

ESR communication: Medical imaging's contribution in the fight against COVID-19

The COVID-19 outbreak, classified as a global pandemic by the World Health Organisation (WHO), has severely affected European countries and put strain on healthcare systems' capacities to provide optimal care to patients. The pandemic requires national healthcare systems and the European Union (EU) to mobilise a full set of instruments and resources to halt the spread of the virus. Consequently, healthcare systems are called on to implement multidisciplinary and integrated solutions to offer the right diagnostic and treatment options to patients. Medical imaging plays a part in this endeavour by offering expertise to accurately diagnose and treat COVID-19 patients.

1. Medical imaging in support of an accurate diagnosis of COVID-19

The medical imaging profession stands by the patients affected by the corona virus and deploys its expertise in the battle against the disease. Radiologists, radiographers, and other imaging professionals play an essential role in the diagnostic process, and consequently, in the care pathway for COVID-19 patients. While confirmation of the diagnosis relies on the DNA sampling technique called 'polymerase chain reaction' (PCR), medical imaging, and Computed Tomography (CT) in particular, helps identify pulmonary symptoms and stratify patients selected from first-line clinical triage in an attempt to lower the pressure on DNA testing facilities.

Experience shows that CT should not be considered a screening option for patients with mild or no symptoms. However, patients with severe respiratory symptoms may benefit from CT, a decision left to the discretion of the treating physician and dependent on the availability of local resources. CT may also be helpful in patients with milder symptoms who have co-morbidities, such as diabetes, obesity, chronic respiratory disease, etc. However, any final confirmation requires a PCR test, even when CT is highly suggestive of COVID-19 and the first PCR test was negative. In essence, medical imaging is supportive of and complementary to DNA sampling in determining the correct diagnosis and extent of COVID-19.

2. Protecting the workforce and operational change in the radiology department

In fighting COVID-19, healthcare professionals are exposed to increased risks of contamination. The ESR urges national authorities and hospitals to respect, and implement, the recommendations of the European Centre for Disease Prevention and Control (ECDC) and of the WHO. While recognising national and European procurement initiatives, such as the Joint Procurement Agreement, the ESR emphasises that governments bear the responsibility to ensure healthcare professionals are sufficiently equipped with personal protective equipment (PPE) and other resources necessary in the battle to save lives. The collapse of health systems should be avoided at any cost, it is therefore of highest significance that governments are asked to preserve the certainty of supplies to maintain an effective delivery of care.

As other hospital units, medical imaging departments should be geared towards a temporary emergency situation that calls for tightened safety measures and adjusted working procedures. When potential corona patients undergo CT, it is therefore recommended to minimise the number of staff members that enter into direct contact with the patient. Moreover, non-urgent imaging procedures should be postponed to reduce risks for staff members, and available resources thoroughly employed to support COVID-19 measures and essential care.

3. Continued delivery of care

For the medical imaging community, there is no doubt that, at present, governments should prioritise the fight against COVID-19 by implementing measures to contain the spread of the virus and to offer accurate care to infected patients. However, the ESR believes that a balanced approach is appropriate to reconcile urgent needs in relation to the COVID-19 crisis and to maintain access to high-quality and essential healthcare services for all patients. In reference to the [WHO guidelines](#), any government action should consider short-term responses to the COVID-19 crisis and, at the same time, the impact on and sustainability of quality healthcare delivery now and in the future. Hence, the ESR calls upon national governments to take into account the views of the WHO and the healthcare sector by swiftly acting and responding to the crisis with continued investments and strategic decisions to safeguard European healthcare systems.

4. Availability of imaging technologies

Amidst reports of shortages across the EU, the ESR pledges its support to the European Commission and to industry initiatives that guarantee the supply of imaging and other medical technologies. Therefore, we welcome the European Commission's proposal to delay the implementation of the Medical Device Regulation by one year. After ratification by the national governments and the European Parliament, the decision should reduce the pressure to comply with the new regulatory framework and allow manufacturers to concentrate on the production and development of medical technologies to support the fight against COVID-19.

Despite the ongoing initiatives, coordination should be taken a step further in order to identify areas and hospitals in need of medical technologies throughout Europe. The ESR relies on governments to gather information on shortages, through national and EU mechanisms that involve industry, hospitals and healthcare providers, so that any emergency can be timely addressed. Furthermore, we call on Member States to allow for the free circulation of goods, medical technologies and medicines in particular in accordance with the European Commission guidance, which is vital for the continuity of care across Europe.

5. Medical societies' contribution to healthcare systems

Undoubtedly, the COVID-19 crisis will also hamper the functioning of European medical societies. These organisations' mission is to provide continuing medical education to the health workforce and to promote best clinical practices and patient safety across Europe. Through scientific journals and medical congresses, attended by healthcare professionals and researchers from across the globe, medical societies such as the ESR drive and disseminate latest scientific breakthroughs in medicine to the benefit of quality healthcare in Europe.

As guardians of clinical practice and patient safety, medical societies will be indispensable for healthcare systems to recover and remain effective care providers after the COVID-19 pandemic. National authorities, the EU institutions and medical societies should jointly agree on a coordinated plan that acknowledges the contribution of medical societies to the delivery of healthcare, and supports medical societies in ensuring that healthcare systems can rely on trusted and scientifically sound advice from the medical sector after COVID-19.

6. A European approach to the crisis

No EU Member State can overcome the health, social and economic impact of the COVID-19 crisis by resorting to unilateral responses. The crisis requires a common European approach that transcends national interests. Even in the absence of bold competences in the area of health, the EU is expected to support the transformation of healthcare systems by investing in capacity-building, education, research and innovation. In addition to the dissemination of information on the spread of COVID-19 by the ECDC, existing EU networks should facilitate the exchange of knowledge on clinical practice and effectiveness of treatments to implement a lessons-learnt approach to the benefit of patients. While previous health crises were of another dimension, the magnitude of the COVID-19 crisis illustrates how prevention and sharing best practices should top the list of priorities in EU health policies.

The ESR welcomes European Union initiatives to address pressing health needs in response to the crisis, and the rapid mobilisation of funds to mitigate the devastating impact on healthcare systems. Furthermore, we call on the EU institutions and Member States to act in a spirit of solidarity and collaboration, across borders and sectors, to face this unprecedented health and economic challenge.

KEY MESSAGES

- While DNA sampling is required to confirm the diagnosis, medical imaging contributes to an accurate diagnosis of COVID-19 in the triage phase as well as for patients with severe respiratory symptoms or co-morbidities
- Healthcare professionals should have sufficient supplies of PPE and their working procedures must be adapted to the COVID-19 crisis to safeguard the continuity of care
- Governments should swiftly adopt measures to maintain access to high-quality essential care for corona- and non-corona patients
- While imaging and other medical technologies should be delivered to areas and hospitals that face shortages, the free circulation of medical goods should be upheld to ensure the continued delivery of care
- Medical societies' essential contribution to education, clinical practice and research should be acknowledged and translated into support measures to sustain the delivery of high-quality healthcare services
- The EU should immediately address pressing health needs and mobilise resources to enhance the resilience of healthcare systems at risk of withstanding similar crises in the future.

The ESR published a document that highlights the most important imaging features and findings of COVID-19. For more information, please click [here](#).



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