Medical Xpress

Making personalized lung cancer therapy a reality in Europe

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The recent approval of Europe's first personalized treatment for lung cancer heralds the arrival of a new era for lung cancer treatment that will demand significant changes to the way cancer specialists and other hospital doctors work, a leading expert said today at the 2nd European Lung Cancer Conference in Geneva, Switzerland.

Prof Robert Pirker of the Medical University of Vienna said that personalized therapy, in which treatment is based on the characteristics of an individual patient's tumor, promised to improve outcomes for patients, as well as being more cost-effective and less toxic than existing treatments.

"Recently, oral treatment with the targeted drug gefitinib was shown to be superior with regard to progression-free survival compared to treatment with up to six cycles of first-line chemotherapy in patients with advanced non-small-cell lung cancer (NSCLC) who have mutations in their tumors that activate a cell-surface molecule called epidermal growth factor receptor (EGFR)," Prof Pirker said.

This finding led to the approval of this drug in Europe in 2009 --but only for treating patients whose tumors carry these mutations.

"Before we can offer patients gefitinib, the presence of these mutations in tumor cells has to be clearly demonstrated," he explained.

In order to achieve this, doctors must perform a molecular analysis of

tumor material from biopsies. "This will benefit patients, but it changes the whole diagnostic workup and requires some change in the thinking of oncologists, including closer co-operation between the various disciplines: interventional pulmonologists, pathologists, biologists, oncologists," he said.

Scientists around the globe are currently probing the genetics of cancers with the aim of identifying new targets for personalized treatment. These projects, such as the International Cancer Genome Consortium, mean that testing for mutations in tumors will become routine.

Eventually, tissue sampling to allow this kind of mutation testing will become standard in Europe, Prof Pirker said. But currently, there are obstacles preventing it from becoming more widespread.

"The obstacles include the fact that too few doctors trained in invasive tumor sampling, that mutation analysis not yet readily available, and that there are reimbursement issues which might vary from country to country," he said.

If these obstacles can be overcome, and more doctors are trained in taking lung cancer biopsies, more patients will be able to be treated with oral gefitinib, and the discovery of other new therapeutic targets will be accelerated," he said.

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