

Biomarkers and Breast Cancer Risk Prediction in Young Women

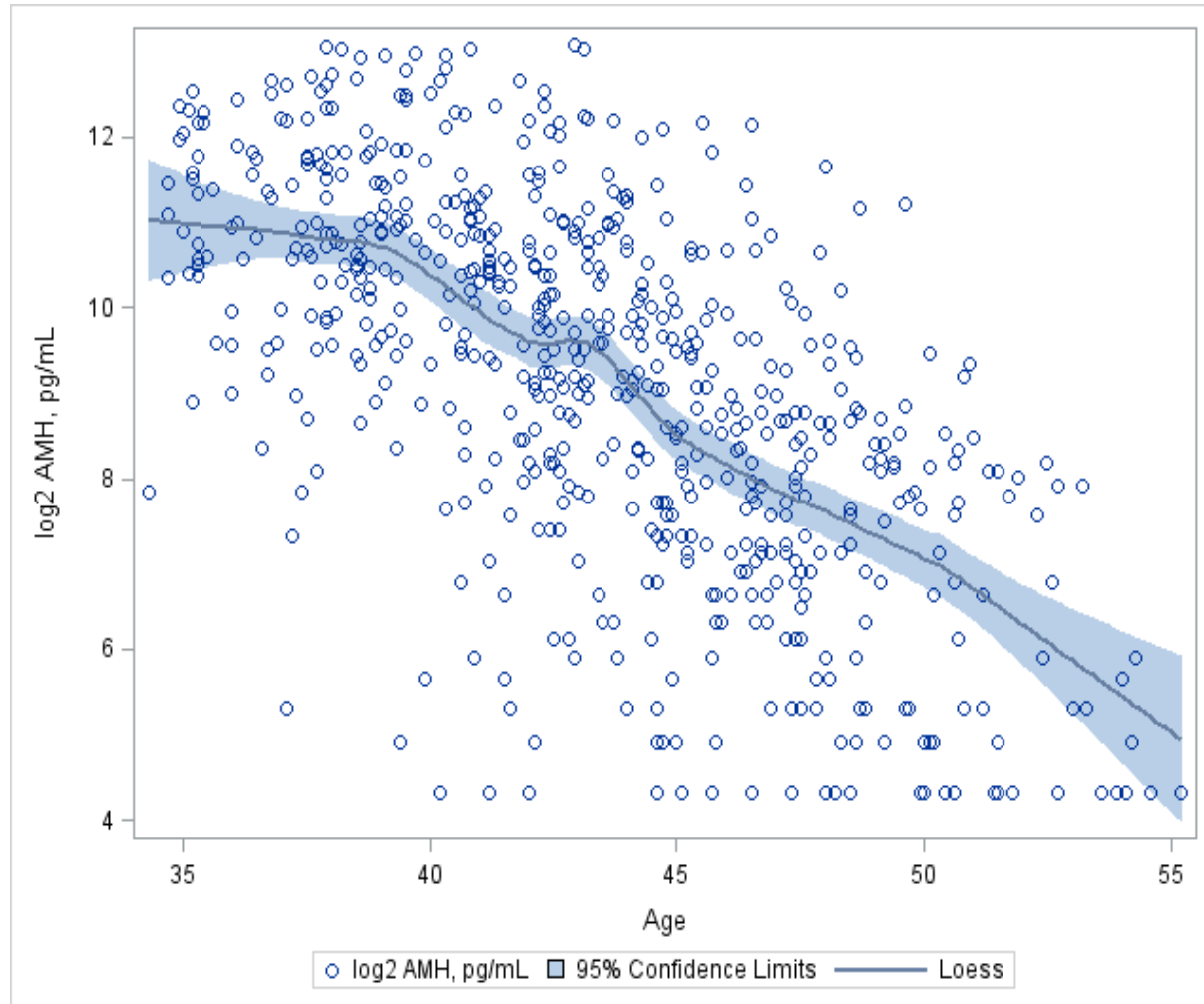
- Multiple PIs: Anne Zeleniuch-Jacquotte and Mengling Liu (NYU Women's Health Study)
- Co-investigators: Anthony Swerdlow, Minouk Shoemaker (BGS); Kala Visvanathan (CLUE II); Louise Brinton, Joanne Dorgan (Columbia, MO, Serum Bank); Tim Key (Guernsey); Heather Eliassen, Sue Hankinson (NHS and NHS II); Göran Hallmans (NSHDS); Vittorio Krogh (ORDET); Hazel Nichols (Sister Study)
- Funding: NCI R01 (09/2013-08/2016)

Specific Aims

- Aim 1: To test the hypothesis that anti-Müllerian hormone (AMH) is associated with breast cancer risk
- Aim 2: To assess whether adding biomarkers (total or free testosterone and/or AMH) to the Gail model improves its performance for women 35-49 years of age

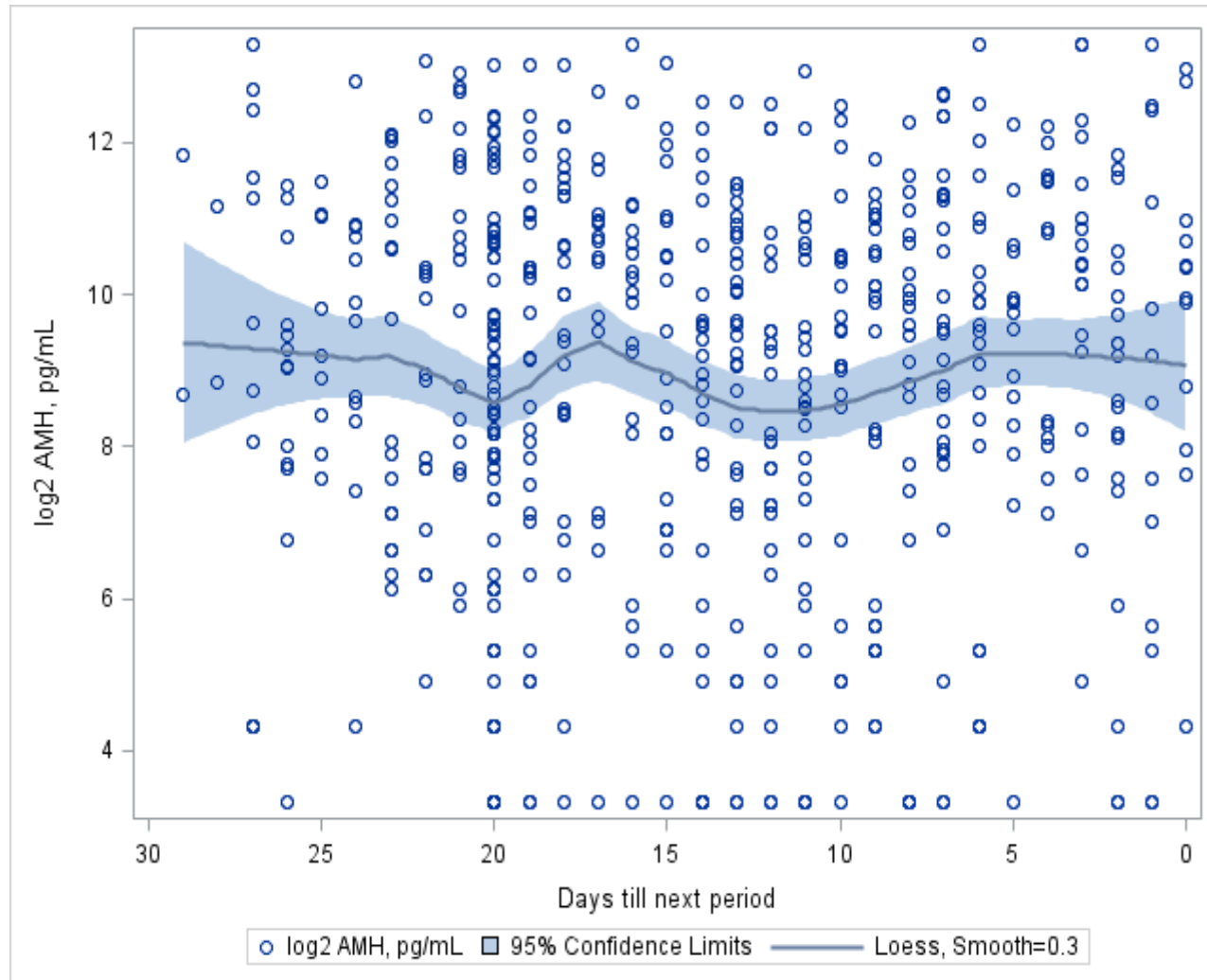
AMH and age

NYUWHS controls (n=627)



AMH and menstrual cycle day

NYUWHS controls (n=627)



Participating Cohorts

Cohort	Country	Age at blood donation	Cohort size (source population size) ¹	# cases
Breakthrough Generations Study	UK	16-98	104,000 (47,547)	451
CLUE II	USA	3-99	14,620 (3,349)	172
Columbia Serum Bank	USA	17-89	6,915	105
Guernsey	UK	34-89	6,100	182
Nurses Health Study	USA	43-69	33,000 (9,190)	144
Nurses Health Study II	USA	32-54	29,611 (25,994)	641
Mammary Screening Cohort	Sweden	40-69	28,800	70
NYU Women's Health Study	USA	35-65	14,274 (7,622)	777
ORDET	Italy	35-69	10,788 (6,694)	283
Sister Study	USA	35-74	50,884 (14,772)	452
Total				3,277*

¹ Number of women participants <50 years of age or premenopausal at blood donation

* Aim 1: 3,013 cases; Aim 2: 2,637 cases