



S RESEARCHERS AT GENENtech prepared to introduce a potent new drug for breast cancer in the summer of 1998, Anu Saad was privy to some insightful information that would sharpen the entire marketing effort. So she sold it to them.

Herceptin, the first genetically tar-

geted cancer drug, went on to become a huge hit. Saad was in an ideal position to help. She is the 43-year-old chief executive of Impath Inc., a New York cancer testing lab. Each year 7,000 pathologists and oncologists send biopsies for testing to one of Impath's three labs. The firm had already screened 40,000 patients for HER2, the malevolent gene

that Herceptin attacks.

By combing its database Impath was able to tell Genentech which states were originating the most tests and where their use was growing. That let Genentech pinpoint where its prelaunch promotion was working—and where it wasn't; oncologists in Oklahoma were behind in HER2 tests.

Herceptin is expected to ring up \$300 million in sales this year. Now Genentech, though rocked by recent reports of deaths from the drug, is testing the drug for other types of cancers, using Impath to tell it how many physicians are requesting HER2 tests for pancreatic, lung and colon cancer. "We're the arbiter of information," Saad says.

Only recently has Saad realized that her company isn't simply in the business of cancer testing-it can also reap new revenue in the information business. Impath is the biggest purveyor of cancer tests in the U.S. Last year it analyzed 148,000 cancer cases, 12% of the nation's total. It processed 28% of all breast cancer screens. Impath's database of 565,000 cancer patient profiles has attracted two dozen drug companies, including Novartis, Human Genome Sciences and Millennium Pharmaceuticals.

Novartis, in final-phase testing for Zometa, a drug aimed at women whose breast cancer has metastasized to the bones, uses Impath data to learn which patients with other kinds of cancer get bone metastasis and to look at genetic markers in those cases. That could one day help the drug giant extend Zometa's use beyond breast cancer. Impath provided the analysis in three weeks. Novartis would have taken a year or more to do the work itself.

Impath charges from \$25,000 to as much as \$750,000 for such work. Its revenue in 1999 for such services was only \$8 million—a fraction of its \$85 million in sales—but growing rapidly, 56% this year. UBS Warburg analyst ▶ By the Numbers

Cancer's Archivist

Impath digs deep to find some startling nuggets of medical information.

143,000 Cancer tests done by Impath in 1999.

60,000 Done by New York's Memorial Sloan-Kettering in 1999.

14% Chance that patients diagnosed with lymphoma or leukemia don't really have it.

20% Chance that metastatic breast cancer patients who are hormonereceptor negative are on unnecessary hormonal therapy.

33% Chance that those diagnosed with nonmetastasized breast cancer have bone marrow tumors.

Source: Impath; Memorial Sloan-Kettering,

which collects clinical information on 1.7 million cancer patients, and Bio-Clinical Partners, a network of 125 clinics, which supplied Impath with 2,000 fresh tumor samples last year.

The goal, in a way, is to vertically integrate the cancer information business. So far Impath has melded data from the two acquisitions and its own records to piece together detailed profiles on 100,000 patients-clinical records, treatment outcomes and the molecular makeup of their diseases. It also is tying patient survival data to about the information, then we've lost sight of our initiative to help cancer patients," says Saad.

Impath was founded in 1988 by two pathologists from New York's Memorial Sloan-Kettering Cancer Center, just as the cancer diagnosis business was undergoing a major technological shift. Traditionally oncologists had analyzed a tumor based on its morphology, including size and how fast it was spreading to other organs. Prognoses were based on broad statistical chances of survival, and treatments were pretty standard: Advanced breast cancer patients underwent surgery and chemotherapy.

But as knowledge of molecular biology improved, scientists discovered that many cancers differ wildly from one another. Lymphoma comes in at least 15 types. About two-thirds of breast cancers contain estrogen receptors, which respond better to the drug Tamoxifen. Testing techniques to detect these markers and track tumor growth became more precise. These sophisticated tests were done largely at big hospitals and research centers.

So Impath sprang up to serve nonacademic hospitals. Mark Fesen, an oncologist in Hutchinson, Kans., sees 200 cancer patients a week and sends 40% of his tests to Impath. He recently examined a 35-year-old woman with metastatic breast cancer and wanted to find out whether she carried the HER2 gene. He FedExed a biopsy to Impath in New York, and a week later the diagnosis came back positive. Fesen automatically prescribed Herceptin, increasing his patient's chance of survival.

When Saad, an Indian-born molecular biologist, left her post as a cellular biology teacher at Cornell University to join Impath in 1990, the school's dean invoked the dismal survival rate of biotech firms as a warning that she was making a mistake by leaving academia. "I thought all the smart scientists were in academia, but the value of scientific development is in its application to help patients," Saad says. Her shares are currently worth \$7.5 million. Looks like a lot of smart scientists are in business, too.

## TO SOOTHE PRIVACY FEARS, IMPATH REVEALS NO NAMES OR SOCIAL SECURITY NUMBERS.

Ricky Goldwasser predicts Impath will post a 50% rise in net income, to \$12 million, on \$126 million in sales this year. Its 24% operating margin (earnings before interest, taxes and depreciation) is twice that of lab giant Quest Diagnostics.

To fuel its database Impath last year acquired Medical Registry Services,

BioClinical's tumor samples.

To soothe any resulting privacy fears, Impath detaches patient names and Social Security numbers from profiles before sending reports to drug companies. Patients sign a three-page consent form letting their tumor samples be used for research and drug development. "If we're not responsible