Hormone replacement therapy and risk of breast cancer with
a favorable histology
(Iowa Women’s Health Study)
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Study Type: POEM
Purpose: Is there an association between HRT use and the incidence among 3 types of breast cancer?
Study Duration: 11 year follow-up
Patients: 371,477, postmenopausal women aged 55-69
Trial Design: self-reported data, prospective cohort study, randomized (selected from 1985 Iowa diver’s license list), 98,029 were eligible with 42.5% answering a 16-page questionnaire, there were four follow-up questionnaires in 1987, 89, 92 and 97, cancer data was identified from the Health Registry of Iowa and crossed with the questionnaires
Inclusion: all women with a driver’s license at risk for breast cancer
Exclusion: premenopausal (n = 569), previous partial or complete mastectomy (n = 1870), those reporting a history of no skin cancer (n = 2293). Total at risk patients = 37,105
Outcome Events: Number of breast cancer events and morphology.

1. Are the results valid?
   * RCT? no
   * Were the comparison groups similar with respect to important determinants of outcome? no data
   * Were outcomes measured the same way for both groups? yes - patient recall bias
   * Was follow-up long and complete? yes, 11 years, there is likely incompleteness

2. What were the results?
   Primary endpoint: Cases (of 371,477) HRT useNNH
   Ductal Carcinoma In Situ 175 (11.5%) NS
   Invasive, favorable histology 82 (5.4%) p<.009 25 (never users vs any use)
   Invasive, unfavorable histology 1164 (76.6%) NS
   Excluded 99
   Multivariate-Adjusted Never HRT Past user Current user
   Ductal Carcinoma In Situ 1.0 NS >5y <5y 0.29 NS
   Invasive, favorable histology 1.0 1.44 2.86 4.42 2.63
   Invasive, unfavorable histology 1.0 NS NS 1.38 NS

3. Will the results help me?
   * poor p-value reporting
   * self-reported data has it’s weakness
   * DCIS and invasive unfavorable cancers were associated with BMI
   * 2 fold increase in risk of DCIS and 1.4 fold increase in invasive unfavorable histology in those with a family history
   * women on hormones were more likely to get a mammogram
   * favorable breast cancer types are more associated with those who currently use HRT vs past users
   * breast cancer death rate in all groups combined was 197/37,105 (at risk) = 0.5%
   * total all breast cancer rate = 1520/37,105 = 4%
   * 197 out of 1520 breast cancers died = 13%