

Lung Cancer in Kentucky (2000 – 2015)

Presented by:

Jaclyn K. McDowell, DrPH

Epidemiologist

Kentucky Cancer Registry

Thomas C. Tucker, PhD, MPH

Associate Director

Kentucky Cancer Registry

Kentucky Cancer Consortium Webinar

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Topic to be Covered

- Characteristics of the Kentucky population
- The major types of cancer for which there are evidence based interventions
- Trends in lung cancer incidence
- Trends in lung cancer mortality
- Lung cancer burden by Area Development District

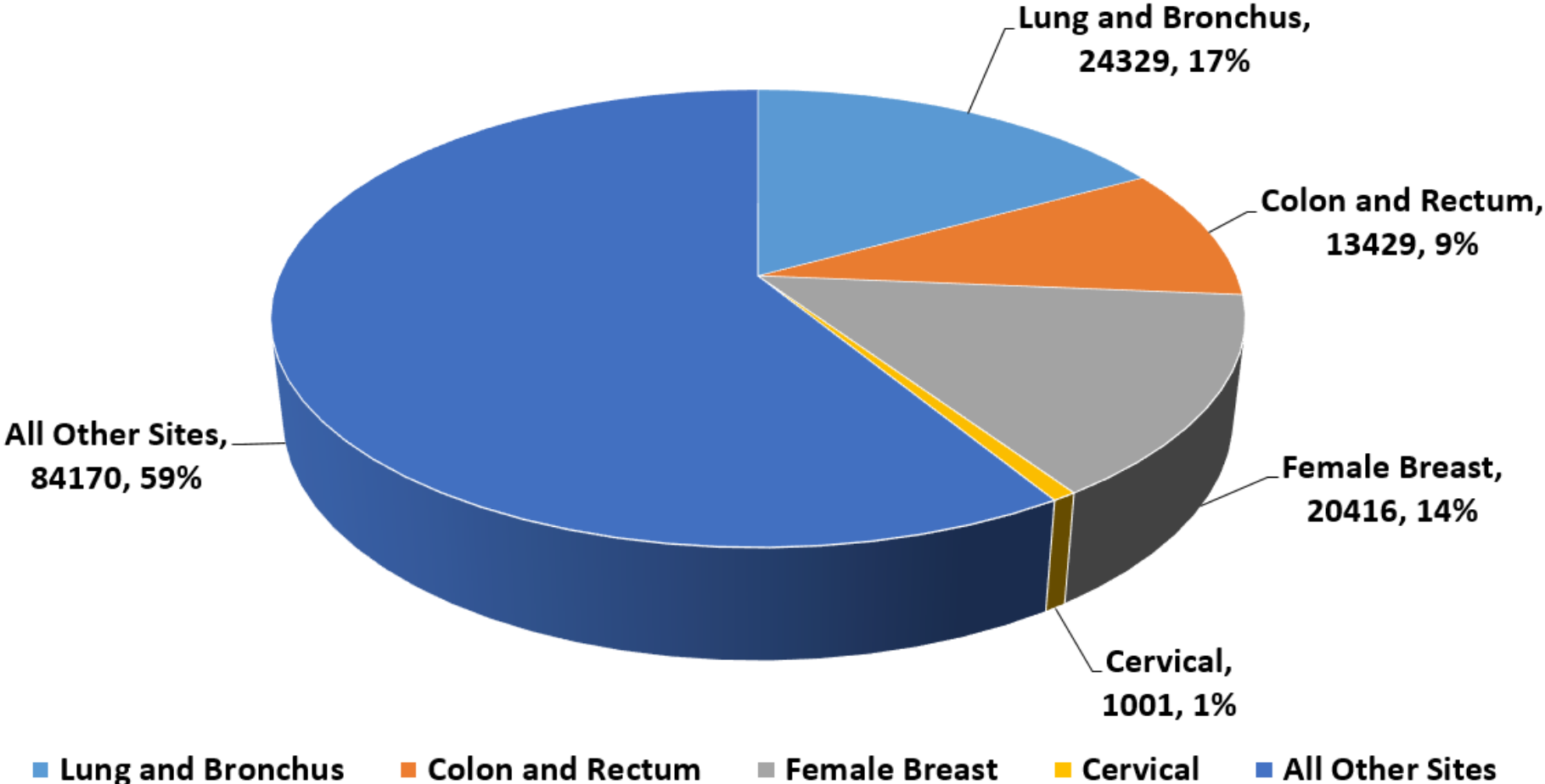
Differences (Disparities) will be explored by

- Gender (Males and Females)
- Race (Blacks and Whites)
- Place (Appalachian Kentucky and Non-Appalachian Kentucky)

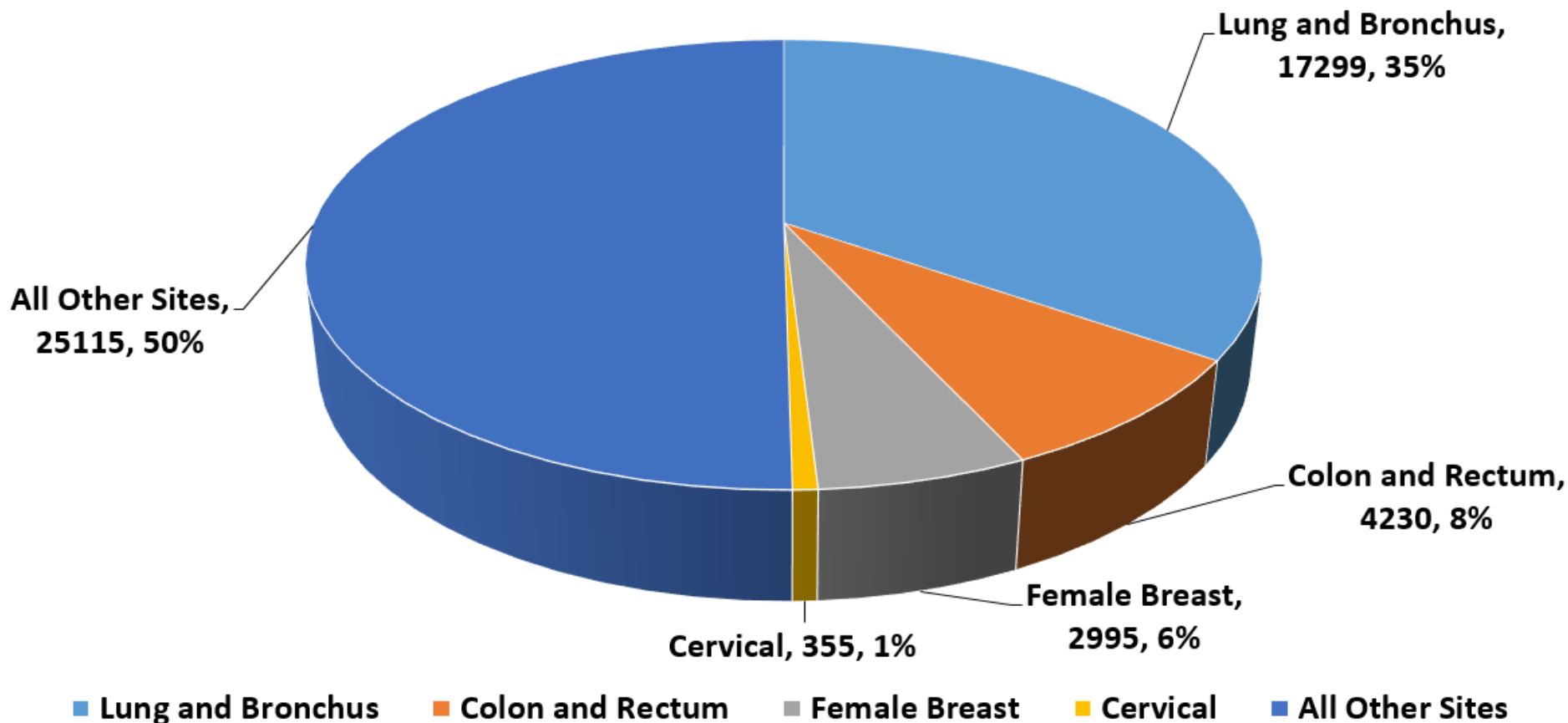
Characteristics of the Kentucky Population

Characteristic	Kentucky	United States
■ Population*	4,436,947	323,127,513
■ % White**	88.1%	77.1%
■ % African American**	8.3%	13.3%
■ % all Other Races**	3.2%	9.4%
■ % Below Poverty***	18.5%	13.5%
■ % Bachelor's Degree***	22.3%	29.8%
■ % Living in Rural Areas	41.0%	18.3%
■ % Living in Appalachia	26.7%	NA
■ # of New Primary Cancers 2016	29,458	NA
* U.S. Census QuickFacts 2016, ** U.S. Census QuickFacts 2015, *** U.S. Census QuickFacts 2011-2015		

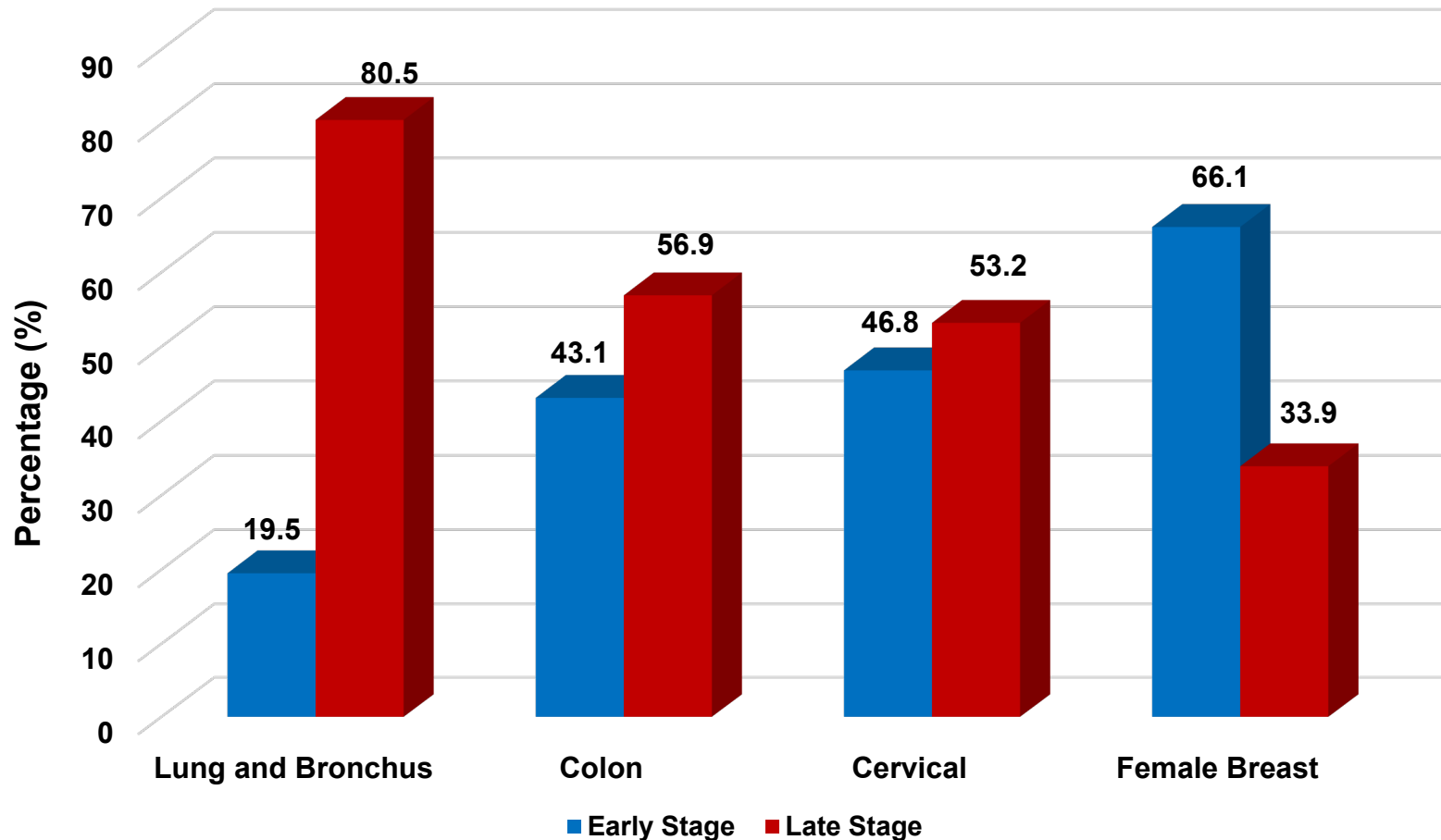
Lung, Colorectal, Breast and Cervical Cancers are **41%** of all Cancer Cases Diagnosed in Kentucky Annually 2011-2015



Lung, Colorectal, Breast and Cervical Cancers are **50%** of all Cancer Deaths Occurring in Kentucky 2011-2015



Early versus Late Stage* Diagnosis for Lung, Colon, Female Breast and Cervical Cancers in Kentucky, 2011-2015



*Early stage includes Localized SEER Summary Stage
Late stage includes Regional and Distant SEER Summary Stage

Age-Adjusted **Incidence** and **Mortality** Rates 2011-2015

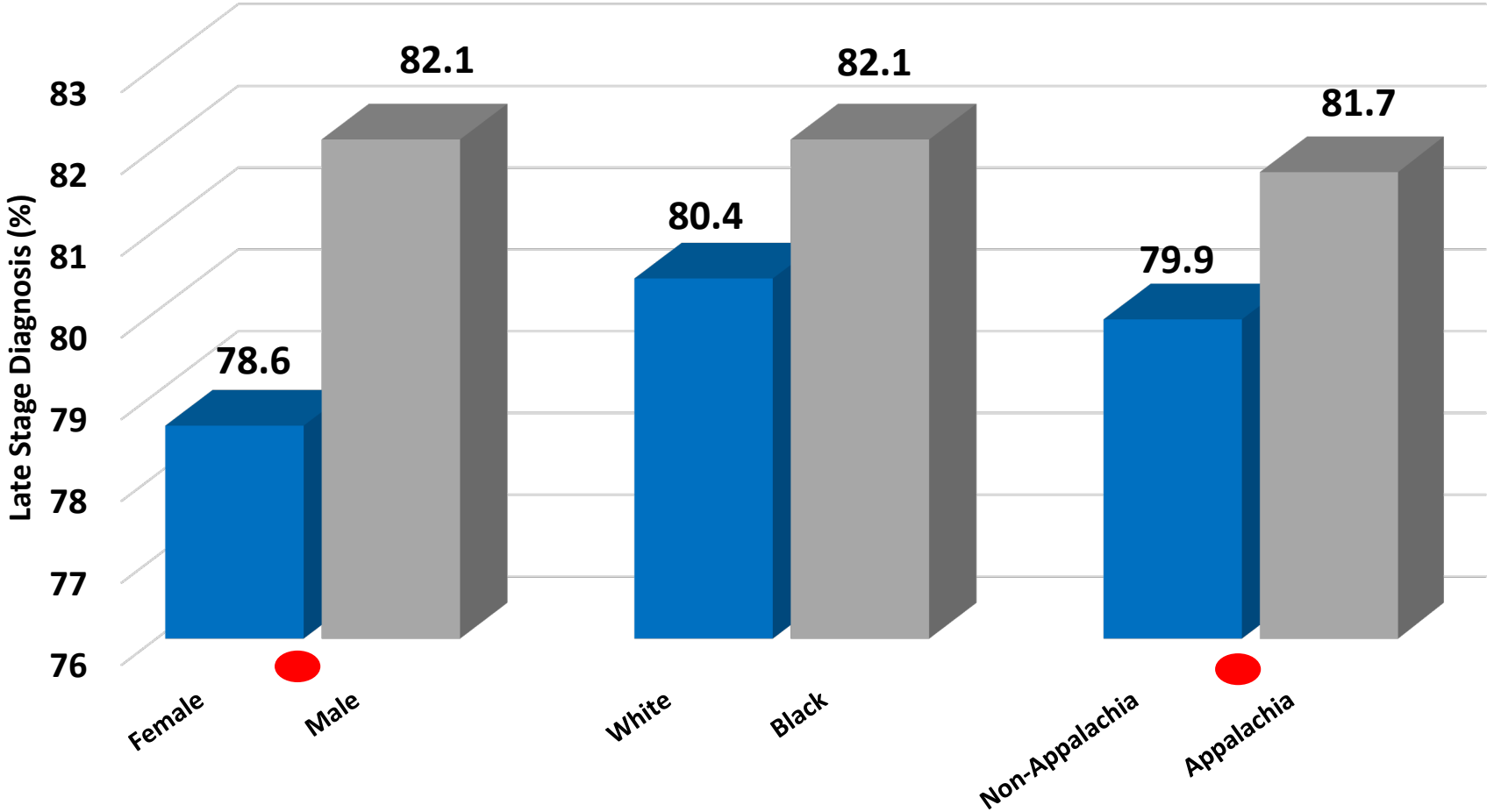
Incidence: U.S., Kentucky and Appalachian Kentucky

	Lung Cancer
U.S.	60.2
Kentucky	93.5
Appalachian Kentucky	* 109.7
Source: CDC/USCS Database (SEER & NPCR Combined) and Kentucky Cancer Registry (KCR). * = p<.05 vs Kentucky as a whole and the U.S.	

Mortality: U.S., Kentucky and Appalachian Kentucky

	Lung Cancer
U.S.	43.4
Kentucky	67.7
Appalachian Kentucky	* 80.5
Source: National Center for Health Statistics (NCHS) and KCR. * = p<.05 vs Kentucky as a whole and the U.S.	

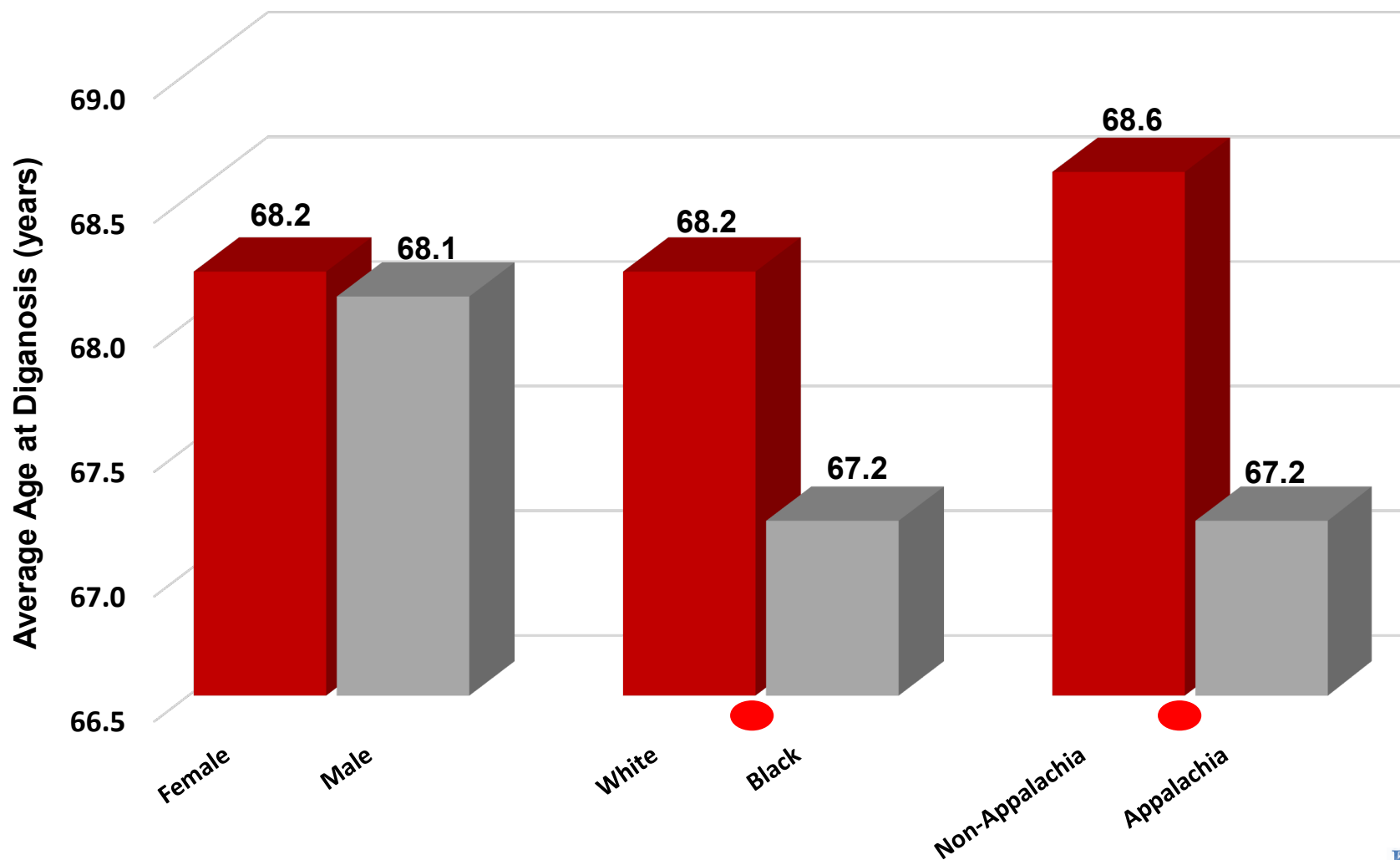
Late Stage* Diagnosis of Lung Cancer in Kentucky by Sex, Race, and Region, 2011-2015



*Late stage = Regional and Distant

● = Statistically significant difference (p<0.05)

Average Age at Diagnosis of Lung Cancer in Kentucky by Sex, Race, and Region, 2011-2015



● = Statistically significant difference (p < 0.05)

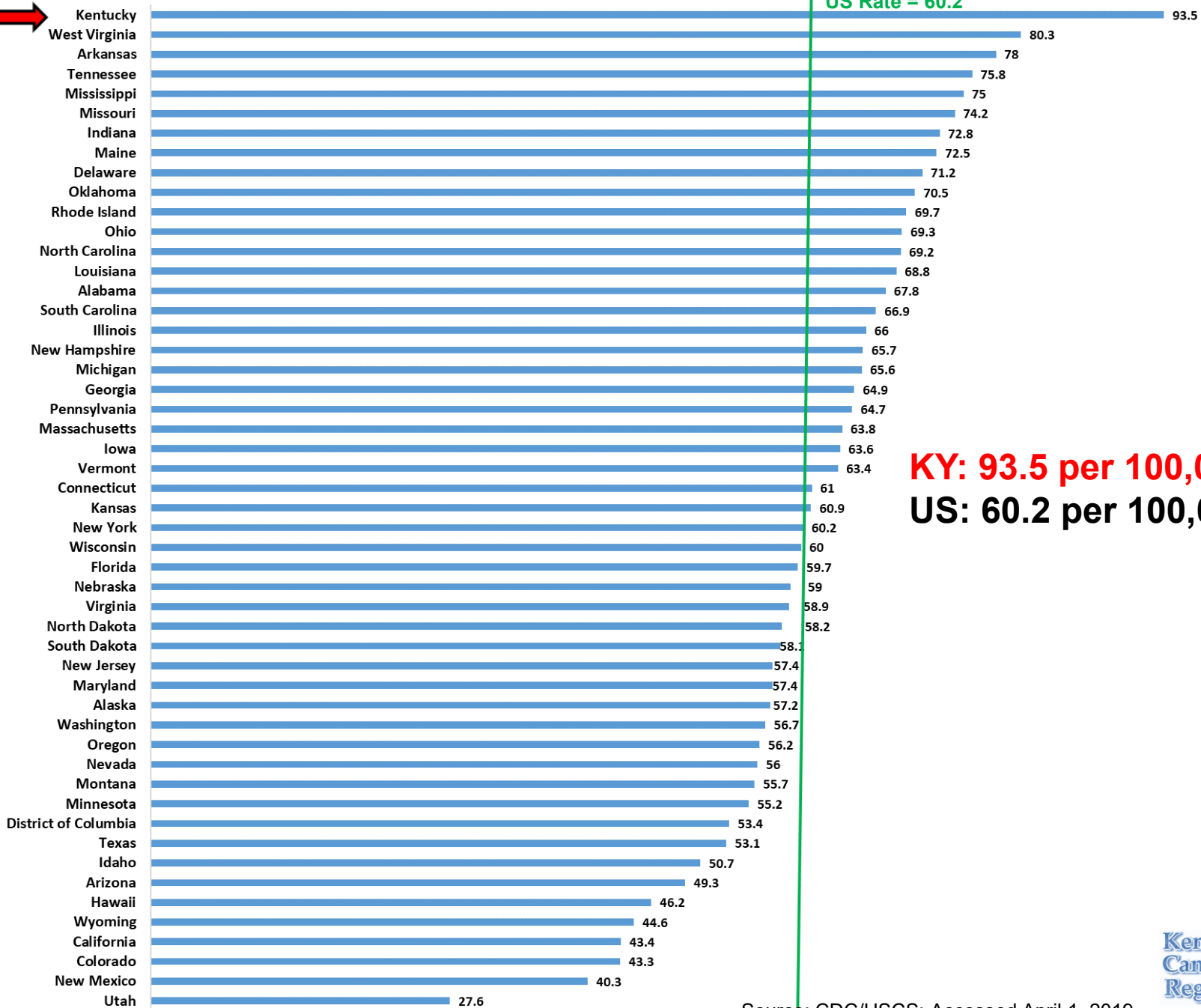
Lung Cancer **Incidence** in Kentucky

Lung Cancer Incidence Rates Ranked by State (2011-2015)

1st



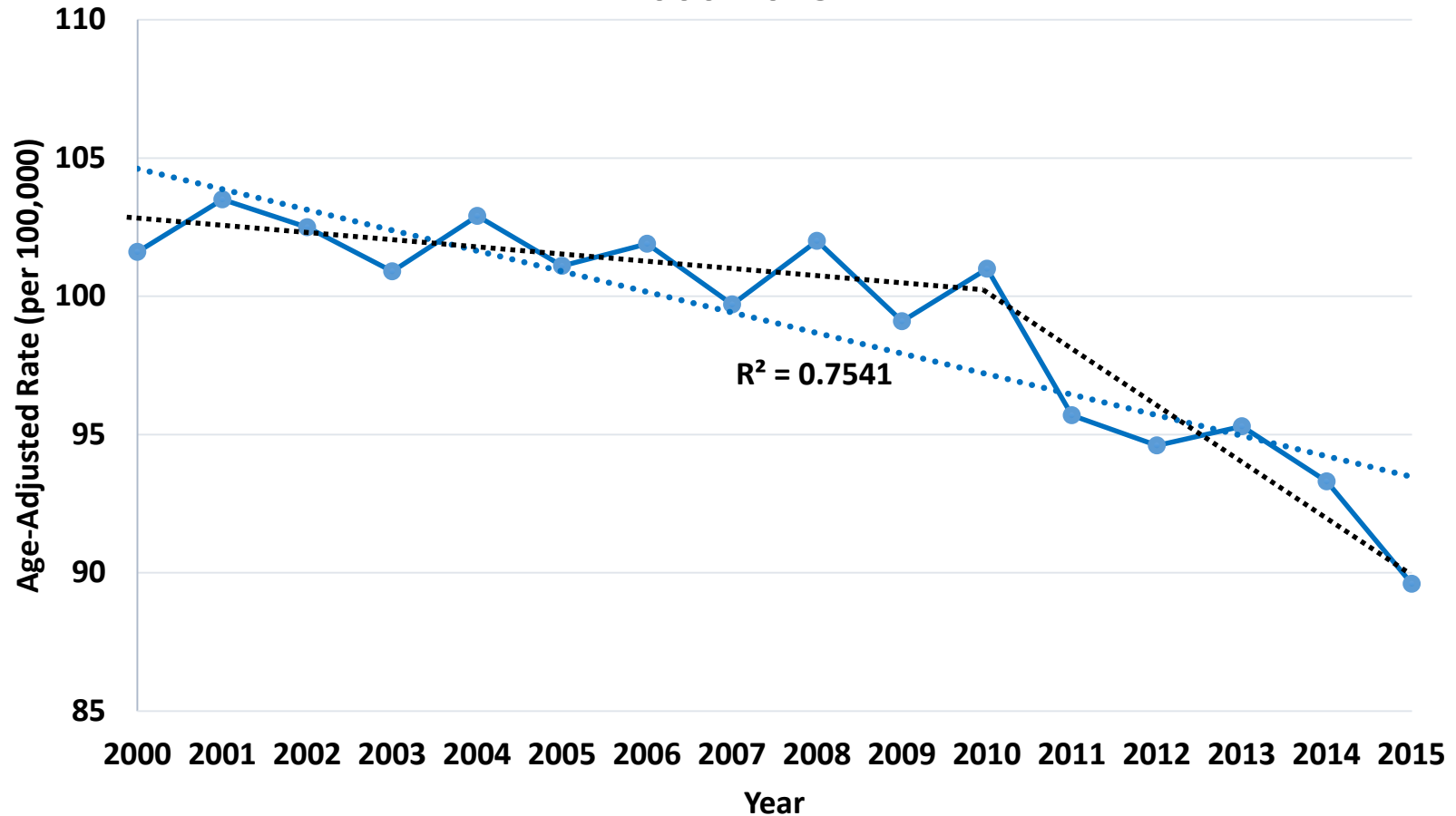
US Rate = 60.2



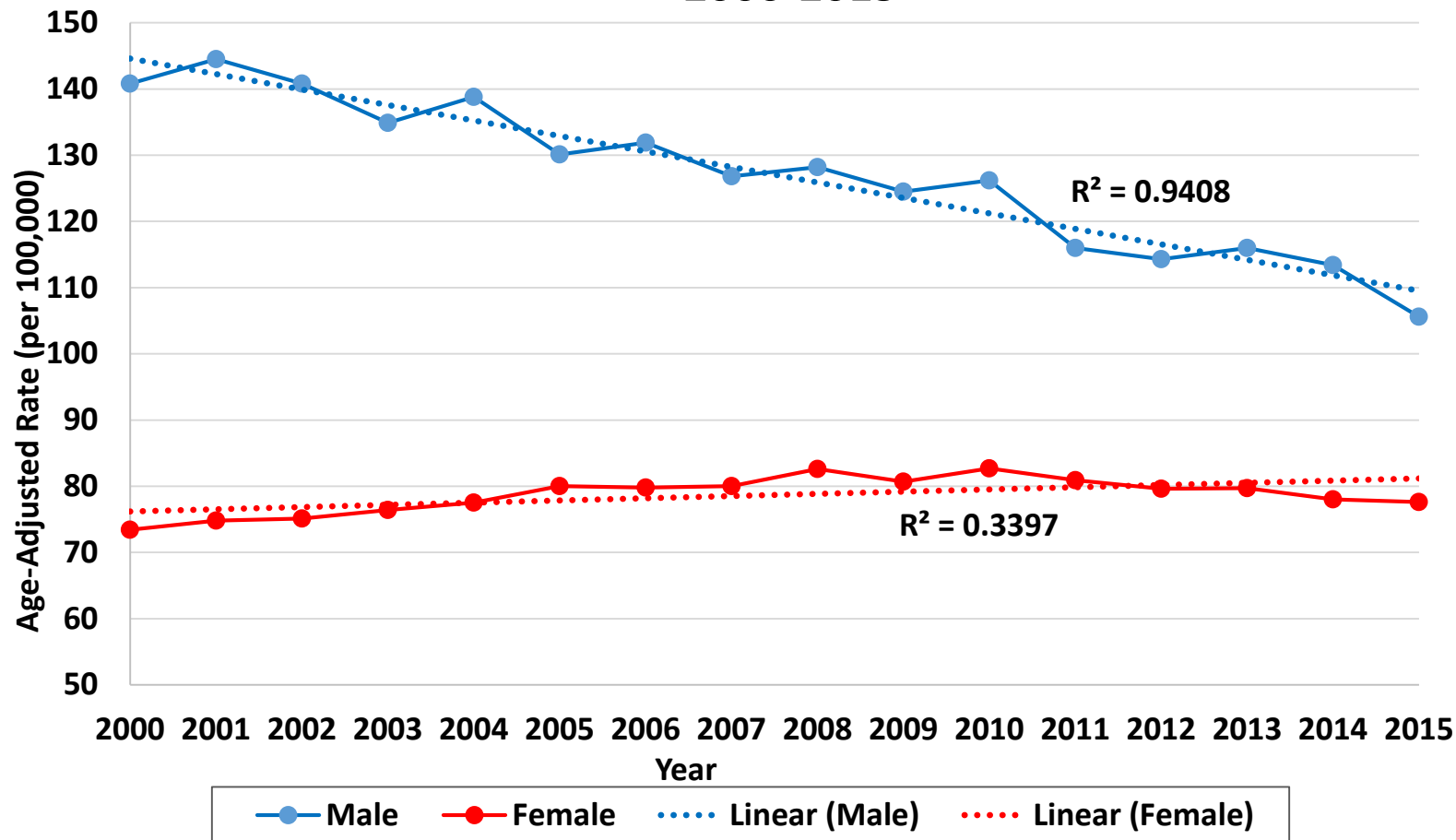
KY: 93.5 per 100,000
US: 60.2 per 100,000



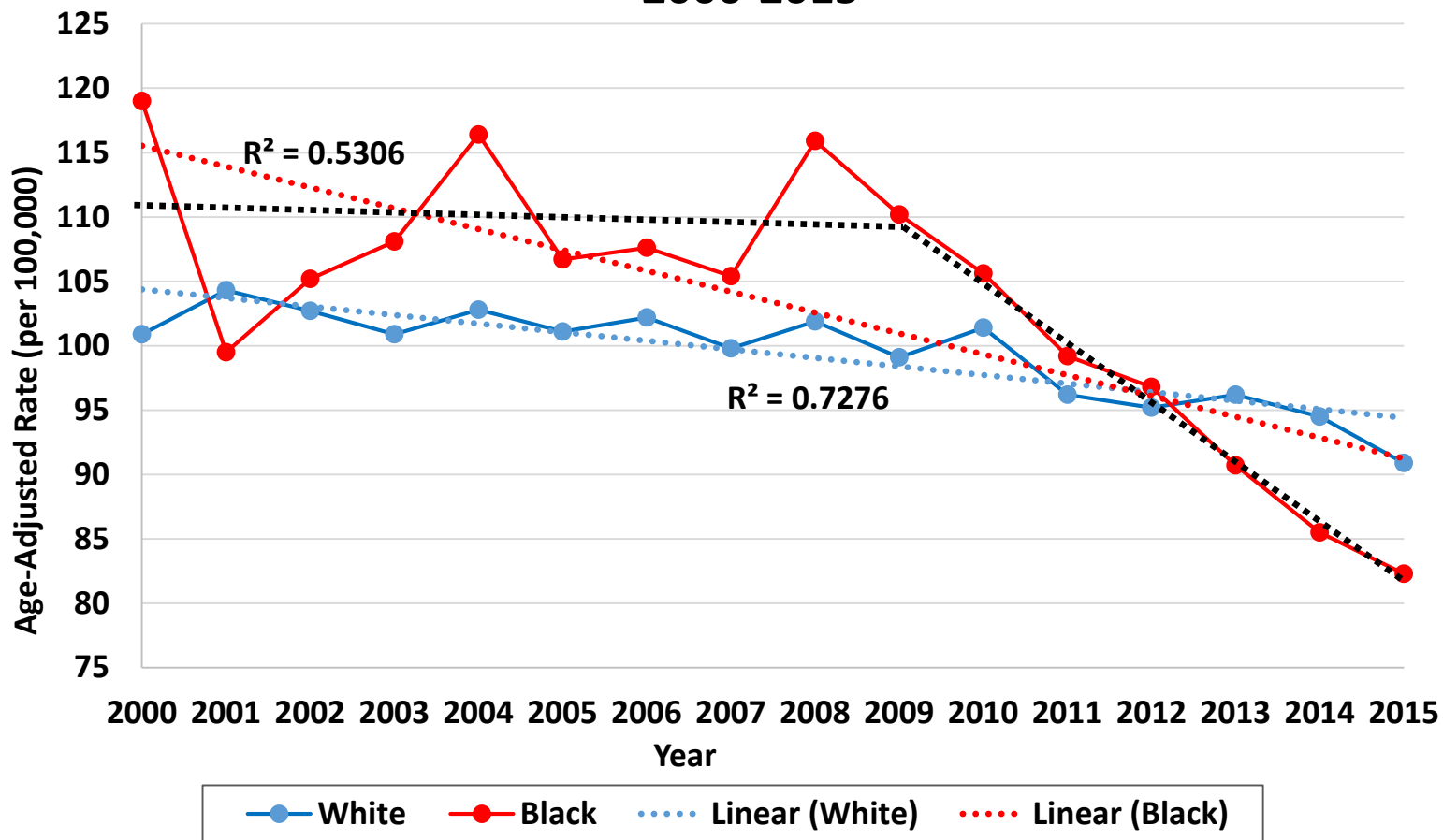
Overall Lung and Bronchus Cancer Incidence Rates 2000-2015



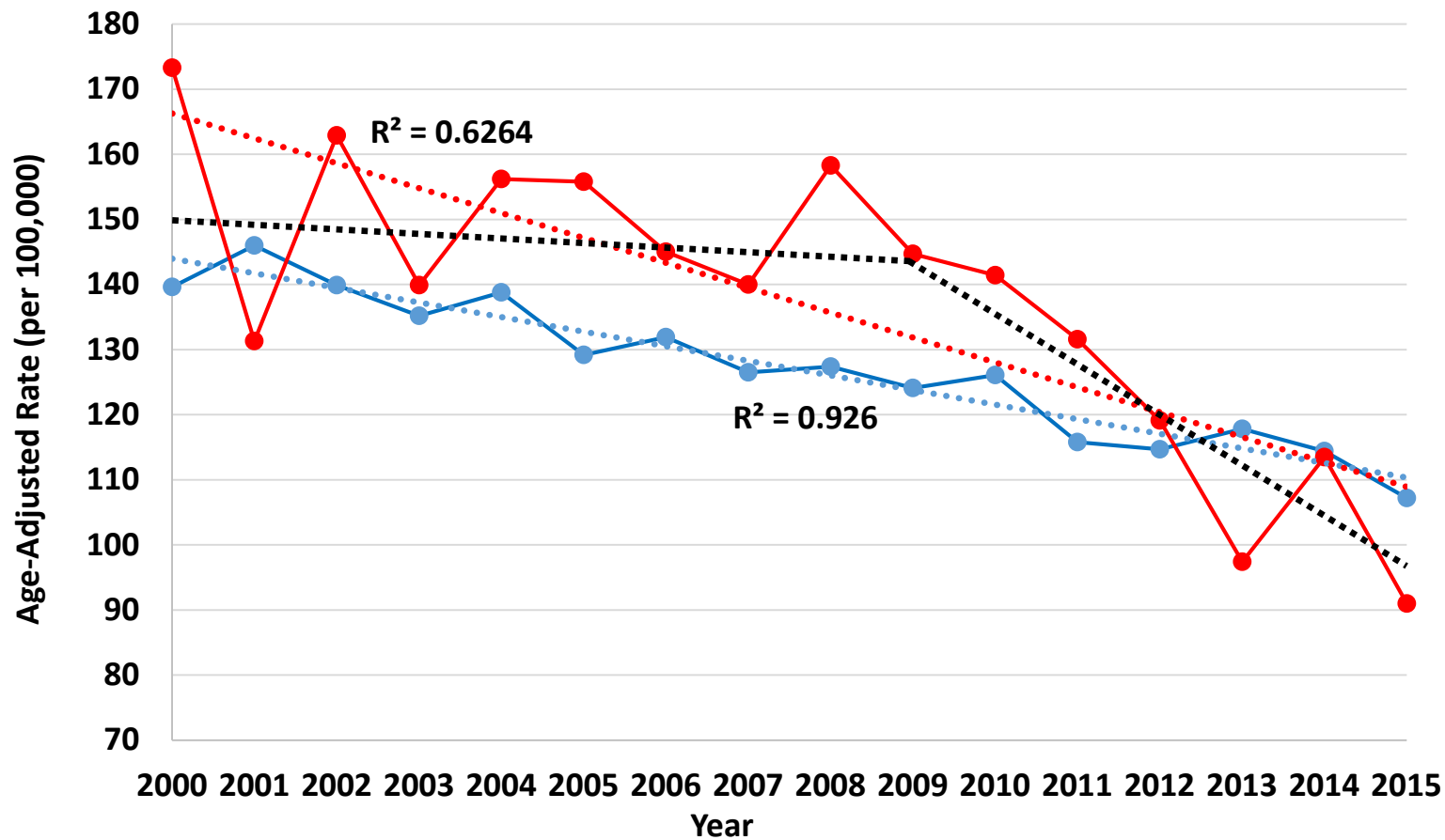
Male vs. Female Lung and Bronchus Cancer Incidence Rates 2000-2015



White vs. Black Lung and Bronchus Cancer Incidence Rates 2000-2015

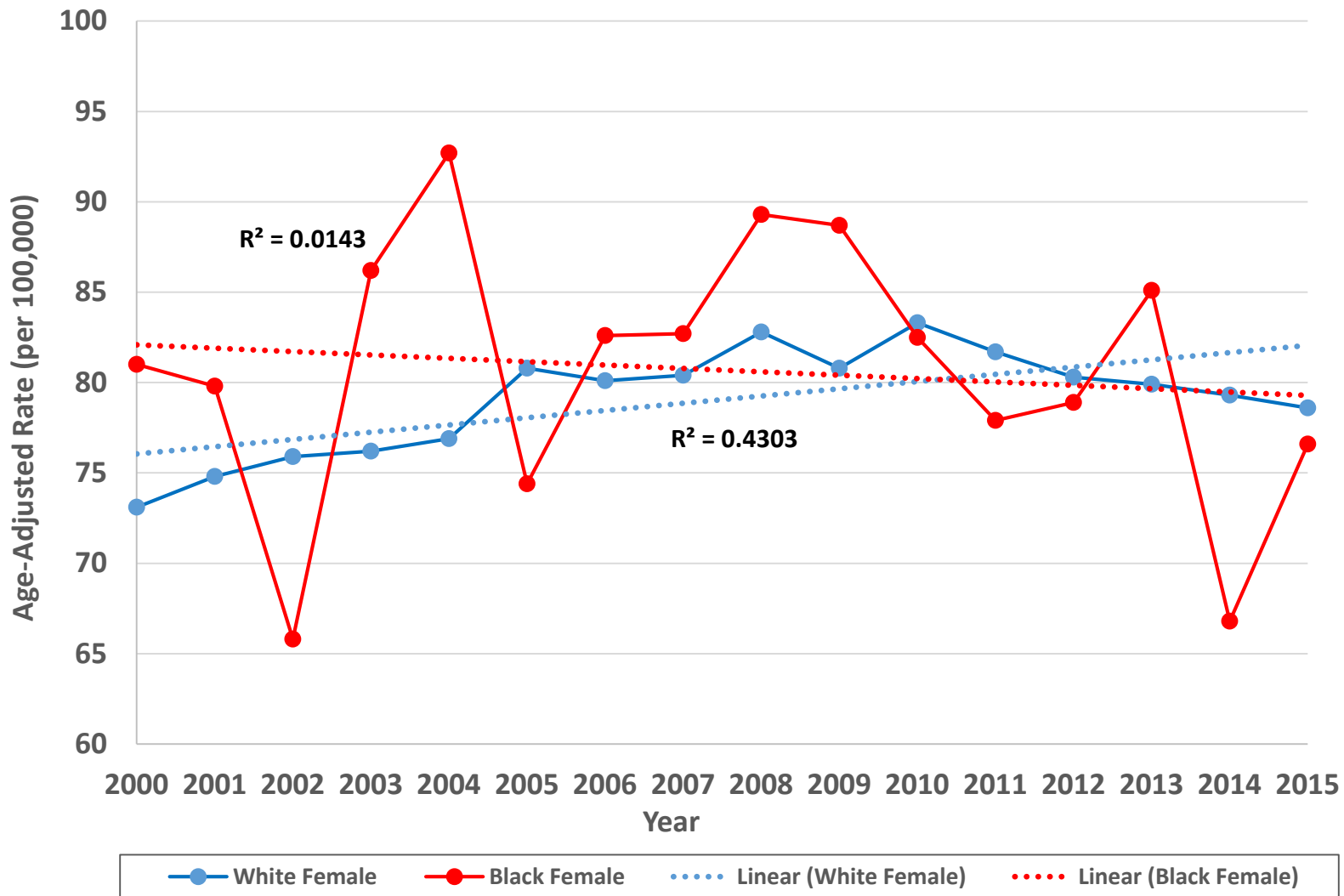


White Male vs. Black Male Lung and Bronchus Cancer Incidence Rates 2000-2015

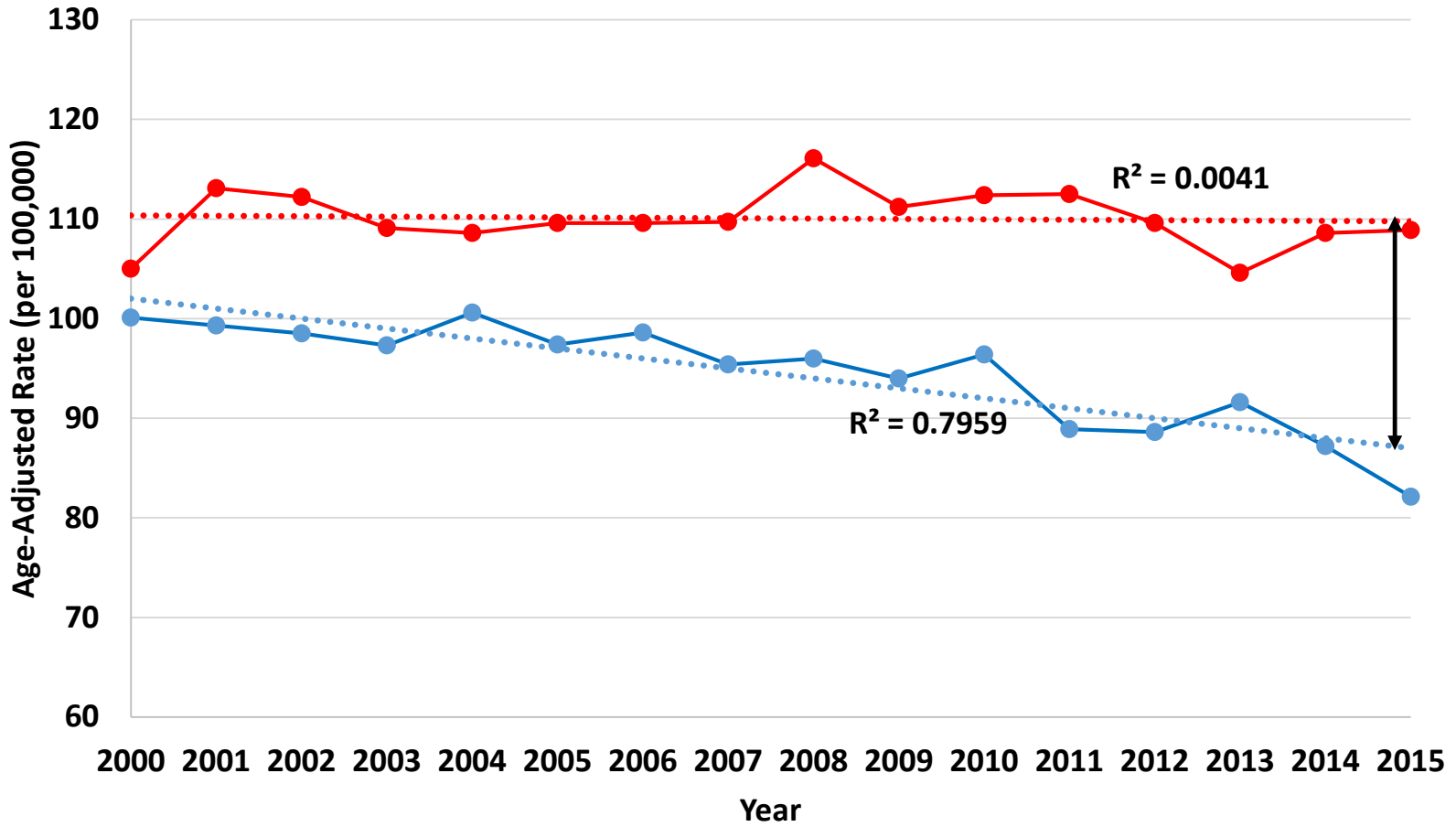


● White Male
 ● Black Male
 ⋯ Linear (White Male)
 ⋯ Linear (Black Male)

White Female vs. Black Female Lung and Bronchus Cancer Incidence Rates 2000-2015

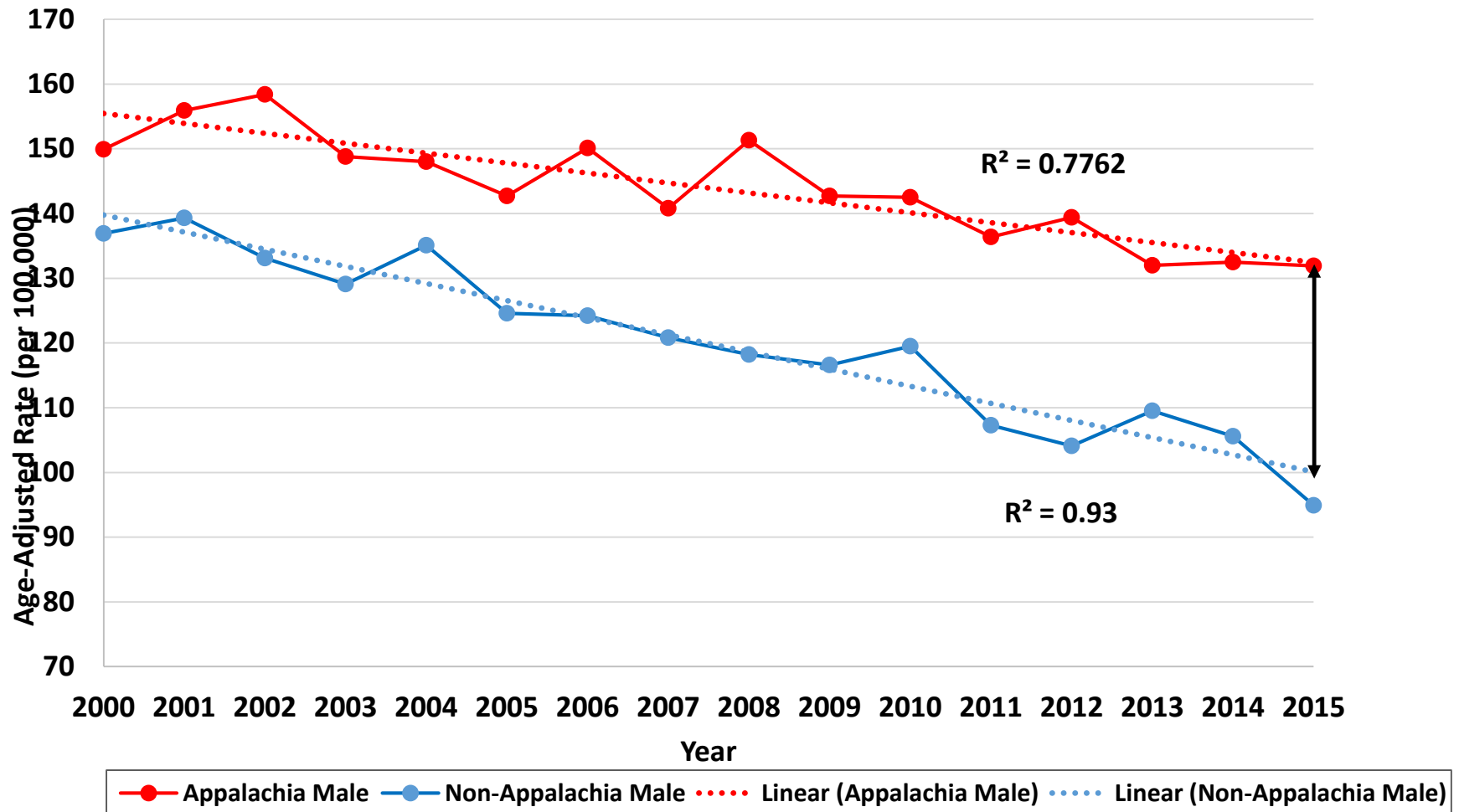


Appalachia vs. Non-Appalachia Lung and Bronchus Cancer Incidence Rates 2000-2015

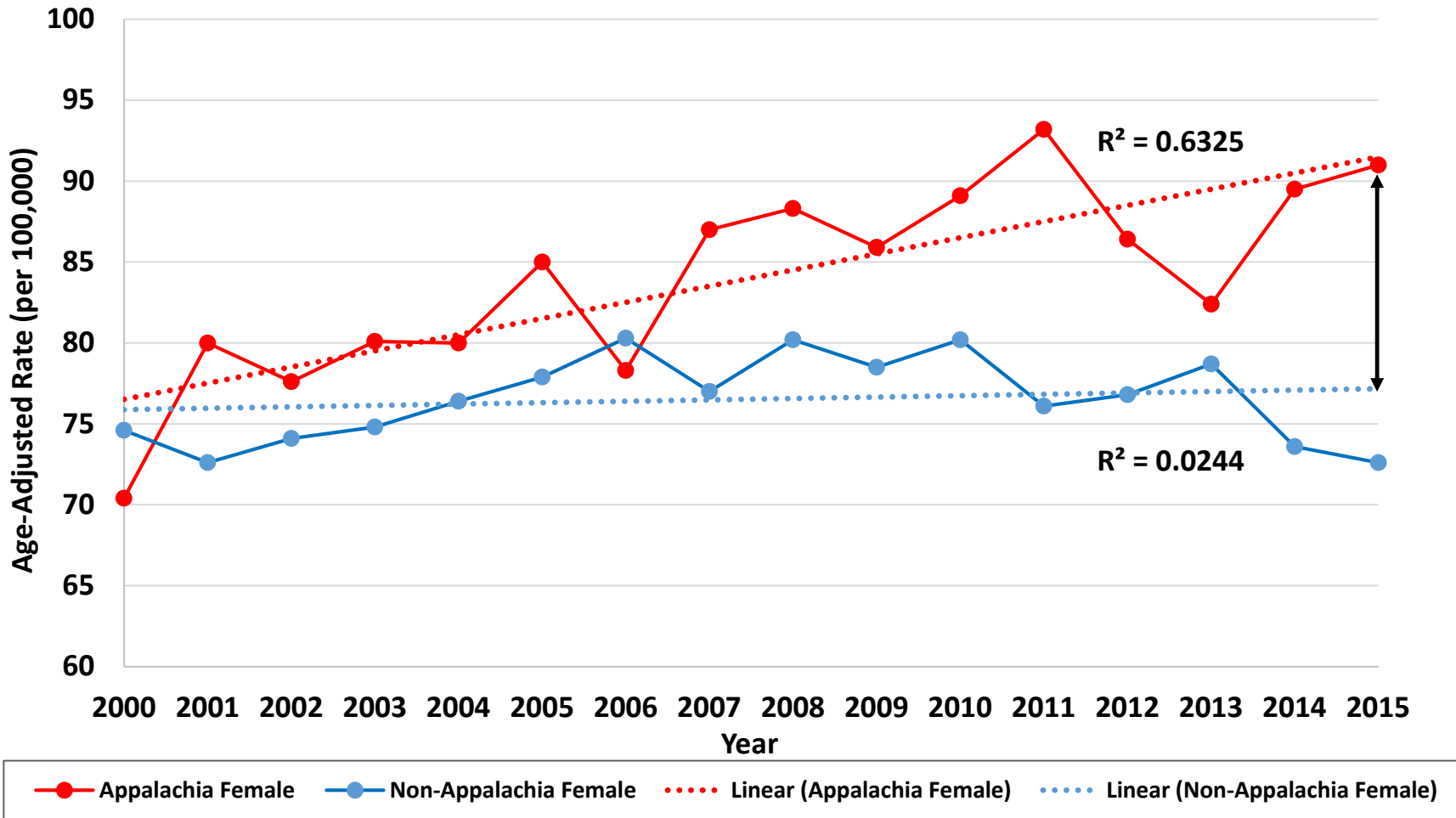


● Appalachia
 ● Non-Appalachia
 ⋯ Linear (Appalachia)
 ⋯ Linear (Non-Appalachia)

Appalachian Male vs. Non-Appalachian Male Lung and Bronchus Cancer Incidence Rates 2000-2015



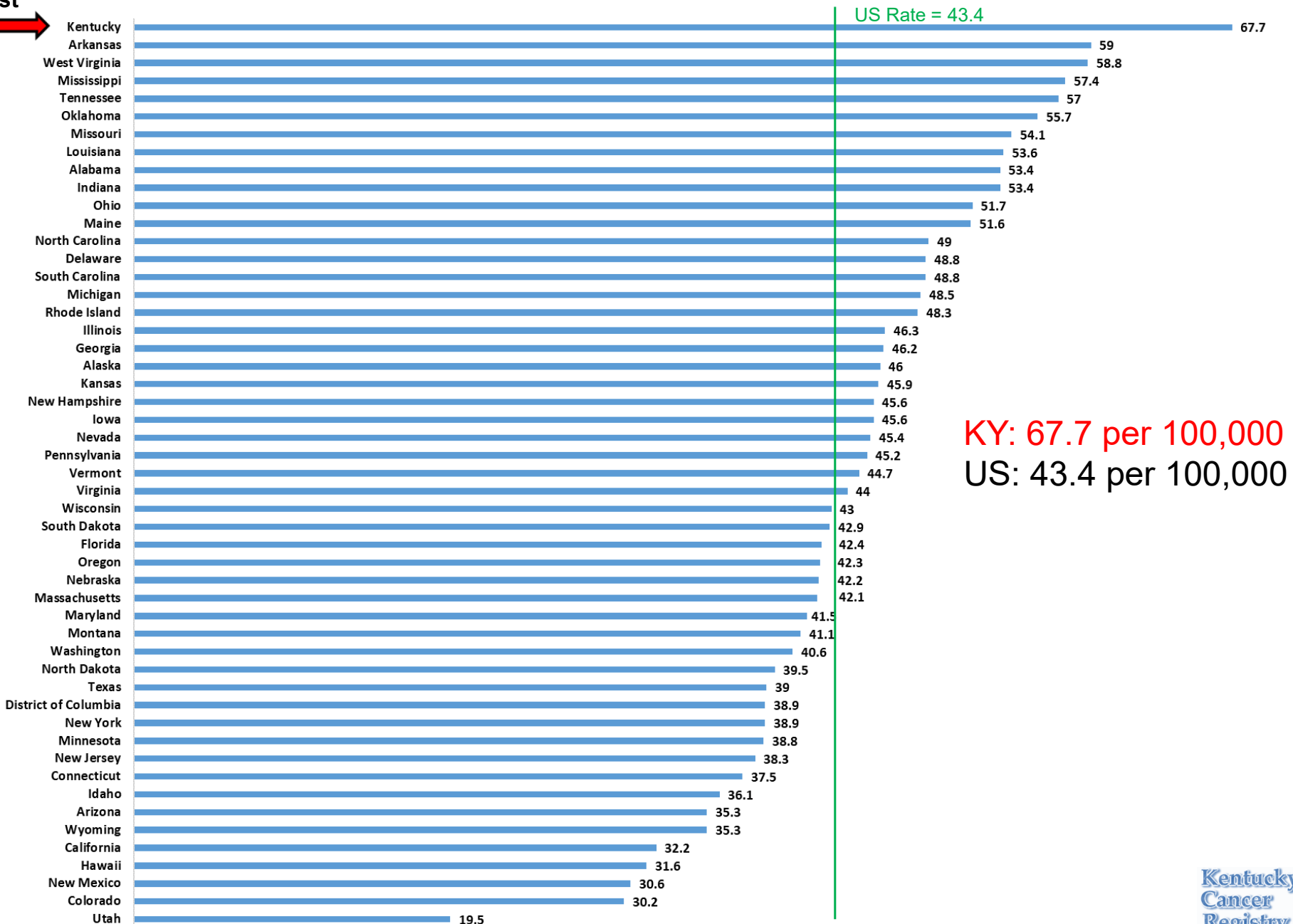
Appalachian Female vs. Non-Appalachian Female Lung and Bronchus Cancer Incidence Rates 2000-2015



Lung Cancer **Mortality** in Kentucky

Lung Cancer Mortality Rates Ranked by State (2011-2015)

1st



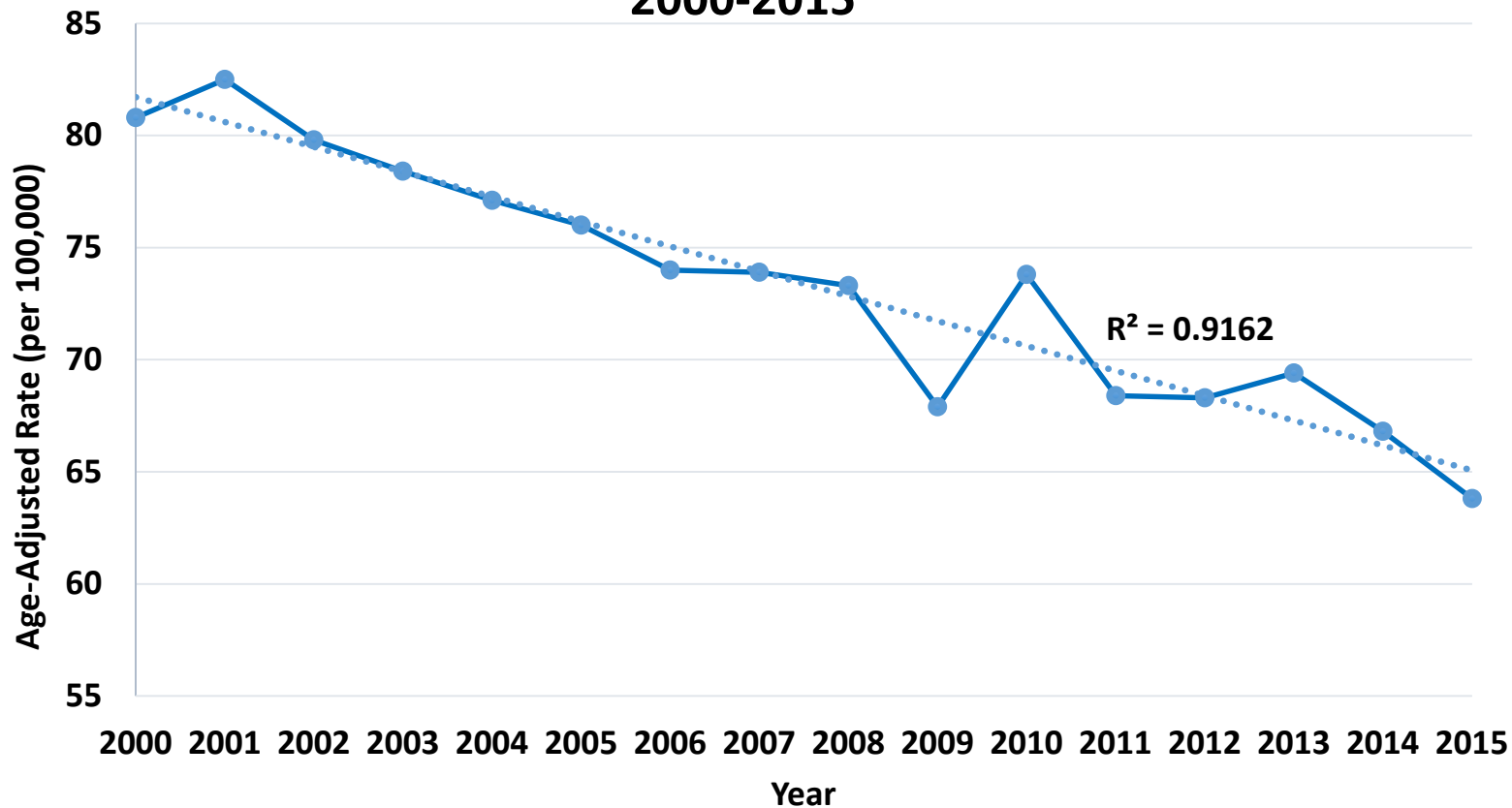
US Rate = 43.4

KY: 67.7 per 100,000
US: 43.4 per 100,000

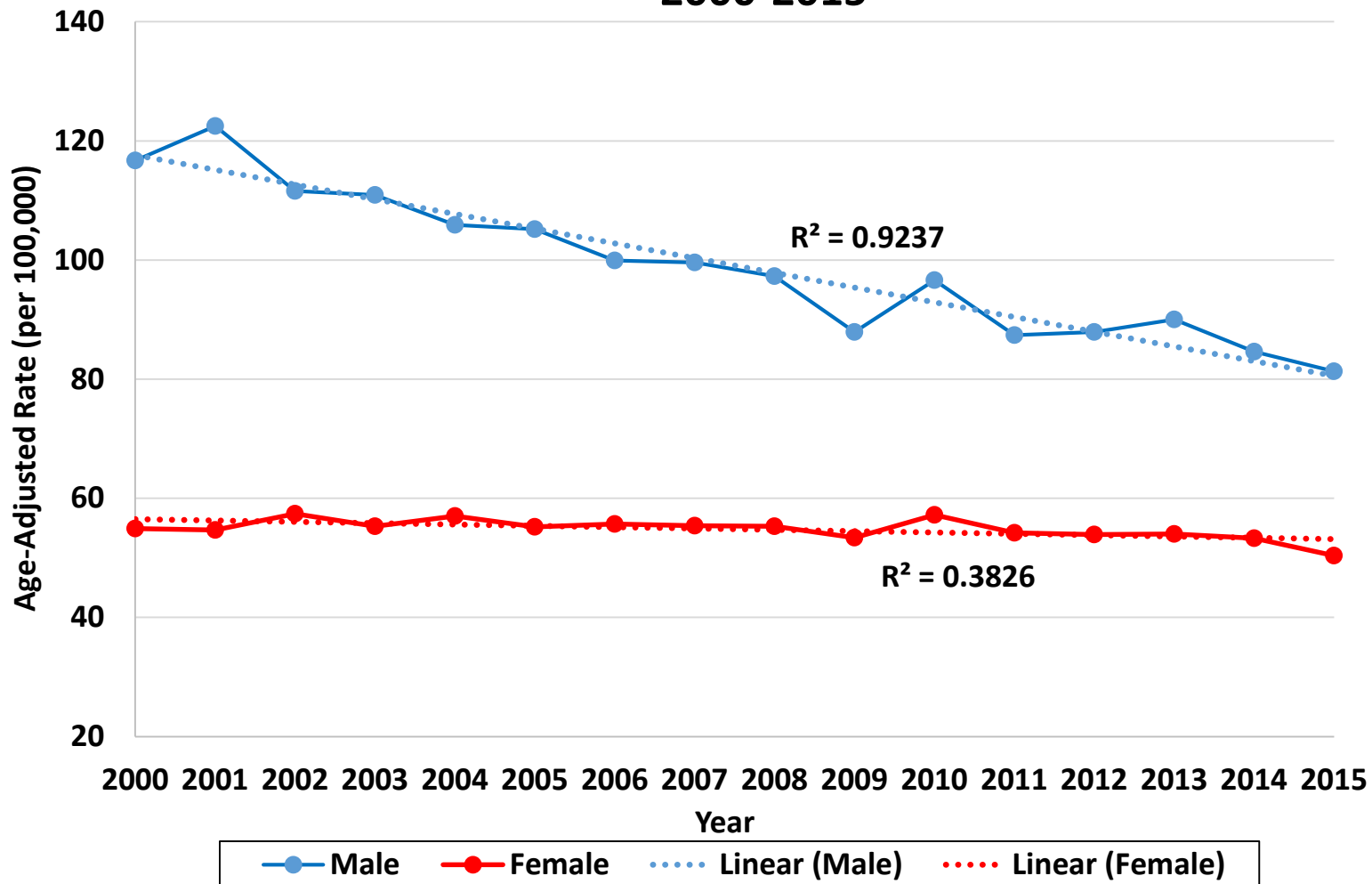
Source: CDC/USCS; Accessed April 1, 2019



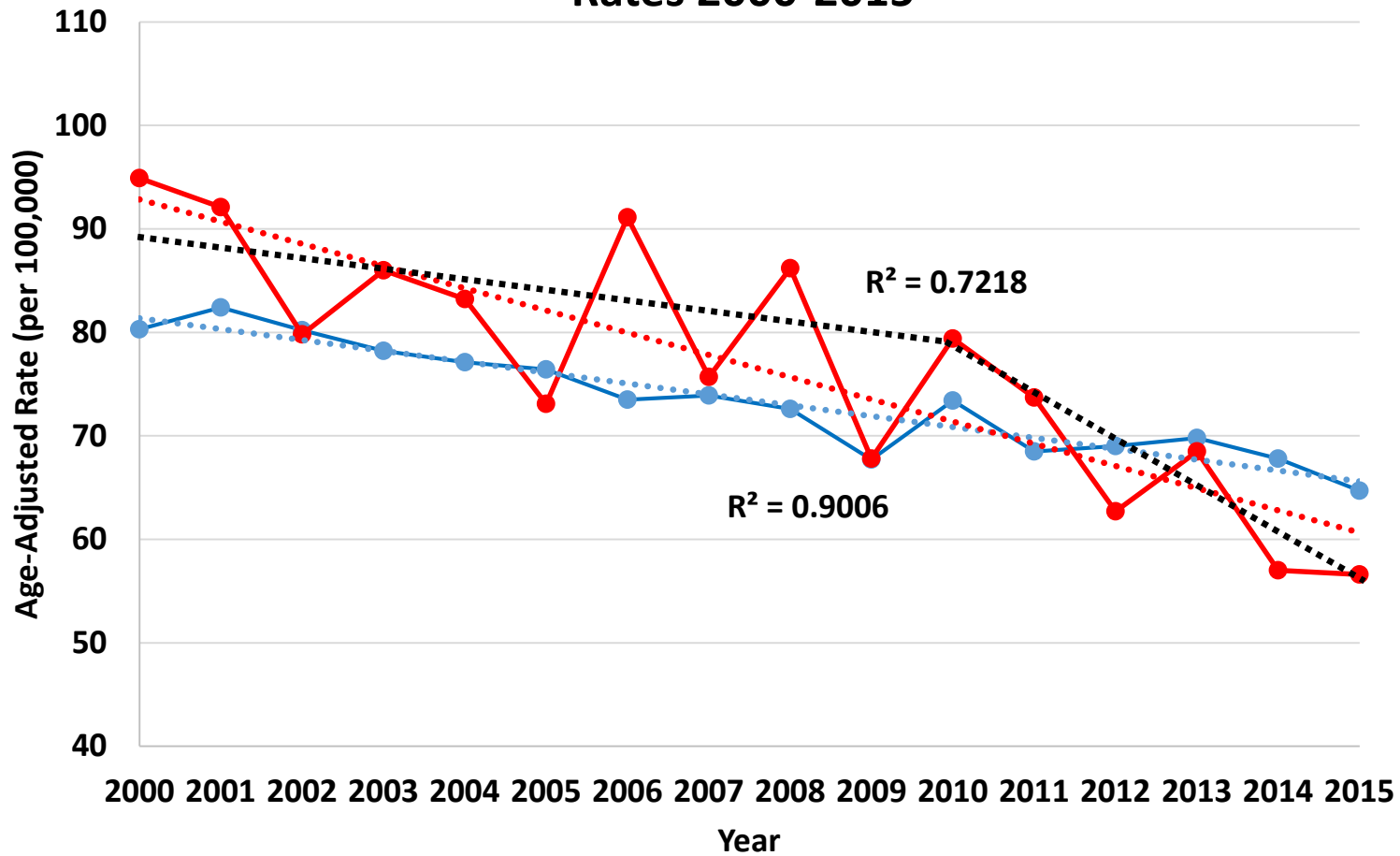
Overall Lung and Bronchus Cancer Mortality Rates 2000-2015



Male vs. Female Lung and Bronchus Cancer Mortality Rates 2000-2015

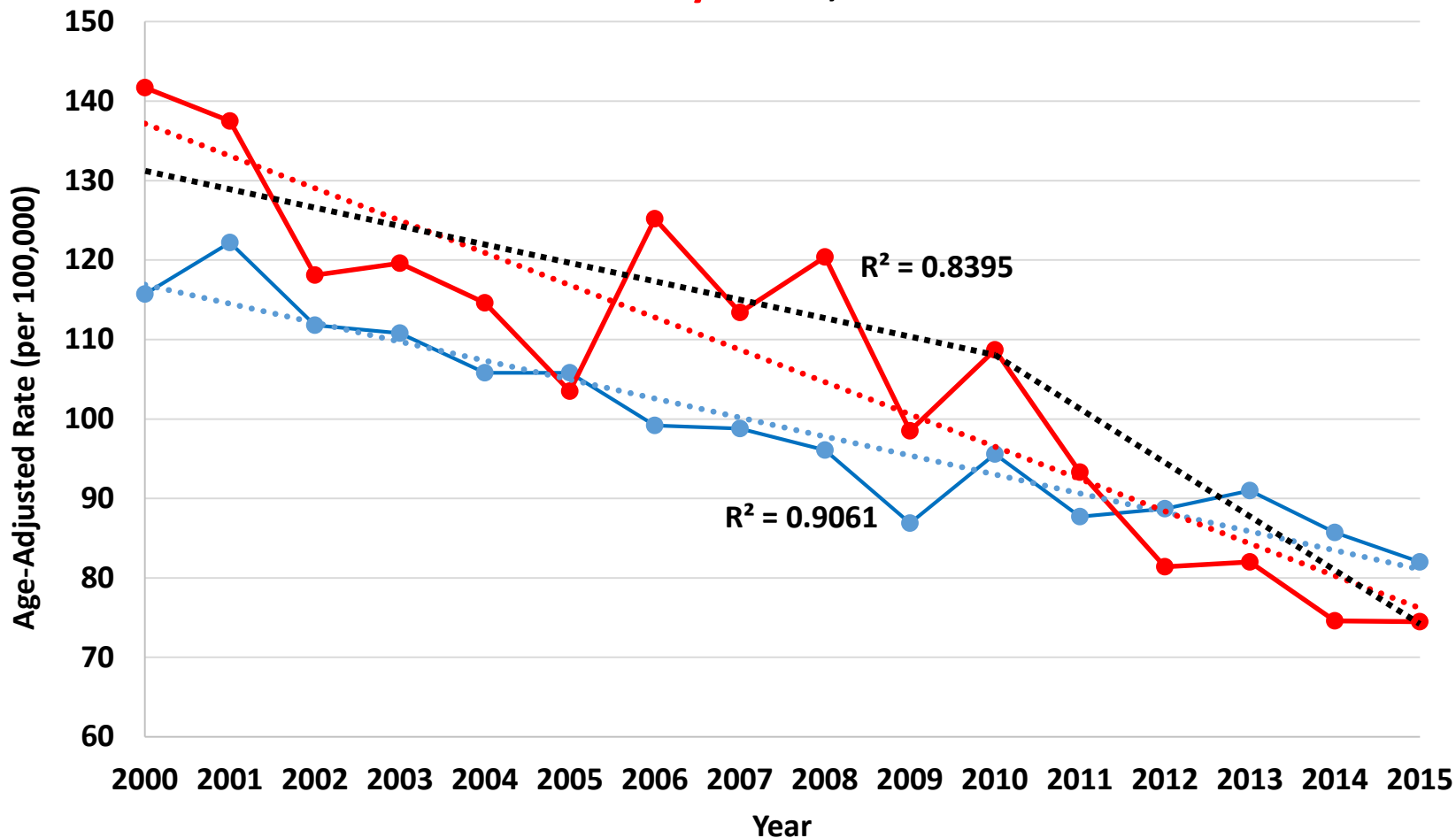


White vs. Black Lung and Bronchus Cancer Mortality Rates 2000-2015

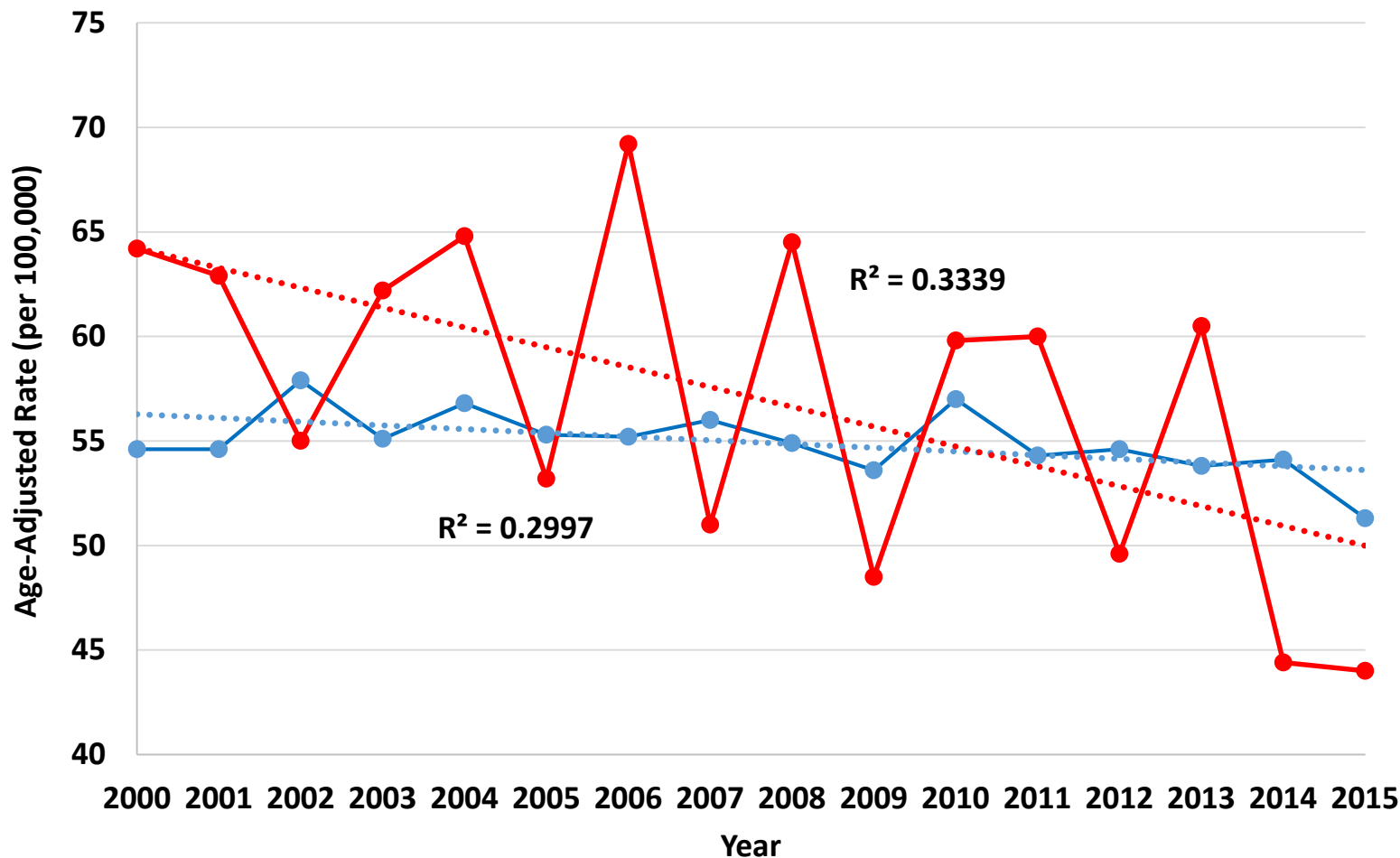


—●— White —●— Black Linear (White) Linear (Black)

White Male vs. Black Male Lung and Bronchus Cancer Mortality Rates, 2000-2015

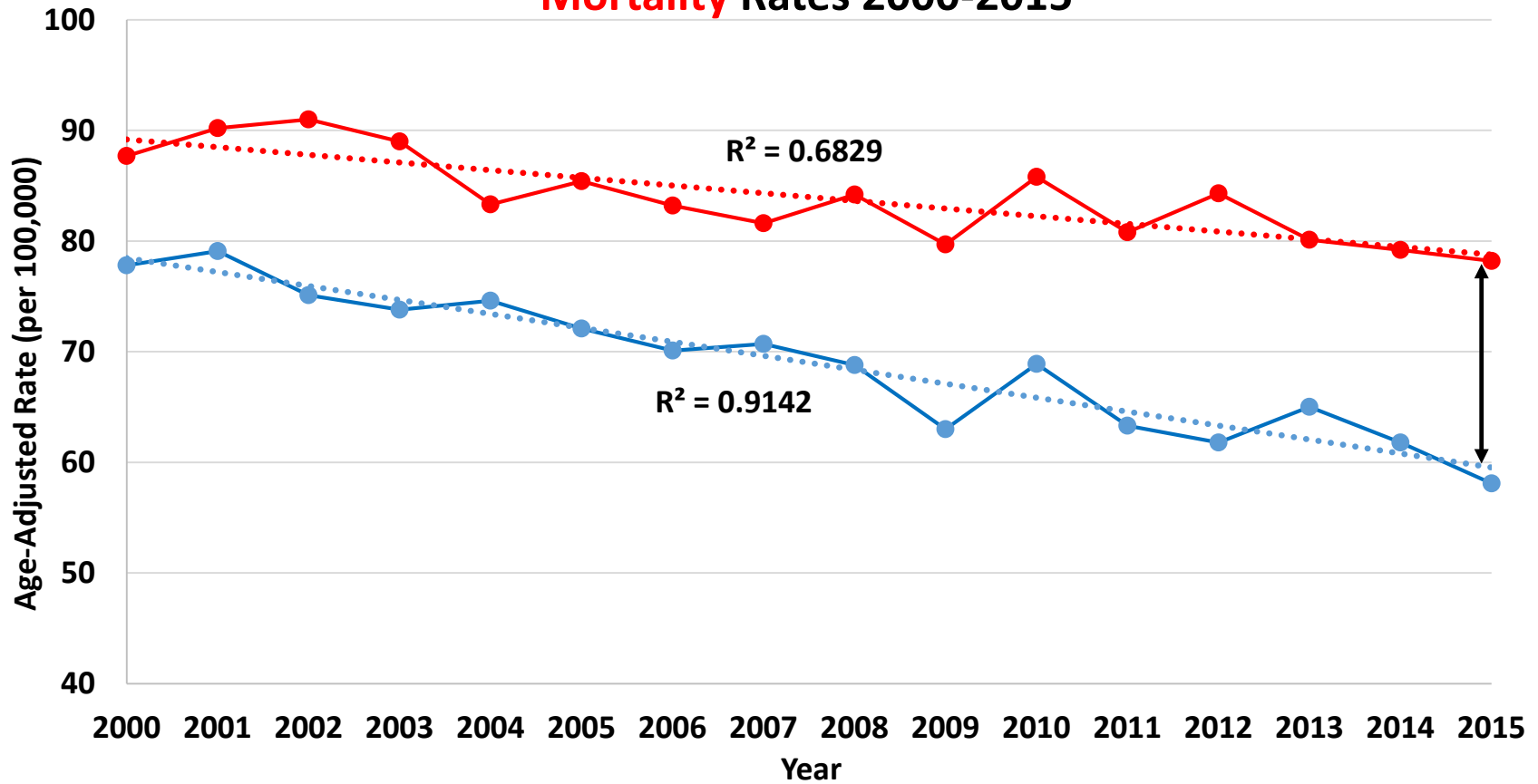


White Female vs. Black Female Lung and Bronchus Cancer Mortality Rates 2000-2015



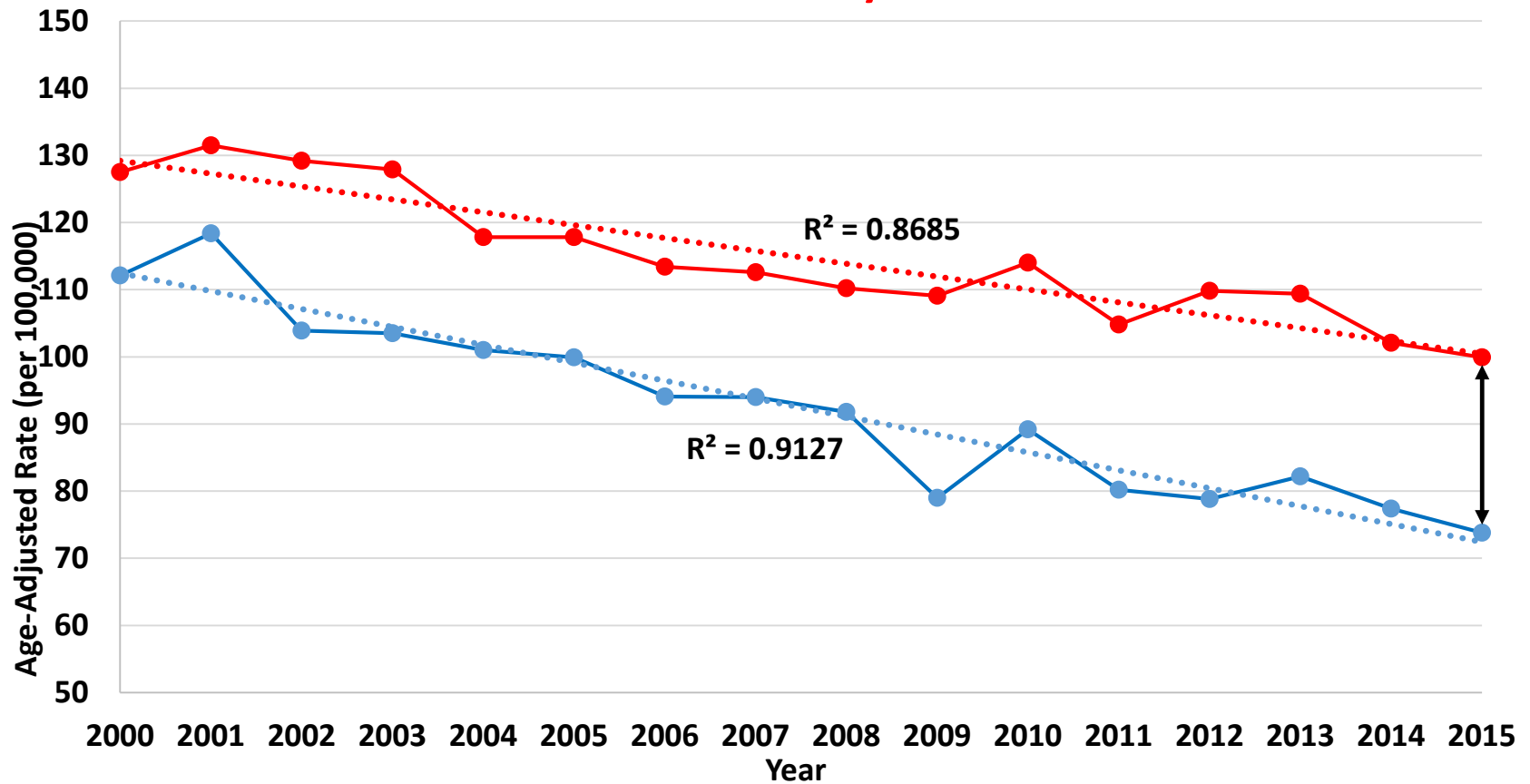
—●— White Female —●— Black Female Linear (White Female) Linear (Black Female)

Appalachia vs. Non-Appalachia Lung and Bronchus Cancer Mortality Rates 2000-2015

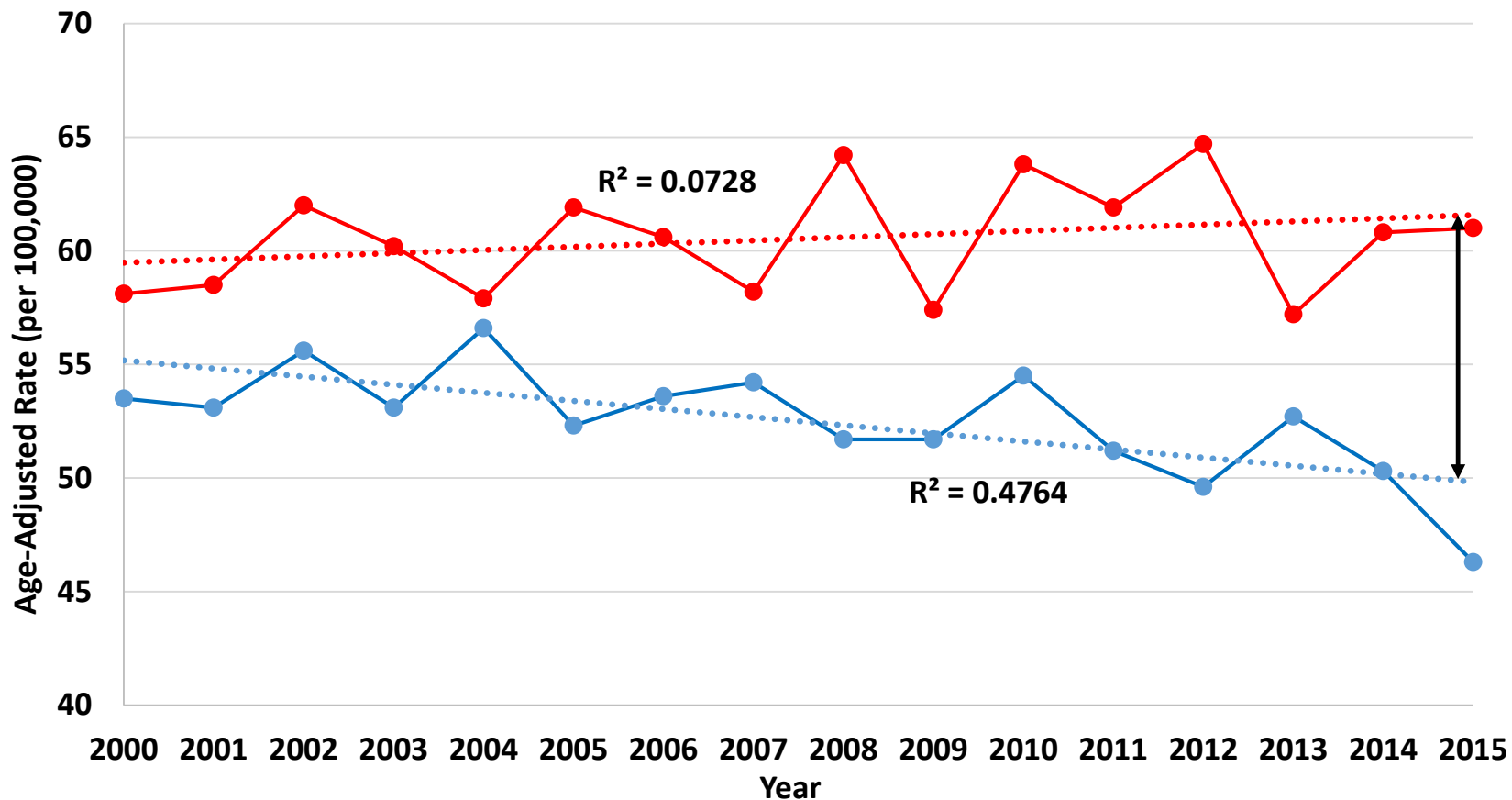


● Appalachia
 ● Non-Appalachia
 ⋯ Linear (Appalachia)
 ⋯ Linear (Non-Appalachia)

Appalachian Male vs. Non-Appalachian Male Lung and Bronchus Cancer Mortality Rates 2000-2015



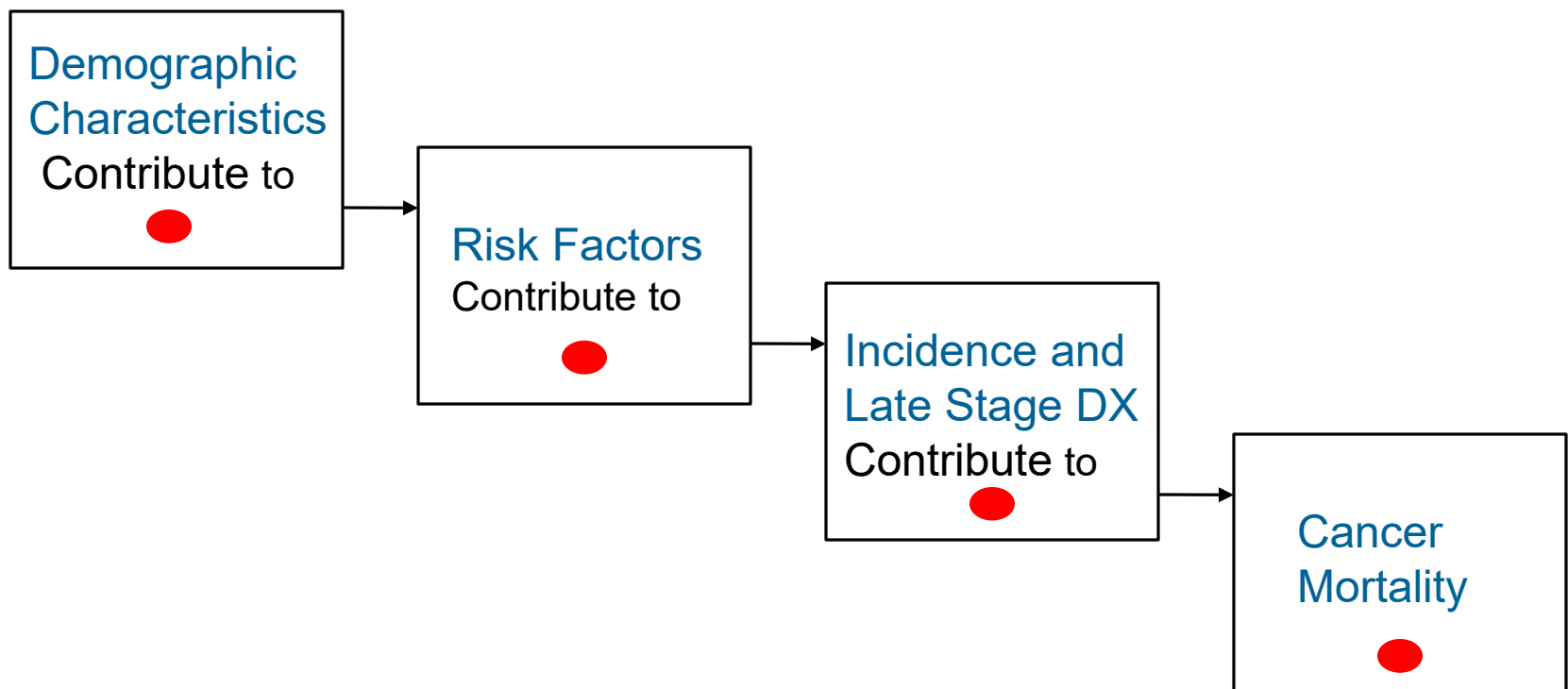
Appalachian Female vs. Non-Appalachian Female Lung and Bronchus Cancer Mortality Rates 2000-2015



● Appalachia Female
 ● Non-Appalachia Female
 ⋯ Linear (Appalachia Female)
 ⋯ Linear (Non-Appalachia Female)

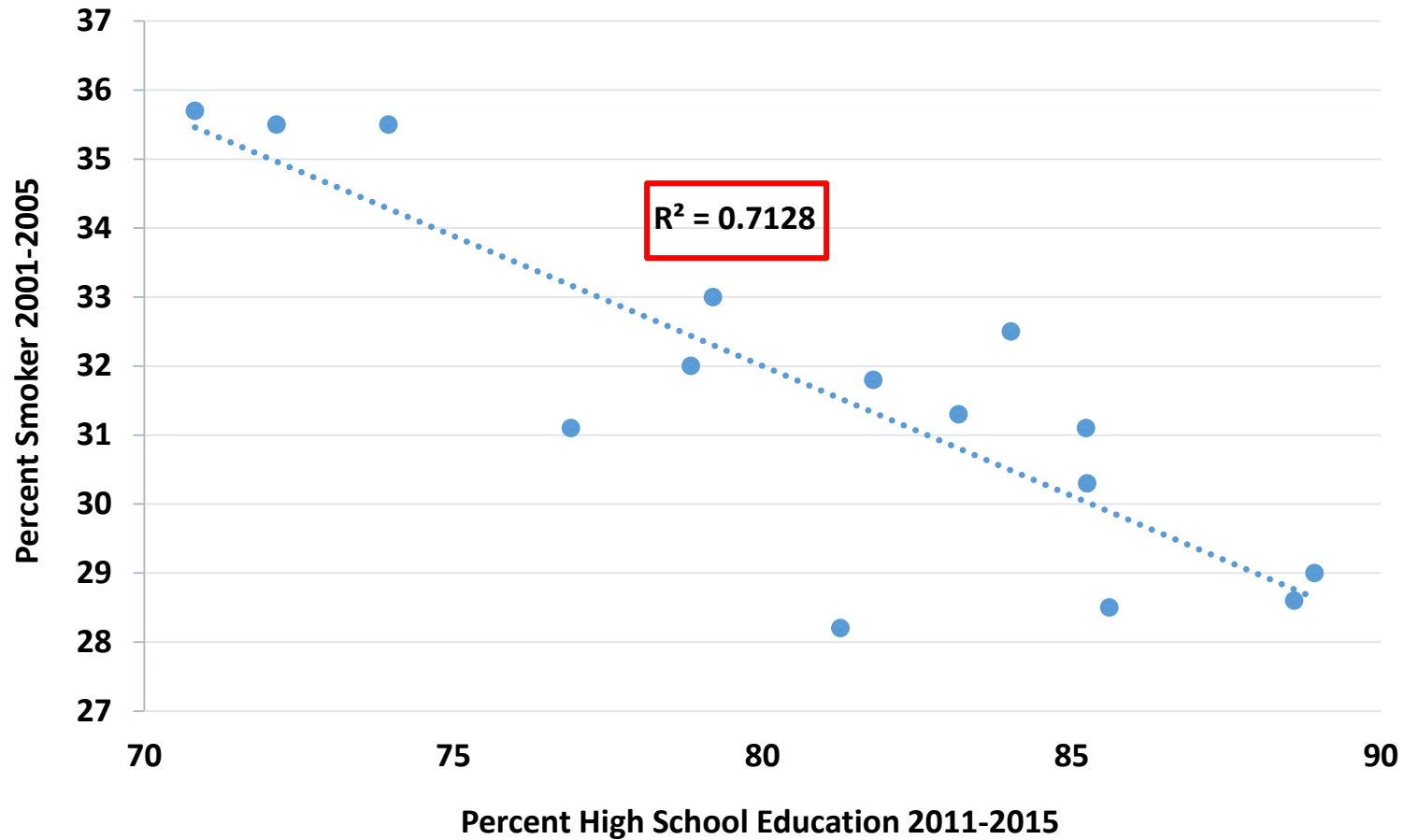
Lung Cancer Burden by Area Development District

Combining Data from Multiple Sources To Create an Index of the Burden of Cancer

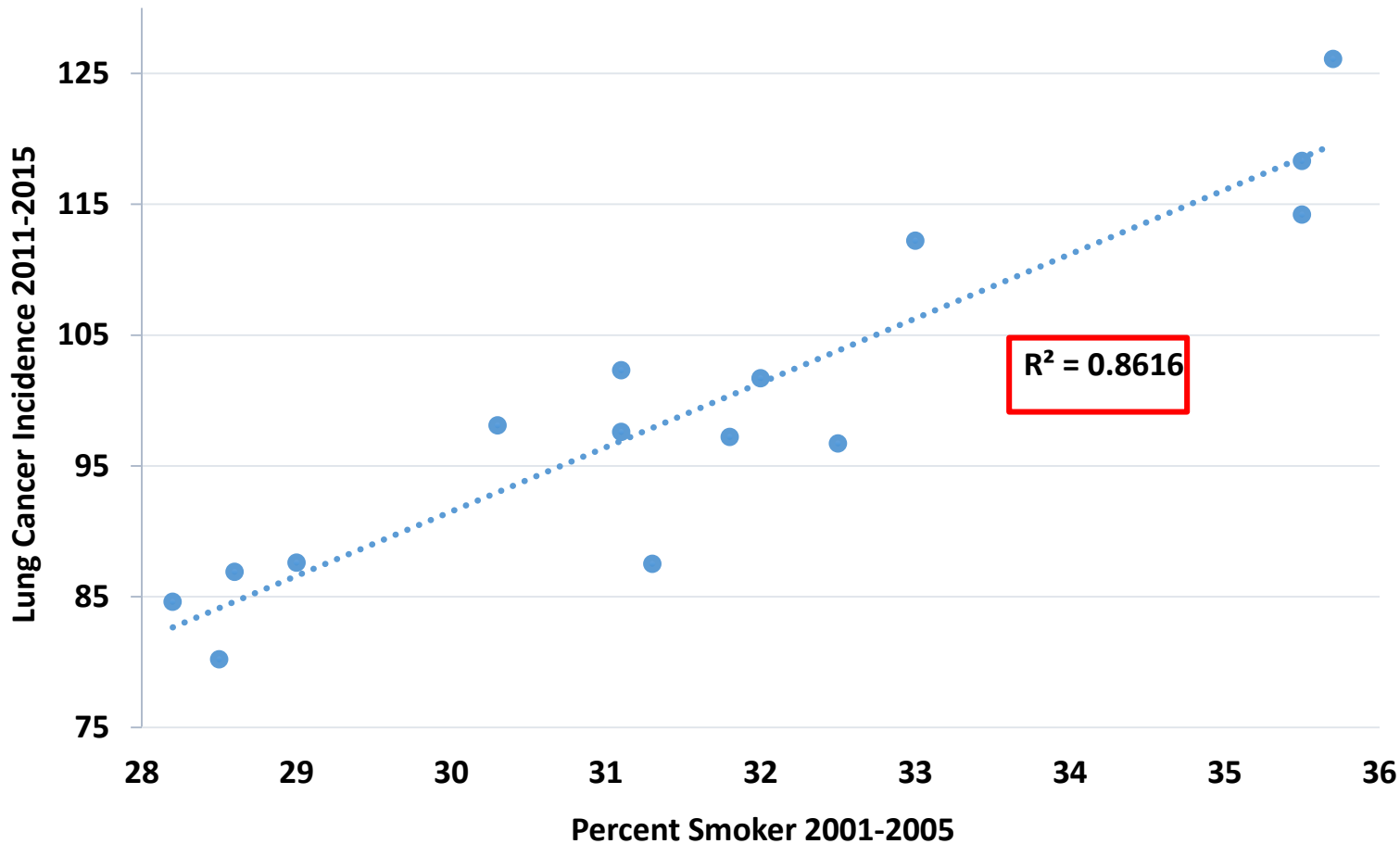


Sequence

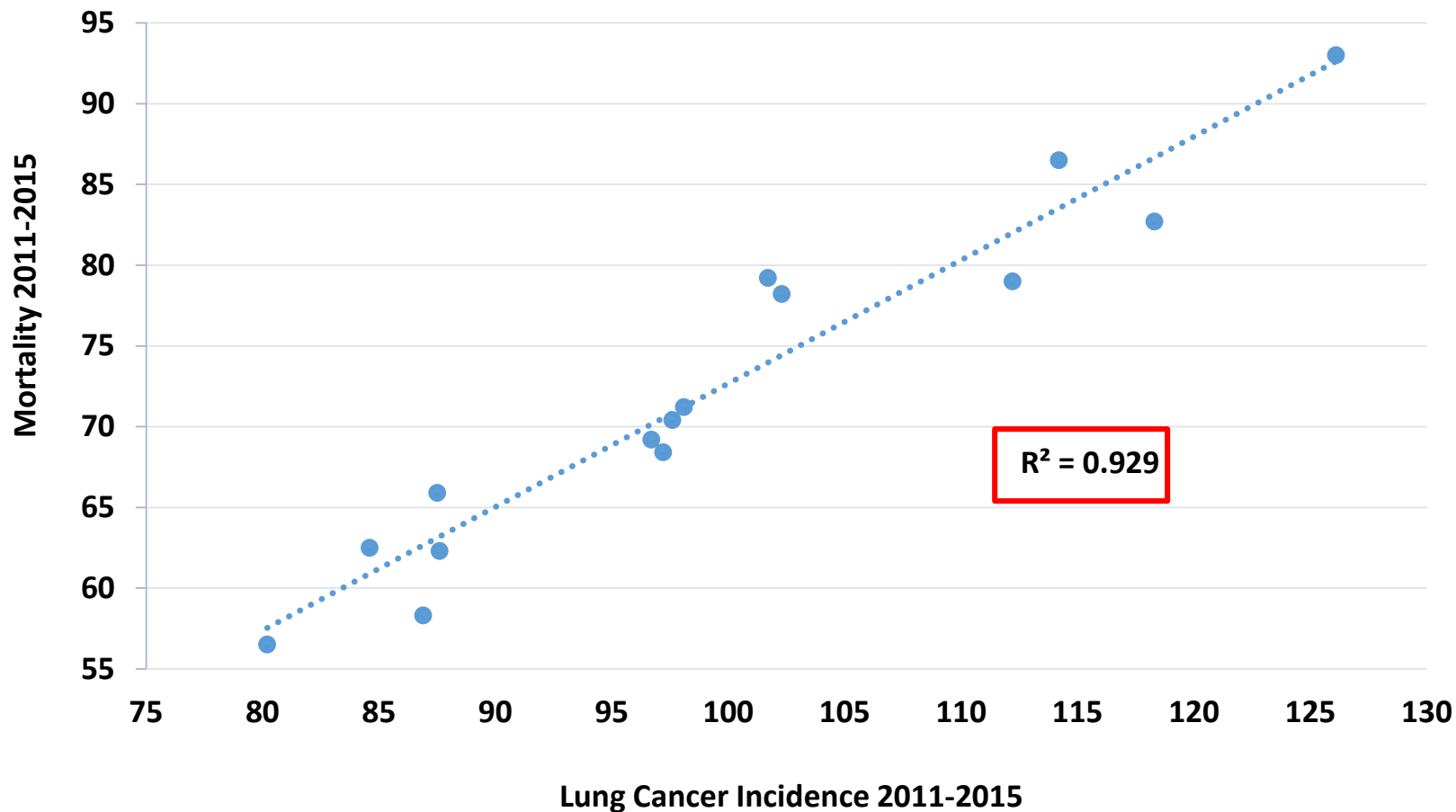
High School Education (2011-2015) vs. Smoking Rate (2001-2005)



Smoking Rate (2001-2005) vs. Lung Cancer Incidence (2011-2015)



Lung Cancer Incidence (2011-2015) vs. Lung Cancer Mortality (2011-2015)



Lung Cancer by Area Development District in KY, 2011-2015

Area Development District ●	High School Education, 2011-2015 ●		Current Smoker, 2001-2005 ●		Age-Adjusted Incidence ●		Age-Adjusted Mortality ●		Overall Rank ●
	Percent	Rank	Percent	Rank	Rate	Rank	Rate	Rank	
Kentucky River	70.8	1	35.7	1	126.1	1	93	1	4
Cumberland Valley	72.1	2	35.5	3	114.2	3	86.5	2	10
Big Sandy	74.0	3	35.5	2	118.3	2	82.7	3	10
Buffalo Trace	79.2	6	33	4	112.2	4	79	5	19
Gateway	78.8	5	32	6	101.7	6	79.2	4	21
Lake Cumberland	76.9	4	31.1	9	102.3	5	78.2	6	24
Fivco	84.0	10	32.5	5	96.7	10	69.2	9	34
Barren River	81.8	8	31.8	7	97.2	9	68.4	10	34
Green River	85.3	12	30.3	11	98.1	7	71.2	7	37
Lincoln Trail	85.2	11	31.1	10	97.6	8	70.4	8	37
Pennyrile	83.2	9	31.3	8	87.5	12	65.9	11	40
Bluegrass	81.3	7	28.2	15	84.6	14	62.5	12	48
Northern Kentucky	88.9	15	29	12	87.6	11	62.3	13	51
Kipda	88.6	14	28.6	13	86.9	13	58.3	14	54
Purchase	85.6	13	28.5	14	80.2	15	56.5	15	57

Age-Adjusted Cancer Incidence Rates in Kentucky

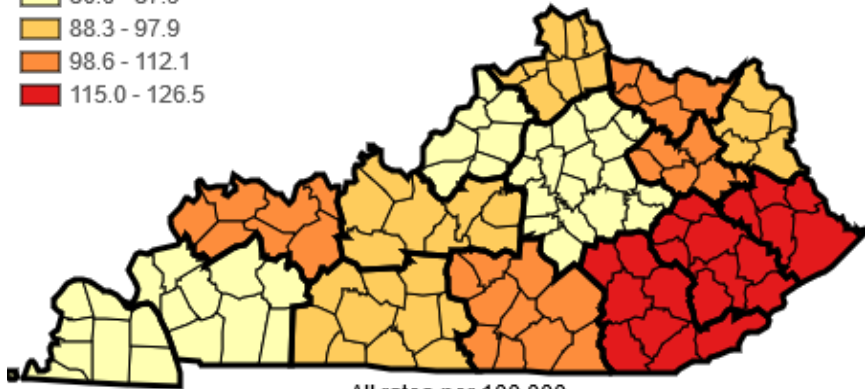
Lung and Bronchus, 2011 - 2015

By Area Development District

Age-Adjusted to the 2000 U.S. Standard Million Population

Kentucky Rate: 94.2 / per 100,000

- 80.6 - 87.9
- 88.3 - 97.9
- 98.6 - 112.1
- 115.0 - 126.5



All rates per 100,000.
Data accessed April 30, 2019. Based on data released Nov 2018.
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Age-Adjusted Cancer Mortality Rates in Kentucky

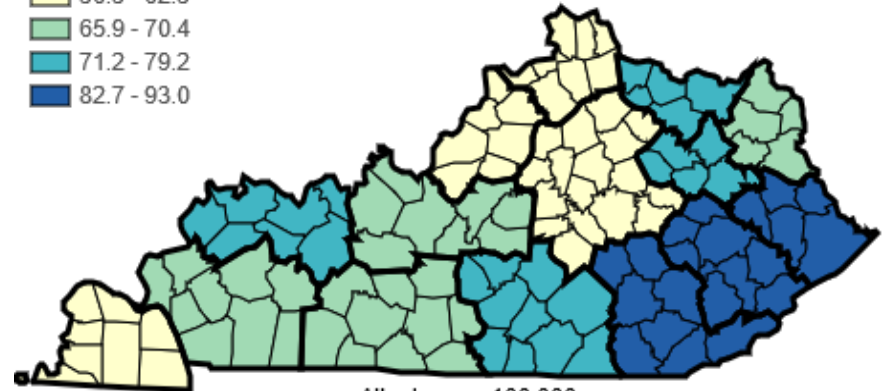
Lung and Bronchus, 2011 - 2015

By Area Development District

Age-Adjusted to the 2000 U.S. Standard Million Population

Kentucky Rate: 67.3 / per 100,000

- 56.5 - 62.5
- 65.9 - 70.4
- 71.2 - 79.2
- 82.7 - 93.0



All rates per 100,000.
Data accessed April 30, 2019. Based on data released Apr 2017. Data for 2009-2015 is preliminary.
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Thank You!

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Contact Information

Jaclyn K. McDowell, DrPH

Epidemiologist

Kentucky Cancer Registry

jnee@kcr.uky.edu

Thomas C. Tucker, PhD, MPH

Associate Director

Kentucky Cancer Registry

tct@kcr.uky.edu

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