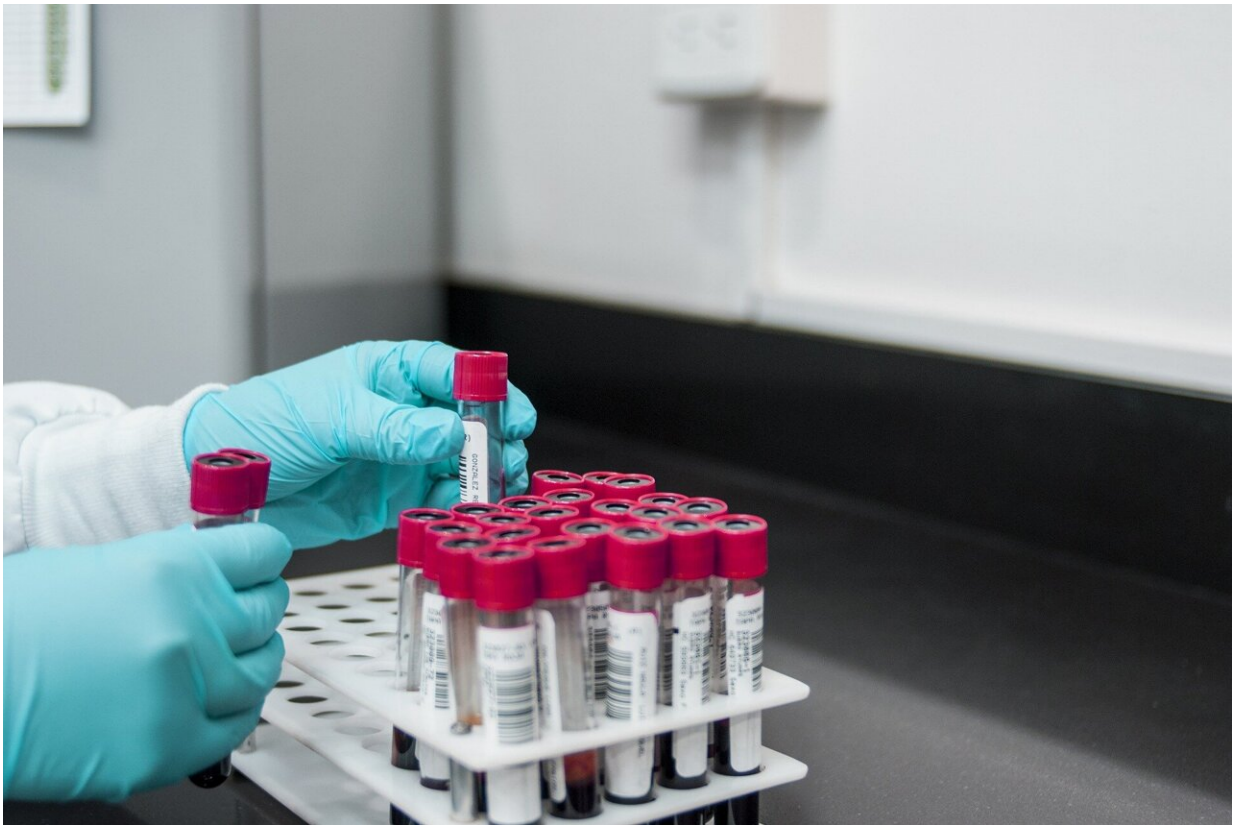


Experts call for better cancer tests to tailor treatment

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Greater use of cancer tests is the key to tailoring use of new treatments for patients more precisely and so increasing their chances of being recommended for use within the NHS, experts say.

Cancer researchers are calling for [regulatory bodies](#) and industry to work together to ensure new treatments are developed alongside a "biomarker" tests to ensure those patients who are most likely to benefit receive treatment.

The [most recent figures available](#), for 2016 to 2019, show that only 18% of [cancer drugs](#) assessed by NICE were accompanied by a biomarker test.

By identifying groups of patients with specific changes in their genes or protein levels that make them more likely to benefit from treatment, biomarker tests make it easier and faster to demonstrate that new treatments are cost-effective.

The need for more and better biomarker tests

The high cost of precision medicines makes it challenging to get them recommended for use within the NHS, unless they are precisely targeted towards individuals who are most likely to benefit from them. For this reason, The Institute of Cancer Research, London, is now calling for industry and regulators to come together to encourage the development of more and better biomarker tests.

Biomarkers can benefit patients in two ways—first by ensuring only those who are most likely to benefit from a treatment go on to receive it, and second by improving the approval rates of new treatments, as they reduce costs by deploying drugs more efficiently.

Challenges to address

However, the costs of developing biomarker tests currently outweigh the [financial benefits](#) of doing so because of excess regulation and

administrative expenses, along with uncertainty over whether tests will be recommended for use within the NHS.

Drug appraisals tend to consider companion tests as an additional cost, which can discourage [pharmaceutical companies](#) from investing in developing and bringing forward biomarker tests, as they appear less cost-effective. In this way, new treatments with companion biomarker tests may seem less attractive, making it harder for them to be developed and adopted.

Experts at the Institute of Cancer Research (ICR) argue that we need more biomarkers to identify which people with cancer are most likely to benefit from different strategies—across all cancer types.

Other barriers to developing and accessing biomarkers are highlighted by the ICR in two new position statements, which look at the creation of biomarkers tests, and access to them. Experts are calling for a series of changes in the way biomarker tests are used in the U.K., including:

- Companies and [academic institutions](#) need to continue to be incentivized to develop biomarker tests alongside new drugs—especially given that use of biomarkers can reduce the size of the patient population for a drug.
- The Government needs to invest in better national infrastructure to support research into new biomarkers by making it easier to collect and access patient data and clinical samples.
- We need a national directory for non-genomic biomarker tests, to supplement the National Genomic Test Directory—and the process for adding new tests needs to be accelerated.

'The key to personalized medicine'

Professor Kristian Helin, Chief Executive of The Institute of Cancer

Research, London, said, "Biomarker tests are the key to personalized treatment—and to getting new drugs approved as quickly as possible. Tests can direct treatment precisely to the patients most likely to benefit, which can improve their quality of life while also increasing the cost-effectiveness of treatment for the NHS.

"The problem is that it is surprisingly hard and costly to get new biomarker tests developed, approved and accessible within the NHS. Unnecessary regulatory barriers need to be removed and we need to see biomarker tests as a way of treating patients more efficiently, rather than as an additional cost."

Getting treatments to the right patients

Professor Kevin Harrington, Professor of Biological Cancer Therapies at The Institute of Cancer Research, London and Consultant Clinical Oncologist at The Royal Marsden said, "Our biological understanding of some treatments, especially immunotherapies, lags behind their [clinical development](#)—which means we are struggling to get them to the right patients quickly enough. To tackle this issue, we need more and better biomarker tests.

"Testing for these measurable indicators can help us predict which patients are most likely to benefit from treatment—which, in turn, allows us to evaluate new treatments in smaller, smarter and cheaper trials, and easier to demonstrate that they are cost-effective."

'Knowing what biomarker a person may have could make all the difference'

Yvonne Diaz, 54, was diagnosed with stage 4 ALK+ [lung cancer](#) in September 2021. When a biomarker test showed she had an ALK

mutation, she was matched to a targeted treatment. She said, "I first went to my GP because I'd been coughing quite a lot. I assumed it was caused by seasonal allergies, but it got to the point where I was finding it hard to speak and I had pressure in my chest. My GP sent me for an X-ray to be safe. I am so lucky she did, because it turns out I had lung cancer.

"After the diagnosis, I had a biopsy to see what type of lung cancer it was, but while I waited for the results, I became so ill I couldn't even leave the house. When the results arrived, my consultant called to tell me it was 'good news.' I had an ALK gene mutation, which meant I was highly treatable. I started treatment three days later, and within a fortnight I was well enough to join my family for dinner again. Now I'm able to do much of what I did previously.

"The treatment I'm on, a targeted therapy called brigatinib, is easy to take, has only minor side effects and, most importantly, it's working. Knowing what [biomarker](#) a person may have could make all the difference. Many lung cancer [patients](#) like me get diagnosed at stage IV when they are quite unwell and the cancer is advanced. This makes being matched to the right treatment all the more important. It also gives us the most precious gift of all—time. For me, that's all about more time and memories with my family and friends."

Provided by Institute of Cancer Research

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