to support its mission.

A REPORT FROM THE CANCER LIAISON

William Kittrell, MD

The Cancer Liaison Program of the Commission on Cancer was developed to recruit volunteers in the management of clinically related cancer activities within the hospital and community settings. Today, 60 percent of the 1,800 cancer liaisons nationwide are surgeons and the remaining 40 percent come from a diverse group of specialties. The primary role of the cancer liaison is to provide leadership, direction and support for the facility's cancer program, following the criteria established by the Approvals Program of the Commission on Cancer. The cancer liaison also works with the local American Cancer Society to support cancer control programs in the community.

As a general surgeon with a special interest in colorectal surgery, I was honored to be asked to serve as Centra Health's cancer liaison in early 2002. It has been my pleasure to accept the challenge of this position and I welcome the opportunity to assist in the growth and development of a cancer program that will benefit the citizens of our community.

As the Centra Health cancer liaison, I have also accepted a position on the board of directors of the Lynchburg chapter of the American Cancer Society (ACS). The Lynchburg chapter provides patient/community education and a wide range of support services for families living with cancer. Fundraising is conducted annually through the Relay For Life, a 24-hour walkathon to support the research activities of the ACS. The American Cancer Society also promotes public awareness on cancer care and treatment facilities through

their web site. (For information on Centra Health's cancer care services visit the ACS website at www.cancer.org/asp/search/ftc/ftc_global.asp)

In the past year, I have assisted the Cancer Registry of Centra Health in the quality review of 2002 cancer case abstracts. The Cancer Registry is required to have ten percent of all new case abstracts reviewed by a physician member of the cancer committee. Thanks to all the physicians who participated in the review. Our Cancer Registry staff is dedicated to quality improvement and providing useful data to the physicians in our area. I am also working with the staff of the Cancer Registry to improve compliance test rates for AJCC staging. We are pleased with our recent review of staging data which shows a significant improvement in compliance compared to prior years. The Commission on Cancer requires a complete AJCC staging of all cancers by the managing physician. Complete staging should include the T (tumor), N (nodes) and M (metastasis) as well as the stage group. I would like to use this opportunity to encourage all managing physicians to provide MO (no evidence of metastasis) or M1 (evidence of metastatic disease) staging on the AJCC staging forms. MX is considered incomplete and will result in our local data being excluded from use by the National Cancer Database.

I look forward to the experience of serving as cancer liaison and would welcome your comments on how we can improve the services we provide.



Registry data is used to determine mortality and cancer trends in local, state and national studies.

CANCER REGISTRY

The Centra Health Cancer Registry is located in the radiation oncology department at Virginia Baptist Hospital and has a full-time staff of two. Joyce Martin came to the registry in 1998 after 10 years in health information and Linda Crist joined the registry staff in August 2000 after 28 years in pathology/laboratory at Centra Health. Their diverse backgrounds have proven to be an asset to the quality of data collected in the Cancer Registry. Faith Coles, administrative secretary for cancer care services, provides valuable assistance with follow-up research and abstracting on an as needed basis.

Our facility is approved by the American College of Surgeons (ACOS) as a Community Hospital Comprehensive Cancer Program. As such, the Cancer Registry reports local cancer data to the Virginia Cancer Registry (a division of the Department of Health) and to the National Cancer Database. Cancer registry data is used to determine mortality and cancer trends in local, state, and national studies.

In July 2002, the Cancer Registry became a separate cost center within the Centra Health structure and is now known as the Oncology Information Center. This is the first step toward our goal of collecting within one department all data related to cancer diagnosis and treatment. We believe this will provide more consistent and accurate data collection and reporting for our facility. The registry currently collects data in the Electronic Registry Systems database for state and national reporting as well as in the Breast Pathology Database, which was developed in 1998 as part of the Centra Health breast cancer program. The Cancer Registry staff also provides technical support for Magview, the mammography database.

Our Cancer Registry staff had many successes in 2002 including:

- Identified and abstracted 1,128 new cancer cases compared to 1,039 in 2000.
- Invited general surgeons to participate with dermatologists and plastic surgeons in our skin pathology conference. As a result, melanoma patients who were being referred out of town for sentinel lymph node biopsies are now having the procedure performed in Lynchburg by our general surgeons.
- Identified a scheduling conflict between the gastroenterologists and our GI cancer conference. This has resulted in a conference schedule change for 2003 that will enable gastroenterology physicians to participate in the GI cancer conference.

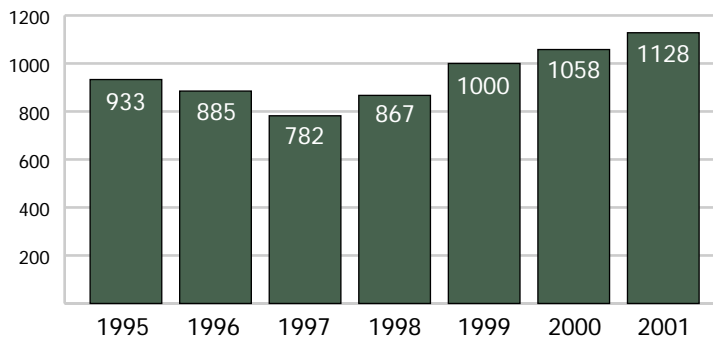
- Continued the trend of increased attendance at our cancer conferences by involving more physicians in the identification of cases being presented.
- Organized 96 cancer conferences (51 breast, 9 gastrointestinal/lung, 10 genitourinary, 6 thoracic, 5 skin, 10 gynecological, and 4 head and neck).
- Completed entry of 11 years of breast cancer pathology into our breast pathology database.
- Provided data/presentation support to several physicians for special studies and community events.
- Archived all digital images from 2002 cancer conferences on compact disc for future use.
- Hosted a videoconference on the 6th Edition of AJCC Staging that becomes effective on January 1, 2003.
- Attended the annual meeting of the Virginia Cancer Registry.

It was another busy year for the Cancer Registry and we appreciate the help and support we have received from our administrators and physicians. The year 2003 will bring many changes to cancer data collection with the implementation of 6th Edition AJCC Staging and the change from ROADS to FORDS coding principles. Our focus for the new year will be to learn the new coding schemes while improving the quality of cancer data collected at Centra Health.

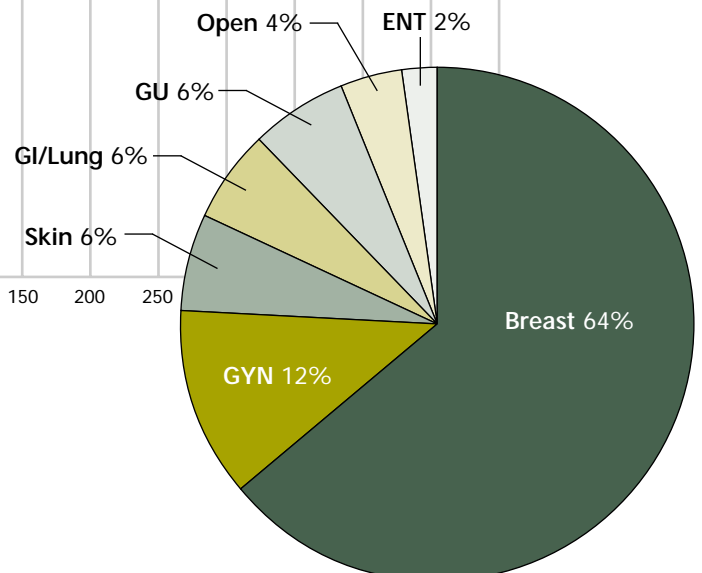
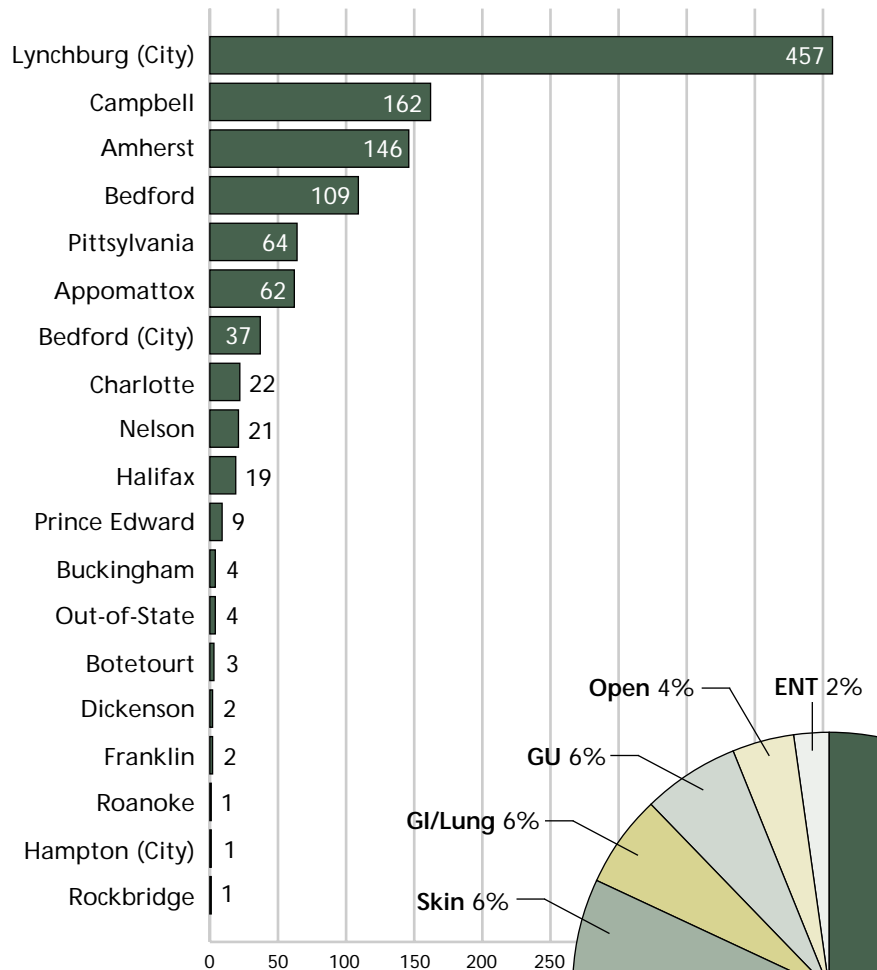


Centra Health Cancer Statistics, 2001

TOTAL NUMBER OF CASES PER YEAR
NUMBER OF CASES BY YEAR



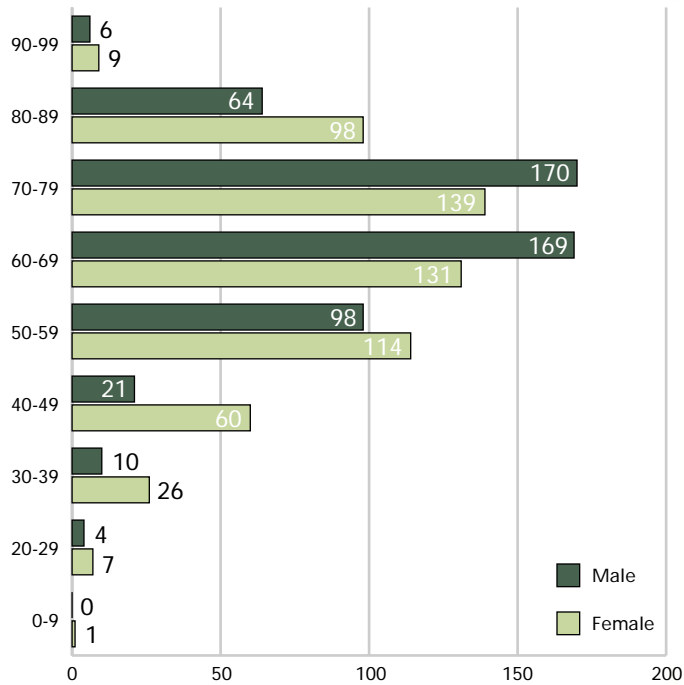
LOCALITY OF NEW 2001 CASES
NUMBER OF CASES BY LOCALITY



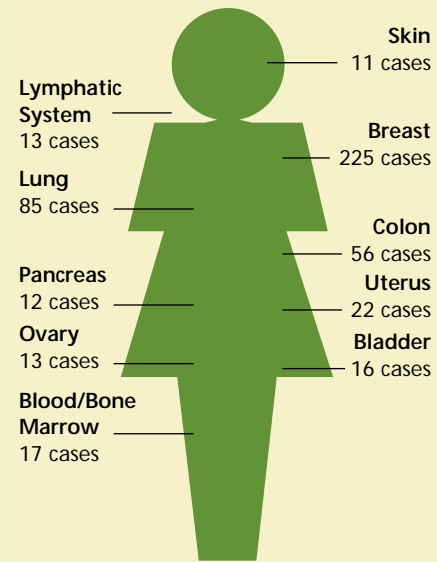
2002 CANCER CONFERENCES
TOTAL CASES PRESENTED BY SITE

Total Cases Presented: 722
Total Conferences: 96
Average Attendance: 24

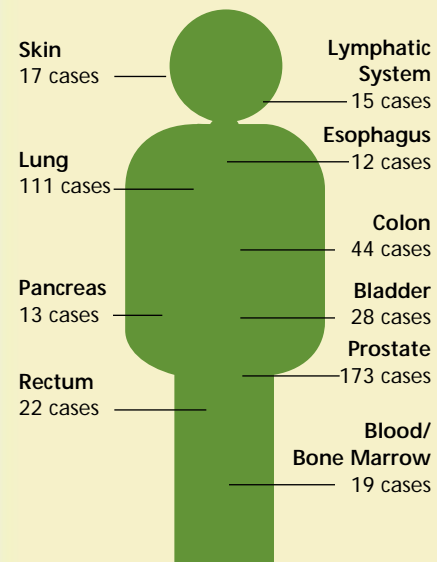
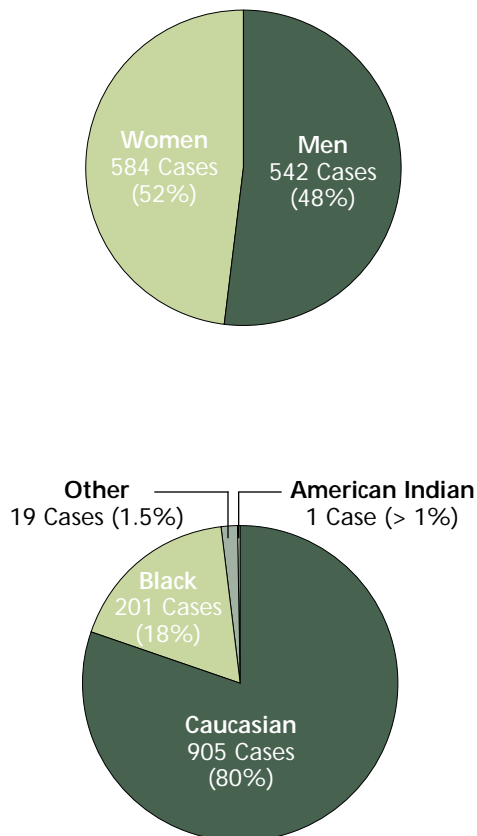
**DISTRIBUTION OF CASES
BY AGE AND SEX
NUMBER OF CASES
BY AGE AT DIAGNOSIS**



**TEN MOST COMMON SITES
BY GENDER**



**INCIDENCE OF CASES
BY SEX AND RACE
TOTAL CASES: 1,126**

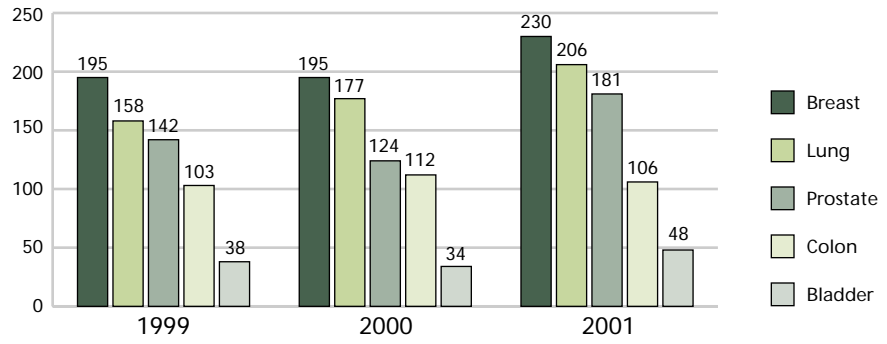


CANCER INCIDENCE BY SITE AND RACE

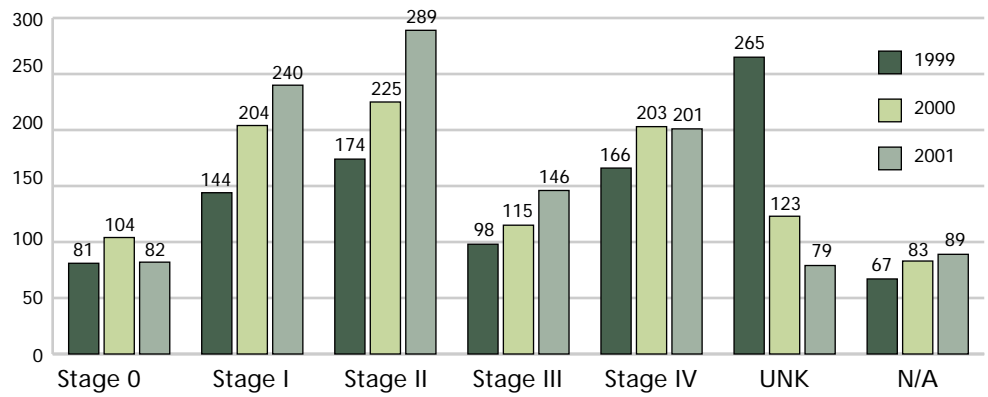
SITE	ALL CASES		WHITE		BLACK		ASIAN		ORIENTAL		AM. IND.		OTHER	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Lip	1	0	1	100	0	0	0	0	0	0	0	0	0	0
Base of Tongue	1	0	1	100	0	0	0	0	0	0	0	0	0	0
Other Parts of Tongue	2	0	2	100	0	0	0	0	0	0	0	0	0	0
Other/Unspecified Parts of Mouth	2	0	1	50	0	0	0	0	0	0	0	0	1	50
Parotid Gland	4	0	4	100	0	0	0	0	0	0	0	0	0	0
Tonsil	3	0	2	67	1	33	0	0	0	0	0	0	0	0
Oropharynx	1	0	1	100	0	0	0	0	0	0	0	0	0	0
Hypopharynx	3	0	3	100	0	0	0	0	0	0	0	0	0	0
Esophagus	16	1	11	69	5	31	0	0	0	0	0	0	0	0
Stomach	12	1	8	67	4	33	0	0	0	0	0	0	0	0
Small Intestine	2	0	2	100	0	0	0	0	0	0	0	0	0	0
Colon	101	9	82	81	17	17	1	1	0	0	1	1	0	0
Rectosigmoid Junction	8	1	7	88	0	0	0	0	0	0	0	0	1	13
Rectum	25	2	23	92	2	8	0	0	0	0	0	0	0	0
Anus & Anal Canal	4	0	2	50	2	50	0	0	0	0	0	0	0	0
Liver & Bile Ducts	12	1	10	83	2	17	0	0	0	0	0	0	0	0
Gallbladder	2	0	2	100	0	0	0	0	0	0	0	0	0	0
Other Biliary Tract	1	0	1	100	0	0	0	0	0	0	0	0	0	0
Pancreas	25	2	20	80	5	20	0	0	0	0	0	0	0	0
Other Digestive Organs	1	0	1	100	0	0	0	0	0	0	0	0	0	0
Accessory Sinuses	1	0	1	100	0	0	0	0	0	0	0	0	0	0
Larynx	9	1	8	89	1	11	0	0	0	0	0	0	0	0
Bronchus & Lung	197	17	162	82	34	17	0	0	0	0	0	0	1	1
Thymus	1	0	0	0	0	0	0	0	0	0	0	0	1	100
Heart Mediastinum Pleura	3	0	3	100	0	0	0	0	0	0	0	0	0	0
Bones, Joints & Other Unspec.	2	0	1	50	1	50	0	0	0	0	0	0	0	0
Blood & Bone Marrow	35	3	30	86	4	11	0	0	0	0	0	0	1	3
Skin	31	3	28	90	1	3	0	0	0	0	0	0	2	6
Retroperitoneum & Peritoneum	2	0	2	100	0	0	0	0	0	0	0	0	0	0
Connective, Subcutaneous, & Other Soft Tissue	5	0	2	40	3	60	0	0	0	0	0	0	0	0
Breast	226	20	181	80	40	18	1	0	0	0	0	0	4	2
Vulva	9	1	9	100	0	0	0	0	0	0	0	0	0	0
Vagina	2	0	2	100	0	0	0	0	0	0	0	0	0	0
Cervix Uteri	12	1	10	83	2	17	0	0	0	0	0	0	0	0
Corpus Uteri	18	2	14	78	4	22	0	0	0	0	0	0	0	0
Uterus NOS	4	0	3	75	1	25	0	0	0	0	0	0	0	0
Ovary	13	1	9	69	3	23	0	0	0	0	0	0	1	8
Penis	3	0	3	100	0	0	0	0	0	0	0	0	0	0
Prostate Gland	173	15	128	74	43	25	0	0	0	0	0	0	2	1
Testis	3	0	3	100	0	0	0	0	0	0	0	0	0	0
Kidney	18	2	14	78	4	22	0	0	0	0	0	0	0	0
Ureter	4	0	4	100	0	0	0	0	0	0	0	0	0	0
Urinary Bladder	45	4	37	82	7	16	0	0	0	0	0	0	1	2
Other & Unspec. Urinary Organs	1	0	1	100	0	0	0	0	0	0	0	0	0	0
Brain	20	2	16	80	4	20	0	0	0	0	0	0	0	0
Thyroid Gland	14	1	11	79	3	21	0	0	0	0	0	0	0	0
Other III-Defined Sites	6	1	4	67	1	17	0	0	1	17	0	0	0	0
Lymph Nodes	22	2	17	77	4	18	0	0	1	5	0	0	0	0
Unknown Primary	21	2	18	86	3	14	0	0	0	0	0	0	0	0
TOTAL CASES	1126	100	905	80	201	18	2	0	2	0	1	0	15	1

NOTE: Asian includes Asian Indian, Pakistani, Vietnamese and other Asian; Other includes all races not listed above and/or unknown

**TOP FIVE SITES
NUMBER OF CASES
BY YEAR**



**AJCC STAGE AT
DIAGNOSIS
NUMBER OF CASES
BY YEAR**

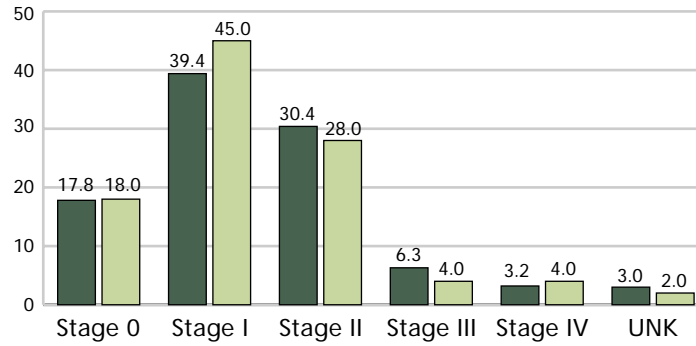


PRIMARY SITE TABULATION

SITE	TOTAL	CLASS		SEX		STAGE					
		Analytic	Non-Analytic	M	F	0	I	II	III	IV	UNK N/A
ALL SITES	1126	1093	33	542	584	82	240	289	146	201	168
Oral Cavity	17	16	1	13	4	0	3	5	1	6	2
Lip	1	1	0	1	0	0	0	1	0	0	0
Tongue	3	3	0	2	1	0	1	0	0	2	0
Oropharynx	1	1	0	1	0	0	0	1	0	0	0
Hypopharynx	3	3	0	2	1	0	0	1	0	1	1
Other	9	8	1	7	2	0	2	2	1	3	1
Digestive System	205	202	3	111	94	10	28	39	40	55	33
Esophagus	16	15	1	12	4	0	1	3	5	7	0
Stomach	10	10	0	5	5	1	1	0	1	4	3
Colon	100	99	1	44	56	5	18	29	27	15	6
Rectum	32	32	0	22	10	3	7	5	1	6	10
Anus/Anal Canal	4	4	0	3	1	1	0	1	2	0	0
Liver	11	11	0	8	3	0	0	0	1	6	4
Pancreas	25	25	0	13	12	0	1	1	2	16	5
Other	7	6	1	4	3	0	0	0	1	1	5
Respiratory System	207	206	1	121	86	1	41	15	49	88	13
Nasal/Sinus	0	0	0	0	0	0	0	0	0	0	0
Larynx	9	9	0	9	0	0	4	1	1	3	0
Lung/Bronchus	196	195	1	111	85	1	37	14	47	85	12
Other	2	2	0	1	1	0	0	0	1	0	1
Blood & Bone Marrow	36	32	4	19	17	0	0	0	0	1	35
Leukemia	21	17	4	10	11	0	0	0	0	0	21
Multiple Myeloma	15	15	0	9	6	0	0	0	0	1	14
Other	0	0	0	0	0	0	0	0	0	0	0
Bone	1	1	0	0	1	0	0	0	0	0	1
Connect/Soft Tissue	5	5	0	1	4	0	1	2	0	1	1
Skin	32	29	3	17	15	4	6	5	6	2	9
Melanoma	23	21	2	12	11	4	6	1	4	2	6
Other	9	8	1	5	4	0	0	4	2	0	3
Breast	226	224	2	1	225	42	100	63	9	9	3
Female Genital	58	55	3	0	58	10	26	7	9	4	2
Cervix Uteri	12	11	1	0	12	1	7	2	2	0	0
Corpus Uteri	22	22	0	0	22	0	17	2	2	1	0
Ovary	13	12	1	0	13	0	0	3	5	3	2
Vulva	9	8	1	0	9	8	1	0	0	0	0
Other	2	2	0	0	2	1	1	0	0	0	0
Male Genital	179	169	10	179	0	1	5	127	16	14	16
Prostate	173	163	10	173	0	0	0	127	16	14	16
Testis	3	3	0	3	0	0	3	0	0	0	0
Other	3	3	0	3	0	1	2	0	0	0	0
Urinary System	67	62	5	42	25	14	13	15	8	10	7
Bladder	44	41	3	28	16	14	6	12	5	3	4
Kidney/Renal	18	17	1	10	8	0	6	3	2	5	2
Other	5	4	1	4	1	0	1	0	1	2	1
Brain & CNS	20	19	1	9	11	0	0	0	0	0	20
Brain	20	19	1	9	11	0	0	0	0	0	20
Other	0	0	0	0	0	0	0	0	0	0	0
Endocrine	14	14	0	3	11	0	8	3	2	1	0
Thyroid	14	14	0	3	11	0	8	3	2	1	0
Other	0	0	0	0	0	0	0	0	0	0	0
Lymphatic System	34	34	0	18	16	0	9	8	6	10	1
Hodgkin's Disease	6	6	0	3	3	0	0	4	2	0	0
Non-Hodgkin's	28	28	0	15	13	0	9	4	4	10	1
Unknown Primary	21	21	0	6	15	0	0	0	0	0	21
Other/III-Defined	4	4	0	2	2	0	0	0	0	0	4

Number of cases excluded: 62. This report excludes CA in-situ cervix cases, squamous and basal cell skin cases and intraepithelial neoplasia cases.

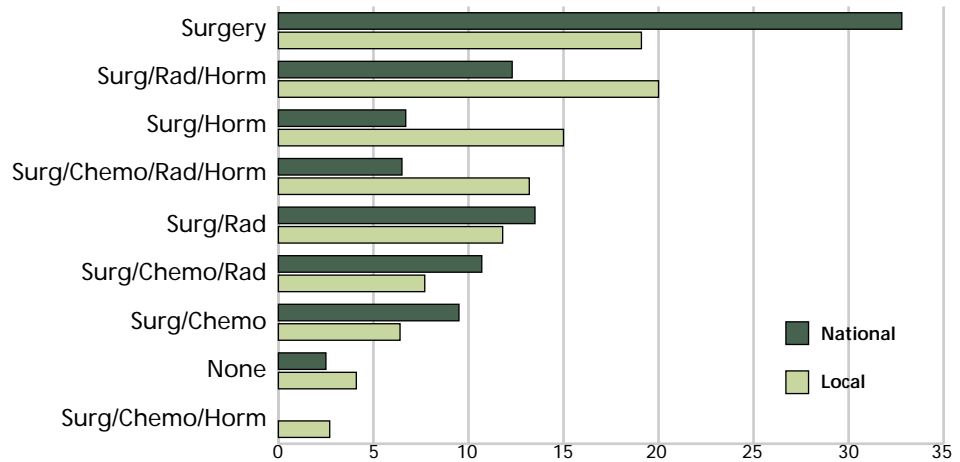
**BREAST CANCER
STAGE AT DIAGNOSIS
NATIONAL VS. LOCAL
PERCENT OF CASES**



National: Data from National Cancer Data Base Mid-Atlantic Region, reporting 14,597 diagnoses in 1999.

Local: Data representing the Centra Health service area, reporting 220 diagnoses in 2001.

**BREAST CANCER
FIRST COURSE TREATMENT
NATIONAL VS. LOCAL
PERCENT OF CASES
BY TREATMENT**



**BREAST CANCER
FIVE-YEAR SURVIVAL
NATIONAL VS. LOCAL
SURVIVAL RATES BY
STAGE AT DIAGNOSIS**

Years Surviving	Stage 0		Stage I		Stage II		Stage III		Stage IV	
	National	Local	National	Local	National	Local	National	Local	National	Local
1	99.1	100	98.4	96.6	97.2	94.9	91.8	95.6	56.6	16.6
2	97.5	96.9	95.8	94.8	90.9	89.8	78.6	69.5	35.7	0
3	95.4	96.9	93.3	93.9	85.0	89.8	67.6	69.5	22.5	0
4	94.1	96.9	90.6	92.2	79.6	84.7	58.7	52.1	19.1	0
5	91.5	96.9	87.7	89.5	74.6	80.7	52.3	52.1	13.7	0



Glossary of Terms

Analytic Case	Case first diagnosed and/or received all or part of the first course of treatment at a Centra Health facility. (Class 0, 1, 2)
Non-Analytic Case	Case diagnosed and received first course of treatment outside of Centra Health but currently receiving treatment through Centra Health. Also includes cases first diagnosed at autopsy.
Class of Case	Class is assigned to all analytic cases and indicates where diagnosis and treatment occurred. Class 0: Diagnosed at Centra Health since 1995; all first course of treatment elsewhere Class 1: Diagnosed and received all or part of first course of treatment at Centra Health Class 2: Diagnosed elsewhere; received all or part of the first course of treatment at Centra Health.
TNM Stage	A system of classifying the spread or extent of disease at the time of diagnosis. Guidelines are dictated by the American Joint Committee on Cancer Staging System (AJCC) and are based on: T: Size and extent of tumor N: Involvement of regional lymph nodes M: Distant metastasis The American College of Surgeons (ACOS) requires that a physician stage the “M” portion of the code as either “M0,” indicating no distant metastatic disease or “M1,” which indicates that there is distant metastasis.
First Course of Treatment	A treatment plan that is determined immediately following initial diagnosis of cancer.
Subsequent Treatment	Any treatment administered after the failure of the first course of treatment.
Abstract	A summary or abbreviated record maintained in the Cancer Registry using the Electronic Registry Systems (ERS) database. The record contains the patient demographics and pertinent information regarding the diagnosis, treatment and disease process throughout the remainder of the patient’s life.
Cancer Registry	A sub-department of Cancer Care Services at Centra Health that identifies newly diagnosed cases of cancer and maintains the abstract. Data is reported to the State of Virginia and the National Cancer database. Cancer Registry staff also conduct yearly follow-up of all cases in the database, coordinate the weekly Cancer Conferences and work with physicians to provide data for special studies and presentations.

Centra Health

Cancer Care Services

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