

# Researchers reveal ways to make personalized cancer therapies more cost effective

March 9 2012

---

As scientists continue making breakthroughs in personalized cancer treatment, delivering those therapies in the most cost effective manner has become increasingly important. Now researchers at the University of Colorado School of Medicine have identified new ways of doing just that, allowing more patients to benefit from this revolution in cancer care.

In a paper published in the [British Journal of Cancer](#), [health economist](#) Adam Atherly, PhD, of the Colorado School of Public Health (CSPH) and medical oncologist D. Ross Camidge, MD, PhD, of the University of Colorado [Cancer](#) Center, argue the cost of profiling patients' tumors for specific molecular abnormalities must be considered. This kind of [molecular profiling](#) is increasingly being used to determine who would benefit most from a variety of [cancer drugs](#). In addition, many [new drugs](#) are now being restricted to [cancer patients](#) with specific molecular subtypes of the disease. Many of these initial breakthroughs have happened in [lung cancer](#), but dividing one disease into many different sub-diseases at the molecular level is expected to extend across most of cancer medicine in the next few years.

"In recent years, we have championed the practice of performing very sophisticated [molecular tests](#) on the tumors of every lung cancer patient we see. We then use this information to direct patients to the most appropriate targeted therapy for their cancer," said Camidge, CU Cancer

Center investigator and director of the thoracic oncology clinical program at University of Colorado Hospital (UCH).

Camidge continues, "The testing has certainly led to major breakthroughs in the treatment of lung cancer. But if we are going to roll these developments out across the U.S. and around the world, we have to understand what this progress costs and how to make it affordable."

Many insurers already consider the cost of a drug and the benefit derived from its use when determining coverage. In their paper, Atherly and Camidge reveal that the cost of testing tumors for an increasing array of specific genetic abnormalities must now also be considered.

"If you screen every patient with a molecular test to detect something that only occurs in one percent of them – in reality, treating each positive patient should also include the upfront costs of screening the other 99 negative patients," said Atherly, professor of health systems management and policy for the Colorado School of Public Health. "If a test costs \$1,000, this means from society's perspective you have to add \$100,000 to the costs of treating each of the one in 100 patients that are positive. And this is before you have even started to consider the cost of the drug itself. When you consider these factors, some organizations may not view a new drug as cost effective even if it works amazingly well for the small percentage who are proven positive by the test."

Using recent breakthroughs by the University of Colorado's lung cancer program to model their data, Atherly and Camidge argue pricing of the molecular profiling tests and policies on who and how to screen for abnormalities should be carefully considered or treatment of many different cancers may be delayed. They suggest two key ways molecular profiling can be made more cost effective. First, clinicians could recommend testing only some patients based on finding certain key clinical factors that increase the chances of a patient having a specific

molecular abnormality in their tumor. The downside is that some positive patients may be missed if they don't fit a classical stereotype. Second, either the cost of the profiling test for each individual molecular abnormality has to be reduced for every patient screened, or tests must be merged so doctors can look for multiple different abnormalities at the same time at a lower combined price.

"We believe the only way to beat cancer is moving away from the one-size-fits-all model," said Camidge. "To do this we must treat every person as an individual. But if we don't think now about the costs of this approach and how to address them, these breakthroughs will never achieve their true potential."

Provided by University of Colorado Denver

Citation: Researchers reveal ways to make personalized cancer therapies more cost effective (2012, March 9) retrieved 7 May 2024 from <https://medicalxpress.com/news/2012-03-reveal-ways-personalized-cancer-therapies.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--