

CLIENT

National Institute of Neurological Disorders and Stroke (NINDS)

OVERVIEW

NINDS, in conjunction with the NIH Clinical Center, have considerable and ever-increasing requirements for acquisition, analysis, and secure storage and access to medical imaging data. Leveraging our experience supporting systems containing medical imaging and clinical data at NIH, NINDS, and the Clinical Center, LCG designed and implemented the Picture Archiving and Communication System (PACS) that offers the ability to store and retrieve medical images from on-site MRI scanners and provides researchers the ability to retrieve and push images to client workstations for analysis.

CHALLENGE

- The PACS must support NIH's unique stroke research purposes
- Implementation of a collaborative research system to securely transfer medical imaging data to a central repository from geographically dispersed locations
- All imaging data must comply with HHS/NIH security protocols

SOLUTION

LCG helped engineer and implement a unique PACS called SPOTRIAS, the Specialized Program of Translational Research in Acute Stroke. This collaborative medical imaging system enables research centers from around the nation to securely transfer patient images to a central NIH repository. By compiling data from many organizations, SPOTRIAS speeds up research by enabling participating researchers to access a much larger dataset.

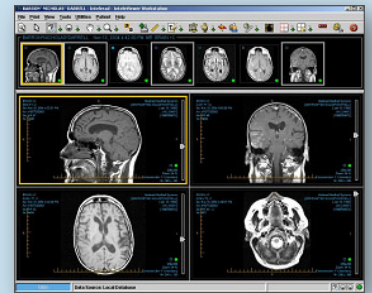
LCG built the system using open standards, such as Digital Imaging and Communications in Medicine (DICOM). The system anonymizes the patient data to eliminate Personally Identifiable Information (PII) for subsequent access. The PACS handles incoming medical imaging data using encrypted file transfers. LCG also built an automated backup and recovery capability to ensure all data can be recovered in the event of a system failure.

RESULT

LCG fully satisfied the complex imaging research requirements of NINDS by implementing not only a PACS for local NIH use, but also for national use as well. The PAC system stores images of stroke patients in such a way that doctors can more efficiently collaborate towards understanding the most proactive treatment of these patients. NINDS managed its rapidly growing requirements for secure data storage and archiving while making the most effective use of limited IT budgets.

BUSINESS VALUE

LCG Systems engineered an innovative PACS solution that enables institutions to collaborate more efficiently nationwide.



■ Picture Archiving and Communication System (PACS)



■ PAC system in use