

# The San Francisco Cancer Initiative SF-CAN

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# An Epidemiologic Perspective

- Cancer prevention has for many decades been an important target for making a very large impact on cancer incidence and mortality.
- Up to 50-60% of cancers could be prevented, if what we currently know about the causes of cancer and their prevention could be put into practice (Colditz 2006;2012).
- Now with new understanding of the role of biology, behavior and social determinants coupled with the tools of data science and IT, we have the opportunity to implement what we know with greater impact.
- What might a comprehensive, integrated, transdisciplinary approach to cancer prevention look like in a major U.S. metropolitan area?

# Objective

- Cancer centers supported by the National Cancer Institute are charged with addressing the cancer burden in their **catchment area**
- This initiative describes an approach to use cancer surveillance data to describe the cancer burden and define a regional research agenda
- We applied this approach to the University of California, San Francisco (UCSF) Helen Diller Family Comprehensive Cancer Center

# The Approach

- What population are we talking about?
- How do we identify them?
- How do we assess the cancer burden in this population?
- What are the actions and research needed to address the cancer burden in this population?
- How do we prioritize?
- Who are the collaborators?
- What resources can be brought to bear?
- How do we evaluate progress and success?

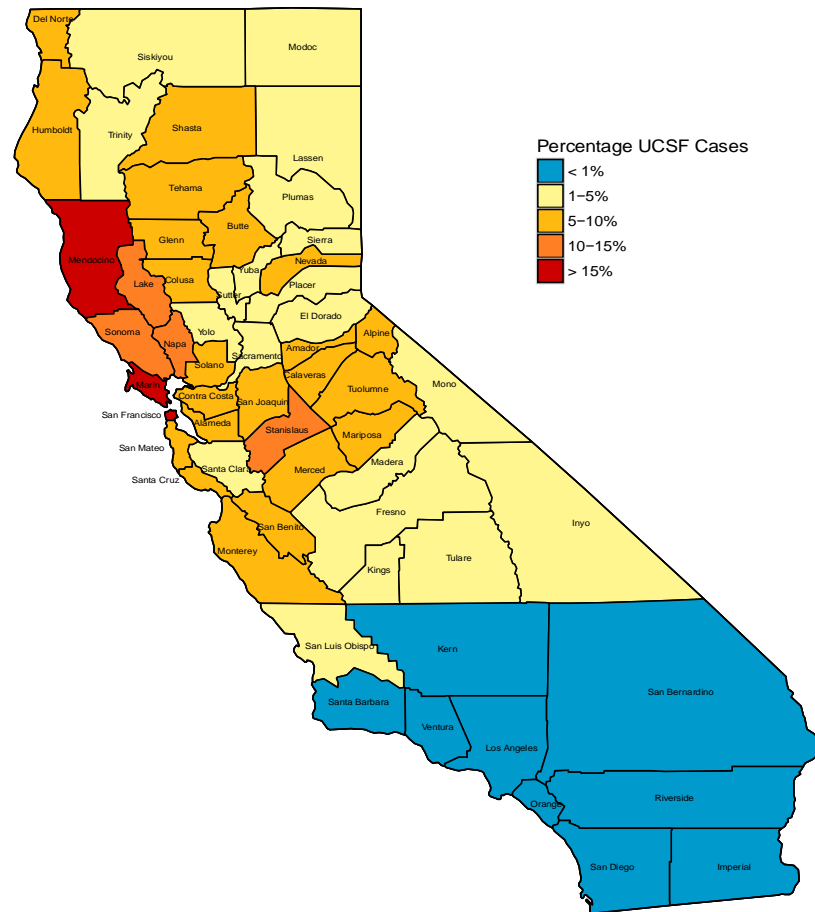
# The Catchment Area...

Must be defined and justified by the center based on the geographic area it serves. It must be population based, e.g., using census tracts, zip codes, county or state lines, or geographically defined boundaries. It must include the local area surrounding the cancer center.

– CCSG Guideline – Feb 19, 2013 page 1

# UCSF Cancer Cases as a % of all Cancer Cases in a County, 2010-14

UCSF as % of CCR cases, by county, averaged over 2010–2014



# The Cancer Burden in the Population?

- Number of Cancer Cases
- Incidence and Mortality Rates
- Cancer Trends
- Risk Factors
- Disparities
- Cancer Costs
- Cancer Survivors

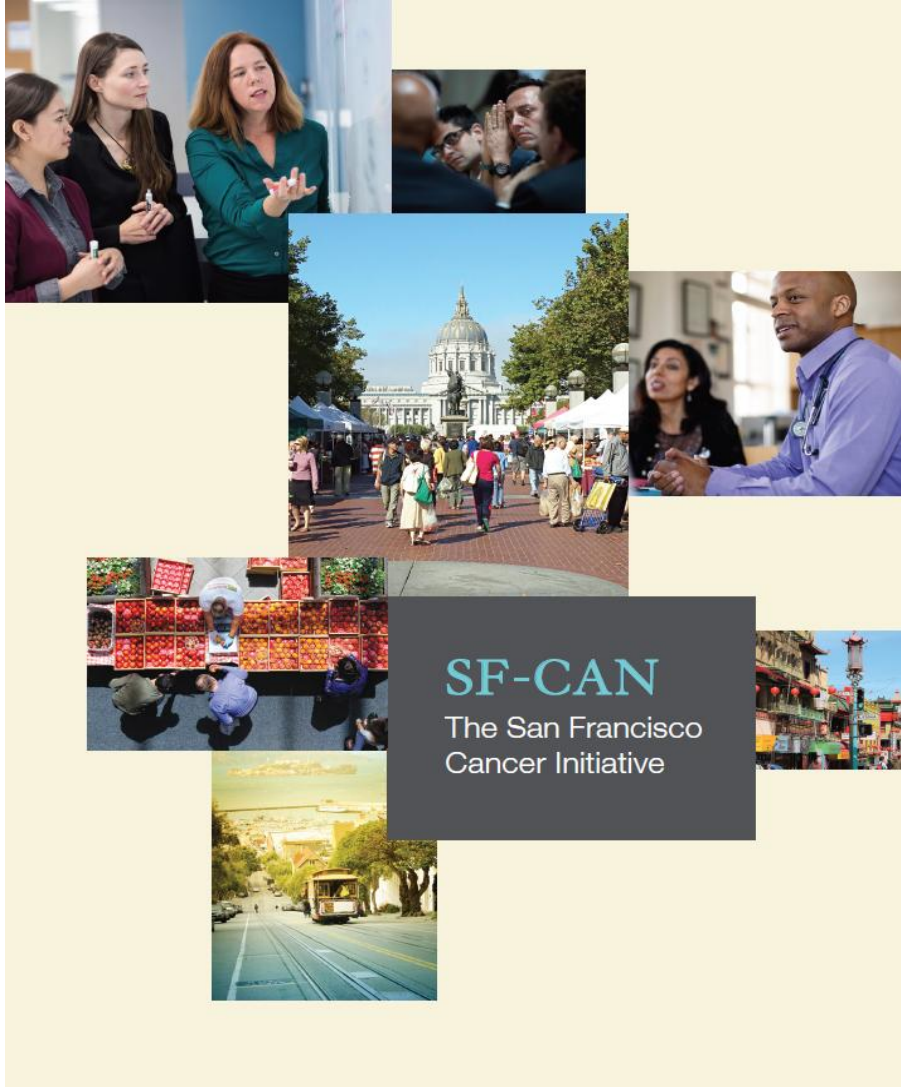
# Characteristics of the Cancer Burden in Catchment Area

- Tobacco-induced cancers remain the first cause of cancer mortality – lung
- High degree of race/ethnic diversity and disparities in cancer rates
- High incidence areas for breast and prostate cancer (e.g., Marin County)
- Environmental exposures – farming, industry
- HIV/AIDs associated cancers - NHL
- Cancers associated with Asian and Latino populations



# San Francisco Cancer Initiative

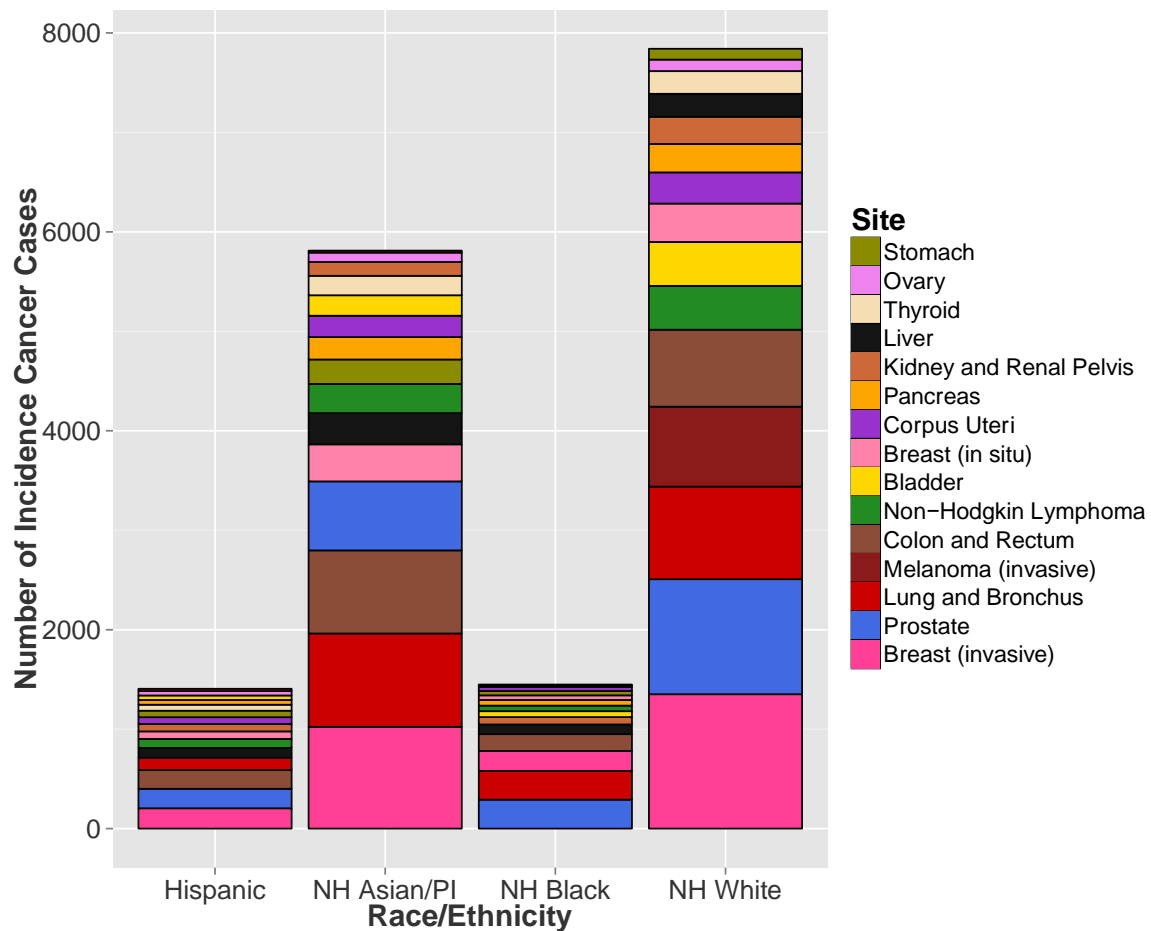
- Our goal is to reduce the cancer burden and particularly address disparities of incidence and outcome by harnessing innovative science, new technologies and our knowledge of needs of all the citizens of San Francisco.
- Will take a broad long-term population health perspective.
- A multilevel—genes to society view of the determinants of cancer.
- A transdisciplinary approach with teams, community partners and political leaders.
- Tie into both the needs of the people and innovations in science coming from ‘precision population health’ and our capacity to harness ‘Big Data’.
- An investment for San Francisco with major new funding.



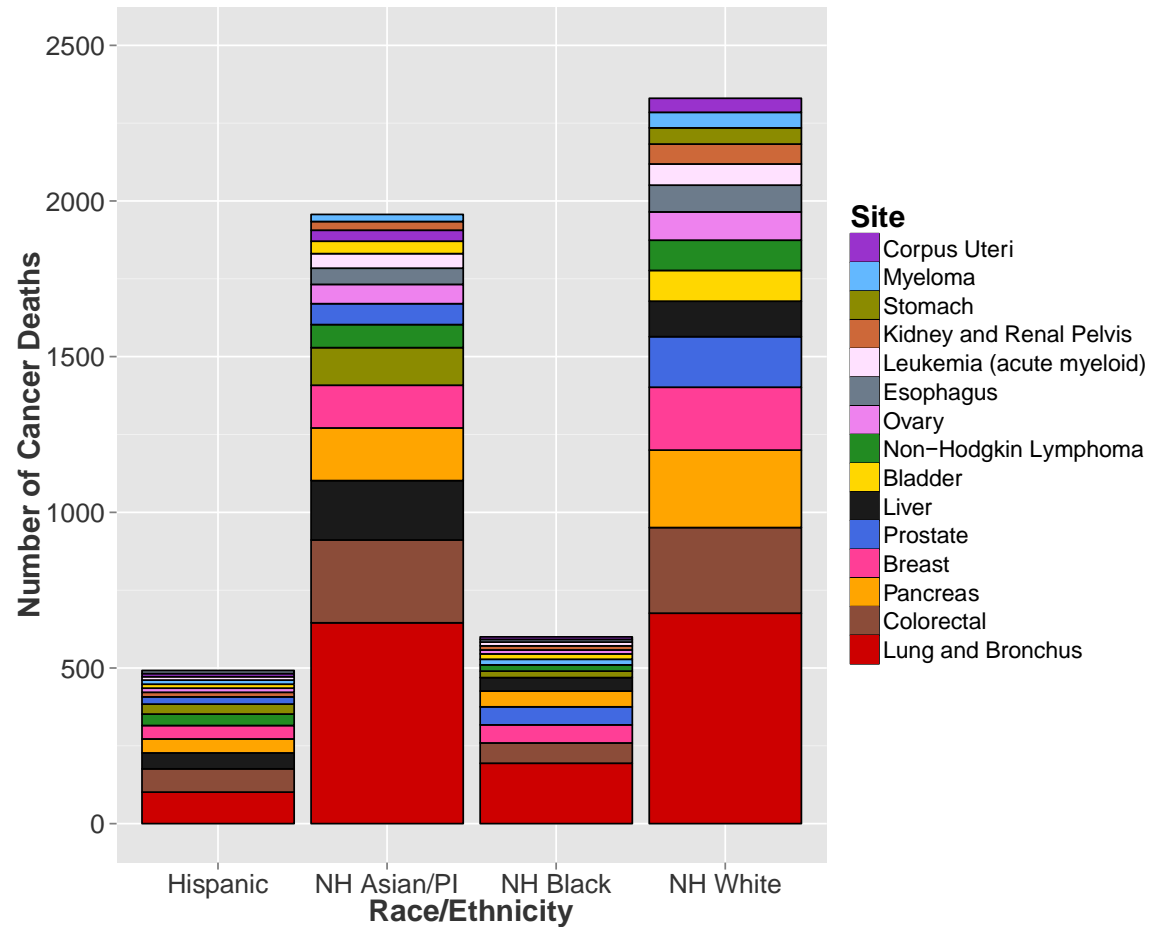
# The Nature of the Cancer Burden

- San Francisco population in 2015 was 849,774.
- In San Francisco 5.4% of the population is black, 47.6% are white and 34.2% are Asian Americans. 15.7% are Latino.
- Over the most recent 5 year period there were ~3950 new cancer cases per year and 1388 deaths. In 2012 there were 3951 new cases and 1362 deaths.
- The 4 most common sites (prostate, breast, lung and colorectal cancer) account for 48% of all new cases and 44% of deaths.
- The top 10 cancers account for 68% of new cases and 73% of deaths.
- The trend in both incidence and mortality is downward at ~6% per year over the last 5 years; 12% since it peaked in 1991.

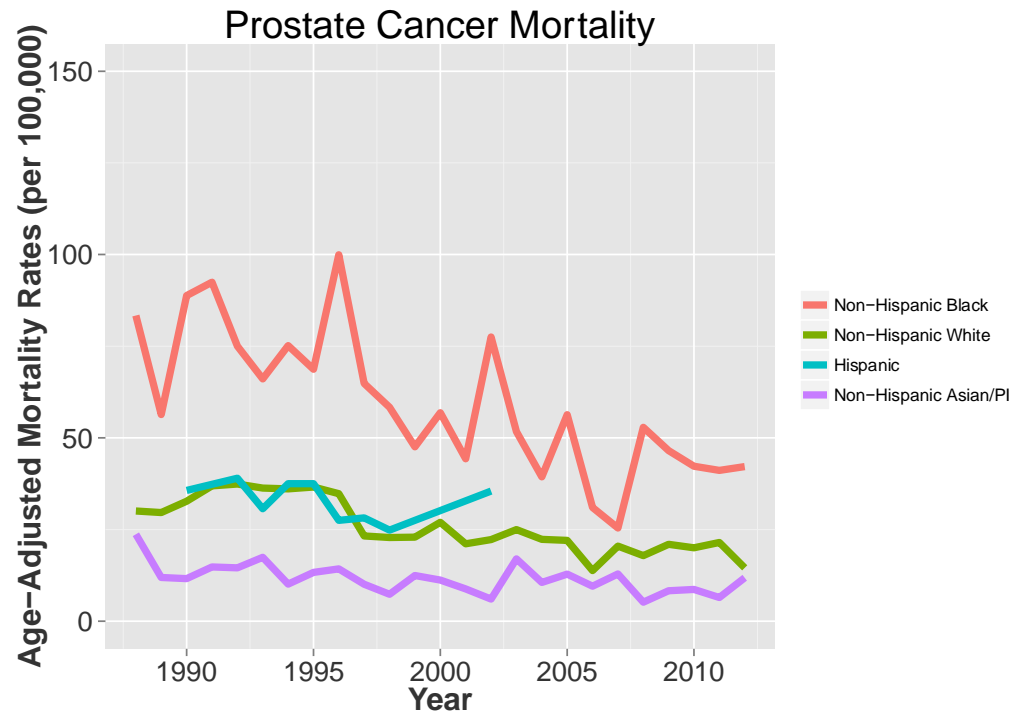
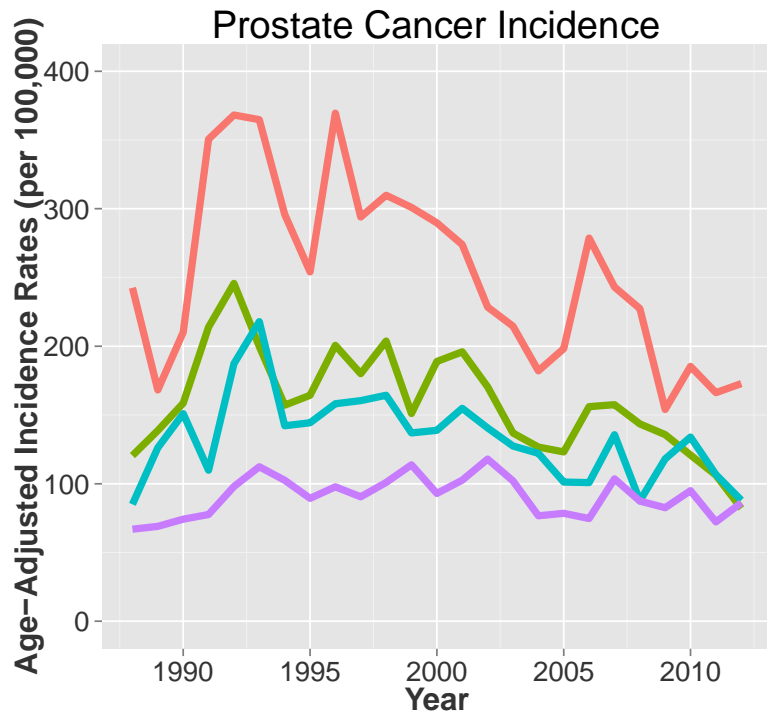
# Incident Cancer Cases for San Francisco County, 2008-2012



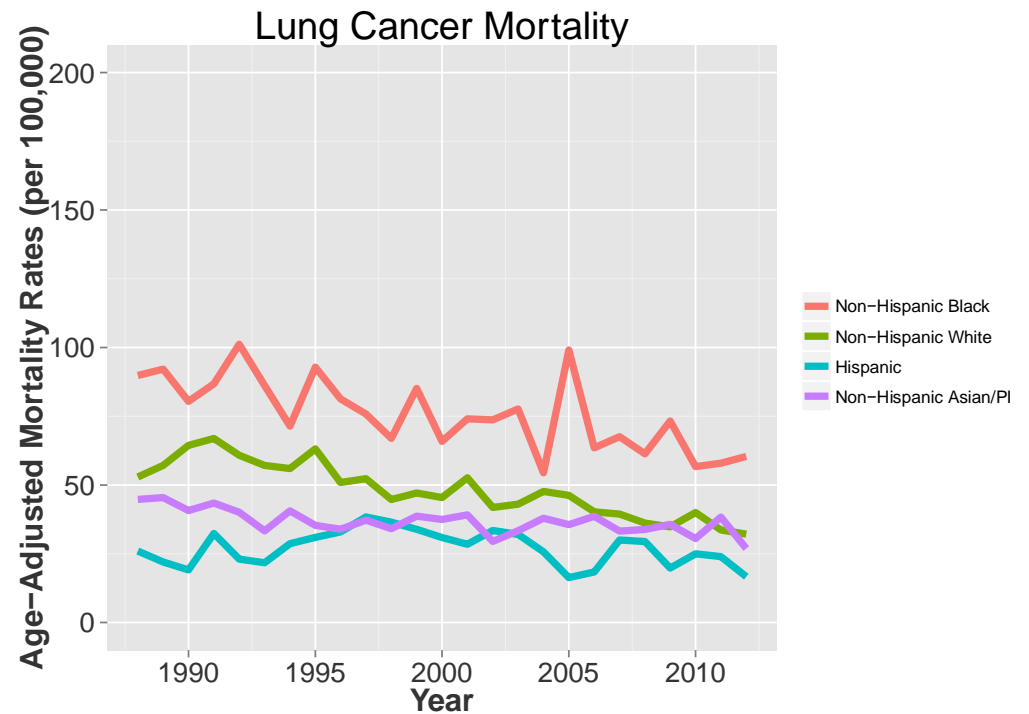
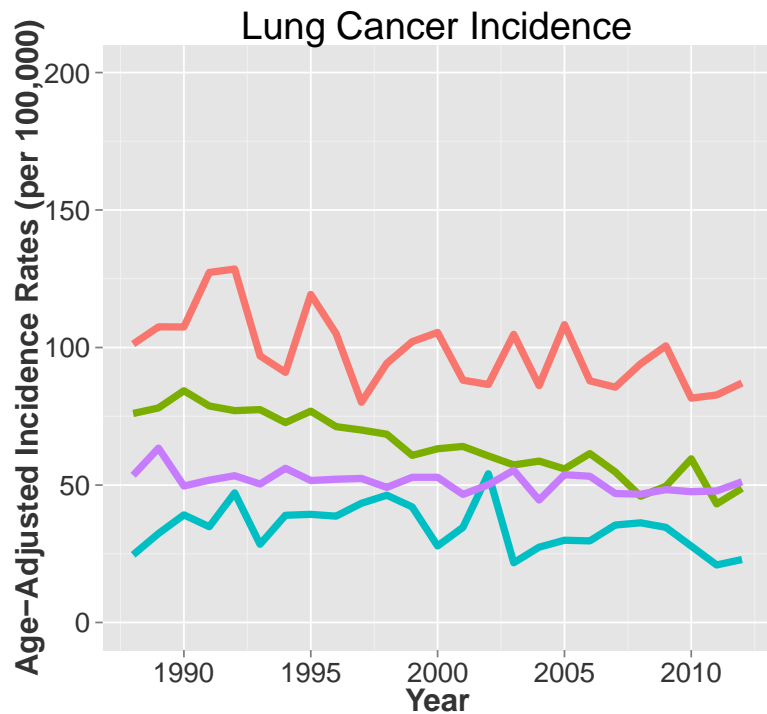
# Cancer Deaths for San Francisco County, 2008-2012



# Prostate Cancer Trends (San Francisco County, 1988-2012)



# Lung Cancer Trends (San Francisco County, 1988-2012)



# What Areas for Initial Concentrated Effort ?

- Tobacco Initiatives – high risk users and policy
- Screening for Colorectal Cancer in vulnerable populations.
- Screening and treatment of Hepatitis C to prevent Liver Cancer
- Risk based screening for AA men and better access and higher quality of care for PSA+ men.
- Improvements in breast cancer screening through access and risk based screening procedures.



# SF-CAN

- Documents the Cancer Burden in terms of incidence, mortality, trends, disparities, and cost.
- Localizes the cancer burden and disparities with the help of geospatial technologies.
- Identifies UCSF investigators and the partnerships with past work in San Francisco.
- Creates a partnership for “collective impact”.
- Introduces innovative ideas for interventions and programs to make a measureable difference.
- Evaluates progress.
- Identifies areas for further research.

# Opportunities for Research

- Participants for clinical and epidemiologic research - biospecimens
- Social determinants of cancer
- Dissemination and Implementation research
- Surveillance for outcomes
- Reducing disparities
- Environmental exposures and cancer
- Quality of care variations
- Complex systems research

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