

MASALA Community Forum



DRS. ALKA KANAYA & NAMRATHA KANDULA

UCSF & NORTHWESTERN UNIVERSITY

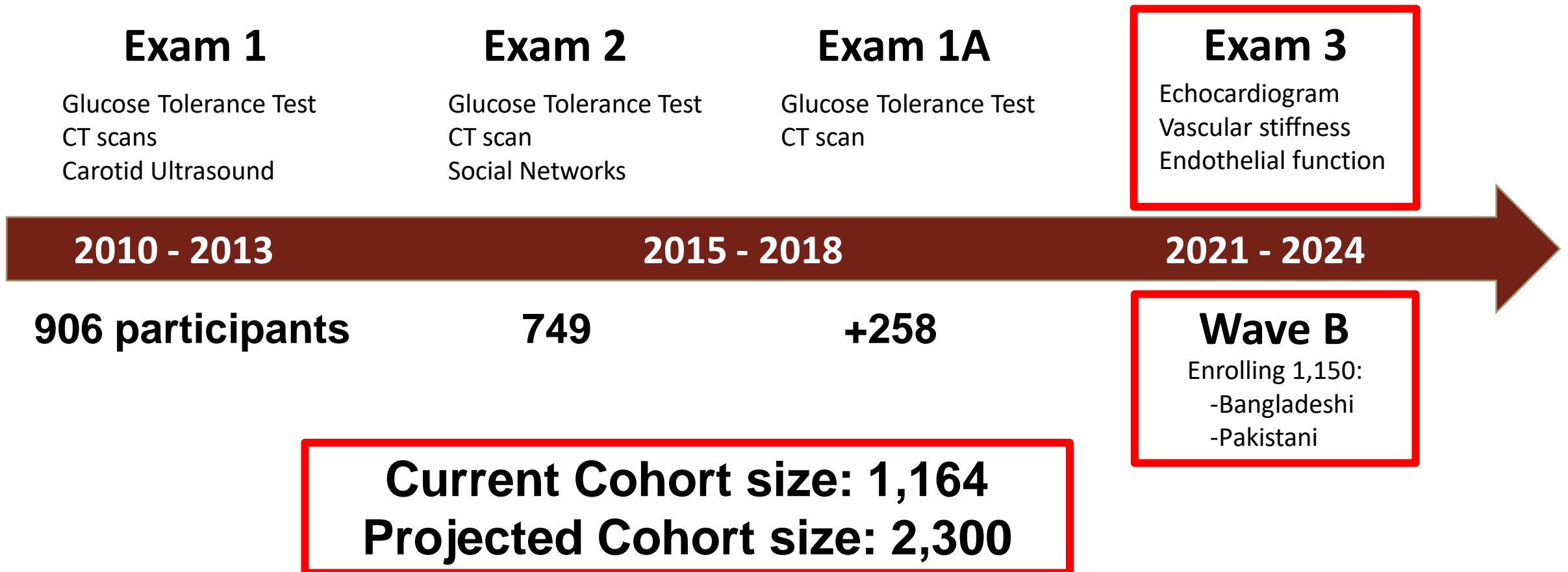
APRIL 28, 2024

Goals for today

1. Share MASALA study updates
2. Highlight newest results:
 - Diet
 - Coronary artery calcium
3. What's next for MASALA?
4. What would you like us to study?

MASALA Study Timeline

Principal Investigators: Drs. Alka Kanaya, Namratha Kandula, Nadia Islam



Current Status of Exams

Exam 3: (UCSF + Northwestern)

- 746 participants returned so far
- Another 60 more to go...
- Hope to finish by August 2024
- Please call if you haven't come in between 2021-2024

Wave B: (Northwestern + NYU)

- Have enrolled 950 new participants
- Another 200 more to go
- Please tell your Pakistani and Bangladeshi friends about the study so that they can participate!
- Hope to finish recruitment by November 2024

South Asian foods



165 item FFQ: many different diet analyses...



Participant ID #

FOOD FREQUENCY QUESTIONNAIRE

MASALA

VEGETABLES, PEAS AND BEANS continued	How often? <i>Write in ONE column only</i>				Average Serving	Your serving size		
	Per Day	Per Week	Per Month	Per Year or Never		Less than Average (small)	Average (medium)	More than Average (large)
45. WHITE SQUASH, GHIA, ZUCCHINI, EGGPLANT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. VEGETABLE KOFTA CURRY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. LETTUCE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 cup or 250 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. CUCUMBER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. CARROTS, raw or boiled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. CARROTS SABJI stir fried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. MIXED VEGETABLE SALADS (kachumbar, onion, tomato, pepper)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. SWEET POTATO, LEEKS, RADISH, OTHER ROOTS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. OTHER VEGETABLES, CURRY (example mushrooms, celery)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. OTHER VEGETABLES, STIR FRIED (example mushrooms, celery)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
COOKIED DRIED BEANS AND LENTILS								
55. LENTIL/DAL CURRY (moong, masoor, urad, chana dal, split peas, besan curry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. SAMBHAR, RASAM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/2 cup or 125 ml	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1. Dietary patterns
2. Diet quality (AHEI-2015)
3. Macronutrient composition
4. Vegetarianism (38%)
5. Healthy and unhealthy plant-based diet
6. South Asian Mediterranean diet
7. DASH Diet
8. Metabolomics of diet

Mediterranean-style diet

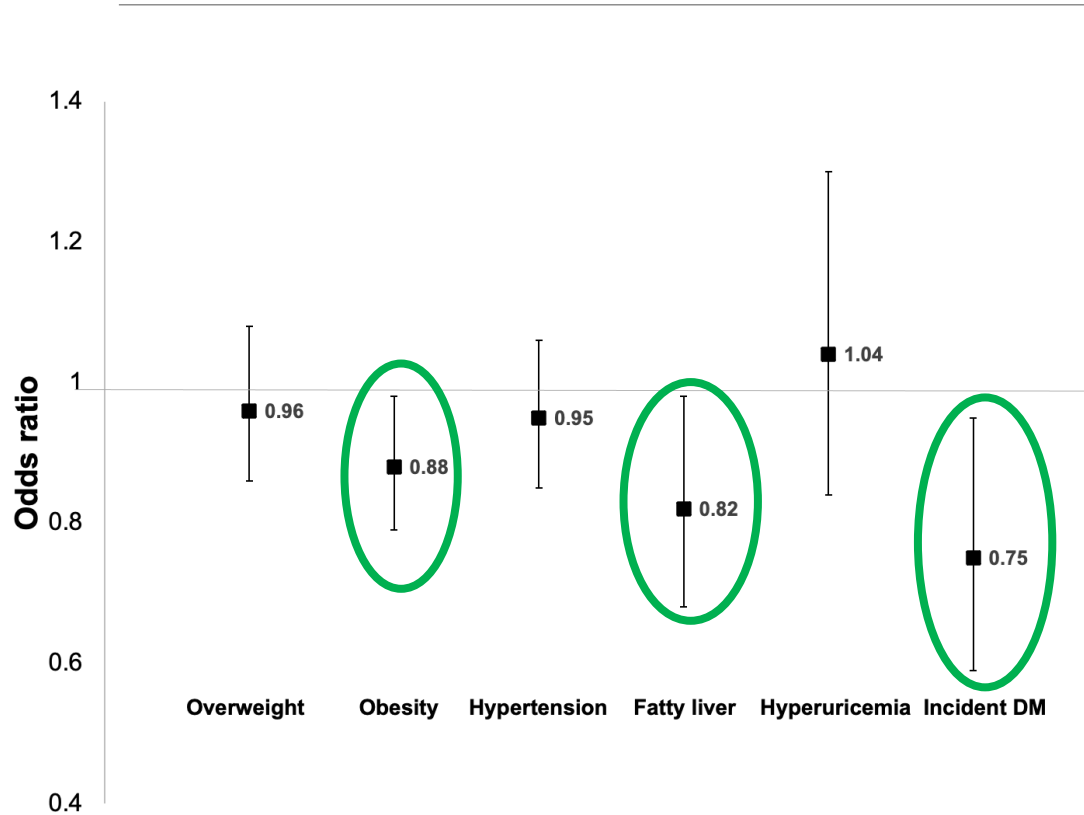
Created a South Asian Mediterranean diet score by grouping foods into 9 categories:

- Vegetables, fruits, legumes, nuts, whole grains, fish, monounsaturated/saturated fat ratio, red/processed meat, alcohol
- Participants above the median intake received 1 point/category; total score range between 0-9 points



Mediterranean-style diet and obesity & diabetes

Higher intake of a Mediterranean style diet with South Asian foods was linked to less obesity, less fatty liver, and a lower risk of developing diabetes over 5 years



DASH Diet Score

DASH Diet

Components



- Used these food items to create a DASH diet score
- **Higher scores** indicate a diet high in F/V/N/L/WG and lower in sodium, meat and SSB
- **Lower scores** indicate poor intake of F/V/N/L/WG and/or higher in sodium, meat, and SSB

Mediterranean-style diet vs. DASH diet

Mediterranean-style diet vs. DASH diet

Food/nutrient	Mediterranean diet	DASH diet
Vegetables	✓	✓
Fruit	✓	✓
Legumes	✓	✓
Nuts	✓	✓
Whole grains	✓	✓
Fish	✓	
Red meat/processed meat	✗	✗
Monounsaturated/saturated fat	✓	
Alcohol	✗	✗
Salt		✗
Sugar sweetened beverages		✗

DASH Diet Score and High Blood Pressure

	Lowest DASH score	Moderate DASH score	Highest DASH score
Women, %	30	44	60
Never smoked, %	72	83	93
No alcohol use, %	43	68	77
Ideal physical activity, %	55	66	77

DASH Diet Score and High Blood Pressure

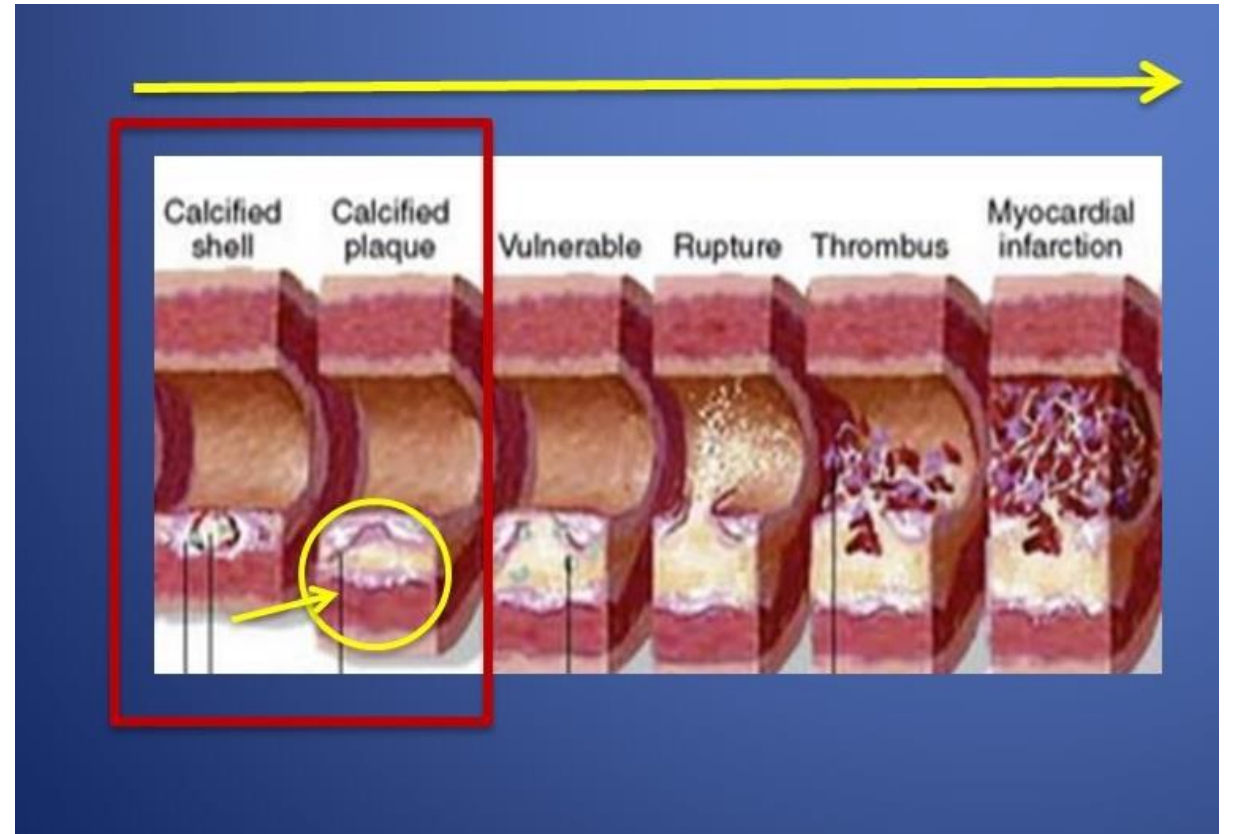
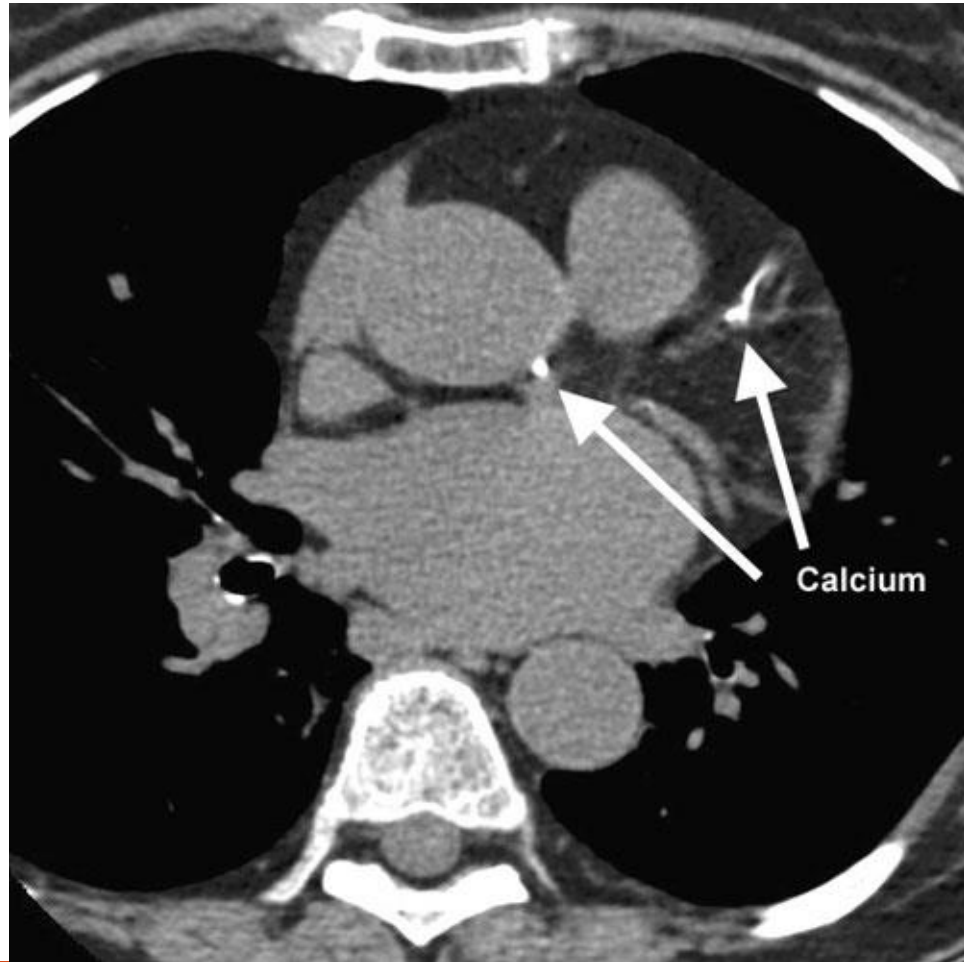
	Lowest DASH score	Moderate DASH score	Highest DASH score
Women, %	30	44	60
Never smoked, %	72	83	93
No alcohol use, %	43	68	77
Ideal physical activity, %	55	66	77
Developed high blood pressure, %	16	14	6

Those in the highest DASH score had a 67% lower risk of developing high blood pressure over 5 years compared to those in the lowest DASH score group (after adjusting for all other risk factors)

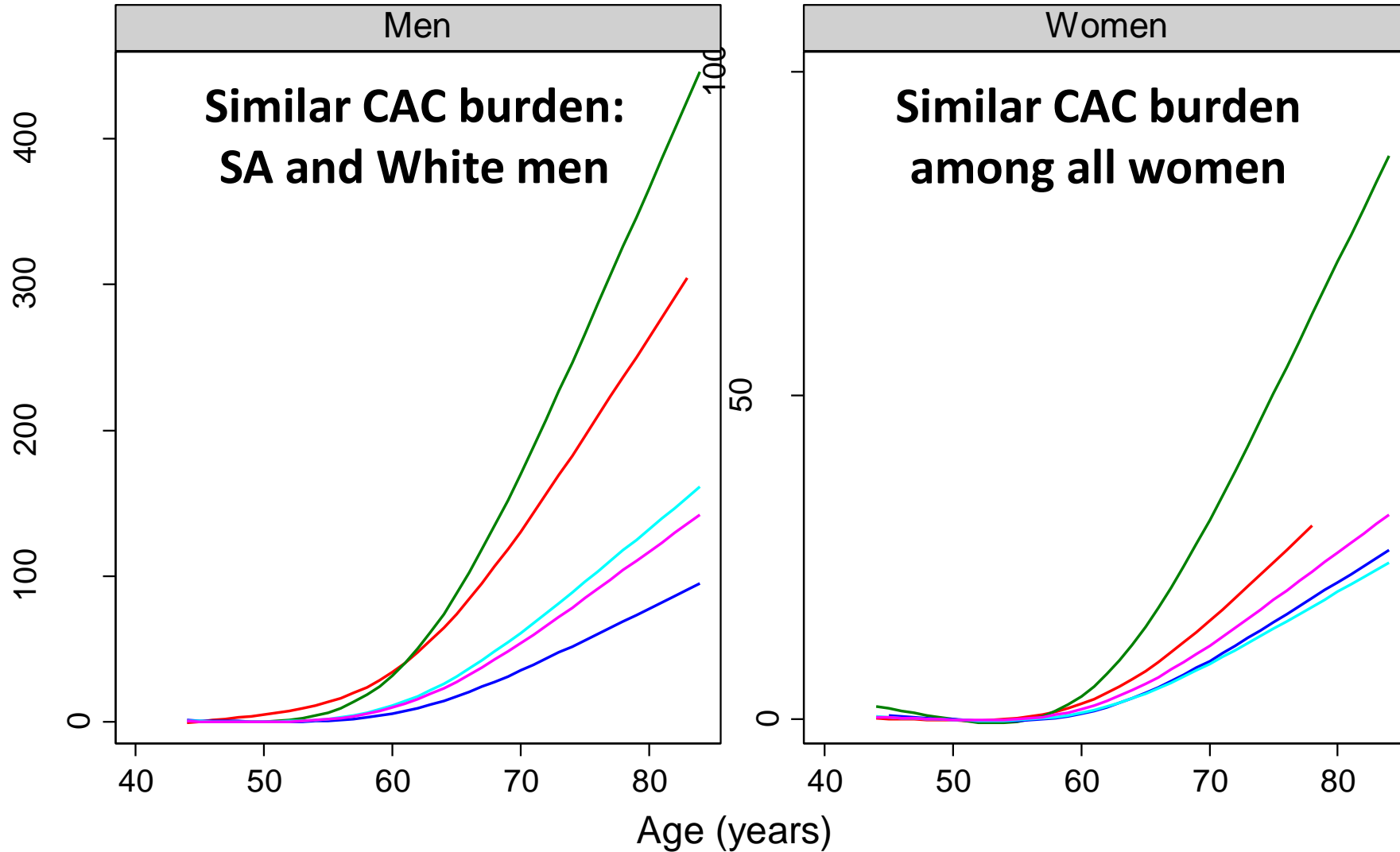
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Coronary Artery Calcium (CAC)



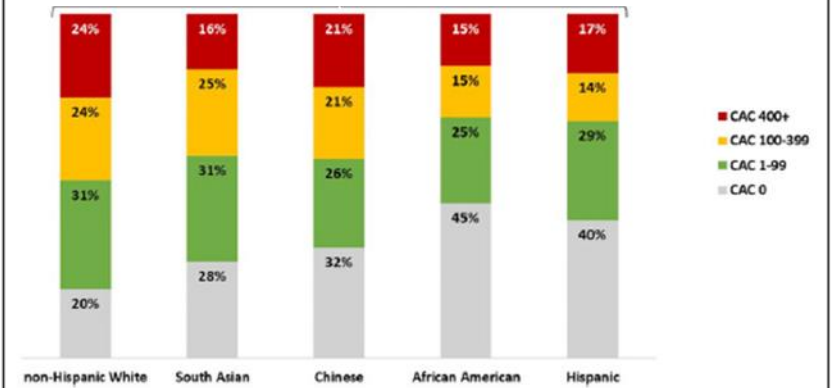
Coronary Artery Calcium



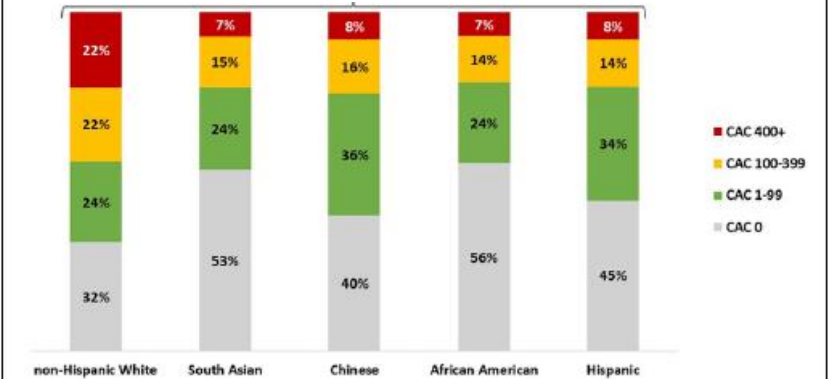
For South Asians and White individuals, those with diabetes had higher CAC.

Prediabetes did not increase the risk of CAC in South Asians.

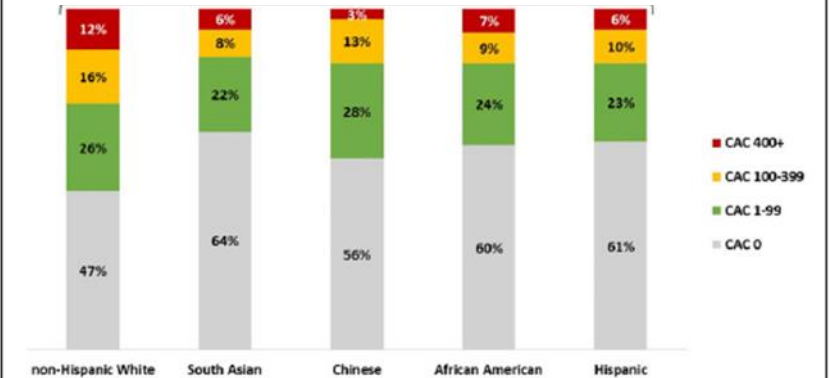
Participants with Diabetes:



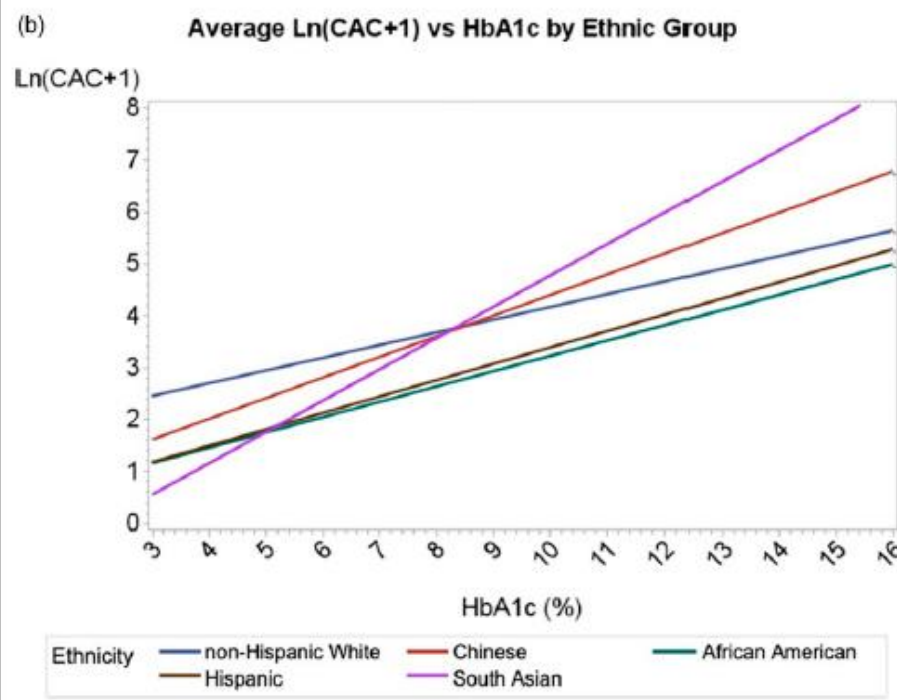
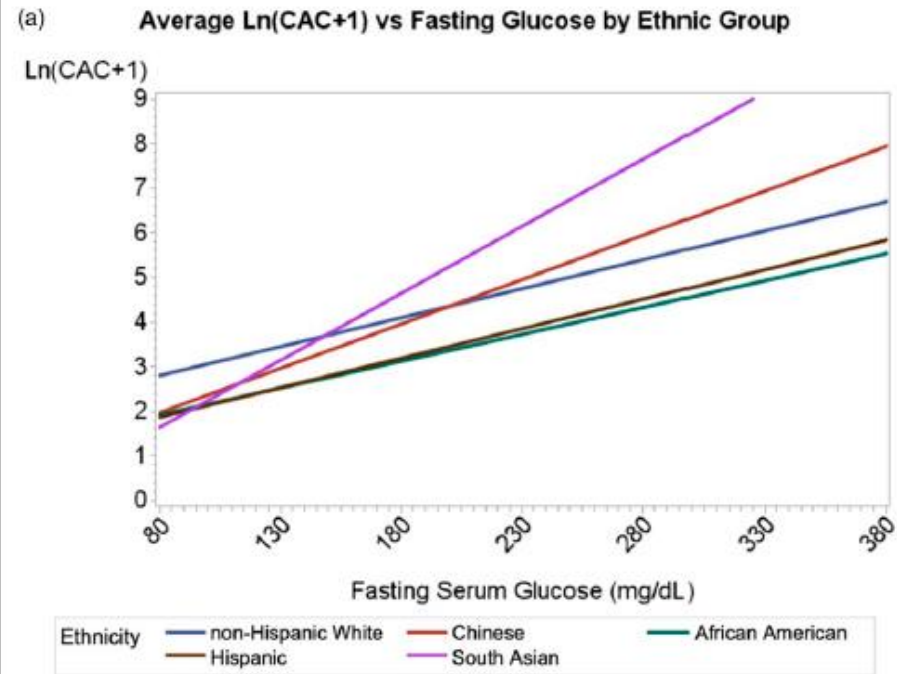
Participants with Prediabetes:



Participants without Diabetes:



The effect of glucose and Hba1c levels on CAC was strongest in South Asians followed by Chinese and Whites





**‘South Asians’
are not
all the same**

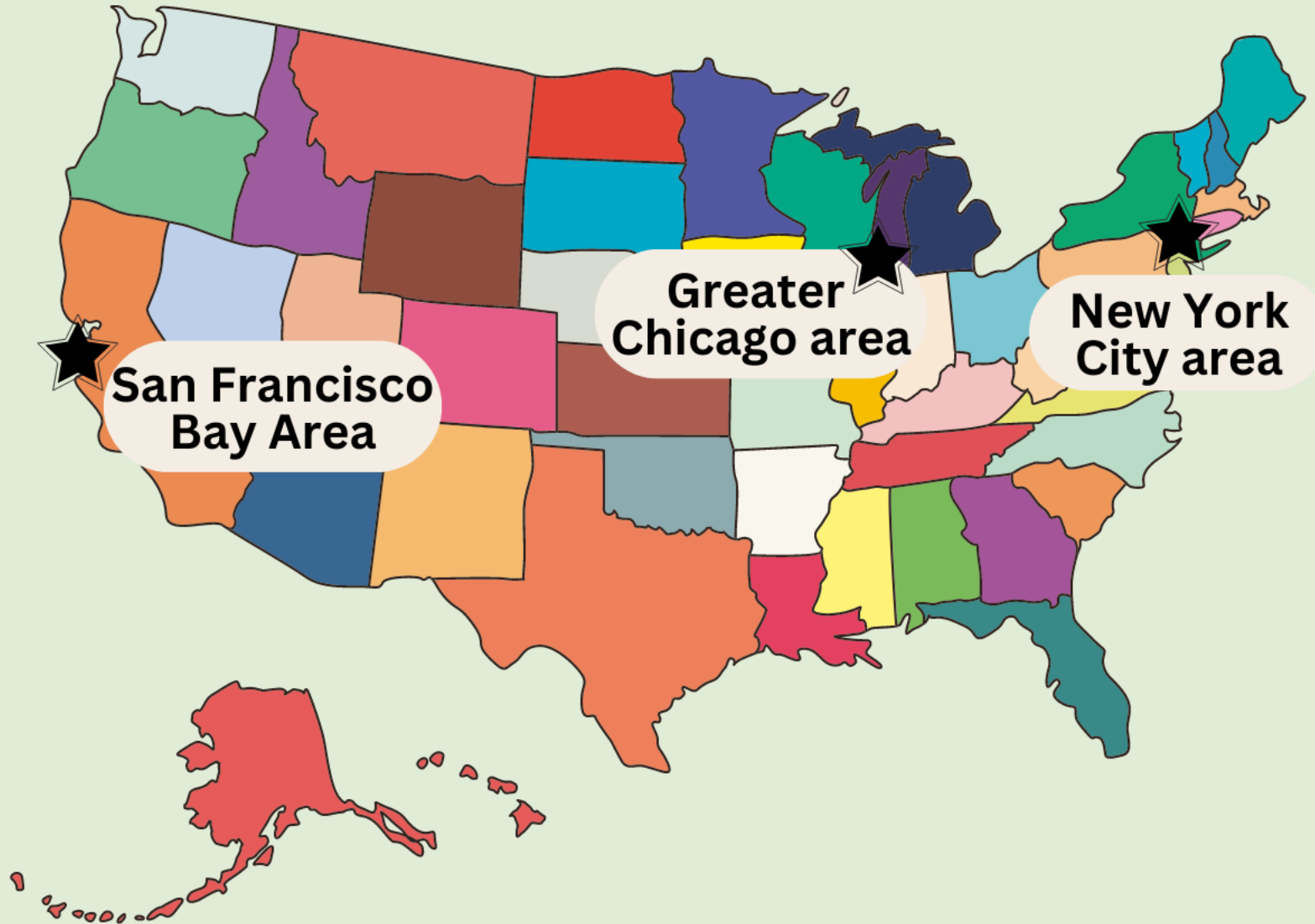
MASALA Study Expansion

New participants:

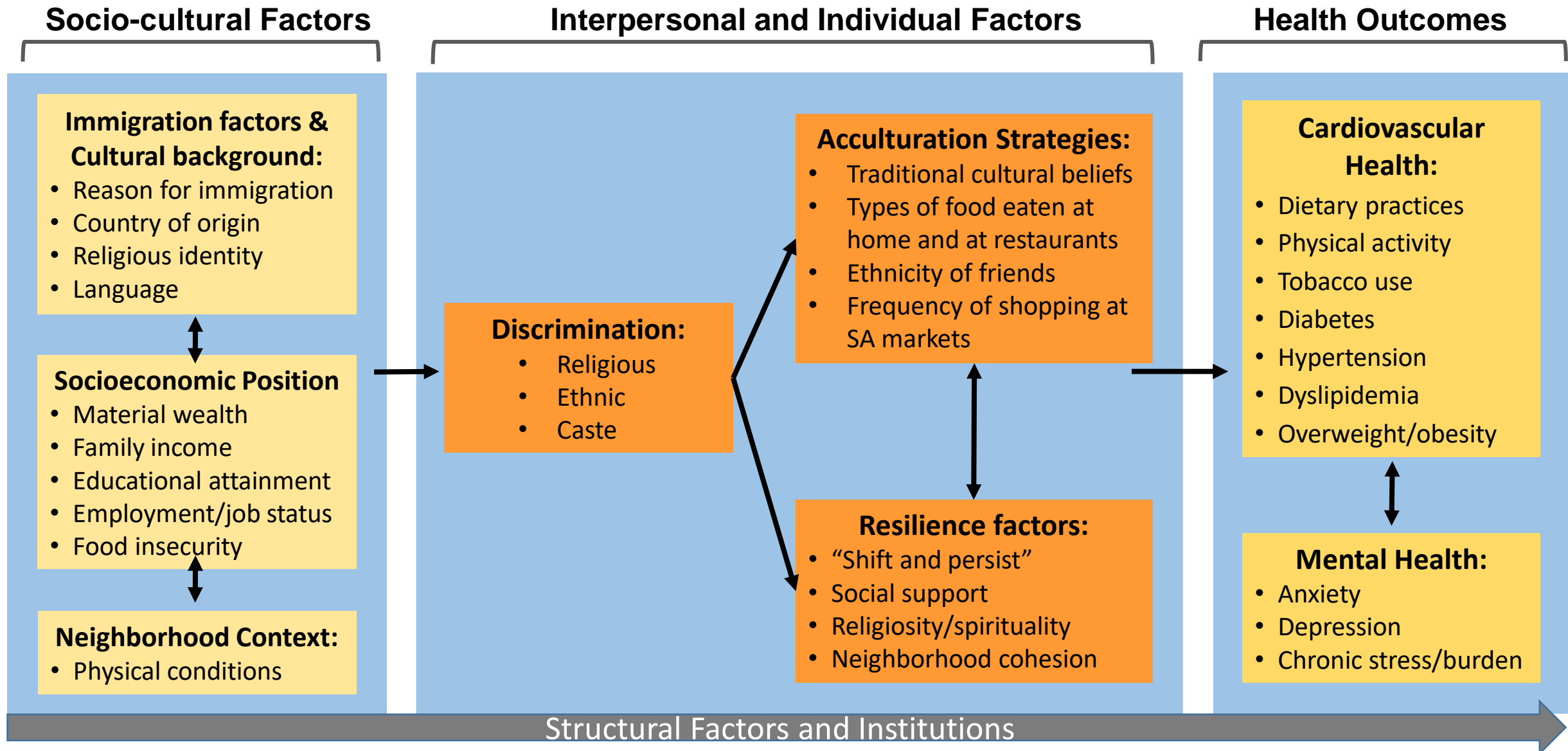
- 600 Bangladeshi
- 600 Pakistani
- 965 Indians (enrolled)

Goals:

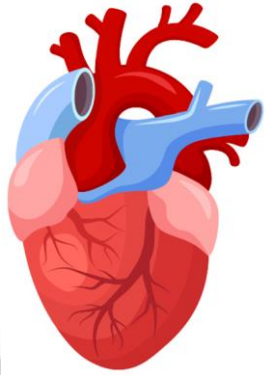
Compare risk profiles of the 3 largest SA subgroups with other U.S. groups



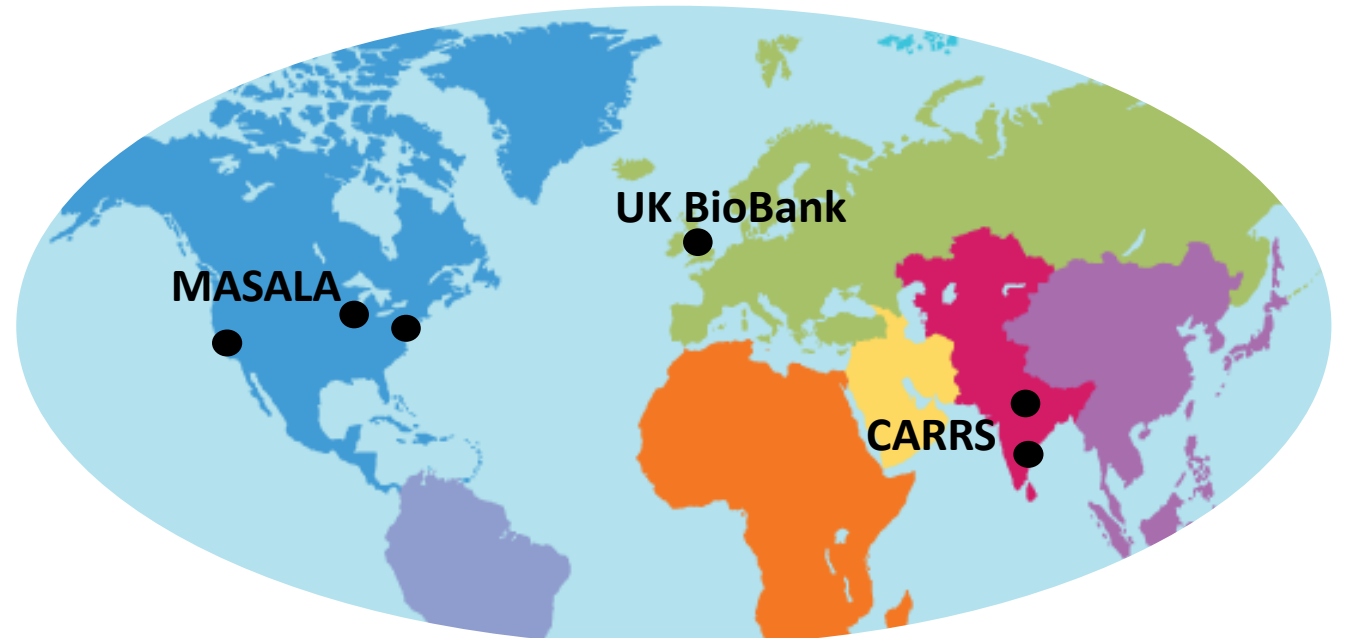
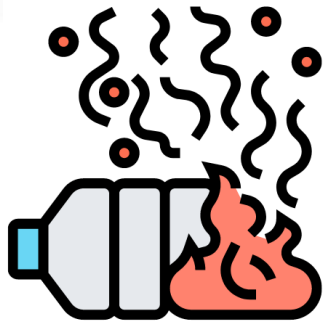
Conceptual Framework: Drivers of Health in South Asian Immigrants



What's next for MASALA?



MASALA²G



Collaborating with contemporary South Asian studies

UCSF: Coordinating Center and Clinical Site



Your follow-up is Critical

- ❖ **Please call us if you have a major change in your health status**
- ❖ **Call us if you have a new address, phone number, or email**
- ❖ **Please take part in our phone interviews.** If we leave a message for you, please call us back. We need to update your information each year.
- ❖ We sometimes send you forms asking you to give MASALA permission to collect your medical records. **Please return these forms quickly**



UCSF clinic: (415) 236-2725
Northwestern clinic: (872) 256-2155

Check out our website: masalastudy.org

The Mediators of Atherosclerosis in South Asians Living in America (MASALA) Study



Investigating heart disease
in the South Asian community

- [ABOUT](#)
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THE MEDIATORS OF ATHEROSCLEROSIS IN SOUTH ASIANS LIVING IN AMERICA (MASALA) STUDY

Questions?

What would you like us to study next?