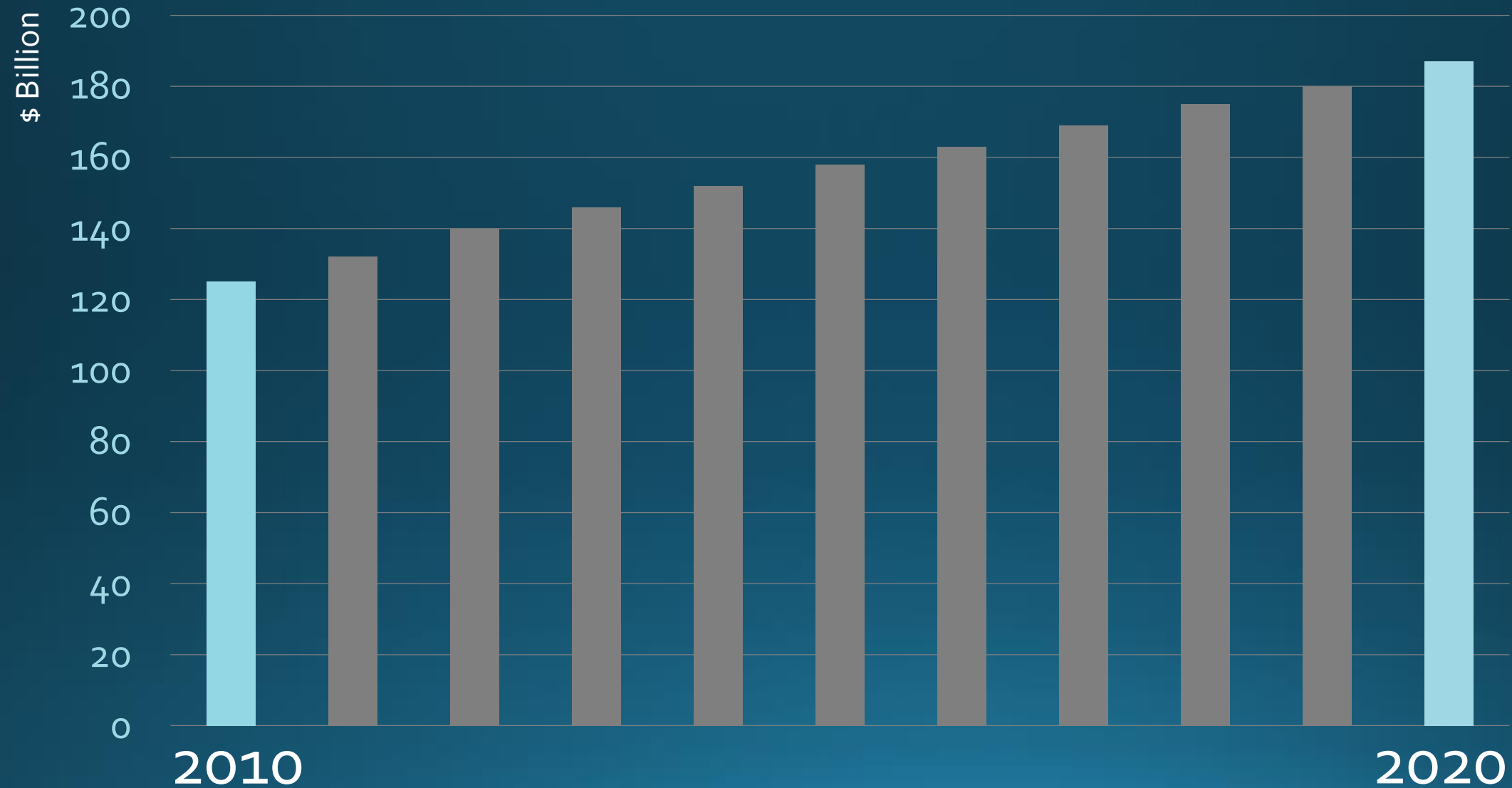


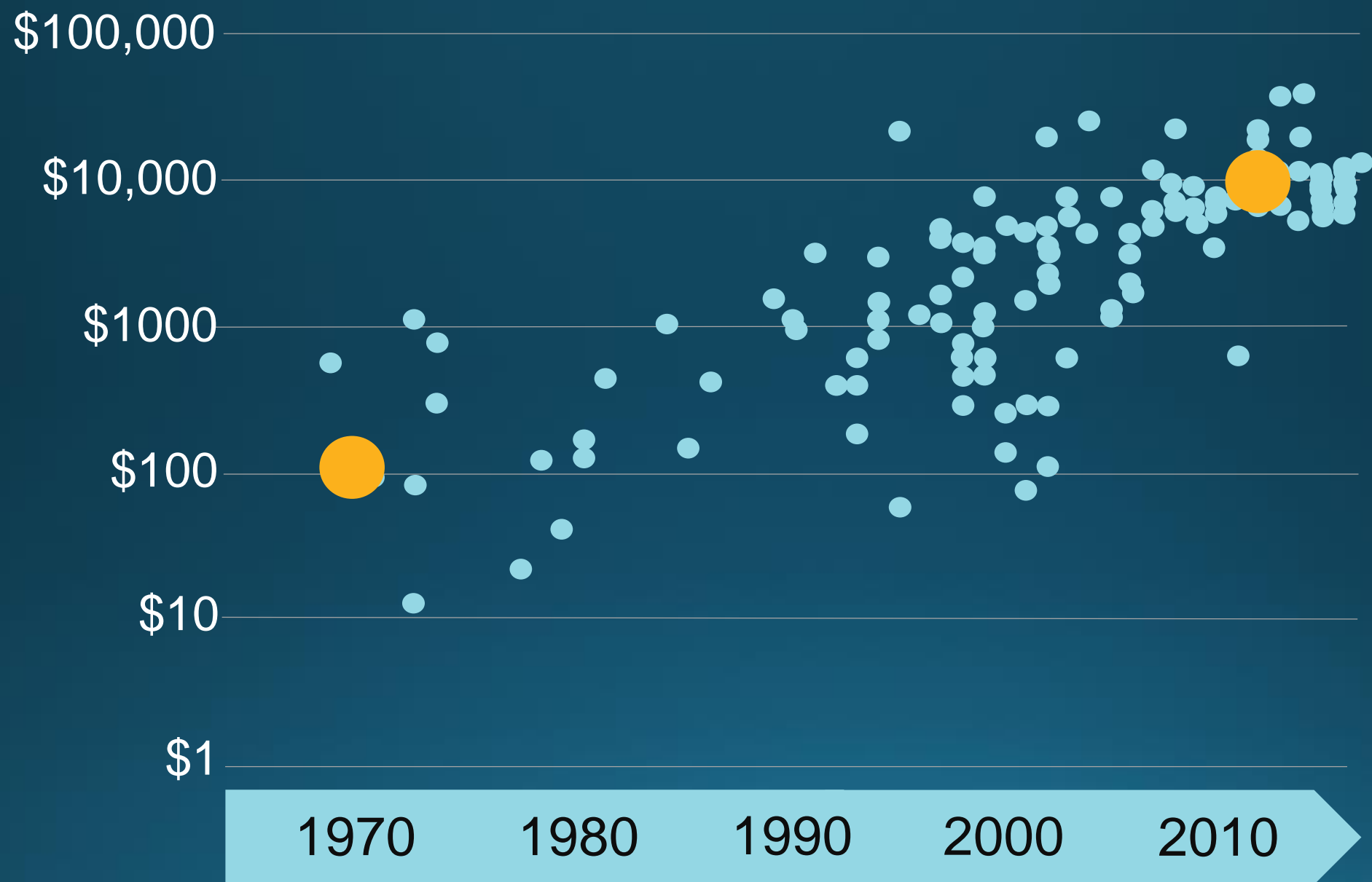
THE FINANCIAL TOXICITY OF CANCER CARE

Yousuf Zafar, MD, MHS
Associate Professor of Medicine and Public Policy
Duke Cancer Institute



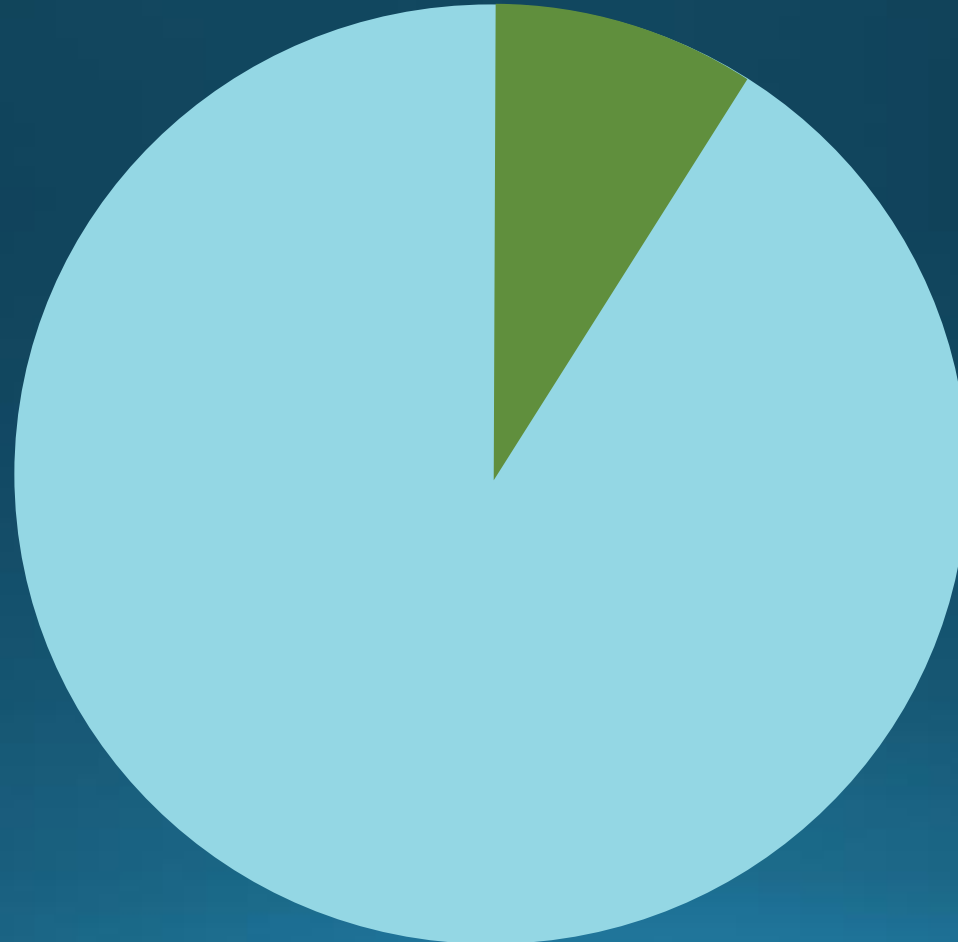
HOW MUCH DOES CANCER COST?





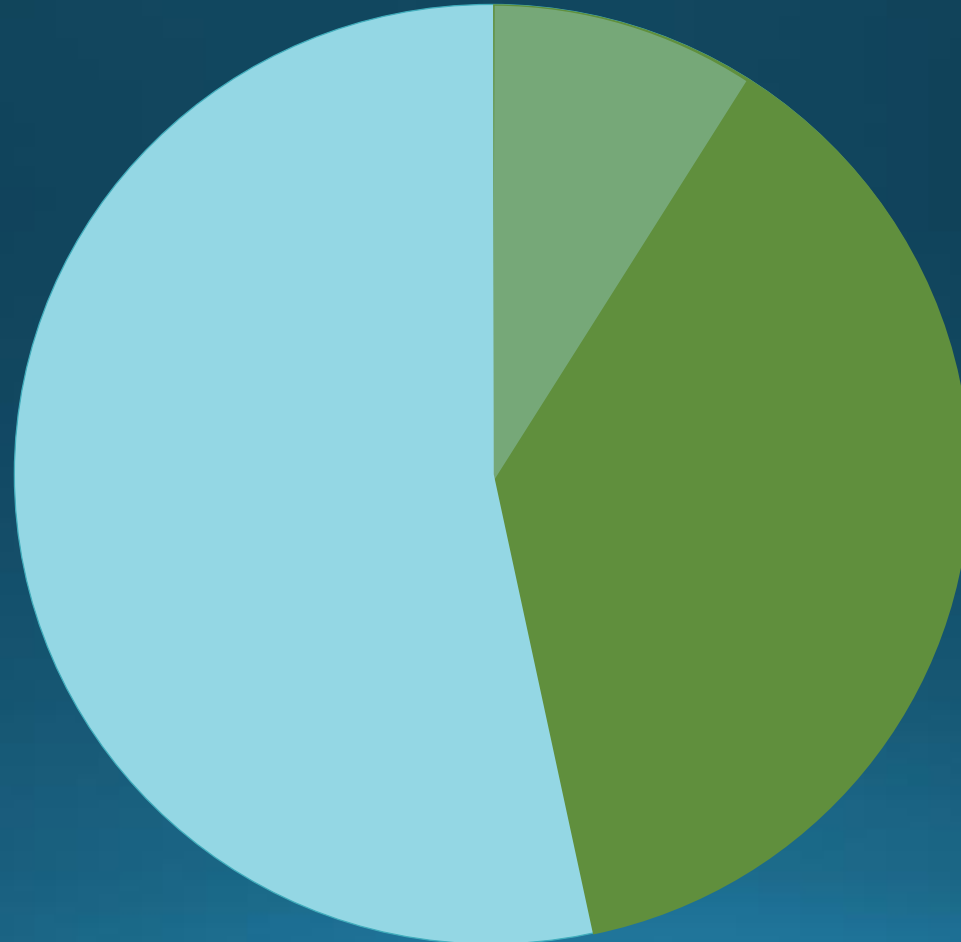
BIOLOGICS

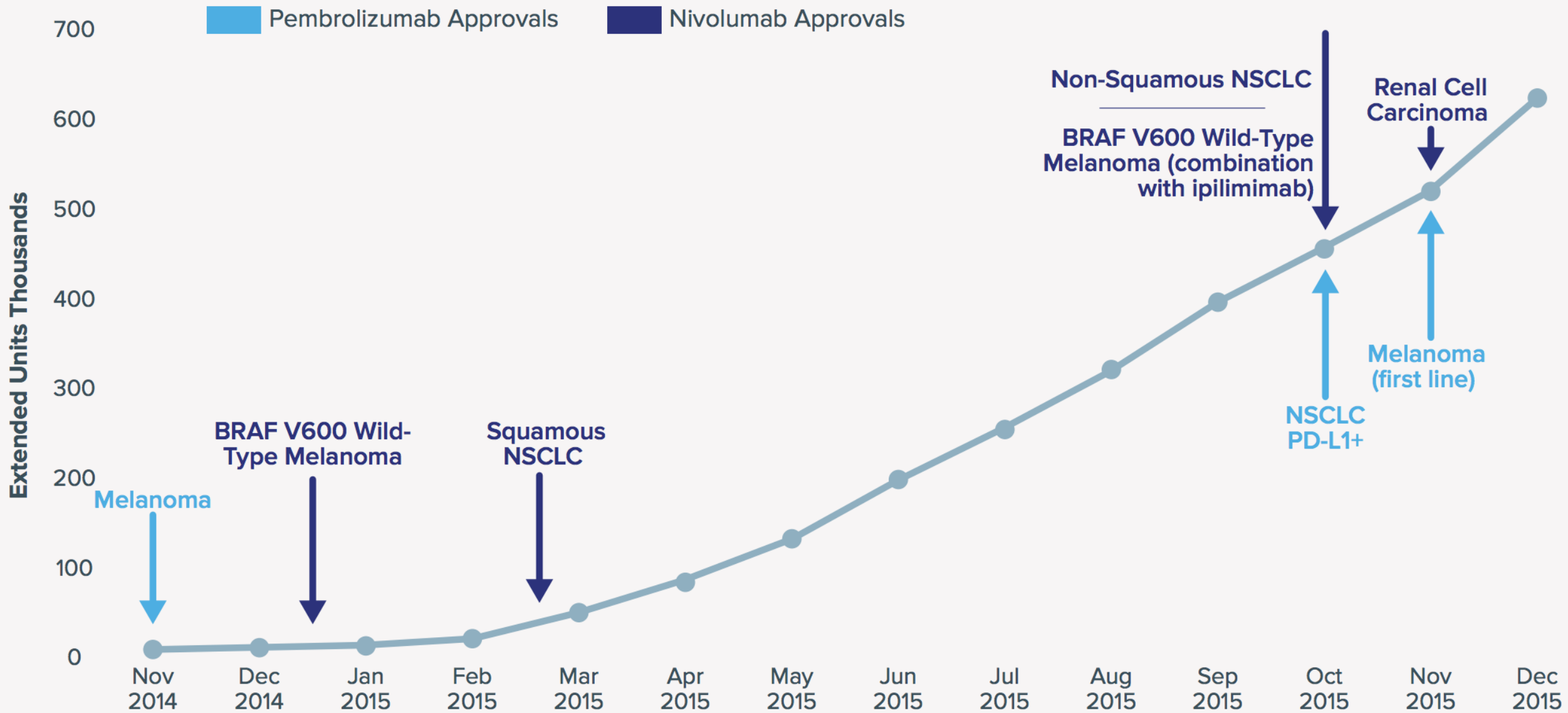
2003



BIOLOGICS

2013





Source: U.S. FDA, Mar 2016; IMS Health, National Sales Perspectives, Jan 2016; IMS Institute for Healthcare Informatics, Mar 2016

350 \$

300

250

200

150

100

50

0

2007

2014

IMATINIB

400mg

158%

ERLOTINIB

100mg

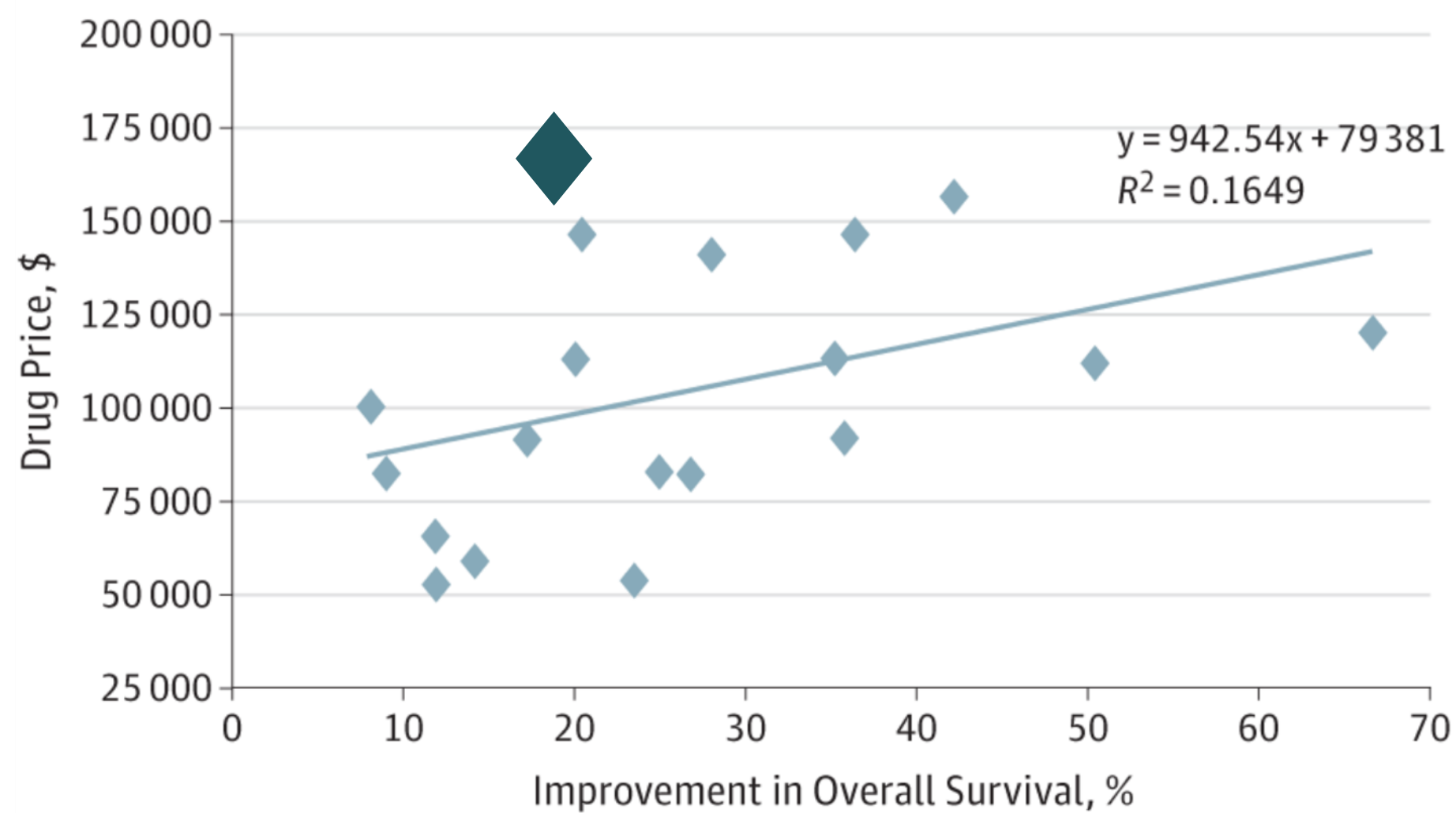
91%

DASATINIB

50mg

130%

COST VERSUS BENEFIT



“Our results suggest that current pricing models are **not rational** but simply reflect **what the market will bear.**”

“ACCEPTABLE”

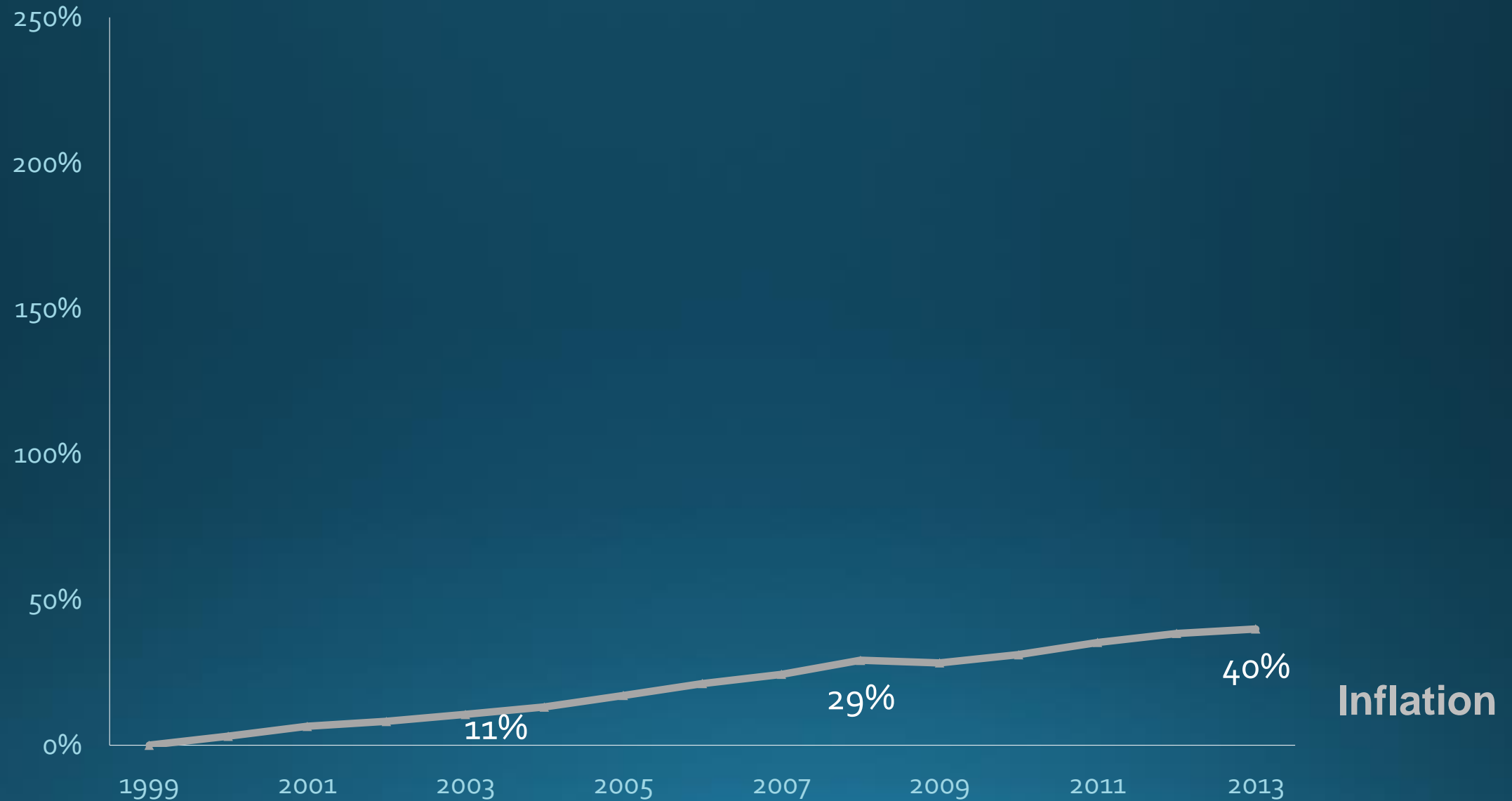
\$50,000 - \$200,000
per year of life in
perfect health

REGORAFENIB

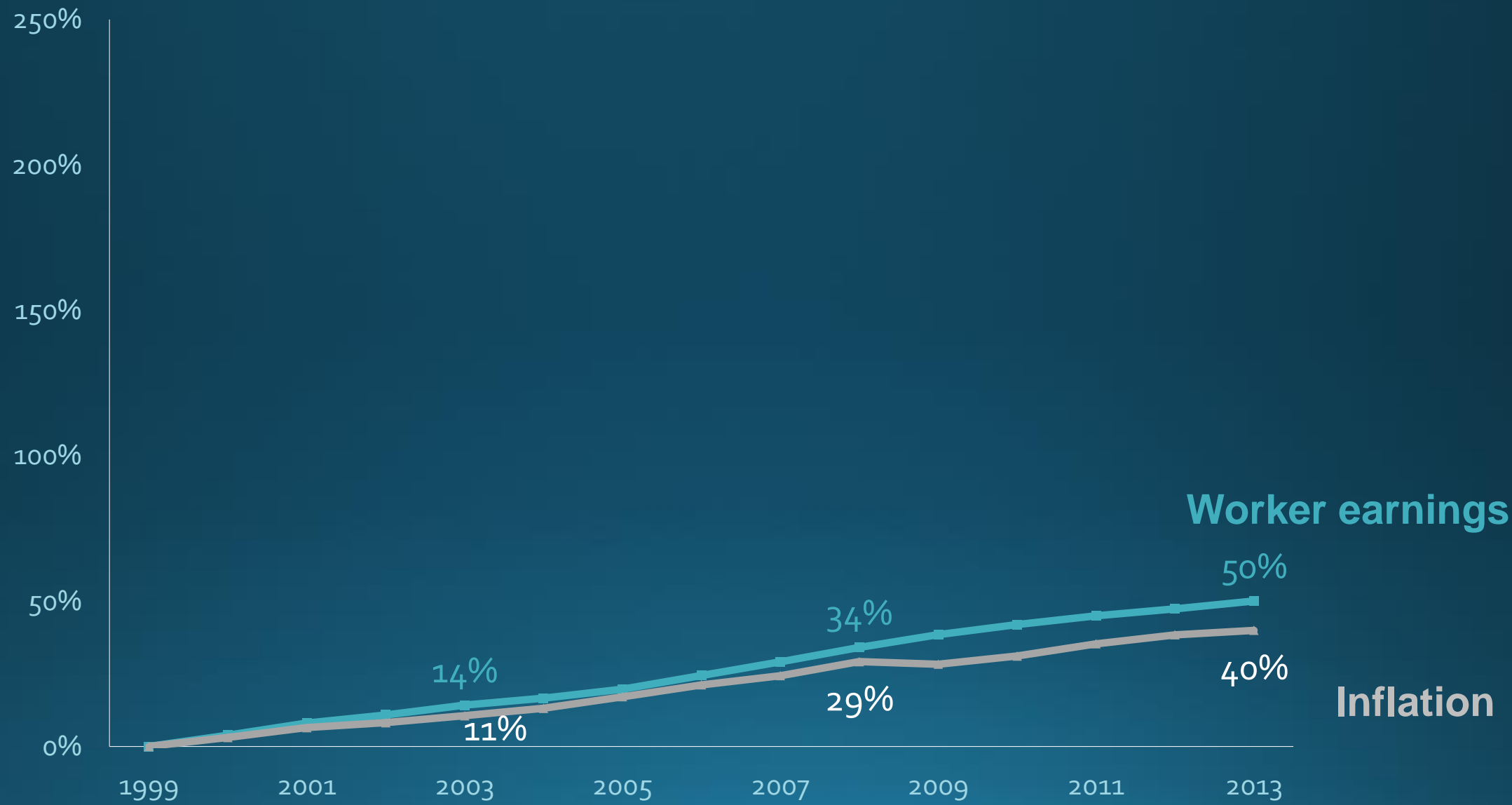
1 year of life in
perfect health:

\$975,954

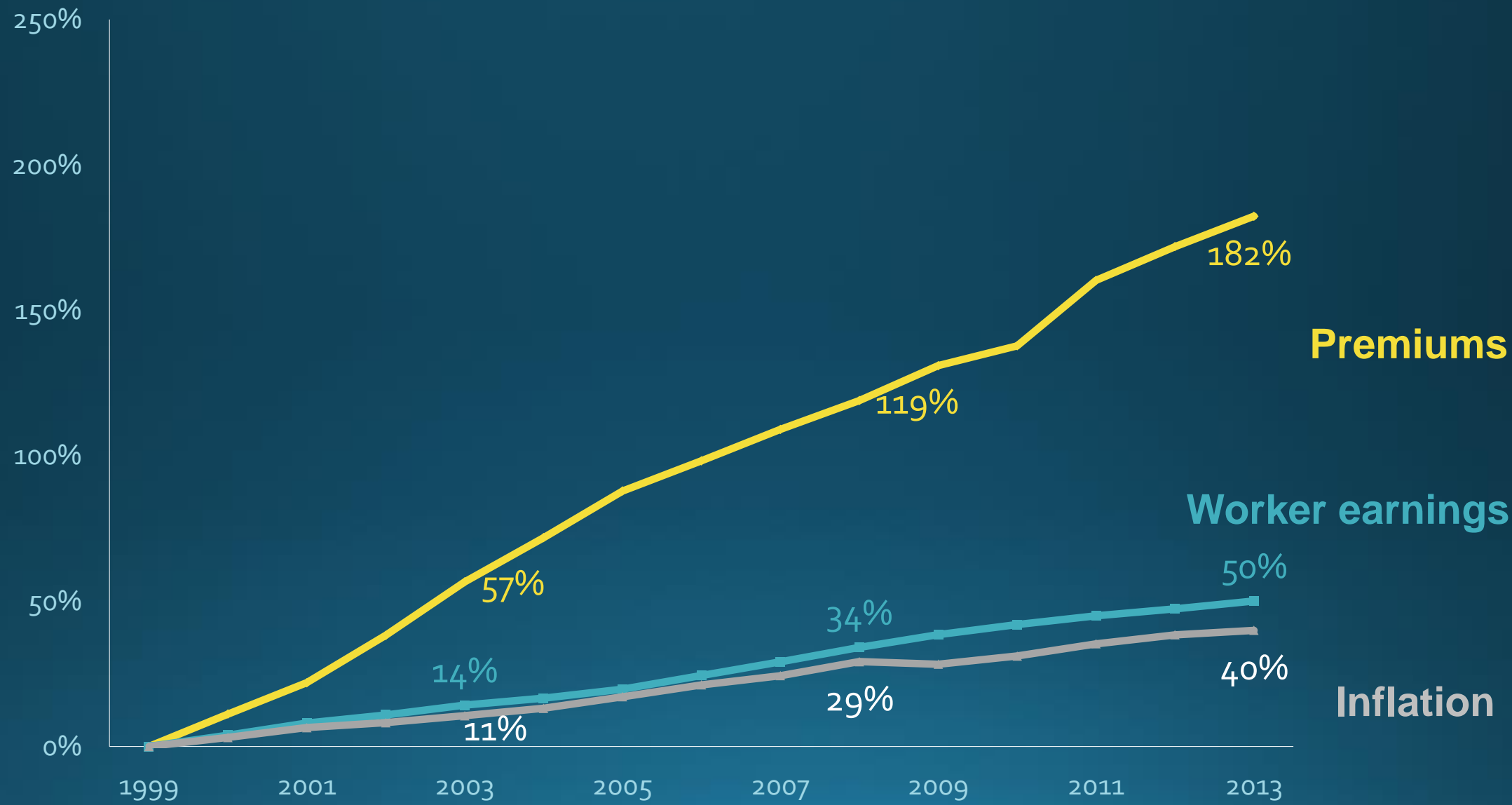
INSURANCE IS MORE EXPENSIVE



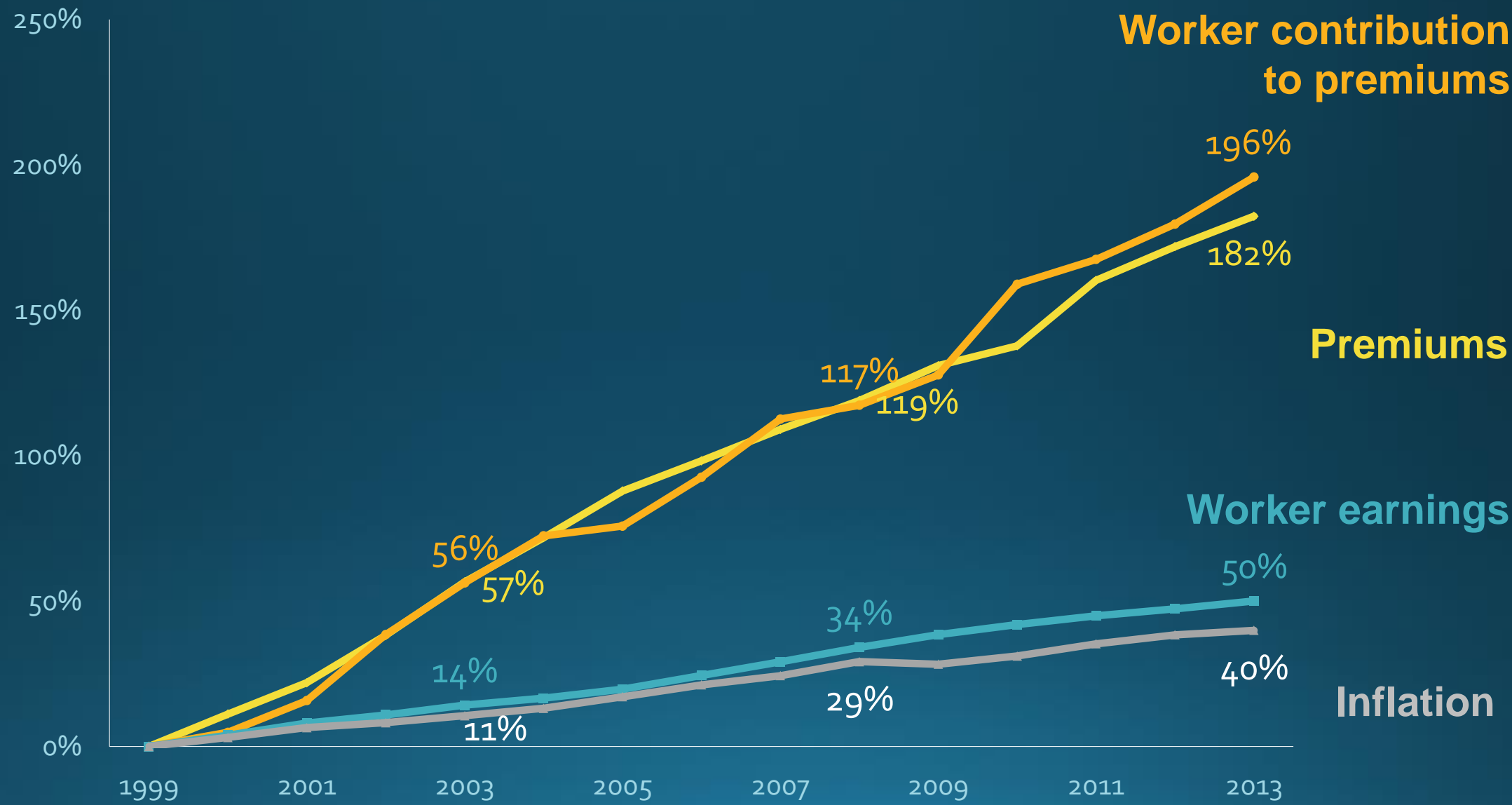
INSURANCE IS MORE EXPENSIVE



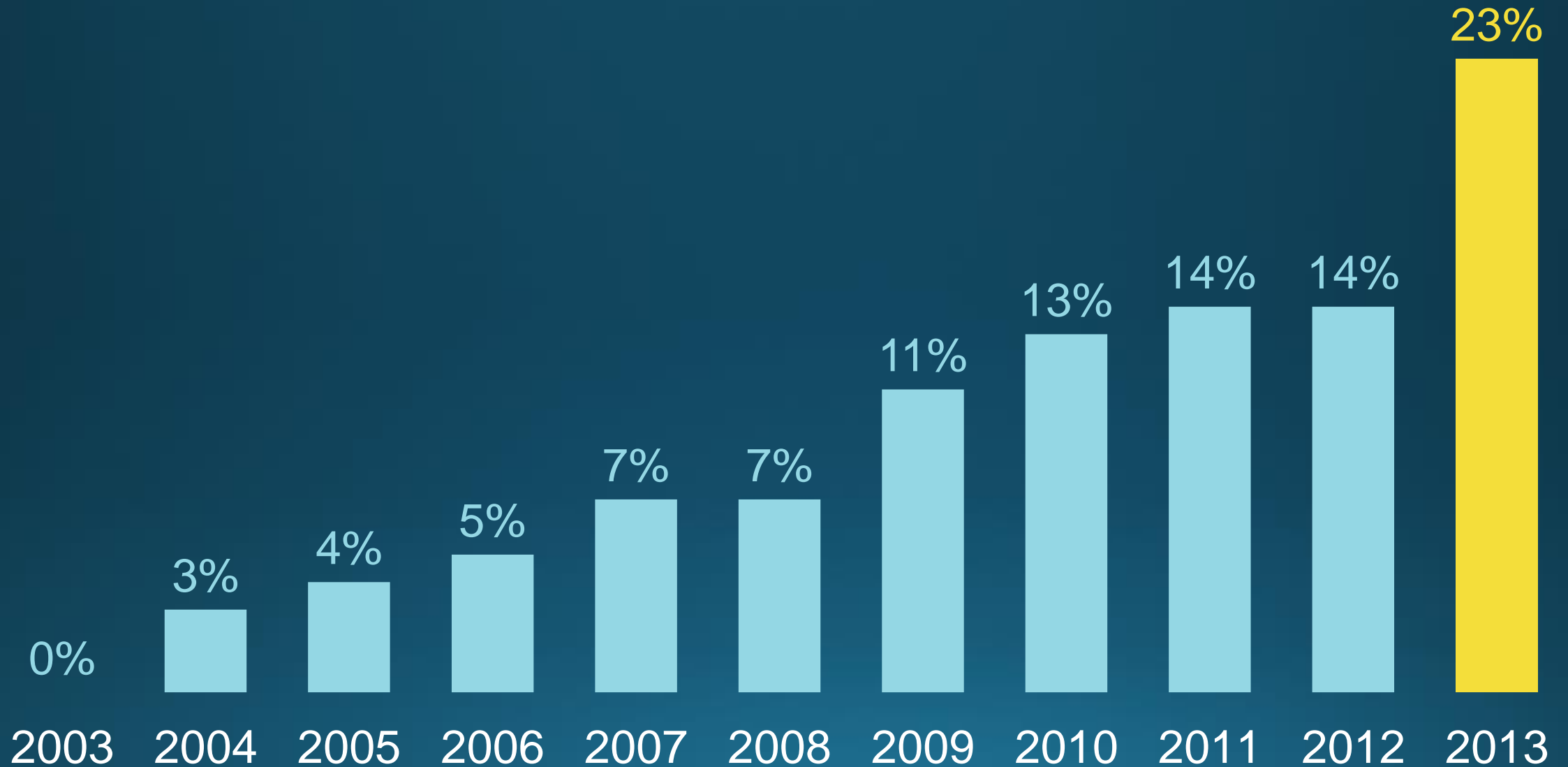
INSURANCE IS MORE EXPENSIVE



INSURANCE IS MORE EXPENSIVE



FOUR-TIERED FORMULARIES



Patient costs, 2014



2.65x

RISK OF

BANKRUPTCY



7,570

matched patients

79%

greater mortality risk

HR 1.79 (1.64, 1.96)

**Extreme
financial
distress**



**Greater
risk of
mortality**

**Extreme
financial
distress**

**Well-
being**

**Greater
risk of
mortality**

Foregone vacations

68%

Cut grocery expenses

46%

Depleted savings

46%

n=254

50%

willing to declare bankruptcy

39%

willing to sell their home

73%

willing to spend less on
food/clothing

**Extreme
financial
distress**

**Health
related
quality
of life**

**Greater
risk of
mortality**



High financial burden:



Quality of life
among patients with
active cancer and
survivors

adjusted beta 0.06 EQ-5D unit per financial burden category; $p < .001$

n=1000

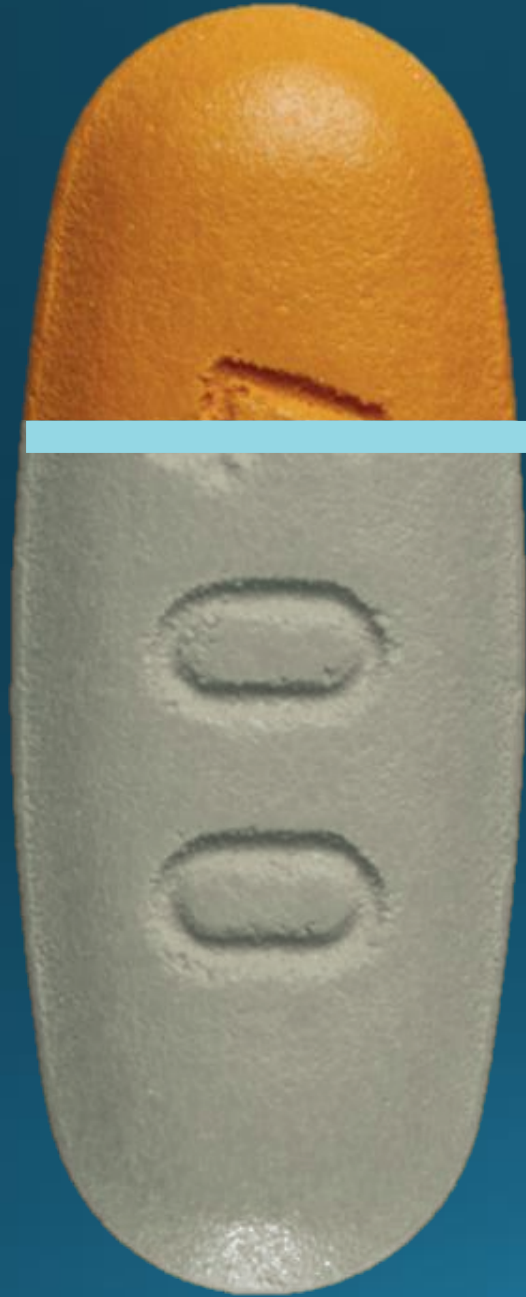
Zafar et al, JOP 2014

**Extreme
financial
distress**

**Quality
of care**

**Greater
risk of
mortality**





70%

higher likelihood
of non-adherence

45%
WERE

NON-ADHERENT



**Extreme
financial
distress**

Well-being

Health-related
quality of life

Quality of care

?

**Greater
risk of
mortality**

Buying less clothing

Buying less food

Financial distress

Working longer hours

Spread out chemotherapy appointments

Cutting out vacations

Missed appointments

Bankruptcy

Using credit

Declining tests

Spending savings

Taking fewer medications

Using other people's medications

Borrowing from friends or family

Selling property

Replaced prescriptions with over the counter medications

Non-adherence

Delaying care

Buying less clothing

Financial distress

Buying less food

Working longer hours

Spread out chemotherapy
appointments

Cutting out vacations

Missed appointments

INTERVENE

Using other people's medications

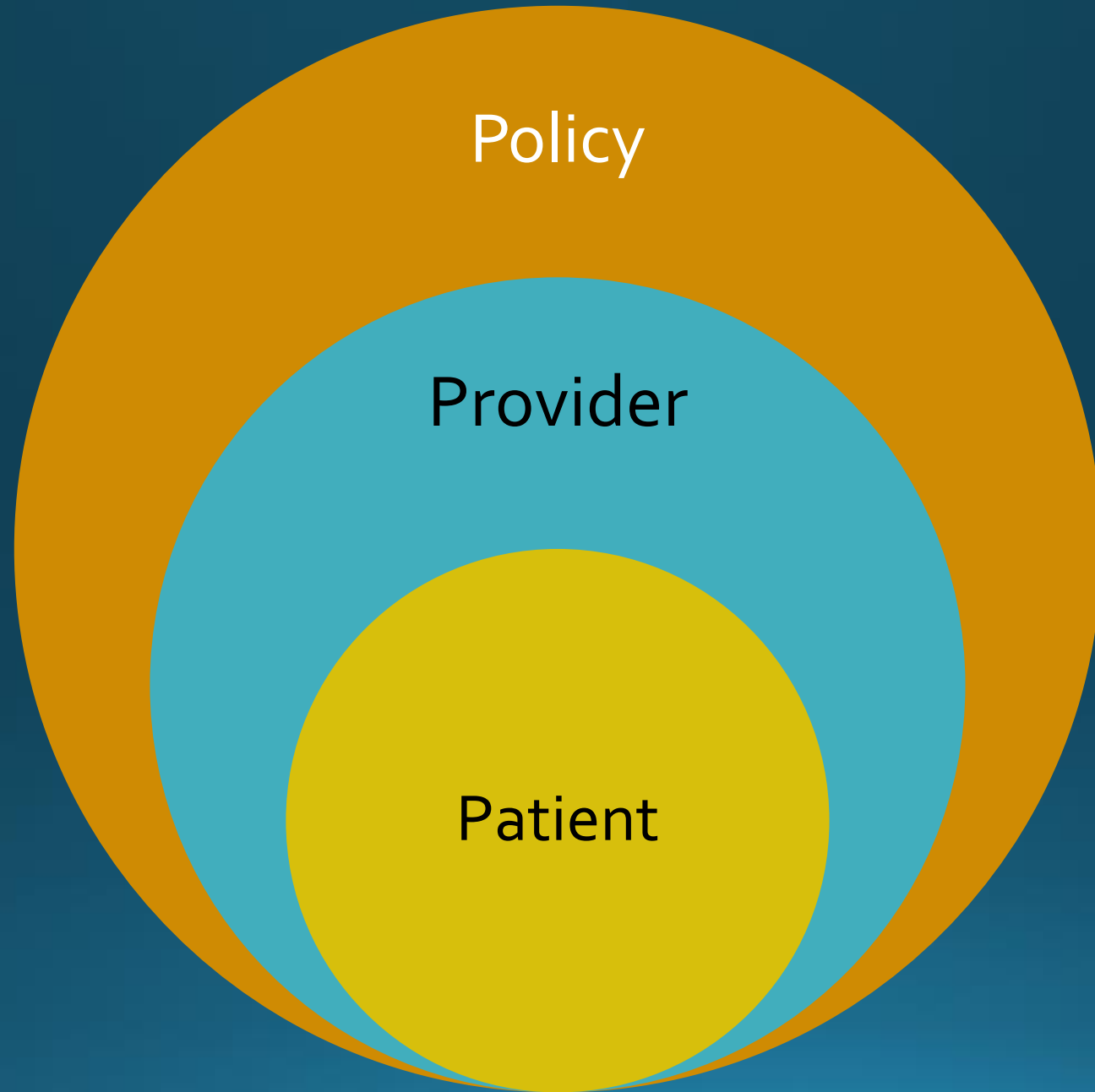
**Borrowing from
friends or family**

Selling property

Replaced prescriptions with
over the counter medications

Non-adherence

Delaying care



MANUFACTURERS

GOVERNMENT

INSURERS

HEALTH SYSTEMS

MANUFACTURERS

GOVERNMENT

INSURERS

HEALTH SYSTEMS

MANUFACTURERS

GOVERNMENT

INSURERS

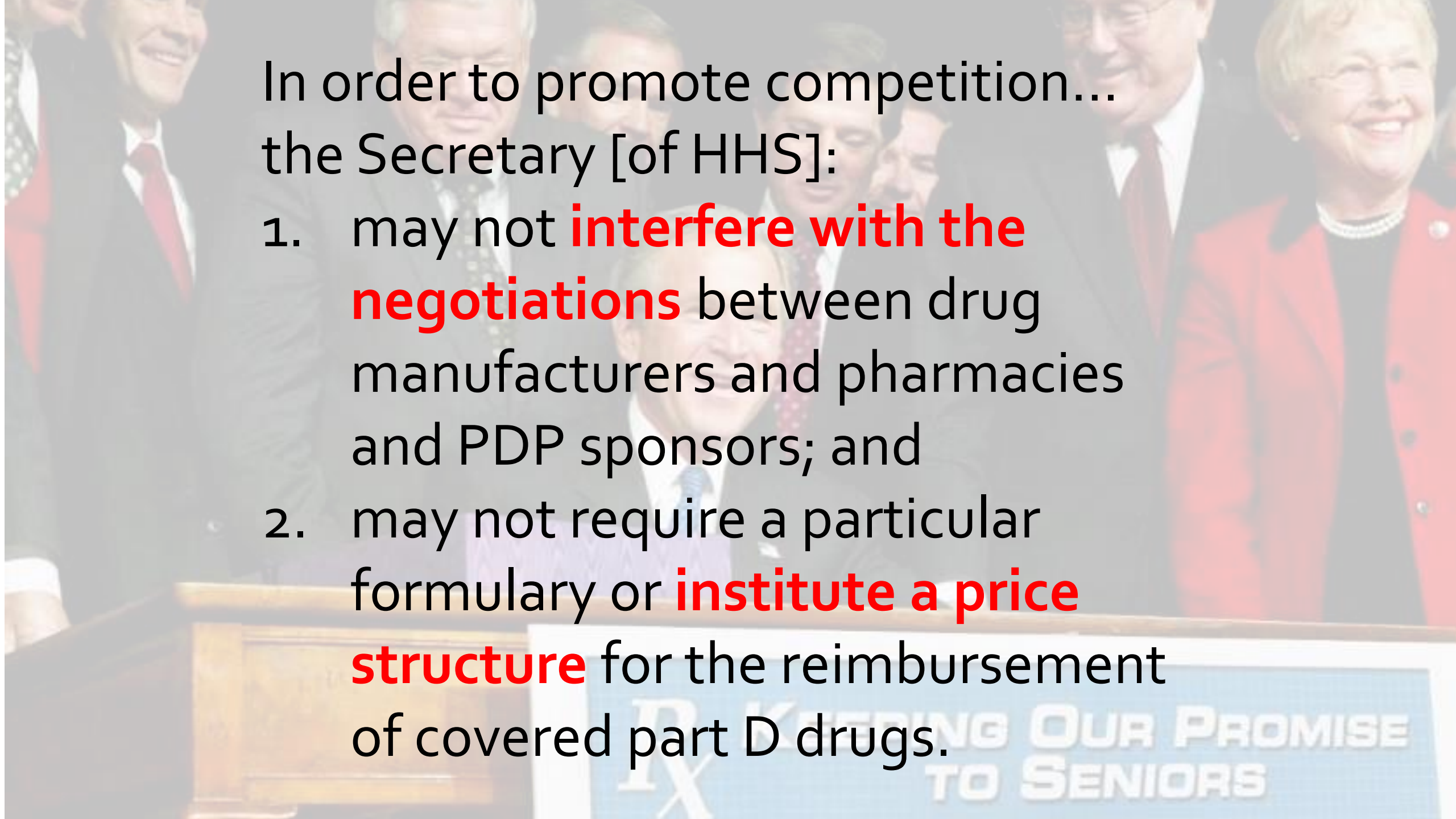
HEALTH SYSTEMS

MANUFACTURERS

GOVERNMENT

INSURERS

HEALTH SYSTEMS



In order to promote competition...
the Secretary [of HHS]:

1. may not **interfere with the negotiations** between drug manufacturers and pharmacies and PDP sponsors; and
2. may not require a particular formulary or **institute a price structure** for the reimbursement of covered part D drugs.

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Open Enrollment for 2017 is here!

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[TAKE THE FIRST STEP TO APPLY](#)

Have a 2016 Marketplace plan?

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Have a 2016 plan in Kentucky? [Learn about using HealthCare.gov for 2017.](#)

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MANUFACTURERS

GOVERNMENT

INSURERS

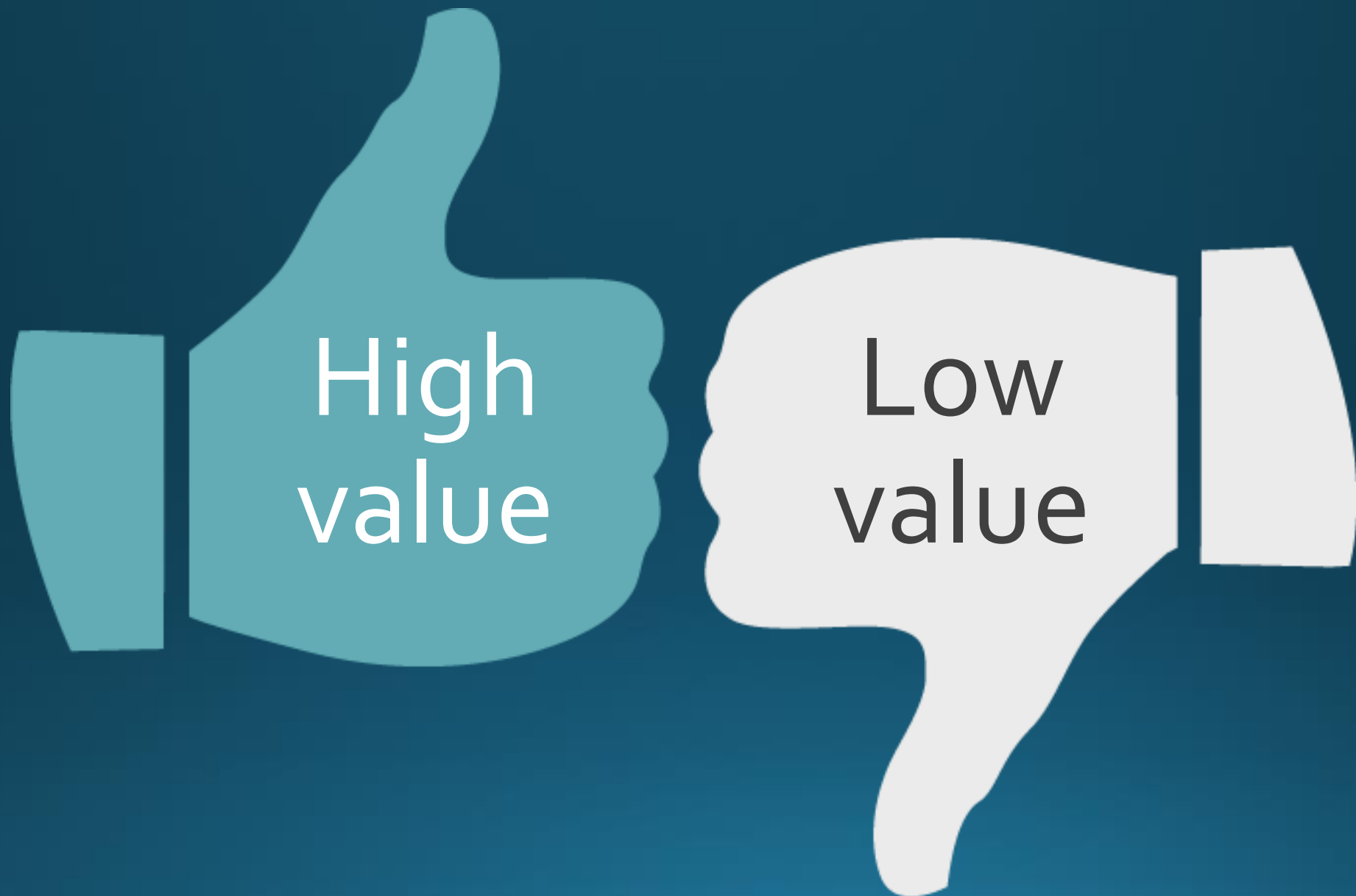
HEALTH SYSTEMS

MANUFACTURERS

GOVERNMENT

INSURERS

HEALTH SYSTEMS



Bevacizumab
for pancreatic
cancer

Imatinib for
CML

Bevacizumab
for pancreatic
cancer

Imatinib for
CML

Bevacizumab
for pancreatic
cancer

Imatinib for
CML

MANUFACTURERS

GOVERNMENT

INSURERS

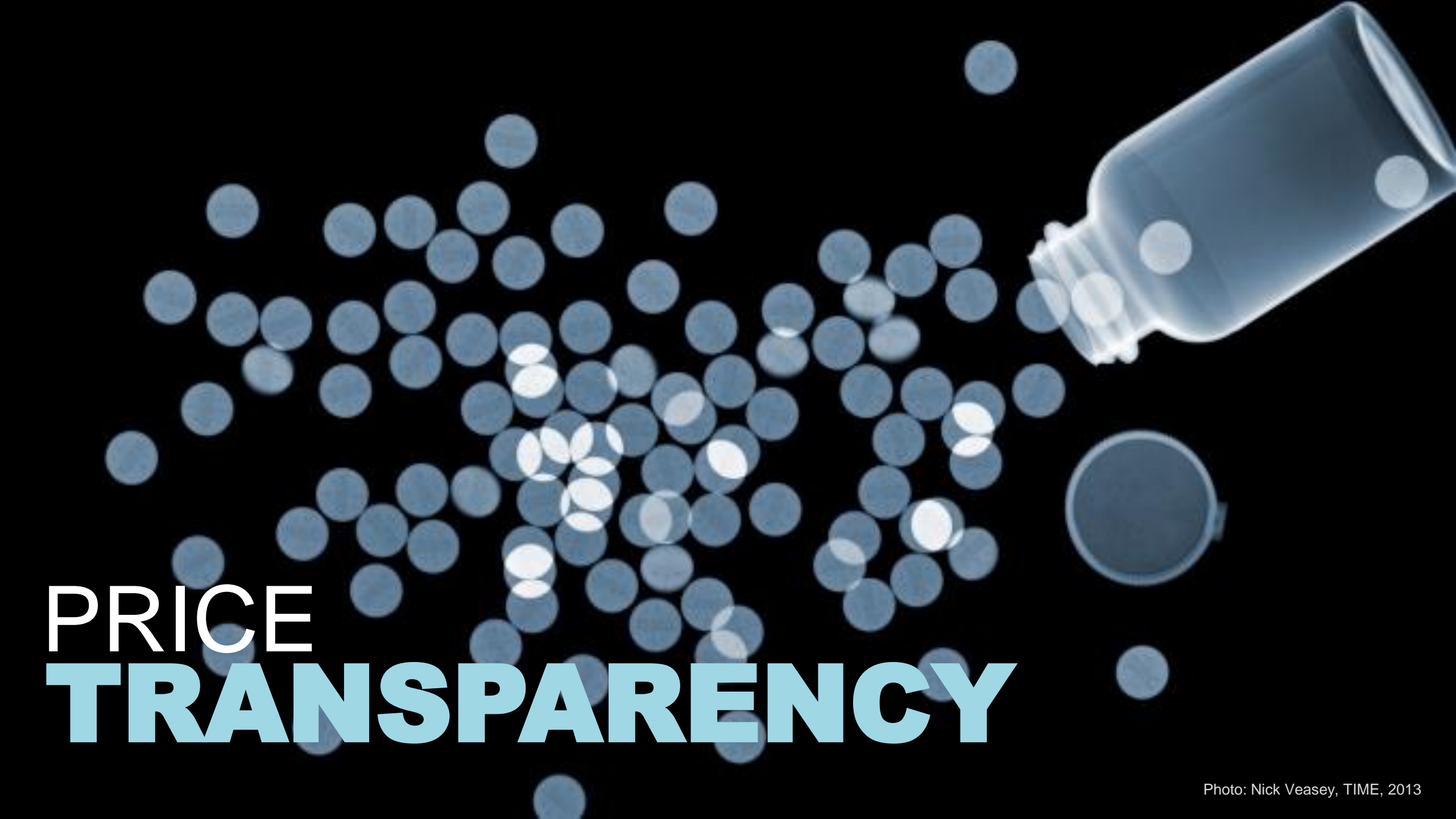
HEALTH SYSTEMS

MANUFACTURERS

GOVERNMENT

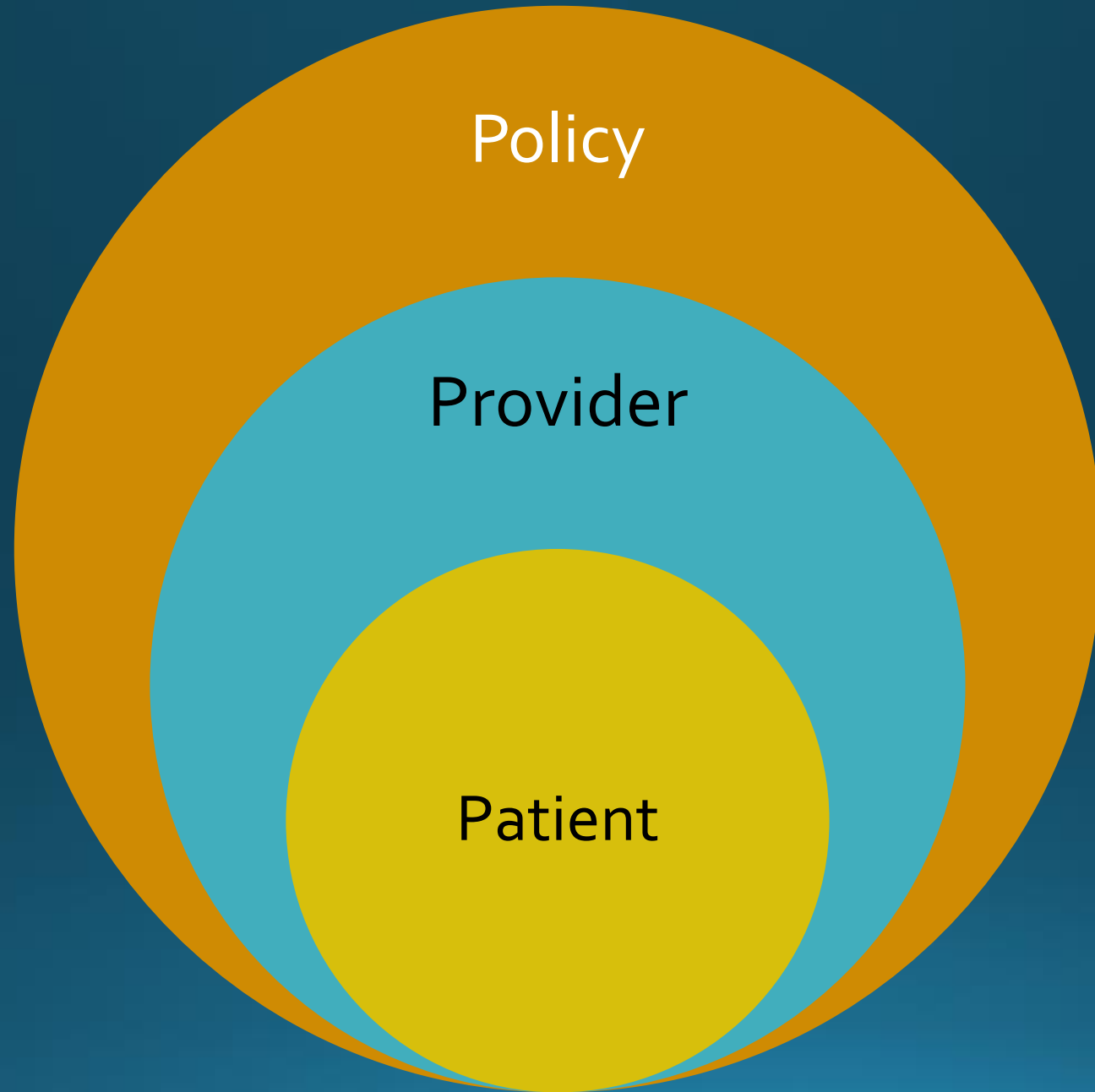
INSURERS

HEALTH SYSTEMS



PRICE **TRANSPARENCY**

Photo: Nick Veasey, TIME, 2013



Prevent
fatigue



Assess
fatigue



Reduce
fatigue

Prevent
financial
toxicity



```
graph LR; A[Prevent financial toxicity] --> B[Assess financial toxicity]; B --> C[Reduce financial toxicity];
```

Assess
financial
toxicity

Reduce
financial
toxicity

Prevent
financial
toxicity



```
graph LR; A[Prevent financial toxicity] --> B[Assess financial toxicity]; B --> C[Reduce financial toxicity];
```

Assess
financial
toxicity

Reduce
financial
toxicity

Focus on
high-value
interventions



Choosing Wisely[®]

An initiative of the ABIM Foundation

Don't use cancer-directed therapy for solid tumor patients with:

- low performance status (3 or 4)
- no benefit from prior evidence-based interventions
- not eligible for a clinical trial
- no strong evidence supporting the clinical value of further anti-cancer treatment.



Goals of care

Prevent
financial
toxicity



```
graph LR; A[Prevent financial toxicity] --> B[Assess financial toxicity]; B --> C[Reduce financial toxicity];
```

The diagram is a horizontal flowchart on a dark blue background. It consists of three rounded rectangular boxes connected by arrows. The first box on the left is dark gray and contains the text 'Prevent financial toxicity'. A gray arrow points from this box to the second box in the middle, which is light blue and contains the text 'Assess financial toxicity'. Another gray arrow points from the second box to the third box on the right, which is dark gray and contains the text 'Reduce financial toxicity'. The word 'financial' in the middle box is highlighted in yellow.

Assess
financial
toxicity

Reduce
financial
toxicity

Nausea



Fatigue



Financial
toxicity



```
graph LR; A[Prevent financial toxicity] --> B[Assess financial toxicity]; B --> C[Reduce financial toxicity];
```

Prevent
financial
toxicity

Assess
financial
toxicity

Reduce
financial
toxicity

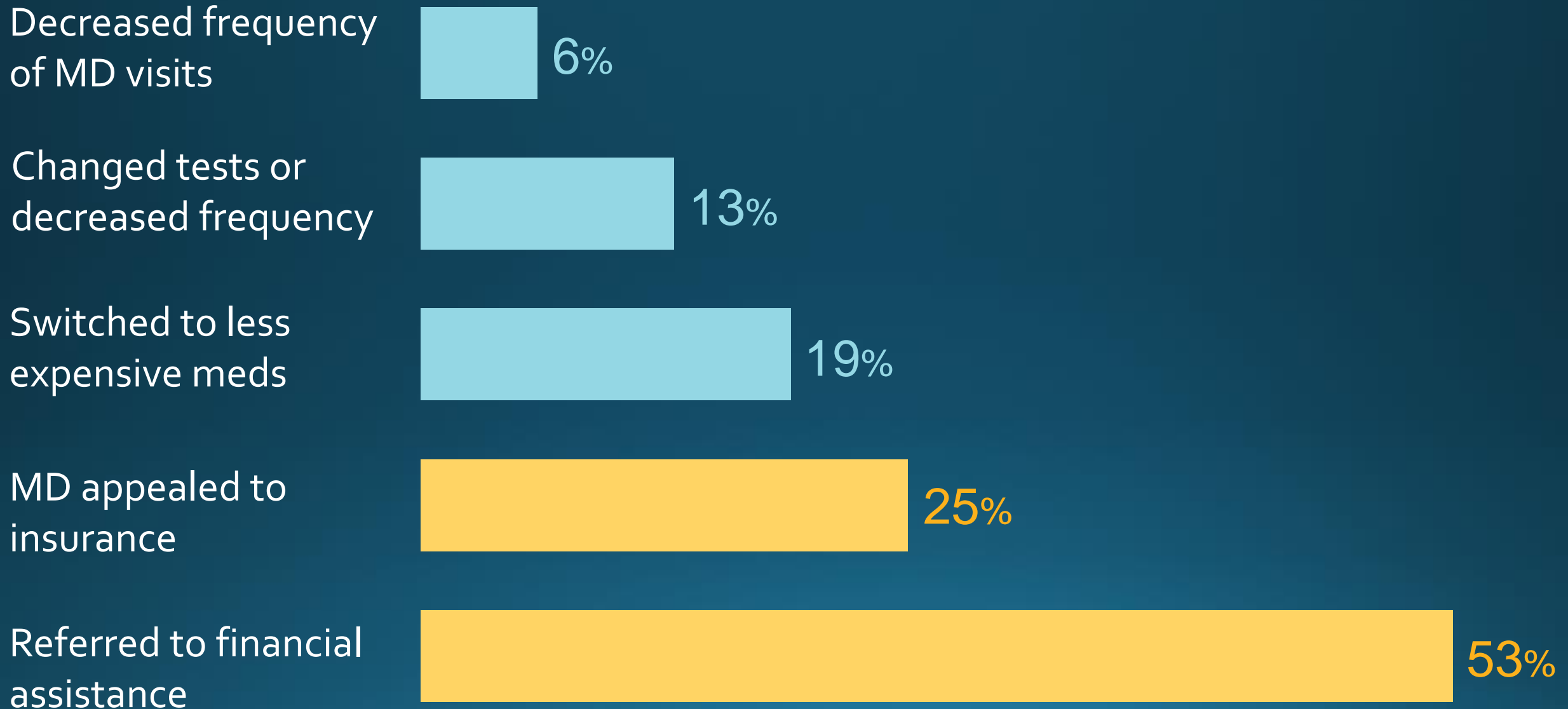
Do patients want to discuss costs?

52% desire a cost discussion with oncologists

19% actually have a cost discussion

n=299

How were costs decreased?



PathLight

FINANCIAL ASSISTANCE, NAVIGATION, COMMUNICATION, AND EDUCATION

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