



TEXAS PREVENTION INSTITUTE

TEXAS CENTER FOR HEALTH DISPARITIES

NIMHD* CENTER OF EXCELLENCE: COMMUNITY OUTREACH CORE*

BREAST CANCER IN TARRANT COUNTY: Screening, Incidence, Mortality, and Stage at Diagnosis

Updated January 2014

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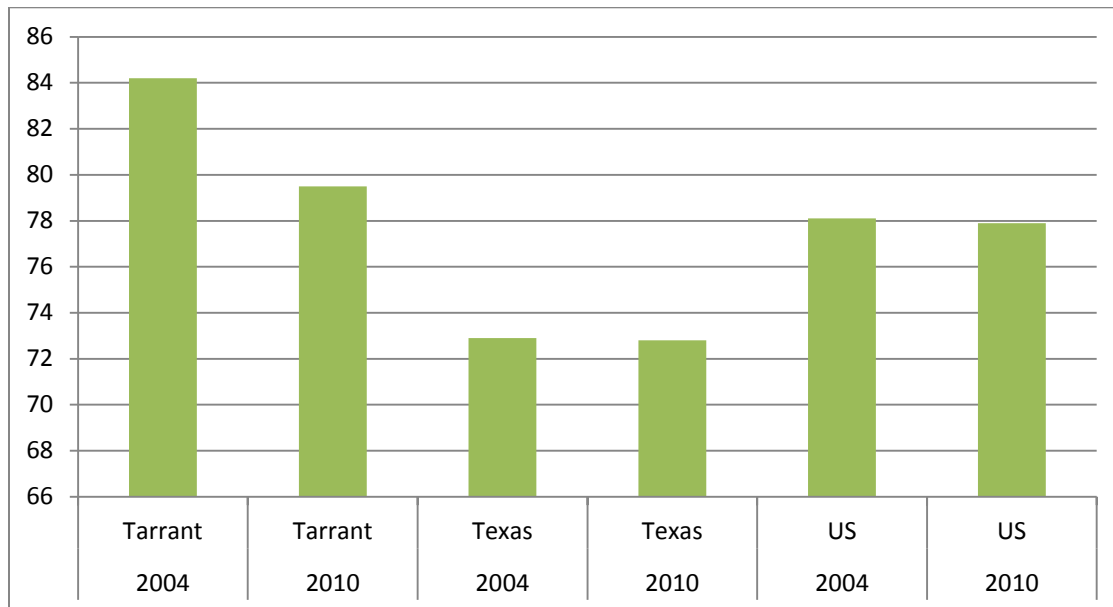
SUMMARY

MAMMOGRAMS	<p>Historically, Tarrant County has had higher overall mammogram rates than Texas and the US, even with a decline from 2004 to 2010.</p>
	<p>Mammogram rates for all racial/ethnic groups in Tarrant County have decreased from 2004 to 2010, with the most dramatic decrease occurring among Hispanic women who experienced close to a 16% decrease.</p>
	<p>Of all racial/ethnic groups in Tarrant County, Black women reported the highest percentage of mammography screening in 2009/2010.</p>
	<p>Roughly half of all zip codes in Tarrant County have a mammogram screening percentage ranging from 64.0 to 96.8%.</p>
	<p>Northeast Tarrant County has the highest percentage of women receiving a mammogram in comparison to other parts of Tarrant County.</p>
INCIDENCE	<p>Similar to state and national trends, the highest incidence of breast cancer in Tarrant County is among White women, followed by Black women, then Hispanic women.</p>
	<p>In Tarrant County, the incidence of breast cancer increases with age for all racial/ethnic groups, but does not increase at the same rate for all racial/ethnic groups.</p>
	<p>In Tarrant County, among women in the age groups of 40-44 and 55-59, Black women have the highest incidence of breast cancer. White women have the highest incidence of breast cancer in all other age groups.</p>
	<p>In Tarrant County, the incidence of breast cancer among older women (50+) is higher than Texas, but lower than the United States.</p>
<p>In Tarrant County, the zip codes with the highest counts of newly-diagnosed cases of breast cancer were 76133 (n=131), 75052 (n=110), 76116 (n=108), 76063 (n=100), and 76021 (n=94). Due to small sample sizes, no valid zip code comparisons can be made with current data.</p>	

MORTALITY	<p>In both Texas and Tarrant County, Malignant Neoplasms (cancer) are the second-leading cause of death among White women and Black women, and the first-leading cause of death among Hispanic women and women of other race/ethnicity.</p>
	<p>Also in line with state and national trends, Black women are 1.5 times more likely to die from breast cancer than White women, and 2.5 times more likely to die from breast cancer than Hispanic women.</p>
	<p>In Tarrant County, Black women have a lower 5 and 10-year survival rate than all other women. Survival rates may be affected by many factors such as socioeconomic status, access to care, or diet.</p>
	<p>The overall mortality rates of older women (55+) with breast cancer are fairly similar across Tarrant County, Texas, and the United States.</p>
STAGE AT DIAGNOSIS	<p>In Tarrant County, Hispanic women are more likely to be diagnosed with late-stage breast cancer (38.6%) than Black women (36.7%). This is unique compared to Texas and the United States, where Black women are most likely to be diagnosed with late-stage breast cancer than other ethnic groups.</p>
	<p>In Tarrant County, the percentage of older women (55+) that are diagnosed with late-stage breast cancer is slightly lower than Texas, but similar to the United States.</p>

MAMMOGRAPHY

Mammogram within Past Two years, Age 50+*, in Tarrant County, Texas, United States, Comparison of 2004 and 2009/2010

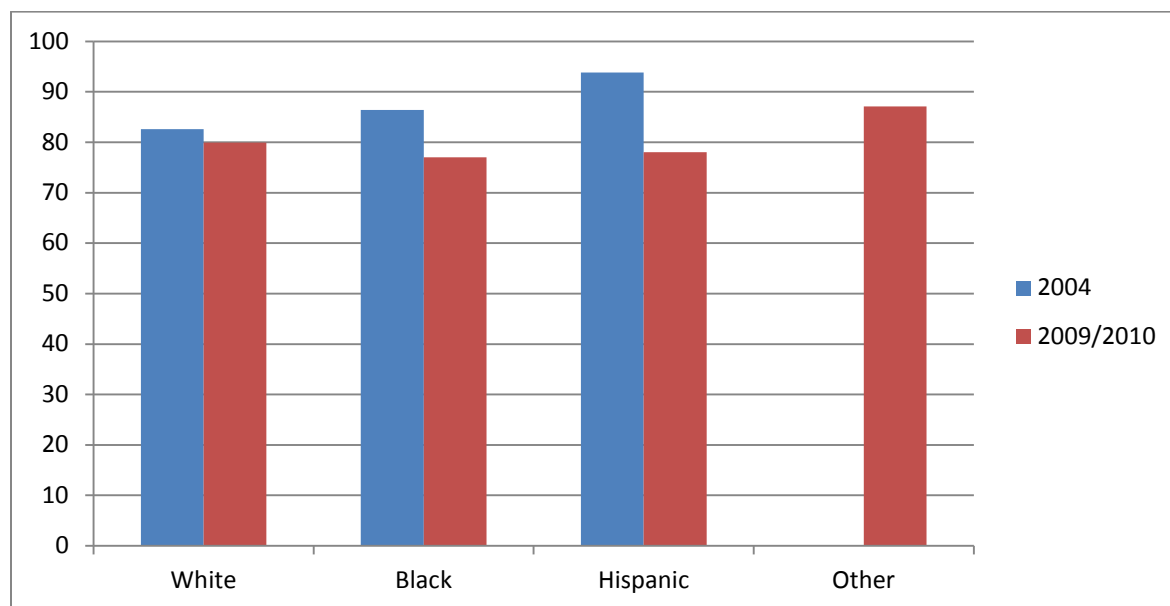


* Guidelines set forth by United States Preventive Service Task Force

Source: Tarrant County Public Health and Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2000-2010;

Historically, Tarrant County has had higher overall mammogram rates than Texas and the US, even with a decline from 2004 to 2010.

Mammogram within Past Two Years, Age 50+*, Tarrant County, by Race/Ethnicity, Comparison of 2004 and 2009/2010



* Guidelines put forth by United States Preventative Task Force

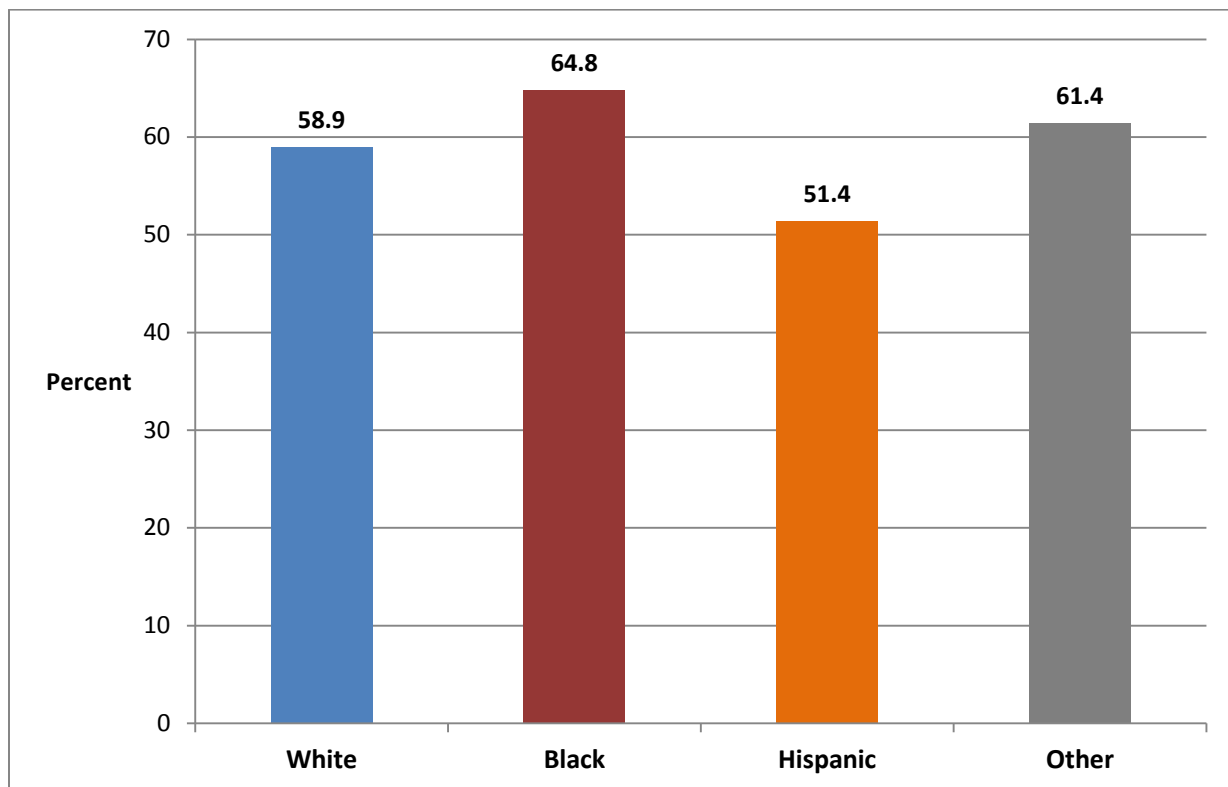
Data for the category "Other" was not available in 2004.

Estimates weighted to population characteristics.

Source: Tarrant County Public Health

Mammogram rates for all racial/ethnic groups in Tarrant County have decreased from 2004 to 2010, with the most dramatic decrease occurring among Hispanic women who experienced close to a 16% decrease.

Mammogram within Past Year, Age 40+*, Tarrant County, by Race/Ethnicity, 2009/2010

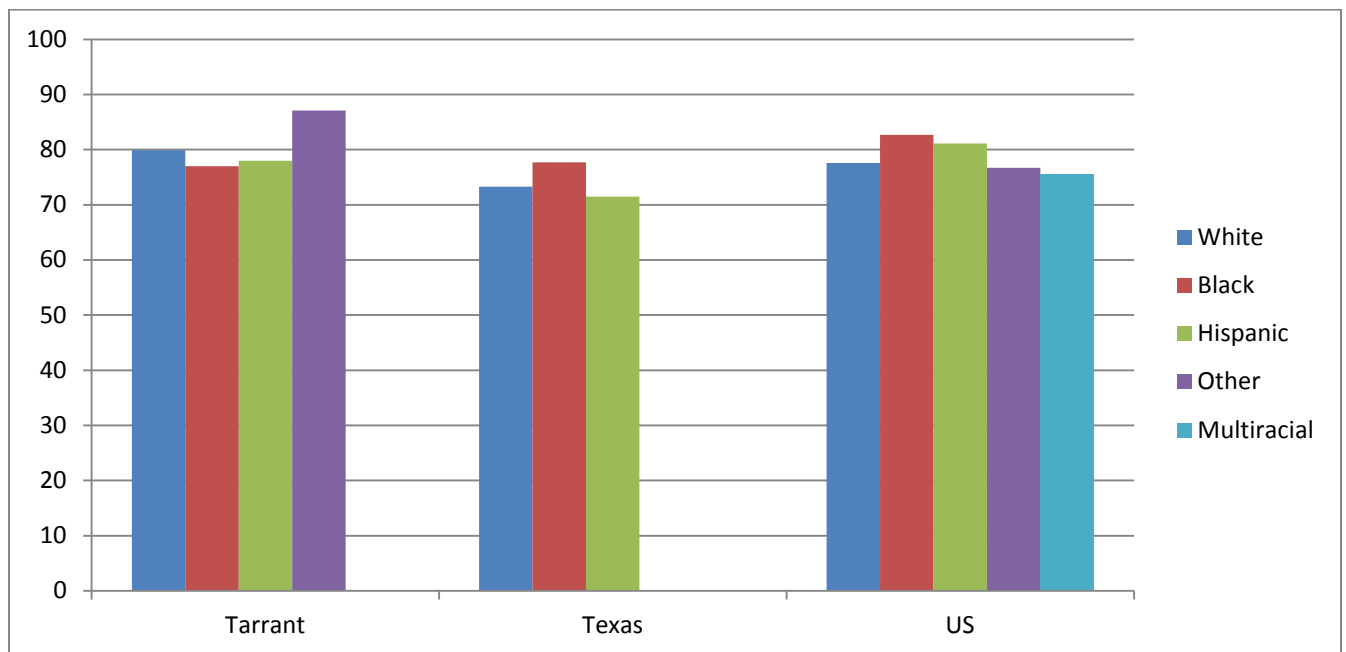


* Guidelines put forth by American Cancer Society.
Estimates weighted to population characteristics

Source: Tarrant County Public Health

Of all racial/ethnic groups in Tarrant County, Black women reported the highest percentage of mammography screening in 2009/2010.

Mammogram within Past Two years, Age 50+*, in Tarrant County, Texas, United States, by Race/Ethnicity, 2009/2010



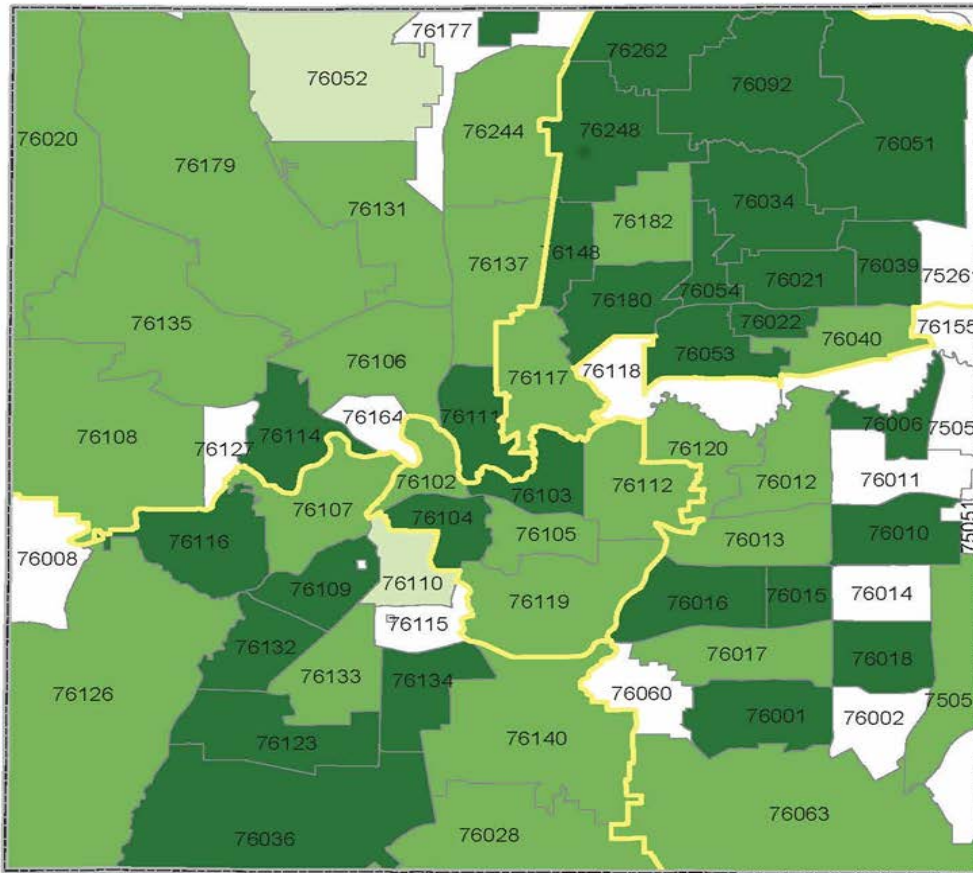
- Guidelines set forth by the United States Preventative Services Task Force

Data for the category "Other" was not available for Texas.

Data for the category "Multiracial" was only available for the US.

Mammogram rates in Tarrant County are fairly similar across different racial/ethnic groups.

Mammogram within Past Year, Age 40+*, Tarrant County by Zip Code, 2009/2010

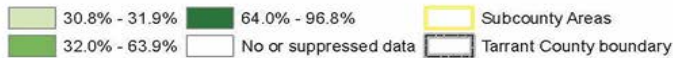


Roughly half of all zip codes in Tarrant County have a mammogram screening percentage ranging from 64.0% to 96.8%.

*American Cancer Society guideline for early detection of breast cancer

These data were prepared by Tarrant County Public Health for its use, and may be revised any time, without notification. Tarrant County Public Health does not guarantee the correctness or accuracy of any features on this map. Tarrant County assumes no responsibility in connection therewith. Said data should not be edited by anyone other than designated personnel, or through written approval by GIS Manager. These data are for informational purposes only and should not create liability on the part of Tarrant County Government, any officer and/or employees thereof.

Weighted Percent*

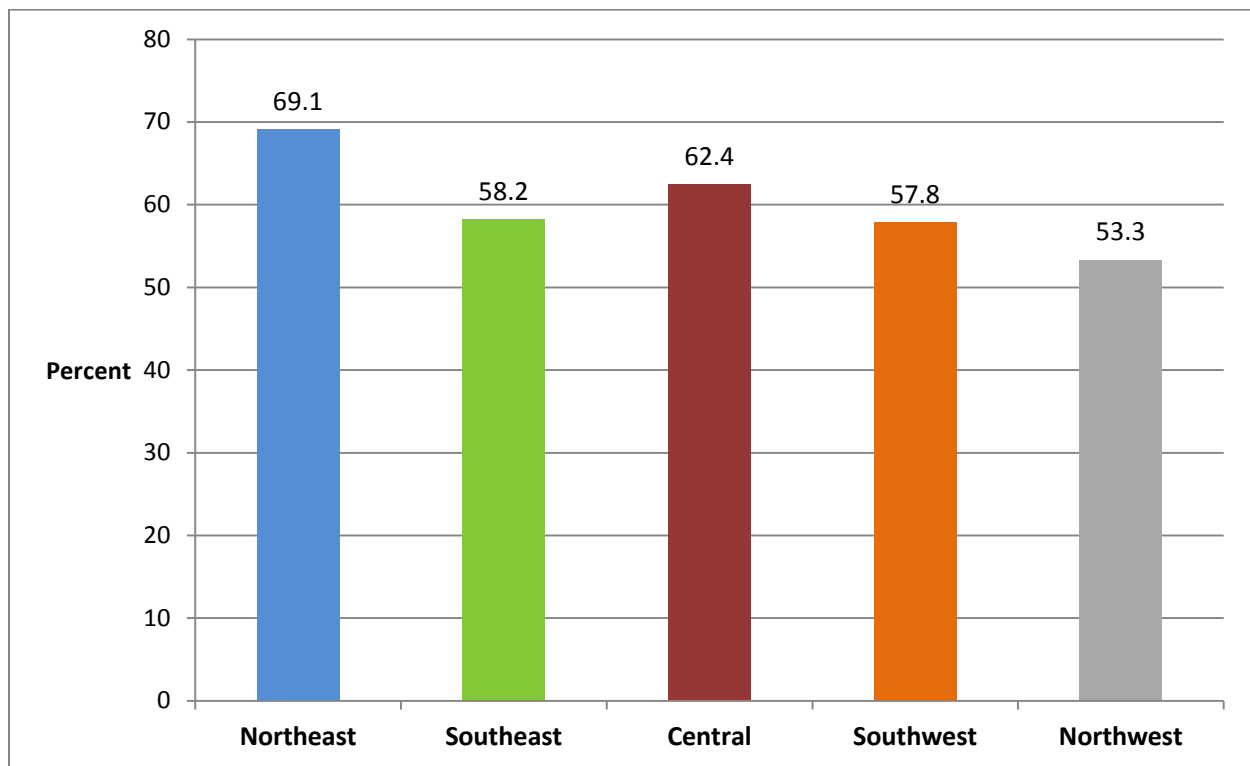


*Estimates weighted to population characteristics



* Guidelines put forth by American Cancer Society

Mammogram within Past Year, Age 40+*, Tarrant County, Comparing Different Areas, 2009/2010



*Guidelines put forth by American Cancer Society

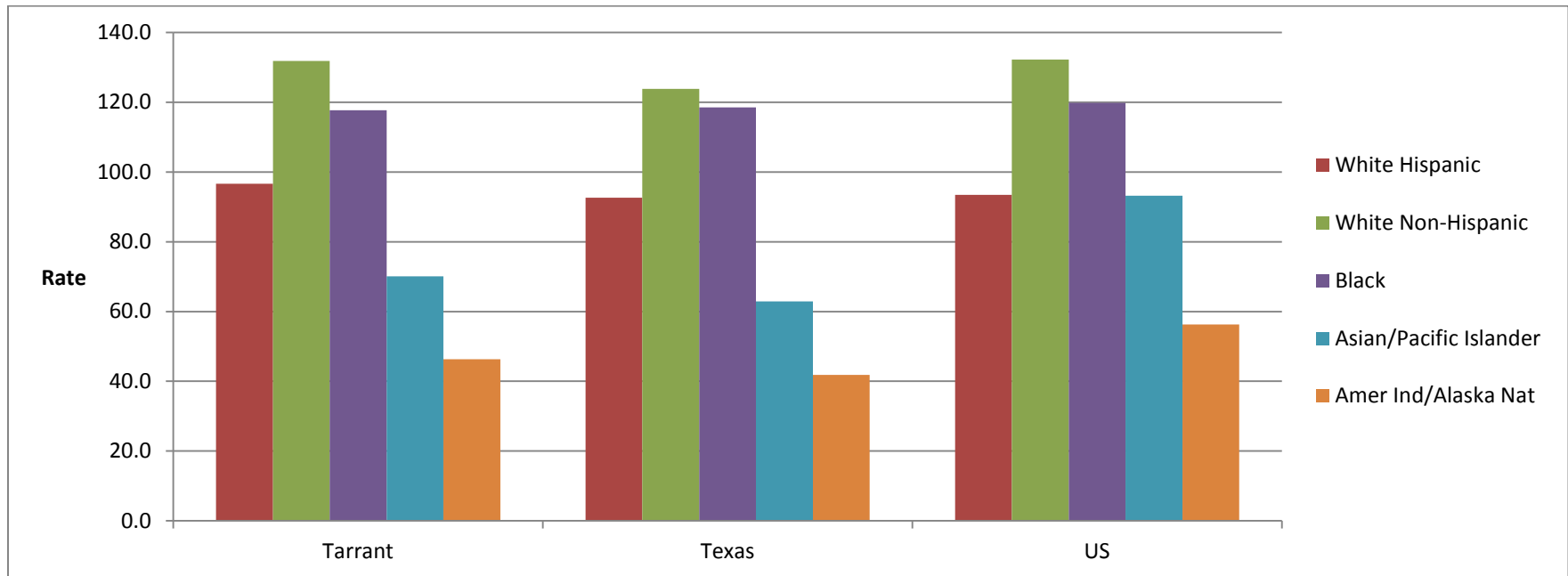
Estimates weighted to population characteristics

Source: Tarrant County Public Health

Northeast Tarrant County has the highest percentage of women receiving a mammogram in comparison to other parts of Tarrant County.

INCIDENCE

Average Annual Breast Cancer Incidence Rates, Tarrant, Texas and United States, Comparison by race and ethnicity*, 2005-2009

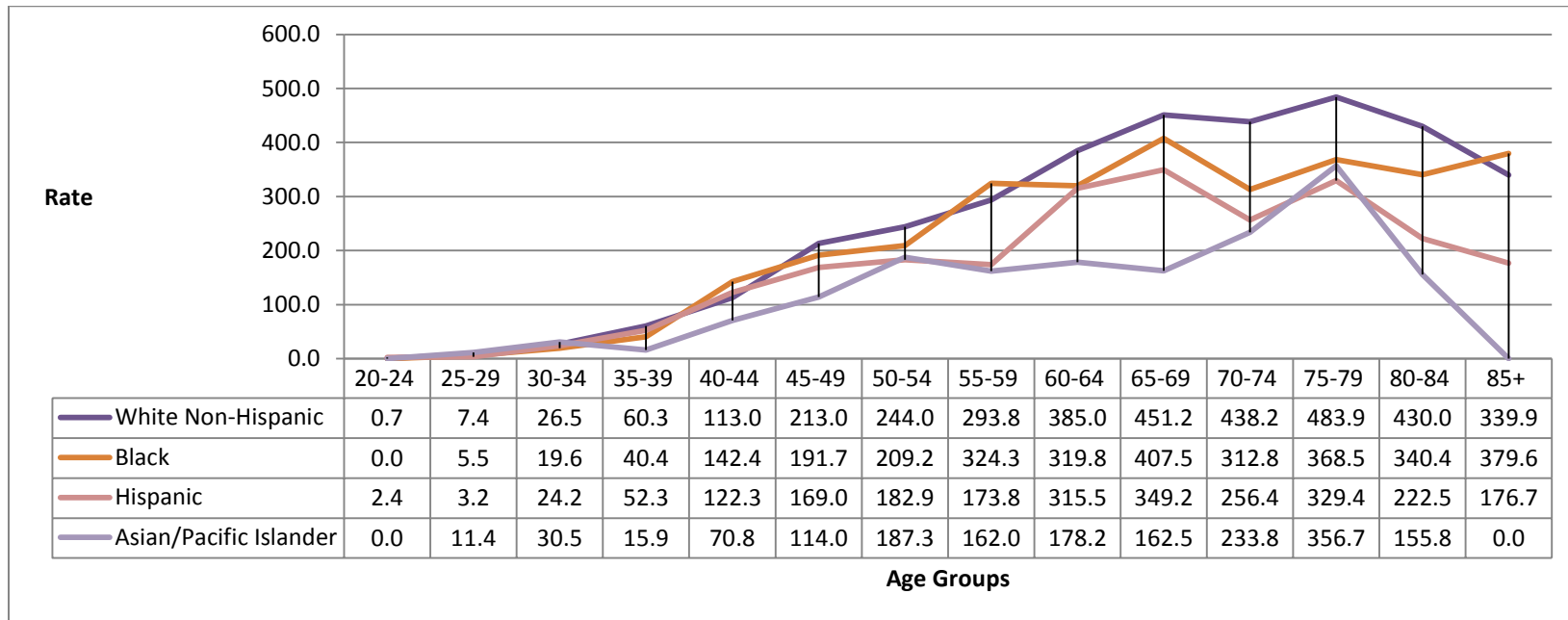


*Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard; Confidence intervals are 95% for rates.

Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12251. 10/19/2012. Texas Incidence Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Incidence - Texas, 1995-2009, Cut-off 11-23-11, SEER*Prep 2.4.5. SEER (U.S.) Incidence Source: Surveillance, Epidemiology and End Results Program (SEER); Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2011 Sub, Vintage 2009 Pops (2000-2009) <Katrina/Rita Population Adjustment:

Similar to state and national trends, the highest incidence of breast cancer in Tarrant County is among White women, followed by Black women, then Hispanic women.

Age-Specific Breast Cancer Incidence Rates*, Tarrant County Females, Tarrant County by race and ethnicity, Diagnosed 2005-2009

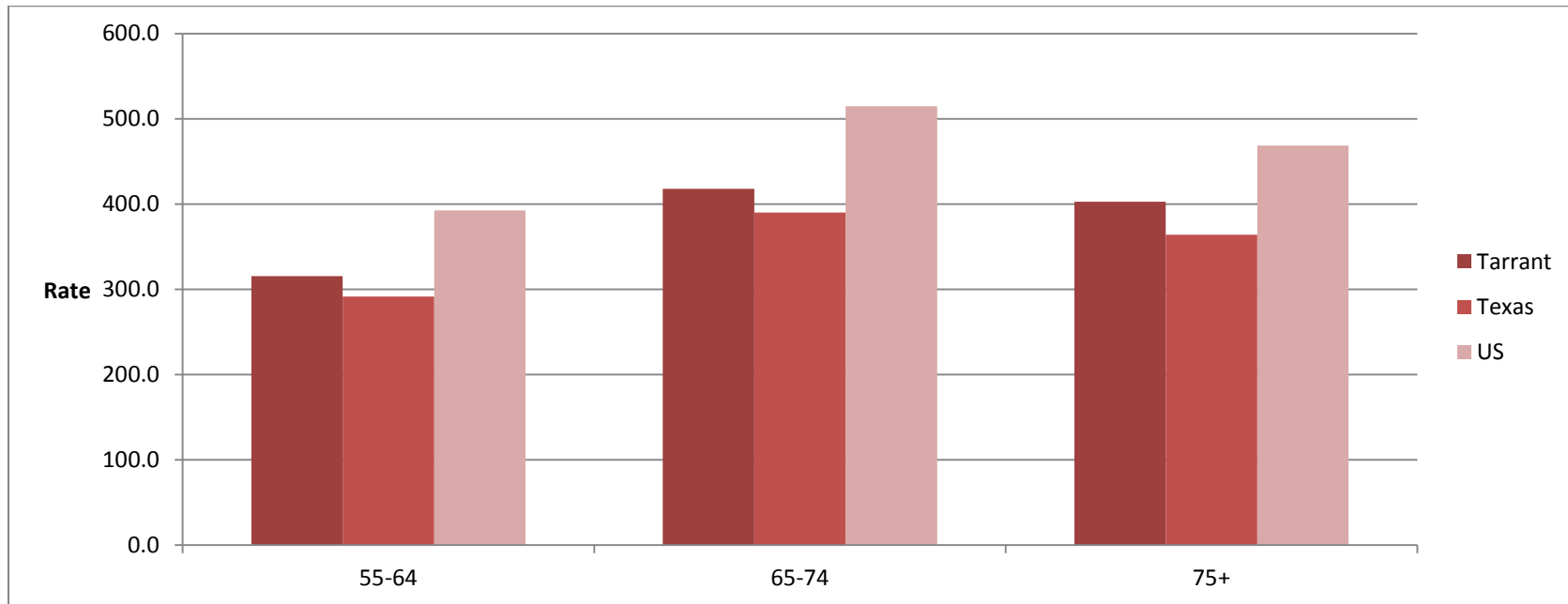


*Rates are per 100,000.

In Tarrant County, the incidence of breast cancer increases with age for all racial/ethnic groups, but does not increase at the same rate for all racial/ethnic groups.

Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12253. 10/29/2012.
Incidence Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Incidence - Texas, 1995-2009, Cut-off 11-23-11, SEER*Prep 2.4.5

Average Annual Breast Cancer Age-Specific Incidence Rates, Among Older Women (55+) in Tarrant County and Texas*, 2005-2009



*Rates are per 100,000; Confidence intervals are 95% for rates.

Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12288. 12/20/2012. Texas Incidence Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Incidence - Texas, 1995-2009, Cut-off 11-23-11, SEER*Prep 2.4.5

In Tarrant County, among women in the age groups of 40-44 and 55-59, Black women have the highest incidence of breast cancer. White women have the highest incidence of breast cancer in all other age groups.

Counts of Newly-Diagnosed Cases of Female Breast Cancer*, By Selected Zip Codes**, 2007-2009,

ZIP Code	Count	ZIP Code	Count	ZIP Code	Count
76133	131	76039	54	76131	29
75052	110	76134	53	76006	25
76116	108	76132	51	76036	25
76063	100	76182	51	76118	25
76021	94	76117	50	76103	23
76051	87	76114	49	76115	22
76112	83	76140	48	76120	22
76248	81	76126	47	76105	21
76017	78	76262	46	76052	19
76109	72	76135	44	76060	17
76012	71	76022	43	76164	16
76016	71	76010	41	75054	8
76179	70	76110	41	76102	8
76108	65	76148	40	76155	3
76013	64	76011	36	76177	3
76180	64	76018	36	76094	2
76244	63	76106	36	76007	1
76053	62	76123	36	76095	1
76092	62	76002	34	76127	1
76137	62	76014	33	76162	1
76119	61	76040	33	76163	1
76020	57	76054	31		
76107	57	76104	31		
76034	56	76111	30		
76001	54	76015	29		

Please note: Due to small numbers of cases, zip code data is non-comparable, since these numbers represent cases and not ratios.

*Only includes malignant cases (there may have been other cases diagnosed at earliest in-situ stage, but these are not included)

**Any missing zip codes means that there were no new cases diagnosed during this time period

Source: Texas Cancer Registry Incidence File, 1995-2009, cutoff 11/2011. Incidence Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Source data for "Incidence - Texas, 1995-2009, Cut-off 11-23-11, SEER*Prep 2.4.5

MORTALITY

Leading Causes of Death of Women in Tarrant County, by Race/Ethnicity, 2009

White n (% , Rate)	Black n (% , Rate)	Hispanic n (% , Rate)	Other n (% , Rate)
Diseases of the Heart 913 (22.6, 159.1)	Diseases of the Heart 168 (23.1, 216.7)	Malignant Neoplasms 93 (22.1, 117.5)	Malignant Neoplasms 38 (26.2, 111.9)
Malignant Neoplasms 900 (22.3, 167.3)	Malignant Neoplasms 157 (21.6, 184.7)	Diseases of the Heart 65 (15.5, 127.5)	Diseases of the Heart 27 (18.6, 84.1)
Chronic Lower Respiratory Diseases 316 (7.78, 57.6)	Cerebrovascular Diseases 48 (6.6, 65.5)	Cerebrovascular Diseases 20 (4.8, 38.8)	Cerebrovascular Diseases 8 (5.5, ?)
Cerebrovascular Diseases 288 (7.1, 49.6)	Diabetes Mellitus 28 (3.9, 37.6)	Diabetes Mellitus 18 (4.3, ?)	Accidents 8 (5.5, ?)
Alzheimer's Disease 165 (4.1, 28.3)	Nephritis, Nephrotic Syndrome and Nephrosis 26 (3.6, 28.9)	Accidents 15 (3.6, ?)	Diabetes Mellitus 6 (4.1, ?)
Accidents 122 (3, 23.5)	Accidents 24 (3.3, 23.7)	Certain Conditions Originating in Perinatal Period 15 (3.6, ?)	Chronic Lower Respiratory Diseases 5 (3.4, ?)
Influenza and Pneumonia 86 (2.1, 15)	Chronic Lower Respiratory Diseases 23 (3.2, 25.2)	Nephritis, Nephrotic Syndrome and Nephrosis 13 (3.1, ?)	Influenza and Pneumonia 4 (2.8, ?)
Diabetes Mellitus 77 (1.9, 13.9)	Hypertension and Hypertensive Renal Disease 18 (2.5, ?)	Chronic Lower Respiratory Diseases 13 (3.1, ?)	Assault (Homicide) 4 (2.8, ?)
Nephritis, Nephrotic Syndrome and Nephrosis 60 (1.5, 10.5)	Septicemia 17 (2.3, ?)	Congenital Malformations, Deformations, & Chromosomal Abnormalities 13 (3.1, ?)	Nephritis, Nephrotic Syndrome and Nephrosis 3 (2.1, ?)
Septicemia 56 (1.4, 10.4)	Alzheimer's Disease 16 (2.2, ?)	Alzheimer's Disease 12 (2.9, ?)	Chronic Liver Disease and Cirrhosis 3 (2.1, ?)

n = number of deaths

Rate per 100,000, age-adjusted to 2000 standard population

Percent of total deaths attributed to a specific cause

Data source: Texas Department of State Health Services

In both Texas and Tarrant County, Malignant Neoplasms (cancer) are the second-leading cause of death among White women and Black women, and the first-leading cause of death among Hispanic women and women of other race/ethnicity.

Leading Causes of Death of Women, Texas, by Race/Ethnicity, 2009

White n (% , Rate)	Black n (% , Rate)	Hispanic n (% , Rate)	Other n (% , Rate)
Diseases of the Heart 12,529 (23, 152.9)	Diseases of the Heart 2,176 (22.9, 196.8)	Malignant Neoplasms 2,830 (20.3, 109.7)	Malignant Neoplasms 426 (23.8, 100.9)
Malignant Neoplasms 11,250 (20.7, 149)	Malignant Neoplasms 2,108 (22.2, 180.1)	Diseases of the Heart 2,825 (20.3, 130.1)	Diseases of the Heart 382 (21.3, 113)
Chronic Lower Respiratory Disease 3,805 (7, 49)	Cerebrovascular Diseases 689 (7.2, 63.4)	Cerebrovascular Diseases 902 (6.5, 41.3)	Accidents 128 (7.1, 29.6)
Cerebrovascular Disease 3,568 (6.6, 43.3)	Diabetes Mellitus 435 (4.6, 38.2)	Diabetes Mellitus 766 (5.5, 33.1)	Cerebrovascular Diseases 124 (6.9, 36)
Alzheimer's Disease 2,801 (5.1, 32.7)	Nephritis, Nephrotic Syndrome and Nephrosis 360 (3.8, 32.9)	Accidents 597 (4.3, 17.6)	Diabetes Mellitus 53 (3, 13.2)
Accidents 2,316 (4.3, 34.2)	Accidents 285 (3, 21.3)	Nephritis, Nephrotic Syndrome and Nephrosis 524 (3.8, 23.1)	Chronic Lower Respiratory Diseases 49 (2.7, 12.7)
Influenza and Pneumonia 1,216 (2.2, 15)	Alzheimer's Disease 268 (2.8, 27.3)	Septicemia 400 (2.9, 16.6)	Septicemia 39 (2.2, 9.7)
Diabetes Mellitus 1,153 (2.1, 14.9)	Septicemia 260 (2.7, 22.9)	Alzheimer's Disease 380 (2.7, 20)	Influenza and Pneumonia 37 (2.1, 12)
Nephritis, Nephrotic Syndrome and Nephrosis 981 (1.8, 12.3)	Chronic Lower Respiratory Diseases 240 (2.5, 21.6)	Influenza and Pneumonia 375 (2.7, 15.5)	Assault (Homicide) 36 (2, 6.1)
Septicemia 950 (1.7, 12.3)	Influenza and Pneumonia 187 (2, 16.6)	Chronic Liver Disease and Cirrhosis 337 (2.4, 12.6)	Intentional Self-Harm (Suicide) 36 (2, 6.2)

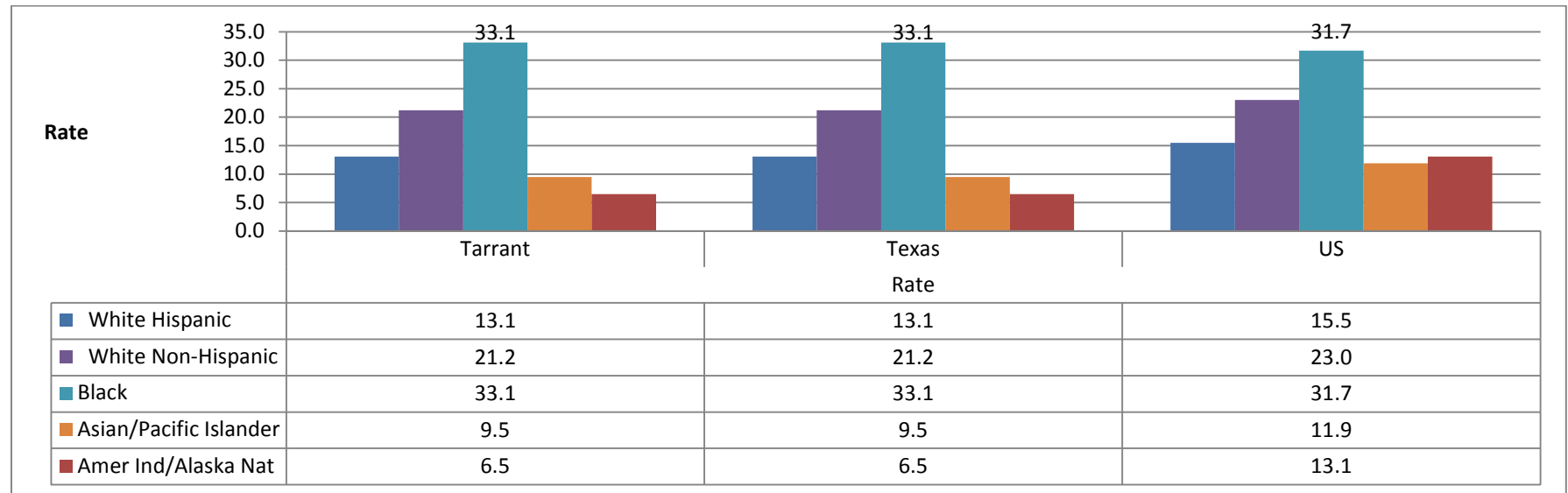
n = number of deaths

Percent of total deaths attributed to a specific cause
Rate per 100,000, age-adjusted to 2000 standard population
Data source: Texas Department of State Health Services

Also in line with state and national trends, Black women are 1.5 times more likely to die from breast cancer than White women, and 2.5 times more likely to die from breast cancer than Hispanic women.

Average Annual Breast Cancer Mortality Rates, 2005-2009

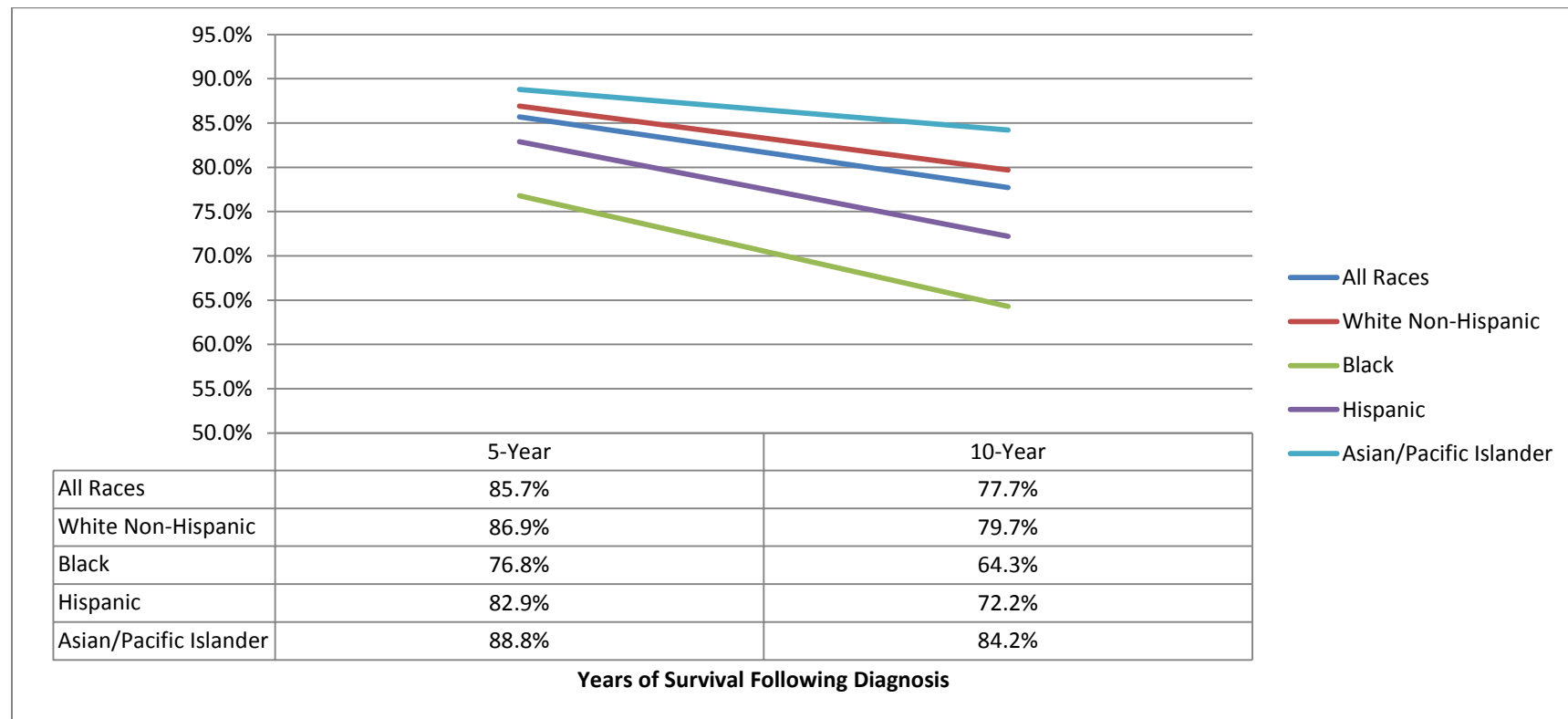
Tarrant, Texas and UNITED STATES Comparison by race and ethnicity



**Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130)*

Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12251. 10/19/2012. Texas Mortality Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Mortality - Texas, 1990-2009, SEER Pop-Adj, SEER*Prep 2.4.5, (created 01/25/12). U.S. Mortality Source: Surveillance, Epidemiology and End Results Program (SEER); Mortality - All COD, Aggregated With State, Total U.S. (1990-2009) <Katrina/Rita Population Adjustment> Note: These U.S. Rates EXCLUDE Delaware, North Dakota and South Carolina due to lack of Hispanic identification for all years.

Cause-Specific Survival* Following Diagnosis for Female Breast Cancer, Tarrant County Cases by Race and Ethnicity, Diagnosed 1995-2009

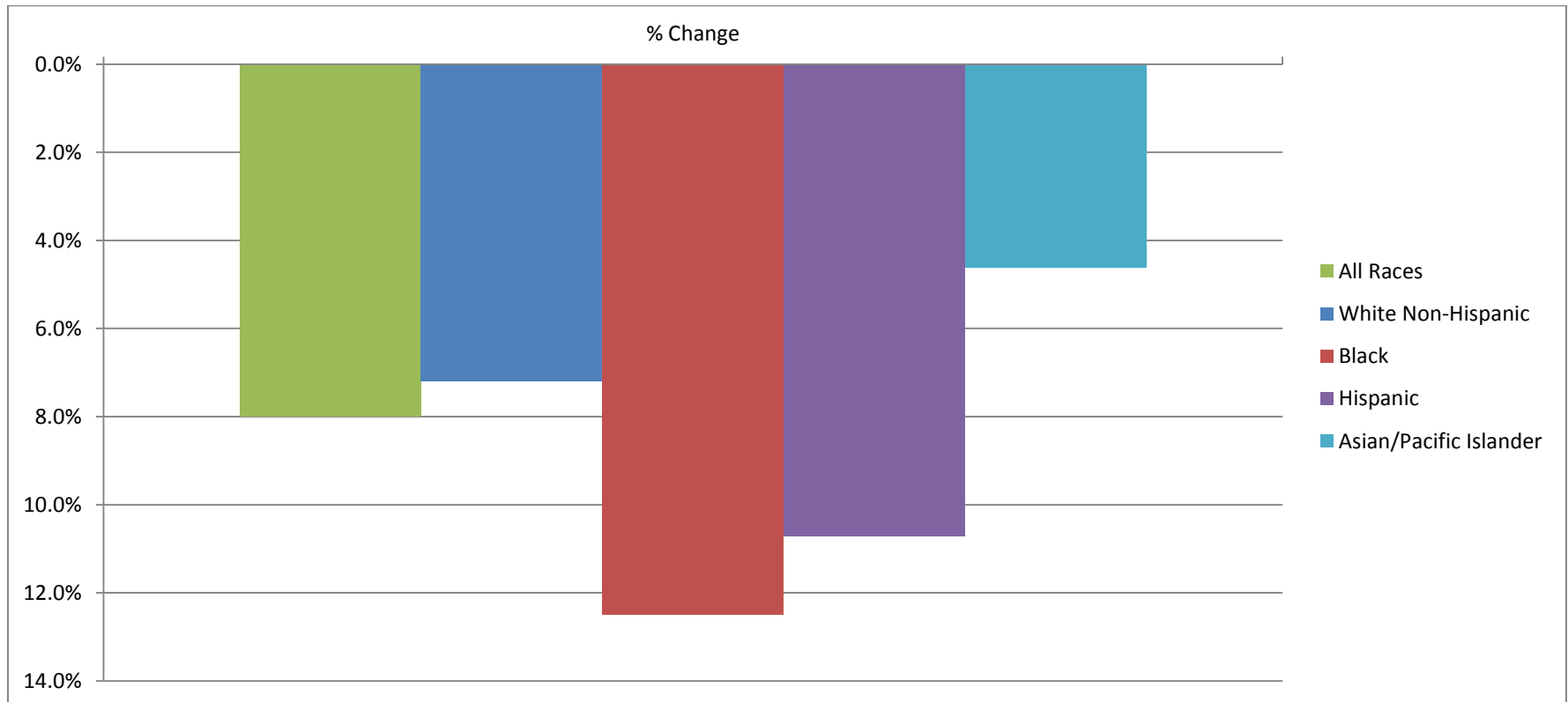


*Excludes death that occur from causes unrelated to breast cancer

Actuarial method. Confidence interval: Log(-Log()) Transformation. The level is 95%. Cases were of female breast cancer diagnosed in residents of Tarrant County, Texas, 1995-2009, and followed through December, 2009. Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12253. 10/29/201.2 Incidence Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Incidence - Texas, 1995-2009, Cut-off 11-23-11, SEER*Prep 2.4.5

In Tarrant County, Black women have a lower 5 and 10-year survival rate than all other women. Survival rates may be affected by many factors such as socioeconomic status, access to care, or diet.

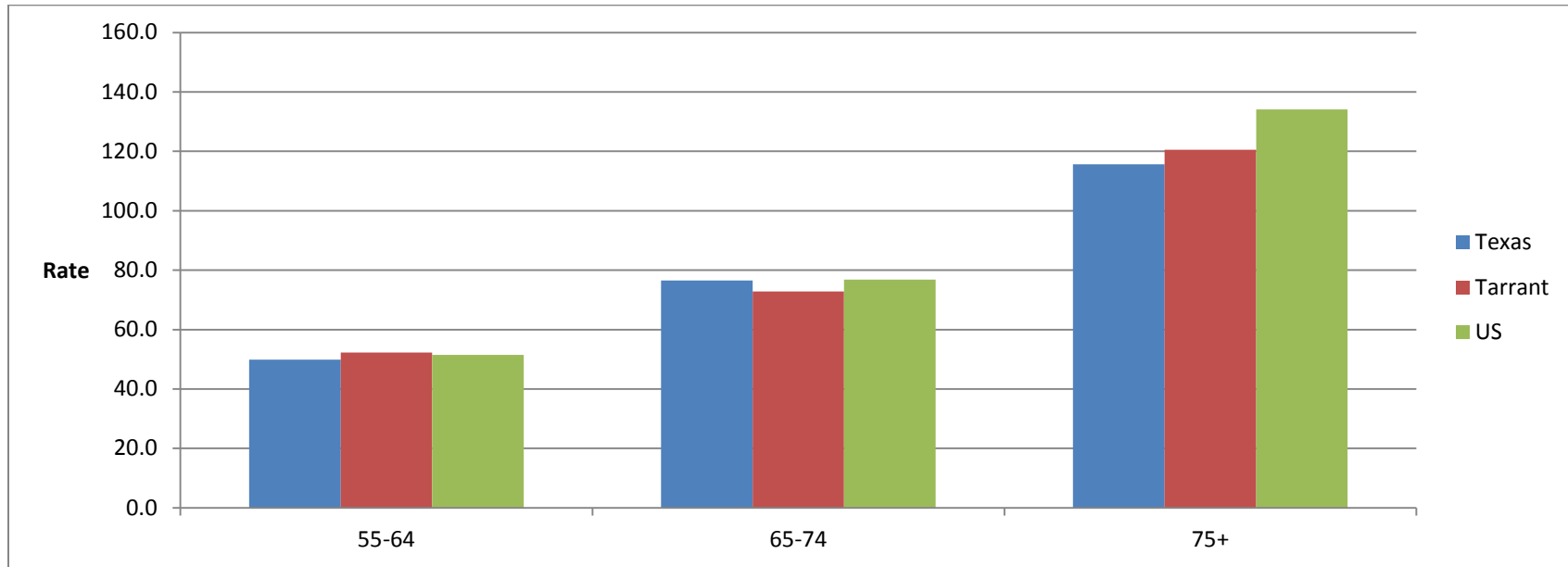
% Change in Cause-Specific Survival* between Year 5 and Year 10 Following Diagnosis for Female Breast Cancer, Tarrant County by Race and Ethnicity, Cases Diagnosed 1995-2009



*Excludes death that occur from causes unrelated to breast cancer

Actuarial method. Confidence interval: $\text{Log}(-\text{Log}())$ Transformation. The level is 95%. Cases were of female breast cancer diagnosed in residents of Tarrant County, Texas, 1995-2009, and followed through December, 2009. Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12253. 10/29/2012. Incidence Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Incidence - Texas, 1995-2009, Cut-off 11-23-11, SEER*Prep 2.4.5

Average Annual Breast Cancer Age-Specific Mortality Rates, Among Older Women (55+) in Tarrant County, Texas, United States*, 2005-2009



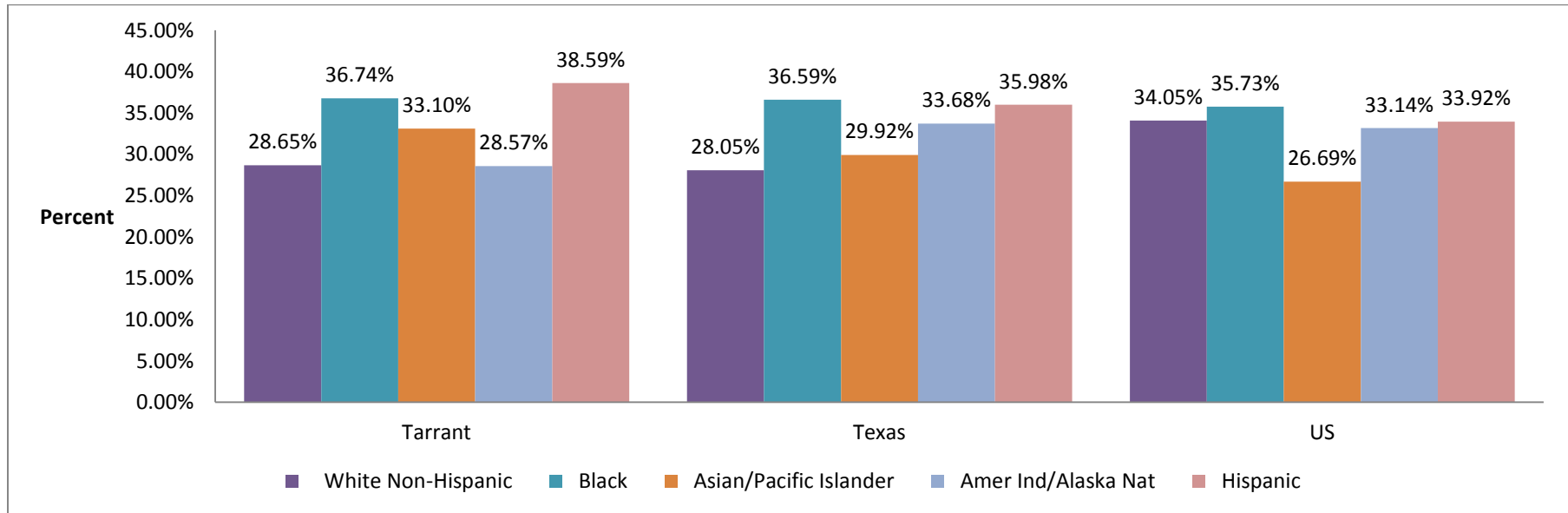
*Rates are per 100,000; Confidence intervals are 95% for rates.

Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12288. 12/20/2012. Texas Mortality Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Mortality - Texas, 1990-2009, SEER Pop-Adj, SEER*Prep 2.4.5, (created 01/25/12).

The overall mortality rates of older women (55+) with breast cancer are fairly similar across Tarrant County, Texas, and the United States.

STAGE AT DIAGNOSIS

Late Stage* Breast Cancer Distribution, Tarrant, Texas and United States, Comparison by race and ethnicity, 1995-2009

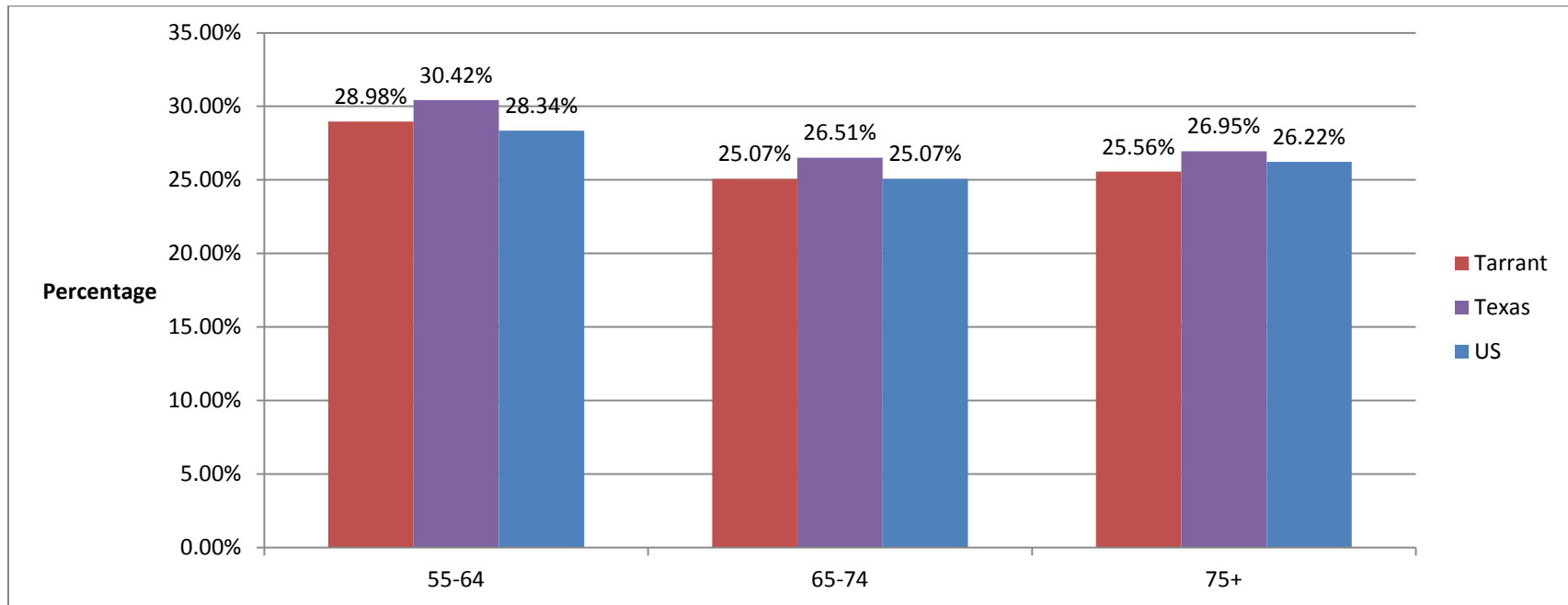


*Late stage defined as regional or distant.

Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12251. 10/19/2012. Texas Incidence Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Incidence - Texas, 1995-2009, Cut-off 11-23-11, SEER*Prep 2.4.5. SEER (U.S.) Incidence Source: Surveillance, Epidemiology and End Results Program (SEER); Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2011 Sub, Vintage 2009 Pops (2000-2009) <Katrina/Rita Population Adjustment:

In Tarrant County, Hispanic women are more likely to be diagnosed with late-stage breast cancer (38.6%) than Black women (36.7%). This is unique compared to Texas and the United States, where Black women are most likely to be diagnosed with late-stage breast cancer than other ethnic groups.

Late Stage* Distribution of Breast Cancer Among Older Women, in Texas and Tarrant County Females, 2005-2009



In Tarrant County, the percentage of older women (55+) that are diagnosed with late-stage breast cancer is slightly lower than Texas, but similar to the United States.

*Late stage defined as regional or distant.

Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request # 12288. 12/20/2012. Texas Incidence Source: Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Incidence - Texas, 1995-2009, Cut-off 11-23-11, SEER*Prep 2.4.5