

# ADVANCES IN DRUG DEVELOPMENT

Current Developments in Oncology Drug Research

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## Insights Into the Increasing Costs of Cancer Drugs



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### H&O How has the price of oncology drugs increased in recent years?

**PB** Introductory prices of cancer drugs have risen more than 100-fold since 1965. The trend is unabating. Prices were up last year and again this year. Prices are increasing not only for new drugs as they first enter the market, but also for drugs already in use, often in cases where there is no suggestion that the treatment is any better than originally thought. Sometimes prices increase even when there is evidence that the drug is less effective than first thought. There are several examples in which prices have risen after a cancer drug has received a boxed warning, the most serious kind of warning possible before market approval is revoked.

Spending on cancer drugs is also rising, reflecting not only the price, but also the quantity of drugs sold. Cancer is more prevalent now. In addition, the number of indications or guideline-recommended uses of expensive cancer drugs is steadily expanding, as research continues. In addition, there has been a decline in the standards for proving a drug should be used for a particular indication.

### H&O Why are cancer drugs among the most expensive?

**PB** There is generally a sense that cancer is an area where health plans are reluctant to interfere based on political concerns. Even in contexts where there are direct substitutes for drugs, there is rarely competition based on price. There are also several laws at the state level, as well

as federal laws affecting Medicare, that require coverage and payment for cancer drugs if they are prescribed by physicians. This requirement undermines any ability for an intermediary—such as a pharmacy benefit manager, insurer, or the Medicare program—to do anything about the manufacturer's price other than to pay it.

### H&O What factors contribute to the value of a drug?

**PB** There is no one answer to this question. However, there is a short list of factors to determine what type of benefit a drug delivers in relation to the price. The price is fairly straightforward to measure. Value is generally matched along the domains of how well the drug improves the patient's health and quality of life. It is possible to measure these factors, as well as other dimensions, to determine how much a drug is worth in terms of dollars. A hypothetical framework for doing so is provided by the DrugAbacus from Memorial Sloan Kettering Cancer Center (<https://drugpricinglab.org/tools/drug-abacus>). The Institute for Clinical and Economic Review (ICER) uses their value assessment framework for every evidence report they publish.

Some have suggested that drugs for rare conditions should be considered more valuable and therefore have higher prices to ensure continued innovation in these areas. There is a strong policy push for this type of manipulation of the value construct. However, there is no good economic argument for this approach.

### H&O What factors diminish the value of a drug?

**PB** Toxicity can diminish the value of a drug. There are some minor factors, such as the inconvenience of administration. The most important tenet is that drugs

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that are unlikely to prolong life for an extended period are intrinsically worth less to the patient and society than drugs that provide large health gains.

**H&O** Does it appear that the price of a drug corresponds to the value?

**PB** There is no evidence that the price of a drug reflects the value. There is no particular reason why it would. Right now, we have a market-based system for pricing monopoly drugs. However, that market-based system has been heavily disrupted through state and federal policies that require the purchase of certain drugs or payments as dictated by the company. The system is highly inflationary. Therefore, there is no requirement or expectation that the prices of drugs are linked to their value.

**H&O** What are some of the complicating factors when attempting to measure the value of a drug?

**PB** The biggest challenge is to extrapolate a drug's long-term benefits based on the limited follow-up in clinical trials. For example, a drug may have follow-up data for several months, but it is anticipated that benefits will last longer. Extrapolating from the available clinical observations to the total expected benefit requires some assumptions. Generally, the pharmaceutical firms would prefer that we consider that all projected assumptions are already factual and thereby ignore the risk that the projected performance of the drug will not meet the reality. However, the prediction involves long-term guesswork, which is difficult. As an example, the chimeric antigen receptor (CAR) T-cell therapies are expensive treatments. Their prices appear reasonable based on predictions about their long-term benefit, but follow-up is currently too limited to confirm the projected durability.

**H&O** Should certain drugs be held to different standards when assessing value?

**PB** All of these treatments should be mapped to the same common framework because the money to pay for them is all drawn from society at large. Certain benefits, such as improvements in progression-free survival, overall survival, and quality of life, should be the primary considerations when allocating money to pay for drugs.

The quality of the data that manufacturers must submit for FDA approval is the main sticking point for value assessment. Some drugs are approved without data showing that they work better than other treatments or that they improve outcomes that patients care about, such as overall survival and quality of life. Many drugs are approved based on radiologic endpoints, such as tumors that appear to shrink on a computed tomography scan. The concern is not with the methods of value assessment, but with the lack of data on value.

**H&O** Can a treating physician judge the value of a drug?

**PB** It can be difficult for a doctor to gauge whether a drug worked for a particular patient. But more importantly, therapies are paid for based on the benefits they exert on average. The reward to the pharmaceutical firm for their innovation comes from every single pill they sell. Therefore, the size of that reward should be dictated by the average benefit, and not by individual doctors who see a benefit in one patient. Those individual benefits matter, of course, but they are not the basis for an assessment of drug value.

**H&O** How do other countries assess drug value, and could institutions in the United States incorporate any of these strategies?

**PB** In the United States, there is minimal focus on drug value at an institutional level. These are matters of public policy. The United States is the only advanced Western country that does not formally assess the trade-off between drug spending vs the societal benefit. Every other advanced economy makes this assessment, and they have much to show for it. They have better outcomes, wider access, and lower costs. Every country is somewhat different in its approach to value assessment. The United Kingdom performs a formal technology assessment to determine the number of British pounds per quality-adjusted life year. Germany does far more reference and comparative pricing, and questions whether the new product is better than existing drugs that are cheaper and/or generic. Australia tries to match access to acceptable

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payments to companies; they are less concerned about the benefit of the treatment. If a drug meets a threshold for benefit, Australia then cuts a creative deal with the manufacturer. For example, price-volume arrangements can provide good access.

### **H&O** Do you foresee a way to standardize value assessment across institutions and/or nationwide?

**PB** It would be possible to use a value framework like the one from ICER (<https://icer-review.org/methodology/icers-methods/icer-value-assessment-framework>). The barriers are not technical; they are political.

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