

PATHSIGHT TELEPATHOLOGY SYSTEM

There is an acute shortage of qualified pathologists in the UK. With a total of 1,500 pathologist posts available, currently around 300 of these are unfilled.

Even taking into account pathologists in training, there will continue to be a substantial shortfall for the foreseeable future.

The role of the pathologist is essential in the diagnosis of an increasing number of complex illnesses, most especially cancers.

Yet pathology departments are closing down and the workload of the pathologist has increased to almost impossible levels, as he is required to work across a wide number of disciplines for a number of different centres.

Today's decreasing number of pathologists are required to travel to case meetings on a weekly basis, further limiting the number of cases they can review and diagnose.

This journey time is conservatively estimated at consuming 50 days per pathologist per annum, putting an additional stress on a profession which is already grossly overworked and at a cost to the NHS of around £2.16 million each year.

PathSight – the future of Telepathology

Fairfield Imaging's PathSight System has merged high quality digital image transfer with video-conferencing to provide a demonstrably time- and cost-effective means of remote case-conferencing on biopsy specimen images and data.

Using this technology, a pathologist can immediately refer a case to a specialist in the field. Crystal-sharp images of slides may be sent to remote locations for diagnosis or second opinion.

Telepathology is not new, but early problems amongst certain manufacturers with quality of image (resolution) and speed of transmission, have led to a degree of scepticism about investing in telepathology.

PathSight has been subject to rigorous and ongoing trials and peer review. Installed throughout a network of key sites* in the UK and Europe, the system is enjoying increasingly wide acceptance amongst Trusts and Hospitals in the NHS and private sectors.

PathSight System

Cancer diagnosis accounts for over 70% of diagnostic pathology work. The UK has one of the lowest cancer survival rates in the developed world.

It is widely recognised that the best chance of effective treatment of all cancers is through accurate, early diagnosis. In the UK, the medical profession faces not only rising workloads but insufficient human resources to meet them.

Diagnosis is more secure when two pathologists are able to discuss a case in 'real' time. Pathsight enables the process of second opinion, referral or remote diagnosis.

Pathsight is a dynamic telepathology system.

The Fairfield Imaging PathSight System provides

- full remote control
- videophone link
- diagnostic quality 24 bit images (1000 x 1000 dpi which is more than four times higher than any other system available)
- high resolution digital camera
- a mailbox function providing advanced store and forward features.

With PathSight, speed of image transmission is also extremely fast, thanks to technology developed by Fairfield Imaging specifically for this purpose.

PathSight examines a biopsy specimen via remote controlled microscope and relays images of these, live, to online parties who are in continuous contact via the system's live video link.

Typically, the parties would share on-screen a low-resolution overview image of the specimen along with clinically relevant patient details and up to 18 diagnostically significant images referenced to their locations within the overall specimen.

Images can be discussed in live sessions, saved and databased with session and patient record for future reference.

Pathsight supports all pathological microscopic and gross anatomy images along with mammograms, X-Rays and dermatological images.

The key benefits of using the Fairfield Imaging Pathsight system against conventional pathology are:

- Mass recording of high quality image data
- Choice of and access to different images
- Automated screening
- Greater reproducibility
- Remote control diagnosis
- Improved user time management

Cost Benefits

Cost of Fairfield Imaging Telepathology equipment £30 - £60 K	Cost of pathologists' downtime in travelling to and attending case meetings - £18K per pathologist p.a. = £2,160,000
FI telepathology equipment can be linked between any number of locations allowing expert diagnosis every time	Saving in establishment cost -
On-line diagnosis – i.e. in a hospital where no Consultant Pathologist is present during a surgical procedure – e.g. FNA	Expert opinion available on-line without need to travel. No requirement for patient to return to outpatients to learn diagnosis
Speed of diagnosis – experts can undertake core biopsies at a rate of 30 an hour	Non-specialist would require 20 minutes per biopsy

In addition to UK installations, a network of 13 telepathology systems is in place in southern Norway and similar systems are being installed in Japan.