

**VANDEBURGH COUNTY, INDIANA, and UNITED STATES  
CANCER REPORT**

**1994-2002**

**Compiled by**

**The Partnership for Health Care Information**

**September, 2003**

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## **EXECUTIVE SUMMARY**

### **VANDERBURGH COUNTY CANCER DATA**

#### **1994-2002**

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Cancer is caused by both external (chemicals, radiation, and viruses) and internal (hormones, immune conditions, and inherited mutations) factors. Causal factors may act together or in sequence to initiate or promote cancers. Ten or more years often pass between exposures or mutations and detectable cancer. (1)

Cancer is very rare in children and young adults and is chiefly a disease of older people. Nearly 80% of all cancers are diagnosed at ages 55 and older. (1)

Based on the information from the American Cancer Society in Cancer Facts and Figures for 2003, cancer is the second leading cause of death in the United States, exceeded only by heart disease. One of every four deaths in the United States is from cancer. Since 1990, there have been approximately 5 million deaths. There is a 5 year relative survival rate of 62% for all cancers combined. The relative survival rate refers to the observed or actual survival rate adjusted for normal life expectancy, factors such as dying of heart disease, accidents, and diseases of old age. In 2003, an estimated 1,500 people will die each day of cancer, putting the annual death total at 556,500. (1)

The top four most commonly diagnosed cancers in the U.S. are prostate, lung and bronchus, colon and rectum, and for women, breast cancer. The estimates for 2003 indicate the same trend. In 2003, an estimated 171,900 new cases of lung cancer will be diagnosed, 147,500 new colorectal cases, 211,300 invasive breast cancer cases, and 220,900 new cases of prostate cancer. The number of deaths estimated for 2003 include 157,200 from lung cancer, 28,900 from prostate cancer, 57,100 from colorectal cancer, and 39,800 breast cancer. (1)

The financial costs of cancer are great both to the individual and to society as a whole. The National Cancer Institute estimated overall annual costs for cancer in the year 2002 at \$171.76 billion, \$60.9 billion for direct medical costs, \$15.5 billion for indirect morbidity costs (cost of lost productivity due to illness), and \$95.2 billion for mortality costs (cost of lost productivity due to premature death). (2) Treatment of breast, lung, and prostate cancers account for over half of the direct medical costs. Nationally the overall cancer death rates declined on average by about 0.6 percent per year during 1990-1996. (1) The decline in mortality was greater for men than for women. Both the rate of new lung cancer cases and lung cancer deaths are rising for women, in contrast to a drop in both incidence and mortality for men. (5)

The incidence data presented for Vanderburgh County was obtained from the Cancer Registries of Deaconess Hospital, Evansville Cancer Center, and St. Mary's Medical Center. The Vanderburgh County cancer cases compiled by the local Cancer Registrars are presented on pages 19-27. Cancer biopsies performed in physician offices may or may not be included in the

incidence data here. Therefore, the number of reported melanoma, prostate, and cervical cancers might be underreported.

Information on Vanderburgh County's 2000-2001 cancer incidence rate in comparison to Indiana and the United States is found on pages 29 and 30. Information on Vanderburgh County's 2000-2001 cancer mortality rate in comparison to Allen county, Indiana, and the United States can be found on pages 13 and 14. (Allen County is included as a comparison location because of relative size similarities to Vanderburgh County.)

The number of cancer related deaths in Vanderburgh County for selected cancer sites included in this report has increased from 287 in 1999 to 323 in 2001 (Page 6). In 1999, Vanderburgh county's mortality rate was 212.19 per 100,000, and was 214.41 per 100,000 in 2001. This cancer rate of 214.41 in 2001, is higher than the national rate of 195.80 per 100,000 for the same year. (5) The change from ICD-9 to ICD-10 precludes direct comparison of data before and after 1999 (See Methodology on Page 5).

In 2003, it is estimated that nationally 1,344,100 new cancer diagnoses will occur and lung cancer will constitute 13 percent of these new cases. The one-year survival rate for lung cancer has increased from 34 percent in 1975 to 42 percent in 1998. The lung cancer five-year survival rate however is the lowest of all cancers at 15 percent except for liver cancer at 7 percent. (1) Since 1992, the incidence of lung cancer in Vanderburgh County has remained relatively unchanged with a slight downtrend in the last 3 years. The number of colorectal cancer cases in Vanderburgh County has declined over the past ten years. The incidence of bladder cancer has remained relatively unchanged with the highest number of incidences occurring in 1997.

The Indiana Health Department's report on suspected cancer risks in Indiana is included in Appendix A (pages 32-34), for information and analysis.

This report was prepared by the Partnership for Health Care Information, a group of health care providers and businesses that work to provide the community with meaningful information regarding health and health care services in the Evansville community. Led by the Dean of the School of Nursing and Health Professions at the University of Southern Indiana, the purpose of the Partnership is two-fold: 1) Provide health care information to the community, and 2) Identify opportunities for improvement in the health of the community. The Partnership for Health Care Information would like to acknowledge the contribution made by the Evansville Cancer registries: Deaconess Hospital, Evansville Cancer Center, and St. Mary's Medical Center.

Members of the Partnership for Health Care Information include:

Deaconess Hospital  
The Evansville Cancer Center  
St. Mary's Medical Center  
Mission Health System  
Tri-State Business Group on Health  
University of Southern Indiana

## METHODOLOGY

Mortality information is collected worldwide using the International Classification of Disease (ICD) classification system. Periodically this classification system is updated to reflect the advancing state of medical knowledge. Data in this report from 1994 through 1998 is based on the ninth ICD revision (ICD-9). Starting in 1999, data was collected using the tenth ICD revision (ICD-10). ICD-10 captures different causes of death than ICD-9. This change impacts the ability to accurately trend data over time.

Mortality rates are expressed as rates per 100,000 population to eliminate the effects of population size and make the numbers comparable. In addition, the rates are age adjusted to eliminate differences in the age composition of a given population. Data in this report from 1994 to 1998 is based on the 1940 standard million population. Starting in 1999, the 2000 standard million population is used to age adjust the mortality rates. The impact of using the 2000 standard million population is an increase in the adjusted death rates. In reality no real change in mortality has occurred and the difference is attributable to the revised standard. Trend data have been separated to reflect the differing standard population adjustment factors.

Only Vanderburgh county residents are included in the county population base. Postal zip codes were used to determine inclusion of data for the population base.

Data for Vanderburgh county cancer incidences were collected by the Cancer Registrars at Deaconess Hospital, Evansville Cancer Center, and St. Mary's Medical Center. The incidence rates were determined by dividing the number of cancer cases by the specified area's population times 100,000.

**For additional information you may contact Dr. Nadine Coudret at the University of Southern Indiana School of Nursing and Health Professions (812-465-1151).**

## Number of Cancer Deaths in Vanderburgh County 1994 – 2001

Ninth Revision International Classification of Disease, 1978 [1994-1998 data]  
Tenth Revision International Classification of Disease, 1992 [1999-2001 data]

Site (Location)	1994	1995	1996	1997	1998	1999	2000	2001
<b>Bladder</b>	10	6	7	8	9			
<b>Urinary Tract</b>						10	13	20
<b>Breast</b>	38	33	37	35	16	26	24	33
<b>Colon, Rectum, Anus</b>	*	*	*	**	**	56	50	46
<b>Female Reproductive</b>	18	18	26	18	27			
<b>Cervix Uteri, Corpus Uteri and Ovary</b>						11	24	18
<b>Lymphatic</b>	48	32	43	51	47			
<b>Non-Hodgkin's Lymphoma</b>						14	20	26
<b>Male Reproductive</b>	23	25	24	25	19			
<b>Prostate</b>						30	19	17
<b>Pancreas</b>	*	*	*	**	**	21	26	26
<b>Respiratory</b>	166	147	134	120	161			
<b>Trachea, Bronchus, Lung</b>						119	156	137
<b>Total Deaths from Selected Sites 1999-2001</b>						287	312	323

\*Available data: total number of deaths for 1992-1996: Colon & Rectum: 229 and Pancreas: 98

\*\* Numbers not available.

Data Sources:

Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;  
National Vital Statistics Reports.

**1994 Cancer Deaths**  
(Per 100,000/ age-adjusted)

<b>Site (Location)</b>	<b>Vanderburgh County</b>	<b>Allen County</b>	<b>State of Indiana</b>	<b>United States</b>
<b>Bladder</b>	2.29	2.01	2.55	Not available
<b>Breast</b>	14.87	18.73	12.68	11.6
<b>Digestive</b>	29.55	31.61	29.71	29.3
<b>Female Reproductive</b>	7.01	7.48	6.82	Not available
<b>Kidney</b>	4.87	3.50	3.22	Not available
<b>Lymphatic</b>	16.78	11.42	14.39	Not Available
<b>Male Reproductive</b>	5.68	6.44	6.29	Not Available
<b>Respiratory</b>	64.18	38.69	45.85	40.10
<b>Total Genital (Female Reproductive + Male Reproductive)</b>	12.69	13.92	13.11	13.2
<b>Total Urinary (Bladder &amp; Kidney)</b>	7.16	5.51	5.76	5.1
<b>All Malignant Cancers</b>	165.40	146.50	141.40	131.5

Data Sources:

Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;  
National Vital Statistics Reports.

**1995 Cancer Deaths**  
(Per 100,000/ age-adjusted)

<b>Site (Location)</b>	<b>Vanderburgh County</b>	<b>Allen County</b>	<b>State of Indiana</b>	<b>United States</b>
<b>Bladder</b>	1.66	2.75	2.37	Not available
<b>Breast</b>	12.33	11.45	12.53	11.5
<b>Digestive</b>	32.15	29.83	31.14	29.0
<b>Female Reproductive</b>	5.72	5.56	7.34	Not available
<b>Kidney</b>	3.49	2.46	3.76	Not available
<b>Lymphatic</b>	9.00	13.97	14.15	Not available
<b>Male Reproductive</b>	5.95	7.14	6.85	Not available
<b>Respiratory</b>	51.46	45.90	46.90	39.6
<b>Total Genital (Female Reproductive + Male Reproductive)</b>	11.67	12.69	14.19	12.7
<b>Total Urinary (Bladder &amp; Kidney)</b>	5.15	5.21	6.12	5.0
<b>All Malignant Cancers</b>	143.40	134.30	145.30	129.8

Data Sources:  
Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;  
National Vital Statistics Reports.

**1996 Cancer Deaths**  
(Per 100,000/age-adjusted)

<b>Site (Location)</b>	<b>Vanderburgh County</b>	<b>Allen County</b>	<b>State of Indiana</b>	<b>United States</b>
<b>Bladder</b>	2.11	1.80	2.40	Not available
<b>Breast</b>	13.61	14.19	11.82	11.0
<b>Digestive</b>	25.29	27.60	28.33	28.5
<b>Female Reproductive</b>	8.45	8.04	6.70	Not available
<b>Kidney</b>	6.27	2.80	3.22	Not available
<b>Lymphatic</b>	13.80	13.53	13.36	Not Available
<b>Male Reproductive</b>	4.48	6.49	6.30	Not available
<b>Respiratory</b>	42.37	39.64	43.94	39.3
<b>Total Genital (Female Reproductive + Male Reproductive)</b>	12.93	14.53	12.99	12.5
<b>Total Urinary (Bladder + Kidney)</b>	8.38	4.60	5.62	5.1
<b>All Malignant Cancers</b>	137.75	135.52	134.74	127.9

Data Sources:

Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;  
National Vital Statistics Reports.

**1997 Cancer Deaths**  
(Per 100,000/age-adjusted)

<b>Site (Location)</b>	<b>Vanderburgh County</b>	<b>Allen County</b>	<b>State of Indiana</b>	<b>United States</b>
<b>Bladder</b>	2.30	1.64	2.18	Not Available
<b>Breast</b>	10.58	13.04	10.43	10.60
<b>Digestive</b>	30.79	31.86	27.84	28.00
<b>Female Reproductive</b>	4.48	6.61	5.43	5.90
<b>Kidney</b>	4.42	3.64	3.80	Not Available
<b>Lymphatic</b>	16.90	12.29	13.09	11.90
<b>Male Reproductive</b>	6.22	7.56	6.81	5.80
<b>Respiratory</b>	41.34	40.58	42.64	38.70
<b>Total Genital (Female Reproductive + Male Reproductive)</b>	10.70	14.17	12.24	11.70
<b>Total Urinary (Bladder + Kidney)</b>	6.72	5.28	5.98	2.20
<b>All Malignant Cancers</b>	134.50	138.23	130.53	124.50

Data Sources:

Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;  
National Vital Statistics Reports.

## 1998 Cancer Deaths

(Per 100,000/age-adjusted)

<b>Site (Location)</b>	<b>Vanderburgh County</b>	<b>Allen County</b>	<b>State of Indiana</b>	<b>United States</b>
<b>Bladder</b>	2.40	1.80	2.30	Not Available
<b>Breast</b>	6.53	11.78	10.44	10.20
<b>Digestive</b>	29.37	31.48	28.79	27.90
<b>Female Reproductive</b>	7.54	9.51	6.74	5.80
<b>Kidney</b>	3.18	3.84	3.52	Not Available
<b>Lymphatic</b>	13.70	9.26	12.90	11.50
<b>Male Reproductive</b>	5.30	6.53	5.69	5.60
<b>Respiratory</b>	50.90	43.13	44.51	38.30
<b>Total Genital (Female Reproductive + Male Reproductive)</b>	12.84	16.04	12.43	11.40
<b>Total Urinary (Bladder + Kidney)</b>	5.58	5.64	5.82	2.2
<b>All Malignant Cancers</b>	136.71	133.73	132.82	122.50

Data Sources:

Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;  
National Vital Statistics Reports;  
National Statistics – CDC WONDER System.

## 1999 Cancer Deaths

(Per 100,000/age-adjusted)

<b>Site (Location)</b>	<b>Vanderburgh County</b>	<b>Allen County</b>	<b>State of Indiana</b>	<b>United States</b>
<b>Breast</b>	13.37	14.70	15.49	15.20
<b>Cervix Uteri, Corpus Uteri and Ovary</b>	5.57	11.11	9.44	8.90
<b>Colon, Rectum, Anus</b>	27.92	25.49	23.48	21.00
<b>Leukemia</b>	8.55	8.16	8.24	7.70
<b>Non-Hodgkin's Lymphoma</b>	6.99	8.53	9.11	8.40
<b>Other</b>	57.74	56.33	49.91	49.10
<b>Pancreas</b>	10.63	12.19	10.22	10.70
<b>Prostate</b>	14.38	13.63	12.63	11.60
<b>Stomach</b>	2.40	1.37	3.26	4.70
<b>Trachea, Bronchus, Lung</b>	59.73	59.85	65.46	55.80
<b>Urinary Tract</b>	4.91	11.14	9.97	8.50
<b>All Malignant Cancers</b>	212.19	222.50	217.22	201.60

Data Sources:

Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;  
National Statistics – National Vital Statistics Report Volume 49 Number 8 September 21, 2001.

## 2000 Cancer Deaths

(Per 100,000/age-adjusted)

Site (Location)	Vanderburgh County	Allen County	State of Indiana	United States
<b>Breast</b>	12.62	14.08	16.25	15.30
<b>Cervix Uteri, Corpus Uteri and Ovary</b>	12.19	10.18	9.53	9.00
<b>Colon, Rectum, Anus</b>	25.16	20.92	21.89	20.80
<b>Leukemia</b>	7.08	5.65	8.03	7.70
<b>Non-Hodgkin's Lymphoma</b>	10.11	7.96	9.67	8.20
<b>Other</b>	43.51	49.58	47.53	48.10
<b>Pancreas</b>	13.50	10.96	10.69	10.60
<b>Prostate</b>	8.91	13.03	11.05	11.3
<b>Stomach</b>	0.96	3.23	3.30	4.60
<b>Trachea, Bronchus, Lung</b>	79.68	54.76	65.67	56.30
<b>Urinary Tract</b>	6.80	11.59	10.15	8.60
<b>All Malignant Cancers</b>	220.53	201.94	213.76	200.50

Data Sources:

Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;  
 National Statistics – National Vital Statistics Report Volume 49 Number 8 September 21, 2001.

## 2001 Cancer Deaths

(Per 100,000/age-adjusted)

Site (Location)	Vanderburgh County	Allen County	State of Indiana	United States
<b>Breast</b>	16.62	17.51	15.48	14.80
<b>Cervix Uteri, Corpus Uteri, and Ovary</b>	8.92	11.10	9.27	8.90
<b>Colon, Rectum, Anus</b>	22.62	22.95	22.61	20.1
<b>Leukemia</b>	8.31	7.15	8.35	7.60
<b>Non-Hodgkin's Lymphoma</b>	12.96	5.58	9.02	7.90
<b>Lymphoid and related tissues</b>	*	*	22.24	20.0
<b>Pancreas</b>	13.45	9.87	10.73	10.5
<b>Prostrate</b>	8.09	11.92	11.47	10.09
<b>Stomach</b>	3.04	1.67	3.53	4.4
<b>Trachea, Bronchus, Lung</b>	68.53	55.37	65.30	55.30
<b>Urinary Tract</b>	10.04	10.86	*	*
<b>Lip, Oral, and Pharynx</b>	*	*	2.15	2.70
<b>Esophagus</b>	*	*	4.99	4.4
<b>Liver and Bile Ducts</b>	*	*	4.13	4.70
<b>Larynx</b>	*	*	1.33	1.30
<b>Skin</b>	*	*	2.45	2.70
<b>Kidney and Renal Pelvis</b>	*	*	5.43	4.20
<b>Bladder</b>	*	*	4.36	4.30
<b>Brain and CNS Parts</b>	*	*	4.83	4.40
<b>Other</b>	41.83	46.68	37.14	22.2
<b>All Malignant Cancers</b>	214.41	200.68	213.32	195.80

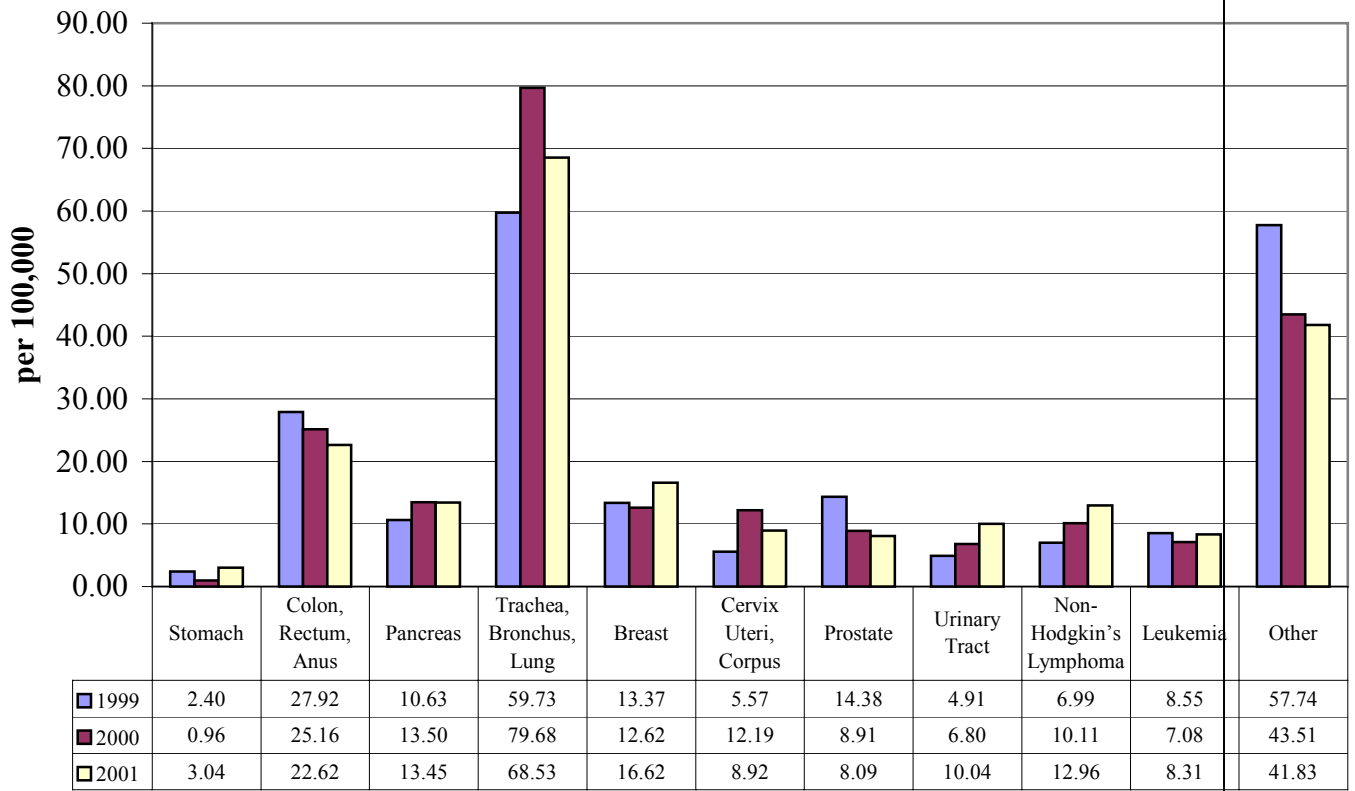
\*numbers unavailable.

Data Sources:

Indiana Statistics- Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team;

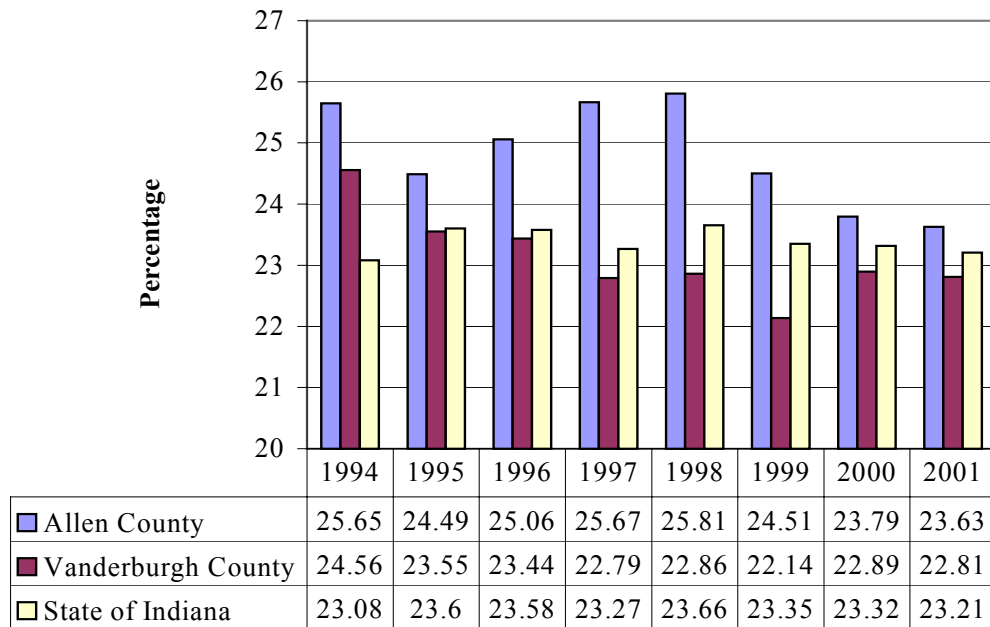
National Statistics- National Vital Statistics Reports Vol. 51, Number 5, March 14, 2003.

### Vanderburgh County Cancer Mortality Rate (per 100,000/age adjusted)



Source:  
Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team.

## Percentage of Deaths Caused by Cancer



Source:  
 Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team.

## Estimated 2002 Cancer Deaths

<b>Site (Location)</b>	<b>State of Indiana</b>	<b>United States</b>
<b>Brain/ Nervous System</b>	300 * (8-9-10)	13,100 (10)
<b>Female Breast</b>	900 (3)	40,000 (3)
<b>Colon &amp; Rectum</b>	1,400 (2)	56,600 (2)
<b>Leukemia</b>	500 (7)	21,700 (7)
<b>Liver</b>	300 (8-9-10)	14,100 (8)
<b>Lung &amp; Bronchus</b>	4000 (1)	154,900 (1)
<b>Non-Hodgkin's Lymphoma</b>	600 (5-6)	24,400 (6)
<b>Ovary</b>	300 (8-9-10)	13,900 (9)
<b>Pancreas</b>	600 (5-6)	29,700 (5)
<b>Prostate</b>	700 (4)	30,200 (4)
<b>ALL SITES</b>	13,000	555,500

\* Rank based upon frequency.

Source:

American Cancer Society, Cancer Facts and Figures 2002.

## Estimated 2003 Cancer Deaths

Site (Location)	State of Indiana	United States
<b>Brain/ Nervous System</b>	300 * (9-10)	13,100 (10)
<b>Female Breast</b>	900 (3)	39,800 (3)
<b>Colon &amp; Rectum</b>	1,300 (2)	57,100 (2)
<b>Leukemia</b>	500 (7)	21,900 (7)
<b>Liver</b>	300 (9-10)	14,400 (8)
<b>Lung &amp; Bronchus</b>	4,000 (1)	157,200 (1)
<b>Non-Hodgkin's Lymphoma</b>	600 (5-6)	23,400 (6)
<b>Ovary</b>	400 (8)	14,300 (9)
<b>Pancreas</b>	600 (5-6)	30,000 (4)
<b>Prostate</b>	700 (4)	28,900 (5)
<b>ALL SITES</b>	13,000	556,500

\*Rank based upon frequency.

Source:

American Cancer Society, Cancer Facts and Figures 2003.

## BLADDER CANCER

The American Cancer Society estimates that there will be 57,400 new cases of bladder cancer and 12,500 deaths nationwide for 2003. (1) According to the American Cancer Society the five-year survival rate is 90% when detected early. (6) In the United States, smoking is estimated to be responsible for 37-47% of bladder cancer. (7) In Vanderburgh County in year 2000, the bladder cancer rate was 18.03 per 100,000 and in 2001 the rate was 15.14 per 100,000. (See page 29.)

### VANDERBURGH COUNTY BLADDER CANCER DIAGNOSED

#### Females diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>0-44</b>	0	0	0	0	0	0	0	0	0	1
<b>45-64</b>	4	1	4	2	2	1	1	2	1	1
<b>65+</b>	7	12	9	7	12	12	8	8	5	8
<b>Total</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>9</b>	<b>14</b>	<b>13</b>	<b>9</b>	<b>10</b>	<b>6</b>	<b>10</b>

#### Males diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>0-44</b>	0	0	0	1	0	0	1	1	3	0
<b>45-64</b>	7	4	5	3	0	4	3	3	7	2
<b>65+</b>	17	20	18	21	20	21	16	16	15	14
<b>Total</b>	<b>24</b>	<b>24</b>	<b>23</b>	<b>25</b>	<b>20</b>	<b>25</b>	<b>20</b>	<b>20</b>	<b>25</b>	<b>16</b>

#### Total diagnosed

All Ages	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
		<b>35</b>	<b>37</b>	<b>36</b>	<b>34</b>	<b>34</b>	<b>38</b>	<b>29</b>	<b>30</b>	<b>31</b>

## BREAST CANCER

Nationally, an estimated 211,300 women in 2003 will be newly diagnosed with breast cancer, while 39,800 will succumb to the disease this year. Mortality rates for breast cancer have been declining roughly 2 percent each year. (1) The death rates remained level for African-American women and may be on the rise for Asian and Pacific Islander women. (2) The incidence rate for breast cancer in Vanderburgh county in 2000 was 173.61 per 100,00 and in 2001, the incidence rate was 168.26. This is in contrast to the 2000 rate in Indiana of 135.44 and the national rate of 128.59. The 2001 rate in Indiana was 140.08 and the rate for the United States was 131.97.

### VANDERBURGH COUNTY BREAST CANCER DIAGNOSED

Females diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>0-44</b>	13	8	10	16	19	20	21	17	18	9
<b>45-64</b>	63	55	51	55	53	52	66	64	54	51
<b>65+</b>	70	83	85	73	83	98	87	70	81	91
<b>Total</b>	<b>146</b>	<b>146</b>	<b>146</b>	<b>144</b>	<b>155</b>	<b>170</b>	<b>174</b>	<b>151</b>	<b>153</b>	<b>151</b>

Males diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>0-44</b>	0	0	0	0	0	0	0	0	0	0
<b>45-64</b>	0	0	1	1	1	0	0	0	2	0
<b>65+</b>	0	0	1	0	0	0	0	2	2	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>1</b>

Total diagnosed

All Ages	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	<i>146</i>	<i>146</i>	<i>148</i>	<i>145</i>	<i>156</i>	<i>170</i>	<i>174</i>	<i>153</i>	<i>157</i>	<i>152</i>

## INVASIVE CERVICAL CANCER

Rates have decreased steadily over the past several decades, and as Pap screening has become more prevalent, carcinoma in situ of the cervix is now more frequent than invasive cancer, particularly in women under age 50. (5) In situ refers to cancer that is considered localized or not invasive, therefore these cases were not included in the data collected.

The national mortality rates for invasive cervical cancer have declined 45 percent over the past 20 years, with the 5-year survival rate at 91 percent in 2003; however, in 2003 the mortality rate for African-American women continued to be more than two times greater than the rate among white women. The invasive cervical cancer incidence rates for Vanderburgh County are significantly lower than the incidence rates for Indiana and the United States in both 2000 and 2001.

### VANDERBURGH COUNTY INVASIVE CERVICAL CANCER DIAGNOSED

Females diagnosed

<b>Age</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
0-44	8	14	10	14	14	24	2	1	4	2
45-64	6	1	2	4	4	5	1	1	3	3
65+	1	4	3	3	3	4	1	1	3	0
<b>Total</b>	<b>15</b>	<b>19</b>	<b>15</b>	<b>21</b>	<b>21</b>	<b>33</b>	<b>4</b>	<b>3</b>	<b>10</b>	<b>5</b>

## COLORECTAL CANCER

It is estimated that in 2003, colorectal cancers will account for about 11 percent of new cancer diagnoses. 3,500 Indiana residents will be newly diagnosed with colorectal cancer. The national incidence rate has declined and is possibly due to increased screening and polyp removal, preventing progression of polyps to invasive cancer .(1) The number of colorectal diagnosis cases has decreased in Vanderburgh county during the last two years but is slightly higher than the Indiana and United States incidence rates.

### VANDERBURGH COUNTY COLORECTAL CANCER DIAGNOSED

#### Females diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>0-44</b>	3	2	2	0	2	2	0	3	0	0
<b>45-64</b>	15	7	8	8	19	14	10	14	11	12
<b>65+</b>	54	41	38	59	46	64	50	52	41	33
<b>Total</b>	<b>72</b>	<b>50</b>	<b>48</b>	<b>67</b>	<b>67</b>	<b>80</b>	<b>60</b>	<b>69</b>	<b>52</b>	<b>45</b>

#### Males diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>0-44</b>	2	3	5	1	2	1	2	3	4	0
<b>45-64</b>	13	20	11	7	9	16	18	14	8	17
<b>65+</b>	50	56	45	38	38	64	39	40	43	31
<b>Total</b>	<b>65</b>	<b>79</b>	<b>61</b>	<b>46</b>	<b>49</b>	<b>81</b>	<b>59</b>	<b>57</b>	<b>55</b>	<b>48</b>

#### Total diagnosed

All Ages	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	<i>137</i>	<i>128</i>	<i>109</i>	<i>113</i>	<i>116</i>	<i>161</i>	<i>119</i>	<i>126</i>	<i>107</i>	<i>93</i>

## LUNG CANCER

The incidence rate for lung cancer is declining in men nationwide; however, Vanderburgh County reflects a rate above the national average. The 2001 incidence rate in the United States is 58.78 per 100,000 and in Vanderburgh County it is 84.43 per 100,000. Nationally, the one-year survival rate has increased; however, the five-year survival rate is 15 percent, second only to liver cancer at 7 percent. (1)

### VANDERBURGH COUNTY LUNG CANCER DIAGNOSED

#### Females diagnosed

<b>Age</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
0-44	1	0	2	0	1	1	0	0	4	1
45-64	23	22	25	24	17	21	23	18	13	12
65+	34	46	40	40	39	50	58	60	51	54
<b>Total</b>	<b>58</b>	<b>68</b>	<b>67</b>	<b>64</b>	<b>57</b>	<b>72</b>	<b>82</b>	<b>78</b>	<b>68</b>	<b>67</b>

#### Males diagnosed

<b>Age</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
0-44	2	2	4	2	3	3	1	2	1	4
45-64	26	26	28	26	25	23	19	28	26	20
65+	56	63	53	53	55	57	63	66	62	54
<b>Total</b>	<b>84</b>	<b>91</b>	<b>85</b>	<b>81</b>	<b>83</b>	<b>83</b>	<b>83</b>	<b>96</b>	<b>89</b>	<b>78</b>

#### Total diagnosed

<b>All Ages</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
	<i>142</i>	<i>159</i>	<i>152</i>	<i>145</i>	<i>140</i>	<i>155</i>	<i>165</i>	<i>174</i>	<i>157</i>	<i>145</i>

## LYMPHOMA (Non-Hodgkin's Lymphoma)

An estimated 53,400 new cases of Non-Hodgkin's lymphoma will occur nationally in 2003. Overall, incidence rates for Hodgkin disease have declined significantly since the late 1980's at a rate of 0.9 percent per year. It is estimated that 23,400 deaths from Non-Hodgkin's lymphoma will occur nationally in 2003. Survival rates will vary widely by cell type and stage of disease. The 5-year survival rate nationally for Non-Hodgkin lymphoma is 55 percent.

The average number of lymphoma cancer diagnosis for the years 1998, 1999, 2000, and 2001 in Vanderburgh County is 14 for females and 17 for males. Local data for Non-Hodgkin's Lymphoma incidence was not compiled prior to 1998.

### VANDERBURGH COUNTY LYMPHOMA CANCER DIAGNOSED

#### Females diagnosed

<b>Age</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
0-44	1	2	2	1
45-64	5	2	3	5
65+	9	8	12	8
<b>Total</b>	<b>15</b>	<b>12</b>	<b>17</b>	<b>14</b>

#### Males diagnosed

<b>Age</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
0-44	2	3	4	3
45-64	9	4	5	5
65+	7	8	12	7
<b>Total</b>	<b>18</b>	<b>15</b>	<b>21</b>	<b>15</b>

#### Total diagnosed

<b>All Ages</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
	<b>33</b>	<b>27</b>	<b>38</b>	<b>29</b>

## MALIGNANT MELANOMA

In 2001, the national mortality rate for melanoma was 2.6 per 100,000. (8) The 5-year relative survival rate for malignant melanoma is 89 percent nationally. (1) Melanoma affects a relatively young patient population; the median age at diagnosis is 45 years. The incidence rate for malignant melanoma in Vanderburgh County is less than the rates in Indiana and the United States.

### VANDERBURGH COUNTY MALIGNANT MELANOMA DIAGNOSED

#### Females diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
0-44	1	1	3	1	4	4	3	0	0	2
45-64	4	2	2	0	2	0	0	1	4	2
65+	1	0	1	4	1	0	2	2	1	2
<b>Total</b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>6</b>

#### Males diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
0-44	0	4	3	1	2	1	0	1	1	2
45-64	6	2	2	7	2	1	1	3	1	4
65+	6	5	2	4	3	2	2	3	3	4
<b>Total</b>	<b>12</b>	<b>11</b>	<b>7</b>	<b>12</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>10</b>

#### Total diagnosed

All Ages	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	<i>18</i>	<i>14</i>	<i>13</i>	<i>17</i>	<i>14</i>	<i>8</i>	<i>8</i>	<i>10</i>	<i>10</i>	<i>16</i>

## PANCREATIC CANCER

In 1999 and 2000, an estimated 57,000 new cases of pancreatic cancer were diagnosed. This number in 2001 and 2002 has risen to 60,000 new cases. In 2003, it is estimated that 30,000 American will die from pancreatic cancer. (1) Although progress is being made in the treatment of pancreatic cancer, the five year survival rate is very low.

### VANDERBURGH COUNTY PANCREATIC CANCER DIAGNOSED

#### Females diagnosed

<b>Age</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
0-44	1	0	2	0
45-64	3	2	3	0
65+	11	6	7	6
<b>Total</b>	<b>15</b>	<b>8</b>	<b>12</b>	<b>6</b>

#### Males diagnosed

<b>Age</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
0-44	1	0	0	0
45-64	0	2	4	4
65+	3	6	13	6
<b>Total</b>	<b>4</b>	<b>8</b>	<b>17</b>	<b>10</b>

#### Total diagnosed

<b>All Ages</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
	<b>19</b>	<b>16</b>	<b>29</b>	<b>16</b>

## PROSTATE CANCER

Nationally and locally the incidence of prostate cancer has been on a steady decline. During the late 1980's there was a sharp increase in the incidence of prostate cancer, but it has been on a steady decline in the 1990's. According to Wingo, et. al. this trend is likely related to the effects of prostate-specific antigen screening.(7) When a screening test, such as PSA, is widely utilized in a population, the incidence rate for the disease under scrutiny will increase as the result of early diagnosis of cancers that otherwise would have been diagnosed later. Prostate cancer incidence rates are expected to continue to decline and may stabilize at the rates in effect prior to the widespread use of PSA screening. (2) The incidence rates in Vanderburgh County for prostate cancer are lower than the incidence rates for Indiana and the United States.

### VANDERBURGH COUNTY PROSTATE CANCER DIAGNOSED

Males diagnosed

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>0-44</b>	0	0	0	0	0	1	0	0	0	0
<b>45-64</b>	19	23	32	18	15	11	20	16	24	19
<b>65+</b>	85	79	56	55	51	53	52	45	51	41
<b>Total</b>	<b>104</b>	<b>102</b>	<b>88</b>	<b>73</b>	<b>66</b>	<b>65</b>	<b>72</b>	<b>61</b>	<b>75</b>	<b>60</b>

## Indiana and United States 2003 New Cancer Cases (Estimated)

Site (Location)	State of Indiana	United States
<b>Female Breast</b>	4,700 * (2)	211,300 (2)
<b>Uterine Cervix</b>	300 (10)	12,200 (10)
<b>Colon &amp; Rectum</b>	3,500 (4)	147,500 (4)
<b>Uterine Corpus</b>	900 (8)	40,100 (8)
<b>Leukemia</b>	700 (9)	30,600 (9)
<b>Lung &amp; Bronchus</b>	4,400 (3)	171,900 (3)
<b>Melanoma</b>	1,400 (7)	54,200 (6)
<b>Non-Hodgkin's Lymphoma</b>	1,300 (5-6)	53,400 (7)
<b>Prostate</b>	5,000 (1)	220,900 (1)
<b>Urinary Bladder</b>	1,300 (5-6)	57,400 (5)
<b>ALL SITES</b>	31,200	1,334,100

\*Rank based on frequency

Source: American Cancer Society, Cancer Facts and Figures 2003

**2000 Incidence Rates Comparison  
per 100,000 population**

<b>SITE</b>	<b>VANDERBURGH</b>	<b>INDIANA</b>	<b>UNITED STATES</b>
<b>Bladder</b>	<b>18.03</b>	<b>19.74</b>	<b>18.90</b>
<b>Breast Cancer</b>	<b>173.61</b>	<b>135.44</b>	<b>128.59</b>
<b>Invasive Cervical</b>	<b>11.06</b>	<b>35.47</b>	<b>34.14</b>
<b>Colon &amp; Rectal</b>	<b>62.24</b>	<b>50.98</b>	<b>46.27</b>
<b>Lung</b>	<b>91.32</b>	<b>65.78</b>	<b>58.31</b>
<b>Non-Hodgkin's Lymphoma</b>	<b>22.10</b>	<b>19.74</b>	<b>19.51</b>
<b>Malignant Melanoma</b>	<b>5.82</b>	<b>16.45</b>	<b>16.95</b>
<b>Pancreatic</b>	<b>16.87</b>	<b>*</b>	<b>10.06</b>
<b>Prostate</b>	<b>92.03</b>	<b>130.90</b>	<b>130.56</b>

**\*numbers not available.**

Total Vanderburgh County incidence rates for all cancer sites are not available for state and national comparisons.

**2001 Incidence Rates Comparison  
(Per 100,000 Population)**

<b>SITE</b>	<b>VANDERBURGH</b>	<b>INDIANA</b>	<b>UNITED STATES</b>
<b>Bladder</b>	<b>15.14</b>	<b>19.48</b>	<b>18.83</b>
<b>Breast Cancer</b>	<b>168.26</b>	<b>140.08</b>	<b>131.97</b>
<b>Invasive Cervical</b>	<b>5.53</b>	<b>38.20</b>	<b>34.88</b>
<b>Colon &amp; Rectal</b>	<b>54.15</b>	<b>51.96</b>	<b>46.95</b>
<b>Lung</b>	<b>84.43</b>	<b>68.19</b>	<b>58.78</b>
<b>Non-Hodgkin's Lymphoma</b>	<b>16.89</b>	<b>21.11</b>	<b>19.49</b>
<b>Malignant Melanoma</b>	<b>9.32</b>	<b>17.86</b>	<b>17.82</b>
<b>Pancreatic</b>	<b>9.32</b>	<b>*</b>	<b>10.13</b>
<b>Prostate</b>	<b>73.70</b>	<b>145.79</b>	<b>139.91</b>

**\*number not available.**

Total Vanderburgh County incidence rates for all cancer sites are not available for state and national comparisons.

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