
SESSION 4: Investing in People Centred Health Service Delivery

Dr Paul Cornes – Conflict of Interest Slide

- **Salary received**
 - **United Kingdom National Health Service**
- **Honoraria received**
 - **Roche**
 - **Janssen**
 - **Sandoz**
 - **Lilly**
 - **European Generics Association**
 - **Teva**
 - **Hospira**
 - **Bernstein**



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Investing in People Centred Health Service Delivery



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Comparative Outcomes Group

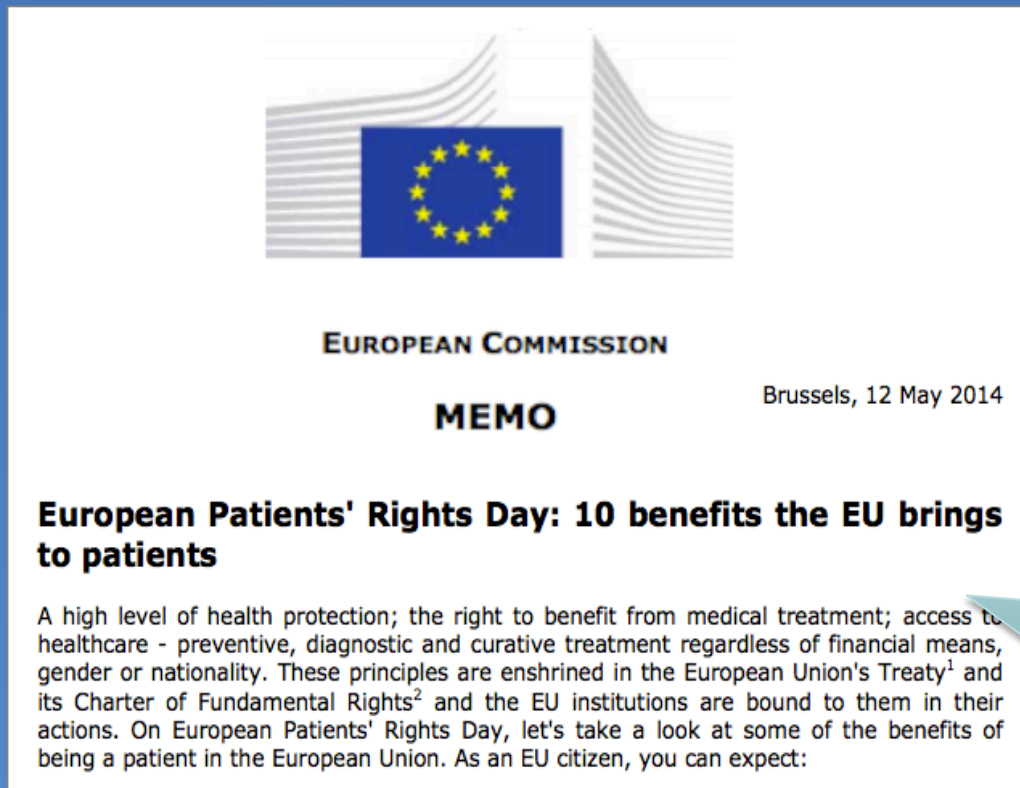
**ESO Task Force Advisory Board on
Access to Innovative Treatment in
Europe**

**European School of Oncology
Piazza Indipendenza, 2
6500 Bellinzona - Switzerland**



EU Patients Rights

- We have rights under Article 168 of the Treaty on the Functioning of the EU & Article 35 of the Charter of Fundamental Rights of the EU



the right to benefit from
medical
treatment...regardless
of financial means,
gender or nationality

I value my work with international colleagues



There is a cost to cancer

cancer has the most devastating economic impact of any cause of death in the world.

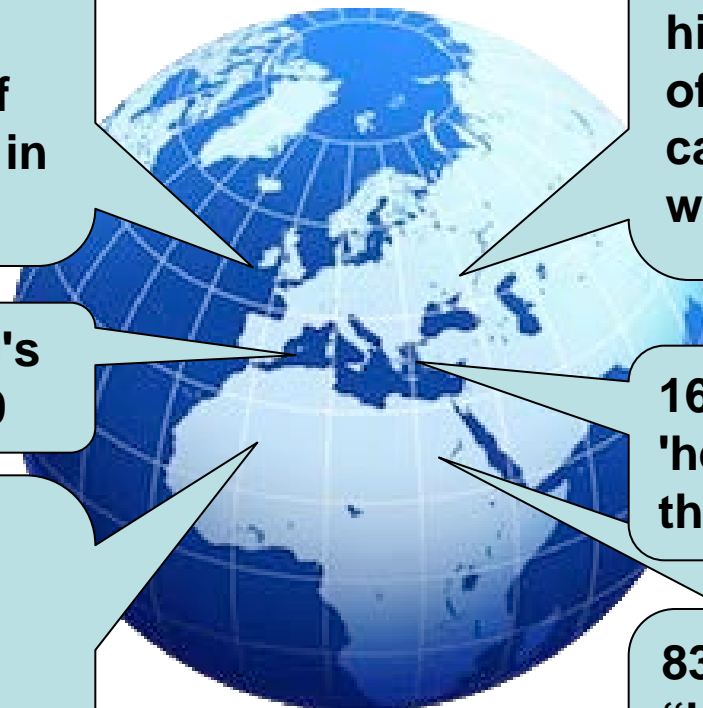
Cancer causes the highest economic loss of all of the 15 leading causes of death worldwide

WHO: Cancer world's top killer since 2010

16.7 percent of all 'healthy' years lost in the European Union

The total economic impact of premature death and disability from cancer worldwide was \$895 billion in 2008.

83 million years of "healthy life" lost due to death and disability from cancer in 2008.



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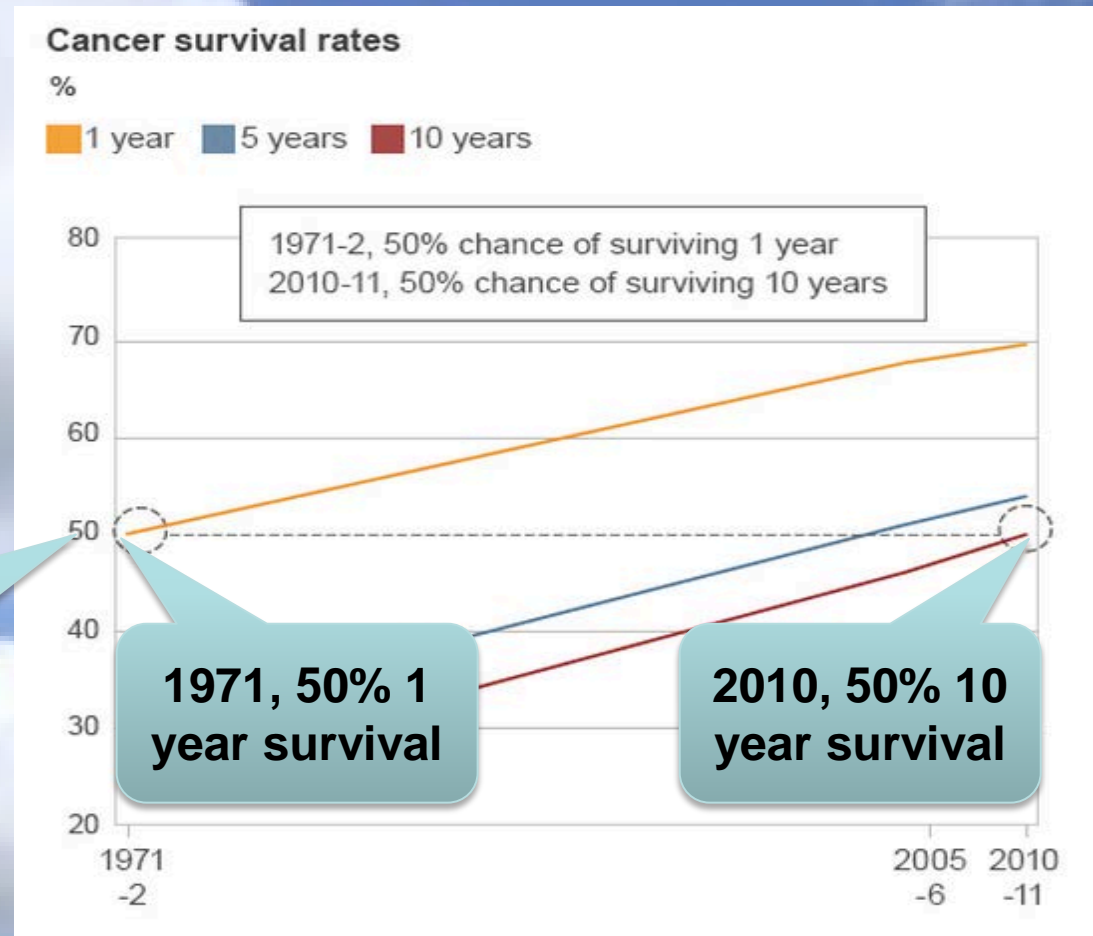
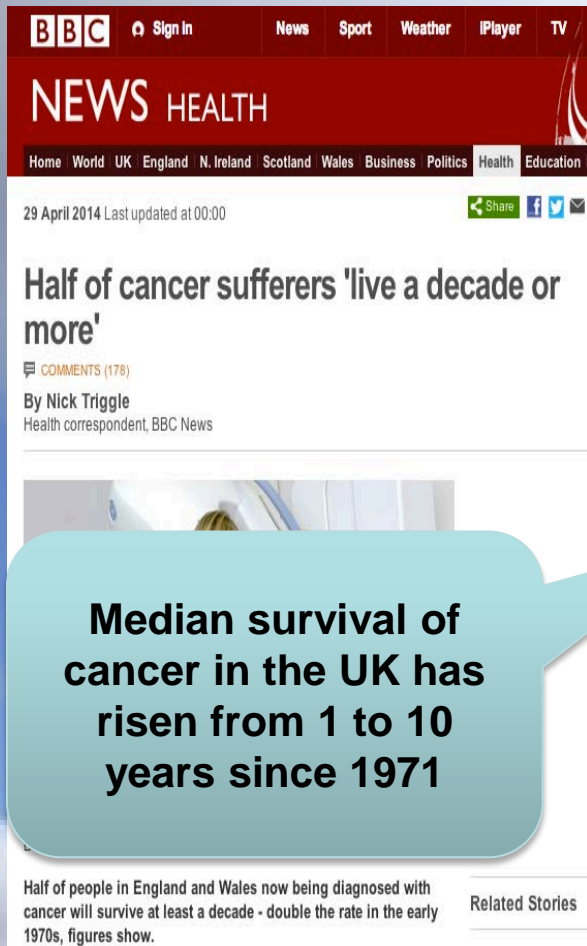
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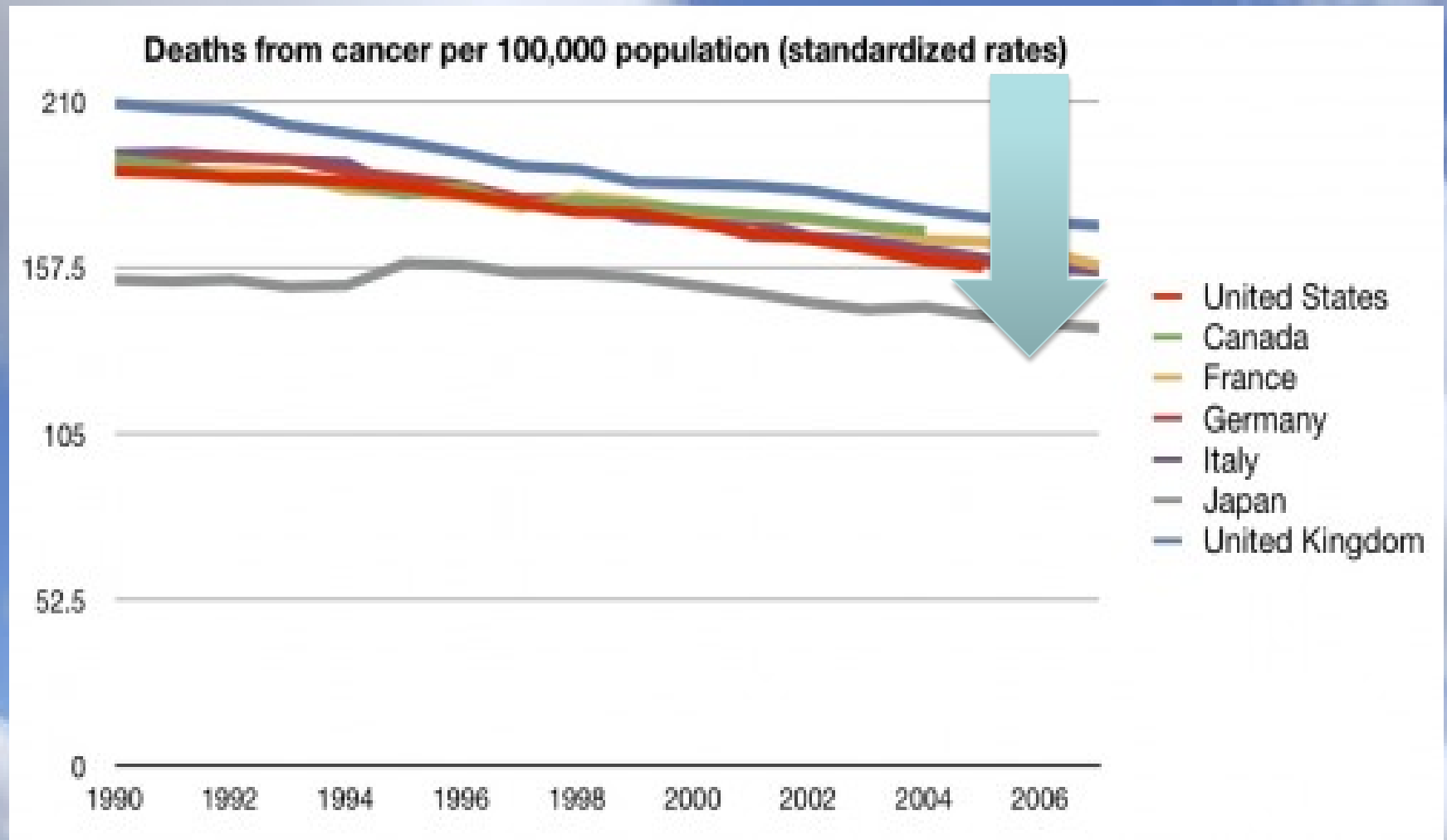
Sorting out the funding for cancer will be the model used to manage other medical conditions

82 million years of "healthy life" lost due to death and disability from cancer in 2008.

Good News for Cancer Treatment: Cancer Survival Is Improving

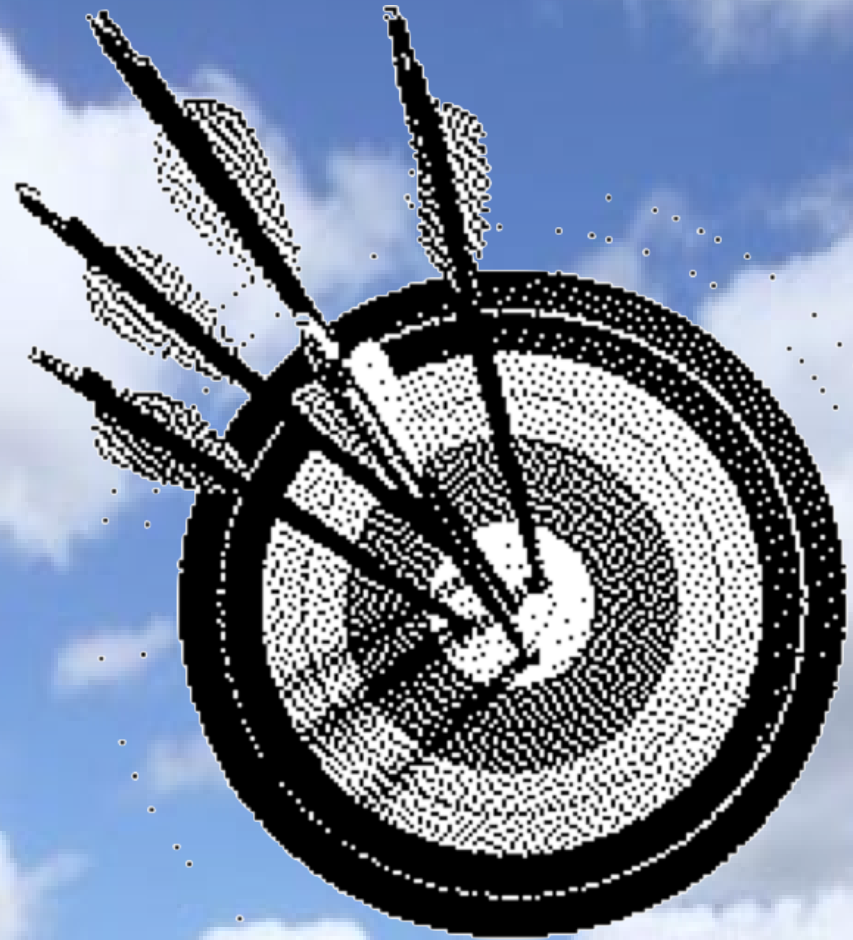


Good News for Cancer Treatment: Worldwide – More People Survive Cancer



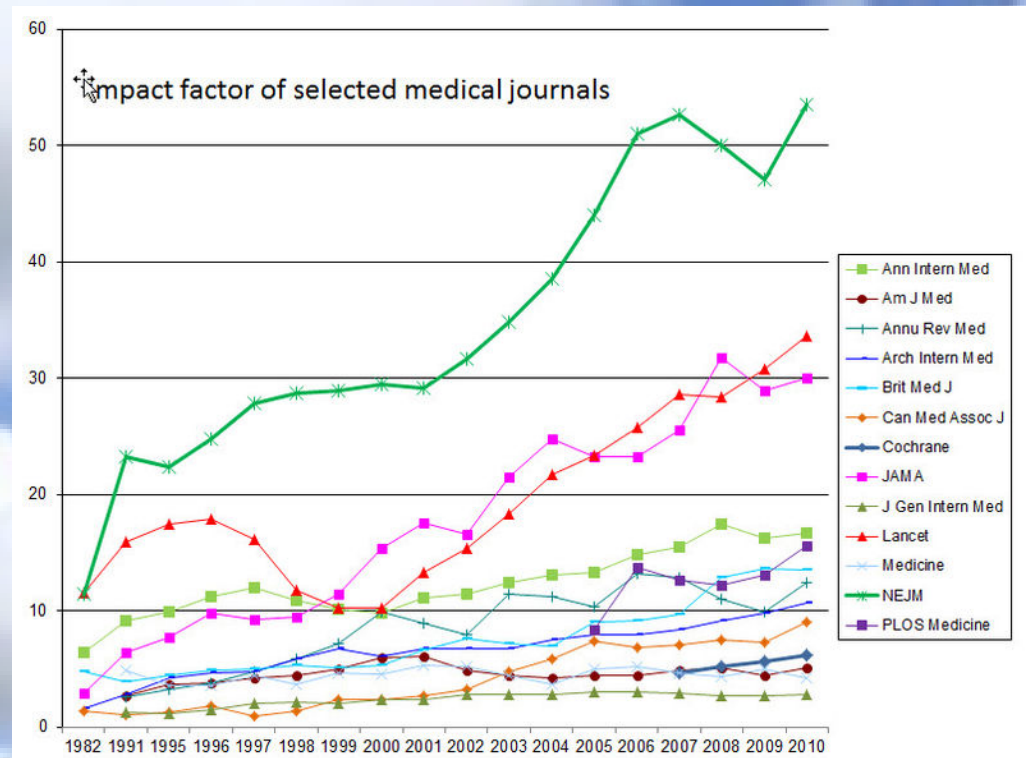
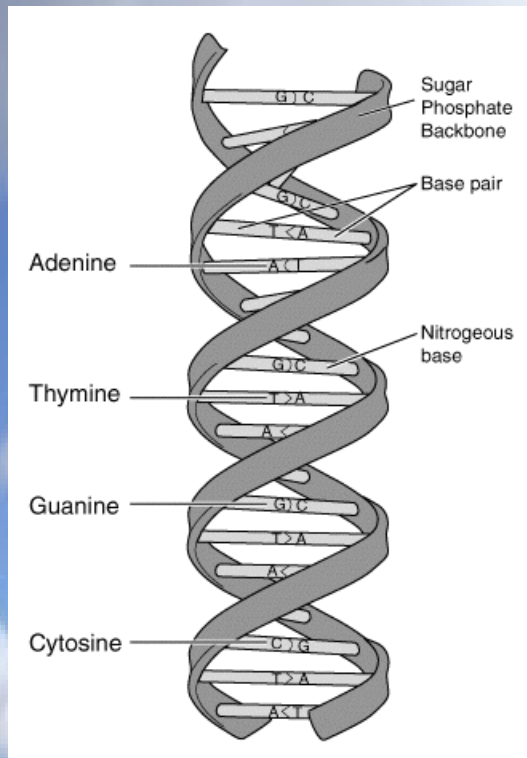
Cancer Survival Is Improving

- New medicines account for 50%–60% of the increase in cancer survival rates since 1975



Good News for Medicine

- Basic cancer science is paying back on its investment
- One medical paper a minute is added to the PubMed US National Library of Medicine



New Targeted Medicines Are Transforming Cancer Care

REVIEWS

Targeted therapy in rare cancers—adopting the orphans

Jaime Munoz and Pascale Karcovsk

Abstract Designation of a rare "orphan" disease is usually conferred by a prevalence of one in 1,000 to 7,500 individuals. Increasingly, orphan diseases are also being defined by their molecular fingerprints. Rare diseases are uniquely challenging from a therapeutic standpoint. It is critical to study clinical study design of treatments for orphan diseases as well as for the increasingly smaller molecular subsets with frequently occurring cancers. In spite of the immense challenges associated with developing a treatment for a rare disease, some of the most groundbreaking therapeutic discoveries have been made in orphan malignancies. This situation may be because a limited number of other molecular alterations occur in rare diseases, which can be targeted by agents. Here, we describe (1) examples of targeted therapies for orphan diseases, with particular emphasis on malignancies in comparative oncology conditions, as well as potential therapeutic strategies that can be adopted to these more orphan conditions.

Munoz J, Karcovsk P. Nat Rev Clin Oncol. 2012;9(11):631-642. doi:10.1038/nrco.2012.100

Introduction

Cancer is one of the most common causes of death worldwide. The treatment of metastatic disease has evolved with medical science, and many patients now survive for years. In the context of orphan diseases, however, the situation is different. Orphan diseases are rare, and the number of patients is small. This makes it difficult to conduct clinical trials and develop new treatments. However, the discovery of targeted therapies for orphan diseases has shown that it is possible to develop effective treatments for these rare conditions.

new diseases as "life threatening or chronically debilitating diseases that are of such low prevalence that special statistical efforts are needed to allow them to be studied." In the context of orphan diseases, however, the situation is different. Orphan diseases are rare, and the number of patients is small. This makes it difficult to conduct clinical trials and develop new treatments. However, the discovery of targeted therapies for orphan diseases has shown that it is possible to develop effective treatments for these rare conditions.

Chemotherapy era vs targeted medicines era

Cancer Disease	Old Model	Old Survival	Personalized Model	Personalized Survival
Acute promyelocytic leukemia	Chemotherapy	19 months	All-trans retinoic acid	>58 months
Chronic myeloid leukemia	Chemotherapy	6 years	Imatinib	>22 years
Melanoma	Dacarbazine	<10 months	Vemurafenib	16 months
Medullary thyroid cancer	Chemotherapy	36 months	Vandetanib	Not reached
Gastrointestinal stromal tumour	Chemotherapy	12-18 months	Imatinib	Close to 5 years
Relapsed Hodgkin lymphoma	Chemotherapy	1.2 years	Brentuximab vedotin	22.4 months

Patient Centred Care

- Is easy if we have the resources to offer a choice from all the appropriate treatment options



Discussing an treatment options with patients should be easy

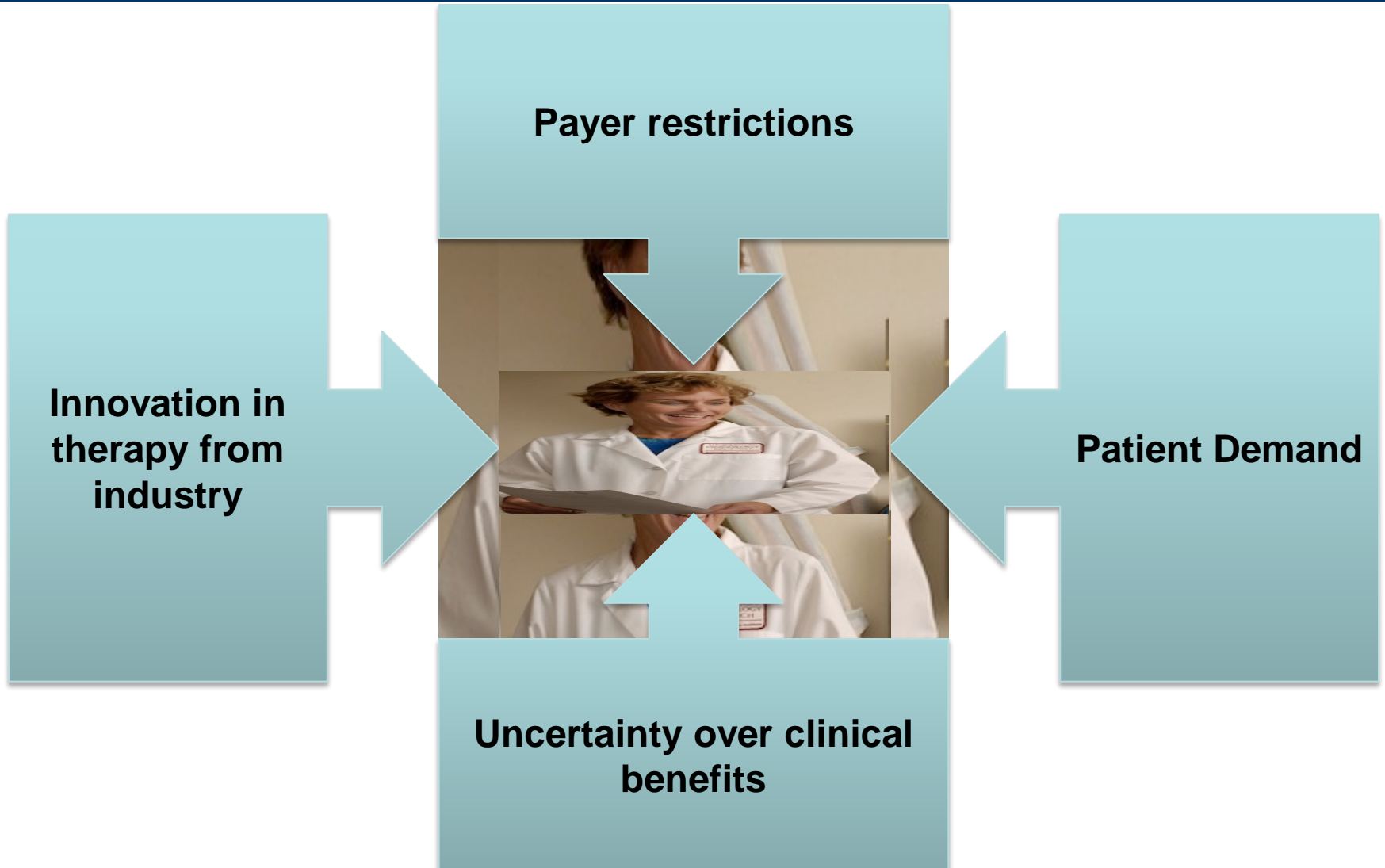
However - Many external pressures can impact our decision

I want you to live longer and live better

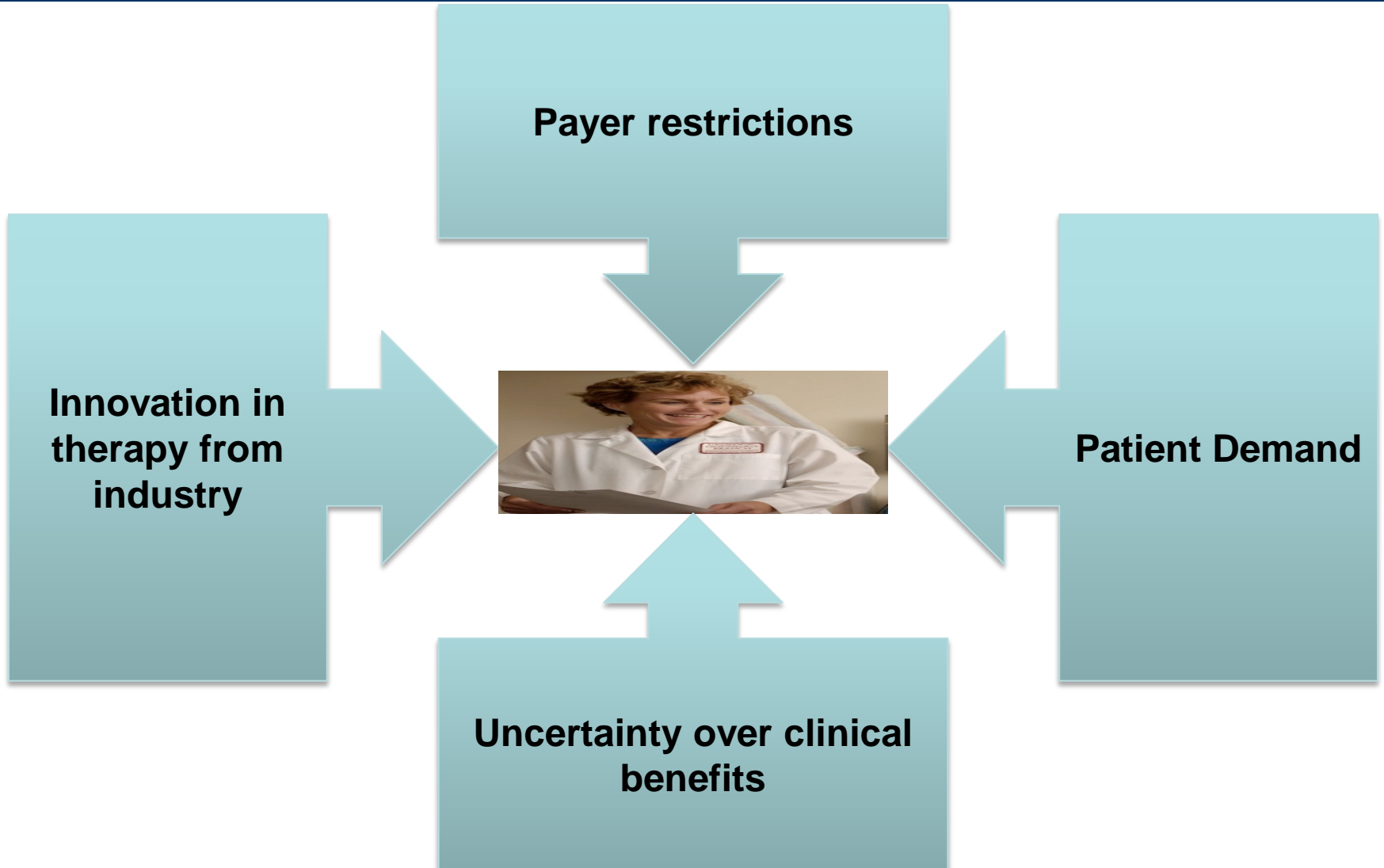
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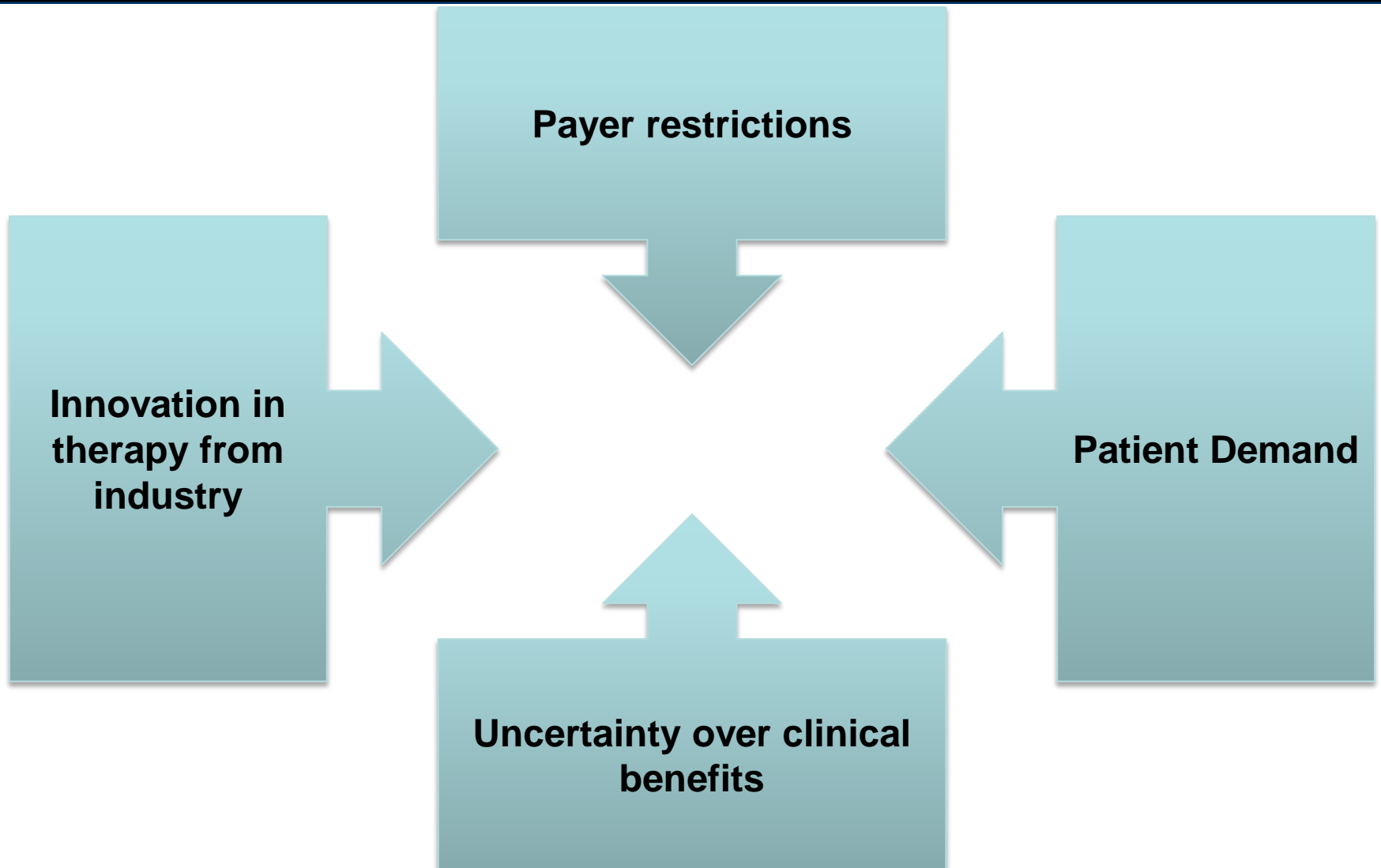


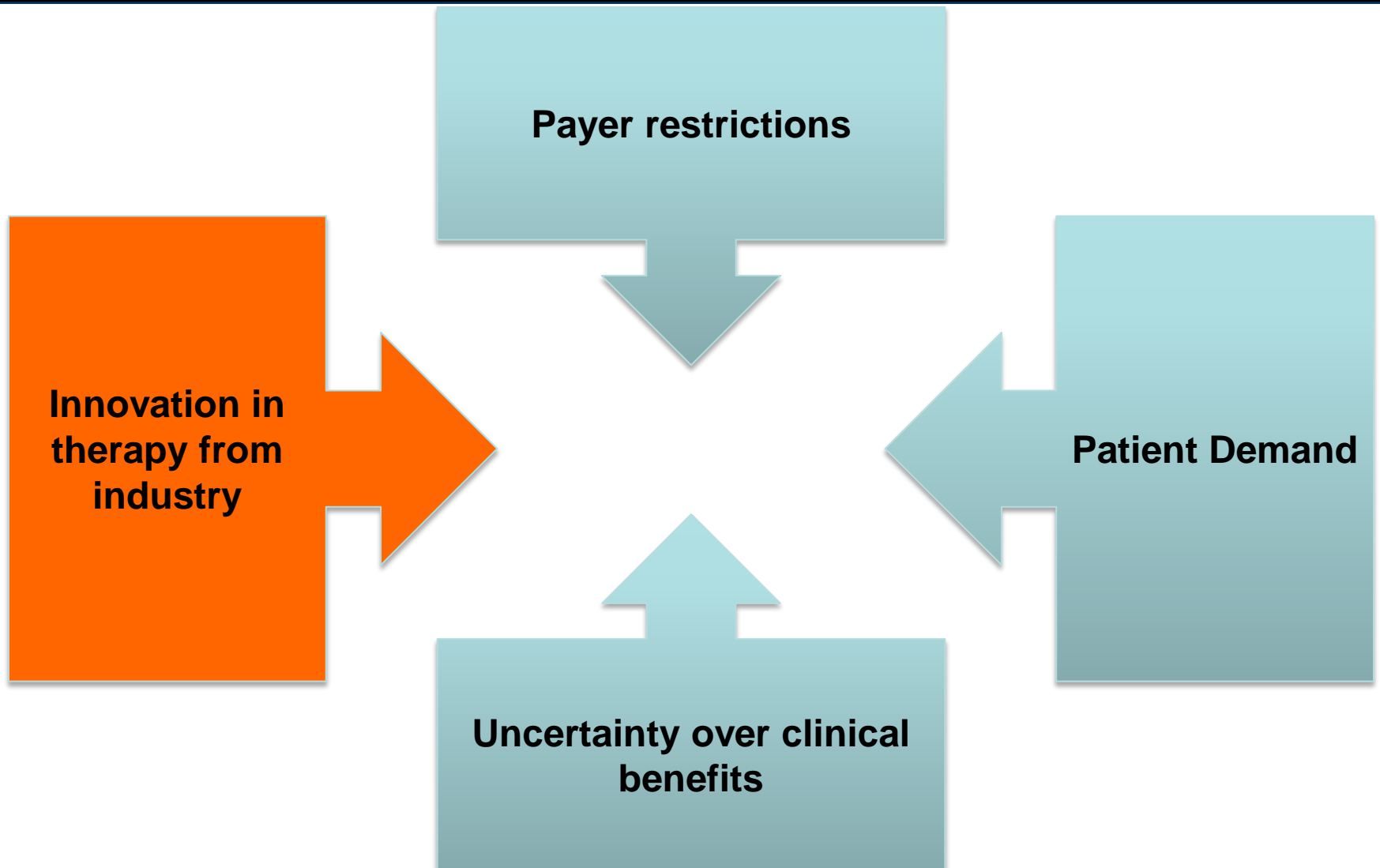
Discussing an treatment options with patients should be easy



Physicians are under many pressures !

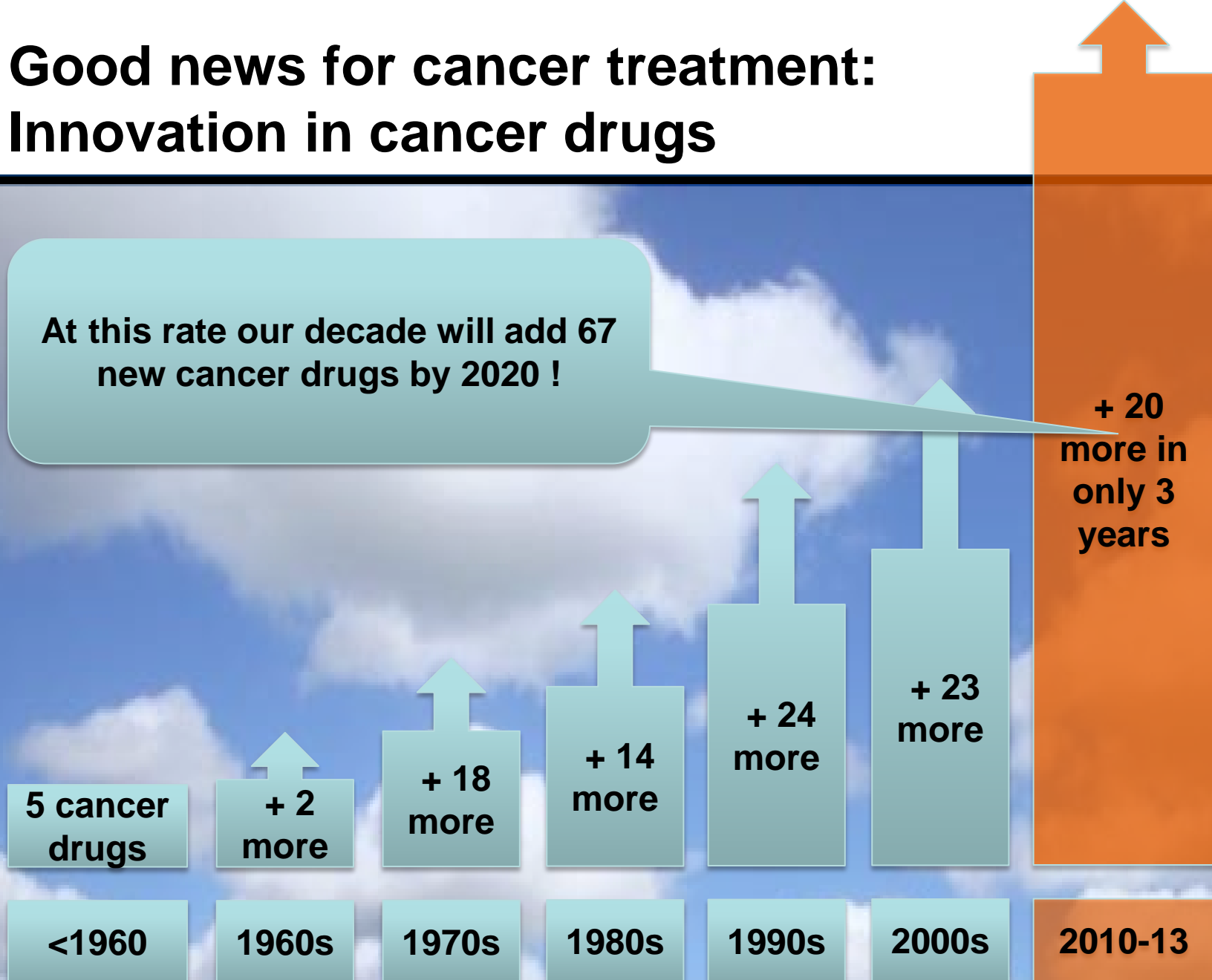






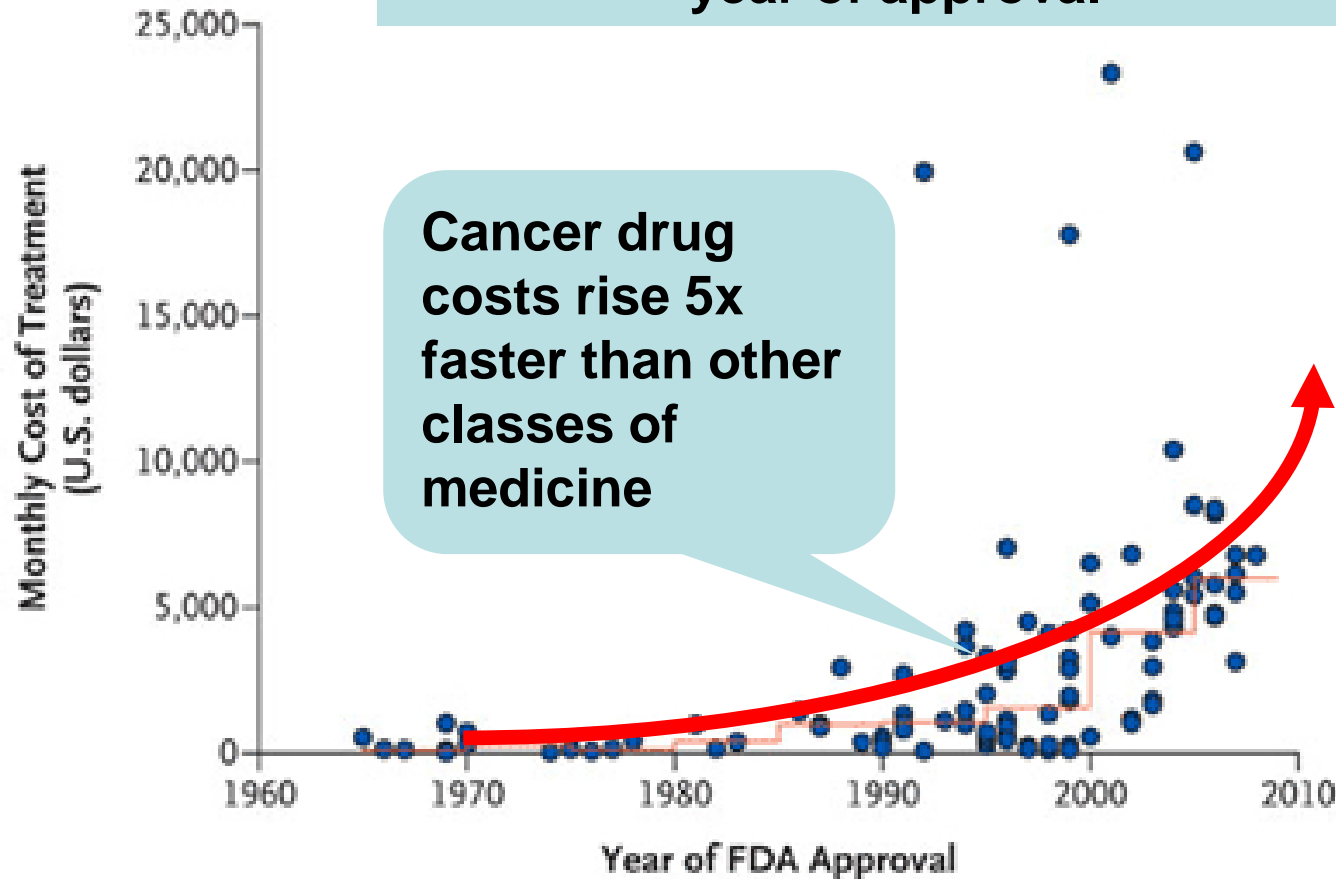
Good news for cancer treatment: Innovation in cancer drugs

At this rate our decade will add 67
new cancer drugs by 2020 !



But We Have a Problem: Treatment Costs Are Rising

Monthly cost of new cancer drugs by year of approval



But We Have a Problem ...



CAN WE AFFORD THE WAR ON CANCER?

Immunotherapy vaccines could extend survival in a handful of cancers. But personalizing treatment, payers argue, is not sustainable. Where should the line be drawn?

BY ED SILVERMAN

Two years ago, the U.S. Food and Drug Administration took a step that some thought would never occur — it approved the sipuleucel-T (Provenge) vaccine for late-stage prostate cancer. The move came after a protracted episode involving allegations of conflicts of interest among a pair of FDA advisory committee members who reviewed the

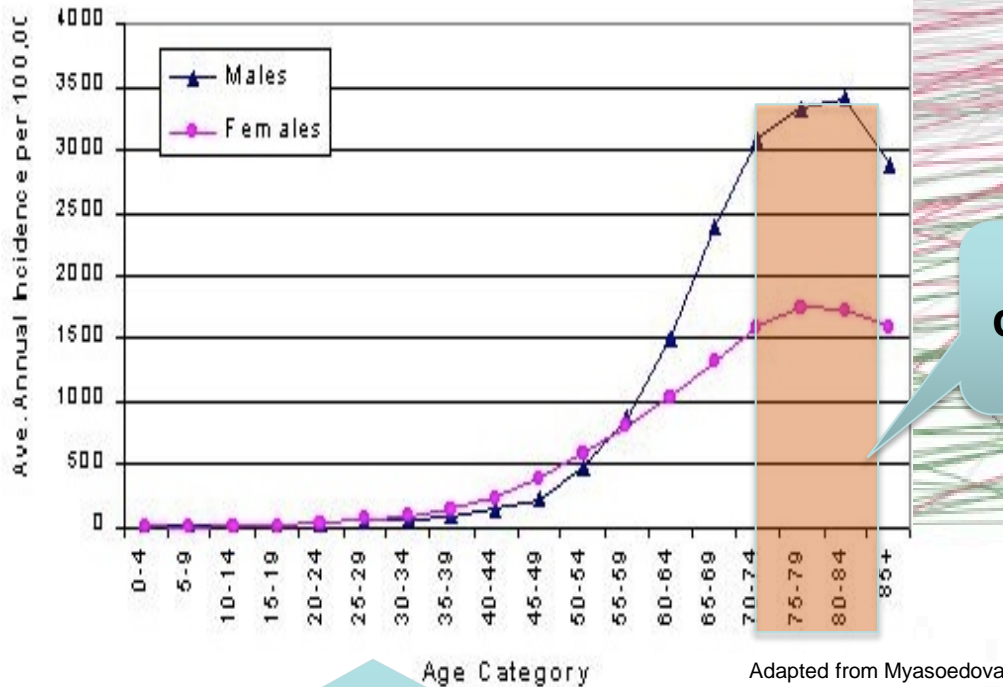
tending a life by 4.1 months is worth the price of Provenge. It has also prompted larger questions about the underlying technology and the need to develop more vaccines.

Provenge is made by culturing a patient's immune cells with a recombinant antigen. The individualized product is then infused back into the patient, activating the immune system to target and attack the cancer. This "immunotherapy" underscores the move toward personalized



But We Have a Problem: More Cancer to Treat

Figure 2.1a: Average, Annual Cancer Incidence Rates by Age Category, 1992-1996 (Linear Scale)



Peak age for cancer is 70-84 years

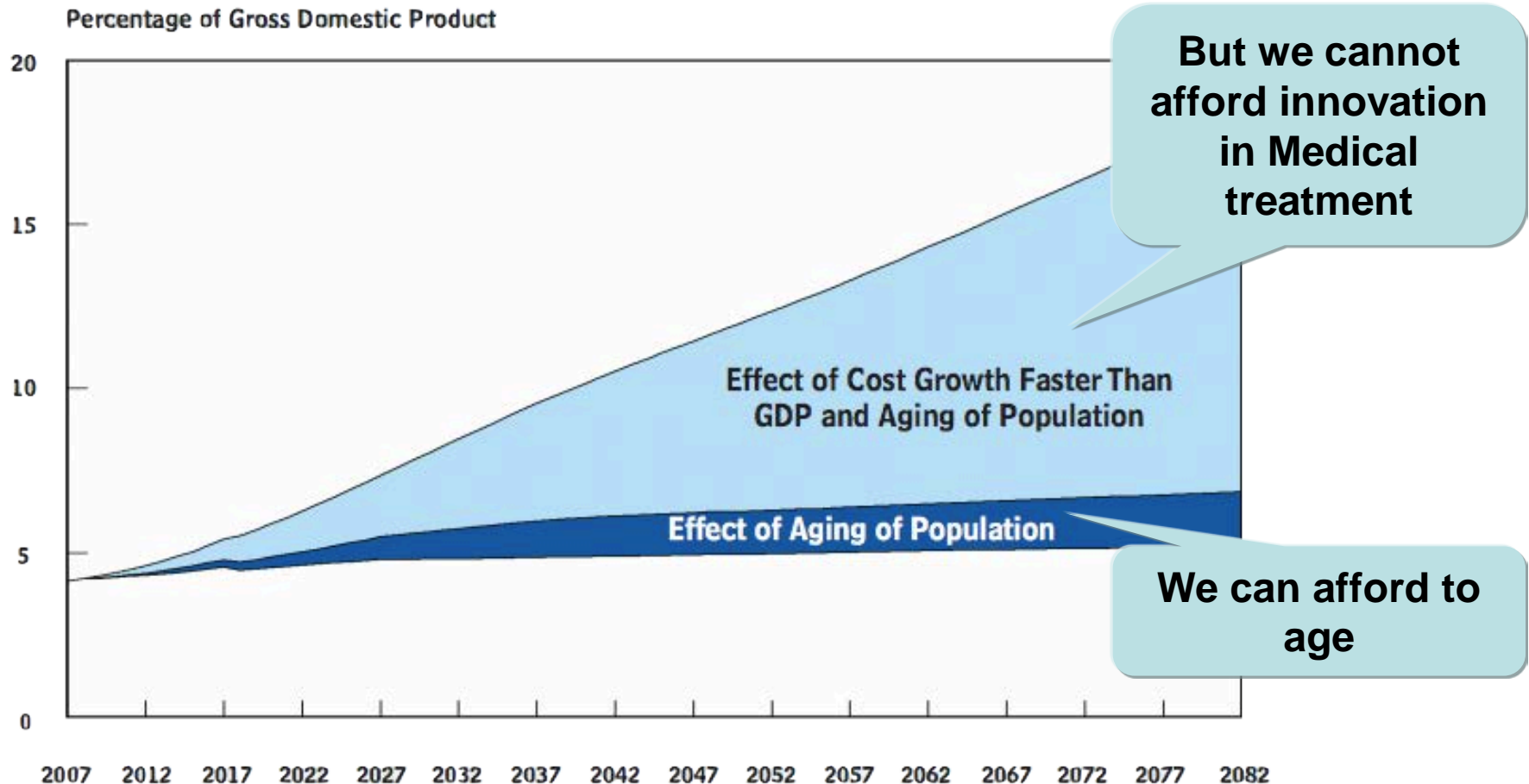
The average life expectancy in 2009 was 67

Relationship of cancer incidence with age



Planning for the Future: What Will Happen to Costs?

What is the driver for increased spending:
Aging populations or medical treatment?

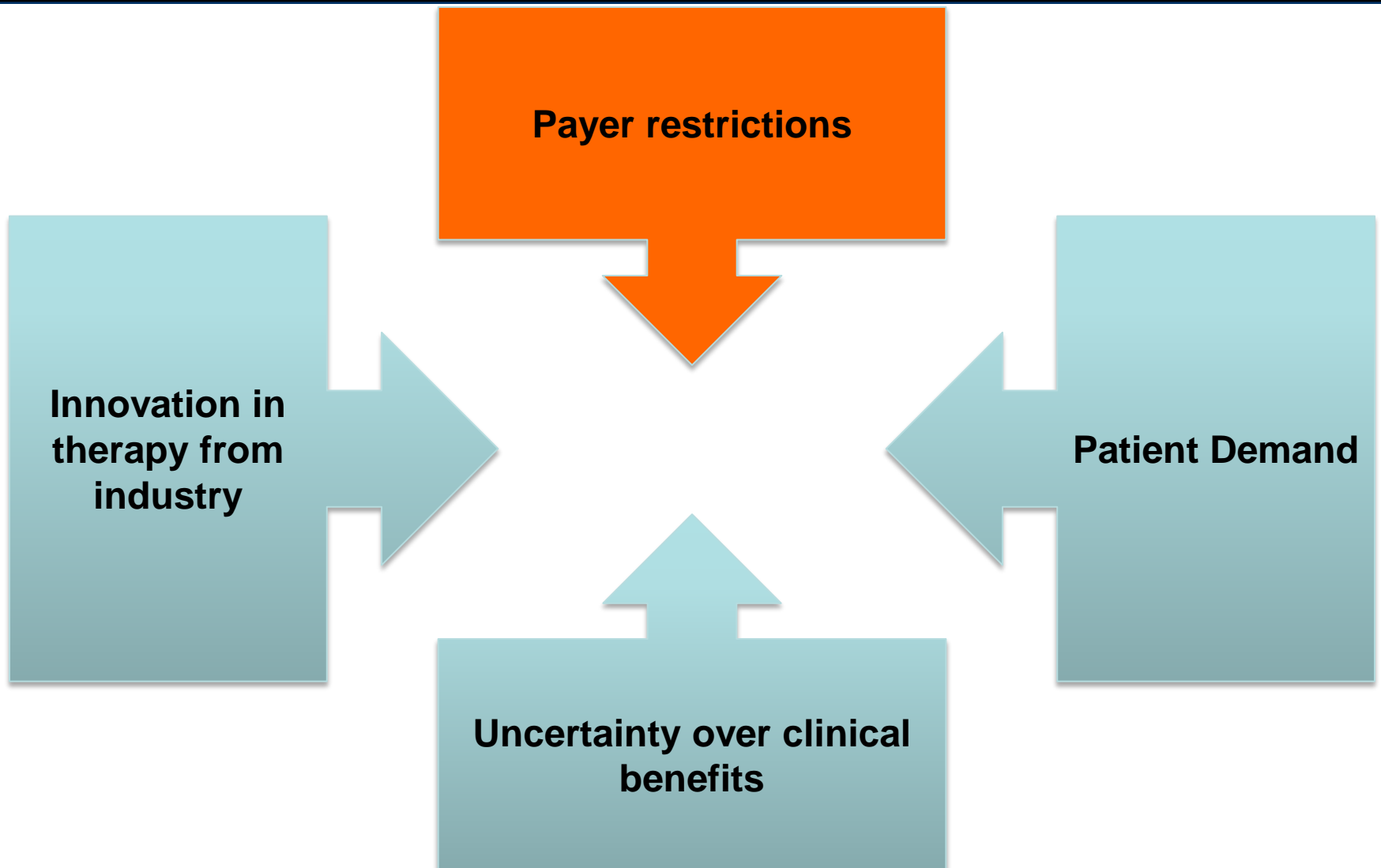


Bad News for Cancer

The Lancet Oncology Commission

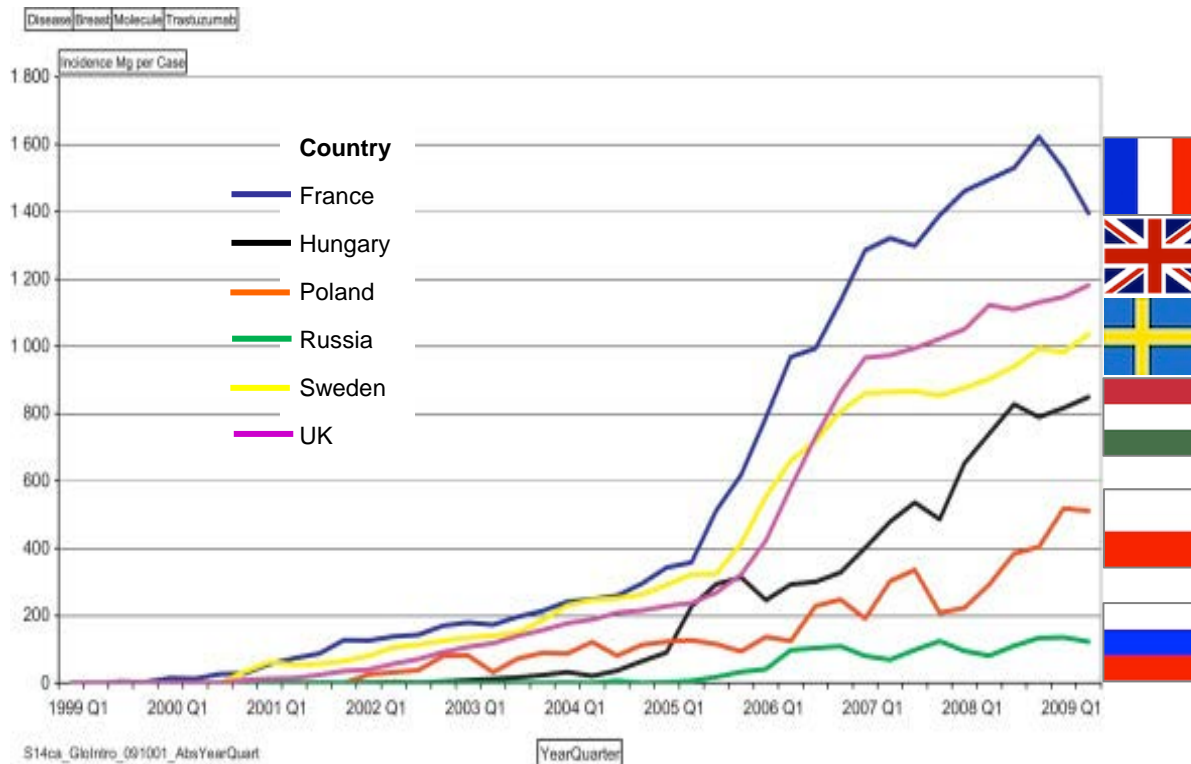
Delivering affordable cancer care in high-income countries

Richard Sullivan, Jeffrey Peppercorn, Karol Sikora, John Zalcberg, Neal J Meropol, Eitan Amir, David Khayat, Peter Boyle, Philippe Autier, Ian F Tannock, Tito Fojo, Jim Siderov, Steve Williamson, Silvia Camporesi, J Gordon McVie, Arnie D Purushotham, Peter Naredi, Alexander Eggermont, Murray F Brennan, Michael L Steinberg, Mark De Ridder, Susan A McCloskey, Dirk Verellen, Terence Roberts, Guy Storme, Rodney J Hicks, Peter J Ell, Bradford R Hirsch, David P Carbone, Kevin A Schulman, Paul Catchpole, David Taylor, Jan Geissler, Nancy G Brinker, David Meltzer, David Kerr, Matti Aapro



Access Is Driven by Affordability

- Example - the use of trastuzumab targeted biologic therapy for high risk breast cancer



Use of trastuzumab is determined by national wealth, not by medical need

The use of trastuzumab for high risk breast cancer treatment (expressed in mg/case of breast cancer) in France, Poland, Russia, UK, Sweden and Hungary 1999–2009

There Is No Evidence that Spending More Will Consistently Improve Health






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1 January 2013, Vol 158, No. 1>

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Reviews | 1 January 2013

The Association Between Health Care Quality and Cost: A Systematic Review

Peter S. Hussey, PhD; Samuel Wertheimer, MPH; and Ateev Mehrotra, MD

[\[+\] Article and Author Information](#)

Ann Intern Med. 1 January 2013;158(1):27-34

[Article](#) [Figures](#) [Tables](#) [References](#)

Background: Although there is broad policy consensus that both cost containment and quality improvement are critical, the association between costs and quality is poorly understood.

Purpose: To systematically review evidence of the association between health care costs and quality.

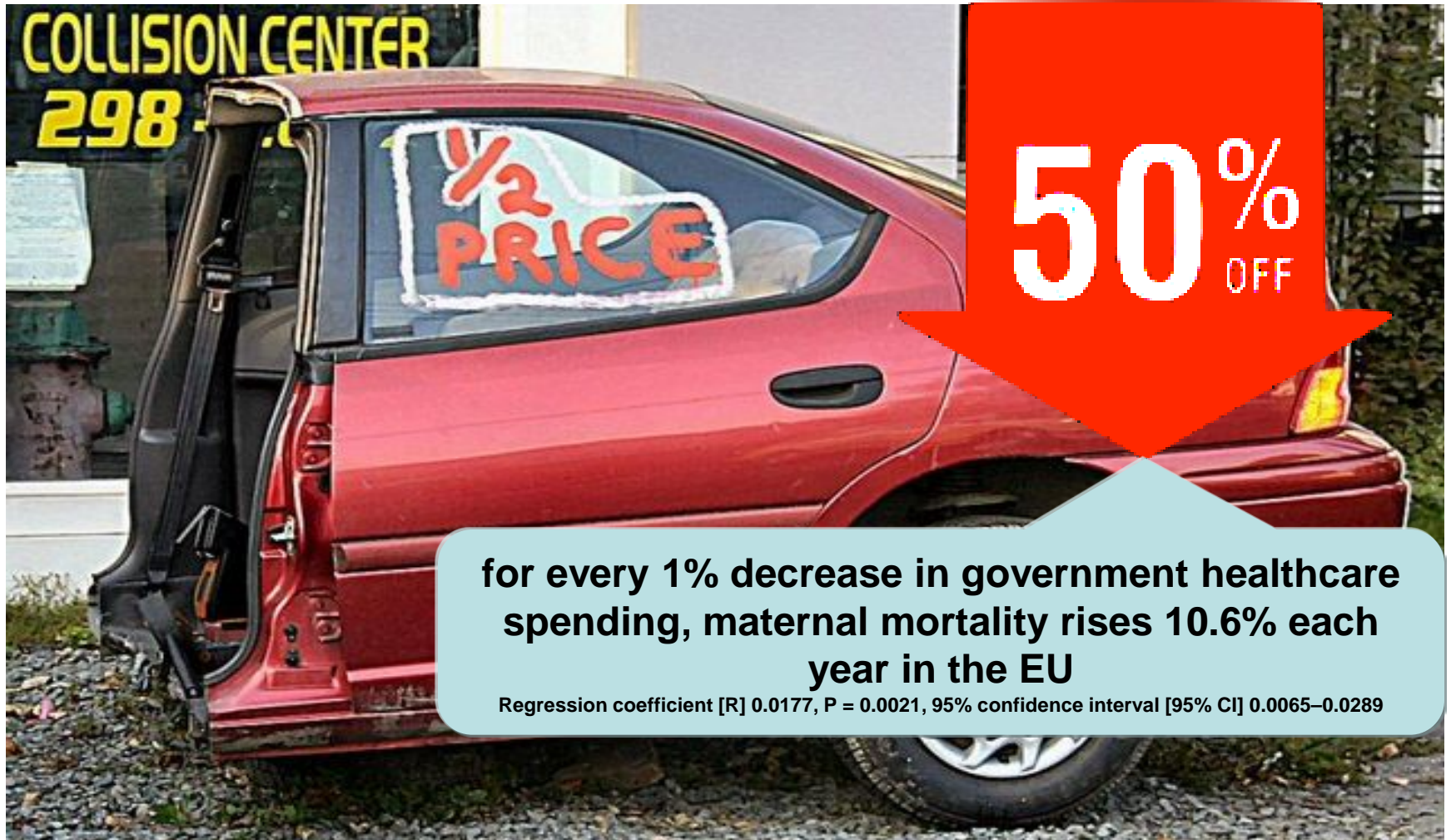
Data Sources: Electronic literature search of PubMed, Cochrane, and other databases for studies published between 1990 and 2012.

Study Selection: Title, abstract, and full-text review to identify relevant studies.

A review of all studies linking increasing cost and better quality

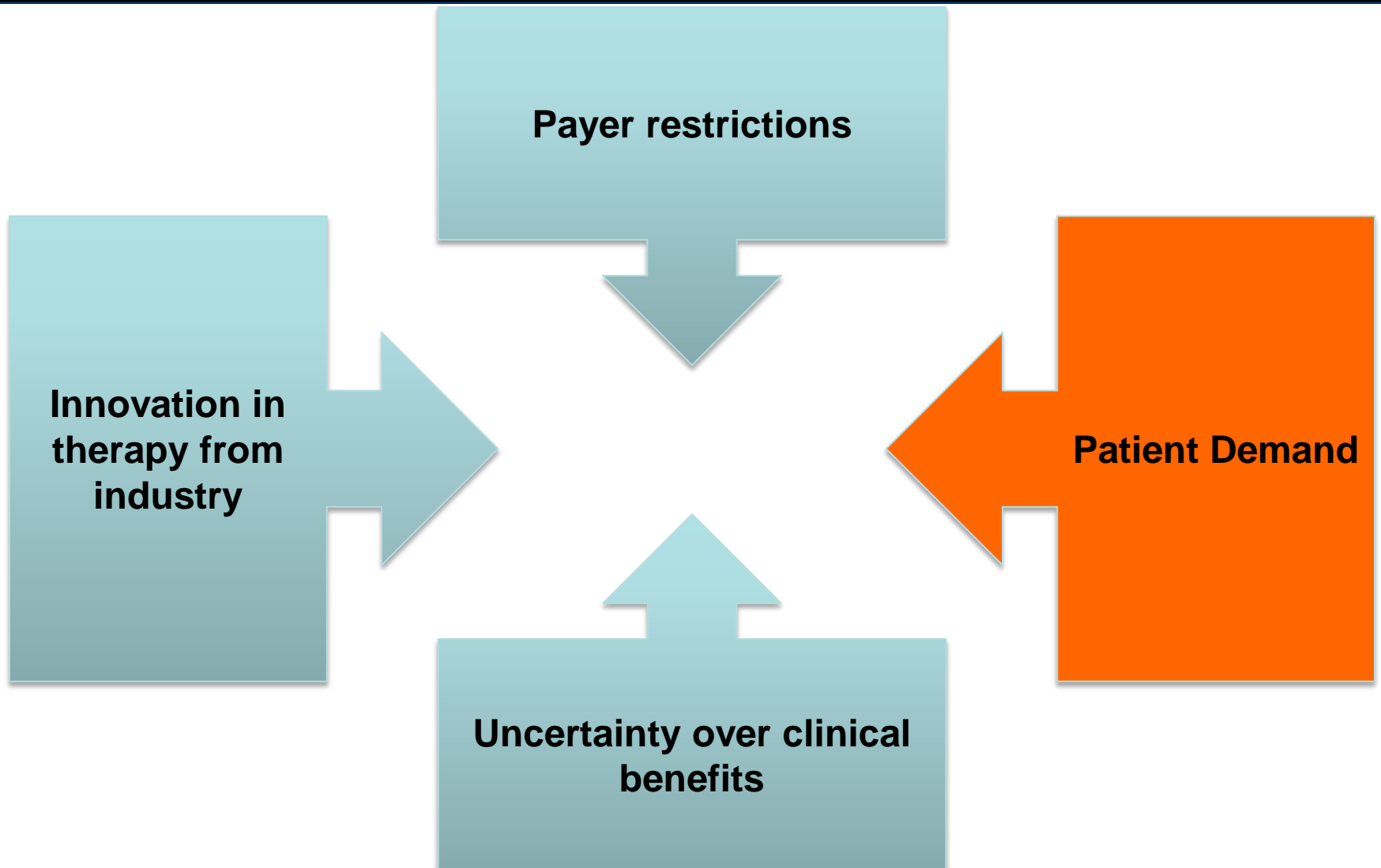
Showed no clear link between more spending and better care

There Is Also No Evidence that Simple Budget Cuts Will Consistently Improve Health



for every 1% decrease in government healthcare spending, maternal mortality rises 10.6% each year in the EU

Regression coefficient [R] 0.0177, P = 0.0021, 95% confidence interval [95% CI] 0.0065–0.0289



Across the EU cancer services are struggling to meet patient demands



The image shows a screenshot of a JAMA Oncology article page. The page header includes the JAMA logo and navigation links like 'HOME' and 'Current'. The article title is 'Patient Demands and Requests for Cancer Tests and Treatments', marked as 'FREE'. The authors listed are Keerthi Gogineni, Katherine L. Shuman, Derek Chinn, Nicole B. Gabler, and Ezekiel J. Emanuel. Two light blue callout boxes are overlaid on the page. The first box contains the text: 'Physicians and payers often blame patient demands for contributing to high medical costs'. The second box contains the text: 'however, a new study involving more than 5,000 patient-clinician visits indicates that cancer patients rarely push for unnecessary tests and treatments from their health care providers.' The page also shows a 'Text Size' option with three icons (A, A, A).

Physicians and payers often blame patient demands for contributing to high medical costs

however, a new study involving more than 5,000 patient-clinician visits indicates that cancer patients rarely push for unnecessary tests and treatments from their health care providers.

Patient Demands and Requests for Cancer Tests and Treatments **FREE**

Keerthi Gogineni, MD, MSHP¹; Katherine L. Shuman, MSN, RN²; Derek Chinn, BS²; Nicole B. Gabler, PhD, MHA³; Ezekiel J. Emanuel, MD, PhD^{2,4,5}

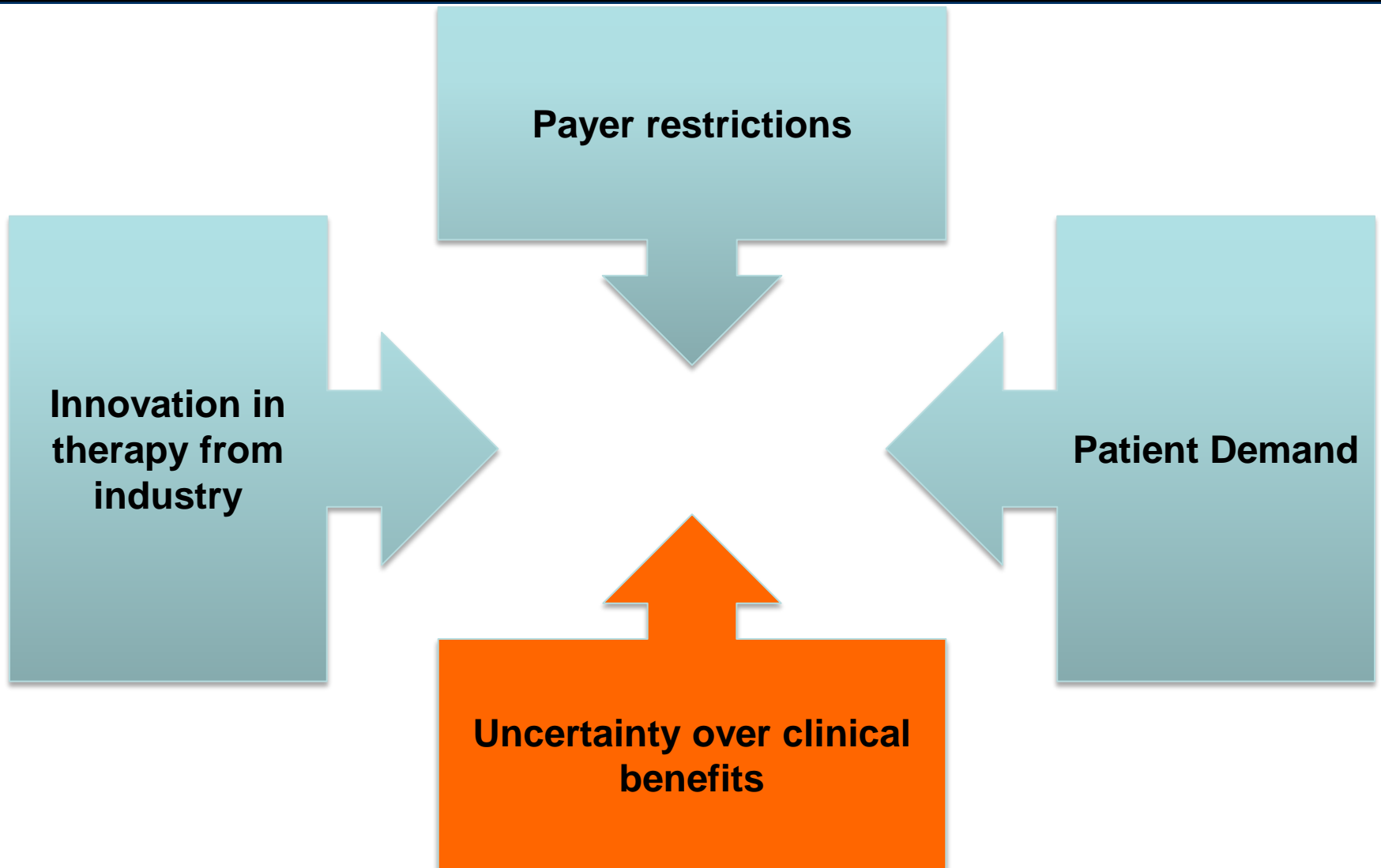
[+] Author Affiliations

JAMA Oncol. 2015;1(1):33-39. doi:10.1001/jamaoncol.2014.197.

Text Size: A A A

Access to Innovation Has One Key Rule

***The only drug that works is a drug
that a patient can afford***

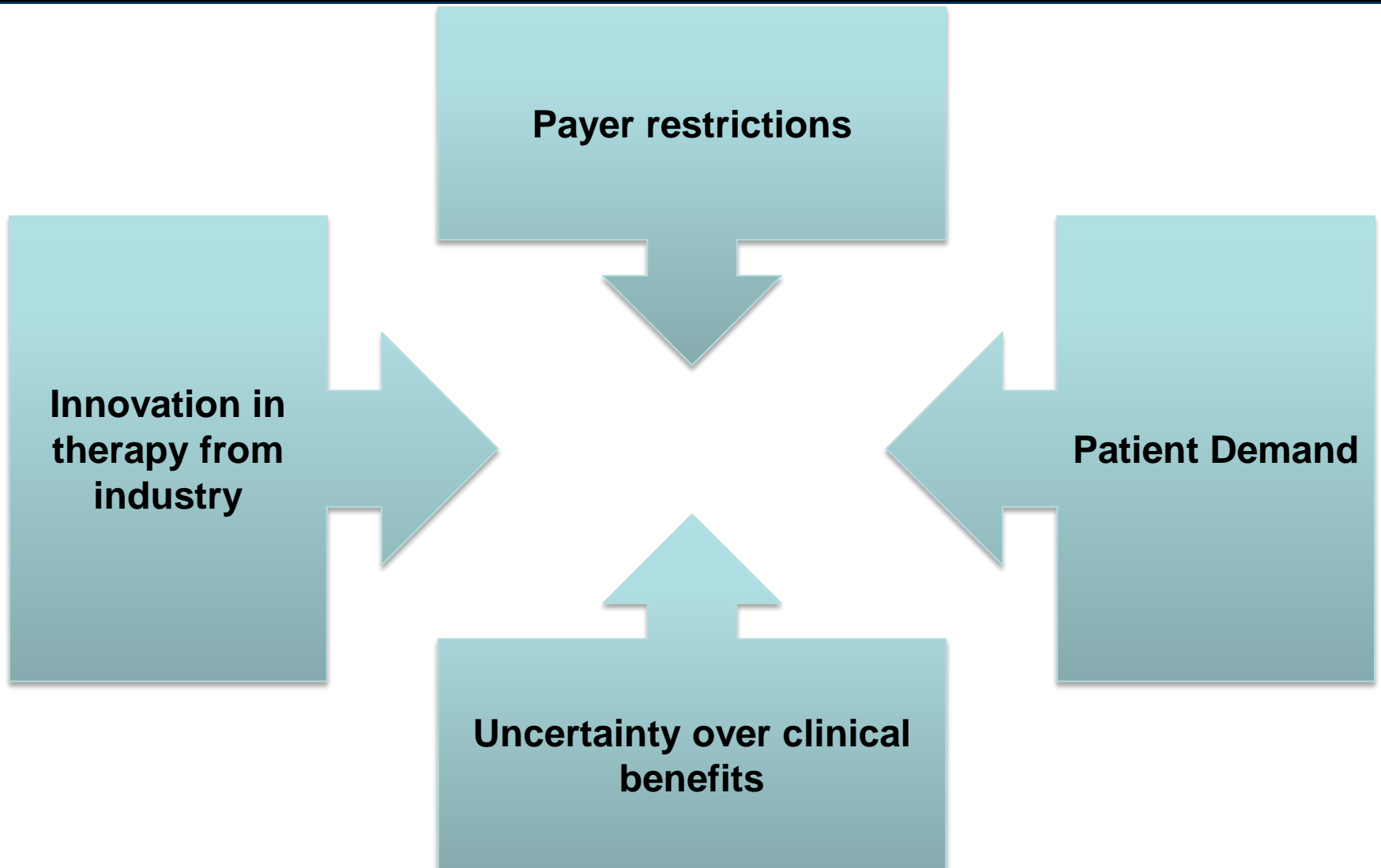


Doctors frequently uncertainty over clinical benefits from innovative treatments

- We need data transparency
- Wieseler and colleagues compared 101 clinical study reports submitted to regulators with published articles on the same trials
- They found that many important outcomes were missing, including mortality,
 - which was reported adequately in all clinical study reports measuring this mortality (n=92) but

only 30% of corresponding articles in medical journals reported patient mortality

How can readers interpret trial results without knowing how many people have died in each treatment arm?





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**“Bring an example from
your own practice”**





Oncology Education to Promote Cost-Effective Care

“Billions of euros are wasted, say researchers, because doctors prescribe branded drugs when a generic equivalent is just as good”

DrugWatch

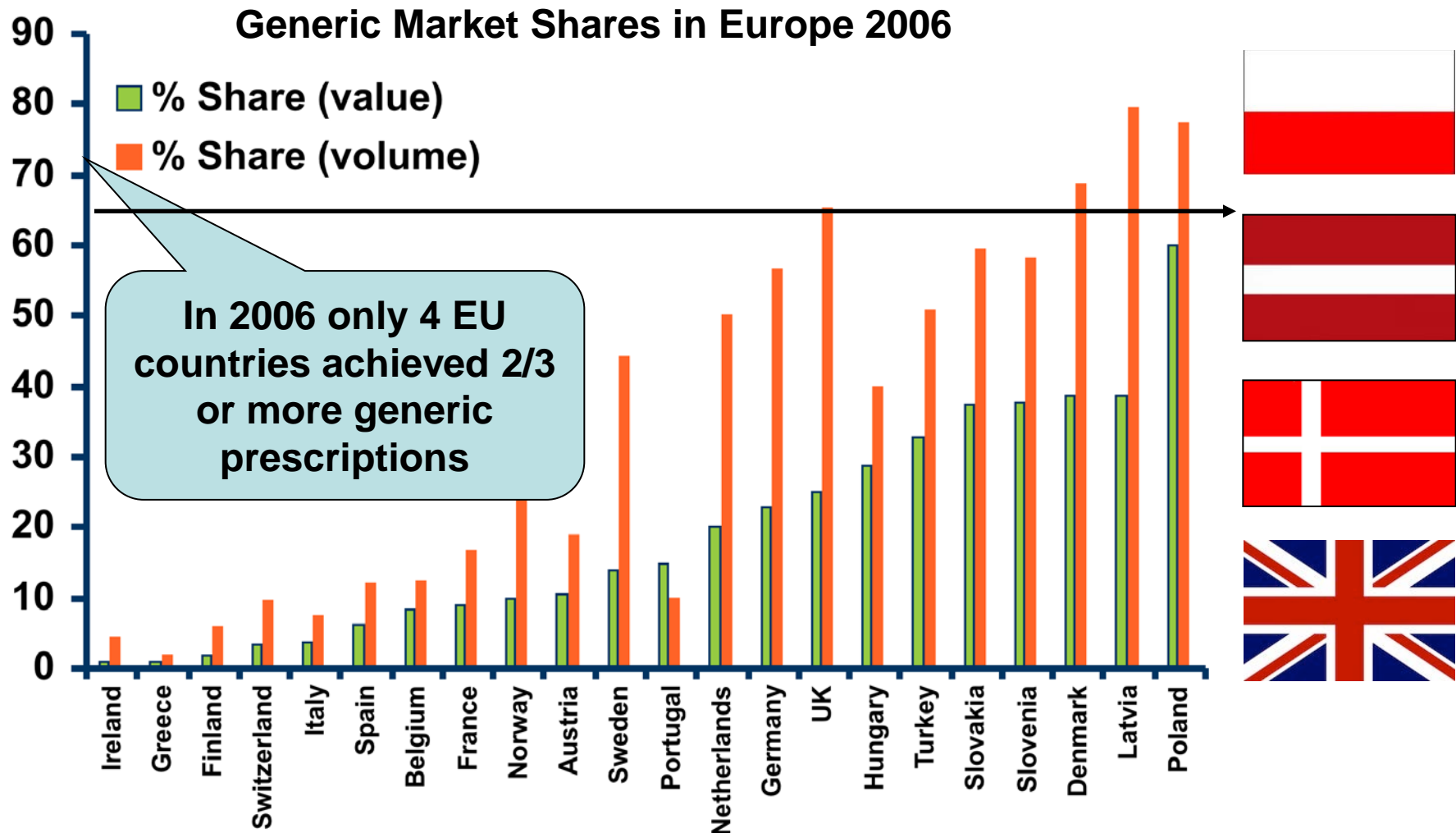


Cancerworld

No-name heroes
can save Europe billions

→ Anna Wagstaff

Use of generics in volumes and values differs by country within the EU





Oncology Education to Promote Cost-Effective Care

- Copies of patent-expired drugs in the EU have specific regulatory names:
 - Small Molecule = “Generics”
 - Large Molecule Biologics = “Biosimilar”

Cancerworld

DrugWatch

No-name heroes
can save Europe billions

→ Anna Wagstaff

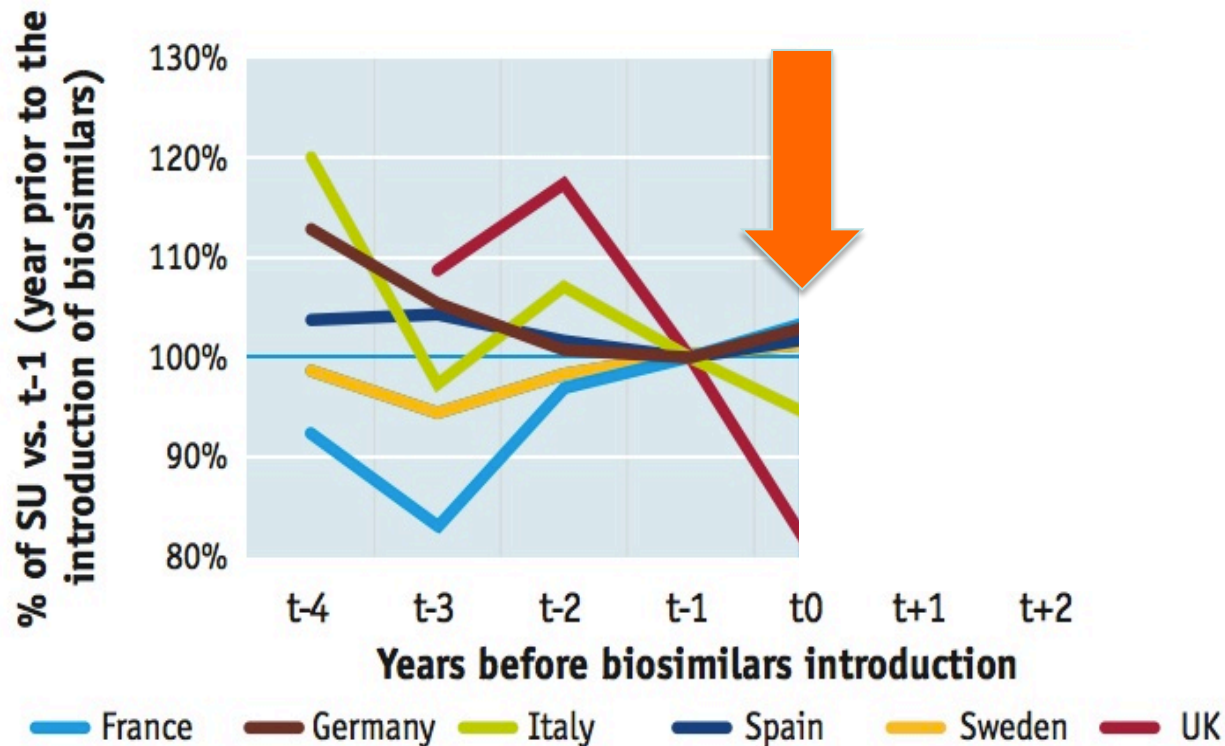
Defining a Biosimilar



World Health
Organization

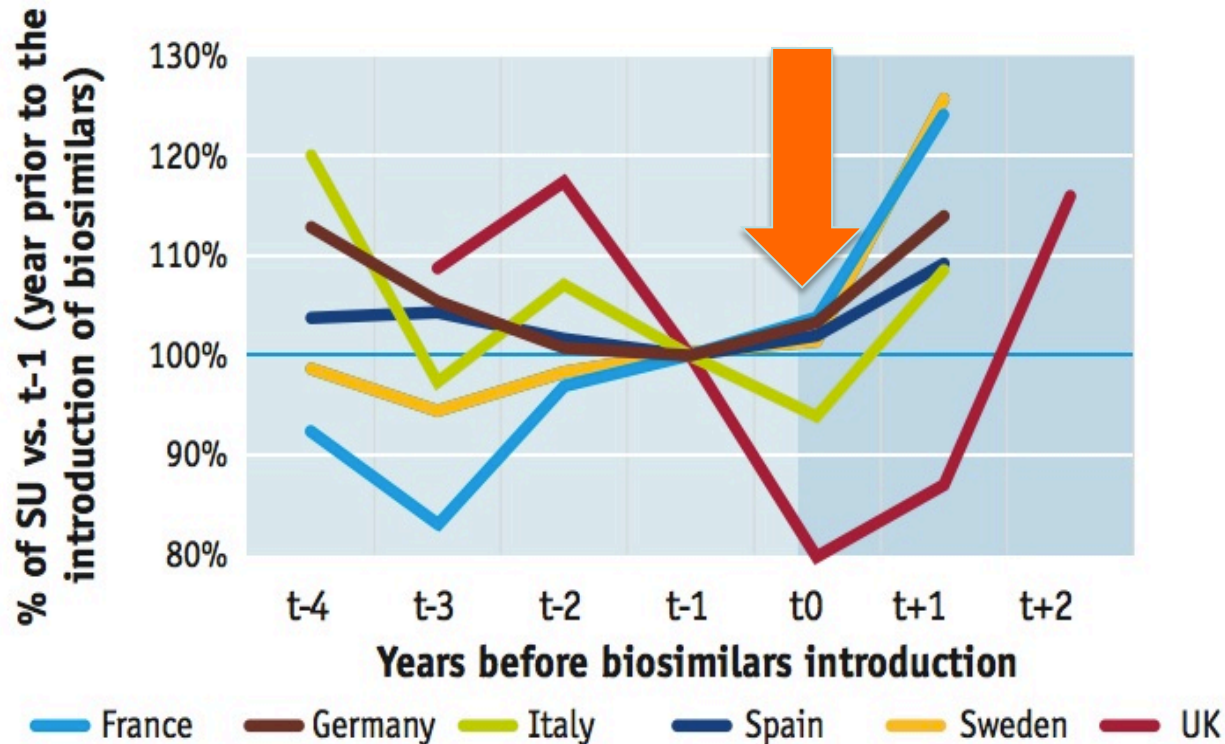
- **The World Health Organization**
 - **A biotherapeutic product which is similar in terms of quality, safety, and efficacy to an already licensed reference biotherapeutic product**

Biosimilars Bring Treatments into Reimbursement That Might Otherwise Be Unaffordable



- Trends in use of white cell growth factors – G-CSF before and after biosimilar introduction in the EU

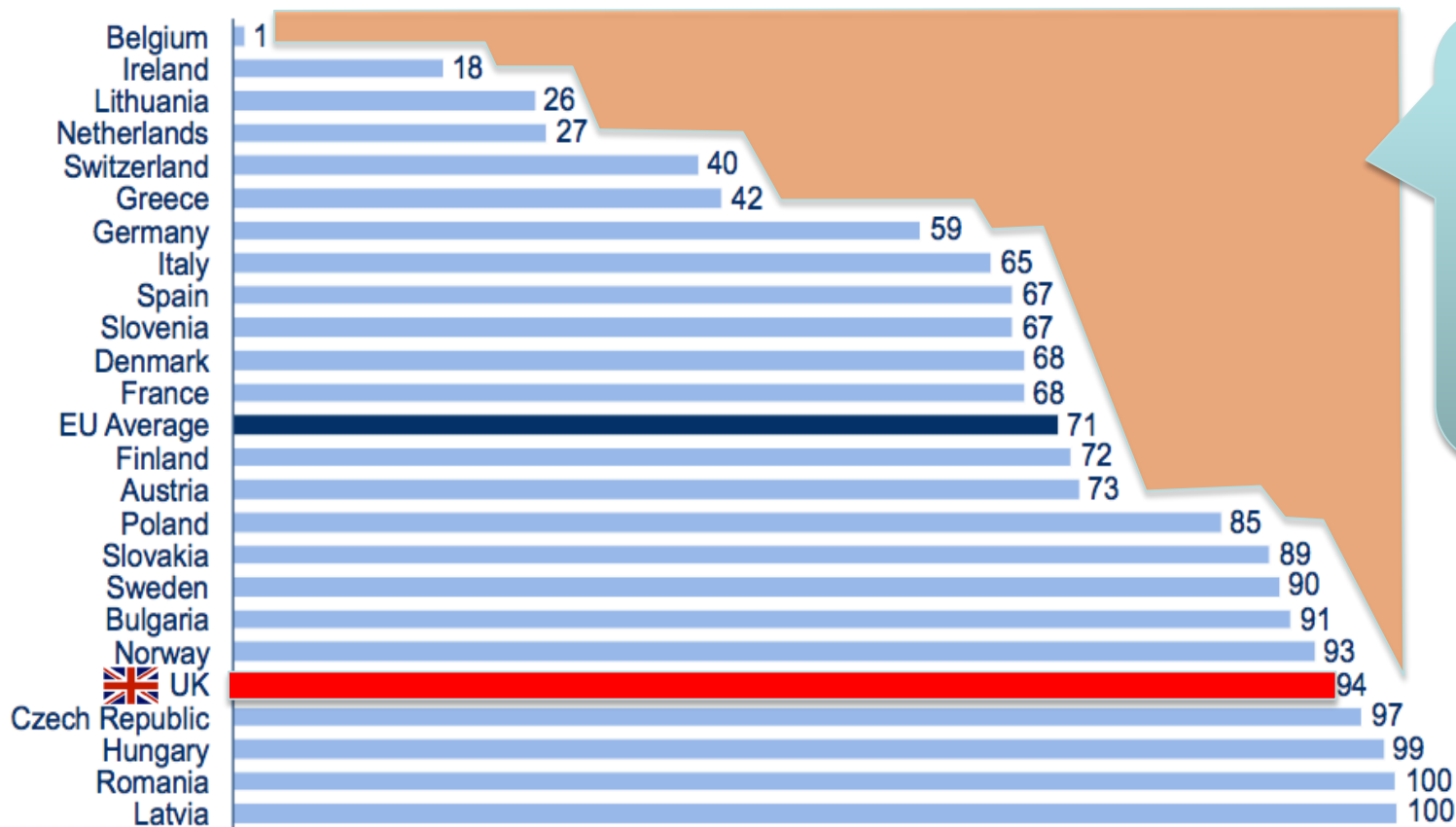
Biosimilars Bring Treatments into Reimbursement That Might Otherwise Be Unaffordable



- Trends in use of white cell growth factors – G-CSF before and after biosimilar introduction in the EU

However – Access to Savings to Reinvest in Better Care Has Not Been Equal in the EU

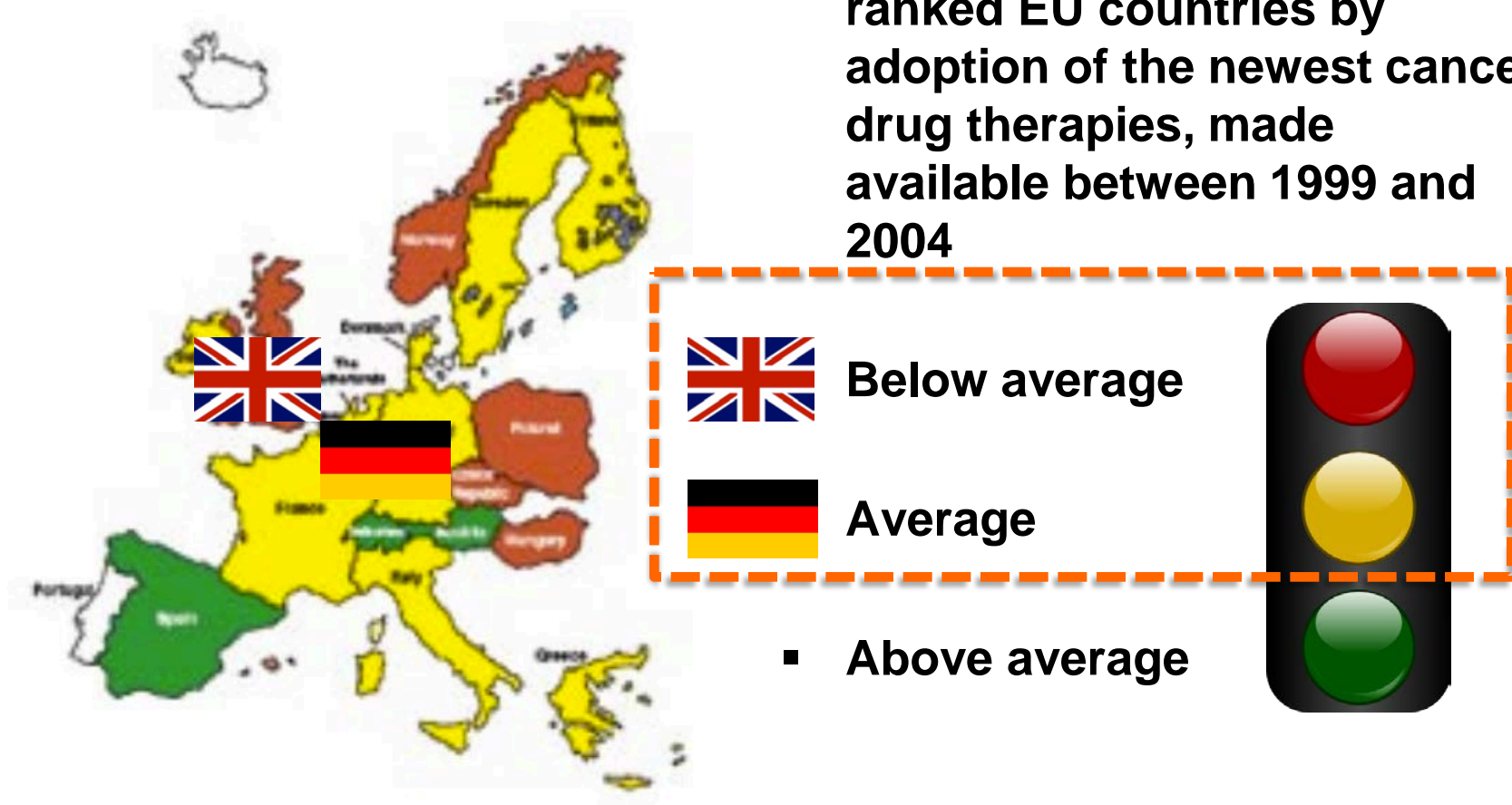
- % of G-CSF as biosimilars vs Neupogen in Europe, Feb 2013



This potential investment is a lost opportunity to improve cancer care

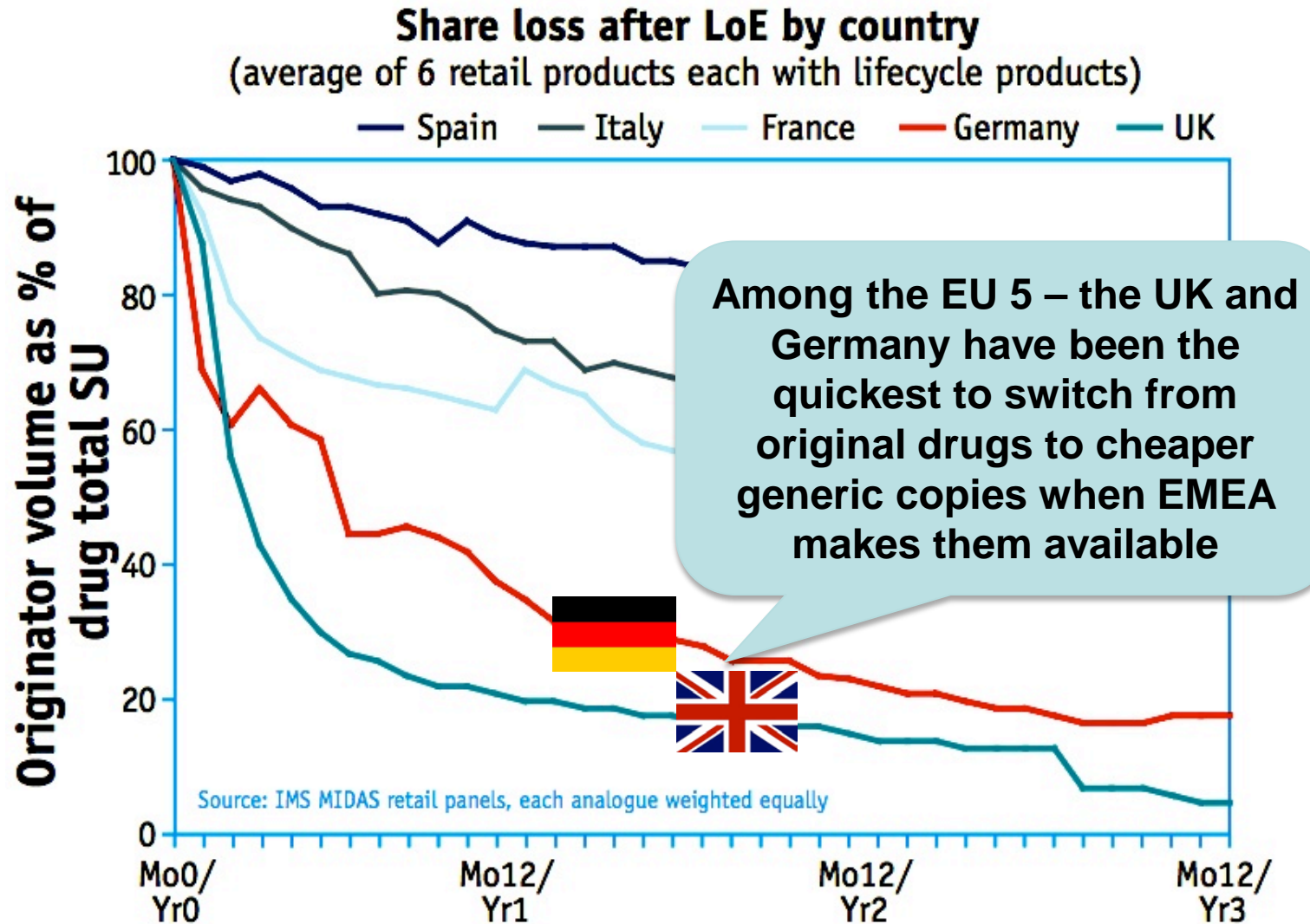
Access to innovation in cancer medicine

- Karolinska Report 2005 – ranked EU countries by adoption of the newest cancer drug therapies, made available between 1999 and 2004

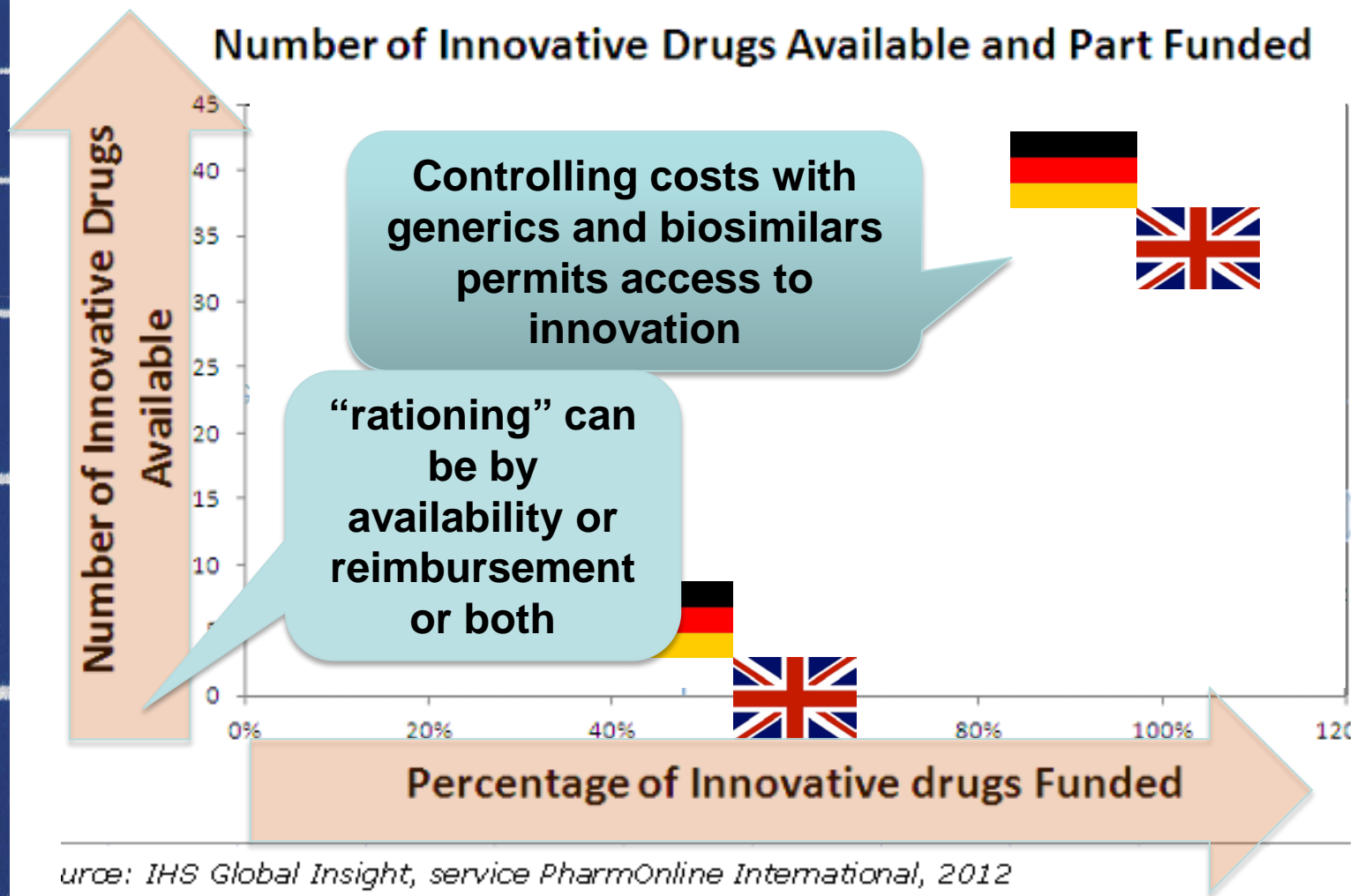


- Above average

Speed of uptake of generics differs by country within the EU



Access to innovative drugs differs by country within the EU





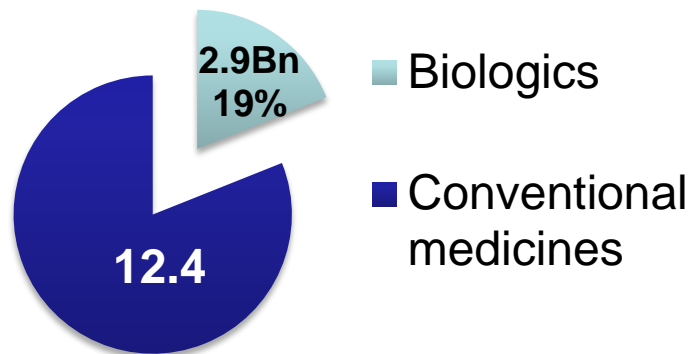
The UK Spends £4 Billion / 5.6 Billion Euros on Biologic Drugs

Even modest savings of only 10% of the UK NHS biologics budget still give us £400 million to reinvest in innovation

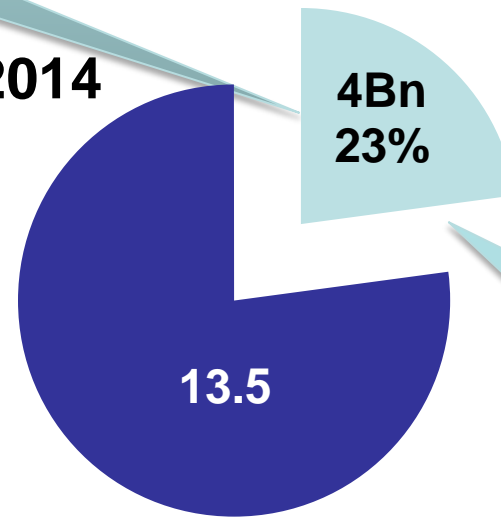
Much more than the cost of the UK cancer drugs fund

Which enabled the UK to be equal highest country in the EU for funded access to innovative cancer medicines

Sales in £ Billion 2011



2014



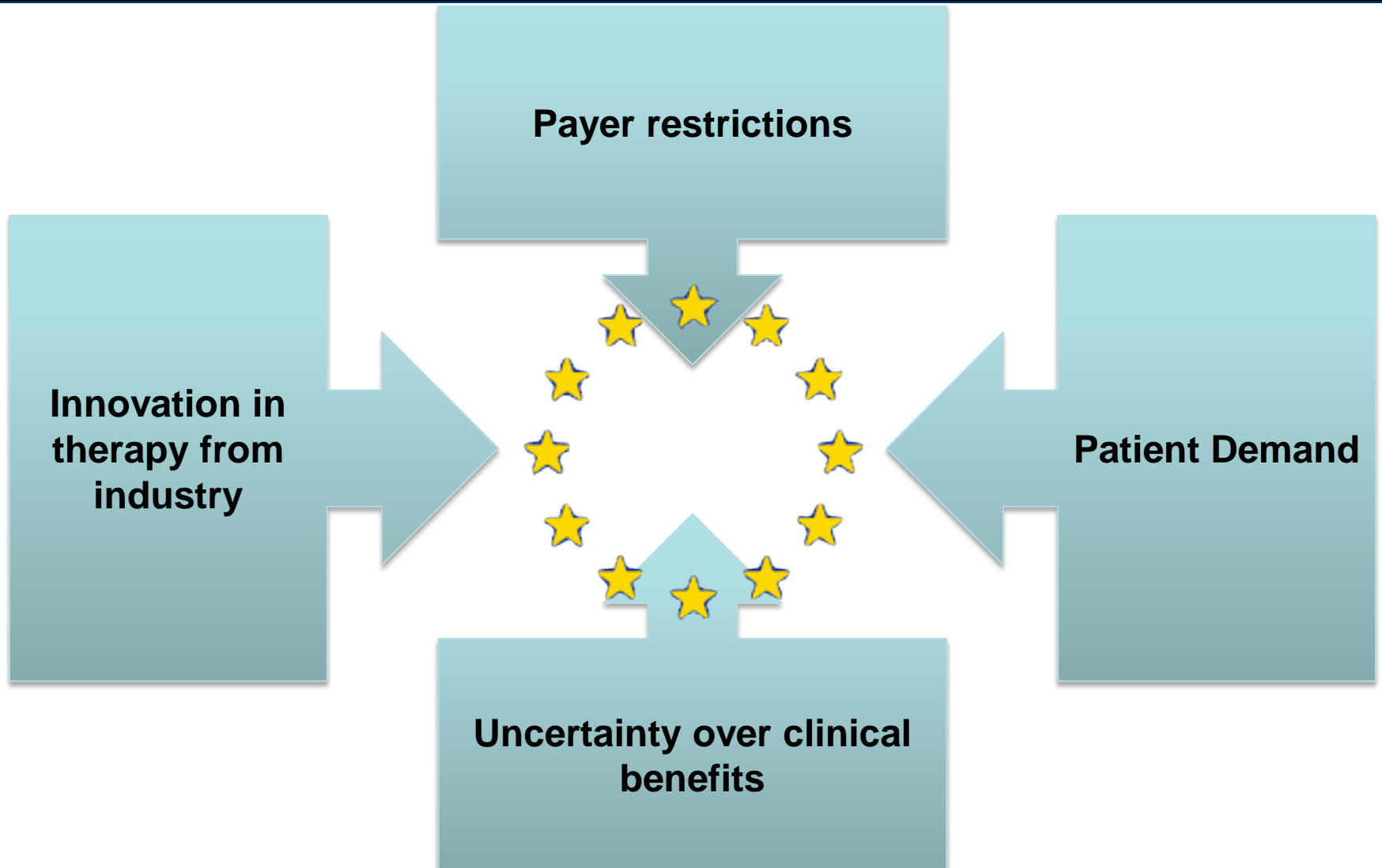
Increased >£1 Billion (1.4B Euros) in 3 years



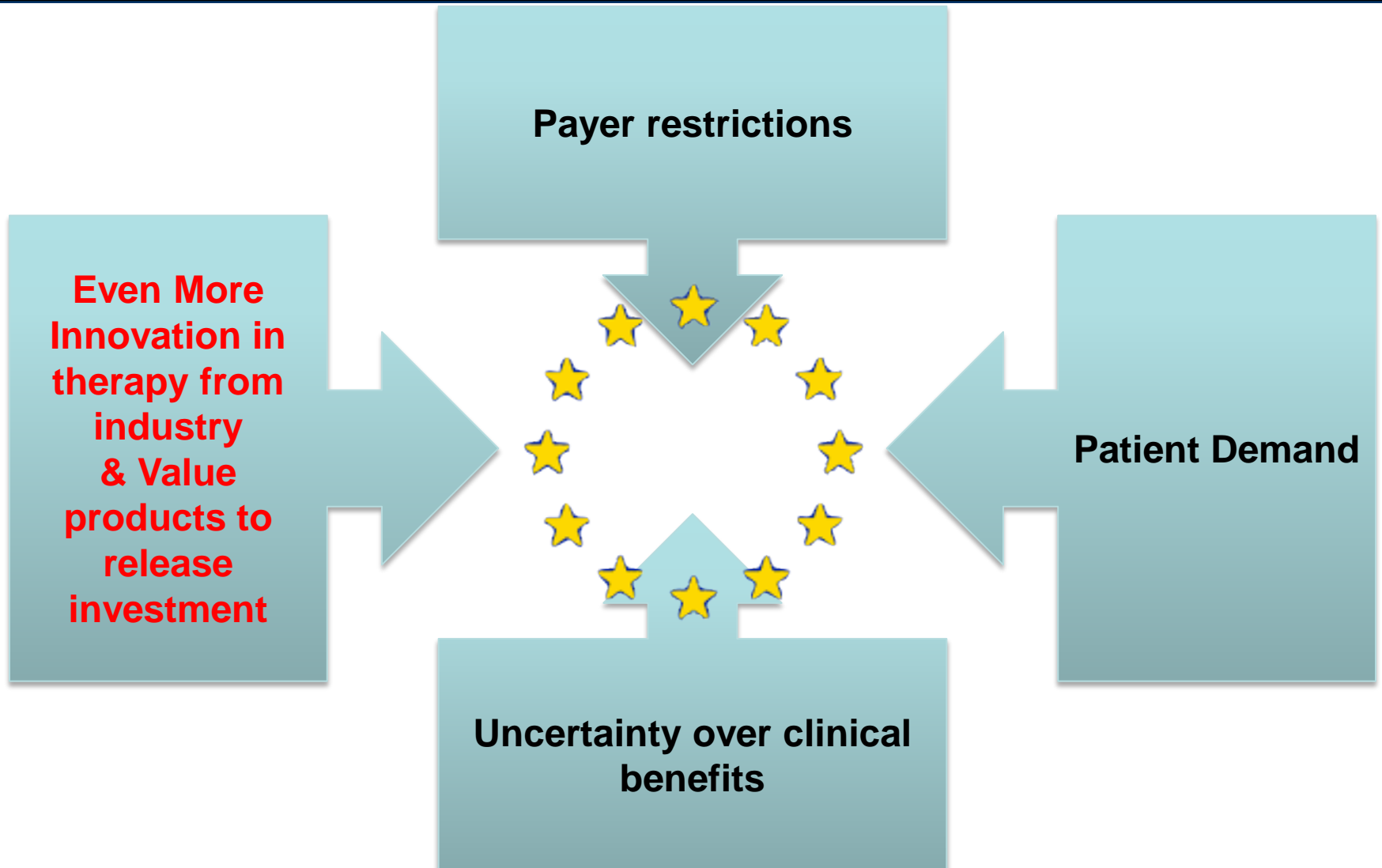
Potential EU Savings from Biosimilar Use

- Haustein R, et al. Saving money in the European healthcare systems with biosimilars. *GaBI Journal*. 2012;1(3-4):120-126
- **Methods:** Using a sequential approach, we calculated the savings through the use of biosimilars for France, Germany, Italy, Poland, Romania, Spain, Sweden, and UK
- **Results**
 - The use of biosimilars is expected to result in overall savings between 11.8 billion euros and 33.4 billion euros between 2007 and 2020, with largest savings expected for France, Germany, and UK
 - Biosimilar monoclonal antibodies - 1.8 to 20.4 billion euros
 - Biosimilar erythropoietins - 9.4 to 11.2 billion euros
 - Biosimilar GCSF - 0.7 to 1.8 billion euros

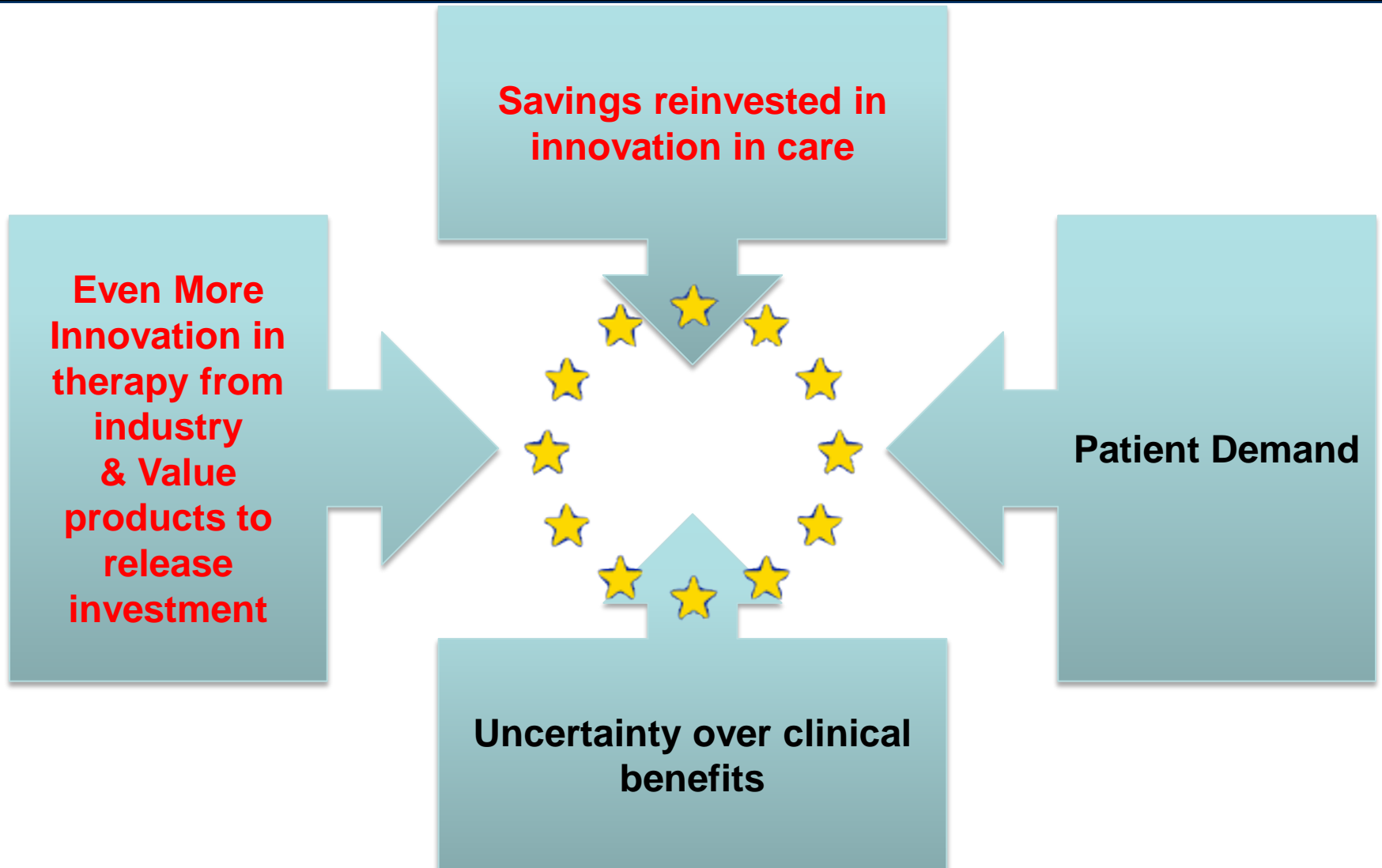
We need EU help to deliver



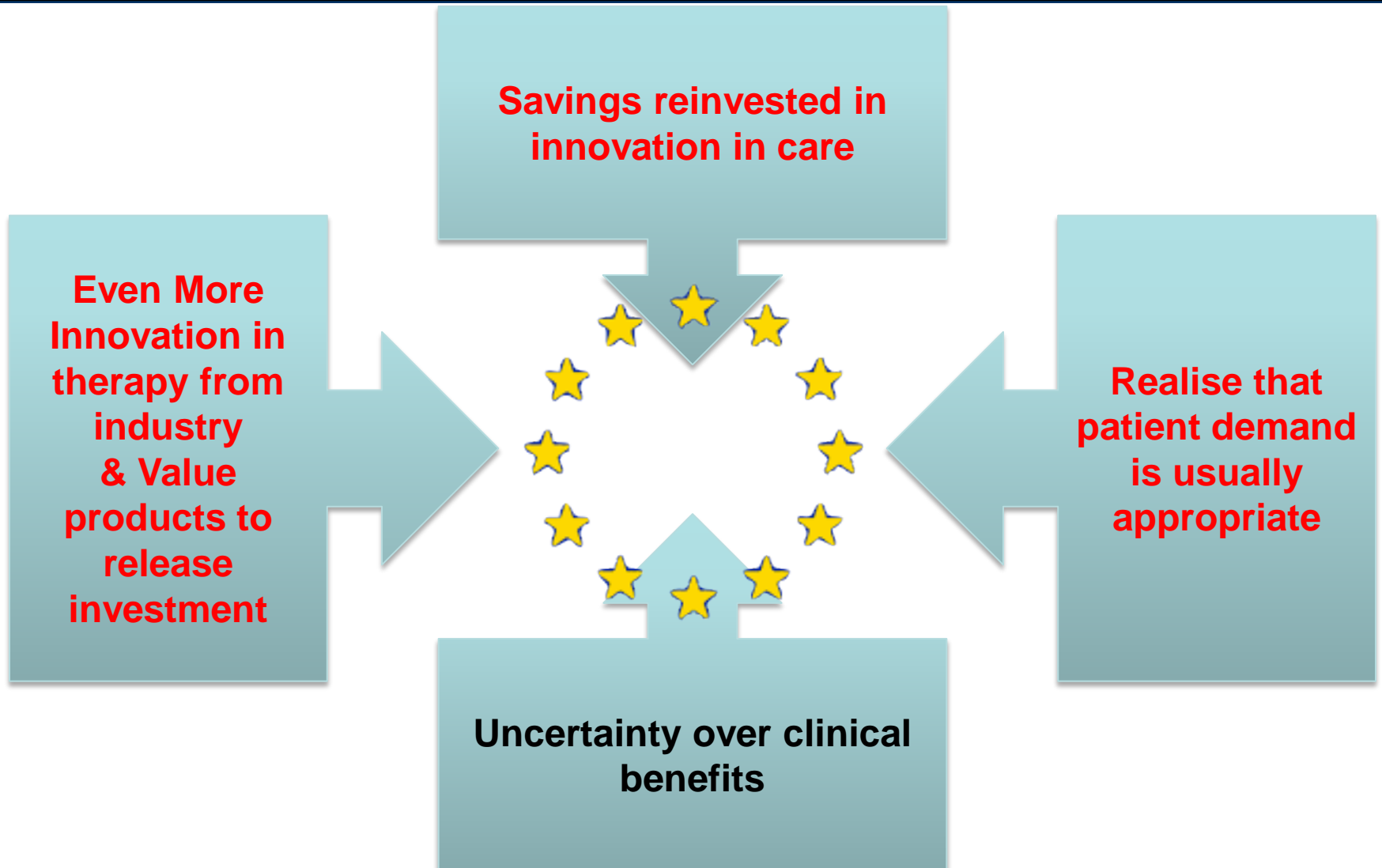
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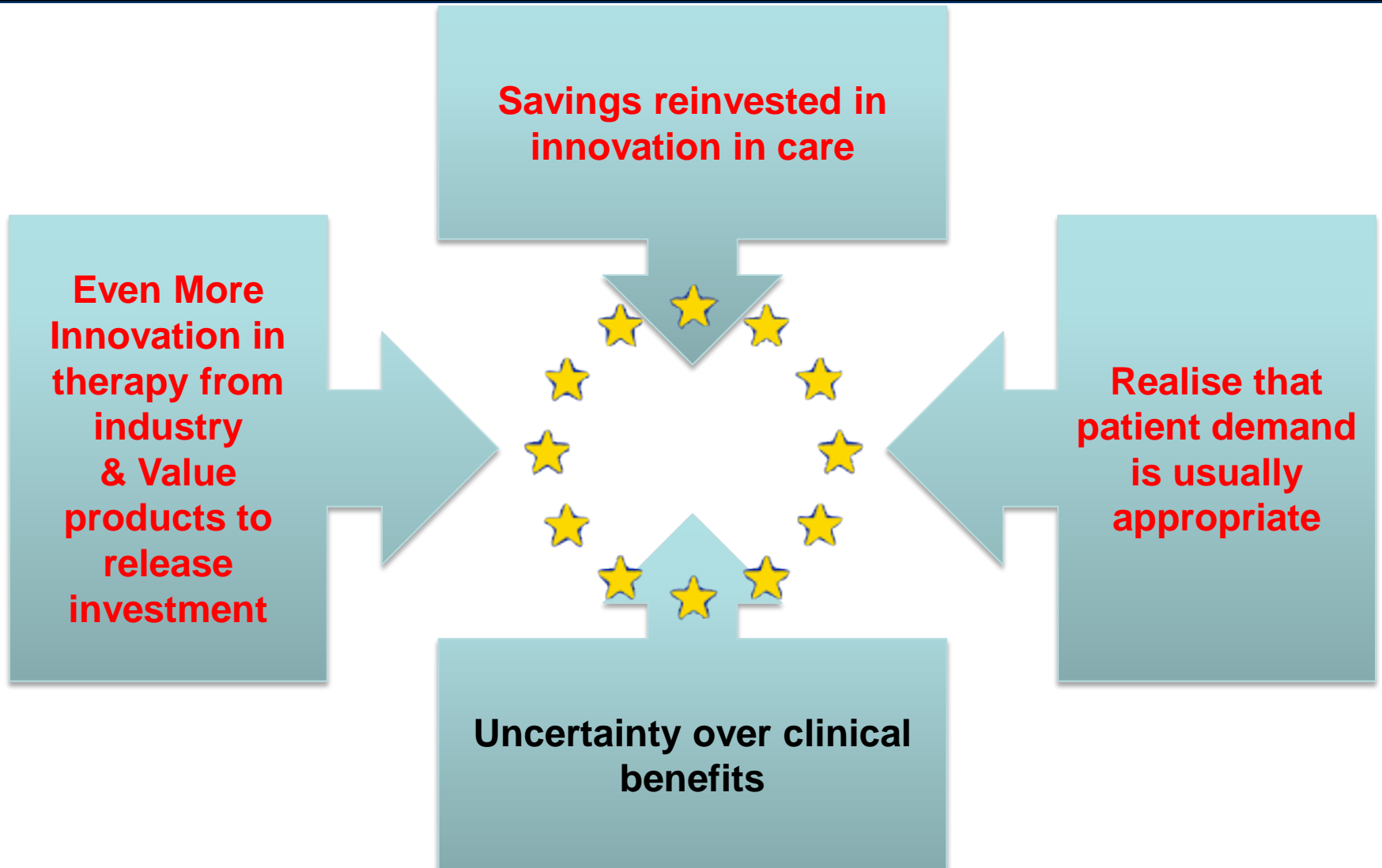
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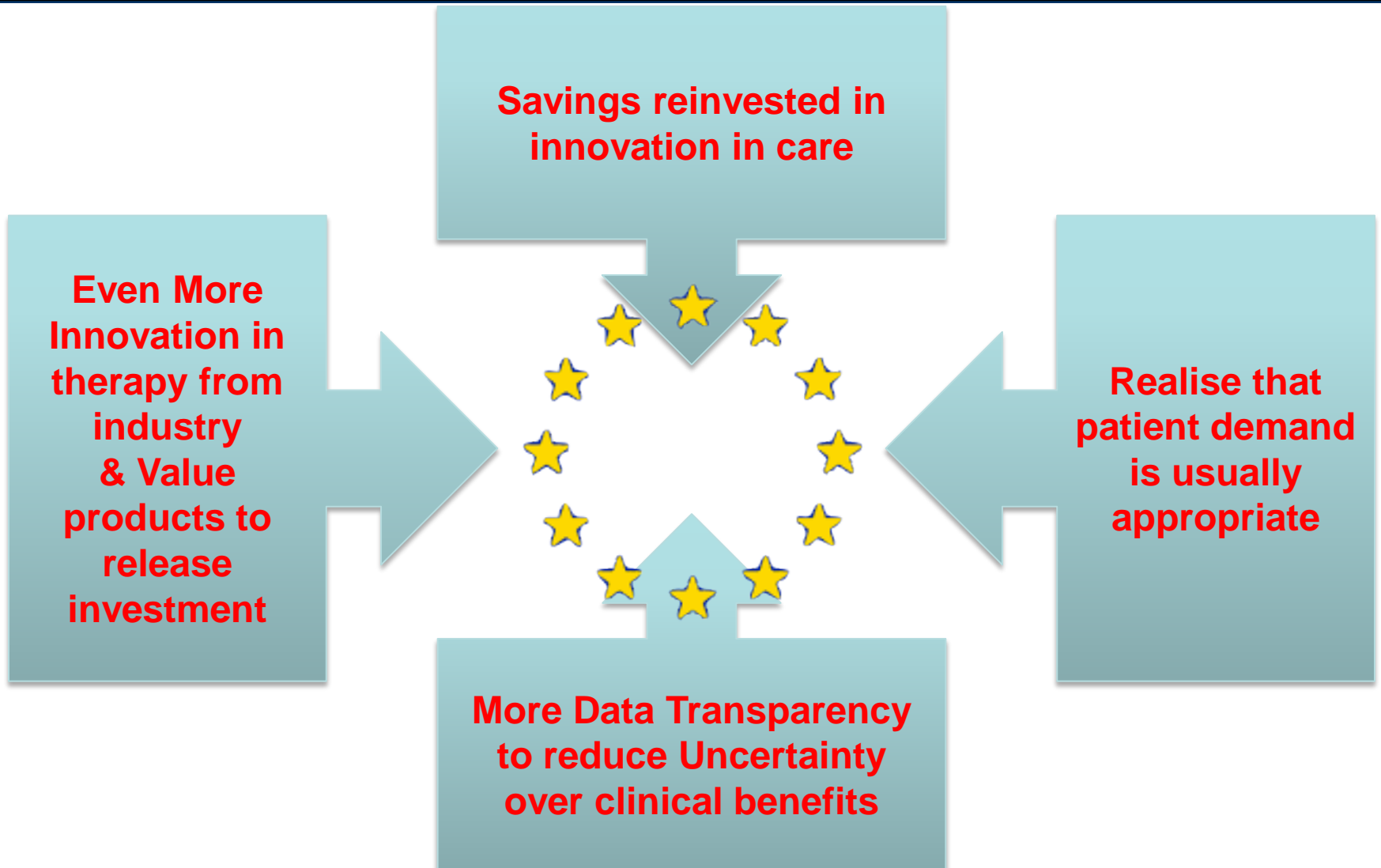
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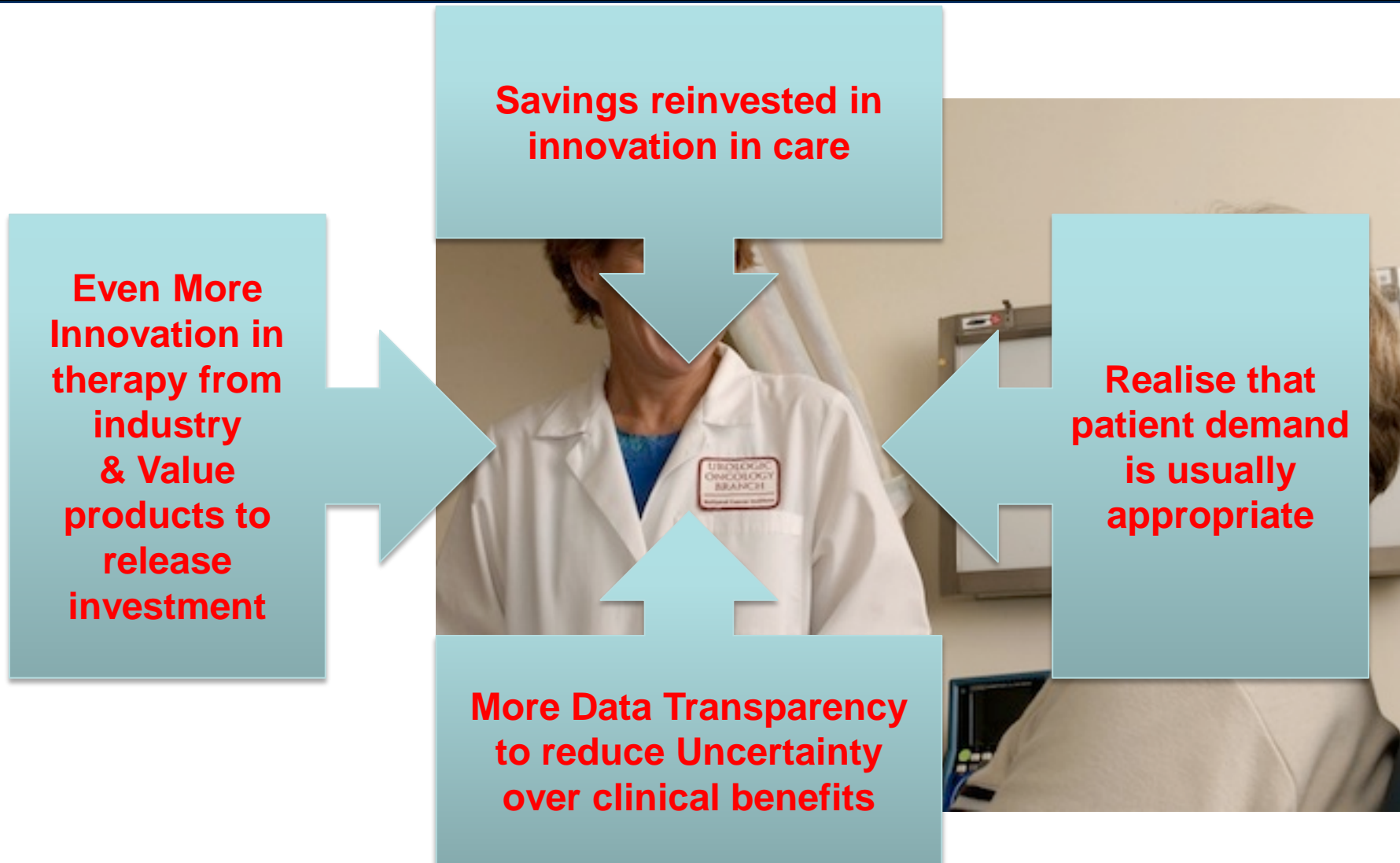
We need EU help to deliver



We need EU help to deliver



This will help release us physicians to offer more and better Patient Centred Care



**“To know even one life
has breathed easier
because you have lived.
This is to have
succeeded.”**

- **Ralph Waldo Emerson**



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