IMPROVING ACCESS AND DIALOG IN UNDERSTANDING BARRIERS TO HIGH COST ONCOLOGY MEDICINES

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Disclaimer

This presentation reflects my own views and does not reflect the views of the government or any other organization or committee that I am affiliated with.

Outline

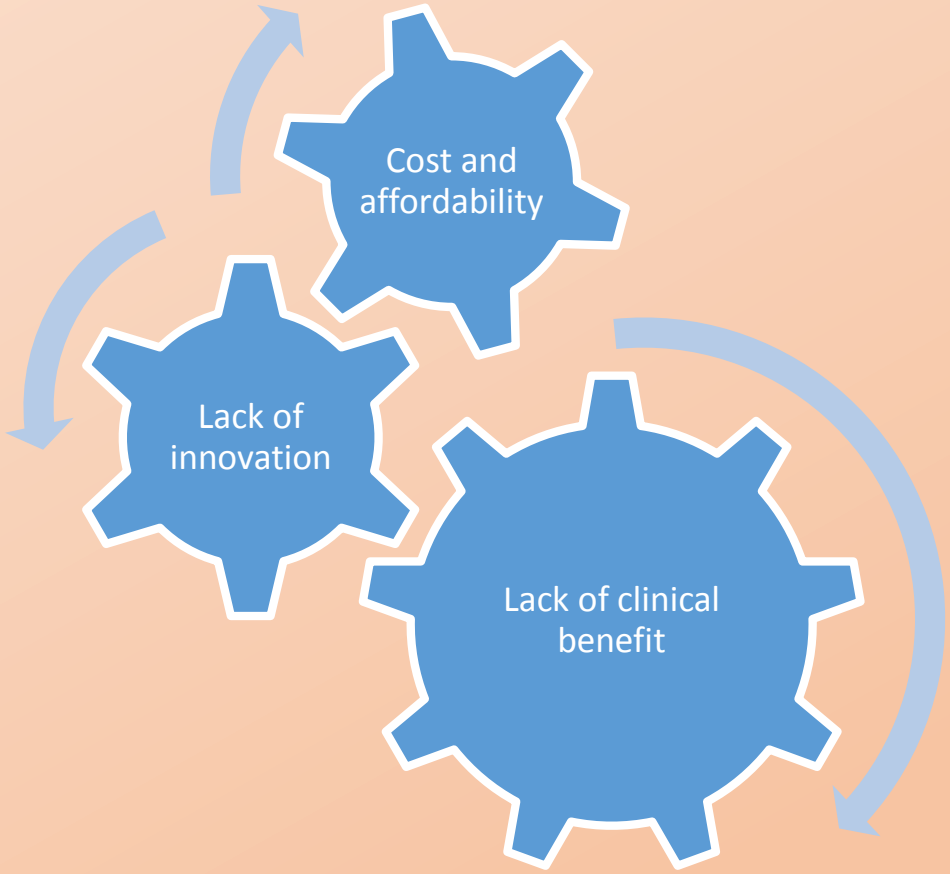
- Industry challenges
- Barriers to improving access
- Solutions

Industry challenges

- High costs of biological medicines in oncology
- Marginal benefit
- Lack of innovation
- Limited application of evidence-based medicine in clinical practice
- Lack of pharmacoeconomic evaluation
- Irrational use of medicines
- Lack of shared-decision making / patient-centricity

Do we really want to have some expensive medicines funded?

Barriers to improving access



Clinical benefit

Unintended consequences of expensive cancer therapeutics – the pursuit of marginal indications and a me-too mentality that stifles innovation and creativity.

The John Conley lecture

Tito Fojo, Sham Mailankody, Andrew Lo

JAMA

July 28, 2014

Clinical benefit of oncology medicines

- Therapies approved for solid tumours between 2002 and 2014 , the median gains in:
  - PFS = 2.5 months
  - OS: 2.1 months

- Only 42% (i.e. 30 of 71 approvals) can be considered ‘clinically meaningful improvements’ based on ASCO committee goals.

Clinical benefit

Table 1. Food and Drug Administration (FDA) Drug Approvals in Solid Tumors 2002 Through 2014[a,b] (continued)

Agent	Approval Date	Enrolled, No.	Cancer Indication	Gain, mo		Would Have Met ASCO Committee Criteria[d]
				PFS[c]	OS	
Ziv-Aflibercept[68]	8/3/2012	1226	Second-line mCRC; with FOLFIRI	2.2	1.44	No
Everolimus[69]	8/30/2012	724	HER2-positive breast cancer	4.6	NA	No
Enzalutamide[70]	8/31/2012	1199	Second-line CRPC	NA	4.8	Yes
Regorafenib[71]	9/27/2012	760	mCRC	0.3	1.4	No
Nab-paclitaxel[72]	10/11/2012	1052	First-line NSCLC; with carboplatin	NA	NA	Uncertain
Cabozantinib[73]	11/29/2012	330	Advanced medullary thyroid carcinoma	7.2	NA	Yes
Abiraterone[74]	12/10/2012	1088	First-line CRPC	NA	5.2	Yes
Bevacizumab[75]	1/23/2013	820	Second-line CRC	NA	1.4	No
TDM-1[76]	2/22/2013	991	HER2-positive metastatic breast cancer	NA	4.2	Yes
Regorafenib[77]	2/25/2013	199	Imatinib- and sunitinib-resistant GIST	3.9	NA	No
Erlotinib[78]	5/14/2013	174	First-line NSCLC with EGFR exon 19 deletion or exon 21 L858R substitution	5.2	NA	Yes
Radium-223[79]	5/15/2013	809	CRPC with bone metastases but no visceral metastases	NA	2.8	Yes
Dabrafenib[80]	5/29/2013	250	Unresectable and/or metastatic melanoma	2.4	NA	Yes
Trametinib[81]	5/29/2013	322	Unresectable and/or metastatic melanoma	3.3	NA	Yes
Afatinib[82]	8/12/2013	345	NSCLC with EGFR exon 19 deletion or exon 21 L858R substitution	6.7	NS	Uncertain
Nab-paclitaxel[83]	9/6/2013	861	Metastatic pancreatic cancer; with gemcitabine	1.8	1.8	No
Crizotinib[84,85,86]	11/20/2013	347	NSCLC expressing *ALK* gene	4.7	NA	Yes

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ASCO SPECIAL ARTICLE

American Society of Clinical Oncology Perspective: Raising the Bar for Clinical Trials by Defining Clinically Meaningful Outcomes

Lee M. Ellis, David S. Bernstein, Emile E. Voest, Jordan D. Berlin, Daniel Sargent, Patricia Cortazar, Elizabeth Garrett-Mayer, Roy S. Herbst, Rogerio C. Lilenbaum, Camelia Sima, Alan P. Venook, Mithat Gonen, Richard L. Schilsky, Neal J. Meropol, and Lowell E. Schnipper

Meaningful Outcomes in Cancer Trials

Table 1. Summary of Recommended Targets for Meaningful Clinical Trial Goals

			Primary End Point		Secondary End Point	
Cancer Type	Patient Population	Current Baseline Median OS (months)	Improvement Over Current OS That Would Be Clinically Meaningful (months)	Target HRs	Improvement in 1-Year Survival Rate (%)*	Improvement in PFS (months)
Pancreatic cancer	FOLFIRINOX-eligible patients	10 to 11[19]	4 to 5	0.67 to 0.69	48 → 63	4 to 5
Pancreatic cancer	Gemcitabine or gemcitabine/nab-paclitaxel–eligible patients	8 to 9[20,21]	3 to 4	0.6 to 0.75	35 → 50	3 to 4
Lung cancer	Nonsquamous cell carcinoma	13[22]	3.25 to 4	0.76 to 0.8	53 → 61	4
Lung cancer	Squamous cell carcinoma	10[23]	2.5 to 3	0.77 to 0.8	44 → 53	3
Breast cancer	Metastatic triple negative, previously untreated for metastatic disease	18[24,25]	4.5 to 6	0.75 to 0.8	63 → 71	4
Colon cancer	Disease progression with all prior therapies (or not a candidate for standard second- or third-line options)	4 to 6[26]	3 to 5	0.67 to 0.67	25 → 35	3 to 5

Abbreviations: FOLFIRINOX, leucovorin, fluorouracil, irinotecan, and oxaliplatin; HR, hazard ratio; OS, overall survival; PFS, progression-free survival.
*Current → target.

Lack of innovation

- Do we wish to improve access considering the marginal benefits?
- Reduce incremental innovation
- Has the FDA have lowered the efficacy bar?
- Perception by the public that new drugs are breakthroughs
- Improve transparency in classifying new drugs as innovative
- Link the degree of innovation and re-imbursed prices
- Use real-world evidence in value demonstration
- Design smaller and smarter clinical trials to reduce costs

Cost of oncology medicines

- Uncontrolled setting of SEP
- Need demonstrate value for money
- Pharmacoeconomic evaluation
- Whether the SEP is reasonable or not for the clinical benefit

Solutions

Is there a straightforward solution in gaining access to high cost medicines for all?

Differential pricing

Adapting drug prices to the purchasing power of consumers in different geographical or socio-economic segments could potentially be a very effective way to improve access to medicines for people living in low and middle-income countries.

Yadav, P (2010), Differential Pricing for pharmaceuticals

Re-imbursement linked to benefits

Develop affordable benchmarks for medicines per cancer type.

Determine a reasonable total cost for the treatment of a specific cancer type per episode of care.

Lab tests	Facility	oncologist
Medicines	Hospital	surgeon
Nursing		

Determine the proportion of medicines of the total cost
Determine a benchmark for medicine costs as a proportion of the medical scheme benefit.
If annual cost of a new medicine is below the medicines affordable benchmark – no problem.

Solutions

- Agreeing on clinical meaningful outcomes
- Rational use of medicines
- Awareness of all costs
- Clinical pathways
- Pharmaco-economic evaluation
  - Comparative effectiveness
  - Cost-effectiveness
  - Clinical thresholds
  - Range of thresholds
- Funding models – benefit small group of people?