California Division 2014 Communities of Focus Team Final Report- abbreviated for external use

California Division

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Created by the Communities of Focus Division Team of the California Division of the American Cancer Society, Inc.

Acknowledgments

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***Note: most of the data tables in this document are meant to be reviewed electronically, not printed. Tables should be viewed using the "zoom" feature in order to read content comfortably.**

Introduction and Background

This document is an abbreviated version of the 2014 California Division Communities of Focus Volunteer team report produced for ACS staff. It contains information and recommendations for identifying areas of the state that appear to be in greatest need of breast and colorectal cancer interventions. Since this information has the potential to benefit other organizations, it is being shared via the California Cancer Registry website and internal ACS content has been removed. For questions about this document, please contact the California Cancer Registry.

Why Breast and Colorectal Cancer?

Breast and colorectal cancer present great opportunity for impact because of their high incidence and mortality. Colorectal cancer is the third most commonly diagnosed cancer and the third leading cause of cancer death in men and women in the US. The American Cancer Society estimates that 132,700 people will be diagnosed with colorectal cancer in 2015, and that 49,700 will die from the disease in the US. Breast cancer is the most commonly diagnosed cancer in women (231,840 cases expected in 2015) and the second leading cause of cancer death among women (40,730 deaths expected in 2015).

Additionally, these are two cancers in which **early detection** presents a tremendous opportunity to improve outcomes. Colorectal cancer can be prevented through the detection and removal of precancerous polyps found during screening. Other methods of screening can find colorectal cancer early, when it is easiest to treat. Mammography can detect breast cancer early, maximizing a woman's chance of survival.

ACS Guidelines for the Early Detection of Breast & Colorectal Cancer in Average-risk Asymptomatic People

Cancer Site	Population	Test/Procedure and Frequency
Breast	Women age 20+	Women should undergo regular screening mammography starting at age 45 years. Women ages 45-54 should be screened annually. Women should have the opportunity to begin annual screening between the ages of 40 and 44 years. Women age 55 and older should transition to biennial screening or have the opportunity to continue screening annually. **Note: these are updated ACS breast cancer screening guidelines (released October 2015)**
Colorectal	Men & Women (average risk) age 50+	***Tests that detect adenomatous polyps and cancer:*** • Colonoscopy every 10 years, or • Flexible sigmoidoscopy every 5 years*, or • Double-contrast barium enema every 5 years*, or • CT colonography (virtual colonoscopy) every 5 years* ***Tests that primarily detect cancer:*** • Yearly fecal occult blood test (FOBT)**, or • Yearly fecal immunochemical test (FIT)*,** • Stool DNA test (sDNA) every 3 years* **If the test is positive, a colonoscopy should be done* ***For FOBT or FIT used as a screening test, the take-home multiple sample method should be used. One test done by the doctor in the office is not adequate for testing.*

Communities of Focus

In 2014, an American Cancer Society volunteer team was formed to issue recommendations for California communities to target in our pursuit to **reduce breast and colorectal deaths**.

Communities of Focus were defined as communities where the Society could have significant impact on lives saved, particularly breast and colorectal cancer deaths. While the "communities of focus" terminology has been retired as an official ACS term, we continue to use it throughout this document to refer to communities where the Society (and other organizations!) can have significant impact on lives saved from breast and colorectal cancer.

Communities of Focus Team Objective: Issue California-specific recommendations for communities of focus for breast and colorectal cancer. Recommend particular geographic communities and/or recommend criteria for prioritizing communities for breast and colorectal cancer interventions.

Note: This report was originally crafted as an internal ACS document, and it has been edited so the data can be used by other organizations involved in cancer control.

Colorectal Cancer Communities of Focus

For the colorectal portion of our work, the team's charge was to identify communities where the Society could have maximum impact in saving lives from colorectal cancer through screening. Throughout this document we will refer to these areas as colorectal cancer communities of focus or as "priority areas."

Methods

In order to identify colorectal cancer communities of focus, the Communities of Focus Team used colorectal cancer incidence data from the California Cancer Registry. The team chose to identify California communities with excess numbers and high proportions of late-stage colorectal cancer disease. We chose to use cases diagnosed from 2007 through 2011, and classified as "late stage" using the SEER (Surveillance, Epidemiology, and End Results) Summary Stage at Diagnosis System. Based on this staging system, tumors that extend beyond the limits of the organ of origin were considered a late stage diagnosis (these included regional and distant stages).

Using Medical Service Study Areas (MSSAs) as geographical units: All California Cancer Registry cases are geocoded to a census tract based on their street address at the time of diagnosis. Medical Study Service Area (MSSA) identification numbers are assigned to each case based upon its census tract. The California Office of Statewide Health Planning and Development (OSHPD) has defined 542 MSSAs in California. The group decided to use MSSAs as geographical units for analysis because of a few practical advantages.

First, MSSAs are aggregations of census tracts which never cross county lines and make up "rational service areas" for primary health care. They are drawn to identify populations, homogeneous with respect to health and income status. Due to the vast diversity of Californians, working at the county level can mask underserved areas. Sub-county MSSAs allow us to better determine areas of greatest need.

Medical Service Study Areas (MSSAs) are aggregations of census tracts designed to represent rational service areas for primary health care. They are drawn to identify similar populations with respect to health and income status.

Additionally, MSSA boundaries are required to be within a 30 minute travel time to the nearest population center offering medical services. Therefore, we could assume that despite other obstacles, proximity to a facility was not a significant deterrent to receiving colorectal cancer screening.

Identifying areas with excess numbers and high-proportions of late-stage colorectal cancer: The proportion of colorectal cancer cases diagnosed at a late stage in each MSSA was compared to the proportion of cancers diagnosed at a late stage in the comparison group, taking into consideration differences in the sex and age distribution of the two groups. The comparison group selected included

non-Hispanic white persons residing in affluent neighborhoods in California because they had the lowest proportion of cancers diagnosed at a late stage compared to other race/ethnicity and income groups (52%). Affluent neighborhoods were identified using census indicators of income, employment, and education for the census block group of residence at diagnosis. Percentages and counts of late stage diagnoses were only included in MSSAs that had at least 15 cases of colorectal cancer diagnosed during the 2007-2011 time period.

Why use the burden of late-stage colorectal cancer to select communities of focus? It should be noted that alternate methods of selecting colorectal communities of focus were discussed among members. One idea proposed, was to identify areas of the state with the lowest concentration of colorectal cancer screening rates (using data from the California Health Interview Survey, as the California Cancer Registry does not collect information on cancer screening). However, the cancer screening rates obtained through self-reported surveys may contain sampling bias and underreporting. Alternatively, all cancer cases are reported to the population-based California Cancer Registry, resulting in more complete and accurate data. The California Cancer Registry also collects very thorough data on patient demographics and tumor characteristics. Additionally, colorectal cancer screening rates are not available at the sub-county level in all counties (only in Los Angeles and San Diego counties). In order to identify targeted geographic areas (MSSAs), the group ultimately decided to focus on colorectal cancer incidence and late stage cancer diagnoses.

Another reason why we chose not to use colorectal screening rates as the primary criteria for identifying colorectal cancer communities of focus is because screening rates throughout the entire state are relatively low. The average colorectal cancer screening rate throughout the state is 68% according to the California Health Interview Survey. Since rates throughout the state are in need of improvement, alternate criteria were needed to narrow down the communities to focus on.

Findings

There were 16 MSSA's throughout the state with a significantly *higher proportion* of late stage colorectal cancer cases compared to the baseline group (in these 16 MSSAs, 65% or more of the colorectal cancer cases were diagnosed at a late-stage). There were 28 MSSAs with an *excess number* of late- stage colorectal cancer cases.

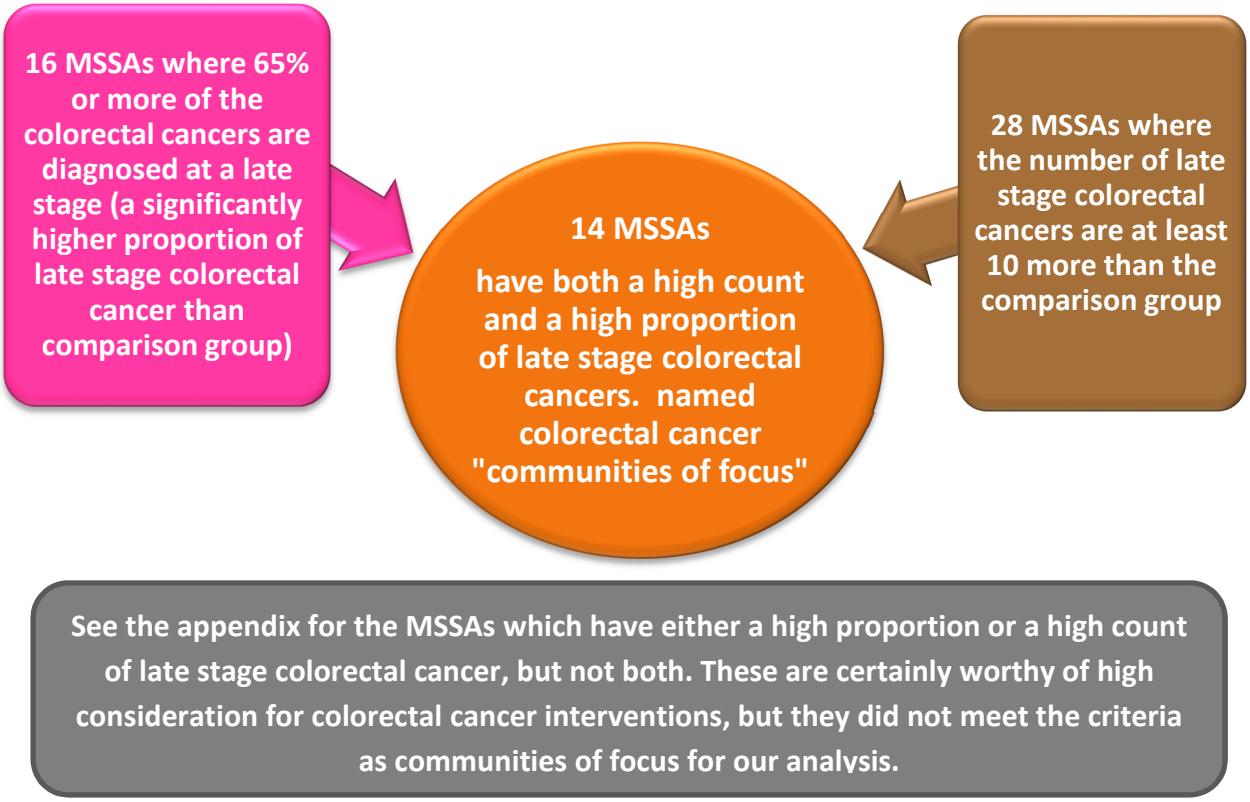
The Communities of Focus group reviewed the data and determined that those MSSAs with *both* excess numbers *and* high proportions of late stage colorectal cancer should be further evaluated. This resulted in **14 "priority" MSSAs throughout the state** (also referred to as colorectal cancer communities of focus). The group felt that it was important to consider both the proportion of late-stage cases and the raw count of late stage cases in

*The Communities of Focus group determined that MSSAs (Medical Service Study Areas) with **both** excess number and high proportions of late stage colorectal cancer should be further evaluated. This resulted in 14 "priority" MSSAs throughout the state.*

order to balance the differences in populations between rural and urban areas. *Table 1- Abbreviated* lists these 14 priority MSSAs. In the maps provided, these priority MSSAs are colored in **orange.**

Additionally, Tables 3 and 4 in the appendix represent MSSAs which were considered as Colorectal Communities of Focus, but were excluded because the excess case counts were not at least 10 (Table 3), or where excess case counts were high but the proportion of late stage diagnoses was not at least 65% (Table 4).

These areas are certainly worthy of high consideration for colorectal cancer interventions, but they did not meet the criteria as communities of focus for our analysis. In the maps that follow, these MSSAs are colored brown (those only an excess count of late stage disease, not an excess percentage) and pink (those with only an excess percentage of late stage disease, not an excess count).



The identification of 14 priority MSSAs is just one part of the story. It is also very important to consider the characteristics and resources of that community when deciding where to prioritize interventions. Expanded content for Table 1 (Table 1- Complete) is included in the appendix and it includes demographic information on these MSSAs (poverty level, ethnic breakdown) and additional information about the community health centers in those areas.

Clinics listed within each MSSA. As can be seen in Table 1, we identified the clinic/community health center resources within each of the 14 MSSAs with an excess proportion and raw count of late stage disease. We did this to easily identify clinic systems that could be targeted for intervention. Of course there are other health systems and partner organizations within these areas (individual provider offices, hospitals, community organizations) that present intervention opportunities. However, in our analysis, we chose to identify only the clinic systems that ACS Primary Care Staff are tasked to work with, those that serve underserved populations. This is because the ACS staff resources to work with these systems are already in place, and there is a great opportunity for impact in working through these primary care systems. [**For external organizations:** please consider the clinic location information as additional context]. Nearly 3.5 million Californians receive their care at a federally funded community health center, and the average colon cancer screening rate at California community health centers is 33% (Health Resources and Services Administration), far below the California average of 69% (Behavioral Risk Factor Surveillance System).

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In order to identify clinics, we began with a list of primary care clinics which offer a full range of primary care services to the uninsured and underinsured. We obtained this list from the California Office of Statewide Health Planning and Development (OSHPD), and this list was refined with the assistance of ACS primary care systems staff. ACS staff removed clinics such as pregnancy centers which do not have a patient population that would merit a colorectal cancer screening intervention. The resulting clinics are listed in Table 1-Abbreviated, and further detail on the clinics (address, screening rate for the clinic system) are included in **Table 1-*Complete*** in the Appendix. The maps provided also map these clinic resources in relation to the priority MSSAs.

Table 1- *Abbreviated*: Colorectal Cancer Communities of Focus: Medical Study Service Areas (MSSAs) with the Highest Percentage of Late-Stage* Disease and Excess Case Counts with Clinic Information, California, 2007-2011**

County	MSSA ID #	MSSA Name	Total Cases	% Late-Stage	Observed Late-Stage Cases	Expected Late-stage cases	Excess Late-Stage Cases (Observed minus expected)	MSSA Population (2010 census)	Colorectal Screening Compliance ^ (CHIS, 2009) [county-level data unless specified]	Clinic Name	CRC screening rate for clinic SYSTEM (HRSA, 2013)^^	
Butte	10	Oroville/Palermo/ Thermalito	100	67%	67	52.3	15	48284	63.70%	Feather River Tribal Health Clinic	34.10%	
										Ampla Health	50%	
Butte	8	Magalia/Paradise/ Stirling City	124	72%	89	65.5	24	41405	63.70%	No FQHC/community health centers in this MSSA		
Riverside	135c	Casablanca/ Riverside Central	112	66%	74	58.8	15	86106	63.00%	Community Health Systems Inc: Magnolia Community Health Center	22.90%	
San Diego	161v	Mira Mesa/Scripps Miramar Ranch	125	71%	89	65.5	24	110841	Sub-county available. north central: 68.5%	Operation Samahan - Mira Mesa	2.50%	
Sonoma	208	Boyes Hot Springs/ Glen Ellen/Kenwood/ Sonoma/Vineburg	100	65%	65	52.9	12	40038	73.20%	Sonoma Valley Community Health Center	22.90%	
	210.1	Santa Rosa	418	65%	273	219.8	53	186178	73.20%	*Santa Rosa Community Health Center System:* Brookwood Health Center of Southwest CHC	47.10%	note: these 5 clinics are the same clinic system (Santa Rosa Community Health Centers)
										Santa Rosa Community Health Centers	47.10%	
										Santa Rosa CHC system: Vista Family Health Center of Southwest CHC	47.10%	
										Santa Rosa CHC system: Southwest Community Health Center	47.10%	
										Santa Rosa CHC system: Elsie Allen Health Center of Southwest CHC	47.10%	
										Sonoma County Indian Health Project	41.30%	
Tehama	222	Corning/Los Molinos/Tehama/Vina	43	74%	32	22.5	10	18053	62.20%	Ampla Health- Los Molinos medical	50%	
										Rolling Hills Clinic Corning (Indian Health Service)	will find	
Yolo	245	Bryte/Broderick/ Clarksburg/Riverview/West Sacramento	81	70%	57	42.3	15	50436	68.90%	CommuniCare Health Centers (Salud Clinic)	18.20%	
										Elica Health Centers		
	246.1	Woodland	96	69%	66	50.4	16	57744	68.90%	CommuniCare Health Centers (Peterson clinic)	18.20%	
										Northern Valley Indian Health Center	35.4	
Los Angeles	78.2b	Pico-Union	175	65%	114	90.9	23	150959	Sub county: SPA 4: 64.4	St. Johns Well Child And Family Center At Magnolia Place	38.50%	
	78.2ccc	Huntington Park/ South Gate West/ Walnut Park	108	65%	70	56	14	106154	Sub County: SPA 7 : 59.2	NECC (Northeast community Clinics) GAGE Health Center	28.60%	
	78.2eeee	Alhambra/ El Sereno South/ San Gabriel Central	260	65%	168	135.8	32	110409	Sub county: SPA 3: 67.4	Herald Christian Health Center		
										Arroyo Vista Community Health Center (El Serreno)	32.60%	
										CSC (Chinese Service Center) Community Health Center- San Gabriel Valley	58%	
Placer	121.2	Rocklin/Granite Bay	163	66%	108	85	23	106492	70.30%	No FQHCs/Community Health Centers in this MSSA		
Sacramento	139c	Antelope/Citrus Heights/Foothill Farms	242	66%	159	126.2	33	120218	71.20%	No FQHCs/ Community Health Centers in this MSSA		

Benchmark group: non-Hispanic whites living in high SES neighborhoods.

Race categories are not mututally exclusive, and may include Hispanic ethnicity.

Source of MSSA data: California Cancer Registry, Department of Public Health.

*Late-stage: regional or distant stage at time of diagnosis.

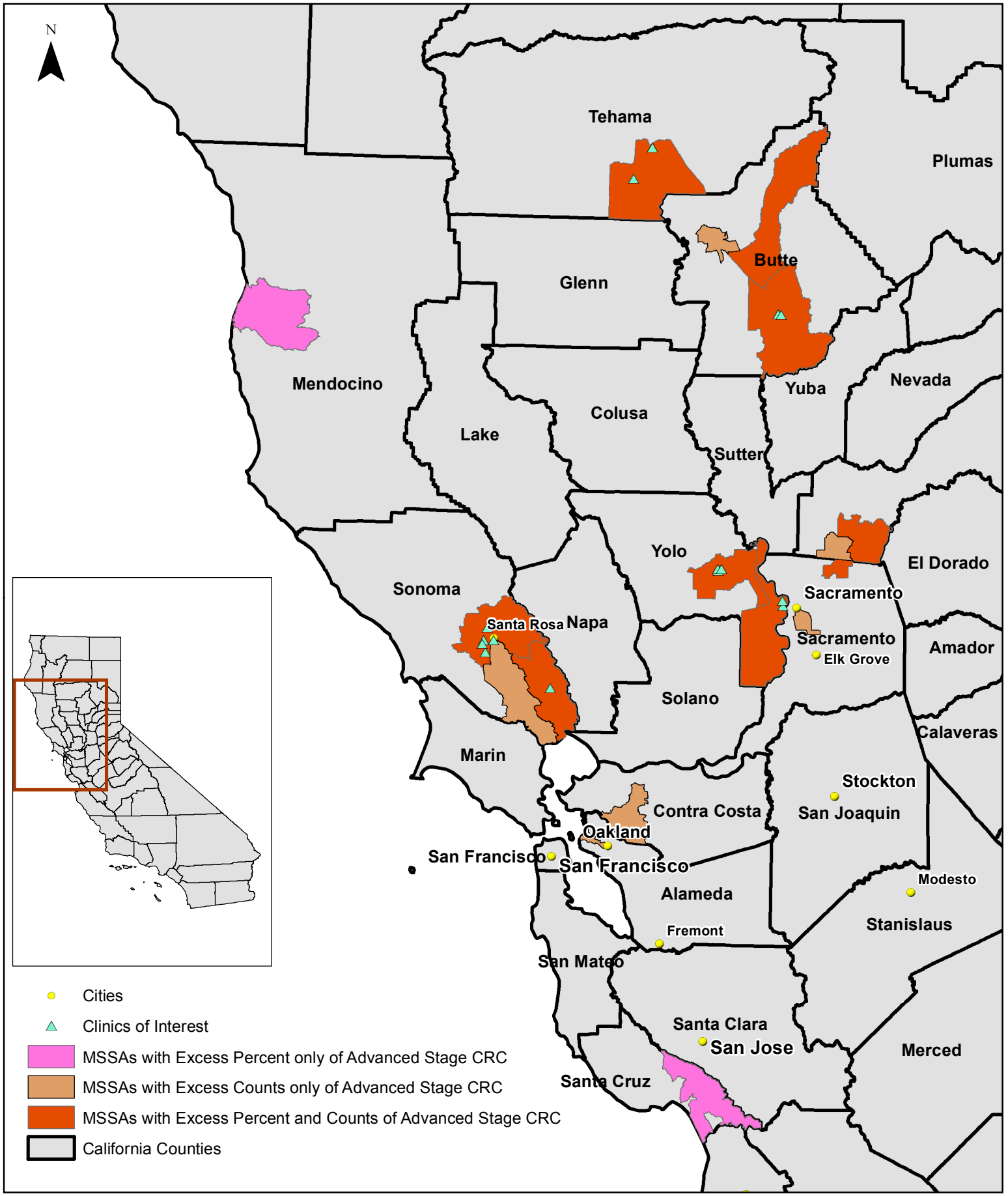
** Clinic list includes Indian Health Service clinics and OSHPD list of primary care clinics that offer a full range of primary care servciies to the uninsured and underinsured(FQHCs, look-alikes free clinics). OSHPD clinic list was refined with assistance of American Cancer Society primary care staff (removed clinics such as pregnancy centers which do not have a patient population for colorectal cancer screening intervention)

***MSSA Definition: Rural= population density <250 persons/sq. mi; Urban =population 75,000-125,000. Recognized community and neighborhood boundaries. Similar demographic and socioeconomic characteristics.

^Colorectal Cancer Screening Compliance: provided at the county-level and sub-county in the cases of San Diego and Los Angeles counties. The screening level is not specific to the particular MSSA, but is provided for context. Source: California Health Interview Survey.

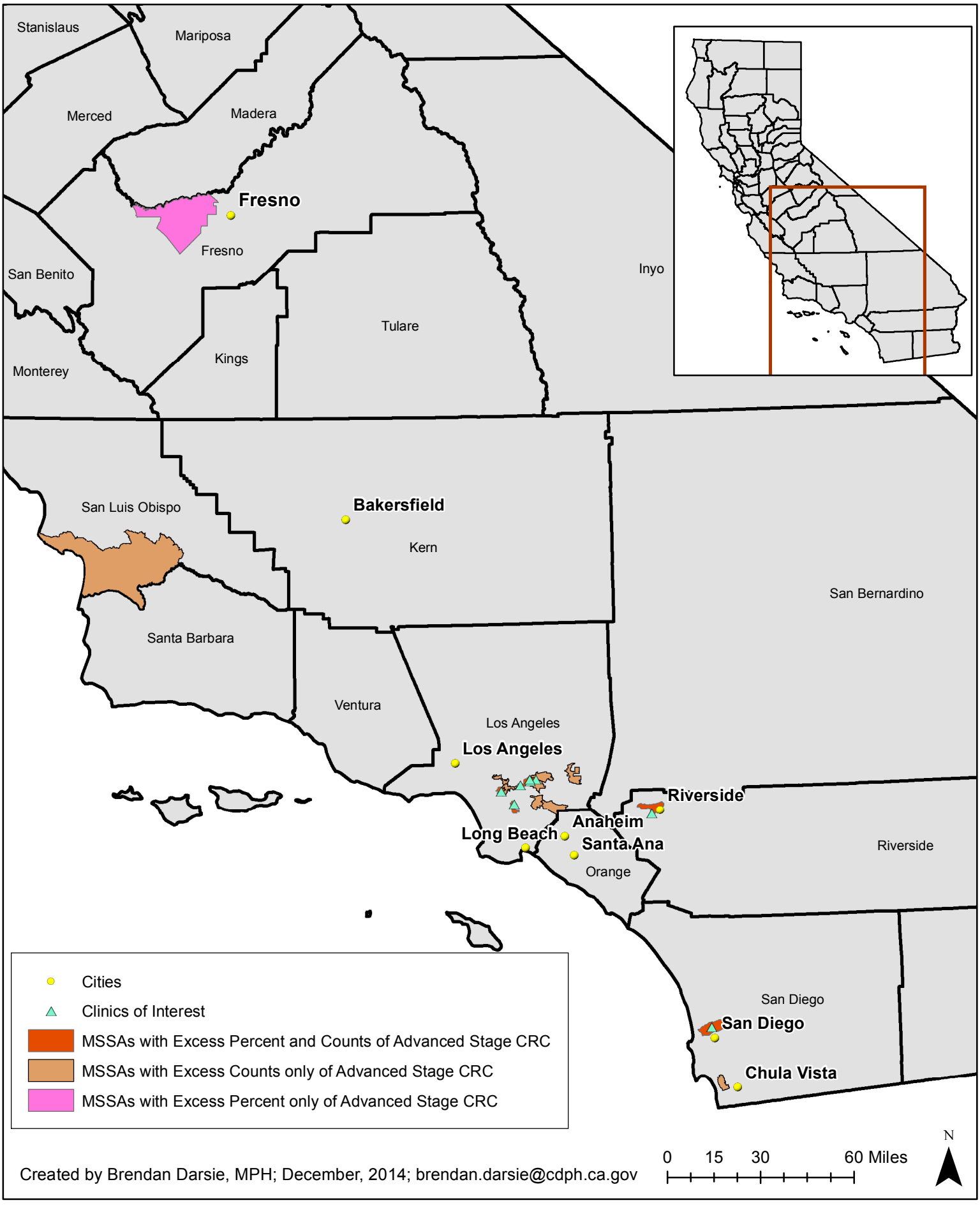
^^The colorectal screening rates of the clinic systems and the number of patients served by the clinic system apply to the entire clinic system and usually encompass multiple sites beyond the one located in the priority MSSA (source: HRSA).

Medical Service Study Areas in Northern California with an Elevated Colorectal Cancer Burden



Created by Brendan Darsie, MPH; December, 2014; brendan.darsie@cdph.ca.gov

Medical Service Study Areas in Southern California with an Elevated Colorectal Cancer Burden



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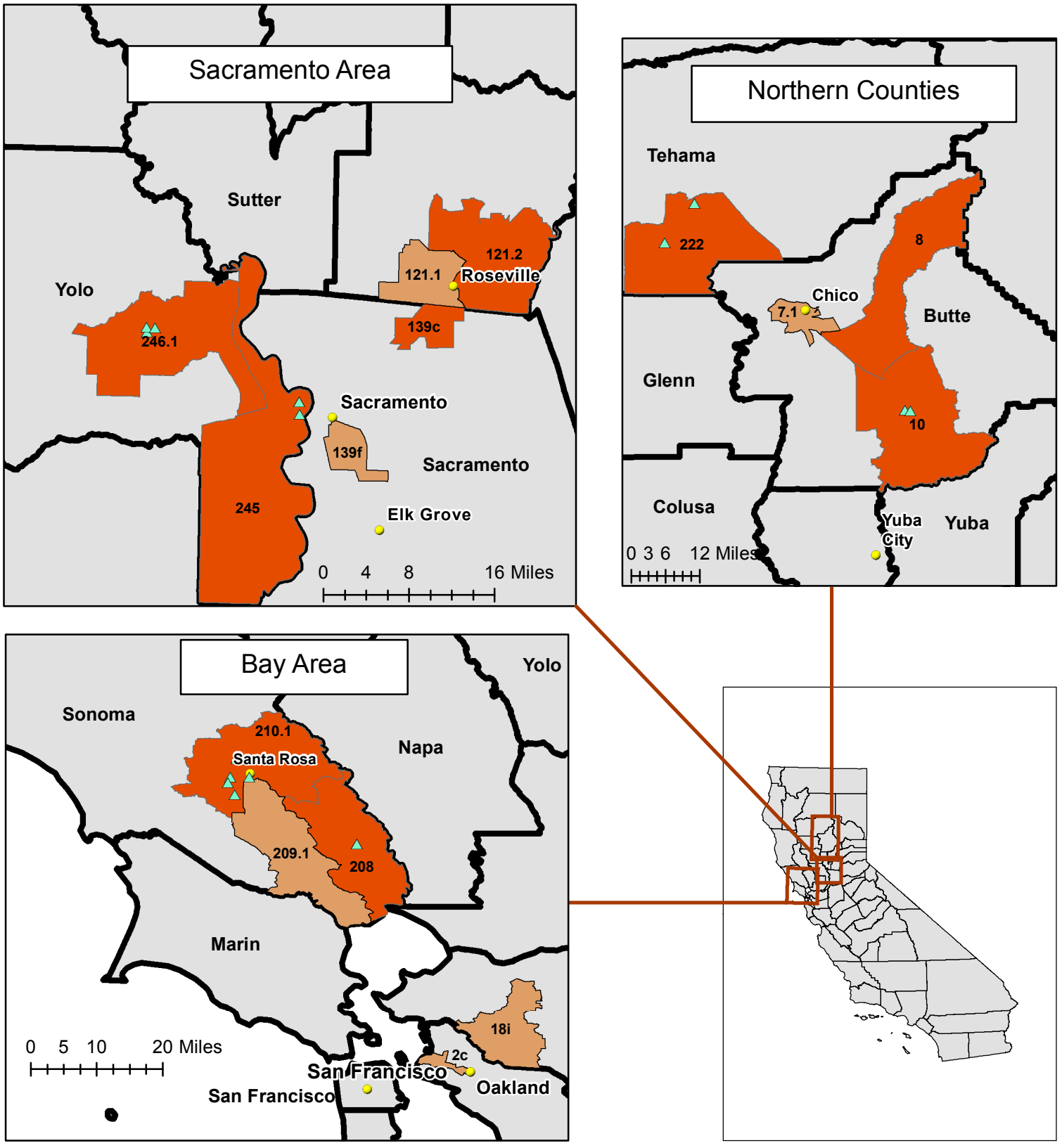

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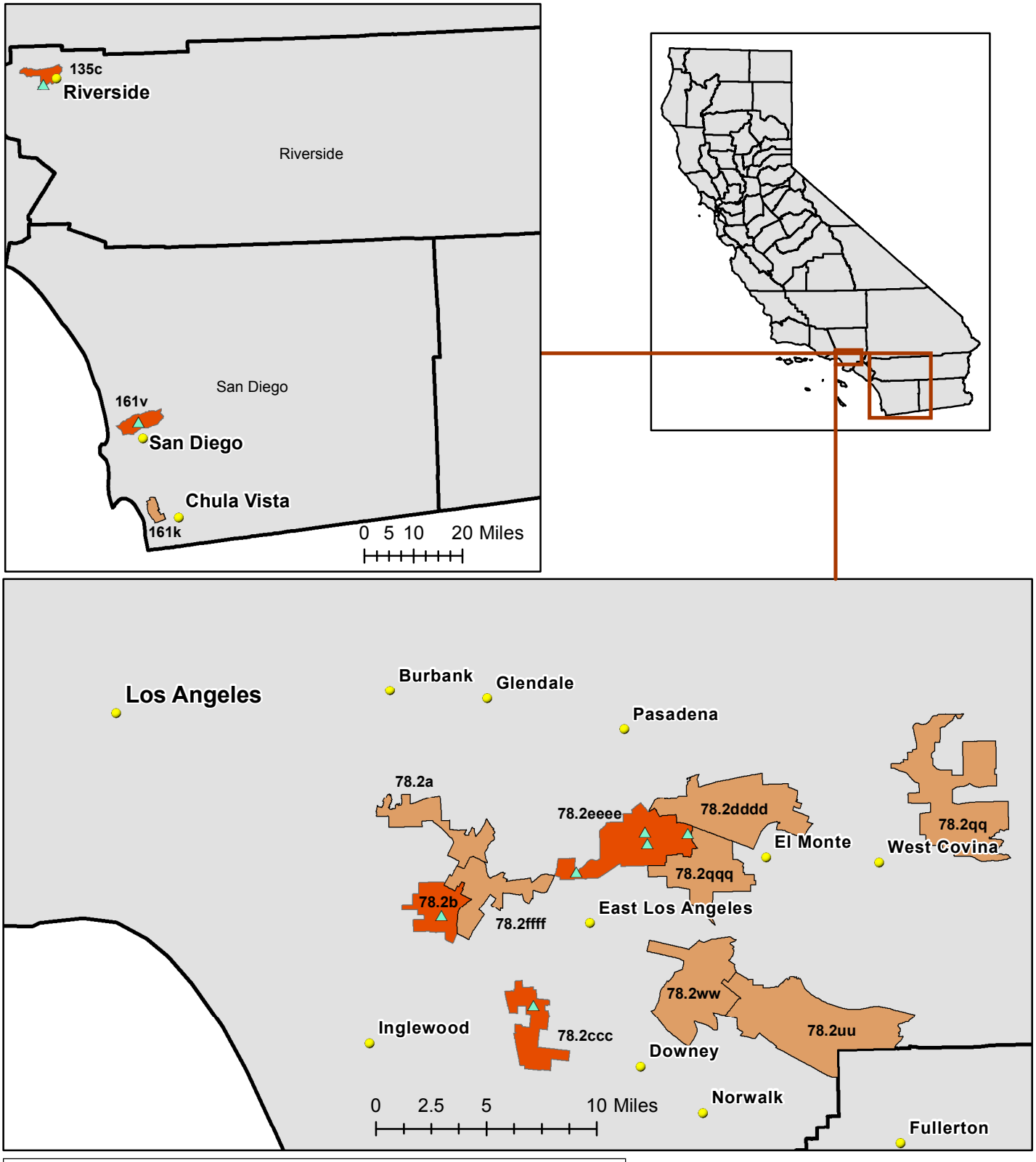

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Limitations of Findings

There are many ways that one could determine the burden of colorectal cancer in a community, and the potential to impact lives saved from colorectal cancer. This analysis highlights medical service study areas with a high burden of late stage disease (defined as areas where the percentage of the colorectal cancer diagnoses are late stage, and where the raw count of late stage cases is also high).

As mentioned previously, Tables 3 and 4 in the appendix represent MSSAs which were considered for designation as colorectal communities of focus, but were ultimately excluded because the excess case counts were not at least 10 (Table 3), or excess case counts were high but the proportion of late stage diagnoses was not at least 65% (Table 4). These areas are certainly worthy of high consideration for colorectal cancer intervention and we have thus included them in the appendix for review. These MSSAs are also represented on Maps 1-4 (shaded pink and brown).

See Tables 3 & 4 in the Appendix for MSSAs which met part but not all of the colorectal communities of focus criteria. These MSSAs are also represented on Maps 1-4.

While our methodology focused on MSSAs as geographic units and late stage colorectal cancer diagnoses as the cancer burden criteria, there are other possible ways to identify the colorectal cancer burden in California communities.

First, different geographic units could be used. Many MSSAs are very small, as is evident in the maps. Larger geographic units could be used, although often times county-level data masks important sub-county differences (our reason for utilizing MSSAs).

Next, our analysis takes into account late stage diagnoses, which result in higher mortality rates, but we did not examine mortality rates directly. The California Cancer Registry does not geocode mortality data so they were unable to assign colorectal cancer deaths to particular MSSAs. In order to examine mortality rates directly we would have needed to do an analysis at the county level. We do suggest that county mortality rates be taken into account as an important piece of information about the cancer burden in a community. Mortality rates by county are available through the California Cancer Registry's Data & Mapping tool available at www.ccrcal.org.

Additionally, it is possible to identify priority communities using screening rates instead of late-stage disease. There is screening information provided for context in Table 1, but it was not part of our criteria for selecting these 14 priority MSSAs. (Note that screening rates are not available at the sub-county level in all areas, so we provided available screening information for the MSSA county and sub-county data only for Los Angeles and San Diego counties). Some of the counties with the lowest screening rates in the state (e.g. Lake 58%, Tulare 53.7%, Kings 38%, Imperial 52.6%) are not represented in the 14 priority MSSAs. It would be reasonable to target some screening interventions in communities with the lowest screening rates. However, as is the case with the counties highlighted above (Lake, Tulare, Kings, Imperial), some communities can have a low screening rate but maintain a relatively low percentage of

late stage diagnoses, and a subsequently lower mortality rate. Thus, instead of asking *"where are the screening rates the lowest"* and intervening there, we chose to focus on the outcome "*where are people getting diagnosed with late stage disease, reducing their chances of survival?"* and we identified those communities as high priority for screening intervention.

It should be noted that factors other than early detection via routine screening play an important role in variations in colorectal cancer survival and mortality. These include promptness, appropriateness, and quality or initial treatment as well as subsequent surveillance. In addition, genetics, biological characteristics of the disease, and co-morbidities are also important determinants of survival and mortality.

Our suggestion is to consider interventions in 14 MSSAs (as well as the MSSAs listed in Tables 3 and 4 that met part but not all of our criteria) on the basis of the high colorectal cancer burden. However, many practical elements should also be considered when selecting particular avenues for intervention. Some of these are discussed in the implications/recommendations section.

Lastly, this project highlights particular geographic areas that merit further attention for our colorectal cancer outreach efforts, but our project did not focus on particular strategies to use. In other words, this project focused on *where* to intervene, but not precisely *why* late-stage disease is so high in certain areas or *how* to intervene. Fortunately, there has been a great deal of research done on identifying effective strategies. There are various evidence-based interventions in resources such as The Community Guide (www.thecommunityguide.org) and the National Cancer Institute's Research-tested Intervention Programs (RTIPs). We also encourage innovation based on "promising" practices before they are deemed evidence-based.

Implications/Recommendations

The original intended use of this information was for ACS staff to prioritize particular geographies and/or particular health systems through which to intervene to increase colorectal cancer screening rates and thus reduce lives lost to colorectal cancer. Implications for particular ACS staff roles have been removed from this version of the document.

External uses:

We encourage other organizations to use these methods to guide colorectal cancer screening planning and outreach efforts. For example, the California Colorectal Cancer Coalition (C4) recently used the data when reviewing clinic grant applications, considering the burden of late-stage disease in the clinic communities. We recommend that organizations consider colorectal cancer screening outreach and interventions in the 14 "priority" medical service study areas (MSSAs) we identified, and also the MSSAs which met some but not all of our criteria (see Tables 3 and 4 in the Appendix).

Breast Cancer Communities of Focus

The team was also charged with identifying communities of focus for breast cancer. The team's goal was to assist staff in prioritizing communities where more lives can be saved from breast cancer.

We approached the identification of breast cancer communities of focus considerably differently than we did colorectal cancer communities of focus. That is because the breast cancer screening rate across the state of California is (fortunately) much higher overall. The state average for mammography screening is 79% according to the California Health Interview Survey. However, there is considerable variation among counties, with county averages ranging from a low of 64% (Lake County) to a high of 91% (Napa County).

Thus, the Communities of Focus group chose to take a different approach to identifying breast cancer communities of focus. As is further explained below, breast cancer screening rates play a more prominent role in this model. Additionally, we chose not to produce a particular list of communities recommended for interventions as was the case with colorectal cancer. Instead, **we have produced a matrix of three data sources for staff to utilize in prioritizing areas for breast cancer interventions.**

Methods

The geographical units used were regions as defined for the California Health Interview Survey (CHIS regions). Most CHIS regions are individual counties, but some CHIS regions are groupings of several small counties.

CHIS regions were analyzed to assess the breast cancer burden according to following criteria: screening rate, mortality rate, and proportion of late stage breast cancer diagnoses.

1. *Breast Cancer Screening Rates:* Breast cancer screening rates for 2011-2012 were obtained from the California Health Interview Survey (CHIS). Proportions of women who have ever had a mammogram were reported by county for most of the state (aggregated counties for more rural areas, and sub-county regions for Los Angeles). CHIS regions with mammography rates less than the state average of 79% were highlighted grey in Table 2.

2. *Breast Cancer Mortality Rates:* The California Cancer Registry provided female breast cancer mortality rates by county. Per California Cancer Registry policy, less populous counties are aggregated to ensure confidentiality of patients; however, the county groupings differ slightly from those of CHIS. Differences are noted in Table 2. Five-year mortality rates (deaths caused by female breast cancers diagnosed from 2007 through 2011) were calculated and compared to the state average. County mortality rates higher than the state average were highlighted grey in Table 2.

3. *Areas with a high percentage of late-stage breast cancer:* The California Cancer Registry identified female breast cancer cases diagnosed between 2007 through 2011 for the analysis. Proportions of late-stage breast cancers, defined as SEER Summary Stages regional and distant, were calculated for each county and/or county group. The individual proportions of late-stage breast cancers were compared to the state average (29.4%) and counties with higher proportions of late-stage disease than the state average were highlighted grey in Table 2.

Findings

All three of these criteria: low screening rate, high mortality rate, and high late stage diagnosis, are combined in Table 2 below. Boxes highlighted in grey indicate lower than state average mammography screening, higher than state average breast cancer mortality rate, and higher than average late-stage diagnosis. It is the group's suggestion that the highest priority be given to counties/county groups where all three criteria are met (all three areas are shaded grey), followed by medium priority for those in which two criteria are met. Areas in which zero or one of the criteria are met are considered lower priority using this particular methodology.

Of the 44 CHIS regions examined, 8 regions had lower than average mammography rates, higher than average breast cancer mortality, and higher than average late-stage diagnosis of breast cancer. These regions met our criteria for high priority and they are shaded dark pink in Table 2.

8 High priority CHIS regions for breast cancer intervention (dark pink):

- Butte
- Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra
- Humboldt
- Kings
- Los Angeles
- San Joaquin
- Shasta
- Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine

15 regions met two of the three criteria and they are thus shaded medium pink for medium priority.

15 Medium priority CHIS regions for breast cancer intervention (medium pink):

- Imperial
- Kern
- Lake
- Mendocino
- Placer
- Riverside
- Sacramento
- San Benito
- San Bernardino
- Santa Cruz
- Solano
- Sonoma
- Stanislaus
- Tulare
- Yuba

21 CHIS regions met one or zero of the criteria. Using this particular methodology, we have labeled them as lower priority in the table and map (light pink). It is important to note the limitations of our methodology (see limitations section). We are not suggesting that breast cancer interventions in these regions are inappropriate. Rather, this data is meant to prompt staff to examine particular counties more closely.

In order to better understand the 8 "high" priority and 15 "medium" priority areas, we've included demographic information (ethnic makeup, income level) on these regions in **Table 5** in the appendix.

Table 2: Breast Cancer Communities of Focus by CHIS Geographic Units*

Geographic Unit: California Health Interview Survey Region (see legend for color coding)	**Mammography screening rate.** *Highlighted if screening rate is under state average 79.0% (source: CHIS 2011-2012)*	**Age-Adjusted Breast Cancer Mortality Rate (per 100,000) :** *Highlighted if higher than state average 21.4 (source:SEER)* (California Cancer Registry geographic regions differ from CHIS regions. Differences are noted.)	**Excess late-stage diagnoses: The % of breast cancer diagnosed at a late stage** (source: California Cancer Registry) *All regions where % of breast cancers diagnosed at a late stage exceeds state average (29.4%) are highlighted*
Alameda	79.6	21.1	27.8%
Butte	73.4	25.1	30.2%
Contra Costa	82.9	22.3	27.0%
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	73.6	**Del Norte and Humbolt: 25.3 Siskiyou and Trinity: 22.1** [Lassen,Modoc,Plumas: 17.5 Sierra and Yuba: 21.1]	34.5%
El Dorado	86.9	20.4	28.6%
Fresno	80.6	19.6	29.8%
Humboldt	77.2	Del Norte and Humbolt: 25.3	30.4%
Imperial	72.6	17.7	35.3%
Kern	83.5	22.0	34.4%
Kings	66.2	22.3	33.7%
Lake	64.0	19.8	31.5%
Los Angeles	78.3 county average, but SPA 4 has 73.1%	21.8	31.6%
Madera	71.8	13.9	29.1%
Marin	78.5	18.5	23.8%
Mendocino	74.9	26.7	28.4%
Merced	79.4	20.3	35.0%
Monterey	72.5	18.9	28.7%
Napa	91.0	19.8	27.0%
Nevada	76.0	19.2	23.0%
Orange	81.7	20.0	28.7%
Placer	77.6	23.7	24.6%
Riverside	77.5	22.7	29.2%
Sacramento	74.5	21.5	29.4%
San Benito	72.0	21.9	29.2%
San Bernardino	81.3	24.0	33.8%
San Diego	80.1	22.1	28.5%
San Francisco	71.8	17.5	24.5%
San Joaquin	72.0	22.8	30.4%
San Luis Obispo	80.6	21.2	27.8%

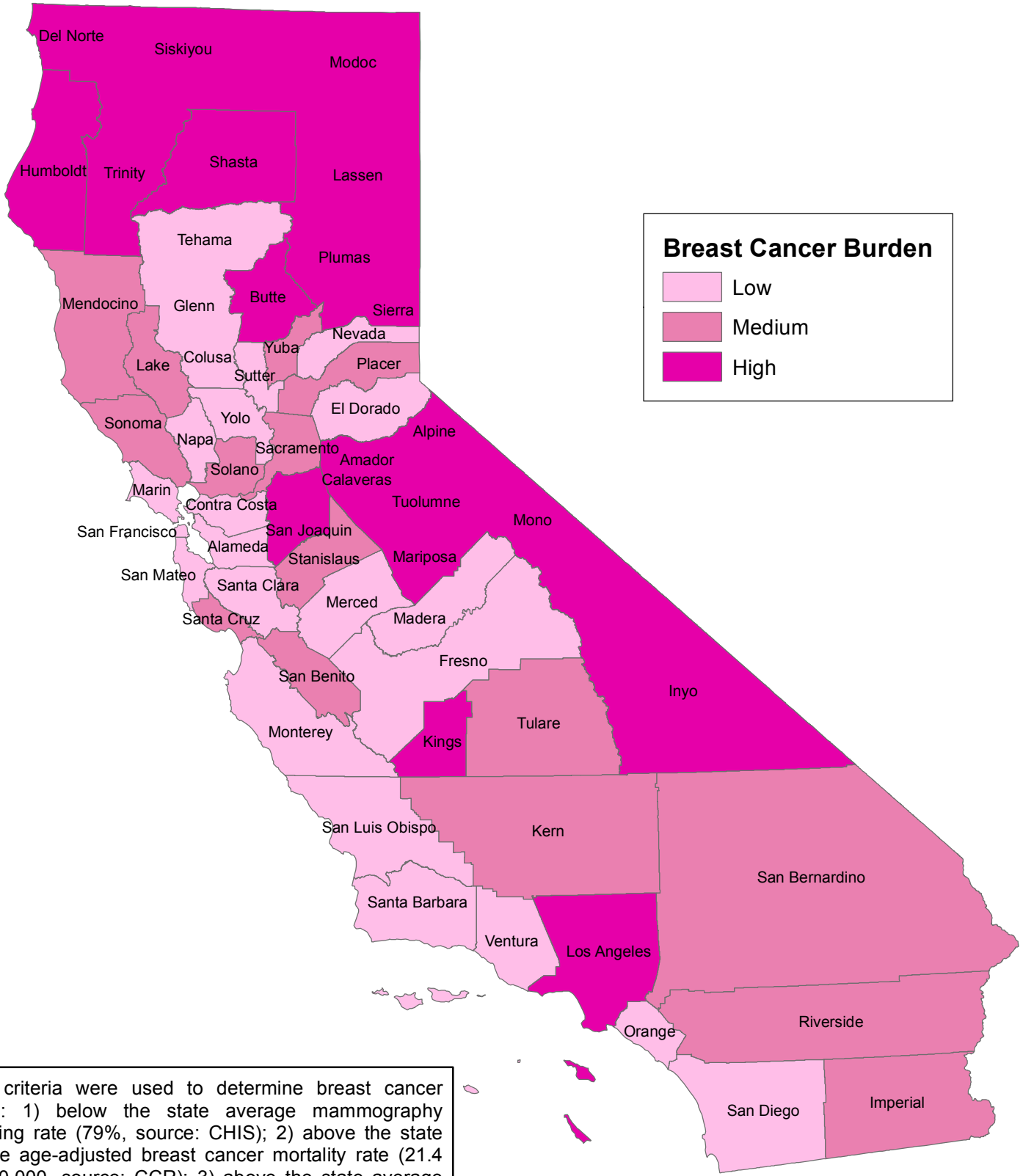
Table 2 (continued): Breast Cancer Communities of Focus by CHIS Geographic Units*			
Geographic Unit: California Health Interview Survey Region (see legend for color coding)	**Mammography screening rate.** *Highlighted if screening rate is under state average 79.0% (source: CHIS 2011-2012)*	**Age-Adjusted Breast Cancer Mortality Rate (per 100,000)** : *Highlighted if higher than state average 21.4 (source:SEER)* (California Cancer Registry geographic regions differ from CHIS regions. Differences are noted.)	**Excess late-stage diagnoses: The % of breast cancer diagnosed at a late stage** (source: California Cancer Registry) *All regions where % of breast cancers diagnosed at a late stage exceeds state average (29.4%) are highlighted*
San Mateo	85.0	19.0	23.7%
Santa Barbara	86.8	17.7	28.1%
Santa Clara	81.1	18.8	25.8%
Santa Cruz	79.0	25.6	30.2%
Shasta	70.6	22.1	31.3%
Solano	86.6	23.6	30.2%
Sonoma	78.8	25.1	27.2%
Stanislaus	83.4	21.5	35.8%
Sutter	78.7	18.7	28.9%
Tehama, Glenn, Colusa	79.8	20	32.6%
Tulare	74.5	19.5	33.0%
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	74.2	**Alpine, Amador, Calaveras 25.4** [Mariposa and Tuolumne: 18.9 Inyo and Mono: 21.0]	30.9%
Ventura	76.2	20.7	27.9%
Yolo	84.8	19.1	24.7%
Yuba	72.1	Sierra and Yuba: 21.1	29.9%

*Contains information on the screening rate, mortality rate, and % late stage breast cancer diagnoses in all California Health Interview Survey (CHIS) geographic units (county or multiple counties)

Color Coding:

	Dark Pink: This region meets 3 of the 3 criteria selected for breast cancer communities of focus and is thus designated as high priority for breast cancer screening intervention based on this assessment.
	Medium Pink: This region meets 2 of the 3 criteria selected for breast cancer communities of focus and is thus designated as medium priority for breast cancer screening intervention based on this assessment.
	Light Pink: this region meets 0 or 1 of the 3 criteria selected for breast cancer communities of focus and is thus designated as low priority for breast cancer screening intervention based on this assessment.

California Breast Cancer Burden



Three criteria were used to determine breast cancer burden: 1) below the state average mammography screening rate (79%, source: CHIS); 2) above the state average age-adjusted breast cancer mortality rate (21.4 per 100,000, source: CCR); 3) above the state average for the percent of late stage diagnoses (29.4%, source: CCR). High burden areas met all three criteria. Medium burden counties met two of the criteria. Low burden counties met one or zero of the criteria.

Created by Brendan Darsie, MPH; January, 2015; brendan.darsie@cdph.ca.gov

Limitations of Findings

There are several noteworthy limitations to our breast cancer communities of focus findings.

First, we took a broad view of the breast cancer burden in California, utilizing county-level (and sometimes clusters of small counties) data. These are large geographic areas and our breast cancer methods were therefore much less specific than our colorectal cancer methods. By using larger geographic regions as the unit of analysis, we are unable to see the variation within that region. For example, the breast cancer burden may be particularly high within a particular community within a county, or among a particular immigrant group which is present in the county but not numerous enough to tip the scales. Because of factors like these, we are not suggesting that it would be inappropriate to launch breast cancer screening interventions in the 21 CHIS regions that were deemed "lower" priority using our methodology. **Rather, this data is meant to prompt public health professionals to examine particular counties more closely, and to assess the potential for breast cancer screening efforts within that area.**

Further, our methods point to particular geographic areas, but as with the colorectal cancer portion of our project, they do not tell us *why* the burden of breast cancer is greater there or *how* to intervene. For the "how" question, there are various evidence-based interventions in resources such as The Community Guide (www.thecommunityguide.org) and the National Cancer Institute's Research-tested Intervention Programs (RTIPs). We also encourage innovation based on "promising" practices before they are deemed evidence-based.

As for the question of "why" the burden of breast cancer is greater in particular communities, it is important to remember that factors other than early detection via routine screening play an important role in variations in breast cancer survival and mortality. These include promptness, appropriateness, and quality or initial treatment as well as subsequent surveillance. In addition, genetics, biological characteristics of the disease, and co-morbidities are also important determinants of survival and mortality.

Implications/Recommendations

The intended use of this information is to prompt public health professionals to examine particular counties more closely, and to assess the potential for breast cancer screening efforts within that area**.** Additionally, we hope that this information is useful in guiding other (non-screening) activities aimed at reducing the breast cancer burden within the community.

The specific recommendations for use of this information by ACS staff have been removed. We hope that external organizations are able to use utilize this information to guide efforts and help to rally particular communities around the fight against cancer.

Conclusions

CONCLUSIONS

We hope that the information in this report helps staff grow existing partnerships and build new ones in the pursuit of saving more lives.

On behalf of the California Communities of Focus volunteer team, we hope that this information is useful both to ACS staff and external organizations working to identify communities for breast and colorectal cancer interventions and activities.

What if the communities I work with weren't selected as communities of focus?

As a reminder, the information on both colorectal and breast cancer communities of focus communities is meant primarily as a ***guide***, not as hard and fast rules for which communities merit interventions. There are many additional data sources which can be used to inform planning and resource allocation for breast and colorectal cancer activities.

One of the most important "takeaways" from the work of this group is that as volunteers and staff of the American Cancer Society, we can and should be using available data to guide our allocation of limited resources.

For example:

- Data on cancer incidence and mortality: California Facts and Figures publications, and the California Cancer Registry website: www.ccrcal.org
- Data on late stage cancer diagnosis: In addition to the information included in this report, the California Cancer Registry performs analyses on areas with high late stage breast and colorectal cancer diagnoses for public access www.ccrcal.org
- Screening rates within a community: California Health Interview Survey (www.healthpolicy.ucla.edu/askchis)
- Screening rates within a health system: In addition to asking the system, there is the Health Services Research Administration (www.hrsa.gov) for FQHCs, and sources such as Consumer Reports and the Office of the Patient Advocate for health plan accounts
- Community demographics: Census data available at www.quickfacts.census.gov
- Community resources: do not underestimate the importance of considering available community resources when examining the cancer burden in a community and planning interventions! Consider locations of clinics, imaging centers, access to colonoscopy, etc.
- Ask the partners that you work about the issues affecting their community/ patient population

We hope that the information in this report helps public health professionals in the state plan and manage activities in the pursuit of saving more lives from breast and colorectal cancer.

Appendix

Table 1 (COMPLETE): Colorectal Cancer: Medical Study Service Areas (MSSAs) with the Highest Percentage of Late- Stage* Disease and Excess Case Counts with Clinic Information, California, 2007-2011**

County	MSSA ID #	MSSA Name	MSSA Definition***	Total Cases	% Late-Stage	Observed Late-Stage Cases	Expected Late-Stage Cases	Excess Late-Stage Cases (Observed minus expected)	Excess Late-Stage Case Grouping	PIR (proportional incidence ratio)	99% C.I. (confidence interval)	MSSA Population (2010 census)	100% FPL (federal poverty level)	200% FPL (federal poverty level)	% White	% Black	% Hispanic	% Pacific Islander	% American Indian/Eskimo	% Asian	% Multi-Racial	% Other Race	# of Primary Care Physicians	Primary Care Physician to Patient Ratio	Colorectal Screening Compliance ^ (CHIS, 2009) [county-level data unless specified]	Clinic Name	Clinic Address	Clinic City	Clinic State	FQHC Zip Code	Clinic Latitude	Clinic Longitude	CRC screening rate for clinic SYSTEM (HRSA, 2013)^^	# of patients served by the clinic SYSTEM^^ (HRSA, 2013)	
Butte	10	Oroville/Palermo/ Thermalito	Rural	100	67%	67	52.3	15	10-19 excess cases	128.1	107.2 -153.1	48284	21.6	47.2	83.1	3.6	12.8	0.4	5.8	7.1	6.1	6.3	37	1 to 1302	63.70%	Feather River Tribal Health Clinic	2145 5th Ave	Oroville	CA	95965-5870	39.5035	-121.565	34.10%		
																										Ampla Health	2800 Lincoln St	Oroville	CA	95966-5961	39.5016	-121.551	50%	67,176	
Butte	8	Magalia/Paradise/ Stirling City	Rural	124	72%	89	65.5	24	20-29 excess cases	135.9	117.6-157	41405	14	32.6	95.1	0.8	7.1	0.3	3.1	2.2	4.2	2.7	27	1 to 1516	63.70%	No FQHC/community health centers in this MSSA									
Riverside	135c	Casablanca/ Riverside Central	Urban	112	66%	74	58.8	15	10-19 excess cases	125.9	106.6-148.6	86106	16.3	45.2	69.6	6.1	52.1	0.7	1.7	4.7	5.6	23.1	272	1 to 312	63.00%	Community Health Systems Inc: Magnolia Community Health Center	9380 Magnolia Ave	Riverside	CA	92503-3749	33.9215	-117.444	22.90%	27,175	
San Diego	161v	Mira Mesa/Scripps Miramar Ranch	Urban	125	71%	89	65.5	24	20-29 excess cases	135.9	117.6-157	110841	5.9	15.3	52.5	4.7	12.5	1.4	1.1	41.6	5.9	5	40	1 to 2689	Sub-county available. north central: 68.5%	Operation Samahan - Mira Mesa	10737 Camino Ruiz Ste 235	San Diego	CA	92126-2375	32.9139	-117.144	2.50%	16,416	
Sonoma	208	Boyes Hot Springs/ Glen Ellen/Kenwood/ Sonoma/Vineburg	Urban	100	65%	65	52.9	12	10-19 excess cases	122.9	102.2-147.7	40038	11.2	27.9	88.4	1	23	0.3	1.8	4	2.8	7.4	25	1 to 1624	73.20%	Sonoma Valley Community Health Center	430 W Napa St Ste F	Sonoma	CA	95476-6545	38.2928	-122.466	22.90%	6,450	
	210.1	Santa Rosa	Urban	418	65%	273	219.8	53	30+ excess cases	124.2	113.4-136.1	186178	12.5	28.8	82.4	3	25.9	0.7	2.8	5.6	3.6	9.7	318	1 to 606	73.20%	*Santa Rosa Community Health Center System:* Brookwood Health Center of Southwest CHC	983 Sonoma Ave	Santa Rosa	CA	95404-4818	38.4405	-122.703	47.10%	41,041	note: these 5 clinics are the same clinic system (Santa Rosa Community Health Centers)
																										Santa Rosa Community Health Centers	3569 Round Barn Cir	Santa Rosa	CA	95403-5781	38.4794	-122.731	47.10%	41,041	
																										Santa Rosa CHC system: Vista Family Health Center of Southwest CHC	3569 Round Barn Cir	Santa Rosa	CA	95403-5781	38.4794	-122.731	47.10%	41,041	
																										Santa Rosa CHC system: Southwest Community Health Center	751 Lombardi Ct	Santa Rosa	CA	95407-6793	38.4272	-122.749	47.10%	41,041	
																										Santa Rosa CHC system: Elsie Allen Health Center of Southwest CHC	599 Bellevue Ave # G17	Santa Rosa	CA	95407-7713	38.402	-122.735	47.10%	41,041	
																										Sonoma County Indian Health Project	144 Stony Point Rd	Santa Rosa	CA	95401-4122	38.4401	-122.744	41.30%		
Tehama	222	Corning/Los Molinos/Tehama/Vina	Rural	43	74%	32	22.5	10	10-19 excess cases	142.2	113.7-177.9	18053	20.3	46.4	82	1.1	28.7	0.5	4	0.9	3.5	15	4	1 to 4594	62.20%	Ampla Health- Los Molinos medical	7981 State highway 99E	Los Molinos	CA	96055-9782	40.0251	-122.1	50%	67,176	
																										Rolling Hills Clinic Corning (Indian Health Service)	740 Solano St	Corning	CA	96021-3352	39.928	-122.175	will find		
Yolo	245	Bryte/Broderick/ Clarksburg/Riverview/West Sacramento	Urban	81	70%	57	42.3	15	10-19 excess cases	134.8	113.4-160.1	50436	16.2	35	71.3	6	33.7	1.7	3.5	11.4	6.8	13.5	6	1 to 8909	68.90%	CommuniCare Health Centers (Salud Clinic)	500 Jefferson Blvd Ste B180	West Sacramento	CA	95605-2394	38.5881	-121.527	18.20%	20,537	
																										Elica Health Centers	115 15th Street Suite A	West Sacramento	CA	95691					
	246.1	Woodland	Urban	96	69%	66	50.4	16	10-19 excess cases	131	110-155.9	57744	11.3	32.8	72.4	1.8	42.8	0.5	3.1	7.1	3.9	19.1	58	1 to 1012	68.90%	CommuniCare Health Centers (Peterson clinic)	8 N Cottonwood St	Woodland	CA	95695-2585	38.685	-121.793	18.20%	20,537	
																										Northern Valley Indian Health Center	175 W Court St	Woodland	CA	95695-2913	38.6789	-121.792	35.4		
Los Angeles	78.2b	Pico-Union	Urban	175	65%	114	90.9	23	20-29 excess cases	125.4	109-144.4	150959	33.8	69.2	35.6	6.1	71.7	0.3	1.3	15.3	1.4	42.9	22	1 to 6854	Sub county: SPA 4: 64.4	St. Johns Well Child And Family Center At Magnolia Place	1910 Magnolia Ave Ste 101	Los Angeles	CA	90007-1220	34.0396	-118.286	38.50%	45,245	
	78.2ccc	Huntington Park/ South Gate West/ Walnut Park	Urban	108	65%	70	56	14	10-19 excess cases	125	104.8-149.2	106154	22.8	56.6	50.5	0.7	97.6	0	0.8	0.5	0.9	48.5	52	1 to 2028	Sub County: SPA 7 : 59.2	NECC (Northeast community Clinics) GAGE Health Center	2975 Zoe Ave.	Huntington Park	CA	90255			28.60%	32,804	
	78.2eeee	Alhambra/ El Sereno South/ San Gabriel Central	Urban	260	65%	168	135.8	32	30+ excess cases	123.7	110.2-138.9	110409	13.7	35.2	29.7	1.8	35.9	0.1	1.1	52.8	1.9	16.5	89	1 to 1224	Sub county: SPA 3: 67.4	Herald Christian Health Center	923 S San Gabriel Blvd	San Gabriel	CA	91776-2743	34.0906	-118.091			
																										Arroyo Vista Community Health Center (El Serreno)	4815 Valley Blvd. Ste C	Los Angeles	CA	90032			32.60%	25,384	
																										CSC (Chinese Service Center) Community Health Center- San Gabriel Valley	320 s. Garfield Ave. Suite 118	Alhambra	CA	91801			58%	5,053	
Placer	121.2	Rocklin/Granite Bay	Urban	163	66%	108	85	23	20-29 excess cases	127.1	110.2-146.5	106492	4.5	11.3	87.9	1.9	8.8	0.5	1.2	9.9	3.8	2.8	31	1 to 1961	70.30%	No FQHCs/Community Health Centers in this MSSA									
Sacramento	139c	Antelope/Citrus Heights/Foothill Farms	Urban	242	66%	159	126.2	33	30+ excess cases	126	111.8-141.9	120218	15.2	34.1	81.8	7.6	16.7	0.7	1.7	4.6	3.6	7.6	18	1 to 6657	71.20%	No FQHCs/ Community Health Centers in this MSSA									

Benchmark group: non-Hispanic whites living in high SES neighborhoods.

Race categories are not mututally exclusive, and may include Hispanic ethnicity.

Source of MSSA data: California Cancer Registry, Department of Public Health.

*Late-stage: regional or distant stage at time of diagnosis.

** Clinic list includes Indian Health Service clinics and OSHPD list of primary care clinics that offer a full range of primary care servciies to the uninsured and underinsured(FQHCs, look-alikes, free clinics). OSHPD clinic list was refined with assistance of American Cancer Society primary care staff (removed clinics such as pregnancy centers which do not have a patient population for colorectal cancer screening intervention)

***MSSA Definition: Rural= population density <250 persons/sq. mi; Urban =population 75,000-125,000. Recognized community and neighborhood boundaries. Similar demographic and socioeconomic characteristics.

^Colorectal Cancer Screening Compliance: provided at the county-level and sub-county in the cases of San Diego and Los Angeles counties. The screening level is not specific to the particular MSSA, but is provided for context. Source: California Health Interview Survey.

^^The colorectal screening rates of the clinic systems and the number of patients served by the clinic system apply to the entire clinic system and usually encompass multiple sites beyond the one located in the priority MSSA (source: HRSA).

Tables 3&4 Represent MSSAs which were considerered as Colorectal Communities of Focus, but were excluded because the excess case counts not at least 10 (Table 3), or where excess case counts were high but the proportion of late-stage diagnoses was not at least 65% (Table 4). These areas are certainly worthy of high consideration for colorectal cancer interventions.

Table 3: Colorectal Cancer: Medical Study Service Areas (MSSAs) with the High Percentage of Late-Stage Disease but insufficient case counts (less than 10 excess cases) California, 2007-2011

County	MSSA ID	% Advanced Stage	Total Cases	Advanced Observed	Advanced Expected	Excess Advanced	Excess Advanced Group	PIR	99% C.I.	MSSA Name	MSSA Definition^	2010 MSSA Population	100% FPL	200% FPL	% White	% Black	% Hispanic	% Pacific Islander	% American Indian/Eskimo	% Asian	% Multi-Racial	% Other Race	# of Primary Care Physicians	Primary Care Physician to Patient Ratio	Colorectal Cancer Screening Compliance
Fresno	29	71	51	36	26.7	9	<10 excess	134.8	108.3-167.8	Biola/Herndon/Highway	Rural	34871	21.5	48.0	72.2	4.8	61.7	0.1	1.2	9.4	2.8	15.7	11	1 to 3614	70.5
Mendocino	89	74	19	14	10.1	4	<10 excess cases	138.6	101.5-189.4	Fort Bragg/Westport	Rural	11563	21.5	44.0	87.6	0.8	24.0	0.0	4.1	1.3	2.6	8.8	13	1 to 937	68.4
Santa Cruz	185.5	69	48	33	25.4	8	<10 excess cases	129.9	103.8-162.6	Amesti/Corralitos/Day Valley/Interlaken/Pajaro Dunes	Rural	27629	9.6	27.7	87.5	2.9	34.8	0.2	1.5	4.3	3.4	7.1	8	1 to 3616	65.8

Table 4: Colorectal Cancer: Medical Study Service Areas (MSSAs) with 10+ Excess Late-Stage Disease* Cases, but where proportion of Late-Stage Disease is <65%, California, 2007-2011

County	MSSA ID	% Advanced Stage	Total Cases	Advanced Observed	Advanced Expected	Excess Advanced	Excess Advanced Group	PIR	99% C.I.	MSSA Name	MSSA Definition^	2010 MSSA Population	100% FPL	200% FPL	% White	% Black	% Hispanic	% Pacific Islander	% American Indian/Eskimo	% Asian	% Multi-Racial	% Other Race	# of Primary Care Physicians	Primary Care Physician to Patient Ratio	Colorectal Cancer Screening Compliance
Butte	7.1	63	138	87	73	14	10-19 excess	119.2	100.9-140.8	Chapmantown/Chico	Urban	93967	21.1	42.3	87.5	2.6	14.3	0.5	3.4	6.2	5.5	5.8	93	1 to 1022	63.7
Placer	121.1	64	204	130	107.1	23	20-29 excess	121.4	106-139	Roseville	Urban	103,718	7.6	19.3	84.3	2.3	14.7	0.7	1.9	8.6	2.8	5.4	282	1 to 465	70.3
San Luis Obispo	171	62	178	111	92.7	18	10-19 excess cases	119.7	103.1-139	Arroyo Grande/Nipomo/Oceano/Pismo Beach	Rural	79,868	8.6	25.7	88.1	1.2	22.3	0.3	1.8	3.9	3.2	8.0	53	1 to 1515	65.3
Sonoma	209.1	62	226	141	118.1	23	20-29 excess cases	119.4	104.7-136.2	Petaluma	Urban	132,934	9.4	25.0	82.9	2.8	23.5	0.5	1.6	6.5	3.4	9.5	96	1 to 1404	73.2
Sacramento	139f	62	200	123	104.6	18	10-19 excess cases	117.6	102-135.6	Florin/Fruitridge/Oak Park/Parkway/South Sacramento	Urban	117,515	26.5	55.8	51.4	14.0	37.0	1.7	3.3	21.0	5.8	15.1	163	1 to 733	71.2
San Diego	161k	63	139	88	73.2	15	10-19 excess cases	120.2	101.9-141.8	Chula Vista Central and Northwest/National City West	Urban	76,733	22.6	53.1	71.3	5.9	68.6	0.6	1.1	10.4	4.0	14.7	80	1 to 1026	sub county: San Diego SOUTH: 67.7
Contra Costa	18i	61	310	190	164.2	26	20-29 excess cases	115.7	103.2-129.8	Lafayette/Martinez South/Moraga/Orinda/Pleasant Hill/Rheem Valley/Rossmoor Leisure World/Walnut Creek Southwest	Urban	109,209	3.4	9.0	87.0	2.2	7.8	0.3	1.2	11.4	3.9	2.0	119	1 to 924	64.3
Alameda	2c	63	149	94	78.3	16	10-19 excess cases	120.1	102.3-140.9	Oakland West Central	Urban	78237	25.0	51.2	26.9	35.7	18.1	0.8	1.5	29.8	3.3	8.9	294	1 to 299	71.3
Los Angeles	78.2a	63	169	107	87.8	19	10-19 excess cases	121.9	104.8-141.7	Echo Park/Hollywood North Central/Silverlake South	Urban	82242	18.6	40.8	64.4	4.9	34.4	0.1	1.2	14.4	3.0	18.6	15	1 to 5405	SPA 4: 64.4
Los Angeles	78.2ddd d	61	264	161	138.3	23	20-29 excess cases	116.4	102.8-131.9	Arcadia Southeast/San Gabriel North	Urban	103312	7.1	22.0	35.7	0.9	23.8	0.5	0.7	52.4	2.4	12.3	42	1 to 2492	SPA 3: 67.4
Los Angeles	78.2ffff	63	163	102	85.3	17	10-19 excess cases	119.6	102.4-139.7	Boyle Heights Northwest/Chinatown/Downto	Urban	100372	36.5	68.3	37.0	8.9	61.2	0.5	1.5	20.8	1.7	33.1	331	1 to 318	SPA 4: 64.4
Los Angeles	78.2qq	60	248	150	129.3	21	20-29 excess cases	116	101.7-132.3	Asuza/Charter Oak/Covina	Urban	118100	11.9	30.1	55.9	3.9	54.8	0.3	1.3	9.7	3.7	32.9	57	1 to 2120	SPA 3: 67.4
Los Angeles	78.2qqq	64	169	108	87.9	20	20-29 excess cases	122.9	106.1-142.2	Rosemead/San Gabriel South/South El Monte	Urban	90694	17.0	48.1	27.1	0.6	38.7	0.8	0.5	55.4	1.6	17.1	43	1 to 2244	SPA 3: 67.4
Los Angeles	78.2uu	62	178	110	93.3	17	10-19 excess cases	117.9	101.5-136.9	La Habra Heights/Whittier	Urban	85083	8.9	25.9	62.2	1.1	62.8	0.2	1.5	4.8	3.2	33.6	118	1 to 730	SPA 7: 59.2
Los Angeles	78.2ww	64	204	130	106.8	23	20-29 excess cases	121.7	106.3-139.3	Pico Rivera/Santa Fe Springs Northwest	Urban	99882	10.9	33.5	54.8	0.8	88.8	0.3	1.6	2.7	2.1	41.9	63	1 to 1587	SPA 7: 59.2

Table 5. Population Characteristics for Breast Cancer Communities of Focus (High and Medium priority) by CHIS Geographic Units										
Geographic Unit: California Health Interview Survey Region	**2010 Population^**	**White (%)^**	**African-American (%)^**	**American Indian/Alaskan Native (%)^**	**Asian (%)^**	**Native Hawaiian and Other Pacific Islander (%)^**	**Hispanic (%)^**	**Two or More Races (%)^**	**100-199% FPL****	**200-299% FPL****
Butte	220,000	87.0%	1.8%	2.4%	4.4%	0.3%	15.1%	4.1%	23.4%	19.7%
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra*	155,124	*	*	*	*	*	*	*	*	*
Humboldt	134,623	84.4%	1.3%	6.2%	2.5%	0.3%	10.5%	5.3%	23.1%	17.8%
Imperial	174,528	89.6%	3.5%	2.6%	2.4%	0.2%	81.8%	1.8%	33.7%	15.9%
Kern	839,631	82.9%	6.3%	2.7%	5.0%	0.3%	50.9%	3.0%	27.9%	11.6%
Kings	150,960	81.4%	7.4%	3.0%	4.3%	0.3%	52.7%	3.6%	27.1%	20.1%
Lake	63,860	87.9%	2.0%	4.1%	1.3%	0.3%	18.4%	4.4%	25.2	10.7%
Los Angeles	9,818,605	71.5%	9.2%	1.5%	14.6%	0.4%	48.3%	2.9%	22.1%	14.0%
Mendocino	87,841	86.6%	1.0%	6.3%	2.1%	0.2%	23.5%	3.9%	19.9%	16.9%
Placer	348,432	86.3%	1.7%	1.1%	6.8%	0.3%	13.4%	3.9%	11.4%	20.5%
Riverside	2,189,641	80.7%	7.0%	1.9%	6.7%	0.4%	46.9%	3.3%	22.6%	15.6%
Sacramento	1,418,788	65.1%	10.8%	1.6%	15.4%	1.2%	22.3%	5.9%	17.4%	15.7%
San Benito	55,269	88.5%	1.3%	3.1%	3.4%	0.4%	57.9%	3.3%	29.5%	13.7%
San Bernardino	2,035,210	77.5%	9.5%	2.0%	7.1%	0.5%	51.1%	3.4%	28.0%	14.3%
San Joaquin	685,306	68.4%	8.1%	2.0%	15.7%	0.7%	40.1%	5.1%	23.5%	16.9%
Santa Cruz	262,382	87.9%	1.4%	1.8%	4.8%	0.2%	32.9%	4.0%	15.1%	11.7%
Shasta	177,223	88.8%	1.0%	3.1%	2.8%	0.2%	9.1%	4.2%	22.3%	17.3%
Solano	413,344	60.7%	14.9%	1.3%	15.4%	1.0%	25.2%	6.7%	21.4%	12.2%
Sonoma	483,878	85.7%	1.9%	2.2%	4.1%	0.4%	25.9%	3.7%	17.6%	16.9%
Stanislaus	514,453	84.3%	3.2%	1.9%	5.8%	0.9%	43.5%	3.8%	27.3%	15.0%
Tulare	442,179	88.4%	2.2%	2.8%	4.0%	0.2%	62.3%	5.9%	28.0%	11.7%
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine*	191,208	*	*	*	*	*	*	*	*	*
Yuba	72,155	79.6%	3.9%	3.0%	7.2%	0.5%	26.9%	5.9%	24.8%	12.2%

^ Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

**Source: 2012 California Health Interview Survey

* Data on race/ethnicity could not be ascertained for multiple counties defined as CHIS regions.

	Dark Pink: This region meets 3 of the 3 criteria selected for breast cancer communities of focus and is thus designated as high priority for breast cancer screening intervention based on this assessment.
	Medium Pink: This region meets 2 of the 3 criteria selected for breast cancer communities of focus and is thus designated as medium priority for breast cancer screening intervention based on this assessment.