

# Pricing anticancer drugs

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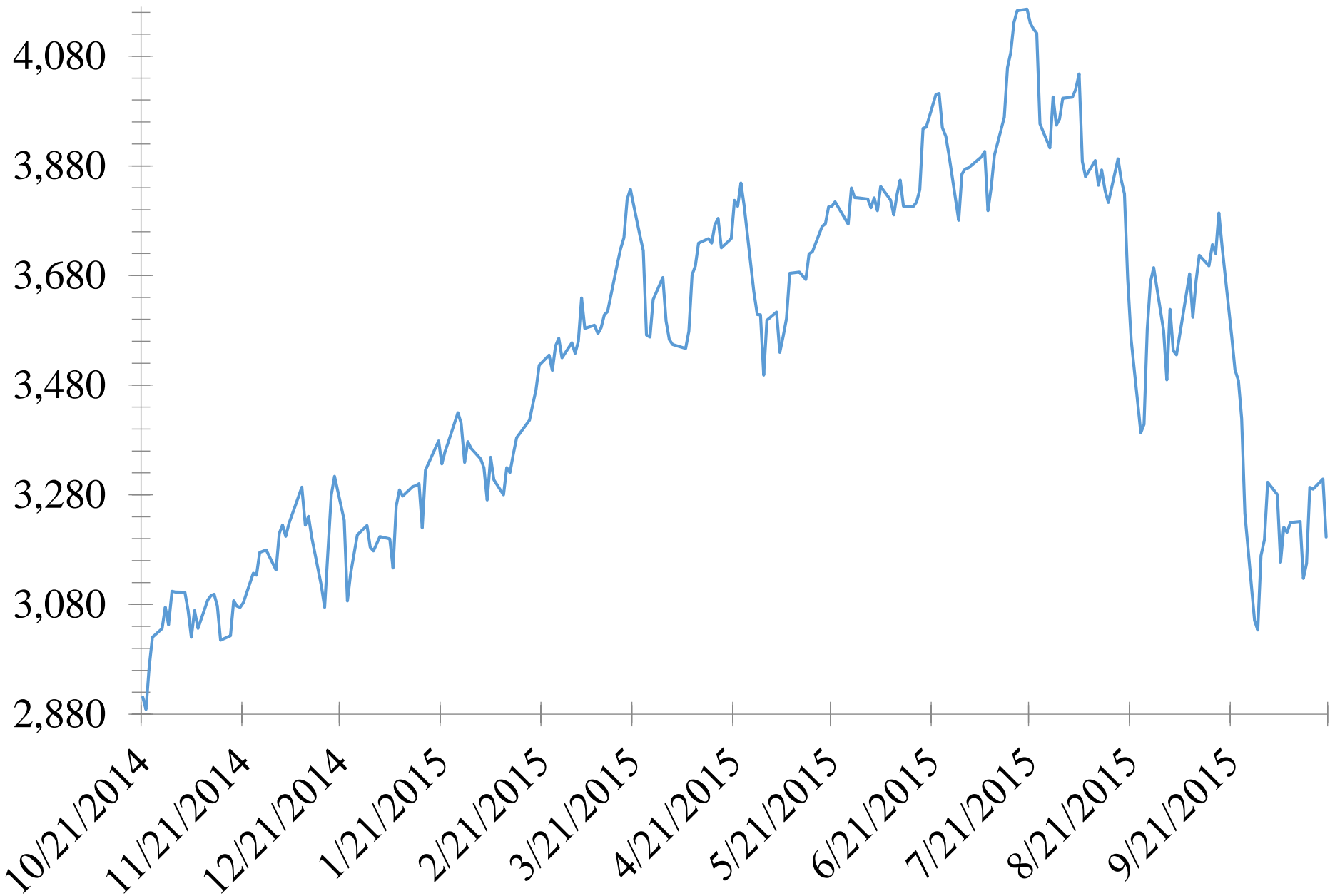
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Pfizer





# NASDAQ Biotechnology Index



# The market for anticancer drugs

- Financial significance:
  - Total spending was \$37 billion in 2013 (IMS 2014)
  - Over 900 anti-cancer drugs are in various phases of pre-approval testing (PhRMA 2012)
- Symbolic significance: “Today NICE routinely denies Britons life-prolonging drugs that are deemed not ‘cost effective’ ... The result, studies show, is that Great Britain’s cancer survival rates are among the worst in Europe and lag behind the United States.” Newt Gingrich (2009)
- Economic significance: Tradeoff between life and health is very explicit

# Defending high prices

Here is James Caruso, the chief commercial officer for drug maker Allos, defending the price of cancer drug Foltyn:

Mr. Caruso also said the price of Foltyn was not out of line with that of other drugs for rare cancers. Patients, moreover, are likely to use the drug for only a couple of months because the tumor worsens so quickly, he said.

# Defending high prices

## Least Convincing Argument of the Day

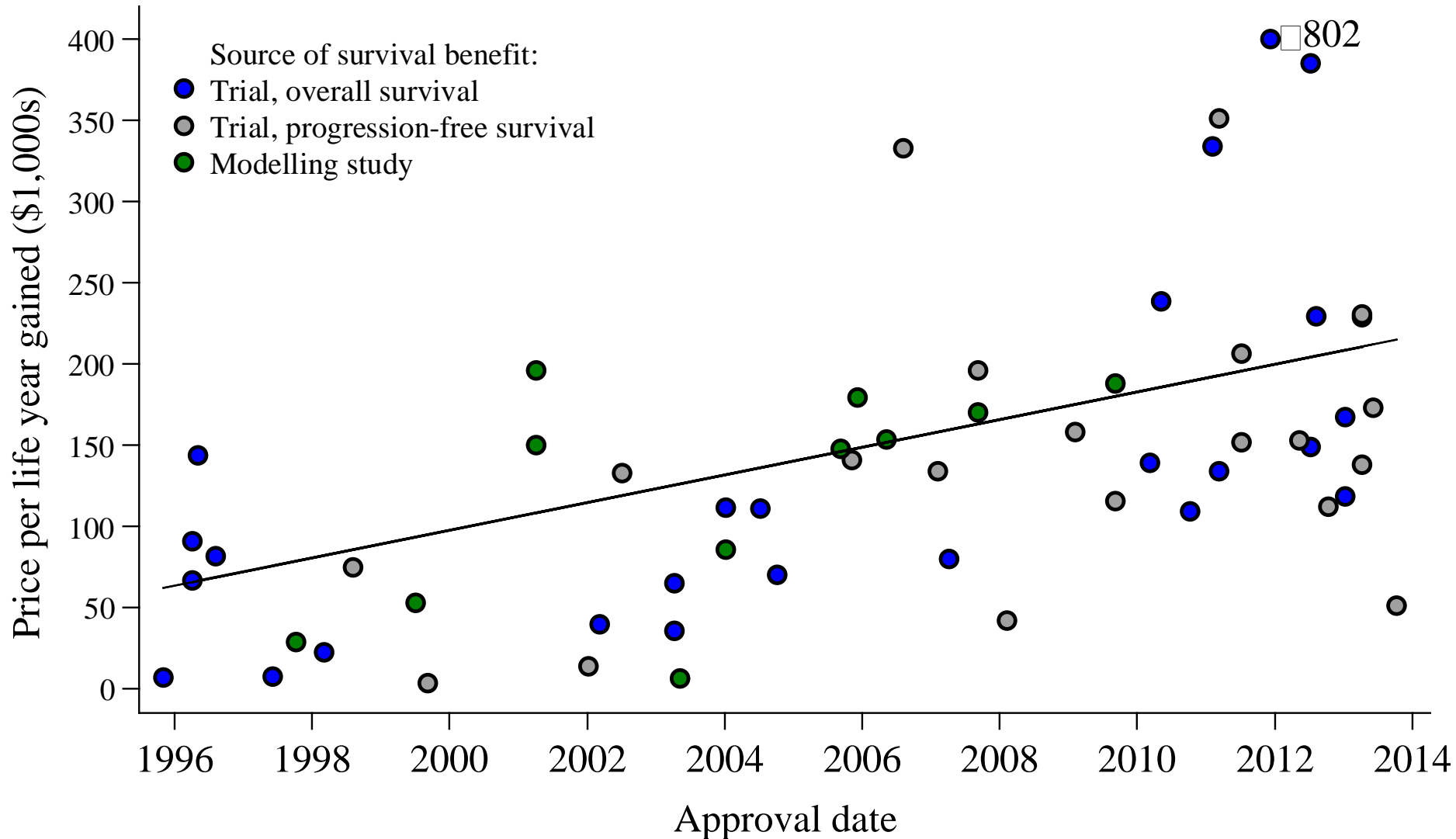
by [Alex Tabarrok](#) on December 6, 2009 at 8:29 am in [Medicine](#) | [Permalink](#)

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Figure 2: Price per life year gained versus approval date



The best fit line is: Price per life year gained = \$54,100 + \$8,500 × Approval year.  
For purposes of display, we re-coded one value from \$802,000 to \$400,000.

# Features of the market for new anticancer drugs

- Producers are monopolists, few close substitutes
- Insurers cover drugs for FDA-approved uses regardless of price
- Physicians make money on office-administered drugs, neutral for oral drugs
- Patients face low cost sharing at the margin

# Patient assistance programs

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# Reference pricing

- Oncologists decide whether to use drugs
- They have no direct incentive to avoid costly drugs
- They may balk at prescribing drugs with prices they perceive as unreasonable
- Perceptions of unreasonableness are malleable and influenced by the prices of previously approved drugs.
- If the reference price is  $\$X$ , manufacturers can set the price of a new drug at  $\$X + \varepsilon$  without incurring a demand penalty

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# Reference pricing

- A spokeswoman for AstraZeneca justified the price of Irressa as “*in line with other cancer treatments.*” (Marcus 2004).
- The retail price of the drug will be \$5,416 per month, an amount that Onyx said is in *the range of similarly specialized cancer drugs.* (Silber 2005)
- Gold [CEO of Dendreon] says that the cost of Provenge was based on the “*overall landscape*” of treatment prices for cancer. (Hutchison 2010)

# Reference pricing in the chemo market

- Right now...it is basically chutzpah...The most powerful predictor of the entry price is the entry price of the drug that came before it. There is nothing to do with innovation, accelerated approval, number of patients served. It is just a game of chicken.

--Oncologist

# Reference pricing

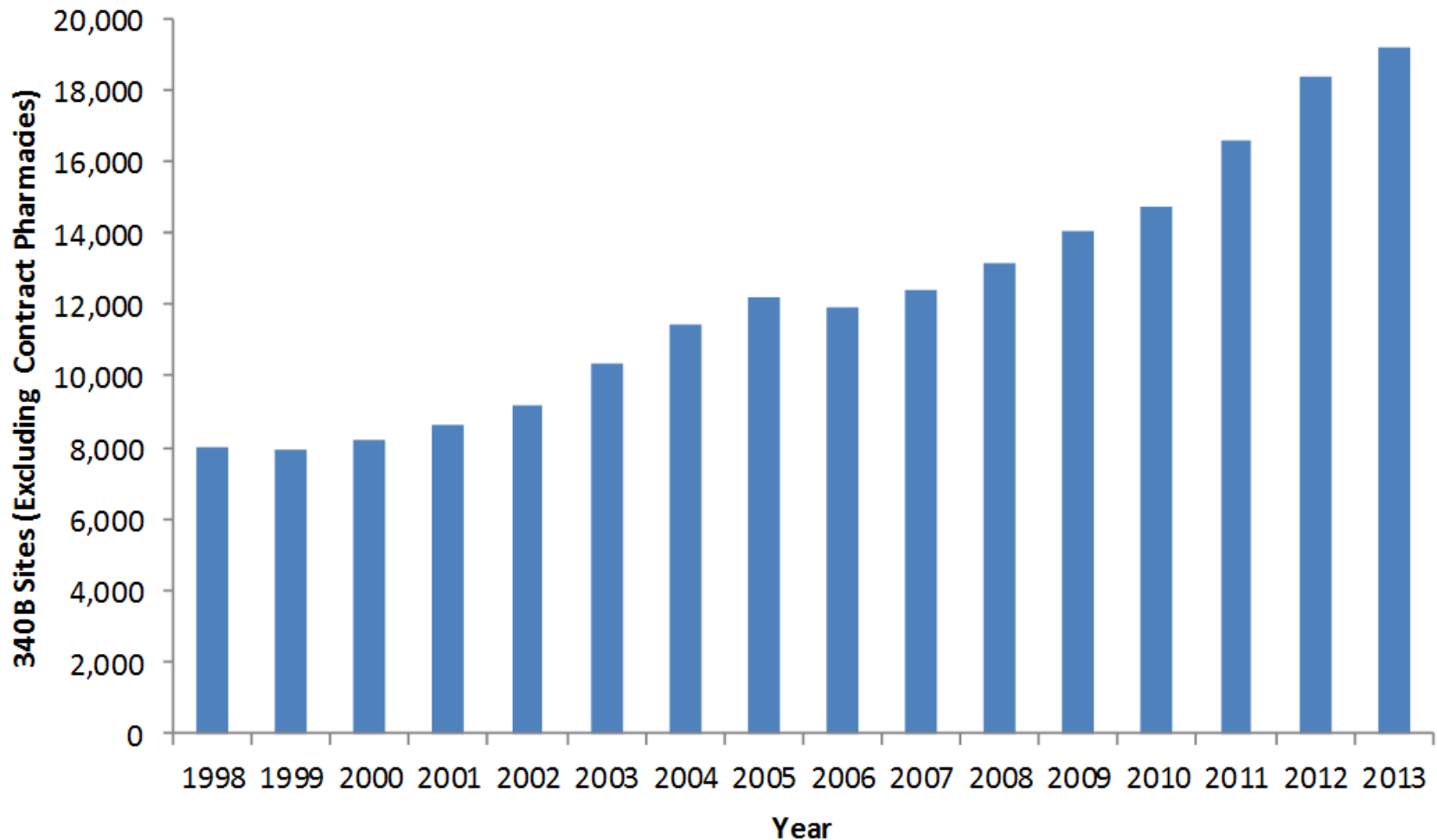
Companies will be looking at these products to help them determine the pricing of their own drugs  
...Tarceva and other drugs will likely take their cue from Erbitux and Avastin.

Wall St. Analyst



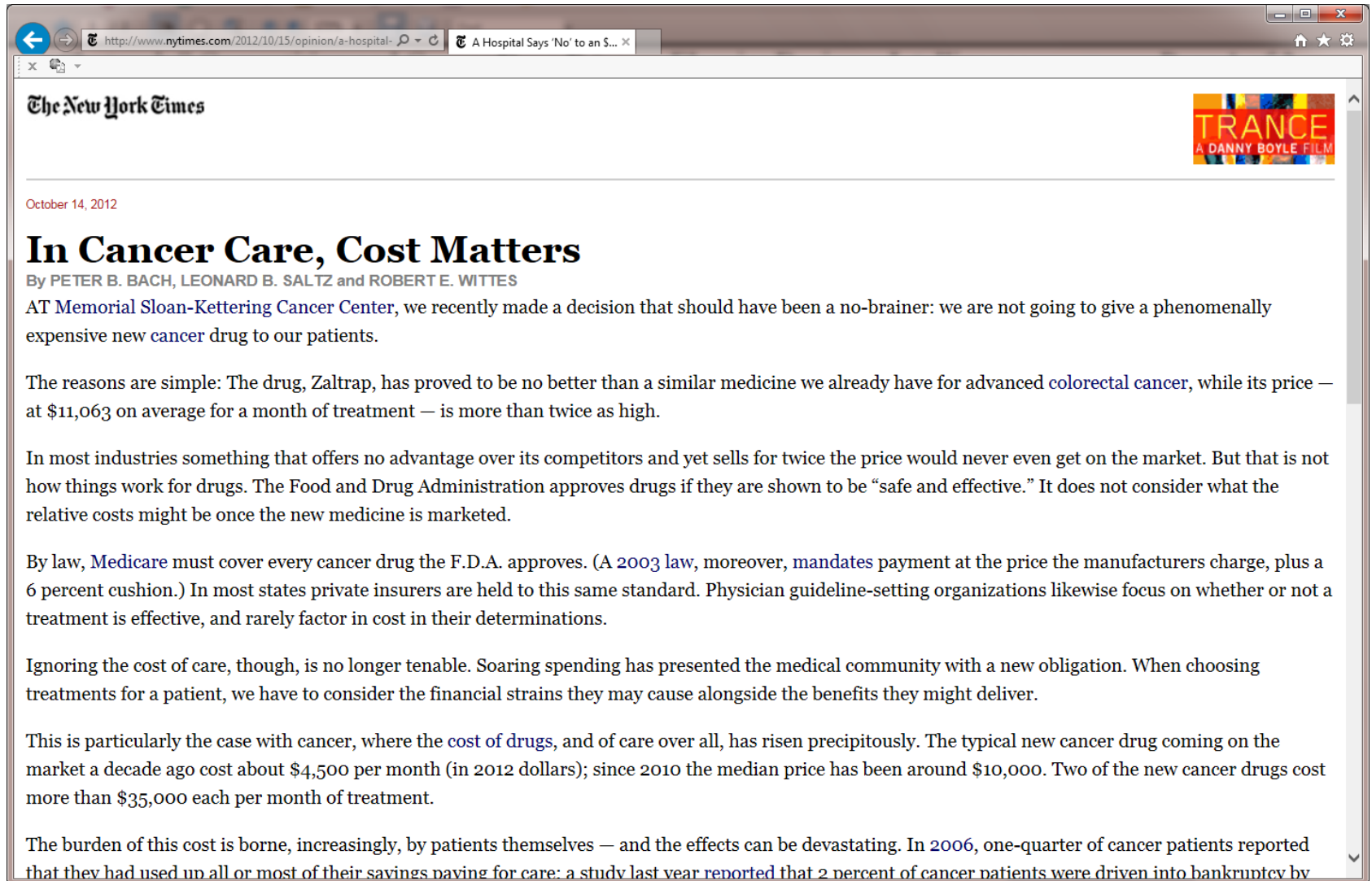
# 340B drug pricing program

Growth in the Number of Participating 340B Covered Entities (1998-2013)



Source: Avalere Health analysis of Health Resources and Services Administration Office of Pharmacy Affairs files.

# Reference pricing and Zaltrap



The screenshot shows a web browser window with the URL <http://www.nytimes.com/2012/10/15/opinion/a-hospital->. The page header features the New York Times logo and a date of October 14, 2012. The main title of the article is "In Cancer Care, Cost Matters" by Peter B. Bach, Leonard B. Saltz, and Robert E. Wittes. The article discusses the high cost of the drug Zaltrap for advanced colorectal cancer, comparing it to a similar, cheaper medicine. It also mentions that Medicare must cover every cancer drug approved by the FDA, and that the cost of cancer care has risen significantly since 2010. The article concludes by stating that the burden of this cost is increasingly borne by patients themselves, and that a study reported that 2 percent of cancer patients were driven into bankruptcy by the cost of care.

**The New York Times**

October 14, 2012

## In Cancer Care, Cost Matters

By PETER B. BACH, LEONARD B. SALTZ and ROBERT E. WITTES

AT Memorial Sloan-Kettering Cancer Center, we recently made a decision that should have been a no-brainer: we are not going to give a phenomenally expensive new cancer drug to our patients.

The reasons are simple: The drug, Zaltrap, has proved to be no better than a similar medicine we already have for advanced colorectal cancer, while its price — at \$11,063 on average for a month of treatment — is more than twice as high.

In most industries something that offers no advantage over its competitors and yet sells for twice the price would never even get on the market. But that is not how things work for drugs. The Food and Drug Administration approves drugs if they are shown to be “safe and effective.” It does not consider what the relative costs might be once the new medicine is marketed.

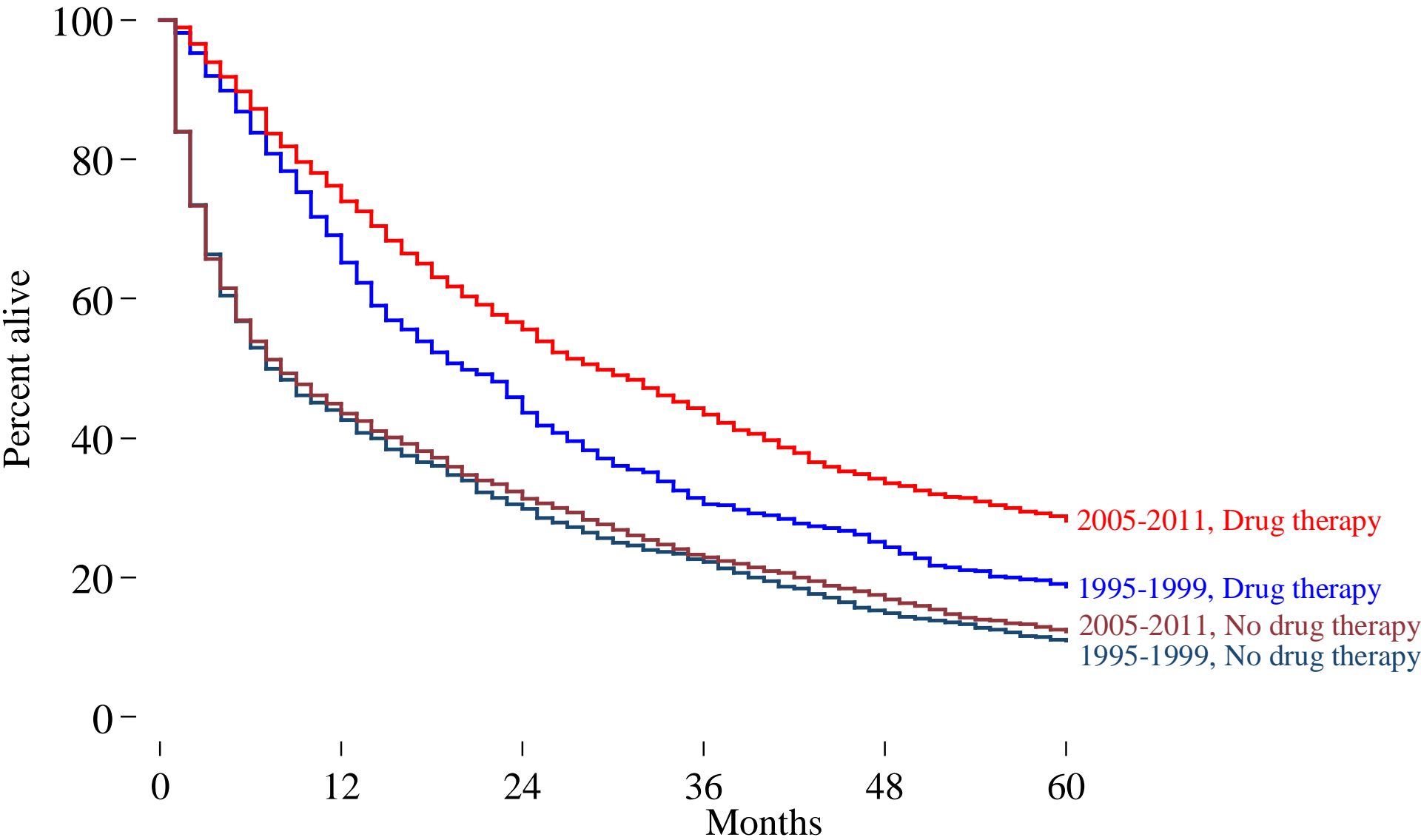
By law, Medicare must cover every cancer drug the F.D.A. approves. (A 2003 law, moreover, mandates payment at the price the manufacturers charge, plus a 6 percent cushion.) In most states private insurers are held to this same standard. Physician guideline-setting organizations likewise focus on whether or not a treatment is effective, and rarely factor in cost in their determinations.

Ignoring the cost of care, though, is no longer tenable. Soaring spending has presented the medical community with a new obligation. When choosing treatments for a patient, we have to consider the financial strains they may cause alongside the benefits they might deliver.

This is particularly the case with cancer, where the cost of drugs, and of care over all, has risen precipitously. The typical new cancer drug coming on the market a decade ago cost about \$4,500 per month (in 2012 dollars); since 2010 the median price has been around \$10,000. Two of the new cancer drugs cost more than \$35,000 each per month of treatment.

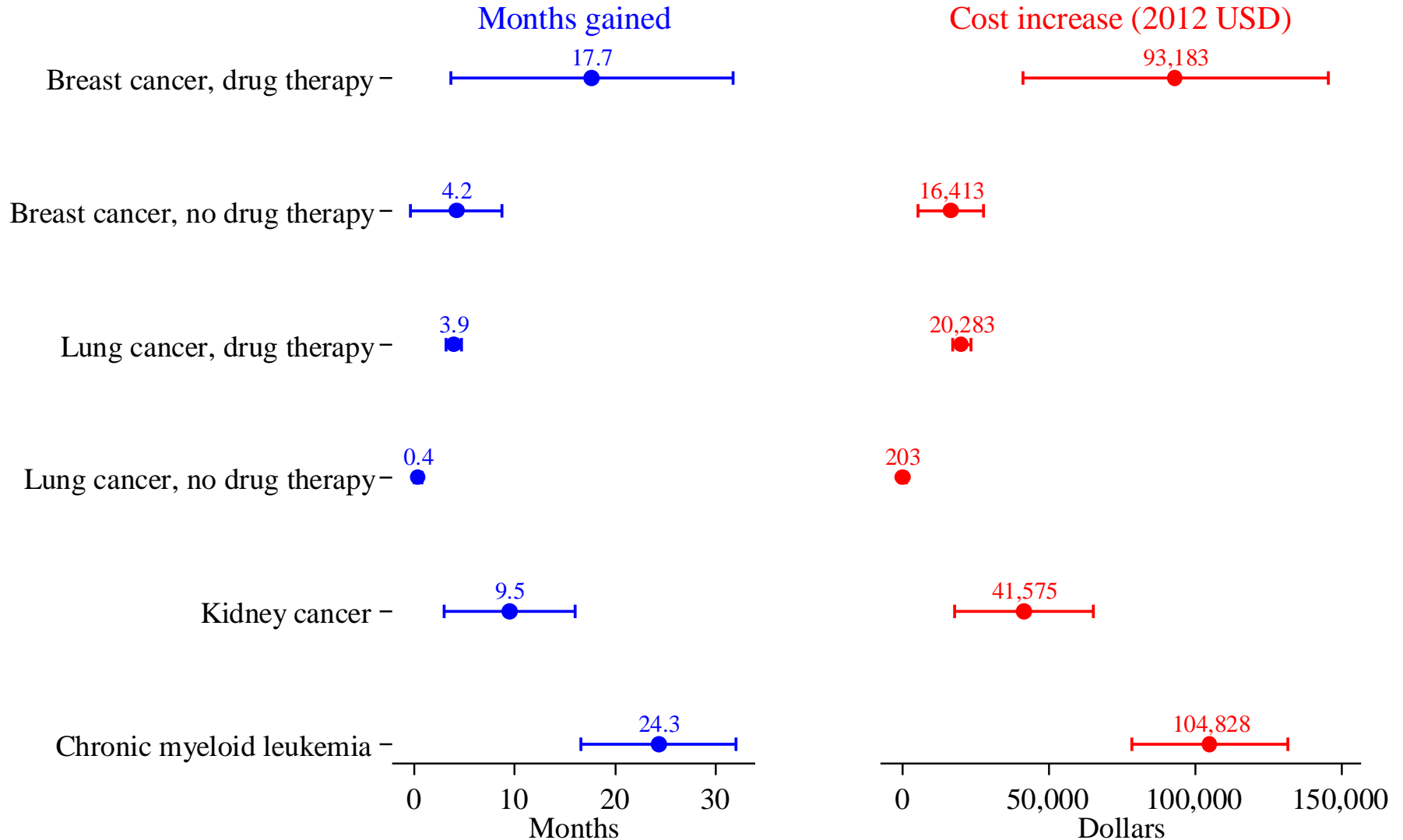
The burden of this cost is borne, increasingly, by patients themselves — and the effects can be devastating. In 2006, one-quarter of cancer patients reported that they had used up all or most of their savings paying for care: a study last year reported that 2 percent of cancer patients were driven into bankruptcy by

Exhibit 2: Breast cancer patient survival by year of diagnosis and treatment



SOURCE: Authors' analysis of SEER-Medicare

# Exhibit 3: Changes in life expectancy and costs, 1995-1999 to 2005-2011



# Policy proposals

- Require companies to spend a share of revenues on R&D
- Medicare Part D volume purchasing
- Allow importation
- Limit out-of-pocket costs
- Tie price to value
- Smooth approval for biosimilars
- Raise approval thresholds

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# Bevacizumab as first-line therapy

Proportion of patients receiving bevacizumab within 3 months of the episode start date

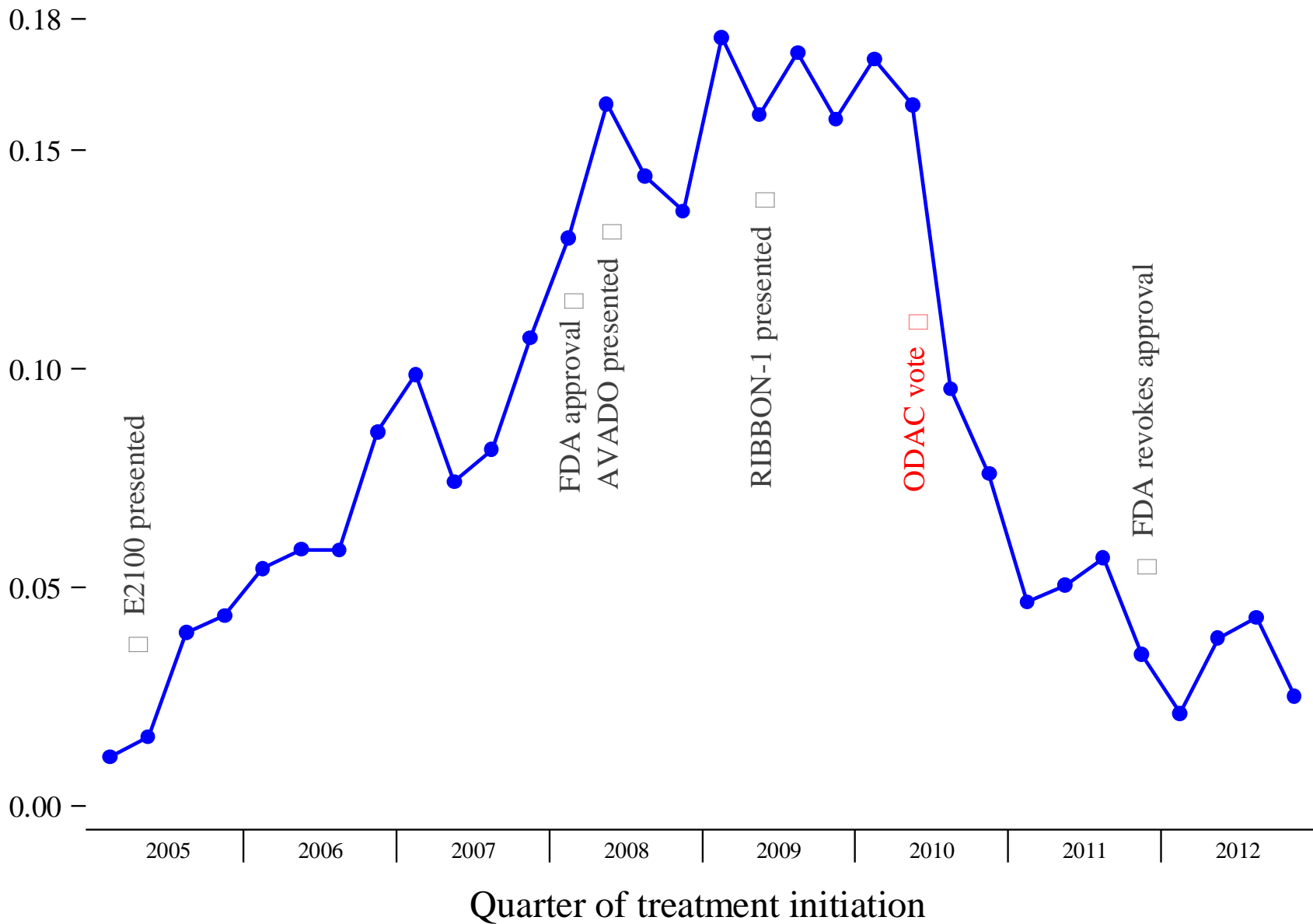


Figure 1: Price versus life years gained

