

Library Current Awareness Bulletin Radiology – April 2022

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News

[Radiologist who charged for scans he reported while at work is suspended for three months](#)

BMJ, March 2022

[Society defends inclusive pregnancy guidance after media criticism](#)

The Society of Radiographers, April 2022

[The Society has issued a statement defending its position that all patients in an identified risk group should be asked if they are pregnant prior to exposure to ionising radiation.]

Guidance

[Artificial intelligence for analysing chest X-ray images](#)

Medtech innovation briefing [MIB292] Published: 29 March 2022

[Diagnostic imaging network workforce guidance](#)

[This document provides support to imaging networks on how to optimise the utilisation of their current workforce.]
NHS England, April 2022

[icobrain ms for active relapsing–remitting multiple sclerosis](#)

Medtech innovation briefing [MIB291] Published: 29 March 2022

Statistics

[Diagnostic Imaging Dataset 2021-22 Data](#)

NHS England

March 2022

[The Diagnostic Imaging Dataset (DID) is a central collection of detailed information about diagnostic imaging tests carried out on NHS patients, extracted from local Radiology Information Systems (RISs) and submitted monthly.]

Artificial Intelligence

[Algorithmic Prediction of Delayed Radiology Turn-Around-Time during Non-Business Hours.](#)

Shah V., Chillakuru Y.R., Rybkin A., Seo Y., Vu T. and Sohn J.H.

Academic Radiology, vol. 29(5) pp. e82-e90

May 2022

[Rationale and Objectives: Radiology turnaround time is an important quality measure that can impact hospital workflow and patient outcomes. We aimed to develop a machine learning model to predict delayed turnaround time during non-business hours and identify factors that contribute to this delay. **Materials and Methods:** This retrospective study consisted of 15,117 CT cases from May 2018 to May 2019 during non-business hours at two hospital campuses after applying exclusion criteria. Of these 15,177 cases, 7,532 were inpatient cases and 7,585 were emergency cases. Order time, scan time, first communication by radiologist, free-text indications, and other clinical metadata were extracted. A combined XGBoost classifier and Random Forest natural language processing model was trained with 85% of the data and tested with 15% of the data. The model predicted two measures of delay: when the exam was ordered to first communication (total time) and when the scan was completed to first communication (interpretation time). The model was analyzed with the area under the curve (AUC) of receiver operating characteristic (ROC) and feature importance. **Source code:** <https://bit.ly/2UrLiVJ> **Results:** The algorithm reached an AUC of 0.85, with a 95% confidence interval [0.83, 0.87], when predicting delays greater than 245 minutes for "total time" and 0.71, with a 95% confidence interval [0.68, 0.73], when predicting delays greater than 57 minutes for "interpretation time". At our institution, CT scan description (e.g. "CTA chest pulmonary embolism protocol"), time of day, and year in training were more predictive features compared to body part, inpatient status, and hospital campus for both interpretation and total time delay. **Conclusion:** This algorithm can be applied clinically when a physician is ordering the scan to reasonably predict delayed turnaround time. Such a model can be leveraged to identify factors associated with delays and emphasize areas for improvement to patient outcomes.]

[Development and Validation of an AI-driven Mammographic Breast Density Classification Tool Based on Radiologist Consensus.](#)

Magni V., Interlenghi M., Cozzi A., Ali M., Salvatore C., Azzena A.A., Capra D., Carriero S., Della Pepa G. et al
Radiology. Artificial Intelligence, vol. 4(2)

March 2022

[Mammographic breast density (BD) is commonly visually assessed using the Breast Imaging Reporting and Data System (BI-RADS) four-category scale. To overcome inter- and intraobserver variability of visual assessment, the authors retrospectively developed and externally validated a software for BD classification based on convolutional neural networks from mammograms obtained between 2017 and 2020. The tool was trained using the majority BD category determined by seven board-certified radiologists who independently visually assessed 760 mediolateral oblique (MLO) images in 380 women (mean age, 57 years \pm 6 [SD]) from center 1; this process mimicked training from a consensus of several human readers. External validation of the model was performed by the three radiologists whose BD assessment was closest to the majority (consensus) of the initial seven on a dataset of 384 MLO images in 197 women (mean age, 56 years \pm 13) obtained from center 2. The model achieved an accuracy of 89.3% in distinguishing BI-RADS a or b (nondense breasts) versus c or d (dense breasts) categories, with an agreement of 90.4% (178 of 197 mammograms) and a reliability of 0.807 (Cohen κ) compared with the mode of the three readers. This study demonstrates accuracy and reliability of a fully automated software for BD classification.]

[Prime Time for Artificial Intelligence in Interventional Radiology](#)

Seah J., Boeken T., Sapoval M. and Goh G.S.

Cardiovascular and Interventional Radiology, vol. 45(3) pp. 283-289

March 2022

[Machine learning techniques, also known as artificial intelligence (AI), is about to dramatically change workflow and diagnostic capabilities in diagnostic radiology. The interest in AI in Interventional Radiology is rapidly gathering pace. With this early interest in AI in procedural medicine, IR could lead the way to AI research and clinical applications for all interventional medical fields. This review will address an overview of machine learning, radiomics and AI in the field of interventional radiology, enumerating the possible applications of such techniques, while also describing techniques to overcome the challenge of limited data when applying these techniques in interventional radiology. Lastly, this review will address common errors in research in this field and suggest pathways for those interested in learning and becoming involved about AI.]

[Summary of the proceedings of the International Forum 2021: "A more visible radiologist can never be replaced by AI"](#)

European Society of Radiology (ESR)

Insights into Imaging, vol. 13(1)

March 2022

[The ESR International Forum at the ECR 2021 discussed effects of artificial intelligence on the future of radiology and the need for increased visibility of radiologists. The participating societies were invited to submit written reports detailing the current situation in their country or region. The European Society of Radiology (ESR) established the ESR International Forum in order to discuss hot topics in the profession of radiology with non-European radiological partner societies. At the ESR International Forum 2021, different strategies, initiatives and ideas were presented with regard to radiology community's response to the changes caused by the emerging AI technology.]

Diagnostic Radiology

[An approach to evaluate the quality of radiological reports in Head and Neck cancer loco-regional staging: experience of two Academic Hospitals.](#)

Giannitto C., Esposito A.A., Spriano G., De Virgilio A., Avola E., Beltramini G., Carrafiello G., Casiraghi E. et al

La Radiologia Medica, vol. 127(4), pp. 407-413

April 2022

[Objectives: To evaluate the quality of the reports of loco-regional staging computed tomography (CT) or magnetic resonance imaging (MRI) in head and neck (H&N) cancer. **Methods:** Consecutive reports of staging CT and MRI of all H&N cancer cases from 2018 to 2020 were collected. We created lists of quality indicators for tumor (T) for each district and for node (N). We marked these as 0 or 1 in the report calculating a report score (RS) and a maximum sum (MS) of each list. Two radiologists and two otolaryngologists in consensus classified reports as low quality (LQ) if the RS fell in the percentage range 0-59% of MS and as high quality (HQ) if it fell in the range 60-100%, annotating technique and district. We evaluated the distribution of reports in these categories. **Results:** Two hundred thirty-seven reports (97 CT and 140 MRI) of 95 oral cavity, 52 laryngeal, 47 oropharyngeal, 19 hypo-pharyngeal, 14 parotid, and 10 nasopharyngeal cancers were included. Sixty-six percent of all the reports were LQ for T, 66% out of all the MRI reports, and 65% out of all CT reports were LQ. Eight-five percent of reports were HQ for N, 85% out of all the MRI reports, and 82% out of all CT reports were HQ. Reports of oral cavity, oro-nasopharynx, and parotid were LQ, respectively, in 76%, 73%, 100% and 92 out of cases. **Conclusion:** Reports of staging CT/MRI in H&N cancer were LQ for T description and HQ for N description.]

[Diagnostic accuracy and reliability of smartphone captured radiologic images communicated via WhatsApp®.](#)

Ntja U., Janse van Rensburg J. and Joubert G.

African Journal of Emergency Medicine, vol. 12(1), pp. 67-70

March 2022

[Introduction: Sending radiographic images as instant messages have become a common means of communication between physicians, aiding in triaging and transfer decision-making in emergencies. While use of technology is increasing, this is not the case for the underserved or rural areas of South Africa with no picture archiving and communications system or advanced hardware in place. In these areas, the medical staffing population have nearly

universal access to smartphones and could benefit from the ability to share images quickly and easily with trained radiologists. South African data on diagnostic reliability of smartphone captured radiology images is lacking. The objective of the study was to determine the accuracy and reliability of diagnoses made on radiologic images captured with smartphone compared to radiologic images on picture archiving and communication system (PACS). **Methods:** A cross-sectional study was conducted with radiographs from June 2018 to July 2019 selected from the PACS system at Pelonomi Tertiary Hospital. Images were displayed on PACS computer screen and captured by principal researcher using a smartphone. Five radiology registrars received the images via WhatsApp® and reviewed them on smartphones. After three weeks, registrars viewed images in random order on PACS stations. McNemar's test was used to compare the diagnostic accuracy of smartphone vs PACS and Kappa values calculated for agreement. Reliability was assessed by analysing the results of different registrars and diagnoses separately. **Results:** 135 X-rays, representative of common emergency conditions, were selected. For all registrars, PACS accuracy was generally higher than smartphone accuracy. The Kappa values all indicated fair to moderate agreement between smartphone and PACS diagnosis. **Conclusion:** Capturing radiographic images using at least 12-megapixel smartphone and sharing them via WhatsApp® is a reliable method that can be used with a high degree of confidence in emergencies to aid clinical decision making. This method of viewing medical imaging is however not a substitution for images viewed on PACS.]

[Morphological Characteristics of the Posterior Wall Associated with Complex Acetabular Fractures: A Radiological Study Using 3D Software and Fracture Mapping Technique](#)

Tian S., Liang S., Wang Z., Ye P., Yin Y., Li J., Zhang R., Zhao K., Hou Z. and Zhang Y.

BioMed Research International

March 2022

Background: The aim of the study was to compare the morphological distinctions of the posterior wall (PW) in different complex acetabular fractures using 3D software and fracture mapping technique and ultimately to provide for improved clinical treatment. **Methods:** One hundred and fourteen patients with complex acetabular fracture associated with PW were recruited. All patients were divided into two groups according to the injury mechanism of the PW: Group A (both-column and PW) and Group B (including posterior column and PW; T shape and PW; and transverse and PW). Fracture mapping was generated on the intra- and extrasurface of a standard template. The radiological parameters including spatial displacement, articular surface area, articular range, marginal impaction, and multifragments of the two groups were compared. **Results:** The spatial displacement, intra-/extra-articular surface area, and start and end point in Group A were 10.9 mm (IQR, 8.4-15.2), $8.2 \pm 2.6 \text{ cm}^2$, $17.9 \pm 5.3 \text{ cm}^2$, 0.8° (IQR, -6.0-16.2), and 107.5° (IQR, 97.2-116.9), respectively. The results in Group B were 30.4 mm (IQR, 16.8-48.7), $4.1 \pm 2.0 \text{ cm}^2$, $10.6 \pm 4.4 \text{ cm}^2$, 29.5° (IQR, 19.2-38.0), and 117.5° (IQR, 98.2-127.2), respectively. Marginal impaction was defined by Letournel et al. All the differences between two groups were significant ($P < 0.05$). The fracture map in Group A showed an "L"-shaped pattern and a "cusp" on the ilium, and the PW was located at 1/5 to 1/4 of the posterosuperior part of the acetabulum. The fracture maps in Group B were scattered and lacked consistency, and the PWs were confined to 1/10 to 1/8 of the posterior acetabulum. **Conclusions:** Quantitative measurements and fracture mapping represented the differences in morphological characteristics of PWs associated with complex acetabular fractures.]

[Role of the radiologist in the diagnosis and management of the two forms of hepatic echinococcosis](#)

Calame P., Weck M., Busse-Cote A., Brumpt E., Richou C., Turco C., Doussot A., Bresson-Hadni S., Delabrousse E. et al
Insights into Imaging, vol. 13 (1)

April 2022

[Echinococcosis is a parasitic disease caused by two zoonotic tapeworms (cestodes) of the Echinococcus genus. It can be classified as either alveolar or cystic echinococcosis. Although the two forms differ significantly in terms of imaging findings, they share similarities in terms of management and treatment. In parallel to medical treatment with albendazole (ABZ), and surgery, historically used in these diseases, various imaging-guided interventional procedures have recently emerged (drainage, stenting, or Puncture, aspiration, injection, and reaspiration (PAIR)). These options open up a new range of therapeutic options. As in oncology, multidisciplinary consultation meetings now play a major role in adapted management and patient care in hepatic echinococcosis. Consequently, diagnostic imaging and interventional expertise have brought radiologists to the fore as important members of these multidisciplinary team. The radiologist will need to evaluate parasite activity in both forms of the disease, to guide the choice of the appropriate therapy from among medical treatment, interventional radiology procedures and/or surgical treatment. Knowledge of the specific complications of the two forms of echinococcosis will also help

radiologists to discuss the appropriate treatment and management. The aim of this review is to describe the core knowledge that what a radiologist should possess to actively participate in multidisciplinary meetings about hepatic echinococcosis. We discuss the role of imaging, from diagnosis to treatment, in alveolar (AE) and cystic echinococcosis (CE), respectively.]

[Software-Based Evaluation of Optimization Potential for Clinical MRI Scanners in Radiology.](#)

Meyl T.P., Berghöfer A., Blatter T., Heverhagen J.T., de Bucourt M. and Maurer M.H.

RoFo: Fortschritte auf dem Gebiete der Rontgenstrahlen und der Nuklearmedizin, vol. 194(4), pp. 391-399
April 2022

[Objective: The aim of the study was to use a software application to analyze the examination times and changeover times of two clinically highly applied MRI scanners at a university hospital for radiology and to evaluate whether this could result in optimization potential for examination planning in the daily clinical routine of MRI diagnostics.

Materials and Methods: Based on the newly developed software application "Teamply Usage" (Siemens Healthineers, Germany), the examinations carried out on two MRI scanners (1.5 T and 3 T) were investigated within an analysis period of 12 months with regard to the type of examination and its duration. In addition, compliance with the previously defined planning time (30, 45, 60 min.) was checked and deviations were analyzed. In addition, the changeover times between the examinations were determined and a possible influence due to the exchange of MRI coils was investigated for a selection of change combinations. **Results:** For the total of 7184 (1.5 T: 3740; 3 T: 3444) examinations included in the study, the median examination time was 43:02 minutes (1.5 T: 43:17 min.; 3 T: 42:45 min.). The ten most frequent types of examinations per MRI scanner were completed within the predefined plan time of 54.5% (1.5 T) and 51.9% (3 T), taking into account a previously defined preparation and post-processing time of 9 minutes per examination. Overall, more time was spent on examinations with a planned time of 30 minutes, whereas the majority of the examinations planned with 45 minutes were also completed within this time. Examinations with a planned time of 60 minutes usually took less time. A comparison between the planned time and the determined examination duration of the most common types of examinations showed overall a slight potential for optimization. Coil exchanges between two examinations had a small, but statistically not significant effect on the median changeover time ($p=0.062$). **Conclusion:** Utilizing a software-based analysis, a detailed overview of the type of examination, examination duration, and changeover times of frequently used clinical MRI scanners could be obtained. In the clinic examined, there was little potential for optimization of examination planning. An exchange of MRI coils necessary for different types of examination only had a small effect on the changeover times.]

[State-of-the-art review of lung imaging in cystic fibrosis with recommendations for pulmonologists and radiologists from the "iMAGING managEment of cySTic fibROsis" \(MAESTRO\) consortium.](#)

Ciet P., Bertolo S., Ros M., Casciaro R., Cipolli M., Colagrande S., Costa S., Galici V., Gramegna A., Lanza C. et al
European Respiratory Review, vol. 31(163)
March 2022

[Objective: Imaging represents an important noninvasive means to assess cystic fibrosis (CF) lung disease, which remains the main cause of morbidity and mortality in CF patients. While the development of new imaging techniques has revolutionised clinical practice, advances have posed diagnostic and monitoring challenges. The authors aim to summarise these challenges and make evidence-based recommendations regarding imaging assessment for both clinicians and radiologists. **Study Design:** A committee of 21 experts in CF from the 10 largest specialist centres in Italy was convened, including a radiologist and a pulmonologist from each centre, with the overall aim of developing clear and actionable recommendations for lung imaging in CF. An a priori threshold of at least 80% of the votes was required for acceptance of each statement of recommendation. **Results:** After a systematic review of the relevant literature, the committee convened to evaluate 167 articles. Following five RAND conferences, consensus statements were developed by an executive subcommittee. The entire consensus committee voted and approved 28 main statements. **Conclusions:** There is a need for international guidelines regarding the appropriate timing and selection of imaging modality for patients with CF lung disease; timing and selection depends upon the clinical scenario, the patient's age, lung function and type of treatment. Despite its ubiquity, the use of the chest radiograph remains controversial. Both computed tomography and magnetic resonance imaging should be routinely used to monitor CF lung disease. Future studies should focus on imaging protocol harmonisation both for computed tomography and for magnetic resonance imaging. The introduction of artificial intelligence imaging analysis may further revolutionise clinical practice by providing fast and reliable quantitative outcomes to assess disease status. To date, there is no evidence supporting the use of lung ultrasound to monitor CF lung disease.]

[What Influences the Way Radiologists Express Themselves in Their Reports? A Quantitative Assessment Using Natural Language Processing](#)

Crombé A., Seux M., Bratan F., Bergerot J.F., Banaste N., Thomson V., Lecomte J.C. and Gorincour G.
Journal of Digital Imaging

March 2022

[Although using standardized reports is encouraged, most emergency radiological reports in France remain in free-text format that can be mined with natural language processing for epidemiological purposes, activity monitoring or data collection. These reports are obtained under various on-call conditions by radiologists with various backgrounds. Our aim was to investigate what influences the radiologists' written expressions. To do so, this retrospective multicentric study included 30,227 emergency radiological reports of computed tomography scans and magnetic resonance imaging involving exactly one body region, only with pathological findings, interpreted from 2019-09-01 to 2020-02-28 by 165 radiologists. After text pre-processing, one-word tokenization and use of dictionaries for stop words, polarity, sentiment and uncertainty, 11 variables depicting the structure and content of words and sentences in the reports were extracted and summarized to 3 principal components capturing 93.7% of the dataset variance. In multivariate analysis, the 1st principal component summarized the length and lexical diversity of the reports and was significantly influenced by the weekday, time slot, workload, number of examinations previously interpreted by the radiologist during the on-call period, type of examination, emergency level and radiologists' gender (P value range: < 0.0001-0.0029). The 2nd principal component summarized negative formulations, polarity and sentence length and was correlated with the number of examination previously interpreted by the radiologist, type of examination, emergency level, imaging modality and radiologists' experience (P value range: < 0.0001-0.0032). The last principal component summarized questioning, uncertainty and polarity and was correlated with the type of examination and emergency level (all P values < 0.0001). Thus, the length, structure and content of emergency radiological reports were significantly influenced by organizational, radiologist- and examination-related characteristics, highlighting the subjectivity and variability in the way radiologists express themselves during their clinical activity. These findings advocate for more homogeneous practices in radiological reporting and stress the need to consider these influential features when developing models based on natural language processing.]

Radiation Therapy

[Estimating the percentage of patients who might benefit from proton beam therapy instead of X-ray radiotherapy](#)

Burnet N.G., Mee T., Gaito S., Kirkby N.F., Aitkenhead A.H., Anandadas C.N., Aznar M.C., Barraclough L.H. et al
The British Journal of Radiology

March 2022

[Objectives: High-energy Proton Beam Therapy (PBT) commenced in England in 2018 and NHS England commissions PBT for 1.5% of patients receiving radical radiotherapy. We sought expert opinion on the level of provision. **Methods:** Invitations were sent to 41 colleagues working in PBT, most at one UK centre, to contribute by completing a spreadsheet. 39 responded: 23 (59%) completed the spreadsheet; 16 (41%) declined, arguing that clinical outcome data are lacking, but joined six additional site-specialist oncologists for two consensus meetings. The spreadsheet was pre-populated with incidence data from Cancer Research UK and radiotherapy use data from the National Cancer Registration and Analysis Service. 'Mechanisms of Benefit' of reduced growth impairment, reduced toxicity, dose escalation and reduced second cancer risk were examined. **Results:** The most reliable figure for percentage of radical radiotherapy patients likely to benefit from PBT was that agreed by 95% of the 23 respondents at 4.3%, slightly larger than current provision. The median was 15% (range 4-92%) and consensus median 13%. The biggest estimated potential benefit was from reducing toxicity, median benefit to 15% (range 4-92%), followed by dose escalation median 3% (range 0 to 47%); consensus values were 12 and 3%. Reduced growth impairment and reduced second cancer risk were calculated to benefit 0.5% and 0.1%. **Conclusions:** The most secure estimate of percentage benefit was 4.3% but insufficient clinical outcome data exist for confident estimates. The study supports the NHS approach of using the evidence base and developing it through randomised trials, non-randomised studies and outcomes tracking. **Advances in Knowledge:** Less is known about the percentage of patients who may benefit from PBT than is generally acknowledged. Expert opinion varies widely. Insufficient clinical outcome data exist to provide robust estimates. Considerable further work is needed to address this, including international collaboration; much is already underway but will take time to provide mature data.]

Radiology Departments

[Management decisions of an Academic Radiology Department during COVID-19 pandemic: the important support of a business analytics software.](#)

Laghi A., Tamburi V., Polici M., Anibaldi P., Marcolongo A. and Caruso D.

European Radiology

April 2022

Objectives: To analyze the response in the management of both radiological emergencies and continuity of care in oncologic/fragile patients of a radiology department of Sant'Andrea Academic Hospital in Rome supported by a dedicated business analytics software during the COVID-19 pandemic. **Methods:** Imaging volumes and workflows for 2019 and 2020 were analyzed. Information was collected from the hospital data warehouse and evaluated using a business analytics software, aggregated both per week and per quarter, stratified by patient service location (emergency department, inpatients, outpatients) and imaging modality. For emergency radiology subunit, radiologist workload, machine workload, and turnaround times (TATs) were also analyzed. **Results:** Total imaging volume in 2020 decreased by 21.5% compared to that in 2019 ($p < .001$); CT in outpatients increased by 11.7% ($p < .005$). Median global TAT and median code-blue global TAT were not statistically significantly different between 2019 and 2020 and between the first and the second pandemic waves in 2020 (all $p > .09$). Radiologist workload decreased by 24.7% ($p < .001$) during the first pandemic wave in 2020 compared with the same weeks of 2019 and showed no statistically significant difference during the second pandemic wave, compared with the same weeks of 2019 ($p = 0.19$). **Conclusions:** Despite the reduction of total imaging volume due to the COVID-19 pandemic in 2020 compared to 2019, management decisions supported by a dedicated business analytics software allowed to increase the number of CT in fragile/oncologic outpatients without significantly affecting emergency radiology TATs, and emergency radiologist workload.]

[The effect of participation of interventional radiology team in a primary trauma survey on patient outcome.](#)

Okada I., Hifumi T., Yoneyama H., Inoue K., Seki S., Jimbo I., Takada H., Nagasawa K., Kohara S., Hishikawa T. et al

Diagnostic and Interventional Imaging, vol. 103(4) pp. 209-215

April 2022

[Purpose: The purpose of this study was to examine the survival benefits of a workflow in which an interventional radiology (IR) team participates in a primary trauma survey on patients with hemodynamically unstable trauma. **Materials and Methods:** A retrospective observational study was conducted between 2012 and 2019 at a single institution. Patients who underwent an IR procedure as the initial hemostasis were assigned to the hemodynamically stable group (HSG) or hemodynamically unstable group (HUG). The primary and secondary outcomes were survival at hospital discharge compared with the probability of survival (Ps) and the time course. **Results:** A total of 160 patients (100 men, 60 women; median age, 57.5 years [interquartile range (IQR): 31.5-72 years]) with an injury severity score of 24 (IQR: 13.75-34) were included. A total of 125 patients were included in the HSG group and 35 patients in the HUG group. The observational survival rate was significantly greater than the Ps rate by 4.9% (95% confidence interval [CI]: 1.6-8.4%; $P = 0.005$) in HSG and by 24.6% in HUG (95% CI: 16.9-32.3%; $P < 0.001$). The observational survival rate was significantly greater than Ps in HUG than in HSG ($P < 0.001$). The median time to initiate IR procedures and the median procedure time in HUG were 54 min [IQR: 45-66 min] and 48 min [IQR: 30-85 min], respectively; both were significantly shorter than those in the HSG. **Conclusion:** A trauma workflow utilizing an IR team in a primary survey is associated with improved survival of patients with hemodynamically unstable trauma when compared with Ps with a shorter time course.]

[What radiologists need to know about patients' expectations: P.A.T.I.E.N.T.S C.A.R.E.R.S A.I.M.S](#)

European Society of Radiology (ESR)

Insights into Imaging, vol. 13(1)

March 2022

[The Patient Advisory Group (PAG) of the European Society of Radiology aims to highlight, in this short paper, patients' expectations from the radiological community and support workers, throughout the patient's medical imaging journey for completion of diagnostic or interventional examinations. In order to maintain constant awareness of patients' expectations, key expectations have been summarised in an easy-to-remember mnemonic: PATIENTS CARERS AIMS. Due to disparate healthcare systems and medical imaging services in Europe, not all patient expectations can be systematically met, but healthcare providers should be mindful, when setting up new operational procedures, of the need to focus on patient-centred needs and care. At times when new or improved

technology is being introduced, such as artificial intelligence applications, telemedicine, robotisation of interventional procedures and digitised records, the impact on radiologist-patient communication and interactions should be considered.]

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