

(performed on same scanner or fused later), when needed, to identify only clinical relevant pulmonary emboli. Can also use Q SPECT to evaluate which PE identified on CTPA might be clinical relevant.

Impact: To streamline referrals for PE imaging, to reduce delays from non-diagnostic VQ or CTPA scans, to reduce negative PE detection rate from CTPA and avoid false positives as much as possible; to reduce the reliance on ventilation isotope imaging, which often limits the availability of VQ scans, so reduce costs.

Outcomes: Small numbers of patients only put thru this algorithm to date but >95% correlation between positive Q SPECT and CTPA; no patients with discordant Q SPECT and CTPA who were watched rather than treated proved to have PE; CTPA reduced referrals with improved rate of positive findings.

Discussion: Clear advantage to have a gamma camera with CT capability rather than separate scanners; need a nuclear medicine department but Q SPECT is more reproducible and more straightforward a technique than perhaps appreciated; need dedicated staff and fusion software to deliver the final outcomes/imaging.

P-128 **Breast cancer: The curious incidence of the hot head on the bone scan**

Katherine Klimczak; David Little; [Nicholas Ridley](#); Sarah Taylor

Great Western Hospitals NHS Foundation Trust

Aims/objectives: To present the range of normal skull appearances on 99m-Technetium bone scintigraphy. To highlight the causes for increased uptake within the skull on bone scans in breast cancer patients

Content: This pictorial review will display a selection of normal bone scintigraphy images alongside the varying pathologies we have encountered in our institution over the last 5 years to highlight the causes for a 'hot head' on a bone scan in female patients with breast cancer.

Relevance/impact: Whole body 99mTechnetium methylene diphosphonate (99mTc MDP) bone scintigraphy is used commonly in patients with breast cancer for the early detection and staging of bone metastases. Bone scintigraphy is not without limitation and can give false-positive results in the presence of benign bone lesions that show increased osteoblastic reaction. It can also give a falsely reassuring negative result if the metastases present are not metabolically active enough to cause sufficient uptake.

This poster will focus on the causes of increased uptake within the skull on the bone scan and alert the reader to the potential for the possible alternative diagnoses than metastatic disease. The various pathologies we have encountered in our institution over the last 5 years include; metastases, Paget's disease, hyperostosis frontalis interna, previous craniotomy, benign bone lesions and sinus disease.

Discussion/conclusion: As bone scintigraphy remains a valuable tool in assessing the presence and extent of bone metastases in breast cancer, Radiologists must be aware of the other causes of increased skull uptake to ensure the accuracy of their reports.

Innovation in service delivery

P-129 **The art of rejection**

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The presentation will explore how film rejection data from Computed and Digital Radiography (CR/DR) systems can be customised by the user and provide examples on how data collected from nine Fuji CR/DR workstations has been adapted, customised and standardised with analysis performed every monthly. Data from all workstations is exported as Excel spreadsheets along with jpegs of rejected images via data stick to a central data hub and amalgamated to a central spreadsheet allowing month on month comparisons between readers and departments as well as the main rejection criteria, namely, positioning errors, exposure errors and patient identification errors.

The analysis of the data has allowed trends between workstations, and departments to be tracked, as well as indicating areas for improvement/training needs, particularly when combined with the ability to review rejected images on the workstations at the time of data collection.

Exported jpegs permit a traditional review of overall image quality and rejection criteria as used with plain film. The benefit of the image being digital is that it can be reviewed on any PC, at any time, without the problems of storage, manual handling and disposal experienced before the advent of digital imaging in radiography.

The ability to customise and export data direct from workstations can therefore help to reduce the time to taken to perform reject analysis and how it can be reviewed and shared with others to provide as much information as the user defines.

P-130 One stop orthopaedic clinic: Value-added musculoskeletal radiology in the new model of patient care cycle

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Plymouth Hospitals NHS Trust

Background information: In the current era of healthcare reform and accountable care organizations in new look NHS, radiology faces a number of challenges as the delivery of healthcare continues to evolve in order to provide better patient care and reduce waiting lists. The purpose of this exhibit is to illustrate the importance of creating value-added radiology services such as One Stop Orthopaedic Clinic and areas to work toward creating better team working in the future.

Material and methods: We have started instant orthopaedic ultrasound for the patients in Orthopaedic and fracture clinic. This model has been running successfully for last three months and will complete a year at the time of presentation. We will concentrate on how to ensure fast and better imaging service throughout the patient care cycle. The patient care cycle starts by them being seen by the Orthopaedic surgeons and referred to the radiologists, who have a clinic room equipped with ultrasound machine and work station. We also provide guided injection at the same time, if needed. There are significant time saving and financial gains to the patient and the trust by this service, which have been proven by our initial audit. The patient satisfaction has also improved drastically as they are getting better and quick service.

Conclusion: The future of how we practice radiology is changing. It is essential to know and understand the changes and how we can provide value in the emerging healthcare models to continue to provide high-quality care to our patients.

P-131 Experiences of a new off site CT colonography service

Paul McCoubrie; [Helena Barton](#)

North Bristol NHS Trust

In March 2013, barium enemas were totally phased out from the local hospital trust. The existing limited CT colonography service at the acute hospital was replaced with CT colonography performed in a purpose-built, off-site CT scanner. This presentation will discuss the findings of a multi-faceted quality audit of 297 patients from the first two months of operation and is compared to data from the previous service.

Notable findings include:

- Dose reduction by half to 5.4mSv, becoming comparable with dose rates for barium enemas.
- Pick up rate for positive mucosal findings of around 10%, of which over 20% were confirmed malignant.
- Significant incidental findings (e.g. AAA >3cm) were reported in 5% of patients, which would otherwise not have been picked up on barium studies.
- Low complication rates and high completion rates.
- A purpose-built unit allows a calm and dignified service, attracting much praise from patients.

With this evidence, we have shown that CT colonography in an off-site scanner is a viable model for hospitals looking to transition away from barium enemas.

P-132 Implementing advanced practice in diagnostic radiography: The Scottish perspective 2013

[Ian Henderson](#); [Sandra Mathers](#); [David Minnoch](#)

Robert Gordon University, Aberdeen

Health policy in Scotland is devolved from the rest of the UK and explicitly promotes the development of extended scope/advanced practice roles for radiographers. Evidence indicates that the evolutionary rate of such roles differs in comparison to the rest of the UK. This study, supported by a CoRIPs award, examines the current situation in Scotland.

Aim: In context of Price et al's UK wide 'Scope of Radiographic Practice 2008', the primary aim of this research was to determine the scope of radiographic practice in Scotland taking into account health policy, professional factors, service pressures, demography and geography.

Method: A two stage exploratory study sought quantitative and qualitative data from lead radiographers in all Scottish hospitals with diagnostic imaging facilities (n=111) and strategic imaging managers across the 14 Health Board areas (n=14). Job specific questionnaires were distributed to both sample groups. Semi-structured interviews were undertaken with a sub-sample, to explore specific elements of the questionnaire responses. Quantitative and qualitative analysis was undertaken using SPSS-PC® and NVIVO®.

Results: Preliminary results indicate that the expected range of skill mix activities are undertaken with predominant activity (by department) relating to reporting in ultrasound (n=23); appendicular skeletal (n=12); axial skeletal (n=10); fluoroscopy (n=7) and breast (n=4). Hot reporting was carried out in 9 sites and 24 had image commenting in place.

Conclusion: There are notable disparities in the implementation of advanced practice roles and the drivers and inhibitors are multi-factorial. Strategic managers described a lead in time of 2-5 years for the development and effective establishment of advanced practice initiatives.

P-133 How much does imaging influence speed of discharge in hospital?

Basel Jaber; [R Simon Davies](#); [Sharon Evans](#)

Abertawe Bro Morgannwg University Health Board

There is increasing publicity both within the health service and the press about provision of consultant input to patient care at weekends to improve patient outcome. The majority of hospitals provide some form of service out of hours and in radiology this is often by consultants being first on call. Delays in radiological investigations are often blamed for delay in diagnosis and discharge, whereas we felt that radiology was rarely a cause of delay in discharge or diagnosis.

We therefore decided to look at all in patient investigations (excluding plain films) performed on patients over a seven day period in this busy general hospital. In all cases we documented the time of referral, time of scan and time

of report. A sample of patients with normal studies was selected and the notes retrieved to see if the patient was discharged immediately following the receipt of the results of any investigation.

The results showed that over 95% of all inpatient request for complex investigations were performed within 24 hours and that receipt of a normal radiological investigation often did not mean early discharge for patients.

The conclusion in our establishment is that radiology performs the vast majority of all investigations on in patients within 24 hours and is rarely the cause of delay in the treatment or discharge of in patients.

P-134 A prospective audit into radiology requesting in an acute medical unit: Are imaging requests being processed within the recommended timeframe?

[Teresa Jacob](#)

Basildon and Thurrock University Hospital

Imaging is a key part of the assessment, diagnosis and management of acute patients. Our hospital provides clear guidance, in the form of a service level agreement (SLA), on the time frame for acquiring imaging and receiving a formal report for in-patients. A prospective study assessing the time delay between decision to image and imaging taking place over one week within the acute medical unit was conducted. 38 requests met our criteria, 71.1% of requests were not delivered to radiology and 86.8% of scans were not conducted within the recommended time frame. The reasons for this include; a limited number of junior doctors and porters on a 50 bed ward; and an overstretched radiology department.

The service provision within the hospital is clearly insufficient to meet ideal targets. To improve the quality of care, our hospital intends to implement a formal traffic light triage system on all imaging request forms. This aims to ease pressure on the radiology service and expedite patient care.

Professional training and education

P-135 Self-assessment = autonomous learner?

[Alexandra Partner](#)

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Aims/objectives:

To identify the benefits and challenges to students who use self-assessment.

To identify a change in attitudes and behaviours of students who use self-assessment.

Content: What has the reaction been like to self-assessment, have attitudes changed? Take a look at the advantages and what skills this is giving the student and how it's preparing them for the future. We must also consider the limitations and barriers to a change in radiography education.

Relevance/impact: As a higher education institution offering a diagnostic radiography programme, our aim is to provide suitably qualified, confident students that can take on new challenges and have the confidence to practice autonomously out in the work place. With the introduction of self-assessment, it forces students to take responsibility for their work, to be honest, to self-evaluate and to consider improvement.

Outcomes: With newly qualified radiographers expected to be independent autonomous practitioners, we as educators must make sure we are pushing students further and giving them the confidence and skills to start their first post. Getting students involved in self-assessment is just one area that has aided in doing this.

Discussion: How can we develop this further? Trial self-assessment in clinical practice and consider this style earlier on in their studies. How the development is measured eg. NSS, module feedback and module results.
