



Saint John's Health System

**Saint John's Cancer Center  
Annual Report 2001**

# **Cancer Care 2001**

## **Saint John's Health System**

These past 12 months were filled with many educational opportunities and challenges. The Cancer Committee prepared for and completed the American College of Surgeons survey with excellent scores. Physicians and ancillary personnel attended two educational offerings on genetics and hormonal therapy for breast cancer. Cancer Registry and Protocols participated in audits from the Radiation Therapy Oncology Group and the Indiana State Board of Health. We came through these successfully. Registry has maintained a greater than 95% follow-up on patients with a greater than 90% rate for physician staging of cases.

Our oncology rehabilitation initiative became a reality and has contributed to the quality of life for many cancer patients. Growing the potential of oncology rehab remains a goal for the Cancer Committee. In fact, those involved in all aspects of cancer care from the free screenings, to diagnosis and treatment, to hospice services, worked together for the comfort and quality standards of care our community needs.

Many physicians, nurses, and ancillary personnel have contributed to the successful year. More physicians became involved in the QA process by analyzing 10% of our newly diagnosed cases and participated in preparation of the annual cancer report. A new interest group for oncology nurses (ONS) has been developed here in Madison County. We welcome this dedication and applaud their commitment to cancer care.

Statistics for 2001 show that lung cancer is still a large problem in our area. Please take a moment to examine the major sites of cancer and the in-depth survival account for non-Hodgkin lymphoma. May we never lose sight of our mission: "To serve together in the spirit of the Gospel, to heal body, mind and spirit, and to improve the health of our community..."

Khalil Wakim, MD  
Cancer Committee Chairman

### **Cancer Service Line Contact Numbers**

Saint John's Cancer Center .....	646-8358
Saint John's Medical Center .....	649-2511
Chemotherapy .....	646-3209
Radiation Therapy .....	646-8358
Hospice .....	646-8334
Women's Center .....	646-8484
Saint John's Medical Supplies .....	646-8366

## Outpatient Cancer Services

The combined daily census of outpatient chemotherapy and radiation therapy was 56 patients per day throughout 2001. Patient satisfaction was very strong in both areas. This year was “the year of the surveys,” with the triennial Joint Commission of Accreditation of Hospital Organizations and the American College of Surgeons surveys taking place.

The energy was directed at understanding and applying the survey standards as they relate to the Cancer Center. Quality initiatives and improvements were paramount in the success of both surveys.

Quality initiatives included: 1) analysis of an oncology rehabilitation program; analysis of infection rates related to venous access (IV catheters); 3) development of an outpatient pain assessment documentation tool; 4) and a study/plan to reduce wait time in outpatient chemotherapy.

The ACoS surveyor was very impressed with the oncology rehabilitation project and suggested that we should publish our accomplishments.

Cancer Registry exceeded the standards for abstracting and follow-up, as well as providing quarterly listings of available RTOG protocols to physicians for patient participation.

Joseph Sensing  
Director, Cancer Services

## Cancer Registry Status 2001

	Count	%		Count	%
Complete Registry	8,171		<b>Patients ALIVE</b>		
-Benign/borderline	3		Total Living	2,916	100%
-In situ	90		Followed ( <b>Target 80%</b> )	2,793	<b>96%</b>
-Squamous	339		Lost to Followup	123	4%
-Non analytic	500				
Sub Total	7,239	100%			
Less Expired	4,323	60%			
Living	2,916	40%			
Less Followed	2,793	39%			
Lost to Followup	123	2%			
F/U rate ( <b>Target 90%</b> )		<b>98%</b>			

## **Cancer Conference Topics 2001**

January — Pancreas  
February — Lung/PET Scan  
March — Colon  
April — Breast  
May — Stomach  
June — Mesothelioma/Prostate  
July — Rectal/Unknown Primary  
August — Esophageal  
September — Hematopoietic/Reticuloendothelial  
October — Ovary  
November — NHL

## **Cancer Committee Members 2001**

K. Wakim, MD – Chairman	K. DeFur, COO
V.C. Amin, MD – Medical Oncology	J. Sensing, Dir., Cancer Center
J. E. Currier, MD – Radiation Oncology	T. Vanosdol, Dir., Health Information Management
B.L. Eddy, MD – Medical Oncology	D. Vester, RN
G. Brazel, MD – Medical Staff Integration	P. Farran, RN, OCN, CTR
K. Burton, MD – Diagnostic Radiology	N. Hunt, TR
S. Juthani, MD – Internal Medicine	P. Reynolds
J. Graybill, MD – Radiation Oncology	R. Titus, Corporate Communications
P. Kippenbrock, MD – Pathology	
J. Mendoza, MD – Urology	

## **Continuing Medical Education**

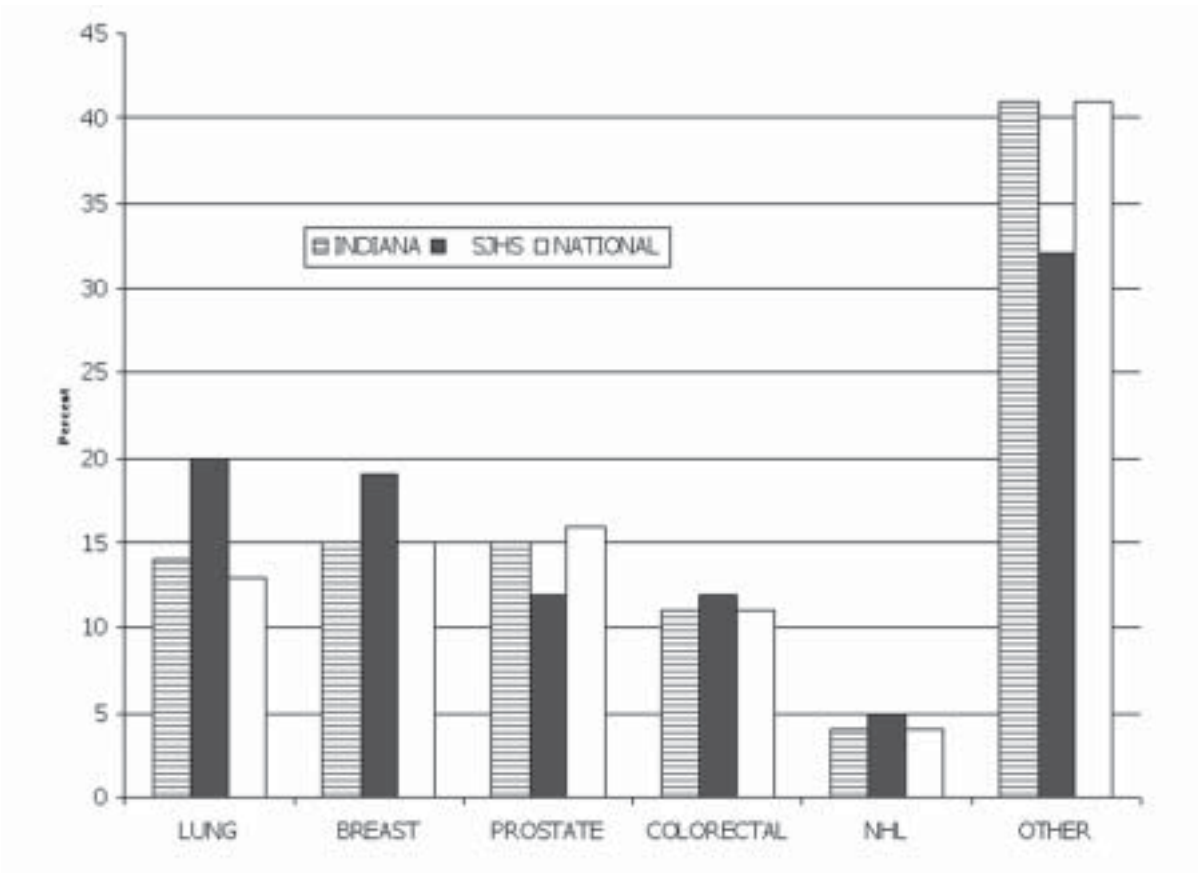
“Genetic Testing – Breast Cancer and Colon Cancer” - August 23, 2001

Presenter - - Myriad Genetics Laboratory

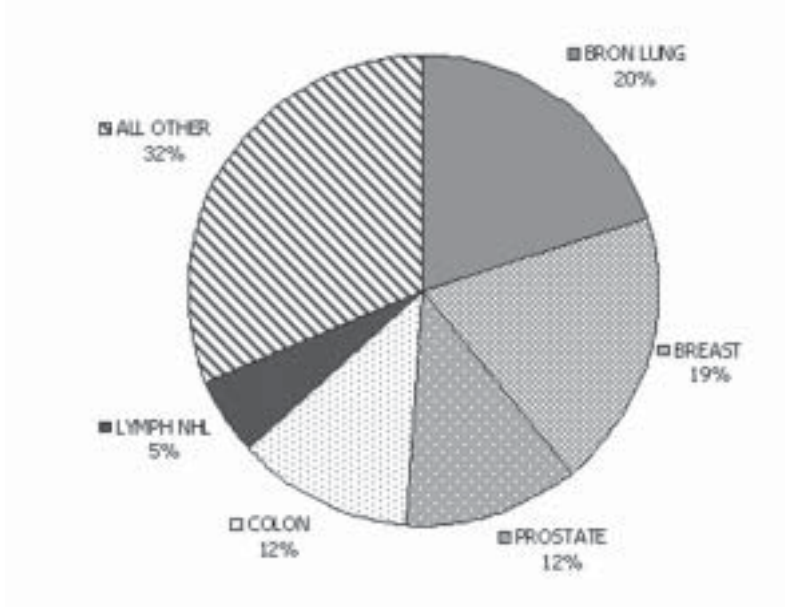
“Hormonal Therapy in Breast Cancer” - September 26, 2001

Presenter - - Brian L. Eddy, MD

## Major Site Cancer Frequency Comparison 2001



## Saint John's Cancer Frequency 2001 448 Cases

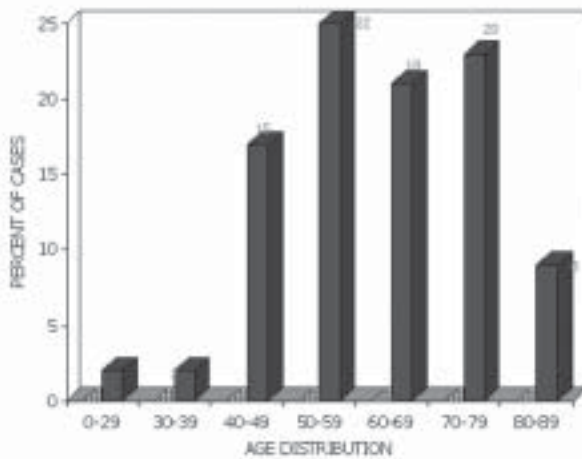


## Breast Cancer 2001

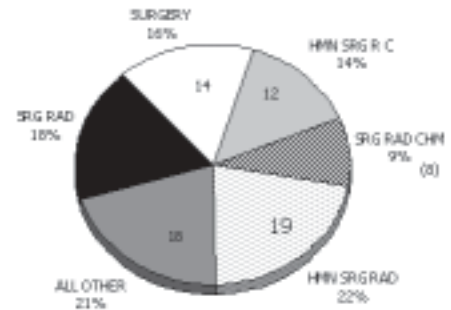
Eighty-seven cases of primary, female breast cancer were diagnosed in 2001. This represented a 26% increase over the year 2000. Twenty-two percent had in-situ disease, while 63% had Stages I & II disease. Twenty-five percent of these cases were in the 50- to 59-year-old age group; 23% in the 70- to 79-year-old group; 21%, 60- to 69-year-old, 17% in the 40- to 49-year-old group, 9% in the 80+; and 5% under 40 years of age. Most significant was the increased incidence under the age of 50 (10% > than the year 2000). Early diagnosis is evident except in the 80+ population, which showed a 4% increased incidence. Radiation therapy is included in approximately 75% of initial therapy for these women.

V.C. Amin, MD

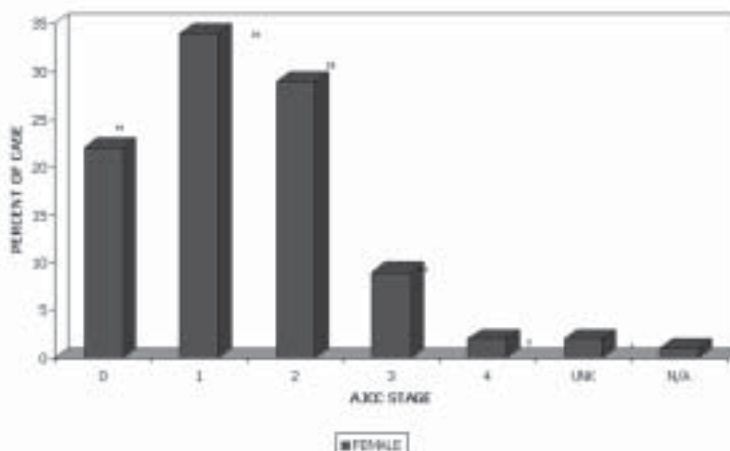
Distribution by Age at Diagnosis  
Breast 2001/SJHS/87 Cases



Initial Therapy  
Breast 2001/SJHS/87 Cases



Distribution by AJCC Stage  
Breast 2001/SJHS/87 Cases



# Lung Cancer 2001

Lung cancer remains a major cause of cancer-related death in the United States, especially in Madison County, Indiana.

National statistics have shown a decline in incidence from 86.5/100,000 in 1984 to 69.1 in 1997 for men, while the rate has stabilized in women at 43.1/100,000. This compares with the Saint John's frequency of 66.3/100,000 in 2001.

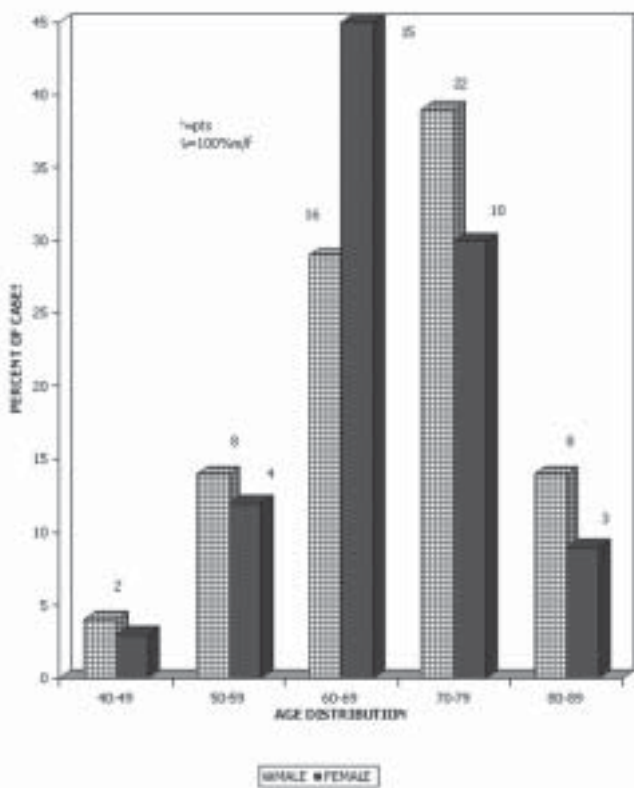
Nationally, only about 15% of new cases were found at a very early stage. Our patient mix compares favorably with this number, as we have found 19% at Stage I.

Treatment advances have achieved significant improvements in survival for selected lung cancer cases, but the overall survival nationally remains low at about 14 percent. As such, prevention remains the key to improving results.

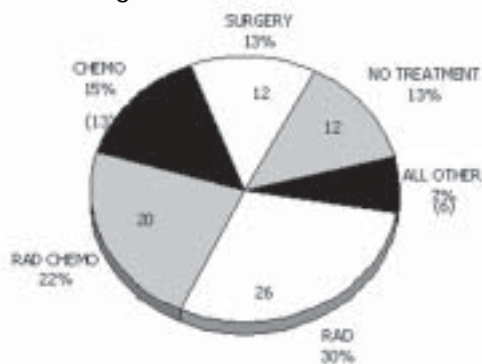
The most important aspect of prevention is to keep the children, youth, and young adults from ever using tobacco.

James Currier, MD

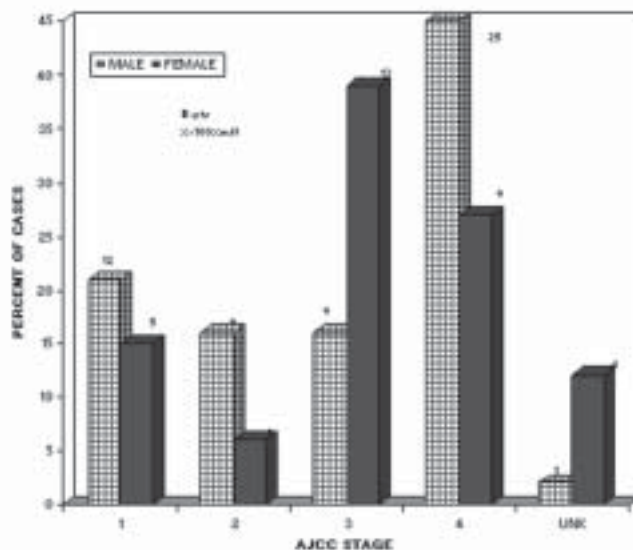
**Distribution by Age at Diagnosis**  
Lung 2001/SJHS/89 Cases



**Initial Therapy**  
Lung 2001/SJHS/89 Cases



**AJCC Stage**  
Lung 2001/SJHS/89 Cases



## Prostate Cancer 2001

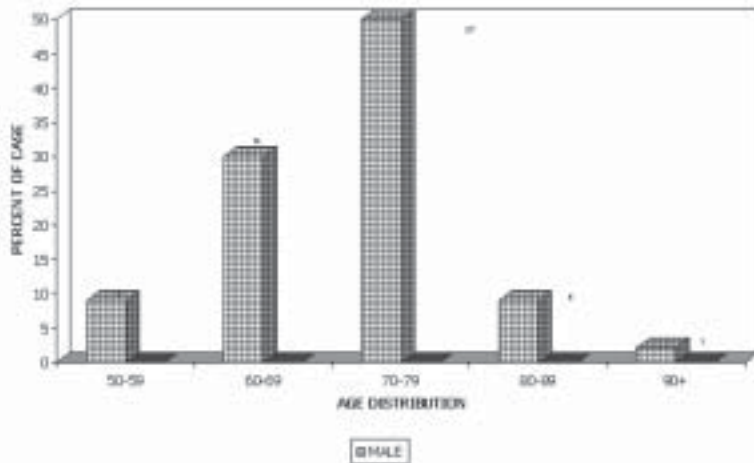
The number of new cases of adenocarcinoma of the prostate in the United States now approximates 200,000 for the year 2001. The cancer incidence remains stable after peaking in 1992 for white men and in 1993 for Afro-American men. At Saint John's Cancer Center, we had 54 new cases of prostate cancer in 2001. Slightly less than half of these men were 70 years old or younger.

With regard to treatment, we have seen a slight decrease in surgical cases and a surprising increase in the cases with no treatment. The change in "no" treatment cases can be explained by the increased number of prostate cancer cases in men 80 years old and greater for which no treatment is a valid option in order to prevent treatment morbidity. Eighty-nine percent of all prostate cases diagnosed at Saint John's were in the early stages of the disease, which are most amenable to treatment.

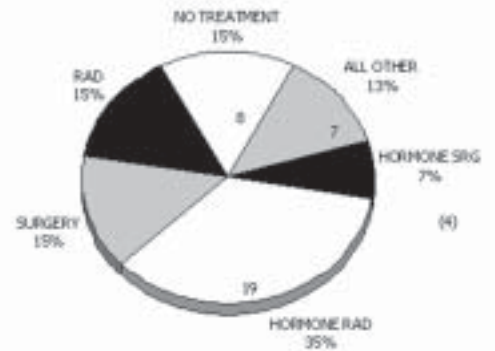
In conclusion, we are now able to reap the benefits of prostate cancer awareness and screening, which results in earlier detection. This result is reflected in the continuing drop in prostatic cancer deaths nationally.

Randall C. Blake, M D

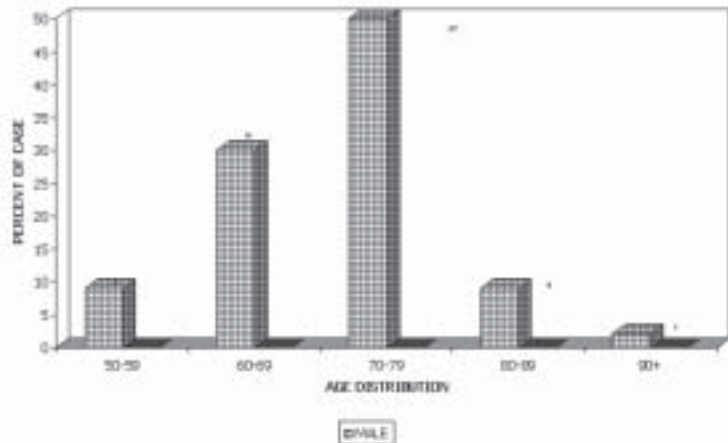
**Distribution by Age at Diagnosis**  
Prostate 2001/SJHS/54 Cases



**Initial Therapy**  
Prostate 2001/SJHS/54 Cases



**AJCC Stage**  
Prostate 2001/SJHS/54 Cases



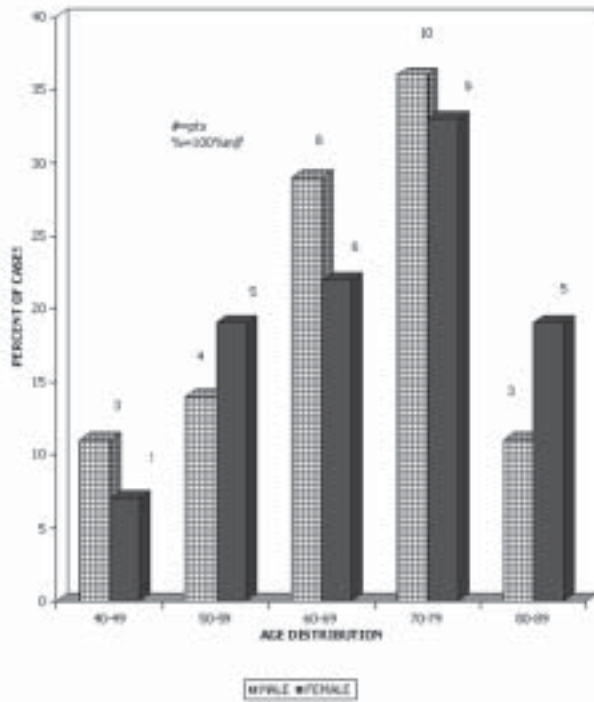
# Colorectal Cancer Analysis 2001

Six fewer cases of colorectal cancer were diagnosed this year. There was a shift to four more cases of rectal cancer than in 2000. Five cases were patients under the age of 50. It appears that a greater number of cases were diagnosed at early stages.

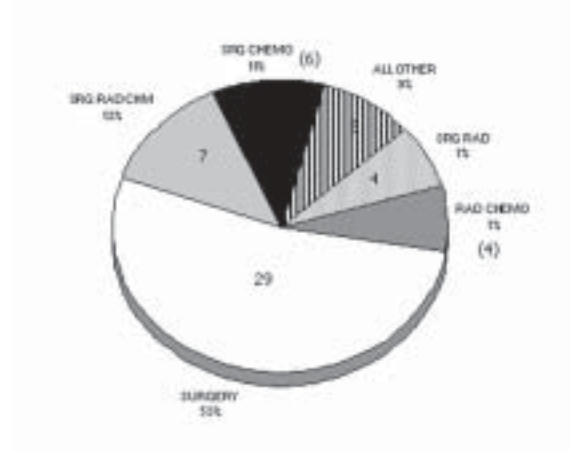
While more combination therapies were given this year, surgery remains the cornerstone of treatment (53%) for both colon and rectal cancers. Radiation therapy +/- chemotherapy are utilized in 38% of these 55 new cases.

Khalil Wakim, MD

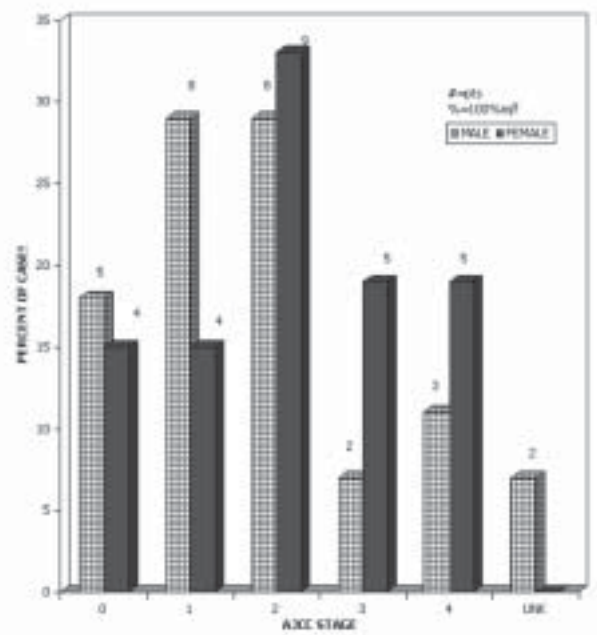
**Distribution by Age at Diagnosis**  
Colorectal 2001/SJHS/55 Cases



**Initial Therapy**  
Colorectal 2001/SJHS/55 Cases



**AJCC Stage**  
Colorectal 2001/SJHS/55 Cases



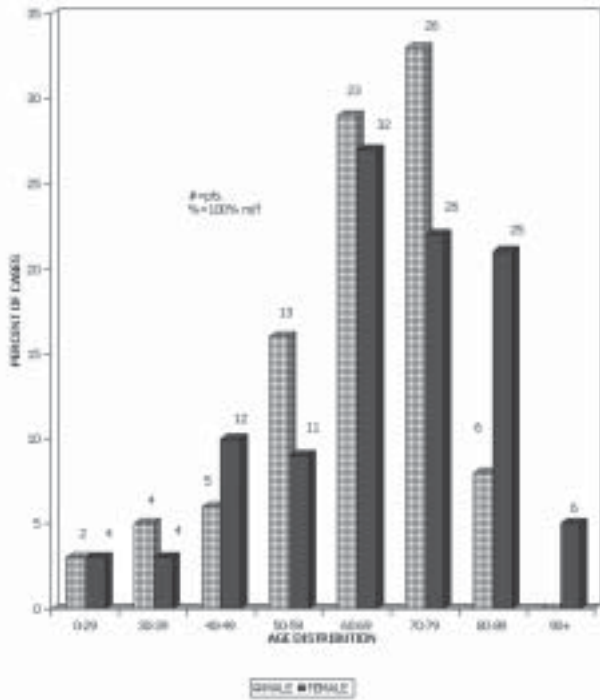
## **Ten Year Lymphoma Study**

The following is an analysis of patterns of diagnosis and treatment of lymphoma patients through the Saint John's Cancer Program for the past decade. A total of 199 patients were found to have various types of lymphomas at Saint John's between 1992-2001, and 23 of these diagnoses were made in 2001. There has been a slight variation in the number of new diagnoses from year to year, but there has been no apparent general trend toward an increase or decrease in the incidence of lymphomas. At Saint John's there has been a predominance of females over males found to have lymphoma. Women accounted for 63% of the patients with new lymphoma diagnoses during the past 10 years and 74% of the total in 2001 alone. This represents an inverse of the expected ratio, because lymphomas are somewhat more common among men than women across the country. We are unable to account for this unusual incidence distribution. The majority of our patients are 50-80 years old at diagnosis, with the peak age being about 70. On the other hand, 16% of our patients are less than 50 years old at diagnosis and another 17% are at least 80 years old. (Fig. 1)

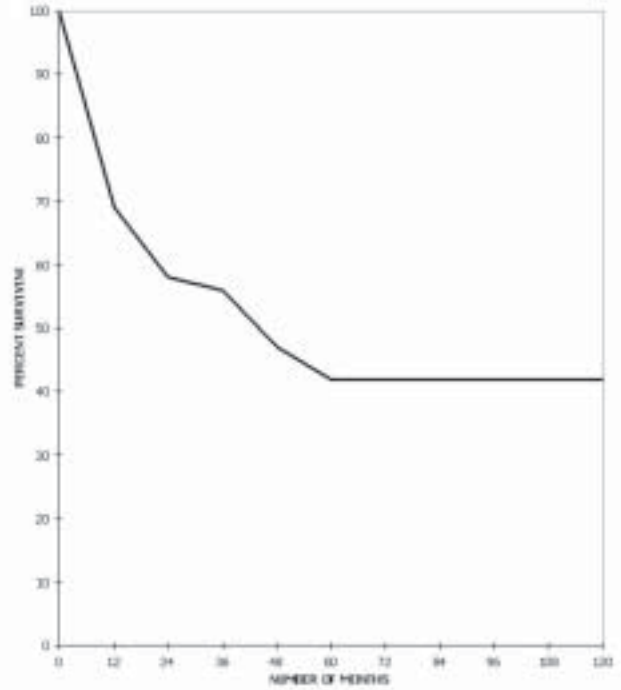
Lymphoma is generally regarded as a systemic disease, and truly localized lymphomas are uncommon. This is especially true of the diffuse small lymphocytic lymphomas and the follicular lymphomas. During the past 10 years, 31% of our patients have been described as having an "unknown" extent of disease. A comprehensive staging evaluation may not have been undertaken for a variety of reasons among these patients. Stage has a greater impact upon treatment and survival for patients with diffuse large cell lymphomas and other aggressive lymphomas than it does among patients with low-grade lymphomas. Bone marrow aspiration and biopsy is *not* routinely performed upon patients with low-grade lymphomas at diagnosis. Exceptions would include those rare patients with follicular lymphoma that are thought to have Stage I disease at diagnosis. Such patients may be candidates for radiation therapy alone. Other patients do not undergo comprehensive staging evaluation due to the presence of severe underlying illnesses that would render aggressive treatment hazardous. This is often the case among patients over the age of 80 years at diagnosis, but this may also be true of younger patients as well. Conversely, successful treatment is possible for an increasing number of elderly patients.

Identification of a specific lymphoma subtype was possible in 68% of our patients during the decade. Diagnostic methodology has improved considerably during the past few years. Routine utilization of immunophenotyping now permits precise classification of nearly every case. In addition, cytogenetic analysis and immunohistochemical stains for specific oncogenes are often helpful. The finding of amplification of cyclin D1 in mantle cell lymphomas is an example of this. In those few cases where the volume of tissue sampled is small or much of the submitted material proves to be necrotic, analysis for immunoglobulin heavy chain gene rearrangements or T-cell receptor gene rearrangements enables us to differentiate between lymphomas and other poorly differentiated malignant neoplasms. Of our patients during the past decade who had lymphomas that could be fully characterized, 31.4% were found to have diffuse large cell lymphoma, 8.6% diffuse mixed large cell and small cleaved cell lymphoma, 5.7% mantle cell lymphoma, 2.9% marginal zone lymphoma, 18.5% diffuse small lymphocytic lymphoma, and 32.1% follicular lymphomas, also known as follicle center lymphomas, grades I, II, and III. The prognosis and management of these individual varieties of lymphomas differ considerably.

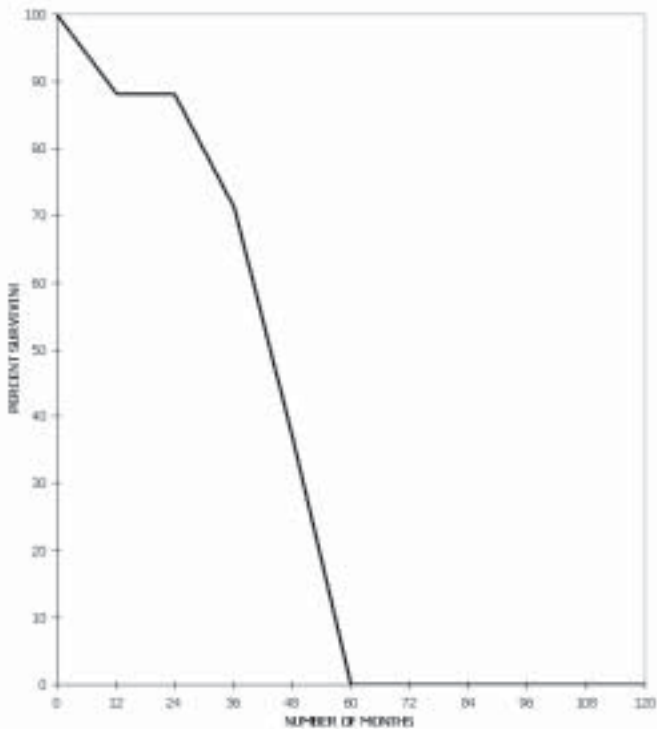
**Distribution by Age**  
Lymphoma/1992-2001/SJHS/140 Cases  
Fig. 1



**Diffuse Large B-Cell Lymphoma**  
Relative Survival All Stages /1992-2001/ 40 Cases  
Fig. 2



**Mantle Cell Lymphoma**  
Relative Survival All Stages/1992-2001/8 cases  
Fig. 3



The diffuse large cell lymphomas have generally been treated with the CHOP chemotherapy regimen throughout the past decade. Complete remission is achieved in more than half of these patients, and many of them prove to be long-term disease-free survivors. Our data demonstrates a plateau in the survival curve at 42% at 5 years and beyond. (Fig. 2) One of our oncologists has included rituximab with the CHOP regimen during the past two years, while the other oncologist does not, based upon differing interpretations of published data. Surgical cytoreduction can sometimes prove to be an important therapeutic maneuver for these patients with large cell lymphomas, because bulk of disease is an important prognostic factor. Overall, only 3% of our patients during the past ten years underwent surgery as a therapeutic modality. Most of these patients had large cell lymphomas, and the stomach or intestinal tract was a predominant site of disease among many of them. Perforation of the gastrointestinal tract and/or abscess formation sometimes result from treatment with chemotherapy alone. Of course, surgery is most often a diagnostic method as regards management of the various lymphomas, but it is also often beneficial for patients to undergo surgical resection of particularly troublesome sites of disease when possible.

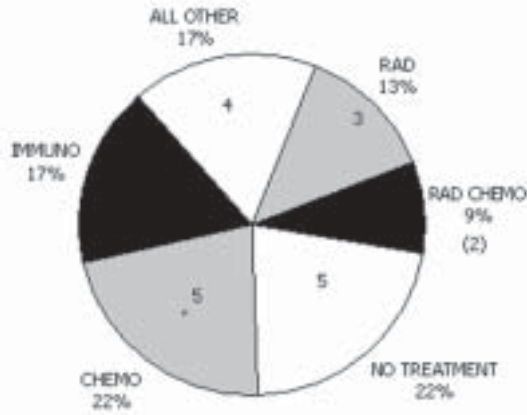
Mantle cell lymphoma was previously most often described as diffuse small cleaved cell lymphoma. While the classification of lymphomas has changed somewhat during the past few years with the rise of the REAL classification, the two terms are virtually synonymous. Mantle cell lymphomas are usually treated aggressively, but with less success than that encountered with the diffuse large cell lymphomas. Untreated mantle cell lymphomas do not prove to be lethal as quickly as diffuse large cell lymphomas. Complete remissions are sometimes achieved through CHOP chemotherapy. Unfortunately, all patients with mantle cell lymphoma eventually suffer disease-progression, and there continues to be no potentially curative therapy. All of our patients expired within five years of diagnosis. (Fig. 3)

The low-grade lymphomas include the diffuse small lymphocytic lymphomas, including the plasmacytoid subtype, and the follicular lymphomas. Both of these lymphomas tend to be slowly progressive, and many patients do not develop any symptoms or complications for several years after diagnosis, even in the absence of any treatment. For these reasons, many patients with newly diagnosed diffuse small lymphocytic lymphomas and follicular lymphomas can simply be observed for some period of time following diagnosis. Spontaneous regressions of follicular lymphomas are also occasionally witnessed. Treatment is generally reserved for the onset of symptoms or complications.

When treatment is indicated, an increasing number of patients with diffuse small lymphocytic lymphomas are treated with single-agent fludarabine. At the same time, an increasing percentage of patients with the various follicular lymphomas are being treated with rituximab, either alone or concurrently with some type of chemotherapy. Rituximab accounts for most of the immunotherapy that was administered in 2001. (Fig. 4) This monoclonal antibody therapy first became available in early 1999, so it does not affect our statistics from earlier in the decade. (Fig. 5) The combination of patients with low grade lymphomas who are simply observed and those who are treated with rituximab alone largely accounts for the decreasing reliance upon chemotherapy. During the past decade, 38% of all patients with lymphomas were treated with chemotherapy, and 56% received chemotherapy as a component of their overall treatment. In contrast, only 22% of all

**Saint John's Health System 2001 NHL Treatment**

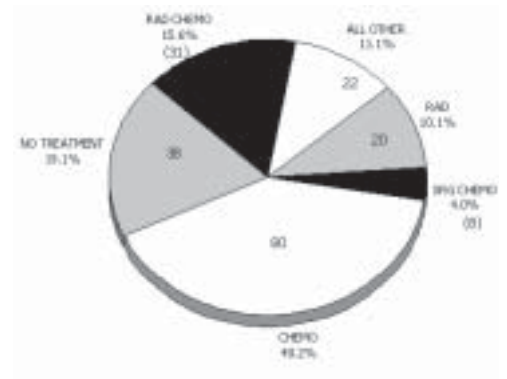
Fig. 4



**Initial Therapy NHL 1992-2001**

Saint John's Health System

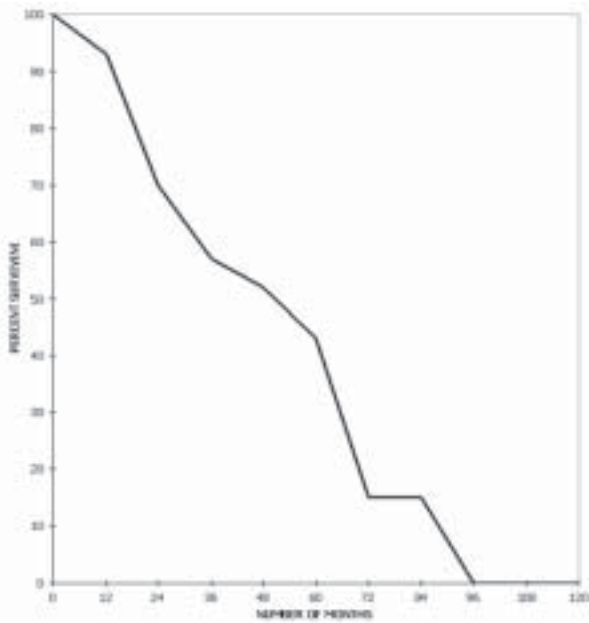
Fig. 5



**Follicular Lymphoma**

Relative Survival All Stages 1992-2001/43 cases

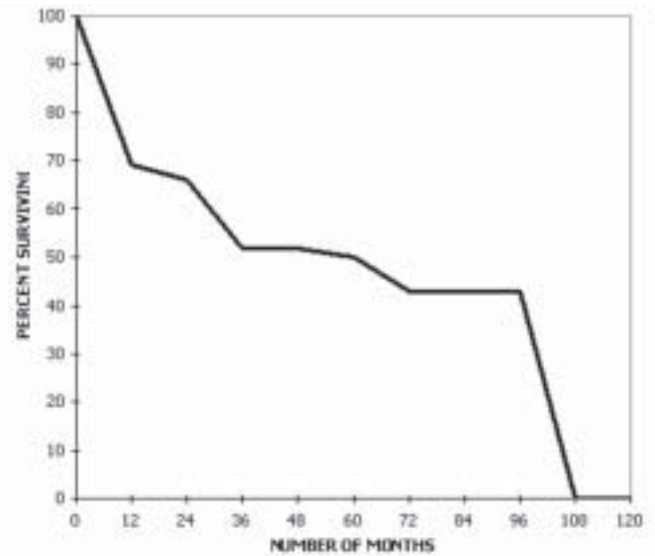
Fig. 6



**Diffuse Small Cell Lymphoma**

Relative Survival All Stages/1992-2001/SJHS/26 Cases

Fig. 7



patients received chemotherapy alone in 2001, and chemotherapy accounted for a portion of their treatment in 31%.

There are assorted chemotherapy options for patients with the follicular lymphomas and for those with progressive diffuse small lymphocytic lymphoma, but there is no definitive best regimen. Treatment alternatives include single alkylating agents, CVP, and CHOP. Few of our patients with follicular lymphomas receive alpha-interferon, chiefly due to its toxicity, inconvenience of administration, and the necessity of a prolonged course of treatment. There continues to be no potentially curative therapy for the great majority of patients with the low-grade lymphomas. Median survival for our follicular lymphoma patients was approximately 50 months, and it was approximately 60 months for those with diffuse small lymphocytic lymphomas. Unfortunately, none of our patients in either of these categories survived for more than nine years following diagnosis. (Fig. 6 & 7)

There are two predominant varieties of marginal zone lymphomas. Some of our patients are found to have splenic marginal zone lymphoma, also known as splenic lymphoma with circulating villous lymphocytes. These patients usually present with leukopenia and thrombocytopenia, with or without anemia. They are often rendered free of symptoms following therapeutic splenectomy. Other patients present with disease within the mucosa-associated lymphoid tissues, chiefly the gastric mucosa. Many of these patients can be treated with macrolide antibiotics and bismuth, or they can be left untreated with close observation.

Relapse among patients with diffuse large cell lymphomas is an ominous development, and virtually none of them prove to be long-term survivors. A variety of salvage regimens are employed with very limited success. While patients with progressive low-grade lymphomas generally survive longer, the ultimate outcome is the same. Very few of our patients are referred for high-dose chemotherapy with autologous stem cell transplantation, because neither of our oncologists believes that this represents effective therapy. Relapsed patients with "responsive disease" will be considered for standard-dose chemotherapy followed by autologous stem cell infusions to an increased extent in the future.

The proportion of patients receiving radiation therapy as a component of their overall management has decreased slightly during the past decade, probably because other options have appeared. Radiation therapy continues to be helpful as consolidation therapy for patients with diffuse large cell lymphoma that have limited residual disease. (Fig. 4 & 5) Radiation therapy can also prove to be potentially curative for those rare patients with stage I follicular lymphomas. In addition, radiation therapy is often exceedingly helpful for palliation of patients with localized complications from various types of progressive lymphomas.

Overall, the outlook for patients with most types of lymphomas has improved during the past decade. New monoclonal antibodies and chemotherapeutic agents with unique mechanisms of action should continue to increase the median survival duration during the next decade. This is a time of cautious optimism for patients, families, nursing staff, and physicians.

Brian L. Eddy, M.D.