Alcohol use and non-Hodgkin Lymphoma risk and outcomes
(WHI MS 2560)

(R21, pending, NIAA PA-14-336)
- Non-Hodgkin Lymphoma (NHL) is a group of hematopoietic cancers, together the most common blood cancer: 71,000 new cases and 19,000 deaths annually; >500,000 survivors in US

- NHL comprises many subtypes, recently organized into a hierarchy for epidemiological studies (InterLymph Consortium; Morton 2007 (Blood) and Turner 2010 (Blood))

Most NHL is B-Cell (~19 x 10^{-5} /yr), T-Cell are rare (~1 x 10^{-5} /yr)
Typical epidemiological studies can examine a few subtypes at Level 5.
• Heterogeneity in risk among NHL subtypes -- InterLymph Consortium (Morton 2014, JNCI)

• Also heterogeneity in survivorship experiences
  • Diffuse large B-cell lymphoma (DLBCL) is aggressive but treatment often leads to cure
  • SLL/CLL and follicular lymphoma are sometimes diagnosed in “indolent” phase, but are characterized by multiple relapses and difficult to cure
Alcohol and NHL in WHI: incidence and survival
Aims:
1. Estimate risk of NHL with alcohol use in WHI cohort
   • Hypothesis: inverse association consistent with earlier studies

2. Estimate association of alcohol use (pre- and post-diagnostic) with NHL survival; investigate change in alcohol use pre/post in association with survival
   • Hypothesis: alcohol intake is associated with shorter survival
WHI: alcohol and NHL

WHI has both pre- and post-diagnostic updated alcohol use
- 3 reports published on pre-diagnostic alcohol and survival, generally show adverse association HR ~ 1.5 for highest consumption
- Most cases in these studies dx before 2000 (prior to widespread use of monoclonal antibody)
- No studies published with post-dx data
- **Change** in alcohol intake following dx is an important question for survivorship
• Cohort is all women (NHL has ~50% higher rate in men),
  • sex-specific differences in drinking behavior – women overshadowed in earlier studies?

• Challenges
  • Many subtypes, small numbers to examine risk heterogeneity
  • Hypotheses about behaviors associated with survival would ideally be tailored to subtypes