

# COMPdata Monthly Monitor - Montana

## February 2005

### Cancer

#### **INTRODUCTION**

According to leading cancer organizations, the risk of getting and dying from cancer continues to decline and the survival rates for many cancers continue to improve.<sup>1</sup> On the other hand, the trends are not as positive for segments of the population and for certain types of cancer.

In January 2005, news reports widely circulated the finding published in *CA, A Cancer Journal for Clinicians*<sup>2</sup> that cancer has surpassed heart disease as the leading cause of death for persons under the age of 85. The National Cancer Institute (NCI) estimates that in 2001 there were approximately 9.8 million Americans who were alive and had a history of cancer.<sup>3</sup>

While the news and statistics may be mixed, there is still much that hospitals can do to have a direct impact on cancer through cancer prevention efforts, inpatient and outpatient care, and by working with cancer survivors to improve their quality of life.

This issue of the COMPdata Monthly Monitor (CMM) focuses on cancer overall with additional information on the four leading cancer types (lung, colorectal, breast, and prostate). Future editions of the CMM will examine each of these cancers in more detail.

#### **Cancer Incidence 4**

The following information reports the age-adjusted invasive cancer incidence rates (per 1,000 population) by gender for 2001. These rates exclude basal and squamous cell carcinomas of the skin except when these occur on the skin of the genital organs, and in situ cancers except urinary bladder.

The most common types of cancer are breast, prostate, lung, and colorectal cancers. The NCI 2003 Cancer Progress Report<sup>1</sup> found that the number of new cases of non-Hodgkin lymphoma, melanoma, and liver cancer are rising in the U.S. for both men and women. The number of new breast and lung cancer cases in women is also increasing. It is believed that breast cancer cases may be rising in part due to more women receiving mammograms than in past years.

#### United States

- Females – all cancer sites combined: 4.05 per 1,000 population
- Males – all cancer sites combined: 5.45
  
- Females – breast: 1.27
- Females – lung and bronchus: 0.53
- Females – colon and rectum: 0.46
  
- Males – prostate: 1.61
- Males – lung and bronchus: 0.88
- Males – colon and rectum: 0.63

#### Montana

- Females – all cancer sites combined: 4.16 per 1,000 population
- Males – all cancer sites combined: 5.48

- Females – breast: 1.30
- Females – lung and bronchus: 0.62
- Females – colon and rectum: 0.42
- Males – prostate: 1.79
- Males – lung and bronchus: 0.81
- Males – colon and rectum: 0.63

### **Cancer Death Rates** <sup>4</sup>

The following information reports the age-adjusted invasive cancer death rates (per 1,000 population) by gender for 2001. These rates exclude basal and squamous cell carcinomas of the skin except when these occur on the skin of the genital organs, and in situ cancers except urinary bladder.

Note that while the incidence for lung and bronchus cancer ranks second to breast and prostate cancer, it ranks first in terms of death rate and is estimated that it will account for more than 172,500 deaths in the U.S. in 2005.<sup>3</sup> Tobacco use is the primary cause for these deaths and the death rate overall for lung cancer is declining, attributed in part to a decrease in smoking by many segments of the population. However, the death rates for women with lung cancer have only recently begun to level off.

#### United States

- Females – all cancer sites combined: 1.64 per 1,000 population
- Males – all cancer sites combined: 2.43
- Females – lung and bronchus: 0.41
- Females – breast: 0.26
- Females – colon and rectum: 0.17
- Males – lung and bronchus: 0.75
- Males – prostate: 0.29
- Males – colon and rectum: 0.24

#### Montana

- Females – all cancer sites combined: 1.66 per 1,000 population
- Males – all cancer sites combined: 2.45
- Females – lung and bronchus: 0.48
- Females – breast: 0.23
- Females – colon and rectum: 0.14
- Males – lung and bronchus: 0.74
- Males – prostate: 0.32
- Males – colon and rectum: 0.24

### **U.S. Cancer Trends**

The following data on cancer trends are taken from the 2004 Annual Report to the Nation on the Status of Cancer, 1975-2001.<sup>1</sup> The report is a collaborative effort of the CDC, NCI, American Cancer Society, and the North American Association of Central Cancer Registries.

The statistics that follow represent the annual percent change for the time period provided.

#### Incidence

- Both sexes – all cancer sites (1995-2001): 0.4%
- Females – all cancer sites (1987-2001): 0.3%
- Males – all cancer sites (1995-2001): 0.2%
  
- Females – breast (1987-2001): 0.5%
- Females – lung and bronchus (1998-2001): -1.3%
- Females – colon and rectum (1998-2001): -2.3%
  
- Males – prostate (1995-2001): 2.0%
- Males – lung and bronchus (1991-2001): -1.9%
- Males – colon and rectum (1998-2001): -3.5%

#### Death Rates

- Both sexes – all cancer sites (1993-2001): -1.1%
- Females – all cancer sites (1992-2001): -0.8%
- Males – all cancer sites (1995-2001): -1.5%
  
- Females – lung and bronchus (1995-2001): 0.2%
- Females – colon and rectum (1984-2001): -1.8%
- Females – breast (1990-2001): -2.3%
  
- Males – lung and bronchus (1991-2001): -1.9%
- Males – colon and rectum (1990-2001): -2.0%
- Males – prostate (1994-2001): -4.1%

In addition to the trends reported above, death rates decreased for 8 of the top 15 cancers in women and 11 of the top 15 cancers in men in the 5-6 years leading up to 2001. Rates increased for esophageal cancer and liver cancer in males, but none of the 15 cancers saw significant increases for women.

The continuing increase in the incidence of prostate cancer in males and female breast cancer, while modest, may be attributable to increased screening through prostate-specific antigen testing and mammography.<sup>2</sup> The increase in female breast cancer incidence may also reflect increased use of hormone replacement therapy and/or increased prevalence of obesity.<sup>2</sup> Declines in lung and bronchus cancer incidence reflect the decrease in cigarette smoking, particularly among adults 18 and older, where the prevalence of cigarette smoking decreased from 42% in 1965 to 23% in 2002. The per capita consumption of cigarettes is lower today than at any point since World War II.

### **CANCER IN MONTANA INPATIENTS**

The following section will provide statistics for cancer patients in Montana hospitals. It is important to note that these statistics represent inpatient care only. The pattern of findings for hospital inpatients may be different than the statistics reported above on cancer incidence and death rates because those are population based. Also important is the fact that technological and medical advances have allowed many cancer patients to receive care in settings other than the acute care hospital.

The statistics in this section are based on ICD-9 coding conventions used by the CDC National Center for Health Statistics, which may differ from surveillance reporting systems that tend to be more restrictive with regard to the inclusion of conditions. In addition, all statistics below exclude newborns and obstetric cases – Major Diagnostic Categories (MDC) 14 and 15.

**All Cancer** (ICD-9 Diagnosis codes 140-208.9, 230-234.9)

Montana hospitals in 2003 found that 6,711 or 8.2% of their inpatients were diagnosed with some type of cancer as either a principal or secondary diagnosis. Compared to 2000 when there were 6,981 total cancer patients, there was a decrease of 3.9%.

For the 6,711 patients with a cancer diagnosis in 2003, it was the principal diagnosis for 52.4% of them or 3,514. This was a decrease of 5.1% compared to 2000 when there were 3,704 patients with a principal diagnosis of cancer. There was a 4.3% decrease from 2000 to 2003 in patients with one or more secondary diagnoses of cancer; there were 4,813 such patients in 2000 and 4,604 in 2003.

**All Patients with a Principal Diagnosis of Cancer**

The following statistics explore in more detail the characteristics of the 3,514 inpatients with a principal diagnosis of cancer in 2003.

- The majority, 74.7%, of cancer patients were admitted to the hospital through a physician referral. Another 18.8% were admitted through the emergency room.
- Just over one-half, 56.7%, of these patients were elective admissions, 28.9% were urgent cases, and 14.3% were emergencies.
- More than three-quarters of cancer patients were routine discharges, 73.2%, or were discharged to home health care, 5.7%. Another 9.9% were discharged or transferred to a skilled nursing, intermediate care, or another type of non-acute care facility, while 6.5% died in the hospital; 2.4% were discharged to hospice at home or at a medical facility.
- A similar percentage of cancer patients were female, 50.3%, as were male, 49.7%.
- More than one-half, 58.1%, were 65 years or older, 36.9% were between the ages of 40 and 64, and 4.9% were younger than 40 years old.
- The vast majority of cancer patients were covered by Medicare, 51.3%, or by a commercial insurer or self-administered plan or HMO, 26.1%. Only 3.8% were Medicaid patients while 4.5% were self-pay.
- Slightly more cancer patients received care in rural hospitals, 52.9%, compared to other urban hospitals, 47.0%.

**Lung and Bronchus Cancer** (ICD-9 Diagnosis codes 162.2-162.9, 176.4, 197.0, 197.3)

In 2003, 424 patients had a principal diagnosis of lung or bronchus cancer or 12.1% of the 3,514 patients with a principal diagnosis of any cancer. There were 10.4% fewer lung and bronchus cancer patients in 2003 compared to 2000, when there were 473.

**Colorectal Cancer** (ICD-9 Diagnosis codes 153-154.8,197.5)

In 2003, 411 patients had a principal diagnosis of colorectal cancer or 11.7% of the 3,514 patients with a principal diagnosis of any cancer. There were 18.1% fewer colorectal cancer patients in 2003 compared to 2000, when there were 502.

**Female Breast Cancer** (ICD-9 Diagnosis codes 174-174.9, 198.81)

In 2003, 319 female patients had a principal diagnosis of breast cancer or 9.1% of the 3,514 patients with a principal diagnosis of any cancer. There were 13.6% fewer female breast cancer patients in 2003 compared to 2000, when there were 369. This is an indication of the trend toward more outpatient procedures for breast cancer patients.

**Prostate Cancer** (ICD-9 Diagnosis code 185)

In 2003, 409 patients had a principal diagnosis of prostate cancer or 11.6% of the 3,514 patients with a principal diagnosis of any cancer. There were 21.4% more prostate cancer patients in 2003 compared to 2000, when there were 337.

**Montana Statistics from COMPdata**

All of the Montana patient statistics were derived from MHA's COMPdata. We encourage you to use COMPdata to examine your hospital community area(s) regarding cancer patients so that you might better understand the impact of these patients on your care and treatment of your changing patient population and the resources needed to diagnose, treat, and manage all cancer patients.

The COMPdata graphing feature can be utilized to examine in a pictorial fashion trends in your state and hospital community area(s) regarding cancer. Hospitals can click here to obtain a graph that illustrates the distribution of cases by Major Diagnostic Category (MDC) for patients having cancer as a secondary diagnosis: <http://www.ihatoday.org/compdata/mtcagraph.pdf>.

**APPENDIX**

**Estimating Cancer Statistics Locally for 2005**

The National Cancer Institute (NCI) and the American Cancer Society (ACS) provide a set of multipliers that can be used to compute rough estimates for cancer incidence and deaths in your local community.<sup>3</sup> It is recommended that you use data from state cancer registries, when it is available, to more accurately estimate local cancer statistics. The estimates should be used with caution because they do not reflect the age or racial characteristics of the population, access to detection and treatment, or exposure to risk factors.

To estimate the number of new cancer cases and cancer deaths, respectively, multiply the community population by these factors:

- All cancer sites: 0.0046, 0.0019
- Female breast (use female population only): 0.0014, 0.0003
- Colon and rectum: 0.0005, 0.0002
- Lung: 0.0006, 0.0006
- Prostate (use male population only): 0.0016, 0.0002

**Major Risk Factors for Cancer**<sup>3</sup>

Lung and Bronchus - Cigarette smoking is the most important risk factor by far. Other significant risk factors include secondhand smoke and occupational or environmental

exposures to substances such as arsenic; some organic chemicals such as benzene; radon and asbestos; radiation exposure from occupational, medical, and environmental sources; air pollution; and tuberculosis.

Colon and Rectum - Age is the primary risk factor for colorectal cancer, with more than 90% of cases diagnosed in individuals older than 50. Other important factors are personal or family history of colorectal cancer and/or polyps, or a personal history of inflammatory bowel disease. Smoking, alcohol consumption, physical inactivity, a diet high in saturated fat and/or red meat, and an inadequate intake of fruits and vegetables all increase the risk of colorectal cancer.

Female Breast The risk of being diagnosed with breast cancer increases with age. Among the primary factors include certain inherited genetic mutations (BRCA1 and BRCA2), a personal or family history of breast cancer, high breast tissue density, and biopsy-confirmed hyperplasia. Other factors include a long menstrual history, obesity after menopause, recent use of oral contraceptives, postmenopausal hormone therapy, never having children or having one's first child after age 30, or consumption of one or more alcoholic beverages per day.

Prostate - The well-established risk factors for prostate cancer are age, ethnicity, and a family history of the disease. More than 70% of all prostate cancer cases are diagnosed in men older than 65. African American men and Jamaican men of African descent have the highest prostate cancer incidence rates in the world.

### **Cancer Prevention<sup>6</sup>**

An examination of the risk factors for cancer listed above draws a clear picture of the potential for preventing cancer risk by adopting healthier lifestyles. As many as 60 percent of all cancers are preventable.<sup>3</sup> Avoiding tobacco use, increasing physical activity, achieving optimal weight, improving nutrition, and avoiding sun exposure can significantly reduce a person's risk for cancer. The other key to preventing cancer and cancer deaths is early detection. Hospitals can be leaders in this effort by making cancer screening, information, and referral services available and accessible to all members of their community. Screening tests for breast, cervical, and colorectal cancers can all reduce the number of deaths from these diseases. Tests for cervical and colorectal cancers may actually prevent these cancers from developing by detecting treatable precancerous conditions.

### **Racial and Ethnic Disparities**

Wide variations in survival associated with race and ethnicity have been reported.<sup>1</sup> With the exception of Asian/Pacific Islander women, every racial and ethnic population had a greater risk of cancer death from all cancer sites combined than for non-Hispanic white patients. Black men were at higher risk of dying of 12 cancers compared to white men, with the increase risk ranging from 9 percent (lung cancer) to a high of 67 percent (oral cavity). Black women experienced higher risks of death from 12 cancers, with the increase ranging from 7 percent (lung cancer) to 82 percent (corpus uterus and melanoma). From 1996 through 2000, the average annual death rate per 100,000 people for all cancers combined was 257 for African Americans, 199 for whites, 138 for Hispanics, 138 for American Indians/Alaska Natives, and 125 for Asians/Pacific Islanders.<sup>6</sup>

### **Infections and Cancer**

In 2005, it is estimated that 17% of new cancers worldwide will be attributable to infection.<sup>3</sup> While some of these cancers are preventable by available public health and medical interventions, barriers exist to applying these interventions, especially in developing countries.

For the first time ever, viruses were added to the list of cancer-causing agents in the US Department of Health and Human Services Eleventh Edition of the Report on Carcinogens that was released in January 2005.<sup>7</sup> Hepatitis B and C were included because they cause liver cancer. Several types of human papilloma viruses cause cervical cancer.

### **Cancer Survivors**

The five-year survivor rates for all cancers have improved from 50% for cancers diagnosed during the period 1974 to 1976 to 64% for cancers diagnosed during the period 1995 to 2000.<sup>2</sup> While this improvement is significant and is encouraging news, there may be another concern. Recent research<sup>8</sup> has shown that cancer survivors may have a tendency to neglect other important health problems. It's important for providers to be vigilant when treating cancer survivors to be sure that other problems, particularly chronic diseases, are not ignored.

## **RESOURCES FOR ADDITIONAL INFORMATION**

### **For Hospitals**

A good starting point for finding valuable information on cancer is the web site for the American Cancer Society (<http://www.cancer.org>). Many of the links on their site lead to resources that are the combined efforts of the National Cancer Institute and the CDC. On the ACS site, click on "Professionals" to get cancer reference information, continuing medical education opportunities, statistics, a bookstore, and more. Of particular value is the section "In My Community" where you can enter a ZIP Code or city to find about activities, news, and resources in your area. You may want to contact ACS or your local cancer society to be sure information about your hospital's services is listed in their database.

Among the highlights of the National Cancer Institute's site (<http://www.cancer.gov>) are very detailed State Cancer Profiles (<http://statecancerprofiles.cancer.gov>) and PDQ – NCI's Comprehensive Cancer Database with treatment summaries for different patient populations, a clinical trials database, and directories of health professionals and cancer care organizations. PDQ can be found under "Cancer Topics" on the NCI home page.

The home page for the CDC home page for Cancer Prevention and Control is <http://www.cdc.gov/cancer/index.htm>. Just released and available on the home page is the First National Breast and Cervical Cancer Early Detection Program Summary Report. Links to a number of valuable articles, reports, and fact sheets are also available.

Onconurse.com (<http://www.onconurse.com>) is dedicated to supporting the relationship between nurses and cancer patients. The "Patient-Centered Guides" are free to download and share with patients. Nurses and others can register to be updated when new information becomes available.

### **For Patients and The Community**

As it is for professionals, the ACS web site (<http://www.cancer.org>) is a great resource for patients, families, caregivers, and others. On the home page there are sections for survivors; patients, family and friends; and health information seekers. There is also an interactive help section devoted to making treatment decisions and exploring treatment options. The "In My Community" section noted above should be of great value to patients and other community members.

People Living With Cancer (<http://www.peoplelivingwithcancer.org>) is the patient information website of the American Society of Clinical Oncology. It is designed to help patients and families make informed health-care decisions. Of note is their information on 50 different types of cancer, which is available in Spanish. There are regular opportunities to participate in chat sessions with ASCO experts on different cancer topics.

Perhaps the best area of the NCI web site for patients and other non-professionals is the "Cancer Topics" section which can be accessed directly at <http://www.cancer.gov/cancertopics/>. This site contains topics such coping with cancer; support and resources; prevention, genetics, and causes; a cancer library; and information regarding different cancer types and treatments.

CancerCare (<http://www.cancer.org>) is a national non-profit organization that provides free professional support services to anyone affected by cancer: people with cancer, caregivers, children, loved ones, and the bereaved.

## REFERENCES

- 1 Jemal, A et al. Annual Report to the Nation on the Status of Cancer, 1975-2001, with a Special Feature Regarding Survival. *Cancer*, July 1, 2004, Vol. 101, No. 1. Available at <http://interscience.wiley.com/cancer/report2004>.
- 2 Jemal, A et al. Cancer Statistics, 2005. *CA, A Cancer Journal for Clinicians*, Jan/Feb 2005, Vol. 55, No. 1. Available at <http://caonline.amcancersoc.org/>.
- 3 American Cancer Society. *Cancer Facts and Figures 2005*. Atlanta: American Cancer Society; 2005. ([http://www.cancer.org/docroot/STT/stt\\_0.asp](http://www.cancer.org/docroot/STT/stt_0.asp)) Date accessed: 2/28/2005.
- 4 U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 2001 Incidence and Mortality*. Atlanta, GA: DHHS, CDC and NCI; 2004. (<http://www.cdc.gov/cancer/npcr/uscs/>) Date accessed: 2/4/2005.
- 5 Cancer Progress Report – 2003 Update, National Cancer Institute, NIH, DHHS, Bethesda, MD, February 2004. (<http://progressreport.cancer.gov/>) Date accessed: 2/4/2005.
- 6 Centers for Disease Control and Prevention. *Preventing and Controlling Cancer: The Nation's Second Leading Cause of Death 2004*. (<http://www.cdc.gov/cancer/ataglan.htm>) Date accessed: 2/19/2005.
- 7 NIH National Institute of Environmental Health Sciences. *List of Cancer-Causing Agents Grows*. Press release, Jan 31, 2005. (<http://www.niehs.nih.gov/oc/news/canceragents.htm>) Date accessed: 2/23/2005.
- 8 Earle, CC & Neville, BA. Under use of necessary care among cancer survivors. *Cancer*. Vol. 101, Issue 8, pp. 1712-1719. Date: October 15, 2004 (Abstract available at <http://interscience.wiley.com>.)