

Library Current Awareness Bulletin

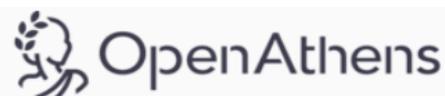
Radiology – April 2020

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Articles can be accessed from the links provided. An OpenAthens account may be required to access some of the articles. To create your free account please go to <https://openathens.nice.org.uk/>



COVID-19 Guidance

[Coronavirus \(COVID-19\) Clinical Radiology Resources](#)

The Royal College of Radiologists
 April 2020

[This is a collection of resources compiled by The Royal College of Radiologists (RCR). It includes guidance from the RCR and links to other guidance and journal articles. A discussion forum can be accessed by members.]

[COVID-19 Pandemic: Summary of Current and Emerging Issues for Radiographers](#)

The Society of Radiographers
 April 2020

[This article considers the actions that radiographers and imaging departments should be taking with regard to following national guidance and local policies for infection control, the screening of outpatients, and the safe use of personal protective equipment (PPE). It considers possible mitigation strategies to ensure sufficient staff are available and to reduce transmission risk.

[COVID-19 Rapid Guideline: Delivery of Radiotherapy](#)

NICE Guideline [NG162]
 March 2020

[The purpose of this guideline is to maximise the safety of patients who need radiotherapy and make the best use of NHS resources, while protecting staff from infection. It will also enable services to match the capacity for

radiotherapy to patient needs if services become limited because of the COVID-19 pandemic. This guideline will be reviewed as new evidence, policy and practice emerges.]

[Student Support Guidance for Allied Health Professions During COVID-19 Outbreak](#)

Health Education England

April 2020

[This guidance document is aimed at providing information to Allied Health Professions(AHP) students in England on what this means for them during this time. The guidance is focused on how students can continue to study and support the health and care system during this time of emergency.]

News

[Radiologist Census Underlines Ongoing Toll of Workforce Shortages](#)

The Royal College of Radiologists

April 2020

[The RCR annual radiology workforce report summarises data and commentary from NHS radiology leaders across the UK. The RCR workforce census data was returned before the escalation of coronavirus management.]

[Tailored PPE Guidance Posters for Imaging and Cancer Teams](#)

The Royal College of Radiologists

April 2020

[Approved by and based on PHE graphical illustrations, the [imaging](#) and [oncology-specific](#) posters display the different PPE arrangements needed in the context of “general contact” versus “aerosol generating procedures or high risk areas” and give key examples of specialty-specific settings and procedures.]

Diagnostic Radiology

[Chest X-Ray Findings in 636 Ambulatory Patients with COVID-19 Presenting to an Urgent Care Center: A Normal Chest X-Ray Is no Guarantee](#)

Weinstock, M.B. et al

The Journal of Urgent Care Medicine, Epub ahead of print

May 2020

[The primary objective was to determine what percentage of Urgent Care (UC) patients with confirmed COVID-19 had normal vs abnormal chest x-rays (CXR). The secondary objective was to describe specific imaging characteristics and the frequency of each abnormal finding on plain film radiography (CXR). A database of a large UC company in the greater New York City (NYC) area was reviewed for patients with positive SARS-CoV-2 PCR tests who also underwent CXR in UC between March 9 and March 24, 2020. Eleven board-certified radiologists, with knowledge that they were only reading imaging studies of COVID-19 patients, were each given a subset of the CXRs with oral and written instructions to re-read the films while disregarding the initial reading. Their readings were classified as normal, mild, moderate, or severe disease.]

[COVID-19 pneumonia manifestations at the admission on chest ultrasound, radiographs, and CT: single-center study and comprehensive radiologic literature review](#)

Lomoro, P. et al

European Journal of Radiology Open, vol. 7

April 2020

[This retrospective single-centre study aimed to investigate the imaging features of emerging COVID-19 pneumonia on chest ultrasound (US), radiographs (CXR) and computed tomography (CT) examinations performed at admission and to provide a comprehensive radiological literature review on ongoing radiological data from recent publications. 58 patients (36 men, 22 women; age range, 18-98 years) with laboratory-confirmed SARS-CoV-2, hospitalized in Valduce Hospital (Como, Italy), were included in the study. Multi-modality imaging findings were evaluated and compared. Literature research was conducted through a methodical search on Pubmed and Embase databases.]

[Impact of 24/7/365 Attending Radiologist Coverage on the Turnaround Time of Trauma-Related Imaging Studies Being Finalized Within 48 Hours in an Emergency Radiology Department, Offering a Perspective from a Tertiary Care Hospital](#)

Jalal, S. et al

Canadian Association of Radiologists Journal, Epub ahead of print

March 2020

[This was a retrospective chart review, where turnaround times of imaging studies for a sample of trauma patients, who had visited the emergency department of the Vancouver General Hospital between two time periods, January 1 to September 30, 2013, and January 1 to September 30, 2017, were noted.]

[Interpretation of emergency CT scans in polytrauma: trauma surgeon vs radiologist](#)

Parag, P. and Hardcastle, T.C.

African Journal of Emergency Medicine, article in press.

March 2020

[This prospective observational comparative study aimed to investigate the discrepancy in interpretation of emergency whole body CT scans in trauma patients by the trauma surgeon and radiologist and to determine if the difference in interpretation of emergency trauma CT scans has an impact on patient management. The study was conducted 1st April to 30th September 2016 at the Inkosi Albert Luthuli Central Hospital which has a level 1 trauma department. The study population comprised 62 polytrauma patients who underwent multiphase whole body CT scans as per the trauma imaging protocol. The trauma surgeons' initial interpretation of the CT scan and radiological report were compared. All CT scans reported by the radiology registrar were reviewed by a consultant radiologist. The time from completion of the CT scan and completion of the radiological report was analysed.]

[Performance of radiologists in differentiating COVID-19 from viral pneumonia on chest CT](#)

Bai, H. et al

Radiology, Epub ahead of print

March 2020

[This study aimed to assess the performance of United States and Chinese radiologists in differentiating COVID-19 from viral pneumonia on chest CT. 219 patients with both positive COVID-19 by RT-PCR and abnormal chest CT findings were retrospectively identified from 7 Chinese hospitals in Hunan Province from January 6 to February 20, 2020. At Rhode Island Hospital, 205 patients with positive Respiratory Pathogen Panel for viral pneumonia and CT findings consistent with or highly suspicious for pneumonia by original radiology interpretation within 7 days of each other were identified. Three Chinese radiologists blindly reviewed all chest CTs (n=424) to differentiate COVID-19 from viral pneumonia. A sample of 58 age-matched cases was randomly selected and evaluated by 4 American radiologists. Different CT features were recorded and compared between the two groups.]

[Radiological findings from 81 patients with COVID-19 pneumonia in Wuhan, China: a descriptive study](#)

Shi, H. et al

The Lancet: Infectious Diseases, vol. 20(4) pp. 425-434

April 2020

[Patients with COVID-19 pneumonia (confirmed by next-generation sequencing or RT-PCR) who were admitted to one of two hospitals in Wuhan and who underwent serial chest CT scans were retrospectively enrolled. Patients were grouped on the basis of the interval between symptom onset and the first CT scan: group 1 (subclinical patients; scans done before symptom onset), group 2 (scans done ≤1 week after symptom onset), group 3 (>1 week to 2 weeks), and group 4 (>2 weeks to 3 weeks). Imaging features and their distribution were analysed and compared across the four groups.]

Education and Training

[A prospective study integrating a curriculum of interventional radiology in undergraduate education: a tetra-core simulation model](#)

Theodoulou, L. et al

CVIR Endovascular, vol. 3(1)

March 2020

[According to the authors; Interventional radiology (IR) is under-represented in undergraduate medical curricula across Europe. By continuing to challenge the boundaries of IR, a rise in the demand for radiologists has been inevitable - a trend not met by a corresponding rise in the supply of radiologists. On tracing the roots of this shortage, lack of awareness of the specialty within medical trainees coupled with a global lack of IR teaching in undergraduate education seem to constitute major exacerbating factors. The purpose of this study was to identify gaps in the field of IR education and address these by implementing an international IR simulation-based course for undergraduates.]

[Feasibility of a paediatric radiology escape room for undergraduate education](#)

Liu, C. et al

Insights into Imaging, vol. 11(1)

March 2020

[A paediatric radiology escape room with accompanying tutorial was developed around key learning objectives set within The Royal College of Radiologists and European Society of Radiology undergraduate curriculum. Students were recruited from two different universities and undertook the escape room themed teaching. An 8-question single best answer (SBA) test was completed before, immediately after and at 2 weeks post-teaching to determine participant improvement and retention of knowledge. The general feedback was also collected.]

[Standards for European training requirements in interventional neuroradiology guidelines by the Division of Neuroradiology/Section of Radiology European Union of Medical Specialists \(UEMS\), in cooperation with the Division of Interventional Radiology/UEMS](#)

Sasiadek, M. et al

Journal of Neurointerventional Surgery, vol. 12(3) pp. 326-331

March 2020

[This document sets out standards for training in interventional neuroradiology (INR) in Europe. These standards have been developed by a working group of the European Society of Neuroradiology (ESNR) and the European Society of Minimally Invasive Neurological Therapy (ESMINT) on the initiative and under the umbrella of the Division of Neuroradiology/Section of Radiology of the European Union of Medical Specialists (UEMS).]

Interventional Radiology

[Eye Lens Dosimetry in Interventional Radiology: Assessment with Dedicated Hp\(3\) Dosimeters](#)

Merrachi, N-A. Et al

Canadian Association of Radiologists Journal, Epub ahead of print

March 2020

[This study aimed to quantify eye lens dose in interventional radiology and assess whether neck dosimeter is a good surrogate to evaluate eye lens dosimetry. Radiation exposure was prospectively measured in 9 interventional radiologists between May and October 2017. Standard Hp(0,07) thermoluminescent dosimeters (TLDs) were worn at the neck outside the lead apron, and 2 dedicated eye lens Hp(3) TLDs were placed just above the eyes, one midline and another at the outer edge of the left eye. Correlations between eye lens and neck TLD doses were assessed with Pearson coefficient, and linear regression was used to predict eye lens dose from neck TLD values.]

[Society of Interventional Radiology Position Statement on Endovascular Intervention for Trauma](#)

Padia, S.A. et al

Journal of Vascular and Interventional Radiology (JVIR), vol. 31(3) p. 363-369

March 2020

[Under the direction of the Society of Interventional Radiology (SIR), a multidisciplinary group of experts composed of personnel from interventional radiology, trauma surgery, orthopaedic surgery, and vascular surgery units was convened to review the current literature on endovascular interventions for trauma. This position statement outlines parameters to consider in endovascular intervention in various organ systems. As new data emerge in the future, this evolving document will continue to be updated.]

[Society of Interventional Radiology Quality Improvement Standards for Image-Guided Percutaneous Drainage and Aspiration of Abscesses and Fluid Collections](#)

Dariushnia, S.R. et al

Journal of Vascular and Interventional Radiology (JVIR), vol. 31(4) pp. 662-666

April 2020

[This Society of Interventional Radiology (SIR) Quality Improvement (QI) Guideline outlines the specifications and principles for performing high-quality percutaneous drainage or aspiration of abscesses and abnormal fluid collections (PDAFC).]

[Sources of Error in Interventional Radiology: How, Why, and When](#)

Mafeld, S. et al

Canadian Association of Radiologists Journal, Epub ahead of print

March 2020

[This article aims to provide an overview of the sources for error in interventional radiology (IR). Being both a procedure and an imaging-based specialty, IR has unique considerations as to how error can occur. However, compared to the surgical and medical literature, data on error in IR are lacking. The available IR literature is reviewed but supplemented with lessons from other specialties and the World Health Organization. Individual risks such as cognitive bias as well as system-level factors are also considered in order to generate a taxonomy for error in IR that includes the operator, patient, team, and environment.]

Patient Experience

[Barriers to not informing patients about radiation in connection with radiological examinations: Radiographers' opinions](#)

Ukkola, L. et al

Radiography, vol. 26(2) pp. e114-e119

May 2020

[Radiographers in Northern Finland were asked via questionnaire whether they had informed patients about the radiation dose and risks during the last year. If information was not provided, the reasons for it were investigated. The results were compared between a University Hospital and other departments and between different lengths of work experience. Altogether 174/272 (64%) radiographers responded to the questionnaire; 50% were from the University Hospital and 50% from other departments.]

Technology

[Automatic Annotation of Narrative Radiology Reports](#)

Krsnik, I. et al

Diagnostics, vol. 10(4)

April 2020

[This paper considers the problem of developing an automated method of labelling free-form radiology reports, as a precursor for building query-capable report databases in hospitals. The analysed dataset consists of 1,295 radiology reports concerning the condition of a knee, retrospectively gathered at the Clinical Hospital Centre Rijeka, Croatia.]

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