Pharmaceutical pricing: Not the market we need

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The US (and ROW by extension) pharmaceutical market

- Almost entirely artificial (through government policy)
- But ‘free’:
  - Companies can select what they develop and how much they charge
  - Policy efforts to direct market work well, but often misguided
- Central element of the market – time limited period of unconstrained pricing
  - Competition then drives down prices
- There are lots of fancy ‘solutions’, but few solve the key problem
  - Market increasingly inefficient on every margin

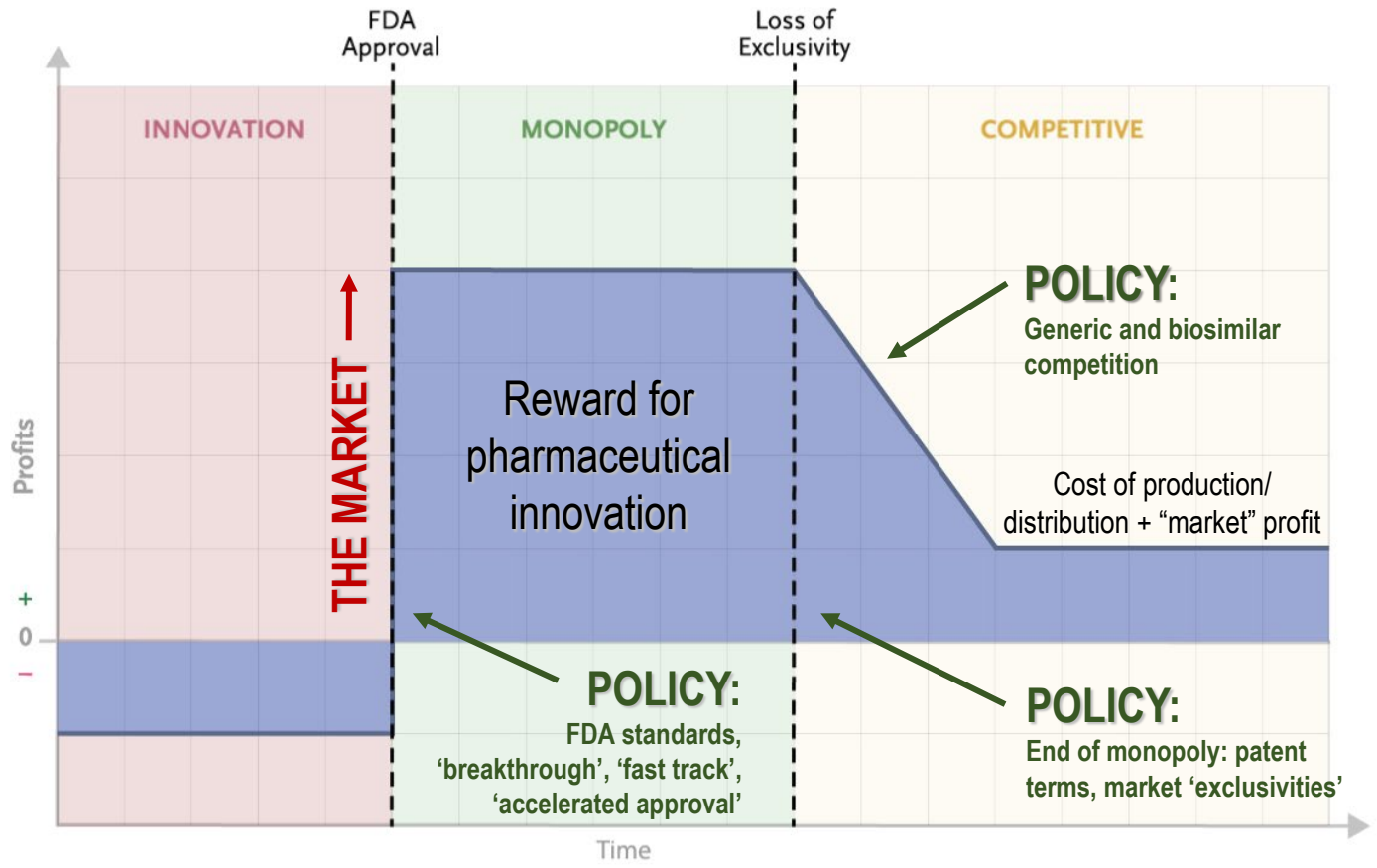
The Reward Box: Monopoly pricing for pharmaceuticals over time

The NEW ENGLAND JOURNAL of MEDICINE

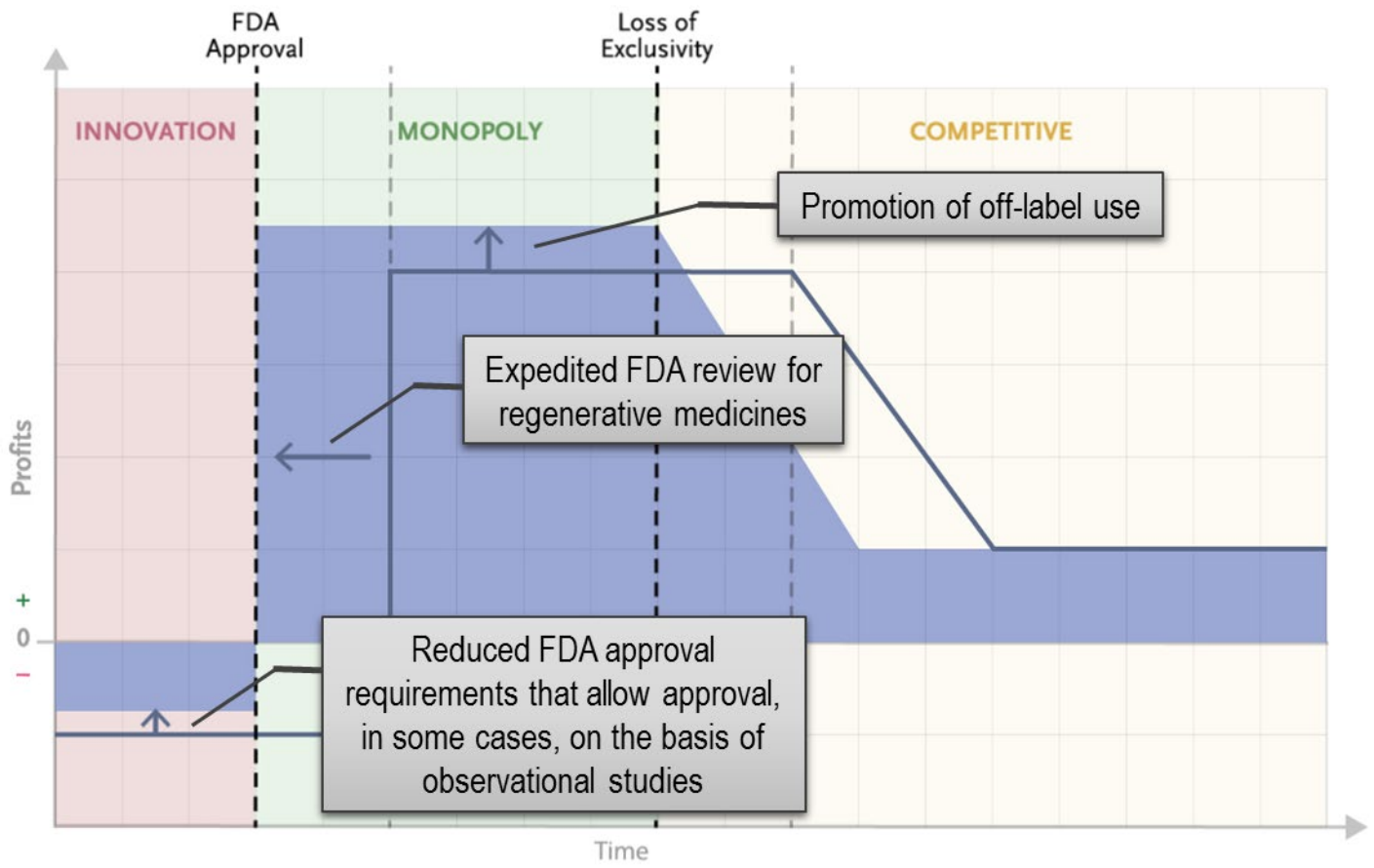
HEALTH POLICY REPORT

Understanding the Rewards of Successful Drug Development — Thinking Inside the Box

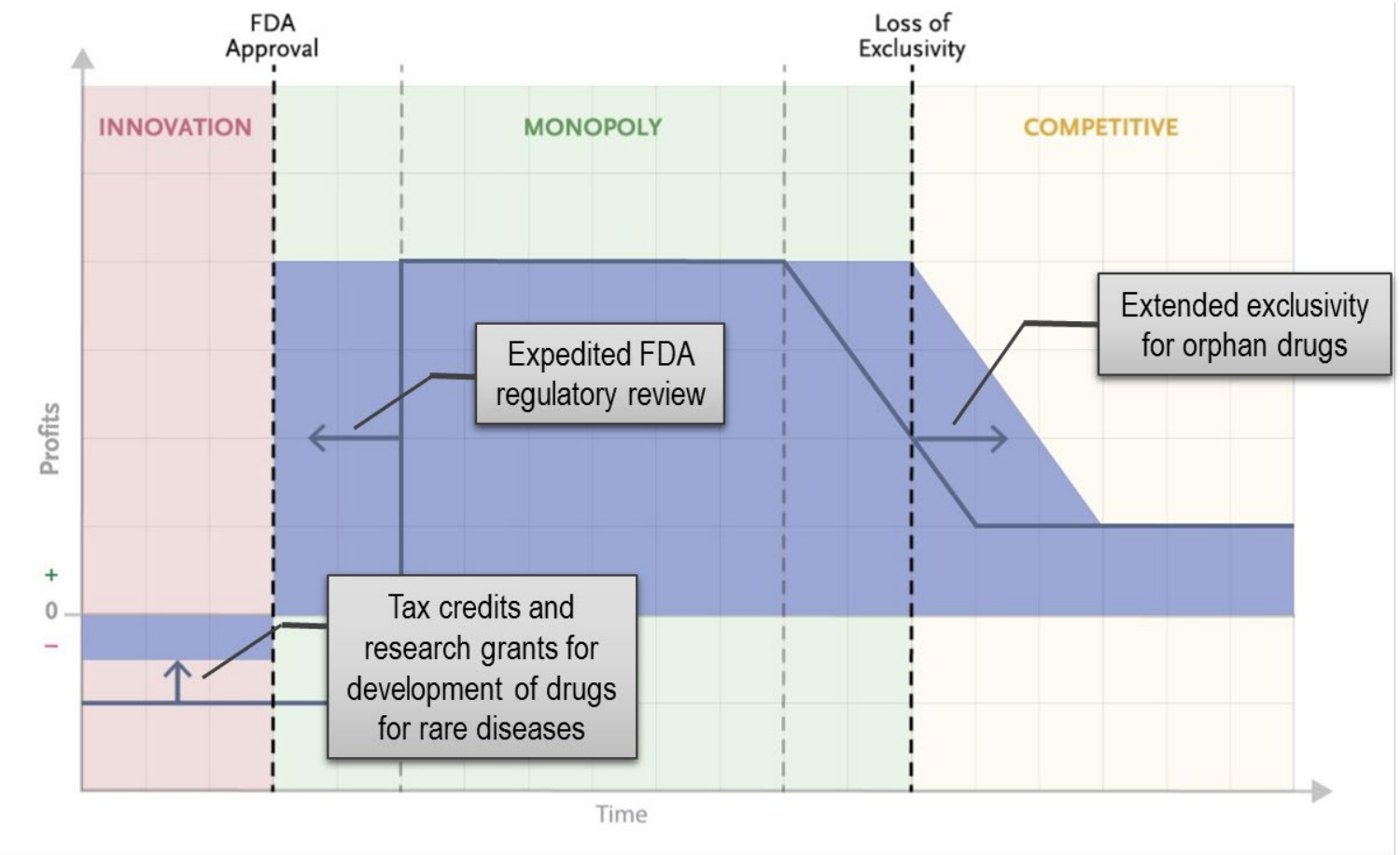
Dhruv Khullar, M.D., M.P.P., Jennifer A. Ohn, M.P.H., Mark Trusheim, M.S., and Peter B. Bach, M.D., M.A.P.P.



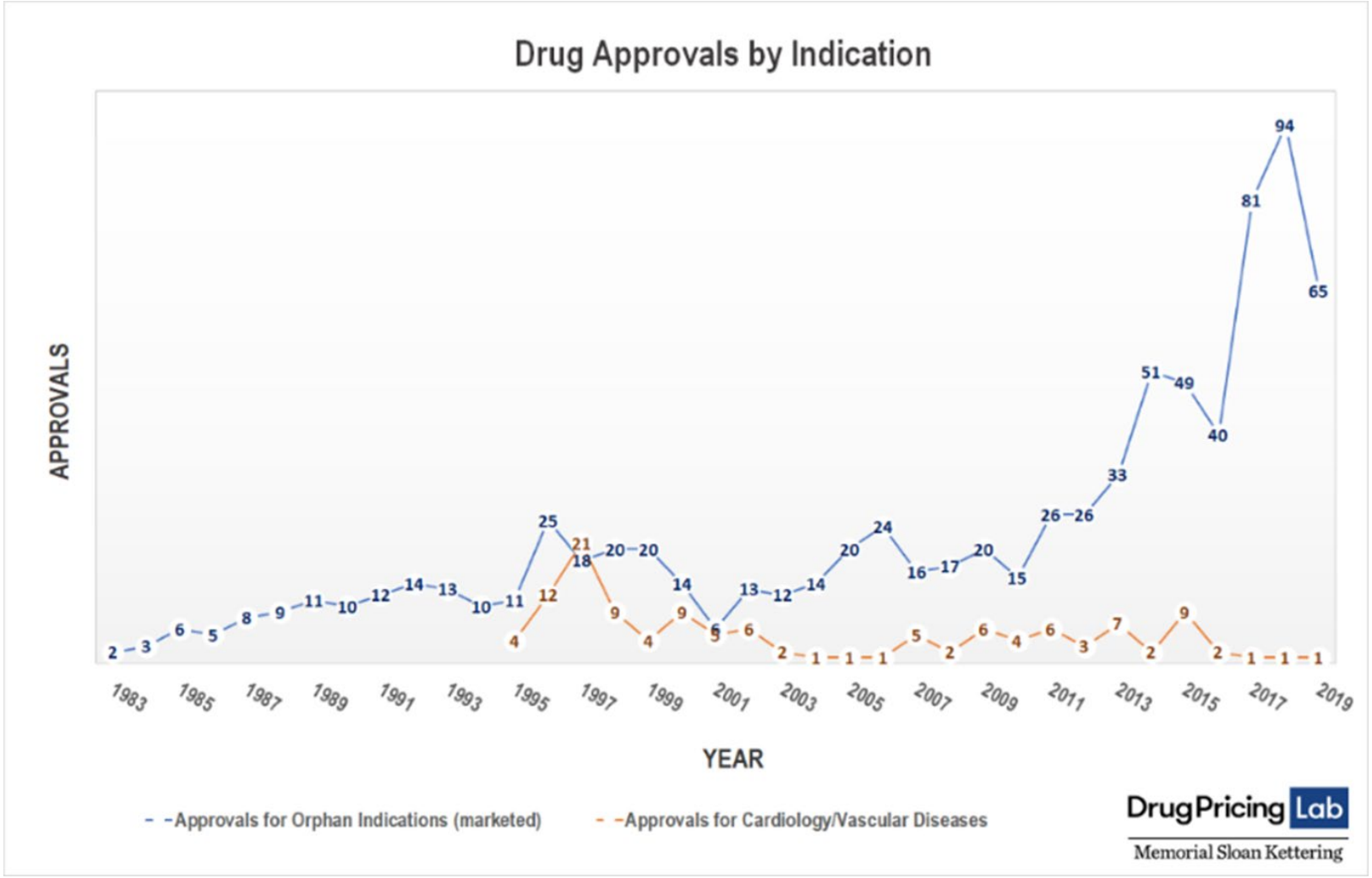
21st Century Cures Act (2016)



Orphan Drug Act of 1983



Innovation (i.e. ‘new drugs’) increasingly narrow

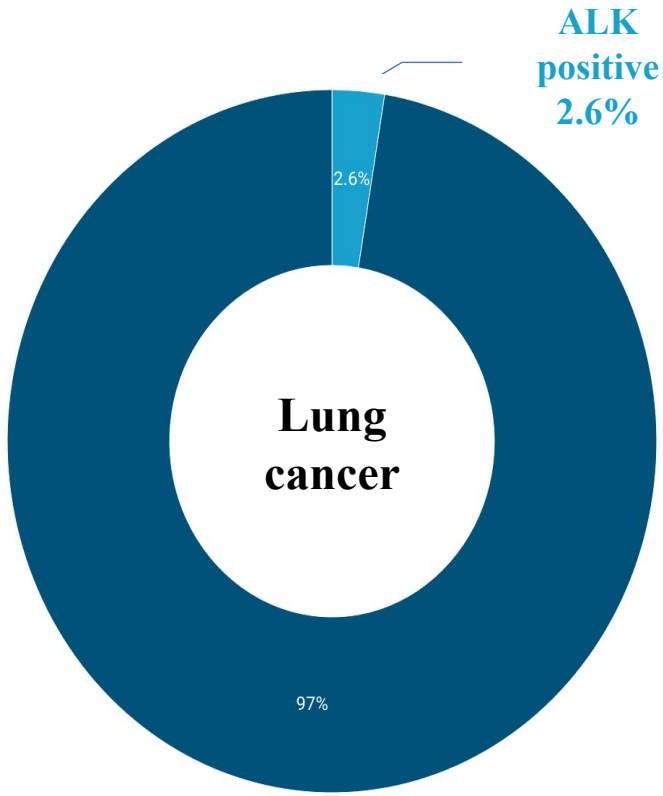


Innovation is mostly followers*

- Investment in ‘innovation’ is about expected returns
- Research success more likely when other drugs in category

Example of ALK inhibitors in lung cancer

Year	Drug
2011	Crizotinib
2014	Ceritinib
2015	Alectinib
2017	Brigatinib
2018	Lorlatinib
2022 --	Ensartinib, Entrectinib, Belizatinib, Alkotinib, Foritinib, TQ-B3139, PLB1003. TPX-0131



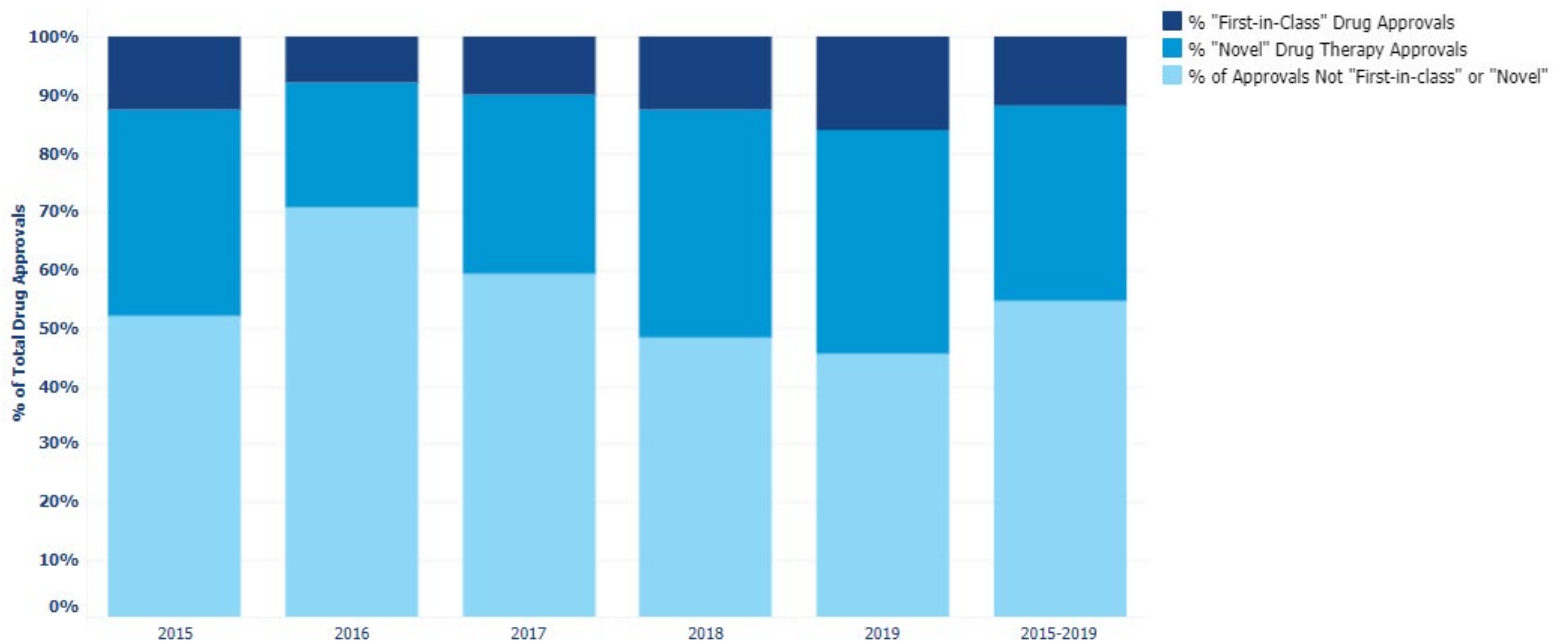
*This is not new, history of pharmaceutical industry is in waves: Benzo’s, statins, ACEI’s, opiates, Immunotherapies, CAR-T, gene therapies

True innovation represents a fraction of total FDA approvals

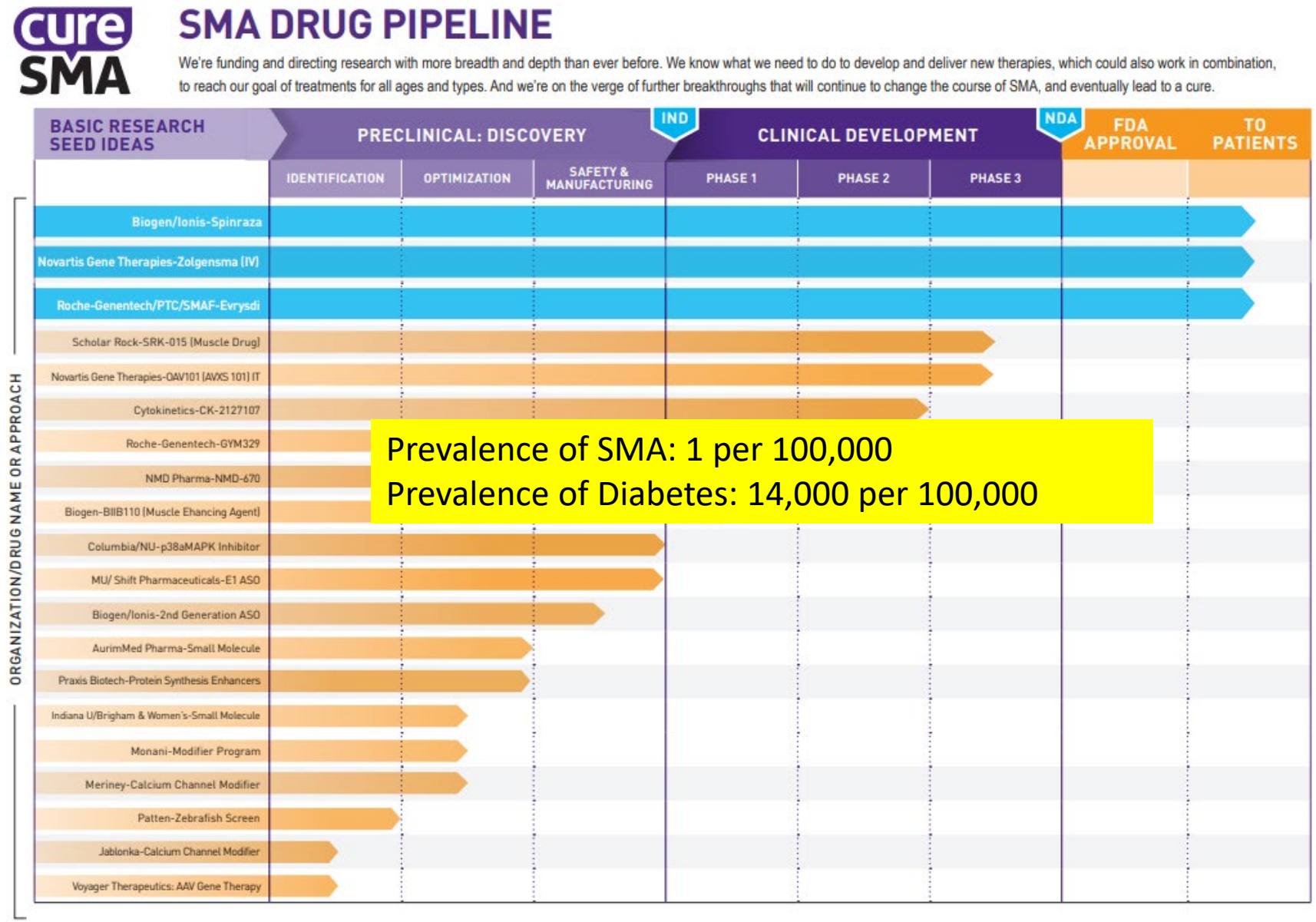
Graph 4

Novel Drug Approvals as % of Total FDA Approvals

Graph | Data Table



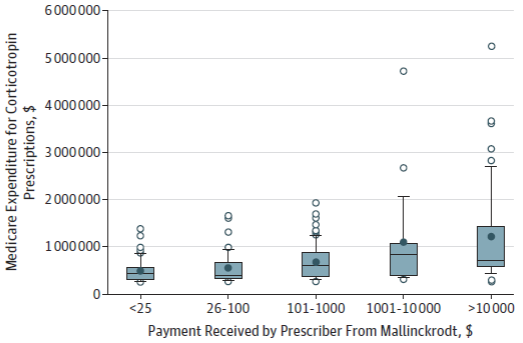
‘Innovation’ is not directed at public health



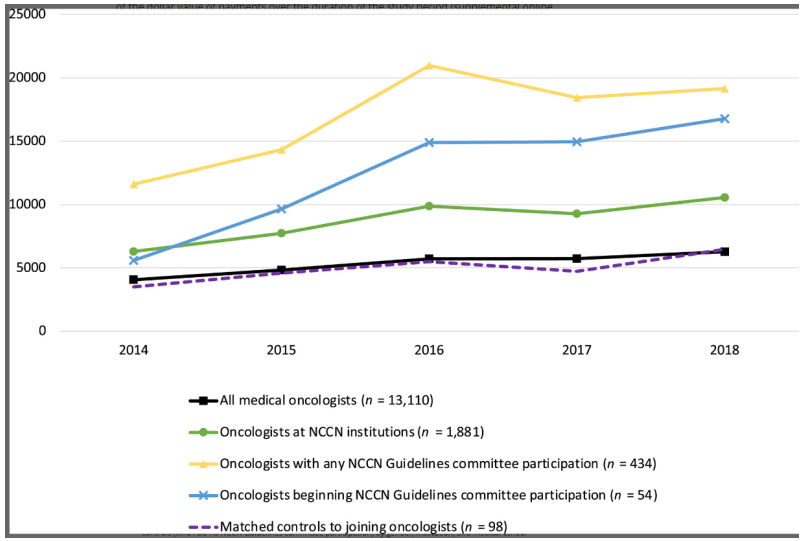
Narrow markets are attractive to companies

- For serious illness, more pricing power
  - Medicare, and most insurers, must cover ALL cancer drugs
- Costs less to buy mkt share
  - Fewer high-volume providers
    - Smaller sales force
    - More concentrated ‘payments’
      - (10x $’s per oncologist vs. PCP’s)
- Path of influence more clear

Figure. Medicare Spending on Repository Corticotropin by Mallinckrodt Payment Amount



Hartung et al. JAMA, 2018



Mitchell et al. The Oncologist, May 2021

Price to health value declining:
As launch prices rise & older rx prices keep up

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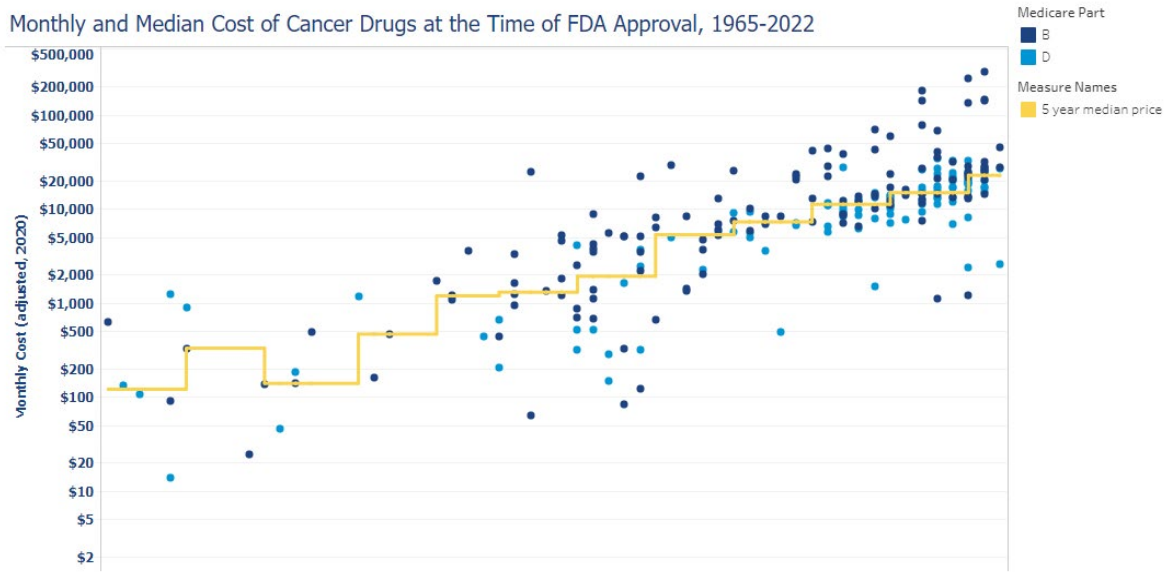
The increasing cost of cancer drugs.

Graph 1

Monthly and Median Costs of Cancer Drugs at the Time of FDA Approval, 1965-2022

Graph



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The exponential increase in drug prices is not unique to cancer.

Graph 2

Gross Monthly and Median Prices of Non-Oncology Drugs at the Time of FDA Approval, 1990-2022

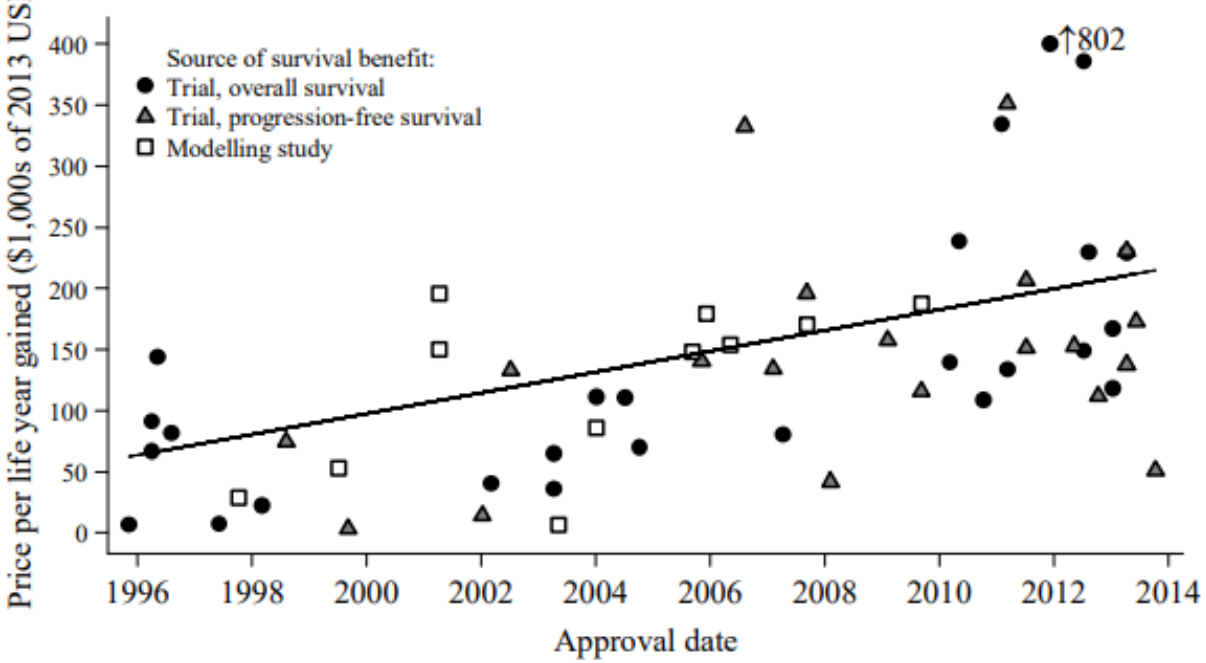
Graph | Data Table

High prices for innovation is failing

- Pay high prices to get companies to invent future treatments we need
- But also, pay high prices for that future treatment
- Which means we can't get it, even though we need it
- You see where this is going ….

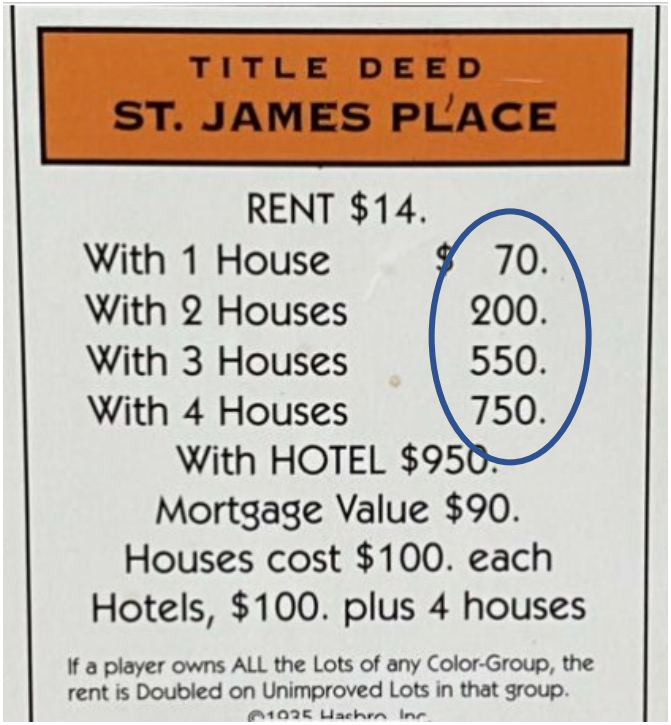
- If prices must keep rising to keep innovation going … we are at point of diminishing returns

Figure 2: Price per life year gained versus approval date



The best fit line is: Price per life year gained = $54,100 + $8,500 x Approval year.
Approval Year = 0 for 1995, 1 for 1996, etc. For purposes of display, we re-coded one value from $802,000 to $400,000.
Source: Authors

They have monopolies, we know what to do



Thank you

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