Colorectal Cancer Trends in Florida Hispanics:
Data from the Hispanic Monograph –
A Florida Cancer Data System Publication

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BACKGROUND

• Florida’s Hispanic population is diverse, and primarily composed of Hispanics from the Caribbean

• Given the diverse ethnic composition and unique experiences of Hispanics in Florida, cancer experiences and trends may vary significantly from other states with large Hispanic populations
Florida Hispanic Distribution

= 29% Cuban
= 19% Puerto Rican
= 15% Mexican
= 27% South and Central American, excluding Brazil

Florida Hispanics by Percentage of Total State Population
2006
Total Florida Hispanics = 3,646,499

ACS, 2006-2008
## Screenings and Sub-site Location

### Table 9. Cancer Screening Test Use (%), by Hispanic Origin, US, 2005

<table>
<thead>
<tr>
<th></th>
<th>Hispanic</th>
<th>Hispanic sub-groups</th>
<th>Non-Hispanic Whites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>Uninsured</td>
<td>Mexican</td>
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<tr>
<td><strong>Colorectal cancer, adults 50 and older</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31.9</td>
<td>14.7</td>
<td>28.2</td>
</tr>
<tr>
<td>Men</td>
<td>34.0</td>
<td>5.5</td>
<td>29.2</td>
</tr>
<tr>
<td>Women</td>
<td>30.2</td>
<td>19.9</td>
<td>27.4</td>
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<tr>
<td><strong>Cervical cancer screening, women 18 and older</strong></td>
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<tr>
<td>Pap test within past 3 years</td>
<td>74.6</td>
<td>65.9</td>
<td>73.3</td>
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<tr>
<td><strong>Breast cancer screening, women 40 and older</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Mammogram within past 2 years</td>
<td>59.6</td>
<td>42.3</td>
<td>56.2</td>
</tr>
<tr>
<td>Mammogram within past year†</td>
<td>41.7</td>
<td>33.3</td>
<td>38.5</td>
</tr>
<tr>
<td><strong>Prostate cancer, men 50 and older†</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Prostate specific antigen test (PSA) past year</td>
<td>29.7</td>
<td>4.0</td>
<td>26.6</td>
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</tbody>
</table>

* Either a fecal occult blood test within the past year, sigmoidoscopy within the past five years, or a colonoscopy within the past 10 years.
† American Cancer Society recommends women 40 and older get regular annual mammograms.
‡ Among those who reported never having been diagnosed with prostate cancer. Note: The 2005 estimates for PSA screening are not comparable to estimates from 2003 and prior due to survey differences.

**Source:** National Health Interview Survey Public Use Data File 2005, National Center for Health Statistics, Centers for Disease Control and Prevention, 2006; estimates are age adjusted to the 2000 Standard Population.
OBJECTIVES

• To produce a report comparing cancer trends in Florida’s Hispanic population compared to the non-Hispanic White population between 1989 and 2006 for cancer surveillance

• To identify patterns of increasing trends for screenable cancers among the Hispanic Population
Cancer in Florida Hispanics 1989 - 2006

2010

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Lora Fleming
Jill MacKinnon
David Lee

University of Miami Miller School of Medicine

http://fcds.med.miami.edu/inc/statistics.shtml
The Florida Cancer Data System (FCDS) is Florida's statewide, population-based cancer registry and has been collecting incidence data since 1981 when it was contracted by the State of Florida Department of Health in 1978 to design and implement the registry. The University of Miami Miller School of Medicine has been maintaining FCDS (http://fcds.med.miami.edu) since that time.

The FCDS is wholly supported by the State of Florida Department of Health, the National Program of Cancer Registries (NPCR) of the Centers for Disease Control and Prevention (CDC) and the Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine.

Register for the 2010 FCDS Annual Conference July 22-23 in Orlando, FL.

Hispanic Monograph 2010

- Cancer in Florida Hispanics: 1989-2006 (pdf)
- Joinpoint tables (Excel)
- Joinpoint stage tables (Excel)
- PIR females tables (Excel)
- PIR males tables (Excel)
- Rates by year/site tables (Excel)
- Rates by year/site/stage tables (Excel)
- Site Distributions NonHispanic White By Gender tables (Excel)
- Site Distributions Sub-Hispanic Group tables (Excel)
<table>
<thead>
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<th>Year</th>
<th>APC</th>
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<td>1989</td>
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<td>2006</td>
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</table>

Cancer in Florida Hispanics 1989 – 2006: Monograph Tables

List of Tables

- Rates by Year by Site
- Rates by Year by Site by Stage
- Joinpoint Rates by Year by Site
- Joinpoint Rates by Year by Site by Stage
- Percent Distribution by Site: Hispanic White by Gender
- Percent Distribution by Site: Hispanic Sub-Groups by Gender
- Proportional Incidence Ratio, Female
- Proportional Incidence Ratio, Male

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METHODS

- FL diagnosed invasive cancers 1989-2006
- FCDS population-based incidence registry circa 1978
- Ethnicity via HOIA (Hispanic Origin Identification Algorithm) (Pinheiro et al. 2008)
- Joinpoint 3.4.3 –by stage and sub-site location
RESULTS

Florida Hispanics & CRC 1989-2006

- Total CRC Dx = 20,274
- Distant stage = 3,131

Distribution of CRC by Stage
1989-2006

Distribution of Distant Stage CRC by sub-site 1989-2006
Florida Hispanics: 1989-2006
Distant Stage CRC Trends

Colorectal - Male - Distant Stage

Colorectal - Female - Distant Stage

Colorectal Cancer

<table>
<thead>
<tr>
<th>Trend 1</th>
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</thead>
<tbody>
<tr>
<td>Years</td>
<td>APC</td>
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<tr>
<td>Hispanic</td>
<td>Male</td>
<td>1989</td>
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<tr>
<td>Female</td>
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<td>NH White</td>
<td>Male</td>
<td>1989</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
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</tbody>
</table>

Statistically significant Annual Percent Change at P < 0.05
CRC trends by sub-site

Rates of proximal colon cancer US Hispanics

1973-2002
Hispanics
Adjusted Odds of having invasive colon cancer
diagnosed in proximal vs distal colon
0.86 (0.82-0.96)
(Shavers, 2007)

1992-2001
Hispanic Male APCs
Sigmoid and proximal no change (regional & distant)

Hispanic Female APCs
Sigmoid -3.7* (regional and distant )
Proximal No change (regional and distant)
(Cress et. al, 2006)

APC = Annual Percent Change
*Statistically significant p< 0.05
FLORIDA
Distant Stage, Left Colon

Hispanic Male

Hispanic Female

Non Hispanic White Male

Non Hispanic White Female

APC = 0.13

APC = -0.83

APC = -2.08*

APC = -2.18*
FLORIDA

Distant Stage, Rectum

Hispanic Male

Hispanic Female

Non Hispanic White Male

Non Hispanic White Female

Hispanic Male

APC = 0.62

Hispanic Female

APC = 0.56

Non Hispanic White Male

APC = -1.31*

Non Hispanic White Female

APC = -1.52*
FLORIDA

Distant Stage, Right Colon

Hispanic Male

APC = 1.82*

Hispanic Female

APC = 2.07*

Non Hispanic White Male

APC = 1.82*
APC = -2.58*

Non Hispanic White Female

APC = -1.25*
Distant CRC Percent Distribution by Hispanic Sub-population

Distant CRC 1989-2006
All Study Years

- Mexican: 26%
- Puerto Rican: 9%
- Cuban: 11%
- So and Central American: 7%
- Other Hispanic: 3%
- Hispanic NOS: 44%
Distant CRC Percent Distribution by Hispanic Sub-population

![Pie chart showing the distribution of distant CRC cases from 1989-1994 by Hispanic sub-population categories: 58% Cuban, 16% Hispanic NOS, 10% Mexican, 8% Other Hispanic, 7% So and Central American, 1% Puerto Rican, and 0% for each of the other categories.](chart.png)
Distant CRC Percent Distribution by Hispanic Sub-population

Distant CRC 1995-2000

- Mexican: 11%
- Puerto Rican: 7%
- Cuban: 12%
- So and Central American: 3%
- Other Hispanic: 10%
- Hispanic NOS: 57%
Distant CRC Percent Distribution by Hispanic Sub-population

Distant CRC 2001-2006

- Mexican: 18%
- Puerto Rican: 3%
- Cuban: 46%
- So and Central American: 12%
- Other Hispanic: 9%
- Hispanic NOS: 12%
CRC Cases by Ethnicity, Age Group and Time Period

Distant Stage CRC Among Cubans by Age Group and Time Period

Counts

20
Distant Stage CRC Among Mexicans by Age Group and Time Period

Counts

1989-1994
1995-2000
2001-2006
LIMITATIONS

- Non-classification of Hispanic sub-group (30%)

- Potential misclassifications

- Lack of annual census estimates for Hispanic subgroups within Florida prevents calculation of incidence rates
CONCLUSIONS

- Distant stage CRC among Hispanic men and women have increased between 1989 and 2006

- Distant stage CRC among Hispanic men and women increasingly diagnosed in the right (proximal to splenic flexure) colon

- The proportional distribution of distant stage CRC among Hispanic sub-groups is decreasing for Cubans and increasing for all other groups
FUTURE RESEARCH

- Continue to monitor the incidence rates for distant stage CRC among Hispanics
- Advocate for full colonoscopies among Hispanics
- Be aware of ongoing demographic changes among Hispanic population

Florida Hispanics by Specific Origin and Time Period

<table>
<thead>
<tr>
<th>Origin</th>
<th>Census 1990</th>
<th>Census 2000</th>
<th>ACS 2006-2008*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuban</td>
<td>43%</td>
<td>31%</td>
<td>29%</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>16%</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>Mexican</td>
<td>10%</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>South and Central</td>
<td>11%</td>
<td>19%</td>
<td>27%</td>
</tr>
<tr>
<td>Other</td>
<td>31%</td>
<td>19%</td>
<td>9%</td>
</tr>
</tbody>
</table>

*Estimated
BRFSS. Behavioral risk factor surveillance system (BRFSS). BRFSS Florida core questions data report. 
http://www.doh.state.fl.us/disease_ctrl/epi/brfss/CDC_Summary_Pages/2008_CDC/ColorectalCancerScreening.pdf (accessed on April 7, 2009).


