Memorial Hospital Cancer Committee
2010 Annual Report

MEMORIAL
HOSPITAL
MEMORIAL HEALTH CARE SYSTEM

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Message from the Cancer Program Chair

Dr. Michael Grillis, Cancer Committee Chairman
Memorial Hospital

I am pleased to present to you our 2010 annual report. I am proud to announce that we have maintained our certification with the American College of Surgeons as a community cancer center with commendations. One major benefit of having an accredited program is quality care close to home with a multi-specialty team approach that coordinates the best treatment options to the patient. The patient is offered education on clinical trials, and support.

Our tumor board continues to meet on a monthly basis to review and evaluate patients with newly diagnosed cancer. We continue to utilize the PACS system to electronically view patient information near-instantaneously by digital imaging using the host of modality, computer hardware and imaging software. This expands the possibilities of providing capabilities of off-site viewing and reporting. Specialists in different areas, including medical oncology, radiation oncology, general surgery, radiology, pathology, internal medicine, family medicine, and oncology nursing convene to share their ideas regarding treatment options for the patients. Guidelines are discussed and treatment decisions are individualized to optimize outcomes.

In addition the hospital continues to maintain the Joint Commission Accreditation status to assure high quality standards of care.

Our Certified Cancer Registry remains active. We continue to compile information on cancer cases diagnosed in the community. Current regulations are constantly tracked to assure the many changes are being followed. The information will be used to track trends, diagnosis, and treatment in the community and in the county at large.

I am personally very pleased with our achievements this year of rendering the highest quality of care for the community's health needs. I want to extend my thanks to all of the members of the Committee and to all the staff at Memorial Hospital who continue to help us work towards our mission.

Composition of the Oncology Committee – 2010

Memorial Hospital has a standing committee that is clearly defined by the hospital's by-laws. This committee provides leadership and oversight for all cancer-related activities.

The Oncology Committee membership includes multidisciplinary physician representation from diagnostic and therapeutic specialties, as well as allied health professionals involved in the care of the cancer patient.

- Michael Grillis, D.O., FACOS – Cancer Committee Chairman
- Rick Wiecek, MD – Cancer Liaison Physician
- James Fanning, MD – Medical Oncologist
- Gary Meade, MD – Pathology
- Khalid Siddiqui, MD – Radiation Oncologist
- Jeff Ward, MD – Radiology
- Kara Brown, CTR – Cancer Registrar
- Bonnie Reeves, COO
- Debra Hess, RN – Director of Special Services
- Paula Jones, LPN, CTR – Cancer Registrar
- Terry Day, RN-Director Medical Surgical
- Ann Smith, RN, MPH, CIC – Quality
- Rose Eisenhauer, SWA – Social Worker
- Nola Murray, RN – Nursing
- Deb Niese/Samantha Knox - American Cancer Society
- Lisa Murphy/Denise Woolley – CME
- Bev Hart – Hospice
- Cheryl Paeth, OTD, OTR/L, CLT

2010 Coordinators

Cancer Conference
Kara Brown, CTR

Quality Improvement
Ann Smith

Quality Control/Cancer Registry
Paula Jones, LPN, CTR

Community Outreach
Debra Hess, RN

THE CANCER REGISTRY

Kara Brown, CTR

The Cancer Registry reviews all patients diagnosed and/or treated at Memorial Hospital with a malignancy or selected benign neoplasm. Reportable cases are identified through various case finding sources within the institution. Utilization of a computerized software system offers access to a broad range of data with various categories including demographics, canceridentification, stage, treatment, and diagnosis. The purpose of this data service is to provide accurate and complete cancer information while maintaining strict confidentiality of each patient's record. The information is electronically stored for timely and accurate retrieval.

Annual Lifetime Follow-Up

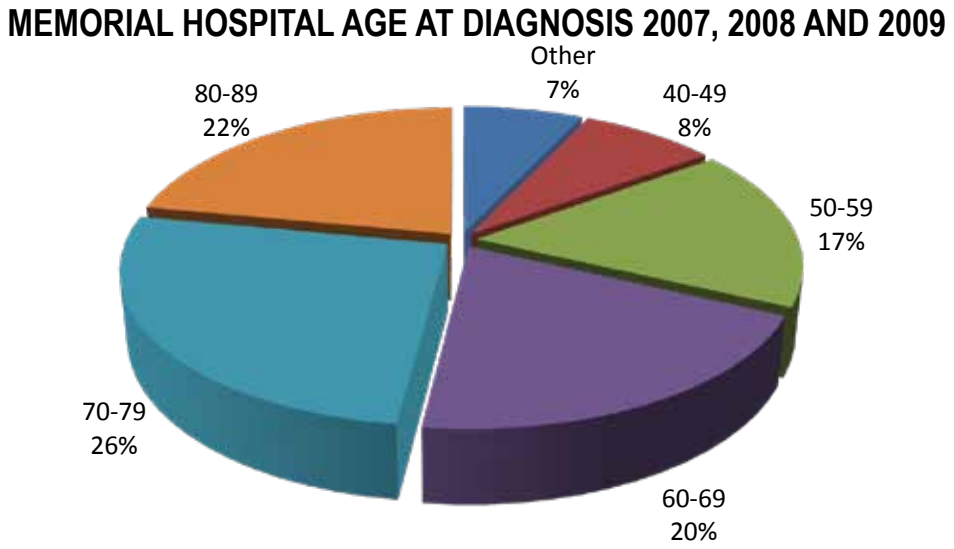
Annual lifetime follow-up on all analytic patients (those patients diagnosed and/or treated at Memorial Hospital) is conducted to ensure accurate survival and outcomes data. Prevention, early detection, and continuity of care are important factors in long-term cancer survival. Performing annual lifetime follow-up directly benefits patients as it reminds the physician and the patient of the need for continued medical surveillance. This is important in order to assure early detection of a possible recurrence or to diagnose a new primary malignancy.

Reporting

Data is submitted to the ACOS's National Cancer Data Base (NCDB), which provides us with comparative studies by which to assess our oncology care. This is the fourth year that Memorial Hospital's Cancer Program participated in the NCDB's Call for Data. Benefits of participation include an annual review of patient care (nationally), a general summary report of our hospital's care patterns for comparison to the national data, and a data edit report to ensure quality of our cancer data. The NCDB provides a useful benchmark for patient care and continuous quality improvement efforts of Memorial Hospital's Cancer Program. This data evaluates therapies and their outcomes, which may assist our physicians to better plan treatment strategies for cancer patients that are in their care.

Quality Control of Registry Data

The Cancer Registry staff continually strives for data quality through a variety of monitoring systems. From 2008 through 2010, as in past years, members of the Cancer Committee reviewed a minimum of 10 percent of the newly diagnosed cases. The physician verifies accurate recording of the primary anatomic site, histology, stage of disease, and treatment by comparing the completed abstract with the patient's medical record. In addition to this review, the registry software has extensive built-in data validation edits initiated at the time of data entry which contributes to high quality data.



The above graph shows a breakdown by 2007, 2008 and 2009 age at diagnosis. The majority of cases diagnosed at Memorial Hospital are in patients age 60 years and older.

Primary Site	2007	%	2008	%	2009	%
ORAL CAVITY & PHARYNX	3	1.60%	4	2.50%	1	0.70%
Tongue	0	0.00%	1	0.60%	0	0.00%
Salivary Glands	0	0.00%	1	0.60%	0	0.00%
Gum & Other Mouth	1	0.50%	0	0.00%	0	0.00%
Tonsil	1	0.50%	2	1.30%	1	0.70%
Oropharynx	1	0.50%	0	0.00%	0	0.00%
DIGESTIVE SYSTEM	31	16.30%	41	25.80%	26	17.30%
Esophagus	5	2.60%	2	1.30%	2	1.30%
Stomach	0	0.00%	1	0.60%	2	1.30%
Small Intestine	1	0.50%	0	0.00%	0	0.00%
Colon Excluding Rectum	20	10.50%	21	13.20%	13	8.70%
Cecum	7		4		6	
Ascending Colon	2		2		1	
Hepatic Flexure	0		1		0	
Transverse Colon	1		2		0	
Splenic Flexure	0		0		1	
Descending Colon	1		2		1	
Sigmoid Colon	8		9		3	
Large Intestine, NOS	1		1		1	
Rectum & Rectosigmoid	5	2.60%	13	8.20%	4	2.70%
Rectosigmoid Junction	1		7		0	
Rectum	4		6		4	
Anus, Anal Canal & Anorectum	0	0.00%	2	1.30%	1	0.70%
Liver & Intrahepatic Bile Duct	0	0.00%	0	0.00%	2	1.30%
Pancreas	0	0.00%	2	1.30%	2	1.30%
RESPIRATORY SYSTEM	14	7.40%	11	6.90%	9	6.00%
Larynx	1	0.50%	1	0.60%	0	0.00%
Lung & Bronchus	13	6.80%	10	6.30%	9	6.00%
BONES & JOINTS	0	0.00%	0	0.00%	1	0.70%
Bones & Joints	0	0.00%	0	0.00%	1	0.70%
SOFT TISSUE	1	0.50%	0	0.00%	0	0.00%
Soft Tissue (including Heart)	1	0.50%	0	0.00%	0	0.00%
SKIN EXCLUDING BASAL & SQUAMOUS	10	5.30%	1	0.60%	5	3.30%
Melanoma -- Skin	10	5.30%	1	0.60%	4	2.70%
Other Non-Epithelial Skin	0	0.00%	0	0.00%	1	0.70%
BASAL & SQUAMOUS SKIN	41	21.60%	39	24.50%	44	29.30%
Basal/Squamous cell carcinomas of Skin	41	21.60%	39	24.50%	44	29.30%
BREAST	49	25.80%	33	20.80%	30	20.00%
Breast	49	25.80%	33	20.80%	30	20.00%
FEMALE GENITAL SYSTEM	11	5.80%	8	5.00%	17	11.30%
Cervix Uteri	3	1.60%	2	1.30%	1	0.70%

Corpus & Uterus, NOS	5	2.60%	3	1.90%	10	6.70%
Primary Site	**2007**	**%**	**2008**	**%**	**2009**	**%**
Ovary	1	0.50%	1	0.60%	1	0.70%
Vagina	0	0.00%	0	0.00%	2	1.30%
Vulva	2	1.10%	2	1.30%	3	2.00%
MALE GENITAL SYSTEM	4	2.10%	2	1.30%	1	0.70%
Prostate	4	2.10%	0	0.00%	0	0.00%
Testis	0	0.00%	1	0.60%	1	0.70%
Penis	0	0.00%	1	0.60%	0	0.00%
URINARY SYSTEM	5	2.60%	7	4.40%	7	4.70%
Urinary Bladder	4	2.10%	6	3.80%	7	4.70%
Ureter	0	0.00%	1	0.60%	0	0.00%
Other Urinary Organs	1	0.50%	0	0.00%	0	0.00%
ENDOCRINE SYSTEM	0	0.00%	0	0.00%	1	0.70%
Thyroid	0	0.00%	0	0.00%	1	0.70%
LYMPHOMA	11	5.80%	3	1.90%	6	4.00%
Hodgkin Lymphoma	0	0.00%	1	0.60%	0	0.00%
Non-Hodgkin Lymphoma	11	5.80%	2	1.30%	6	4.00%
NHL - Nodal	8		1		6	
NHL - Extranodal	3		1		0	
MYELOMA	1	0.50%	0	0.00%	1	0.70%
Myeloma	1	0.50%	0	0.00%	1	0.70%
LEUKEMIA	3	1.60%	2	1.30%	0	0.00%
Lymphocytic Leukemia	2	1.10%	1	0.60%	0	0.00%
Myeloid & Monocytic Leukemia	1	0.50%	1	0.60%	0	0.00%
KAPOSI SARCOMA	0	0.00%	1	0.60%	0	0.00%
Kaposi Sarcoma	0	0.00%	1	0.60%	0	0.00%
MISCELLANEOUS	6	3.20%	7	4.40%	1	0.70%
Miscellaneous	6	3.20%	7	4.40%	1	0.70%
Total	190		159		150	

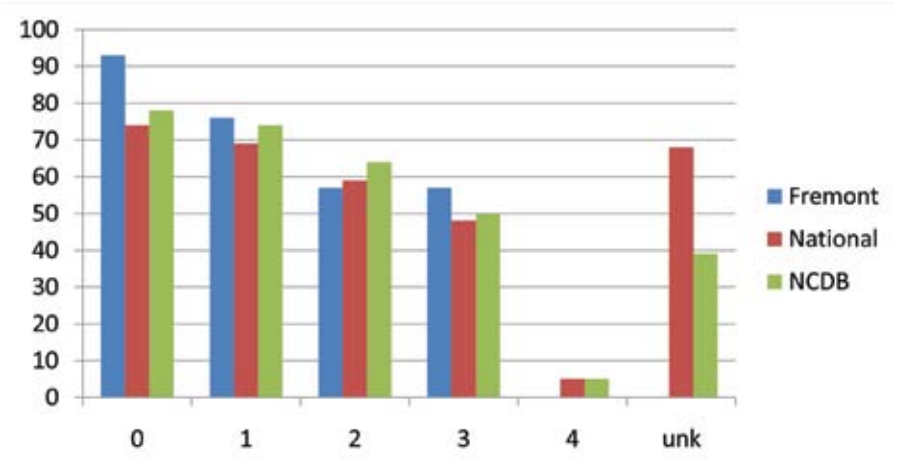
List of sites treated by year at Memorial Hospital in Fremont.

Colorectal Cancer Study

Dr. Michael Grillis

Colorectal cancer (CRC) is the third most commonly diagnosed cancer among both men and women in the United States. Approximately 148,810 new cases of large bowel cancer are diagnosed each year in the United States, of which 108,070 are colon and the remainder rectal cancers. Approximately 49,960 Americans die of large bowel cancer each year.

2000-2003 FREMONT COLON, RECTOSIGMOID AND RECTUM OBSERVED SURVIVAL



Survival comparisons for Memorial Hospital shows over 50 percent survival in all stages with stage 0 being over 90 percent. There were no stage 4 cases for Memorial Hospital in the study.

Diagnosis

While colorectal cancer is often found after symptoms appear, most people with early colon or rectal cancer have no symptoms of the disease. Symptoms usually appear only with more advanced disease, signifying the importance of undergoing recommended screening tests before any symptoms develop.

Some of the common signs and symptoms of CRC are change in bowel habits, rectal bleeding, abdominal pain, weakness and fatigue. If symptoms or the results of the physical exam or blood tests suggest that colorectal cancer might be present, further work up is pursued with any of the following tests that might include endoscopic tests such as sigmoidoscopy or colonoscopy, or imaging tests such as a barium enema (lower GI series), double-contrast barium enema, or CT colonography (virtual colonoscopy).

The most common test for evaluating the presence of Colorectal cancer at Memorial Hospital is a standard colonoscopy, which has the advantage of both diagnostic and therapeutic intervention concurrently.

Recommended Work Up for Colon Cancer

Once the diagnosis of CRC is established, the local and distant extent of disease spread should be determined in order to provide a framework for discussing therapy and prognosis. Two staging systems are used to define the extent of disease at diagnosis, the Duke's classification and the TNM staging system of the American Joint Committee on Cancer (AJCC). Preoperative clinical staging is best accomplished by physical examination (with particular attention to ascites, hepatomegaly and lymphadenopathy), computed tomography (CT) scan of the abdomen and pelvis, and chest radiograph. Even if preoperative clinical staging evaluation fails to show evidence of metastatic spread, intraoperative evaluation is an essential component of the clinical staging process. In particular, CT scan is not a reliable diagnostic test for low volume tumor on peritoneal surfaces.

Recommended Work Up for Rectal Cancer

Preoperative knowledge of the depth of invasion and nodal status is critically important for planning therapy of a rectal cancer. Neoadjuvant combined modality approaches utilizing both chemotherapy and radiation are associated with less toxicity and a higher likelihood of sphincter preservation, particularly for distal transmural tumors. Both transrectal or endorectal ultrasound (EUS) and MRI with or without an endorectal coil can demonstrate the various layers of the rectal wall, but the EUS is less expensive and less time-consuming.

Treatment Options for Colon Cancer

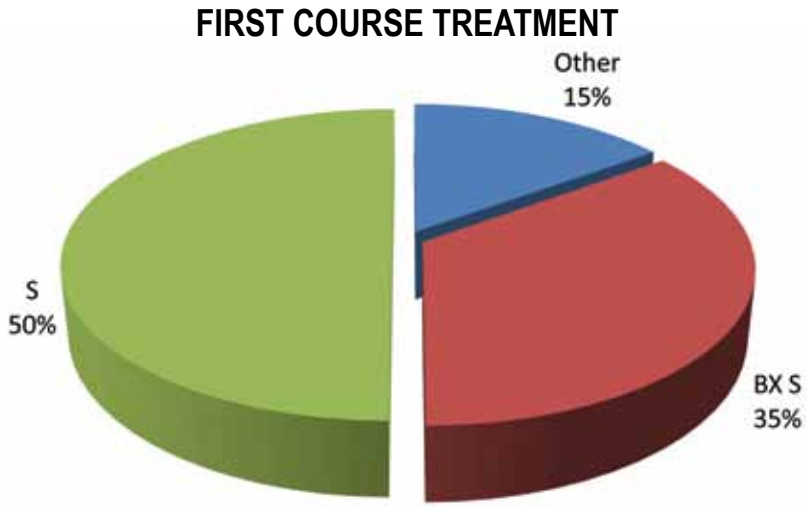
Surgery has the most important role in treatment for patients with colon cancer that is believed to be localized. The type of surgery depends upon the location and stage of the tumor. Not all patients need chemotherapy after surgery. The patients who are most likely to have cancer cells remaining after surgery, and therefore benefiting from adjuvant chemotherapy, are those with stage III colon cancer, and a subgroup of patients with high-risk stage II disease. In patients with stage III colon cancer, the use of chemotherapy after surgery reduces the risk of dying of cancer by about 30 percent. A six-month course of adjuvant chemotherapy is a standard approach throughout the world.

People with higher-risk stage II disease include those with a T4 tumor, tumor that obstructed the bowel or has perforated the bowel wall, invasion of tumor into lymph or blood vessels or nerves, poorly differentiated cancer, or fewer than 13 lymph nodes in the surgical specimen.

Treatment Options for Rectal Cancer

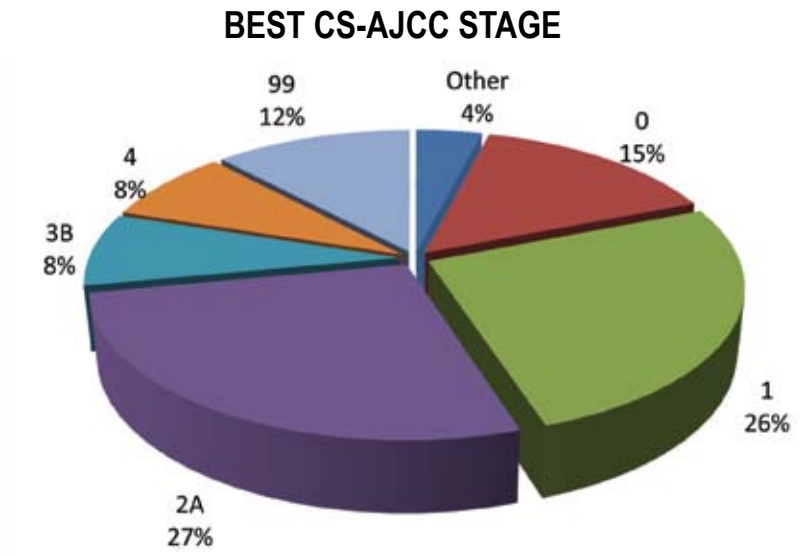
The majority of rectal cancers are treated with a combination of surgery, radiation, and chemotherapy.

- Stage I rectal cancer — Surgery alone may be curative.
- Stage II or III — Adjuvant or neoadjuvant therapy along with surgery.
- Stage IV — Chemotherapy, with or without surgery



First Course Treatment	Number	Percent (%)
Bx and Surgery	9	34.62%
Surgery	13	50.00%
other	4	15.38%
Total	26	100.00%

85% of all colorectal cancers are treated with surgery at Memorial Hospital in 2007.



Best CS/AJCC Stage	Number	Percent (%)
0	4	15.38%
1	7	26.92%
2A	7	26.92%
3B	2	7.69%
4	2	7.69%
99	3	11.54%
Other	1	3.85%
Total	26	100.00%

The graph above displays the breakdown by Stage for 2007 colorectal cancers. The majority of the cases treated at Memorial Hospital are diagnosed at an early stage. Three cases are noted in the unknown stage. These cases were diagnosed by biopsy but received further treatment elsewhere.

Future Direction

Over the past 12 years, significant progress has been made in the systemic treatment of this malignant condition. Six new chemotherapeutic agents have been introduced, increasing median overall survival for patients with metastatic colorectal cancer from less than 9 months with no treatment to approximately 24 months. For patients with stage III (lymph node positive) colon cancer, an overall survival benefit for fluorouracil-based chemotherapy has been firmly established, and recent data have shown further efficacy for the inclusion of oxaliplatin in such adjuvant treatment programs. For patients with stage II colon cancer, the use of adjuvant chemotherapy remains controversial, but may be appropriate in a subset of individuals at higher risk for disease recurrence.

Characterizing the molecular changes associated with colorectal cancer development and progression will allow us to identify both biological markers for this disease and relevant molecular targets for prevention and treatment.

Colon Cancer Treatment from an Oncologist Point of View:

Dr. James E. Fanning

The changes in adjuvant therapy for colorectal cancer have undergone a sizeable change in the last 10-15 years with the advent of oxaliplatin in the adjuvant setting and the addition of multiple new agents in the metastatic setting. Traditionally a fluorouracil-based approach was taken in most patients in the setting of adjuvant colon cancer therapy. It was shown that oxaliplatin-based chemotherapy offers superior overall survival rates and is the gold standard at this time for adjuvant therapy for node positive colon cancer.

In the metastatic setting, bevacizumab, an anti-vascular epidermal growth factor receptor inhibitor has been shown to offer superior response rates when used in addition with chemotherapy over chemotherapy alone in the metastatic setting. Similarly, Erbitux and Vectibix monoclonal antibodies targeting the epidermal growth factor receptor has also been shown to be additional weapons in the oncologist's weapon against metastatic colon cancer. Irinotecan unfortunately has not been shown to improve survival rates in the adjuvant setting and is not routinely used outside the clinical trial. However, it is a very potent drug when used in the metastatic setting.

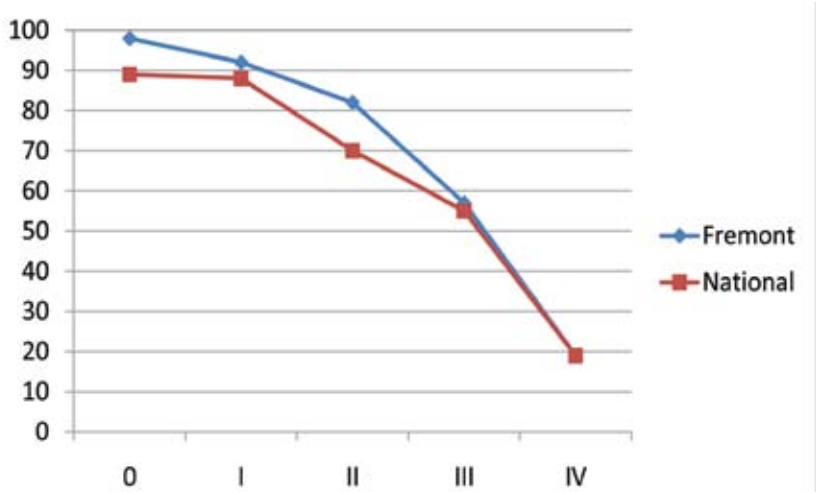
In the adjuvant setting for rectal cancer, fluorouracil-based therapy with radiation is still the gold standard. Current research questions are investigating the addition of multiple agents on top of fluorouracil such as oxaliplatin that could potentially improve response rates and overall survival. One clear development over the last ten years has been the aggressive use of neoadjuvant therapy and radiation therapy at diagnosis in many patients with rectal cancer. Many oncologists still will treat adjuvant rectal cancer patients in a similar way as the adjuvant colon cancer patients with oxaliplatin-based chemotherapy.

BREAST CANCER: A STUDY OF CARE AT MEMORIAL HOSPITAL OF FREMONT

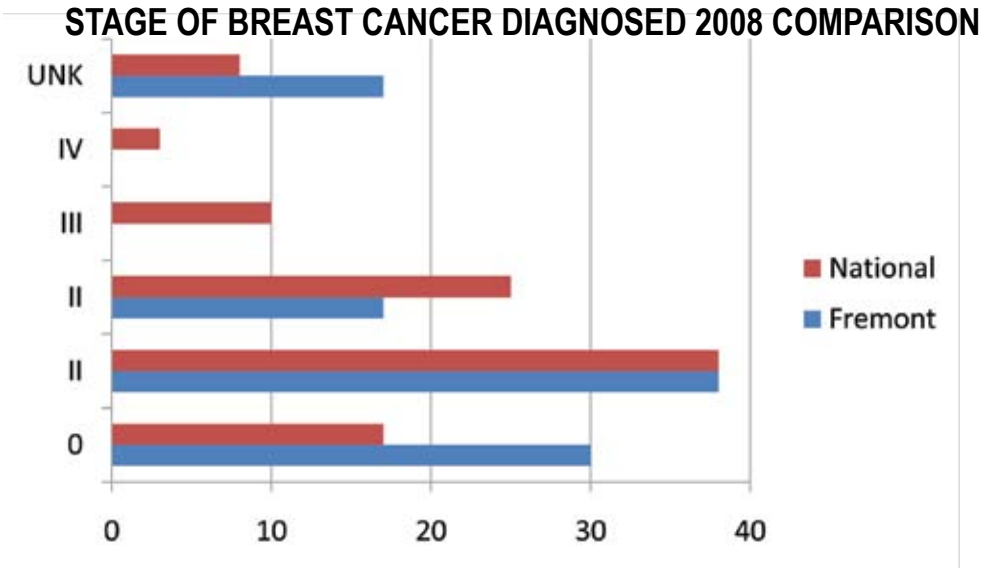
Dr. Michael Grillis

Breast cancer is a malignancy that originates in the ducts and lobules of the breast. It is the most common malignancy in women, affecting approximately one in eight American women during their lifetime. In 2008, an estimated 182,460 women were diagnosed with invasive breast cancer and 63,413 were diagnosed with in situ disease (25 percent). In the U.S. Breast cancer remains the second leading cause of cancer deaths in American women, accounting for 40,480 deaths in 2008.

OBSERVED SURVIVAL BREAST 2000-2005 (5 YEARS)



Routine breast cancer screening gives us the best chance to diagnose breast cancers at their earliest stages, when they are most curable. We continue to recommend annual screening mammography and clinical breast examination for all women over the age of 40, as well as monthly breast self examination as a means of maximizing the chances for early detection. With increased public awareness and vigorous screening programs, more than 80 percent of breast cancers are diagnosed at an early stage. As a result, 87 percent of all women with breast cancer will survive five years, and 80 percent will be alive at 10 years.



American Cancer Society Recommendations for Early Breast Cancer Detection:

- Women age 40 and older should have a screening mammogram every year and should continue to do so for as long as they are in good health.
- Women in their 20s and 30s should have a clinical breast exam (CBE) as part of a periodic (regular) health exam by a health professional, preferably every 3 years. After age 40, women should have a breast exam by a health professional every year.
- BSE is an option for women starting in their 20s. Women should be told about the benefits and limitations of BSE. Women should report any breast changes to their health professional right away.

Women at increased risk should talk with their doctors about the benefits and limitations of starting mammograms when they are younger, having additional tests (such as breast ultrasound or MRI), and/or having more frequent exams.

Digital Mammography at Memorial Hospital

Digital mammography provides patients with more accurate and better-detailed mammograms than traditional film mammography. According to cancer.gov, digital mammography gives women, especially those under the age of 50, significantly better results. Digital mammography can also detect cancer in women under 50 sooner than film mammography. Digital mammography is available at Memorial Hospital in the Women's Diagnostic Center, which was constructed in existing hospital space in the early part of 2010.

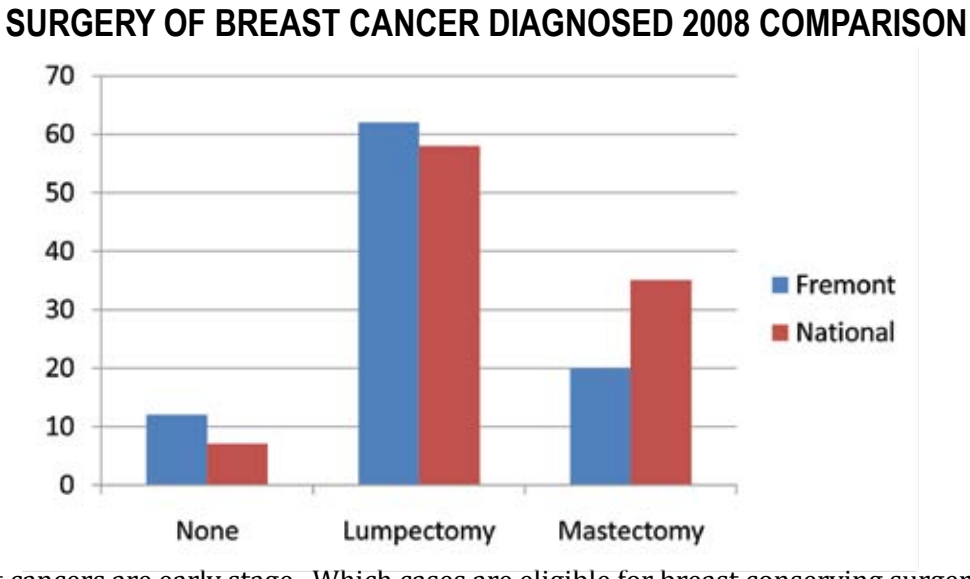
One other advantage of having digital mammography is space. Images are stored electronically; therefore health-care facilities have more space that can be used for patient care. In fact, the Women's Diagnostic Center at Memorial Hospital was constructed in space that was previously used to store film images.

Celebrating Women & Wellness

In 2010, Memorial Health Care System established the Celebrating Women & Wellness Committee. This committee has hosted free, monthly information sessions led by physicians and other health care professionals, which have addressed issues such as breast cancer and mammography as well as cervical cancer.

Survival

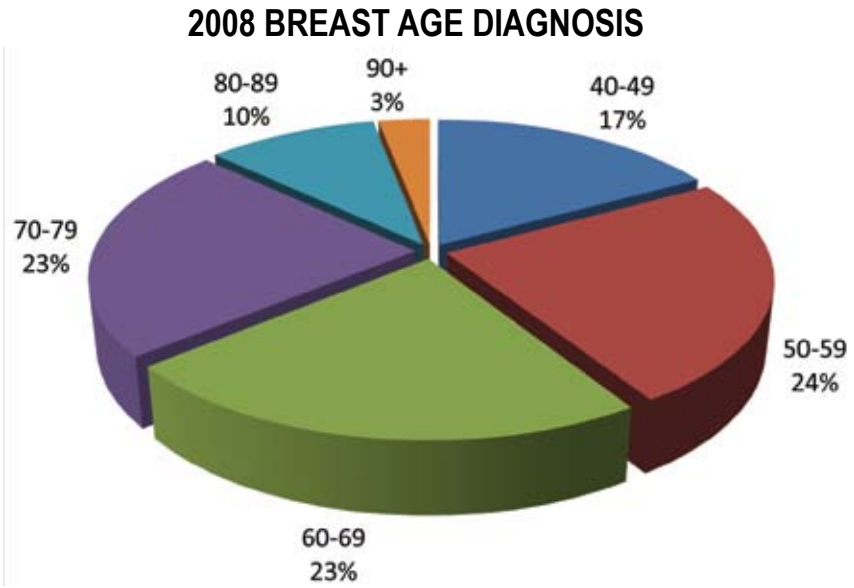
Breast cancer survival is determined primarily by the extent of disease at the time of diagnosis, with in situ and localized cancers having the best prognosis, cancers with distant spread having the worst, and regional disease in between. The age at diagnosis is also known to be an important prognostic factor with younger women tending to have more aggressive disease than older women with breast cancer. Our age distribution shows that the majority of breast cancer diagnosed in 2008 was in the age group of 50-79. Early breast cancers are typically managed initially with surgery. In the absence of specific contraindications, breast conserving therapy (BCT) is widely recognized as medically equivalent to mastectomy as a surgical approach to early breast cancers. Breast conservation rates vary over different geographic regions and are influenced both by physician recommendations and by patient preference. In our hands, 63 percent of women are treated with a breast conserving approach, compared to 20 percent who undergo mastectomy.



Most new breast cancers are early stage. Which cases are eligible for breast conserving surgery followed by radiation and adjuvant therapy as appropriate?

- Stage I and II breast cancer should be considered.
- Ductal or lobular histology can be considered eligible.
- Any location in the breast with histologic negative margins.
- Patients with mobile palpable nodes, even if clinically positive.
- Estrogen receptor status is not relevant.

Patient age is not the only factor in recognizing and accepting the commitment to life-long surveillance.



Mastectomy may still be the treatment of choice for some patients with new breast cancer. These fall into four broad categories:

- Those in whom radiation therapy is contraindicated
- Those in whom lumpectomy would have an unacceptable cosmetic result
- Those for whom local recurrence is an issue
- Those few high-risk patients for whom prophylaxis is appropriate

The last two decades have brought an increased role for chemotherapy, hormonal therapy and radiation therapy in the management of early stage breast cancers.

LYMPHOMA

James Fanning, MD

Lymphoma is usually malignant tumors that arise in the lymph nodes or other lymphatic tissue. These cells are responsible for immune response to infections.

There are 2 types of lymphoma.

Hodgkin lymphoma (also know as Hodgkin's lymphoma, Hodgkin disease or Hodgkin's disease)

Non-Hodgkin lymphoma

Memorial Hospital had six cases diagnosed in 2009 with Lymphoma.

The cells of these 2 types of lymphoma look different under a microscope. However, in some cases, special lab tests may be needed to tell them apart.

Types of non-Hodgkin Lymphoma (listed are two of the most common)

Diffuse large B cell lymphoma: This kind makes up about 1 out of every 3 cases of lymphoma.

Follicular lymphoma: About 1 out of 5 cases of lymphoma in the US are of this type.
Types of Hodgkin disease:

- Classic Hodgkin disease accounts for about 95 percent of all cases.
- Nodular sclerosis Hodgkin disease – occurs mainly in younger people
- Mixed cellularity Hodgkin disease – mostly in older adults
- Lymphocytic-rich Hodgkin disease accounts for about 5 percent of HD cases
- Lymphocytic-depleted Hodgkin disease – least common 1 percent

Nodular lymphocyte predominant Hodgkin disease – more common in men than women.

Key Statistics

Hodgkin disease
8,510 new cases in 2009
1,290 people will die of Hodgkin disease in 2009,

Hodgkin disease can occur both children and adults. It is most common in early adulthood. Because of advances in treatment, survival rates have improved considerably since the early 1970's. The one year survival rate for all patients diagnosed with HD is about 92 percent.

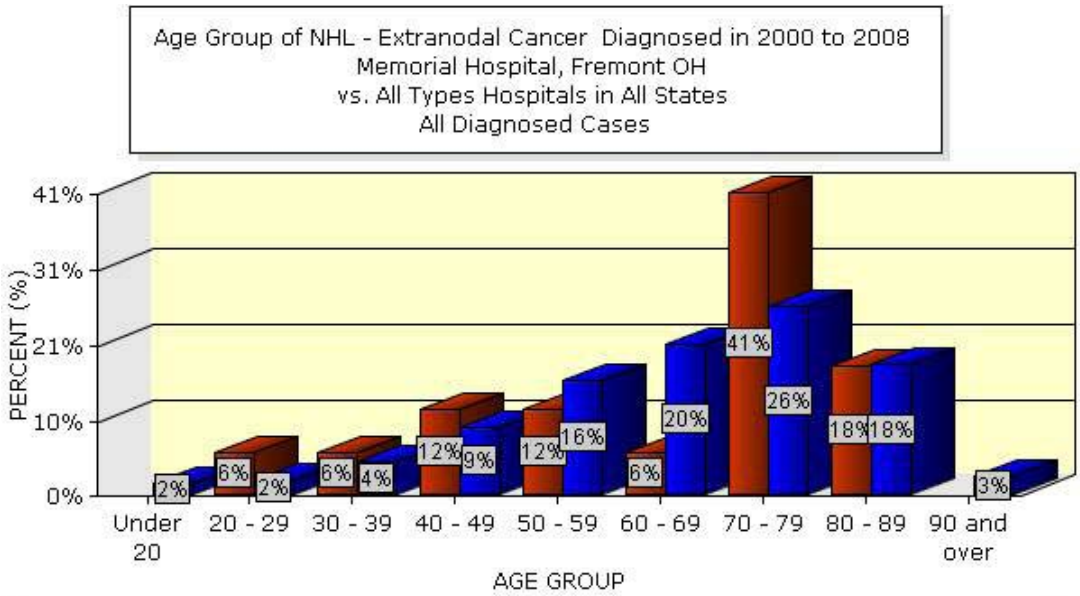
The 2 graphs are noted for nodal and extra nodal lymphoma. The data is compared against the National Cancer Data base that encompasses all Cancer Programs throughout the United States.

Non-Hodgkin lymphoma

About 65,540 new cases of NHL

About 20,210 deaths from NHL

These numbers include both adults and children. This cancer is slightly more common in men than in women. Whites are affected more often than African Americans or Asian Americans. A person's risk of getting NHL during his or her lifetime is about 1 in 50.



	Under 20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 and over
My Facility		6%	6%	12%	12%	6%	41%	18%	
Other	2%	2%	4%	9%	16%	20%	26%	18%	3%

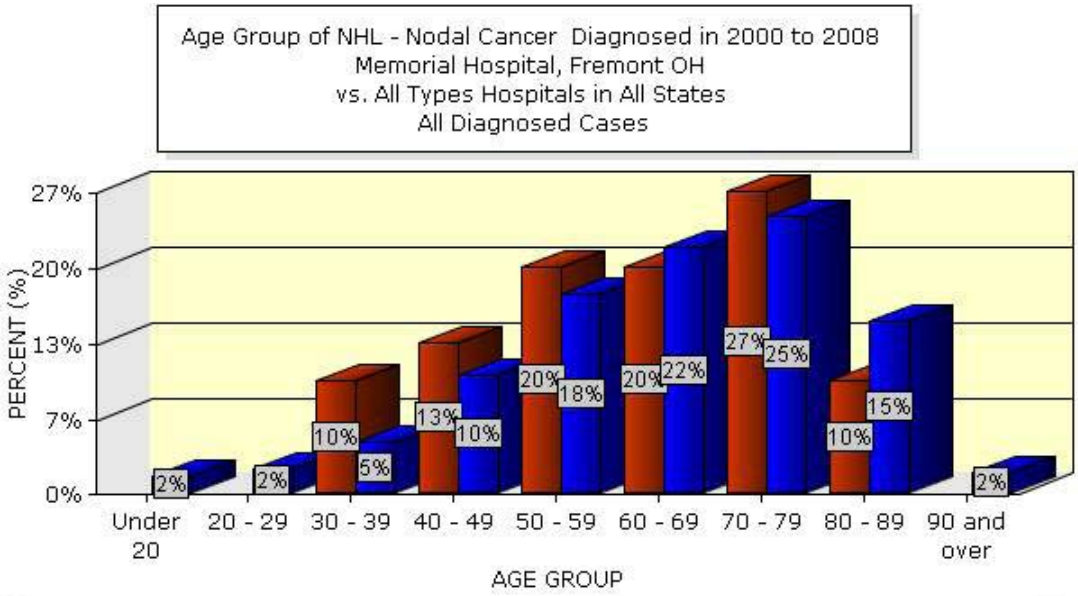
Age Group of NHL - Extranodal Cancer Diagnosed in 2000 to 2008

Memorial Hospital, Fremont OH

vs. All Types Hospitals in All States

All Diagnosed Cases

#	Age Group	My (N)	Oth. (N)	My (%)	Oth. (%)
1.	Under 20	.	1469	.	1.7%
2.	20 - 29	1	1798	5.88%	2.08%
3.	30 - 39	1	3857	5.88%	4.46%
4.	40 - 49	2	8063	11.76%	9.33%
5.	50 - 59	2	13520	11.76%	15.64%
6.	60 - 69	1	17708	5.88%	20.48%
7.	70 - 79	7	22333	41.18%	25.83%
8.	80 - 89	3	15430	17.65%	17.85%
9.	90 and over	.	2277	.	2.63%
	Col. TOTAL	17	86455	100%	100%



	Under 20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 and over
My Facility			10%	13%	20%	20%	27%	10%	
Other	2%	2%	5%	10%	18%	22%	25%	15%	2%

Age Group of NHL - Nodal Cancer Diagnosed in 2000 to 2008

Memorial Hospital, Fremont OH

vs. All Types Hospitals in All States

All Diagnosed Cases

#	Age Group	My (N)	Oth. (N)	My (%)	Oth. (%)
1.	Under 20	.	3860	.	1.59%
2.	20 - 29	.	5418	.	2.23%
3.	30 - 39	3	11209	10%	4.61%
4.	40 - 49	4	25508	13.33%	10.49%
5.	50 - 59	6	42786	20%	17.6%
6.	60 - 69	6	52968	20%	21.79%
7.	70 - 79	8	59745	26.67%	24.57%
8.	80 - 89	3	37115	10%	15.27%
9.	90 and over	.	4525	.	1.86%
	Col. TOTAL	30	243134	100%	100%

Risk Factors for Lymphoma

Hodgkin disease	Non-Hodgkin lymphoma
Epstein Barr Virus	Age
Age	Gender
Gender	Race
Geography	Exposure to certain chemicals
Family History	Radiation exposure
Socioeconomic status	Weakened immune system
	Autoimmune disease
	Certain infections
	Body weight and diet

Signs and Symptoms of Lymphoma:

Lymph nodes near the skin

Generalized no specific symptoms
- Weight loss
- Fever
- Drenching night sweats

These are sometimes called B symptoms. B symptoms are often linked to faster growing cancer cells.

Once lymphoma is diagnosed, tests will be done to determine the stage (extend of spread) of the disease. The treatment and prognosis for a patient with lymphoma depends to some extent on both the type and the stage of the disease.

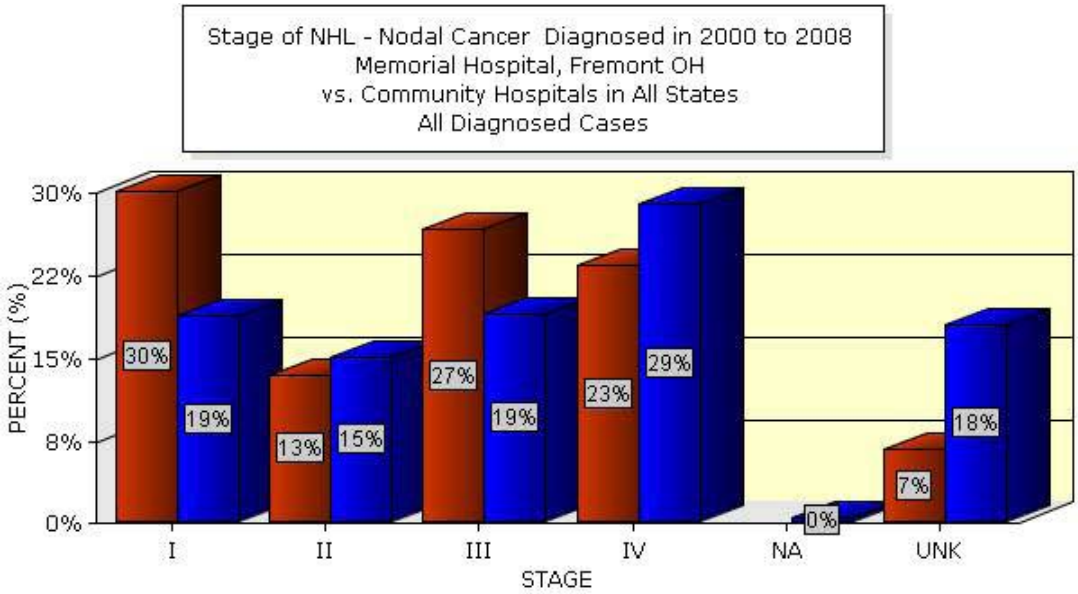
AJCC Staging

Stage I - In a lymph node or in nodes only in one region or is found only in a single organ.

Stage II - In 2 or more lymph node groups on the same side of the diaphragm or extends locally from the lymph nodes to a nearby organ.

Stage III – The lymphoma is found on both sides of the diaphragm or the cancer may have also spread to nearby organs, to the spleen or both.

Stage IV – The lymphoma has spread outside the lymph nodes into an organ that is not next to an involved node, or has spread to bone marrow, brain or spinal cord. This stage includes any onvolvement of the liver, bone marrow, or nodular involvement of the lung(s) or cerebral spinal fluid.



	I	II	III	IV	NA	UNK
My Facility	30%	13%	27%	23%		7%
Other	19%	15%	19%	29%	0%	18%

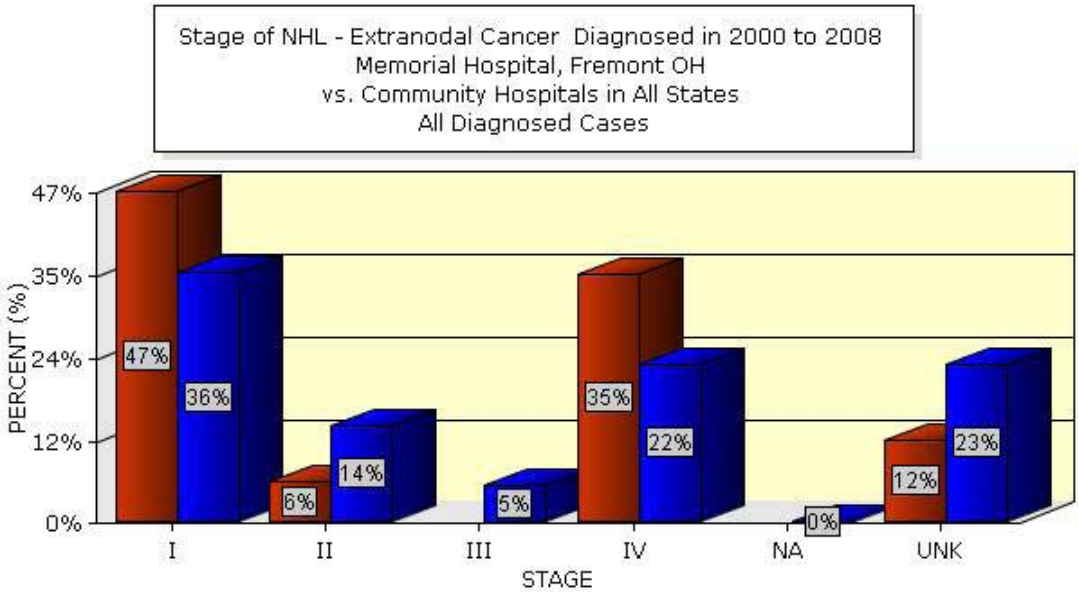
Stage of NHL - Nodal Cancer Diagnosed in 2000 to 2008

Memorial Hospital, Fremont OH

vs. Community Hospitals in All States

All Diagnosed Cases

#	*Stage*	My (N)	Oth. (N)	My (%)	Oth. (%)
1.	I	9	6677	30%	18.7%
2.	II	4	5376	13.33%	15.06%
3.	III	8	6761	26.67%	18.93%
4.	IV	7	10312	23.33%	28.88%
5.	NA	.	164	.	0.46%
6.	UNK	2	6418	6.67%	17.97%
	Col. TOTAL	30	35708	100%	100%



	I	II	III	IV	NA	UNK
My Facility	47%	6%		35%		12%
Other	36%	14%	5%	22%	0%	23%

Stage of NHL - Extranodal Cancer Diagnosed in 2000 to 2008

Memorial Hospital, Fremont OH

vs. Community Hospitals in All States

All Diagnosed Cases

#	*Stage*	My (N)	Oth. (N)	My (%)	Oth. (%)
1.	I	8	4527	47.06%	35.71%
2.	II	1	1755	5.88%	13.85%
3.	III	.	667	.	5.26%
4.	IV	6	2847	35.29%	22.46%
5.	NA	.	24	.	0.19%
6.	UNK	2	2856	11.76%	22.53%
	Col. TOTAL	17	12676	100%	100%

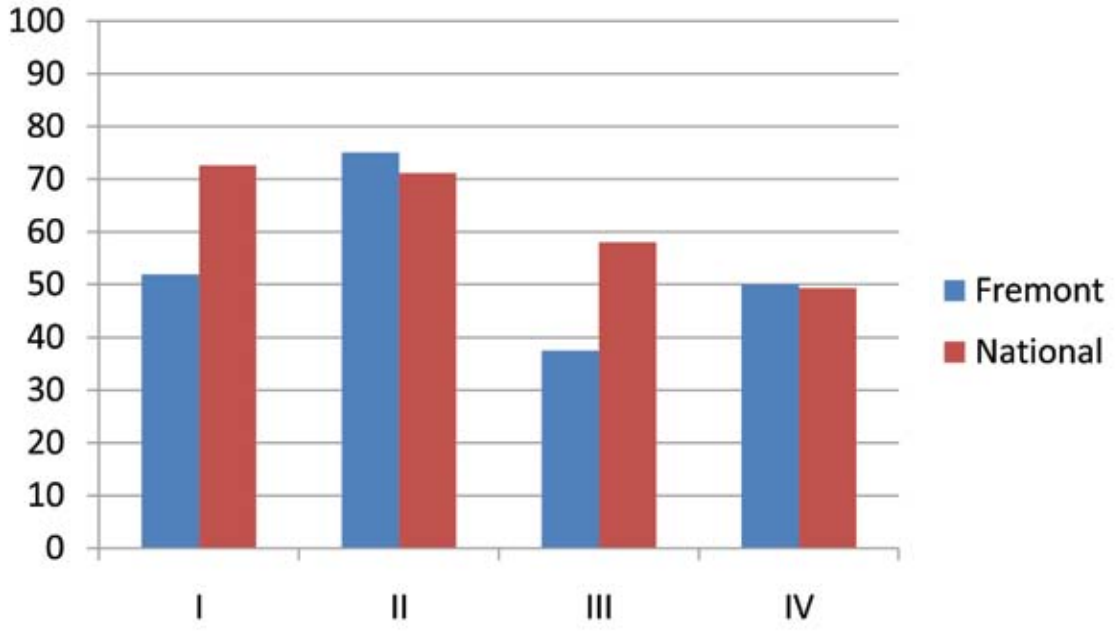
The two staging graphs are divided into graphic data for nodal and extranodal. The graphs are compared from 2000 – 2008 versus National Community Hospital Data. (NCDB) In the extranodal data Fremont had 17 cases for comparison and the nodal data 30 cases. 2009 data was not used in the comparison due to NCDB data was not available for 2009.

Treatment:
Treatment: treatment for the malignant lymphomas varies according to the exact histologic type of lymphoma and according to stage. For Nonhodgkins lymphomas in general, the type of lymphoma will many times have a greater impact on the type of treatment than the exact clinical stage. For Hogkins lymphomas, the opposite is very many times true- stage will have a greater impact on treatment than the exact variant of Hodgkins lymphoma. Chemotherapy, radiation, and surgery are main treatment strategies one has for treatment for the malignant lymphomas. Chemotherapy strategies can include highly toxic regimens as well as antibody therapy, and even bone marrow transplant. Radiation treatments are used in many lymphoma patients with success. Surgery is still used, but often times more for biopsy that outright treatment.

Prognosis: In general, patients have a better overall prognosis the earlier the stage. This is more true in Hodgkins lymphomas than Nonhodgkins lymphomas. For many of the follicular lymphomas, patients enjoy a good overall prognosis, many times despite no treatment at all. Indeed, in some Nonhodgkins lymphoma patients, a patient with stage IV disease may receive no recommended treatment at all, and have an excellent prognosis respectively. Prognosis relies more on the exact type of Nonhodgkin lymphoma than stage. In Hogdkins lymphoma, prognosis is closely linked to stage and not as close to type or variant of Hodgkins lymphoma.

Survival:
The survival table below is a comparison of Memorial Hospital of Fremont cases against the National Cancer Database (NCDB). Memorial Hospital had 39 cases diagnosed between 2000 -2005. These are the cases that were used for the comparison. The graph is showing no significant difference in survival versus NCDB.

FREMONT OBSERVED LYMPHOMA 5 YR SURVIVAL BY STAGE



Fremont	51.9	75	37.5	50
NCDB	72.6	71.1	58	49.3

AJCC STAGE OF DISEASE AT DIAGNOSIS

MEMORIAL
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