



Bon Secours Hospital, Cork

***Laboratory Information System (L.I.S.)
Sunquest (Misys) Current Version***

All work undertaken in the laboratory is processed through the Laboratory Information System (LIS). The laboratory information system is written in MUMPS programming language and runs on a IBM system P5 running AIX software. The system is accessed through networked Personal Computers (PCs) and Citrix Presentation Server thin clients.

The Sunquest server is located in the Systems Room on the lower ground floor and maintained by the IT Department. There are 3 Xyplex servers located centrally in the laboratory, to which all laboratory instruments and Sunquest label printers are connected.

The LIS has a two-way interface to the Hospital Information System (HIS), and the following messages are exchanged:

- From HIS to LIS: Admission, Transfer and Discharge patient information
Acknowledgment of messages received
- From LIS to HIS: Billing charge codes
Laboratory test orders (all Pathology departments except Histopathology, Diagnostic Cytology and Gynaecology Cytology - CoPath)
Results of patient testing
Acknowledgements of messages received

Most laboratory instruments are interfaced to the LIS, using a two-way interface (upload / download) where ever supported. Currently all of the interfaced instruments have a full upload / download interface except three, the Desega is upload only (Haematology) the BactAlert is download only (Microbiology) and Triturus is upload only (Immunology).

Most of the Sunquest functionality is provided through a Graphic User Interface (GUI), namely:

- GUI AD, OE, Inquiry, Billing, Merging, Bloodbank, Microbiology (most functionality)
- Laboratory Access Results Workstation (LARS)
- Differential Keyboard (Df)

A Sunquest CoPathPlus^(R) system is used for Histopathology, Diagnostic Cytology , Gynaecologic Cytology and Post Mortems. This is interfaced with Sunquest and the previous results on the Anatomic Pathology were converted into CoPath and are accessible. LARS is used wherever automated instruments send results into Sunquest (i.e. for all instruments except BactAlert). The Differential Keyboard is applied in Haematology.



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All patient test result data is stored on Sunquest and is available on-line to authorized users indefinitely. Most patient test result data is stored on the HIS (PIMs) and is available to authorised PIMs users. Transaction data is held for 90 days and then ‘archived’ onto a transaction tape, by the Laboratory Information Systems Manager.

General Maintenance of Sunquest server and back-ups of daily activity.

The Hospital IT Department maintains the Sunquest server, including uninterruptible power supply (UPS), the Xyplex servers, PCs and network and is responsible for daily, weekly and monthly backup tapes. A monthly verification procedure is undertaken and back-up tapes are stored in a fire-proof safe, off site. Access to the Sunquest server is restricted to the IT Department staff. Refer to procedure BSC/IT/SOP/011 titled “IT Central Computer Room Access” and BSC/IT/SOP/013 titled “Laboratory Information System Back Up, Tape Verification Reboot and Shutdown Procedures”.

The system has a concurrent back-up facility that allows back-ups be done without any downtime for users.

Two separate tapes of transactions only are recorded every 90 days, by the LIS Manager, and held in a fire-proof safe. Refer to procedure BSC/IT/SOP/005 titled “Saving Sunquest (Misys) Transactions onto Tape Cartridge”.

Maintenance of the Laboratory Software

System security is maintained by the Laboratory Information System Manager. Refer to procedure BSC/IT/SOP/001 titled “Laboratory Information System - User Registration (Network and Applications)”.

New releases of software and software updates are provided by Sunquest. These upgrades are testing fully according to test plans provided by Sunquest before moving into the Live area.

All errors on the Sunquest system are evaluated by the Laboratory Information System Manager. Refer to procedure BSC/IT/SOP/007 titled “Reporting Laboratory Information System (LIS) Errors by Pathology Staff”.

Local configuration of the system is maintained by the Laboratory Information System Manager, in conjunction with the laboratory departments. Refer to procedure BSC/IT/SOP/003 titled “Routine Maintenance of Laboratory Information System”.

System Support

There are two system managers (job sharing) available to the laboratory to provide day-to-day support and maintenance checks and the IT department also provides day to day support. In addition, there is 24 hour support available from Sunquest and Hospital IT.

A contract of responsibilities between the IT department and Laboratory Information System Manager is in place and defines the relationship and responsibilities of the Laboratory Information System Manager and the Hospital IT Manager.



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