



## Study of Women's Health Across the Nation (SWAN)

# Accessing and Utilizing SWAN Data and Biospecimens for Optimal Research Productivity: A Guide to the Process

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## SWAN Goals



To describe the chronology of the biological and psychosocial characteristics of the menopausal transition



To describe the effects of this transition on subsequent health and risk factors for age-related chronic conditions



Emphases placed on:

- Including multiracial/ethnic samples of participants
- Cohort comprises community or population-based samples

## Study Overview

### Cross-sectional telephone survey and screening: 1996-97, N= 16,000+

Brief snapshot on a large sample of mid-aged women (40-55): age of natural menopause, prevalence of surgical menopause, lifestyle, symptoms, health factors

### SWAN Cohort: In-Person Baseline: 1997-98, N=3302

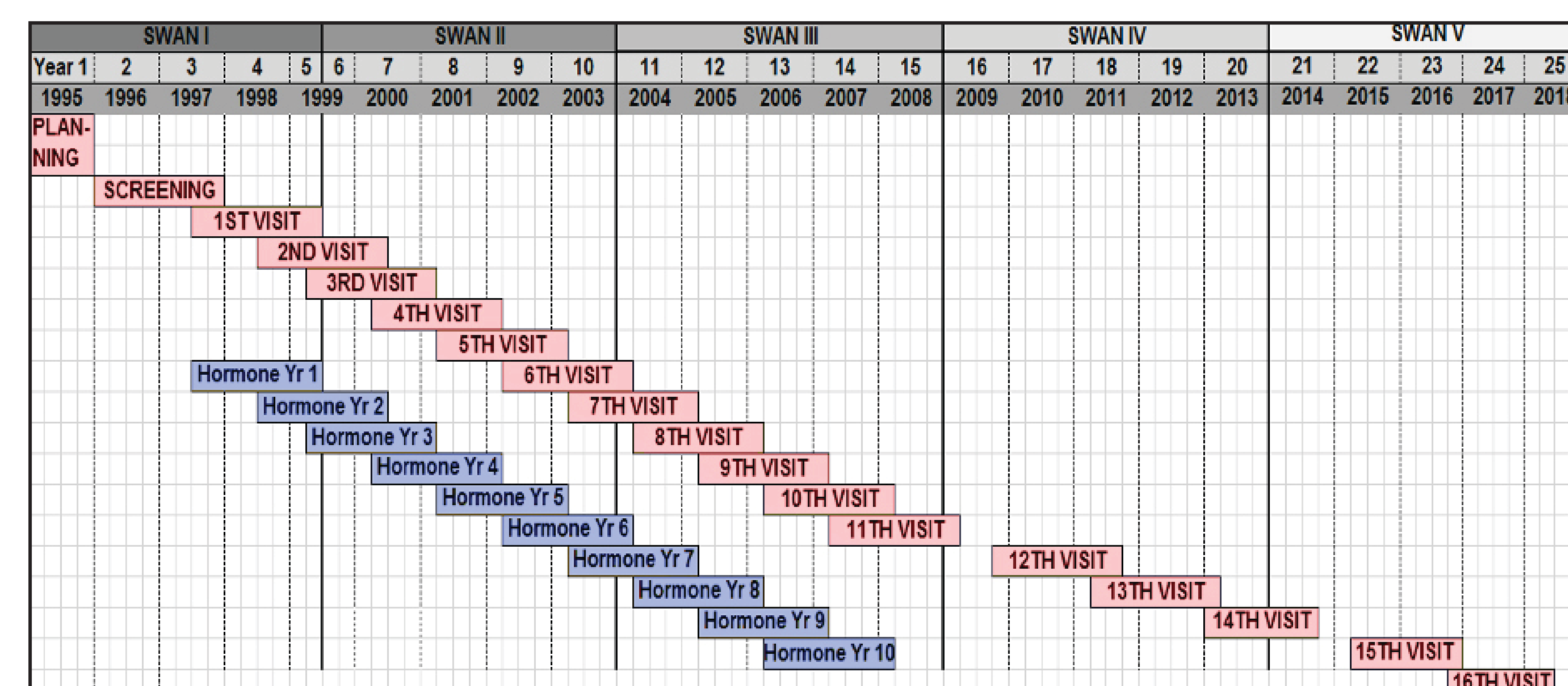
At each site, about half of the enrolled women were non-Hispanic white and about half were either Black, Japanese, Chinese or Hispanic.

- Aged 42-52
- Menses within past 3 months and not pregnant or breastfeeding
- Uterus plus at least one ovary intact
- No hormone medications

### Longitudinal follow-up of SWAN Cohort: 1997-2018

15 follow-up visits and a 16<sup>th</sup> visit at Bone sites

## Timeline of SWAN Visits

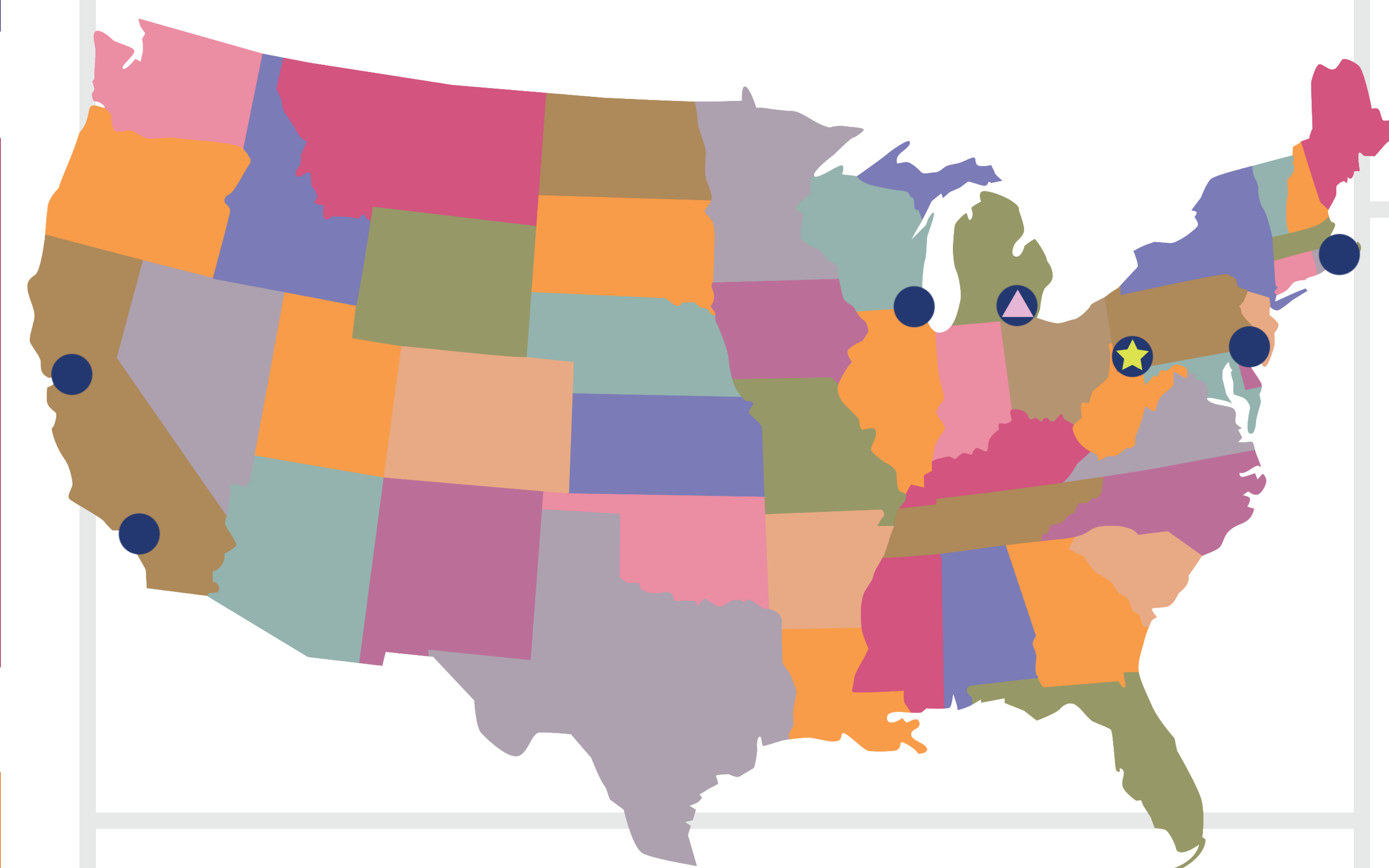


## Structure of SWAN

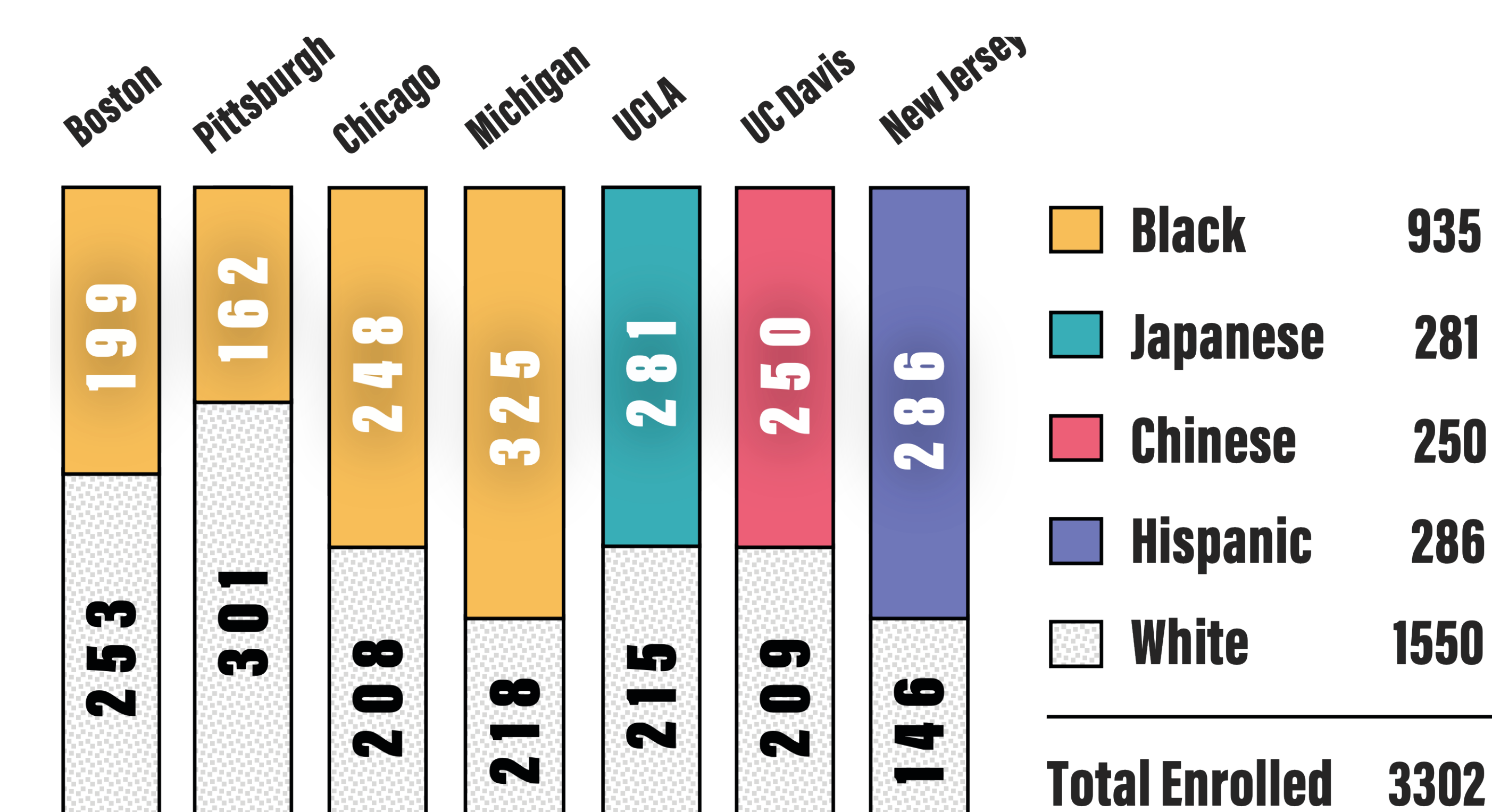
7 field sites across the United States: Boston, Pittsburgh, Newark, Detroit, Chicago, Los Angeles and Oakland CA

Coordinating Center at University of Pittsburgh

Central Laboratory at University of Michigan



## Diverse Racial Ethnic Cohort



## Reasons to Use SWAN Datasets and Specimens

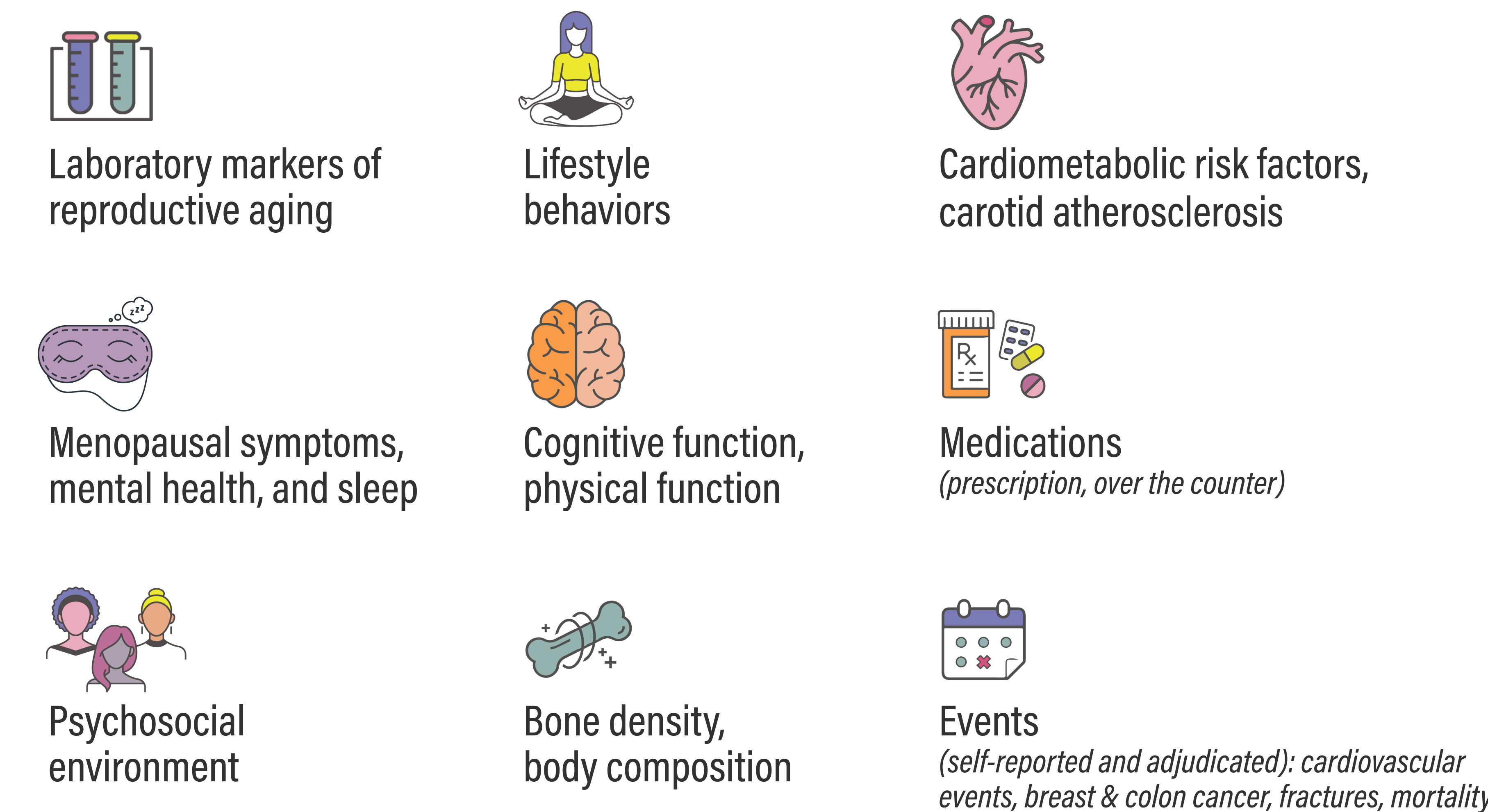
- Covers middle to older age; Longitudinal data spans ages 42-52 at baseline to 60-73 at last all-site follow-up
- Multiple follow-ups: up to 16 visits over 25 years
- Detailed information on menopause transition (menopause status, hormones, symptoms)
- Contains a broad range of physical and psychological measures
- Blood and urine specimens available

## SWAN Publications and Ancillary Studies

- > 500 publications based on SWAN data
- > 300 investigators have published SWAN data
- SWAN has served as the platform for > 40 funded ancillary studies, F31 and K-awards



## SWAN Data Collection

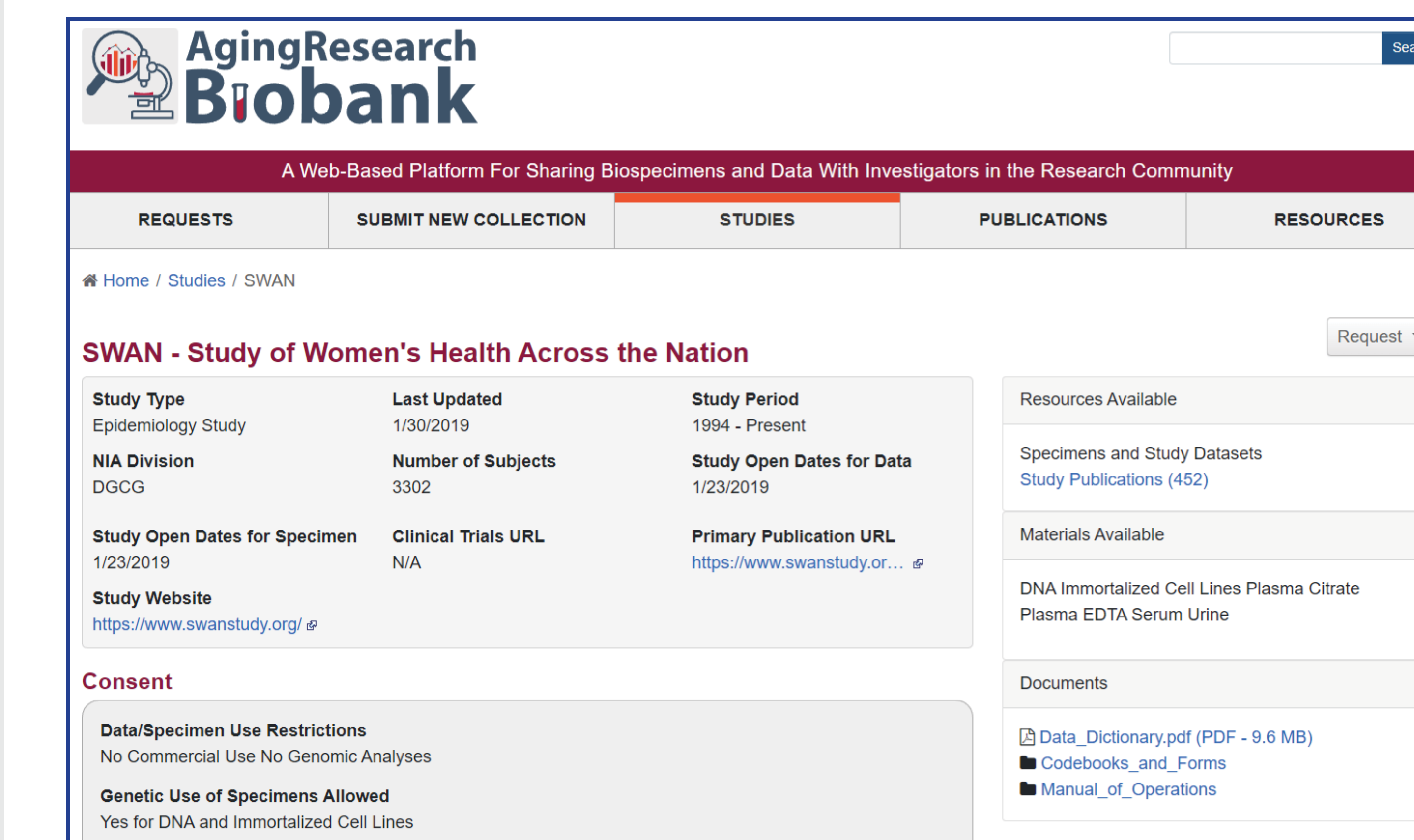


## SWAN Specimen Collection

- Serum, plasma, and urine specimens collected at each clinic visit
- Daily urine hormone assessments for ≤50 days annually for up to 10 years from urine specimens
- Repository vials stored at the NIA Aging Research Biobank

## Accessing SWAN Data and Specimens

[agingresearchbiobank.nia.nih.gov/studies/swan](https://agingresearchbiobank.nia.nih.gov/studies/swan)



## Steps to Request Data/Specimens from NIA

- Scientifically rigorous study proposal
- Documented IRB approval or waiver
- Funding if needed
- Data and/or material transfer agreement
  - Agreements created by the NIA Biobank for recipients of the data and/or specimens for use in research projects
- Non-commercial use to advance women's health research
- Limited datasets with variables required by specific aims



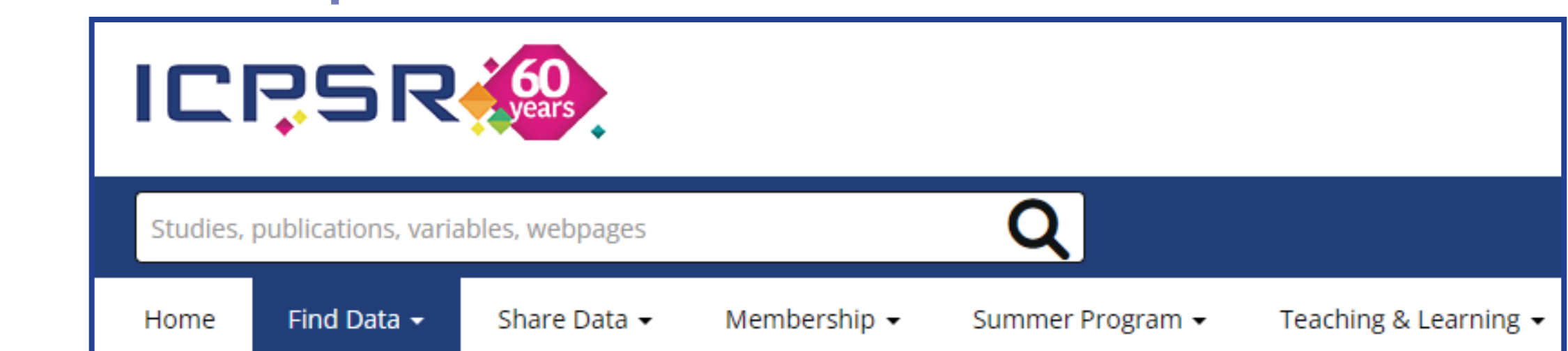
## Tips for Successful Applications

- Formulate relevant hypotheses involving women's health and demonstrate knowledge of pertinent prior SWAN research
- Minimal overlap with SWAN literature and current studies
  - Search publication lists on NIA Biobank website or PubMed to determine if hypotheses are novel and interesting
- Feasibility of proposal
  - Do the data required for key exposure and outcome definitions exist?
  - Can desired measures be obtained from existing specimens?
  - Adequate sample size, include power calculations
- Early communication with NIA Aging Research Biobank is critical to determine whether resources will meet your needs
- A collaborator from SWAN is often helpful given complexity of study; see [www.swanstudy.org](https://www.swanstudy.org)

## SWAN Data Resource

- SWAN data (not biological specimens) are also available at the National Archive of Computerized Data on Aging (NACDA)
- Includes SWAN Cross-sectional data and SWAN Baseline to Visit 10
- Requires registration but no application
- Recommended for student projects

[www.icpsr.umich.edu/web/ICPSR/series/00253](https://www.icpsr.umich.edu/web/ICPSR/series/00253)



## More Information

[www.swanstudy.org](https://www.swanstudy.org)



## Conclusions



An expansive collection of SWAN biospecimens and datasets are available to external investigators and trainees.



Resources can be used for pilot studies, research projects for advanced trainees, and manuscripts focused on special topics.

## Acknowledgements

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We wish to express our appreciation for the women who have participated in SWAN for over 25 years and given their time and information for the benefit of women's health!

