



Saint Thomas Hospital

We're here for life.

2008

A MESSAGE FROM OUR SERVICE LINE EXECUTIVE

Eliminating cancer is at the heart of all we do.

Each day, every day, the Saint Thomas Health Service Cancer Program utilizes innovative cancer treatments, integrated therapies and comprehensive education and prevention in the battle against cancer. Through this advanced, patient-centered approach, we're giving hope to thousands across middle Tennessee and winning the war against cancer—one patient at a time.

A critical part of cancer care is the support that is provided by patients' families and friends. That is why Saint Thomas Health Services has three American College of Surgeons' Accredited Community Cancer Programs. The Dan Rudy Cancer Program at Saint Thomas Hospital, Baptist Hospital's Cancer Center and Middle Tennessee Medical Center's Cancer Center have each been recognized and certified as premier community cancer programs. Together with our 70 physician cancer specialists, our three cancer programs treated more than 4000 people in 2007 with comprehensive cancer services, state-of-the-art technology and premier cancer specialists.

We are committed to erasing cancer. In 2007 our system became the only healthcare system in Middle Tennessee to provide all digital mammography, providing the best screening and diagnostic breast services to over 48,000 women a year who put their faith in us to screen for breast cancer. In November 2007 we launched the Saint Thomas Lung Clinic to provide multidisciplinary intervention for all lung and chest tumors. The Saint Thomas Brain Tumor Group remained one of the largest regional referral centers with advanced radio-surgery for the removal of brain tumors. With our specialized colorectal surgeons, our three cancer programs diagnosed and treated more patients with colon cancer than any other program in Middle Tennessee.

Saint Thomas Health Services three cancer programs and its experienced and dedicated associates provide our community with the assurance that advanced, and compassionate cancer care is available close to home. During this time of hope and change we will continue to hold our program to the highest standards, always looking for opportunities to grow and to meet the cancer care needs of our community.

Elizabeth Pace
Cancer Service Line Executive



SAINT THOMAS HEALTH SERVICES

“The premier, comprehensive and integrated system providing compassionate, patient centric cancer prevention, detection, treatment and support to the 3 million residents in Middle Tennessee.”

OUR EXPERIENCE:

MOST FREQUENTLY SEEN CANCERS AT STHS IN 2007

Breast	835
Digestive system	739
Respiratory system	692
Female genital system	347
Male genital system	343
Urinary system	238
Brain and CNS	232
All others	665
Total	4091

We're dedicated to offering the best in cancer care. In fact, all 3 of our cancer programs have been recognized by the Commission on Cancer of the American College of Surgeons as offering the very best in cancer care. Each of our cancer programs has been awarded Commendation Level of Accreditation and Saint Thomas Hospital was the first Community Hospital Comprehensive Cancer Program in Tennessee to receive the Outstanding Achievement Award at its last survey. This is recognition of the quality of our comprehensive, multidisciplinary patient care. We're proud to offer the very best in today's cancer treatment close to home.

For more information about the accreditation and what it means for you, visit:
www.facs.org/cancer/publicapproval.html



SAINT THOMAS HOSPITAL—2008 CANCER COMMITTEE

Alan Cohen, MD
Medical Oncology, Chair

Gina Bonn, RN
Oncology Case Manager

Elizabeth Pace, MHA
STHS Oncology Service Line Executive

Richard Geer, MD
General Surgery, Co-Chair
Cancer Liaison Physician

Irene Bradford, RN
Lung Center

Kimberly Parham, RN
STHS Breast Centers Nurse Manager

Steven Abram, MD
Neurosurgery

Stan Campbell, D. Min.
Pastoral Care

Linda Sack
Seton Support Center

Jeanne Ballinger, MD
General Surgery

Pam ClenDening, CTR
STHS Oncology Data Manager

Rebecca Taylor
American Cancer Society

Marion Bolin, MD
Radiation Oncology

Myrna Garrett, RN
Inpatient Oncology Unit

Sharon Tibbits, PT
STHS Cancer Center Program Coordinator

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Sara Beth Holland, PT
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Beverly Upchurch
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Thomas Hunter, MD
Radiation Oncology

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Palliative Care Specialist

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Medical Oncology

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Radiation Oncology

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Oncology Research

David Schull, MD
Urology

Kathy McGee, MSN
Director of Nursing

Margaret Wright, MD
Medical Imaging

Andrea Owens, MS
Wellness Services

SAINT THOMAS HOSPITAL—2007 ACCESSIONED CASES

Primary Site	Total	Class		Sex	
		Analytic	Non-Analytic	M	F
ALL SITES	1725	1483	242	825	900
ORAL CAVITY	19	13	6	16	3
LIP	1	1	0	1	0
TONGUE	8	6	2	7	1
OROPHARYNX	0	0	0	0	0
HYPOPHARYNX	0	0	0	0	0
OTHER	10	6	4	8	2
DIGESTIVE SYSTEM	393	327	66	219	174
ESOPHAGUS	29	23	6	20	9
STOMACH	40	24	16	25	15
COLON	112	99	13	61	51
RECTUM	63	44	19	34	29
ANUS/ANAL CANAL	8	8	0	2	6
LIVER	18	15	3	12	6
PANCREAS	103	94	9	56	47
OTHER	20	20	0	9	11
RESPIRATORY SYSTEM	372	329	43	208	164
NASAL/SINUS	0	0	0	0	0
LARYNX	12	9	3	8	4
LUNG/BRONCHUS	357	317	40	197	160
OTHER	3	3	0	3	0
BLOOD & BONE MARROW	58	42	16	32	26
LEUKEMIA	41	29	12	22	19
MULTIPLE MYELOMA	12	11	1	7	5
OTHER	5	2	3	3	2
BONE	1	1	0	1	0
CONNECT/SOFT TISSUE	9	7	2	4	5
SKIN	48	41	7	29	19
MELANOMA	46	39	7	27	19
OTHER	2	2	0	2	0
BREAST	230	198	32	1	229
FEMALE GENITAL	93	83	10	0	93
CERVIX UTERI	16	13	3	0	16
CORPUS UTERI	23	22	1	0	23
OVARY	28	24	4	0	28
VULVA	21	19	2	0	21
OTHER	5	5	0	0	5

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Primary Site	Total	Class		Sex	
		Analytic	Non-Analytic	M	F
MALE GENITAL	113	104	9	113	0
PROSTATE	108	101	7	108	0
TESTIS	3	1	2	3	0
OTHER	2	2	0	2	0
URINARY SYSTEM	83	71	12	57	26
BLADDER	34	31	3	27	7
KIDNEY/RENAL	46	37	9	28	18
OTHER	3	3	0	2	1
BRAIN & CNS	136	116	20	71	65
BRAIN (BENIGN)	2	1	1	0	2
BRAIN (MALIGNANT)	46	42	4	31	15
OTHER	88	73	15	40	48
ENDOCRINE	68	65	3	21	47
THYROID	44	43	1	10	34
OTHER	24	22	2	11	13
LYMPHATIC SYSTEM	64	50	14	31	33
HODGKIN'S DISEASE	5	3	2	4	1
NON-HODGKIN'S	59	47	12	27	32
UNKNOWN PRIMARY	35	33	2	21	14
OTHER/ILL-DEFINED	3	3	0	1	2

ESOPHAGEAL CANCER—SITE SPECIFIC STUDY

Thomas Hunter, MD

The American Cancer Society estimates that during 2008 approximately 16,470 new esophageal cancer cases will be diagnosed in the United States and 14,280 deaths from esophageal cancer will occur. About 75% to 80% will occur among men. It is 50% more common among African Americans than among whites, though in Western countries, the rate of adenocarcinoma of the esophagus in white men has been increasing at about 2% a year. The esophageal cancer rate has been unchanged in white women. The rate of esophageal cancer, mainly squamous cell, has been dropping in African American men and women.

The esophagus is essentially a hollow tube and its walls are composed of a number of highly specialized layers, including an inner lining made up of thin, flat cells called squamous cells, a layer below the inner lining containing mucus-secreting glands, and a thick band of muscle tissue. The types of esophageal cancer are classified according to the types of cells from which it originates.

Squamous cell carcinoma, which is the most common form of cancer worldwide and in African Americans, arises from the flat squamous cells that line the esophagus. Cancer of the esophagus is much more common in some other countries, such as Iran, northern China, India and southern Africa where the rates of esophageal cancer are 10 to 100 times higher than in the United States. The main type of esophageal cancer in these countries is squamous cell carcinoma.

Adenocarcinoma arises from the glandular tissue in the lower part of the esophagus nearest the stomach. In the United States, adenocarcinoma is more common in whites than in African Americans. During the past two decades, this type of cancer has increased by 50 percent in African Americans and 450 percent in white Americans.

While squamous cell and adenocarcinoma are the typical types of esophageal cancer, rare forms of the disease sometimes occur. These include sarcoma, lymphoma, small cell carcinoma and spindle cell carcinoma. In addition, cancer that starts in other organs can spread through the bloodstream or lymphatic system to the esophagus.

Figure 1. Comparison NCDB and Saint Thomas Hospital—Histology of Esophageal Cancer
(Source: NCDB, Commission on Cancer, ACoS. Benchmark Reports, v9.0)

Histology	NCDB %	STH %
Carcinoma, NOS	4.49	3.76
Squamous Cell Carcinoma	30.57	13.53
Adenocarcinoma	53.91	62.41
Other Specified Types	11.03	20.30

Factors that have been associated with increased risk include heavy alcohol consumption and chronic alcohol abuse that causes inflammation of the lining of the esophagus that can lead to malignant changes. Also associated with esophageal cancer is use of tobacco products whether cigarettes, cigars, pipe or chewing tobacco. This risk increases with long-term usage and increases even more in people who smoke and use alcohol. Chronic acid reflux resulting in chronic heartburn and a change

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in the lining of the distal esophagus to lining that resembles the glandular lining of the stomach, Barrett's esophagus, results in about a third of esophageal cancers. Smoking, obesity and a high-sodium diet result in an increased risk of reflux problems. Dietary factors such as eating a diet low in fruits and vegetables appear to contribute to esophageal cancer. Especially implicated are diets lacking in vitamins A, C and B-1 (riboflavin). Also, obesity has been linked to an increased risk of adenocarcinoma. Esophageal cancer is also associated with the rare medical conditions of achalasia, esophageal webs, and tylosis.

Factors associated with a decreased risk of esophageal cancer include aspirin or NSAID usage, diets high in cruciferous vegetables and green and yellow vegetables, moderate coffee consumption, eating pizza more than once a week, and the presence of helicobacter pylori. The last two factors are still controversial.

The American Cancer Society estimates during 2008, because esophageal cancer is usually diagnosed at a late stage, most people with esophageal cancer will eventually die of this disease. However, survival rates have been improving. During the early 1960s, only 4% of all white patients and 1% of all African-American patients survived at least 5 years after diagnosis. Now, 18% of white patients and 11% of all African-American patients survive at least 5 years after diagnosis. These figures refer to patients with all stages of disease, so survival rates in earlier stage disease will be higher. In general the prognosis of esophageal cancer is so poor because the majority of patients present with advanced disease.

The main treatment for esophageal cancer includes surgery, radiation and chemotherapy. These may be utilized singularly or in combination. At Saint Thomas Hospital a total of 107 cases were reported from this institution from 2000-2005. The predominant treatment involved trimodality therapy utilizing preoperative chemotherapy and radiation therapy followed by surgery in 42% of cases. An additional 23% were treated with chemotherapy and radiation alone. Surgery was the sole modality in 16%. Chemotherapy alone was used 7% of the time, while radiation alone was used in 2% of cases. As preoperative therapy was so frequently utilized, accurate survival by stage was not available.

Figure 2. Comparison NCDB and Saint Thomas Hospital – Treatment of Esophageal Cancer
(Source: NCDB, Commission on Cancer, ACoS. Benchmark Reports, V9.0)

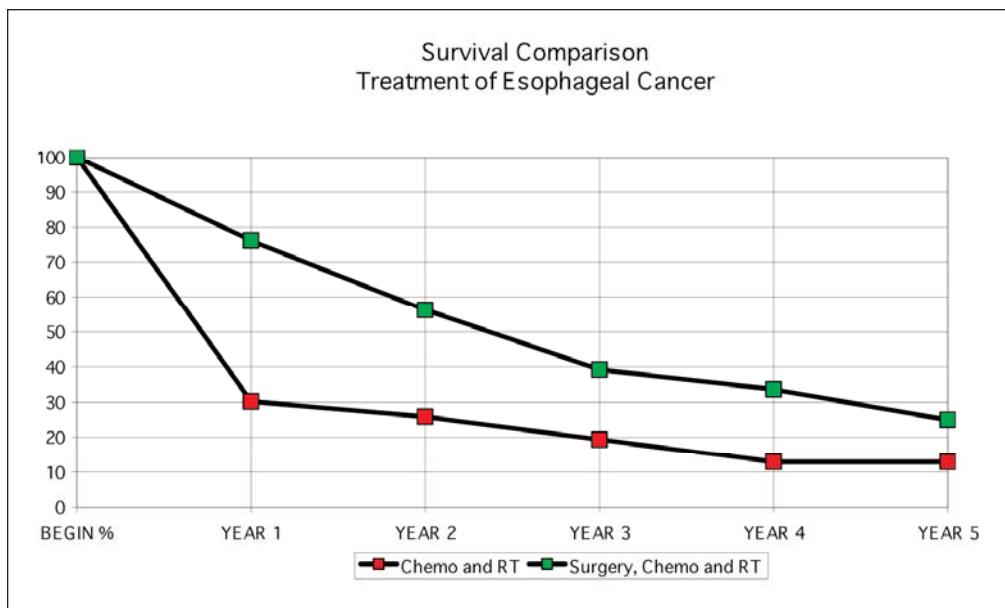
Treatment	NCDB%	STH%
Surgery Only	13.88	15.89
Radiation Only	8.92	1.87
Surgery & Radiation	0.01	0.00
Surgery & Chemotherapy	0.01	0.00
Radiation & Chemotherapy	30.49	23.36
Chemotherapy Only	8.29	7.48
Surgery, Radiation & Chemotherapy	13.01	42.06
Other Specified Therapy	4.39	1.87
No First Course Treatment	21.00	7.48

Over the past 5 years, neoadjuvant chemoradiotherapy has been utilized more often at Saint Thomas Hospital. An analysis of 65 cases from the period 2002–2007 revealed the following tumor response at time of surgical resection:

Figure 3. Tumor Response at Surgical Resection Following Neoadjuvant Chemoradiotherapy at Saint Thomas Hospital

Partial Response	52%
Complete Response	37%
Progression of Disease	8%
Indeterminate	3%

A five-year observed survival analysis calculated by actuarial method comparing patients treated with chemotherapy and radiation and patients who received surgery, chemotherapy and radiation shows a survival advantage for those treated with tri-modality therapy.



The five-year survival of patients with esophageal cancer has improved from historic 5% levels to the current 18% levels nationally. Trimodality therapy as practiced at Saint Thomas Hospital appears to improve on the national average by about 10% by actuarial analysis. The histological 37% complete response rate is excellent. The treatment of esophageal cancer at Saint Thomas is at least equivalent to national standards.