

Haematological Malignancy Diagnostic Service

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A busy summer...

There's been a lot going on since our last edition. Within the department, we've seen the introduction of more novel tests – MLPA has been fully introduced for myeloma cases and EZH2 mutational analysis is now available (see more details below). HMDS has hosted a fourth annual study day and the annual British Lymphoma Pathology Group meeting in the same week in June. Also, at the end of June, we welcomed the MHRA as HMDS became the first non-commercial laboratory to be inspected to GCP standards by the agency due to our large volume of clinical trial work. The inspection was a positive experience, with no critical findings and some good feedback which will help us continue to improve. Following that, we are now busy preparing for our first UKAS surveillance visit in September so no relaxing just yet!

Fourth annual HMDS study day

HMDS recently held its 4th successive educational meeting at the Royal Armouries in Leeds. The meeting has grown each year attracting increasing numbers of participants and sponsors and this year was attended by over 130 delegates. The theme of the meeting 'Incorporating novel diagnostics into patient management' plays to the strengths of HMDS a specialist laboratory offering an integrated diagnostic service for leukaemia, lymphoma and myeloma. The presentations, many from nationally renowned speakers, covered five main topics, chronic myeloid disorders, histiocytic disorders, T-cell and mantle cell lymphoma, minimal residual disease testing and finally myeloma. A key aim of the meeting was to update the core HMDS users on new topics or changing concepts, based on new research, that will impact on, or be incorporated into, routine diagnostic work.

For the first time this year, we worked with Hartley Taylor organising the registration and administration of the event and we are very grateful for their input. The feedback from attendees was excellent, with some very positive comments, including: 'One of the best study days I have attended.', 'Nice mix of clinical and diagnostic approach.', 'Good speakers, well organised' and 'Please keep arranging such meetings in future.'

We plan to make this a regular annual event so please let us know if there are topics you feel it would be particularly useful to cover.



View from the auditorium in the Royal Armouries. Dr Chris Parrish, Consultant Haematologist, St James's Institute of Oncology presenting on 'Immunotherapy in myeloma'.

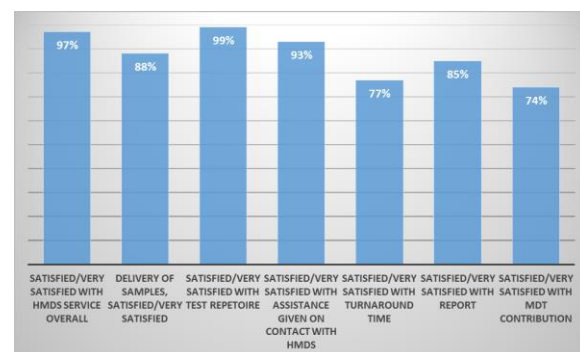


Next year's meeting has already been booked for **Friday 29th June 2018**.

Latest HMDS User Survey

Thank you to all users that responded to our latest user survey. There was a significantly improved response relative to last year. Overall, 97% of responders were satisfied or very satisfied (69%) with the HMDS service. Other results are summarized in the chart below.

Some comments were made regarding the service which is outside the remit of HMDS, e.g. rapidity of cytogenetic results, but others suggested improvements related to HMDS. Changes to report distribution have been made (see HILIS article) and improvements have also been made in delivery times after HMDS alerted several trusts to frequent delays with samples. Overall this was a very positive survey of HMDS by the regular users of the service but we also welcome suggestions for improvement. All comments from users have been discussed at various meetings within the department and this should translate into a better service provided by HMDS for its users.



Introduction of EZH2 mutational analysis

EZH2 mutations are reported in follicular lymphoma and DLBCL (GC-type). Recent studies suggest that the drug Tazemetostat, an EZH2 inhibitor, has an enhanced response in patients with a demonstrable mutation in EZH2.

We have devised a strategy to detect reported hotspot mutations in EZH2 located at exons 17 and 19 (reference genome GRCh37/hg19). This approach employs two small (<200bp) PCR amplicons, which makes this applicable to FFPE samples and routine Sanger sequencing.

We have validated mutation detection by comparing data from REMoDL-B and MaPLe trial samples, which was performed by Ming Du, University of Cambridge, with excellent concordance. EZH2 mutational analysis will be performed in HMDS on samples from the MaPLe trial in the first instance.

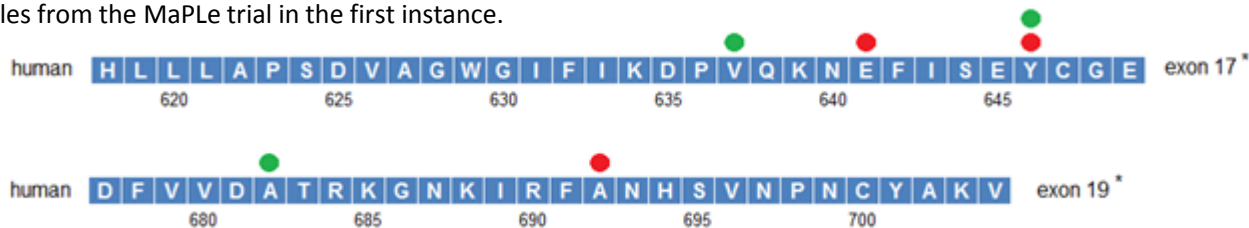


Fig.1. Summary of variants targeted by Sanger sequencing approach.

New features of HILIS for external users

The HMDS Integrated Laboratory Information System (HILIS) is our lab management system and is a bespoke system developed in-house to support users both in HMDS and beyond. It was first launched in 2003 to meet the challenges of fully integrating all the components which appear on the HMDS reports and, without it, HMDS would be unable to offer the comprehensive reports we produce. In-house development expertise has also allowed the system to evolve significantly over the last 14 years into the version we now use today, HILIS4. Here, we'd like to highlight a few of the newer HILIS features developed with our external users in mind.

Emailed Reports: We've been transitioning to emailing reports rather than sending them through the post reducing delivery time to 1 day.

This feature is available for departments or trusts only, not individuals. If you are interested in receiving reports for specific departments or trust-wide, and have a shared departmental or organisational @nhs.net address, please email HMDS for further details.

Report Notifications: Any clinical referrer can register to receive an email alert for new or updated reports. The email informs you that a report has been authorised or updated on HILIS. It can be set-up to alert you to new or updated reports (or both) as well as reports for yourself, your department or your trust. The email does not contain the report itself.

This feature is only available for registered HILIS referrers with a @nhs.net account. A guide to sign up can be found on the front page of HILIS, or under Resources/Documents.

Electronic Request Form: Registered users of HILIS are encouraged to complete request forms online, rather than by hand. The online request form can be found under Resources/Documents and takes you through step-by-step. Once completed, the printed form is sent with the sample and the lab is informed a sample is incoming.

This feature is only available to registered HILIS users as it uses patient identifiers.

If you would like access to HILIS or need any support using these features please email HMDS on hmds.lth@nhs.net.

Welcome to Dr Beer

Following the departure of John Goodlad, we currently have a locum consultant haematopathologist working with us. Dr Phillip Beer has worked in both academic and commercial healthcare organisations and comes with a wealth of experience in the genomics of cancer which he will be applying to improving the sequencing approach for lymphoid malignancies within HMDS.



Clinical scientist trainees

In September, we will also be welcoming three new clinical scientist trainees to the department. These scientific training posts (STPs) are now organised at national level and competition for candidates is strong. We are pleased to have attracted trainees to three different disciplines; haematology, cellular pathology and bioinformatics. Posts like this are crucial to the development of the department and continue a long-standing tradition of commitment to teaching within HMDS.

HMDS sample receipt on weekends

Please can we repeat the reminder to users that HMDS does not have a postal delivery on Saturday. This means that any sample posted on Friday does not reach us until Monday morning and this can result in samples being inadequate for processing.

For local centres, who send samples via hospital transport/courier/Hays Dx, routine samples can be received on a Saturday morning. Urgent samples should be discussed with the on-call consultant at HMDS before sending.