

General study updates

Annual Progress Report available online:
<https://www.whi.org/docs/2026-Annual.pdf>

Garnet Anderson, PhD
WHI Clinical Coordinating Center
Fred Hutch 40th Anniversary Endowed Chair
Fred Hutchinson Cancer Center
May 7, 2026



Thanks to the WHI team

Participants
CCC and RC Staff
Adjudicators
Committee and SIG Leaders and Members



Seattle, May 2025

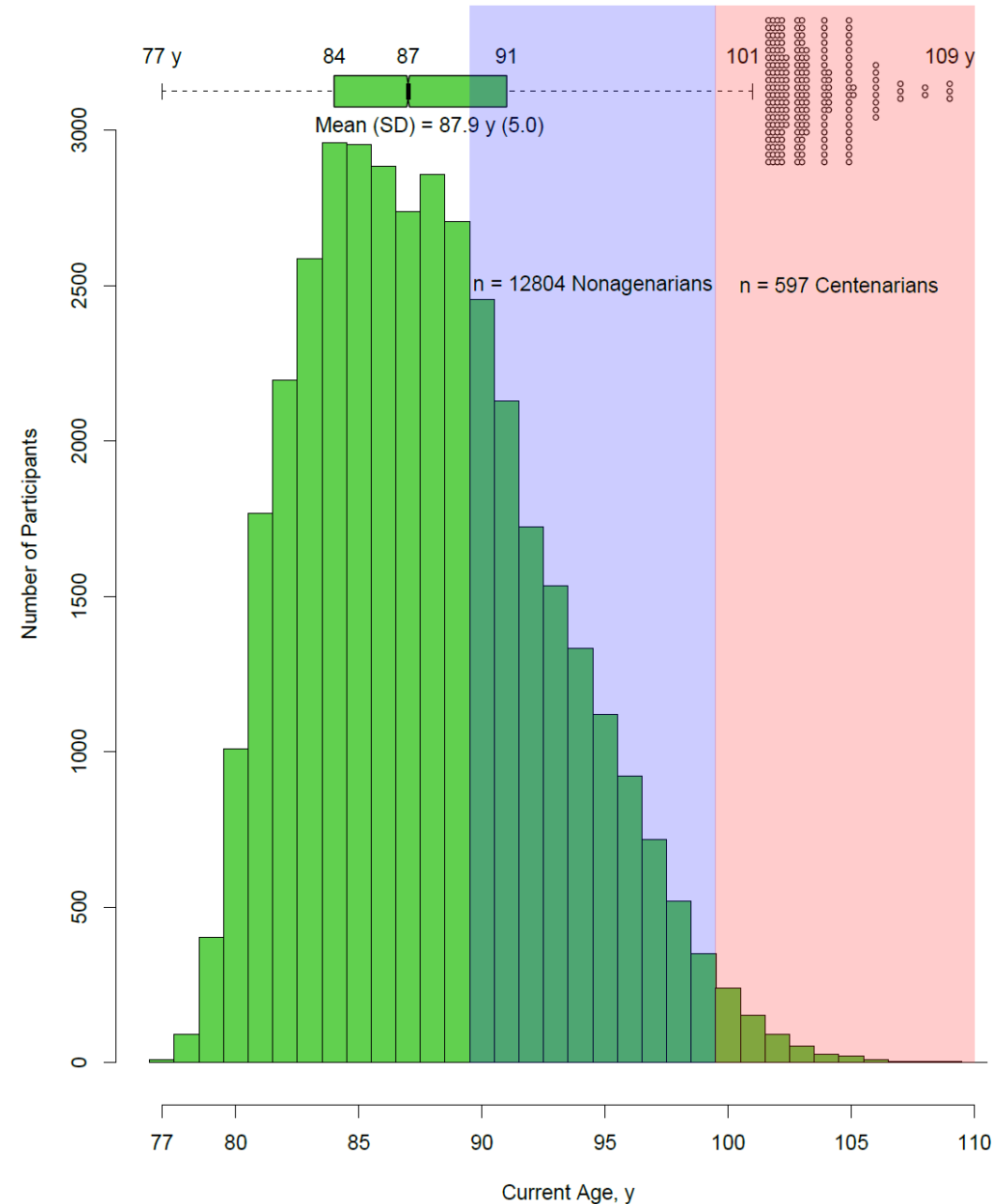
Age and race of 38,562 active participants

Data as of February 21, 2026

Race/ethnicity	N	%
Hispanic/Latina	1448	3.8
American Indian/Alaska Native	73	0.2
Asian	933	2.4
Native Hawaiian/Pacific Islander	27	0.1
Black/African American	2593	6.7
White	34033	88.3
More than 1 race	482	1.2
Other/not reported	421	1.1

Distribution of current age for participants in active* follow-up (N = 38562)

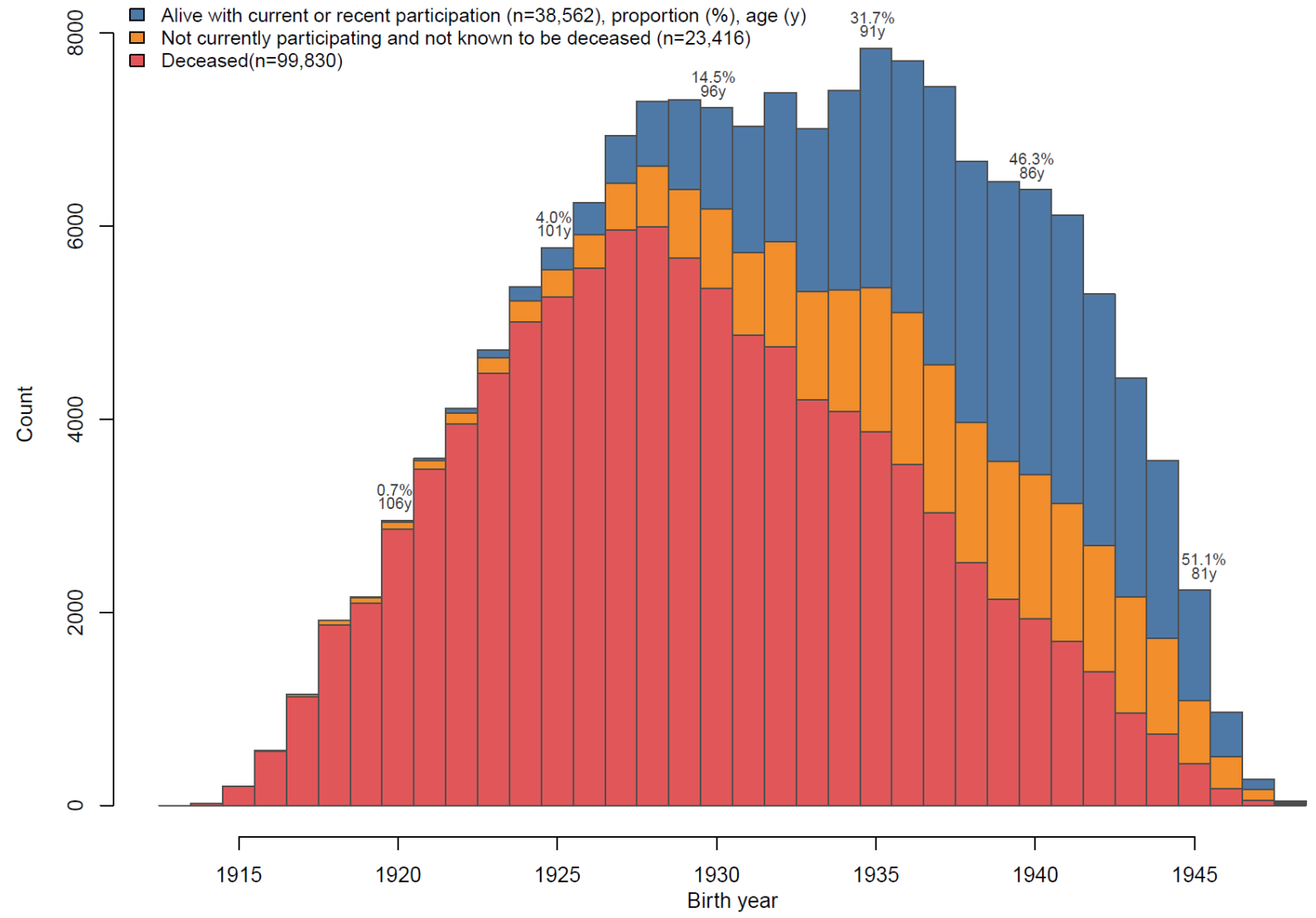
Data as of February 21, 2026



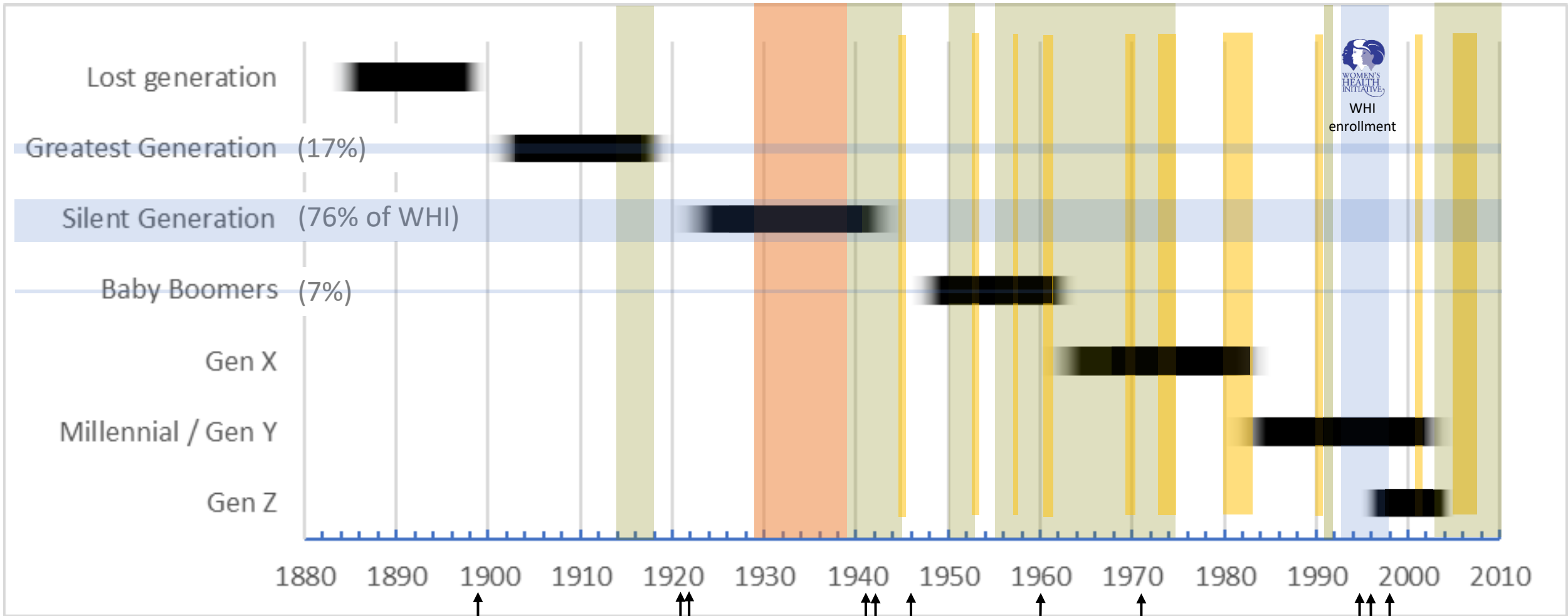
Change in annual questionnaire response rate calculations

- Response rates over time:
 - 2023 APR: 75.1%
 - 2024 APR: 75.1%
 - 2025 APR: 73.2%
 - 2026 APR: 90.2%
- Previously APR reported rates were based on all participants whose contact window opened in the previous year
- Revised (2026) calculations are based on all participants for whom the response window had closed

Distribution of Birth Year by Vital Status



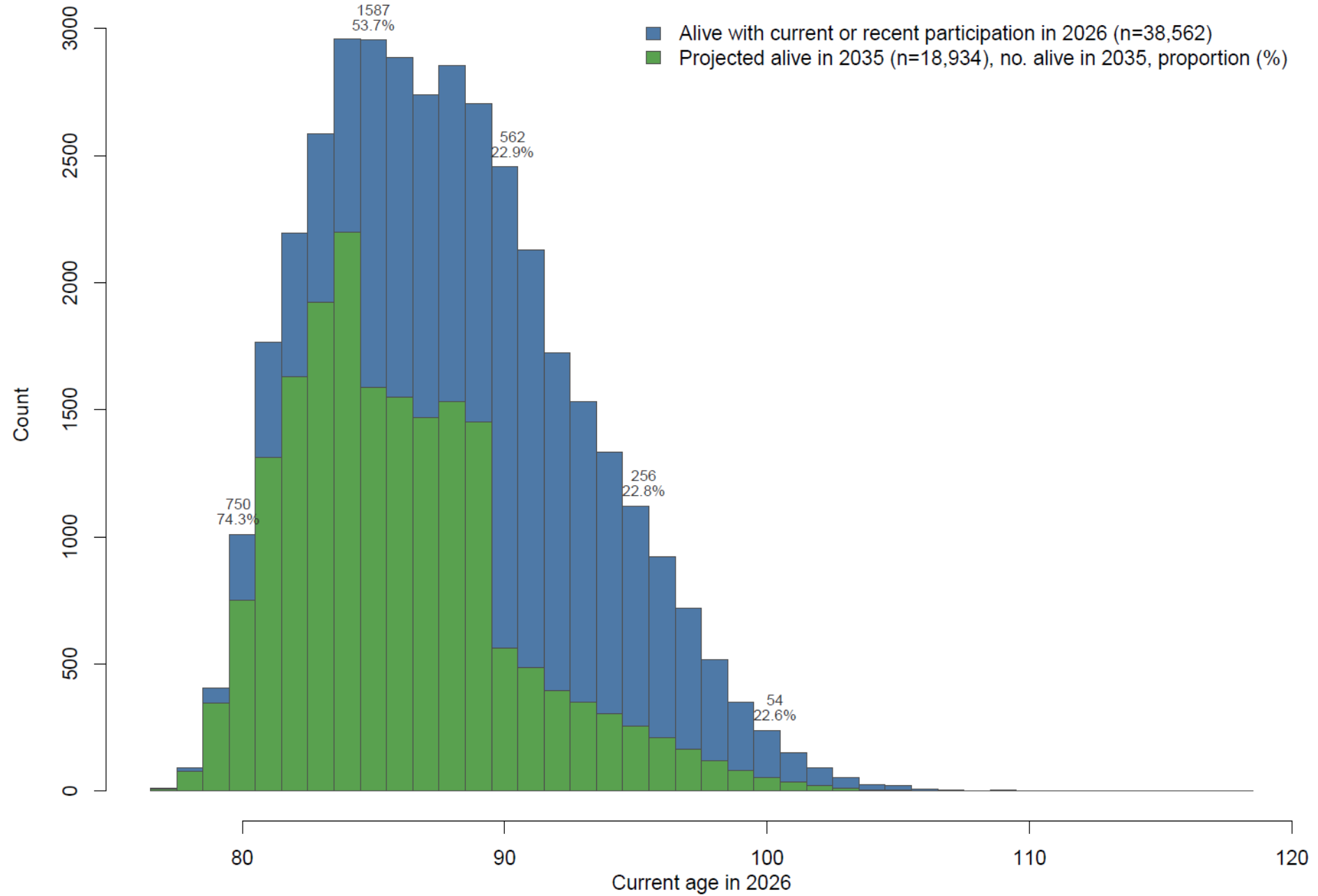
Historical Context for the WHI Population



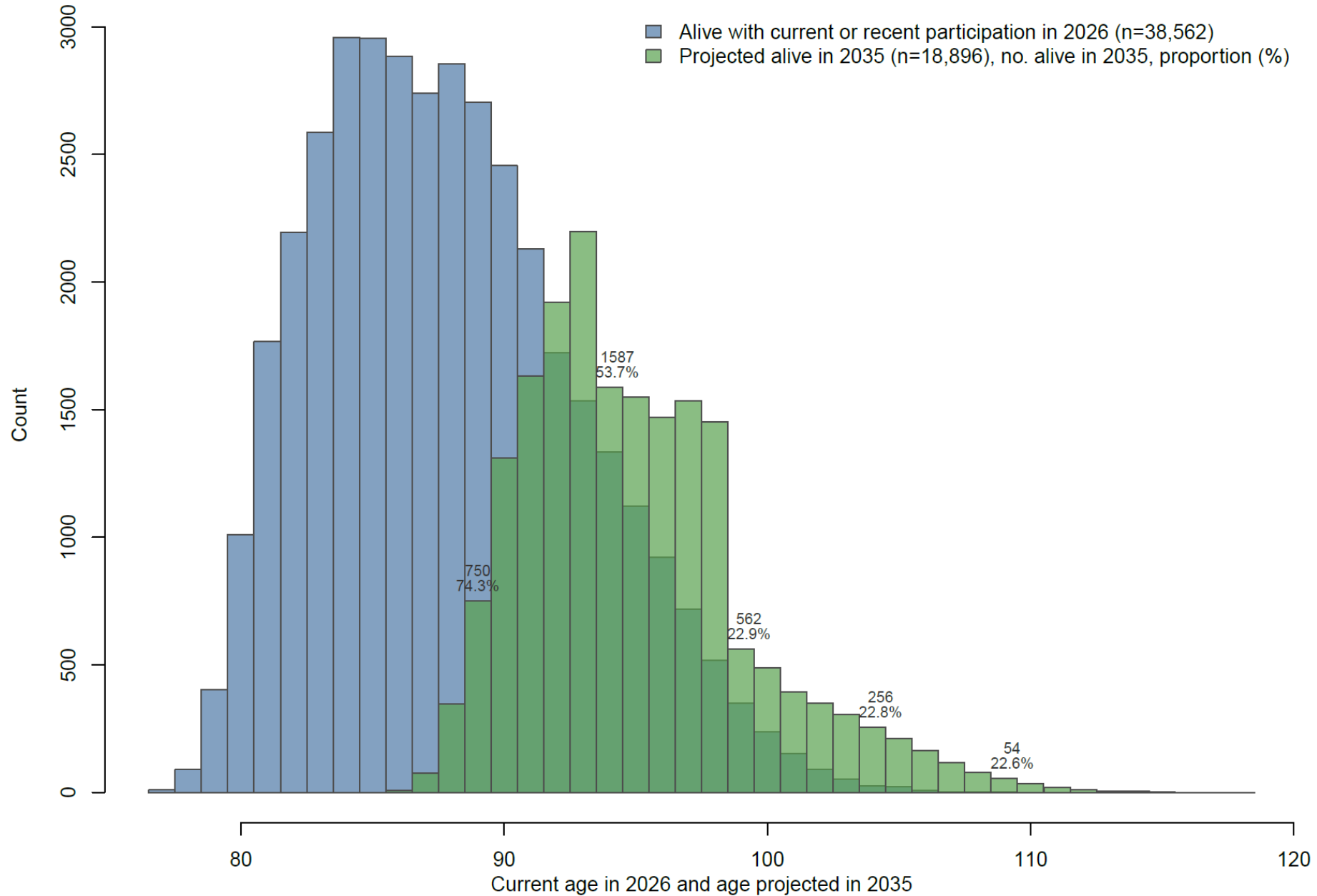
- Birth Years for Generations
- World Wars and Major U.S. conflicts
- Great Depression
- U.S. Economic Recessions
- WHI Enrollment



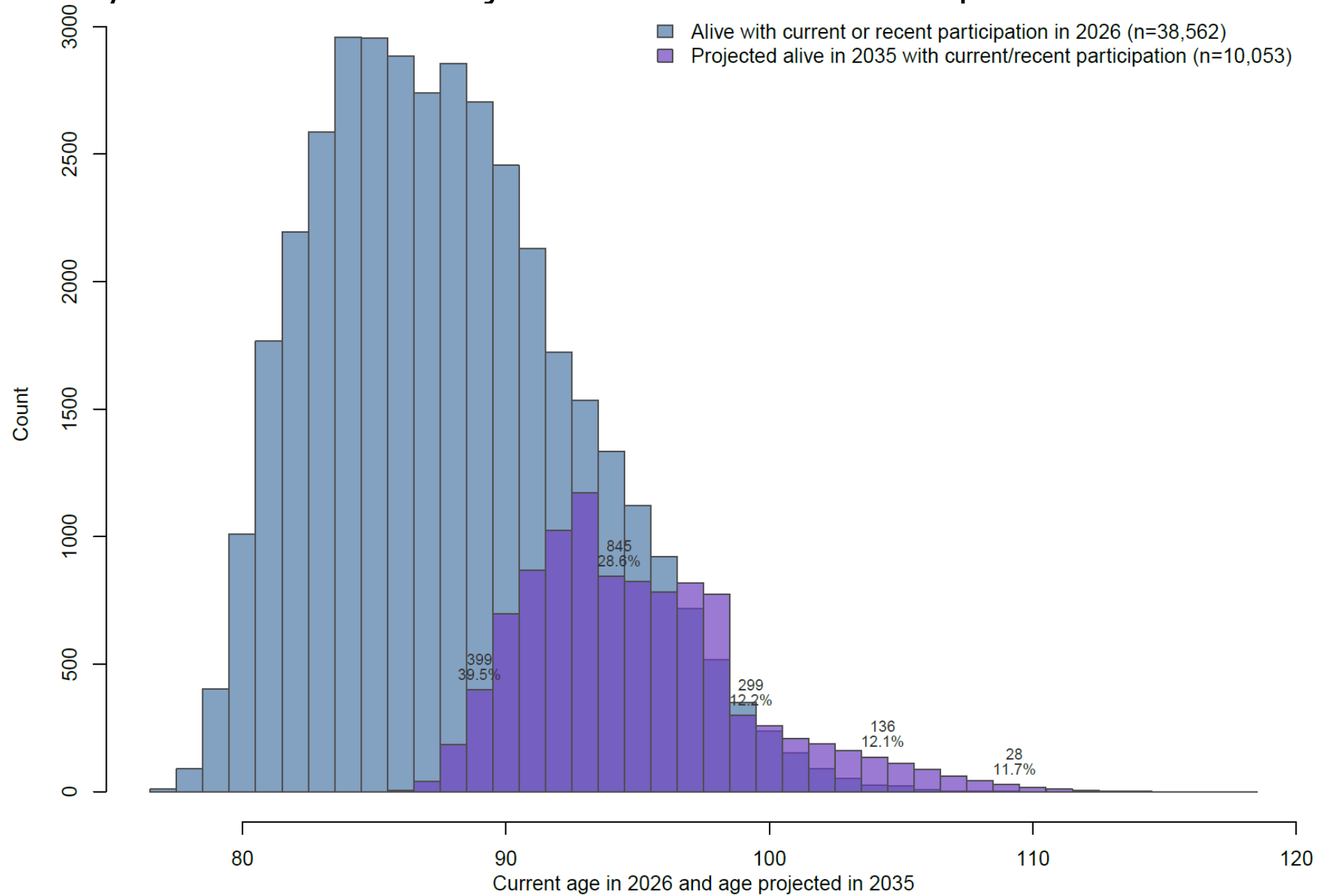
Distribution of Current Age and Projected Alive in 2035



Currently Active by Current Age & Projected Alive by Age in 2035

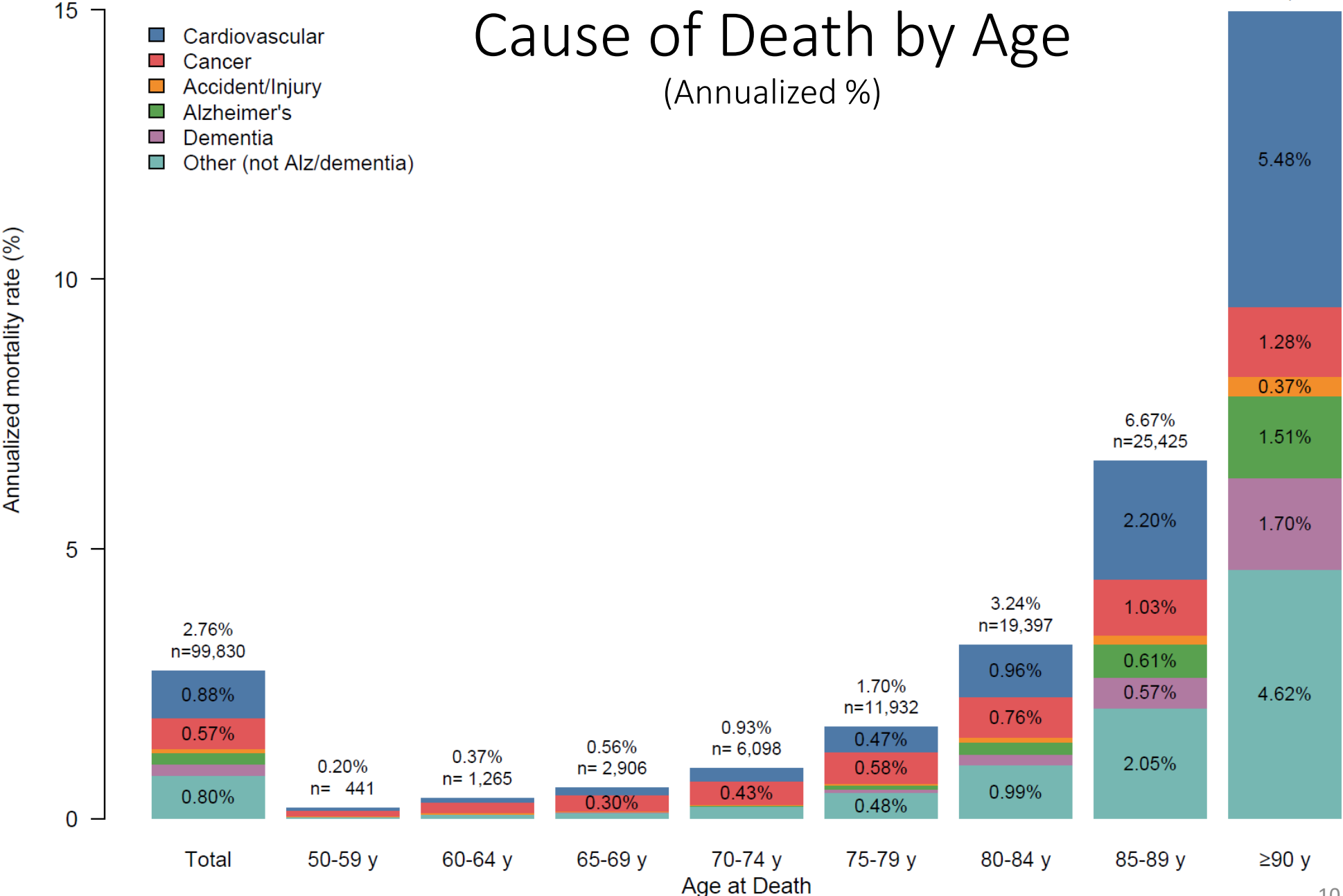


Currently Active and Projected Active Participants in 2035 by Age

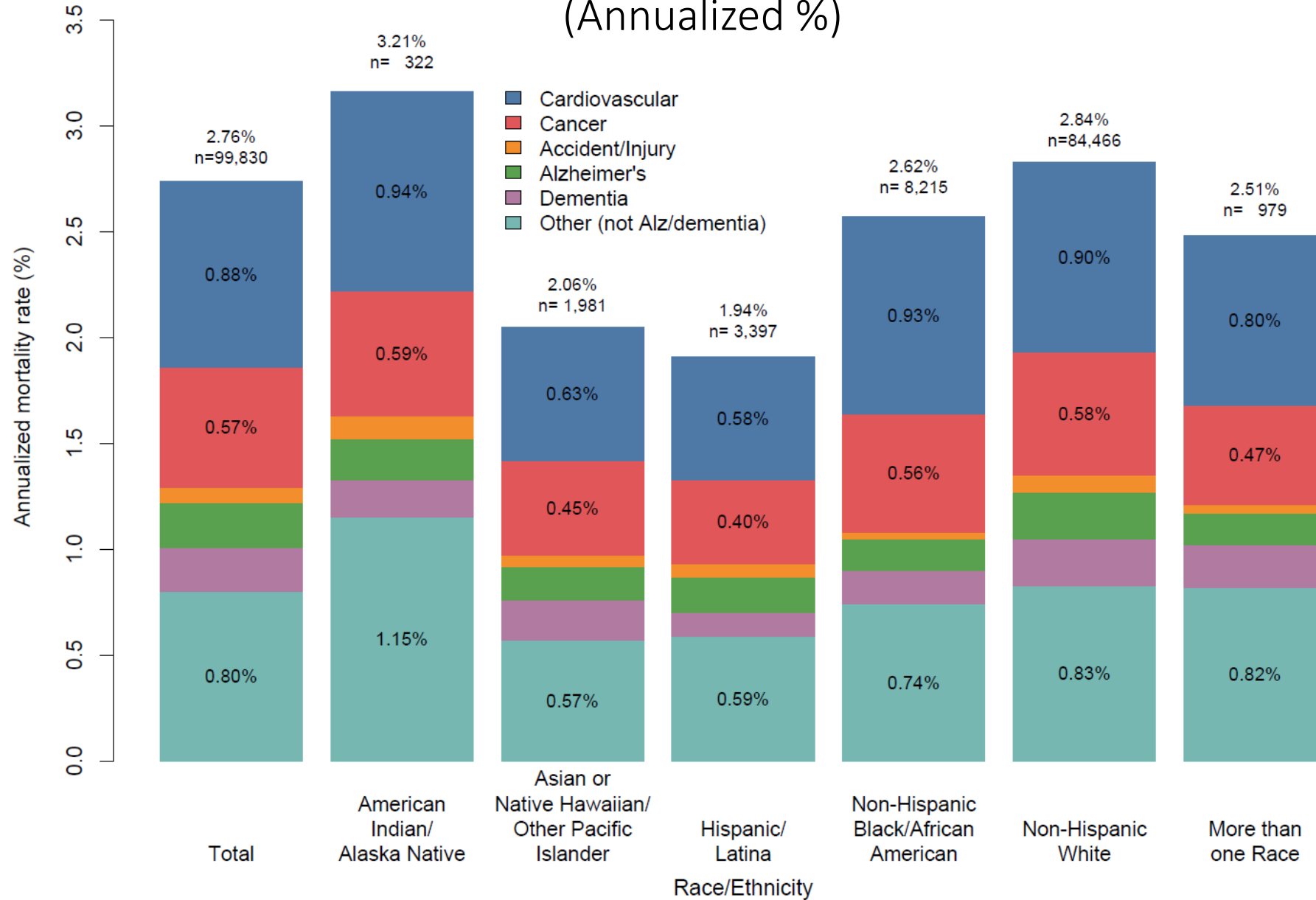


Cause of Death by Age

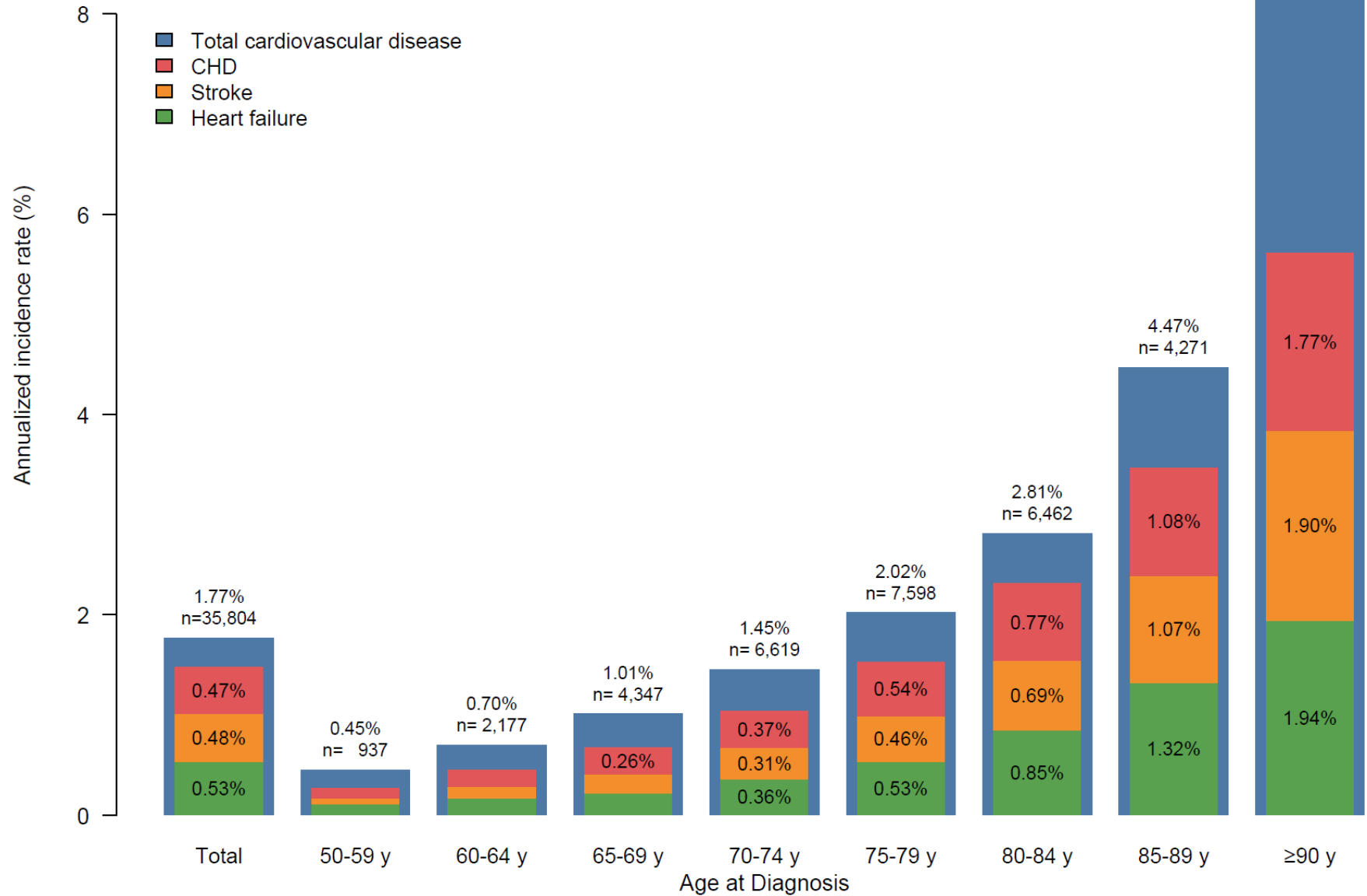
(Annualized %)



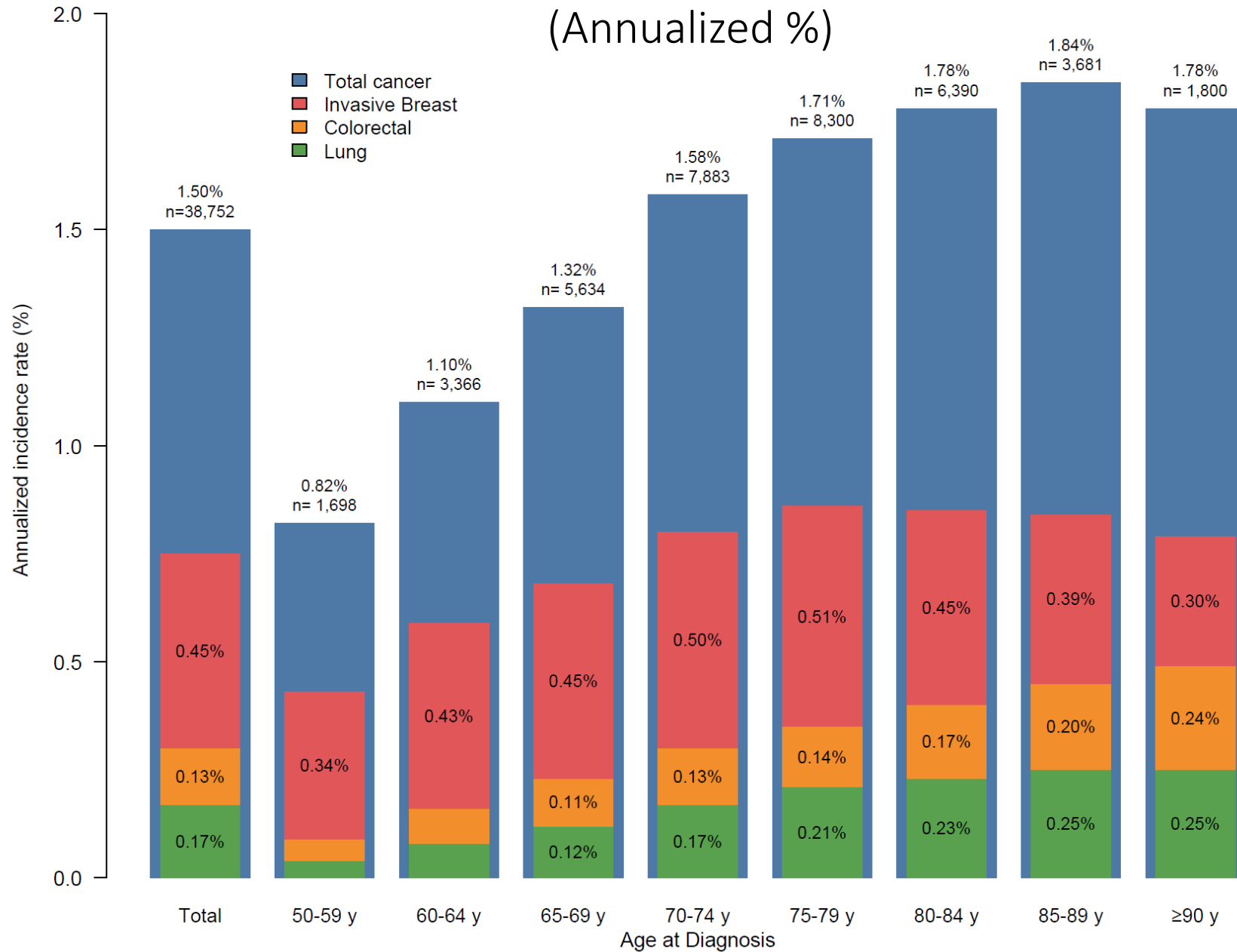
Cause of Death by Race/Ethnicity (Annualized %)



Verified Cardiovascular Outcomes by Age at Diagnosis (Age-Specific Annualized %)

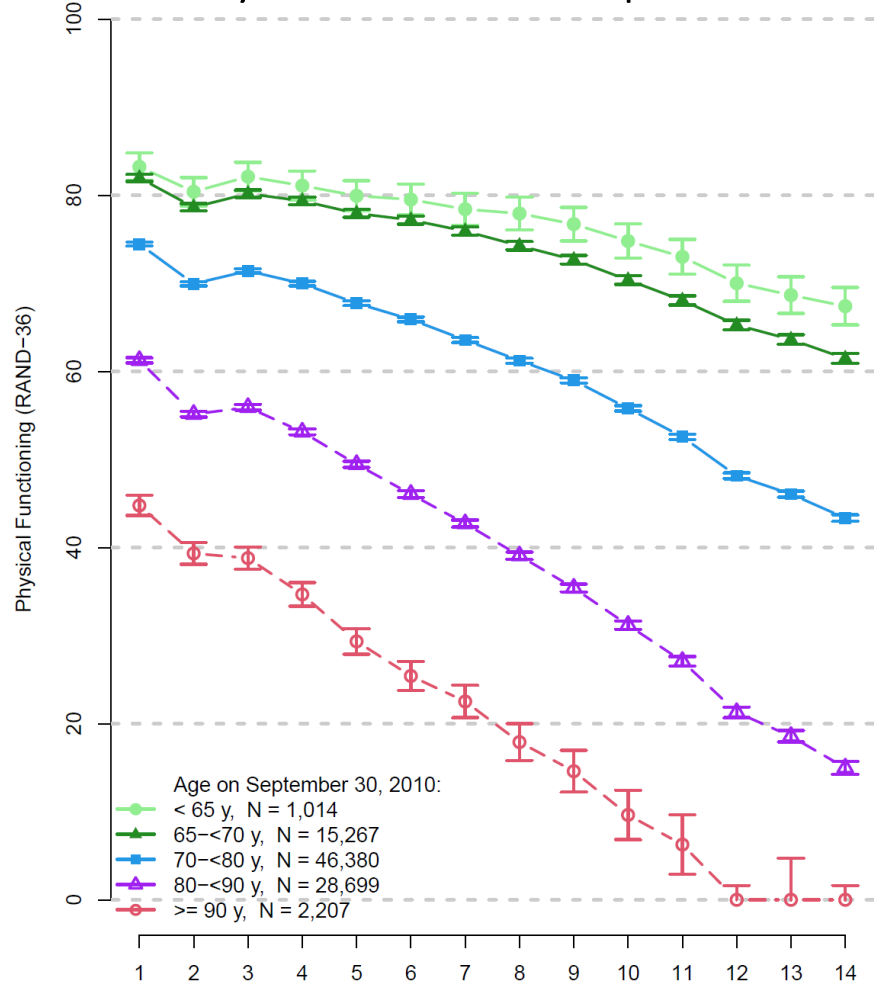


Verified Cancers by Age at Diagnosis (Annualized %)



Mean Physical Functioning During Extension-II

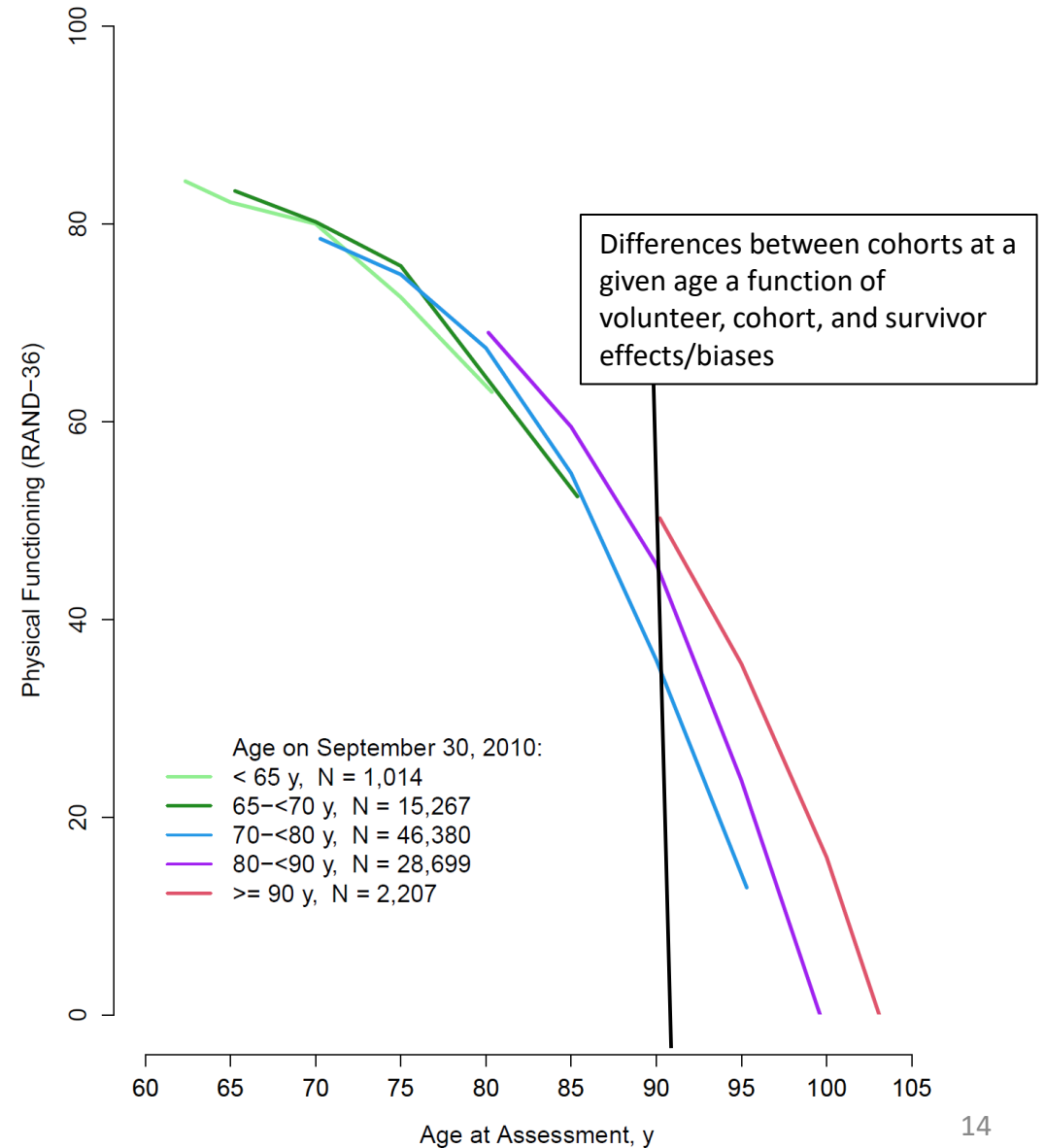
By ES-2 Follow-up time



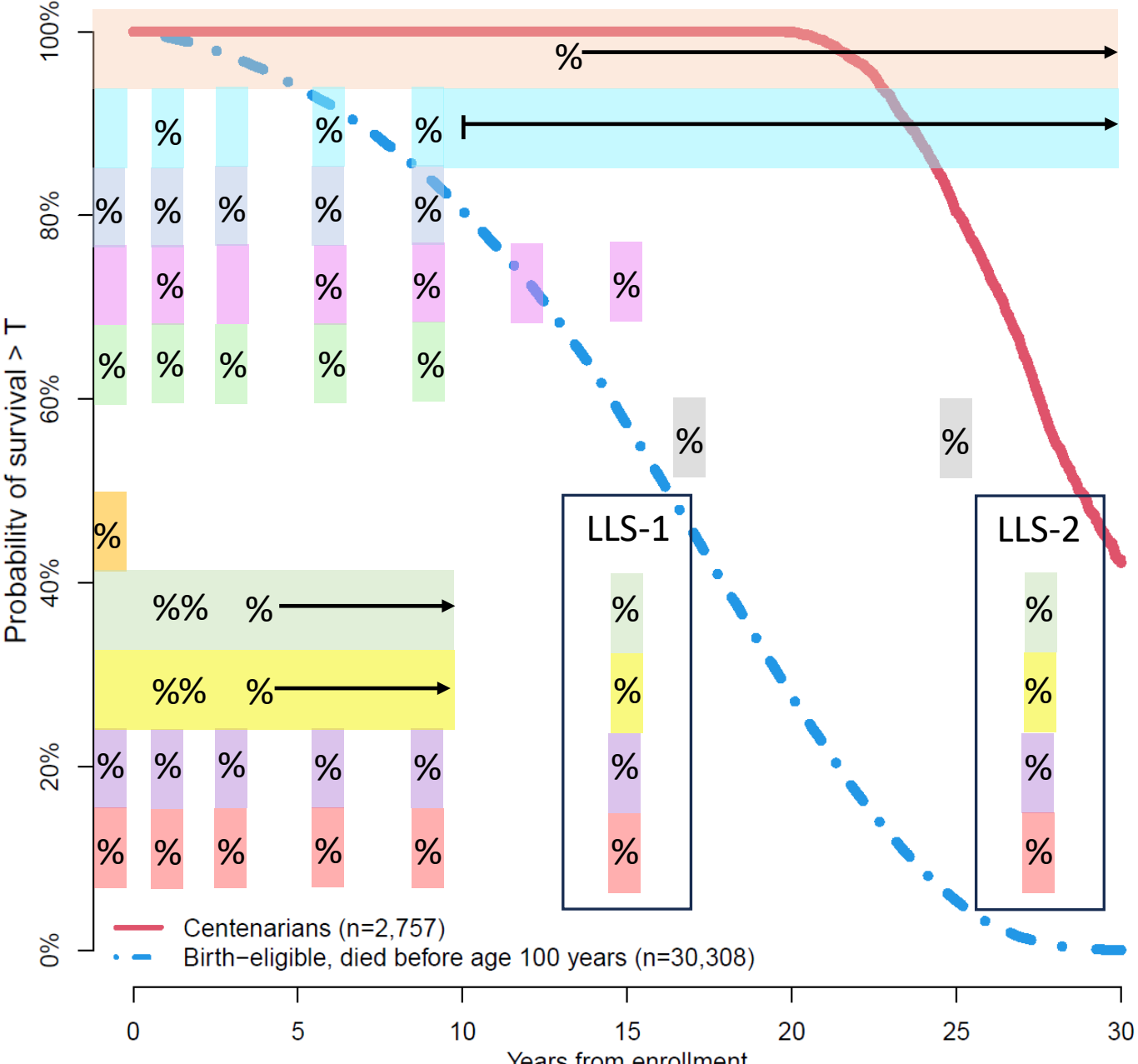
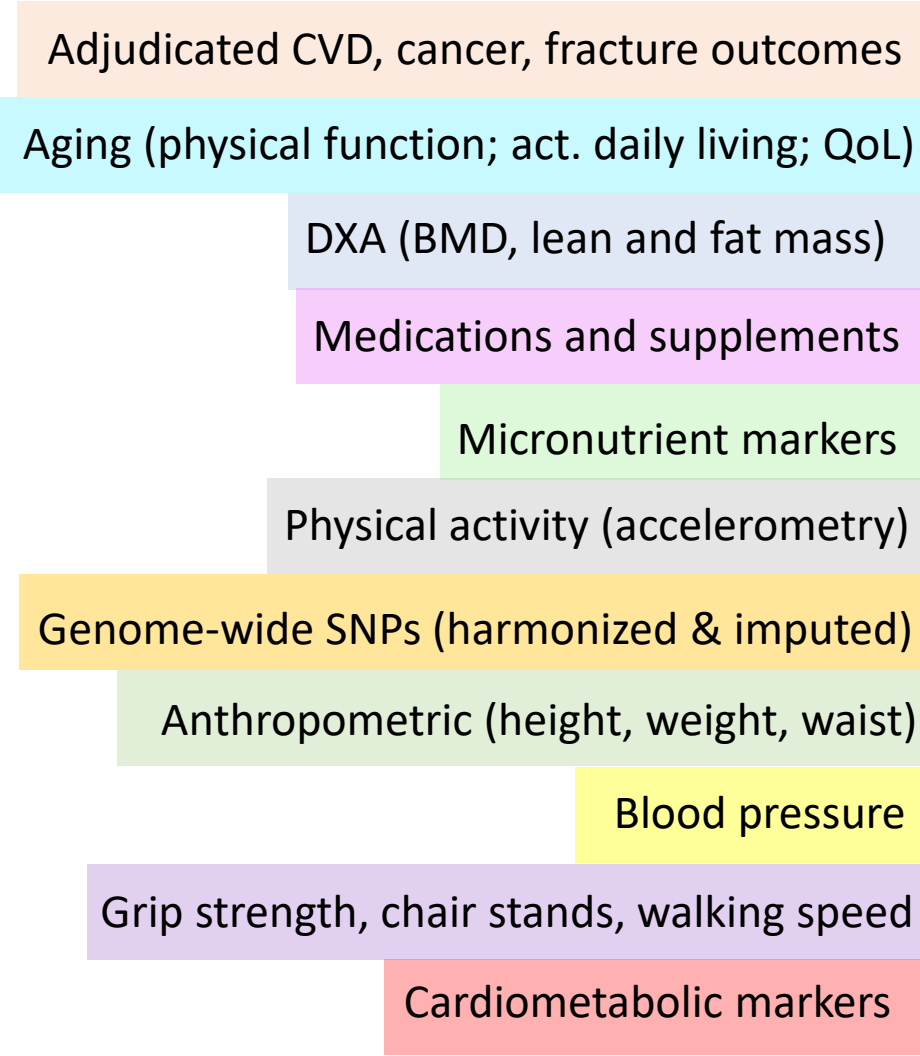
WHI Extension Study II (2010-Present) Visit Year

Number At Visit	1	2	3	4	5	6	7	8	9	10	11	12	13	14
< 65 y	885	887	797	774	701	667	627							
65-70 y	13528	13309	11975	11640	10473	9550	8784							
70-80 y	39576	37387	31397	28951	24204	19649	16451							
80-90 y	21538	18294	12814	10041	6886	4314	2749							
>= 90 y	1270	926	499	287	148	66	25							

By Age at Assessment



Data availability and timing for centenarians and YOB matched controls



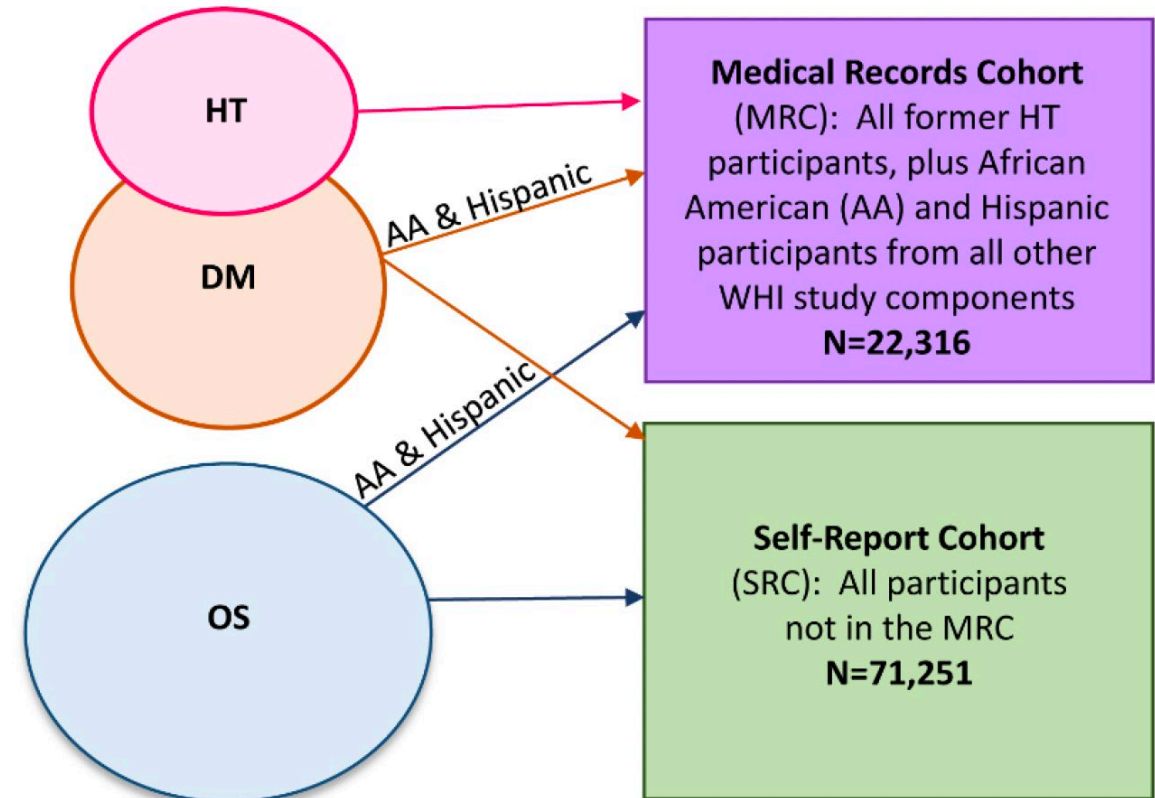
Virtual Pooled Registry Cancer Linkage System

Holly Harris, ScD, MPH
Professor of Epidemiology
Bus Family Endowed Chair
WHI Clinical Coordinating Center

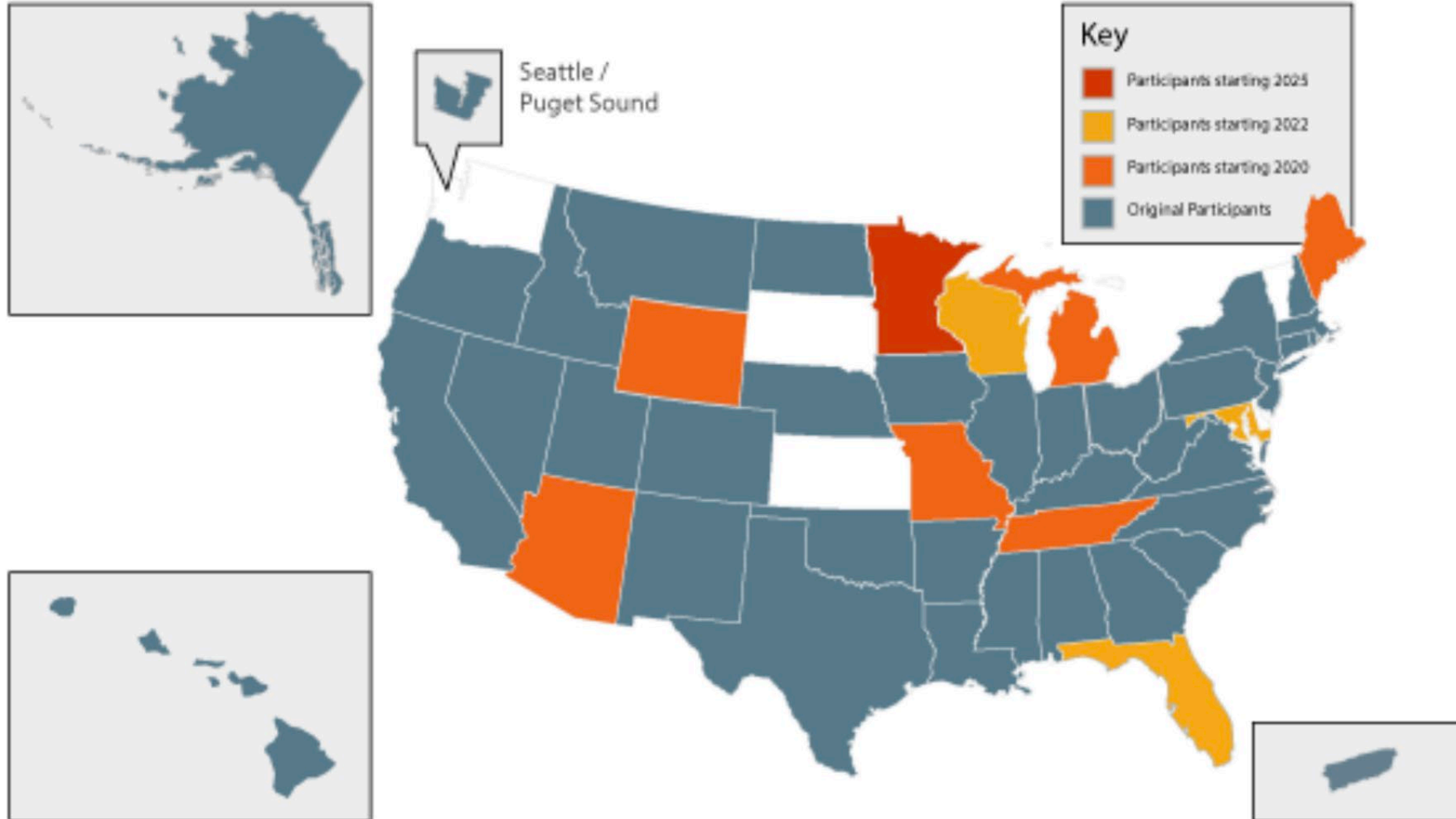


Cancer adjudication in WHI

- Prior to June 2023 all cancers were adjudicated
- Funding from NCI ended in 2023
 - Stopped adjudicating SRC cancers except for those in states not participating in VPR (12.7% of SRC)
 - Continued adjudicating all MRC cancers
- Virtual Pooled Registry Cancer Linkage System
 - Designed to: Streamline the process of applying for release of individual-level data



Participating registries



Not in VPR

Delaware
Kansas
South Dakota
Vermont
Eastern Washington

Not in VPR Phase II

Florida
Illinois

VPR additions

Minnesota
Nevada

Overall process and timeline

48,334 total high-quality matches from 43 registries

PHASE I

Linkage with participating registries → release of match counts by registry and diagnosis year

September 2019
Initial application

April 2020
Received match counts

Registry/ Notes	Estimated Processing Time	HQ #	Applications Required	Type of Review	Uses VPR DUA
Alabama	1 - 3 months	1180	State Forms Only	IRB	No
Alaska	Less than 1 month	5	TIRA Only	Registry	Yes
Arizona	1 - 3 months	1580	TIRA Only	IRB, Registry	No
Arkansas	1 - 3 months	122	State Forms Only	Registry	No
California (CCR)	1 - 3 months	10324	TIRA & State Form	IRB, Registry	No
Colorado	1 - 3 months	132	TIRA Only	Registry	Yes
Connecticut	1 - 3 months	265	TIRA Only	IRB	No
Georgia	1 - 3 months	1470	TIRA Only	CIRB	No
Hawaii	1 - 3 months	1131	TIRA Only	CIRB, Registry	Yes
Idaho	1 - 3 months	58	TIRA Only	Registry	Yes
Indiana	3-6 months	115	TIRA Only	Registry	No
Iowa	1 - 3 months	1845	TIRA Only	Registry	Yes
Kentucky	Less than 1 month	167	TIRA Only	Registry	Yes
Louisiana	3-6 months	29	TIRA Only	Registry	Yes
Maine	Greater than 6 months	91	TIRA Only	CIRB, Registry	Yes
Maryland	Less than 1 month	1169	TIRA Only	IRB	No
Massachusetts	1 - 3 months	3641	TIRA Only	IRB	Yes
Michigan	Greater than 6 months	1286	TIRA Only	CIRB	Yes
Mississippi	3-6 months	139	TIRA Only	Registry	No
Missouri	1 - 3 months	78	TIRA Only	IRB	Yes
Montana	Less than 1 month	22	TIRA Only	Registry	Yes
Nebraska	3-6 months	12	TIRA Only	Registry	Yes
New Hampshire	1 - 3 months	167	State Forms Only	Registry	No
New Jersey	Greater than 6 months	2345	TIRA Only	CIRB, Registry	No
New Mexico	3-6 months	62	TIRA Only	CIRB, Registry	Yes
New York	3-6 months	4804	TIRA Only	Registry	Yes
North Carolina	3-6 months	2651	TIRA Only	Registry	No
North Dakota	1 - 3 months	1	TIRA Only	CIRB	Yes

Overall process and timeline

Where we
currently are

PHASE I

Linkage with participating registries → release of match counts by registry and diagnosis year

September 2019
Initial application

April 2020
Received match counts

PHASE II

Application to individual registries (and their IRBs) for release of individual level data from matches in Phase 1

December 2022
Submitted TIRA

October 2023
Received first data

RELINKAGE

Apply to all registries at once to receive updated data

Phase II

Application for release of individual-level data on matched cases identified during Phase I

Registry/ Notes	Applications Required	Type of Review	Uses VPR DUA
Alabama	State Forms Only	IRB	No
Alaska	TIRA Only	Registry	Yes
Arizona	TIRA Only	IRB, Registry	No
Arkansas	State Forms Only	Registry	No
California (CCR)	TIRA & State Form	IRB, Registry	No
Colorado	TIRA Only	Registry	Yes
Connecticut	TIRA Only	IRB	No
Georgia	TIRA Only	CIRB	No
Hawaii	TIRA Only	CIRB, Registry	Yes

	4/28/26
Received data	34
Approvals in place/waiting to receive data	3
Approvals in place/DUA pending	2
Approvals under review at external registry/IRB	3
Denied	1

Overall process and timeline

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currently are

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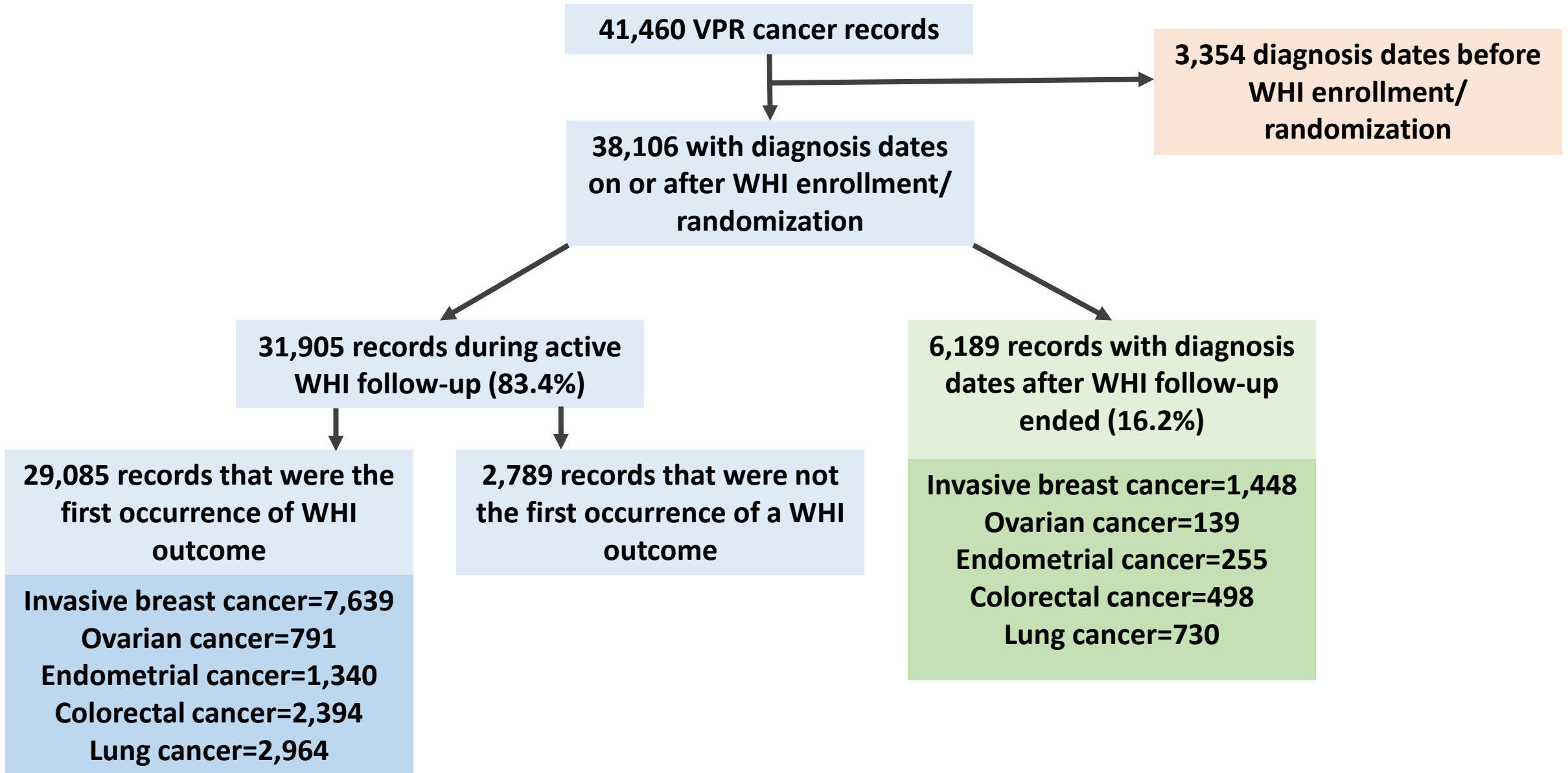
RELINKAGE

Apply to all registries at once to receive updated data

May 2026
34 registries received

Ongoing
Apply for relinkage (add MN and NV)
Apply for non-VPR registry data

Data received to date



Next steps

- Finalize permissions/DUAs with remaining 5 registries
- Complete paperwork (application, IRB, DUA, confidentiality pledges, etc) for newly added registries and potentially non-VPR registries
- Relinkage for updated data
- Continue to develop internal VPR database to track each registries individual requirements (publication terms, data destruction times lines, etc)
- Compare data from registry to adjudicated cancer data
- Create VDE for data access due to registry requirements around secondary data sharing

Thank you

Allison Matson
Jenny Schoenberg

Leah Jager
Gary Lu
Roberta Ray
Rebecca Hunt

Carolyn Burns
Bill Carrick
Lisa Johnson

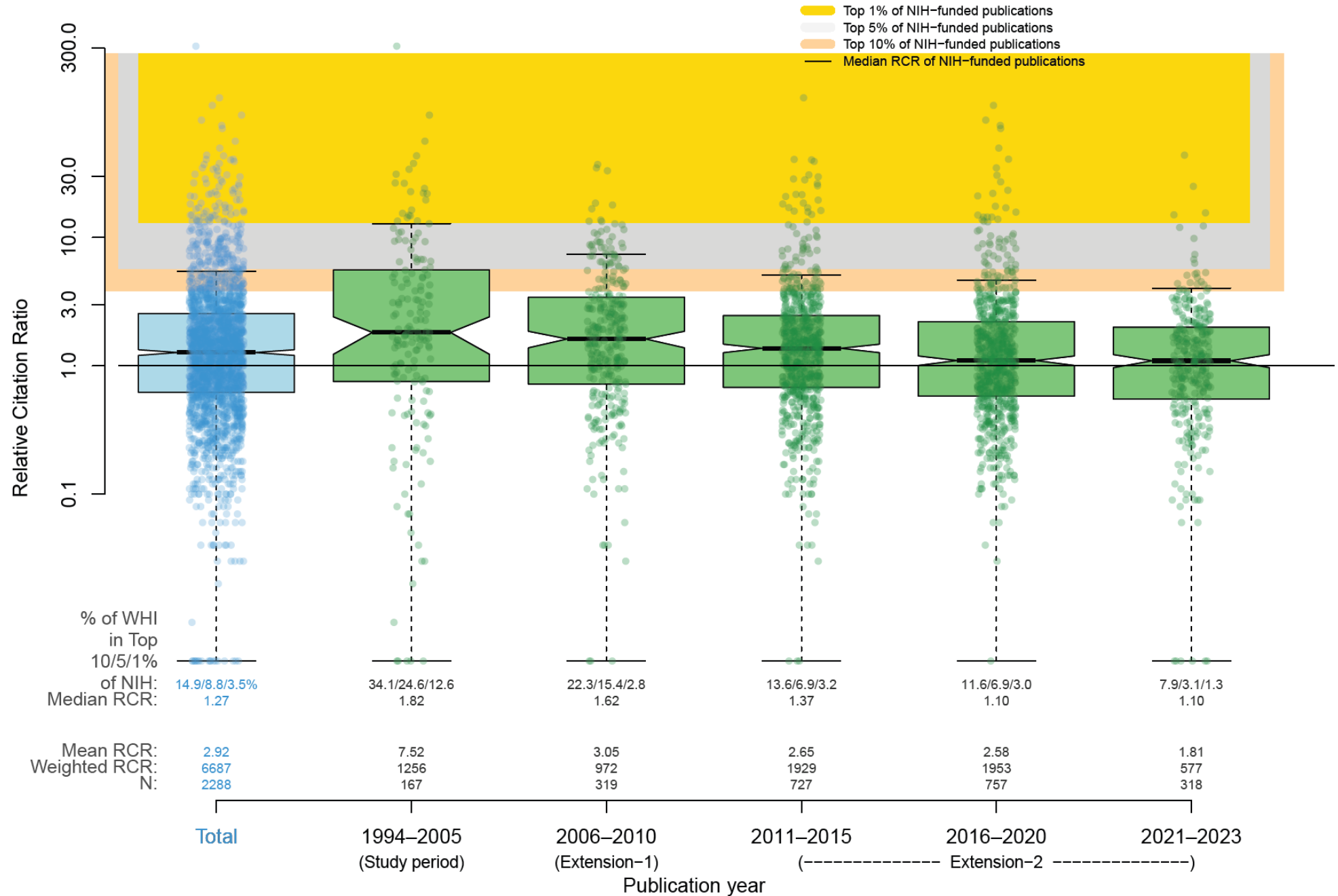
Castine Clark

Additional updates from the CCC

- Participant webinars continue to attract many participants
 - Interested in presenting?
- Investigator data release scheduled for June.
 - New data available:
 - Form 160 (new annual ADL Q): aging indicators, physical function, sleep, cognition
 - Form 161: physical activity, nutrition, vision/hearing, depression, medication use
 - Measurements (F301) and biospecimen data from LLS2 available in 2025 release.
Specific form questions/items at: <https://www.whi.org/formList>
- Non-SAS Virtual Data Enclave (VDE) under development
 - Equipped with more recent R package and Stata
- WHI website undergoing some refresh with additional functionality planned (stay tuned)

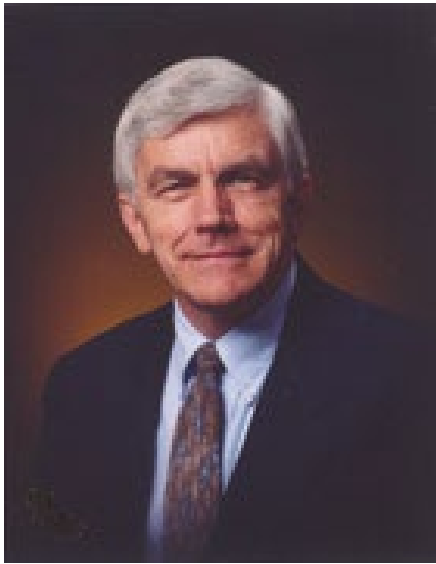


Relative Citation Ratio of WHI Publications



Some unsung heroes of WHI

The WHI Data and Safety Monitoring Board, 1993-2005



Dave Demets



Eugene Braunwald



Margaret Chesney



Harvey Cohen



Elizabeth Barrett-Connor



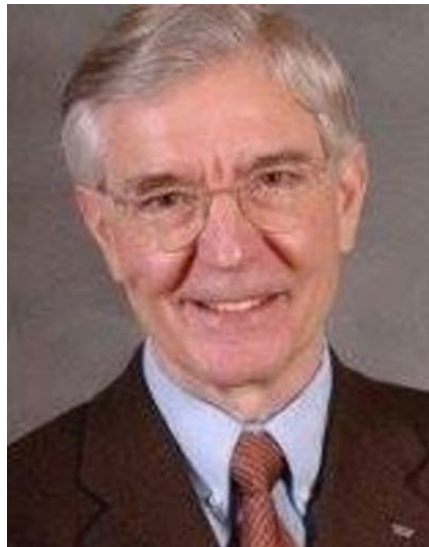
Leo Dunn



Johanna Dwyer



Victor Vogel



LeRoy Walters



Salim Yusuf



Robert Heaney

Janet Wittes

- PhD in Statistics, Harvard
- Postdoctoral fellowship, NCI
- Instructor in Epidemiology, Columbia University
- Professor of Mathematics, Hunter College
- Biostatistics Research Branch Chief, NHLBI
- Biostatistician, Department of Veterans Affairs
- Founder and President, Statistics Collaborative
- **Chair, WHI Data and Safety Monitoring Board**
- Editor-in-chief, Controlled Clinical Trials
- President, Society for Clinical Trials
- Lead author of:

Wittes J, Braunwald E, Chesney MA, et al. **Menopausal Hormone Labels Should Rely on Evidence, Not Opinion.** *JAMA.* 2026;335(14):1201–1202.

