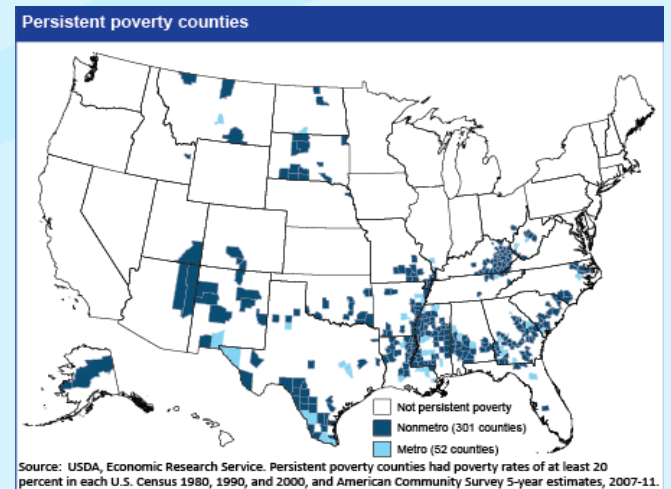


Cancer Incidence in the Historic Black Belt Region 2004-2011

June 2014

Background Black Belt Region

- ❑ **Region in Southern U.S.**
 - *Virginia – Texas*
 - *11 states traditional Black Belt*
- ❑ **Characteristics**
 - *Topography*
 - *Demographics*
 - *Economics*



Background

Previous Studies

- ❑ **Mortality disparities**
- ❑ **Breast, cervical, colorectal cancer screening**
- ❑ **Cancer incidence**
 - *Feasibility evaluation in one state*
 - *Rates compared to two similar states*
 - *Rates compared to SEER*

Purpose

- ❑ **Examine incidence and trends**
 - *State, sex, race*
- ❑ **Compare to non-Black Belt**
 - *Within states*
 - *Rest of U.S.*

Methods

- ❑ **Counties identified**
 - *AL, AR, FL, GA, LA, MS, NC, SC, TN, TX, VA*
 - *Black Belt vs non-Black Belt*
- ❑ **NPCR-CSS 2013 November submission**
 - *States meeting high quality criteria*
 - *Diagnosis years 2004-2011*

Preliminary Results

1998-2010

- ❑ **All sites combined**
 - *Black Belt higher than non-Black Belt*
 - *Black Belt white population higher in 5 states*
- ❑ **Black Belt males higher**
- ❑ **Black Belt females higher in half of states**
- ❑ **Trend by diagnosis year generally increases**

Invasive Cancer Incidence Rates by Primary Site, US Black Belt Region and US, Males, All Races, 2004-2011

| | US Black Belt | US Non-Black Belt |
|----------------------------------|---------------|-------------------|
| | Rate | Rate |
| All Sites | 557.7 | 541.2 |
| Oral Cavity and Pharynx | 18.4 | 16.2 |
| Esophagus | 8.2 | 8.6 |
| Stomach | 9.5 | 9.4 |
| Colon and Rectum | 54.5 | 52.4 |
| Liver and Intrahepatic Bile Duct | 10.8 | 10.4 |
| Pancreas | 14.0 | 13.6 |
| Larynx | 8.3 | 6.4 |
| Lung and Bronchus | 91.8 | 78.9 |
| Melanoma of the Skin (whites) | 30.0 | 32.8 |
| Prostate | 152.4 | 144.9 |
| Testis | 4.3 | 5.7 |
| Urinary Bladder | 33.1 | 38.1 |
| Kidney and Renal Pelvis | 21.5 | 20.9 |
| Brain and Other Nervous System | 7.5 | 8.0 |
| Thyroid | 4.9 | 6.3 |
| Hodgkin Lymphoma | 3.0 | 3.2 |
| Non-Hodgkin Lymphoma | 22.2 | 23.7 |
| Myeloma | 8.1 | 7.3 |
| Leukemia | 15.9 | 16.9 |

Invasive Cancer Incidence Rates by Primary Site, State Black Belt Region and US, Males, All Races, 2004-2011

| | All Sites | Colon & Rectum | Lung | Prostate |
|--------------------------|--------------|----------------|--------------|--------------|
| <i>US Non-Black Belt</i> | 541.2 | 52.4 | 78.9 | 144.9 |
| <i>AL Black Belt</i> | 574.4 | 59.2 | 101.9 | 160.5 |
| <i>AR Black Belt</i> | 571.0 | 57.6 | 109.5 | 164.8 |
| <i>FL Black Belt</i> | 532.8 | 52.1 | 79.9 | 136.5 |
| <i>GA Black Belt</i> | 575.8 | 55.5 | 97.3 | 168.8 |
| <i>LA Black Belt</i> | 604.7 | 63.0 | 100.9 | 169.0 |
| <i>MS Black Belt</i> | 593.7 | 62.4 | 110.7 | 166.0 |
| <i>NC Black Belt</i> | 569.7 | 51.9 | 97.0 | 158.4 |
| <i>SC Black Belt</i> | 562.3 | 52.6 | 95.8 | 156.5 |
| <i>TN Black Belt</i> | 562.0 | 56.1 | 99.1 | 155.2 |
| <i>TX Black Belt</i> | 541.1 | 54.2 | 85.7 | 142.8 |
| <i>VA Black Belt</i> | 561.9 | 51.5 | 92.9 | 163.6 |

Invasive Cancer Incidence Rates by Primary Site, Black Belt Region within State, Males, All Races, 2004-2011

- ❑ **Black Belt significantly higher**
 - *All Sites, Stomach: all but 2 states*
 - *CRC, Larynx: all but 3 states*
 - *Lung: 4 states*
 - *Prostate: all states*

- ❑ **Black Belt significantly lower or comparable**
 - *Bladder, Thyroid, Hodgkin: all but 1 state*
 - *Brain: all states*
 - *NHL, Leukemia: all but 2 states*

Invasive Cancer Incidence Rates by Primary Site, US Black Belt Region and US, Females, All Races, 2004-2011

| | US Black Belt | US Non-Black Belt |
|----------------------------------|---------------|-------------------|
| | Rate | Rate |
| All Sites | 405.2 | 421.6 |
| Oral Cavity and Pharynx | 6.4 | 6.2 |
| Esophagus | 1.8 | 1.9 |
| Stomach | 4.9 | 4.6 |
| Colon and Rectum | 40.2 | 39.6 |
| Liver and Intrahepatic Bile Duct | 3.5 | 3.6 |
| Pancreas | 10.8 | 10.6 |
| Larynx | 1.6 | 1.4 |
| Lung and Bronchus | 54.8 | 55.2 |
| Melanoma of the Skin (whites) | 17.6 | 17.9 |
| Breast | 119.8 | 122.4 |
| Cervix Uteri | 9.0 | 7.7 |
| Corpus and Uterus | 20.8 | 25.4 |
| Ovary | 11.7 | 12.5 |
| Urinary Bladder | 8.1 | 9.5 |
| Kidney and Renal Pelvis | 11.4 | 10.9 |
| Brain and Other Nervous System | 5.5 | 5.8 |
| Thyroid | 14.3 | 18.7 |
| Hodgkin Lymphoma | 2.3 | 2.5 |
| Non-Hodgkin Lymphoma | 15.3 | 16.5 |
| Myeloma | 5.6 | 4.7 |
| Leukemia | 9.8 | 10.3 |

Invasive Cancer Incidence Rates by Primary Site, State Black Belt Region and US, Females, All Races, 2004-2011

| | All Sites | Colon & Rectum | Lung | Breast | Cervix | Uterus |
|--------------------------|--------------|----------------|-------------|--------------|-------------|-------------|
| <i>US Non-Black Belt</i> | 405.2 | 40.2 | 54.8 | 119.8 | 9.0 | 25.4 |
| <i>AL Black Belt</i> | 396.2 | 41.1 | 53.5 | 120.7 | 8.5 | 18.9 |
| <i>AR Black Belt</i> | 389.6 | 44.3 | 59.7 | 112.1 | 10.9 | 17.4 |
| <i>FL Black Belt</i> | 406.7 | 39.3 | 53.7 | 115.7 | 9.8 | 22.8 |
| <i>GA Black Belt</i> | 402.5 | 40.6 | 53.2 | 122.6 | 8.7 | 19.8 |
| <i>LA Black Belt</i> | 410.6 | 44.4 | 57.2 | 118.6 | 9.5 | 17.7 |
| <i>MS Black Belt</i> | 397.8 | 45.5 | 55.9 | 114.0 | 9.8 | 19.4 |
| <i>NC Black Belt</i> | 417.4 | 38.0 | 56.3 | 126.9 | 7.6 | 22.8 |
| <i>SC Black Belt</i> | 402.8 | 39.3 | 53.9 | 121.6 | 8.3 | 20.4 |
| <i>TN Black Belt</i> | 409.8 | 43.1 | 57.7 | 121.7 | 9.1 | 20.8 |
| <i>TX Black Belt</i> | 404.2 | 38.7 | 53.3 | 118.1 | 9.8 | 19.6 |
| <i>VA Black Belt</i> | 407.9 | 39.8 | 57.8 | 127.7 | 7.2 | 22.3 |

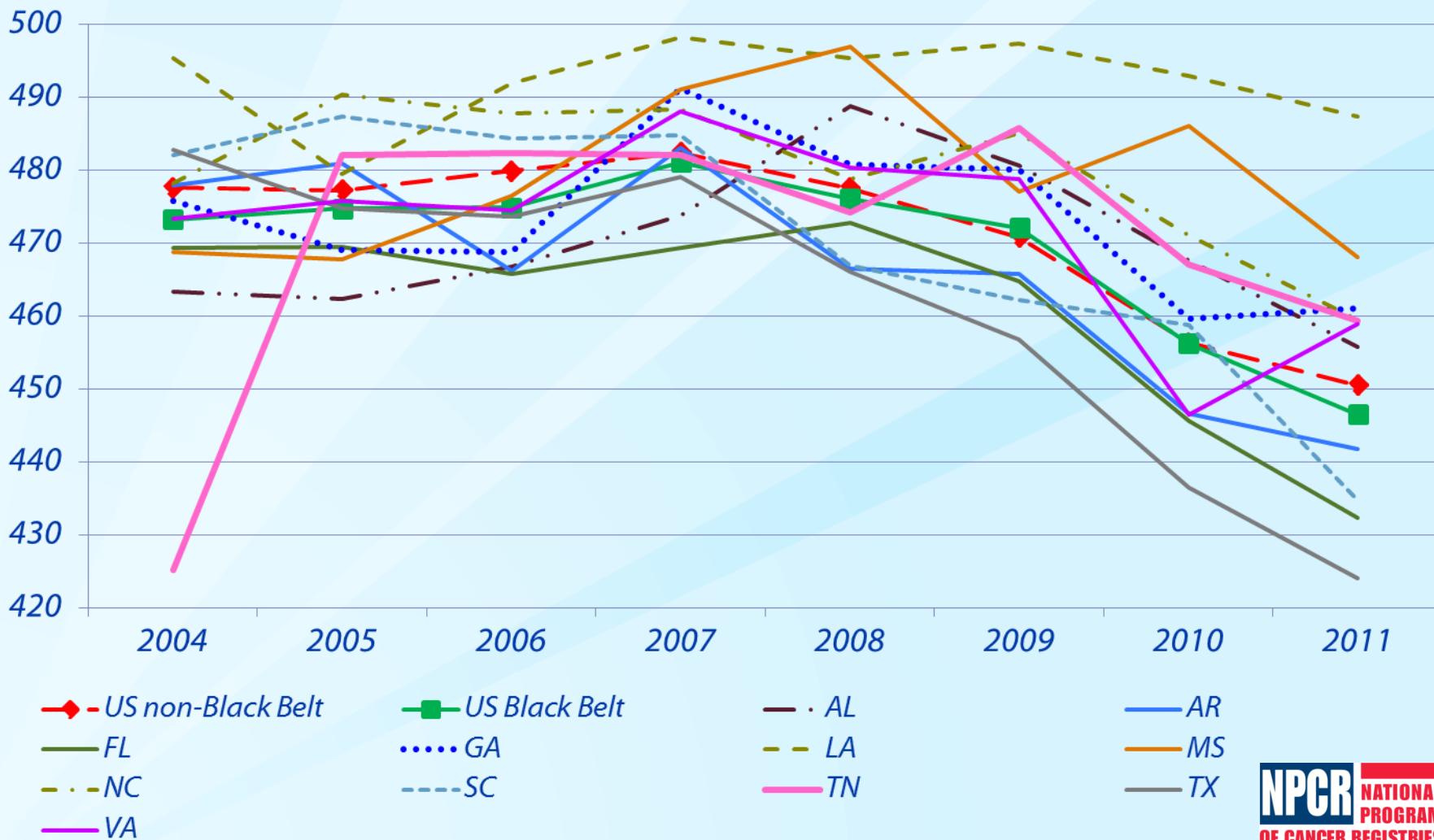
Invasive Cancer Incidence Rates by Primary Site, Black Belt Region within State, Females, All Races, 2004-2011

- ❑ **Black Belt significantly higher**
 - *All Sites: 5 states*
 - *CRC: all but 3 states*
 - *Breast: 7 states*
 - *Cervix: 6 states*
- ❑ **Black Belt significantly lower or comparable**
 - *Lung, Melanoma: all but 2 states*

Invasive Cancer Incidence Rates by Black Belt Region within State and US, by Race, 2004-2011

- ❑ **Black Belt significantly higher**
 - *Black:White - 7 states*
- ❑ **Non-Black Belt:Black Belt**
 - *Within white population: 5 states*
 - *Within black population: 4 states*

Invasive Cancer Incidence Rates by Black Belt Region within State and US, by Diagnosis Year, 2004-2011



Conclusions

- **Black Belt males generally higher rates**
 - **Colon and rectum, lung, prostate more consistent**
- **Black Belt females generally lower rates**
 - **Uterus consistently lower**
- **No consistent pattern**
 - **State**
 - **Primary site**
 - **Race**
- **Consistent downward trend by diagnosis year**
- ❑ **Further analysis by race/sex/site**
- ❑ **Further analysis by race/sex/site/economic status**

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*The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the
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