

Table1. Socio-demographic characteristics of the population in the Coldwater Creek area and the State of Missouri

Geographic Area	Total population 2000 Census*	Percentage (%)				
		>64yrs	Male	African American	< High school education**	Below poverty***
<i>63031</i>	50,013	13.71	47.58	11.32	13.33	4.06
<i>63033</i>	45,574	15.73	46.24	43.41	12.44	4.12
<i>63034</i>	16,803	10.65	48.35	28.99	7.44	1.86
<i>63042</i>	19,162	11.88	48.01	18.10	12.62	6.77
<i>63134</i>	14,982	11.60	45.77	57.91	22.54	16.33
<i>63138</i>	21,879	11.09	46.48	53.82	17.70	11.62
<i>Designated area</i>	168,413	13.22	47.04	32.20	13.69	6.24
<i>State of Missouri</i>	5,595,211	13.50	48.62	11.25	18.68	11.74

*Census 2000 population counts from the Census 2000 SF1 table P012 (Sex by Age).

**The populations and percentages of "less than High School Education" are for the population 25 years and older, from the Census 2000 SF3 (sample data) table P037.

***The populations and percentages of "Below Poverty" were for the population in 1999 for whom poverty status was determined, from the Census 2000 SF3 (sample data) table P087.

Table 2. Number of observed and expected incident cases of cancers in ZIP code 63031, 1996-2004

Site	Observed cases	Expected cases*	SIR	Lower 95% CI	Upper 95% CI	Sig
Oral cavity and pharynx	43	48.2	0.89	0.65	1.20	
Esophagus	24	21.8	1.10	0.71	1.64	
Stomach	22	26.3	0.84	0.52	1.27	
Colon excluding rectum	204	197.9	1.03	0.89	1.18	
Rectum and rectosigmoid; anus, anal canal and anorectum	69	74.5	0.93	0.72	1.17	
Liver	17	16.3	1.04	0.61	1.67	
Pancreas	48	51.7	0.93	0.68	1.23	
Larynx	26	22.1	1.18	0.77	1.72	
Lung and bronchus, pleura, trachea, mediastinum and other respiratory organs	403	372.7	1.08	0.98	1.19	
Bones and joints	1	4.1	0.24	0.00	1.36	
Soft tissue including heart	8	13.5	0.59	0.26	1.17	
Melanoma of the skin	59	53.6	1.10	0.84	1.42	
Female breast	361	335.7	1.08	0.97	1.19	
Cervix uteri	19	23.9	0.79	0.48	1.24	
Corpus uteri	60	62.9	0.95	0.73	1.23	
Ovary	31	35.5	0.87	0.59	1.24	
Prostate	307	268.3	1.14	1.02	1.28	SH
Testis	14	10.4	1.35	0.74	2.26	
Urinary bladder	107	92.8	1.15	0.94	1.39	
Kidney and renal pelvis	74	63.1	1.17	0.92	1.47	
Brain and other nervous system	36	32.9	1.09	0.77	1.51	
Thyroid	21	33.4	0.63	0.39	0.96	SL
Hodgkin lymphoma	15	12.1	1.24	0.69	2.04	
Non-Hodgkin Lymphoma	80	88.6	0.90	0.72	1.12	
Myeloma	18	24.4	0.74	0.44	1.17	
Leukemia	64	57.1	1.12	0.86	1.43	
Other	120	135.2	0.89	0.74	1.06	
Other including bone, liver and soft tissue	146	169.1	0.86	0.73	1.02	
Total	2251	2178.8	1.03	0.99	1.08	

*Expected based on age-, gender- and race- specific state rates. SIR: Standardized incidence ratio. CI: Confidence Interval. Sig: Significantly different between observed and expected. SH: Observed is significantly higher than expected. SL: Observed is significantly lower than expected.

Table 3. Number of observed and expected incident cases of cancers in ZIP code 63033, 1996-2004

Site	Observed cases	Expected cases*	SIR	Lower 95% CI	Upper 95% CI	Sig
Oral cavity and pharynx	37	49.8	0.74	0.52	1.02	
Esophagus	17	25.7	0.66	0.39	1.06	
Stomach	40	31.9	1.25	0.90	1.71	
Colon excluding rectum	250	215.7	1.16	1.02	1.31	SH
Rectum and rectosigmoid; anus, anal canal and anorectum	84	75.9	1.11	0.88	1.37	
Liver	15	22.1	0.68	0.38	1.12	
Pancreas	64	57.5	1.11	0.86	1.42	
Larynx	19	24.9	0.76	0.46	1.19	
Lung and bronchus, pleura, trachea, mediastinum and other respiratory organs	345	401.4	0.86	0.77	0.96	SL
Bones and joints	4	3.5	1.14	0.31	2.93	
Soft tissue including heart	13	13.6	0.96	0.51	1.63	
Melanoma of the skin	42	39.3	1.07	0.77	1.44	
Female breast	348	331.8	1.05	0.94	1.17	
Cervix uteri	13	26.1	0.50	0.26	0.85	SL
Corpus uteri	62	58.3	1.06	0.82	1.36	
Ovary	29	32.7	0.89	0.59	1.27	
Prostate	415	310.7	1.34	1.21	1.47	SH
Testis	2	5.8	0.34	0.04	1.24	
Urinary bladder	87	91.0	0.96	0.77	1.18	
Kidney and renal pelvis	83	65.6	1.27	1.01	1.57	SH
Brain and other nervous system	32	28.2	1.13	0.78	1.60	
Thyroid	14	27.3	0.51	0.28	0.86	SL
Hodgkin lymphoma	13	10.5	1.24	0.66	2.12	
Non-Hodgkin Lymphoma	77	85.2	0.90	0.71	1.13	
Myeloma	26	30.1	0.86	0.56	1.27	
Leukemia	58	57.2	1.01	0.77	1.31	
Other	140	144.7	0.97	0.81	1.14	
Other including bone, liver and soft tissue	172	183.9	0.94	0.80	1.09	
Total	2329	2266.5	1.03	0.99	1.07	

*Expected based on age-, gender- and race- specific state rates. SIR: Standardized incidence ratio. CI: Confidence Interval. Sig: Significantly different between observed and expected. SH: Observed is significantly higher than expected. SL: Observed is significantly lower than expected.

Table 4. Number of observed and expected incident cases of cancers in ZIP code 63034, 1996-2004

Site	Observed cases	Expected cases*	SIR	Lower 95% CI	Upper 95% CI	Sig
Oral cavity and pharynx	9	17.7	0.51	0.23	0.97	SL
Esophagus	5	8.2	0.61	0.20	1.42	
Stomach	8	9.4	0.85	0.37	1.68	
Colon excluding rectum	75	62.1	1.21	0.95	1.51	
Rectum and rectosigmoid; anus, anal canal and anorectum	27	24.4	1.11	0.73	1.61	
Liver	6	7.2	0.83	0.30	1.81	
Pancreas	11	16.7	0.66	0.33	1.18	
Larynx	3	8.7	0.34	0.07	1.01	
Lung and bronchus, pleura, trachea, mediastinum and other respiratory organs	92	125.2	0.73	0.59	0.90	SL
Bones and joints	1	1.3	0.77	0.01	4.28	
Soft tissue including heart	6	4.6	1.30	0.48	2.84	
Melanoma of the skin	17	15.4	1.10	0.64	1.77	
Female breast	109	108.5	1.00	0.82	1.21	
Cervix uteri	4	8.7	0.46	0.12	1.18	
Corpus uteri	18	19.0	0.95	0.56	1.50	
Ovary	13	10.5	1.24	0.66	2.12	
Prostate	135	102.9	1.31	1.10	1.55	SH
Testis	1	2.6	0.38	0.01	2.14	
Urinary bladder	27	28.3	0.95	0.63	1.39	
Kidney and renal pelvis	27	22.1	1.22	0.80	1.78	
Brain and other nervous system	7	10.1	0.69	0.28	1.43	
Thyroid	11	10.8	1.02	0.51	1.82	
Hodgkin lymphoma	4	3.9	1.03	0.28	2.63	
Non-Hodgkin Lymphoma	24	27.6	0.87	0.56	1.29	
Myeloma	17	8.7	1.95	1.14	3.13	SH
Leukemia	13	17.9	0.73	0.39	1.24	
Other	26	42.7	0.61	0.40	0.89	SL
Other including bone, liver and soft tissue	39	55.8	0.70	0.50	0.96	SL
Total	696	725.3	0.96	0.89	1.03	

*Expected based on age-, gender- and race- specific state rates. SIR: Standardized incidence ratio. CI: Confidence Interval. Sig: Significantly different between observed and expected. SH: Observed is significantly higher than expected. SL: Observed is significantly lower than expected.

Table 5. Number of observed and expected incident cases of cancers in ZIP code 63042, 1996-2004

Site	Observed cases	Expected cases*	SIR	Lower 95% CI	Upper 95% CI	Sig
Oral cavity and pharynx	14	17.6	0.80	0.43	1.33	
Esophagus	7	8.0	0.88	0.35	1.80	
Stomach	8	9.5	0.84	0.36	1.66	
Colon excluding rectum	80	67.8	1.18	0.94	1.47	
Rectum and rectosigmoid; anus, anal canal and anorectum	31	26.3	1.18	0.80	1.67	
Liver	12	6.2	1.94	0.999	3.38	
Pancreas	20	17.9	1.12	0.68	1.73	
Larynx	10	8.3	1.20	0.58	2.22	
Lung and bronchus, pleura, trachea, mediastinum and other respiratory organs	169	133.8	1.26	1.08	1.47	SH
Bones and joints	0	1.5	0.00	--	--	
Soft tissue including heart	5	5.0	1.00	0.32	2.33	
Melanoma of the skin	24	18.7	1.28	0.82	1.91	
Female breast	135	120.0	1.13	0.94	1.33	
Cervix uteri	8	9.2	0.87	0.37	1.71	
Corpus uteri	18	22.3	0.81	0.48	1.28	
Ovary	18	12.3	1.46	0.87	2.31	
Prostate	118	99.6	1.18	0.98	1.42	
Testis	1	4.0	0.25	0.00	1.39	
Urinary bladder	35	31.9	1.10	0.76	1.53	
Kidney and renal pelvis	24	22.8	1.05	0.67	1.57	
Brain and other nervous system	14	11.8	1.19	0.65	1.99	
Thyroid	7	12.4	0.56	0.23	1.16	
Hodgkin lymphoma	2	4.7	0.43	0.05	1.54	
Non-Hodgkin Lymphoma	36	31.3	1.15	0.81	1.59	
Myeloma	9	8.7	1.03	0.47	1.96	
Leukemia	21	19.9	1.06	0.65	1.61	
Other	52	46.5	1.12	0.84	1.47	
Other including bone, liver and soft tissue	69	59.2	1.17	0.91	1.48	
Total	878	778.0	1.13	1.06	1.21	SH

*Expected based on age-, gender- and race- specific state rates. SIR: Standardized incidence ratio. CI: Confidence Interval. Sig: Significantly different between observed and expected. SH: Observed is significantly higher than expected. SL: Observed is significantly lower than expected.

Table 6. Number of observed and expected incident cases of cancers in ZIP code 63134, 1996-2004

Site	Observed cases	Expected cases*	SIR	Lower 95% CI	Upper 95% CI	Sig
Oral cavity and pharynx	18	13.3	1.35	0.80	2.14	
Esophagus	8	7.3	1.10	0.47	2.16	
Stomach	8	9.4	0.85	0.37	1.68	
Colon excluding rectum	56	56.4	0.99	0.75	1.29	
Rectum and rectosigmoid; anus, anal canal and anorectum	36	19.6	1.84	1.29	2.54	SH
Liver	8	6.7	1.19	0.51	2.35	
Pancreas	15	15.5	0.97	0.54	1.60	
Larynx	17	7.1	2.39	1.39	3.83	SH
Lung and bronchus, pleura, trachea, mediastinum and other respiratory organs	146	106.8	1.37	1.15	1.61	SH
Bones and joints	2	1.1	1.82	0.20	6.56	
Soft tissue including heart	3	3.9	0.77	0.15	2.25	
Melanoma of the skin	10	8.7	1.15	0.55	2.11	
Female breast	109	89.6	1.22	0.999	1.47	
Cervix uteri	8	8.3	0.96	0.42	1.90	
Corpus uteri	18	15.2	1.18	0.70	1.87	
Ovary	12	8.4	1.43	0.74	2.50	
Prostate	92	86.2	1.07	0.86	1.31	
Testis	2	1.7	1.18	0.13	4.25	
Urinary bladder	25	21.0	1.19	0.77	1.76	
Kidney and renal pelvis	18	17.8	1.01	0.60	1.60	
Brain and other nervous system	9	7.5	1.20	0.55	2.28	
Thyroid	5	7.8	0.64	0.21	1.50	
Hodgkin lymphoma	4	3.2	1.25	0.34	3.20	
Non-Hodgkin Lymphoma	23	21.1	1.09	0.69	1.64	
Myeloma	10	8.9	1.12	0.54	2.07	
Leukemia	20	14.9	1.34	0.82	2.07	
Other	48	38.1	1.26	0.93	1.67	
Other including bone, liver and soft tissue	61	49.8	1.22	0.94	1.57	
Total	730	605.4	1.21	1.12	1.30	SH

*Expected based on age-, gender- and race- specific state rates. SIR: Standardized incidence ratio. CI: Confidence Interval. Sig: Significantly different between observed and expected. SH: Observed is significantly higher than expected. SL: Observed is significantly lower than expected.

Table 7. Number of observed and expected incident cases of cancers in ZIP codes 63138, 1996-2004

Site	Observed cases	Expected cases*	SIR	Lower 95% CI	Upper 95% CI	Sig
Oral cavity and pharynx	14	18.2	0.77	0.42	1.29	
Esophagus	10	9.0	1.11	0.53	2.04	
Stomach	13	11.4	1.14	0.61	1.95	
Colon excluding rectum	111	76.0	1.46	1.20	1.76	SH
Rectum and rectosigmoid; anus, anal canal and anorectum	24	27.2	0.88	0.57	1.31	
Liver	14	7.9	1.77	0.97	2.97	
Pancreas	24	20.1	1.19	0.76	1.78	
Larynx	5	8.9	0.56	0.18	1.31	
Lung and bronchus, pleura, trachea, mediastinum and other respiratory organs	151	139.5	1.08	0.92	1.27	
Bones and joints	1	1.5	0.67	0.01	3.71	
Soft tissue including heart	4	5.6	0.71	0.19	1.83	
Melanoma of the skin	11	14.7	0.75	0.37	1.34	
Female breast	135	119.9	1.13	0.94	1.33	
Cervix uteri	3	10.7	0.28	0.06	0.82	SL
Corpus uteri	21	20.4	1.03	0.64	1.57	
Ovary	11	11.7	0.94	0.47	1.68	
Prostate	129	107.9	1.20	0.998	1.42	
Testis	2	2.6	0.77	0.09	2.78	
Urinary bladder	41	32.8	1.25	0.90	1.70	
Kidney and renal pelvis	33	23.9	1.38	0.95	1.94	
Brain and other nervous system	9	11.3	0.80	0.36	1.51	
Thyroid	10	11.1	0.90	0.43	1.66	
Hodgkin lymphoma	6	4.7	1.28	0.47	2.78	
Non-Hodgkin Lymphoma	23	31.9	0.72	0.46	1.08	
Myeloma	5	10.6	0.47	0.15	1.10	
Leukemia	26	22.0	1.18	0.77	1.73	
Other	52	52.9	0.98	0.73	1.29	
Other including bone, liver and soft tissue	71	67.9	1.05	0.82	1.32	
Total	888	814.2	1.09	1.02	1.16	SH

*Expected based on age-, gender- and race- specific state rates. SIR: Standardized incidence ratio. CI: Confidence Interval. Sig: Significantly different between observed and expected. SH: Observed is significantly higher than expected. SL: Observed is significantly lower than expected.

Table 8. Number of observed and expected incident cases of cancers in the Coldwater Creek designated area (63031, 63033, 63034, 63042, 63134, and 63138 combined), 1996-2004

Site	Observed cases	Expected cases*	SIR	Lower 95% CI	Upper 95% CI	Sig
Oral cavity and pharynx	135	164.8	0.82	0.69	0.97	SL
Esophagus	71	80.0	0.89	0.69	1.12	
Stomach	99	97.8	1.01	0.82	1.23	
Colon excluding rectum	776	676.0	1.15	1.07	1.23	SH
Rectum and rectosigmoid; anus, anal canal and anorectum	271	247.8	1.09	0.97	1.23	
Liver	72	66.4	1.08	0.85	1.37	
Pancreas	182	179.3	1.02	0.87	1.17	
Larynx	80	79.9	1.00	0.79	1.25	
Lung and bronchus, pleura, trachea, mediastinum and other respiratory organs	1306	1279.4	1.02	0.97	1.08	
Bones and joints	9	12.9	0.70	0.32	1.32	
Soft tissue including heart	39	46.3	0.84	0.60	1.15	
Melanoma of the skin	163	150.4	1.08	0.92	1.26	
Female breast	1197	1105.5	1.08	1.02	1.15	SH
Cervix uteri	55	86.9	0.63	0.48	0.82	SL
Corpus uteri	197	198.1	0.99	0.86	1.14	
Ovary	114	111.1	1.03	0.85	1.23	
Prostate	1196	975.5	1.23	1.16	1.30	SH
Testis	22	27.1	0.81	0.51	1.23	
Urinary bladder	322	297.9	1.08	0.97	1.21	
Kidney and renal pelvis	259	215.2	1.20	1.06	1.36	SH
Brain and other nervous system	107	101.8	1.05	0.86	1.27	
Thyroid	68	102.8	0.66	0.51	0.84	SL
Hodgkin lymphoma	44	39.2	1.12	0.82	1.51	
Non-Hodgkin Lymphoma	263	285.7	0.92	0.81	1.04	
Myeloma	85	91.4	0.93	0.74	1.15	
Leukemia	202	189.0	1.07	0.93	1.23	
Other	438	460.1	0.95	0.86	1.05	
Other including bone, liver and soft tissue	558	585.6	0.95	0.88	1.04	
Total	7772	7368.3	1.05	1.03	1.08	SH

*Expected based on age-, gender- and race- specific state rates. SIR: Standardized incidence ratio. CI: Confidence Interval. Sig: Significantly different between observed and expected. SH: Observed is significantly higher than expected. SL: Observed is significantly lower than expected.

Table 9. Types of cancer, their association with ionizing radiation, and significant difference* from expected based on the state rates, 1996-2004

Type of Cancer	63031	63033	63034	63042	63134	63138	Designated Area
Cancers Frequently Associated with Radiation with Authoritative Risk Estimates							
<i>Leukemia</i>							
<i>Thyroid</i>	SL	SL					SL
<i>Female breast</i>							SH
Cancers Occasionally Associated with Radiation with Valid Risk Estimates							
<i>Lung</i>		SL	SL	SH	SH		
<i>Stomach</i>							
<i>Colon</i>		SH				SH	SH
<i>Esophagus</i>							
<i>Bladder</i>							
<i>Ovary</i>							
<i>Myeloma</i>			SH				
Cancers Rarely Associated with Radiation with Uncertain Risk Estimates							
<i>Brain and nervous system</i>							
<i>Kidney</i>		SH					SH
<i>Liver</i>							
<i>Salivary glands</i>							
<i>Non-Hodgkin Lymphoma</i>							
<i>Skin</i>							
<i>Rectum</i>						SH	
<i>Uterus</i>							
<i>Bone</i>							
Cancers Never or Sporadically Associated with Radiation with No Risk Estimates							
<i>Pancreas</i>							
<i>Prostate</i>	SH	SH	SH				SH
<i>Testis</i>							
<i>Cervix</i>		SL				SL	SL
All Cancers				SH	SH	SH	SH

*SH: Significantly higher than expected. SL: Significantly lower than expected.

Table 10. Stage of diagnosis for female breast cancer, prostate cancer, colorectal cancer, and kidney and renal pelvis cancer in the designated area and the State of Missouri

Stage of Diagnosis	Female Breast Cancer				Prostate Cancer				Colorectal Cancer*				Kidney and Renal Pelvis Cancer			
	State		Designated Area		State		Designated Area		State		Designated Area		State		Designated Area	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
<i>Localized</i>	21,882	60.0	738	61.7	24,667	75.3	978	81.8	10,694	34.9	339	32.8	4141	56.8	151	58.3
<i>Regional</i>	10,954	30.0	342	28.6	3,730	11.4	122	10.2	11,940	38.9	419	40.5	1227	16.8	39	15.1
<i>Distant</i>	1,773	4.9	73	6.1	1,374	4.2	32	2.7	5,310	17.3	198	19.1	1303	17.9	51	19.7
<i>Unknown</i>	1,890	5.2	44	3.7	2,990	9.1	64	5.4	2,734	8.9	78	7.5	622	8.5	18	6.9
<i>Total</i>	36,499	100	1,197	100	32,761	100	1,196	100	30,678	100	1,034	100	7293	100	259	100

*Colon, rectum and rectosigmoid

Table 11. Modifiable risk factors for female breast, colorectal, prostate, and kidney cancers

Modifiable risk factors	Female breast cancer	Colorectal cancer	Prostate cancer	Kidney cancer
Diet	Poor diet likely increases risk	Poor diet increases risk	Poor diet increases risk	
<i>Fruit and vegetable</i>		Reduce risk	Reduce risk	Reduce risk
<i>Dairy</i>		Low fat milk reduces risk	Dairy product increases risk	
<i>Red meat</i>		Increase risk	Increase risk	
<i>Processed meat</i>		Increase risk		
<i>Fiber</i>		Decrease risk		
Physical activity	Reduce risk	Reduce risk	Reduce risk of aggressive forms	Likely reduce risk
Obesity/overweight	Increase risk after menopause	Increase risk	Increase risk of aggressive forms	Increase risk
Tobacco use	Likely increases risk	Increase risk	Likely increase risk of aggressive forms	Increase risk
Alcohol consumption	Increase risk	Increase risk		
Oral contraceptives	Increase risk			
HRT				
Never having children				
First full-term pregnancy after age 30				
Breast feeding	Decrease risk			
Parity				Likely increase with # of births
STI or inflammation			Increase risk	
High blood pressure				Increase risk
Diabetes		Increase risk		Likely increase risk
Diuretics				Increase risk
Lack of screening		Increase risk after age 50		
Trichloroethylene exposure				Likely increase risk
Ionizing radiation	Increase risk			

HRT: Hormone replacement therapy after menopause
<http://www.cancer.org/acs>

STI: Sexually transmitted infections

Table 12. Prevalence of risk factors in the designated area and the State of Missouri, 2011

Risk Factors	Designated Area*		State of Missouri**
	Number of respondent	Prevalence (%)	Prevalence (%)
<i>Current Smoking among adults age 18+</i>	246	20.4	23.0
<i>Fruit and vegetable consumption < five times per day among adults age 18+</i>	246	86.8	87.4
<i>Physical inactivity among adults age 18</i>	246	25.9	23.7
<i>Obesity among adults age 18+</i>	233	31.9	30.2
<i>No mammogram CBE in last year among women age 40+</i>	109	21.3	30.6
<i>No colonoscopy or sigmoidoscopy in last 10 years among adults age 50+</i>	129	38.2	39.1
<i>No Pap smear in last 3 years among women age 18+</i>	155	13.4***	26.3

Data source: 2011 Missouri County-level Study

* The data were not weighted for the area and therefore may not be representative of the population in the area

**The number of respondents for the State of Missouri is more than 50,000

*** Significantly lower than the state prevalence

CBE: Clinical Breast Exam