Froedtert & Medical College of Wisconsin

For the smart choice in cancer care, it's academic.

Clinical Cancer Center

ANNUAL REPORT - 2010 DATA

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Introduction

Bruce Campbell, MD, FACS

Dear friends,

Thank you for visiting our report of cancer activities for the current year! We are proud of the care we provide to our patients and appreciate the trust the community extends to us.

This report contains many statistics, but much of the untold story of what goes on in our Clinical Cancer Center occurs in the interactions and personal greetings in clinics and in hallways. I have been impressed with the dedication of our staff at all levels of responsibility and patient interaction. This is truly a great place to care for patients, and I am extremely proud to be part of our team.

I wish I had time and space to highlight all of the exciting developments within the past few months. Among just a few of the accomplishments of which we are most proud:

- A new tissue bank, housed in Pathology, is a direct source of the molecular data critical for preventing, detecting and treating diseases, especially cancer. Tissue and blood samples are donated under strict patient consent and privacy guidelines. The director of the tissue bank is Saul Suster, MD, Medical College of Wisconsin pathologist and chairman of Pathology.
- In Radiology, new imaging technology is offering increased precision and mapping of cancers.
- A number of remarkable translational research projects are underway, including research in gynecologic oncology, neuro-oncology, and hematology and oncology.
- New cancer surgeons, including T. Clark Gamblin, MD, MS, (liver cancer), David Johnstone, MD, (lung cancer), Paula Termuhlen, MD, (breast cancer and melanoma), Kiran Turaga, MD, MPH, (regional cancer therapy) and Susan Tsai, MD, MHS, (liver and pancreas cancers).
- The new Adult Cancer Genetics Clinic offers whole genome sequencing for qualified patients. Whole genome sequencing assesses a range of cancers, including rarer diseases such as pancreatic cancer. The process makes it possible for patients to have their entire genome (all genes) tested.
- The Pancreatic Cancer Screening Program is aimed at identifying individuals with a family history of pancreatic cancer who are at high risk for developing the disease. High risk patients are offered screening for early detection of disease, along with wellness interventions for cancer risk reduction.
- A new psychiatrist, Jennifer Knight, MD, joined our psycho-oncology team. Psych-oncology specialists provide services ranging from individual therapy with medication to family counseling and relaxation training.
- Plans for expansion of the Day Hospital include additional patient bays and private rooms to better meet the needs of patients who require chemotherapy, blood products, other types of infusions or advanced services which might otherwise require hospitalization. It is expanding to serve the needs of the growing number of cancer patients who are able to be treated appropriately in an outpatient setting.
- A growing emphasis on cancer survivorship includes a special walking track for our patients within the Clinical Cancer Center, partnerships with LiveStrong© and the Wisconsin Athletic Club, and new cancer patient support groups (cancer caregivers group and groups for colorectal and bladder cancer patients).

- Froedtert & The Medical College of Wisconsin support a number of cancer-related events, including a run/walk event highlighting colorectal cancer awareness (Get Your Rear in Gear®), with 700 participants in this first-time event in 2011. Other sponsored events include Strain for the Brain® (neuro-oncology), Komen for the Cure® (breast cancer), Purple Stride® (pancreatic cancer) and Light the Night® (blood cancers).
- Patient education events included a May head and neck cancer screening and education event, and a March colorectal cancer awareness event. Upcoming: an event for sarcoma survivors in February 2012.
- A beautiful gallery of art was created by cancer patients and family members. Please visit the gallery on the 3rd floor of the Clinical Cancer Center near the elevators. *Supported by generous donors to the Froedtert Hospital Foundation.*
- The Blood and Marrow Transplant Program was re-accredited by the Foundation for the Accreditation of Cellular Therapy. This means the program has met rigorous standards, defined by the leading experts in the field and based on the latest knowledge of cellular therapy product transplantation.
- The Froedtert & The Medical College of Wisconsin Cancer Network expanded, adding new physicians and services at its two locations: West Bend at Froedtert Health St. Joseph's Hospital's Kraemer Cancer Center, and Menomonee Falls at Froedtert Health Community Memorial Hospital's Cancer Care Center.
    - Specialties in West Bend include radiation oncology, hematology and oncology, thoracic surgery, urologic oncology, gynecologic oncology, and plastic and reconstructive surgery
    - Specialties in Menomonee Falls include radiation oncology, hematology and oncology, urologic oncology, gynecologic oncology, and neuro-oncology (brain tumors)
    - Services at both locations include oncology nurse practitioners, psych-oncology, cancer nutrition counseling and cancer genetics.

Thank you for your continued confidence in the Froedtert & The Medical College of Wisconsin Clinical Cancer Center. We have worked hard to make this a place of clinical excellence, where research, teaching, clinical care and public health all meet for the benefit of patients, families, our community and the world.

Sincerely yours,

Bruce Campbell, MD, FACS
Co-chair, Froedtert & The Medical College of Wisconsin Cancer Committee
Professor, Medical College of Wisconsin Department of Otolaryngology and Communication Sciences

Cancer Committee

Physician Members	
Bruce Campbell, MD, FACS	Head and Neck Oncology Co-chair, Froedtert & The Medical College of Wisconsin Cancer Committee
Mark Malkin, MD	Neuro-oncology (Brain and Spine Tumors) Co-chair, Froedtert & The Medical College of Wisconsin Cancer Committee
Adam Currey, MD	Radiation Oncology
Amanda Kong, MD, MS	Surgical Oncology
John Charlson, MD	Hematology and Oncology
Donald Hackbarth, MD	Orthopaedic Oncology (Bone and Soft Tissue Sarcomas)
David King, MD	Orthopaedic Oncology (Bone and Soft Tissue Sarcomas)
Eduardo Zambrano, MD	Pathology
Kirk Ludwig, MD	Colorectal Surgery
Marcelle Neuburg, MD	Dermatology (Skin Cancer)
Francisco Quiroz y Ferrari, MD	Diagnostic Radiology
Oksana Sayko, MD	Physical Medicine and Rehabilitation
Alonzo Walker, MD	Surgical Oncology Director, Breast Cancer Program

Cancer Committee

Clinical Cancer Center and Hospital Operations	
Mary Jo Burgoyne, RN, MSN, CNS-BC, APNP	Clinical Nurse Specialist, Psych-oncology
Sue Derus	Executive Director, Cancer Services for Froedtert Health
Julie Griffie, RN, MSN, ACSN-BC, AOCN	Clinical Nurse Specialist, Breast Cancer Program
Lori Jemison, RN	Clinical Coordinator, Blood and Marrow Transplant Program
John Koenig	Director, Radiation Oncology Interim Director, Froedtert & The Medical College of Wisconsin Cancer Network, Community Division
Donald Kroll	Manager, Rehabilitation Services, Acute
Rabbi Melech Lensky, JD	Chaplain
Laurie McGroarty, BSN, CCM	Quality Management Coordinator
Lori McNally-Chronis, MSW	Social Worker
Courtney Miles	Community Outreach Coordinator, Marketing
Kathy Myers, RN	Clinical Coordinator, Head and Neck Cancer Program
Betty Olesen, BSN, RN	Research Coordinator, Radiation Oncology
Mary Robertson, RN	Patient Care Coordinator, Vascular and Interventional Radiology
Tina Curtis, RN, MSN	Director, Outpatient Cancer Services
Martha See, RHIT, CTR	Director, Cancer Registry and Quality Coordinator
Crystal Trejo, CTR	Supervisor, Cancer Conference Coordinator, Cancer Registry
Tom Shefchik	American Cancer Society Representative
Heidi Stark, BSN, RN, OCN	Clinical Coordinator, Prostate and Urologic Cancer Program
Steve Stern, M. Div.	Chaplain
Laura Pape, MS, CGC	Genetic Counselor
Angela Thompson	Genetic Counselor
Kate Sweeney, RN, MS, ACNS-BC, AOCNS	Manager, Clinical Cancer Center Patient Support Services
Tiffany Marbach, BSN, RN	Clinical Coordinator, Bone and Connective Tissue Cancer Program; Brain and Spine Tumor Program

Cancer Registry Report

The Froedtert & The Medical College of Wisconsin Cancer Registry is managed by the Health Information Department and directed by the Cancer Committee. Data collected since 1983 is computerized with a reference date of January 1, 1989. From 1989 to 2010, the computerized database contained 40,279 cases. New accessions for 2010 numbered 3,403; of these, 2,331 were analytical cases. Physician members of the Cancer Committee review abstracting of 10 percent of all analytical cases to ensure the quality of data provided by the Cancer Registry.

Registry

To assist in research, provide survival and treatment information and to meet the Commission on Cancer standard of 90 percent follow up, all cases diagnosed and/or treated at the hospital are followed yearly. Ongoing data collection and continued lifetime observation is currently maintained on 15,364 patients. The current follow-up rate is 95.86 percent for patients diagnosed in the last five years. Follow-up information is obtained by reviewing the patient's medical record, from the managing physician and only if necessary by contacting the patient.

Staffing

Registry staff consists of eight full-time registrars. All registrars maintain CTR credentials. The registrars coordinate and attend weekly tumor boards. In compliance with Commission on Cancer standard 2.3, Crystal Trejo and Martha See fulfill the roles of cancer conference coordinator and coordinator for the quality of Cancer Registry data respectively. Cancer registrars are members of the Wisconsin Cancer Registrars Association and the National Cancer Registrars Association and participate in educational conferences provided by these organizations.

Requests for Data

Medical staff, residents and administration made 25 requests for information in 2010. Data was submitted to the National Cancer Data Base and exported to the Wisconsin Cancer Reporting System. A study of patients with head and neck cancer is included in this annual report.

For More Information

Froedtert & The Medical College of Wisconsin Cancer Registry: 414-805-6597

Martha See, RHIT, CTR
Manager, Cancer Registry

Crystal Trejo, CTR
Supervisor, Cancer Registry

Vicky De Decker, CTR
Supervisor, Cancer Registry

Sue Ebersohl, CTR
Cancer Registrar

Jeanie Ray, CTR
Cancer Registrar

Kim Palasz, CTR
Cancer Registrar

Deborah Dries, RHIT, CTR
Cancer Registrar

Linda Smith, CTR
Cancer Registrar

Cancer Conferences and Tumor Boards

Urology Focused Tumor Board is held on the third Friday of the month and is attended by physicians and staff from Diagnostic Radiology, General Surgery, Hematology and Oncology, Nuclear Medicine, Pathology, Radiation Oncology and frequently, by other specialty staff participating in the care of cancer patients. Cases of special interest are presented. Pathology slides, X-rays and other scans are reviewed and treatment options discussed. Nurses, residents, students and other allied health professionals also attend these conferences.

Blood and Marrow Transplant (Adult and Pediatric) Case Conferences are held every Tuesday and are attended by physicians and staff from the Blood and Marrow Transplant Program, Radiation Oncology, Hematology and Oncology, and Pathology.

Breast Cancer Conferences are held every Monday to discuss all new breast cancer cases. Attendees include physicians and staff from Hematology and Oncology, Radiation Oncology, Radiology, Surgery and Pathology. Nurses, residents, data managers and students also attend.

Endocrine Medicine/Surgical Conferences are held on the second Thursday of each month and are attended by physicians and staff from Endocrinology, Surgery, Pathology, Radiology, and Vascular and Interventional Radiology. Nurses, residents, students and endocrine fellows also attend.

Colorectal/Gastrointestinal Cancer Conferences meet every Tuesday to discuss all new colorectal and gastrointestinal cancer cases. Attendees include physicians and staff from Hematology and Oncology, Radiation Oncology, Radiology, Surgery and Pathology. Nurses, residents, data managers and students also attend.

Gynecologic Oncology Tumor Boards are held every Thursday of the month and are attended by physicians and staff from Obstetrics/Gynecology, Pathology, Diagnostic Radiology and Radiation Oncology.

Hepatic Tumor Conferences held on second and fourth Mondays. Attendees include physicians and staff from Gastroenterology/Hepatology, Hematology and Oncology, and Surgery.

Lymphoma Case Conferences are held the second Monday of each month and are attended by physicians and staff from Hematology and Oncology, Diagnostic Radiology, Pathology, General Surgery and Radiation Oncology.

Thoracic Tumor Conferences are held weekly on Thursdays. Attendees include physicians and staff from Thoracic Surgery, Pulmonology, Radiology, Radiation Oncology, and Hematology and Oncology.

Musculoskeletal Oncology Conferences are held weekly on Wednesdays. Attendees include staff from Orthopaedic Surgery, Radiology, Pathology, Radiation Oncology, and Hematology and Oncology.

Neuro-oncology Tumor Boards are held weekly on Wednesdays and are attended by physicians and staff from Neuro-oncology, Neurosurgery, Pathology, Radiation Oncology and Neuroradiology.

Oncology Case Conferences are held every Friday. Presentations from guest cancer specialists supersede regular conferences. Attendees include physicians and staff from Hematology and Oncology, fellows and house staff for regular conferences.

Otolaryngology Head and Neck Tumor Boards are held every Thursday and are attended by physicians and staff from Hematology and Oncology, Surgery and Radiation Oncology. Nurses, data managers, speech pathologists and dietitians also attend.

Pancreatobiliary Case Conferences are held every second and fourth Friday and include, but are not limited to, discussion of cancer patients. Attendees include physicians and staff from Gastroenterology/Hepatology, Surgery, Radiation Oncology, and Vascular and Interventional Radiology.

Pediatric Tumor Board Conferences are held the first three Thursdays of the month.

Prostate Tumor Conferences are held on the first Monday of the month and are attended by physicians and staff from Hematology and Oncology, Surgery and Radiation Oncology. Nurses and data managers also attend.

Surgical Radiology Chest Conferences are held weekly on Thursdays and include, but are not limited to, discussion of cancer patients. Attendees include physicians and staff from Pulmonary Medicine and Radiology.

Please contact Crystal Trejo at 414-805-6597 for information regarding these conferences.

Summary of General and Specialty Multidisciplinary Tumor Boards	
Urology Focused Tumor Board (7 Sessions)	**19**
Penis: 3 Prostate: 4 Testis: 1 Kidney: 6 Bladder: 4 Other: 1	
Breast Cancer Conference (47 Sessions)	**503**
Gynecologic Tumor Board (48 Sessions)	**201**
Cervix: 40 Corpus Uteri: 68 Ovary: 60 Vulva: 8 Other: 25	
Hepatic Tumor Conference (18 Sessions)	**165**
Liver: 130 Colon: 17 Other: 18	
Musculoskeletal Oncology Conference (44 Sessions)	**309**
Bone: 52 Soft Tissue: 169 Other: 88	
Otolaryngology Tumor Conference (32 Sessions)	**267**
Lip, Oral Cavity and Pharynx: 149 Musculoskeletal: 18 Respiratory and Intrathoracic: 59 Other: 41	
Thoracic Tumor Conference (48 Sessions)	**369**
Lung: 306 Esophagus: 46 Other: 17	
Gastrointestinal/Colorectal Case Conference (35 Sessions)	**277**
Digestive: 253 Other: 24	
Neuro-oncology Tumor Board (49 Sessions)	**598**
Brain, Central Nervous System: 454 Other: 144	
Prostate Tumor Board (49 Sessions)	**318**
Lymphoma Tumor Conference (1 Session)	**4**
Lymph Nodes: 4	
TOTAL	**3,030**

Primary Sites

STATISTICAL SUMMARY

In 2010, 3,403 cases were added to the Cancer Registry database. Of these cases, 2,331 (68.5 percent) were classified as analytical, having their diagnosis made and/or receiving all or part of their first course of treatment at Froedtert & The Medical College of Wisconsin. The top five sites of all analytical cases in order of decreasing frequency were: breast (305), prostate (203), lung/bronchus (196), pancreas (125) and kidney/renal pelvis (113).

The age of patients compromising analytic cases ranged from younger than age 20 (1.5 percent) to age 90 or older (.6 percent). The majority of patients were older than age 50 (77.6 percent), with the greatest number of cases clustered in the age range of 60-69 (25.8 percent). The younger population (younger than age 50) made up a substantial number of cases (22.3 percent). Of all analytic cases, 50.2 percent (1,170) were female, and 49.8 percent (1,161) were male. Review of analytic cases by race revealed 86.0 percent (2,004) were Caucasian, 12.7 percent (295) were African-American, and the remaining 1.3 percent (32) represented other races.

Distribution by the American Joint Commission on Cancer (AJCC) stage at diagnosis demonstrates that just over half of the patients had stage 0, I, or II cancers (50.4 percent). Patients with stage III disease represented 13.4 percent of the cases; 16.1 percent had stage IV cancers. Staging information was insufficient for 3.2 percent of all cases, and not applicable for 16.8 percent of all cases.

RACE

	Number	Percent
Caucasian	2,004	86.0
African-American	295	12.7
Other	32	1.3
TOTAL	**2,331**	**100**

SEX

	Number	Percent
Male	1,161	49.8
Female	1,170	50.2
TOTAL	**2,331**	**100**

AGE AT DIAGNOSIS

	Number	Percent
0-19 years	36	1.5
20-29 years	64	2.8
30-39 years	114	4.9
40-49 years	306	13.1
50-59 years	568	24.4
60-69 years	601	25.8
70-79 years	448	19.2
80-89 years	179	7.7
90-99 years	15	.6
TOTAL	**2,331**	**100.0**

AJCC STAGE

	Number	Percent
Stage 0	115	4.9
Stage I	576	24.7
Stage II	486	20.8
Stage III	313	13.4
Stage IV	372	16.1
Not Applicable	391	16.8
Unknown	75	3.2
TOTAL	**2,331**	**100.0**

Primary Sites Using AJCC Staging

Site	TOTAL	CLASS		SEX		STAGE						
Group	Cases	Analytic	NonAn	M	F	Stage 0	Stage I	Stage II	Stage III	Stage IV	N/A	Unknown
ALL SITES	3403	2331	1072	1750	1653	114	577	485	314	372	393	75
LIP	1	0	1	0	1	0	0	0	0	0	0	0
TONGUE	47	35	12	29	18	1	9	3	7	14	0	1
SALIVARY GLANDS, MAJOR	13	8	5	7	6	0	1	1	1	5	0	0
GUM	7	5	2	2	5	1	1	1	1	1	0	0
FLOOR OF MOUTH	11	9	2	9	2	0	3	1	0	5	0	0
MOUTH, OTHER & NOS	15	13	2	6	9	0	8	1	0	3	0	1
TONSIL	21	16	5	17	4	0	1	2	1	11	0	1
OROPHARYNX	9	4	5	5	4	0	1	1	0	2	0	0
NASOPHARYNX	5	2	3	4	1	0	0	0	1	1	0	0
HYPOPHARYNX	4	4	0	3	1	0	1	0	0	3	0	0
PHARYNX & ILL-DEFINED	1	1	0	1	0	0	0	0	0	0	1	0
ESOPHAGUS	28	15	13	20	8	0	5	1	4	3	0	2
STOMACH	66	48	18	45	21	0	16	6	8	15	0	3
SMALL INTESTINE	27	20	7	14	13	0	7	4	2	6	0	1
COLON	118	75	43	56	62	10	14	13	13	23	0	2
RECTUM & RECTOSIGMOID	81	52	29	48	33	2	15	11	10	12	0	2
ANUS,ANAL CANAL,ANORECTUM	8	6	2	2	6	0	1	3	2	0	0	0
LIVER	79	63	16	55	24	0	24	14	13	5	1	6
GALLBLADDER	13	8	5	4	9	0	2	0	2	4	0	0
BILE DUCTS	26	20	6	16	10	1	4	8	1	2	1	3
PANCREAS	193	125	68	101	92	3	19	40	12	43	0	8
RETROPERITONEUM	4	3	1	2	2	0	1	0	1	1	0	0
PERITONEUM,OMENTUM,MESENT	7	1	6	3	4	0	0	0	0	0	0	1
NASAL CAVITY,SINUS,EAR	12	11	1	7	5	0	2	1	1	5	2	0
LARYNX	39	26	13	31	8	2	8	4	5	6	1	0
LUNG/BRONCHUS-SMALL CELL	28	22	6	16	12	0	1	1	1	18	0	0
LUNG/BRONCHUS-NON SM CELL	225	174	51	103	122	0	47	24	39	62	2	0
PLEURA	11	5	6	7	4	0	0	1	3	1	0	0
OTHER RESPIR & THORACIC	1	1	0	1	0	0	0	0	0	0	1	0
LEUKEMIA	122	69	53	72	50	0	0	1	0	0	68	0
MYELOMA	95	58	37	57	38	0	0	0	0	0	58	0
OTHER HEMATOPOIETIC	58	27	31	29	29	0	0	0	0	0	27	0
BONE	20	18	2	12	8	0	4	7	2	4	0	1
SOFT TISSUE	81	66	15	47	34	0	19	19	22	4	0	2
MELANOMA OF SKIN	99	79	20	61	38	24	30	11	8	2	0	4
OTHER SKIN CA	12	11	1	5	7	0	4	1	2	0	0	4
BREAST	409	305	104	8	401	55	108	102	19	18	1	2
CERVIX UTERI	22	14	8	0	22	0	5	1	4	3	0	1
CORPUS UTERI	68	51	17	0	68	0	37	1	4	4	0	5
UTERUS NOS	3	0	3	0	3	0	0	0	0	0	0	0
OVARY	55	35	20	0	55	0	5	2	25	3	0	0
VAGINA	2	1	1	0	2	0	0	0	0	1	0	0
VULVA	7	6	1	0	7	1	2	1	1	1	0	0
OTHER FEMALE GENITAL	6	3	3	0	6	0	2	0	1	0	0	0
PROSTATE	355	203	152	355	0	0	5	151	30	16	0	1
TESTIS	21	15	6	21	0	0	12	0	1	0	0	2
PENIS	5	5	0	5	0	1	2	1	1	0	0	0
BLADDER	90	48	42	60	30	7	15	14	6	3	0	3
KIDNEY AND RENAL PELVIS	147	113	34	95	52	4	59	4	17	8	5	16
URETER	2	2	0	1	1	1	1	0	0	0	0	0
OTHER URINARY	4	3	1	4	0	1	1	0	0	0	1	0
EYE	14	12	2	6	8	0	2	3	1	0	6	0
BRAIN	140	107	33	75	65	0	0	0	0	0	107	0
OTHER NERVOUS SYSTEM	60	44	16	24	36	0	0	0	0	0	44	0
THYROID	102	87	15	31	71	0	53	3	22	7	0	2
OTHER ENDOCRINE	62	45	17	32	30	0	1	0	0	0	44	0
HODGKIN'S DISEASE	33	16	17	18	15	0	0	11	1	4	0	0
NON-HODGKIN'S LYMPHOMA	162	92	70	96	66	0	19	11	19	42	0	1
UNKNOWN OR ILL-DEFINED	47	24	23	22	25	0	0	0	0	1	23	0

Glossary

Analytical
Cases diagnosed and/or receiving all or part of the first course of treatment at the Froedtert & The Medical College of Wisconsin Clinical Cancer Center.

Non-Analytical
Cases receiving treatment at the Froedtert & The Medical College of Wisconsin Clinical Cancer Center after the first course of treatment is administered elsewhere.

Stage of Disease
Determination of the extent of disease at presentation.

First Course of Treatment
The initial tumor-directed treatment or series of treatments, usually initiated within four months after diagnosis.

Abbreviations
A = analytic: N/A = non-analytic (includes patients seen for second opinion consultations)

M = male; F = female

Non-Appl/Unk = unknown or not applicable

Please note: Tabulations for stage distribution include analytical cases only.

Tobacco Use in Head and Neck Cancer Patients

Bruce Campbell, MD, FACS
Co-chair, Froedtert & The Medical College of Wisconsin Cancer Committee
Professor, Medical College of Wisconsin Department of Otolaryngology and Communication Sciences

Head and neck cancer is defined as squamous cell carcinoma that arises in the oral cavity, nasopharynx, oropharynx, hypopharynx, larynx and neck; these are the "mucosal sites" where cancers can arise in the mouth and throat. For the past 150 years, most of the cancers in these sites have been associated with long-term tobacco use, but they became much more common in the 20th century as smoking rates climbed. Squamous cell carcinoma of the region has affected several famous people, including Ulysses S. Grant, Sigmund Freud, Grover Cleveland, Babe Ruth, Sammy Davis, Jr. and Michael Douglas.

Although smoking was not initially recognized as causing squamous carcinoma of the throat, that changed in the 1960's. Since the publication of the Surgeon General's report on tobacco and cancer in 1964, the percentage of adult men smoking in the U.S. has dropped from about 50 percent in the mid-1960's to about 20 percent in 2011. Although the rate of decline has slowed, the recognition that tobacco is related to cancers of many sites including lung, throat and esophagus has become widely known by the public. Paralleling this drop in smoking, cancer incidence and deaths attributed to most tobacco-related cancers have also declined.

Despite this knowledge, tobacco use continues in the U.S., even among cancer patients. The incidence of continued smoking among cancer patients has not been widely measured, although the rate of tobacco use among head and neck cancer survivors remains higher than percentage of use in patients who have never had cancer.

THE STUDY

We reviewed tobacco use among new head and neck cancer patients over a 12 month period.

During 2010, 149 patients were newly diagnosed with head and neck cancer and presented to the Froedtert & The Medical College of Wisconsin Clinical Cancer Center. Patients who presented having been previously treated or who received their treatment elsewhere were not included in the review. Over the past five years, the number of patients presenting to Froedtert & The Medical College has increased from approximately 110 in 2006 to 150 in 2010.

Table I

	TOTAL
Never used	20
Cigarette smoker current	63
Cigar/pipe current	3
Snuff/smokeless current	1
Previous use	62
TOTAL	**149**

All of the patients were asked about their tobacco use. (See table I.) Only 20 (13 percent) had never used tobacco in any form. Sixty-two (41 percent) had used tobacco at some point in the past, but had quit at the time of presentation. Sixty-seven (45 percent) of the patients were actively smoking at the time of cancer presentation. This is two-and-a-half times the percentage of patients in the general population who smoke.

Of the current tobacco users, 49 were men and 18 were women; 53 were Caucasian, 13 were African-American, and one was Asian. (See tables II and III.)

Table II

	Never Used	Cigarette smoker current	Cigar/pipe current	Snuff/ smokeless current	Previous use	TOTAL
Male	9	45	3	1	41	99
Female	11	18	0	0	21	50
TOTAL	**20**	**63**	**3**	**1**	**62**	**149**

Table III

	Never Used	Cigarette smoker current	Cigar/pipe current	Snuff/ smokeless current	Previous use	TOTAL
White	19	50	3	0	56	128
Black	0	12	0	1	6	19
Laotian	1	0	0	0	0	1
Asian	0	1	0	0	0	1
TOTAL	**20**	**63**	**3**	**1**	**62**	**149**

Aggressive smoking cessation approaches were recommended for all of the patients who continued to use tobacco. Since most insurance, including Badger Care and Medicare cover the cost of medications for smoking cessation, economic barriers to using the medications were rarely present. Despite repeated counseling and the effects of cancer treatment, many of the patients continued to smoke.

HELPING CANCER PATIENTS QUIT SMOKING

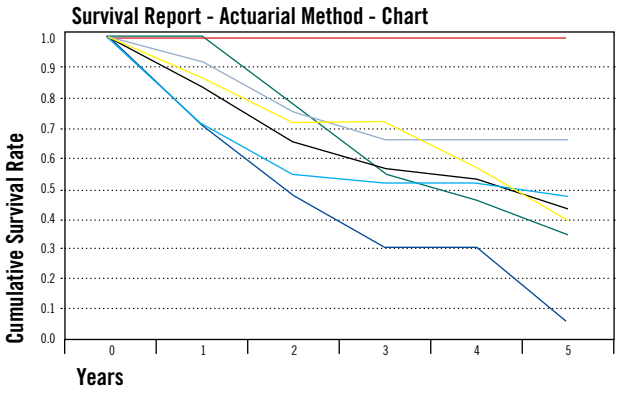
Long-term success in helping people quit smoking is still limited. In previous work, we discovered that approximately one quarter of head and neck cancer survivors continued to smoke five or more years after treatment.

Recent trends in head and neck cancer have included a shift away from tobacco-related cancers. With the increasing incidence of human papilloma virus (HPV) related squamous carcinomas, almost all of which occur in the oropharynx, more and more patients are presenting to the Head and Neck Cancer Program with minimal or non-existent tobacco use histories. Research has demonstrated that the incidence of these HPV-related cancers has continued to rise over the past 10 years and that patients with HPV-related cancer have a significantly better survival outcome than patients who have non-HPV related oropharyngeal cancers. Non-smokers who develop HPV-related cancers have better survival outcomes than smokers. Therefore, smoking cessation is encouraged even in HPV-positive carcinomas of the pharynx.

OVERALL SURVIVAL OF HEAD AND NECK CANCER PATIENTS

Between 2006 and 2010, 706 patients presented to Froedtert & The Medical College with head and neck cancers. Adequate long-term survival information is available for 109 of these patients. Survival curves are presented in Figure 1. The curve for stage III is not reliable, because of the small number of patients in that particular group. Data are consistent with nationally published data on survival in patients with head and neck cancer.

Figure 1



	0	1	2	3	4	5
All Stages	100%	83%	65%	57%	53%	43%
Stage 0	100%	100%	100%	100%	100%	100%
Stage I	100%	92%	75%	66%	66%	66%
Stage II	100%	87%	72%	72%	57%	39%
Stage III	100%	71%	48%	30%	30%	6%
Stage IV	100%	71%	55%	52%	52%	47%
Unknown	100%	100%	78%	54%	46%	35%

TREATMENT CHOICE FOR HEAD AND NECK CANCER

Treatment for head and neck cancer at Froedtert & The Medical College is delivered using the best of currently available evidence. When possible, patients are offered participation in a research protocol. If no protocol is available for a particular type or stage of cancer, treatment is modeled after the consensus recommendations of the National Comprehensive Cancer Network (NCCN).

National treatment trends have moved increasingly toward non-surgical cancer management as more patients have been treated with chemotherapy or biologic therapy combined with radiation therapy. During the most recent five years (2006-2010), surgery continued to be a portion of care for a significant percentage of our patients, although the procedures have become less invasive. For example, 66 of 148 (45 percent) laryngeal cancer patients had surgery as part of their initial cancer treatment. Similarly, 61 of 144 (42 percent) of pharyngeal cancer patients and 192 of 262 (73 percent) oral cavity cancer patients had an operative procedure during their initial treatment. During the most recent year (2010), surgery continued to be an important part of treatment and was used in 53 percent of laryngeal cancer cases, 41 percent of pharyngeal cancer cases and for 68 percent of oral cavity cancer patients.

TREATMENT TEAM

The head and neck cancer treatment team continues to expand. With the move to the Froedtert & The Medical College of Wisconsin Clinical Cancer Center, all patients now have simplified access to a full range of specialists. Most new patients routinely visit an otolaryngologist, radiation oncologist and medical oncologist. Many others will also see a speech pathologist, oral surgeon, plastic surgeon, psych-oncology nurse, rehabilitation specialist and audiologist. Behind the scenes are specialized radiologists, pathologists, data managers, nursing specialists and researchers.

CONCLUSION

In conclusion, head and neck cancer management continues to be a specialized, team effort involving multiple departments. Management is provided using protocols whenever possible. Smoking cessation is strongly encouraged, and cessation help is provided to patients who are receptive. In the future, the Head and Neck Cancer Program will continue to emphasize smoking cessation, cancer prevention and quality of life interventions.

Analytical Cancer Cases

COMPARISON WITH NATIONAL AND STATE ESTIMATES

	Froedtert (actual)		Wisconsin (estimated)		United States (estimated)	
Primary Site	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Female Breast (excludes 55 in situ cases)	250	10.7	4,120	13.9	207,090	13.5
Prostate	204	8.76	1,670	15.7	217,730	14.2
Lung/Bronchus	194	8.41	3,990	13.4	222,520	14.5
Brain & Other Nervous System	138	5.9	unavailable		unavailable	
Pancreas	193	8.29	unavailable		unavailable	
Thyroid	87	3.73	unavailable		unavailable	
Colon/Rectum (excludes 12 in situ cases)	115	4.93	2,760	9.0	142,570	9.3
Kidney/Renal Pelvis	113	4.85	unavailable		unavailable	
Leukemia	69	2.96	940	3.17	43,050	2.8
Non-Hodgkins Lymphoma	92	3.95	1,340	4.5	65,540	4.0
Other Sites (excludes 33 in situ cases)	758	32.5	11,790	39.8	361.060	23.6
All Sites (excludes 115 in situ cases)	2,328	100.0	29,610	100.	1,529,560	100.0

Sources:
Froedtert & The Medical College of Wisconsin Cancer Registry Database 2010
Cancer Facts and Figures 2010, American Cancer Society