

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Cohort Study Information

Cohort ^a	Demographics	Geographic Region	Eligibility Criteria	Baseline Exam	Index Exam ^b
SOF	9,704 community-dwelling white women, and 662 community-dwelling black women	4 US sites (Baltimore, MD; Minneapolis, MN; Pittsburgh, PA; Portland, OR)	Women age 65 and older, ability to walk without the assistance of another person, and absence of bilateral hip replacement	1986-1988 white cohort; 1997-1998 black cohort	Year 10 (1997-1998) or Year 16 (2002-2004)
MrOS	5,994 community-dwelling men	6 US sites (Birmingham, AL; Minneapolis, MN; Palo Alto, CA; Pittsburgh, PA; Portland, OR; San Diego, CA)	Men age 65 and older, ability to walk without the assistance of another person, and absence of bilateral hip replacement	2000-2002	Year 5 (2005-2007), Year 7 (2007-2009) or Year 14 (2014-2016)
Health ABC	3,075 black and white community-dwelling men and women	2 US sites (Memphis, TN and Pittsburgh, PA)	Age 70-79 with no self-report of mobility difficulty or mobility disability	1997-1998	Year 3 (1999-2000), Year 5/6 (2002-2003), Year 8 (2004-2005) or Year 10 (2006-2007)

Study acronyms: SOF, Study of Osteoporotic Fractures; MrOS, Osteoporotic Fractures in Men Study; Health ABC, Health, Aging and Body Composition Study

^aInstitutional review boards at each participating site reviewed and approved the four cohort studies; all participants provided written informed consent

^bParticipants counted only once and included in analytical cohort at index examination when they first reached age ≥ 80 years

eTable 2. Characteristics of Women by Cohort

Characteristic	Women	
	SOF (n=4101)	Health ABC (n=805)
Age, years, mean (SD)	82.9 (2.9)	81.2 (0.9)
Race/ethnicity, n (%)		
Black	235 (5.7)	310 (38.5)
White	3,866 (94.3)	495 (61.5)
Weight, kg, mean (SD)	65.0 (12.4)	67.5 (13.8)
Body mass index, kg/m ² , mean (SD)	26.5 (4.7)	27.1 (5.3)
Number of fractures since age 50, n (%)		
0	1,904 (46.4)	509 (63.2)
1	725 (17.7)	249 (30.9)
2	910 (22.2)	40 (5.0)
≥3	562 (13.7)	7 (0.9)
Number of falls in past year, n (%)		
0	2,691 (65.6)	566 (70.3)
1	814 (19.8)	142 (17.6)
2	315 (7.7)	76 (9.4)
≥3	281 (6.9)	21 (2.6)
Parent fractured hip, n (%) ^a	494 (12.0)	0 (0)
Current smoker, n (%)	113 (2.8)	39 (4.8)
Oral glucocorticoid use, n (%)	137 (3.3)	28 (3.5)
Rheumatoid arthritis, n (%)	592 (14.4)	5 (0.6)
Alcohol intake ≥3 drinks/day, n (%)	37 (0.9)	1 (0.1)
Bisphosphonate use, n (%)	170 (5.3)	4 (0.5)
Femoral neck BMD T-score ^b , mean (SD)	-2.0 (1.0)	-1.6 (1.0)
5-year probability (%) of hip fracture from FRAX w/BMD model, mean (SD) ^a	4.8 (4.9)	2.2 (2.1)
5-year probability (%) of hip fracture from Garvan w/BMD model, mean (SD)	18.7 (22.3)	6.9 (9.4)
5-year probability (%) of hip fracture from femoral neck BMD, mean (SD)	7.0 (5.4)	5.2 (4.3)

Abbreviations: BMD, bone mineral density; SD, standard deviation

^aassuming no parental history of hip fracture for all Health ABC participants

^bBMD T-scores were calculated using the National Health and Nutrition Examination Survey young white female reference database

eTable 3. Characteristics of Men by Cohort

Characteristic	Men	
	MrOS (n=3205)	Health ABC (n=779)
Age, years, mean (SD)	83.0 (2.9)	81.3 (1.0)
Race/ethnicity, n (%)		
Black	77 (2.4)	244 (31.3)
White	2,940 (91.7)	535 (68.7)
Other ^a	188 (5.9)	0 (0)
Weight, kg, mean (SD)	79.4 (12.5)	79.3 (13.2)
Body mass index, kg/m ² , mean (SD)	26.8 (3.7)	26.9 (4.0)
Number of fractures since age 50, n (%)		
0	2,242 (70.0)	607 (77.9)
1	626 (19.5)	165 (21.2)
2	207 (6.5)	7 (0.9)
≥3	130 (4.1)	0 (0)
Number of falls in past year, n (%)		
0	2,072 (64.6)	555 (71.2)
1	575 (17.9)	128 (16.4)
2	427 (13.3)	72 (9.2)
≥3	131 (4.1)	24 (3.1)
Parent fractured hip, n (%) ^b	431 (13.4)	0 (0)
Current smoker, n (%)	38 (1.2)	36 (4.6)
Oral glucocorticoid use, n (%)	89 (2.8)	19 (2.4)
Rheumatoid arthritis, n (%)	210 (6.6)	3 (0.4)
Alcohol intake ≥3 drinks/day, n (%)	132 (4.1)	13 (1.7)
Bisphosphonate use, n (%)	170 (5.3)	4 (0.5)
Femoral neck BMD T-score ^c , mean (SD)	-0.9 (1.1)	-0.8 (1.2)
5-year probability (%) of hip fracture from FRAX w/BMD model, mean (SD) ^b	2.2 (2.4)	1.2 (1.0)
5-year probability (%) of hip fracture from Garvan w/BMD model, mean (SD)	6.1 (9.6)	3.6 (5.1)
5-year probability (%) of hip fracture from femoral neck BMD, mean (SD)	3.1 (3.4)	3.1 (3.5)

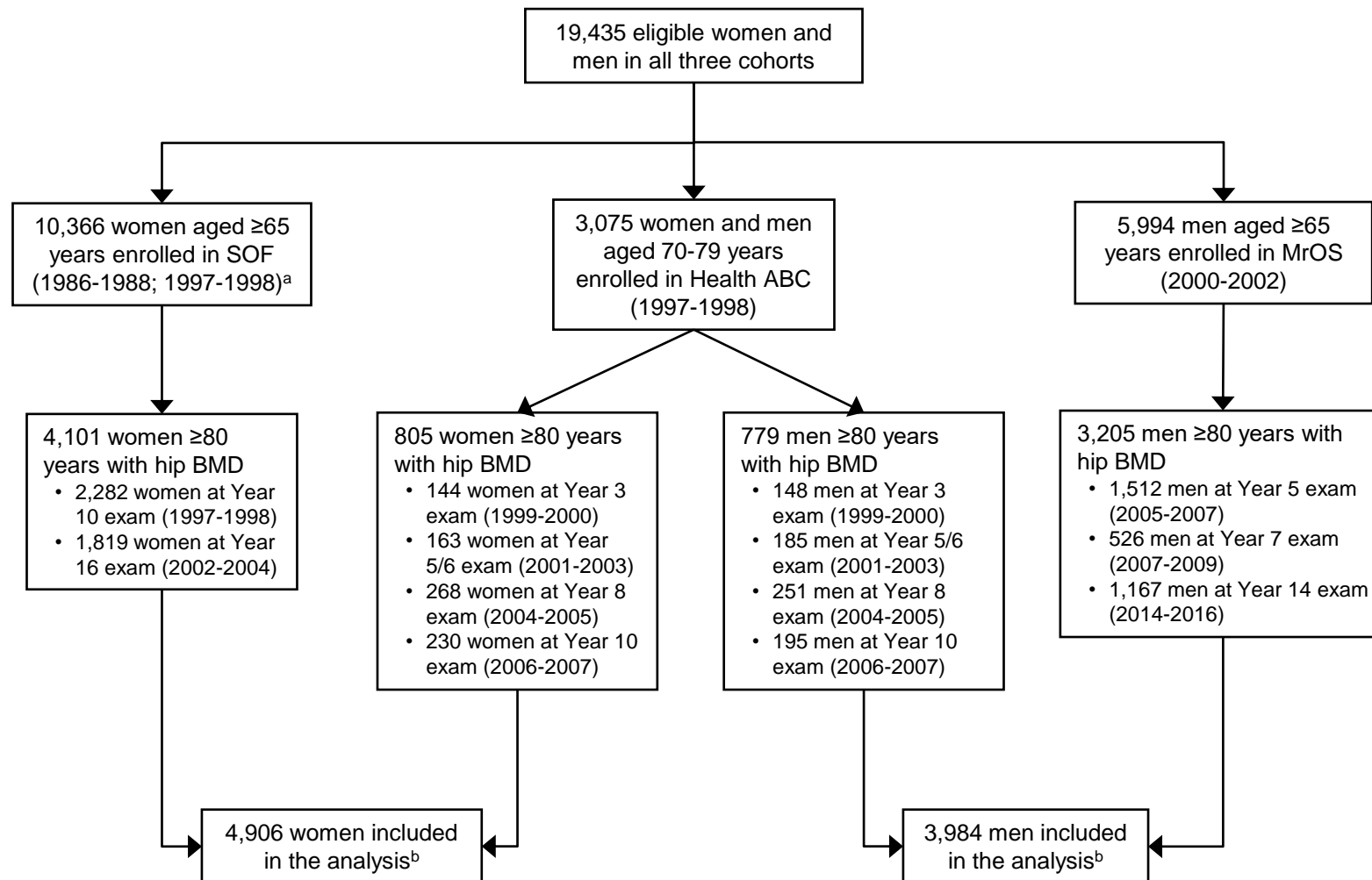
Abbreviations: BMD, bone mineral density; SD, standard deviation

^aAsian, Hispanic, Latino, Native American or Hawaiian/Pacific Islander

^bassuming no parental history of hip fracture for all Health ABC participants

^cBMD T-scores were calculated using the National Health and Nutrition Examination Survey young white female reference database

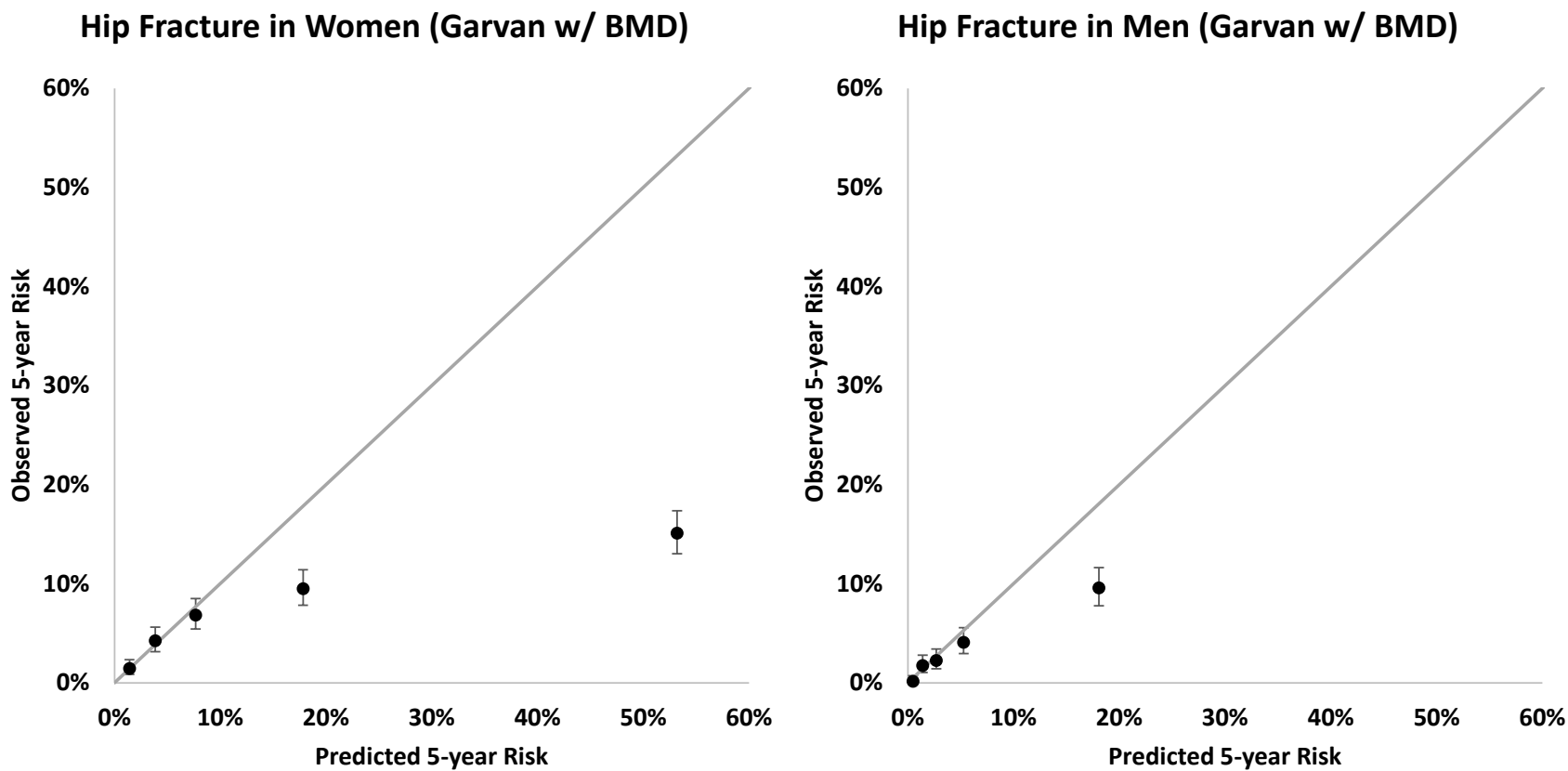
eFigure 1. Participant Flow Diagram



^a9,704 community-dwelling white women were enrolled from 1986-1988, and 662 community-dwelling black women were enrolled from 1997-1998

^bParticipants counted only once and included in analytical cohort at index examination when they first reached age ≥80 years

eFigure 2. Observed^a vs Predicted 5-Year Absolute Probability of Hip Fracture Stratified by Quintile of Predicted Risk for the Garvan tool in Women and Men



^aobserved probability of hip fracture was calculated using Kaplan-Meier method