Transforming Pathology Requesting and Results Reporting
Transforming Pathology Requesting and Results Reporting

CliniSys has been successfully delivering clinical and diagnostic software solutions for over twenty-five years. All of our software and services are developed in close collaboration with advisors who hold key clinical positions across the European healthcare community which helps us stay at the forefront of clinical innovation.

CyberLab is a simple and powerful user-friendly electronic requesting and results reporting service developed by CliniSys in response to the increasing demand for hospital and community-based web-enabled Pathology and Radiology requesting and results reporting systems. CyberLab is a fully web-based application with Oracle backend database providing facilities such as demand management and complex facility-based requesting rules and a highly flexible result viewing module.

CyberLab is a web-based requesting and result reporting system that has been designed to operate within primary and secondary care. CyberLab can be integrated with any laboratory information management system via standardised messaging such as HL7. CyberLab has also been designed to fully integrate with GP systems to allow GP’s to identify the patient within their local GP system and have this information and the user security ID and password used to pre-populate the order within CyberLab.

The CyberLab product has been developed in close collaboration with all domain specialists including GP’s, hospital staff, lab staff and IT experts. This has resulted in an intuitive, user-friendly application that can be tailored to meet the requirements of each individual CyberLab user.

CyberLab provides the requester and laboratory with improved clinical safety via full end to end electronic communications, increases efficiency at the point of requesting and within the laboratory specimen reception via complex rules base and demand management tools, reliable and accurate test requesting and result reporting. CyberLab enjoys a large customer base spread throughout mainland Europe and the UK and is used in both private and hospital environments.

Key benefits

- Customisable security to support primary and secondary care users
- Definable requesting module to support demand management
- Customisable and intuitive result reporting
- Decision Support
- Demand management
- Integration with mobile technologies; iPhone, iPad
- Support for multiple LIMS and HIS/PAS communication
- Seamless external system integration with GP / 3rd party systems
- Secure and fully auditable access
- Latest web and communication technologies
- Zero-footprint on clients
Fast, personalised data access

CyberLab features fast and intuitive search screens to speed up the requesting and reporting process. In order to serve both primary and secondary care users, the patient and order lookup can be customised to ensure a personalised look and feel.

GP’s have fast access to their own patients or all patients treated within a practice or group of practices. Hospital based users have direct access to all patients from their ward subject to the security definition. Access to results is tailored on a user role basis.

All search options can be stored and reused per individual user. An individual start page ensures immediate access to the desired information as the user logs in.

Key benefits

- Fast and intuitive lookup screens
- Communication with mobile devices; iPhone, iPad
- Wide range of search options
- Advanced customisation
- Tailored roles base access
- Auto-refresh functionality for key users e.g. ITU

Security and authentication

- Full session logging
- User-based action logging
- Consistent configuration screens
- Dedicated communication daemons
- GLP compliance
- Based on modern technologies

Advanced and customisable search options can be saved and reused for each user. Auto-refresh ensures the latest information for key specialist areas such as A&E and ITU is displayed.

Icons indicating the presence of abnormal, urgent and new results for the selected patients.
Flexible and guided order entry

Supporting processes to provide a paperless test requesting solution is definitely one of the challenges that every clinical laboratory will face in the near future. CyberLab’s simple “point and click” requesting screen and advanced lab communication is the ideal solution to tackle this.

Customisation is a key feature, enabling test requesting that meets the requirements of different user types and roles. GP’s and hospital staff can have unique panels of tests and hospital staff users can be defined to have access to patients from their wards. GP’s have access to their own patients and are assured seamless integration with their incumbent GP system. Configurable requesting rules ensure that only appropriate tests are requested, potential inconsistencies are automatically checked and that all required information to execute the tests is available for the lab. For further control and flexibility, the CyberLab order entry screens are also highly configurable to accommodate local requirements.

At any time, the requestor can monitor the progress of the lab order. For the laboratory, time and cost reduction, flexibility and fewer errors are just some of the advantages.

With the cyclic ordering functionality, users are able to specify a series of requests such as for diabetes, oncology, haemodialysis in a single step. Thus saving a lot of time and effort while treating recurring orders.

Features

- Simple test requesting
- Intelligent requestor guidance
- Auto-prompt for required information
- Decision support via definable attachments
- Ward-specific test profiles
- Cyclic ordering
- Demand management - duplicate handling
- Comprehensive requesting rules
- Built-in order validation procedures
- Request Order follow-up
- Standardised LIMS, HIS and PAS
- HL7 messaging
- Sample label and barcode printing
- Seamless GP Integration

Once the request is sent to the LIMS, CyberLab produces a detailed request overview, including an request barcode and a sampling list.
Result reporting

CyberLab’s result reporting screen is extremely flexible and feature-rich. It can produce cumulative views of up to 200 requests simultaneously for a single patient. Navigation buttons allow browsing through the patient’s lab results.

A wide range of layout and filter options are available to customise the look and feel of the consultation screen. A full results history for a patient is available to the clinician, irrespective of where it was requested, i.e. primary care or acute.

Lab results are logically displayed by lab discipline and may be marked by result flags. Urgent and new results are clearly highlighted. Confidential results can be hidden from unauthorised users. Popup screens provide detailed information on the selected order or result value.

Features

- Cumulative result reports
- Decision support - definable attachments
- Support for graphs and images
- Printer-friendly PDF reports
- User-specific preferences
- Complete results patient history view
- “To do” lists
- Acknowledgment of result facility
- Advanced customisation options

Cumulative view of up to 200 orders per patient

Navigation buttons for easy browsing through the patient’s results

User specific filtering and layout options

Detailed patient information, accompanied by permanent results from the patient’s medical record

Fully supportive of comprehensive textual results in the case of Cellular pathology and Radiology results
Advanced result views and reports

CyberLab has the ability to present different result types originating from different external systems. Mobile clinical staff are afforded direct access to results via CyberLab’s ability to communicate with mobile technologies such as the iPhone and iPad.

Automatic notifications can be configured ensuring that the user is kept up to date with the latest results via SMS or email where CyberLab informs the user as soon as new results become available. This notification also updates the user’s “to do” list.

History graphs can be displayed for multiple tests simultaneously for a configurable time frame. CyberLab also supports image results and electrophoresis graphs.

Result reports can be patient-scoped or ward-scoped, the latter offering a result overview per hospital ward for a specific test panel. In addition to the on screen result views, CyberLab can generate highly customisable, printer friendly PDF reports.
External system integration

CyberLab can easily be integrated with third party applications such as Electronic Patient Records and GP packages. As CyberLab is an expert in laboratory test requesting and result reporting, more general applications such as EPR systems can directly access CyberLab and embed its specialised screens.

CyberLab can be integrated in external systems through HTML and XML based connection layers, supporting the most recent web standards such as SOAP.

CliniSys acknowledges that interoperability with GP systems is an essential element of any electronic requesting and results reporting service. As such, CyberLab can be integrated with the GP system and/or can function as a stand alone system. CyberLab can easily integrate with most GP systems and will simplify and streamline the pathology ordering process and at the same time provide quick and easy display of all patient results with appropriate security access rights.

Following a comprehensive validation programme with EMIS, CyberLab has passed all necessary accreditation standards with reference to integration with EMIS PCS and EMIS LV and is now an official EMIS accredited partner product.

Connectivity

Seamless EPR integration

- Active Directory support
- Context-restricted access
- Automatic context synchronisation
- HTML and XML connections
- Support for SOAP standard
- Secure Socket (SSL)

Safe and secure

CyberLab is all about the transmission of medical data over a network. Therefore, security is crucial. If implemented in a hospital environment CyberLab can utilise security provisions available within the Trust such as firewall, etc.

All successful logins and login attempts in CyberLab are registered and system managers have the tools to review the session logs. In addition, all user actions performed on lab orders are equally logged and available for review making CyberLab the ideal solution for a GLP-compliant environment.
Transforming Pathology Requesting and Results Reporting

Application and communication management

Application configuration is often a complex exercise. To avoid this, CyberLab can import configuration data from the LIMS. Lab administrators can readily create and manage configuration data through consistent and user-friendly configuration editors.

CyberLab can communicate with several laboratory and hospital information systems simultaneously using international standards such as HL7 and HPRIM. Coding systems and PIN providers allow CyberLab to communicate with several partners at the time. Using the ADT messages (Admission, Discharge, Transfer) from the HL7 standard, patients are followed by CyberLab as they move through the hospital.

State-of-the-art technologies

CyberLab is developed with the Java programming language and has an Oracle database. CyberLab is implemented on a dedicated Windows server and supports several browser types and versions. CyberLab uses the latest web technologies and standards such as web services and SOAP to communicate with third party applications.

CyberLab being a modern web application, ensures that a zero client architecture is used as well as provides seamless integration with mobile technologies such as Apple’s iPhone and iPad and other WAP enabled devices.

Supported browsers include:

- Internet Explorer 7, 8, 9 and 10
- Mozilla Firefox 4 and higher
- Safari 4 and higher
- Google Chrome 16 and higher