



The face of **CANCER** *in IOWA*

The Burden of Cancer in Iowa and the Need for a Comprehensive Approach to Prevention and Control

The Report of the Comprehensive Cancer Control Study Committee

In Response to the
Requirements of House File 726

January 2, 2002

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Background

Introduction

Iowa, like most other states, is heavily burdened by cancer. This terrible disease affects many of our citizens, both those who get it and their loved ones. Cancer has enormous personal, social and economic impacts on everyone it touches and the state as a whole. A comprehensive approach to cancer prevention and control is needed to stimulate a coordinated and integrated effort by the private, public and voluntary sectors across the state to aggressively reduce the burden of cancer by:

- ***Preventing cancer from ever occurring whenever possible,***
- ***Detecting cancer in its earliest stages when it occurs,***
- ***Treating any cancer found with the most appropriate treatment known, and***
- ***Assuring that the quality of life of cancer patients is the best it can be.***

Developing a comprehensive plan for reducing the burden of cancer in Iowa requires a common understanding of the current burden, the factors that influence what that burden is, and the factors which can be influenced to reduce it. This report of the Comprehensive Cancer Control Study Committee clearly lays this understanding out while focusing on eight cancers that make up 66.4% of all the cancers in the state.

House File 726

The Iowa Legislature commissioned this report in 2001. That legislation gave the following charge to the Iowa Department of Public Health and the Comprehensive Cancer Control (CCC) Study Committee:

- Assess the new cases and prevalence of cancer in Iowa;
- Evaluate the effectiveness of current cancer control efforts in terms of prevention, early detection, treatment, rehabilitation, and quality of life;
- Encourage the use of screening guidelines and tests;
- Identify additional federal funding sources and opportunities to enhance medical assistance dollars for treatment of breast and cervical cancers;
- Evaluate the availability and effectiveness of current resources; and
- Place special emphases on prostate, bladder, colorectal, skin, lung, oral cavity and pharynx, breast, and cervical cancers.

The Study Committee made use of existing data sources in order to complete its work in the time frame specified by the legislation.

For over 70 years, cancer has been the second leading cause of death in Iowa. And while there has been tremendous growth in the scope and number of programs designed to reduce the burden of cancer among Iowans, coordination between organizations involved in prevention and control efforts remains challenging. By working together to develop a CCC plan, stakeholders from across the state can use Iowa specific data to determine problems; identify cancer service gaps; make decisions on how to deal with the gaps; and maximize existing public and private cancer resources.

*- Comprehensive
Cancer Control
Program,
Iowa Department of
Public Health*

Partnerships

Partnerships must be built to ensure broad buy-in and support for both planning and implementation.

- *Centers for Disease Control and Prevention*

Data and Research

Data and research must be used in priority setting and strategy development in order to ensure that decisions are evidence-based and defensible.

- *Centers for Disease Control and Prevention*

Committee Make-Up

A study committee was formed in the summer of 2001 to carry out the Comprehensive Cancer Control study. Members of the Committee included people from varied backgrounds and experiences, including individuals from public health agencies, hospitals and health care providers, insurance providers, the media, and academia. Cancer site-specific working groups made up of 5 – 8 CCC Committee members were formed and met several times either in person and/or via conference calls to address the major cancer sites identified in House File. These were: breast, uterine cervix, oral cavity and pharynx, lung, prostate, bladder, colorectal, and skin.

Individual members of the Comprehensive Cancer Control committee are listed in Appendix A.

Committee Methods

The Committee conducted its review of the cancer burden in Iowa in the course of three face-to-face meetings and two conference calls of the full committee. In addition, the Committee divided itself into cancer site-specific working groups and these met during face-to-face meetings of the Committee and by conference calls as well.

At the outset, the committee identified its information needs to comply with the requirements of the House File charge. It became apparent that with the mandated deadline for completing the study, the Committee would have to confine its review to existing data sources. That is, the Committee relied on data already collected by others and did not do any primary data collection of its own. However, in the course of identifying information sources, a number of important needs for which no information currently exists were identified and these will be passed along to the statewide cancer planning group for their consideration.

The Committee reviewed data provided from a variety of sources including the Iowa Department of Public Health and the State Health Registry of Iowa. Because Iowa has one of the oldest state cancer registries in the nation, many options were available for the time periods to be used in this study. The Committee determined that for the most part it would look at data from the 6-year period 1994-1999. 1999 represents the latest year of cancer data currently available through the registry. In some cases (e.g., risk factors), data are available for 2000 and, when available, were used in the report. Another exception to the general rule is the reporting of survival data. Since all survival data is reported as relative, five-year survival, the cancers included in this report are those diagnosed from 1990-1995 so that corresponding survival through 1999 can be included.

The Committee reviewed several drafts of the report before ratifying the final report on December 12, 2001.

Previous Work

In 1998, Iowa jump-started its statewide thinking about the cancer burden and how to reduce it by preparing a cancer chapter for the state report, *Healthy Iowans 2010*. This report, published in 2000, was reviewed at the outset of the Committee's deliberations along with the progress made towards the state cancer goals between 1998 and the time of this study. In many ways, this study report has benefited from the excellent *Healthy Iowans 2010* document and is an expansion on it. Indeed, several of the people who worked on that chapter were also participants on the Committee.

Report Content

The report of the Committee is divided into a number of sections that, in sum, provide the information requested in the House File 726 charge:

EXECUTIVE SUMMARY – which provides an overview of the cancer burden in Iowa and the importance of a statewide, comprehensive cancer control plan to reduce it.

BACKGROUND – which provides the basis for the study and how it was conducted.

COMPREHENSIVE CANCER CONTROL GOALS – which provides a review of the primary means available for reducing the impact of cancer on Iowa's citizens.

CANCER DISEASE BURDEN – which provides a description of the overall burden of cancer on Iowa.

THE ENVIRONMENT FOR COMPREHENSIVE CANCER CONTROL IN IOWA – which provides information on major assets the state has for reducing the burden of cancer, the major barriers that will hinder efforts to reduce the cancer burden, and progress to date towards the *Healthy Iowans 2010* goals.

RECOMMENDATIONS – which provide specific guidance for the consideration of a statewide, comprehensive cancer control planning group based on the Committee's review of the cancer data.

CANCER SITE SUMMARIES – which provide a capsule summary of the burden, cancer control opportunities, and site-specific recommendations for each of the eight cancers specified in House File 726: bladder, breast, uterine cervix, colorectal, lung, oral cavity and pharynx, prostate and skin.

APPENDICES – which provide a listing of the Committee members, definitions of terms and acronyms used throughout the report, and maps of cancer patient support groups and hospice services.

Healthy Iowans 2010

Healthy Iowans 2010 has been developed to create a culture of health in our state – a future in which residents are free of preventable diseases and injuries and have access to quality health services. The overarching goals are:

- 1) to increase the quality and years of healthy life, and
- 2) to eliminate health disparities among our people.

*- Healthy Iowans 2010
Iowa's Health Agenda
for the New
Millennium*

Comprehensive Cancer Control Goals

Comprehensive Cancer Control

Comprehensive Cancer Control is an integrated and coordinated approach to reducing cancer incidence, morbidity, and mortality through prevention, early detection, treatment, rehabilitation, and palliation.

- *Centers for Disease Control and Prevention*

Reducing the burden of cancer in Iowa in a comprehensive manner means simultaneously working to achieve four critical goals:

Whenever possible, prevent cancer from even occurring. – The prevention of cancer is possible by changing our exposures to risk factors that are known to cause cancer. Most of the known risk factors can be reduced by choices Iowans make at home and at work. We can primarily change our risks by not using tobacco (smoking or smokeless), maintaining a healthy diet low in fat and high in fruits and vegetables, and by keeping physically active. Too many Iowans still use tobacco, including our young people. The rate of obesity in Iowans is increasing like in the rest of the nation. We can avoid other risk factors by following safety rules at work if we are exposed to chemicals that cause cancer. Some known risk factors for cancer, such as age, are not modifiable.

When cancer does occur, find it in its earliest stages. – Not all cancer is preventable. There is no question that for most cancers, including the ones that most impact Iowans, early detection and treatment saves lives. The later a cancer is found the less likely it will be treated successfully. Moreover, the earlier a cancer is found, the less complex the treatment will be and the less complications will result from it. As will be seen in the cancer site-specific discussions later in this report, there has been an increasing use of many early detection tests by Iowans, but there are still far too many who don't get them or who get them less frequently than they should.

When cancer is found, treat it with the most appropriate therapy that is available. – Research programs have provided incredible advances in our knowledge of how to treat cancer. The challenge is to assure that the most appropriate treatments are available to patients when they need them. Little is known in Iowa about the extent to which the treatments being offered represent the best possible alternatives and about the geographic distribution of available treatment options. What is known is that in Iowa, like most of the rest of the nation, far fewer people are participating in clinical trials than could be. Clinical trials often are among the best options for treatment.

Assure the quality of life of every cancer patient is the best it can be. – Everyone describes 'quality of life' from his or her personal perspective. What one person finds a problem another won't even notice. The American Cancer Society has acknowledged that there are generally four important dimensions to quality of life: physical, psychological, social and spiritual. Within each of these are many issues that affect the lives of individual cancer patients to a greater or lesser degree. For example: physical well-being might include pain management during treatment and in the later stages of cancer and physical rehabilitation following treatment; psychological well-being might include how one feels about the loss of a breast or other body changes as a result of treatment or rejection that some patients suffer from family and friends as a result of having cancer; social well-being might include combating subtle discrimination due to their cancer as a patient tries to re-enter the workforce or obtain insurance coverage and addressing the issues that arise from the financial impact of cancer and cancer treatment on a family; and spiritual well-being

might include the acknowledgement by health care professionals of the spiritual needs of their patients during treatment or the availability of hospice and other end-of-life care for patients who are dying. The possibilities are endless. It is well known that across the nation cancer patients and advocacy organizations are speaking out firmly on the need to improve the quality of life of cancer patients and those close to them. In Iowa, little is known about the quality of life needs that exist and how well they are being met. Support groups exist in many places throughout the state as do hospice services. However, little is known about how many people who want these services or about the availability of other quality of life services.

Cancer Disease Burden

Cancer Projections for 2002

5 out of every 1000 Iowans will be diagnosed with the disease.

This means 14,600 new cases of cancer will be found.

2 out of every 1,000 Iowans will die of cancer.

This means 6,300 cancer deaths will occur.

Source: State Health Registry of Iowa

The Overall Cancer Burden in Iowa

Cancer is the second leading cause of death in Iowa. It accounts for about one out of every four deaths in the state. Based on projections for 2002 made by the State Health Registry of Iowa, cancer will be diagnosed in five out of every 1,000 Iowans, which translates to 14,600 new cases. In addition, cancer will be the cause of death for 2 of every 1,000 Iowans this year. That means that 6,300 Iowans will die from cancer this year, which is 13 times the number of deaths caused by auto accidents in the state. Every county in Iowa is affected by cancer.

Age

- **65% of cancers in Iowa are found in people over the age of 65.**
- **Iowa ranks 4th in the nation in percentage of people over age 65.**
- **Between now and 2025, Iowa's population age 65 and older will grow by 57%.**

Cancer occurs in all age groups, but it occurs most often among older age groups. More than 92% of all new cancers occur in those ages 45 years and older; more than 65% in people over age 65.

This is very important to Iowa because its population is among the oldest in the nation and it is getting older. Currently the state ranks 4th in the nation in the percentage of residents over the age of 65 and 2nd highest in the percentage of residents over the age of 85. Projections are that between now and 2025, the number of Iowans ages 65 and older will jump 57% to 686,000. That means the number of people in Iowa who will be in the prime age groups for cancer is going to dramatically increase between now and then.

Iowa needs to be prepared for this change and to address the cancer prevention, early detection, treatment and quality of life needs of these people.

Race

- **Racial minorities have some cancers more often and die from some cancers more often than do Caucasians.**
- **Most cancer cases in Iowa among racial minorities occur in metropolitan counties.**

Only about 6% of the Iowa population is classified as belonging to a racial minority. As will be seen in the cancer site-specific sections, people belonging to these groups sometimes have cancer more often than the general population and then die more often from it when they do (e.g., black males with prostate

cancer). Recognizing and addressing these disparities is important to the statewide plan for reducing the burden of cancer.

Because the size of these populations in Iowa is relatively small, interpreting the data that are available about their cancer experience is very complicated and does not yield the same level of precision as it does for the population as a whole. For example, from 1994-1999 there were 631 cancer deaths in the state among racial minorities compared to 37,753 in the Caucasian population. Most of those deaths (507) were in the African American population, which at least partially reflects the fact that they are the largest racial minority in the state. It is known that most of the cancer cases among racial minorities occur in the state's larger cities, where most of the state's minority citizens live. In fact, 85% of all these cancers were diagnosed in African Americans residing in just three metropolitan counties, Black Hawk, Polk and Scott.

It is clear that more work needs to be done to better understand the magnitude of the cancer experience among Iowa's racial minorities, the factors that impinge on that experience, and the best methods for intervening to eliminate disparities between minorities and the population as a whole.

Geography

- **There are some differences in the cancer data between rural and urban counties in Iowa, though few are dramatic in size.**

Iowa is a rural state and the relationship of this geography to cancer is important. Like Iowa's racial minorities, some counties have small populations and interpreting the cancer data at the county level can be very complicated if not impossible. The Committee decided to compare the cancer experience among Iowa's 10 counties that are classified by the federal government as 'Standard Metropolitan Areas' with the remaining 89 counties as a means of looking at a rural-urban distinction in cancer experience.

When looking at all new cancer cases from 1994-1999, there is a slight elevation in the rates among MSA counties over rural counties in both the under 65 age group and the 65 and over age group. The results for cancer deaths are similar in the older age groups. For males age 45-64, there is a slight increase in the death rates for MSA counties (245.2/100,000 compared with 224.5). For the age group 65-84 there is a more marked increase in the death rate for MSA counties (1077.8/100,000 compared with 976.0). Iowa's rural counties, however, tend to have a higher proportion of people over the age of 65 than do metropolitan counties. This has important implications for the accessibility and availability of cancer services to meet the needs of these people.

Other metropolitan-rural distinctions found in the cancer data include: lung cancer deaths are higher in metropolitan counties; deaths from all cancers are higher in metropolitan counties among both male and female Caucasians in the 65-84 age group; and deaths are higher in metropolitan counties among both male and female African Americans in all age groups.

Health Disparities

Although the diversity of the American population may be one of the nation's greatest assets, it also represents a range of health improvement challenges – challenges that must be addressed by individuals, the community, and state in which they live, and the nation as a whole.

*- Healthy People 2010,
U.S. Department of
Health and Human
Services*

Quality of Life

Quality of life reflects a general sense of happiness and satisfaction with our lives and environment. Health-related quality of life reflects a personal sense of physical and mental health and the ability to react to factors in the physical and social environments.

- *Healthy People 2010,
U.S. Department of
Health and Human
Services*

Quality of Life

- **Quality of life is increasingly important to those with cancer and their families.**
- **In general, little is known about the quality of life needs of Iowans and how well they are being met.**

As noted earlier, quality of life is a very important issue for cancer patients and their loved ones. It is receiving increasing attention around the country by organizations that represent and/or work with cancer patients and by statewide comprehensive cancer planning groups.

There is little hard data to work with in terms of defining where Iowa stands in meeting the quality of life needs of its citizens with cancer. In part this is because there are so many ways in which individual patients define quality of life. Also, there is little agreement among scientists on how to measure quality of life, and there has been relatively little funding to support surveillance programs that monitor these issues.

In recent years there has been increasing attention given to quality of life issues associated with specific cancers (e.g., see the cancer site-specific section later on oral cavity and pharynx cancers). As more studies are done and as patient demand increases in these areas, the attention that will and should be paid to quality of life can be expected to increase as well.

It should be noted that there are several areas emerging as significant focal points for future work in the area of quality of life. Two prominent ones are end-of-life care and pain management. The appendix contains a map showing the distribution of hospice services around the state, but it remains unclear what issues patients have in terms of awareness of, willingness to use, access to, and utilization of such services in Iowa. Iowa has recently received funding for a state pain management initiative and this, along with related services, will be examined more closely as the statewide comprehensive planning group develops an action plan for reducing the burden of cancer in Iowa.

The Environment For Comprehensive Cancer Control In Iowa

The cancer burden in Iowa is high. There is a need for a comprehensive approach to reducing that burden. The Committee reviewed the current environment for comprehensive cancer control in Iowa focusing on the major assets that will aid in a comprehensive effort, the primary challenges in the state that may inhibit a comprehensive effort, and a review of the progress to date towards the *Healthy Iowans* 2010 goals. The results of each of these reviews are summarized below.

Major Assets

1. Iowa has one of the oldest cancer registries in the nation with cancer data going back to 1973.
2. Iowa has one of the nation's highest rates of literacy.
3. Iowa has a National Cancer Institute-designated Comprehensive Cancer Center and there are members of the Association of Community Cancer Centers found around the state.
4. Iowa has a history of strong, cooperative, and successful public-private partnerships to address major issues.
5. Iowa has a strong voluntary presence that is focused on cancer issues, including the American Cancer Society and the Susan G. Komen Foundation.
6. Iowa has the Iowa Communications Network (ICN) to assist in providing professional education throughout the state.
7. The Iowa legislature recently passed a new Medicaid Breast and Cervical Cancer treatment option benefit.
8. Iowa has strong legislative interest and leadership on cancer as witnessed by the commissioning of this study.
9. Iowa has a well-established health care infrastructure that reaches throughout the state.
10. Iowa has a university medical institution that is well known and respected.
11. Iowa has in place the *Healthy Iowans 2010* plan that includes an excellent chapter in cancer.
12. Iowa's citizens are very receptive to responding to a challenge when things are clearly explained to them, as witnessed by their willingness to participate in research programs.
13. Iowa has secured federal funding to support the development of a broad-based, statewide comprehensive cancer plan.
14. The US Centers for Disease Control and Prevention has assigned a full-time staff person to Iowa to assist in its comprehensive cancer control efforts.

Challenges

1. The current economy of the state is not strong. It is not an economy in which new programs are readily launched.
2. The population of Iowa is aging and that will increase the burden of cancer in Iowa if everything stays the same.
3. The distribution of some health professional groups (e.g., nurses) around the state may not be optimal for achieving all the goals of a comprehensive cancer control program.
4. Cancer early detection tests are underutilized in Iowa.
5. The health care infrastructure does not communicate and coordinate its efforts as well as needed.
6. The economic climate for the health care industry may inhibit optimal cancer control. For example, time limits of patient-doctor interaction work against strong research findings that physician counseling for preventive behaviors is highly effective.
7. There are a large number of health and social issues competing for the attention of the public and policy makers.
8. While overall literacy rates are high in Iowa, there are subgroups of the population with low literacy skills.
9. Health disparities exist among population groups in Iowa in cancer statistics and cancer-related factors (e.g., in insurance coverage).
10. Iowans continue to use tobacco and Iowans are getting more obese.
11. Only about 3% of Iowans with cancer participate in cancer clinical trials.

Progress Toward the "Healthy Iowans 2010" Cancer Objectives

Healthy People 2010 was written in the late 1990s as the disease prevention/health promotion agenda for the nation during the coming decade. As a companion document specific to Iowa, *Healthy Iowans 2010* was developed around four themes:

1. Eliminating health disparities
2. Empowering the Iowa population in its health care
3. Collaborating in disease prevention/health promotion efforts
4. Creating dynamic change as set out in the objectives of the document

Cancer is one of 23 chapters in *Healthy Iowans 2010*. This chapter specifies goals for improvement in number of new cases (incidence) and deaths (mortality) for cancer in general and for specific types of cancer. The table below shows progress towards the cancer specific cancer goals set forth in *Healthy Iowans 2010*.

Summary of Progress

Cancer Site	Gender	Trend in Iowa Rates*		Trend Moving in Right Direction?
		1994-96	1997-99	
All sites mortality	M & F	198.2	191.9	Yes
All sites incidence	M & F	463.2	475.5	No
Lung mortality	M & F	54.6	52.1	Yes
Colorectal mortality	M & F	23.5	22.9	Yes
Breast mortality	F	29.2	26.9	Yes
Prostate mortality	M	36.2	32.5	Yes
Skin melanoma mort.	M & F	2.6	2.7	No
Oropharynx mortality	M & F	2.6	2.3	Yes
Cervix mortality	F	2.6	2.3	Yes

* Expressed per 100,000 and age-adjusted to Year 2000 U.S. standard

Source: State Health Registry of Iowa

As would be expected, none of the *Healthy Iowans 2010* goals has yet been achieved. However, for seven of the nine cancer goals the trends are moving in the right direction towards achieving the goals. For the other two, skin melanoma and the number of new cases for males and females, the trends are moving in the wrong direction.

Healthy Iowans 2010 Cancer Goals Progress

As would be expected, none of the *Healthy Iowans 2010* goals has yet been achieved. However, for seven of the nine cancer goals the trends are moving in the right direction towards achieving the goals.

COMPREHENSIVE CANCER CONTROL

Comprehensive Cancer Control emphasizes integration of many disciplines including administration, basic and applied research, evaluation, health education, program development, public policy, surveillance, clinical services and health communications.

*- Centers for Disease
Control and Prevention*

Recommendations

The Committee strongly supports the cancer recommendations and goals found in *Healthy Iowans 2010*. In addition, the Committee makes the following general recommendations for the consideration of the statewide, comprehensive planning group. It is important that these recommendations be further refined into specific actions with time frames for accomplishment and clearly articulated responsibilities for carrying them out. In the cancer site-specific sections that follow there are a number of recommendations applicable only to that site.

Education

- Provide statewide public education programs to promote early detection and cancer prevention.
- Provide statewide professional education on early detection, regular cancer screening for patients, treatment options, and financial coverage of cancer screening, diagnosis and treatment.
- Educate and encourage primary care providers in Iowa to systematically incorporate cancer screening and/or health maintenance guidelines into their office procedures for all adult patients.

Surveillance

- Include modules in the Behavioral Risk Factor Surveillance System (BRFSS) to monitor all the key risk behaviors and risk-reduction behaviors associated with cancer. There is a need to identify all the surveillance needs for each cancer site of interest.
- Collect data on exposures and risk factors for cancer among Iowa youth.

Prevention

- Assure that Iowa has in place all the elements of a comprehensive tobacco prevention and cessation program as defined by the Centers for Disease Control and Prevention.
- Provide culturally specific public health education on cancer risk factors.
- Provide culturally specific training on cancer prevention skills.

Early Detection

- Provide culturally sensitive and appropriate screening services (e.g., to African Americans, Bosnians, Hispanics, Asians, etc.).
- Seek additional funding for cancer screening, diagnostic services, and treatment for the underinsured or uninsured.
- Encourage primary care providers to use reminder systems to help ensure regular cancer screening.

- Promote more efficient and effective screening programs using current methods of early detection.
- Educate the Medicare population on guidelines in cancer screening and regarding their increased risks for cancer as they age.
- Promote ACS guidelines for cancer screening.

Treatment

- Provide public/professional education on the availability and eligibility for Medicaid coverage to treat persons diagnosed with cancer.
- Provide public/professional education on treatment options and clinical trials.
- Increase the number of cancer patients who are treated according to approved cancer treatment protocols.

Legislation

- Assure protection against discrimination on the basis of having cancer.
- Endorse a strong, statewide comprehensive cancer control planning effort.
- Support with appropriate legislation the recommendations that come from the statewide, comprehensive cancer control planning effort.

Cancer Site Specific Data Reviews

CANCER REVIEWS

- **Lung and Bronchus**
- **Colon and Rectum**
- **Female breast**
- **Prostate**
- **Bladder**
- **Skin melanoma**
- **Oral Cavity and Pharynx**
- **Cervical**

In the following sections the Committee summarizes the key points regarding each of the eight cancers identified in House File 726. For each site there is an overview of that cancer in Iowa, specific discussions of prevention, early detection and treatment, listings of any site-specific quality of life issues or recommendations (not all sites have these) and a quick summary of the site and how well Iowa is doing with it. The site-specific cancers are presented in descending order of their contribution to the cancer deaths in Iowa from 1994-1999. The cancers that are reviewed include:

- Lung and Bronchus
- Colon and Rectum
- Female breast
- Prostate
- Bladder
- Skin melanoma
- Oral Cavity and Pharynx
- Cervical

Lung Cancer

Overview

10,346 Iowans died of lung cancer from 1994-1999.

Lung cancer is the leading cancer killer of Iowa men and women. Although the epidemic death rates peaked in men during the mid-1990s and have since begun a steady decline, death rates in women are currently steady and may begin to rise due to increasing tobacco use in recent years. Lung cancer occurs in all ages, but as a result of the accumulation of lifestyle exposures, occurs most frequently in older age groups.

New cases and death rates are higher among African American men and women, which is of public health importance, especially in three metropolitan counties (Black Hawk, Polk and Scott) of Iowa. Death rates for men and women in these counties are significantly higher than for those in non-metropolitan counties.

Only 16% of lung cancer cases in Iowa are diagnosed at the earliest (local) stage of the disease. Adding to these bleak statistics is the very low survival rate for those diagnosed even at this early stage. Lung cancer is a very aggressive disease.

Lung cancer stage at diagnosis and five-year relative survival rates in Iowa, 1990 – 1995.			
Stage at diagnosis	Number*	Percent**	5-year Relative Survival Rate***
Localized (confined to lung)	1436	16	45
Regional (spread to lymph nodes in the region)	2378	27	19
Distant (spread to other organs)	5128	57	2

* Number of cases of lung cancer diagnosed in Iowa from 1990 – 1995 by stage at diagnosis.

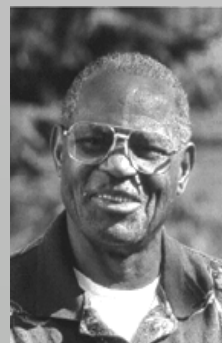
** Percentage of cases diagnosed at each stage.

*** See appendix for definition

Source: State Health Registry of Iowa

Prevention

One hundred years ago, before tobacco use was common, lung cancer was not even considered a primary site of cancer. It was a site to where cancer metastasized. From the epidemic of lung cancer that began 70 years ago, following widespread acceptance and use of cigarettes, and which continues today, we now know that lung cancer is a very preventable disease. Nearly 90% of lung cancers are caused by tobacco use and exposure to secondhand tobacco smoke. While rates of tobacco use among Iowans 18 years and older has been steady or declining over time (current rate of 23.5%), tobacco use in youth has dramatically increased to a current high rate of 35%. Conservative estimates indicate approximately 1 in 4 children under the age of 13 years have smoked,



Don, Polk County

I was lucky. A spot was found on my lung during an employer annual wellness check. I am fortunate to be alive. My advice to everyone is to quit smoking and get regular check-ups.

SCREENING STATEMENT

There are no effective population-based screening methods for detecting lung cancer at early stages.

and nearly 70% of Iowa high school students have tried cigarettes. In addition, the rate of tobacco use among Iowa women ages 18 – 44 years (one target group of the tobacco industry's multibillion dollar advertising campaign) is currently almost 29%.

Tobacco use among recent immigrants to Iowa (Vietnamese, Hmong, Laotians, Hispanics, Bosnians) is of particular concern. For example, the rate of tobacco use among Bosnian immigrants in Black Hawk County, Iowa, is approximately 50%. Although the immigrant population is younger than the general Iowa population, this smoking rate (and the accompanying high rate of secondary smoke exposure among family members) portends poorly for the future health of the Bosnian population in Iowa.

The Centers for Disease Control has determined that the most effective approach to reducing tobacco use is through a comprehensive tobacco control program that includes: statewide programs; community programs; counter marketing; school programs; cessation programs; enforcement of current laws; monitoring and evaluation; and administration.

One proven best practice for preventing tobacco use is to increase cost. One avenue of increasing the price of tobacco is through taxation. The current tax rate on cigarettes in Iowa is \$0.36 per pack. The American Cancer Society supports increasing this tax.

For the 5 – 10% of lung cancers that are not caused by tobacco, a significant (but less well known) risk factor for lung cancer is exposure to radon. A colorless, odorless gas, radon is a naturally occurring element in the soil, concentrated in specific geographic areas. Radon gas can seep into basements through foundations, and is more of a problem in newer, energy efficient homes where basement sealing prevents air circulation from eliminating significant radon concentrations. Unfortunately, Iowa is one of the geographic areas in the U.S. where a high proportion of homes exceeded the Environmental Protection Agency level for radon.

Early Detection

There are no effective methods for population-based screening and early detection of lung cancer. Reliance on tobacco prevention and cessation methods is the only course in reducing the burden of lung cancer.

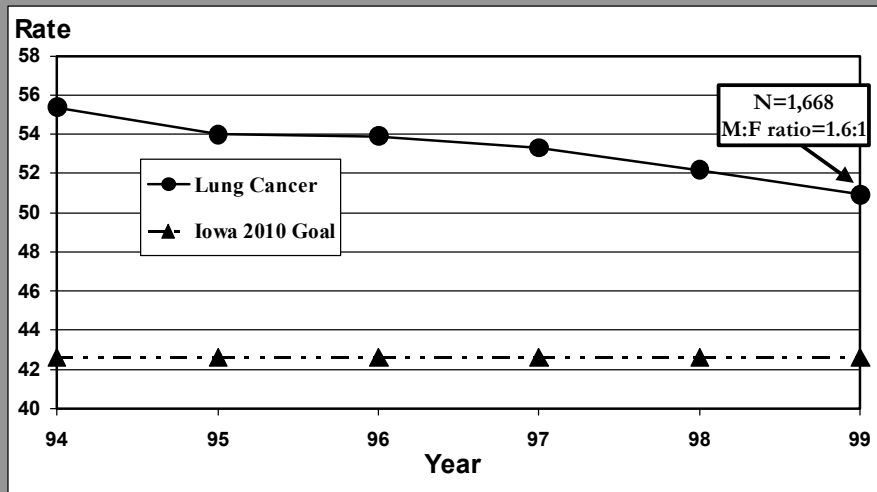
Treatment

Surgery, chemotherapy, and radiation therapy are the primary forms of treatment for lung cancer. However, because the prognosis of lung cancer is very poor when diagnosed at a late stage, approximately 25% of lung cancer patients receive no treatment.

GOOD NEWS FOR IOWA

- Lung cancer death rates in men are decreasing.
- Lung cancer death rates can be lowered by reducing the use of tobacco products.

Lung Cancer Mortality Rates, 1994-99



Source: State Health Registry of Iowa

BAD NEWS FOR IOWA

- Lung cancer is Iowa's biggest cancer killer.
- Lung cancer death rates in women are stable but may rise due to increased tobacco use in recent years.
- Most lung cancer cases are diagnosed in the late stages.
- There are no effective population-based screening methods for detecting lung cancer at early stages.

Colorectal Cancer

Overview

4,682 Iowans died of colorectal cancers between 1994-1999.

In Iowa, cancer of the colon and rectum is the second most common cause of cancer deaths in men and women combined. Colorectal cancer can be diagnosed at any age, however the risk increases exponentially with increasing age.

Over 60% of Iowans with colorectal cancer were diagnosed at regional or distant stages, which has a significant negative effect on five-year relative survival rates.



Kate, Linn County

Three years ago colonoscopy, chemotherapy, and excellent medical care saved my life. The golfball-sized, symptomless tumor was located at the far end of the colon near the appendix and only full colonoscopy ultimately revealed its presence.

Colorectal cancer stage at diagnosis and five-year relative survival rates in Iowa, 1990 – 1995.			
Stage at diagnosis	Number*	Percent**	5-year Relative Survival Rate***
Localized (confined to colon/rectum)	3478	37.5	93
Regional (spread to lymph nodes in the region)	3839	41.3	68
Distant (spread to other organs)	1970	21.2	8

* Number of cases of colorectal cancer diagnosed in Iowa from 1990 – 1995 by stage at diagnosis.

** Percentage of cases diagnosed at each stage.

*** See appendix for definition.

Source: State Health Registry of Iowa

Prevention

Risk factors for colorectal cancer include non-modifiable factors such as age and family history, as well as modifiable lifestyle factors such as diet, exercise, obesity, and use of tobacco and alcohol. Iowans are at increased risk for colorectal cancer, with over 50% of the population described as overweight, less than 50% who exercise 3 times per week, and only 18% of Iowans eating the recommended 5+ servings of fruits and vegetables daily. In the future, aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs), which have been shown to reduce risk of colorectal cancer, may be recommended and used effectively as a prevention strategy.

Early Detection

Colorectal cancer screening has been proven to detect lesions at precancerous or early stages, which lowers colorectal cancer deaths significantly. In Iowa, 1999 Behavioral Risk Factor Surveillance System (BRFSS) data show that, for adults aged 50 years and older, 24% had a fecal occult blood test in the past year (ranking 14th in the US) and 31.2% had a sigmoidoscopy or colonoscopy in the past 5 years (ranking 32nd in the US). The proportion of Iowa men and women diagnosed at distant stages has decreased slightly since 1994. New tests for

colorectal cancer early detection are being researched. Until then, there is a need to continue to seek better utilization of existing tests.

Treatment

Surgery alone is the most common form of colorectal cancer treatment. Use of radiation therapy and chemotherapy are highly dependent on patient's age, stage of cancer at the time of diagnosis, and the presence of other significant medical conditions. When colorectal cancer has metastasized to distant locations in the body, treatment does not improve survival, and has a significant negative impact on the patient's quality of life. Therefore, "no treatment" is common in these cases. Colostomy was commonly used to treat colorectal cancer in the past, but is much less commonly used today.

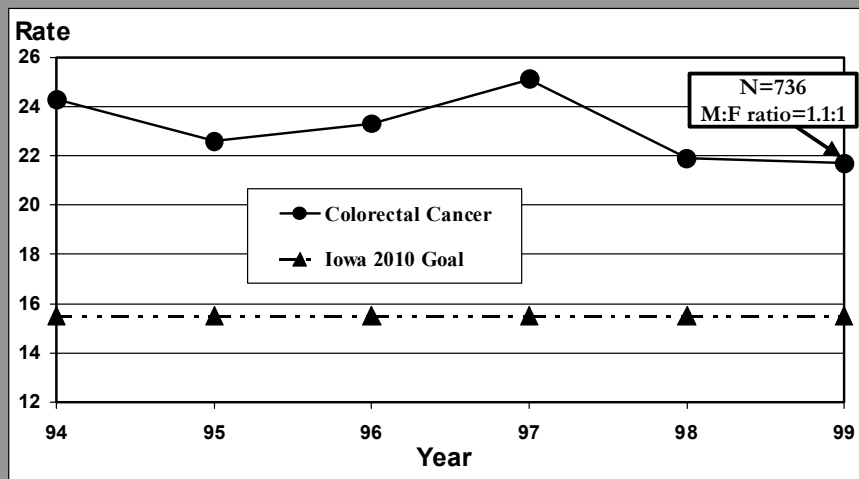
Additional Quality of Life Issues

Colostomy

GOOD NEWS FOR IOWA

- Early detection and removal of polyps can prevent colorectal cancer from developing.

Colorectal Cancer Mortality Rates, 1994-99



Source: State Health Registry of Iowa

BAD NEWS FOR IOWA

- Most cases of colorectal cancer are diagnosed at late stages.
- Use of early detection tests for colorectal cancers is low in Iowa.

American Cancer Society Screening Recommendations for Colorectal Cancer

Beginning at age 50, men and women at average risk should follow one of the examination schedules below:

- 1) Fecal Occult Blood Test (FOBT) every year, or
- 2) Flexible sigmoidoscopy every 5 years, or
- 3) FOBT every year and flexible sigmoidoscopy every 5 years, (of these three options, the American Cancer Society prefers option 3)
- 4) double-contrast barium enema every 5 years,
- 5) colonoscopy every 10 years.

People with a personal history of polyps, colorectal cancer, or inflammatory bowel disease, or a family history of colon cancer or polyps are at higher risk for colon cancer and may need to start being tested before age 50, and have tests done more often.

Female Breast Cancer

Overview

3,046 Iowans died of female breast cancer from 1994-1999.



Linda, Johnson County

It is incredibly important for women to get mammograms done on a periodic basis. Mammography was a very important part of my diagnosis and is a very important part of every woman's diagnosis, in terms of initially finding the cancer.

Breast cancer is the most commonly diagnosed cancer in Iowa women, and is the second most common cause of cancer deaths. Although women of all ages are at risk of breast cancer, women over the age of 50 years are at greatest risk. Over 75% of breast cancers are found in women age 50 and older. In fact, in Iowa, two of three women who die of breast cancer in Iowa are 65 years of age or older. African American women are less likely to be diagnosed with breast cancer at an early stage, and are more likely than Caucasian women to die from the disease. Breast cancer also affects men, but to a far less extent (20 cancer deaths among men compared with 3,046 among women from 1994-1999). This report focuses therefore on female breast cancer.

Much can be done to reduce the burden of breast cancer through early detection using mammography screening and clinical breast examinations. Following increased use of screening mammography in the 1980s, the new cases rate of breast cancer in Iowa women increased significantly. The increase in new cases in Iowa was followed by a decrease in deaths among women with breast cancer in the mid-1990s. This may be related to the increase in the detection of early stage breast cancers through screening mammography.

The five-year relative survival rate for localized breast cancer has increased from 72% in the 1940s to 98% today. If the cancer is diagnosed at regional or distant stages, however, survival drops significantly. African American women are nearly twice as likely as Caucasian women to be diagnosed at distant stages.

Breast cancer stage at diagnosis and five-year relative survival rates in Iowa, 1990 – 1995.			
Stage at diagnosis	Number*	Percent**	5-year Relative Survival Rate***
Localized (confined to breast)	6638	65	98
Regional (spread to lymph nodes in the region)	2988	29	80
Distant (spread to other organs)	634	6	22

* Number of cases of breast cancer diagnosed in Iowa from 1990 – 1995 by stage at diagnosis.

** Percentage of cases diagnosed at each stage.

*** See appendix for definition.

Source: State Health Registry of Iowa

Prevention

Currently there is no proven way to prevent breast cancer, as the risk factors for developing the disease are non-modifiable or can't be changed. The primary risk factors are being a woman and growing older, as the risk for developing breast cancer becomes more likely as a woman ages. Other risk factors that cannot be changed are a family history of breast cancer or ovarian cancer in first degree relatives (mother, sister, daughter) diagnosed prior to menopause and also genetic mutations.

Ongoing clinical trials are being conducted to determine the usefulness of drugs such as Tamoxifen, Raloxofine, and other selective estrogen receptor moderators (SERMs) in reducing the risk of breast cancer in women at high risk. While there are no certain methods of breast cancer prevention, women may lower their risk by practicing general good health behaviors such as limiting alcohol consumption, eating foods lower in dietary fat, not smoking, increasing physical activity, and maintaining a healthy weight.

Early Detection

Much can be done to reduce the burden of breast cancer through early detection. Routine screening mammography, along with clinical breast examinations and breast self-examinations, provides the best method of detecting breast cancer at its early, most treatable stages. According to the BRFSS, the percent of Iowa women over 50 who reported having a mammogram within the previous year has increased from 61.7% in 1994 to 69.2% in 1999. In 1999, this percentage placed Iowa's ranking of recent mammograms as 30th in the nation. The percent of Iowa women who reported having a clinical breast examination in the past year increased from 70% in 1994 to 72.7% in 1999. In contrast, Medicare claims data indicate that only 37.5% of the female Medicare beneficiaries in the state of Iowa had a mammogram in 1999.

Across Iowa, 155 certified mammography facilities provide breast cancer screening services. The geographic distribution of those services, as well as the utilization of mobile mammography units in areas of lower population density, appears to provide availability of access to screening for most Iowa women. However, true accessibility to mammography services may be limited due to limited hours of clinic operation, availability of trained mammography technicians, rural residence and longer distances to facilities, and other unknown factors.

Iowa receives federal funding to provide screening services through the Iowa Breast and Cervical Cancer Early Detection Program (BCCEDP). The program provides free mammography and Pap testing to Iowa women between the ages of 50 – 64 and with incomes of up to 250% of the Federal Poverty Guidelines who are underinsured or uninsured. Although the BCCEDP has been screening Iowa women since 1995, there may be a lack of knowledge about the program among the public, health care professionals, and social service organizations across the state. The program is serving approximately 5,000 women annually which is estimated to be nearly 45% of the eligible women in Iowa. While the BCCEDP has received annual increases in federal funding over the past three years, the level of funding simply does not cover screening for the total number of women who are eligible.

American Cancer Society Screening Guidelines for Breast Cancer

Women aged 40 years and older should have an annual mammogram, an annual clinical breast examination (CBE) by a health care professional, and should perform monthly breast self examinations (BSE). The CBE should be conducted close to and preferably before the scheduled mammogram.

Women aged 20 – 39 years should have a clinical breast examination by a health care professional every three years and should perform monthly breast self examinations.

"Besides being female, age is a woman's most important risk factor for developing breast cancer." "Early detection of breast cancer greatly improves the treatment options, the chances for successful treatment, and survival. Mammography is the single most effective method of early detection." (from: ***ACS Breast Cancer Facts and Figures 1999-2001***)

Treatment

Women diagnosed with early stage breast cancer have the option of either lumpectomy (removal of the breast tumor along with a small margin of surrounding disease-free tissue) or mastectomy (removal of the entire breast along with varying amounts of underlying and supporting tissue). Results of clinical trials in the 1980s indicate the two treatment options provide equivalent survival and equivalent recurrence rates of breast cancer. Based on these results, the National Institutes of Health convened a breast cancer treatment consensus conference in 1991 that concluded with recommendations that nearly all women diagnosed with early stage breast cancer are candidates for the less disfiguring lumpectomy surgery. However, analysis of the National Surveillance, Epidemiology, and End Results (SEER) database reveals that Iowa has the lowest rates of lumpectomy in women diagnosed with early stage breast cancer. Although the rate of lumpectomy is increasing in Iowa over time, the state remains at the lowest level in the SEER program, with fewer than 1/2 of early stage breast cancers being treated with lumpectomy in 1998.

In May 2001, legislation was enacted establishing an optional Medicaid coverage group for diagnosis and treatment of precancerous and cancerous breast and cervical lesions. The new optional Medicaid coverage group, the Breast and Cervical Cancer Treatment group, was implemented on July 1, 2001. A limitation of the optional coverage group under current legislation pertains to eligibility for service. In Iowa, eligibility is limited to women whose cancers are detected through the Breast and Cervical Cancer Early Detection Program (BCCEDP) or whose breast cancer screening service is paid for by the Susan G. Komen Foundation. All other uninsured or underinsured women are ineligible for this coverage, as are non-residents of the state. During the first quarter of the optional group coverage, 28 women received treatment coverage. There may be a lack of knowledge among health care professionals, social service organizations, and the public pertaining to the availability of this new optional Medicaid coverage for treatment option.

Additional Quality of Life Issues

- Choosing between breast prostheses or breast reconstruction
- Lymphedema
- Sexuality issues

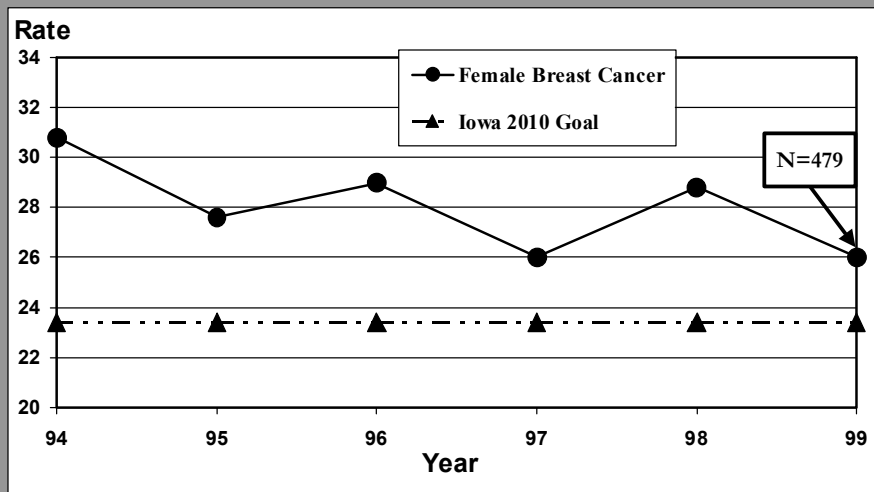
Additional Recommendations

- Provide breast cancer education programs in the Iowa counties with the largest populations of African American women.

GOOD NEWS FOR IOWA

- Although new cases of breast cancer have increased, these cases are more often diagnosed at the early, most treatable stages.
- Early detection through routine cancer screening increases the likelihood of diagnosing breast cancer at an early stage when it is most easily treated and the 5-year survival rate is 98%.
- Deaths from breast cancer have decreased in Iowa over the past five years.

Female Breast Cancer Mortality Rates, 1994-99



Source: State Health Registry of Iowa

BAD NEWS FOR IOWA

- African American women are less likely to be diagnosed with breast cancer at an early stage and they are more likely to die from the disease.
- For underinsured and uninsured women, the inability to pay for service remains a barrier to receiving cancer treatment.

Prostate Cancer

Overview

2,632 Iowans died of prostate cancer from 1994-1999.

In Iowa, prostate cancer is the most commonly diagnosed cancer in men, and the second leading cause of cancer deaths. Prostate cancer occurs in all adult male age groups, but the greatest burden of disease is in men over age 65. This burden is of greater importance in Iowa, where census data indicate we have the 4th largest state population proportion of individuals aged 65 years and older, and the 2nd largest population proportion of those aged 85 years and older.

In addition, significant disparities occur in prostate cancer burden by race groups. African American men are nearly twice as likely to be diagnosed and more than twice as likely to die from prostate cancer compared to Caucasian men. This disparity in prostate cancer survival is due in part to African American men in Iowa being 50% more likely to be diagnosed at a distant stage compared to Caucasian men, resulting in a 5-year relative survival rate of 82% compared with 94% in Caucasian men. In Iowa, this is of importance in the three counties (Black Hawk, Polk and Scott) where the state's population of African Americans resides in greatest proportions.



Ron, Polk County

Thank goodness for the PSA test. That's how they caught my cancer. When I first found out, I didn't want to tell anybody. Now I want people to listen to me when I tell them to get checked. I am so very glad to be alive. I am so happy to be with my family.

Prostate cancer stage at diagnosis and five-year relative survival rates in Iowa, 1990 – 1995.			
Stage at diagnosis	Number*	Percent**	5-year Relative Survival Rate***
Localized (confined to prostate)	5683	61	100
Regional (spread to lymph nodes in the region)	2395	26	100
Distant (spread to other organs)	1195	13	34

* Number of cases of prostate cancer diagnosed in Iowa from 1990 – 1995 by stage at diagnosis.

** Percentage of cases diagnosed at each stage.

*** See appendix for definition.

Source: State Health Registry of Iowa

Prevention

Since known risk factors for prostate cancer are non-modifiable characteristics such as age, race, and family history, no primary prevention recommendations specific to prostate cancer are warranted. While there are no certain methods of preventing prostate cancer, men may lower their risk by adapting universal cancer prevention lifestyle recommendations, such as decreasing obesity, participating in regular physical activity, not using tobacco products, drinking alcohol in moderation, and increasing consumption of fruits, vegetables and whole grains.

Early Detection

Measuring the amount of Prostate Specific Antigen (PSA) in a blood sample is used to screen for prostate cancer, and can be used to detect cases at a very early stage. During the 1990s, the increase in cases detected at early, more treatable stages, coupled with a decline in prostate cancer death rates, would suggest that PSA testing was, at least in part, responsible for the decline in death rates. In Iowa, the Behavioral Risk Factor Surveillance System (BRFSS) included a survey question on PSA screening utilization during 1998 only. Therefore, no conclusions regarding trends of PSA utilization in Iowa are available. Results of the 1998 survey indicated 43.4% of men ages 50 – 64 years had a routine PSA test within the past 2 years, and 60.7% of men age 65 years and older had the test.

Treatment

The most common forms of treatment for prostate cancer are surgery, radiation, endocrine therapy, and “watchful waiting.” Treatment choice is highly dependent on a patient’s age, stage of cancer at the time of diagnosis, and the presence of other significant medical conditions. Currently, there is no consensus on the most effective form of treatment for prostate cancer, and accordingly, patients should be fully informed of their treatment options.

Additional Quality of Life Issues

- Incontinence
- Sexual dysfunction

Additional Recommendations

- Education programs in the counties with the largest African American populations.

American Cancer Society Screening Guidelines for Prostate Cancer

Beginning at age 50, the prostate-specific antigen (PSA) test and the digital rectal exam should be offered annually to men who have a life expectancy of at least 10 years.

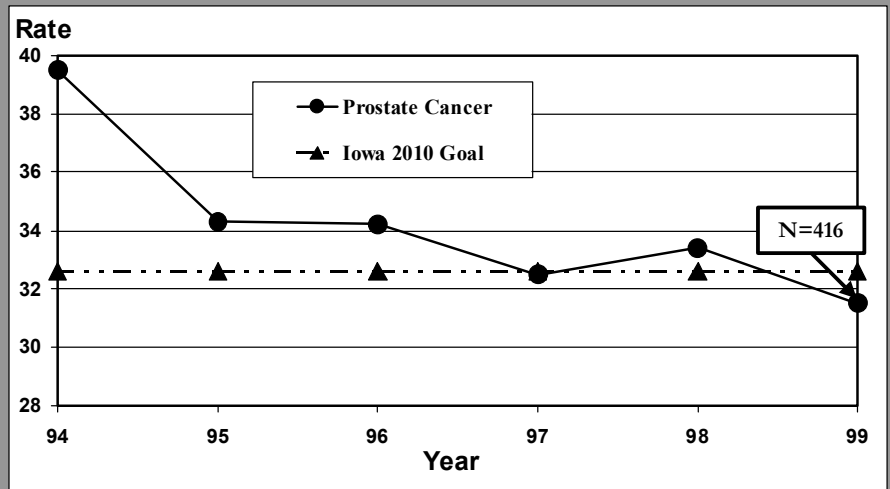
Men at high risk (African American men and men who have a first degree relative who was diagnosed with prostate cancer at a young age) should begin testing at age 45.

Men should be given information about the benefits and limitations of tests so they can make an informed decision.

GOOD NEWS FOR IOWA

- Relative survival from prostate cancer is 100% when detected at early stages.
- Screening for prostate cancer is widely available and increasingly utilized.
- Death from prostate cancer have declined in the past 5 years.

Prostate Cancer Mortality Rates, 1994-99



Source: State Health Registry of Iowa

BAD NEWS FOR IOWA

- Death rates for African American males are twice as high as those of Caucasian males.
- Prostate cancer is the most commonly diagnosed cancer in Iowa men and the second leading cause of cancer deaths.

Bladder Cancer

Overview

824 Iowans died of bladder cancer from 1994-1999.

Bladder cancer is the fourth most common newly diagnosed cancer in men and ninth most common in women. Caucasians get bladder cancer twice as often as African Americans or Hispanics. Survival from bladder cancer is very high when it is diagnosed in the localized stage, which occurs in the majority of cases, but survival drops off significantly when bladder cancer has begun to spread. The five-year relative survival rate is lower for blacks than for whites.

Bladder cancer stage at diagnosis and Five-year relative survival rates in Iowa, 1990 – 1995.			
Stage at diagnosis	Number*	Percent**	5-year Relative Survival Rate***
Localized (in wall of bladder)	2409	77	94
Regional (spread to lymph nodes in the region)	623	20	47
Distant (spread to other organs)	103	3	10

* Number of cases of bladder cancer diagnosed in Iowa from 1990 – 1995 by stage at diagnosis.

** Percentage of cases diagnosed at each stage.

*** See appendix for definition.

Source: State Health Registry of Iowa

Prevention

Bladder cancer is a preventable disease in many cases. Tobacco use is the major risk factor for bladder cancer. Tobacco use in Iowa is discussed in the site-specific section on "Lung Cancer."

Early Detection

There are no effective methods for population-based screening of bladder cancer. Reliance on tobacco prevention and cessation methods is the best course for reducing the burden of bladder cancer. There are some screening programs undertaken by industries that know their workers are exposed to chemicals that can cause bladder cancer.

Treatment

Treatment has improved in recent years resulting in reduced death rates. Surgery is the predominant form of bladder cancer treatment.



Harold, Wayne County

I have had my bladder and prostate removed. Both had cancer in the early stages. I had 5 biopsies for prostate cancer, and none was ever found. Thanks, to a vigilant family doctor who insisted I have a cystoscopy, we found a small cancer in the early stages. It was removed. I had two more cystoscopies and cancer was found each time. We decided the safest thing to do was remove the bladder and prostate, at which time the prostate cancer was found. The cancers were found early enough, that I haven't needed any further treatment. I am glad I am one of the lucky ones. We will always remain vigilant.

SCREENING RECOMMENDATIONS

There is no effective method for population-based screening for bladder cancer among asymptomatic persons.

Additional Quality of Life Issues

- Incontinence
- Sexual dysfunction

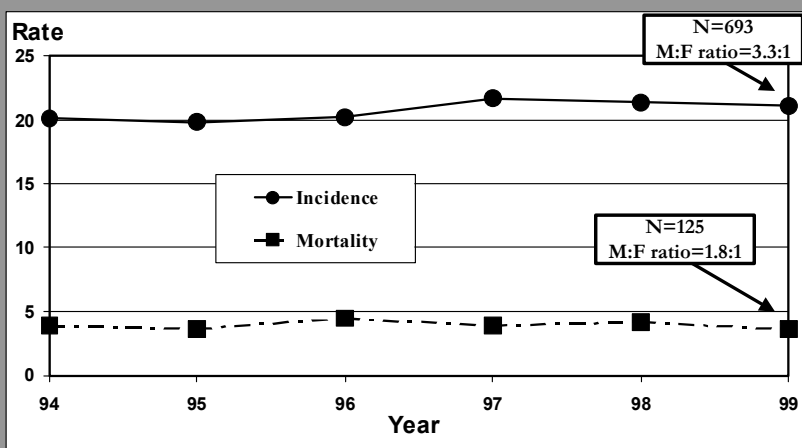
GOOD NEWS FOR IOWA

- When bladder cancer is diagnosed early, survival is excellent.
- Although new cases of bladder cancer are increasing over time, deaths are decreasing.

BAD NEWS FOR IOWA

- There is no effective method for population-based screening for bladder cancer among asymptomatic persons.

In Situ and Malignant Bladder Cancer Rates, Males and Females Combined, Iowa



Source: State Health Registry of Iowa

Skin Melanoma Cancer

Overview

483 Iowans died of melanoma skin cancer from 1994-1999.

There are three main types of skin cancer: squamous cell carcinoma, basal cell carcinoma, and melanoma. The overwhelming majority of skin cancer cases are squamous and basal cell carcinomas which are very curable and usually do not result in death. Therefore, this section of the report discusses skin melanoma only. Melanoma is also the only type of skin cancer for which data are collected in Iowa.

New cases rates for skin melanoma are relatively low compared to other types of cancer in Iowa, but new cases rates have increased over the last five years. Although the rate of new cases is low, the death rate for skin melanoma is relatively high, and therefore skin melanoma emerges as a relatively more aggressive form of cancer with a significant health burden on the state.

Death rates for skin melanoma are approximately twice as high in Caucasian males than in Caucasian females in Iowa. In addition, the population of Iowa includes a very high proportion of residents of European descent, who are at greatest risk of developing skin cancer.

Skin Melanoma stage at diagnosis and five-year relative survival rates in Iowa, 1990 – 1995.			
Stage at diagnosis	Number*	Percent**	5-year Relative Survival Rate***
Localized (confined to skin)	1503	83	95
Regional (spread to lymph nodes in the region)	201	11	57
Distant (spread to other organs)	100	6	14

* Number of cases of skin melanoma diagnosed in Iowa from 1990 – 1995 by stage at diagnosis.

** Percentage of cases diagnosed at each stage.

*** See appendix for definition.

Source: State Health Registry of Iowa

Prevention

Non-modifiable risk factors for skin melanoma and other skin cancers include family history of skin cancers, fair skin, and personal history of other skin cancers. One significant modifiable risk factor for skin cancer includes blistering sunburns (especially before the age of 20 years). Data from the 1999 BRFSS survey indicated the proportion of Iowans who have had a sunburn in the previous 12 months was one of the highest levels recorded (see table). This will have a significant impact on the new cases of skin melanoma in Iowa, creating a new cohort of individuals with increased risk for the next 20 years.



Marshon, Polk County

My father would brag about refusing to go to a doctor. This proved to be his undoing. A routine doctor's exam would likely have revealed his malignant tumor. I was only 12 when my dad passed away at age 43. I have missed him over the years.

American Cancer Society Screening Recommendations for Skin Melanoma and Other Skin Cancers

Skin cancer can be detected in its early stage by using the **ABCD** guidelines:

Asymmetry: Most early lesions grow at an uneven rate resulting in an asymmetric pattern. Non-cancerous moles are usually circular (symmetrical).

Border Irregularity: The uneven growth rate also results in an irregular border around the lesion.

Color: Irregular growth rates also cause more than one color within the same skin growth, including shades of black, light/dark brown, purple, red, and pink.

Diameter: Lesions with a diameter greater than 6 mm (the width of a regular pencil eraser) should be considered suspicious.

Screening for skin cancer should include a full body examination for skin cancers during routine physical examinations or during physician office visits for other conditions. In addition, individuals should practice full body self-examination to note changes in moles and other skin growths at least annually.

Iowans reporting a sunburn occurring within the last 12 months, BRFSS 1999.

Age category	Male %	Female %
18 – 24	67.5	75.2
25 – 34	71.4	55.1
35 – 44	68.8	53.4
45 – 54	54.1	36.7
55 – 64	38.2	20.6
65+	19.4	6.7

Protection from the sun through physical barriers (sunscreens, hats, UV protective clothing, avoiding prolonged direct sun exposure between 10 a.m. and 3 p.m.) will decrease sunburn incidence, and may reduce the risk of skin melanomas.

A common myth regarding skin cancer is that tanning beds are safer than natural sun exposure, which is untrue. Use of tanning beds is an established risk factor for skin cancer. Although there are 1450 registered tanning facilities in Iowa, no data are collected during inspections regarding incidence of burns. In addition, there are no legal age restrictions for the use of tanning beds.

Early Detection

In Iowa 91% of skin melanomas are diagnosed at the *in situ* or localized stage. This would suggest high survival rates, but, in fact, death rates do not support the stage diagnosis. Thickness of the melanoma lesion at the time of diagnosis is a good prognostic indicator, with 95% survival rate for those lesions that are 0.75 mm thick or less, and decreasing survival for those with lesions greater than 0.75 mm.

Treatment

If the skin melanoma lesion is not thick and has not metastasized, it can be removed through surgery. In fact, 92% of all cases in Iowa are treated by surgery alone. The data show that 4% of cases receive no treatment, possibly indicating advanced stage of disease with no apparent benefits of treatment.

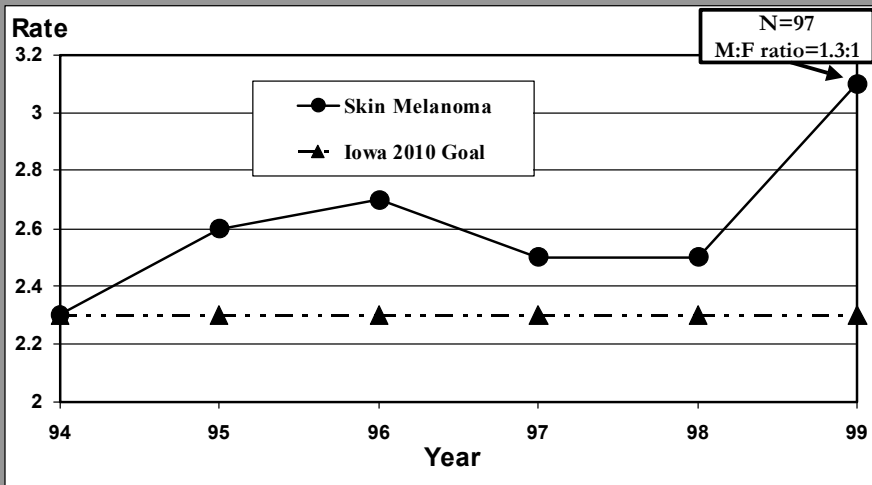
GOOD NEWS FOR IOWA

- New cases of the most deadly form of skin cancer, melanoma, are relatively low when compared to the other types of cancer in the state

BAD NEWS FOR IOWA

- Prevention of skin melanoma is a challenge, as Iowa does not have a way to collect information on youth and adults who fail to protect their skin from UV exposure and sunburns.

Skin Melanoma Mortality Rates, 1994-99



Source: State Health Registry of Iowa

ORAL CAVITY/PHARYNX CANCERS

Overview

367 Iowans died of cancers of the oral cavity and pharynx from 1994-1999.



Tammy, Marion County

On October 6, 2000, Tammy, age 40, was diagnosed with cancer on her tongue, from what appeared to be a regular canker sore. After 40 radiation treatments, an 11-1/2 hour surgery, three chemo treatments, many hospital stays, and much pain, she lost her battle with cancer in less than 13 months. For Tammy, her husband, their three kids and the rest of her family, it was a year of living a nightmare. We were able to carry on, only through the loving support of family, friends, church, community, and the local Hospice group. Now Tammy is reaping her reward of a dedicated Christian faith.

- Provided by
Tammy's family

Cancer of the oral cavity and pharynx includes malignancies originating in the mouth and the portion of the throat that begins at the back of the nose and ends just above the voice box. The pharynx is divided into three separate areas: the nasopharynx, the oropharynx, and the hypopharynx. Although certain information (e.g., prevention, quality of life) is pertinent to both oral cavity and pharynx cancers, this report provides separate data when the disease and treatment characteristics are substantially different. It should be noted that cancers of the lip are sometimes grouped with oral cavity tumors, but for the purposes of responding to the mandate of the House File, they are not included in this report because they behave quite differently.

Although cancers of the head and neck are relatively rare, this disease and its treatment frequently result in impaired functions that are important in day-to-day living such as eating and speaking. In Iowa, the new cases rate for oral cavity/pharynx cancers was 8.4 per 100,000 between 1994-1999. Males had a higher rate of new cases (12.2) than females (5.2), which most likely reflects their different patterns of tobacco use. African Americans also demonstrated a higher rate of new cases (10.6) than Caucasians (8.4). The death rate was 2.4 for all Iowans; the higher death rate for males (3.2 compared to 1.5 for females) corresponded with their higher rate of new cases.

Over 60% of people with cancers of the oral cavity and pharynx are diagnosed with advanced (regional or distant) disease, which is associated with a poorer prognosis. The table below shows all cancers included in the oral cavity/pharynx combined, although five year relative survival rates vary by actual site: 64.3% for the oral cavity, 45.2% for the nasopharynx, 54.2% for the oropharynx, and 45.2% for the hypopharynx.

Oral cavity/pharynx cancer stage at diagnosis and five-year relative survival rates in Iowa, 1990 – 1995.			
Stage at diagnosis	Number*	Percent**	5-year Relative Survival Rate***
Localized (confined to original site)	441	39	78
Regional (spread to lymph nodes in the region)	594	52	45
Distant (spread to other organs)	98	9	13

* Number of cases of cancer of the oral cavity/pharynx diagnosed in Iowa from 1990 – 1995 by stage at diagnosis.

** Percentage of cases diagnosed at each stage.

*** See appendix for definition.

Source: State Health Registry of Iowa

Prevention

Prevention must focus on eliminating tobacco use (smoking and smokeless). Tobacco use is the primary risk factor for cancers of the oral cavity and pharynx. Tobacco is associated with the initial disease as well as recurrences among patients who do not quit using tobacco after diagnosis. Tobacco use in Iowa is discussed in the site-specific section on "Lung Cancer." Although the rates of use of smokeless tobacco (a risk factor for oral cavity cancers) are unknown for Iowa adults, the rate of regular use among male high school students in Iowa was approximately 15% in 1999 (ranking 18th out of 33 states reporting to the Youth Risk Behavior Surveillance System).

The synergistic effect of alcohol and tobacco use, which further increases the risk of cancer among those who smoke, is not well understood by the general public.

Most people are also not aware that human papilloma virus (HPV) is another identified risk factor for cancers of the oral cavity and oropharynx.

Early Detection

Most oral cavity/pharynx cancers are diagnosed with advanced (regional or distant) disease. When broken down, only 55% of oral cavity and 22% of pharynx cancers were diagnosed as localized. The higher proportion of localized oral cavity tumors almost certainly reflects the fact that oral cavity tumors are easier to detect at an earlier stage before they have metastasized. Iowa's stage distributions were similar to national findings for oral cavity and hypopharynx cancers. However, the percentage of oropharyngeal and nasopharynx cancers with advanced disease at the time of diagnosis appeared to be higher than the nation as a whole.

Although programs do exist to screen for cancers of the oral cavity/pharynx, such programs are not widely used and their effectiveness is questionable. Unfortunately, delay in diagnosis often results from both health care providers and patients failing to address early warning signs of pain, non-healing lesions, and swallowing or speaking difficulties.

Treatment

Surgery is the primary treatment modality for managing cancers of the oral cavity and pharynx. In Iowa, surgery was used alone or in combination with other modalities in 74% of all new cases diagnosed between 1994 and 1999. Since a higher proportion of oral cavity cancers are localized, a higher percentage received single modality therapy (60%) than did pharynx cancers (40%).

Based on the assumption that tissue-sparing treatment protocols might reduce impairments resulting from surgery, there has been an effort within the last decade to increase the use of combined chemoradiation in head and neck cancers. A nationwide study indicated that approximately 10% of oral cavity/pharynx cancer cases were treated with radiation therapy combined with

SCREENING RECOMMENDATIONS:

There are no systematic, population based screening programs in place for cancers of the oral cavity and pharynx.

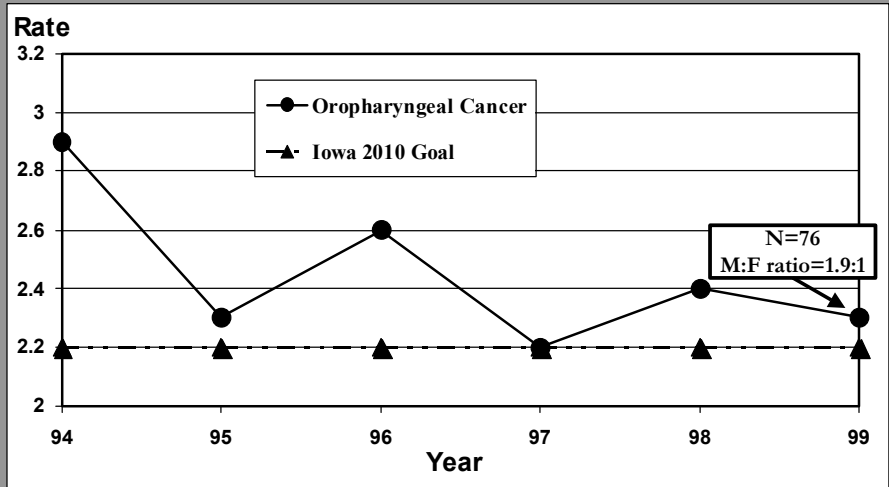
chemotherapy between 1985 and 1994, whereas 5% were treated with this non-surgical modality in Iowa between 1994 and 1999.

Rehabilitative interventions after treatment include dental restoration, clinical rehabilitations for impaired speech and swallowing, reconstructive surgery to improve function and aesthetics, and physical therapy for shoulder problems resulting from neck dissection procedures. There are also a limited number of support groups available to these patients (e.g., the Lost Chord Club).

GOOD NEWS FOR IOWA

- Cancers of the oral cavity and pharynx are often caused by preventable risk factors, most importantly tobacco use.

Oral Cavity and Pharynx Cancer Mortality Rates, 1994-99



Source: State Health Registry of Iowa

BAD NEWS FOR IOWA

- There are no systematic, population-based screening programs in place for cancers of the oral cavity and pharynx.
- Over 60% of the people with cancers of the oral cavity and/or pharynx in Iowa are diagnosed with advanced disease.

Cervical Cancer

Overview

235 Iowans died of cervical cancer from 1994-1999.

Cervical cancer is nearly 100 percent preventable. Cervical cancer rates are higher among older women; however, cervical intraepithelial neoplasia (CIN), the precursor lesion to cervical cancer, most often occurs among younger women. Routine screening is an important strategy that can actually prevent cervical cancer from developing. Cervical cancer is curable if detected early.

In the early years of the 20th century, cervical cancer was the leading cancer killer of women. Following the development and subsequent use of the Pap test in the early 1940s, deaths from cervical cancer dramatically decreased. Data from the State Health Registry from 1994-1999 reported 785 cases of cancer of the uterine cervix. During the same time period, 235 Iowa women died as a result of the disease. Rates of cervical cancer were significantly higher in African American and other minority races. Rates in Caucasian women remained stable or increased.

More than half of all cervical cancer patients in Iowa from 1990 to 1995 were diagnosed at the localized stage, which is associated with a five-year relative survival rate of 95%. Survival declines significantly when cervical cancer is diagnosed at later stages.

Cervical cancer stage at diagnosis and five-year relative survival rates in Iowa, 1990 – 1995.			
Stage at diagnosis	Number*	Percent**	5-year Relative Survival Rate***
Localized (confined to uterus)	425	58	95
Regional (spread to lymph nodes in the region)	240	33	51
Distant (spread to other organs)	65	9	25

* Number of cases of cervical cancer diagnosed in Iowa from 1990 – 1995 by stage at diagnosis.

** Percentage of cases diagnosed at each stage.

*** See appendix for definition.

Source: State Health Registry of Iowa

Prevention

Known risk factors for cervical cancer include the following modifiable behaviors: having sex at an early age, having many sexual partners, or having sexual partners who have had sex with many partners. Other risk factors include: human papilloma virus (HPV) infection, immunosuppressive disorders such as HIV/AIDS, and failure to receive regular Pap test screening. Cervical cancer is also associated with cigarette smoking. Tobacco use in Iowa is discussed in the site-specific section on "Lung Cancer." HPV is sexually transmitted, and although



Nancy, Scott County

I believe that annual pap smears and pelvic exams are an important first step for women's healthcare, although, my faithful appointments did not prevent or early detect my cancer. In my opinion we have a long way to go to improve women's healthcare in this area. I'm thankful for the love and support of my doctors, family, friends, and Gilda's Club of the Quad Cities. They all helped me to learn to live my life again and to make the most out of every day that our precious God gives to me.

**American Cancer
Society Screening
Guidelines for
Cervical Cancer**

All women who are or have been sexually active or who are 18 years and older should have an annual Pap test and pelvic examination. After three or more consecutive satisfactory examinations with normal findings, the Pap test may be performed less frequently at the discretion of the physician.

treatments exist (freezing or burning of the lesion), they remain inadequate methods of eliminating the virus completely, and are not considered curative.

Early Detection

Regular screening with the Pap test is the best method of detecting cervical cancer at an early, treatable stage. The Behavioral Risk Factor Surveillance System (BRFSS) in Iowa reports that women age 40 years and older who had Pap test screening within the last three years remained stable from 1995 (79.0%) to 2000 (80.8%). In 1999, Pap screening rates in Iowa women ages 18 – 44 years (89% screening rate) ranked 19th in the nation, while rates in Iowa women ages 45 years and older (80.0% screening rate) ranked 35th.

Iowa has two systems of federally funded Pap test screening available for low-income, uninsured or underinsured women. During 2000, federally funded family planning services offered by the Title X system to women of reproductive age provided 43,594 Iowa women with 47,037 Pap tests. The federally funded BCCEDP (see previous section on Breast Cancer) which also targets low-income, uninsured and underinsured women primarily ages 50 to 64 years also plays an important role in the screening and diagnosis of cervical cancer. Both programs are effective at screening and reporting abnormal screening results for the Iowa women served. In addition, the BCCEDP offers reimbursement to participating health care providers for colposcopy and biopsy services.

Treatment

In Iowa from 1994-1999, data from the Surveillance, Epidemiology, and End Results (SEER) program show that surgery alone was the most common method of treatment for the 785 diagnosed cases of cervical cancer. Cryotherapy (freezing the cervical tissue), electrocoagulation (destruction of the cervical tissue using intense heat by electrical current), laser ablation and surgery are treatments used for pre-cancerous cervical lesions to help prevent progressions of the lesion to cervical cancer. In addition to surgery, radiation therapy and chemotherapy are modes of treatment used for cervical cancer. Use of these is highly dependent on the patient's age, stage of cervical cancer at the time of diagnosis, and the presence of other significant medical conditions.

As mentioned in the previous section on breast cancer, optional Medicaid coverage for diagnosis and treatment of pre-cancerous and cancerous breast and cervical lesions was implemented in Iowa on July 1, 2001. As noted, there are limitations regarding this resource based on eligibility requirements. Many women of reproductive age currently do not qualify for service in the BCCEDP because of their ages, and that makes them ineligible also for treatment through the Medicaid treatment option.

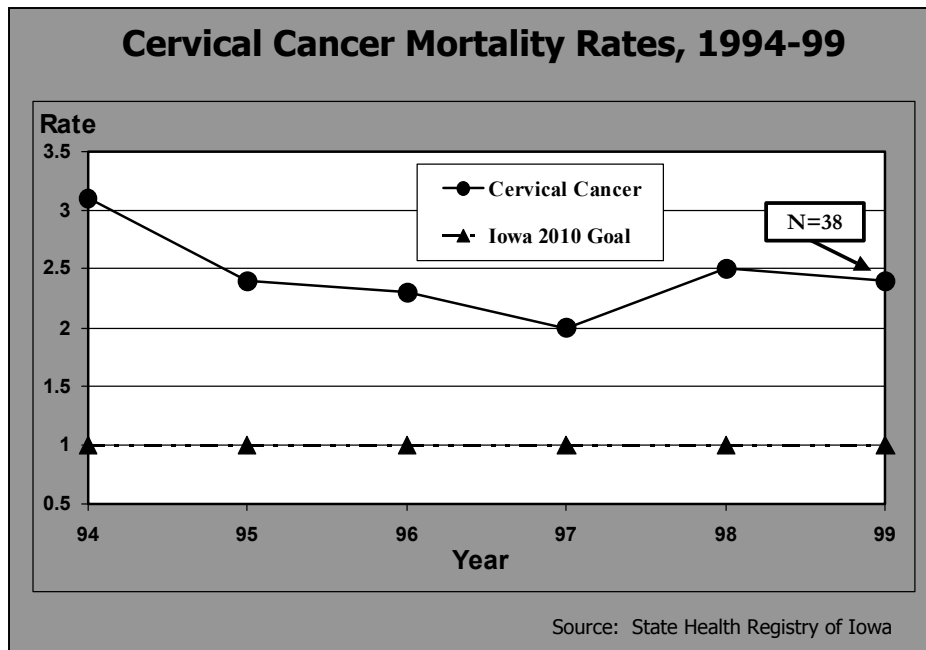
There is a lack of designated and available funding and resources for the diagnosis and treatment of cervical cancer or its pre-cancerous conditions in the reproductive population served by the federally funded family planning programs.

Additional Quality of Life Issues

- Sexuality issues

GOOD NEWS FOR IOWA

- Cervical cancer or its pre-cancerous lesions are easy to detect with the use of the Pap test.



BAD NEWS FOR IOWA

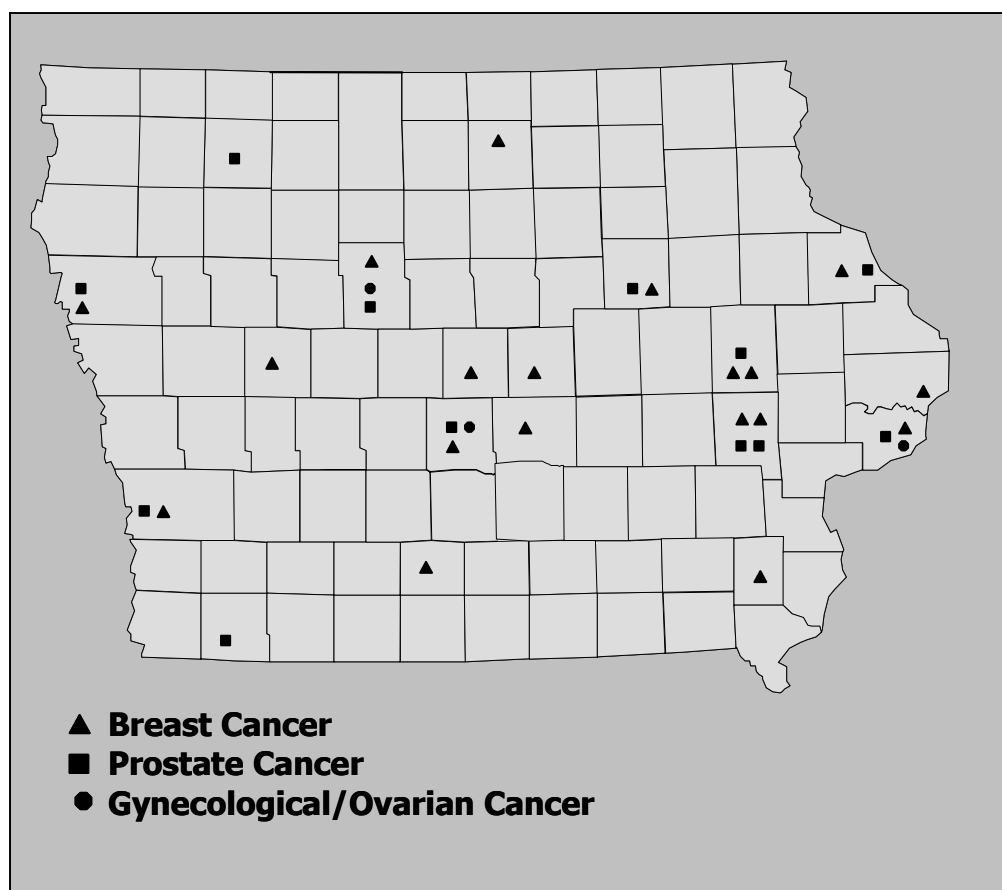
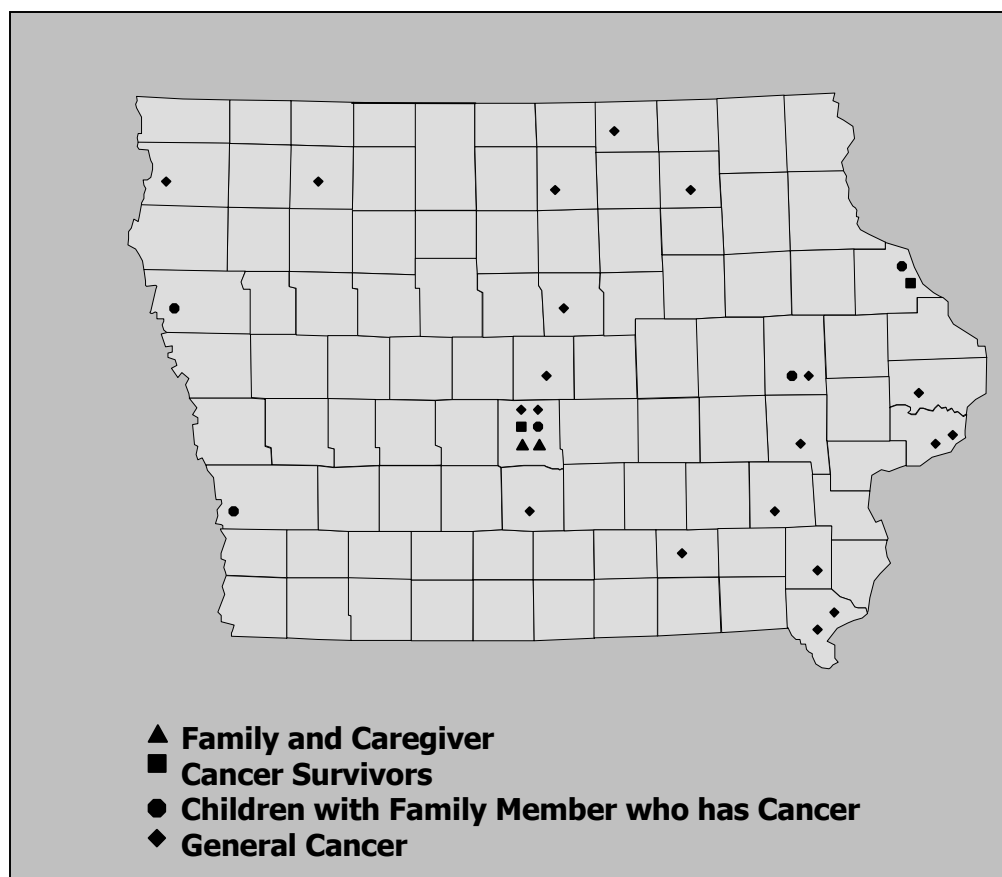
- The cost and access to associated diagnostic testing and treatment services prevent women from obtaining the care that will reduce new cases and deaths from cervical cancer.
- Iowa ranks 35th among the state in the use of the Pap test among women age 45 and older.

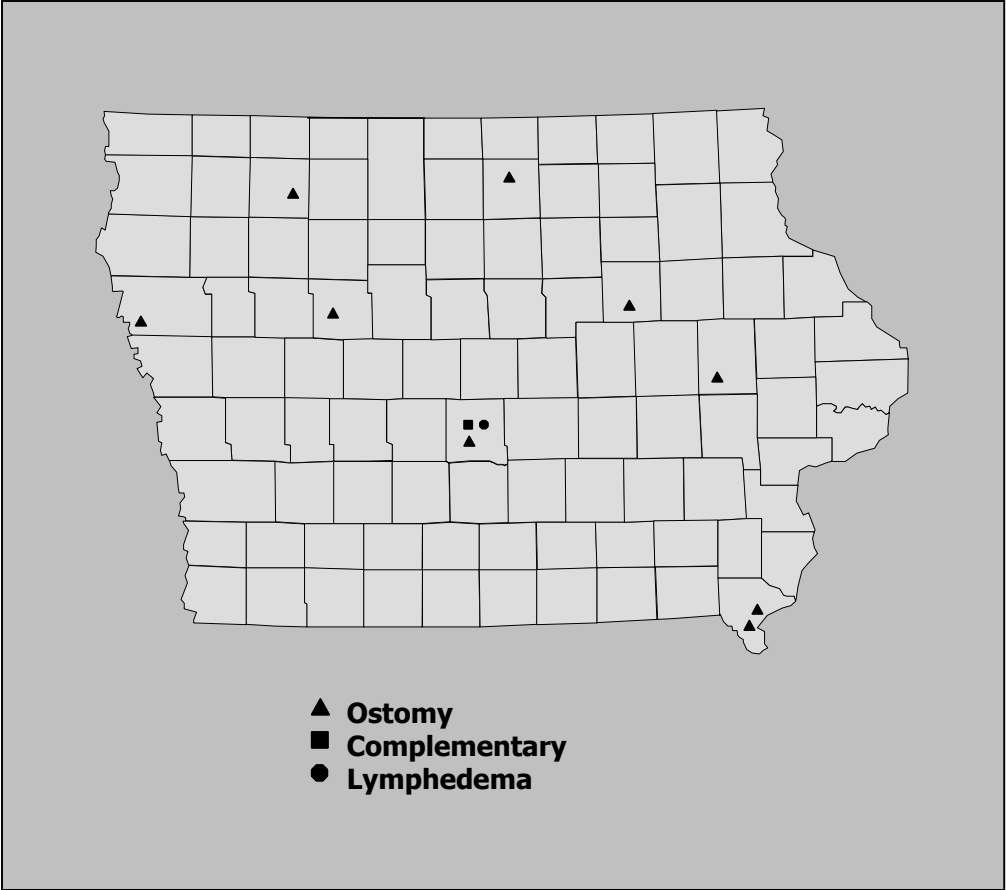
DEFINITIONS OF TERMS

- **BCCEDP:** Breast and Cervical Cancer Early Detection Program – Federally funded program administered through the Centers for Disease Control and Prevention to provide free mammograms and Pap tests to women of low income.
- **BENIGN:** Growth of tissue that does not have invasive characteristics, does not have the ability to spread through the body.
- **BRFSS:** Behavioral Risk Factor Surveillance System; statewide annual telephone survey of health risk behaviors of adults 18 years and older conducted by the Iowa Department of Public Health.
- **CANCER MORBIDITY:** Disability from cancer.
- **MALIGNANT:** growth of tissue that has invasive characteristics; has the ability to spread to other sites in the body.
- **METASTASIS:** spread of the cancerous cells from a primary site to a distant organ, tissue, and/or lymph node(s). Most common organs to where cancer cells spread: bone, brain, lung, and/or liver. Presence of metastasis indicates extremely poor prognosis.
- **MSA:** Metropolitan Statistical Area – geographically defined metropolitan areas (usually counties) in the state. In Iowa, MSA's include the counties of Black Hawk, Dallas, Linn, Polk, Warren, Pottawattamie, Scott, Woodbury, Dubuque, and Johnson. Non-metropolitan areas consist of the remaining 89 counties.
- **RELATIVE SURVIVAL RATE:** The ratio of the observed survival rate (proportion of cancer patients surviving for a specified length of time after diagnosis) to the expected survival rate. The expected rate is based on mortality rates for the general population. It is assumed that the presence of cancer is the only factor, which distinguishes cancer patients from the general population, with the 5-year relative survival rate indicating the probability that patients will still be alive five years from the time of the diagnosis.
- **SEER:** Surveillance, Epidemiology, and End Results – National cancer surveillance program in the National Cancer Institute, National Institutes of Health, recording information on every malignant cancer diagnosed in 14 geographic regions currently, collecting and providing complete and accurate cancer data for research and public health purposes.
- **SHRI:** State Health Registry of Iowa – Iowa's branch of SEER, housed at The University of Iowa.
- **STAGE AT TIME OF DIAGNOSIS:** Describes how far the cancer has spread in a patient's body at the time of diagnosis. Generalized staging categories included in this study:
 - ***In situ*:** neoplasm that has malignant characteristics, but is not invasive, has not begun to penetrate surrounding tissue; earliest stage with best prognosis.
 - **Localized:** an invasive, malignant neoplasm that is confined entirely to the organ or tissue of origin.
 - **Regional:** a malignant neoplasm that has extended beyond the limits of the organ of origin directly into surrounding organs, tissue, or lymph nodes.

- **Distant:** a malignant neoplasm that has spread to distant organs, tissue, or lymph nodes remote from the primary tumor; latest stage with worst prognosis.
- **YRBS** – Youth Risk Behavior Surveillance System – statewide survey of health risk behaviors in individuals under the age of 18 years conducted every two years by the Iowa Department of Education.

Cancer Support Groups





- ▲ **Non-Profit ownership**
- **Proprietary ownership**
- **Government ownership**
- ★ **Independent hospice corporation**
- ◆ **Hospice operating as division of hospital corp.**
- ✕ **Hospice operating as division of home health**
- ➡ **Hospice operating as a division of a hospice corporation**

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