

Cancer Rates for Indiana's Public Health Districts 2008-2012



Indiana State
Department of Health

Submitted By

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For Indiana's Public Health Districts
2008-2012

(Published February 2015)

Indiana State Department of Health
Health and Human Services Commission
Division of Chronic Disease, Primary Care & Rural Health
2 North Meridian Street
Indianapolis, Indiana 46204

This publication was supported by Cooperative Agreement 1U58DP003884-01 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

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Introduction

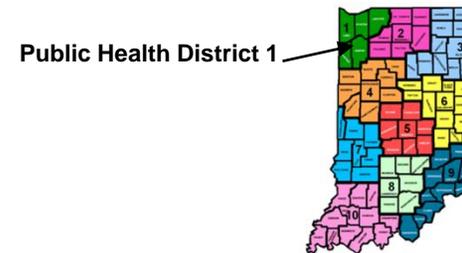
“Evidence based” or “data driven” decision-making are phrases often heard when allocating resources or designing public health programs aimed at reducing the burden of disease among disparately affected populations. The Indiana State Cancer Registry (ISCR) at the Indiana State Department of Health is poised to provide cancer data to assist in efforts aimed at controlling and managing cancer among Indiana residents. The ISCR works under the mandate provided by code IC 16-38-2-1 (www.in.gov/legislative/ic/code/title16/ar38/ch2.html) to collect and record all cases of malignant disease, other tumors and precancerous diseases that are diagnosed or treated in Indiana. The ISCR also provides data and information to researchers to advance scientific knowledge around cancer causes, diagnoses and treatment.

Growing interest in establishing local-level coalitions around cancer increased the demand for district-level and county-level incidence and mortality data for the top four cancer sites: lung, female breast, colorectal and prostate. This report provides a comprehensive look at Indiana’s top four cancers by Indiana’s public health districts (PHD). While district level data are readily available via the online ISCR’s statistics report generator, a geographic comparative analysis is not. In addition, inclusion of county level data in the online data generator cannot occur as many have numbers too small for reporting or calculating stable rates. This report considers each PHD individually and comparatively with the other nine districts as well as to Indiana as a whole. It also provides for comparisons by race and gender and comparisons by county and state. Use of *Canstat*, an internal graphical user interface, facilitated extraction of data from the ISCR. Confidence interval comparisons determined significant differences between rates. The results provide a backdrop to guide the cancer control planning efforts not only for governmental entities and district coalitions but also for non-profit health agencies that serve the communities within each district.

Cancer and Minority Populations in Indiana

African-Americans are the largest minority group in Indiana. Their large numbers lend themselves to calculating stable rates statewide and district wide. As a result, this document focused on finding disparities between whites and African-Americans. Published data on American Indians, Asians and Hispanics is limited due to their smaller numbers. Data on these minority groups are often not reported or referred to as “statistically insignificant,” because the rates are too low. This is the case in Indiana. Use of the words “significant” and “insignificant” are statistical terms and does not imply that the burden of cancer affecting them is any more or less important.

Public Health District 1



Public Health District 1 (District 1) is comprised of Jasper, Lake, LaPorte, Newton and Porter counties. It lies in the northwest corner of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 1 had a statistically higher rate of 490.5 per 100,000 people for the same period. For mortality, the rate for District 1 of 192.6 per 100,000 people was higher, but not statistically different than the Indiana rate of 187.3 per 100,000 people.

Figure 1. Age-adjusted Cancer Incidence Rates – District 1 vs. Indiana, 2008-2012

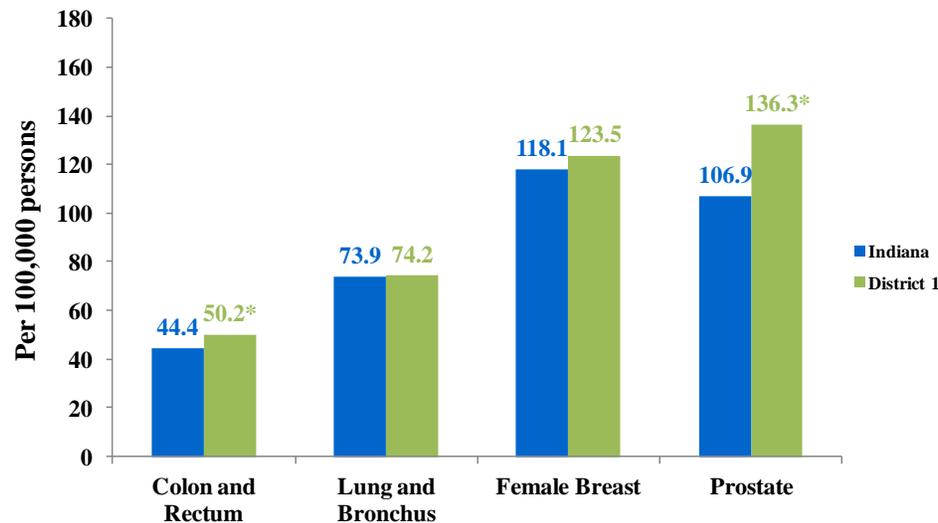
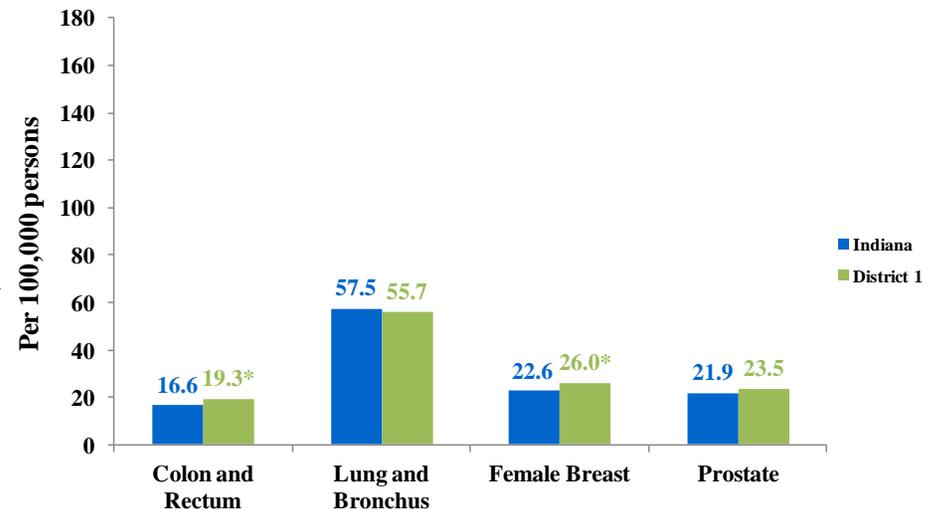


Figure 2. Age-adjusted Cancer Mortality Rates – District 1 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 ↑ = higher ↓ = lower "blank" = no difference

Table 1. Cancer Incidence Rate Comparisons for District 1, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9	↓	17,650	106.9	↓	22,082	118.1		25,847	73.9		15,495	44.4	↓
District 1	22,316	490.5		2,920	136.3		3,012	123.5		3,381	74.2		2,265	50.2	
District 2	16,510	470.4	↓	1,940	117.9	↓	2,163	117.1		2,524	71.3	↓	1,592	45.3	↓
District 3	17,163	443.5	↓	1,849	100.8	↓	2,318	112.9		2,450	63.3	↓	1,647	42.4	↓
District 4	8,416	452.6	↓	926	105.9	↓	1,081	110.5		1,379	74.1		820	44.0	↓
District 5	37,854	458.8		3,597	92.2	↓	5,674	124.7	↑	5,846	73.6	↑	3,322	40.7	↓
District 6	18,879	479.2	↓	2,198	117.8	↓	2,330	112.3	↓	3,226	80.0	↓	1,841	45.9	↓
District 7	8,010	489.3	↓	834	105.7	↓	996	115.9		1,380	82.5	↑	785	48.2	↓
District 8	9,182	471.1	↓	858	90.7	↓	1,235	119.7		1,498	75.9		865	45.1	↓
District 9	11,810	462.7	↓	1,053	84.7	↓	1,508	109.3	↓	2,088	81.4	↑	1,063	41.9	↓
District 10	13,035	457.5	↓	1,474	107.9	↓	1,763	117.3		2,073	71.9		1,295	45.2	

Table 2. Cancer Incidence Rate Comparisons for Counties District 1, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9		18,854	106.9		22,082	118.1		25,847	73.9		15,495	44.4	
Jasper	913	488.1		109	116.7		122	126.3		166	88.1	↑	88	46.6	
Lake	13,521	494.9	↑	1,715	136.5	↑	1,840	124.7		1,978	72.2		1,435	52.5	↑
LaPorte	3,179	486.9	↑	432	140	↑	398	115.9		508	77.1		308	47.7	
Newton	388	432.2		46	100.8		46	101		66	70.4		41	46.9	
Porter	4,315	486.7	↑	618	141.5	↑	606	126.6		663	76		393	46.2	

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ↓ = lower "blank" = no difference

Table 3. Cancer Mortality Rate Comparisons for District 1, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	65,367	187.3		2,918	21.9	4,410	22.6	↓	20,079	58.5		5,832	16.9	↓
District 1	8,741	192.6		416	23.5	660	26.0		2,504	55.9		855	19.1	
District 2	6,452	180.3	↓	324	23.2	420	20.8	↓	1,888	53.3		558	15.7	↓
District 3	6,962	178.7	↓	361	24.1	503	23.0		1,918	49.5	↓	634	16.2	
District 4	3,444	183.0		153	20.4	235	22.2		1,072	57.7		332	17.6	
District 5	14,870	188.2		658	22.8	1,065	23.3		4,571	58.2		1,210	15.1	↓
District 6	7,847	194.4		295	18.6	489	22.4		2,544	63.1	↑	702	17.1	
District 7	3,310	200.0		126	20.3	208	22.8		1,124	67.7	↑	316	19.2	
District 8	3,669	187.7		155	20.4	233	21.5		1,179	59.9	↑	299	15.5	↓
District 9	4,841	191.7		189	20.4	250	17.8	↓	1,649	64.6		402	16.1	
District 10	5,231	180.6		241	21.4	347	21.8		1,560	54.1		488	16.7	

Table 4. Cancer Mortality Rate Comparisons for Counties in District 1, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	65,367	187.3		2,918	22.4	4,410	22.6		20,028	57.5		5,818	16.6	
Jasper	384	208.0		X	27.4	33	32.3		140	75.4	↑	25	13.6	
Lake	5,333	194.8	↑	245	22.4	403	26.2	↑	1,497	54.8		546	20.1	↑
LaPorte	1,278	195.5		67	27.4	91	25.8		362	55.7		133	19.7	
Newton	179	197.0		X	X	X	X		56	60.3		23	25.1	
Porter	1,567	180.6		76	23.4	119	24.2		468	53.8		150	17.4	

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE†
 ↑ = higher ↓ = lower “blank” = no difference

Incidence and Mortality by Race and Gender

Table 5. Cancer Incidence Rates by Races and Genders for District 1 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	463.1	481.9 ↑	479.7	508.4 ↑	514.1	549.5 ↑	436.8	451.3 ↑	512.0	537.3	439.8	449.5	546.5	575.2	441.6	471.2
Colon and Rectum	43.7	47.6 ↑	51.5	65.8 ↑	50.4	56.4 ↑	39.6	45.2 ↑	50.1	54.3	39.2	42.4	57.7	72.1	47.3	61.2 ↑
Lung and Bronchus	73.9	75.0	80.0	72.6	91.3	92.1	61.0	60.9	91.8	92.1	61.9	63.0	106.6	100.3	62.1	54.7
Female Breast	–	–	–	–	–	–	118.1	123.5	–	–	118.0	122.0	–	–	122.0	131.6
Prostate	–	–	–	–	106.9	136.3 ↑	–	–	100.5	120.8 ↑	–	–	146.3	163.3	–	–

Table 6. Cancer Mortality Rates by Races and Genders for District 1 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	183.2	185.6	221.2	217.5	231.3	232.3	157.1	165.5 ↑	226.5	224.6	439.8	449.5	277.0	261.3	186.9	189.6
Colon and Rectum	16.1	17.5	22.0	28.9 ↑	20.2	23.3 ↑	13.8	16.4 ↑	19.7	21.2	39.2	42.4	26.7	36.5	19.0	23.7
Lung and Bronchus	56.8	55.6	64.3	53.8 ↓	75.1	71.0	44.5	44.1	74.0	70.4	61.9	63.0	89.0	73.1	47.4	40.0
Female Breast	–	–	–	–	–	–	118.1	123.5	–	–	21.8	24.8	–	–	30.0	28.9
Prostate	–	–	–	–	106.9	136.3	–	–	20.5	20.1	–	–	43.1	44.3	–	–

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the district’s rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method.

Stage of Diagnosis by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE[†]
 ↑ = higher ↓ = lower "blank" = no difference

Table 7. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender- District 1 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female		
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	
In Situ	0.1	0.0	0.1	X	0.0	0.0	X	X	X	0.0	X	X	X	0.0	0.0	0.0	0.0	0.0	0.0
Local	14.1	13.6	14.2	13.9	13.8	12.2	15.8	16.9	13.0	11.3	15.8	16.8	13.2	11.9	17.1	17.5	11.6	9.0	
Regional	17.3	16.4	17.4	16.6	17.6	16.0	21.2	20.1	14.4	13.6	21.1	19.9	14.6	14.1	23.9	22.6	13.2	11.5	
Distant	38.2	37.6	38.2	37.6	44.0	39.5	47.8	47.0	30.8	30.6	47.5	46.4	30.8	31.0	58.0	53.7	34.4	30.0	

Table 8. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender -District 1 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female									
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD								
In Situ	2.6	4.5	↑	2.2	3.9	↑	3.7	7.6	↑	3.1	5.4	↑	2.3	3.7	↑	2.6	4.7	↑	1.8	3.2	↑	4.2	9.8	↑	3.3	6.0
Local	18.2	20.6	↑	17.9	20.2	↑	19.4	23.1	↑	20.8	23.8	↑	16.0	18.0	↑	20.5	23.8	↑	15.7	17.3	↑	22.0	24.5	↑	17.6	22.1
Regional	15.0	16.2		14.8	15.6		16.5	20.3		16.7	18.1		13.5	14.7		16.6	17.7		13.3	14.0		17.4	21.1		15.9	19.5
Distant	8.8	10.1		8.8	8.9		12.3	17.1	↑	10.0	11.5	↑	7.8	8.9		9.8	10.1		7.6	8.0		14.0	21.2		10.9	14.1

Table 9. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race-District 1 vs. Indiana. 2008-2012†**

	All		White		African-American		
	Indiana	PHD	Indiana	PHD	Indiana	PHD	
In Situ	26.6	27.6	26.2	27.3	31.7	30.1	
Local	74.9	74.4	75.5	75.1	68.2	70.0	
Regional	33.7	38.1	↑	33.2	36.1	42.1	49.8
Distant	7.4	8.7		7.4	8.4	9.2	10.1

Table 10. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race-District 1 vs. Indiana, 2008-2012†**

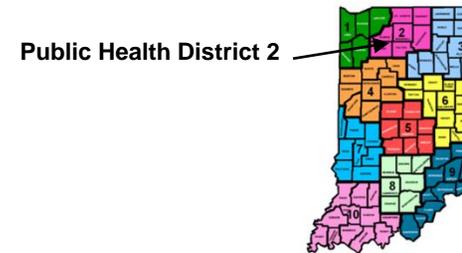
	All		White		African-American			
	Indiana	PHD	Indiana	PHD	Indiana	PHD		
In Situ	X	0.0	0.0	0.0	0.0	0.0		
Local	83.4	108.6	↑	78.7	95.6	↑	108.5	124.1
Regional	11.7	16.3	↑	11.3	15.7	↑	15.1	18.3
Distant	6.3	6.8		6.3	5.5		15.1	X

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.



Public Health District 2

Public Health District 2 (District 2) is comprised of Elkhart, Fulton, Kosciusko, Marshall, Pulaski, St. Joseph and Starke counties. It lies in the north central part of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 2 had a higher, but not statistically different rate of 470.4 per 100,000 people for the same period. For mortality, the rate for District 2 of 180.3 per 100,000 people was statistically lower than the overall Indiana rate of 187.3 per 100,000 people.

Figure 3. Age-adjusted Cancer Incidence Rates – District 2 vs. Indiana, 2008-2012

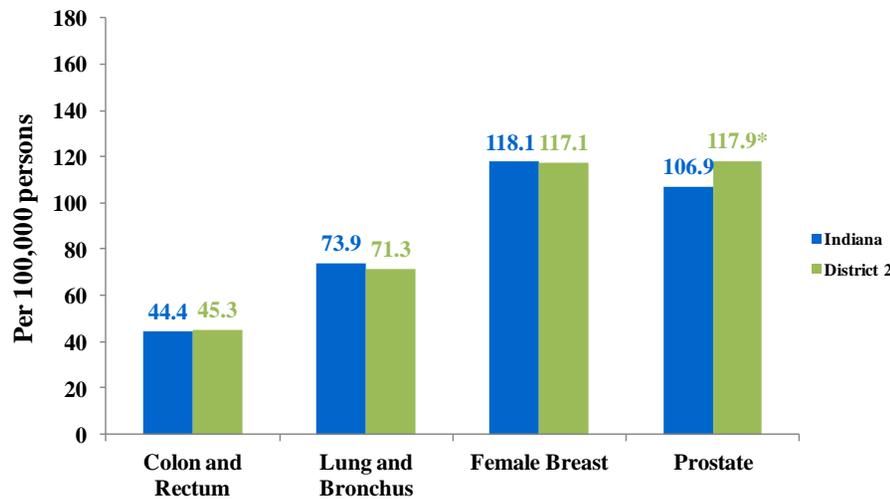
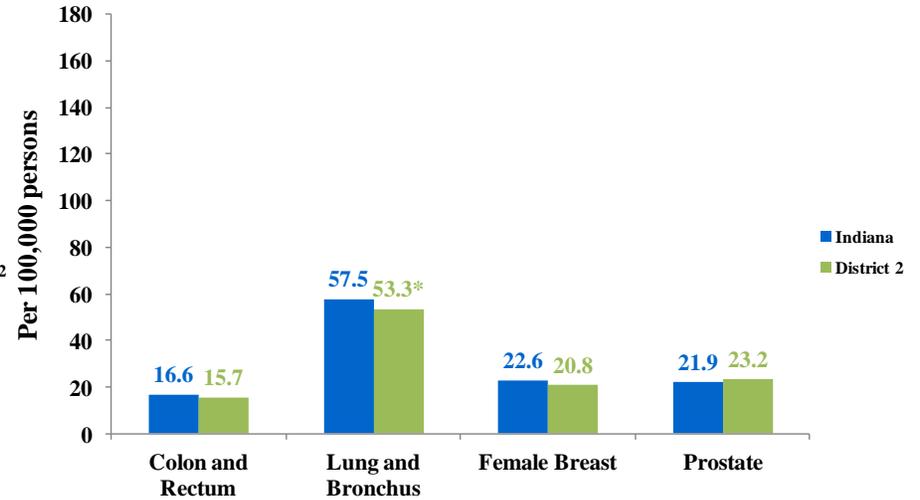


Figure 4. Age-adjusted Cancer Mortality Rates – District 2 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ↓ = lower "blank" = no difference

Table 11. Cancer Incidence Rate Comparisons for District 2, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9	↑	17,650	106.9		22,082	118.1	↑	25,847	73.9	↑	15,495	44.4	
District 1	22,316	490.5	↑	2,920	136.3	↑	3,012	123.5		3,381	74.2	↑	2,265	50.2	↑
District 2	16,510	470.4		1,940	117.9		2,163	117.1		2,524	71.3		1,592	45.3	
District 3	17,163	443.5	↓	1,849	100.8	↓	2,318	112.9		2,450	63.3	↓	1,647	42.4	
District 4	8,416	452.6		926	105.9		1,081	110.5		1,379	74.1	↑	820	44.0	
District 5	37,854	458.8	↑	3,597	92.2		5,674	124.7	↑	5,846	73.6	↑	3,322	40.7	
District 6	18,879	479.2	↑	2,198	117.8		2,330	112.3		3,226	80.0	↑	1,841	45.9	
District 7	8,010	489.3	↑	834	105.7		996	115.9		1,380	82.5	↑	785	48.2	
District 8	9,182	471.1		858	90.7	↓	1,235	119.7		1,498	75.9		865	45.1	
District 9	11,810	462.7		1,053	84.7	↓	1,508	109.3	↓	2,088	81.4	↑	1,063	41.9	
District 10	13,035	457.5	↓	1,474	107.9	↓	1,763	117.3		2,073	71.9		1,295	45.2	

Table 12. Cancer Incidence Rate Comparisons for Counties in District 2, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum	
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†
Indiana	163,199	466.9		17,650	106.9		22,082	118.1		25,847	73.9		15,495	44.4
Elkhart	4,721	471.1		507	110.7		602	113.7		703	70.1		421	42.2
Fulton	625	473.3		69	104.9		76	110.3		110	81.2		72	54
Kosciusko	1,962	462.3		230	113.7		263	120.3		302	69.8		188	44.1
Marshall	1,281	470.8		167	131.4	↑	163	111.8		167	60	↓	121	44.7
Pulaski	390	452.5		49	110.7		41	93.2		63	69.6		45	52.3
St. Joseph	6,806	469.4		827	122.6	↑	937	121.9		1,050	71.8		688	47.1
Starke	725	507.1	↑	91	124.9		81	111.1		129	85.9		57	40.3

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 ↑ = higher ↓ = lower "blank" = no difference

Table 13. Cancer Mortality Rate Comparisons for District 2, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	65,367	187.3		2,918	21.9	4,410	22.9		20,079	58.5		5,832	16.9	↓
District 1	8,741	192.6	↑	416	23.5	660	26.0	↑	2,504	55.9	↑	855	19.1	
District 2	6,452	180.3		324	23.2	420	20.8		1,888	53.3		558	15.7	
District 3	6,962	178.7		361	24.1	503	23.0		1,918	49.5		634	16.2	
District 4	3,444	183.0		153	20.4	235	22.2		1,072	57.7		332	17.6	
District 5	14,870	188.2		658	22.8	1,065	23.3		4,571	58.2	↑	1,210	15.1	
District 6	7,847	194.4	↑	295	18.6	489	22.4		2,544	63.1	↑	702	17.1	
District 7	3,310	200.0	↑	126	20.3	208	22.8		1,124	67.7	↑	316	19.2	↑
District 8	3,669	187.7		155	20.4	233	21.5		1,179	59.9		299	15.5	
District 9	4,841	191.7	↑	189	20.4	250	17.8		1,649	64.6	↑	402	16.1	
District 10	5,231	180.6		241	21.4	347	21.8		1,560	54.1		488	16.7	

Table 14. Cancer Mortality Rate Comparisons for Counties in District 2, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum	
	Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†		Count	Rate†
Indiana	65,367	187.3		2,918	21.9	4,410	22.6		20,028	57.5		5,818	16.6
Elkhart	1,720	171.3	↓	81	21.4	112	19.9		492	49.7	↓	155	15.8
Fulton	277	207.2		X	X	18	24.2		88	66.3		21	15.5
Kosciusko	800	188.3		40	25.5	50	21.2		242	56.7		66	15.0
Marshall	462	163.8	↓	23	21.9	30	18.9		128	46.0	↓	38	13.3
Pulaski	170	192.4		X	X	X	X		50	55.4		X	X
St. Joseph	2,717	180.5		143	23.5	178	20.9		780	52.4	↓	245	16.3
Starke	306	219.0	↑	X	X	23	31.4		108	72.7	↑	21	15.0

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Incidence and Mortality by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Table 15. Cancer Incidence Rates by Races and Genders for District 2 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	463.1	458.5	479.7	502.4	514.1	516.3	436.8	441.4	512.0	499.4	439.8	440.6	546.5	615.1	441.6	428.4
Colon and Rectum	43.7	44.2	51.5	47.2	50.4	50.3	39.6	40.9	50.1	49.1	39.2	40.6	57.7	56.0	47.3	39.2
Lung and Bronchus	73.9	70.6	80.0	92.8	91.3	86.9	61.0	59.5	91.8	85.7	61.9	60.2	106.6	138.3	62.1	61.5
Female Breast	–	–	–	–	–	–	118.1	117.1	–	–	118.0	117.5	–	–	122.0	118.7
Prostate	–	–	–	–	106.9	117.9	–	–	100.5	102.8	–	–	146.3	179.8	–	–

Table 16. Cancer Mortality Rates by Races and Genders for District 2 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female				
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD			
All Sites	183.2	177.1	221.2	205.9	231.3	221.8	157.1	151.7	226.5	217.3	439.8	440.6	277.0	282.8	186.9	156.4			
Colon and Rectum	16.1	15.3	22.0	17.6	20.2	18.5	13.8	13.5	19.7	18.4	39.2	40.6	26.7	X	19.0	X			
Lung and Bronchus	56.8	52.7	↓	64.3	59.3	75.1	69.0	↓	44.5	41.0	74.0	67.4	↓	61.9	60.2	89.0	99.4	47.4	31.5
Female Breast	–	–	–	–	–	–	118.1	117.1	–	–	21.8	20.3	–	–	30.0	24.6			
Prostate	–	–	–	–	106.9	117.9	–	–	20.5	22.3	–	–	43.1	46.9	–	–			

Source: Indiana State Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

†"↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Stage of Diagnosis by Race and Gender

Table 17. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender –District 2 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	0.1	X	0.1	X	0.0	0.0	X	X	X	X	X	X	X	X	0.0	0.0	0.0	0.0
Local	14.1	14.2	14.2	14.2	13.8	16.6	15.8	14.9	13.0	14.0	15.8	14.8	13.2	14.2	17.1	X	11.6	X
Regional	17.3	15.9	17.4	15.6	17.6	23.7	21.2	19.4	14.4	13.4	21.1	18.6	14.6	13.5	23.9	35.1	13.2	X
Distant	38.2	38.8	38.2	38.4	44.0	50.7	47.8	49.2	30.8	30.5	47.5	48.2	30.8	30.5	58.0	80.7	34.4	30.6

Table 18. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender –District 2 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	1.9	2.2	1.8	3.7	X	3.1	2.4	2.3	1.5	2.6	2.2	1.8	1.4	4.2	X	3.3	X
Local	18.2	17.7	17.9	17.7	19.4	12.8	20.8	20.0	16.0	15.6	20.5	19.9	15.7	15.7	22.0	X	17.6	X
Regional	15.0	15.7	14.8	15.3	16.5	20.5	16.7	17.1	13.5	14.4	16.6	16.5	13.3	14.2	17.4	25.1	15.9	X
Distant	8.8	9.5	8.8	9.4	12.3	12.7	10.0	10.3	7.8	8.9	9.8	10.0	7.6	8.9	14.0	X	10.9	X

Table 19. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race–District 2 vs. Indiana, 2008-2012†**

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	26.6	28.1	26.2	27.9	31.7	54.7
Local	74.9	71.1	75.5	72.4	68.2	70.0
Regional	33.7	35.1	33.2	34.6	42.1	45.5
Distant	7.4	8.4	7.4	8.2	9.2	30.8

Table 20. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race–District 2 vs. Indiana, 2008-2012†**

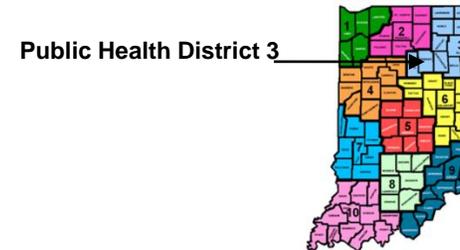
	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	X	0.0	0.0	0.0	0.0	0.0
Local	83.4	84.7	78.7	76.4	108.5	125.1
Regional	11.7	13.5	11.3	12.9	15.1	26.6
Distant	6.3	7.1	6.3	7.0	15.1	X

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.



Public Health District 3

Public Health District 3 (District 3) is comprised of Adams, Allen, DeKalb, Huntington, LaGrange, Miami, Noble, Steuben, Wabash, Wells and Whitley counties. It lies in the northeast corner of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 3 had a statistically lower rate of 443.5 per 100,000 people for the same period. For mortality, the rate for District 3 of 178.7 per 100,000 people was statistically lower than the overall Indiana rate of 187.3 per 100,000 people.

Figure 5. Age-adjusted Cancer Incidence Rates – District 3 vs. Indiana, 2008-2012

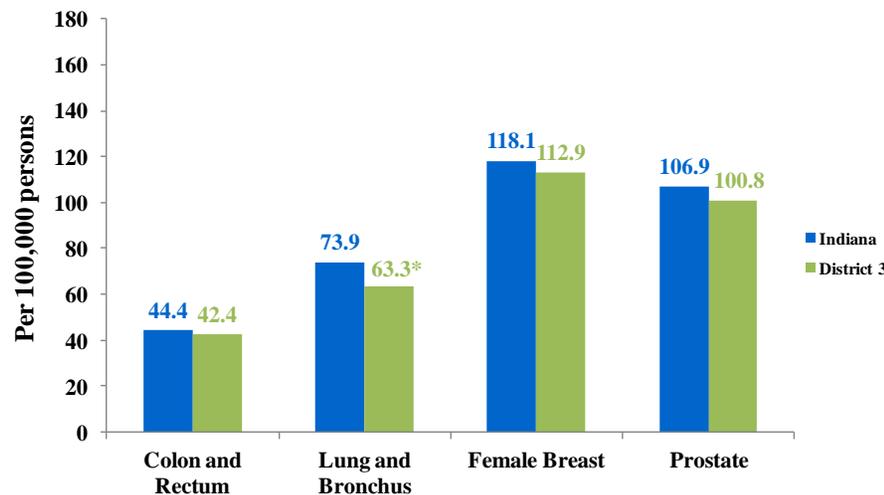
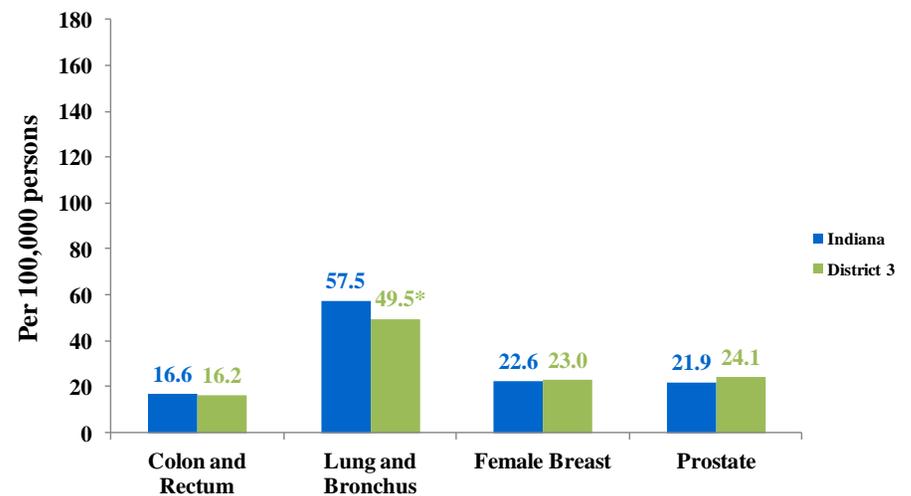


Figure 6. Age-adjusted Cancer Mortality Rates – District 3 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ‡ = lower “blank” = no difference

Table 21. Cancer Incidence Rate Comparisons for District 3, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9	↑	17,650	106.9	↑	22,082	118.1		25,847	73.9	↑	15,495	44.4	
District 1	22,316	490.5	↑	2,920	136.3	↑	3,012	123.5		3,381	74.2	↑	2,265	50.2	↑
District 2	16,510	470.4	↑	1,940	117.9	↑	2,163	117.1		2,524	71.3	↑	1,592	45.3	
District 3	17,163	443.5		1,849	100.8		2,318	112.9		2,450	63.3		1,647	42.4	
District 4	8,416	452.6	↑	926	105.9	↑	1,081	110.5		1,379	74.1	↑	820	44.0	
District 5	37,854	458.8	↑	3,597	92.2	↑	5,674	124.7	↑	5,846	73.6	↑	3,322	40.7	
District 6	18,879	479.2	↑	2,198	117.8	↑	2,330	112.3		3,226	80.0	↑	1,841	45.9	
District 7	8,010	489.3	↑	834	105.7	↑	996	115.9		1,380	82.5	↑	785	48.2	
District 8	9,182	471.1	↑	858	90.7	↑	1,235	119.7		1,498	75.9	↑	865	45.1	
District 9	11,810	462.7	↑	1,053	84.7	↑	1,508	109.3	↓	2,088	81.4	↑	1,063	41.9	
District 10	13,035	457.5	↑	1,474	107.9	↓	1,763	117.3		2,073	71.9	↓	1,295	45.2	↑

Table 22. Cancer Incidence Rate Comparisons for Counties in District 3, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9		17,650	106.9		22,082	118.1		25,847	73.9		15,495	44.4	
Adams	824	442.4		98	115		113	114.6		92	48.5	↓	103	56.1	↑
Allen	8,124	447.9	↓	865	101.6		1,142	116.2		1,117	62.5	↓	782	42.9	
DeKalb	1,044	458.9		109	97.7		151	124.1		167	72.1		104	46.8	
Huntington	1,042	477.4		110	106.1		129	111.1		137	62.8		103	46.8	
LaGrange	709	404.9	↓	66	78.3	↓	94	105.1		110	62.2		63	35.1	
Miami	913	428.1	↓	103	95.1		103	98.4		167	78.4		66	32.1	↓
Noble	1,056	417.3	↓	107	91		152	113.9		161	64.9		103	40.5	
Steuben	840	411.9	↓	91	87.3		99	93	↓	139	65.5		76	37.7	
Wabash	988	457.5		126	122.1		120	107.5		136	62.9		108	45.6	
Wells	709	421.7	↓	67	85.8		95	110.7		92	53.3	↓	56	32.2	↓
Whitley	914	470.7		107	115.7		120	119.8		132	67.2		83	42.5	

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method).

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ‡ = lower “blank” = no difference

Table 23. Cancer Mortality Rate Comparisons for District 3, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum			
	Count	Rate†		Count	Rate†	Count	Rate†	Count	Rate†		Count	Rate†		
Indiana	163,199	466.9	↑	17,650	106.9	↑	22,082	118.1	25,847	73.9	↑	15,495	44.4	
District 1	22,316	490.5	↑	2,920	136.3	↑	3,012	123.5	3,381	74.2	↑	2,265	50.2	↑
District 2	16,510	470.4	↑	1,940	117.9	↑	2,163	117.1	2,524	71.3	↑	1,592	45.3	
District 3	17,163	443.5		1,849	100.8		2,318	112.9	2,450	63.3		1,647	42.4	
District 4	8,416	452.6	↑	926	105.9	↑	1,081	110.5	1,379	74.1	↑	820	44.0	
District 5	37,854	458.8	↑	3,597	92.2	↑	5,674	124.7	5,846	73.6	↑	3,322	40.7	
District 6	18,879	479.2	↑	2,198	117.8	↑	2,330	112.3	3,226	80.0	↑	1,841	45.9	
District 7	8,010	489.3	↑	834	105.7	↑	996	115.9	1,380	82.5	↑	785	48.2	
District 8	9,182	471.1	↑	858	90.7	↑	1,235	119.7	1,498	75.9	↑	865	45.1	
District 9	11,810	462.7	↑	1,053	84.7	↑	1,508	109.3	2,088	81.4	↑	1,063	41.9	
District 10	13,035	457.5	↑	1,474	107.9	↓	1,763	117.3	2,073	71.9	↓	1,295	45.2	↑

Table 24. Cancer Mortality Rate Comparisons for Counties in District 3, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†	Count	Rate†	Count	Rate†		Count	Rate†	
Indiana	65,367	187.3		2,918	21.9	4,410	22.6	20,028	57.5		5,818	16.6	
Adams	320	162.4	↓	23	27.7	X	X	66	34.0	↓	35	19.6	
Allen	3,166	175.6	↓	144	21.4	258	25.0	855	48.2	↓	288	15.7	
DeKalb	439	193.4		X	X	25	20.5	122	53.4		41	17.4	
Huntington	445	197.5		27	30.4	33	25.4	119	52.3		39	17.6	
LaGrange	295	168.9	↓	X	X	X	X	80	45.7		29	15.6	
Miami	409	192.6		X	X	21	19.5	145	68.1		25	11.8	
Noble	473	189.7		29	30.8	38	29.3	133	52.8		51	20.7	
Steuben	346	170.4		21	26.0	31	26.2	99	46.7	↓	29	14.7	
Wabash	432	186.3		29	29.6	25	18.9	115	52.3		39	15.2	
Wells	266	150.7	↓	X	X	X	X	77	44.4		28	15.7	
Whitley	371	189.8		32	44.1	↑	24	21.8	107	54.1		30	15.7

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Incidence and Mortality by Race and Gender

Table 25. Cancer Incidence Rates by Races and Genders for District 3 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	463.1	443.8 ↓	479.7	404.7 ↓	514.1	488.2 ↓	436.8	415.9 ↓	512.0	492.3 ↑	439.8	423.8 ↓	546.5	464.7 ↓	441.6	368.3 ↓
Colon and Rectum	43.7	42.1	51.5	48.4	50.4	48.8	39.6	37.4	50.1	49.3	39.2	37.8	57.7	59.4	47.3	42.1
Lung and Bronchus	73.9	63.7 ↓	80.0	65.3	91.3	78.4 ↓	61.0	52.2 ↓	91.8	80.0	61.9	53.2 ↓	106.6	74.8	62.1	57.9
Female Breast	-	-	-	-	-	-	118.1	112.9	-	-	118.0	115.2	-	-	122.0	88.5
Prostate	-	-	-	-	106.9	100.8	-	-	100.5	97.9	-	-	146.3	132.5	-	-

Table 26. Cancer Mortality Rates by Races and Genders for District 3 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	183.2	177.1 ↓	221.2	199.5	231.3	222.1	157.1	150.1	226.5	219.8	439.8	423.8	277.0	263.4	186.9	165.2
Colon and Rectum	16.1	16.1	22.0	15.6	20.2	20.0	13.8	13.2	19.7	19.8	39.2	37.8	26.7	X	19.0	X
Lung and Bronchus	56.8	49.3 ↓	64.3	55.9	75.1	65.4 ↓	44.5	38.0 ↓	74.0	65.0 ↓	61.9	53.2 ↓	89.0	82.6	47.4	38.2
Female Breast	-	-	-	-	-	-	118.1	112.9	-	-	21.8	23.0	-	-	30.0	24.5
Prostate	-	-	-	-	106.9	100.8	-	-	20.5	23.0	-	-	43.1	54.6	-	-

Source: Indiana State Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Stage of Diagnosis by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Table 27. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender –District 3 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female		
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	
In Situ	0.1	X	0.1	X	0.0	0.0	X	X	X	0.0	X	X	X	0.0	0.0	0.0	0.0	0.0	0.0
Local	14.1	13.5	14.2	13.7	13.8	X	15.8	14.9	13.0	12.7	15.8	15.3	13.2	12.7	17.1	X	11.6	X	
Regional	17.3	14.1 ↓	17.4	14.1 ↓	17.6	15.2	21.2	17.6 ↓	14.4	11.5 ↓	21.1	17.5 ↓	14.6	11.7 ↓	23.9	X	13.2	X	
Distant	38.2	30.4 ↓	38.2	30.6 ↓	44.0	32.9	47.8	38.1 ↓	30.8	24.6 ↓	47.5	38.3 ↓	30.8	24.7 ↓	58.0	40.9	34.4	27.6	

Table 28. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender –District 3 vs. Indiana, 2008-2012†**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	2.0	2.2	1.8	3.7	X	3.1	2.4	2.3	1.6	2.6	2.3	1.8	1.4	4.2	X	3.3	X
Local	18.2	18.7	17.9	18.3	19.4	25.8	20.8	21.3	16.0	16.7	20.5	20.7	15.7	16.5	22.0	31.1	17.6	22.4
Regional	15.0	13.4	14.8	13.5	16.5	11.1	16.7	15.6	13.5	11.6	16.6	15.6	13.3	11.8	17.4	X	15.9	X
Distant	8.8	8.0	8.8	7.9	12.3	X	10.0	9.3	7.8	7.0	9.8	9.2	7.6	7.0	14.0	X	10.9	X

Table 29. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race–District 3 vs. Indiana, 2008-2012†**

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	26.6	23.5	26.2	23.9	31.7	X
Local	74.9	69.3 ↓	75.5	70.9	68.2	44.3 ↓
Regional	33.7	33.6	33.2	34.3	42.1	30.8
Distant	7.4	7.3	7.4	7.2	9.2	X

Table 30. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race–District 3 vs. Indiana, 2008-2012†**

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	X	0.0	0.0	0.0	0.0	0.0
Local	83.4	82.1	78.7	79.8	108.5	104.3
Regional	11.7	8.9 ↓	11.3	9.1 ↓	15.1	X
Distant	6.3	5.9	6.3	5.6	15.1	X

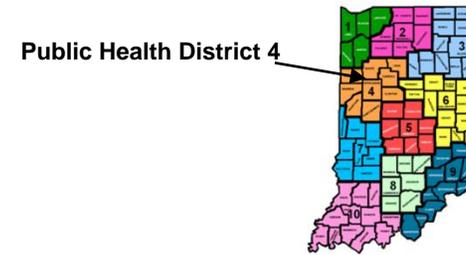
Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the district’s rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method.

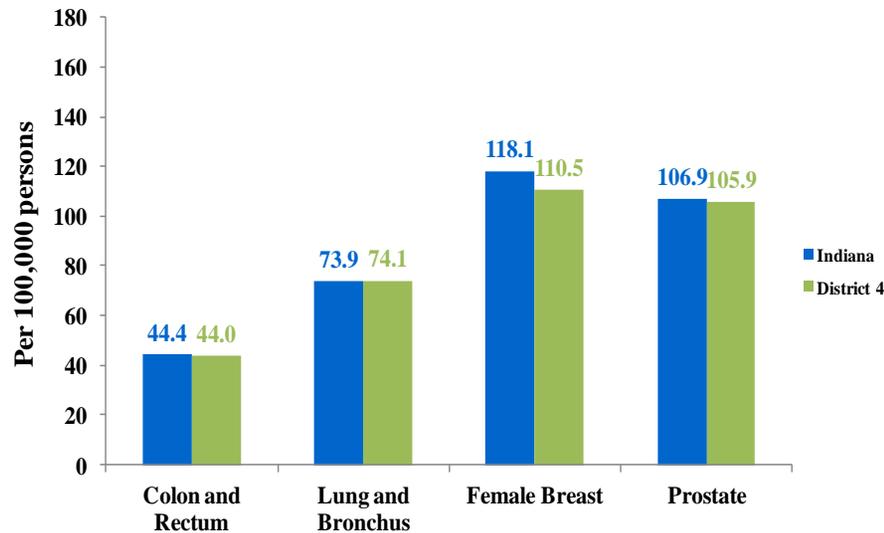
“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Public Health District 4



Public Health District 4 (District 4) is comprised of Benton, Carroll, Cass, Clinton, Fountain, Montgomery, Tippecanoe, Warren and White counties. It lies in the west central part of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 4 had a statistically lower rate of 452.6 per 100,000 people for the same period. For mortality, the rate for District 4 of 183.0 per 100,000 people was lower, but not statistically different than the overall Indiana rate of 187.3 per 100,000 people.

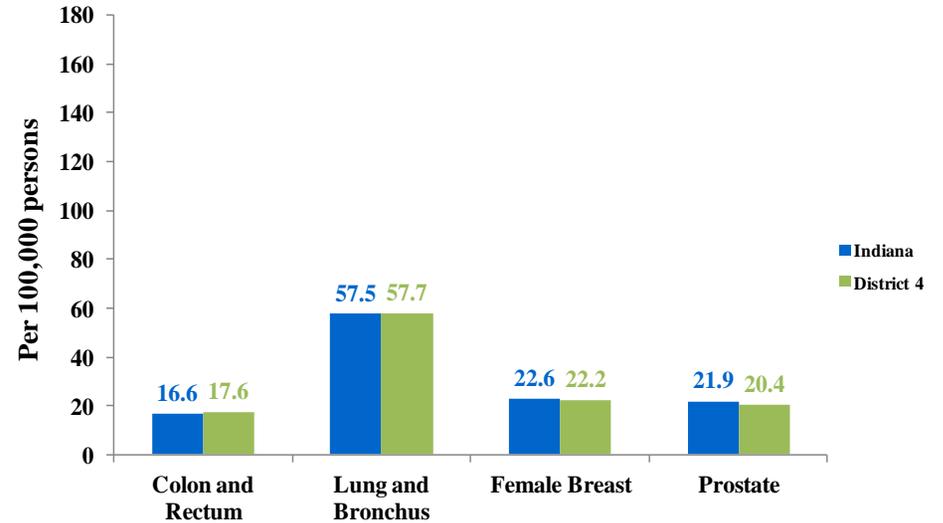
Figure 7. Age-adjusted Cancer Incidence Rates – District 4 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Figure 8. Age-adjusted Cancer Mortality Rates – District 4 vs. Indiana, 2008-2012



↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ‡ = lower "blank" = no difference

Incidence

Table 31. Cancer Incidence Rate Comparisons for District 4, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9		17,650	106.9	↓	22,082	118.1		25,847	73.9		15,495	44.4	
District 1	22,316	490.5	↑	2,920	136.3	↑	3,012	123.5		3,381	74.2		2,265	50.2	↑
District 2	16,510	470.4		1,940	117.9		2,163	117.1		2,524	71.3	↓	1,592	45.3	
District 3	17,163	443.5	↓	1,849	100.8	↓	2,318	112.9		2,450	63.3	↓	1,647	42.4	
District 4	8,416	452.6		926	105.9		1,081	110.5		1,379	74.1		820	44.0	
District 5	37,854	458.8	↑	3,597	92.2	↓	5,674	124.7	↑	5,846	73.6	↑	3,322	40.7	
District 6	18,879	479.2		2,198	117.8		2,330	112.3		3,226	80.0	↑	1,841	45.9	
District 7	8,010	489.3		834	105.7	↓	996	115.9		1,380	82.5	↑	785	48.2	
District 8	9,182	471.1		858	90.7	↑	1,235	119.7		1,498	75.9		865	45.1	
District 9	11,810	462.7	↓	1,053	84.7	↓	1,508	109.3	↓	2,088	81.4	↑	1,063	41.9	
District 10	13,035	457.5	↓	1,474	107.9	↓	1,763	117.3		2,073	71.9		1,295	45.2	

Table 32. Cancer Incidence Rate Comparisons for Counties in District 4, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9		17,650	106.9		22,082	118.1		25,847	73.9		15,495	44.4	
Adams	824	442.4		98	115		113	114.6		92	48.5	↓	103	56.1	↑
Allen	8,124	447.9	↓	865	101.6		1,142	116.2		1,117	62.5	↓	782	42.9	
DeKalb	1,044	458.9		109	97.7		151	124.1		167	72.1		104	46.8	
Huntington	1,042	477.4		110	106.1		129	111.1		137	62.8		103	46.8	
LaGrange	709	404.9	↓	66	78.3	↓	94	105.1		110	62.2		63	35.1	
Miami	913	428.1	↓	103	95.1		103	98.4		167	78.4		66	32.1	↓
Noble	1,056	417.3	↓	107	91		152	113.9		161	64.9		103	40.5	
Steuben	840	411.9	↓	91	87.3		99	93	↓	139	65.5		76	37.7	
Wabash	988	457.5		126	122.1		120	107.5		136	62.9		108	45.6	
Wells	709	421.7	↓	67	85.8		95	110.7		92	53.3	↓	56	32.2	↓
Whitley	914	470.7		107	115.7		120	119.8		132	67.2		83	42.5	

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 ↑ = higher ↓ = lower "blank" = no difference

Table 33. Cancer Mortality Rate Comparisons for District 4, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,079	58.5	5,832	16.9
District 1	8,741	192.6	416	23.5	660	26.0	2,504	55.9	855	19.1
District 2	6,452	180.3	324	23.2	420	20.8	1,888	53.3	558	15.7
District 3	6,962	178.7	361	24.1	503	23.0	1,918	49.5 ↓	634	16.2
District 4	3,444	183.0	153	20.4	235	22.2	1,072	57.7	332	17.6
District 5	14,870	188.2	658	22.8	1,065	23.3	4,571	58.2	1,210	15.1
District 6	7,847	194.4	295	18.6	489	22.4	2,544	63.1	702	17.1
District 7	3,310	200.0 ↑	126	20.3	208	22.8	1,124	67.7 ↑	316	19.2
District 8	3,669	187.7	155	20.4	233	21.5	1,179	59.9	299	15.5
District 9	4,841	191.7	189	20.4	250	17.8	1,649	64.6	402	16.1
District 10	5,231	180.6	241	21.4	347	21.8	1,560	54.1	488	16.7

Table 34. Cancer Mortality Rate Comparisons for Counties in District 4, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,028	57.5	5,818	16.6
Benton	98	178.3	X	X	X	X	44	82.2	X	X
Carroll	229	181.0	X	X	X	X	54	41.8	22	17.5
Cass	450	192.0	X	X	28	22.8	162	69.3	34	14.9
Clinton	383	196.0	23	29.5	X	X	129	67.2	45	22.1
Fountain	236	202.2	X	X	X	X	77	65.1	26	23.6
Montgomery	415	177.7	20	19.9	20	14.8	131	57.1	36	15.3
Tippecanoe	1,200	172.5	49	17.9	107	26.5	330	48.9 ↓	120	17.1
Warren	94	172.2	X	X	X	X	32	58.4	X	X
White	339	204.2	X	X	20	22.1	113	66.8	29	17.7

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Incidence and Mortality by Race and Gender

Table 35. Cancer Incidence Rates by Races and Genders for District 4 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	463.1	458.3	479.7	225.5 ↓	514.1	488.9 ↓	436.8	431.8	512.0	497.5	439.8	441.7	546.5	150.5 ↓	441.6	306.2
Colon and Rectum	43.7	44.6	51.5	X	50.4	47.2	39.6	41.0	50.1	48.3	39.2	41.8	57.7	X	47.3	X
Lung and Bronchus	73.9	75.2	80.0	X	91.3	90.3	61.0	62.4	91.8	92.8	61.9	63.3	106.6	X	62.1	X
Female Breast	–	–	–	–	–	–	118.1	110.5	–	–	118.0	111.5	–	–	122.0	102.0
Prostate	–	–	–	–	106.9	105.9	–	–	100.5	106.1	–	–	146.3	32.4	–	–

Table 36. Cancer Mortality Rates by Races and Genders for District 4 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	183.2	181.4	221.2	158.9	231.3	222.3	157.1	154.3	226.5	219.7	439.8	441.7	277.0	X	186.9	X
Colon and Rectum	16.1	17.6	22.0	X	20.2	20.8	13.8	14.9	19.7	20.9	39.2	41.8	26.7	X	19.0	X
Lung and Bronchus	56.8	57.5	64.3	X	75.1	74.8	44.5	45.1	74.0	74.1	61.9	63.3	89.0	X	47.4	X
Female Breast	–	–	–	–	–	–	118.1	110.5	–	–	21.8	21.7	–	–	30.0	59.3
Prostate	–	–	–	–	106.9	105.9	–	–	20.5	20.0	–	–	43.1	21.5	–	–

Source: Indiana State Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Stage of Diagnosis by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Table 37. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender -District 4 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	0.1	X	0.1	0.0	0.0	0.0	X	0.0	X	0.0	X	0.0	X	X	0.0	0.0	0.0	0.0
Local	14.1	16.3	14.2	16.4	13.8	X	15.8	17.0	13.0	16.0	15.8	17.3	13.2	16.0	17.1	X	11.6	X
Regional	17.3	14.8 ↓	17.4	15.1	17.6	X	21.2	19.3	14.4	11.2 ↓	21.1	19.7	14.6	11.4 ↓	23.9	X	13.2	0.0
Distant	38.2	39.2	38.2	39.8	44.0	X	47.8	48.2	30.8	32.8	47.5	49.0	30.8	33.2	58.0	X	34.4	X

Table 38. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender -District 4 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	1.9	2.2	1.7	3.7	X	3.1	2.5	2.3	X	2.6	X	1.8	X	4.2	X	3.3	X
Local	18.2	13.5 ↓	17.9	13.6 ↓	19.4	X	20.8	13.9 ↓	16.0	13.0	20.5	14.0 ↓	15.7	13.0	22.0	X	17.6	X
Regional	15.0	19.1 ↑	14.8	19.4 ↑	16.5	X	16.7	20.5 ↑	13.5	17.9 ↑	16.6	20.9	13.3	18.1 ↑	17.4	X	15.9	X
Distant	8.8	9.5	8.8	9.6	12.3	X	10.0	10.6	7.8	8.5	9.8	10.8	7.6	8.6	14.0	X	10.9	X

Table 39. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race-District 4 vs. Indiana, 2008-2012**

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	26.6	26.8	26.2	27.4	31.7	X
Local	74.9	69.7	75.5	70.8	68.2	X
Regional	33.7	33.2	33.2	33.3	42.1	X
Distant	7.4	5.7	7.4	5.8	9.2	X

Table 40. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race-District 4 vs. Indiana, 2008-2012**

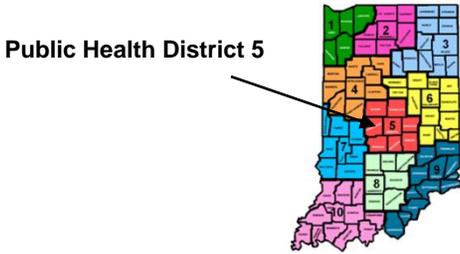
	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	X	0.0	0.0	0.0	0.0	0.0
Local	83.4	86.5	78.7	86.4 ↑	108.5	X
Regional	11.7	10.9	11.3	11.0	15.1	X
Distant	6.3	5.7	6.3	5.8	15.1	X

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.



Public Health District 5

Public Health District 5 (District 5) is comprised of Boone, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan and Shelby counties. It lies in the central part of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 5 had a statistically lower rate of 458.8 per 100,000 people for the same period. For mortality, the rate for District 5 of 188.2 per 100,000 people was higher, but not statistically different than the overall Indiana rate of 187.3 per 100,000 people.

Figure 9. Age-adjusted Cancer Incidence Rates- District 5 vs. Indiana, 2008-2012

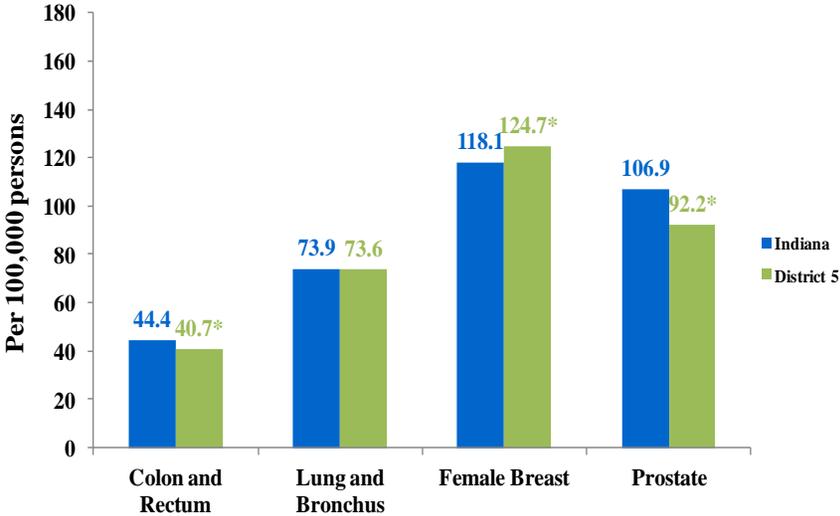
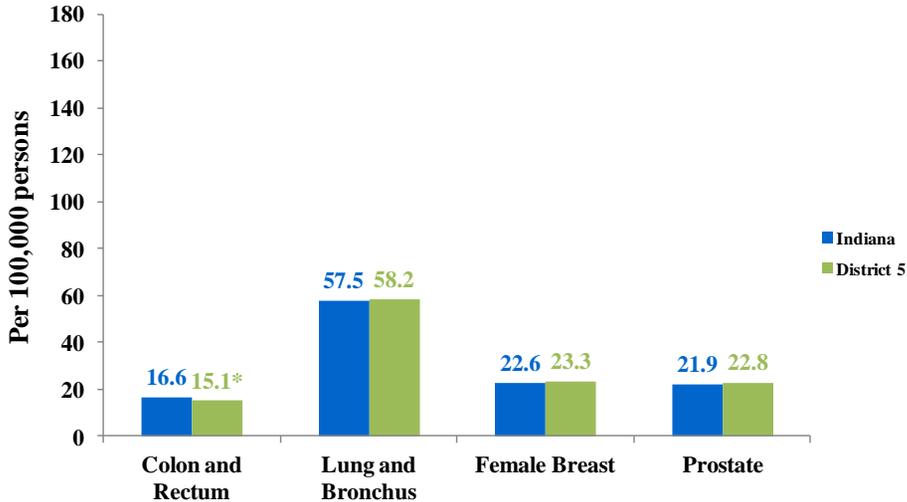


Figure 10. Age-adjusted Cancer Mortality Rates- District 5 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher † = lower "blank" = no difference

Table 41. Cancer Incidence Rate Comparisons for District 5, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum			
	Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†		Count	Rate†		
Indiana	163,199	466.9	↓	17,650	106.9	22,082	118.1	↓	25,847	73.9	↓	15,495	44.4	↑	
District 1	22,316	490.5		2,920	136.3	↑	3,012	123.5	↓	3,381	74.2	↓	2,265	50.2	↑
District 2	16,510	470.4	↓	1,940	117.9		2,163	117.1	↓	2,524	71.3	↓	1,592	45.3	
District 3	17,163	443.5	↓	1,849	100.8	↓	2,318	112.9	↓	2,450	63.3	↓	1,647	42.4	
District 4	8,416	452.6	↓	926	105.9	↑	1,081	110.5	↓	1,379	74.1	↓	820	44.0	
District 5	37,854	458.8		3,597	92.2		5,674	124.7		5,846	73.6		3,322	40.7	
District 6	18,879	479.2	↓	2,198	117.8		2,330	112.3	↓	3,226	80.0	↓	1,841	45.9	↑
District 7	8,010	489.3	↓	834	105.7		996	115.9	↓	1,380	82.5		785	48.2	
District 8	9,182	471.1	↓	858	90.7	↓	1,235	119.7	↓	1,498	75.9	↓	865	45.1	
District 9	11,810	462.7	↓	1,053	84.7	↓	1,508	109.3	↓	2,088	81.4		1,063	41.9	
District 10	13,035	457.5	↓	1,474	107.9	↓	1,763	117.3	↓	2,073	71.9	↓	1,295	45.2	↑

Table 42. Cancer Incidence Rate Comparisons for Counties in District 5, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum			
	Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†		Count	Rate†		
Indiana	163,199	466.9		17,650	106.9	22,082	118.1		25,847	73.9		15,495	44.4		
Boone	1,246	428	↓	134	95.9		213	133.8		176	63.7	↓	110	38.1	
Hamilton	4,895	412.3	↓	548	93.1	↓	888	129.6		484	47.2	↓	414	36.2	↓
Hancock	1,827	480.6		142	74.5	↓	242	118.7		312	82.8		153	40.2	
Hendricks	3,398	485		361	105.1	↓	500	129.2		482	72		269	38.6	
Johnson	3,280	454		267	75.5	↓	446	114.5		522	73.2		329	45.4	
Marion	19,952	462.5		1,802	91.7	↓	2,926	122.2		3,357	80.1	↑	1,715	40.1	
Morgan	1,952	503.2	↓	213	109.4		275	131.7		307	80.2		201	52.5	
Shelby	1,304	509.7	↓	130	105.2		184	138.4		206	80.4		131	49.8	

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ‡ = lower “blank” = no difference

Table 43. Cancer Mortality Rate Comparisons for District 5, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,079	58.5	5,832	16.9
District 1	8,741	192.6	416	23.5	660	26.0	2,504	55.9	855	19.1
District 2	6,452	180.3	324	23.2	420	20.8	1,888	53.3 ↓	558	15.7
District 3	6,962	178.7	361	24.1	503	23.0	1,918	49.5 ↓	634	16.2
District 4	3,444	183.0	153	20.4	235	22.2	1,072	57.7	332	17.6
District 5	14,870	188.2	658	22.8	1,065	23.3	4,571	58.2	1,210	15.1
District 6	7,847	194.4 ↑	295	18.6 ↓	489	22.4	2,544	63.1 ↑	702	17.1
District 7	3,310	200.0 ↑	126	20.3	208	22.8	1,124	67.7 ↑	316	19.2
District 8	3,669	187.7	155	20.4	233	21.5	1,179	59.9	299	15.5
District 9	4,841	191.7	189	20.4	250	17.8 ↓	1,649	64.6 ↑	402	16.1
District 10	5,231	180.6	241	21.4	347	21.8	1,560	54.1	488	16.7

Table 44. Cancer Mortality Rate Comparisons for Counties in District 5, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,028	57.5	5,818	16.6
Benton	98	178.3	X	X	X	X	44	82.2	X	X
Carroll	229	181.0	X	X	X	X	54	41.8	22	17.5
Cass	450	192.0	X	X	28	22.8	162	69.3	34	14.9
Clinton	383	196.0	23	29.5	X	X	129	67.2	45	22.1
Fountain	236	202.2	X	X	X	X	77	65.1	26	23.6
Montgomery	415	177.7	20	19.9	20	14.8	131	57.1	36	15.3
Tippecanoe	1,200	172.5	49	17.9	107	26.5	330	48.9 ↓	120	17.1
Warren	94	172.2	X	X	X	X	32	58.4	X	X
White	339	204.2	X	X	20	22.1	113	66.8	29	17.7

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower “blank” = no difference

Incidence and Mortality by Race and Gender

Table 45. Cancer Incidence Rates by Races and Genders for District 5 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	463.1	456.8	479.7	476.3	514.1	490.5 ↓	436.8	440.6	512.0	489.0 ↓	439.8	443.7	546.5	531.2	441.6	445.6
Colon and Rectum	43.7	40.1 ↓	51.5	44.9	50.4	46.4 ↓	39.6	35.9 ↓	50.1	46.3	39.2	35.0 ↓	57.7	48.6	47.3	42.6
Lung and Bronchus	73.9	72.7	80.0	85.8	91.3	87.5	61.0	63.6	91.8	86.3 ↓	61.9	63.7	106.6	111.6	62.1	69.1
Female Breast	–	–	–	–	–	–	118.1	124.7	–	–	118.0	126.0	–	–	122.0	122.4
Prostate	–	–	–	–	106.9	92.2	–	–	100.5	86.9	–	–	146.3	132.2	–	–

Table 46. Cancer Mortality Rates by Races and Genders for District 5 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	183.2	181.4	221.2	235.1	231.3	232.3	157.1	158.7	226.5	224.2	439.8	443.7	277.0	299.7	186.9	196.9
Colon and Rectum	16.1	14.5 ↓	22.0	20.0	20.2	18.5	13.8	12.5	19.7	17.8	39.2	35.0	26.7	25.0	19.0	17.3
Lung and Bronchus	56.8	56.4	64.3	73.6 ↑	75.1	73.8	44.5	47.1	74.0	71.0	61.9	63.7	89.0	101.0	47.4	55.7
Female Breast	–	–	–	–	–	–	118.1	124.7	–	–	21.8	21.7	–	–	30.0	32.6
Prostate	–	–	–	–	106.9	92.2	–	–	20.5	20.6	–	–	43.1	42.4	–	–

Source: Indiana Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the district’s rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

Stage of Diagnosis by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Table 47. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender -District 5 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female		
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	
In Situ	0.1	X	0.1	X	0.0	0.0	X	0.0	0.0	0.0	X	0.0	X	0.0	0.0	0.0	0.0	0.0	0.0
Local	14.1	14.8	14.2	15.1	13.8	14.3	15.8	15.7	13.0	14.4	15.8	15.5	13.2	15.0	17.1	17.9	11.6	12.1	
Regional	17.3	17.2	17.4	17.4	17.6	17.4	21.2	20.0	14.4	15.2	21.1	19.8	14.6	15.7	23.9	22.9	13.2	13.8	
Distant	38.2	37.6	38.2	36.4	44.0	48.5	47.8	45.2 ↓	30.8	31.9	47.5	43.9	30.8	30.7	58.0	60.9	34.4	40.4	

Table 48. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender -District 5 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	3.1	2.2	1.9	3.7	X	3.1	3.1	2.3	3.0	2.6	2.2	1.8	1.7	4.2	X	3.3	X
Local	18.2	17.3	17.9	17.2	19.4	16.9	20.8	19.9	16.0	15.1	20.5	20.0	15.7	14.7	22.0	17.8	17.6	16.2
Regional	15.0	13.1 ↓	14.8	12.9 ↓	16.5	15.0	16.7	14.5 ↓	13.5	11.9 ↓	16.6	14.5	13.3	11.5 ↓	17.4	15.2	15.9	X
Distant	8.8	8.2	8.8	8.0	12.3	10.4	10.0	9.6	7.8	7.1	9.8	9.5	7.6	6.7	14.0	11.1	10.9	9.6

Table 49. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race-District 5 vs. Indiana, 2008-2012†**

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	26.6	29.4 ↑	26.2	28.7 ↑	31.7	X
Local	74.9	81.5 ↑	75.5	83.6	68.2	71.4
Regional	33.7	34.6	33.2	33.9	42.1	40.6
Distant	7.4	6.9	7.4	6.8	9.2	7.8

Table 50. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race-District 5 vs. Indiana, 2008-2012†**

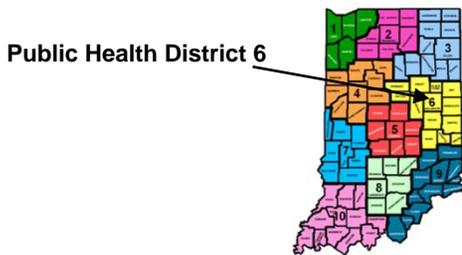
	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	X	0.0	0.0	0.0	0.0	X
Local	83.4	67.9 ↑	78.7	64.8 ↓	108.5	91.6 ↓
Regional	11.7	11.7	11.3	11.1	15.1	14.6
Distant	6.3	6.8	6.3	5.6	15.1	17.2

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.



Public Health District 6

Public Health District 6 (District 6) is comprised of Blackford, Delaware, Fayette, Grant, Henry, Howard, Jay, Madison, Randolph, Rush, Tipton, Union and Wayne counties. It lies in the east central part of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 6 had a statistically higher rate of 479.2 per 100,000 people for the same period. For mortality, the rate for District 6 of 194.4 per 100,000 people was statistically higher than the overall Indiana rate of 187.3 per 100,000 people.

Figure 11. Age-adjusted Cancer Incidence Rates— District 6 vs. Indiana, 2008-2012

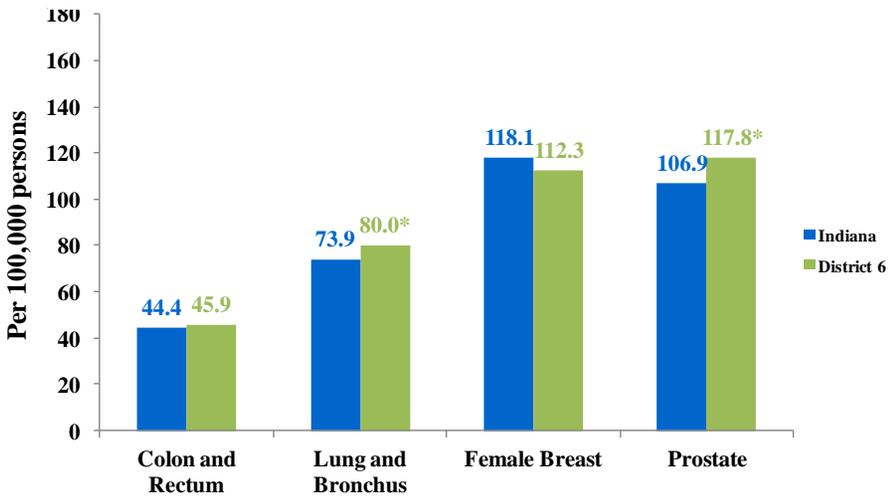
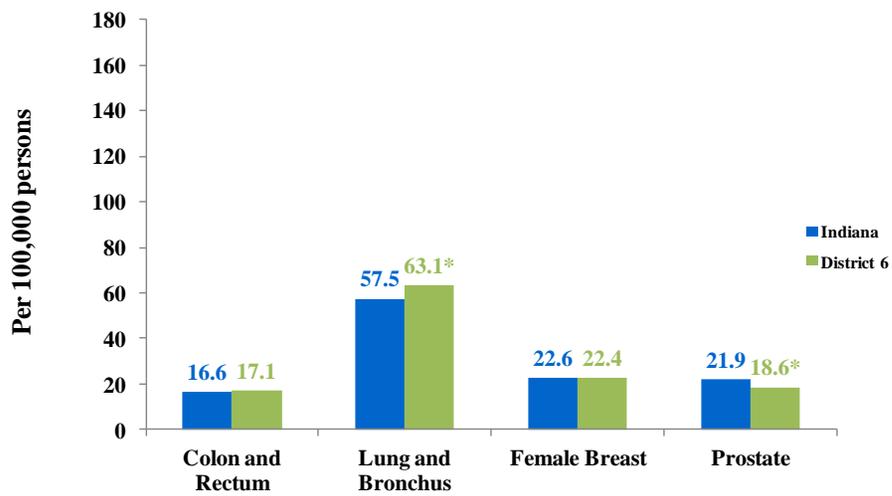


Figure 12. Age-adjusted Cancer Mortality Rates— District 6 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ↓ = lower "blank" = no difference

Table 51. Cancer Incidence Rate Comparisons for District 6, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum					
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†					
Indiana	163,199	466.9	17,650	106.9	22,082	118.1	↑	25,847	73.9	↓	15,495	44.4			
District 1	22,316	490.5	↑	2,920	136.3	↑	3,012	123.5	↑	3,381	74.2	↓	2,265	50.2	↑
District 2	16,510	470.4	↓	1,940	117.9	2,163	117.1	2,524	71.3	↓	1,592	45.3			
District 3	17,163	443.5	↓	1,849	100.8	↓	2,318	112.9	2,450	63.3	↓	1,647	42.4		
District 4	8,416	452.6	926	105.9	1,081	110.5	1,379	74.1	↓	820	44.0				
District 5	37,854	458.8	↑	3,597	92.2	5,674	124.7	↑	5,846	73.6	↑	3,322	40.7	↓	
District 6	18,879	479.2	2,198	117.8	2,330	112.3	3,226	80.0	1,841	45.9					
District 7	8,010	489.3	834	105.7	↓	996	115.9	1,380	82.5	↑	785	48.2			
District 8	9,182	471.1	858	90.7	↓	1,235	119.7	1,498	75.9	↓	865	45.1			
District 9	11,810	462.7	↓	1,053	84.7	↓	1,508	109.3	↓	2,088	81.4	1,063	41.9		
District 10	13,035	457.5	↓	1,474	107.9	↓	1,763	117.3	2,073	71.9	↓	1,295	45.2	↑	

Table 52. Cancer Incidence Rate Comparisons for Counties in District 6, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum			
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†			
Indiana	163,199	466.9	17,650	106.9	22,082	118.1	25,847	73.9	15,495	44.4			
Blackford	431	498.2	53	129.2	54	116	69	78.9	46	50.8			
Delaware	3,228	492.6	↑	394	128.5	↑	406	118.2	553	82.9	312	46	
Fayette	669	426.8	↓	73	95.4	63	78.3	↓	138	84.7	61	37.7	
Grant	2,265	519.5	↑	284	139.1	↑	287	124.8	357	78.9	235	53.6	↑
Henry	1,479	475.9	159	107.5	172	102.3	250	79.3	166	52.1			
Howard	2,264	437.2	↓	219	86.3	291	106.5	399	75.5	205	39		
Jay	629	496.9	67	110.7	98	140.2	91	71	77	60.6			
Madison	3,779	476.6	505	133.9	↑	468	112.7	636	79	350	44.1		
Randolph	847	502.8	106	130.7	↑	104	120.2	144	82	87	51.2		
Rush	527	500.7	45	86.1	61	115.3	87	78.1	46	42.8			
Tipton	464	443	↓	41	76.2	72	129.8	76	72.2	61	56		
Union	207	457.3	31	150.5	X	X	34	67.7	19	43.9			
Wayne	2,090	484.3	221	112.6	234	102.7	392	88.3	↑	176	39.3		

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ↓ = lower "blank" = no difference

Table 53. Cancer Mortality Rate Comparisons for District 6, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast		Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†	
Indiana	65,367	187.3	↓	2,918	21.9	↑	4,410	22.6	20,079	58.5	↓	5,832	16.9	
District 1	8,741	192.6		416	23.5	↑	660	26.0	2,504	55.9	↓	855	19.1	
District 2	6,452	180.3	↓	324	23.2		420	20.8	1,888	53.3	↓	558	15.7	
District 3	6,962	178.7	↓	361	24.1		503	23.0	1,918	49.5	↓	634	16.2	
District 4	3,444	183.0		153	20.4		235	22.2	1,072	57.7		332	17.6	
District 5	14,870	188.2	↓	658	22.8	↑	1,065	23.3	4,571	58.2	↓	1,210	15.1	
District 6	7,847	194.4		295	18.6		489	22.4	2,544	63.1		702	17.1	
District 7	3,310	200.0		126	20.3		208	22.8	1,124	67.7		316	19.2	↑
District 8	3,669	187.7		155	20.4		233	21.5	1,179	59.9		299	15.5	
District 9	4,841	191.7		189	20.4		250	17.8	1,649	64.6		402	16.1	
District 10	5,231	180.6	↓	241	21.4		347	21.8	1,560	54.1	↓	488	16.7	

Table 54. Cancer Mortality Rate Comparisons for Counties in District 6, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast		Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†	
Indiana	65,367	187.3		2,918	21.9		4,410	22.6	20,028	57.5		5,818	16.6	
Blackford	172	194.5		X	X		X	X	49	55.7		28	32.0	↑
Delaware	1,297	191.4		41	15.2	↓	81	23.4	417	62.0		126	17.8	
Fayette	364	231.5	↑	20	28.5		25	29.1	123	76.1	↑	34	20.6	
Grant	893	201.3		30	18.0		62	25.2	284	63.1		73	16.5	
Henry	624	196.4		24	20.2		32	18.5	213	68.0	↑	50	15.4	
Howard	936	176.3		31	15.9		61	20.8	299	56.3		74	13.7	
Jay	273	211.9		X	X		X	X	80	62.6		32	24.9	
Madison	1,573	194.2		63	20.0		94	21.0	546	67.5	↑	129	15.7	
Randolph	335	193.1		20	26.2		X	X	100	56.9		32	18.7	
Rush	226	209.0		10	22.2		X	X	70	63.1		X	X	
Tipton	177	163.6		X	X		X	X	46	42.9		23	20.3	
Union	75	173.4		X	X		X	X	25	56.9		X	X	
Wayne	902	202.0	↑	27	14.5		52	21.3	292	66.1	↑	74	16.2	

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Incidence and Mortality by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 † = higher ‡ = lower "blank" = no difference

Table 55. Cancer Incidence Rates by Races and Genders for District 6 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female				
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD			
All Sites	463.1	476.1	↑	479.7	471.0	514.1	544.5	↑	436.8	434.5	512.0	541.9	↑	439.8	435.9	546.5	581.4	441.6	398.4
Colon and Rectum	43.7	45.2		51.5	50.3	50.4	52.8		39.6	40.3	50.1	52.6		39.2	39.7	57.7	61.7	47.3	44.7
Lung and Bronchus	73.9	80.4	↑	80.0	73.2	91.3	99.0	↑	61.0	65.6	91.8	100.0	↑	61.9	66.4	106.6	92.4	62.1	56.0
Female Breast	–	–		–	–	–	–		118.1	112.3	–	–		118.0	111.9	–	–	122.0	113.3
Prostate	–	–		–	–	106.9	117.8		–	–	100.5	113.2		–	–	146.3	164.1	–	–

Table 56. Cancer Mortality Rates by Races and Genders for District 6 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female					
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD				
All Sites	183.2	193.0	↑	221.2	207.7	231.3	237.9		157.1	163.4	226.5	236.9	↑	439.8	435.9	↑	277.0	258.8	186.9	174.8
Colon and Rectum	16.1	16.9		22.0	22.1	20.2	20.4		13.8	14.7	19.7	20.5		39.2	39.7		26.7	X	19.0	X
Lung and Bronchus	56.8	62.7	↑	64.3	67.9	75.1	83.6	↑	44.5	47.6	74.0	83.2	↑	61.9	66.4	89.0	100.6	47.4	49.5	
Female Breast	–	–		–	–	–	–		118.1	112.3	–	–		21.8	22.1	–	–	30.0	24.8	
Prostate	–	–		–	–	106.9	117.8		–	–	20.5	18.1		–	–	43.1	31.2	–	–	

Source: Indiana State Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower “blank” = no difference

Stage of Diagnosis by Race and Gender

Table 57. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender—District 6 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female					
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD				
In Situ	0.1	X	0.1	X	0.0	0.0	X	X	X	X	X	X	X	X	0.0	0.0	0.0	0.0				
Local	14.1	15.0	14.2	15.1	13.8	X	15.8	17.4	13.0	13.5	15.8	17.7	13.2	13.5	17.1	X	11.6	X				
Regional	17.3	19.1	17.4	19.2	17.6	15.4	21.2	23.9	14.4	15.5	21.1	24.0	14.6	15.5	23.9	X	13.2	X				
Distant	38.2	41.8	↑	38.2	42.0	↑	44.0	44.4	47.8	51.9	↑	30.8	33.8	47.5	51.7	30.8	34.3	↑	58.0	61.7	34.4	29.8

Table 58. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender –District 6 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	2.3	2.2	2.1	3.7	X	3.1	2.9	2.3	2.0	2.6	2.6	1.8	1.7	4.2	X	3.3	X
Local	18.2	19.9	17.9	19.4	19.4	22.3	20.8	23.5	16.0	17.0	20.5	23.0	15.7	16.5	22.0	X	17.6	X
Regional	15.0	14.0	14.8	13.9	16.5	13.5	16.7	15.5	13.5	12.9	16.6	15.5	13.3	12.7	17.4	X	15.9	X
Distant	8.8	9.2	8.8	9.1	12.3	X	10.0	10.6	7.8	8.0	9.8	10.6	7.6	7.9	14.0	X	10.9	X

Table 59. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race—District 6 vs. Indiana, 2008-2012**

	All		White		African-American			
	Indiana	PHD	Indiana	PHD	Indiana	PHD		
In Situ	26.6	24.2	26.2	23.8	31.7	X		
Local	74.9	73.2	75.5	73.2	68.2	76.6		
Regional	33.7	29.4	↓	33.2	28.9	↓	42.1	32.4
Distant	7.4	7.6	7.4	7.9	9.2	X		

Table 60. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race—District 6 vs. Indiana, 2008-2012**

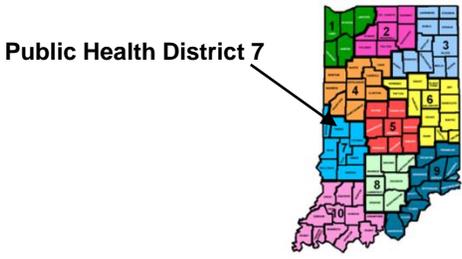
	All		White		African-American			
	Indiana	PHD	Indiana	PHD	Indiana	PHD		
In Situ	X	0.0	0.0	0.0	0.0	0.0		
Local	83.4	95.1	↑	78.7	91.3	↑	108.5	139.0
Regional	11.7	10.8	11.3	10.3	15.1	X		
Distant	6.3	5.9	6.3	5.6	15.1	X		

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the district’s rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method.

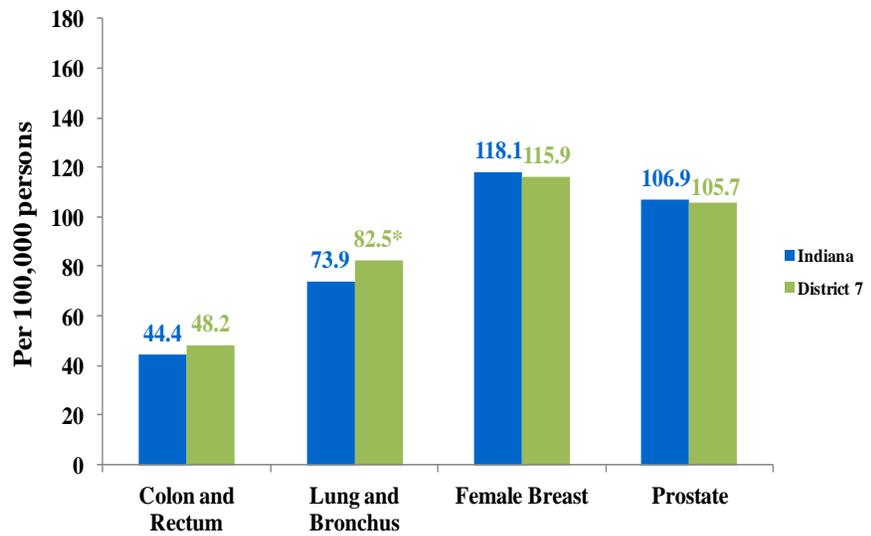
“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.



Public Health District 7

Public Health District 7 (District 7) is comprised of Clay, Greene, Owen, Parke, Putnam, Sullivan, Vermillion and Vigo counties. It lies in the west central part of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 7 had a statistically higher rate of 489.3 per 100,000 people for the same period. For mortality, the rate for District 7 of 200.0 per 100,000 people was statistically higher than the overall Indiana rate of 187.3 per 100,000 people.

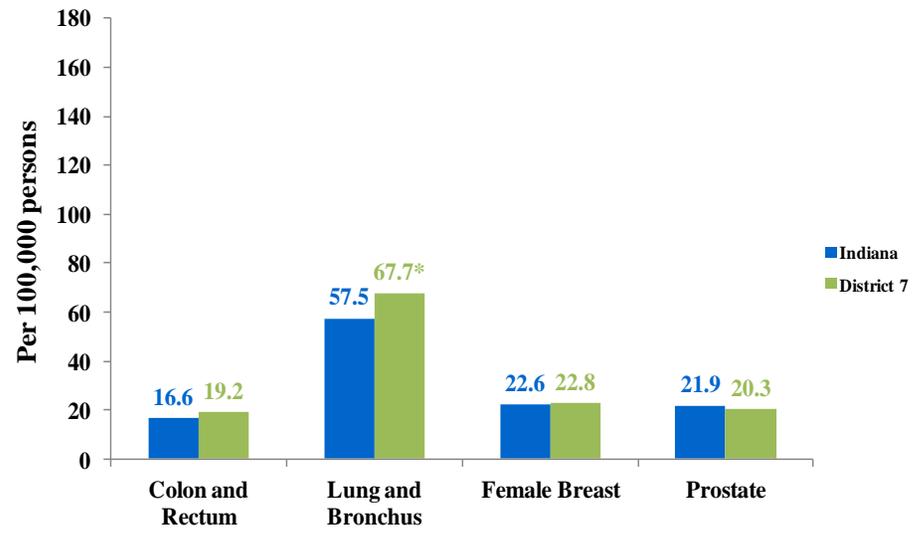
Figure 13. Age-adjusted Cancer Incidence Rates- District 7 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Figure 14. Age-adjusted Cancer Mortality Rates- District 7 vs. Indiana, 2008-2012



Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher † = lower "blank" = no difference

Table 61. Cancer Incidence Rate Comparisons for District 7, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†		Count	Rate†
Indiana	163,199	466.9	17,650	106.9	22,082	118.1	25,847	73.9	↓	15,495	44.4
District 1	22,316	490.5	2,920	136.3	3,012	123.5	3,381	74.2	↓	2,265	50.2
District 2	16,510	470.4	1,940	117.9	2,163	117.1	2,524	71.3	↓	1,592	45.3
District 3	17,163	443.5	1,849	100.8	2,318	112.9	2,450	63.3	↓	1,647	42.4
District 4	8,416	452.6	926	105.9	1,081	110.5	1,379	74.1	↓	820	44.0
District 5	37,854	458.8	3,597	92.2	5,674	124.7	5,846	73.6		3,322	40.7
District 6	18,879	479.2	2,198	117.8	2,330	112.3	3,226	80.0	↓	1,841	45.9
District 7	8,010	489.3	834	105.7	996	115.9	1,380	82.5		785	48.2
District 8	9,182	471.1	858	90.7	1,235	119.7	1,498	75.9	↓	865	45.1
District 9	11,810	462.7	1,053	84.7	1,508	109.3	2,088	81.4		1,063	41.9
District 10	13,035	457.5	1,474	107.9	1,763	117.3	2,073	71.9	↓	1,295	45.2

Table 62. Cancer Incidence Rate Comparisons for Counties in District 7, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†		Count	Rate†
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,028	57.5		5,818	16.6
Clay	311	189.9	X	X	22	24.6	96	58.2		36	22.1
Greene	413	194.6	X	X	X	X	144	67.5		34	16.0
Owen	269	214.2	X	X	20	29.1	86	65.4		21	18.4
Parke	200	188.6	X	X	X	X	68	61.1		X	X
Putnam	413	196.9	X	X	23	20.6	158	74.9	↑	54	25.4
Sullivan	284	217.5	X	X	X	X	87	65.5		27	21.1
Vermillion	220	205.2	X	X	X	X	87	79.1	↑	25	25.0
Vigo	1,200	202.1	33	19.4	82	24.3	398	68.1	↑	101	16.7

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher † = lower "blank" = no difference

Table 63. Cancer Mortality Rate Comparisons for District 7, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†	Count	Rate†	Count	Rate†		Count	Rate†	
Indiana	65,367	187.3	↓	2,918	21.9	4,410	22.6	20,079	58.5	↓	5,832	16.9	↓
District 1	8,741	192.6		416	23.5	660	26.0	2,504	55.9	↓	855	19.1	
District 2	6,452	180.3	↓	324	23.2	420	20.8	1,888	53.3	↓	558	15.7	↓
District 3	6,962	178.7	↓	361	24.1	503	23.0	1,918	49.5	↓	634	16.2	↓
District 4	3,444	183.0	↓	153	20.4	235	22.2	1,072	57.7	↓	332	17.6	
District 5	14,870	188.2	↓	658	22.8	1,065	23.3	4,571	58.2	↓	1,210	15.1	↓
District 6	7,847	194.4		295	18.6	489	22.4	2,544	63.1		702	17.1	↓
District 7	3,310	200.0		126	20.3	208	22.8	1,124	67.7		316	19.2	
District 8	3,669	187.7	↓	155	20.4	233	21.5	1,179	59.9	↓	299	15.5	↓
District 9	4,841	191.7		189	20.4	250	17.8	1,649	64.6		402	16.1	↓
District 10	5,231	180.6	↓	241	21.4	347	21.8	1,560	54.1	↓	488	16.7	↓

Table 64. Cancer Mortality Rate Comparisons for Counties in District 7, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum		
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†		Count	Rate†	
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,028	57.5		5,818	16.6	
Clay	311	189.9	X	X	22	24.6	96	58.2		36	22.1	
Greene	413	194.6	X	X	X	X	144	67.5		34	16.0	
Owen	269	214.2	X	X	20	29.1	86	65.4		21	18.4	
Parke	200	188.6	X	X	X	X	68	61.1		X	X	
Putnam	413	196.9	X	X	23	20.6	158	74.9	↑	54	25.4	↑
Sullivan	284	217.5	↑	X	X	X	X	87	65.5		27	21.1
Vermillion	220	205.2		X	X	X	X	87	79.1	↑	25	25.0
Vigo	1,200	202.1	↑	33	19.4	82	24.3	398	68.1	↑	101	16.7

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Incidence and Mortality by Race and Gender

Table 65. Cancer Incidence Rates by Races and Genders for District 7 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female							
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD						
All Sites	463.1	491.1	↑	479.7	404.2	514.1	534.9	↑	436.8	465.4	↑	512.0	539.4	↑	439.8	468.9	↑	546.5	395.0	↓	441.6	459.4
Colon and Rectum	43.7	48.7	↑	51.5	X	50.4	54.8		39.6	42.4		50.1	55.8		39.2	42.8		57.7	X		47.3	X
Lung and Bronchus	73.9	82.5	↑	80.0	99.2	91.3	104.7	↑	61.0	66.4		91.8	106.4	↑	61.9	66.5		106.6	X		62.1	X
Female Breast	-	-		-	-	-	-		118.1	115.9		-	-		118.0	115.8		-	-		122.0	126.9
Prostate	-	-		-	-	106.9	105.7		-	-		100.5	103.9		-	-		146.3	114.9		-	-

Table 66. Cancer Mortality Rates by Races and Genders for District 7 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female							
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD						
All Sites	183.2	199.2	↑	221.2	195.5	231.3	253.9	↑	157.1	161.7		226.5	252.8	↑	439.8	468.9		277.0	205.2		186.9	185.7
Colon and Rectum	16.1	19.0	↑	22.0	X	20.2	24.7	↑	13.8	15.0		19.7	24.4	↑	39.2	42.8		26.7	X		19.0	X
Lung and Bronchus	56.8	67.3	↑	64.3	X	75.1	92.1	↑	44.5	49.1		74.0	91.8	↑	61.9	66.5		89.0	X		47.4	X
Female Breast	-	-		-	-	-	-		118.1	115.9		-	-		21.8	23.1		-	-		30.0	14.2
Prostate	-	-		-	-	106.9	105.7		-	-		20.5	19.6		-	-		43.1	19.6		-	-

Source: Indiana State Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Stage of Diagnosis by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 † = higher ‡ = lower "blank" = no difference

Table 67. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender –District 7 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	0.1	0.0	0.1	0.0	0.0	0.0	X	0.0	0.0	0.0	X	0.0	X	X	0.0	0.0	0.0	0.0
Local	14.1	11.5 ↓	14.2	11.6 ↓	13.8	X	15.8	12.7	13.0	11.0	15.8	12.9	13.2	11.0	17.1	X	11.6	X
Regional	17.3	20.6 ↑	17.4	20.7 ↓	17.6	X	21.2	25.2	14.4	17.2	21.1	25.6	14.6	17.0	23.9	X	13.2	X
Distant	38.2	45.2 ↑	38.2	45.1 ↑	44.0	66.9	47.8	57.3 ↑	30.8	36.0 ↑	47.5	57.5 ↑	30.8	35.8 ↑	58.0	X	34.4	X

Table 68. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender –District 7 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	1.8	2.2	1.8	3.7	X	3.1	X	2.3	X	2.6	X	1.8	X	4.2	X	3.3	X
Local	18.2	17.3	17.9	17.5	19.4	X	20.8	20.4	16.0	15.3	20.5	20.4	15.7	15.6	22.0	X	17.6	X
Regional	15.0	19.2 ↑	14.8	19.4 ↑	16.5	X	16.7	21.7 ↑	13.5	16.3	16.6	22.0 ↑	13.3	16.4	17.4	X	15.9	X
Distant	8.8	8.7	8.8	8.9	12.3	X	10.0	9.3	7.8	8.1	9.8	9.7	7.6	8.2	14.0	X	10.9	X

Table 69. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race–District 7 vs. Indiana, 2008-2012**

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	26.6	29.8	26.2	30.1	31.7	X
Local	74.9	72.3	75.5	72.1	68.2	X
Regional	33.7	32.4	33.2	32.6	42.1	X
Distant	7.4	10.7 ↑	7.4	10.6 ↑	9.2	X

Table 70. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race–District 7 vs. Indiana, 2008-2012**

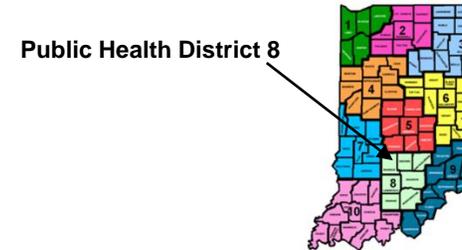
	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	X	0.0	0.0	0.0	0.0	0.0
Local	83.4	83.0	78.7	81.2	108.5	X
Regional	11.7	13.7	11.3	13.6	15.1	X
Distant	6.3	5.3	6.3	5.5	15.1	X

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the district’s rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method.

“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.



Public Health District 8

Public Health District 8 (District 8) is comprised of Bartholomew, Brown, Jackson, Lawrence, Monroe, Orange and Washington counties. It lies in the south central part of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 8 had a higher, but not statistically higher rate of 471.1 per 100,000 people for the same period. For mortality, the rate for District 8 of 187.7 per 100,000 people, which was slightly higher, but not statistically different than the overall Indiana rate of 187.3 per 100,000 people.

Figure 15. Age-adjusted Cancer Incidence Rates- District 8 vs. Indiana, 2008-2012

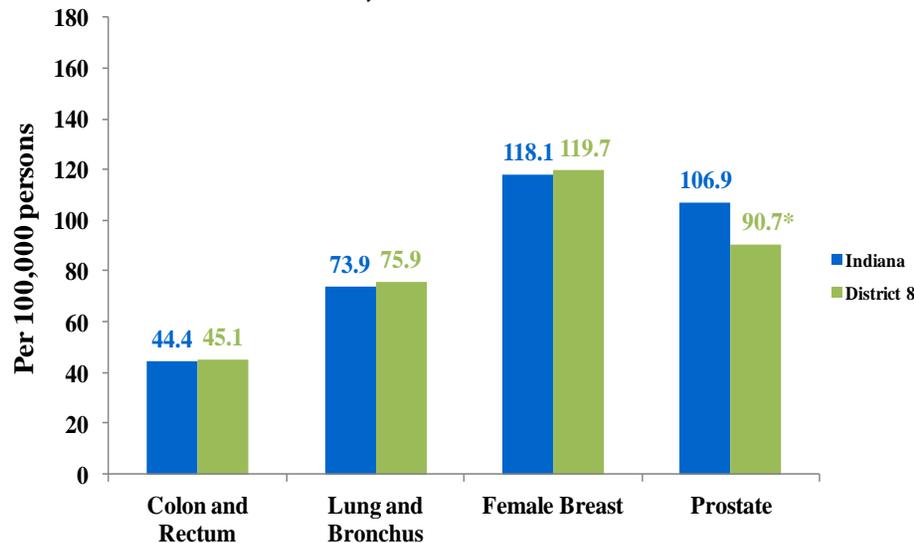
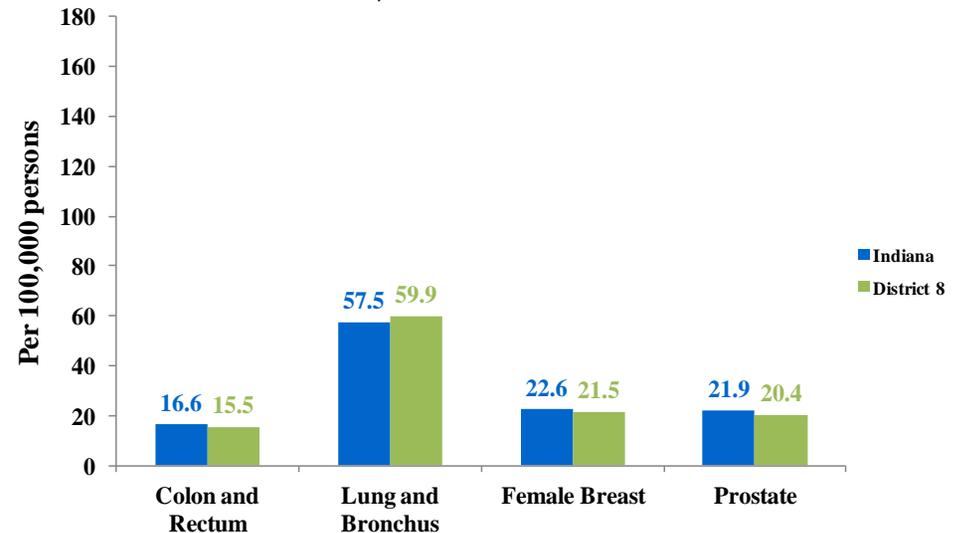


Figure 16. Age-adjusted Cancer Mortality Rates- District 8 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 † = higher ↓ = lower "blank" = no difference

Table 71. Cancer Incidence Rate Comparisons for District 8, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9	↑	17,650	106.9	↑	22,082	118.1		25,847	73.9	↓	15,495	44.4	
District 1	22,316	490.5	↑	2,920	136.3	↑	3,012	123.5		3,381	74.2		2,265	50.2	↑
District 2	16,510	470.4		1,940	117.9	↑	2,163	117.1		2,524	71.3		1,592	45.3	
District 3	17,163	443.5	↓	1,849	100.8	↓	2,318	112.9		2,450	63.3	↓	1,647	42.4	
District 4	8,416	452.6		926	105.9	↑	1,081	110.5		1,379	74.1		820	44.0	
District 5	37,854	458.8	↑	3,597	92.2	↑	5,674	124.7	↑	5,846	73.6	↑	3,322	40.7	
District 6	18,879	479.2		2,198	117.8	↑	2,330	112.3		3,226	80.0	↑	1,841	45.9	
District 7	8,010	489.3		834	105.7		996	115.9		1,380	82.5	↑	785	48.2	
District 8	9,182	471.1		858	90.7		1,235	119.7		1,498	75.9		865	45.1	
District 9	11,810	462.7		1,053	84.7	↑	1,508	109.3	↓	2,088	81.4		1,063	41.9	
District 10	13,035	457.5	↓	1,474	107.9		1,763	117.3		2,073	71.9		1,295	45.2	↑

Table 72. Cancer Incidence Rate Comparisons for Counties in District 8, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)			Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	163,199	466.9		17,650	106.9		22,082	118.1		25,847	73.9		15,495	44.4	
Bartholomew	2,028	467.7		180	87.9	↓	283	122.3		331	76		178	41.1	
Brown	470	448.9		57	96.4		57	96.1		66	63.3		44	44	
Jackson	1,232	504.9	↑	121	105.9		170	134.8		200	78.5		116	48.5	
Lawrence	1,385	470.7		135	90.3	↓	171	111		250	82.7		149	50.6	
Monroe	2,644	450.7		257	93.3		368	116.1		374	63.8	↓	235	41.2	
Orange	608	493.9		48	75	↓	74	110.9		119	93.8	↑	69	57.3	
Washington	815	518.8	↑	60	76.8	↓	112	137.5		158	97.8	↑	74	48.6	

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 ↑ = higher ↓ = lower "blank" = no difference

Table 73. Cancer Mortality Rate Comparisons for District 8, Indiana 2008–2012†**

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,079	58.5	5,832	16.9
District 1	8,741	192.6	416	23.5	660	26.0	2,504	55.9	855	19.1 ↑
District 2	6,452	180.3	324	23.2	420	20.8	1,888	53.3	558	15.7
District 3	6,962	178.7	361	24.1	503	23.0	1,918	49.5 ↓	634	16.2
District 4	3,444	183.0	153	20.4	235	22.2	1,072	57.7	332	17.6
District 5	14,870	188.2	658	22.8	1,065	23.3	4,571	58.2	1,210	15.1
District 6	7,847	194.4	295	18.6	489	22.4	2,544	63.1	702	17.1
District 7	3,310	200.0 ↑	126	20.3	208	22.8	1,124	67.7 ↑	316	19.2 ↑
District 8	3,669	187.7	155	20.4	233	21.5	1,179	59.9	299	15.5
District 9	4,841	191.7	189	20.4	250	17.8	1,649	64.6 ↑	402	16.1
District 10	5,231	180.6	241	21.4	347	21.8	1,560	54.1	488	16.7

Table 74. Cancer Mortality Rate Comparisons for Counties in District 8, Indiana 2008–2012†**

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,028	57.5	5,818	16.6
Bartholomew	804	185.2	33	19.4	53	21.6	257	58.7	63	15.1
Brown	189	184.8	X	X	X	X	63	62.4	X	X
Jackson	512	207.5 ↑	26	26.2	25	18.7	171	68.1	46	18.9
Lawrence	570	188.9	X	X	40	24.0	185	60.8	55	18.1
Monroe	1,014	172.1 ↓	49	21.8	68	20.5	292	49.7 ↓	79	13.7
Orange	257	206.6	X	X	X	X	94	73.7 ↑	20	15.4
Washington	323	206.4	X	X	X	X	117	73.7 ↑	23	15.6

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower “blank” = no difference

Incidence and Mortality by Race and Gender

Table 75. Cancer Incidence Rates by Races and Genders for District 8 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female		
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	
All Sites	463.1	472.0	479.7	421.9	514.1	519.9	436.8	438.5	512.0	527.0	439.8	444.5	546.5	433.5	441.6	398.0	
Colon and Rectum	43.7	45.1	51.5	60.3	50.4	51.6	39.6	39.8	50.1	53.1	39.2	40.5	57.7	X	47.3	X	
Lung and Bronchus	73.9	76.3	80.0	56.1	91.3	97.8	61.0	59.0	91.8	98.6	61.9	60.5	106.6	X	62.1	X	
Female Breast	–	–	–	–	–	–	118.1	119.7	–	–	118.0	120.3	–	–	122.0	118.0	
Prostate	–	–	–	–	106.9	90.7	–	–	100.5	89.4	↓	–	–	146.3	89.3	–	–

Table 76. Cancer Mortality Rates by Races and Genders for District 8 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	183.2	185.7	221.2	195.3	231.3	239.0	157.1	150.9	226.5	236.6	439.8	444.5	277.0	X	186.9	X
Colon and Rectum	16.1	15.5	22.0	X	20.2	20.2	13.8	11.7	19.7	20.2	39.2	40.5	26.7	X	19.0	X
Lung and Bronchus	56.8	59.8	64.3	X	75.1	80.8	44.5	44.4	74.0	80.6	61.9	60.5	89.0	X	47.4	X
Female Breast	–	–	–	–	–	–	118.1	119.7	–	–	21.8	21.2	–	–	30.0	33.7
Prostate	–	–	–	–	106.9	90.7	–	–	20.5	20.3	–	–	43.1	35.2	–	–

Source: Indiana State Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the district’s rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Stage of Diagnosis by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Table 77. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender–District 8 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	0.1	X	0.1	X	0.0	0.0	X	X	0.0	X	X	*0.1	0.0	X	0.0	0.0	0.0	0.0
Local	14.1	10.8 ↓	14.2	10.9 ↓	13.8	X	15.8	13.4	13.0	8.9 ↓	15.8	13.4	13.2	9.1 ↓	17.1	X	11.6	0.0
Regional	17.3	19.3	17.4	19.7	17.6	X	21.2	23.3	14.4	16.3	21.1	23.6	14.6	16.6	23.9	X	13.2	0.0
Distant	38.2	42.2 ↑	38.2	42.5 ↑	44.0	X	47.8	55.3 ↑	30.8	31.8	47.5	55.3 ↑	30.8	32.4	58.0	X	34.4	X

Table 78. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender–District 8 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	1.8	2.2	1.7	3.7	X	3.1	2.3	2.3	X	2.6	2.2	1.8	X	4.2	X	3.3	X
Local	18.2	18.8	17.9	18.9	19.4	X	20.8	20.6	16.0	17.5	20.5	20.7	15.7	17.4	22.0	X	17.6	X
Regional	15.0	15.0	14.8	15.2	16.5	X	16.7	16.6	13.5	13.5	16.6	16.9	13.3	13.5	17.4	X	15.9	X
Distant	8.8	7.9	8.8	7.8	12.3	X	10.0	9.9	7.8	6.1	9.8	9.8	7.6	6.1	14.0	X	10.9	X

Table 79. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race–District 8 vs. Indiana, 2008-2012**

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	26.6	27.9	26.2	27.4	31.7	X
Local	74.9	75.2	75.5	75.6	68.2	X
Regional	33.7	33.6	33.2	34.0	42.1	X
Distant	7.4	8.0	7.4	8.1	9.2	X

Table 80. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race–District 8 vs. Indiana, 2008-2012**

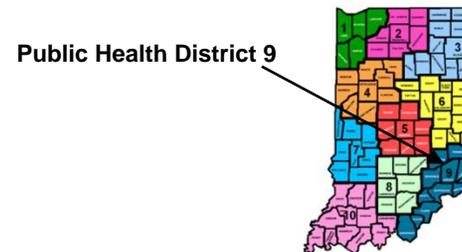
	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	X	0.0	0.0	0.0	0.0	0.0
Local	83.4	69.3 ↓	78.7	67.7 ↓	108.5	X
Regional	11.7	11.0	11.3	11.2	15.1	X
Distant	6.3	5.4	6.3	5.5	15.1	X

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the district’s rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method.

“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.



Public Health District 9

Public Health District 9 (District 9) is comprised of Clark, Dearborn, Decatur, Floyd, Franklin, Harrison, Jefferson, Jennings, Ohio, Ripley, Scott and Switzerland counties. It lies in the southeast corner of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 9 had a lower, but not statistically different, rate of 462.7 per 100,000 people for the same period. For mortality, the rate for District 9 of 191.7 per 100,000 people was higher, but not statistically different than the overall Indiana rate of 187.3 per 100,000 people.

Figure 17. Age-adjusted Cancer Incidence Rates—District 9 vs. Indiana, 2008-2012

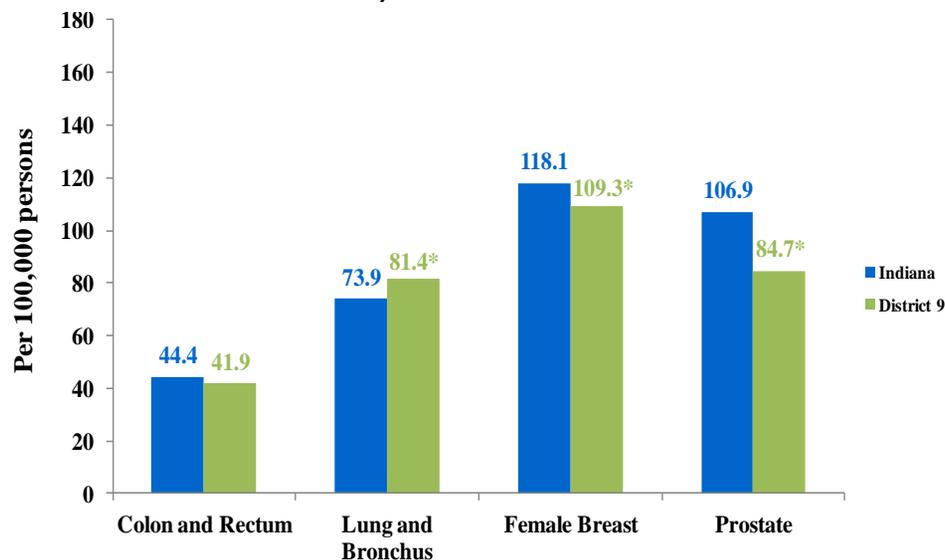
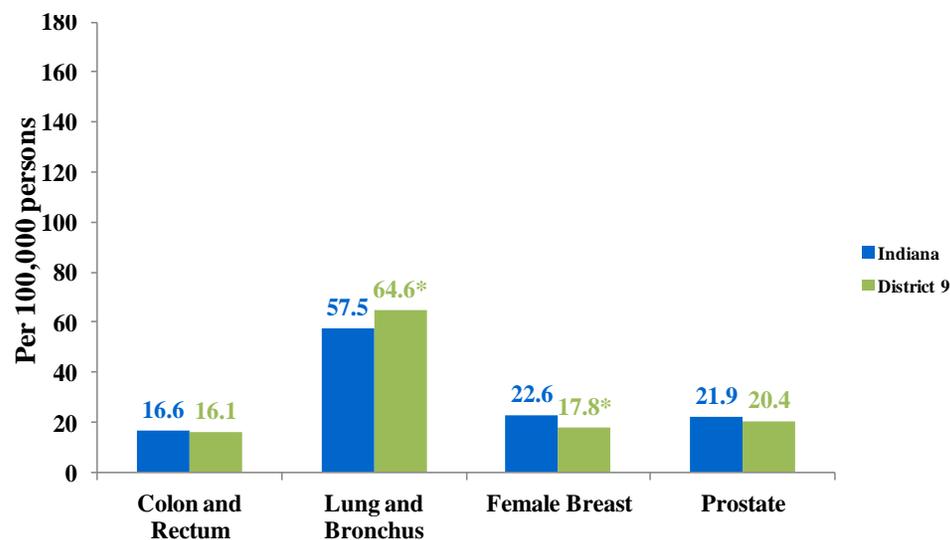


Figure 18. Age-adjusted Cancer Mortality Rates—District 9 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD †
 ↑ = higher ↓ = lower “blank” = no difference

Table 81. Cancer Incidence Rate Comparisons for District 9, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum				
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†			
Indiana	163,199	466.9	17,650	106.9	↑	22,082	118.1	↑	25,847	73.9	↓	15,495	44.4		
District 1	22,316	490.5	↑	2,920	136.3	↑	3,012	123.5	↑	3,381	74.2	↓	2,265	50.2	↑
District 2	16,510	470.4		1,940	117.9	↓	2,163	117.1		2,524	71.3	↑	1,592	45.3	
District 3	17,163	443.5	↓	1,849	100.8	↑	2,318	112.9		2,450	63.3	↓	1,647	42.4	
District 4	8,416	452.6		926	105.9	↑	1,081	110.5		1,379	74.1		820	44.0	
District 5	37,854	458.8		3,597	92.2		5,674	124.7	↑	5,846	73.6	↓	3,322	40.7	
District 6	18,879	479.2	↑	2,198	117.8	↑	2,330	112.3		3,226	80.0		1,841	45.9	
District 7	8,010	489.3	↑	834	105.7	↑	996	115.9		1,380	82.5		785	48.2	↑
District 8	9,182	471.1		858	90.7		1,235	119.7	↑	1,498	75.9	↓	865	45.1	
District 9	11,810	462.7		1,053	84.7		1,508	109.3		2,088	81.4		1,063	41.9	
District 10	13,035	457.5		1,474	107.9	↑	1,763	117.3		2,073	71.9	↓	1,295	45.2	

Table 82. Cancer Incidence Rate Comparisons for Counties in District 9, Indiana 2008–2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum				
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†			
Indiana	163,199	466.9	17,650	106.9	22,082	118.1	25,847	73.9	15,495	44.4					
Clark	2,825	468.3	198	66.2	↓	376	110.9		512	86.1	↑	261	43.5		
Dearborn	1,237	439.1	152	107.7		167	113.2		216	76		125	46		
Decatur	660	443.8	81	114.8		68	84.8	↓	108	72		57	37.8		
Floyd	1,992	481.4	162	81.4	↓	282	122.3		338	82.2		166	39.2		
Franklin	523	386.3	↓	71	115.6		62	92.4		84	60.1		41	30.2	↓
Harrison	1,037	458.5		86	72.9	↓	140	118.1		186	82		77	33.8	↓
Jefferson	873	459.7		89	94.5	↓	91	89.4	↓	145	75.3		80	42.6	
Jennings	757	499.5		63	84.8		94	115.3		148	97.3	↑	50	35.5	
Ohio	206	542.2		X	X		29	147		43	109	↑	24	66.5	
Ripley	768	462.9		78	97.7		100	113.6		133	78.2		73	43.3	
Scott	647	479.5		31	47.2	↓	77	108.1		124	89.5		71	51.3	
Switzerland	285	472.3		27	85.2		22	72.4	↓	51	84.4		38	66.5	↑

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD†
 † = higher ‡ = lower "blank" = no difference

Table 83. Cancer Mortality Rate Comparisons for District 9, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum		
	Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†		Count	Rate†	
Indiana	65,367	187.3		2,918	21.9	4,410	22.6	↑	20,079	58.5	↓	5,832	16.9	
District 1	8,741	192.6		416	23.5	660	26.0	↑	2,504	55.9	↓	855	19.1	↑
District 2	6,452	180.3	↓	324	23.2	420	20.8		1,888	53.3	↓	558	15.7	
District 3	6,962	178.7	↓	361	24.1	503	23.0	↑	1,918	49.5	↓	634	16.2	
District 4	3,444	183.0		153	20.4	235	22.2		1,072	57.7	↓	332	17.6	
District 5	14,870	188.2		658	22.8	1,065	23.3	↑	4,571	58.2	↓	1,210	15.1	
District 6	7,847	194.4		295	18.6	489	22.4	↑	2,544	63.1		702	17.1	
District 7	3,310	200.0		126	20.3	208	22.8		1,124	67.7		316	19.2	
District 8	3,669	187.7		155	20.4	233	21.5		1,179	59.9	↓	299	15.5	
District 9	4,841	191.7		189	20.4	250	17.8		1,649	64.6		402	16.1	
District 10	5,231	180.6	↓	241	21.4	347	21.8		1,560	54.1	↓	488	16.7	

Table 84. Cancer Mortality Rate Comparisons for Counties in District 9, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast			Lung			Colon and Rectum	
	Count	Rate†		Count	Rate†	Count	Rate†		Count	Rate†		Count	Rate†
Indiana	65,367	187.3		2,918	22.5	4,410	22.6		20,028	57.5		5,818	16.6
Clark	1,158	195.4		21	19.6	50	15.1	↓	414	70.5	↑	102	17.0
Dearborn	496	180.4		14	22.6	27	19.0		168	59.7		49	18.6
Decatur	301	199.5		X	X	X	X		96	64.1		20	13.5
Floyd	761	186.2		14	28.9	↓	56	23.0	252	60.7		51	12.2
Franklin	255	186.4		X	X	X	X		79	57.1		29	21.4
Harrison	385	173.6		X	X	23	19.2		132	59.7		25	11.3
Jefferson	323	169.0		X	X	X	X		109	55.9		29	15.2
Jennings	318	217.3	↑	X	X	X	X		110	71.5	↑	23	16.9
Ohio	77	198.2		X	X	X	X		32	81.0		X	X
Ripley	343	200.5		X	X	X	X		98	58.1		35	20.9
Scott	285	217.2	↑	X	X	X	X		108	78.8	↑	22	17.2
Switzerland	139	229.5	↑	X	X	X	X		51	81.2	↑	X	X

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Incidence and Mortality by Race and Gender

Table 85. Cancer Incidence Rates by Races and Genders for District 9 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female						
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD					
	All Sites	463.1	459.0	479.7	478.5	514.1	500.3	436.8	439.5	512.0	508.7	439.8	454.2	546.5	556.5	441.6	453.6				
Colon and Rectum	43.7	41.6	51.5	35.8	50.4	45.0	39.6	39.2	50.1	45.7	39.2	40.9	57.7	X	47.3	X					
Lung and Bronchus	73.9	81.5	↑	80.0	89.7	91.3	101.1	↑	61.0	66.7	↑	91.8	103.9	↑	61.9	68.6	↑	106.6	127.2	62.1	X
Female Breast	-	-	-	-	-	-	118.1	109.3	-	-	118.0	109.4	-	-	122.0	111.6					
Prostate	-	-	-	-	106.9	84.7	-	-	100.5	80.1	-	-	146.3	109.0	-	-					

Table 86. Cancer Mortality Rates by Races and Genders for District 9 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female						
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD					
	All Sites	183.2	186.4	221.2	210.6	231.3	240.2	157.1	157.4	226.5	233.6	439.8	454.2	277.0	249.0	186.9	180.7				
Colon and Rectum	16.1	16.0	22.0	X	20.2	18.8	13.8	14.0	19.7	18.9	39.2	40.9	26.7	X	19.0	X					
Lung and Bronchus	56.8	63.2	↑	64.3	71.6	75.1	84.8	↑	44.5	49.4	↑	74.0	82.7	↑	61.9	68.6	↑	89.0	X	47.4	X
Female Breast	-	-	-	-	-	-	118.1	109.3	-	-	21.8	17.2	-	-	30.0	31.4					
Prostate	-	-	-	-	106.9	84.7	-	-	20.5	19.6	-	-	43.1	39.4	-	-					

Source: Indiana State Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Stage of Diagnosis by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 † = higher ‡ = lower "blank" = no difference

Table 87. Lung and Bronchus Cancer Incidence Rates by Stage of Diagnosis, Race and Gender—District 9 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female			
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD		
In Situ	0.1	X	0.1	X	0.0	0.0	X	X	0.0	0.0	X	X	0.0	0.0	0.0	0.0	0.0	0.0		
Local	14.1	15.1	14.2	15.1	13.8	X	15.8	17.0	13.0	14.0	15.8	16.8	13.2	14.2	17.1	X	11.6	X		
Regional	17.3	21.2	↑	17.4	21.0	↑	17.6	38.6	↑	21.2	24.5	14.4	18.4	↑	21.1	24.2	14.6	18.2	↑	
Distant	38.2	40.9		38.2	41.3		44.0	X		47.8	53.1	↑	30.8	31.6		47.5	53.4	↑	30.8	32.1

Table 88. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender—District 9 vs. Indiana, 2008-2012**

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	2.3	2.2	2.0	3.7	X	3.1	2.4	2.3	2.3	2.6	2.1	1.8	2.0	4.2	X	3.3	X
Local	18.2	17.4	17.9	16.9	19.4	X	20.8	18.7	16.0	16.2	20.5	18.0	15.7	16.0	22.0	X	17.6	X
Regional	15.0	13.3	14.8	13.4	16.5	X	16.7	14.3	13.5	12.5	16.6	14.3	13.3	12.6	17.4	X	15.9	X
Distant	8.8	8.7	8.8	8.9	12.3	X	10.0	9.0	7.8	8.3	9.8	9.2	7.6	8.6	14.0	X	10.9	X

Table 89. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race—District 9 vs. Indiana, 2008-2012**

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	26.6	24.1	26.2	24.0	31.7	X
Local	74.9	70.5	75.5	70.6	68.2	X
Regional	33.7	29.9	33.2	30.2	42.1	X
Distant	7.4	6.3	7.4	6.2	9.2	X

Table 90. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race—District 9 vs. Indiana, 2008-2012**

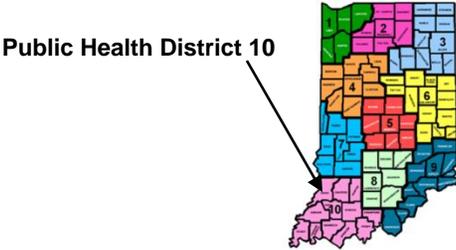
	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	X	0.0	0.0	0.0	0.0	0.0
Local	83.4	65.5	↓	78.7	61.6	↓
Regional	11.7	9.2	↓	11.3	9.3	15.1
Distant	6.3	4.9		6.3	4.8	15.1

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the state rate of based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.



Public Health District 10

Public Health District 10 (District 10) is comprised of Knox, Daviess, Martin, Gibson, Pike, Dubois, Posey, Vanderburgh, Warrick, Spencer, Perry and Crawford counties. It lies in the southwest corner of the state. In Indiana, the overall cancer incidence rate was 466.9 per 100,000 people during 2008-2012. District 10 had a lower, but not statistically different, rate of 457.5 per 100,000 people for the same period. For mortality, the rate for District 10 of 180.6 per 100,000 people was statistically lower than the overall Indiana rate of 187.3 per 100,000 people.

Figure 19. Age-adjusted Cancer Incidence Rates- District 10 vs. Indiana, 2008-2012

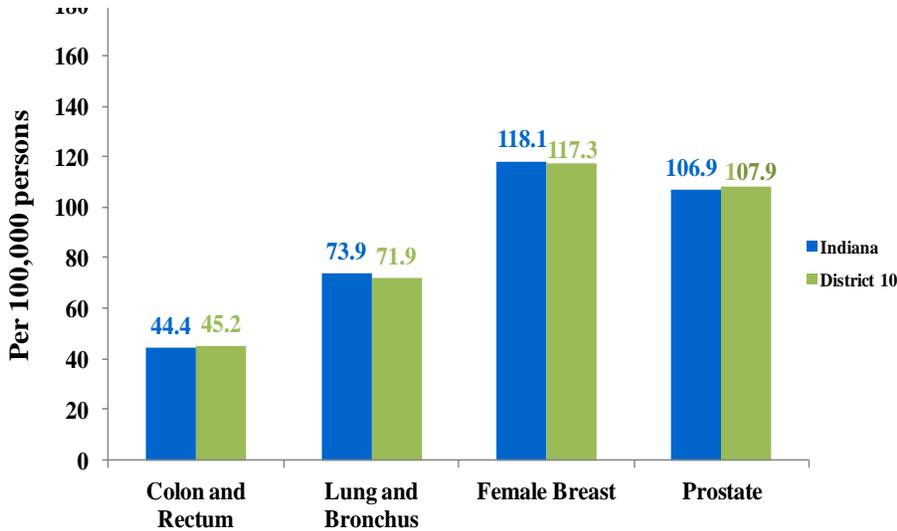
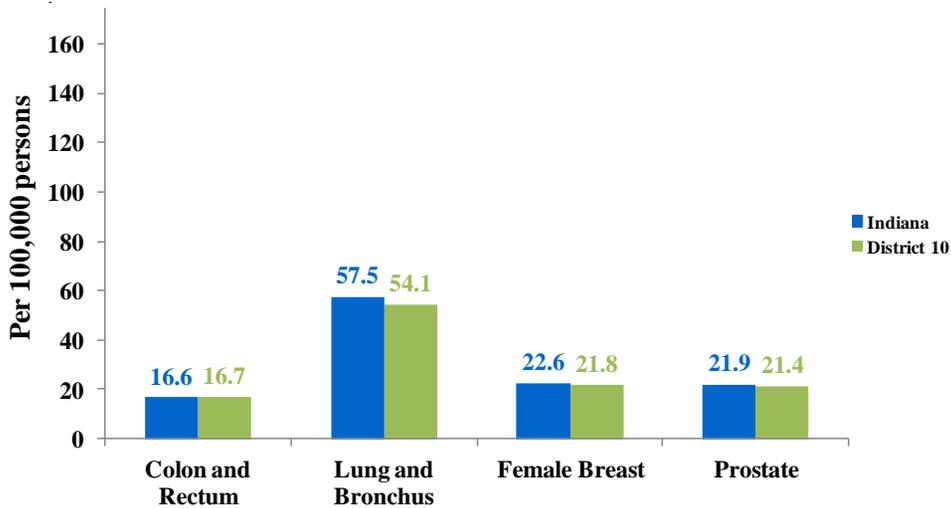


Figure 20. Age-adjusted Cancer Mortality Rates- District 10 vs. Indiana, 2008-2012



Source: Indiana State Cancer Registry, April 2014

*Significantly different rate when compared to Indiana. Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population. Age-adjusted is a process in which statistical procedures have been applied to allow fair comparisons across populations by removing the effect of differences in age-distribution between the populations.

Incidence

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD†
 ↑ = higher ↓ = lower "blank" = no difference

Table 91. Cancer Incidence Rate Comparisons for District 10, Indiana 2008-2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†
Indiana	163,199	466.9	17,650	106.9	22,082	118.1	25,847	73.9	15,495	44.4
District 1	22,316	490.5	2,920	136.3	3,012	123.5	3,381	74.2	2,265	50.2
District 2	16,510	470.4	1,940	117.9	2,163	117.1	2,524	71.3	1,592	45.3
District 3	17,163	443.5	1,849	100.8	2,318	112.9	2,450	63.3	1,647	42.4
District 4	8,416	452.6	926	105.9	1,081	110.5	1,379	74.1	820	44.0
District 5	37,854	458.8	3,597	92.2	5,674	124.7	5,846	73.6	3,322	40.7
District 6	18,879	479.2	2,198	117.8	2,330	112.3	3,226	80.0	1,841	45.9
District 7	8,010	489.3	834	105.7	996	115.9	1,380	82.5	785	48.2
District 8	9,182	471.1	858	90.7	1,235	119.7	1,498	75.9	865	45.1
District 9	11,810	462.7	1,053	84.7	1,508	109.3	2,088	81.4	1,063	41.9
District 10	13,035	457.5	1,474	107.9	1,763	117.3	2,073	71.9	1,295	45.2

Table 92. Cancer Incidence Rate Comparisons for Counties in District 10, Indiana 2008-2012*†

	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†	Count	Rate†
Indiana	163199	466.9	17650	106.9	22082	118.1	25847	73.9	15495	44.4
Crawford	309	479.5	29	80.4	45	138.1	56	83.7	25	37.7
Daviess	774	438.9	82	98.5	84	89.4	120	67.2	88	48.3
Dubois	1092	445	132	114.1	144	110.9	138	55.5	111	44.7
Gibson	908	450.3	111	116.6	133	125.3	141	68.2	109	53.7
Knox	1182	510.4	142	131.9	154	123.8	171	71.4	121	53
Martin	344	541.9	40	120.7	48	148.9	49	75.3	47	73.4
Perry	527	443.2	46	81.4	72	111.3	106	90.7	49	40.4
Pike	363	425.1	38	91.8	53	120.5	56	62.1	43	49.6
Posey	735	468.9	99	129.7	101	120.1	94	62.2	69	44.4
Spencer	573	448.5	63	100.5	78	120.5	100	75.7	63	50.4
Vanderburgh	4617	445.3	491	102.2	599	109.3	827	78.7	427	41
Warrick	1611	476.2	201	115.3	252	137.7	215	64.4	143	42.7

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Mortality

↑↓ DENOTE IF RATE IS SIGNIFICANTLY DIFFERENT THAN THE RATE IN BOLD[†]
 ↑ = higher ↓ = lower "blank" = no difference

Table 93. Cancer Mortality Rate Comparisons for District 10, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum	
	Count	Rate [†]		Count	Rate [†]	Count	Rate [†]	Count	Rate [†]		Count	Rate [†]
Indiana	65,367	187.3	↑	2,918	21.9	4,410	22.6	20,079	58.5		5,832	16.9
District 1	8,741	192.6	↑	416	23.5	660	26.0	2,504	55.9		855	19.1
District 2	6,452	180.3		324	23.2	420	20.8	1,888	53.3		558	15.7
District 3	6,962	178.7		361	24.1	503	23.0	1,918	49.5		634	16.2
District 4	3,444	183.0		153	20.4	235	22.2	1,072	57.7		332	17.6
District 5	14,870	188.2		658	22.8	1,065	23.3	4,571	58.2		1,210	15.1
District 6	7,847	194.4	↑	295	18.6	489	22.4	2,544	63.1	↑	702	17.1
District 7	3,310	200.0	↑	126	20.3	208	22.8	1,124	67.7	↑	316	19.2
District 8	3,669	187.7		155	20.4	233	21.5	1,179	59.9		299	15.5
District 9	4,841	191.7	↑	189	20.4	250	17.8	1,649	64.6	↑	402	16.1
District 10	5,231	180.6		241	21.4	347	21.8	1,560	54.1		488	16.7

Table 94. Cancer Mortality Rate Comparisons for Counties in District 10, Indiana 2008–2012*†

	All Cancers			Prostate (Male-only disease)		Female Breast		Lung			Colon and Rectum		
	Count	Rate [†]		Count	Rate [†]	Count	Rate [†]	Count	Rate [†]		Count	Rate [†]	
Indiana	65,367	187.3		2,918	21.9	4,410	22.6	20,028	57.5		5,818	16.6	
Crawford	110	171.1		X	X	X	X	43	63.7		X	X	
Daviess	327	182.4		X	X	X	X	104	58.9		33	18.9	
Dubois	434	173.7		X	X	32	22.6	97	39.0	↓	49	19.4	
Gibson	357	174.3		X	X	28	25.7	97	46.9		47	22.7	
Knox	439	181.0		X	X	27	19.9	130	53.7		50	20.3	
Martin	125	189.3		X	X	X	X	38	58.7		X	X	
Perry	257	212.7		X	X	X	X	93	79.4	↑	31	24.6	
Pike	155	180.3		X	X	X	X	54	60.8		X	X	
Posey	255	165.2		X	X	X	X	64	41.5	↓	21	13.5	
Spencer	231	181.0		X	X	X	X	70	53.7		29	22.2	
Vanderburgh	1,987	187.0		83	19.3	138	24.0	617	58.6		150	13.8	
Warrick	554	167.5	↓	33	27.2	44	24.1	153	46.0	↓	40	12.3	↓

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the rate is significantly different than the rate of the geography bolded based on the 95% confidence interval overlap method.

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE †
 ↑ = higher ↓ = lower "blank" = no difference

Incidence and Mortality by Race and Gender

Table 95. Cancer Incidence Rates by Races and Genders District 10 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	463.1	449.7 ↓	479.7	469.0	514.1	521.3	436.8	413.4 ↓	512.0	517.5	439.8	409.8 ↓	546.5	579.2	441.6	395.4
Colon and Rectum	43.7	44.0	51.5	42.9	50.4	52.8	39.6	39.2	50.1	51.5	39.2	38.3	57.7	59.6	47.3	X
Lung and Bronchus	73.9	71.2	80.0	86.2	91.3	92.9	61.0	56.0	91.8	92.5	61.9	56.0 ↓	106.6	134.5	62.1	53.3
Female Breast	–	–	–	–	–	–	118.1	117.3	–	–	118.0	114.8	–	–	122.0	126.3
Prostate	–	–	–	–	106.9	107.9	–	–	100.5	105.1	–	–	146.3	160.1	–	–

Table 96. Cancer Mortality Rates by Races and Genders for District 10 vs. Indiana 2008–2012*†

	White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
All Sites	183.2	176.7	221.2	227.1	231.3	223.7	157.1	151.6	226.5	219.2	439.8	409.8	277.0	267.3	186.9	204.0
Colon and Rectum	16.1	16.4	22.0	X	20.2	20.3	13.8	13.8	19.7	19.8	39.2	38.3	26.7	X	19.0	X
Lung and Bronchus	56.8	53.0 ↓	64.3	68.0	75.1	72.5	44.5	40.5	74.0	71.4	61.9	56.0 ↓	89.0	81.7	47.4	58.6
Female Breast	–	–	–	–	–	–	118.1	117.3	–	–	21.8	21.2	–	–	30.0	35.3
Prostate	–	–	–	–	106.9	107.9	–	–	20.5	20.7	–	–	43.1	53.6	–	–

Source: Indiana State Cancer Registry, April 2014

* Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† "↑↓" symbols denote whether the district's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method

"X" Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Stage of Diagnosis by Race and Gender

↑↓ DENOTE IF DISTRICT RATE IS SIGNIFICANTLY DIFFERENT THAN THE STATE RATE†
 ↑ = higher ↓ = lower "blank" = no difference

Table 97. Lung and Bronchus Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender—District 10 vs. Indiana, 2008-2012*†

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female		
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	
In Situ	0.1	0.0	0.1	0.0	0.0	0.0	X	0.0	X	0.0	X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Local	14.1	13.8	14.2	13.4	13.8	X	15.8	16.7	13.0	11.9	15.8	15.9	13.2	11.8	17.1	X	11.6	X	
Regional	17.3	18.0	17.4	17.8	17.6	X	21.2	24.2	14.4	13.3	21.1	23.9	14.6	13.2	23.9	X	13.2	X	
Distant	38.2	36.3	38.2	36.3	44.0	41.0	47.8	47.0	30.8	28.0	47.5	47.0	30.8	28.0	58.0	55.6	34.4	X	

Table 98. Colon Cancer Incidence Rates by Stage of Diagnosis, Race and Gender –District 10 vs. Indiana, 2008-2012*†

	All		White		African-American		Male		Female		White Male		White Female		African-American Male		African-American Female	
	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	2.6	2.4	2.2	2.3	3.7	X	3.1	3.3	2.3	1.7	2.6	3.2	1.8	1.6	4.2	X	3.3	X
Local	18.2	17.4	17.9	16.7	19.4	X	20.8	20.7	16.0	15.0	20.5	19.8	15.7	14.7	22.0	X	17.6	X
Regional	15.0	16.8	14.8	16.4	16.5	X	16.7	19.3	13.5	14.8	16.6	18.9	13.3	14.2	17.4	X	15.9	X
Distant	8.8	8.5	8.8	8.5	12.3	X	10.0	9.8	7.8	7.3	9.8	9.9	7.6	7.3	14.0	X	10.9	X

Table 99. Female Breast Cancer Incidence Rates, Stage of Diagnosis by Race—District 10 vs. Indiana, 2008-2012*†

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	26.6	21.1 ↓	26.2	20.7 ↓	31.7	X
Local	74.9	77.8	75.5	76.2	68.2	X
Regional	33.7	32.1	33.2	31.8	42.1	X
Distant	7.4	5.7	7.4	5.1 ↓	9.2	X

Table 100. Prostate Cancer Incidence Rates, Stage of Diagnosis by Race—District 10 vs. Indiana, 2008-2012*†

	All		White		African-American	
	Indiana	PHD	Indiana	PHD	Indiana	PHD
In Situ	X	X	X	X	0.0	0.0
Local	83.4	88.4	78.7	86.2 ↑	108.5	124.9
Regional	11.7	9.0 ↓	11.3	8.9 ↓	15.1	X
Distant	6.3	6.8	6.3	6.4	15.1	X

Source: Indiana State Cancer Registry, April 2014

*Rates are per 100,000 people and age-adjusted to the 2000 U.S. Standard Population

† “↑↓” symbols denote whether the district’s rate is significantly different than the state rate of based on the 95% confidence interval overlap method.

“X” Rate and comparison to state rate suppressed if fewer than 20 cases occurred because the rate is considered unstable.

Technical Notes

Age-adjusted Rates

Older age groups generally have higher cancer rates than younger age groups. For example, in Indiana, more than 60percent of new lung cancer cases occur in those ages 60 and older. As a result, if one county's lung cancer incidence rate is higher than another, the first question asked is whether the county with a higher rate has an older population.

To address this issue, all mortality and incidence rates presented in this report, unless otherwise noted, have been age-adjusted. This removes the impact of different age distributions between populations and allows for direct comparisons of those populations. Additionally, age-adjustment allows for a comparison of rates within a single population over time. An age-adjusted rate is not a real measure of the burden of the disease on a population, but rather an artificial measure that is used for comparison purposes.

All mortality and incidence rates in this publication were age-adjusted using the direct method. This method weights the age-specific rates (i.e., rates calculated for each age group) for a given sex, race or geographic area by the age distribution of the standard population. The 2000 United States standard million population and five-year age group population numbers were used to calculate all of the age-adjusted rates in this report.

Confidence Intervals and Statistical Significance

Because the ISCR collects information on all reportable cancer cases that occur in Indiana, the incidence and mortality rates in this report are not subject to sampling error (i.e., error in estimating rates because one is working with sample rather than population data). However, cancer rates are often impacted by random variation, especially when looking at rates for rare types of cancer or among small geographic areas. Because of this random variation, confidence intervals (CIs) are used to describe the range of that variation. Most typically, 95 percent CIs are calculated, which provide a range of values in which one is 95 percent confident that the true rate exists, or, more technically, a 95 percent CI is such that if one repeated a study 100 times, 95 of the intervals would include the true rate.

For this report, CIs for the age-adjusted rates were calculated with a method based on the gamma distribution (Fay MP, Feuer EJ., 1997.) This method produces valid CIs even when the number of cases is very small. When the number of cases is large, the CIs produced with the gamma method are equivalent to those produced with the more traditional methods.

Generally, when the 95 percent CI for the area of interest does not overlap with the 95 percent CI for the comparison area, we say that the two areas are statistically significantly different at the $P<.05$ level (i.e., the difference between the two rates is more than that expected by random variation). The limitation of this method, though, is that if two rates have overlapping CIs, they are probably not significantly different, but there is a chance that they still could be. Therefore, some of the rates in this report (e.g., county rates) not designated as being significantly above or below the comparison rate (e.g., Indiana rate) could still be significantly different.