

Advanced Stage Colorectal Cancer in California Communities

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Overview

- California Cancer Registry (CCR)
- Colorectal cancer in California: State perspective
- Colorectal cancer in California: Local perspective

The California Cancer Registry

- Established by state law passed in 1985
- CCR has collected information on all new cancer cases and deaths for the entire state of California since 1988
- Hospitals and physicians are required to report cancer cases to the CCR

The California Cancer Registry

- The mission of CCR is to serve the public by collecting statewide data, conducting surveillance and research into the causes, controls, and cures of cancer and communicating results to the public.
- CCR monitors the occurrence of cancer among Californians, both incidence (new diagnoses) and mortality (deaths).

State Perspective: Good News

Colorectal cancer incidence and mortality rates have declined dramatically in California since 1988

- Incidence rates dropped by 37%
- Mortality (death) rates dropped by 40%

State Perspective: Bad News

Colorectal cancer mortality rates have declined among all major racial/ethnic groups – but the rate of decline is not equal

Non-Hispanic whites:	43% decline
African Americans:	27% decline
Asian/Pacific Islanders:	29% decline
Hispanics:	10% decline

The Other Bad News

Despite the availability of highly effective screening tests, over 50% of colorectal cancer cases in California are diagnosed late – after the disease has already spread beyond the colon or rectum, and survival rates drop.

State Perspective: Summary

- Colorectal cancer incidence and mortality rates are declining overall in California, but not equally for all race/ethnic groups
- Earlier stage at diagnosis is associated with much improved chance of survival

Colorectal Cancer in California: the Local Level

- Statewide statistics give an overview of colorectal cancer in California
- How can we help inform more targeted intervention?

Advanced stage colorectal cancer in California communities among men and women 50 years and older, 2007-2011



- Project initiated by CCR
- Identified Medical Study Service Areas (MSSA) throughout the state with higher than average (52%) advanced stage colorectal cancer
- Goal: Help to inform and assist more targeted colorectal screening interventions.

Patient Selection Criteria:

- Includes men and women who were:
 - Residents of California
 - Diagnosis years: 2007-2011
 - Ages 50+
 - Diagnosed with a cancer of the colon or rectum
 - n= 64,364

Community Definition: MSSA

- MSSA: geographic unit defined by Office of Statewide Health Planning and Development (OSHPD) for determining medical shortage areas
- MSSAs are “rational service areas for healthcare” or “healthcare communities”
- 542 MSSAs in California based on Census 2010

Methodology

In each MSSA we analyzed:

- Out of all the colorectal cancer cases diagnosed during the five-year period, how many were diagnosed at late-stage (regional or distant stage)?
- How do those percents and numbers of late-stage colorectal cancer cases compare to a benchmark group?

Methods:

the Benchmark Group

- Benchmark group included non-Hispanic whites living in high socioeconomic status neighborhoods statewide
- 52% of cases in benchmark group were diagnosed at advanced stage
- Selected because it is the demographic group with the lowest percent of advanced-stage colorectal cancer

Analysis

- We compared the proportion of advanced stage cases in each community with the proportion in our benchmark group
- We tested to see if the difference was statistically significant

Results: Summary

32 communities: Percent of advanced stage cases significantly higher than the benchmark group

6 communities: $\geq 70\%$ advanced stage

11 communities: 65-69% advanced stage

15 communities: 60-64% advanced stage

408 communities: Percent of advanced stage cases was not significantly different from the benchmark group

102 communities: Too few cases to do calculation (< 15 cases in five-years)

Advanced stage colorectal cancer in Ca communities among men and women 50 years and older, 2007-2011



Dark red: 70% or more of cases diagnosed at advanced stage

Dark Orange: 65-69% of cases diagnosed at advanced stage

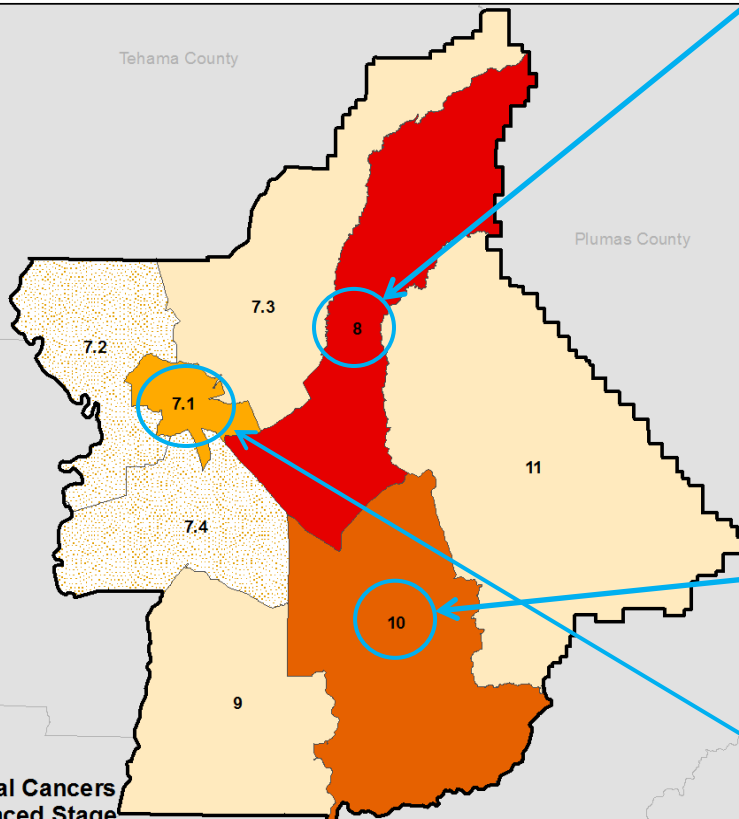
Orange: 60-64% of cases diagnosed at advanced stage

Beige: % of advanced stage not significantly different from comparison group

White: not calculated (<15 cases in five-year period)



Advanced Stage Colorectal Cancer in Butte County Communities Among Adults 50 Years and Older, 2007-2011



Percent of Colorectal Cancers Diagnosed at Advanced Stage

- >70% diagnosed advanced stage
- 60-64% diagnosed advanced stage
- 65-69% diagnosed advanced stage
- Not significantly different from comparison group (52% advanced stage)
- Not calculated (<15 cases)
- County boundary

Prepared by: California Cancer Registry, California Department of Public Health (May 2014).

Butte County:

MSSA 8: Magalia/Paradise/Stirling City

124 total cases

89 advanced stage

Demographic characteristics:

- 14% living at 100% FPL*

MSSA 10: Oroville/Palmero/Thermalito

100 total cases

67 advanced stage

Demographic characteristics:

- 83% non-Hispanic white
- 13% Hispanic ethnicity
- 22% living at or <100% FPL*

Primary Care Shortage Areas

MSSA 7.1: Chapmantown/Chico

- 63% of colorectal cancer cases diagnosed advanced stage

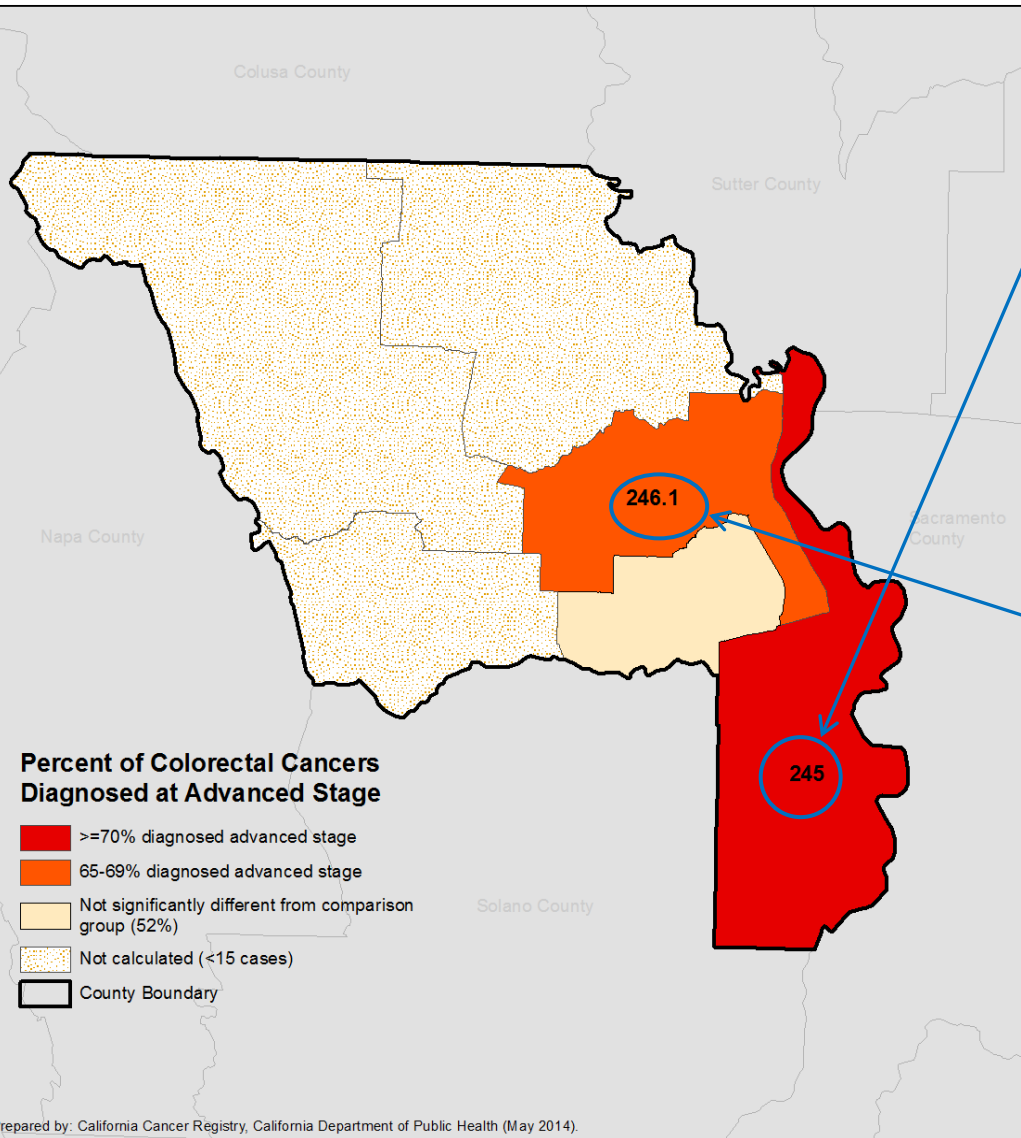
Demographic characteristics:

- 21% living at or <100% FPL*

* Federal Poverty Level



Advanced Stage Colorectal Cancer in Yolo County Communities Among Adults 50 Years and Older, 2007-2011



Yolo County:

MSSA 245: Bryte/ Broderick/Clarksburg/ Riverview/West Sacramento

81 total cases

57 advanced stage

Demographic profile:

- Urban
- Diverse; large Hispanic pop.
- Primary care shortage area

MSSA 246.1: Woodland

96 total cases

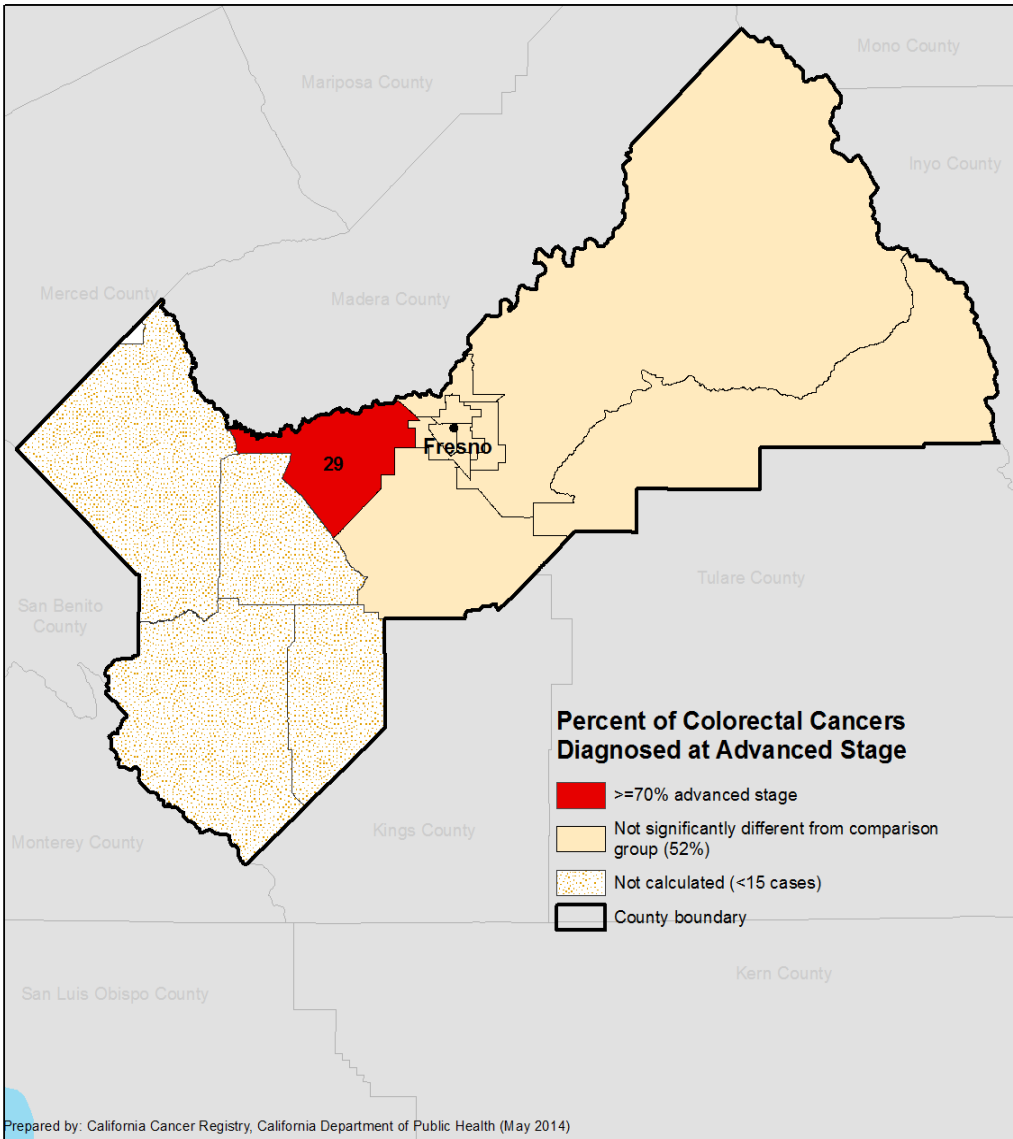
66 advanced stage

Demographic profile:

- Urban
- Diverse; large Hispanic pop.



Advanced Stage Colorectal Cancer in Communities of Fresno County Among Adults 50 Years and Older, 2007-2011



Fresno County:

MSSA 29: Biola/Herndon/
Highway City/Kerman

51 total cases

36 advanced stage

71% advanced stage diagnoses

Demographic characteristics:

Racial/ethnic distribution

72% white

62% Hispanic ethnicity

22% of the population lives
 ≤ 100 FPL*

Rural community

Primary Care Shortage Area

*Federal Poverty Level

Why do some communities have more cases diagnosed at advanced stage?

These maps tell us where, but not why.

Possible reasons:

- Population characteristics (i.e., poverty, lack of insurance, education level)
- Community characteristics (i.e., number of doctors doing screening, rural area with few services)
- Chance

Interpreting the maps: cautions

- These maps do not compare overall colorectal cancer incidence rates by community
- They do not suggest any information about underlying causes of colorectal cancer
- They do not suggest that communities with no statistically significant excess of advanced stage colorectal cancers should be ignored
- The maps should not be used in isolation
- They are the beginning of the discussion – not the end

Summary

- Colorectal cancer incidence and mortality rates have declined, but not among all groups.
- More than half of colorectal cancers in California are diagnosed at advanced stage, regardless of race, ethnicity, and socioeconomic status.
- Maps can be used to identify geographic variations in stage distribution.
- Results need to be interpreted in conjunction with local knowledge.
- Percent late stage does not tell the whole story.