May 19, 2003

Matching Results for Ancillary Study 108: Gene and diet effects in colon cancer

Case / Control Selection:

All locally adjudicated African American cases of incident colorectal cancer were selected as potential cases from the February 28th, 2003 database from the WHI Observational Study. Colorectal cancer is defined as being diagnosed in the colon, rectosigmoid junction, or rectum. Cases were not required to be invasive. A total of 69 locally adjudicated cases initially were eligible for the study along with 7,570 potential African American controls.

Potential cases and controls were excluded if they possessed any of the following characteristics:
- Inadequate Buffy Coat Supply
- Refusal to Participate in Genetic Studies
- Any Self Reported Cancer prior to or at baseline (Form 30)
- Colorectal Cancer Denied at Central Adjudication (Cases Only)

Out of an original 69 cases and 7,570 controls, a total of 19 cases and 1,036 controls were excluded from the prospective case / control set using the above criteria, leaving a total of 50 incident colorectal cancer cases and 6,534 controls.

Matching criteria:

All fifty (48 centrally confirmed, 2 centrally open) incident colorectal cancer cases were put into the matching algorithm. Matching was done on age at baseline and was matched based on criteria to minimize an overall distance measure (Bergstralh EJ, Kosanke JL. Computerized matching of cases to controls. Technical Report #56, Department of Health Sciences Research, Mayo Clinic, Rochester, MN. April 1995). Matching was done in a time forward manner to ensure that each control had at least as much control time as its matched case. For example, a case diagnosed with colorectal cancer two years after randomization would be matched with a control with at least two years of follow-up. SAS code is available to implement this matching scheme.

Matching summary:

A total of 50 incident cases colorectal cancer and 6,534 controls were put into the matching process. All cases were successfully matched with 3 controls each (no unmatchable cases) and included in the final sample set.

The mean difference in age between the cases and controls is 0 with the mean age at baseline for each of the groups at 62.74. Thus each case's age at baseline matched exactly with its respective controls.