

LETTER TO THE EDITOR

Radiology in times of dystopia and black swans: reflections during the COVID-19 lockdown[☆]



La radiología en tiempos de distopías y cisnes negros: reflexiones desde el confinamiento COVID-19

Dear Editor,

We read with great interest your recent reflections about radiology and its professionals in the coronavirus crisis published in our journal.¹ As Nassim Nicholas Taleb indicated, the impact of the highly improbable reveals the fragility of the foundations of our knowledge.² Until the first European explorers arrived in Australia in the 17th century, in Europe it was believed that all swans were white. The discovery of swans with black feathers broke that paradigm. For Taleb, black swans would be highly improbable and unpredictable events with a powerful impact on our lives, such as the current coronavirus crisis.² Now that we are forced to admit that the pandemic (an improbable event) will be with us for at least some time, it seems, as Slavoj Žižek argued, that it is as though we are living in a dystopia straight out of a film script in which an abnormal new normal has been created.³ A new abnormal that, for example, made it normal to bump patients in our departments, and that will undoubtedly result in future enhancement of management centred on imaging with added value for patient versus volume management or in a broad implementation of abbreviated study protocols to make optimal use of time.⁴ Moreover, the COVID situation has mandated dual healthcare pathways, with reserves of human and material resources for both, and with patient management that has inevitably been less dynamic given the need to go to great lengths to safeguard something as essential as the safety of patients and professionals. Finally, as you indicated, the pandemic has prompted a necessary return to basic technologies and abilities such as plain X-rays.¹ It has also highlighted the need to enhance the interdisciplinary knowledge of radiologists in order to tackle challenges like this and to avoid excessive specialisation.⁴

Nevertheless, following this crisis, medical imaging will be one of the areas to undergo the greatest expansion. Not just because of the things that could not be done or the new things that are to come, but also because, throughout the crisis, prior trends that were already fairly familiar have become more marked (e.g. professionals not making decisions about patients without imaging tests) and because new necessities will arise, such as those deriving from foreseeable enhancement of variations on remote medical appointments to keep patients out of hospitals. With this, inevitably, the genuinely clinical part of medical practice will decrease, thus heightening the importance of imaging and other complementary tests; derivative requirements from hospitals with morning and afternoon activity to avoid groups of people, as a new standard towards which we are heading; and emergence of new indications motivated by the need to increase our safety when caring for possible COVID-19 patients, as is already being proposed for complex surgical procedures,⁵ as well as changes to existing indications (e.g. CT instead of ultrasound in cases of acute abdomen, in order to include the chest). All this will undoubtedly lead to an increased need for and importance of imaging.

Our future, therefore, will be not so much dystopic as plagued by new challenges, faced with which radiology will undoubtedly succeed in reinventing itself once again.

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[☆] Please cite this article as: García-Figueiras R, Baleato-González S. La radiología en tiempos de distopías y cisnes negros: reflexiones desde el confinamiento COVID-19. *Radiología*. 2020. <https://doi.org/10.1016/j.rx.2020.05.003>

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Reinventing the radiological process: a real challenge!☆



Reinventar el proceso radiológico. ¡¡Un verdadero reto!!

Dear Editor,

The current COVID-19 pandemic has placed radiology at a historical crossroads which has already been analysed by various authors.^{1,2} For this new situation, it is important that we closely examine previous experiences, the present crisis and possible future scenarios.

Our experience of fighting the pandemic has provided us with a number of key lessons:

- a) The essential role played by every member of staff in the radiology department.
- b) The importance of reporting chest X-rays.
- c) The need for sufficient personal protective equipment.
- d) The benefits of remote working.
- e) The need for a flexible attitude to adapt to a changing environment.
- f) The importance of fast, structured and reliable communication within the department.
- g) The collaborative skills demonstrated by all levels of staff for making changes.
- h) The need to differentiate between opinions based on scientific arguments and those based on fear or on available resources.

In the current crisis situation we are learning to maintain protection, cleaning and social distancing measures in order to guarantee safety. These measures create certain difficulties for staff carrying out their work and are forcing us to develop a new organisational system for the running of the radiology department.

Looking to the future, experts warn of the risk of new outbreaks before an accessible vaccine becomes available and in a context of severe financial crisis. There are two possible scenarios we therefore need to analyse:

- A The scenario where no changes are made to the radiology department patient care process. There is a significant risk of longer waiting lists due to the difficulties presented

by the environment in terms of staff and equipment. This could cause blockage of the healthcare system.

- B The scenario where the radiological process is reinvented, increasing the added value provided by radiology for the clinical management of the patient. To achieve this, five main actions are required:

- 1 Replacement of the current system of requesting tests by referring the clinical problem to the radiologist and awaiting their response on the protocol to be followed.
- 2 Enhancement of artificial intelligence in the radiology care process to improve efficacy and increase the added value for the patient.
- 3 Enhancement of interventional radiology as a therapeutic alternative with a better cost/benefit ratio.
- 4 Modernisation of the training models for radiology department staff, and radiology technicians in particular, with introduction of a model based on current needs.
- 5 Review of radiology equipment with optimisation, renovation and correct sizing in each department.

Opting for the reinvention scenario may seem difficult. However, we now have a unique opportunity to do so and I am confident we can do what is necessary to advance towards a new future for radiology, by collaborating and implementing the lessons learned during the current crisis.

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☆ Please cite this article as: Pedraza Gutiérrez S. Reinventar el proceso radiológico. ¡¡Un verdadero reto!! *Radiología*. 2020. <https://doi.org/10.1016/j.rx.2020.05.005>