

Pathologie Friesland, Leeuwarden, the Netherlands

# Pathologie Friesland: Keeping up with the **new face of pathology**

GLIMS Anapath from MIPS helps regional pathology lab meet changing demands efficiently, by integrating all processes

**INTERVIEWEE** » Dr. Robby Kibbelaar, Surgical Pathologist, Hematopathologist

“Pathology has really changed in the past 20 or so years,” smiles Dr. Robby Kibbelaar, clinical pathologist at Pathologie Friesland, in Leeuwarden, the Netherlands. “It’s not like in the old TV shows anymore: a man in a lab coat with a microscope performing an autopsy.” In fact, he says, both the role of the clinical pathologist and the way in which pathology exams are carried out have evolved. New IT tools, like MIPS’ GLIMS Anapath Laboratory Information Management System (LIMS), are helping Pathologie Friesland to meet the transforming demands.



“Information Technology ... is the future for pathology labs, and GLIMS Anapath is proof of the workflow efficiency benefits IT can offer them.” Dr. Robby Kibbelaar

#### THE PATHOLOGIST AS A PARTNER IN DIAGNOSIS

Pathologie Friesland is a not-for-profit laboratory that provides pathology services for five hospitals in the Friesland region of the Netherlands. “We are one of the biggest labs in the country, working with about 300 GPs. We have 64 staff, including 12 pathologists and 1 molecular biologist, plus 4 trainee pathology assistants,” says Dr. Kibbelaar.



He gives some examples of how the demands on the lab have changed over time: “Per year, we now do 50,000 histology tests, 35,000 smear tests for cervical cancer – and less than 200 autopsies. Autopsies used to be our main work, but improvements in diagnosis mean we and the clinicians usually know the disease before the patient dies. Autopsy is more part of a hospital quality circle/process and confirmation instead of offering the final answer.”

#### A DEFINING ROLE IN CLASSIFYING PATHOLOGIES

Dr. Kibbelaar attributes much of the change to the advent of immunohistochemistry and molecular diagnostics. Immunohistochemistry staining is now pivotal in the diagnosis of abnormal cells such as those found in cancerous tumours, degenerative or autoimmune diseases. “Molecular diagnostics,” says Dr. Kibbelaar, “is the next step in the future of pathology.”

With these techniques, pathologists have become a key player in the diagnosis and treatment of patients. “It’s not simply a case of saying ‘the patient has breast cancer – let’s treat it.’ There are many stages and types of breast pathologies, which have different prognosis and will respond differently to different treatments. As some of the treatments are expensive, it’s important for the health





### GLIMS Anapath

- Supports the processing of material examinations. Suitable for biopsy and cytology as well as autopsy.
- Offers support for textual result values, structured results and image results (which can contain both microscopic and macroscopic images).
- With the appropriate editing software installed, macroscopic and microscopic images can be edited and stored from the GLIMS application. Images can also be included in reports.
- Seamless integration of the module in GLIMS provides access to all related chemical and microbiological information.

» authorities, as well as the treating physician, to know if the patient has a pathology that will respond to the expensive treatment or not. In addition the treatments can have serious adverse effects; in those cases the treatment can actually harm the patient instead of relieving the symptoms. Or consider lymphomas. Until the 1970s, three categories were defined, based on degree of malignancy. Hematopathology has enabled us to define more than 36 non-Hodgkin lymphoma classifications. So our role now is to determine which type of pathology the patient has, and consult with the physician to determine treatment.”

#### NEW DEMANDS REQUIRE NEW TOOLS

These changes mean that the labs themselves need new tools to meet the growing complexity of demands. “We have so much more data to deal with now, we need to use IT to manage and monitor it,” says Dr. Kibbelaar. This is why he worked closely with MIPS to develop the GLIMS Anapath solution. “I want my LIMS to tell me what processes were used, what data is available, from where, and when? What’s more, we have obligations to monitor each sample: where is it, at what

stage of the diagnostic process, has it been sent out for consultation or additional exams, has it been returned?”

He admits that developing GLIMS Anapath was more complicated than initially expected. “We thought we could adapt the GLIMS solution used by our ‘sister’ microbiology and clinical chemistry laboratories. But in fact the pathology lab is such a unique environment that creating a specific pathology solution was much more than just replacing existing fields and tables. We had to map out the entire lab process: from registration of the incoming sample, through gross examination, processing, microscopy, reporting, even post-report consulting.”

“The last point is new functionality we have been working on with MIPS. About 1,700 of our reports are subject to external review every year: for example, if a patient goes to a different hospital for treatment, everything involved in the diagnosis will be reviewed. We have to keep track of that for our own administration, to ensure that the patient’s samples are being properly handled, and to monitor the quality of our own work.”

## EFFICIENTLY MANAGING WORKFLOW, SAMPLES AND REPORTING

Although it took time for the staff to get used to the system, Dr. Kibbelaar notes that the efficiency benefits are felt by everyone involved in the process, from technicians, to pathologists, to lab administration. “Sample management can be complex. We may receive eight or more biopsies from different parts of a colon, while prostate biopsies are usually from five different locations on the left and right. That means the technician is making a lot of repetitive notes. Before, it all had to be written down first followed by dictation – and all the numerical terms in particular were hard for the speech recognition. Instead, with GLIMS, when the sample arrives, it is entered into the system once, with a description of the type of material, along with the request for the needed cassettes and any (special) stains. Then when the technician does a gross description, he answers a standard set of questions which include drop-down windows of possible answers – and the gross report is finished!”

GLIMS simplifies the reporting process for the pathologist, too. “He doesn’t have to re-input terms for description and coding the examination; after dictating the microscopy and formulating the conclusion, he just adds the diagnosis code, using speech recognition. Everything else – all the process and staining details that are important, but repetitive – is already there,” comments Dr. Kibbelaar. “Plus the lab administration has the data they need for their financial analyses and accounting, for each and every sample. Importantly, we can



also backtrack and check any details about the sample and the process – it’s all there, for us. This data will become more and more important from a quality assurance point of view, as not only clinicians in hospitals but the laboratory specialists as well must be transparent in the quality of their work and provide so-called Q-indicators.”

“I am confident GLIMS Anapath can offer the same benefits to other pathology labs. Unlike other types of labs – such as clinical chemistry or microbiology – it took longer for pathology to really benefit from advances in laboratory equipment technology: pathologists do still have to look in the microscope themselves! So IT has been slower to infiltrate into the labs, as well. But it is the future for pathology labs, and GLIMS Anapath is proof of the workflow efficiency benefits IT can offer them.” •

### Benefits of GLIMS Anapath

- Automation of process improves workflow efficiency from start to finish. Data only needs to be input once.
- Pathologists no longer have to dictate all terms; they can focus on the diagnosis for the final report.
- Samples no longer get ‘lost’: with status tracking, you can see exactly where they are in the process.
- All details of the workflow are recorded, allowing control of process efficiency, quality and costs.

