Personalised Medicine in Cancer Treatment
Hype or Hope?

Jolanta Gore-Booth
Founder and CEO of EuropaColon
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The first drug used in treating cancer is an accidental discovery ‘mustard gas’

5FU became mainstay of chemotherapy treatment for CRC

Discovery that cancer cells could conceivably mutate to become resistant to a single agent

Tamoxifen approved for advanced breast cancer becomes 1st example of targeted therapy in personalised medicine

HER2 oncogene was identified (biomarker) leading to the launch of Herceptin in 1998

Two more predictive biomarkers identified KRAS and EGFR in CRC

Radiation and surgery and early understanding of oncology

Paul Ehrlich – Father of Chemotherapy awarded a Nobel prize

5FU became mainstay of chemotherapy treatment for CRC
What is Personalised Medicine?

• Personalised medicine is nothing new!
• We know we can target a specific cancer
  – but, in many cases, without knowing whether the therapy can or will cure the patient
• Now we are able to identify specific biomarkers to see whether the patient will benefit from the treatment and so are able to stratify the patient
  – but there are still very few oncology biomarkers available at the moment
• Today, the only thing we can say with certainty is that personalised medicine can prolong life in some patients
  – but there is no magic cure as yet... despite all the HYPE!
• There is still a long and complicated journey to go before every cancer patient can receive the right drug, in the right dosage, at the right time
Why do we need personalised medicines?

- The ‘one size fits all’ approach is no longer good enough.
  - Many patients are being treated with drugs that are ineffective for them whilst being exposed to toxicity including severe side effects or even toxic deaths
- There is an increased demand for more effective drugs
- Efficacy of anticancer drugs is low compared with other therapeutic areas e.g. in leukemia, lymphoma and testicular cancer
- However, the efficacy of systemic treatment in advanced disease is modest, despite new molecular targets and the development of new drugs
“Coming together is a beginning; keeping together is progress; working together is success”

Henry Ford
OVERCOMING CHALLENGES AND
ESTABLISHING RESPONSIBILITIES
Clinicians

- In most of Europe, clinical awareness and knowledge of personalised medicines could be improved through **quality-assured education**

- Clinicians need to be given **access to new treatments** and must have a desire to use these treatments (i.e. they should not fear them)

- Patients need to be **informed about personalised medicine**, which could be a difficult conversation, since:
  - Not every patient can benefit
  - It is not a cure
  - It is not reimbursed

**Where predictive biomarkers exist, clinicians should test their patients at point of diagnosis to ensure maximum benefit**
Patients

- We cannot afford to be uneducated or disempowered
  - *If necessary, we need to challenge clinicians*
  - *We have a right to a second opinion if we wish*
- We must demand full access to clear and relevant information
  - *We should be clear about our treatment options and our preferences*
- We should cultivate healthy doctor–patient relationships
  - *We need to become health advocates working with local and national NGOs to ensure equitable access to best treatments and care*
  - *We must get educated and involved in HTA*

We are all patients at some time in our lives
The Pharmaceutical Industry

- We have high expectations of the pharmaceutical industry but can these expectations be met?
  - Positive – biomarkers will enable smaller better targeted clinical studies
  - Negative – restricted marketing potential
- Efficacy and safety do not go hand in hand and regulators may demand far larger studies to evidence drug safety, resulting in huge costs
- Impact of personalised medicine in the short-term is positive for patients but, again, larger trials could impose huge costs
- Currently, only 20% of FDA-approved drugs recoup development costs.
  - This is not sustainable in the long term!

Regulators need to adopt reasoned and reasonable policies in relation to biomarkers
Governments and Payers

- In a difficult financial climate there are challenges...
  - There is no easy solution to keeping healthcare up to date but it constantly needs to be reviewed and modernised

- Personalised medicine could reduce the financial burden on healthcare systems, while also offering more treatment options

- Requires upfront commitment and resources to set up the test laboratories for personalised medicine

- Commissioning becomes more, rather than less, complicated

Political will is essential if we are to move forward
Media

- The media is essential to help empower patients
  - but this requires a mature, not commercial approach, to healthcare journalism
- Some media would have us believe that any advances in cancer care brings us closed to the ultimate goal of cure
  - the reality is different
- We need to be responsible in the information we provide the media
  - in turn, the media have to be responsible in how they report the information

We need the media to remain an essential partner
The Promise... The Reality

- **The promise**... The right treatment, for the right patient, at the right time...

- **The reality**... between 2000 and 2009, only 25 new cancer agents and only six predictive biomarkers so far

We need to manage expectations of the promise against the reality!!!
Conclusion

• Society is a key contributor to solving the complexities of cancer treatment
• All stakeholders have to contribute to ensure successful outcomes for patients
Hype or Hope?

Human optimism is fuelled by promises (HYPE) that molecular biology brings us ever nearer to a cure for cancer.

There IS time for HOPE that the challenges can be met and translated into success.
EuropaColon and Global Colon Cancer Alliance

2nd Colorectal Cancer Patient Conference

DATE: 5th /6th July 2013

MEETING:
The World Congress on Gastrointestinal Cancer

VENUE:
The International Convention Center (CCIB)
Barcelona Spain
Thank you

www.europacolon.com
jola@europacolon.com