Virtua Fox Chase Cancer Program 2010 Annual Report Message from the Medical Directors

The Virtua Fox Chase Cancer Program (VFCCP) serves Burlington, Camden and Gloucester counties and their surrounding communities in central and southern New Jersey. Virtua proudly integrates the hospitals of Virtua in Mt. Holly, Marlton, Voorhees, Berlin and the newly opened Washington Township facility.

This year the Virtua Fox Chase Program received full accreditation with commendation following its triennial survey conducted by the American College of Surgeons Commission on Cancer (CoC). Accreditation by the CoC is only awarded to facilities that commit to provide the best in cancer diagnosis and treatment and are able to comply with the CoC rigorous standards. Obtaining CoC accreditation ensures that patients receive:

- Quality care close to home by a multidisciplinary team;
- Comprehensive care offering a range of state of the art services and equipment;
- Access to cancer-related education:
- Access to clinical trials and new treatment options;
- Ongoing monitoring and improvement of care to patients.

Virtua offers a wide array of surgical oncology expertise in colorectal surgery, breast cancer surgery, urologic surgery, gynecologic surgery, otolaryngotic surgery and spine surgery. Interventional radiology facilities are available at all hospital sites. Radiation oncology facilities and medical oncology practices are also available throughout our service areas.

This year 23 physicians were appointed to the Virtua Fox Chase Adjunct Faculty Panel. This panel represents rigorous standards developed by Virtua and the Fox Chase Cancer Center (FCCC) in Philadelphia. All of these physicians collaborate with FCCC physicians on education, research and care coordination.

In 2010, VFCCP continued to achieve and surpass its goals and objectives including:

- Expansion of Virtua Fox Chase joint ventures with the opening of the Washington Township Radiation Oncology facility;
- American College of Radiology Accreditation at its radiation oncology facilities;
- Implementation of robot-assisted surgery at Virtua Memorial;
- Expansion of nurse navigation services which now includes: breast, thoracic, colorectal and gynecologic oncology patients;
- Continued expansion of Virtua Genetics Risk Assessment Program to include colorectal, breast, uterine and ovarian risk and was newly established as a clinical site for Arcadia University Genetic Counselor students;

- Ongoing collaborative development with the Surgery Program of Excellence in Virtua approved Oncologic Surgery Physician Panels in Breast, Colorectal and Thoracic surgery
- Continued growth in the clinical research program, exceeding CoC accrual standards
- Expansion of Oncology Social Service Program with the addition of a gynecology oncology support group; newly established as a clinical site for Rutgers social work students.

The 2010 Annual Report describes details of our Cancer Program and Cancer Registry statistics. This year's Site Study focuses on an in-depth review of endometrium cancer by Randolph Deger, MD.

As we look forward to another exciting year in 2011 with new programs and plans, we wish to thank all the participants of the VFCC Program and Fox Chase Cancer Center for their commitment to excellence in cancer care for all the communities we serve.

Sincerely,

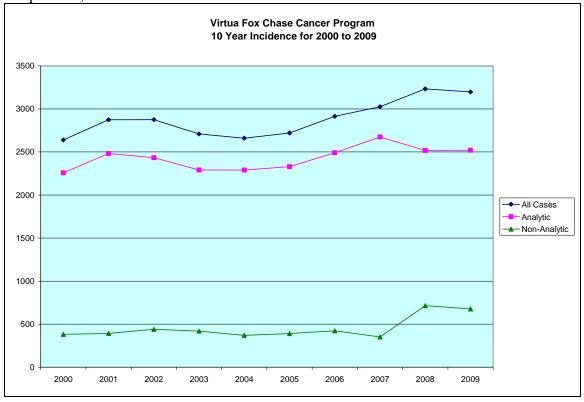
Stephen G. Wallace, MD Medical Director Oncology Program of Excellence Virtua Memorial Ashok Bapat, MD Medical Director Oncology Program of Excellence Virtua Voorhees

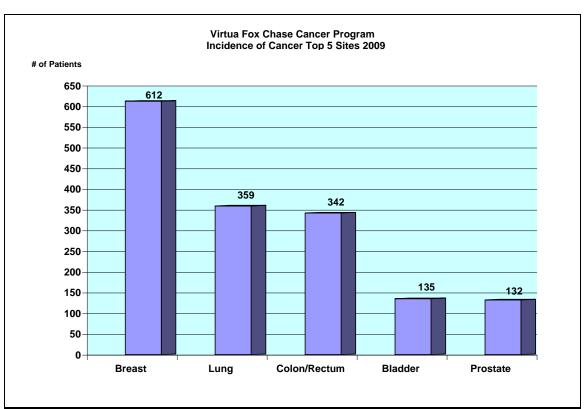
Virtua Fox Chase Cancer Program Cancer Registry Report

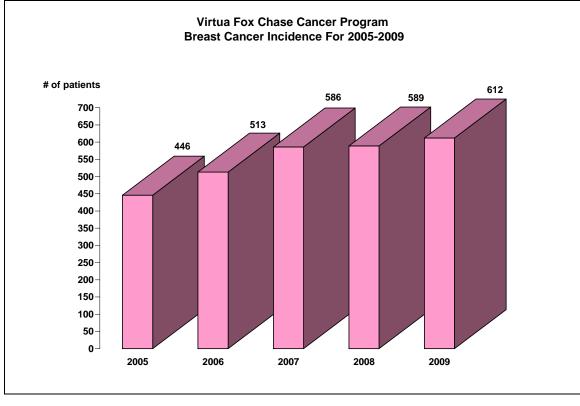
The Cancer Registry is the component of the cancer program that is responsible for the accurate, timely collection of cancer patient data which is used for the evaluation of patient outcomes. Additionally, the Cancer Registry coordinates many of the activities of the Virtua Fox Chase Cancer Program (VFCCP) and our participation as one of the American College of Surgeon's (ACoS) Commission on Cancer (CoC) accredited programs. In April 2010 the Commission on Cancer surveyed the VFCCP and awarded Virtua a three year accreditation with commendation. The CoC establishes standards to ensure high quality, multi-disciplinary and comprehensive cancer care delivery in hospitals through out the United States. It grants accreditation only to those facilities that have voluntarily committed to provide the best in cancer diagnosis and treatment and are able to comply with their rigorous standards.

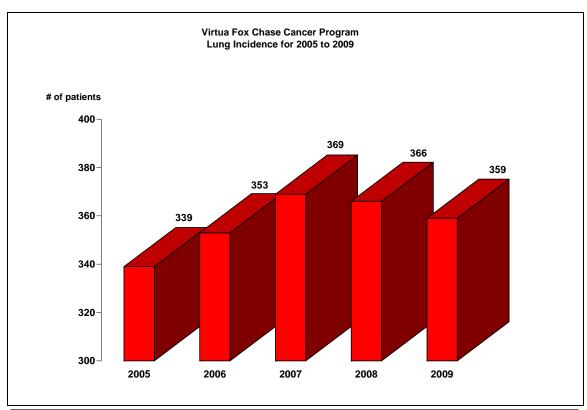
The Cancer Registry is the primary source of data included in the Virtua Oncology Dash Board which benchmarks Virtua's clinical outcomes against national standards. This year, Virtua's Oncology Quality Dashboard included clinical quality measures endorsed by the National Quality Forum (NQF), American College of Surgeons (ACoS) and the National Comprehensive Cancer Network (NCCN); the National Accreditation Program for Breast Centers (NAPBC) and the Oncology Roundtable.

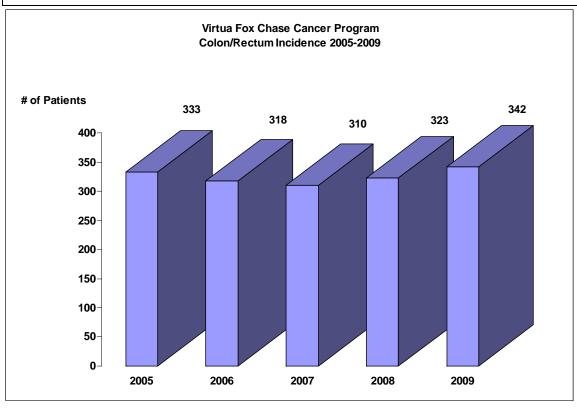
During 2010, the Cancer Registry collected data on 2,521 analytic and 677 non-analytic cases. Breast, prostate, lung, colorectal and bladder cancer remain the most frequently seen sites at Virtua comprising 62% of the analytic cases accessioned into our database. The individual breakdown of cases is as follows: 24% breast, 14% lung, 14% colorectal, 5% prostate, and 5% bladder.

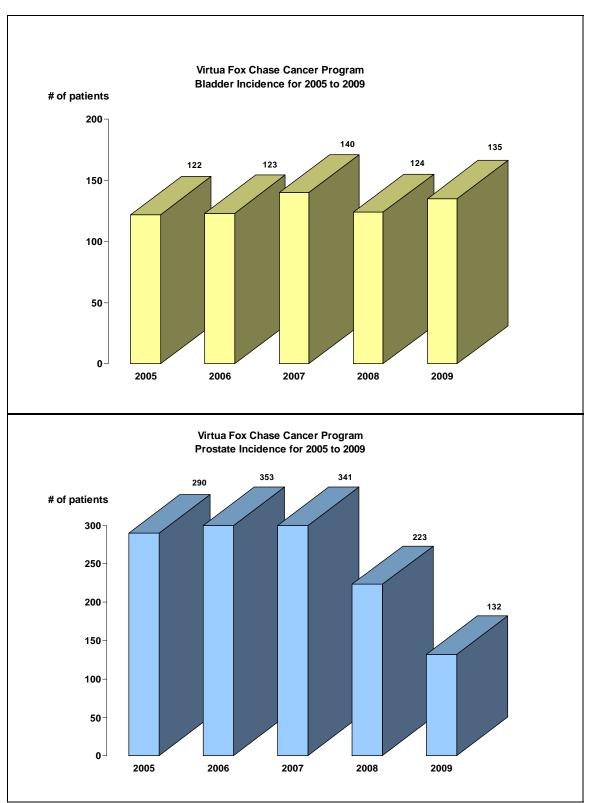












The Cancer Registry is staffed by a total of seven tumor registrars two of whom serve as team leaders covering the Virtua hospital system. All of the cancer registrars are certified by the National Cancer Registrars Association (NCRA) and are active members of NCRA as well as the Oncology Registrar Association of New Jersey (ORANJ). The

entire staff has maintained professional competencies by attending multiple training sessions sponsored by NCRA and ORANJ.

Medical oncologists, radiation oncologists, surgeons and pathologists perform rigorous quality assurance activities throughout the year reviewing cases accessioned in the Cancer Registry for accuracy, completeness and timeliness.

Weekly Cancer Conferences are held at the Virtua Memorial and Virtua Voorhees campuses. Cases are discussed in a multi-disciplinary format with the majority presented for consensus prospective treatment decisions. Guest speakers from Fox Chase Cancer Center as well as other renowned oncologists participate in cancer conferences on both campuses. Site specific breast, thyroid, urology, and gynecologic oncology cancer conferences are held at Virtua as well.

The Cancer Registry responds to a multitude of data requests annually, supporting physicians, hospital administration and other components of the Virtua Fox Chase Oncology Program including clinical research, the nurse navigation program and the high risk programs.

Fox Chase Virtua Health Cancer Program											
Analytic* Cases - 2009						AJCC* Stage					
	Total Cases	Males	Female	0	1	2	3	4	UNK	N/A	
Total Analytics:	2521	995	1526	237	599	464	274	459	245	243	
Oral Cavity & Pharynx	30	23	7	0	2	4	5	11	8	0	
Digestive											
Esophagus	24	22	2	0	1	2	1	13	7	0	
Stomach	36	24	12	1	3	1	4	16	7	4	
Small Intestine	14	9	5	0	3	1	1	0	1	8	
Colon (excl Rectum)	243	115	128	17	49	56	48	51	18	4	
Rectum & Rectosigmoid	99	54	45	9	25	15	18	22	7	3	
Anus, Anal Canal	10	3	7	0	0	2	1	3	3	1	
Liver/Intrahepatic Bileduct/Other Biliary	31	18	13	0	2	3	1	5	19	1	
Gallbladder	7	2	5	1	1	2	0	3	0	0	
Pancreas	68	33	35	0	5	14	2	33	14	0	
Retro & Peritoneum/Omentum/Mesent	3	0	3	0	0	0	0	0	1	2	
Other Digestive	1	0	1	0	0	0	0	0	0	1	
Respiratory											
Nose, Nasal Cavity & Middle Ear	2	0	2	0	0	0	0	0	1	1	
Larynx	20	15	5	1	11	2	1	4	1	0	
Lung/Bronchus	359	174	185	1	72	12	82	161	28	3	
Trachea, Mediastimun, Pleura \$ Other	0	0	0	0	0	0	0	0	0	0	
Bones & Joints	1	0	1	0	1	0	0	0	0	0	
Soft Tissue incl Heart	19	4	15	0	3	0	0	10	2	4	
Skin											
Melanoma	25	12	13	1	9	5	1	6	3	0	
Other Non-epithelial Skin	2	0	2	0	1	0	0	1	0	0	
Breast	612	3	609	121	215	172	58	32	14	0	
Female Genital											
Cervix	17	0	17	0	4	1	1	5	6	0	
Corpus & Uterus, NOS	87	0	87	1	43	11	7	5	15	5	
Ovary	41	0	41	0	7	2	10	15	7	0	
Vagina	0	0	0	0	0	0	0	0	0	0	
Vulva	5	0	5	0	1	2	1	0	1	0	
Other Female Genital	0	0	0	0	0	0	0	0	0	0	
Male Genital											
Prostate	132	132	0	0	1	109	5	7	10	0	
Testis	8	8	0	0	4	4	0	0	0	0	
Penis	2	2	0	1	1	0	0	0	0	0	
Other Male Genital	0	0	0	0	0	0	0	0	0	0	
Urinary											
Bladder	135	100	35	77	21	12	1	10	14	0	
Kidney/Renal Pelvis	86	49	37	3	44	8	6	11	14	0	
Ureter	2	1	1	2	0	0	0	0	0	0	
Other Urinary Organs	2	2	0	0	0	1	0	0	1	0	

Brain & Central Nervous System	39	16	23	0	0	0	0	0	0	39
Endocrine										
Thyroid	89	27	62	1	39	4	6	6	33	0
Other Endocrine	4	4	0	0	0	0	0	0	0	4
Lymphoma										
Hodgkin	9	6	3	0	2	2	2	3	0	0
Non-Hodgkin	79	43	36	0	27	16	11	20	5	0
Myeloma	19	7	12	0	0	0	0	0	0	19
Leukemia	37	22	15	0	0	0	0	0	0	37
Mesothelioma	17	14	3	0	2	1	1	6	5	2
Kaposi Sarcoma	0	0	0	0	0	0	0	0	0	0
Other/Unknown/Uncertain Malig	105	51	54	0	0	0	0	0	0	105

^{*}Analytic: Newly dx and/or 1st treated at this institution

^{**}AJCC: American Joint Committee on Cancer

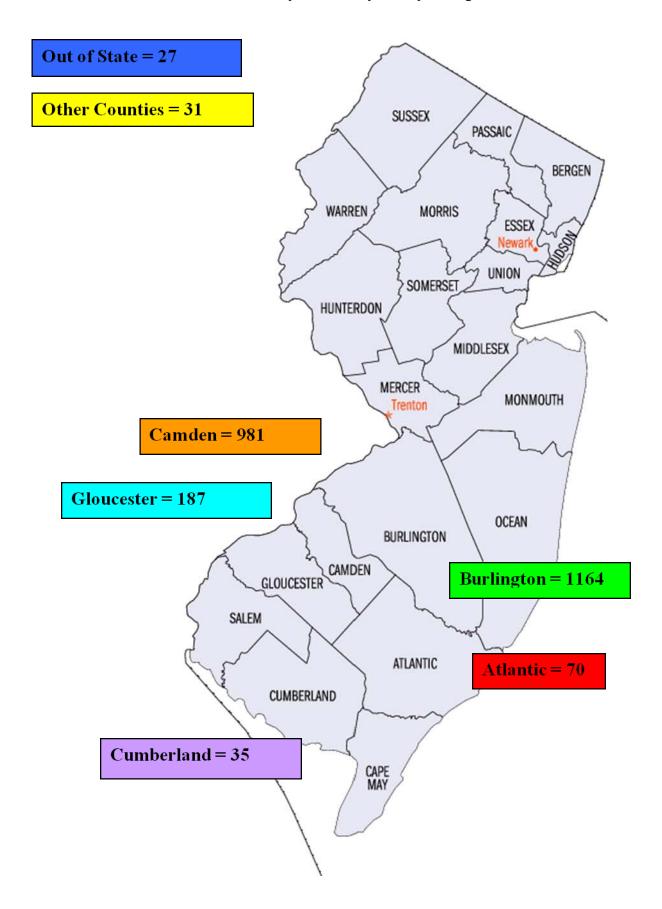
VIRTUA FOX CHASE CANCER PROGRAM

Analytic Case Comparison 2005 - 2009

	2005	2006	2007	2008	2009
Total Analytic Cases:	2330	2491	2674	2518	2521
Oral Cavity & Pharynx	34	26	33	19	30
Digestive	0-1	20	00	10	
Esophagus	23	15	26	23	24
Stomach	19	37	28	33	36
Small Intestine	10	10	14	16	14
Colon (excl Rectum)	236	230	233	230	243
Rectum & Rectosigmoid	97	88	77	93	99
Anus, Anal Canal	6	6	12	14	10
Liver/Intrahepatic Bileduct/Other Biliary	25	24	34	30	31
Gallbladder	7	12	11	5	7
Pancreas	50	39	66	50	68
Retro & Peritoneum/Omentum/Mesent	4	5	3	8	3
Other Digestive	1	1	2	2	<u></u>
Respiratory		I			1
Nose, Nasal Cavity & Middle Ear	1	5	3	0	2
Larynx	11	21	23	18	20
Lung/Bronchus	339	353	369	366	359
Trachea, Mediastinum, Pleura & Other	1	0	2	1	<u></u>
Bones & Joints	1	2	1	1	1
Soft Tissue incl Heart	10	16	16	10	19
Skin	10	10	10	10	13
Melanoma	27	18	29	15	25
Other Non-epithelial Skin	6	7	4	3	23
Breast	446	513	586	589	612
Female Genital	440	313	300	309	012
Cervix	16	16	24	14	16
Corpus & Uterus, NOS	82	95	93	91	87
Ovary	50	48	42	44	41
•	4	1	3	0	0
Vagina Vulva	6	14	10	9	5
Other Female Genital	3	2	2	4	0
Male Genital	3			4	
Prostate	290	353	341	223	132
Testis	10	11	14	15	8
Penis	0	2	14	2	2
Other Male Genital	0	1	0	0	0
	U	I	U	U	
Urinary Bladder	122	123	140	124	135
				+	
Kidney/Renal Pelvis	60	63 7	72	89	86
Ureter Other Hringry Organs	3		5	3	2
Other Urinary Organs	3	3	2	3	2
Brain & Central Nervous System Endocrine	18	30	25	30	39

Thyroid	85	70	87	65	89
Other Endocrine	9	7	3	8	4
Lymphoma					
Hodgkin	21	11	13	12	9
Non-Hodgkin	78	82	92	94	79
Myeloma	16	21	25	11	19
Leukemia	25	30	19	38	37
Mesothelioma	7	6	10	17	17
Kaposi Sarcoma	2	0	0	0	0
Other/Unknown/Uncertain Malig	66	67	79	96	105

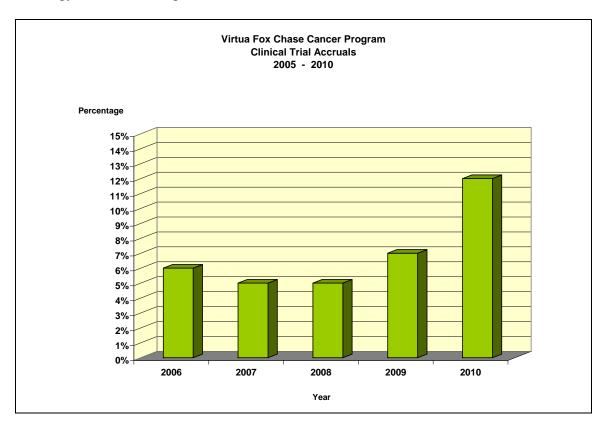
Virtua Fox Chase Cancer Program 2009 Analytic Cases By County at Diagnosis



Virtua Fox Chase Cancer Program 2010 Annual Report Clinical Research Report

The Virtua Fox Chase Cancer Program (VFCCP) has a robust clinical research program, participating in national cooperative group trials through Fox Chase Cancer Center (FCCC) in Philadelphia. We are one of a select group of community-based hospitals in New Jersey and Pennsylvania whose cancer programs are affiliated with FCCC. Virtua was chosen to be part of this network of community cancer programs by consistently demonstrating outstanding cancer-care standards and supporting an infrastructure needed to offer clinical trials. This affiliation allows Virtua patients to have access to the latest advances in cancer care, treatment and research.

The Virtua Fox Chase Clinical Research Program is staffed by a Registered Nurse, two Clinical Research Associates and a Clinical Research Assistant. The research staff works closely with our physician clinical investigators to ensure the best clinical trials with the latest treatment options are available for our patients. A Research Review Committee comprised of our principal investigators meets monthly to discuss and recommend new trials to the Institutional Review Board (IRB) for approval. Currently, there are 62 oncology clinical trials open at VFCCP.



♦ As of December 1, 2010 12% of Virtua analytic cancer patients were accrued to clinical trials. We continue to far exceed commendation level of the CoC's standard of enrolling over 4% of analytic oncology patients annually in clinical trials. Analytic refers

to those patients that have been diagnosed or received their first course of treatment at Virtua.

- ♦ From January 1, 2010 to December 1, 2010, 297 oncology patients have enrolled in clinical trials available through VFCCP.
- ♦ VFCCP participates in multiple national cooperative groups including: Eastern Cooperative Oncology Group (ECOG), Radiation Therapy Oncology Group (RTOG), and American College of Surgeons Oncology Group (ACOSOG), Clinical Trials Support Unit (CTSU), and Gynecology Oncology Group (GOG).
- ♦ Information is available for patients and staff about Virtua's oncology clinical trial offerings on the Virtua web site (www.virtua.org) and on New Jersey Cancer Trial Connect (www.njctc.org).

Prevention Trials

- ♦ The High Risk Assessment Program is designed to help women learn about their risk factors associated with breast and ovarian cancer. In collaboration with Fox Chase Cancer Center, eligible individuals receive the opportunity to participate in a variety of studies such as new screening methods, genetic testing for research purposes and cancer prevention trials.
- ♦ 111 participants have been accrued through the High Risk Assessment Program from January 1, 2010 through December 1, 2010.

To learn more about clinical trials or find out about open prevention and treatment studies available at the Virtua Fox Chase Cancer Program, call 1-888-Virtua-3 or visit our Virtua website www.virtua.org

Oncology Services

Advancing oncology care through education and coordination of care

Breast Care Program

The Breast Care Program is specifically designed to meet the needs of patients through the entire continuum of breast care. The program was established to support our growing Women's Health Program of Excellence, for patients seeking breast care at our institutions, and to provide greater access and enhanced services to patients in our community. Virtua offers a full range of comprehensive clinical services from prevention and screening, through cancer diagnosis, multi-modality therapy, and supportive services. Under the direction of Dr. Eric J. Miller and Dr. Diane R. Gillum, Virtua's Breast Care Program strives to provide innovative, integrated, high quality oncologic care. Virtua strongly believes in a multidisciplinary team approach to breast cancer care that includes the patients and their families, physicians, nurse navigators, support from licensed clinical oncology social workers, genetic counselors and health care professionals who specialize in all aspects of breast care. In 2009, Virtua's Breast Care program achieved accreditation from the National Accreditation Program for Breast Centers (NAPBC), passing all 27 standards.

The goals of the breast navigation program are to support physicians in achieving optimal clinical outcomes, enhance communication between the various disciplines and referring physicians, and improve patient satisfaction. It allows for more efficient use of physician time spent with patients and ensures timely delivery of services. To date, over 3000 patients have been navigated through Access Navigation. Access Navigation assists patients in obtaining prompt appointments with a breast surgeon for evaluation. Over 1100 patients have been enrolled in the Nurse Navigation Program. The nurse navigators are oncology nurses with additional training in breast health and breast cancer care. Breast care nurse navigators are available to newly diagnosed patients to assist with education, support and access to resources. This program has received excellent feedback from patients, their family members, and referring physicians with overall patient satisfaction scores of 98%.

Patient education and community outreach are important components of the Breast Care program. Many breast cancer educational programs are provided free to the community. Funding from Susan G. Komen Foundation also helps support the program's navigation program.

Other Oncology Nurse Navigation Services

Virtua's Navigation Program has been recognized as best practice by Fox Chase Cancer Center and the Association of Community Cancer Centers. In 2010 we have expanded our oncology nurse navigation services to include thoracic, colorectal, and gynecological cancers. To date, the thoracic and colorectal navigation programs have overall patient satisfaction of 95% and 100% respectively.

Oncology Social Services

During 2010, the oncology social workers joined the multidisciplinary medical team during weekly case conferences and weekly Radiation Oncology Rounds at Voorhees, Memorial, and Washington Township as well as bi-weekly cancer conferences at Memorial.

The oncology social workers provide individual counseling to patients and their families. Specialized counseling services are available for children of cancer patients through the "Hand in Hand" Children's Counseling Program. Patients are referred to appropriate community resources, particularly through the use of the Oncology and Community Resource Guide developed and distributed by the oncology social workers. The oncology social workers recommend and facilitate psychiatry referrals when indicated and develop, implement, assess and facilitate oncology support groups for breast cancer patients, caregivers of oncology patients support group and, most recently, a gynecologic oncology patient support group. Cancer survivorship needs have been addressed by individual counseling and the implementation of cancer survivorship community workshops through partnerships with the Living through Cancer and Susan G. Komen organizations.

In 2010, clinical supervision was provided to MSW students from Rutgers University. There has been an initiative to collaborate with Rutgers to precept MSW 2nd year students in oncology programs i.e. breast support groups, radiation therapy, counseling, etc. Oncology Social Workers also collaborated with the inpatient nursing staff to support children of terminally ill cancer patients at bedside and has developed a training seminar to present to the staff. The Virtua Social Work program presented "Psychosocial Care of Cancer Patients" at the Philadelphia College of Osteopathic Medicine. Additionally, the Oncology Social Workers are collaborating with Samaritan Hospice to develop a Palliative Care Resource handbook.

Virtua Fox Chase Cancer Program Cancer Genetics Report

While 90 percent of cancer cases occur due to lifestyle, environmental or aging factors, five to 10 percent of cancers are passed down from generation to generation. If you or your family members have been diagnosed with colon, breast, ovarian or uterine cancer, you could be at increased risk for developing those cancers. In 2003, through our partnership with Fox Chase Cancer Center, we developed our Cancer Genetics Program. The program began with a focus on hereditary breast and ovarian cancer syndromes and in 2009 expanded into gastrointestinal and other adult cancer genetic syndromes. The volume of patients that has been in our program has increased year after year.

	2003	2004	2005	2006	2007	2008	2009	2010
TOTAL NEW	12	16	58	28	67	175	287	254*
VISITS								

^{*} Visits 1/1/10-12/22/10

Breast and ovarian cancer

Genetic tests are available for hereditary breast cancer and ovarian cancer. Among them are the most common hereditary breast cancer syndromes involving the BRCA1 and BRCA2 genes. When genetic testing is completed and an alteration is found in one of the identified genes, an individual's risk for developing certain types of cancer is significantly increased. For women, there is an increased risk for developing breast and/or ovarian cancer. For men, there is an increased risk for breast and prostate cancer. In addition, men and women who have already been diagnosed with these cancers are at increased risk for developing a second cancer.

Colorectal cancer

Genetic tests are available for hereditary colon cancer. Common hereditary cancer syndromes include Lynch Syndrome and familial adenomatous polyposis (FAP). Lynch Syndrome (or HNPCC) is an inherited condition that increases your chances for colon, uterine and other cancers. FAP is an inherited condition that may cause an individual to have hundreds of colon polyps and significantly increases the risk for colon cancer. Testing is also available for other gastrointestinal hereditary cancer syndromes.

The Team Approach

The Cancer Genetics Program at Virtua is unique in that it consists of a multidisciplinary team of oncology and genetics experts including medical oncologists, an advanced practice nurse in genetics (only one of 33 in the country), a board certified genetic counselor, and master's prepared licensed clinical social workers. The team discusses genetics cases and review current literature during monthly pedigree reviews.

Experts at the Virtua Fox Chase Cancer Genetics Program help guide patients through the cancer risk counseling process to identify their risk for cancer. The counselors help patients who are uncertain about their family's medical history or have concerns about other cancers by obtaining medical records and pathology reports from the various

healthcare centers where their family members have been treated. Other benefits of the program include:

- Receiving individualized and comprehensive counseling from cancer genetics experts including medical oncologists trained in cancer genetics, advanced practice nurses, board-certified genetic counselors and social workers
- Discovering an increased risk for cancer
- Learning about the benefits, risks and limitations of genetic testing
- Undergoing genetic testing, if appropriate
- Learning how to decrease risk for developing cancer (screening or medical and surgical approaches)

Clinical trials

Patients who have a personal or family history of breast or ovarian cancer and are willing to participate in a research study, may be eligible for the Margaret Dyson Family Risk Assessment Program conducted in partnership with the Fox Chase Cancer Center in Philadelphia.

Participant will:

- Help provide insight into hereditary factors, or genes, that influence cancer risk
- Gain access to the latest news and information on cancer genetics

	2005	2006	2007	2008	2009	2010
TOTAL	58	28	60	119	143	111
ACCRUED						
TO						
RESEARCH						

^{*}Accrued 1/1/10-12/1/10

Community outreach

Our cancer genetics staff is committed to community education of healthcare providers and the lay community. Our experts travel throughout our surrounding communities fulfilling many speaking engagements and one on one interaction. Lectures are given free of charge as a community service. Requests for lectures are made through the Virtua Speakers Bureau and through community contacts that the Virtua Fox Chase Cancer Program has made with organizations within Burlington, Camden and Gloucester counties.

One of the largest events we held in September for our healthcare providers who diagnose colon and uterine cancers was a program entitled "Tumor Screening for Hereditary Colon Cancer Syndromes" and over 30 healthcare providers attended.

	Total Lectures 2010	Total Attendance
Total Lectures	4	~95
Total Visits To Healthcare Providers	13	>100

The Cancer Genetics Program has been interviewed and featured in many Virtua Health publications and local newspapers, magazines and television programs discussing the identification and management of high risk individuals. Our Advanced Practice Genetics Nurse contributed to a chapter on establishing a Cancer Genetics Program in a recently published Nursing Cancer Genetics textbook. The Cancer Genetics Program is now an established clinical site for Arcadia University Genetic Counseling students. Two Students have been precepted in 2010.

Virtua Fox Chase Cancer Program Education and Community Outreach Report

The Virtua Fox Chase Cancer Program (VFCCP) works closely with cancer advocacy organizations and community partners to improve and enhance cancer education, prevention and supportive services throughout the region. The cancer program continually reviews cancer incidence and prevalence within the region and develops resources and services to augment existing programs while identifying the future direction for cancer education and prevention efforts. Resources and services are designed across the continuum of care, from prevention to risk reduction and support. This report will detail all of the community and education activities of the VFCCP held throughout this year.

Oncology Lectures given in the community

Many of our oncology physicians, nurses, therapists, educators and executives are active members of the Virtua Speakers Bureau. These experts travel throughout our surrounding counties speaking on cancer related topics for lay and professional audiences. Lectures are given free of charge as a community service. Requests for lectures are made through Virtua Speakers Bureau and through community contacts with the Virtua Fox Chase Cancer Program.

Our oncology experts have been interviewed and featured in many Virtua publications and local newspapers, magazines and television programs discussing many aspects of oncology care from prevention to survivorship.

	Total Lectures Jan-Oct	Total Attendance
TOTAL LECTURES	18	404

Cancer Screenings Events

In addition to the New Jersey Cancer Education and Early Detection Program (NJCEED) screening program, the VFFCP offers lectures and free cancer screenings in our community. Physicians volunteer their time offering site-specific cancer screenings. Participants receive education, screening examinations and referrals for follow-up care for suspicious findings.

Type of Screening	Attendance
Breast, Cervical, Prostate, Colorectal	55
Lung Age Screening	62
Total Screened	117

Outreach Health and Wellness Events

Health fairs give the VFCCP the opportunity to reach out to people and the community about their health and well-being. By bringing health professionals and lay people together, a health fair educates people about health, behavior modification, prevention and available resources through the VFCCP. Our participation in health fairs can include exhibits, mini-workshops, demonstrations and screenings.

Display and Health Fairs	Encounters
10	890

^{*}Encounters are the total number of people that the employee comes in contact with at a healthfair/event

Grant Funded Programs

The New Jersey Cancer Education and Early Detection Program (NJCEED) is sponsored by the New Jersey Department of Health and Senior Services. NJCEED provides grants to facilitate comprehensive screening services for breast, cervical, prostate and colorectal cancer for uninsured or underserved populations. The NJCEED grant provides monies for outreach, education and cancer screening services with case management for breast, cervical, prostate and colorectal cancer. Services are provided by Virtua affiliated physicians to residents of Camden and Burlington Counties. This year's NJ CEED grant totaled \$ 460,500 and was awarded to Virtua as a regional grant for both Camden and Burlington County.

Camden County CEED	Totals Screened
screenings	
Breast & Cervical Ca.	380
Prostate Cancer	18
Colon Cancer	75

Burlington County CEED screenings	Totals Screened
Breast & Cervical Ca.	390
Prostate Cancer	19
Colon Cancer	92

The Virtua Quitcenter was part of the New Jersey Department of Health and Senior Services Comprehensive Tobacco Control Plan (CTCP). It was one of only eight Quit centers in the state providing professional face to face counseling in individual or group sessions. Last year's New Jersey CTCP grant totaled \$102,600; however this program was discontinued by the State of New Jersey in June 2010.

Virtua Quitcenter	Patients Seen
1 st Quarter	58
2 nd Quarter	38
3 Quarter	N/A
Totals seen 2010	96

Susan G Komen for the Cure Central & South Jersey Affiliate funded the Breast Care Program \$26,000 to provide bilingual outreach to increase screening compliance among NJCEED patients. Susan G Komen for the Cure Philadelphia Affiliate funded the Breast Care Program \$29,743 to provide enhanced services through our breast navigation program for women who face multiple barriers to obtaining breast cancer treatment

Support Groups and Counseling

Virtua Fox Chase Cancer Program offers support groups that provide patients and their loved ones an opportunity to learn ways of coping with their cancer diagnosis and treatment. These specifically designed groups can provide emotional support and decrease the sense of isolation commonly associated with treatment. They provide a forum where patients can get practical advice as well as share thoughts, feelings and concerns. The support groups are facilitated and managed by oncology professionals from the Virtua Fox Chase Cancer Program.

In addition to support groups, patients have access to oncology social workers that provide support both in the hospital and on an outpatient basis including individual and group support, and counseling for children whose parents have cancer. An oncology social worker is a professional who has specialized training in how a diagnosis of cancer affects a person and his or her family and friends. An oncology social worker understands that there are many aspects of a person's life outside of cancer, and that cancer affects each person in a different way. The oncology social worker's expertise provide a comprehensive view to the person living with cancer that is respectful of each individual's ethnicity, spirituality, family situation, unique strengths and challenges. It is his or her job to represent a person's interests and needs to the medical team.

Support Groups	Virtua Location	# Of mtgs.	Avg. pts/
Caregivers Group	Mt. Holly	4	3
Man to Man: Prostate Cancer	Mt Holly	9	45
Women Supporting Women with Breast Cancer	Mt. Holly	6	18
General Cancer Survivorship	Mt. Holly	2	1
Survivors Support	Voorhees	9	1
Women Supporting Women with Breast Cancer	Voorhees	6	15

Workshops

Look Good Feel Better is a program that teaches female cancer patients beauty techniques to help restore their appearance and self-image during chemotherapy and radiation treatments. A licensed cosmetologist teaches participants about makeup, skincare, nail care and options related to hair loss such as wigs, turbans and scarves. Each group receives a free kit of cosmetics to use during and after the workshop. The Virtua Fox Chase Cancer Program sponsors this workshop with the American Cancer Society as a community service and offers it on-site at Virtua Memorial and Virtua Voorhees.

Workshops held	Avg. Attendance
2	6

Beauty Retreat is collaboration between Virtua Fox Chase Cancer Program and Rizeri Salon in Marlton. Cancer patients receive spa services, education, and support.

Workshops held	Attendance
1	23

Advocacy and Community Events

Virtua Fox Chase Cancer Program's employees actively participate in community awareness and cancer advocacy fund raising events independent of their employee responsibilities. This year, teams of employees, physician and patients walked, raced, rowed and raised funds to support cancer research and cancer care in our community.

FCVHP Teams participation in events held in our community include:

- Susan G. Komen Breast Cancer Foundation's *Race for the Cure* in PA and NJ
- Leukemia and Lymphoma Society's Light the Night Walk
- American Cancer Society's Making Strides Against Breast Cancer walk
- American Cancer Society's "Relay for Life" event
- 6th Annual Philadelphia International Dragon Boat Festival
- William G. Rohrer Center for Health Fitness 5K Race to benefit Fox Chase Virtua Health Cancer Program

Additional programs and activities of distinction for oncology patients:

- **Moving On** is a fitness and exercise program that offers a supervised exercise program for cancer survivors. This program is based in Virtua's William G. Rohrer Center for Health Fitness.
- Outpatient nutrition services are offered to meet the needs of patients who are undergoing cancer treatment. Patients undergoing chemotherapy or radiation will be counseled by a registered dietician through meal plans that incorporate their individual food preferences.
- **Complementary health services** are available for our patients. They include massage therapy, guided imagery and mind/body healing.
- Collaborative Efforts: Virtua collaborates with many organizations in our community while trying to meet the needs of all community members. We actively participate in cancer-related coalitions on many levels to help meet some of these needs. Examples include: American Cancer Society, the Susan G Komen Breast Cancer Foundation Central & South Jersey Affiliate, Burlington County Department of Health, Camden County Department of Health, South Jersey Cancer Coalition, South Jersey Breast Cancer Coalition, ACS Nutrition Task Team, Camden County CEED Coalition, NJ State CEED Coalition, New Jersey Cancer Control Task Force, and the Camden and Burlington County CAT Coalition.

Virtua Fox Chase Cancer Program will continue to improve upon its effectiveness to bring to the community the best cancer prevention, education, screening services and supportive programming available.

To receive complimentary Virtua Fox Chase Cancer Program publications for your office, please call 1-888-Virtua-3. Topics include smoking cessation, clinical trials, Breast Cancer Handbook, Prostate Cancer Handbook, Cancer Survivor's Guidebook, and health alerts on a variety of cancers and cancer-related topics.

Virtua Fox Chase Cancer Program Radiation Oncology Services Report

The Virtua Fox Chase Cancer Program offers the following treatment options and advanced technologies to treat cancer patients:

- Precision computerized treatment planning system to accurately target the tumor so it receives higher levels of radiation with minimal exposure to normal tissue
- IMPAC computerized radiation oncology delivery system to ensure precise delivery of radiation using system features including auto set-up, pre-treatment verification
- Conformal radiation therapy to use 3-D treatment planning with CT scanning to target the exact location of tumors
- MammoSite and SAVI radiation therapy system(s) to use for early stage breast cancer, delivering high dose partial breast radiation from within the tumor bed
- External beam radiation using a linear accelerator
- Intensity modulated radiation therapy (IMRT) which uses computer generated images of the tumor to aim thin beams of radiation from many different angles, to the tumor and sparing the surrounding tissue
- Brachytherapy which uses radioactive material placed directly into or near the cancer and delivers low doses of radiation over several months.
- High dose rate (HDR) brachytherapy delivers a high dose of radiation from within the tumor bed (area where the cancerous tumor has been removed) and may be completed in fewer treatments then with external radiation
- Image guided Radiation therapy to precisely target the tumor prior to treatment delivery
- Sterotactic Radiosurgery to precisely treat small tumors in the brain, lung and other parts of the body.

Lemuel Ariaratnam, MD directs the radiation oncology facilities located in Marlton, Mount Holly and Voorhees. In 2010 the Marlton facility delivered approximately 691 radiation treatments per quarter, Voorhees delivered 2,287 and Memorial 3,125. Average patient satisfaction surveys have revealed "overall satisfaction" for all three facilities at 96%

In early 2010, Virtua and Fox Chase Cancer Center joined to open a new facility in the Virtua Washington Township Health and Wellness Center under the direction of David Lowther, MD a Fox Chase Cancer Center physician on staff at Virtua. Virtua Fox Chase Cancer Center Radiation Oncology offers the latest in radiation therapy technology. In addition to the now standard 3D conformal and IMRT treatment modalities, the radiation oncology facility in Washington Township offers Volumetric Modulated Arc Therapy (VMAT), which allows for the ability to deliver IMRT treatments in two minutes or less, as well as Image Guided Radiation Therapy (IGRT) to precisely target the tumor prior to treatment delivery. Also new to Virtua, a 4D CT simulator allows for assessment of tumor motion to precisely plan treatments, and Stereotactic Radiosurgery (SRS) offers a

non-surgical option to deliver high doses of radiation to small tumors in the brain or spine with sub-millimeter accuracy.

Virtua is accredited by the American College Of Radiology and is also credentialed by the Radiological Physics Center at MD Anderson to participate in Radiation Thearpy Oncology Group treatment clinical studies.

Virtua Fox Chase Cancer Program 2010 Endometrium Site Study Randolph Deger, MD and Susan Van Loon RN, CTR

Overview

This report will provide an in-depth review of endometrial cancer including epidemiology of endometrial cancer; discussion of risk factors; description of the disease process; staging; treatment options; along with a presentation of data. An overview of the services available for patients with gynecological malignancies at Virtua Fox Chase Cancer Program will also be discussed.

Epidemiology

Endometrial cancer is a cancer that starts in the endometrium, the inner lining of the uterus. It is the most common cancer of the female reproductive organs and accounts for 6% of all cancers in women. Nearly all cancers of the uterus start in the endometrium; roughly 2% of cancers may develop in the supportive tissue or muscle of the uterus, this group of cancers is known as sarcomas. The American Cancer Society's most recent estimates of the incidence of uterine cancer in 2010 show approximately 43,470 new cases in the United States. Additional estimates reveal that approximately 7,950 women will die from uterus cancer in 2010.

Most cases of endometrial cancer are diagnosed in women age 50 and older, with more then half between the ages of 50-69. Endometrial carcinoma is more common in white women. Five year relative survival rates are 86% among white women and only 61% among black women. Some potential explanations for the racial differences include cancer biology, sociodemographic characteristics, and differences in access to care, medical co morbidities; and response to treatment. (Yap S, Matthews, R)

Differences in epidemiology and prognosis suggest that two forms of endometrial cancer exist which are described as follows: The first pathogenic type (Type 1) arises in women with obesity, hyperlipidemia, and signs of hyperestrogenism; anovulatory uterine bleeding, infertility, late onset of menopause, and hyperplasia of the stroma of the ovaries and endometrium. Type 1 demonstrates a favorable prognosis with a reported 85.6% 5-year survival rate. The second pathogenic type (Type 2) of the disease tends to arise in older women and these patients do not have an increased prevalence of obesity, hyperlidemia and other signs as described above in the Type 1 patients. Little is known about the etiology of Type 2 tumors, they tend to be aggressive, poorly differentiated, with deep invasion of the myometrium and metastatic spread and demonstrate a 58.8% 5-year survival rate. (Bokhman).

Risk Factors for Endometrial Cancer

Women have a 2.58% lifetime risk of developing endometrial cancer. Women at increased risk include increasing age, late menopause, never giving birth, infertility, obesity, diabetes, high blood pressure, estrogen treatment and tamoxifen therapy. These

risk factors are discussed in more detail. Most of the major known risk factors for endometrial cancer contribute to prolonged and excessive exposure of the endometrium to estrogens unopposed by progesterone, as occurs with unopposed post-menopausal estrogen therapy.

Endometrial cancer was among the first cancers identified as being obesity-related. Obesity is an important risk factor among women who do not use hormone therapy; adipose tissue provides the major source of circulating estrogens through increased conversion of androstenedione to estrone and decreased production of sex hormone-binding globulin by the liver. Together, these increase the concentration of circulating estrogens.

Tamoxifen used in the treatment and prevention of breast cancer has been associated with an increase incidence of endometrial hyperplasia, endometrial polyps, and endometrial carcinoma in postmenopausal breast cancer patients. Numerous randomized, controlled trials in breast cancer patients have demonstrated an increased relative cancer risk of 6.4 to 7.5 % fold after a mean duration of 35 months of tamoxifen use.

Chronic anovulation has also been cited as an important cause of endometrial cancer the relative risk in developing carcinoma of the endometrium is 3.1. The risk of endometrial cancer is increased in women with polycystic ovarian syndrome because these patients lack normal progesterone secretion.

Approximately 2-5% of endometrial cancers may be due to an inherited susceptibility. Lynch syndrome, also known as hereditary nonpolyposis colorectal cancer syndrome, an autosomal-dominant inherited cancer susceptibility syndrome caused by a germline mutation in one of the DNA mismatch repair genes, accounts for the majority of inherited cases. Lynch syndrome is associated with the early onset of cancer and the development of multiple cancer types, particularly colon and endometrial. (Meyer, LA et al)

In younger women between the ages of 20-54 5% of incident endometrial cancer may be attributable to a family history, and 2% may be related to colorectal cancer. (Gruber SB, Thompson WD)

Screening for Endometrial Cancer

At present, there is no routine screening to identify endometrial cancer before symptoms develop. Most cases of endometrial cancer (85%) are diagnosed at an early stage because of symptoms; fortunately survival rates are high. Routine pelvic exams rarely find this disease. Although pap tests may detect the presence of endometrial cells, pap tests have not been proven to adequately identify endometrial cancers.

There is no evidence that screening by ultrasonography such as an endovaginal ultrasound or transvaginal ultrasound reduce mortality from endometrial cancer. In

addition, there is inadequate evidence that routine screening by endometrial biopsy reduce mortality from endometrial cancer either.

Since there are no routine methods of screening for endometrial cancer, it is important to educate women about the risks, signs and symptoms. The American Cancer Society recommends that at the time of menopause, all women should be told about the risks and symptoms of endometrial cancer and strongly encouraged to report any vaginal bleeding, spotting or unusual vaginal discharge to their doctor. Additionally, women that are identified as increased risk (as discussed above) should report any abnormal vaginal bleeding to their doctors. Better methods of early detection for endometrial cancer are needed and clinical trials are presently underway to identify diagnostic tools that may prove to be useful in early detection.

Presentation and Diagnosis of Endometrial Cancer

The most common presentation of endometrial carcinoma is abnormal vaginal bleeding. This can include menorrhagia, metrorrhagia, or menometrorrhagia in patients who are still menustrating or postmenopausal bleeding in those who have been amenorrheic for more then 12 months. In patients who present with the above symptoms an endometrial biopsy may be performed. Transvaginal ultrasound may be used to evaluate the endometrium however controversy precludes this method as exact in lieu of biopsy.

Pain in the pelvis and weight loss may also be symptoms of advanced disease. If a biopsy is non-diagnostic and symptoms persist further evaluation typically with a dilation and curettage is warranted.

Staging Endometrial Cancers

Staging is dependent on appropriate surgical intervention so that information about the tumor can be gained to establish the prognosis and indicated adjuvant treatment plan. Endometrial cancer is surgically staged; a hysterectomy is required to determine the degree of myometrial invasion. The recommendation of the Society of Gynecologic Oncology and the American College of Obstetricians and Gynecologists is that all women with endometrial cancer should undergo primary surgical therapy including, total extrafascial hysterectomy, bilateral salpingo-oophorectomy and biopsy of any suspicious lesions, along with retroperitoneal lymph node sampling and peritoneal cytology. An endometrial carcinoma is staged according to the International Federation of Gynecology and Obstetrics (FIGO) and the American Joint Committee on Cancer TNM staging system. They both classify the cancer on the basis of the extent of the tumor (T); whether the cancer has spread to the lymph nodes (N); and whether it has spread to distant sites (M).

Effective with cancer cases diagnosed 01/01/2010 and after, FIGO revised the staging system for the first time in over a decade. The update was necessary to keep pace with the explosive growth of medical research further refining the prognosis in various patient

subsets. Data presented in this report is based on the previous staging system which as follows:

Stage I

Stage I endometrial carcinoma is confined to the corpus uteri

Stage IA: tumor limited to endometrium

Stage IB: invasion to less then 50% of the myometrium Stage IC: invasion to greater then 50% of the myometrium

Stage II

Stage II endometrial cancer involves the corpus and the cervix but has not extended outside the uterus

Stage IIA: endocervical glandular involvement only

Stage IIB: cervical stromal invasion

Stage III

Stage III endometrial cancer extends outside of the uterus but is confined to the true pelvis

Stage IIIA: tumor invades serosa and/or adnexa and/or positive peritoneal cytology

Stage IIIB: vaginal metastases

Stage IIIC: metastases to pelvic and/or para-aortic lymph nodes

Stage IV

Stage IV endometrial cancer involves the bladder or bowel mucosa

Stage IVA: tumor invasion of bladder and/or bowel mucosa

Stage IVB: distant metastases; including intra-abdominal and/or inguinal lymph nodes

For cases diagnosed on and after 01/01/2010 the staging schema is as follows:

Stage I

Stage 1A: Tumor confined to the uterus, no <1/2 myometrial invasion Stage 1B: Tumor confined to the uterus, >1/2 myometrial invasion

Stage II

Stage II: Cervical stromal invasion, but not beyond the uterus

Stage III

Stage IIIB: Vaginal and/or parametrial involvement

Stage IIIC1: Pelvic node involvement Stage IIIC2: Para-aortic involvement

Stage IV

Stage IVA: Tumor invasion bladder and/or bowel mucosa

Stage IVB: Distant metastases including abdominal metastases and/or inguinal lymph

nodes

Uterine Sarcomas were staged previously as endometrial cancers, which did not reflect clinical behavior. Therefore a new corpus sarcoma staging system was developed based on the criteria used in other soft tissue sarcomas.

Endometrial cancer can be grouped with regard to the degree of differentiation of the adenocarcinoma:

Grade 1: no more then 5% of a nonsquamous or nonmorular solid growth pattern

Grade 2: 6% to 50% of a nonsquamous or nonmorular solid growth pattern

Grade 3: greater then 50% of a nonsquamous or nonmorular solid growth pattern

The grade of the tumor is based on the formation of cancer cells that look similar to glands found in the normal, healthy endometrium. Well differentiated tumors (Grade 1) tend to limit their spread to the surface of the endometrium; myometrial extension is less common. Patients with Grade 1 tumors involving only endometrium and no evidence of intraperitoneal disease have a low risk of nodal involvement (less the 5%).

In patients with Grade 2 tumors invasion of less then 50% of the myometrium and no intraperitoneal disease have a 5-9% incidence of pelvic node involvement and a 4% incidence of para-aortic nodes.

In grade 3 the cells tend to arrange haphazardly and do not form glands, these cancers tend to be more aggressive. In patients with poorly differentiated Grade 3 tumors, myometrial invasion occurs more frequently, with 20-60% spread to pelvic and 10-30% spread to para-aortic lymph nodes. Distant metastasis can occur and most commonly involves the lungs, liver and vagina.

The majority of uterine tumors originate from the endometrial glands, these are called adenocarcinomas. The most common type of endometrial cancer is called endometroid adenocarcinoma. Characteristically, these tumors are of low stage and grade. Endometroid cancers consist of cells in glands that resemble the normal endometrium. Some of these cancers contain squamous cells as well as glandular cells called adenosquamous carcinomas.

Other types of endometroid cancers include serous carcinoma, clear cell and mucinous adenocarcinoma. Serous carcinoma and less commonly occurring clear cell carcinoma make up about 10% of endometrial carcinomas. These tend to be more aggressive and frequently present in women with advanced-staged disease.

Uterine carcinosarcoma has features of both endometrial carcinoma and sarcoma known as malignant mixed mesodermal tumors or malignant mixed mullerian tumors; they comprise approximately 4% of uterine cancers.

Treatment Options by Stage

Stage I

Approximately 75-80% of women with endometrial cancers are diagnosed with Stage I disease. Primary therapy for the treatment of endometrial cancer is surgical which includes hysterectomy, bilateral salpingo-oophorectomy and a staging procedure that includes pelvic and para-aortic lymphadenectomy as discussed above under staging. In most cases of early stage disease, surgery alone is curative.

In recent years the laparoscopic or minimally invasive approach has been employed. A prospective randomized trial conducted by the Gynecology Oncology Group (GOG) examined whether overall survival would differ between women undergoing an open approach versus the laparoscopic approach. The final results are not available however preliminary data presented demonstrated similar staging outcomes (pelvic and para-aortic nodes). The surgery time for laparoscopic was significantly longer, however hospital stay was significantly decreased. (Walker J. etal)

It is important to note that there are controversies in the current management of some patients with early stage disease. Historically, adjuvant pelvic radiation has not been shown to improve overall survival in early-stage patients. Most of the clinical research on early-stage endometrial cancer is examining whether certain high risk patients would benefit from adjuvant therapy and whether adjuvant therapy should include pelvic radiation, vaginal radiation, and/or systemic chemotherapy. The current challenge is for physicians to identify those patients with early stage disease that are at high risk for the possibility of a recurrence and discuss options of adjuvant therapy so that women can make informed choices. Adjuvant radiation therapy has been standard of care for high risk Stage I and Stage II patients. However, given the reported increase in distant failure rate the GOG is currently conducting a Phase III trial comparing chemotherapy in conjunction with radiation therapy to radiation therapy alone.

Robotic Assisted Surgery

FDA approval of robotic assisted surgery in 2005 has had significant impact on the surgical approach to patients with early stage endometrial cancer. Many investigators have reported their experiences touting numerous benefits over laparoscopy including surgery for larger (high BMI) patients, more rapid recovery, less blood loss, and equal efficacy with regard to nodal yield for staging. Operative times tend to be slightly longer compared to laparoscopy. Conversion rates to laparotomy are low and in general complications limited. The costs associated with the robot and the number of surgeons skilled in this technique currently limits its availability in the management of most eligible patients. Additional prospective trials are necessary to verify long term outcomes and economic impacts associated with this new technology.

Stage II

For stage II endometrial cancer, there are several potential strategies including preoperative intracavity and external beam radiation therapy followed by surgery. Typically, however Stage II is disguised in the occult setting after surgical staging.

Stage III

Patients with stage III endometrial cancer are treated initially with surgery. Patients with inoperable disease caused by the tumor that extends to the pelvic wall may be treated with radiation therapy. The usual approach is to use a combination of intracavity and external beam radiation. However, in the past five years, randomized trials have shown a benefit to adjuvant chemotherapy in stage III disease. The updated FIGO staging system reflects this finding stratifying Stage II patients preferably those with nodal involvement into IIIC and IIIC2.

Stage IV

Management is contingent on extent of disease and ability to satisfactorily resect all disease. The value of optimal debulking (less then or equal to 2 cm residual disease) has been shown by several investigators to demonstrate a survival advantage. Adjuvant therapies have had limited impact. Systemic chemotherapy or hormonal therapy is usually offered. Whole abdominal radiation therapy is less effective with greater toxicity. These patients are deemed incurable and palliative approaches are often necessary.

Recurrence

Local recurrences particularly vaginal are radiated with or without initial attempts at surgical resection. Reported salvage rates are quite good impacting overall survival. Distant relapse unfortunately portends a similar prognosis to Stage IV individuals (see above). Rarely an isolated hepatic or lung metastases is resectable resulting in long term benefit.

Fertility Sparing Therapy in Young Women

With 5% to 29% of endometrial cancers affecting women 45 years or younger the patient and clinician face very special challenges to address fertility sparing treatment. Fertility sparing therapy for endometrial carcinoma in young women is not standard although it has been widely used. The first prerequisite for fertility sparing treatment in endometrial carcinoma is an absolute diagnosis of well-differentiated endometrial carcinoma, which may be difficult. Conservative hormonal treatment of young patients with endometrial carcinoma is feasible with high response rates and acceptable pregnancy rates. However certain criteria should be met and the patient should understand that conservative treatment is not standard and carries an increased risk of progression. Although long-term disease free survival is possible after conservative treatment, virtually all individuals will experience a relapse. Therefore definitive surgery in the form of hysterectomy is recommended after childbearing is complete. (Erkanli S, Ayhan A)

Future Therapeutic Options

Numerous trials of new agents have been completed recently including antiangiogenic therapy, mTOR inhibitors, EGF inhibitors; VEGF inhibitors however results are still pending. For endometrial cancer, one of the top priorities of the National Cancer Institute

is to identify prognostic and predictive markers for treatment efficacy and toxicity. One of the key research issues in endometrial cancer relates to developing a more comprehensive and detailed understanding of cancers at a genetic and molecular level. Hopefully, one or a combination of these new agents will make a difference in the future of treating endometrial cancer.

Clinical Trials

Clinical trials are research studies that are designed to answer questions about new ways to treat, diagnose, prevent and manage symptoms of cancer. The National Cancer Institute, drug companies, medical institutions, and other organizations sponsor clinical trials. The Gynecologic Oncology Group (GOG) is one of the National Cancer Institute's research groups. GOG is the only group which focuses its research on women with cancers of the female genital tract. The GOG was formed in 1970 and one of its main objectives is to promote excellence in the quality and integrity of clinical research in gynecologic malignancies. GOG is a multi-modality group including gynecology oncologists, medical oncologists, statisticians, pathologists, nurses, data managers; quality of life experts and administrative personnel devoted to the study of gynecologic malignancies. Annually, GOG enrolls approximately 3, 300 patients in clinical trials. Virtua participates in clinical trials and over the past five years has enrolled 22 patients in GOG through it's partnership with the Fox Chase Cancer Center. In 2010 Virtua had 9 GOG trials open for enrollment.

Virtua Fox Chase Cancer Program/ Gynecology Oncology

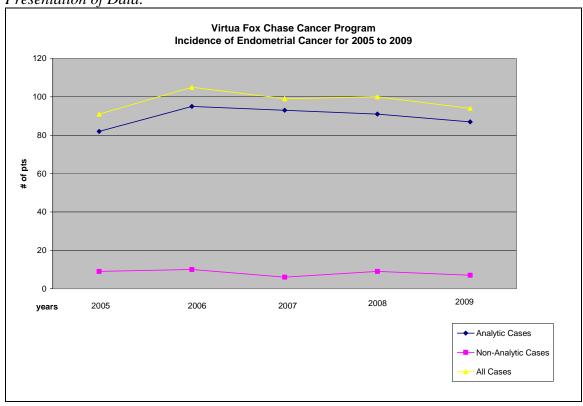
Randolph Deger, MD, directs the Virtua Fox Chase Gynecologic Oncology Program. He is board certified in Obstetrics and Gynecology, Gynecologic Oncology and Hospice and Palliative Medicine. Sarah H. Kim, MD, MSCE joined Dr. Deger's practice in 2009. Dr Kim is also board certified in Obstetrics and Gynecology and trained in robotic surgery. Both Dr. Deger and Dr. Kim collaborate with other specialists to provide individualized state of the art care to patients seen at Virtua with gynecologic malignancies. Robotassisted surgery for gynecologic malignancies was implemented at Virtua in 2010, and to date more then 40 cases have been successfully performed.

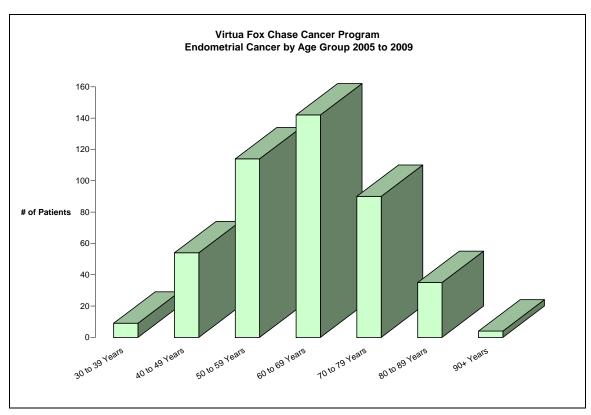
An important part of each patient's treatment plan includes Virtua's interdisciplinary gynecologic oncology cancer conference. These conferences are attended by surgeons, radiation oncologists, medical oncologists, radiologists, pathologists, oncology nurses, genetics counselors, social workers and other health care providers with a special interest in Gynecologic malignancies. These conferences focus on collaborative strategies for the assessment, staging, diagnosis, treatment, and follow-up of each patient. Pertinent information including patient history, physical examination findings, and pathology, imaging and operative findings are reviewed and discussed. Staging, treatment options, clinical trial eligibility, journal article review and latest cancer therapies are also considered as the team continually strives to formulate consensus-based management decisions.

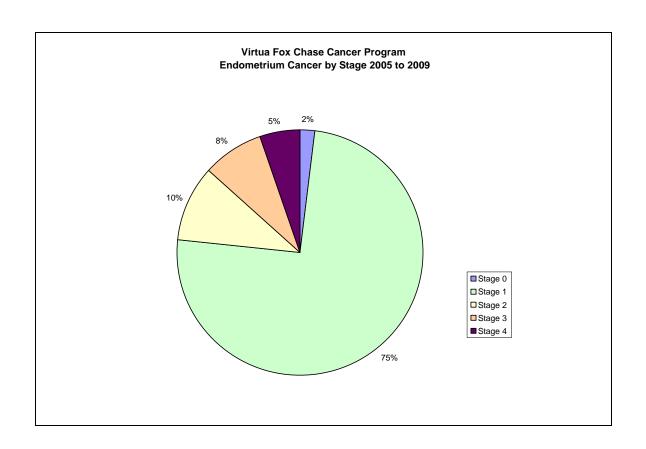
In late 2010, the Virtua Fox Chase Cancer Program implemented a Gynecologic Oncology Care Nurse Navigaton Service. A Gynecologic Care Oncology Nurse Navigator is available to newly diagnosed patients with gynecologic malignancies to assist with education, support and access to resources. The goal of the Nurse Navigation Service is to support physicians in improving clinical outcomes and to enhance patient satisfaction. Nurse navigation offers personalized service and helps guide each individual through the patient's cancer journey.

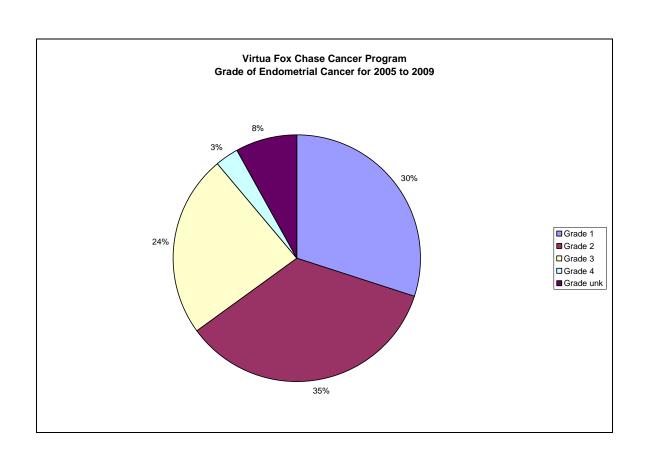
Through our partnership with Fox Chase Cancer Center, Virtua developed the Cancer Genetics Program. The program began with a focus on hereditary breast and ovarian cancer syndromes and has expanded into gastrointestinal and other adult cancer genetic syndromes including uterine cancers.

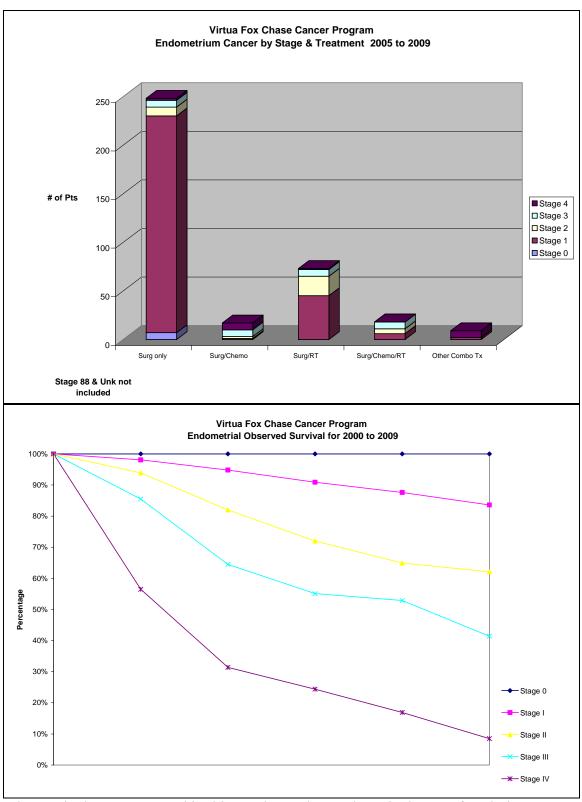
Presentation of Data:











The survival rates presented in this graph are observed survival rates of analytic endometrium cases cancer cases seen at Virtua 2005-2009. Observed survival rates from 2003 (latest data available) from the National Cancer Data Base reveal the following: 90.5 for Stage 0; 89.1 for Stage 1; 70.7 for Stage 2, 51.1 for Stage 3 and 13.5 for Stage 4.

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