

Insurance Times: Insurers urged to back using genes to target patient drugs

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It's a frustrating reality of modern medicine — doctors know the drugs they prescribe don't work for all their patients. Given the diversity of our genes, no single drug will be effective in every human.

Insurance companies are also frustrated with the one-pill-fits-all drug delivery system, since they have to pay for increasingly expensive drugs whose effectiveness isn't guaranteed.

Interleukin Genetics Inc., a struggling biotechnology company, has proposed a solution: target drugs to individuals based on their genetic makeup.

Such personalized medicine isn't new — scientists in academia, government and the pharmaceutical industry have worked for years in the "pharmacogenetics" field to develop the necessary genetic tests.

But these individualized medical responses have been considered prohibitively expensive. By including the insurance companies in the equation, scientists hope to overcome the cost barrier.

"This would clearly be good for the payers," said Oliver Fetzter, a biotechnology analyst with the Boston Consulting Group. With some drugs, "60 percent of the medication being prescribed has no effect."

Interleukin — in what it bills as "a novel partnership between biotechnology and managed care" — launched a 2,000-patient rheumatoid arthritis study last week with the Center for Health Care Policy and Evaluation. The center is an independent research site funded entirely by UnitedHealth Group Inc., the Minnetonka, Minn., managed care giant.

Researchers at the center insist their goal has little to do with improving UnitedHealth's bottom line and everything to do with helping doctors and patients avoid nasty side effects or fruitless treatments.

"We are a group of independent researchers that have our own agenda," said spokeswoman Susan Hayes.

Regardless of the center's avowed altruistic position, Interleukin said its commercial goal is clear: design a test that will cut prescription drug costs.

"It will allow the rheumatologist to pick the right drug and managed care won't spend a bunch of money on a drug that doesn't work," said Interleukin chief executive Philip Reilly. "If it turns out that we develop such a test, it will be a sea change in how the pharmaceutical industry operates."

The study is using volunteers with rheumatoid arthritis culled from UnitedHealth's 16.5 million members. Rheumatoid arthritis is an often debilitating inflammation of the joints that afflicts 2.1 million Americans.

The study, which should be completed by the end of the year, will determine if a simple genetics test can help doctors make better choices, especially when it comes to prescribing expensive genetically engineered drugs. Researchers will compare the genes of those who respond positively to the drugs to those who don't.

Three engineered rheumatoid arthritis drugs are now on the market. Each costs about \$1,000 a month per patient.

Waltham, Mass.-based Interleukin hopes to spot genetic markers that lead to a simple and definitive test doctors can use to determine which patients respond best — if at all — to Enbrel, Remicade and Kineret.

When making prescriptions, doctors rely largely on their "clinical judgment" — a combination of habit, gut instinct and trial and error. They routinely prescribe one of the engineered drugs to new patients for three months to see if it works.

Developing a successful test will do more than save insurance companies money, doctors time and patients discomfort: it may help save Interleukin Genetics itself. Last month, the publicly traded and money-losing company warned it had only enough cash on hand to keep it in business through the end of August.

"It's not our last best chance, but it's probably our best chance," said Reilly, who has been negotiating with potential investors for additional financing.

Even if the Interleukin test proves successful, other obstacles remain before personalized medicine can become widespread.

"A pretty high degree of clinical sophistication is needed to make this work," said Fetzer. "And most insurance companies are having more basic problems with things like their billing systems."

Despite its promise, the area has "some real business and legal uncertainties," said Hank Greely, co-director of Stanford University's Program in Genomics, Ethics and Society.

"People are nervous about the word 'genetic' like they are about 'radiation.' It's a word people don't like," said Greely, a law professor.

Reilly, the Interleukin CEO, said his company will guard against individual genetic information being used to discriminate against insurance coverage or employment.

"None of these tests are going to be used to kick any one out of a plan," Reilly said. "No one is going to be punished because they have a certain genotype."