

RIVERSIDE CANCER CARE SERVICES

2012 Annual Review



YOU

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On behalf of Riverside Health System and the communities and people we serve, we are proud to present the 2012 Cancer Care Services Annual Review.

It has been a busy and productive year for Riverside Health System's cancer programs. In November 2012, the Riverside Regional Medical Center cancer program was surveyed by the American College of Surgeons Commission on Cancer (CoC) for the 10th time. The program has been accredited by the Commission on Cancer continuously in three-year increments over the past 30 years. In 2011, Riverside Walter Reed Hospital joined the ranks of CoC accredited programs and is the only accredited program on the Middle Peninsula, providing high quality cancer care to rural communities within the region.

Over the past year, our expanding capabilities have gained regional and national recognition for advanced clinical capabilities and continued focus on diagnosis, treatment and follow-up care of patients with cancer. As another example of our ongoing commitment to quality, 2012 also saw the accreditation of Riverside's Diagnostic Center Williamsburg as a "Breast Center of Excellence." This designation marks the second Breast Center of Excellence facility within the Riverside Health System to receive accreditation. Most recently, the program also received re-accreditation for National Accreditation Program for Breast Center (NAPBC).

An essential element in this national recognition, as well as in our ability to deliver exceptional care close to home, is the collaborative, multidisciplinary approach to cancer care that Riverside maintains. The benefits of a team approach to cancer treatment – coordinating your care with a group of medical professionals from different specialties who work together to plan and carry out your treatment – are well established through research studies and years of experience. For that reason, the Riverside Cancer Care team consists of numerous physician specialists and subspecialists along with nurses, radiation therapists, as well as a wide range of other medical and allied health professionals who have specific training and experience in cancer care.

Along with a team approach, we also bring a strong individual focus to every aspect of care. There are many forms of cancer. But there is only one of you. That simple but very important understanding is the basis for Riverside's highly personalized approach to cancer care. You can see it in everything from the leading-edge technology that helps make each cancer diagnosis as accurate as possible to the individualized treatment that factors in a range of medical, psychological, emotional and personal considerations. Carried out by our experienced and skilled team of cancer specialists, every treatment plan is directed to a unique person, not to a disease.

As a result, we don't just treat cancer at Riverside Cancer Care Centers. We treat the cancer that might be affecting you and your family.



SANDY SNAPP
*Service Line Administrator
for Oncology and
Neurosciences*



MARK E. CHISAM, MD
*Oncology Service Line
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SOPHIA MIKAC,
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INTEGRATIVE MEDICINE

Integrative Medicine at Riverside brings together evidence-based complementary therapies with leading-edge cancer treatment. Simply put, Integrative Medicine focuses on the whole person – body, mind and spirit – not just his or her disease. This combined approach to care, particularly where it involves managing the side effects of cancer and its treatment, has been demonstrated to enhance quality of life for a wide range of people, and has become a growing component of the Riverside Cancer Care program that is offered at no cost.

The incorporation of Integrative Medicine as part of the Riverside Cancer Care program is to a large part, the legacy of the late Mark E. Ellis, MD. As a pioneer in combining wellness-oriented, complementary therapies with standard cancer care, Dr. Ellis made Integrative Medicine an important part of his work at the Peninsula Cancer Institute, from where the therapies are now expanding to other Riverside care sites.

The Integrative Medicine team is comprised of certified oncology nurses, palliative care coordinators, certified massage therapists, a certified lymphedema therapist, a registered yoga instructor and a registered dietician, and also includes a music therapy coordinator and pet therapy.

Nurse Coordinator

The process begins when a new patient is introduced to our nurse coordinator who assesses each individual's needs based on their diagnosis and treatment plan. With this assessment, other team members will be included in the customized care plan. Then the patient is given a teaching session where the treatment plan is reviewed and questions and anxieties are addressed. The nurse will also coordinate patient appointments with radiation oncology, surgeons and diagnostic testing as needed.

Dietician

Patients with compromised appetites or poor nutritional status are referred to Riverside's Cancer Care Dietician. Our dietician holds national certification in oncology providing education and consultation regarding food, diet, supplementation and chemotherapy. Each month, in conjunction with the American Cancer Society, our dietician presents "Nutrition and Exercise: During and After Cancer Treatment" to our patients and the community. On average, she meets with 20 patients week addressing their nutritional needs and concerns.



Special Support Services

As an important part of Integrative Medicine, Riverside's Special Support Services include the following resources:

The Family Services Program which provides informational, emotional and logistic support to family members and other personal caregivers as well as for the individual being treated for cancer. This program helps identify community-based services, locate support groups, assist with financial concerns and most important, let care givers know they are not alone; the Patient Navigation Program which relies on skilled and clinically experienced individuals in the specific diagnostic areas of breast cancer, lung cancer, prostate cancer, colorectal cancer and pancreatic cancer to help guide patients and families through the healthcare system in general and the cancer experience in particular. Patient Navigators help with everything from appointments and referrals to transportation and insurance, and offer a comforting presence during tests and treatment; and a Palliative Care Coordinator who serves as a liaison with Home Care and community-based hospice care.

Riverside Special Support Services also include a distress screening tool to better address the many psychosocial needs of patients and families as well as a new Survivorship Program to assist patients with their transition to life after treatment.

Massage Therapy

Our massage therapists provide private full-body massage as well as hand or foot massage during chemotherapy. Documented benefits include stress and anxiety reduction, decrease in pain and a decrease in possible side effects from medical treatments such as nausea, fatigue, constipation, and peripheral neuropathy. Patients report that their time in the massage room is restorative and conducive to an overall sense of wellbeing. Currently, approximately 140 patients per month take advantage of massage therapy to complement their treatment.

Music Therapy

A wealth of scientific research confirms music's role in helping people relax by reducing the perception of discomfort and affecting breathing rate and blood pressure in a positive way. Along with helping to reduce anxiety and depression, music also helps distract from the side effects of treatment. Music therapy is individualized to each patient and is offered through an iPod loaded with personal selections. About 100 patients each month seek music or movies on a DVD player.





Pet Therapy

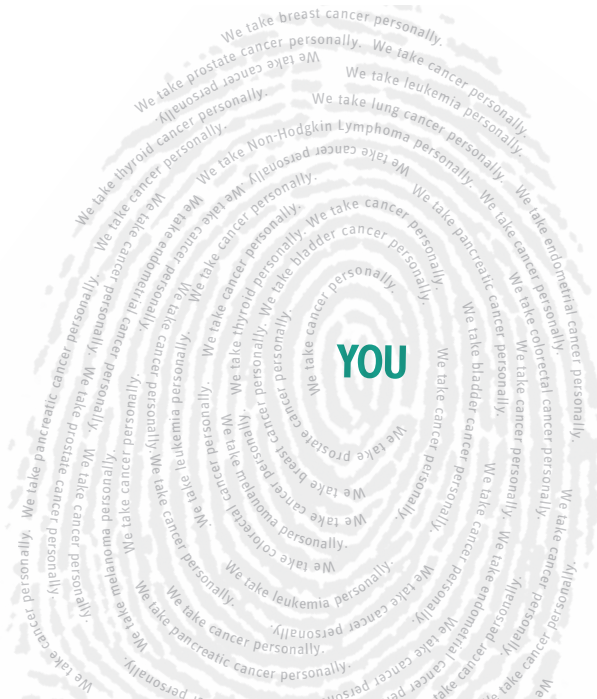
Animals have a long history of providing people with unconditional acceptance, affection and companionship. Pet Therapy at Riverside is provided by our generous and enthusiastic community of volunteers who bring their certified therapy dogs – specially trained to be gentle and comforting around people – to interact with patients to the benefit of both species. There are currently 10 different therapy dogs that visit our facilities on a weekly basis.

Yoga Therapy

Mindful Yoga is a weekly program designed to meet the specialized needs of patients wherever they are in their process of healing. The atmosphere in the yoga class promotes relaxation and rejuvenation. It includes breathing techniques for stress reduction and guided imagery, along with gentle yoga poses that increase flexibility and stamina.

Our commitment at Riverside Cancer Care is to embrace every cancer patient as an individual. It's an essential part of what we mean by taking cancer personally. Integrative Medicine allows us be patient focused and promotes whole patient care and healing, truly providing a comprehensive approach to cancer care. Integrative Medicine is provided by Riverside Health System at no additional cost to the patient. The Mark E. Ellis Endowment Fund was created to provide support for these important services. You can contribute to this fund securely online at www.riversideonline.com/Foundation.

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PREVENTION AND EARLY DETECTION KNOWLEDGE IS POWER

Riverside puts a high degree of importance and value on the health of the many communities it serves. As a regional health system and as individuals who are the human face of that organization, we believe knowledge is a powerful tool for cancer education and prevention. For that reason we make sure that communications and relevant, timely information are important parts of our overall efforts.

Empowering people to use the information our physicians, nurses, other team members and community partners provide is one of the hallmarks of the Cancer Care Program at Riverside. Our hope is that the information that reaches our community is then transferred into action that helps people prevent cancer or find it in its earliest, most curable stages.

As part of this commitment we are very pleased to offer an additional new screening this year. In 2012, Riverside partnered with the Peninsula Health District to offer testicular cancer screening for the first time as a mass screening in our community. We also began a new partnership with Wal-Mart in Gloucester to provide monthly cancer prevention and awareness education. In addition, we also partnered with the Lackey Free Clinic in York County to support a monthly Pap smear and clinical breast examination clinic.

2012 Special Education Initiative

Another important initiative this year was the decision to assist men in the understanding of the controversies surrounding prostate cancer screening. The latest recommendations from the United States Preventative Services Task Force (USPSTF) regarding prostate cancer screening – namely the prostate-specific antigen blood test (PSA) – have launched a series of debates within the medical community. Depending on its position and interpretation of available evidence, each side contends it has evidence of potential harm to the patient if PSA testing is performed – or if it is not performed. But while the controversies circulate in our mass media newspapers and TV news as well as in social media, many men who fit into the risk profile for prostate cancer continue to ask questions about the best approach to follow.

The complexities of determining what's right when it comes to prostate cancer screening can be drilled down to one fact: the American Cancer Society, the American Urological Association and other leaders in prostate cancer education and clinical guidelines agree that there needs to be active involvement by both the concerned individual and his physician.

This shared decision-making process between doctor and patient is essential. Men need to be informed about the screening and the diagnostic process, and take part in deciding the best plan of action on a personal and individual basis. This means an open and interactive discussion related to the risks of testing and treatment – and just



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*Cancer Education /
Outreach Nurse*

as important, the risks of doing neither. Even if the patient participates in the prostate screening process outside of the physician's office, the results and follow-up should include a review and discussion with that physician.

During our prostate cancer screenings in 2012 and other special educational events participants were encouraged to discuss prostate screening with their healthcare provider and share the screening results it that became the chosen approach. Our hope is that this information sharing effort will continue to advance productive dialogue between the patient and physician.

Cancer Outreach Activities throughout our Health System

Each year Riverside participates in a wide range of events in the communities we serve in the Peninsula, Middle Peninsula, Eastern Shore, Southside and Northern Neck regions of Virginia. These outreach activities, which involve our oncology physicians, nurses, radiation therapist and cancer care educators include:

- Pap smear and clinical breast examinations for 539 women during 26 regional clinics; six women were diagnosed with pre-cancerous or early stage cervical cancer and four pre-cancerous or existing breast cancers were diagnosed
- Women's Health Talk – four part series – 130 participants
- Nutrition and Exercise for Women – 49 participants
- Breast and Colon Health Awareness Talk – 32 participants
- Great American Smokeout activities – Reached 38 individuals with cessation kits/
- Colon Cancer Awareness Talk & Outreach activities reached 118 participants
- Skin cancer awareness activities and cancer screening – reached 672 participants; 33 screening participants received referrals for follow-up care
- Prostate Cancer Screenings totaling 63 participants with five undergoing further investigation
- Monthly Nutrition & Activity Classes for the patient and caregiver before, during and after cancer treatment – nine sessions served
- Testicular Cancer Screening. – 20 men were evaluated
- Senior Health Fair Events – Three separate events with 268 participants learning about cancer awareness
- Chincoteague Seafood Festival
- Women's Health Expo, Eastern Shore "*Healing Measures: A Breast Health & Awareness Event*"
- American Cancer Society, CPS3 Study – reached 54 participants who signed up for the study

Breast and Cervix Grant Programs

In 2011-2012 Riverside Cancer Care received the Breast and Cervical Cancer Early Detection (EWL) grant. We are in our 14th year for this grant program which is funded by the Centers for Disease Control and Prevention and managed locally by the Virginia Department of Health. The EWL program offers underserved women, ages 45 to 64, a chance to receive a free Pap smear, clinical breast examination and mammogram while also providing diagnostic follow-up and cancer treatment. The Susan G. Komen for the Cure®, Tidewater Affiliate also funds a grant given

to Riverside that provides mammograms to women not meeting the eligibility requirements for EWL. Together the grants provided over 540 mammograms, 133 Pap smears, 423 clinical breast examinations and 447 individual educational sessions during the 2011-2012 fiscal year.

Community Partnerships

Riverside Cancer Care joins other organizations each year to reach an ever growing portion of the population. As part of this objective we collaborate annually with a number community partners to promote cancer prevention and early detection awareness issues. Some of our partnerships include the work we do with the area's four free clinics, the two local health departments and Brentwood OB/GYN and Brentwood Family Medicine to provide free Pap smears and clinical breast examinations for women on our community. We also are involved in collaborative partnerships with the American Cancer Society (ACS) and the Leukemia and Lymphoma Society (LLS), joining together to work on national and regional cancer initiatives. Riverside Cancer Care is also a member and partner with the Peninsula Cancer Prevention Coalition and the state's Cancer Action Coalition of Virginia.

In 2012 a Cancer Survivorship Conference was held as part of a regional collaborative effort among the two cancer coalitions, ACS, LLS, two other area health care organizations and Riverside. This program provided a day for cancer survivors to come together to share experiences and learn more about the kind of survivorship issues each of them face during and after treatment.



Community Partnerships

Each year Riverside provides support to local cancer-related events throughout the region. This year we participated and partly sponsored a number of area events held by our community partners:

- American Cancer Society, Relay For Life events (eight events)
- Beyond Boobs, Race for the Hills, Breast Cancer 10k (one event)
- Beyond Boobs, "Pedal for a Cure" (one event)
- Junior League of Hampton Roads, Trot for Teal: Women's Reproductive Awareness 5K run (one event)
- American Leukemia and Lymphoma Society, Light the Night- Peninsula (one event)
- Making Strides Against Breast Cancer (one event)
- Take the Time -- Know the Signs: Handbags for Hope (one event)

Survivorship programs and support groups

We recognize the value of people being able to share their personal cancer story with others who have similar experiences. As a result, several groups are available to provide that needed support for cancer patients and their families. Each month a number of cancer support programs gather to meet within some area of the Riverside Health System. All of the support groups are led by trained facilitators, some of which are Riverside staff members.

- Breast Cancer Support Group and Breast Cancer Caregiver Support Group
- Teal Magnolias: Female Reproductive Cancer Support Group
- General Cancer Support Group
- Leukemia and Lymphoma Society Cancer Support Group
- Peninsula Lost Chord Club
- Transitions: A Support Group education the transitioning process after cancer treatment
- American Cancer Society Look Good Feel Better program
- Riverside/ACS Nutrition and Physical Activity During and After Cancer Treatment
- American Cancer Society Cancer Resource Center

Cancer Resource Library

The Cancer Resource Library has been available to members in our community since 1990. The library offers the community, patient or family member a place to learn more about the cancer experience or cancer prevention/early detection measures. Staff is available to help guide visitors through the extensive materials available to them or assist them in finding information on the Internet. Twice a week the library has the American Cancer Society's Cancer Resource Volunteers who provide additional and much needed service to our community.

Tree Branch Boutique

Women suffering from the effects of cancer treatment are welcomed at our boutique for free wig fittings or to receive a hat or scarf. Our trained staff is on hand to assist women in choosing a wig or to teach them how to tie head-scarves. This room also accommodates a place for ACS trained volunteers to meet patients in need of a wig fitting or wig cutting. All head coverings are free and donated by various community groups, the ACS and the Junior League of Hampton Roads.

Partner Spotlight

The American Cancer Society has been a long-standing community partner with Riverside. Together our partnership develops and provides a number of educational endeavors in the communities we serve. These events are based on national and regional ACS standards for 2012 as well as the approved 2012 Oncology Education Plan for Riverside Health System.

Support programs are an integral part of our overall cancer services. Riverside Health System participates in a number of ACS support programs each year. One such effort is the Look Good Feel Better program offering women tips in caring for their skin



during cancer treatment and instruction on how to best utilize scarves and head-pieces during the time of hair loss. This program provides a safe and fun environment for women to share with each other and try new looks. In 2012, Riverside offered 19 classes serving 84 women.

Late in 2011, Riverside welcomed a new ACS service to the Peninsula community – the Cancer Resource Center (CRC). Sharing space with our Cancer Resource Library the CRC volunteers offer a number of education and support services. In 2012 the CRC reached 181 individuals ranking 4th in the South Atlantic Division. The CRC and Cancer Care staff offered assistance in the following programs: Road to Recovery (368 trips provided); Gas cards (257 trips); Reach to Recovery (four referrals) and a number of general information requests. Our CRC volunteers also utilize our Tree Branch Boutique to assist women in free wig and hat fittings. Working together we assisted 88 women with wigs and head coverings over the last year.

In addition, Riverside takes part in the American Cancer Society's annual Relay for Life events. This team-centered series of activities is designed to raise funds and awareness and invites the community to celebrate and remember the lives of people who have battled cancer. These events, which now take place in 20 countries worldwide, also place a spotlight on survivors and caregivers through a special reception. In 2012, 179 Riverside team members participated in nine Relay for Life events across the region.

This year Riverside also participated in the Cancer Prevention Study (CPS-3). This nationwide American Cancer Society epidemiology research study invites men and women between the ages of 30 and 65 years who have no personal history of cancer to join this historic research initiative. The ultimate goal is to enroll at least 300,000 adults from various racial and ethnic backgrounds from across the U.S. Riverside Cancer Care Center assisted enrollment of 54 individuals and will offer additional CPS-3 enrollment dates in the ensuing months.



YVONNE PIKE, M.ED.
*Supervisor
Breast Cancer Navigator*

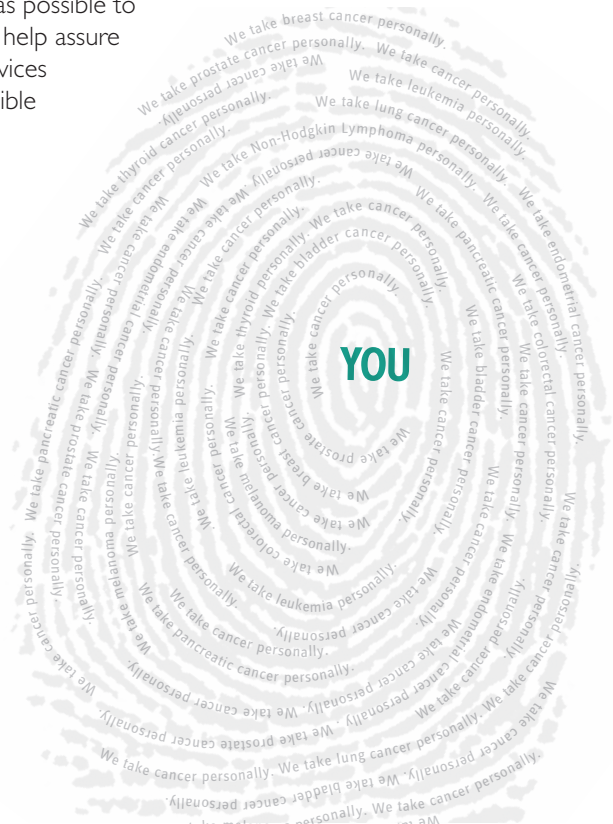
ONCOLOGY PATIENT NAVIGATION

The Riverside Oncology Patient Navigator program began in 2005 with a single Navigator and a simple but very important goal: to help individuals and their care givers manage the sometimes frightening, confusing and overwhelming experience of cancer diagnosis and treatment. While the program, available to patients at no cost, has grown since that time to include four full time Navigators and a more extensive array of services, the commitment to that original goal remains unchanged.

Today, Riverside provides an experienced and specially trained team that consists of breast cancer, prostate cancer, lung cancer and colorectal/pancreatic cancer Navigators. Each of these health and education professionals provides a compassionate and personalized source of support and comfort for patients, care givers and other family members. Along with assistance directly related to cancer care, Oncology Patient Navigators can help with everything from appointments, insurance and transportation issues to financial challenges while also coordinating care with the whole cancer treatment team and accessing a wide range of other Riverside and community-based resources.

“I only have one question. Where does Riverside Cancer Care Health System find these people? They are the nicest, well qualified people I have ever been around. The best! Thanks to all that have made my “bout” with cancer so much easier and understandable. Thanks again.”
—GERALD K. WHITE

Over the past year, the Navigators helped guide over 800 people throughout the Peninsula, Williamsburg and Gloucester areas. With the patient and family always at the center of care, our goal is to reach as many patients as possible to provide needed information, help assure access to treatments and services and support the highest possible quality of life.



CLINICAL TRIALS

The Riverside Health System supports a specialized research program designed to provide our patients with access to the latest clinical trials. Clinical trials in the area of cancer care are research studies that directly involve people and are carried out to identify new ways to prevent cancer, diagnose and treat the disease and manage symptoms. Many of the cancer treatments that are now considered to be the standard of care – and are currently benefiting patients – initially incorporated clinical trials as part of their development. For that reason a discussion about clinical trials may be included in our goal to educate each patient about his or her decision regarding treatment options.

Clinical trials are generally carried out in four separate phases (designated by Roman numerals) each with a different purpose related to the safety and efficacy (effectiveness) of the treatment.

Riverside participates in Phase II, III and IV clinical trials. These phases help determine if the new treatment has an affect on cancer and how it compares to the current standard treatment while also assessing the long-term safety and effectiveness of the treatment. Riverside is participating in National Cancer Institute (NCI) studies as well as network, university and pharmaceutical studies. Targeted chemotherapy trials currently offered include:

- Breast
- Colon
- Lung
- Melanoma
- Ovarian
- Prostate
- Hematological conditions

Clinical trials offer patients an opportunity to try new therapies or existing therapies in combinations that may not otherwise be available to them. Participating in a clinical trial can have many benefits. Each patient is carefully monitored during and after treatment and the information gathered from the study improves our knowledge about cancer and the development of new therapies. In 2011, we enrolled nearly 100 patients in clinical trials.

In 2012, Riverside participated with the American Cancer Society (ACS) in the CP3 Study. This study is looking at cancer-free adults ages 30 - 65 to enroll. They will be monitored and contacted by the American Cancer Society for the next 20 years. This study is designed to track diet, exercise habits as well as other factors that may contribute to an individual's health. Riverside enrolled 54 participants on the Peninsula in this important research.



ORA MAE JACKSON,
RN, OCN
Protocol Manager

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Future growth of our clinical research program includes a partnership with Radiation Therapy Group (RTOG), a national clinical cooperative group funded by the National Cancer Institute to increase survival and improve the quality of life of patients diagnosed with cancer. This new partnership will expand the scope of clinical trials to include radiation treatment.

For further information on clinical trials, please visit riversideonline.com or call (757) 534-5565.

GENETIC COUNSELING

Beginning in 2012, Riverside now offers genetic counseling as part of our full range of Cancer Care programs and services available to the community. Provided by a board certified genetic counselor, this specialized service includes a review of your personal and family history of cancer and can help identify individuals who may be at increased risk for future cancers because of hereditary factors.

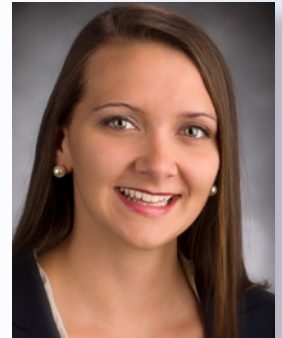
Through the use of easily understandable and clinically relevant information, the genetic counseling program at Riverside seeks to clarify for our patients which cases of cancer are likely related to genetic and hereditary factors and which instances of cancer may be explained by other factors such as lifestyle, environment, or simply chance. Although cancer in its various forms is not uncommon within our population, most cancers are not hereditary.

Since its inception, over 100 individuals have received genetic counseling services that are currently provided to our patients through Riverside locations in Newport News, Williamsburg, the Eastern Shore, and the South Side.

The service starts with our physicians – surgeons, oncologists or primary care physicians – who have the specialized training and tools needed to help identify people who may be at increased risk for hereditary cancer. Once a physician has determined a person could benefit from genetic counseling, I meet with them to provide information on what hereditary cancer “looks like” in a family and how they and their family may or may not fit that picture.

I also help facilitate genetic testing for interested and eligible patients. Genetic testing involves the use of laboratory analysis to obtain a more precise estimate of cancer risk that may help you and your physician make important decisions about your medical care. Deciding whether or not to undergo genetic testing is a personal choice that can be made at the time of the counseling session or at a future date.

Genetic counseling does not require genetic testing and regardless of whether someone receives genetic testing or not, my goal as a genetic counselor is to determine if there are any factors related to the health of an individual and family that should be more carefully managed moving forward. This effort includes a discussion of cancer screening recommendations along with a look at lifestyle factors that can contribute to cancer risk. In addition, I can connect patients with specialists that can assist them with their management needs.



ASHELEY SUPEK,
MS, CGC
Genetic Counselor

“My genetic counseling experience took place after a second breast cancer diagnosis. It was very educational and fact based which left me encouraged, hopeful, and calm. I feel that this counseling was what helped me make my decision regarding surgery and future treatment needs and feel more comfortable and informed about my choice.”

—BRENDA HEARN



JENNIFER BROWN,
BS, CTR
Cancer Registry Manager

CANCER REGISTRY

The Riverside Cancer Registry provides a formalized process for collecting information on cancer diagnoses (cancer type, stage and treatment results) within individual Riverside facilities as well as the Riverside Health System as a whole. The ability to more closely monitor cancer incidence within our health system helps medical and administrative staff determine how Riverside's educational, early-detection and other cancer-related resources and programs can be best directed. In addition, data from the Riverside Cancer Registry is provided to state and national databases each month, contributing to national policies and strategies for cancer prevention and treatment.

Established in 1979, the Riverside Cancer Registry currently holds records on more than 37,000 patients that include not only the initial diagnosis and treatment but lifelong patient follow-up information. In addition to providing valuable geographic, demographic and clinical information related to cancer, the Riverside Cancer Registry is essential to Riverside's designation by the American College of Surgeon's as an accredited cancer center.

During 2012, the Riverside Cancer Registry completed additions and merges to its multi-facility database. Early in the year reports for Riverside Tappahannock Hospital were transferred from the state to the Riverside Cancer Registry department, a change that helps assure more consistent and appropriate reporting to the Virginia Central Cancer Registry. In addition the registry of Riverside Shore Memorial Hospital was merged with the existing Riverside Regional Medical Center and Riverside Walter Reed Hospital databases.

This registry consolidation provides a larger geographic database from which Riverside can mine data to inform qualitative decisions. Because each Riverside hospital facility remains independent in this data collection model, registry staff has the option of retrieving information from individual facilities or from the entire health system.

The Primary Site Table on page 15 displays the caseload outcomes for 2011 at Riverside's three American College of Surgeons Commission on Cancer (CoC) Accredited Programs: Riverside Regional Medical Center, Riverside Shore Memorial Hospital and Riverside Walter Reed Hospital. Of each facility's top 10 sites (where the primary cancer occurred in the body), seven were shared among the three facility locations: Colon, Lung & Bronchus, Breast, Prostate, Bladder, Pancreas and Skin. These sites account for over 80% of each Riverside facility's 2011 total analytic caseload.

As CoC accredited programs, patient follow-up is essential to providing reliable survival statistics. Each facility has exceeded the minimum follow up activities (80%) since its reference date.

FACILITY	REFERENCE YEAR	OVERALL FOLLOW-UP
Riverside Regional Medical Center	1979	92.6%
Riverside Shore Memorial	1996	95%
Riverside Walter Reed Hospital	2007	95%

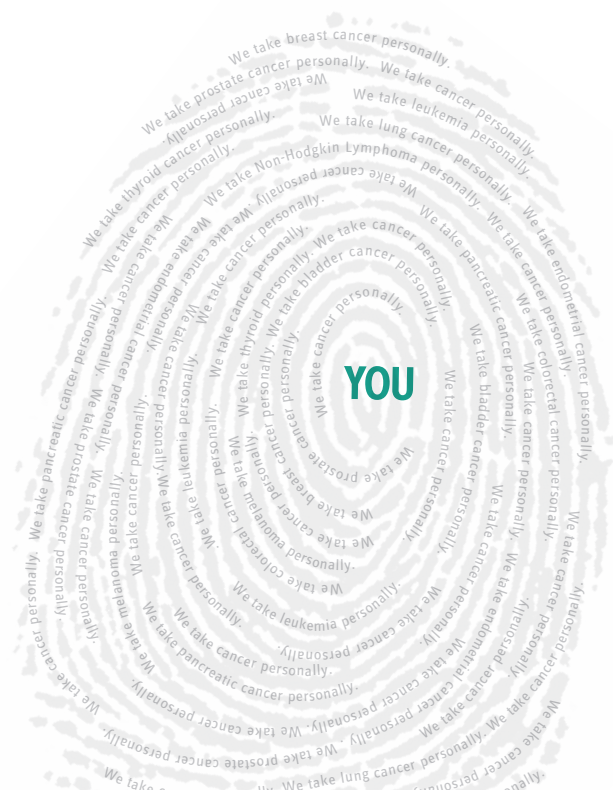
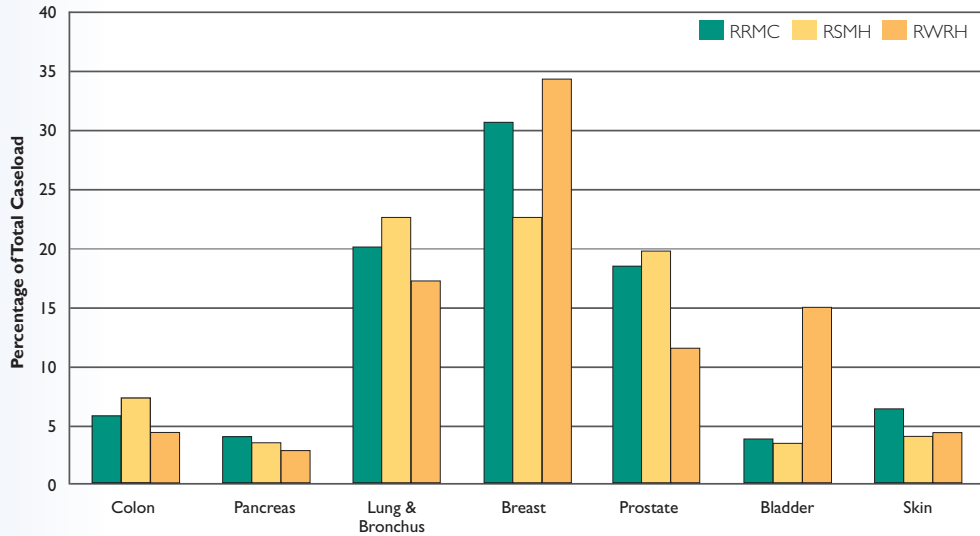
In addition to serving as a significant local, regional and national resource for information, the Riverside Cancer Registry continues to grow to support the mission, vision and values of Riverside Health System.

2011 Primary Site Table for Riverside Cancer Program

Primary Site	RRMC		RSMH		RWRH	
	Total	Analytic	Total	Analytic	Total	Analytic
ORAL CAVITY & PHARYNX	50	41	3	3	13	13
DIGESTIVE SYSTEM	267	222	37	35	25	23
Colon	91	70	14	13	7	6
Rectum	40	33	2	1	5	5
Pancreas	50	48	6	6	5	4
Other	86	71	15	15	8	8
RESPIRATORY SYSTEM	297	256	50	46	33	25
Lung	277	238	44	40	32	24
Other	20	18	6	6	1	1
SOFT TISSUE	10	7	0	0	0	0
SKIN EXCLUDING BASAL & SQUAMOUS	90	73	20	7	5	5
Melanoma	84	68	20	7	5	5
Other	6	5	0	0	0	0
BREAST	409	368	38	37	53	48
FEMALE GENITAL SYSTEM	105	80	22	17	5	4
Cervix Uteri	19	17	4	2	2	2
Corpus Uteri	39	33	10	8	1	0
Ovary	27	22	5	4	2	2
Other	20	8	3	3	0	0
MALE GENITAL SYSTEM	343	229	36	35	27	17
Prostate	332	220	35	35	26	16
Other	11	9	0	0	1	1
URINARY SYSTEM	109	82	11	10	24	21
Bladder	65	44	7	6	23	21
Kidney	42	36	2	2	1	0
Other	2	2	2	2	0	0
EYE & ORBIT	1	1	0	0	1	0
BRAIN & OTHER NERVOUS SYSTEM	54	45	7	5	4	3
ENDOCRINE SYSTEM	45	35	2	2	2	2
Thyroid	29	26	2	2	2	2
Other	16	9	0	0	0	0
LYMPHOMA	84	68	8	7	8	8
Hodgkins Lymphoma	10	10	2	2	1	1
Non-Hodgkins Lymphoma	74	58	6	5	7	7
MYELOMA	42	29	6	6	2	1
LEUKEMIA	41	15	11	10	1	1
MESOTHELIOMA	13	12	0	0	0	0
MISCELLANEOUS	39	25	12	10	7	7
TOTAL	1,999	1,588	263	230	210	178

Figure 1: 2011 Most Common 7 Sites across the Riverside Cancer Accredited Facilities

Of the top 10 sites for each facility these seven were inconsistent across the health system. Combined these sites accounted for over 80% of the total caseload seen.



2011 PROSTATE CANCER STUDY

According to the National Cancer Institute, 16.5% of men born today will be diagnosed with cancer of the prostate at some point during their lifetime. This number can also be expressed as 1 in 6 men. These statistics point to the fact that prostate cancer is an extremely prevalent disease among all male populations with a significantly higher incidence among African-American men.

Recently there has been an increase in the percentage of early stage or low-risk disease in patients studied from 1991 to 2001 as compared from 1989 to 2002. This increase may well be related to more widespread use of the PSA blood test (prostate specific antigen) to detect early stage prostate cancers before symptoms are noted. The overall number of cases of prostate cancer has remained relatively stable, but the age-adjusted death rates for prostate cancer have declined approximately 4% annually from 1994 to 2001. As more data accrues, hopefully this trend will continue.

One of the most important current issues regarding prostate cancer is appropriate treatment of early stage disease. Traditionally, the area of controversy has been regarding surgical resection (radical prostatectomy – the complete removal of the prostate gland and some of the tissue that surrounds it) or definitive radiation therapy (in the form of either interstitial radioactive seed implantation or external beam x-rays). In recent years, all modalities have improved with less toxicity and more precision.

In particular, surgical excision has been improved with the use of da Vinci® robotic system. This robotic-assisted procedure is performed at Riverside Regional Medical Center with highly satisfactory results. Over the past decade it has become, in fact, the most common treatment for prostate cancer performed at Riverside Regional Medical Center. In prostate cancer treatment as in many surgical procedures, the risks of surgery also include the risks of anesthesia. Because prostate cancer is usually diagnosed in an older male population (highest percentage of diagnosis are between ages 60 to 69 according to the National Cancer Data Bank), anesthesia and surgical risks certainly need to be taken into account.

Radiation therapy can be delivered as either external beam radiation or interstitial seed implantation. Interstitial seed implantation requires some time in the operating room, but anesthesia is light and relatively brief. During this time, radioactive seeds of either iodine-125 or palladium-103 are inserted into the prostate using rectal ultrasound for real-time guidance. Radioactive seed implants can be used as a definitive treatment in early stage disease when the risk of prostate capsular extension – a situation where the cancer cells have extended into or through the outer lining of the prostate gland – is very low, or as a boost for higher-grade tumors where external beam x-rays would also be applied to the areas surrounding the prostate itself.

External beam radiation using a multi-field, multi-beam intensity modulated (IMRT) technique is the most commonly employed treatment for prostate cancer at Riverside Shore Memorial Hospital.



MATHEW SINESI, MD
Radiation Oncologist

As mentioned, the age at diagnosis of cancer of the prostate generally forms a bell curve with highest rates in the 60 to 69-year-old group. A total of 121,402 patients were analyzed from 1,374 hospitals by the American College of Surgeons National Cancer Data Bank (NCDB). The NCDB data correlated almost exactly with Riverside data collected at Riverside Regional Memorial Hospital, Riverside Shore Memorial Hospital, Riverside Walter Reed Hospital, and Riverside Tappahannock Hospital. The stage at diagnosis by NCDB was highest at stage 2 with approximately 61% of patients at stage 2. Approximate 77% of patients in the Riverside system were stage 2 with slightly less stage 1 (8.7% versus 19.8%), but less stage 3 (7.2% versus 10% nationally). Overall survival rates appear similar and the Riverside Health System is at least comparable or better in different stage groups.

Another approach to prostate cancer that has been gaining momentum is watchful waiting, the decision to postpone immediate treatment. During this period, patients still require regular exams, PSA tests and possible periodic biopsies to ensure that the cancer is not progressing or progressing very slowly. Specifically, in cases where tumor is felt to be at low risk (PSA level less than 10 and low-grade cancer), watchful waiting, also called active surveillance, can be an option. If PSA blood levels rise at some point, treatment may be initiated, but in some cases, the prostate cancer may stay stable for a number of years. This approach may be especially applicable in patients with comorbidities, other co-existing medical conditions or diseases that are more likely to result in a life-limiting event than prostate cancer would.

For those early stage cancers where prostatectomy or definitive radiation therapy would likely result in similar cure rates, the decision to employ one treatment or another is often left to the patient. Some patients feel strongly that a tumor should be removed from the body and opt for surgery. Other men, concerned about potential surgical complications and wishing to avoid surgery at all costs, opt for radiation treatment, either by external IMRT x-rays or an interstitial seed implant as performed at Riverside Regional Medical Center.

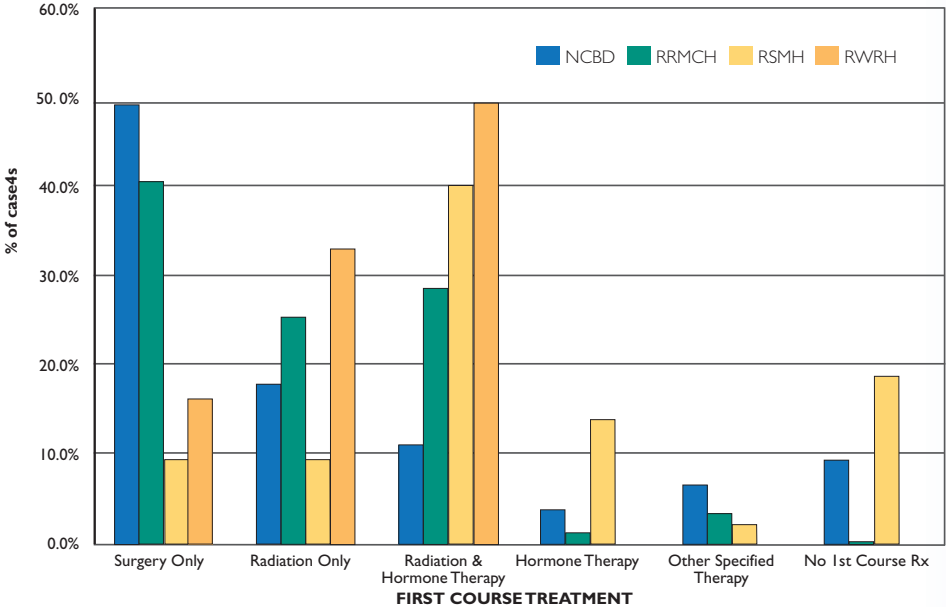
Prostate cancer has a relatively long natural history in patients, and even aggressive cancers that are either metastatic (spreading to other areas away from the original site) at diagnosis or develop metastases later can remain relatively stable over time. Patients can live a number of years with cancer requiring occasional treatment with either anti-androgen therapy (androgen deprivation therapy-ADT, a hormone-related treatment), or spot radiation treatment for any area of metastases causing symptoms. Prostate cancer can spread to any area in the body but has a special affinity for bone tissue. This condition usually results in significant bony pain and/or fracture risk. Radiation therapy is usually employed along with ADT or chemotherapy if the tumor has become hormone resistant.

At all four Riverside Cancer Care locations, patients are treated according to National Comprehensive Cancer Network (NCCN) guidelines so treatment protocols and outcomes can be compared to national standards. When compared to national standards, both local control and overall survival of prostate cancer stage by stage and in different age groups are comparable within the Riverside Health System. Our

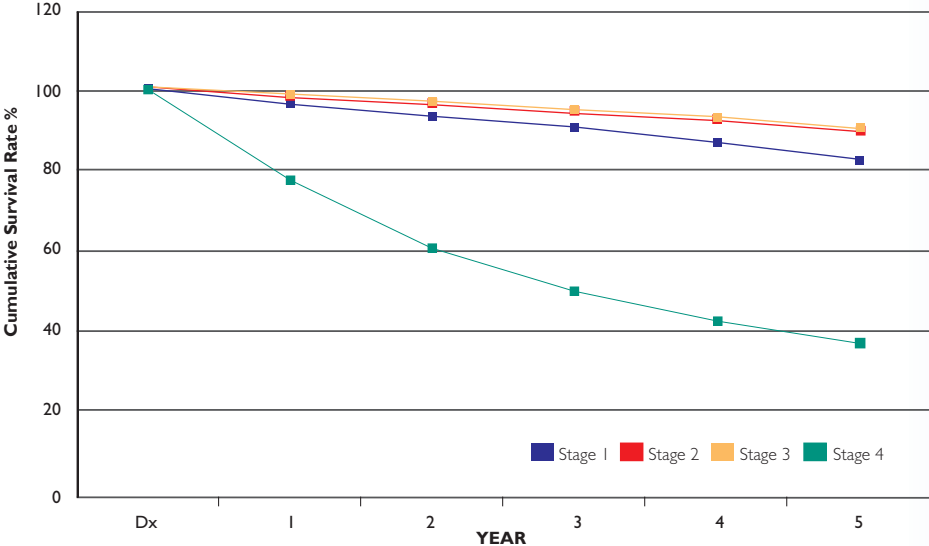
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expectation is that as diagnostic measures and treatment protocols become even more precise, we will be able to discern with increases accuracy which patients require treatment immediately, with which therapy and how closely to follow patients who either opt for watchful waiting or need additional care after treatment. As further efforts continue regarding diagnosis and treatment, Riverside Hospital remains on the cutting edge of prostate cancer therapies.

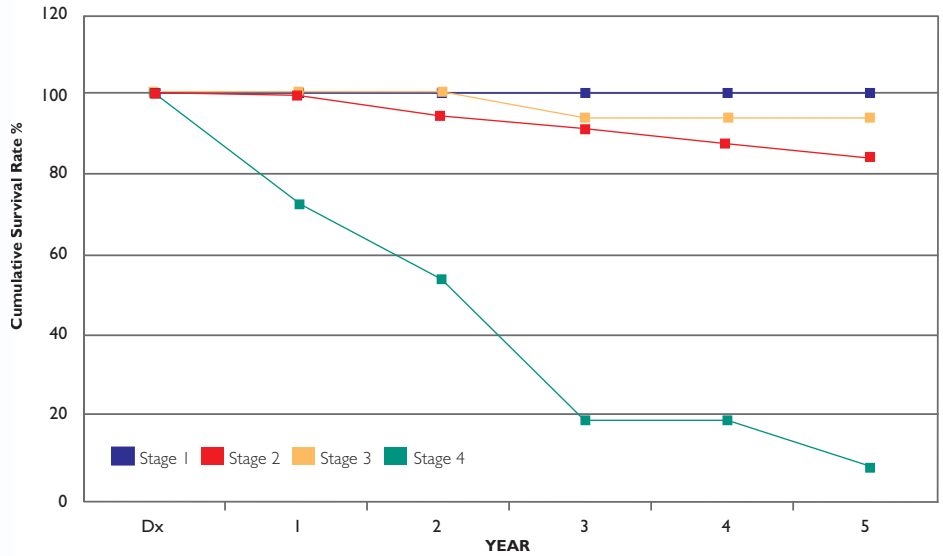
First Course Treatment of Prostate Cancer Diagnosed in 2010 5-year Observed Survival Rate Cases Diagnosed 2003-2005



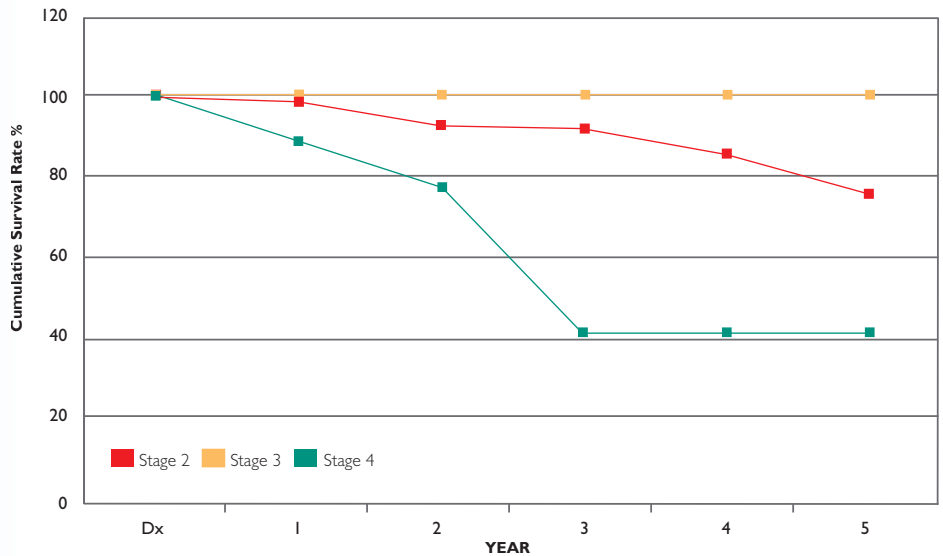
Prostate Cancer National Cancer Data Base 5-year Observed Survival Rate Cases Diagnosed 2003-2005



Prostate Cancer Riverside Regional Medical Center 5-year Observed Survival Rate Cases Diagnosed 2003-2005



Prostate Cancer Riverside Shore Memorial Hospital 5-year Observed Survival Rate Cases Diagnosed 2003- 2005



STEREOTACTIC RADIOSURGERY AT RIVERSIDE

The Riverside, University of Virginia, Chesapeake Regional Radiosurgery Center now enters its seventh year of offering stereotactic radiosurgery, a non-invasive, non-surgical treatment of cancer that uses direct beams of radiation guided by 3-D computer imaging and focused precisely on tumors in the brain and body. Through October 2012, more than 2,000 patients have been treated with radiosurgery at the Center with over 800 individuals treated on the Gamma Knife (used exclusively with cancers or other disorders of the brain), that began in 2006. More than 1,200 people have been treated on the Synergy-S linear accelerator with therapy that began in 2007.

This comprehensive treatment history represents one of the larger utilizations of radiosurgery in the world and the Riverside, University of Virginia, Chesapeake Regional Radiosurgery Center and its staff have been recognized through clinical presentations in Greece, Australia, France, Germany and Russia, as well as multiple presentations within the United States.

The concept of radiosurgery began in 1951 when Swedish neurosurgeon Lars Leksell wrote a paper describing the use of multiple beams of radiation to treat a small tumor volume. After years of research, development and collaboration, the first application of the resulting technology was the Gamma Knife, designed to treat intracranial tumors and other brain abnormalities. This advancement was followed by the development of modified linear accelerators which could deliver stereotactic radiosurgery to the body.

Due in part to its exceptional precision, there is minimal toxicity associated with radiosurgery. In addition, the therapy is more convenient for patients and families and allows resumption of systemic chemotherapy much quicker than fractionated (dividing the radiation dose into several smaller doses) radiation therapy.

The Gamma Knife offers therapy to patients for both benign and malignant cranial tumors as well as functional disorders. Our partner at the University of Virginia has been a leader in Gamma Knife radiosurgery, having had the 4th Gamma Knife in the world installed in 1989. Since that time, they have treated more than 7,000 patients from 54 countries and every state and have generated over 300 publications. Approximately 50% of the work done currently on the Gamma Knife is treatment of brain metastases, the spread of cancer from a primary site into the brain.

The Gamma Knife has clearly been shown to offer improved local control with tumor responses of greater than 80%. Fifty-four percent (54%) of patients treated for brain metastases demonstrate a volume reduction of 44% or greater. The current clinical investigations for Gamma Knife involve treating patients with multiple metastases (greater than five) as emerging literature demonstrates that the volume of tumor is a more important prognostic factor than the number of brain metastases.



C. Ronald Kersh, MD,
FACP
**RADIATION
ONCOLOGIST**

Gamma Knife radiosurgery can also be used for multiple benign and vascular lesions including arteriovenous malformations, acoustic neuromas, meningiomas, pituitary adenomas, and trigeminal neuralgia. At Riverside we have extensive experience with all of these tumors and abnormalities.



With regard to extracranial radiosurgery, the predominant uses currently at Riverside involve spinal and lung radiosurgery. Spinal metastases remain a major problem in malignancy with greater than 180,000 cases diagnosed in the United States each year with pain and neurologic compromise a major problem. An analysis of both our data and the University of Virginia data reveals that patients treated to the spine with three fractions of radiosurgery usually given one week apart demonstrate a pain relief of 88% and a tumor control rate of 90%. This appears to be a long-lasting response, and treatment of isolated spinal metastasis with radiosurgery comprises approximately 35% of our treatment population.

The Riverside, University of Virginia, Chesapeake Regional Radiosurgery Center has been honored to be a participant in the Elekta Spine Radiosurgery Group which includes an international research consortium from the University of Pittsburgh Medical Center, the University of Virginia, Wurzburg, Germany, the Princess Margaret Hospital in Toronto, and the William Beaumont Hospital in Detroit. We have also had three national presentations at the American Society of Therapeutic Radiology and Oncology.



Lung stereotactic radiosurgery has become an increasing component of our work at Riverside. Radiosurgery can be utilized in medically inoperable stage T1 and T2 lesions, isolated PET scan lesions, patients who have received prior external beam radiation, and patients with oligometastatic disease. Current clinical results with 3-4 fractions of stereotactic radiosurgery for early stage lung cancer demonstrate long-term control rates of greater than 85%. Our analysis reveals a control rate of 91%.

Other tumors that can be successfully managed with radiosurgery include primary and metastatic liver tumors. Treatment of liver tumors demonstrates a 1-year local control rate of 92% with this noninvasive technique.

We have presented data on our gynecologic cancer patients, who have previously undergone external beam radiation at the International Gynecologic Cancer Society which was held in Prague in 2010, and our data demonstrated a response rate of 94% with complete response of 47% and a partial response of 47% noted. There were minimal complications observed in this high-risk population. Other tumor sites which have been investigated include metastatic adrenal gland tumors, pancreatic cancer, and from an investigational standpoint, carcinoma of the prostate.

In summary, the radiosurgical program at Riverside has rapidly evolved into a significant treatment and information dissemination resource for the region and beyond. A majority of tumors treated demonstrate a response rate greater than 80% with minimal morbidity. As tumor imaging continues to improve even more, we feel that the future for stereotactic radiosurgery is limitless.



DEBBIE ATKINSON
*Executive Director
Riverside Health System
Foundation*

RIVERSIDE HEALTH SYSTEM FOUNDATION

Critical support for Cancer Care initiatives

Since its creation in 1999, Riverside Health System Foundation has inspired hope and contributed to the health and wellbeing of the many communities that Riverside serves throughout southeast Virginia. As part of its mission to provide philanthropic support for services and programs that would not be possible without the generous contributions of individuals, families, organizations, corporations and private foundations, the Riverside Health System Foundation helps support initiatives that are specific to Riverside Cancer Care including the two funds highlighted below:

The Tree of Life Cancer Care Fund: This specialized resource within the foundation includes community outreach and education efforts, screening and prevention programs, facility enhancements and immediate patient assistance support. The fund also has a particular focus on helping women who can't afford a mammogram gain access to this important screening.

The Dr. Mark E. Ellis Endowment Fund for Cancer Care Advancement: Honoring the late Riverside medical oncologist and Integrative Medicine pioneer, Mark E. Ellis, MD, this fund was developed to help assure that the benefits of Integrative Medicine are available to individuals receiving treatment at the Riverside Cancer Care Center. The ultimate goal is to offer Integrative Medicine at every Riverside location where people seek treatment. While these services (See page 2) have been found to both enhance patient experiences and improve clinical outcomes, they are not reimbursable through most insurance coverage. As a result, support from this endowment is essential in sustaining Integrative Medicine as an important component of cancer care services.

Both of these funds provide an opportunity for personal and organizational generosity as well as a chance to turn a vision of "giving back" into a reality. Gifts to these funds are tax-deductible to the fullest extent allowed by law. For more information please call (757) 234-8740.

ONCOLOGY COMMITTEE

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Medical Oncology	Dr. Yousef	Dr. Khalil	Dr. Stith
Radiation Oncology	Dr. Layser	Dr. Pinn Bingham	Dr. M. Sinesi
Surgeon	Dr. Billings	Dr. Schursky	Dr. Weisner
Radiologist	Dr. Stoldt	Dr. Schengber	Dr. Fritz
Pathologist	Dr. Schwartz	Dr. Helwig	Dr. Kaye
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Nutrition	Kathy McAdoo		
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Patient Navigation	Yvonne Pike	Yvonne Pike	
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Cancer Conference			
Coordinator	Pauline Shofner	Jennifer Brown	Dr. Stith
Administration	Sandy Snapp	Sandy Snapp	Joseph Zager
Pastoral Care	Dean Luther		
Rehab Services	Heather Blair	Sean Schwarting	
OCN Nurse	Kim Monroe	Pat Emerson	Tina Churn

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