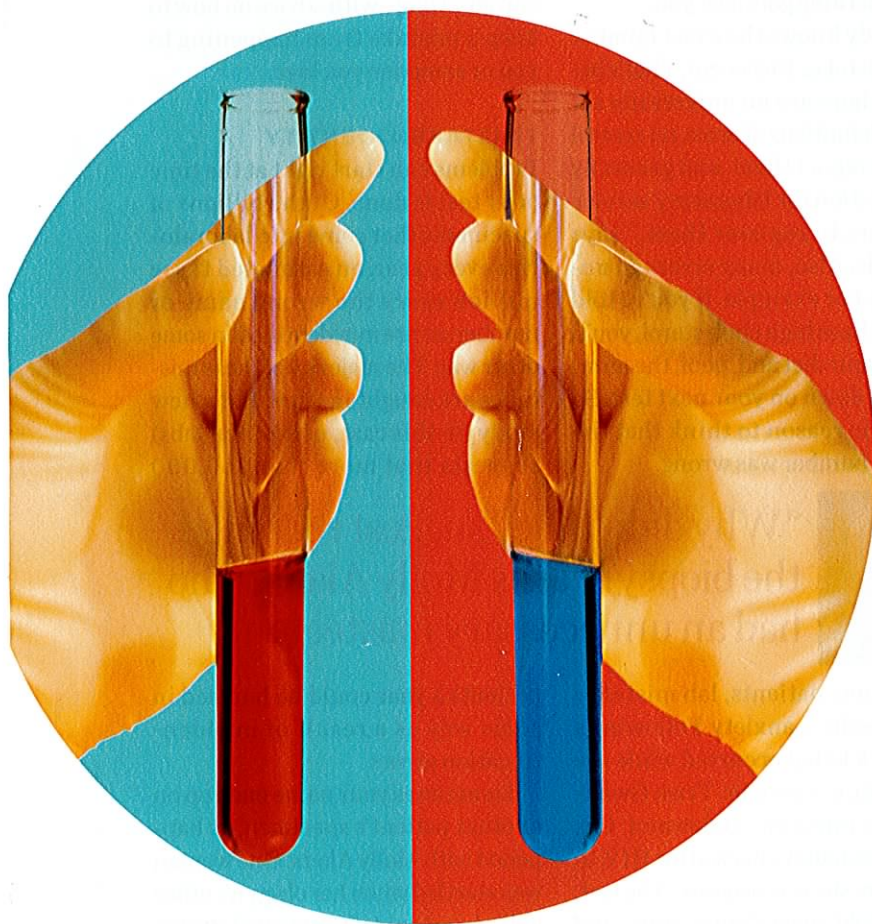


# Can You Trust Your Lab Results?

Mixed-up samples, misread slides, contaminated specimens—lots can go wrong. Here's how to protect yourself **By Leslie Pepper**



Photograph by Age Fotostock/SuperStock

**Shortly before** her 33rd birthday, Molly Akers, a stay-at-home mom in New Lenox, IL, learned she had a cancerous tumor in her neck. Because a scan had found something suspicious in her lymph nodes, she underwent a biopsy. The day after the procedure, Akers got a call that would change her life. The neck tumor hadn't spread, the doctor reported, "but you do have breast cancer."

It was unbelievable. In a matter of weeks,

Akers had developed two kinds of cancer? More mysteriously, doctors couldn't find the actual breast tumor, only evidence that breast cancer had spread into her lymph nodes. Diagnosing an occult cancer—meaning there's no mass they can see—doctors performed a mastectomy and removed 24 lymph nodes.

Then the story took an even stranger turn. Eight days after the mastectomy, the surgeon's nurse called, asking Akers to come in right away. Now she was terrified—*There's only one reason doctors have you come in early*, she thought. When she got there, the surgeon was literally sobbing. "We've gone through everything, and we can't find a primary," the doctor told Akers, who was totally confused. The doctor continued: "What I'm telling you is, you never had breast cancer."

Apparently, a lab technician had mixed up two slides, putting the wrong name on each. The other woman had breast cancer. Akers did not. (The lymph node abnormality turned out to be nothing.) What's more, because of the additional testing and surgery, she had to delay treating the cancer she *did* have.

Every year, more than seven billion laboratory tests are performed in the United States—at hospitals, commercial sites, and in doctors' offices. With the vast majority of procedures, there's no problem: Results are accurate and are correctly conveyed to doctor and patient. But technicians and doctors do make mistakes—everything from getting a blood type wrong to implanting the wrong embryo into a woman's womb. Because of the sheer volume, it's nearly impossible for labs to be error free. "How do you design a system where there are no traffic accidents on the →



## How to Protect Yourself

While many lab errors are out of your control, there are steps you can take to increase the chances of accurate results.

- Ask your doctor about the lab she uses. It should be accredited and approved by the College of American Pathologists (a sign that it meets high standards).
- If you can see the test tube or slide, double-check that your name is on it; if you're in the hospital, make sure your wristband is accurate.
- If the result of the test is a surprise, ask your doctor: "Did you expect this? Do you think this is what I have?" If the answers are no, consider repeating the test.
- Get a copy of all lab results and reports, suggests Susan Sheridan, president of Consumers Advancing Patient Safety. "Patients may not realize they have the right to these," she says.
- Have a specialist read your slides. With a skin sample, for instance, you'll improve odds of the right diagnosis if it's viewed by a dermatopathologist, says Mark Lebwohl, M.D., chairman of dermatology at the Mount Sinai School of Medicine in New York City. Your insurer may not cover a specialist, so you'll have to decide whether to pay for it yourself.

road?" asks Stephen Raab, M.D., director of the Center for Pathology Quality and Healthcare Research at the University of Pittsburgh Medical Center. Adds David Novis, M.D., senior consultant for a firm that advises laboratories, "When you look at these things all day long, occasionally something gets past you."

Nobody knows the exact number of lab mistakes that occur. That's because "there are no universally accepted definitions of error, no central place to report them, and generally no obligation for laboratory service providers to register them," says Dr. Novis. Also, many errors go unnoticed: For example, if you're told that you have high cholesterol, you'll change your diet and, poof, the number goes down on your next test. So there's no reason to think that the original number was wrong.



**"Why didn't they suggest redoing the biopsy?" asks Molly Akers, who had an unnecessary mastectomy**

For some patients, lab mistakes cause needless anxiety. Following a needlestick that occurred while she was treating a patient, Trish Gwaltney, 47, a nurse in Englewood, CO, was immediately checked for HIV, to make sure she was negative. The test, she was told, turned out positive, and because it was just before Memorial Day, she had to wait through a "dreadful long weekend" to get the results of a retest. "My husband and I felt as if we'd received death sentences," says Gwaltney, who finally learned she did not have HIV.

That's the kind of outcome many experts insist is no big deal. "But if you get a false diagnosis of HIV, it's a

big deal to you," says Dr. Novis. Of course, for people subjected to needless treatments or surgeries, the consequences of lab mistakes go way beyond anxiety. The same is true for those who are told they are fine and get no treatment—until it's too late.

Here are three primary ways a test can go wrong—with advice on how to keep a mistake from happening to you or someone you love.

### 1 MISTAKEN IDENTITY

Problems can start right at the time your test is done. Of the billions of specimens that come into laboratories every year, an estimated three million carry the wrong name or number, or are misidentified in some other way. The majority of these mistakes are caught in time. But a new study (in this case, of hospital labs) suggests that more than 160,000

patients a year could be harmed in some way as a result of misidentification errors.

Sometimes your name ends up on another patient's specimen, as happened with Molly Akers. One woman was startled when her ob-gyn's office called and said, "Congratulations! You're pregnant!" The woman had left a urine sample at the doctor's office earlier in the day—not to confirm pregnancy, but because she had symptoms of a urinary infection.

Even if a test is done on the correct specimen and is read accurately, a mere typo can turn a right result devastatingly wrong. "I once put out a report that was supposed to read →

'no evidence of cancer,' and it went out as 'evidence of cancer.' That was awful," says Dr. Novis. The mistake was caught within a few days, when the patient went to another doctor.

### 2 MISINTERPRETED SAMPLES

Six years ago, Shannon Carlino, 35, of Bear, DE, was told the mole that had been removed from her leg was benign. Two years later, the mole grew back even bigger, and this time, the biopsy results came back malignant. "When another doctor saw the earlier slides, he said it definitely had been melanoma. In fact, it had spread to the margins," Carlino says.

Just a few months ago, she learned the cancer had spread to her bones and lungs, and she decided to try a new treatment. But her five-year survival rate is now only three percent. "If my cancer had been removed the first time, the odds would have been 97 percent," she says.

### 3 CONTAMINATED EVIDENCE

Although it's extremely rare, a specimen also can be tainted by another sample in the lab. Kim Tutt of Tyler, TX, was shocked when she was told she had a deadly form of lung cancer that had spread to her jaw. Then 34, Tutt had had a biopsy because her dentist had seen a small mass in her mouth. Now the surgeon was saying

there was no cure—an extensive operation to remove half her jaw would help Tutt live about six months at most. She went ahead; her sons were only 11 and 10 at the time, and even those few months meant a lot to her. She tried to prepare, rushing out to buy her boys' winter wardrobe and leaving the clothes with her best friend. "Give these to the boys when



## Her slide was misread, so it wasn't until two years later that Shannon Carlino learned she had melanoma

the time comes," Tutt said. Then, a few months after the surgery, the doctor told her there had been a mistake. "We don't think you ever had cancer," he reported. "We think the biopsy was cross-contaminated."

Dozens of tissues may be processed at the same lab workstation every day. The station is cleaned between jobs, but microscopic fragments of tissue could remain on equipment and be transferred to the next slide. A DNA test on Tutt's slide confirmed that the cancer was not hers; it belonged to another patient who'd been tested the same day.

Although she's relieved, Tutt has undergone more than 20 surgeries to rebuild her jaw, and is now permanently disfigured.

### SAFER SYSTEMS

Health-care groups are working to establish better safeguards, including bar-coded specimen labels and double checks when a patient's information is entered into a computer. "No one who works in labs wants errors to happen," says Paul Valenstein, M.D., a pathologist at Saint Joseph Mercy Health System in Ann Arbor,

MI, and lead author of the new study on errors. "When we get sick, our specimens go to the same laboratories that serve our patients. We are all in this together."

For Akers, that's little consolation. When she was diagnosed with a second kind of cancer, all the doctors called her a medical mystery. Why, she asks now, didn't one of them say, "Hey, this doesn't make sense—maybe we should do another biopsy?"

Akers has filed a lawsuit against the hospital (as did Tutt). But money can't make up for what these women have gone through. Today, Akers says she can't bear to look at family photos taken before her mastectomy: "That person had no idea what was around the corner." ■



### Testing Your Test: How to Get a Second Opinion

For certain diseases, false positives or false negatives are common, and some labs routinely have two pathologists read these more challenging slides. Labs may also elect to repeat tests before reporting certain diagnoses, such as HIV or cancer. But you also have the right to have your slides reviewed by another pathologist or another hospital, and for a serious diagnosis, that's smart. Ask your doctor where he suggests you send them. The office should be able to get the sample transferred (you'll probably have to sign a release and pay for records to be copied). If your doctor questions your request, you can call a lab yourself. "Specimens are part of your medical record and you have the right to them," says Stephen Raab, M.D., of the University of Pittsburgh Medical Center. Most insurers will pay for a second opinion.