



Providing Complete Diagnostic Solutions for Pathology Labs

AGILENT SOLUTIONS HELP SCIENTISTS GAIN INSIGHTS, COPE WITH INCREASING WORKLOADS

The diagnostics business is all about helping pathology laboratories deliver fast, accurate information to the doctors, hospitals, and medical centers they serve.

The information these labs provide—often using instruments, software, and reagents from Dako, an Agilent Technologies company—is vital to making the right diagnosis and prescribing the best possible therapy.

Customers in this market are faced with increasing workloads because of the increasing number of cancer cases worldwide. The challenge for pathology labs is to cope with the increasing workload with their existing staffs as they operate in an environment where there's pressure to keep health-care costs down.

Every step of the way

The chain of events often goes something like this:

During surgery, a tissue sample is taken from the patient and sent to the pathology lab. The lab embeds the tissue into a small paraffin block so it can then be cut into very thin sections. Each section then goes onto a glass slide to be stained. The stain makes certain telltale signs (the proteins) stand out under the microscope.

Dako provides the instruments and reagents to do this staining.

The company also provides a solution that enables lab personnel to attach a barcode to each patient sample and track it as it makes its way through the lab. It's critical that slides from one patient don't get mixed up with slides from another patient. If anything can keep pathologists awake during the night, it is the risk of accidentally giving a wrong diagnosis.

Once slides have been prepared, the next step is called a primary stain, which is designed to help answer one critical question: Does the patient have cancer or not? If the answer is yes, the next step is advanced staining.

In advanced staining, the question—what kind of cancer is this?—is more difficult to answer. The lab may stain samples using anywhere from 5 to 20 different reagents called antibodies. The

pathologist will then be able to look in the microscope and determine: What kind of tumor are we facing and how much has it progressed?

Key technologies

Dako is well-known for our high-quality antibodies. The quality of stain is the most important parameter for pathologists as this enables them to make precise and accurate diagnosis of cancer.

The company's automated advanced-staining solution, Dako Omnis, was developed in close collaboration with lab personnel and pathologists worldwide.

Dako Omnis offers twice the capacity of competitive solutions. One instrument can process up to 30,000 advanced staining slides per year. That's a key point considering the pressure on labs to increase throughput and deliver quick results.

Dako Omnis also offers more flexibility to laboratories.

Consider this example: After a tissue sample is taken from the patient, it's vital that the cancer type is quickly identified in order to develop the best possible treatment plan. The new solution allows for the immediate processing of these types of urgent patient cases.

Only Dako Omnis allows a lab to run a new patient case without waiting for the other samples already in the system to finish.

With continuous loading, batch loading, and overnight run options all available, Dako Omnis sets a new standard for what customers can expect from an automated solution.

The system also provides an intuitive, user-friendly workstation and software to bring lab control to a new level. Now, key processes such as slide processing and instrument maintenance can be traced to individual operators, greatly increasing quality control.

As with all of Dako's solutions, customers can use DakoLink software to connect all solutions and workstations to the laboratory's own information system. This approach gives the lab manager a start-to-finish overview of the processing of each individual slide.

For more information, visit the [Diagnostics](#) website.