

BIOST 515-Project

Michael Cork, Claire Rothschild, Baohai WattShao, Aji John

Winter Quarter 2018

We are interested in changes in plasma lipid biomarkers for coronary heart disease (CHD) after hormone replacement therapy in a sample of 2,763 women from the Heart and Estrogen/progestin Replacement Study (HERS). HERS was a randomized, double-blind, placebo-controlled trial designed to test the efficacy and safety of estrogen plus progestin therapy for prevention of recurrent coronary heart disease (CHD) events in women.

Questions of interest

The data to be analyzed for this project is a subset of the data collected from the 2,763 women in the Heart and Estrogen/progestin Replacement Study (HERS) clinical trial of hormone therapy. The questions to be addressed are:

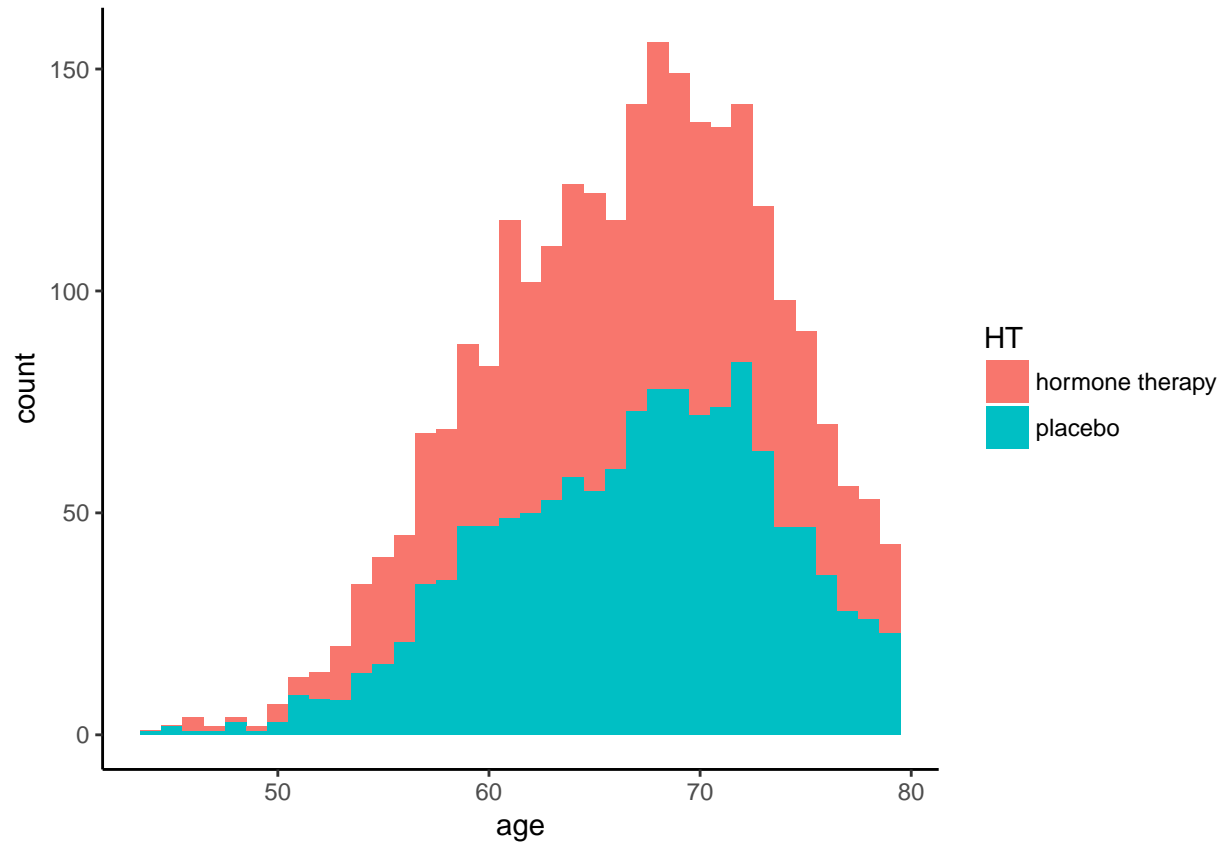
1.

What associations exist between the plasma lipid biomarkers for CHD at baseline (i.e., prior to randomized treatment assignment) and the available data on participant demographics (age, race, BMI), behavior (smoking, alcohol consumption, physical activity), and available clinical and laboratory measures of organ system functioning (e.g, glucose, blood pressure)?

2.

Is there any evidence of hormone therapy treatment effects on the plasma lipid biomarkers after one year of treatment?

Profile of subjects studied



BMI Profile of subjects studied by Control/Treatment

HT	n	meanBMI	sdBMI	meanBMI.1	sdBMI.1
hormone therapy	1274	28.59735	5.434025	28.22312	5.509812
placebo	1306	28.52488	5.495672	28.45959	5.605677

3.

Is there any attenuation of the hormone therapy treatment effects after adjustment for known risk factors for CHD? ## 4. Do any of the hormone therapy treatment effects identified above for the plasma lipid biomarkers differ according to race/ethnicity, statin medication use, smoking behavior, or alcohol consumption.