Background

Jewish General Hospital is one of the largest and busiest acute-care hospitals in the entire Quebec province. The 637 bed teaching hospital, affiliated with McGill University, admits more than 23,000 patients a year, while handling at least 300,000 outpatient visits, 67,000 emergency visits and more than 4,000 births annually.

The Surgical & Molecular Pathology Department at the hospital has 50 employees, which includes 16 Surgical Technologists, 13 Pathologists and three Pathology Assistants. The lab has an overall annual slide volume of 150,000 H&E, 40,000 IHC, 9,000 Special Stains and 6,500 ISH.

The department added Dako Omnis to their setup in October 2014 in order to better meet their needs in terms of quality, random access, slide volume and having an instrument that can accommodate both IHC and ISH on the same platform. Today, they have a total of three Dako Omnis instruments in the lab.

Kathy Ntapolias, Lab Manager and Assistant Head of the Department of Pathology, was interviewed in October 2015, along with Pamela Wetzler, Technical Coordinator for IHC, to learn more about their experiences during the first year with their new Dako Omnis instruments.

"Dako Omnis has completely changed the way we work."

- Pamela Wetzler,
  Technical Coordinator for IHC, Jewish General Hospital, Montreal, Canada
Workflow improvements

Like many labs around the world, Jewish General Hospital has had to manage increasing slide volumes with limited personnel and financial resources. “We have more and more work required with less staff, and our workload is unpredictable” said Ms. Ntapolias. “And we of course have a real need to decrease our turnaround times in order to diagnose patients faster,” she continued.

Unlike other instruments, Dako Omnis offers the flexibility to choose between batch and continuous flow processing, based on a lab’s unique needs. The lab at Jewish General Hospital ultimately switched to continuous flow processing to maximize their efficiency and apply a LEAN design. Racks have been designed to fit a majority of patient cases and can be continuously loaded and off-loaded, eliminating waiting time required to batch and re-sort slides, ensuring a high throughput. “Dako Omnis has completely changed the way we work,” said Ms. Wetzler. “With Dako Omnis, there’s no waiting. Before, it was always a juggling act for us because we would wait to collect 30 slides before loading. Now, we no longer have to do that. These instruments make it much easier to plan our workload, and now there’s no stress at 3 p.m., which used to be our cutoff for receiving new slides for processing.”

Stat cases are now processed by the lab with ease. “Today, if a doctor brings us a rush case, we can get it on the instrument from cutting in 30 minutes,” said Ms. Ntapolias. “Before Dako Omnis, it would be around 3-4 hours before we could put a rush case on, since we couldn’t stop the previous run.”

Staining quality they can depend on

The excellent staining quality with Dako Omnis has been very consistent, according to Ms. Ntapolias and Ms. Wetzler, which they credit to the Dynamic Gap Staining Technology, a new IHC method available exclusively on Dako Omnis. The method uses rapid reagent distribution across the slides while switching to continuous movement of reagents during reagent incubation and washes. It is designed to produce consistent, high-quality results, with very little variation between slides, instruments and even between days. It also eliminates common staining artifacts like patchy staining, edge effects and air bubbles.

“Dynamic Gap Staining Technology is a wonderful method for ensuring even staining,” said Ms. Ntapolias. The lab took actual samples with which they had experienced problems with the staining on their previous instrumentation, and ran them again on Dako Omnis in order to compare. “The slides from Dako Omnis had strong, even staining, whereas the other slides told a different story,” explained Ms. Ntapolias.

Placement of the patient tissue versus the control and physical tissue damage, due to heat and other factors, had also presented big problems for the lab in the past. “Before Dako Omnis, we had to be careful that both pieces of tissue were placed within the designated area. It was really positive that the ‘zone of interpretation’ with Dako Omnis is not limited.” Regarding tissue damage, “it was a problem with our previous platform, but not with Dako Omnis,” said Ms. Ntapolias. “The onboard pretreatment on Dako Omnis does not cause any tissue damage.”
A controlled onboard environment with a full range of robust processes further ensures consistent results with Dako Omnis, as well as the high-quality FLEX Ready-to-Use system. “To take full advantage of Dako Omnis, you have to realize the excellent quality of the detection system and Dako antibodies.

Staining quality is always good and always the same, no matter what,” said Ms. Wetzler.

**Highest capacity available**

Due to its high capacity of reagents and slides, Dako Omnis has enabled the lab to tackle their workload with fewer instruments and fewer hands-on steps. The high capacity allows them to place a large number of slides and an extensive quantity of reagents and bulk fluids on the instrument at any given time. This means that everything they need for a run is onboard Dako Omnis, requiring fewer trips back and forth to replenish supplies.

“The number of reagent positions is one of the things we rely on the most,” said Ms. Wetzler.

Ms. Ntapolias agreed. “With 60 temperature-controlled reagent positions and 60 slide positions, Dako Omnis has the most of any platform available,” she said. “This is a very important feature, because you do not realize how much of an impact it has on you being able to maximize the random access loading of slides. What is the point of random access if there are not enough reagent positions to house all of your solutions?”

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**Summary**

Dako Omnis: Trust, ease of use and reproducibility.

Doing more with less has proven to be possible for the lab at Jewish General with Dako Omnis. The platform has been an invaluable addition to their lab during this first year.

Ms. Ntapolias summed up her experience with Dako and Dako Omnis in three words: Trust, ease of use and reproducibility. “This is the best platform on the market, and I recommend it,” said Ms. Ntapolias. “And we are looking forward to adding other Dako instruments in the future.”
Ease of use in their daily work

Dako Omnis has been an intuitive and easy-to-use platform for the lab staff at Jewish General. The interface walks the operator through everything he or she needs to do, from the management of slides, reagents and bulk fluids to maintenance. The system logs all operator actions and cross-checks to ensure that the user’s programming makes sense.

“The software is very easy to use, and is so simple for someone with basic computer experience,” said Ms. Wetzler. “The instrument is also really user-friendly, and it tells you exactly what to do. There are no surprises, and nothing to wonder about.”

No hidden costs from a supplier that is a true partner

Ms. Ntapolias describes the relationship with Dako as “true synergy.” The Dako team worked with Jewish General to first listen to and learn about their needs, before recommending Dako Omnis. “The Dako team is willing to say both what they can and cannot do,” said Ms. Ntapolias. “They have been extremely open and honest, and they do not waste our time. It’s all about transparency, and we have developed a great deal of trust with them.”

With their previous vendor, unexpected costs would often arise, but this doesn’t happen with Dako. “Our spending has evened out, and we don’t have to worry about spikes like we used to. This makes budget reviews easier…much easier,” said Ms. Ntapolias.

Ms. Wetzler concurred, and said that the Dako team has been extremely responsive. “The people who installed our instruments are the ones who service them. I get the answers I need fast. I can text them or do troubleshooting on the phone. It’s a very good relationship.”