

higher ($P=.002$) than that of DM. The mean AUC of AI CAD SM alone and DM with DBT did not differ significantly ($P=.264$). The mean AUC of AI CAD SM with DBT was higher than that of DM with DBT and it approached significance ($P=.066$).

Conclusion: AI CAD SM alone was superior to DM alone. AI CAD SM with DBT was also superior to DM with DBT although not statistically significant. AI CAD SM can replace DM in both screening and clinical setting.

Limitations: This was a preliminary single-site retrospective study with a single manufacturer.

Ethics committee approval: Ethical approval was received for this study.

Funding for this study: Funding for this study was provided by FUJIFILM.

Author Disclosures:

Takayoshi Uematsu: Nothing to disclose

16:00-17:00

Open Forum #1 (Radiographers)

Research Presentation Session: Radiographers

RPS 1614

Advancing radiographic practice and training needs

Moderators

J. Portelli; Msida/MT

F. M. H. M. Vanhoenacker; Antwerp/BE

RPS 1614-3

Role expansion in ultrasound: radiographers in European Federation of Radiographer Societies (EFRS) countries

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Purpose: Variability within radiographer performed ultrasound practice in EFRS countries has been previously reported. In 2019/2020 several EFRS surveys evaluated radiographers working in ultrasound. These results aimed to investigate the prevalence of radiographer extended and advanced practice ultrasound roles and explore priorities for future career development.

Methods or Background: Participants were recruited to an online cross-sectional survey by national societies of the EFRS and social media. Mixed questions were included, with some Likert scale options to explore opinions. Descriptive statistics, chi square test and theme analysis were used to assess the results.

Results or Findings: Radiographers from 58% of EFRS countries responded to the survey ($n=561$), predominantly the UK, Ireland and Spain (81%). Most undertook teaching (83.4%), fewer engaged in research, audit and leadership. UK sonographers were more likely to communicate findings to patients (83.4%) and/or doctors (94.6%) than other respondents. Smaller numbers refer for further examinations (UK=45.6%, non-UK=12.5%). A significant difference ($p<0.0001$) was seen between those that do and do not perform ultrasound in their country when asked if radiographers should provide the final report on scans they perform. Commonly radiographers reported working in ultrasound to challenge themselves, increase knowledge, skills, responsibility and independent working. Most enjoyed ultrasound, but many reported feeling undervalued. Future priorities varied between the UK, Ireland and other countries.

Conclusion: Whilst many radiographers are independently performing ultrasound examinations, few outside the UK independently report and communicate the results to patients. Advanced practice skills including audit, research and leadership were less common amongst radiographers in ultrasound than teaching others. Priorities highlighted in this study reflect previous work: legislation enabling independent regulated ultrasound practice, additional training opportunities and support from clinical colleagues to develop the role.

Limitations: Limitations will be discussed, including survey language.

Ethics committee approval: Not applicable.

Funding for this study: Not applicable.

Author Disclosures:

Malene Roland Vils Pedersen: Nothing to disclose

Rute Martins Dos Santos: Nothing to disclose

Barbara Kraus: Nothing to disclose

Gill Harrison: Nothing to disclose

RPS 1614-4

European radiographers' experience in ultrasound: roles, support and legal responsibility

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Purpose: The practice of ultrasound by radiographers in Europe is well documented. Detailed individual radiographer involvement in ultrasound needed further exploration, therefore, as part of a suite of surveys the European Federation of Radiographer Societies (EFRS) this study investigated the examinations performed, extent of the role and legal responsibilities of radiographers performing ultrasound.

Methods or Background: EFRS national societies ($n=38$) disseminated an online survey to members, along with social media recruitment of participants. The survey, included a mix of closed questions, free text options, and scale responses.

Results or Findings: Responses were received from 561 radiographers: mean age 33.5 years, with 13.5 years ultrasound experience. Radiographers performed ultrasound in most respondent countries (92%). Reasons for not undertaking ultrasound included lack of available education or legislation and/or limited/no support from medical colleagues. Academic level 7 education (diploma or master's) were most frequently cited for radiographers working within ultrasound. Common ultrasound examinations performed by radiographers were general medical, gynaecological, vascular and obstetrics. Of those undertaking ultrasound, 97.4% work independently; 70.4% provide full interpretative reports, whilst 52% of those, predominantly in UK and Ireland, give advice on further investigations. Over 50% of radiographers take responsibility for the report. 72% had professional indemnity insurance.

Conclusion: Radiographers are involved in a wide range of ultrasound examinations, however ultrasound education, level of reporting and support for independent practice vary across countries. Recommendations to support radiographer career development in ultrasound, in conjunction with legislative and radiology support, include team working, co-development of educational programmes, clear clinical protocols, up-skilling existing practitioners and auditing practice.

Limitations: There was self-selection bias, inter-country differences and the survey was written in English, leading to potential for misinterpretation.

Ethics committee approval: Not applicable.

Funding for this study: Not applicable.

Author Disclosures:

Malene Roland Vils Pedersen: Nothing to disclose

Barbara Kraus: Nothing to disclose

Gill Harrison: Nothing to disclose

Rute Santos: Nothing to disclose

RPS 1614-5

Ultrasound evaluation of the patellar tendon in sports practitioners and non-sports practitioners: the radiographer's role

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Purpose: Patellar tendon (PT) injuries are one of the most common overuse injuries in sports. Ultrasound is a well-established technique that has proven to be an ideal choice to characterise and evaluate this tendon. The aim of this study was to evaluate PT dimensions in sports practitioners (SP), namely cyclists and volleyball players (VP), and non-sports practitioners (NSP).

Methods or Background: A sample of 115 individuals was recruited, of which 37 were cyclists, 38 VP, and 40 NSP. Length, thickness, and width of the PT were bilaterally measured using a longitudinal and transverse probe approach. The individuals were placed in supine with a 30° flexion of the knee.

Results or Findings: Results obtained demonstrate that cyclists and VP present increased values for PT length and thickness, since that statistically significant differences were found in length and thickness bilateral measurements between SP and NSP ($p<0.003$). Concerning physical activity level, significant differences were found, mostly between low and high levels, in the three dimensions measured bilaterally ($p<0.004$). PT length, thickness, and width dimensions of both limbs present correlations with gender and height, highlighting moderated to strong intensity values in the PT length ($0.520<r<0.601$). Positive correlations of weak to moderate intensity between the length and thickness dimensions with physical activity level in both limbs were valid ($0.281<r<0.422$).

Conclusion: Physical activity stimulates the development and stabilisation of the patellar tendon, preventing associated pathologies. The evaluation of the PT through ultrasound is reliable and allows its measurement and characterisation in several clinical situations, highlighting the radiographer's fundamental role in the musculoskeletal field.

Limitations: Sample size.

Ethics committee approval: Ethics committee approval and written consent was delivered to the participants.

Funding for this study: No funding was received.

Author Disclosures:

Joao Pinheiro: Nothing to disclose

António Fernando Caldeira Lagem Abrantes: Nothing to disclose

Rui Pedro Pereira Almeida: Nothing to disclose

Bianca Vicente: Nothing to disclose

Sónia Isabel Rodrigues: Nothing to disclose

Ángela Patrícia Gomes Pissarra: Nothing to disclose

Oksana Lesyuk: Nothing to disclose

Luís Pedro Vieira Ribeiro: Nothing to disclose

RPS 1614-6

Characteristics associated with high interpretation performance amongst radiography advanced practitioners (RAPs) involved in breast cancer screening

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Purpose: We propose a method to optimise cancer detection through identification of key RAP characteristics that enhance mammographic interpretation. A database of performance levels will also be provided to act as a benchmark for interpretation standards. The objectives are to: i. identify reader characteristics that promote optimal image interpretation; ii. create an evidence-base from which standards for interpretation can be proposed.

Methods or Background: The performance of 50 UK-based RAPs reading, a cloud-based test set of 60 mammographic cases with known results, will be assessed. Participants will be asked to complete a questionnaire to record their characteristics. Sensitivity, specificity and receiver operating characteristics (ROC) values will be established for each RAP and correlation techniques will be used to explore associations between characteristics and image interpretation accuracy. Percentile values on performance levels for each of the three metrics will be provided, serving as initial benchmarks for future evaluations.

Results or Findings: This project is ongoing. The aim is to present preliminary data on factors that promote optimum performance of RAPs. Collaborators are invited to be a part of this study which should form the basis for optimising image interpretation. Causal agents linked to best performance will be identified as well as baseline values for diagnostic efficacy. The author will also present a framework for the ongoing assessment of standards, available to all mammographic readers through the cloud.

Conclusion: An exploration of casual agents that impact optimal interpretation as well as RAP-based standards will be developed to promote breast screen reading efficacy.

Limitations: This is a pilot study, however it will establish system to optimise breast cancer screening interpretation.

Ethics committee approval: In progress.

Funding for this study: Ongoing/self funded.

Author Disclosures:

Patrick Brennan: Nothing to disclose

Noelle Lay: Nothing to disclose

Ruth Mary Strudwick: Nothing to disclose

Chantal Ski: Nothing to disclose

RPS 1614-7

An investigation of radiographers' perception about their role in providing psychosocial support to cancer patients

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Purpose: The purpose of this study was to investigate radiographers' perception about their role in identifying and providing psychosocial support to cancer patients receiving radiotherapy.

Methods or Background: The study comprised of a prospective, non-experimental design that involved the distribution and collection of a paper questionnaire to all radiographers working at a radiotherapy department in Malta. The self-designed questionnaire contained 19 questions, including a few that were incorporated from other research studies following respective authors' permission.

Results or Findings: Twenty one from twenty six radiographers completed the questionnaire anonymously, resulting in a response rate of 80.7%. All participants perceived the provision of psychosocial care to be highly important (71.4%, n=15/21) or important (28.6%, n=6/21). The majority of radiographers (85.71%, n=18/21) saw their primary role as care coordinators, linking patients to the right support resources. Participants felt most confident in providing counselling and support for treatment-related symptoms and least confident in delivering psychosocial support. Lack of training (95.2%) was identified as the most common obstacle to providing psychosocial support, followed by a lack of use of a screening tool (85.7%), an absence of environmental space (76.2%), and a limited understanding in the field (61.9%).

Conclusion: Despite radiographers acknowledging that the provision of psychosocial support was an important part of their role, this study identified various barriers that may be restricting them from doing so. In this regard, adequate training, the use of a psychosocial screening instrument and the implementation of clear referral process are recommended so as to enhance radiographers' ability to provide psychosocial support to their patients.

Limitations: Small sample size restricts generalisation of the study findings.

Ethics committee approval: This study was approved by the University of Malta Research Ethics Committee. Application number-5863_300620_Jade Azzopardi.

Funding for this study: No funding was received for this study.

Author Disclosures:

Jonathan Loui Portelli: Nothing to disclose

Jade Azzopardi: Nothing to disclose

Susan Mercieca Mercieca: Nothing to disclose

RPS 1614-8

CT head scans for final year students: too great an expectation?

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Purpose: Following on a previous presentation at ECR 2019, we present part one of a longitudinal study examining the need for further CT postgraduate programmes. Two further factors are examined: professional body graduate attribute requirements for non-contrast CT head imaging, and the length of time taken for graduate radiographers to undertake CT scanning post-qualification.

Methods or Background: This study set out to identify training requirements for UK CT radiographers by investigating whether social and/or academic factors have an influence on students' approach toward CT dose optimisation both before and after qualification since the variation in CT doses across countries are primarily attributable to local choices regarding technical parameters. In-depth interviews were analysed in a systematic and rigorous manner through thematic analysis following the Braun and Clarke qualitative data analysis framework.

Results or Findings: Three themes were identified: education, dose optimisation, and culture. Student comments from the three themes respectively are shown: "(...) if you get stuck doing one thing one way you think it is the only way to do this thing"; "Would like to have had protocols explanation of why they change"; "students just helping patients getting on and off table, hard to learn anything". Mind maps of themes can be seen in figures. Two years post qualification, a third of the students hadn't worked in CT.

Conclusion: Whilst participants may have been aware of how to optimise dose from theory, many did not have the experience to do so in practice, with many not ever being allowed to optimise parameters under direct supervision. The question arises: is it reasonable to expect final year students to scan CT heads?

Limitations: Part 1 of a longitudinal study.

Ethics committee approval: This study was approved by the University of Hertfordshire Ethics Committee with Delegated Authority HSK/UH/02331 and aHSK/UH/02331.

Funding for this study: No funding was received for this study.

Author Disclosures:

Sean Ryan: Nothing to disclose

Victoria Teresa Major: Nothing to disclose

Desiree O'Leary: Nothing to disclose

RPS 1614-9

Building bridges among students and young radiographers in Nigeria based on previous ECR sponsored experience

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Purpose: To highlight the lessons learned and experiences gained from previous attendance of the European Congress of Radiology (ECR) as an "Invest in the Youth" and "Shape your Skills" programme recipient. To highlight how the experience gained has been transferred to the young generations of radiographers in Nigeria, thus building bridges across the globe.

Methods or Background: Realist review of series of activities and events embarked upon based on experience from previous ECR attended both onsite and online will be presented.

Results or Findings: Talk shows and awareness creation to student radiographers during special days like student health week world radiography day celebrations have resulted in growing interest in ECR related activities. Series of side events held with the Nigerian Association of Radiography students (NARS) during the General conference in 2019 and 2020. Interest among young generation of radiographers including students in "Invest in the youth" and "Shape your skills" programme has increased over the years. This is evident by the current number of applications from Nigeria.