

Information for HPC: Radiology and COVID-19

How radiology can help fighting against COVID-19?

The team of Clinical Support, at Bayer Radiology Spain, share the compilation of information regarding the use of radiological procedures for the diagnosis and evolution of the COVID-19 virus that is currently causing a global pandemic.

Protection recommendations to avoid infections

The **ECDC** (European Centre for Disease Prevention and Control) has published a technical report to support healthcare workers managing suspected or confirmed cases of COVID-19 [1].

The **WHO** (World Health Organization) presents a infographic [2] that shows how and when to use the different Personal Protective Equipments.

Finally, we highlight this infographic taken from a publication of the **JACR** (Journal of the American college of Radiology), showing up the recommendations to the Radiology Department specifically [3].

The **Revista Intervencionismo** has published an action protocol in the Vascular and Interventional Radiology (RVI) rooms during the coronavirus outbreak (COVID-19) [4].

LITERBA (Asociación Civil de Licenciados, Técnicos y Estudiantes de Radiología de la Ciudad de Buenos Aires) has published a guide with systematic work on the use of mobile radiography in patients with isolation by COVID-19 [5].

Indications for radiology tests

SERAM has created a basic guide for imaging test indications for COVID-19 infection [6], which includes general recommendations for the radiological report, thus facilitating and simplifying its preparation in this type of patient for different modalities (RX and CT).

The **BSTI** (British Society of Thoracic Imaging) has published a guide for the radiological report of these patients [11].

Video guide for radiologists

The **ESR** (European Society of Radiology) has shared an interesting video [7], stated by Dr. Adrian Brady ESR Second Vice-President and Prof. Nicola Sverzellati from the University of Parma, covering uncovered findings about thoracic imaging of COVID-19 patients and recommendations for radiological test performing.

Societies monographs

The **ESR** has prepared an special webpage covering the COVID-19 outbreak, including the overview of European and global research and support measures [22].

The **RSNA** (Radiological Society of North America) maintains the most updated page with articles related to COVID-19 and radiological tests [12]. They are even holding webinars and podcasts to report on scientific advances in this area [12] (located on the right side of the page).

The **ACR** (American Collegue of Radiology) maintains a monograph on COVID-19 [13] and has published a series of recommendations to use DX and CT in COVID-19 patients [14].

The **BSTI** has published a monograph on the virus [10].

The **SERAM** is collecting and updating a monograph on COVID-19, giving general recommendations on the use of DX and mainly CT [9].

Image databases

A very interesting resource is access to CT images of patients with COVID-19 so that professionals can train themselves by seeing positive cases. With this objective, two companies have done a very good job:

BSTI database [15] and page to upload own patient data [16].

RSNA Database [17].

Relevant articles

- Coronavirus (COVID-19) Outbreak: What the Department of Radiology Should Know, Kooraki , Soheil et al . *Journal of the American College of Radiology (JACR)* [18].
- Radiology Perspective of Coronavirus Disease 2019 (COVID-19): Lessons From Severe Acute Respiratory Syndrome and Middle East Respiratory Syndrome, Melina Hosseiny et al ., *American Journal of Roentgenology (AJR)* [19].
- Performance of radiologists in differentiating COVID-19 from viral pneumonia on chest CT, Harrison X. Bai et al., *Radiology* [20].
- Microbiology for Radiologists: How to Minimize Infection Transmission in the Radiology Department , Sobia K. et al., *RadioGraphics* [21]

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Bibliography

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- [2] <https://www.paho.org/en/documents/infographic-covid-19-guidelines-personal-protective-equipment>
- [3] [https://www.jacr.org/article/S1546-1440\(20\)30150-2/fulltext](https://www.jacr.org/article/S1546-1440(20)30150-2/fulltext)
- [4] <http://revistaintervencionismo.com/intervencionismo/protocolo-de-actuacion-en-las-salas-de-radiologia-vascular-e-intervencionista-rvi-durante-el-brote-de-coronavirus-covid-19/> In Spanish
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- [6] https://seram.es/images/site/Recomendaciones_imagen_SERAM_COVID_19.pdf In Spanish
- [7] <https://youtu.be/QFW8CmZ0cyM>
- [8] <https://pubs.rsna.org/doi/full/10.1148/radiol.2020200642>
- [9] <https://seram.es/index.php/informacion-coronavirus> In Spanish
- [10] <https://www.bsti.org.uk/standards-clinical-guidelines/clinical-guidelines/covid-19-bsti-statement-and-guidance/>
- [11] https://www.bsti.org.uk/media/resources/files/BSTI_COVID-19_Radiology_Guidance_v1_13.03.20_9kzNSRs.pdf
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- [15] http://bit.ly/BSTICovid19_Teaching_Library
- [16] https://bsticovid19.cimar.co.uk/load.html?share_code=92b5ed53-edb4-47a4-b754-eb4701c6e3bd&share_account=88788a5b-3b16-45c7-ac38-7a7dcd1c6edc
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- [19] <https://www.ajronline.org/doi/full/10.2214/AJR.20.22969>
- [20] <https://pubs.rsna.org/doi/10.1148/radiol.2020200823>
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