



Enhanced database reporting – John Kershaw

Do you do clinical audit?

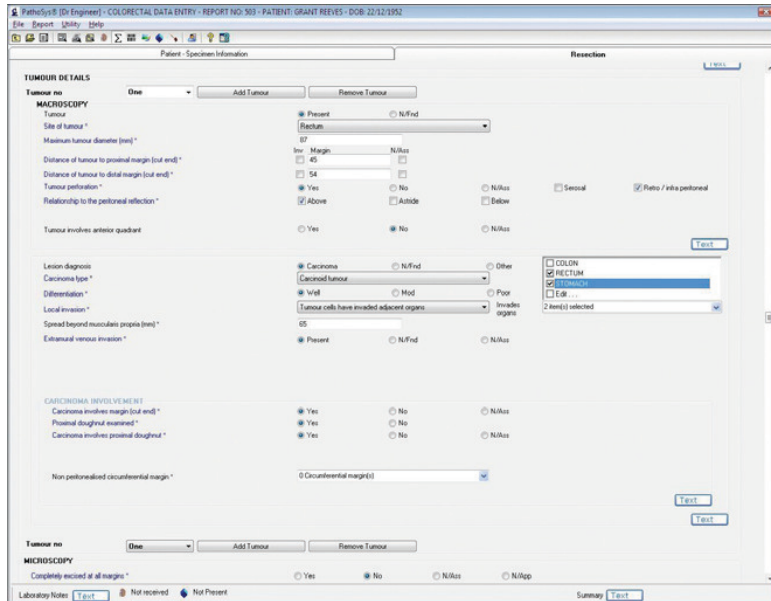
What exactly do you spend time doing when you perform a clinical audit? Or, to put it another way, do you spend most time thinking about the audit, the reasons for doing it and the meaning of the results and what needs to change to improve your work quality? Unless you have lots of staff to support you, I bet you spend the vast majority of the audit doing process things – finding the right number of cases to include; getting

so you just get stuck into the marathon read-in. I think it is reasonable to assume that it will take about two minutes to read each report and say another 30 seconds to enter the information onto a note pad or into a spreadsheet. You have more than two hours just reading without taking into account the time you have taken either doing the searches or persuading someone to do them for you, persuading the office staff to print the reports for you, finding the printed reports and then finding them again

when you manage to allocate some time to do the audit. Chances are you are short staffed and have a dozen things that either should already have been done or need to be done now! Sound familiar? You have to be really keen to do audit don't you? Is it really worthwhile? Won't it wait until you are less busy? Trouble is you are never less busy.

Let's now spool forward into the future – clinical audit is still a requirement but now you can get all the information required for your colorectal audit, nicely entered into a spreadsheet and ready to analyse in just five minutes from the time you started looking at your cases. This gives you the time to do the really important thinking about what the results mean and how you can improve your practice. Great eh? Except it isn't in the future – *I have just collected the audit data on 1,500 cases and it has taken less than 10 minutes.*

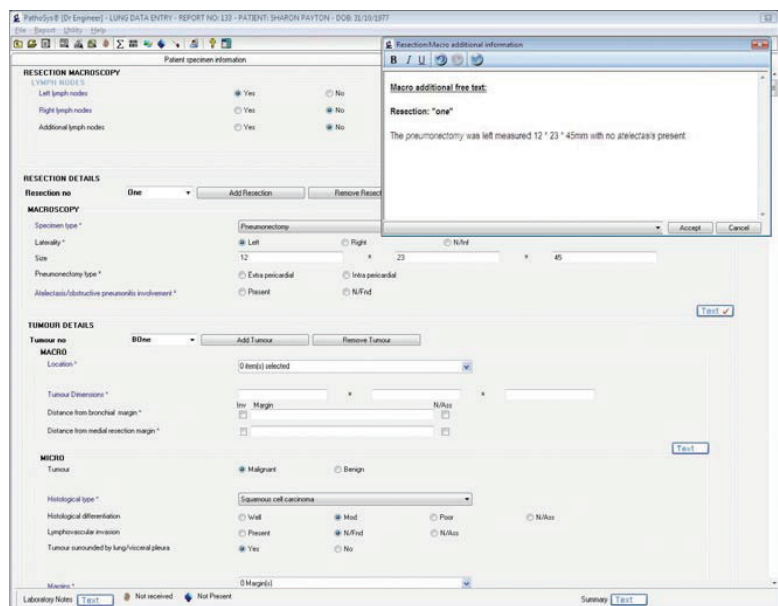
How is it done? I used a system called *PathoSys* which uses a unique technique called enhanced database reporting (EDR). This works by interfacing between the lab computer and the pathologist. It is a new way of reporting cancer cases and it produces consistent reports for clinicians with automatic staging and coding built



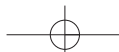
The colorectal resection data entry

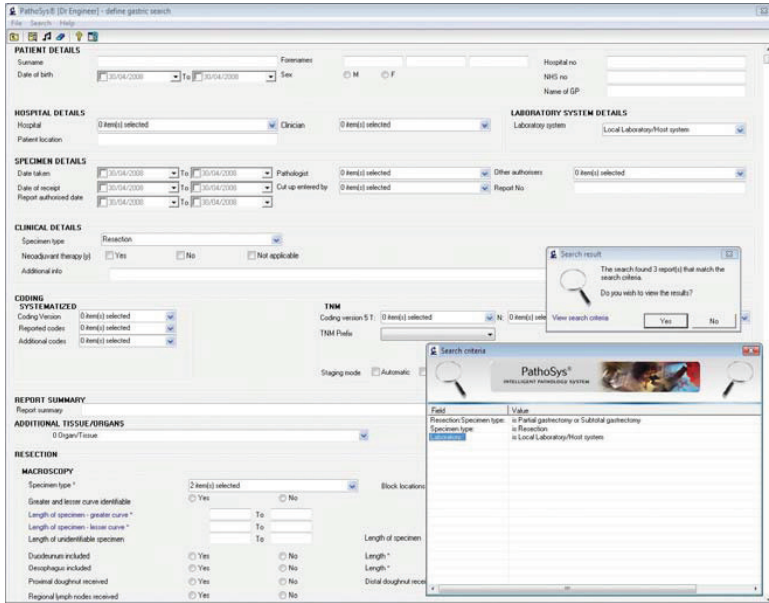
the reports printed; extracting the information from them. These tasks will occupy most of your time. This is time most of us don't have! The result is that in most labs audit is performed by only the most enthusiastic or the most junior of us!

Lets assume that you are auditing the number of lymph nodes found from examining specimens with colorectal adenocarcinomas. You have spent a while defining a SNOMED search and either doing it yourself or (more likely) waiting for some kindly technically minded BMS colleague to do it for you on the lab computer (often overnight so as not to slow the whole lab operations down). As a result of the searches, you think you have in excess of 50 cases to include. You now need to wait for them to be printed. You next need to find the time to sit down and read them all so that you can confirm that they should be included in the audit and to extract the information you need from the more or less wordy reports in front of you. If your lab uses a proforma report then at least you will have some degree of consistency to help you get to the information required – it's more than likely that you don't report in this way



Data entry with the user adding free text annotation





The search screen which mirrors the data entry

in. It uses the minimum dataset as the basis for the report and stores all the data required to make a diagnosis and assess all the features needed by clinicians in a relational database. It is designed to allow direct data input at the microscope by the pathologist. When the data has been entered the system generates a WYSIWYG (what you see is what you get) report on the computer screen; if you are satisfied that this is correct you press a button and the report is authorised. That's it, you have finished with the case. Off the report goes into the lab computer where it is stored with all other reports and like all other authorised reports it automatically goes into the print queue and then is sent out to the clinicians in the usual way.

Because *PathoSys* stores all the information in a database it means that it is all easily accessible for searching. The system has a really easy search engine which has been designed to be used by any old technophobe! So you can search on any or all of the parameters which go to make up your report – this is

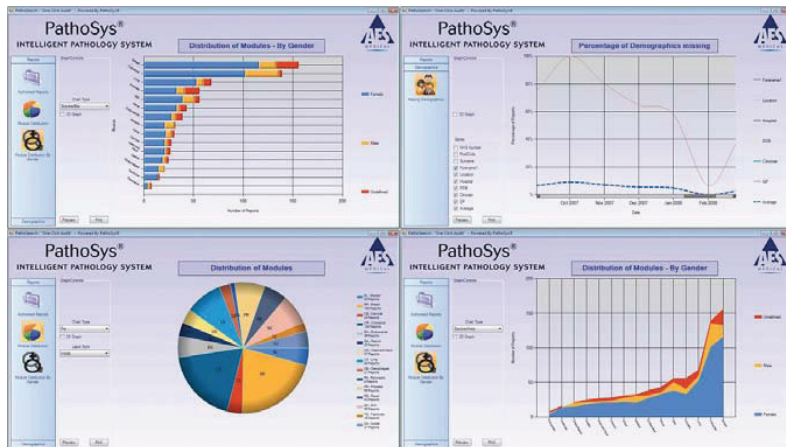
what enabled me to collect all the information required for my colorectal cancer audit on 1,500 cases in 10 minutes.

The flexibility provided to you by using a system which makes all data items immediately available is staggering. Just a few examples – you can recall all the cases for your forthcoming MDT meeting in seconds; all the information required by cancer registries can be sent to them electronically and in a way that enables the registry to enter it directly into their database. Information on screening cases can similarly be sent to screening offices; you can obtain whatever research data that you need from the path reports with great ease – saves on research assistants! You can really ensure that pathology data is available to your clinicians in whatever way they want and need, and at whatever frequency.

The system also links directly to the Royal College of Pathologists dataset manuals so that you can refresh your memory about any of the dataset fields at the touch of a button whilst reporting. You can very easily link images to your reports although you may find that using images in your reports is limited by the functionality of your lab computer system. *PathoSys* does not prevent you from dictating descriptive reports. It ensures that these are inserted at the appropriate point in the report. Moreover you can also search such free text areas. Although the system offers rule based staging, this can be overridden by the pathologist if required. And there is much, much more that you can do with this 21st century tool for pathologists.

Are there any downsides? Well you have to be prepared to learn to report using enhanced database reporting: ie working in a different way. You will have to change some of your local policies and procedures. In a busy working environment changing the way you do things is never easy but this is the only real difficulty with *PathoSys* and it only applies to the transitional phase during the learning curve. Where it is in use,

most pathologists give positive and in many cases glowing reports on *PathoSys* as a cutting edge constantly-developing tool for histopathology. If you are interested in improving the quality of your cancer reporting and ensuring that you can measure that improvement you should investigate enhanced database reporting as a radical way forward for your practice. For further information just go to <http://www.aesmedical.com>



Standard graphical reporting of usage and data quality

Dr J Kershaw was responsible for the creation of the Pathlinks cellular pathology department. Now in retirement from the NHS he acts as Medical Director to AES Group Medical Division for which he receives consultancy fees
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