Hope

2009 Annual Cancer Report

Focus on head & neck cancer

Mary Lanning
Memorial HealthCare

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Introduction

Brad Neet
MLMH President/CEO

The Morrison Cancer Center-MLMH advanced its mission of providing cancer care and health education to the people of central Nebraska in 2009.

As part of that mission, the cancer center continued its focus on emerging technologies and advancements in patient care. As discoveries are made and best practices are established in treating patients diagnosed with cancer, we continue to move forward with our program.

The 2009 Annual Cancer Report from Mary Lanning Memorial HealthCare and the Morrison Cancer Center provides a focus on head and neck cancer, along with an overview of several forms of cancer, offering insight into trends, outcomes and progress.

Dr. Richard Bowen contributed to the report with his analysis of thyroid cancer, its diagnosis and treatment.

Also included in the report is information from the National Cancer Institute.

Dr. Dan Herold
Cancer Commitee
Chairman

The MLMH Cancer Committee

The MLMH Cancer Committee serves as a multidisciplinary board that oversees overall care of cancer patients. The committee meets quarterly and includes members from all hospital services involved in the diagnosis and treatment of cancer patients.

Representatives from Administration, Tumor Registry, Quality Improvement, Hospice, Social Services, Oncology, nursing and the American Cancer Society are included, as well as the physicians who diagnose and treat cancer patients.

The Cancer Committee initiates and coordinates cancer activities to improve cancer care at Mary Lanning Memorial HealthCare. Members provide physician education programs and public awareness activities. Community outreach and education are coordinated with the American Cancer Society to promote cancer awareness and early detection.

Multidisciplinary oncology conferences are held bi-monthly. Conferences are designed to contribute to patient management and provide education for the medical staff. Each conference is patient-oriented and include presentations of the patient's medical history, physical findings, clinical course, and radiology and pathology findings. Stage of disease and treatment options, and outcomes are discussed. Major cancer sites diagnosed and/or treated at MLMH are reviewed, as well as unusual presentations of rare types of malignancies.

Tumor Registry Report

Tumor Registries play an important role in improving the detection, prevention and treatment of cancer. The registry collects and analyzes cancer-related patient data including demographic, diagnostic, treatment and follow-up information, beginning at diagnosis and continuing throughout the cancer patient's lifetime.

Annual follow-up is accomplished mainly through readmission information from the medical record and physician/patient letters.

The Tumor Registry has collected data on patients diagnosed/and or treated at MLMH since 1978. In 2005, the registry reference date was changed to 1990. The registry database contains over 6,600 cases since 1990. During 2009, the registry accessioned 247 cases. Two hundred and thirty-five were analytic cases and the remaining 12 were non-analytic cases seen for recurrent or persistent disease.

The registry is staffed by one full-time Certified Tumor Registrar who abstracts cases, does annual follow-up of patients and provides statistics for any individual or physician who requests data.

The registry submits data to the National Cancer Data Base and the Nebraska State Cancer Registry. This data is used in compiling state and national statistical data. Registry functions comply with the American College of Surgeon's Commission on Cancer's Approvals Program.

The Cancer Committee

- Dan Herold, MD, Radiology, Chairman
- Jerry Seiler, MD, General Surgery, Cancer Liaison Physician
- Francisco Almeida, MD, Pulmonology
- Robert L. Anderson, MD, General Surgery
- V. Richard Bowen, MD, Otolaryngology
- Debora Bruno, MD, Medical Oncology
- John A. Coover, DDS, Oral Surgery
- Asim Ejaz, MD, Pathology
- David Halsted, MD, Urology
- Paul Wibbels, MD, Internal Medicine
- Timothy Zimmerman, MD, Family Practice
- Mark Callahan, MLMH Vice President of Ancillary Services
- Pat Kern, MSW, Social Services Director
- Chandra Muske, RN, Oncology Unit
- Chris Page, Quality Improvement
- Dorothy Streff, RN, Home Care Services
- Colleen Vacek, OCN, Hospice
- Jackie Shafer, RHIT CTR, Tumor Registry

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- Michael Skoch, MD, Chief of Staff Elect
- Richard French, MD, Immediate Past Chief of Staff

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- Leota Rolls, Senior Vice President
- Tim Gronseth, Senior Vice President/CFO
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- Mark Callahan, Vice President
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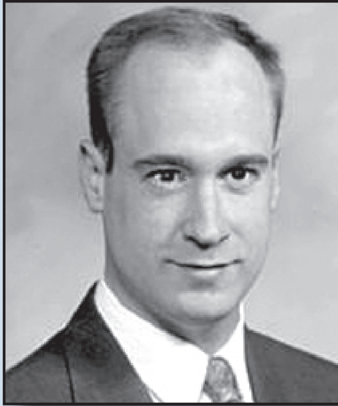
- L. Joe Davis, MD,Vice President

Public Relations

- Lisa Brandt, Director

Thyroid cancer



V. Richard Bowen, MD
Otolaryngology

The thyroid is an H-shaped gland in the mid-neck just below the adam's apple. It uses iodine to make thyroid hormones, which help in the body's regulation of metabolism. Nodules can develop in the thyroid gland. These are more common in women than in men. Thyroid cancer is fairly uncommon, accounting for about 10,000 new cases a year in the United States.

The diagnosis of thyroid cancer is made typically after finding a nodule through self-examination or by the healthcare provider. Occasionally, these can be noted on some other examination such as an ultrasound of the neck or CAT scan for other reasons. Typically, nodules are painless and rarely can result in hoarseness, difficulty swallowing and pain.

Papillary thyroid carcinoma accounts for 60% of all thyroid carcinomas with follicular thyroid carcinoma accounting for 20%. Less likely are medullary thyroid carcinoma, lymphoma and anaplastic carcinoma. This discussion will be based upon papillary and follicular thyroid carcinoma.

Upon initially discovering the thyroid nodule, the patient should undergo a thyroid ultrasound to determine the size, location and number of nodules. Depending on the results, an ultrasound-guided biopsy most likely would be recommended. Sometimes blood tests will be performed to determine the functioning of the thyroid gland. Most thyroid cancer patients are euthyroid (normal).

There are no blood tests to diagnose thyroid cancer. A blood test called a thyroglubulin can be used to follow the patient after thyroid surgery for malignancy. While most thyroid biopsies are benign, if the patient has follicular cells on biopsy, it may be recommended that a further procedure be done such as a thyroid lobectomy (removal of half of the thyroid) for further diagnosis.

The cause of thyroid cancer is unknown, although there are changes in a cellular/DNA level that would account for the formation of the thyroid cancer. These are more common in women than men and occur typically between 20 and 40 years of age. The patients are at a higher risk of developing thyroid cancer if they have had radiation exposure in the past. An example would be treating with radiation in childhood for acne, tonsil and adenoid enlargement, ringworm or exposure to radiation during shoe fitting in the 1950s. The staging of follicular and papillary carcinoma revolves around the size of the tumor and the age of the patient. There is a better prognosis if the patient is less than 45 years old. Certainly, patients over 45 years of age with spread to the lymph nodes or distant metastasis (spread to distant organs) have a worse prognosis and higher clinical stage.

Thyroid cancer treatment is surgical. Most patients require a total thyroidectomy. Rarely, a patient under 45 years old with a 1 cm or smaller nodule may require only a thyroid lobectomy. The benefit would be not requiring lifelong thyroid hormone replacement postoperatively. The overall prognosis is excellent with early stage I and II disease achieving nearly 100% 5-year survival. Sometimes a neck dissection may be required to remove lymph nodes around the thyroid and sometimes extending further out in the neck. Risks of surgery include risk of injury to the recurrent laryngeal nerve (affecting the voice), hypocalcemia (low calcium), hematoma (blood collection) and infection. After surgery, patients require radioactive iodine to allow radioactive material to be delivered to any residual thyroid and thyroid cancer cells to help ablate (destroy) these cells. The overall prognosis is excellent in the early stage (stage I and stage II) disease; however, the prognosis decreases with more advanced disease in particular, patients over 45 years of age. Overall, most cases of thyroid cancer can be readily treated. Unfortunately, in patients with advanced disease, thyroid cancer can be fairly difficult to treat.

Focus on head & neck cancer

More information

Most head and neck cancers begin in the squamous cells that line the mucosal surfaces in the head and neck area. Mucosal surfaces are moist tissues lining hollow organs and cavities of the body open to the environment. Some head and neck cancers begin in glandular cells and are called adenocarcinomas.

Cancers of the head and neck are further identified by the area in which they begin:

• **Oral cavity.** The oral cavity includes the lips, the front two-thirds of the tongue, the gingiva, the buccal mucosa (lining inside the cheeks and lips), the floor of the mouth under the tongue, the hard palate, and the small area behind the wisdom teeth.

• **Salivary glands.** There are many salivary glands; the major ones are in the floor of the mouth, and near the jawbone.

• **Paranasal sinuses and nasal cavity.** The paranasal sinuses are small hollow spaces in the bones of the head surrounding the nose. The nasal cavity is the hollow space inside the nose.

• **Pharynx**. The pharynx is a hollow tube about 5 inches long that starts behind the nose and leads to the esophagus (the tube that goes to the stomach) and the trachea (the tube that goes to the lungs). The pharynx has three parts:

— **Nasopharynx.** The nasopharynx, the upper part of the pharynx, is behind the nose.

— **Oropharynx.** The oropharynx is the middle part of the pharynx. The oropharynx includes the soft palate (the back of the mouth), the base of the tongue, and the tonsils.

— **Hypopharynx.** The hypopharynx is the lower part of the pharynx.

• **Larynx**. The larynx, also called the voicebox, is a short passageway formed by cartilage just below the pharynx in the neck. The larynx contains the vocal cords. It also has a small piece of tissue, called the epiglottis, which moves to cover the larynx to prevent food from entering the air passages.

• **Lymph nodes in the upper part of the neck**. Sometimes, squamous cancer cells are found in the lymph nodes of the upper neck when there is no evidence of cancer in other parts of the head and neck. When this happens, the cancer is called metastatic squamous neck cancer with unknown (occult) primary.

Cancers of the brain, eye and thyroid as well as those of the scalp, skin, muscles and bones of the head and neck are not usually grouped with cancers of the head and neck. For this report thyroid cancers are included.

Symptoms of several head and neck cancer sites include a lump or sore that does not heal, a sore throat that does not go away, difficulty swallowing, and a change or hoarseness in the voice. Other symptoms may include the following:

• **Oral cavity.** A white or red patch on the gums, tongue or lining of the mouth; a swelling of the jaw that causes dentures to fit poorly or become uncomfortable and unusual bleeding or pain in the mouth.

• **Nasal cavity and sinuses.** Sinuses that are blocked and do not clear, chronic sinus infections that do not respond to treatment with antibiotics, bleeding through the nose, frequent headaches, swelling or other trouble with the eyes, pain in the upper teeth, or problems with dentures.

• **Salivary glands.** Swelling under the chin or around the jawbone; numbness or paralysis of the muscles in the face; or pain that does not go away in the face, chin or neck.

• **Oropharynx and hypopharynx.** Ear pain.

• **Nasopharynx.** Trouble breathing or speaking, frequent headaches, pain or ringing in the ears, or trouble hearing.

• **Larynx.** Pain when swallowing or ear pain.

• **Metastatic squamous neck cancer.** Pain in the neck or throat that does not go away.

These symptoms may be caused by cancer or by other, less serious conditions. It is important to check with a doctor or dentist about any of these symptoms.

To find the cause of symptoms, a doctor evaluates a person's medical history, performs a physical examination, and orders diagnostic tests. The exams and tests conducted may vary depending on the symptoms. Examination of a sample of tissue under the microscope is always necessary to confirm a diagnosis of cancer.

Continued

Focus on head & neck cancer

More information *(continued)*

Continued

If the diagnosis is cancer, the doctor will want to learn the stage (or extent) of disease. Staging is a careful attempt to find out whether the cancer has spread and, if so, to which parts of the body. Staging may involve an examination under anesthesia (in the operating room), x-rays and other imaging procedures, and laboratory tests. Knowing the stage of the disease helps the doctor plan treatment.

The treatment plan for an individual patient depends on a number of factors, including the exact location of the tumor, the stage of the cancer and the person's age and general health. The patient and the doctor should consider treatment options carefully. They should discuss each type of treatment and how it might change the way the patient looks, talks, eats or breathes.

Surgery. The surgeon may remove the cancer and some of the healthy tissue around it. Lymph nodes in the neck may also be removed (lymph node dissection), if the doctor suspects that the cancer has spread. Surgery may be followed by radiation treatment.

Radiation therapy. This treatment involves the use of high-energy x-rays to kill cancer cells. Radiation may come from a machine outside the body (external radiation therapy). It can also come from radioactive materials placed directly into or near the area where the cancer cells are found (internal radiation therapy or radiation implant).

Chemotherapy, also called anticancer drugs. This treatment is used to kill cancer cells throughout the body. The side effects of chemotherapy depend on the drugs that are given. In general, anticancer drugs affect rapidly growing cells, including blood cells that fight infection, cells that line the mouth and the digestive tract and cells in hair follicles

Risk Factors: Tobacco (including smokeless tobacco, sometimes called "chewing tobacco" or "snuff") and alcohol use are the most important risk factors for head and neck cancers, particularly those of the oral cavity, oropharynx, hypopharynx and larynx. Eighty-five percent of head and neck cancers are linked to tobacco use. People who use both tobacco and alcohol are at greater risk for developing these cancers than people who use either tobacco or alcohol alone.

Estimated new cases and deaths from oral cancer in the United States in 2010

New cases: 36,540 Deaths: 7,880 (oral cavity and pharynx)

Estimated new cases and deaths from throat cancer (including cancers of the larynx) in the United States in 2010

New cases: 12,720 (laryngeal); 12,660 (pharyngeal), Deaths: 3,600 (laryngeal), 2,410 (pharyngeal)

Information from the web site of the National Cancer Institute (http://www.cancer.gov) Please visit the website for more information.

Services available at Mary Lanning Memorial HealthCare

Social Services

Social workers are available to provide counseling to help deal with the psychological, social and financial impact of cancer on patients and their families.

Social workers can provide a wide range of services to patients including discharge planning from the hospital, arranging for care at home, financial counseling, interpretation of insurance and Medicare benefits or bereavement counseling.

The choice of interventions depends on the particular needs identified through an individual assessment.

Services are available to all Mary Lanning patients including those on acute care, home health, hospice and radiation therapy.

Services available at Mary Lanning Memorial HealthCare

Oncology

The Oncology Unit is a 10-bed unit that specializes in patients with cancer, cancer-related diagnosis and blood dyscrasias. Patient's medical and surgical needs can be addressed as well as providing care to those receiving chemotherapy, internal or external radiation and/or blood products. The staff are trained in the care and support of treating the complications that can occur as a result of the disease and/or its treatments.

Hospice is addressed on the unit. To provide a continuum of care, hospice patients have available services to inpatient, outpatient or respite care on a 24-hour basis in central Nebraska and beyond.

The Oncology Unit registered nurses are required to be chemotherapy-trained and/or certified in oncology (OCN). This allows for specialized, individual care of patients with cancer. Implementation of the nursing process and plan of care is accomplished through a multidisciplinary approach.

The oncology staff is dedicated to providing quality care. Many of the staff are members of the National Oncology Nursing Society and active in the local Central Nebraska Chapter. Together with other nurses in the local chapter, they are involved with fundraising activities such as the annual Relay for Life for the American Cancer Society and community education projects. They also plan and offer continuing education to professionals to advance the level of cancer knowledge in this area.

Hospice

Mary Lanning Hospice provides a special way of caring for a person with a life-limiting illness. Support is provided for physical, emotional and spiritual needs for both the patient and the family. Hospice is a philosophy of care that accepts death as a natural process. Members of the Mary Lanning Hospice Team assist the patient and their family in the management of symptoms so that each day may be lived to the fullest. The focus of hospice is on life.

Hospice care and services are provided primarily in the home. Respite or inpatient care is available, if needed, and is provided on the Mary Lanning Oncology Unit. Hospice services are also available to patients in skilled nursing facilities in the service area.

Our service area includes Adams, Hall, Webster, Kearney, Clay and Franklin counties. Mary Lanning Hospice is state-licensed, Medicare-certified and accredited by the Joint Commission.

Mary Lanning Hospice served 157 patients and their families in 2009. Of these patients, 40% were seen with cancer being their primary terminal diagnosis. Average length of stay was around 39 days. Of the 144 new admissions, 56 (39%) had a length of stay of less than seven days.

An interdisciplinary team comprised of the hospice medical director, the attending physician, a pastoral or counselor consultant, medical social worker, nurses, aides, therapists, pharmacist and volunteers provide services to meet the needs of the hospice patients and families.

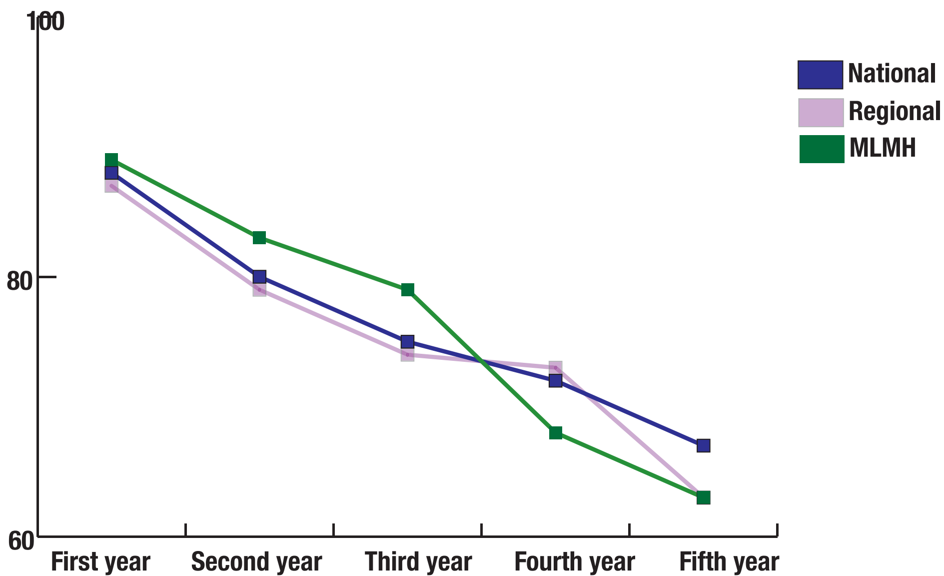
The Mary Lanning Hospice Volunteer program provides trained volunteers for support and assistance to the hospice patient and families. These volunteers provide the gift of time, hope and caring to the lives they touch.

A palliative care component has also been provided by the hospice nurses to many patients who do not meet the criteria for hospice but need symptom and comfort management recommendations.

The hospice nursing staff also provide educational in-services to our contracting nursing homes, facilitating a cooperative effort between the facility staff and hospice in management of patient comfort for those residents on hospice or palliative care.

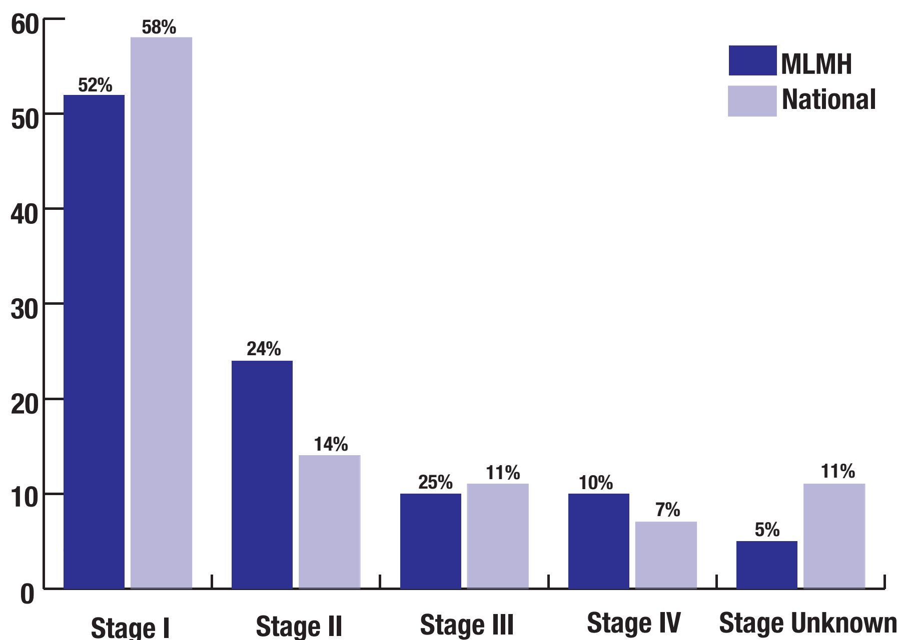
Head & neck statistics

1998-2002
Observed survival rates:
Head & neck cancer



Head & neck cancer stages

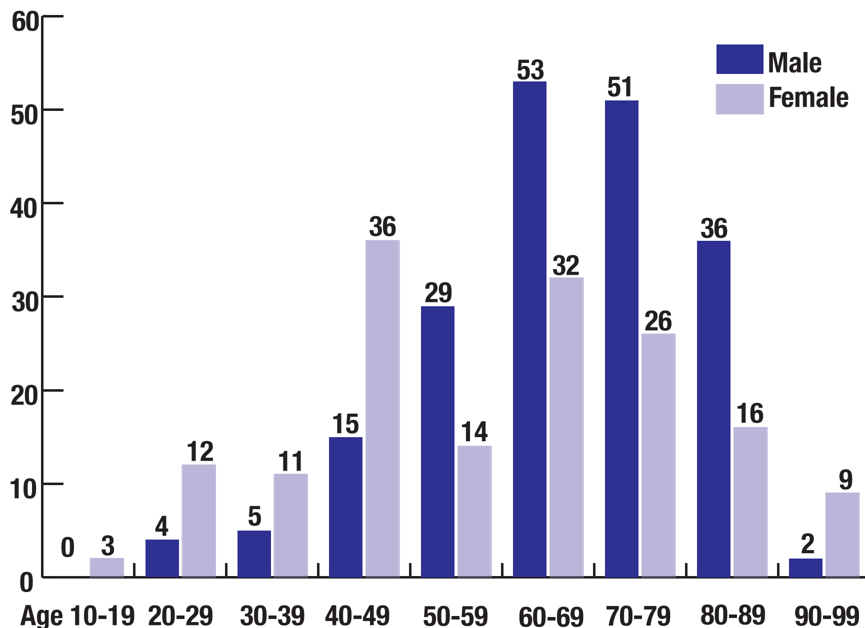
The following are percentages of thyroid cases from 2000-2007 broken down by stage at time of diagnosis, comparing figures from Mary Lanning Memorial HealthCare with data from the National Cancer Data Base/Commisson on Cancer.



Head & neck statistics

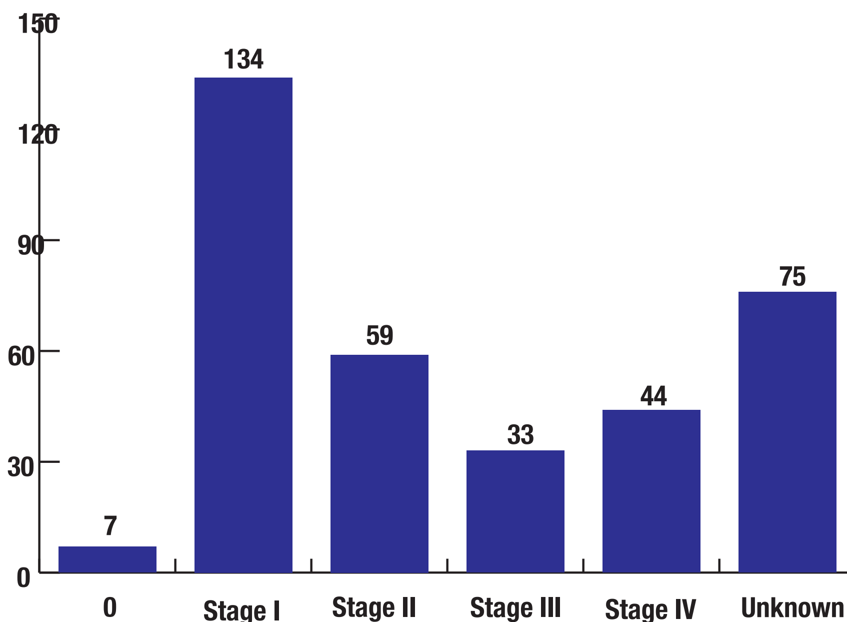
1990-2009 head & neck by age/gender

In 2009, Mary Lanning Memorial HealthCare reported the following numbers of patients with head and neck cancer. The figures are broken down by age and gender.



Head & neck cancer stages

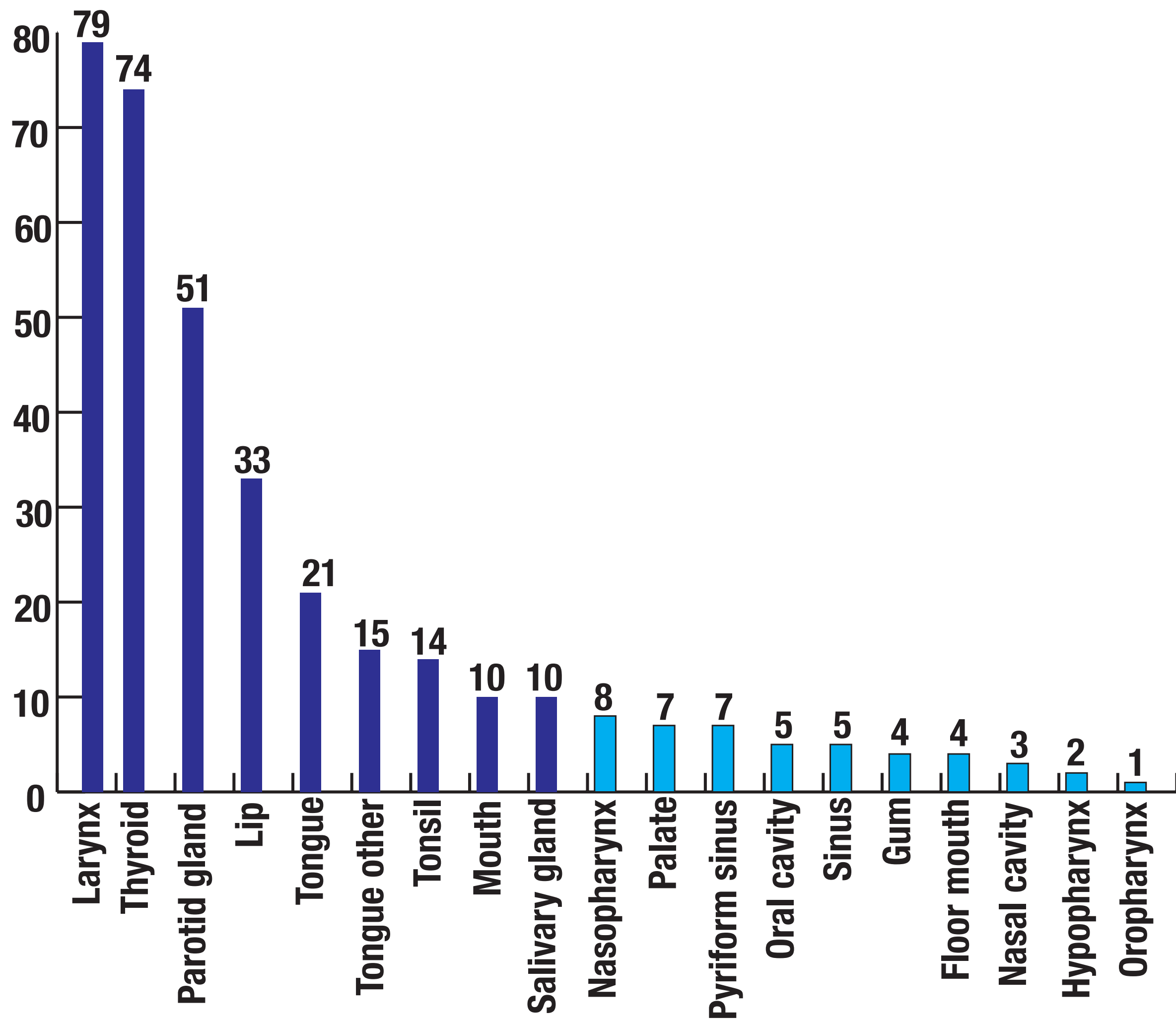
Mary Lanning Memorial HealthCare diagnosed the following number of head and neck cancers, broken down by stage at diagnosis, between 1990 and 2009.



Head & neck statistics

1990-2009 head & neck sites

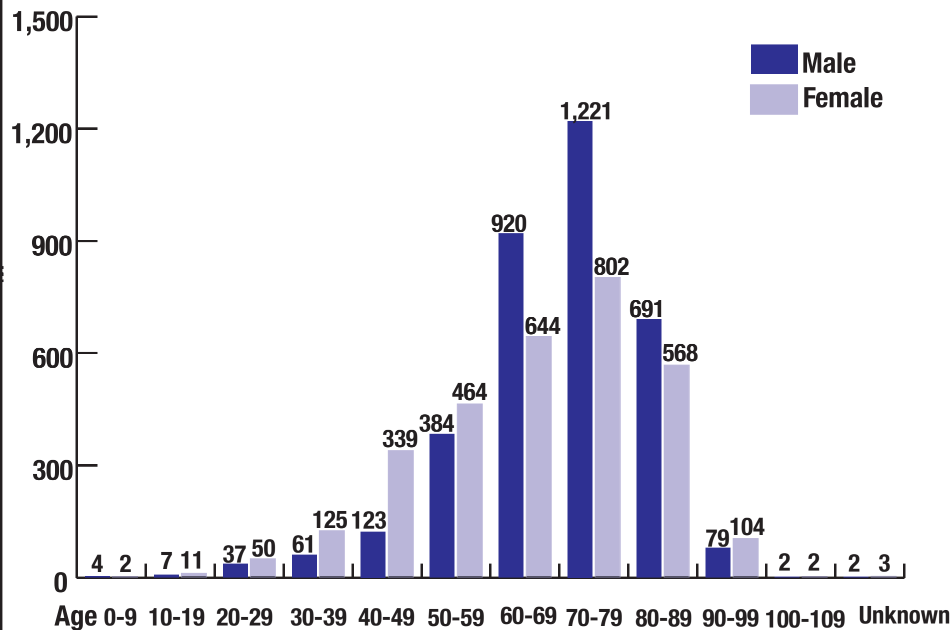
Head and neck cancers reported at Mary Lanning Memorial HealthCare from 1990-2009 are broken down by site.



Cancer: All sites

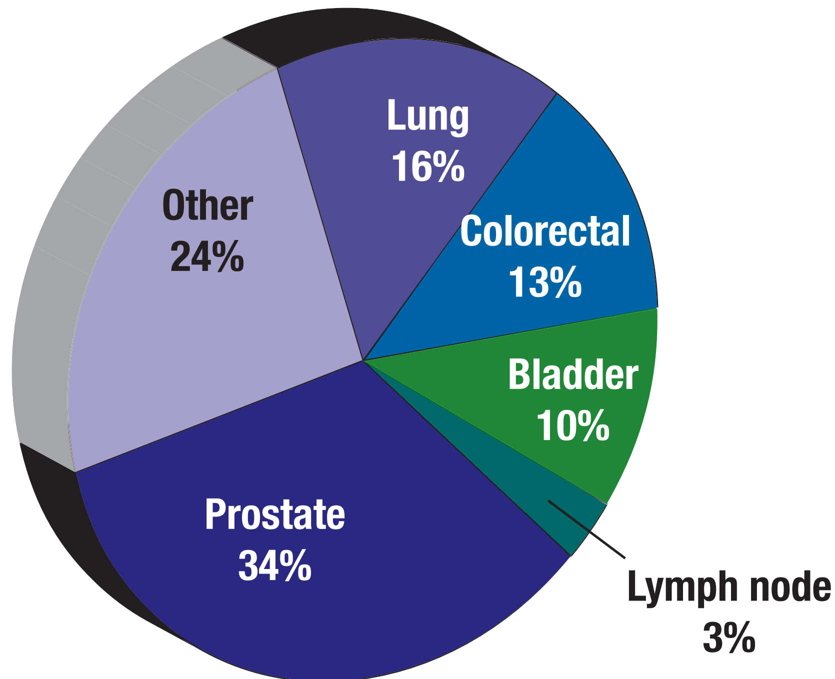
1990-2009 all cancers by age/gender

Between 1990 and 2009, Mary Lanning Memorial HealthCare reported the following number of patients with cancer broken down by age at diagnosis and gender.

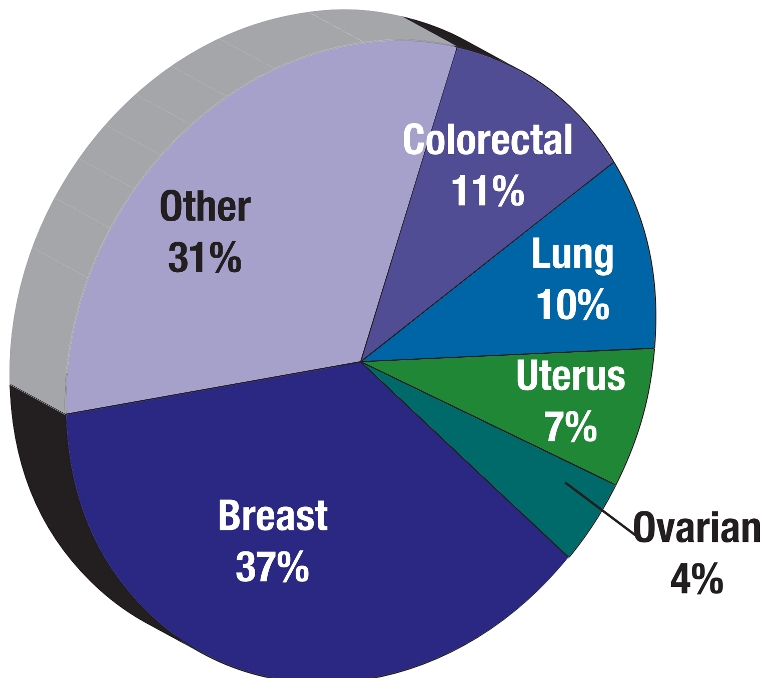


Cancer: All sites

Top cancer sites at MLMH Males 1990-2009

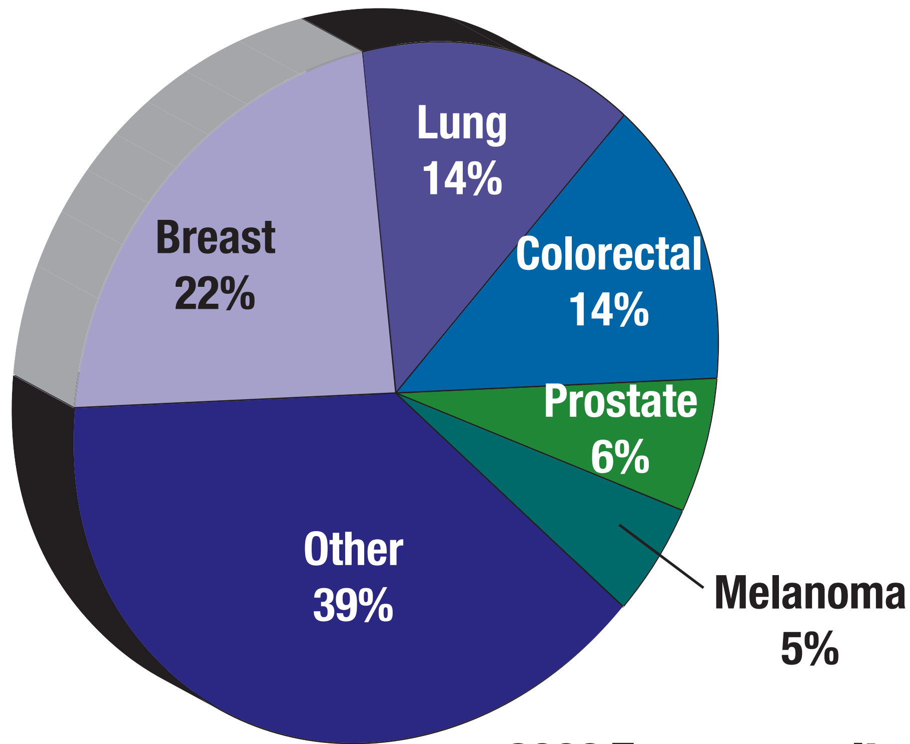


Top cancer sites at MLMH Females 1990-2009

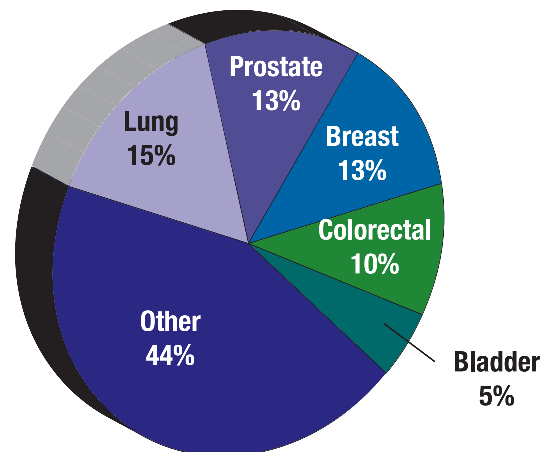


Cancer: All sites

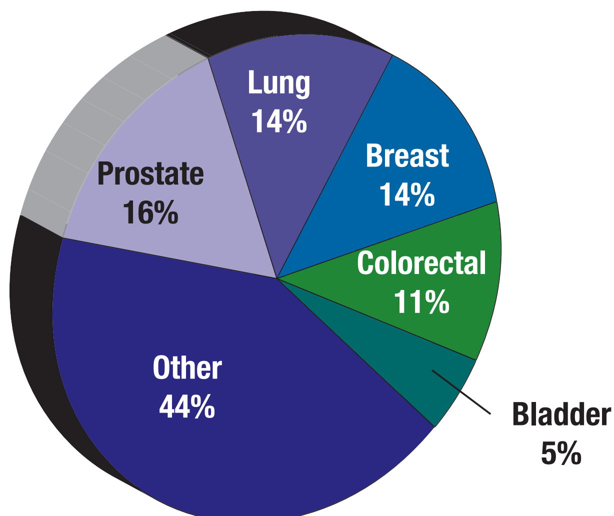
2009 Top cancer sites at MLMH



2009 Top cancer sites in the nation



2009 Top cancer sites in Nebraska



Nebraska and national figures are estimates from Cancer Facts & Figures 2007 published by the American Cancer Society.

2009 Summary — All analytic cases

Primary site	All cases	AJCC stage						Gender	
		0	I	II	III	IV	9	M	F
Buccal cavity & pharynx	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**
Lip		0	1	0	0	0	0	1	0
Tongue		0	1	0	0	0	0	1	0
Digestive system	**46**	**0**	**11**	**8**	**14**	**7**	**6**	**24**	**22**
Esophagus		0	1	2	0	1	3	3	4
Stomach		0	1	0	0	1	0	2	0
Colon excluding rectum		0	5	3	12	5	2	14	13
Rectum and Rectosigmoid		0	3	2	2	0	0	4	3
Anus		0	1	0	0	0	0	0	1
Liver		0	0	1	0	0	0	1	0
Pancreas		0	0	0	0	0	1	0	1
Respiratory system	**38**	**0**	**6**	**0**	**16**	**14**	**2**	**20**	**18**
Larynx		0	2	0	0	1	1	1	3
Lung and bronchus		0	4	0	16	13	1	19	15
Bones and joints	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
Soft tissue	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**
Melanoma of the skin	**14**	**3**	**3**	**3**	**2**	**1**	**2**	**8**	**6**
Breast	**54**	**17**	**18**	**10**	**5**	**4**	**0**	**0**	**54**
Female genital system	**14**	**0**	**10**	**0**	**2**	**1**	**1**	**0**	**14**
Cervix uteri		0	1	0	0	0	0	0	1
Corpus uteri		0	8	0	2	0	1	0	11
Ovary		0	1	0	0	1	0	0	2

2009 Summary — All analytic cases

Primary site	All cases	AJCC stage 0	I	II	III	IV	9	Gender M	F
Male genital system	**15**	**0**	**0**	**10**	**1**	**3**	**1**	**15**	**0**
Prostategland		0	0	10	1	3	1	15	0
Urinary system	**11**	**2**	**2**	**5**	**0**	**1**	**1**	**10**	**1**
Urinary bladder		2	2	5	0	0	0	8	1
Kidney and renal pelvis		0	0	0	0	1	1	2	0
Eye	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
Brain & CNS	**3**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**2**	**1**
Endocrine system	**7**	**0**	**5**	**0**	**2**	**0**	**0**	**2**	**5**
Thyroid gland		0	5	0	2	0	0	2	5
Lymphomas	**15**	**0**	**5**	**1**	**1**	**8**	**0**	**9**	**6**
Hodgkin's Disease		0	0	0	0	2	0	1	1
Non-Hodgkin's Lymphoma		0	5	1	1	6	0	8	5
Multiple Myeloma	**3**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**2**	**1**
Leukemias	**11**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**9**	**2**
Chronic lymphocytic		NA	NA	NA	NA	NA	NA	4	1
Acute myeloid		NA	NA	NA	NA	NA	NA	2	1
Other leukemia		NA	NA	NA	NA	NA	NA	3	0
Other ill-defined & unknown	**11**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**5**	**6**
All sites combined	**247**	**22**	**63**	**37**	**44**	**40**	**13**	**108**	**139**

AJCC staging: 0, I, II, III, IV and 9 (Unknown or no AJCC staging scheme)