

The Future of Medical
Practice and Treatment:

Economic Efficiency and CEA-CER

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The Future and Obama Care

- Value of growth in health enormous
 - Murphy and Topel (2007)
 - Partly due to medical innovation
- Obama campaign platform and proposals
 - Increased central planning and price controls
 - “Europeanization” of US Health Care
- US unique role in medical innovation
- Underlying goal: “Solidarity”, Intergenerational?
- The worlds most costly unintended consequence ?

CEA and CER as Price Controls

- Subsidies and D/S Prices: Co-pays and Reimbursement
- CEA
 - Rules that controls producer- and consumer price as function of evidence on quality or effectiveness of a single treatment
- CER
 - Rules that controls consumer- and producer prices as function of evidence on quality or effectiveness of multiple treatments
- Weakly monotonic D/S prices

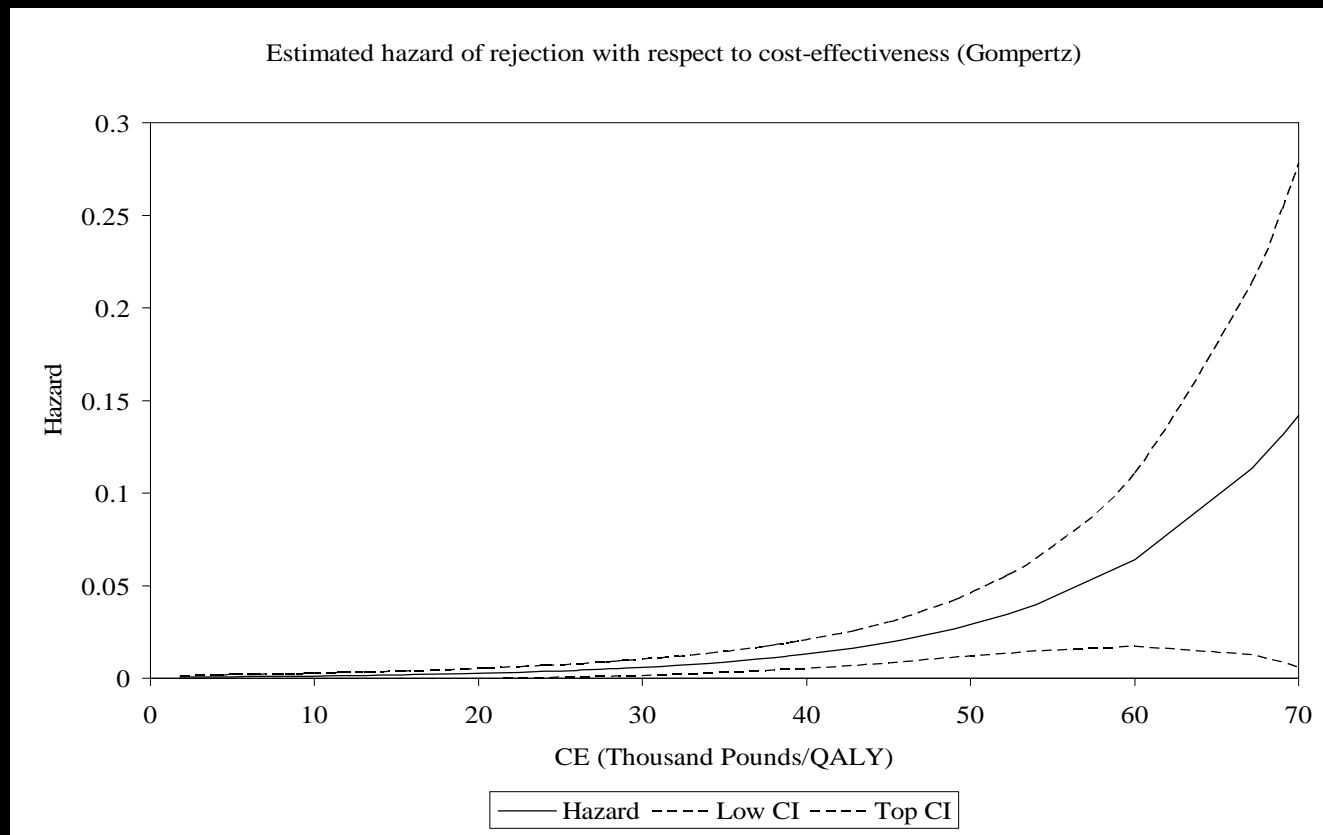
Dynamic Efficiency and CEA/CER

- Jena, A. and T. Philipson “Cost-Effectiveness as Price Controls”, *Health Affairs*, 2008
- Jena A., and T. Philipson “Cost-Effectiveness Analysis and Innovation”, *Journal of Health Economics*, 2008.
- CEA/CER focused on Consumer Surplus
- Consumer- vs Producer Surplus
 - Patents lowers CS (and CE) to raise PS
 - Perfect Discrimination: CE minimized to increase dynamic efficiency and health
- CEA and CER are price controls in bilateral monopoly
- World Innovation and US CEA/CEA policies
 - No Tradeoff Outside US

Static Efficiency and CEA

- Jena, A. and T. Philipson, ” *Endogenous Cost-Effectiveness Analysis and Health Care Technology Adoption* “ NBER WP 2009
- Exogenous CE depends resource costs : Costs/Quality
 - Determines economic efficiency: Social MB vs MC
- Endogenous CE uses prices : Price/Quality
 - Prices are marked-up above costs: $\text{Price} = \text{Markup} * \text{Costs}$
 - Demand Side Affects Markup
 - Patient/Doctors and Adoption Policies (!)
 - Example: NICE threshold policy
- “Bang for the buck” rationale for CEA has “buck” include demand factors
- Example: patented protected drugs vs competitively priced devices

Estimated NICE rejection hazard function, 1999-2005



Static Efficiency and CER

- New funding for Comparative Effectiveness Analysis in American Recovery and Restoration Act of 2009
- Little is know about the effects of CER on welfare of patients
 - When are head-to-head trials in CER valuable?
 - What are welfare effects of adopting technology based on CER?

Basic Issue: Patient Heterogeneity

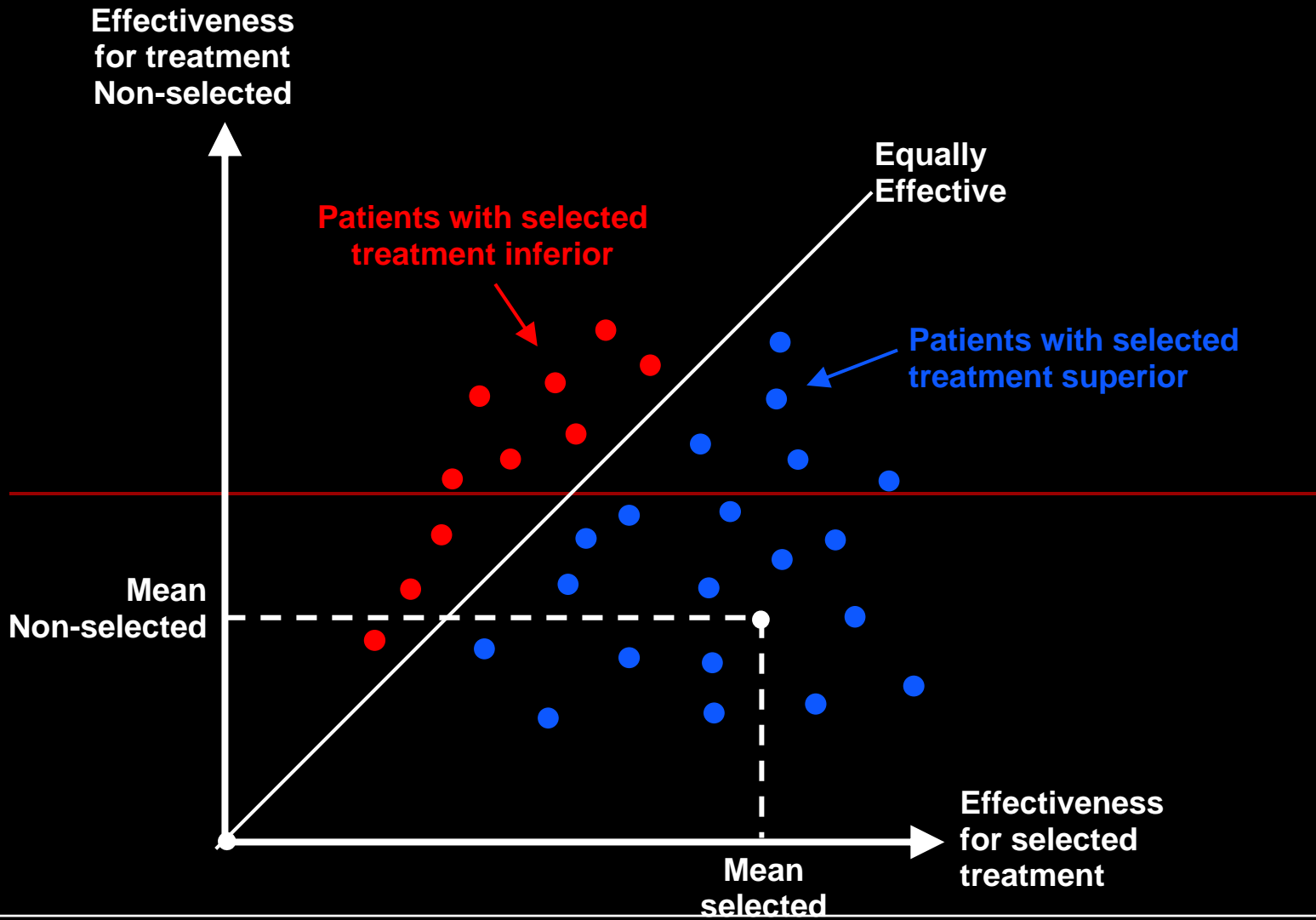
INFORMATION VALUE OF CONDUCTING CER

- Head-to Head trials valuable only under patient heterogeneity in treatment effects
 - Otherwise: two placebo controlled sufficient
 - Different distribution of interactions across two studies issue under heterogeneity

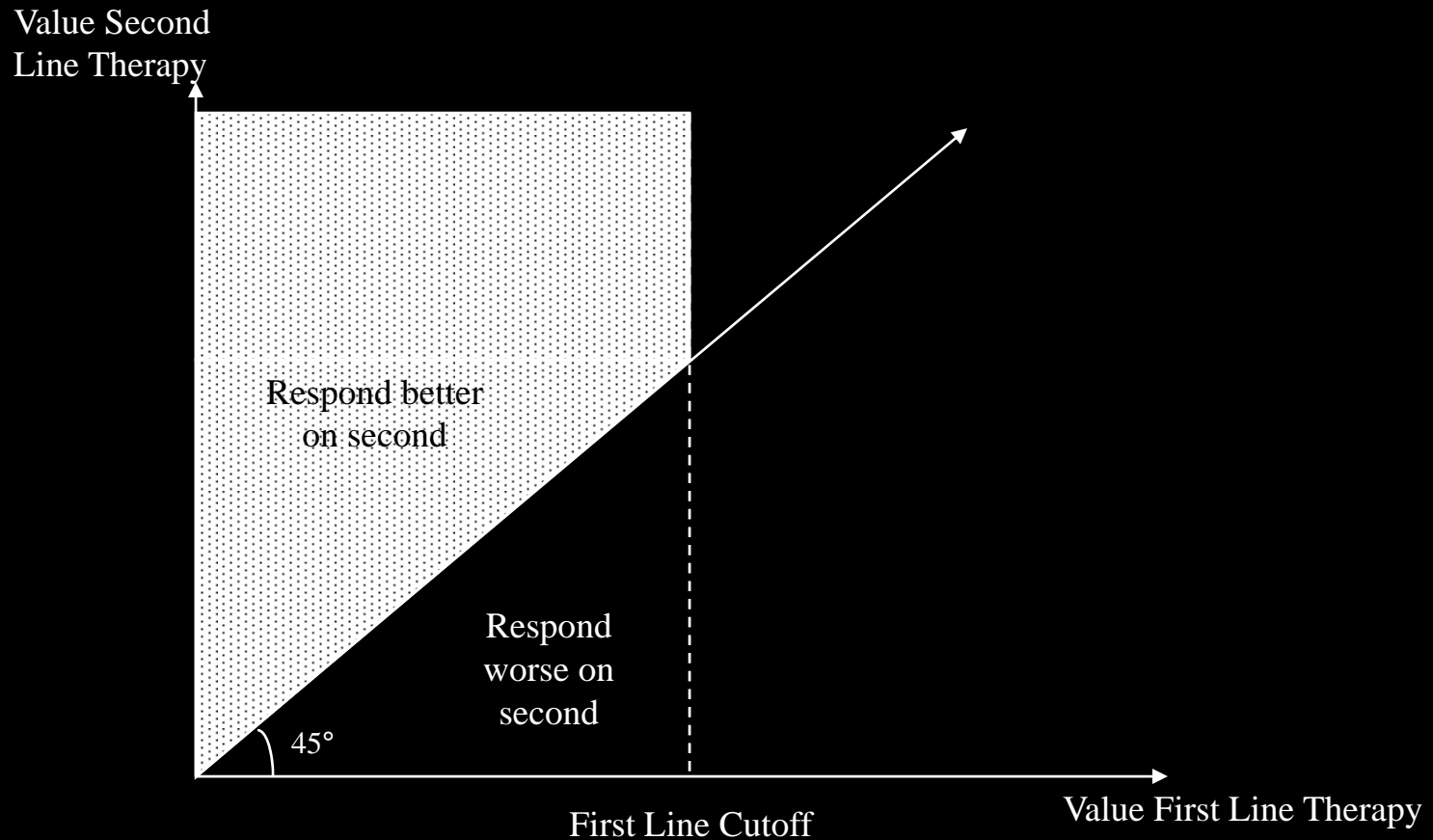
BASING TECHNOLOGY ADOPTION ON CER

- Adoption based on CER is *product-specific* adoption
- Patient heterogeneity in treatment responses means adoption should be *patient-specific*

Hence: CER is only valuable when adoption based on it is not valuable!



Conditional vs Unconditional Treatment Responses



Larger Issue exemplified by “Medical Treatment & Practice”

■ Production vs Financing

- Financing Public, Production Private
- Can the two be separated ?
- Premium support: Medicare Part D model
 - Private sector for CER (Analog: Medicaid Pricing)

■ Public Role in CER (CBO 2007)

- Why insufficient quality information unique to health care?
- Negative and excessive advertising

In Summary

- CER And CEA are implicit price controls
- These Price Controls have Efficiency Implications
 - Dynamic Inefficiency
 - Operate against purpose of patents
 - Dynamic impact present in US but not smaller countries
 - Static Inefficiency of CEA: Endogenous CE
 - Static Inefficiency of CER: Heterogeneity