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
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

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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.
- WHO: Cancer world's top killer since 2010
- The total economic impact of premature death and disability from cancer worldwide was $895 billion in 2008.
- Cancer causes the highest economic loss of all of the 15 leading causes of death worldwide
- 16.7 percent of all 'healthy' years lost in the European Union
- 83 million years of “healthy life” lost due to death and disability from cancer in 2008.

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

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

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

Good News for Cancer Treatment: Cancer Survival Is Improving

Median survival of cancer in the UK has risen from 1 to 10 years since 1971

1971, 50% 1 year survival

2010, 50% 10 year survival

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

[Graph showing trends in cancer deaths per 100,000 population from 1990 to 2006 across different countries, indicating a decrease in deaths over time.]
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

### Targeted therapy in rare cancers—adopting the orphans


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

**Chemotherapy era vs targeted medicines era**
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

I want to live longer and live better

This image was released by the National Cancer Institute, an agency part of the National Institutes of Health, with the ID 4187. URL= https://upload.wikimedia.org/wikipedia/commons/0/0c/Doctor_talking_with_a_patient.jpg. Accessed June 23, 2015
Discussing treatment options with patients should be easy.

- Innovation in therapy from industry
- Payer restrictions
- Uncertainty over clinical benefits
- Patient Demand

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Physicians are under many pressures!

- Innovation in therapy from industry
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Innovation in therapy from industry

Payer restrictions

Uncertainty over clinical benefits

Patient Demand
Innovation in therapy from industry

Payer restrictions

Patient Demand

Uncertainty over clinical benefits
Good news for cancer treatment: Innovation in cancer drugs

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

Cornes P. Pictogram created from data in - Savage P. Development and economic trends in cancer therapeutic drugs: Analysis of modern and historical treatment costs compared to the contemporary GDP per capita. J Clin Oncol 32, 2014 (suppl; abstr e17535)
But We Have a Problem: Treatment Costs Are Rising

Cancer drug costs rise 5x faster than other classes of medicine.

The cost of cancer drugs is expected to continue growing at >20% annually.

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” underlines the move toward personalized
But We Have a Problem: More Cancer to Treat

The average life expectancy in 2009 was 67 years. The peak age for cancer is 70-84 years.


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?

But we cannot afford innovation in Medical treatment

We can afford to age

Bad News for Cancer


Delivering affordable cancer care in high-income countries

Innovation in therapy from industry

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Patient Demand
Access Is Driven by Affordability

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

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.

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

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Across the EU cancer services are struggling to meet patient demands

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.
Access to Innovation Has One Key Rule

The only drug that works is a drug that a patient can afford
Innovation in therapy from industry

Payer restrictions

Patient Demand

Uncertainty over clinical benefits
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?

Innovation in therapy from industry

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Patient Demand
“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

No-name heroes can save Europe billions

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

In 2006 only 4 EU countries achieved 2/3 or more generic prescriptions.
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”

Defining a Biosimilar

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

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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

  - Below average
  - Average
  - Above average
Speed of uptake of generics differs by country within the EU

Among the EU 5 – the UK and Germany have been the quickest to switch from original drugs to cheaper generic copies when EMEA makes them available.

Source: IMS MIDAS retail panels, each analogue weighted equally.
Access to innovative drugs differs by country within the EU

Controlling costs with generics and biosimilars permits access to innovation

“rationing” can be by availability or reimbursement or both

Source: IHS Global Insight, service PharmOnline International, 2012
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

- Biologics: 19% (2.9Bn)
- Conventional medicines: 81% (12.4Bn)

2014

- Biologics: 23% (13.5Bn)
- Conventional medicines: 77% (4Bn)

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

Potential EU Savings from Biosimilar Use


**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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We need EU help to deliver

Payer restrictions

Even More Innovation in therapy from industry & Value products to release investment

Uncertainty over clinical benefits

Patient Demand
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Savings reinvested in innovation in care

Uncertainty over clinical benefits

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Realise that patient demand is usually appropriate

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More Data Transparency to reduce Uncertainty over clinical benefits

Realise that patient demand is usually appropriate
This will help release us physicians to offer more and better Patient Centred Care

Even More Innovation in therapy from industry & Value products to release investment

Savings reinvested in innovation in care

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More Data Transparency to reduce Uncertainty over clinical benefits
“To know even one life has breathed easier because you have lived. This is to have succeeded.”

• Ralph Waldo Emerson

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