Colorectal Cancer in California: an Update

Cyllene R. Morris, DVM, PhD
California Cancer Reporting and Epidemiologic Surveillance (CalCARES) Program
UC Davis Comprehensive Cancer Center
CCR and CalICARES Program

- California Cancer Registry (CCR): statewide cancer surveillance system, collects information on most cancers diagnosed in CA since 1988.

- Since 2012, CalICARES, UC Davis Comprehensive Cancer Center, has partnered with the California Department of Public Health.

- Program manages daily operations of the state mandated CCR
In 2017 – last year with complete reporting

Colorectal cancer (CRC): 3rd most common cancer among males and females, and the 3rd in number of cancer deaths

- 7,640 cases
- 2,730 deaths

- 7,006 cases
- 2,555 deaths
## Current CRC Age-Adjusted Incidence and Mortality Rates (per 100,000) in California

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>1988</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incidence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males:</td>
<td>38.0</td>
<td>67.7</td>
</tr>
<tr>
<td>Females:</td>
<td>30.1</td>
<td>49.4</td>
</tr>
<tr>
<td><strong>Mortality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males:</td>
<td>14.0</td>
<td>27.3</td>
</tr>
<tr>
<td>Females:</td>
<td>10.6</td>
<td>19.8</td>
</tr>
</tbody>
</table>
CRC Age-Adjusted Incidence Rates: California, 2017

Rate per 100,000

- White, non-Latino
- African American
- Latino
- Asian/Pacific Islander
- Native American

M F
CRC Age-Adjusted Mortality Rates: California 2017

Rate per 100,000

- White, non-Latino
- African American
- Latino
- Asian/Pacific Islander
- Native American

M (male) and F (female) bars for each category.
Overall Decrease

43% M
37% F

Trends in Age-Adjusted CRC Incidence Rates: California, 1988-2017

Rate per 100,000

M + F
M
F
Incidences trends differ by age

**50 - 64**

**65 +**

![Graph showing incidence trends by age](image)
Incidence: lower but increasing among younger persons

20 - 34

35 - 49

Rate per 100,000

Overall percent change in CRC incidence: California, 1988 - 2017

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, non-Latino</td>
<td>-44 %</td>
<td>-39 %</td>
</tr>
<tr>
<td>African American</td>
<td>-44 %</td>
<td>-43 %</td>
</tr>
<tr>
<td>Latino</td>
<td>-16 %</td>
<td>-14 %</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>-34 %</td>
<td>-34 %</td>
</tr>
<tr>
<td>Native American</td>
<td>41 %</td>
<td>73 %</td>
</tr>
</tbody>
</table>

---

* Not Significant
Trends in Age-Adjusted CRC Mortality Rates: California, 1988-2017

Overall Decrease

49% M
48% F
## Overall percent change in CRC mortality: California, 1988 - 2017

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, non-Latino</td>
<td>-53 % ↓</td>
<td>-48 % ↓</td>
</tr>
<tr>
<td>African American</td>
<td>-39 % ↓</td>
<td>-46 % ↓</td>
</tr>
<tr>
<td>Latino</td>
<td>-14 % (\sim)</td>
<td>-27 % ↓</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>-41 % ↓</td>
<td>-35 % ↓</td>
</tr>
<tr>
<td>Native American</td>
<td>117 % ↑</td>
<td>88 % (\sim)</td>
</tr>
</tbody>
</table>
Highest Rates:
* Colusa-Glenn-Tehama
  Sierra-Yuba
* Butte
* San Bernardino
* Stanislaus

Lowest Rates:
Southern Bay Area
Central Coast
Gold Country

* significant difference

https://www.cancer-rates.info/ca/
Highest Rates:

Sierra-Yuba
* Stanislaus
* Shasta
* San Bernardino
* San Joaquin

Lowest Rates:

Bay Area / Central Coast
Eastern Sierra

* Significant difference

https://www.cancer-rates.info/ca/
CRC Screening in California: Percent Compliance (at time of recommendation)

<table>
<thead>
<tr>
<th>Year</th>
<th>BRFSS</th>
<th>CHIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>71.6</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>71.4</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>66.0</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>68.2</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>62.9</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>59.0</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>53.9</td>
<td></td>
</tr>
</tbody>
</table>
Late Stage Diagnoses

- Examined by Summary Stage System

  - **Early**
    - In Situ and localized tumors
    - Confined to colon and rectum

  - **Late**
    - Regional Extension and Metastatic
    - Tumor invades serosa (membrane covering the colon and other organs) and beyond
Percent Late Stage Diagnoses: California 2015-2017

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, Non-Latino</td>
<td>62.7</td>
</tr>
<tr>
<td>African American</td>
<td>63.5</td>
</tr>
<tr>
<td>Latino</td>
<td>63.9</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>62.9</td>
</tr>
<tr>
<td>Native American</td>
<td>62.6</td>
</tr>
<tr>
<td>Male</td>
<td>62.8</td>
</tr>
<tr>
<td>Female</td>
<td>63.1</td>
</tr>
<tr>
<td>20-49</td>
<td>67.6</td>
</tr>
<tr>
<td>50-64</td>
<td>60.1</td>
</tr>
<tr>
<td>65+</td>
<td>63.6</td>
</tr>
</tbody>
</table>
Percent Late Stage Diagnoses: California 2015-2017

- Private Insurance: 60.2%
- Medicare: 62.4%
- Medi-Cal: 67.9%
- Unknown: 76.2%
- High SES: 60.9%
- Medium SES: 63.1%
- Low SES: 65.0%
Percent Late Stage, 2015-17:

California: 60.1%

Colusa: 72.3
Yuba: 70.8 *
Tehama: 69.9 *
Amador: 69.8 *
Plumas: 68.8
Lassen: 68.5
Mendocino: 66.4
Lake: 66.0
Santa Cruz 65.9 *

* significantly higher than State
Advanced Stage at Diagnosis by Medical Service Study Area (MSSA)

- CCR produces maps comparing proportion of late-stage cancers in each MSSA with the statewide proportion late-stage in the non-Latino white, high SES population.

- Current maps only available for breast cancer, CRC will be available soon.
Interactive mapping for incidence of the 12 most common cancers, by sex and race/ethnicity

Maps show data for subcounty areas in California: Census tract “ Zones”, MSSA, Legislative Districts

Demographic and health information for the area selected also shown
According to California Department of Public Health guidelines, cancer incidence rates cannot be reported if based on <15 cancer cases and/or a population of <10,000 to ensure confidentiality and stable statistical rates.
Thank you!

CMORRIS@UCDAVIS.EDU