Background

Peter MacCallum Cancer Centre (colloquially known as Peter Mac) is one of the world's leading cancer research, education and treatment centers globally and is Australia's only public hospital solely dedicated to caring for people with cancer. Peter Mac has over 2,500 staff, including more than 580 laboratory and clinical researchers, all focused on providing better treatments, better care and potential cures for cancer.

Sue Sturrock, the Laboratory Manager of the Anatomical Pathology department, has worked at Peter Mac since 2007. Chris Angel, M.D., who joined the team in 2010, heads up the Anatomical Pathology department with 22 staff members and eight Pathologists. Both Ms. Sturrock and Dr. Angel played an important part in the evaluation of the new H&E reagents used on the Dako CoverStainer, and they were interviewed in March 2017 to hear how the reagents and the instrument were working for them.

"The H&E stain was really a quite nice stain to look at.”

- Dr Chris Angel,
  Head of Anatomical Pathology,
  Peter MacCallum Cancer Center,
  Melbourne, Australia
Consistent H&E staining, at the right intensity

Consistency is of great importance for laboratories in H&E staining, and Peter Mac was no exception. With more than 75,000 H&E slides per year, the lab needed a standardized system that was easy to use and could provide consistent Progressive staining intensity. They had experienced issues in the past, and were seeking a solution that provided better instrument performance, better workflow and more consistent quality.

Dako CoverStainer was their choice. With it, they can consistently stain up to 3,000 slides with the same Dako H&E reagents to achieve accurate results they can rely on. The Dako Reagent Management System (RMS) ensures constant reagent circulation to prevent precipitation and optimize staining consistency and reagent usage. Specially-designed slide racks reduce reagent carry-over and eliminates cross contamination contributing to the excellent Dako CoverStainer quality of stains.

To meet the staining preferences of their pathologists, the lab at Peter Mac chose to go with Dako Harris Hematoxylin and Dako Eosin Y Phloxine B, two of five new Dako CoverStainer reagents that offer flexible staining intensities based on the preferences of the pathology lab.

Quality is key

Dr. Angel was pleased with the stain from the start. “The H&E stain was really a quite nice stain to look at,” he said. “It usually takes a pathologist a while to get used to a new one, but this was, from the beginning, very good. It had a good balance between the hematoxylin and eosin, and nucleic details were good.”

As a specialized cancer center, the pathologists at Peter Mac review a lot of cases from other labs. Dr. Angel was pleased with the quality of the Dako CoverStainer stain. “We can definitely say that this is one of the better stains,” he said.

Ms. Sturrock agreed. “We have an improved and consistent staining performance, with a robust, intense and crisp result from the new products,” she said. When asked to rank the new reagents on multiple parameters including overall staining quality, morphology, nuclear details, color intensity, Eosinophilic structures, differentiation and reproducibility, she gave them the highest rank of ‘excellent’ on every single one.

Figure 1. Dr. Angel and the anatomic pathology lab team with Dako CoverStainer.
A safe and efficient lab

Walking into the lab at Peter Mac, it is evident that Dako CoverStainer has also improved the lab environment. The exceptional ventilation and quiet operation of Dako CoverStainer contributes to a more comfortable and safe working environment for the staff. “Dako CoverStainer is very quiet,” said Ms. Sturrock. “It does not interrupt the general lab environment, and we can even talk or hear music while it is running. And because it’s quiet and has no smell, the instrument can be placed very close to the send-out bench, which has improved our workflow and productivity,” she said.

Dako CoverStainer has also been very easy for the staff to use, since it automates every step in the H&E process, from baking to drying. “We needed a more efficient, more reliable way to do H&E,” said Dr. Angel. “Dako CoverStainer is easier for our staff to use. We’ve had several new employees starting, and they’ve had no trouble learning how to use it.”

Workflow has been accelerated and turnaround time for patient cases has been shortened, with the ability to run 240 slides per hour, with just 46 minutes to first coverslipped slides after loading. “Our productivity and turnaround times have improved. Sometimes the instrument works faster than the staff can provide slides,” says Ms. Sturrock. “We also save time because of the automatic coverslapping at the same time,” added Dr. Angel. In addition, the lab no longer has to use an oven to dry finished slides. “Our slides are ready for storage sooner, since they are file dry in just one day with Dako CoverStainer,” said Ms. Sturrock.

Summary

Dako CoverStainer provided Peter Mac with H&E staining flexibility customized to their preferences, with the Dako CoverStainer consistency and high-quality staining they could count on. “There is only one option for our lab, and that is Dako CoverStainer” said Ms. Sturrock. “The pathologists are able to provide answers to oncologists in a timely manner, which is extremely important for patients to receive treatment as quickly as possible,” she said. “The lab staff and I have full confidence in Dako CoverStainer.”
Customer samples stained with the new Dako CoverStainer reagents

Fig 2. Skin

Fig 3. Prostate

Fig 4. Colon