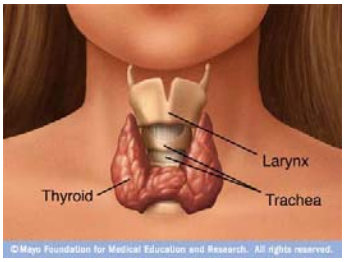
2008

St. Alexius
Medical Center

[ANNUAL REPORT ON THYROID CANCER]

Annual Report on Thyroid Cancer
St. Alexius Medical Center
Based on 2008 Registry Data



One in 119 Americans born today will be diagnosed with cancer of the thyroid at some time during their lifetime. This means that almost 1% of the population will contract this disease that forms in the thyroid gland, an organ at the base of the throat that makes hormones that help control heart rate, blood pressure, body temperature, and weight. In 2009, there are expected to be 37,200 new cases of Thyroid Cancer diagnosed and 1,630 deaths from Thyroid Cancer.[1] Thyroid Cancer was the tenth most common form of cancer diagnosed in the United States in 2006[2] (the most recent data available from the National Cancer Database) and, with 28 cases in 2008, the 6th most common cancer diagnosed and/or treated by physicians at St. Alexius Medical Center.

The data in this report is related only to Thyroid Cancer cases that were either diagnosed, treated or both at St. Alexius Medical Center in 2008. Those cases that were diagnosed and treated outside St. Alexius Hospital, such as at Mid Dakota Clinic or other independent clinics, are not included in preparation of this report.

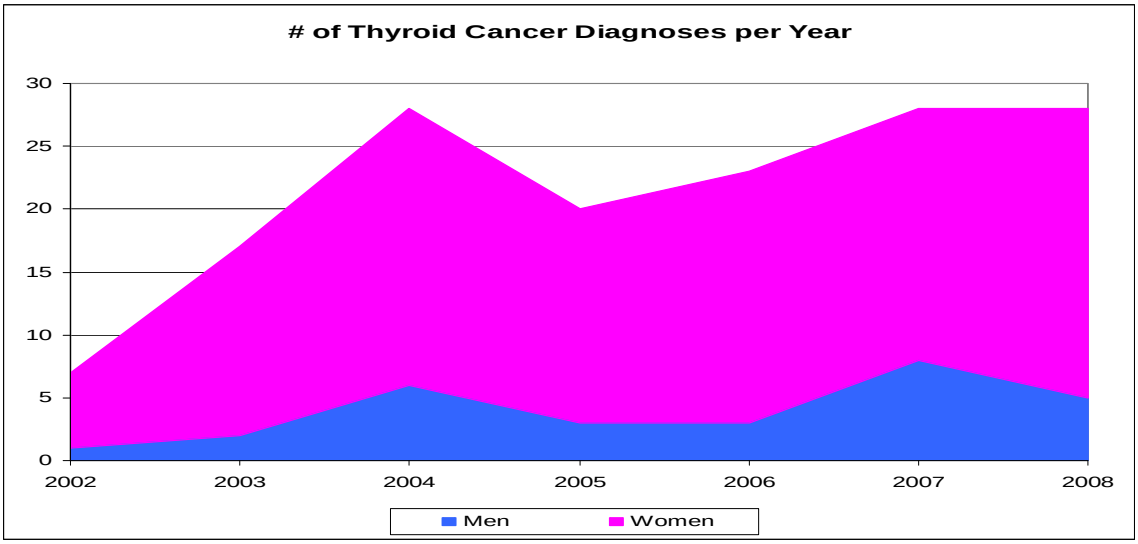
St. Alexius Medical Center
Top 10 Cancer Sites in 2008

Site	Cases	%
Prostate	136	27.98%
Breast	72	14.81%
Lung/Bronchus	94	19.34%
Colon	39	8.02%
Hematopoietic	36	7.41%
Thyroid Gland	**28**	**5.76%**
Kidney	26	5.35%
Bladder	21	4.32%
Corpus Uteri	19	3.91%
Lymph Nodes	15	3.09%

Factors that may increase the risk of thyroid cancer include: exposure to high levels of radiation, personal or family history of goiter (a noncancerous enlargement of the thyroid), or certain inherited genetic syndromes, such as familial medullary thyroid cancer, multiple endocrine neoplasia and familial adenomatous polyposis.[3]

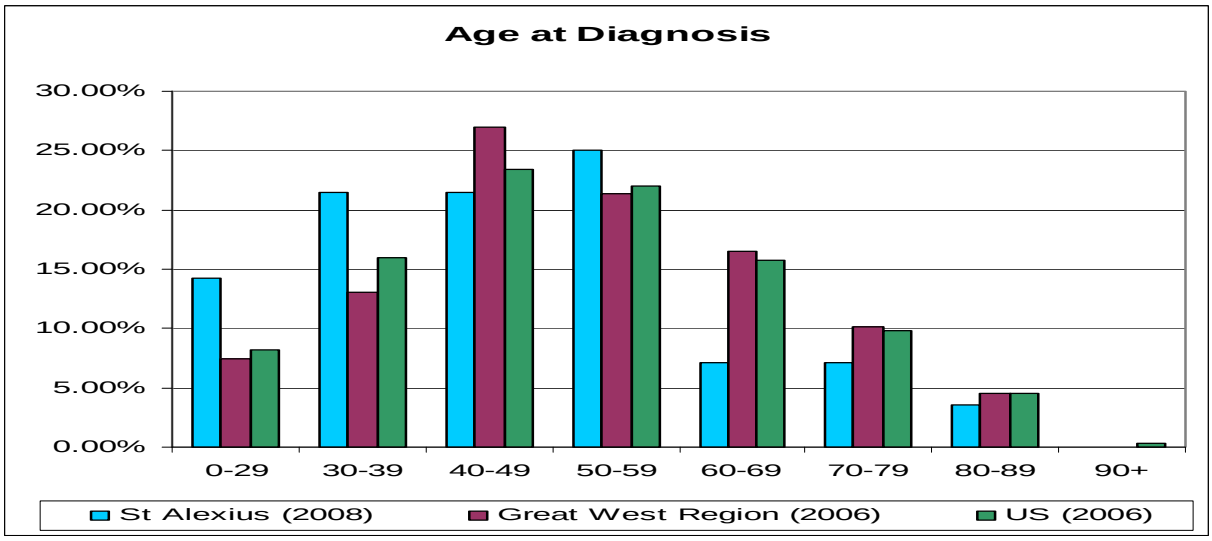
INCIDENCE, GENDER & AGE

St. Alexius physicians diagnosed or treated 7 thyroid cancer patients in 2002 and 17 thyroid patient in 2003. Since 2004, incidence has ranged between 20 and 29 cases each year.



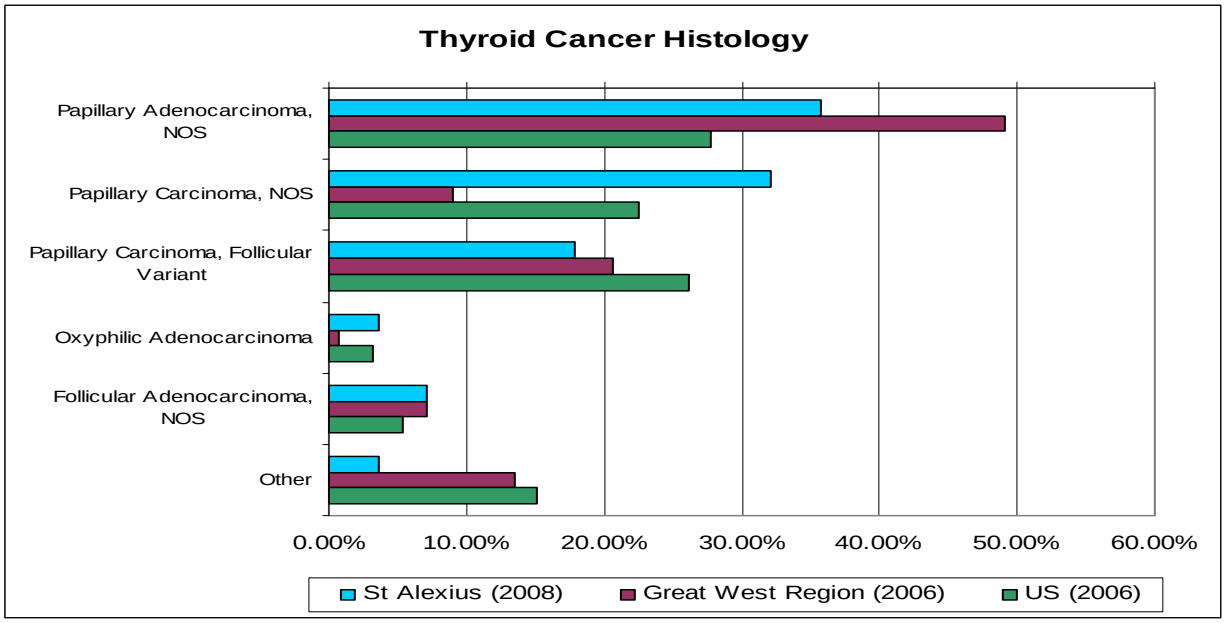
Of the 151 cases seen by St. Alexius physicians since 2002, 123 (81%) have been women. The percentage of female patients dealing with the disease has remained between 70% and 90% of the thyroid cancer cases at St Alexius. Nationally, as well, 3 out of 4 Thyroid Cancers diagnosed are in women.[2]

Four out of five Thyroid Cancer diagnoses are in patients between the ages of 40 and 60 in St Alexius' service area. Over one-third of thyroid tumors diagnosed or treated at St. Alexius are among younger people (under the age of 40). This rate is of discovery in the under 40 group is higher than the national and regional averages, which total less than 25%.

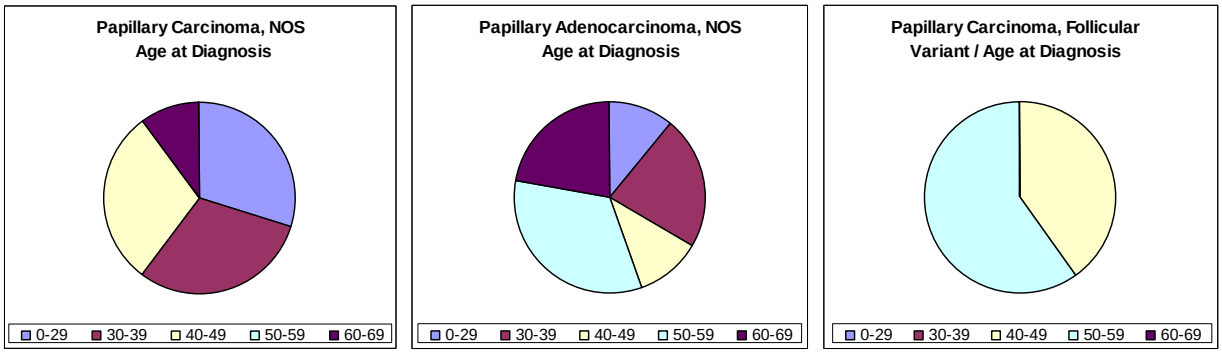


HISTOLOGY

Louise Davies and Gilbert Welch, in an evaluation of thyroid cancer incidence from 1973 to 2002 as documented in SEER data, concluded that the increase in the incidence of thyroid cancer from 3.6 in 1973 to 8.7 per 100,000 in 2002 was due to increased detection of small papillary tumors. Their study showed the increase of papillary thyroid cancer accounted for 95% of the increase and that there was no significant change in the incidence of the less common histological types: follicular, medullary and anaplastic.[4] The histology of St. Alexius' Thyroid diagnoses in 2008 was also heavily weighted to papillary tumors, as shown below, with 85% of being within one of the three papillary histologies in early stage detection.



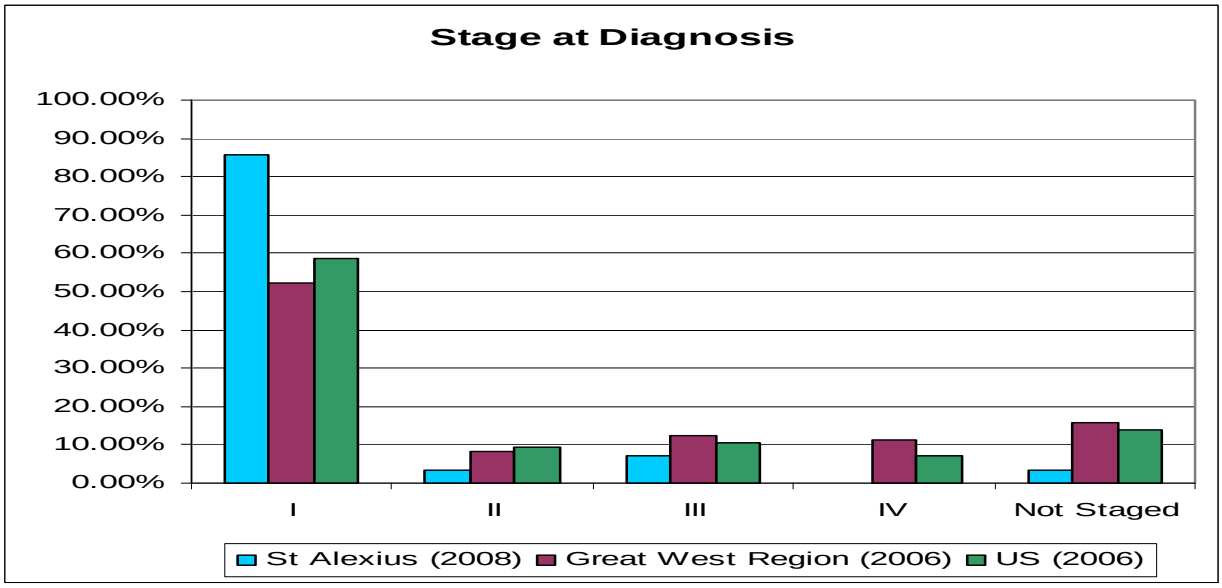
Looking into the age-related histologies of the three most frequently diagnosed or treated tumors at St. Alexius in 2008, 9 out of 10 Papillary Carcinoma, NOS diagnoses were in patients under 50 years old, while all 5 Papillary Carcinoma, Follicular Variant presented themselves between the ages of 40 and 59. Papillary Adenocarcinoma, NOS occurred across several age bands.



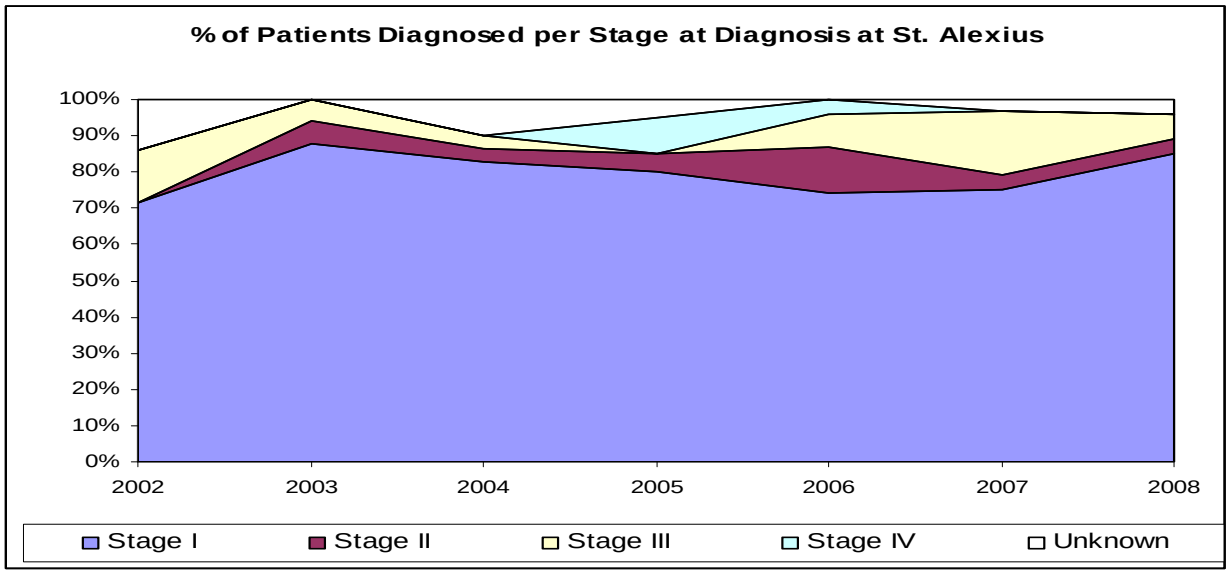
Nationally, as well, in the younger population, papillary carcinoma tends to occur more frequently than the follicular variant.[5]

STAGING

Thyroid cancers, like most cancers, can be staged according to the rules set forth by the American Joint Commission on Cancer. These stages are ranked I through IV and are used in the development of treatment plans and determining a prognosis for the patient. One of the noticeable factors here is that St. Alexius physicians are catching Thyroid tumors in Stage I at an even more favorable rate than the rest of the Great West Region or the country as a whole. More than 85% of all thyroid tumors diagnosed at St. Alexius in 2008 are discovered at Stage I while the rest of the country gets less than 60% of the tumors at this early stage.

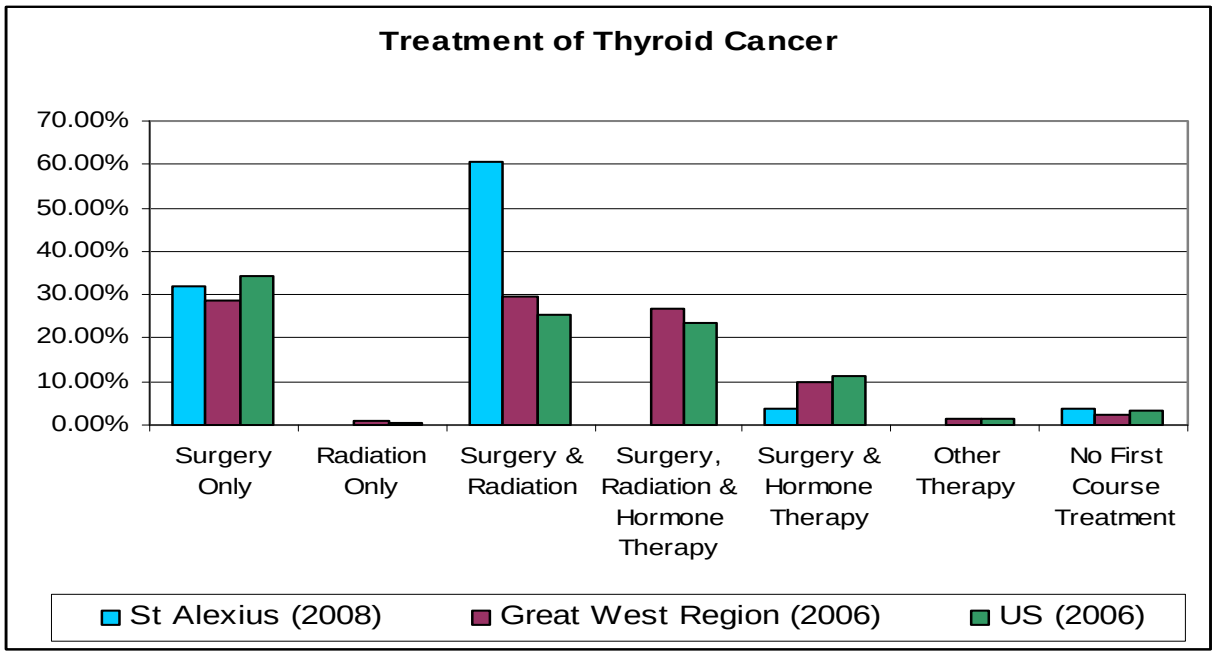


Early diagnosis is consistently better at St. Alexius, as well, with better than 70% of Thyroid tumors diagnosed at Stage I every year since 2002. It is the diagnosis of the disease at this early stage that provides physicians with a greater opportunity to treat the tumor with positive results for the patient.



TREATMENT

Surgery is the therapy of choice for all primary lesions. Surgical options include total thyroidectomy or lobectomy. The choice of procedure is influenced mainly by the age of the patient and the size of the nodule. Surgery is often followed by I^{131} ablative therapy or external beam radiation therapy. Also, because thyroid cancer treatment may kill thyroid cells, the thyroid is not able to make enough thyroid hormone, so patients are given thyroid hormone replacement pills in some cases.[1]



PROGNOSIS

Thyroid cancer is almost always curable. Most thyroid cancers grow slowly and are associated with a very favorable prognosis. The mean survival rate after 10 years is higher than 90%.[5] Due to the small number of cases diagnosed or treated at our hospital, survival statistics at St. Alexius are anecdotal. With that in mind, the superior early stage discovery gives weight to the statistic that among 115 Stage I Thyroid Cancer patients diagnosed or treated since 2002, only one Thyroid Cancer patient death recorded in the St. Alexius Cancer Registry occurred with evidence of cancer still being present at the time of death. It is not documented in the registry database whether cancer was or was not a contributing factor to that death. Since the percentage of thyroid cancer cases being diagnosed in Stage I is so high at St. Alexius, there are not enough late stage diagnoses to separately analyze Stage II, III or IV survivability.

Footnotes

[1] National Cancer Institute: www.cancer.gov
[2] American College of Surgeons National Cancer Database website
[3] MayoClinic.com
[4] The Journal of the American Medical Association. May 10, 2006
[5] emedicine.medscape.com