

The MICROS CRP — In Use at the Site of Medical Treatment



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Hematology is one of the most fundamental clinical tests. To handle the growing scope of blood testing, efforts are being made to increase efficiency by concentrating testing equipment in a central testing room, or by contracting the testing work out to specialized organizations. However, this growing centralization and out-sourcing has in turn given rise to certain disadvantages, including a growing distance between the site of treatment and the site of testing.

With the aim of “achieving quick and accurate clinical testing right beside the patient,” ABX-Horiba group has continued the development of compact and easy-to-use clinical testing equipment. With the simple questions, “How are these products being used?” and “Are they useful?,” we interviewed doctors who are using our products.

Dr. David Gozzard of the North Wales Cancer Treatment Center in England comments that the introduction of the MICROS CRP, a compact hematology analyzer, has alleviated the burden on patients, and allowed doctors and clinical technicians to treat patients with less pressure, creating a big change in the atmosphere of the treatment room.

Dr. Gozzard can I ask you first of all to tell me about the North Wales Cancer Treatment Centre?

The centre opened in June of 2000 and sees patients from the whole of North Wales. Previously cancer services (e.g. radiotherapy) for this area were provided by The Christie Hospital in Manchester and Clatterbridge Hospital on the Wirral. We had been pushing for own centre for a long time. The original idea was first put forward twelve years ago.

What facilities do you have here?

We have two linear accelerators and an orthovoltage machine in the radiotherapy department. The centre also has a twenty bed inpatient ward, a sixteen bed day unit and outpatient clinics running constantly throughout the day. We have two MICROS CRP hematology analysers which we run ourselves in the centre. One instrument is in Out Patients and we have recently purchased a second analyser which is in the Day Unit. The centre is staffed by five radiotherapy consultants and two hematology Consultants, of which I am one. The nursing staff, radiographers, and support staff form part of the multidisciplinary team and work closely with the medical staff.

You must see a lot of patients.

Yes, the Day Unit is extremely active with an average of 600 cases per month and we take on 2000 new cases each year.

When did you first start using the MICROS CRP analyser in the Centre?

It's been in place and working since the first day we opened our doors. Indeed the pneumatic tube which sends samples to the main lab experienced difficulties on our first day so we went "live" right from the very first moment.

That must have been nerve-wracking.

No, not at all. We had been running the instrument on the ward for three months previously so we were all very comfortable with using it; in fact we were very relieved to have it on that first day.

So exactly why is it so important to perform blood tests on the patients you see?

First of all we have to make a clinical judgement about the safety of giving chemotherapy and the hematology results help us assess whether the patient's bone marrow is capable of dealing with the side effects. Secondly, we need to know whether the patient is well and can go home, or might have an infection and needs to be admitted. CRP helps us make that decision.

How does it do that?

Basically it helps to reassure me, as a consultant, that I have made the right clinical decision. If the CRP is raised then I know the patient is unwell and should be considered for admission for observation. Conversely a normal CRP will reassure me that it is fine to send the patient home. It also enables me to manage the bed situation and ensure that those patients that need them get the available beds.

Before you moved into the new centre and started running the MICROS CRP how were the blood tests performed?

The sample had to be taken to the main lab to be analysed. This could take up to a couple of hours and the patients just had to sit and wait in the clinic. As you can imagine, everyone involved could get very stressed waiting for results to come back. The laboratory also suffered because they were being phoned with requests for urgent sample results all the time.

Indeed, once the out patients realised how the system worked they would turn up for their appointment early, hoping to get their blood taken and their results back in time for their appointment time. Quite often twenty out of thirty patients booked in for a clinic would all turn up at 9 a.m. hoping to have their blood taken. Of course all that happened was that they had to wait to see the phlebotomist.

As a clinician it used to be awful; opening the door to ask the next patient to come in and seeing a mass of expectant patients all hoping it was their turn.

How has using the MICROS CRP in the Centre changed all this?

It has really benefited all aspects of our work and helped everyone involved. First of all it has enabled us to meet early morning deadlines. For example on the ward, we can take blood from a patient in the morning and have the results back in time for the ward round starting at 9 a.m. We also no longer experience problems meeting the 9:30 a.m. order deadline for blood products which come to us from Liverpool.

In the Day Unit we see patients who come in for chemotherapy. Now patients no longer have to wait for the results of their blood test to come back from the main lab. We can decide straight away if we can go ahead with their treatment. This has also had knock on effects in Pharmacy as they too await the outcome of the blood tests before going ahead and dispensing a treatment. Using the MICROS CRP analyser *in situ* has had tremendous logistical benefits all round.

The most radical change of all however has been in Out Patients. We still see the same number of patients but everything is so much more controlled, with only 2 or 3 patients ever waiting at a time. The patients arrive and have their blood taken. The phlebotomist then, in front of them, runs the sample through the analyser and gets the results straight away. Patients who have been attending the clinic for a long time just can't believe the difference.

You mentioned that the phlebotomists run the samples, how do they feel about this?

They are very happy; it has taken away a lot of the stress from their job. They and the nurses run the instrument and carry out routine care and maintenance but it is really a very simple instrument to run. In fact we managed to run out of reagents one week (through our own mistake) and we had to go back to the old system. Everyone was "tearing their hair out."

What about the laboratory; were they concerned about the quality of the results you would be getting from using the analyser in the clinic?

Initially yes. Past experience of using near patient systems in another part of the hospital had not been good and they felt that obtaining consistent and accurate results was very dependent on ensuring a quality approach to all aspects of the process.

How did you overcome their worries?

Well a key point in our evaluation was when we ran UK NEQAS samples in the clinic and obtained the same results as the lab. However on a day-to-day basis the lab sends down samples for us to run as QCs and all our samples are sent to the lab as most will need films anyway. I think that once they were happy with the results we were getting from the MICROS CRP, the laboratory staff found that they too benefited by having all the stress of clinic days taken away from them. They don't get lots of calls from us chasing urgent results anymore!

So everyone is happy?

Very definitely, we have brought the lab to the patient and have removed the pre- and postanalytical waiting time. Clinics are now really calm - it's quite a transformation. Indeed during our recent Cancer Services Review the Cancer Services Clinical Directorate picked the MICROS CRP as an audit item which had significantly improved the quality of service.

It's great to hear such a positive story, thanks for talking to us.
