Lung Cancer Screening: Cost Effectiveness Analysis
William C. Black, MD

Outline
- NLST CEA
- CEA concepts
- ICER estimate

Cost Effectiveness Analysis
- Comparison: LDCT vs CXR vs None
- Effectiveness: LYs and QALYs
- Costs: $US (reference 2009)
- Perspective: Societal
- Time horizon: Within-trial and lifetime
- Discount rate: 3%

Effectiveness (LYs)
- Aggregate LYs from entry to death
- Observed survival before 2009
- Projected survival after 2009
  - age, sex, smoking, lung ca status

Effectiveness (QALYs)
- Adjust LYs for QOL (0-1.0)
- SF-6D utility scoring
- Estimate missing scores
  - age, sex, scr, lung ca status

Costs
- Direct medical (screening, dx, rx)
- Non-medical (travel, lodging)
- Opportunity (lost wages)
- Projected beyond 2009
  - age, sex, and lung ca status

Which of the following statements about the benefits, harms, and costs of LDCT screening for lung cancer is true?

1. The benefits of LDCT screening for lung cancer definitely outweigh the harms and costs.
2. The harms and costs of LDCT screening for lung cancer definitely outweigh the benefits.
3. The harms and costs of LDCT screening for lung cancer are well established.
4. The balance of the benefits, harms, and costs of LDCT screening strongly depend on who is screened and in what manner.