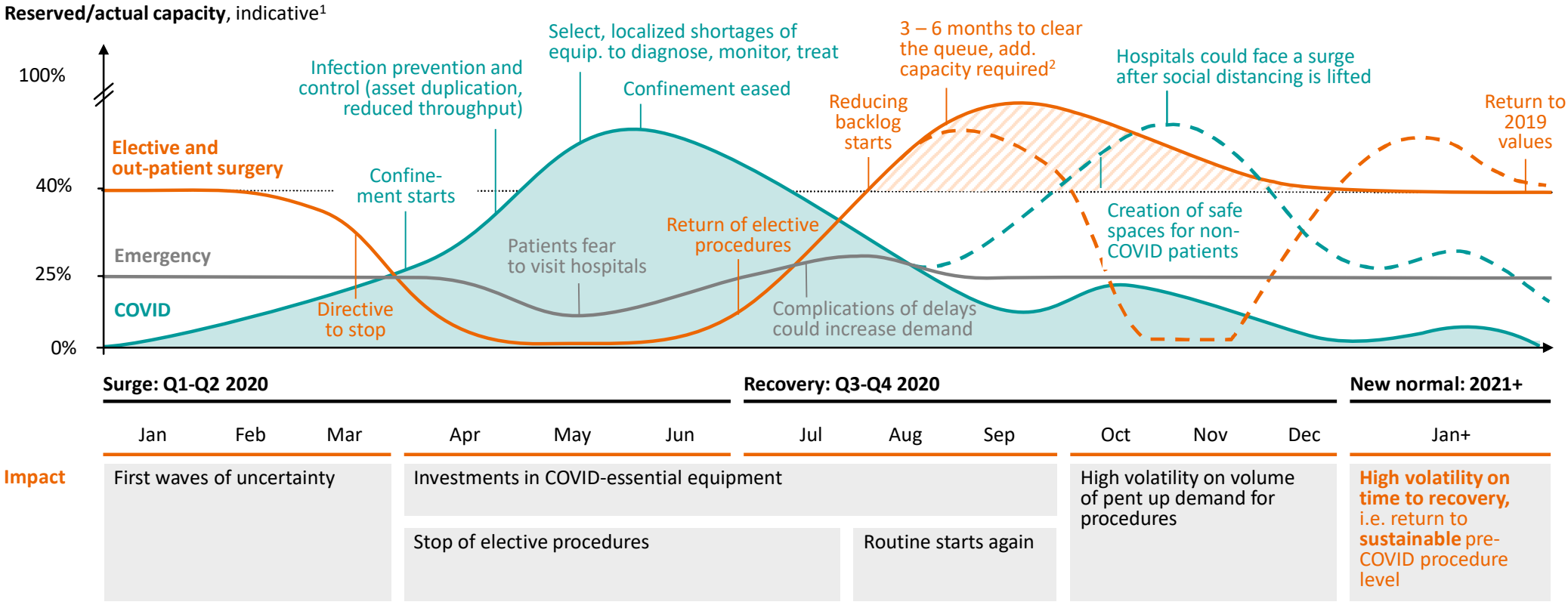
SIEMENS Healthineers

Gestione della pandemia da COVID-19

Dicembre 2020

Patrizia Palazzi
Strategic Sales Expert
patrizia.palazzi@siemens-healthineers.com

Le fasi della pandemia da COVID-19



[1] Excluding Maternity/newborn, other medical nonemergency admissions
[2] Primarily imaging, less laboratory | M&S team analysis, Analyst reports

Le priorità nelle fasi di emergenza

Investment priorities	During surge	During recovery	New normal: 2021+
Meet the surge capacity	**ICU expansion:** Construction, beds, ventilators, field hospitals		
	Capacity management solutions: Asset management, workforce management		
	COVID-19 imaging equipment: CT, Xray, Ultrasound		
	Testing solutions: SARS-CoV-2 diagnostic & antibody testing, blood gas solutions		
Create safe brick and mortar settings	**Workforce and patient protection:** PPE, set up of dedicated COVID spaces, technology enablement of remote workforce, robots		
Accelerate Virtual Health adoption	**Virtual Care:** Virtual urgent care and outpatients' visits, chronic care management, virtual support of hospitals, AI assisted care delivery		
Overall	Providers focus investment on workforce and patient safety, and supply of “COVID essentials”		

✚ In addition …

New normal themes already get momentum (see next page) …

Transforming care delivery

Improving patient experience

Acceleration of digitalization

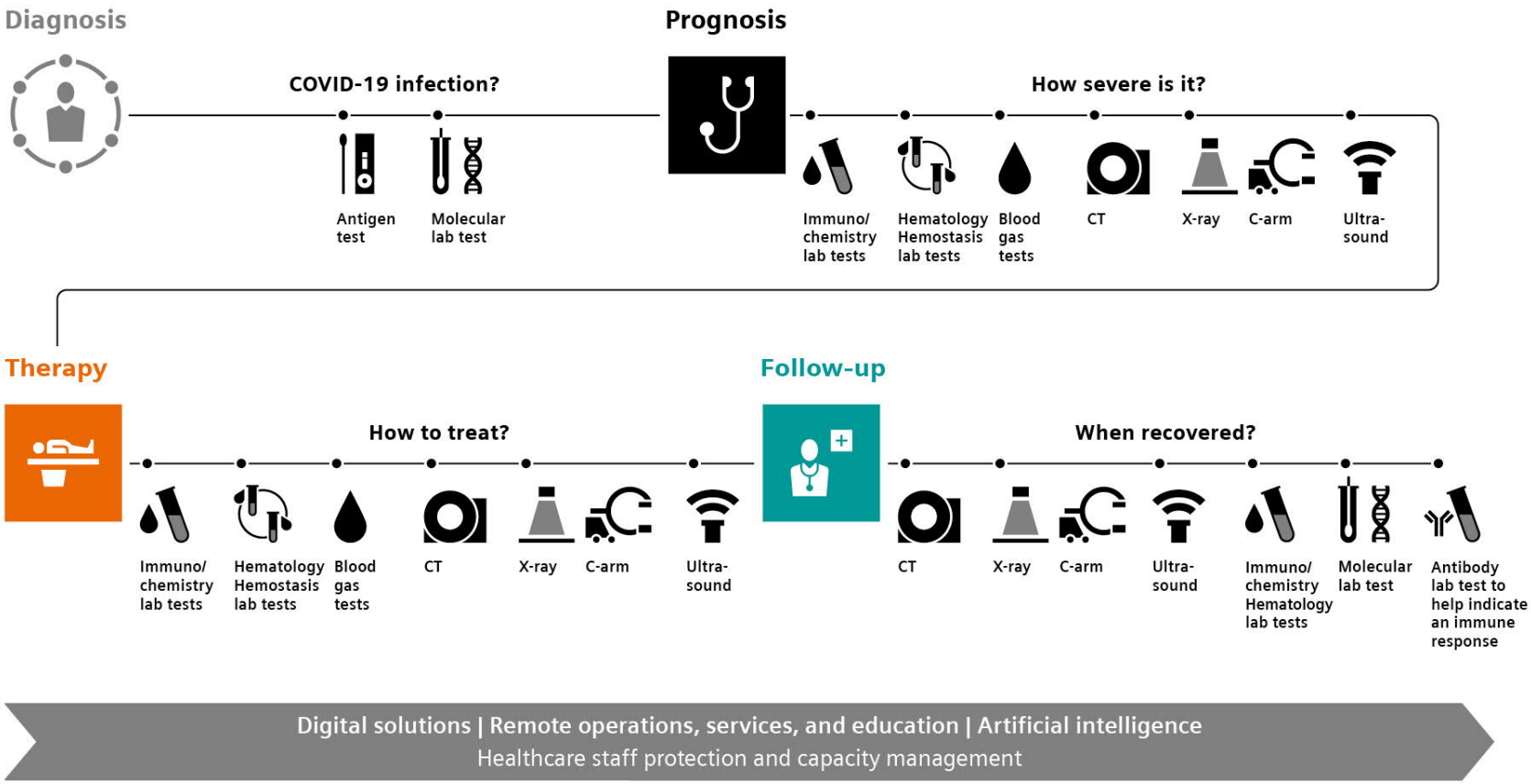
Le priorità nel “new normal”

Investment priorities in new normal phase 2021+[1]

Transforming care delivery	**Widespread adoption of telehealth**
	Acceleration of outpatient growth
	Remote workforce enablement
	Strengthening of public health
	Decentralization of testing and greater emphasis on point of care solutions
	Consolidation
Improving patient experience	**Patient demand safe and convenient access to care**
Acceleration of digitalization	**Significant acceleration of digitalization in healthcare**

1 Dependent on geography (see p. 4)

COVID-19 patient pathway[1]



This pathway is for illustration purposes only. (Status Nov. 5. 2020)

Vi supportiamo per offrire la migliore assistenza ai pazienti

In the following overview we want to highlight parts of the portfolio from Siemens Healthineers that can support healthcare providers at each stage of COVID-19 patient care: diagnosis, prognosis, therapy and follow-up.

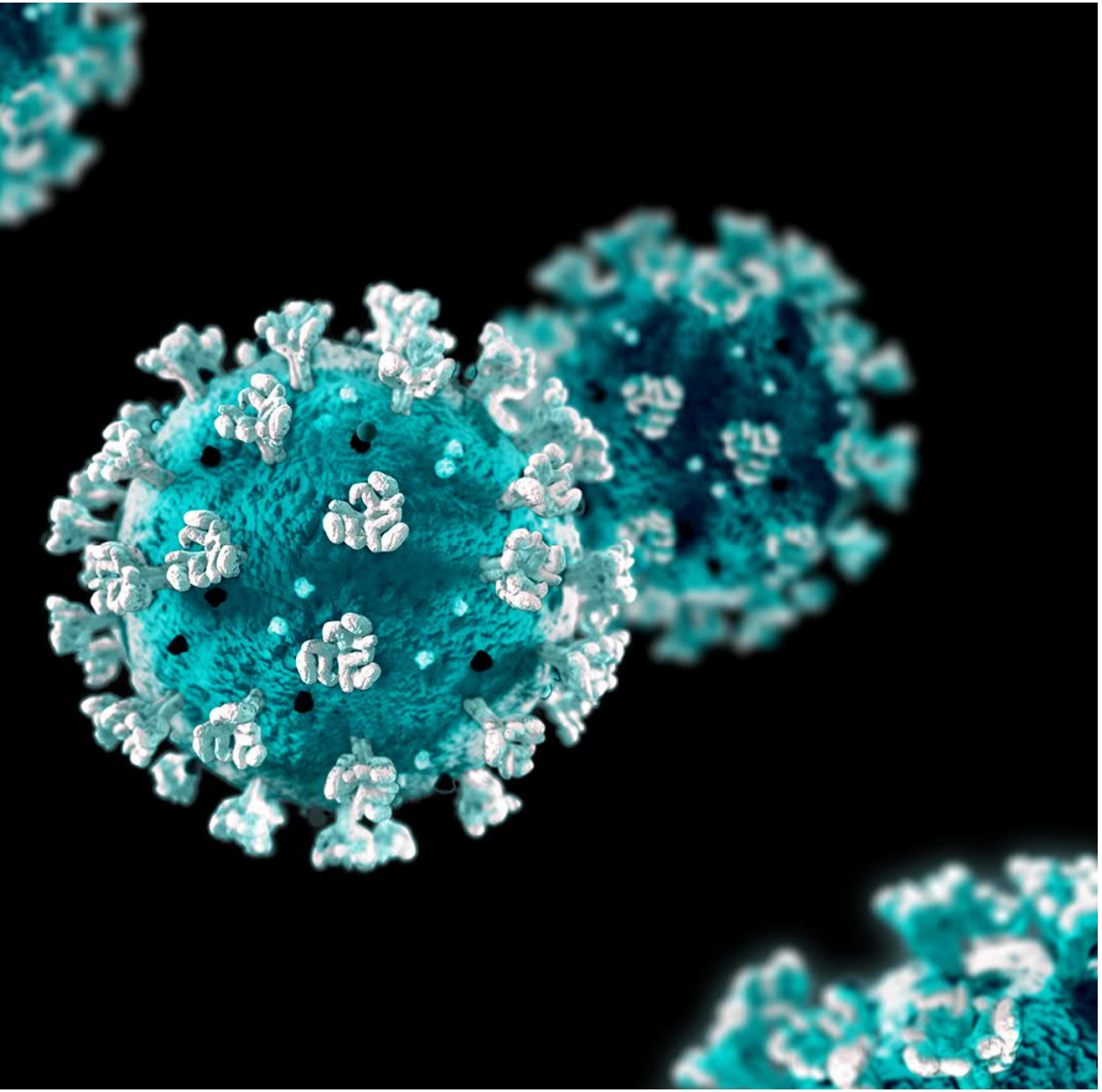
Clinical

Our medical imaging, laboratory diagnostics and point-of-care testing solutions can support physicians to make a prognosis about the severity of a COVID-19 case, help treat the patient, and assist in the follow-up to find out when the patient has recovered.

Operational

At the same time our digital health solutions, services and consulting can support healthcare providers in protecting healthcare workers and increasing healthcare delivery capacity. For example, our digital services enable medical personnel to operate systems regardless of their location and thus with a potentially lower risk of infection.

Due to high demand, availability in certain regions may be affected, please contact your local Siemens Healthineers organization for details.



Clinical

Antigen testing for rapid detection of SARS-CoV-2 virus which causes COVID-19

SIEMENS Healthineers

Detecting presence of SARS-CoV-2 viral proteins (antigens)

As society continues to navigate through the COVID-19 pandemic, there is a critical public health need to get ahead of the spread of the SARS-CoV-2 virus with a fast and simple test for all.

Rapid antigen testing at point-of-care

The CLINITEST Rapid COVID-19 Antigen Test[1] is a point-of-care cassette test that does not require central laboratory analyzers and hence eliminates transport delays and associated costs. It delivers results in 15 minutes. The CE marked test, which is distributed by Siemens Healthineers, demonstrated 96.72 % sensitivity and 99.22 % specificity based on a clinical study of 317 subjects.
This rapid antigen test makes testing available to more people across a wider variety of settings.

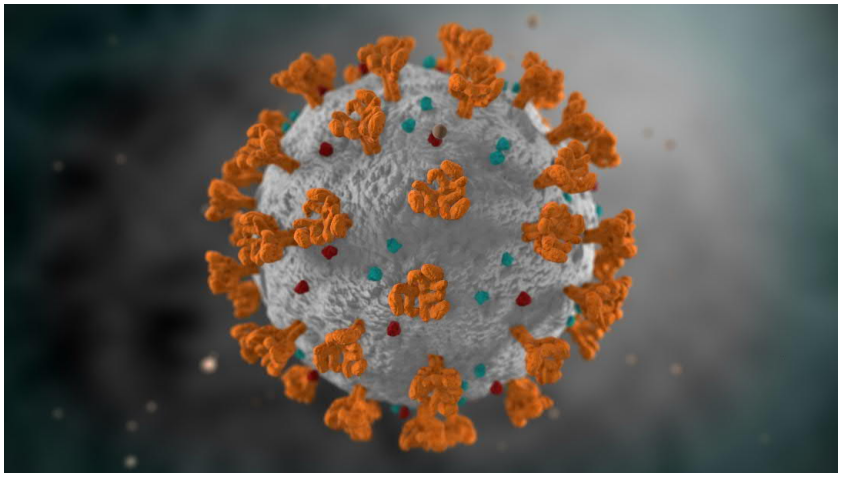
1) Under review by the U.S. FDA for Emergency Use Authorization (EUA). Product availability may vary from country to country and is subject to varying regulatory requirements.

Molecular testing for the specific detection of SARS-CoV-2 virus which causes COVID-19

SIEMENS Healthineers

Identification of the coronavirus strain causing COVID-19

Robust, highly sensitive molecular testing is critical for the detection of the coronavirus strain SARS-CoV-2 causing COVID-19. Real-time PCR testing amplifies the RNA from SARS-CoV-2 and enables its specific identification.



The FTD SARS-CoV-2 real-time PCR Assay[1]

The FTD SARS-CoV-2 real-time PCR Assay has a dual-target design for SARS-CoV-2 virus identification. It is a robust assay designed for high sensitivity, specificity and inclusivity. This test utilizes the same workflow, including PCR profile, as existing Fast Track Diagnostics (FTD) Respiratory Disease kits. It was optimized on the Biomerieux EasyMag Extraction System and the Applied Biosystems 7500 Real-time PCR Thermocycler, which are used in clinical laboratories worldwide.

1) This test has not been FDA cleared or approved. This test has been authorized by FDA under an EUA for use by authorized laboratories. This test has been authorized only for the detection of nucleic acid from SARS-CoV-2, not for any other viruses or pathogens. This test is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Act, 21. U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner. Product availability may vary from country to country and is subject to varying regulatory requirements.

Immunoassay and chemistry lab tests help assess severity and manage comorbidities in COVID-19 patients

SIEMENS Healthineers

Assessing severity and managing comorbidities in COVID-19 patients

Fast, accurate detection and monitoring of health issues and comorbidities that may arise as part of COVID-19 disease management are critical. Immunoassay and chemistry laboratory tests play a critical role in assessing severity of these health issues and managing comorbidities.

Lab testing with immunoassay and chemistry analyzers and assays

Our comprehensive portfolio of systems and extensive menu in immunoassay, chemistry, hematology, hemostasis, molecular, and urinalysis, in conjunction with automation, informatics, and services, can help support the essential role of laboratory diagnostics.
This portfolio also includes the easy-to-install Dimension® EXL 200 Integrated Chemistry System[1], which can help mobilize testing quickly in pop-up labs and triage locations.

1) Product availability may vary from country to country and is subject to varying regulatory requirements.

SARS-CoV-2 serology testing helps indicate recovery from COVID-19 and manage the pandemic

Antibody testing helps manage the COVID-19 pandemic

SARS-CoV-2 serology tests play a critical role in managing COVID-19 patients. They detect an immune response in infected individuals and populations, which may be prove useful to determine immunity. As the pandemic evolves, this capability will be extremely valuable in surveillance of the disease and in the event of future outbreaks. Rapid and accurate antibody testing on a large scale is vital to address the challenges of the COVID-19 pandemic.

The SARS-CoV-2 Total antibody assay[1]

The SARS-CoV-2 Total antibody assay detects both IgM and longer-lasting IgG antibodies with high sensitivity for recent and prior infection. It can be used effectively for broad population testing with the accuracy, speed, and large availability that's needed. The Total assay is available on multiple high-throughput analyzers including the Atellica® IM Analyzer, ADVIA Centaur® XP/XPT Immunoassay System and Dimension Vista® and Dimension® EXL™ Systems.

1) This test has not been FDA cleared or approved. This test has been authorized by FDA under an EUA for use by authorized laboratories. This test has been authorized only for detecting the presence of antibodies against SARS-CoV-2, not for any other viruses or pathogens. This test is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner. Product availability may vary by country and is subject to varying regulatory requirements.

Atellica Diagnostics IT and Aptio Automation can help labs adapt to COVID-19 workflow changes quickly

SIEMENS Healthineers

COVID-19 testing protocols are effecting lab workflows

As the COVID-19 pandemic evolves, healthcare providers need to quickly and efficiently diagnose and treat the many clinical complications that often accompany a COVID-19 diagnosis. This can result in significant deviations to typical lab testing volumes and disruptions to established lab workflows.

Customize and automate your COVID-19 lab workflows

Siemens Healthineers provides a comprehensive multidisciplinary workflow solution to optimize testing of COVID-19 patients. Atellica® Diagnostics IT helps labs identify and drive optimized workflows with robust solutions that enhance visibility, automate processes, and centralize management across instruments, automation, sites, and networks.

By coupling Aptio® Automation with Atellica Diagnostics IT, labs can further enhance COVID-19 workflows by minimizing tube touches, reducing manual tasks, and automating workflows.

Broad portfolio for diagnosis, treatment, and management of coagulation abnormalities in COVID-19 patients

SIEMENS Healthineers

COVID-19 patients are experiencing serious —and sometimes fatal— clotting abnormalities

While it's not unusual for infections to raise the risk of clotting, the COVID-19 virus is associated with an unprecedented range of clotting-related disorders in affected patients. Our coagulation tests are playing an important role in the diagnosis, treatment, and management of coagulation abnormalities in COVID-19 patients.

Scalable hemostasis testing and a comprehensive assay portfolio

Following a COVID-19 diagnosis, hemostasis testing, therapy, and monitoring play an imperative role in COVID-19 patient management. Our broad portfolio of systems and proven INNOVANCE® assays—including INNOVANCE D-Dimer, INNOVANCE Antithrombin, and INNOVANCE Heparin—will help you gain efficiencies, increase operational workflow and throughput, and better manage your resources.

Blood gas systems are used in the management of ventilated patients under respiratory distress

Blood gas testing is often required for patients undergoing evaluation for respiratory distress and/or signs of dyspnea

These conditions are caused by various diseases that affect breathing, COVID-19 is one of those. Arterial blood gas (ABG) tests measure pH (acidity and alkalinity) and the levels of oxygen (pO_2) and carbon dioxide (pCO_2). The ABG test provides a status of the patient's oxygenation levels, enabling caregivers to determine if adjustments to ventilator settings or other treatments are required.

Blood Gas Solutions from Siemens Healthineers

The RAPIDPoint® 500e Blood Gas System and epoc® Blood Analysis System are important analyzers supporting COVID-19 response efforts, where blood gas testing plays a critical role in managing infected patients and monitoring their respiratory distress. The analyzers integrate seamlessly into hospital networks with the Point of Care Ecosystem™, which offers remote management of operators and devices.

Product availability may vary from country to country and is subject to varying regulatory requirements.

Computed Tomography (CT) helps to evaluate COVID-19 patients and survey their progression

SIEMENS Healthineers

Evaluation of pneumonia with CT

High resolution chest CT images help assess the severity of the lung involvement in COVID-19 patients, especially those with severe symptoms. This includes evaluation of the progression and remission of the disease.[1]

CT with SOMATOM go. platform

Scanners from the SOMATOM go. platform[2] are recommended for fast delivery requests in areas where COVID-19 is prevalent. The innovative mobile CT workflow of SOMATOM go. platform scanners permits technologists to maintain a distance of at least 1.5 m (5 ft) from potentially infected patients. Tin Filter technology is available in all our scanners offering radiation exposure control when surveying the patient's progression.[3]

These scanners can also be installed in mobile units to provide access in high-demand or in isolated areas.

1) Fang et al., Sensitivity of Chest CT for COVID-19: Comparison to RT-PCR, Radiology 2020
2) Mainly SOMATOM go.Up, SOMATOM go.All, SOMATOM go.Top
3) Kang et al., Recommendation of low-dose CT in the detection and management of COVID-19

Radiography supports the initial assessment of severity and monitoring of lung involvement of COVID-19 patients

Evaluation of pneumonia with radiography

Radiography supports initial assessment of severity and monitoring of disease progression. Chest radiographs can show characteristic signs of viral acquired pneumonia. Typical radiographic findings include airspace opacities, ground-glass opacity (GGO), and consolidation.

Radiography with MULTIX Impact

MULTIX Impact is a flexible, modular radiography system which covers a wide range of clinical requirements. Siemens Healthineers offers specific solutions for deployment in temporary COVID-19 diagnostic and therapeutic setups. These systems can also be installed in stationary indoor and outdoor container solutions to provide access in high-demand or in isolated areas. We can provide these container solutions together with the system. To further support this, MULTIX Impact is easy to use and comes with a complete remote and online training concept.

Due to high demand, availability in certain regions may be affected, please contact your local Siemens Healthineers organization for details.

Mobile radiography systems reduce the need for transportation of COVID-19 patients

Monitoring of pneumonia with mobile radiography

Mobile radiography systems help with the monitoring of disease progression in particularly severe cases. The devices can be driven directly to patients in the intensive care unit, for example, eliminating the need for patients to be transported through the hospital.

Mobile radiography with MOBILETT Elara Max

MOBILETT Elara Max is a lightweight, fully digital mobile radiography system that can be quickly deployed wherever needed. The system offers improved hygienic conditions thanks to antimicrobial coating, fully integrated cables, and smooth and closed surfaces.

Due to high demand, availability in certain regions may be affected, please contact your local Siemens Healthineers organization for details.

Cios mobile C-arms – an option for lung imaging
Bring imaging to the patient and prevent contamination

SIEMENS Healthineers

Staging and monitoring of pneumonia patients

Chest radiography may help to stage or triage pneumonia patients quickly and may help to monitor the progression of the disease.[1] This is in particular important for patients who should not be transported through the hospital to prevent contamination.

Cios mobile C-arms – an option for lung imaging[2,3]

Cios Alpha and Cios Spin can provide high-quality chest digital radiography (DR) images. The systems can be moved easily into front-door staging units as well as into ICUs. Cios user interfaces are designed for optimal usability in stressful situations. Cios mobile C-arms can be positioned flexibly according to the imaging needs in standing, sitting or laying patients. The systems offer antimicrobial coating, smooth and closed surfaces and approved cleaning and draping protocols. In addition, Cios Spin provides 3D imaging suitable to guide pulmonary interventions[3].

1) Pan et al. Intensive Care Med 2020; 46:573-575; https://doi.org/10.1007/s00134-020-05964-0
2) Cios Mobile C-arms are not specifically designed for COVID 19 diagnosis
3) Cios Mobile C-arms may be used for chest digital radiography in emergency situations if portable x-ray is not available.
4) Gildea et al. J Bronchol Intervent Pulmonol 2020; 27:153-155; https://www.ncbi.nlm.nih.gov/pubmed/32209919

Ultrasound: a fast, simple and mobile clinical imaging solution with strong correlation to CT findings[1]

SIEMENS Healthineers

Diagnosis of pneumonia with ultrasound

When CT isn't readily available, for example in emergency rooms and intensive care units, lung ultrasound is strongly recommended for acute respiratory failure and may be a useful alternative aid during the COVID-19 outbreak:

- Bedside ultrasound imaging may reduce cross contamination
- Dedicated report and customized protocols for lung and FAST[2] examination
- Easily movable to locations, where it is needed

Ultrasound with ACUSON Freestyle

Wireless ultrasound transducers with integrated controls provide unrestricted access to practitioners at the point of care, reducing the source of infections with cable-free, fully-immersible transducers and custom-fit covers

1) Poggiali E., et al., Can Lung US Help Critical Care Clinicians in the Early Diagnosis of Novel Coronavirus (COVID-19) Pneumonia? RSNA, March 13, 2020
2) FAST: **F**ocused **A**ssessment with **S**onography in **T**rauma

Magnetic Resonance (MR) images to support physicians in detecting cardiac injury

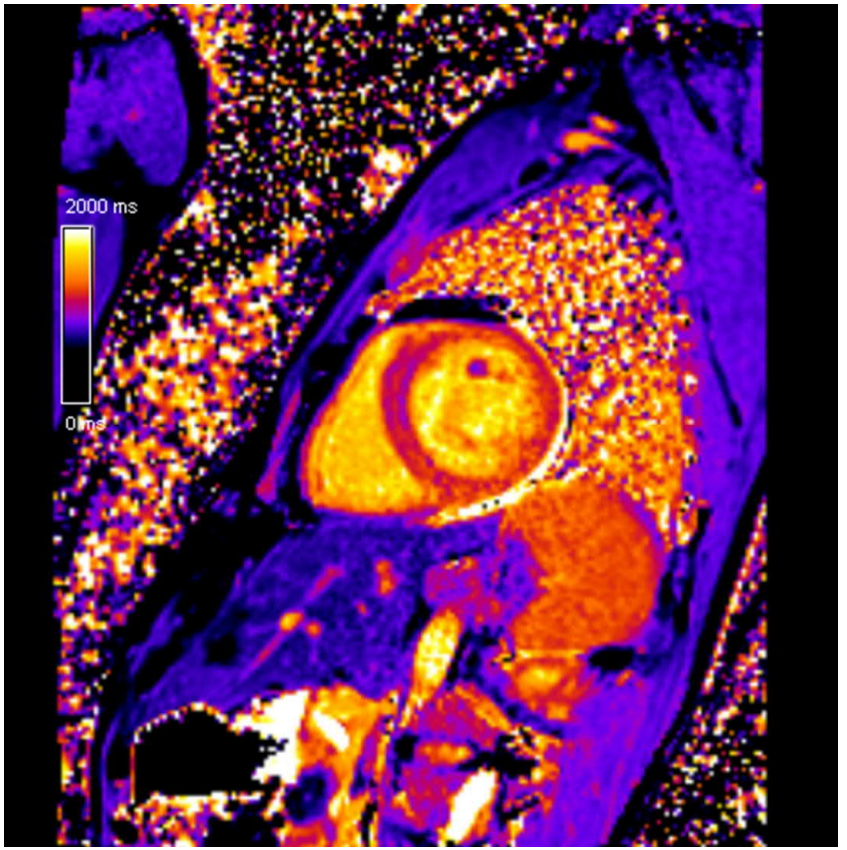
SIEMENS Healthineers

Diagnosis of cardiac injury with MRI

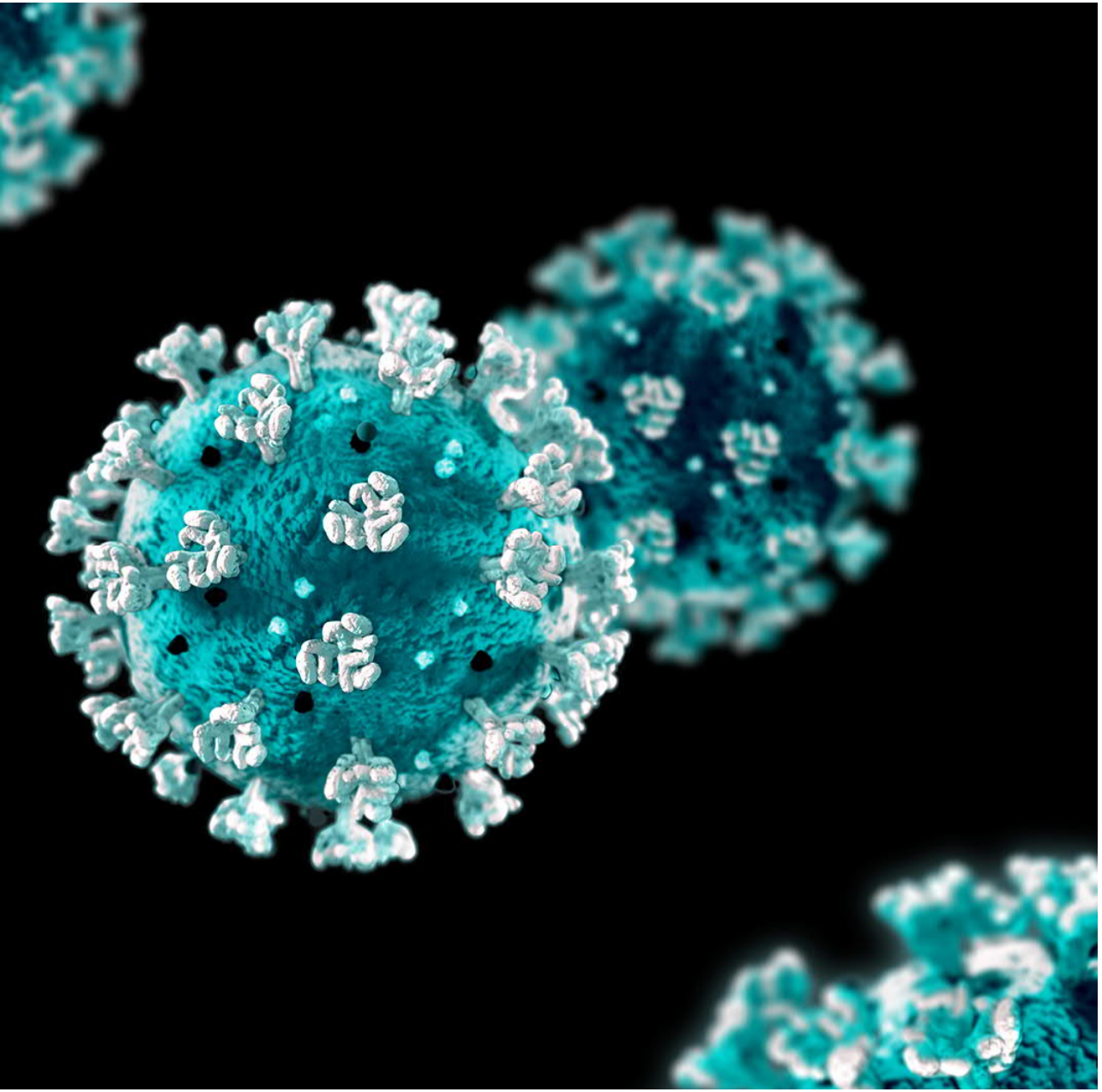
Recent studies in China and Italy[1,2,3] have indicated that myocardial injury is common among patients hospitalized with COVID-19 and is associated with a higher risk of in-hospital mortality. Cardiovascular MRI (CMR) can be useful in supporting physicians detect and monitor cardiac injury (e.g. myocarditis) as a possible complication of COVID-19, according to the Society for Cardiovascular Magnetic Resonance (SCMR).

Cardiovascular MRI with 1.5 and 3T MAGNETOM systems

To support CMR we offer SCMR Recommended Protocols, clinically optimized exam protocols for 1.5 and 3T MAGNETOM systems, for download. To help perform comprehensive CMR exams, we also offer a free, 90 days trial license for our standardization and automation technology Cardiac Dot Engine.[4]



1) Shi S, Qin M, Shen B, et al. Association of Cardiac Injury With Mortality in Hospitalized Patients With COVID-19 in Wuhan, China. *JAMA Cardiol.* Published online March 25, 2020. doi:10.1001/jamacardio.2020.0950
2) Guo T, Fan Y, Chen M, et al. Cardiovascular Implications of Fatal Outcomes of Patients With Coronavirus Disease 2019 (COVID-19). *JAMA Cardiol.* Published online March 27, 2020. doi:10.1001/jamacardio.2020.1017
3) Inciardi RM, Lupi L, Zaccone G, et al. Cardiac Involvement in a Patient With Coronavirus Disease 2019 (COVID-19). *JAMA Cardiol.* Published online March 27, 2020. doi:10.1001/jamacardio.2020.1096
4) Not available in all countries.



Operational

Hybrid molecular imaging systems can help extend capacity for Computed Tomography imaging

Hybrid PET/CT and SPECT/CT provide CT imaging

High resolution chest CT images help assess the severity of the lung involvement in COVID-19 patients.[1] Modern hybrid molecular imaging systems can be used as standalone Computed Tomography (CT) systems to perform a full range of CT applications, including high resolution lung imaging protocols. Hybrid imaging systems can thereby extend CT capacity during peak demand.

High resolution Computed Tomography

Biograph™ PET/CT and Symbia™ SPECT/CT systems can be used as standalone Computed Tomography systems.[2] Based on your individual strategy to separate COVID-19 patients from other patients and staff, these scanners can and perform high resolution chest CT imaging to aid in assessing the severity of the lung involvement in COVID-19 patients, or serve as back-up for non-COVID-19 patient backlog.

1) Fang et al., Sensitivity of Chest CT for COVID-19: Comparison to RT-PCR, Radiology 2020
2) Note: Symbia T and Intevo Excel are not indicated for use as a Standalone CT

Support radiology to evaluate and survey progression of COVID-19 patients with Radiation Therapy CT Simulators

SIEMENS Healthineers

Evaluation of pneumonia with CT Simulators

High resolution chest CT images help assess the severity of the lung involvement in COVID-19 patients.[1] Modern CT Simulators provide the same high resolution diagnostic capabilities as CT scanners in Radiology. They have access to lung imaging protocols allowing the entire lung to be covered in less than 10 seconds. Innovations like the innovative tablet-based mobile workflow allows technologists to maintain a safe distance from potentially infected patients.[2]

In times of staff shortage reduce Organs At Risk (OAR) contouring time with AI AutoContouring[3]

Automatic *syngo*.via based AI AutoContouring supports fast delineation of organs at risk. Automating this routine workflow helps save time in radiation therapy departments, which can help extend capacity for CT imaging.

SOMATOM go.Sim

SOMATOM go.Open Pro

SOMATOM Confidence RT Pro

SOMATOM go.Up RT

SOMATOM CT Simulators supported by *syngo*.via based AI AutoContouring

1) Fang et al., Sensitivity of Chest CT for COVID-19: Comparison to RT-PCR, Radiology 2020
2) Mobile workflow is available on the SOMATOM go. platform
3) Optional

Remote scanning assistance helps reduce staff exposure to infectious patients in diagnostic imaging

SIEMENS Healthineers

Staff protection with remote scanning assistance

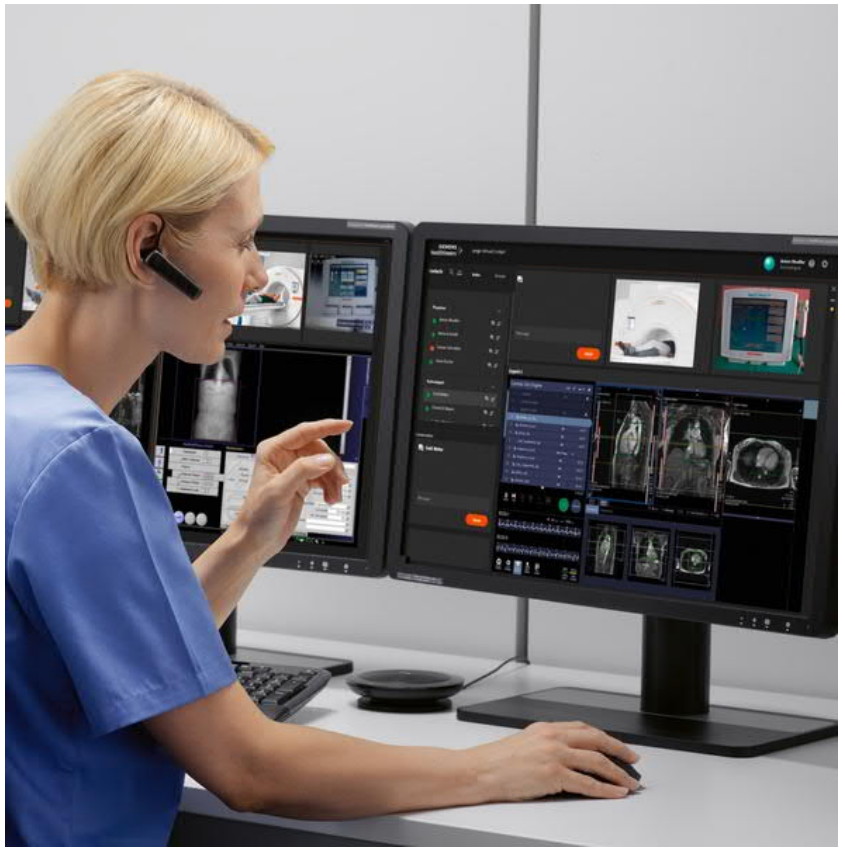
Social distancing and preventing unnecessary exposure to potentially infectious patients are just two effective measures to help protect staff and patients. Remote operations may also help reduce staff exposure to infectious patients and may allow employees under quarantine, to continue working.

Remote scanning assistance with *syngo* Virtual Cockpit

syngo Virtual Cockpit enables remote scanning assistance to imaging personnel – regardless of their geographic location. Assistance can even be provided from home with a simple laptop.[1]

With *syngo* Virtual Cockpit, your best technologists can assist on up to three exams at once, distributing their skills and experience across sites in real time.

syngo Virtual Cockpit Lite offers remote scanning assistance from any networked computer within your facility, and enables access to one scanner at a time using *syngo* Expert-i. Both of these remote solutions may help limit staff exposure to the Coronavirus.[2]

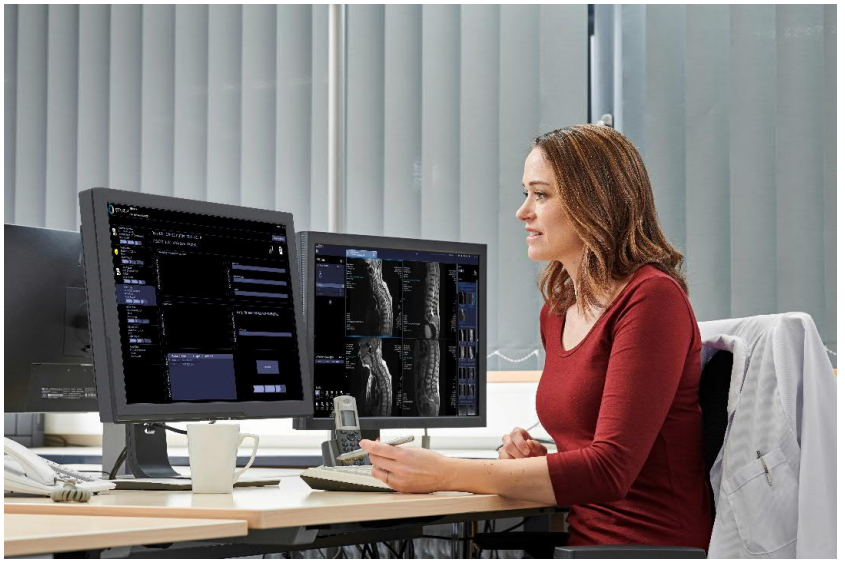


1) A secure VPN connection to the department network is required. Other appropriately trained personnel must be in the room to care for patient, position the patient, and manually start the scan.
2) These solutions are not clinically proven or guaranteed to reduce exposure to COVID-19.

Contract expert radiologists to overcome shortage of qualified staff or to expand capacity in times of peak demand

Flexibly expand diagnostic capacity with expert radiologists

As the demand for diagnosis of COVID-19 cases increases, healthcare providers are challenged to secure or even ramp up capacity of expert radiologists, despite potential staff shortages from quarantine or sick leave. Simple, flexible, and scalable access to expert radiologists can help to master increasing case volume or to overcome staff shortage in radiology departments



Contract expert radiologists on our Teleradiology Marketplace BEFUND24[1]

Healthcare providers with increasing case volume or staff shortage in radiology use BEFUND24 to access expert radiologists, who provide written, digitally documented, expert-validated medical reports, reliably and at high quality. BEFUND24 manages data transfer, administrative and financial processes, and brings together healthcare providers and expert radiologists on a secured future-oriented platform.

1) The products/features (mentioned herein) are not commercially available in all countries. Their future availability cannot be guaranteed.

Applying Artificial Intelligence (AI) to diagnostic imaging with potential to support COVID-19 diagnosis and assess severity

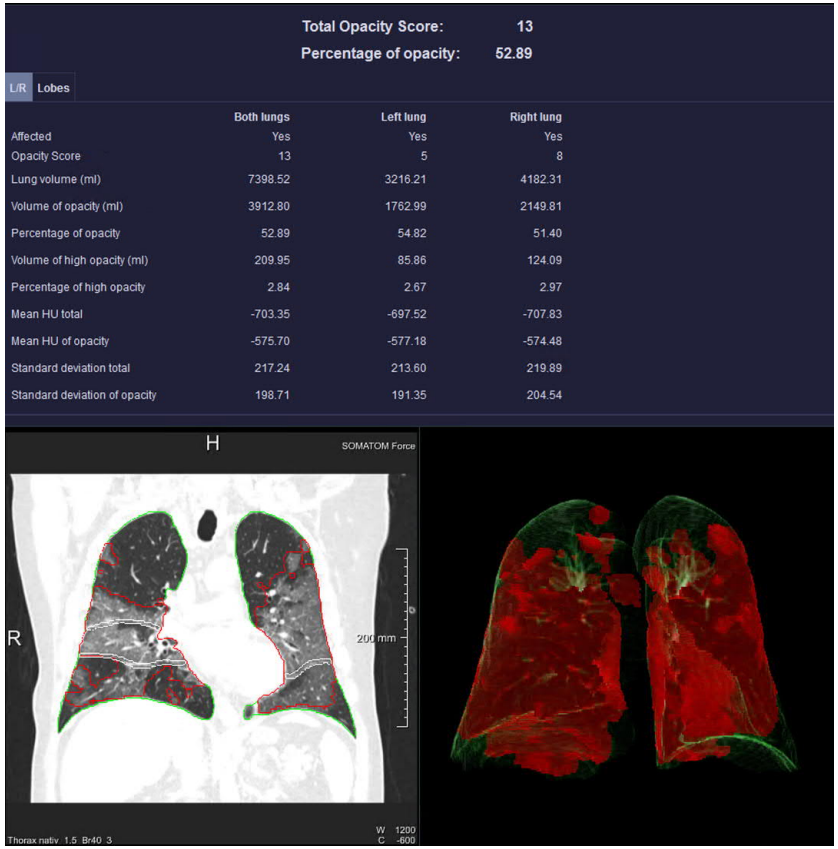
SIEMENS Healthineers

Supporting radiologists in evaluation by applying AI to images

With the inclusion of radiological findings from chest imaging in confirming COVID-19 diagnosis the workload of radiologists is increasing. AI-powered analysis of chest images has the potential to alleviate the workload of radiologists by supporting them to diagnose diseases, assess their severity and monitor their progression.

AI COVID-19 algorithms for trial and clinical routine

The research prototype CT Pneumonia Analysis[1] is designed to automatically identify and quantify abnormal patterns in the lung, which can be associated with COVID-19, and to compute severity measures. This prototype is available for trial for free on *syngo*.via Frontier, AI-Rad Companion research and *syngo*.via openApps. Beyond research, the AI-Rad Companion Chest X-ray[2] automatically characterizes radiographic findings for lung X-ray, including atelectasis and consolidations, which correlate with signs of COVID-19 induced pneumonia.



1) For Research Use Only. Not for use in diagnostic procedures.
2) AI-Rad Companion Chest X-ray is currently not for sales in the United States and other selected countries.

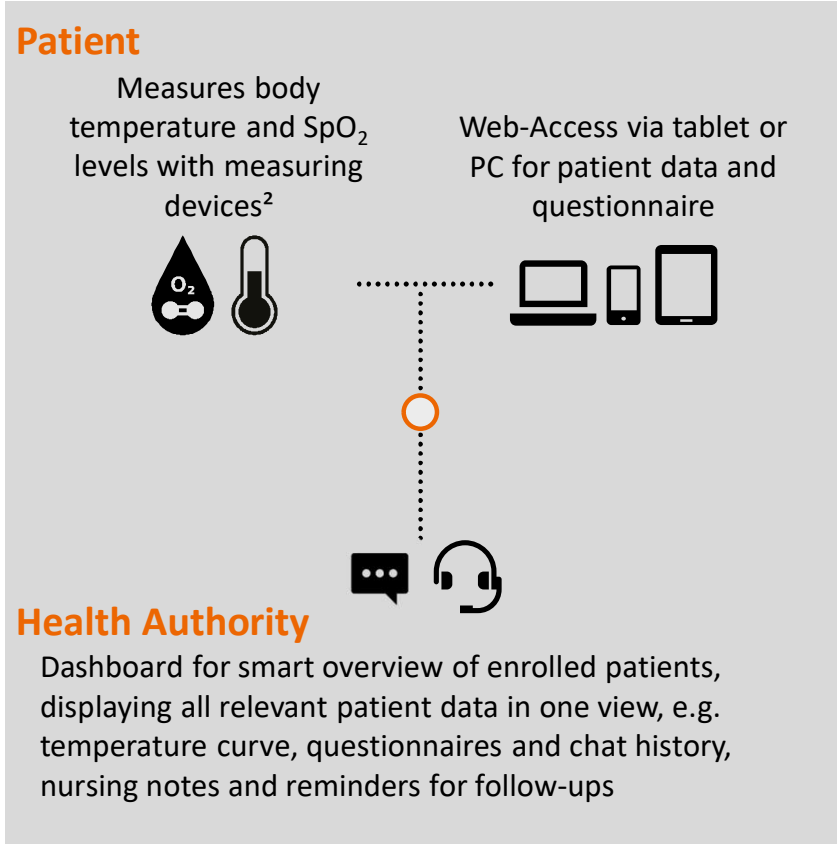
Remote care management of potential COVID-19 patients may help free up inpatient capacity

Supervising infected patients at home

The highly infectious nature of SARS-CoV-2 demands that infected patients be quarantined. For healthcare providers, keeping patients with no or mild symptoms out of doctor's offices, emergency clinics or hospitals is essential, particularly during times of peak demand. Home quarantine and self-monitoring can be an option for health authorities; yet it is crucial that these patients continue to receive supervision.

Remote care management solution for COVID-19

This solution remotely connects patients – for example those in quarantine – with physicians. It promptly informs physicians of the progress of potential COVID-19 symptoms, making it possible to monitor these symptoms and take appropriate action. This may help free up inpatient capacity for COVID-19 patients with severe symptoms.[1]



1) Remote Care Management solution for COVID-19 is not part of teamplay myCare Companion. This solution is developed, sold and distributed by Austrian Institute of Technology (AIT) in cooperation with telbiomed Medizintechnik und IT Service GmbH. For further information please contact your local Siemens Healthineers organization
2) Measuring devices are not part of the solution

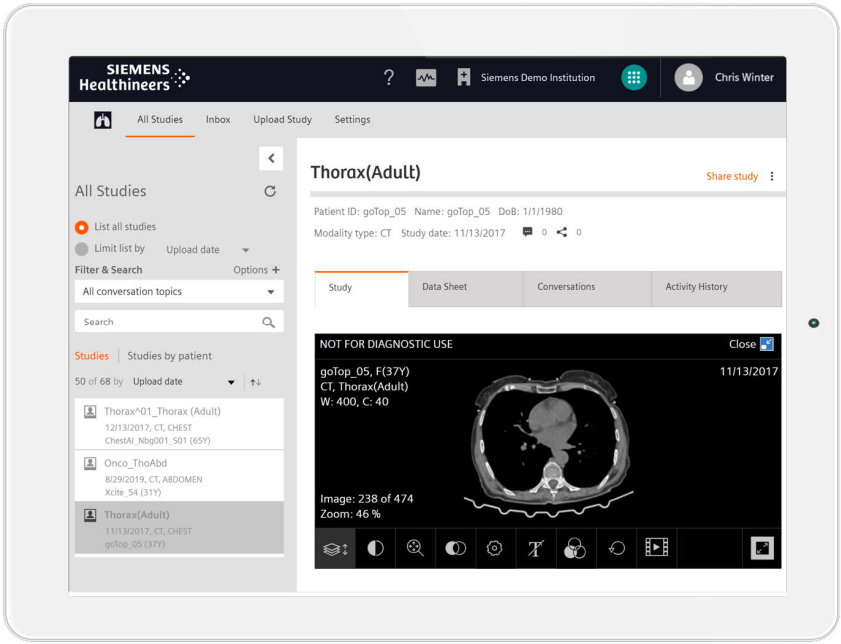
Sharing image studies in a secured environment to expand reading expertise and capacities – with teamplay Images

Expand reading expertise and capacities by sharing image studies

Imaging can help evaluate pulmonary damage suffered by a patient as a result of infectious acquired diseases, including COVID-19. Digital collaboration capabilities can enable staff to support clinical personnel in high-demand areas remotely and may allow employees who are under quarantine to continue to assist in reading images. Participation of expert radiologists located in different time zones can allow shared images to be reviewed efficiently.

Image sharing in a secured environment with teamplay Images

teamplay Images is a secure, cloud-based image sharing service for DICOM files.[1] It provides access to imaging studies quickly and easily from desktop computers or tablets and enables secured sharing and discussion of relevant cases beyond the institution. Appropriate privacy settings can be selected in order to ensure patient data safety.



Enabled by
teamplay digital health platform

1) The DICOM viewer is not intended for diagnostic display. Due to regulations data exchange between data center regions is restricted.
The products/features/service offerings are not commercially available in all countries. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

Quick and easy communication in a virtual community on mobile devices - with partner app Join

Staff protection through digital communication and collaboration

The spread of COVID-19 is likely to affect healthcare workers. Social distancing and the prevention of unnecessary exposure to potentially infectious patients are the most effective measures to protect medical staff, especially at times when demand is high. New, digital ways of augmenting communication and collaboration by sharing patient information, e.g. image sharing or video calling, reduce the need for personal interaction.

Digital medical communication with Join[1]

Join can help health systems to create new ways of working, aiming to protect staff and increase employee availability beyond physical locations. Join enables medical professionals to collaborate from anywhere at any time via chat, audio, video calls, and sharing of documents and medical images. Join leverages the infrastructure of the teamplay digital health platform for easier installation and setup into the healthcare provider workflow.

Enabled by
teamplay digital health platform

1) Siemens Healthineers is neither the provider nor reseller nor legal manufacturer of the 3rd party applications in Siemens Healthineers Store. Any claims made for 3rd party applications and all warranty obligations are the sole responsibility of the legal manufacturer and not Siemens Healthineers. Additionally, the 3rd party applications mentioned may not be commercially available in all countries.

Temporary workforce helps build up capacity in areas of high demand or compensate for sick leave

Capacity ramp up with temporary workforce

The rapid spread of COVID-19 cases, combined with the absence of employees because of quarantine or sick leave, presents significant risks and challenges to healthcare providers who must secure and even ramp up capacity.

Temporary, fully vetted talent from Siemens Healthineers

We offer workforce solutions that provide highly skilled radiographers, trained and supported by Siemens Healthineers.

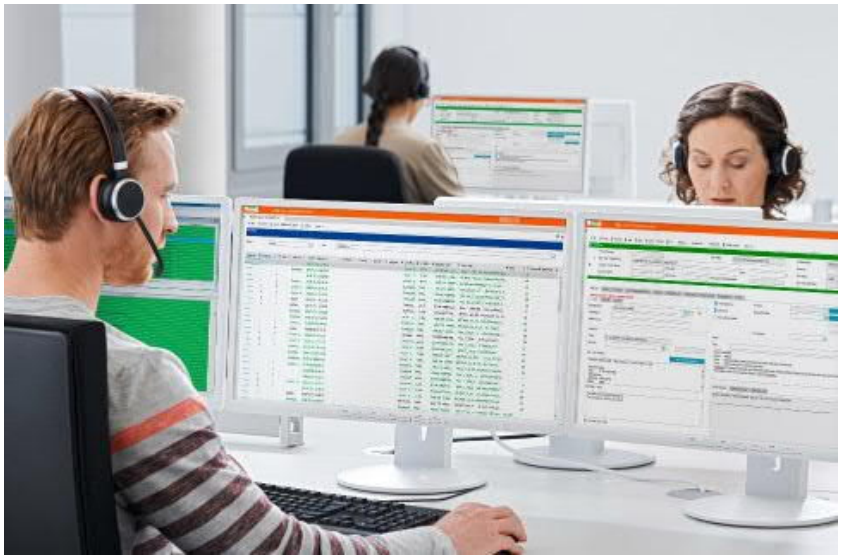
- FlexForce Tech[1] is a service where we address workforce challenges with flexible contract terms.
- Workforce Responders are Applications Specialists from Siemens Healthineers, who can assume the roles of technicians as additional workforce members during the COVID-19 pandemic.

The products/features and/or service offerings (here mentioned) are not commercially available in all countries and/or for all modalities. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.
1) Service only available in USA and Germany (German name: MTRA on Demand), this is released for all in-vivo modalities, not for in-vitro.

Customer Services that support your equipment performance

Minimized operational disruptions

When the right diagnosis can make a difference in the COVID-19 care path, healthcare providers need to rely on equipment performance. Real-time 24/7 system monitoring, proactive, remote and digital services such as our Guardian Program, teamplay Fleet or Smart Remote Services can increase the required uptime.



Equipment Performance Services and Connect Platforms

When no access to a facility is possible, Siemens Healthineers Smart Remote Services (SRS) experts can use advanced troubleshooting tools to remotely restore operations.[1] Our application support assists with real-time access to application experts and our teamplay Fleet online portal enables 24/7 performance and maintenance management of critical equipment. Moreover Siemens Healthineers offers a service plan that integrates continuous updating and upgrading of the fleet – which for instance includes access to cybersecurity updates.

The products/features and/or service offerings (here mentioned) are not commercially available in all countries and/or for all modalities. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.
1) Precondition: the equipment needs to be connected to Smart Remote Services (SRS)

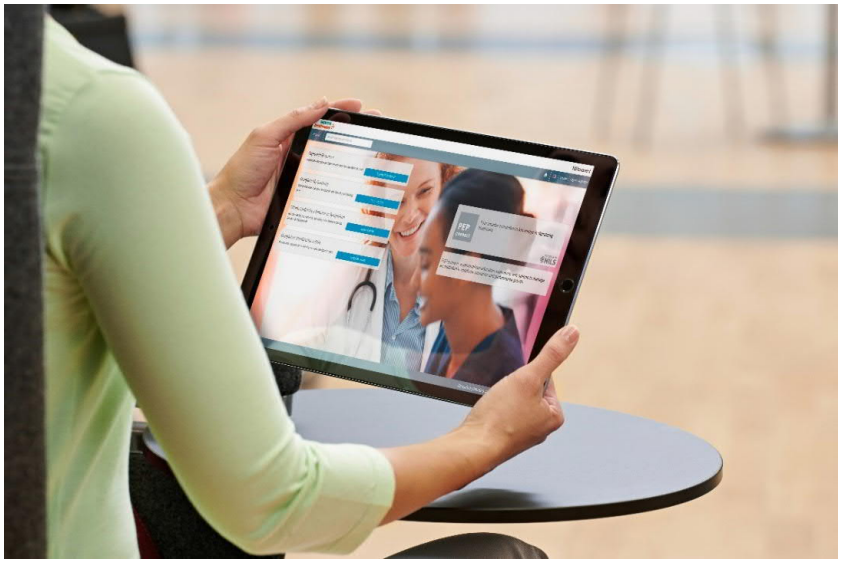
PEPconnect, our personalized online education platform, provides relevant information on our equipment and COVID-19 in general

Equipment know-how and application training

As COVID-19 cases continue to increase, appropriate know-how on equipment applications, imaging protocols, and examination workflows is as crucial as clinical expertise.

PEPconnect: the personalized online education experience

PEPconnect is designed for healthcare professionals and customized to their roles and learning behavior to increase their competency, efficiency, and productivity.
Siemens Healthineers provides resources on best use for our pathway-related equipment as well as general information on COVID-19.



Access PEPconnect here.

Delivering on the need for increased treatment capacity with Rapid Activation Management Consulting Services

COVID-19 necessitates rapid responses

In the current situation, the ability to respond rapidly is crucial. In some cases, planning and operationalizing incremental clinical/bed capacity immediately in facilities can be challenging. Healthcare providers may not have the necessary capacity and means to quickly plan and activate processes required to address the current public health emergency.

Bringing together all necessary expertise[1]

With our consulting experience[1] we can support our healthcare providers during the COVID-19 pandemic. Rapid Activation Management Consulting Services[2] enable healthcare providers to address the immediate needs to manage increased demand, patient workflows, support financial repositioning, and set up new facilities or repurpose existing ones.

1) This comprises strategic, operational, facility planning and activation for hospitals and health systems expertise, with the added technology and digital knowledge of Siemens Healthineers.
2) The global single point of contact to discuss and align project priorities and offerings is Soeren Eichhorst (soeren.eichhorst@siemens-healthineers.com). In the U.S., please contact Jesse Balok from ECG Management Consultants (JBalok@ecgmc.com).

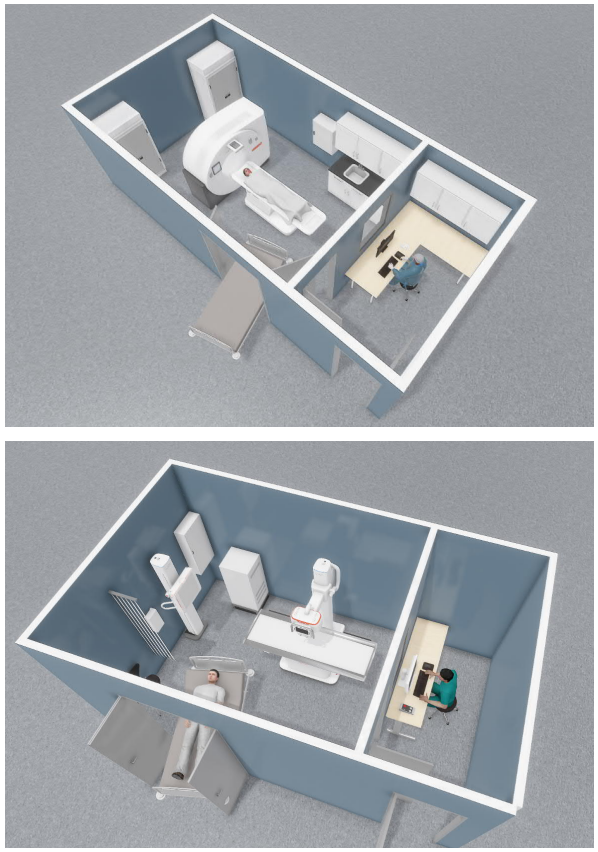
Simple, standardized site preparation solutions for CT and X-ray imaging rooms aimed at being suitable for COVID-19 centers

More agility to increase system capacity in COVID-19 centers

When confronted with an immediate need to increase system capacity and speed up implementation, proper facility design and planning are extremely useful. Enterprise Services from Siemens Healthineers offers simple and standardized solutions to optimize room preparation and planning.

Offering standardized solutions for CT and X-ray imaging rooms

Siemens Healthineers is ready to provide standardized solutions for imaging modalities specifically for COVID-19 centers as a download package (click here). We offer guidance and complete planning regarding radiation protection for imaging rooms aimed at being suitable for COVID-19 centers (modular building, implementation in exhibition area or similar approaches). Standardized solutions are currently available for SOMATOM go.Top, SOMATOM go.All, and MULTIX Impact.[1]



1) If you are interested in individual solutions beyond the standardized solutions please contact us here.

Care for more COVID-19 patients and increase capacity for care provision with temporary ‘pop-up’ hospitals

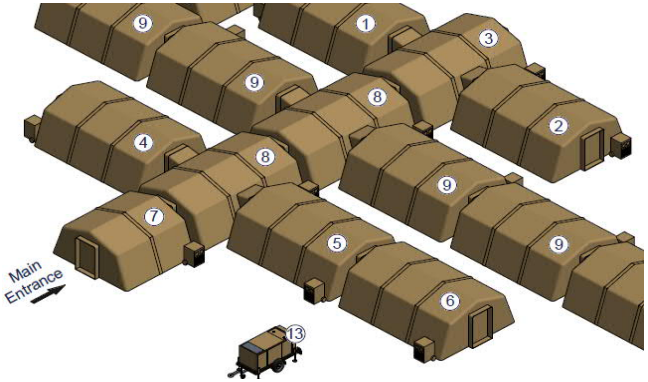
SIEMENS Healthineers

Treating more patients without increasing contagion risk

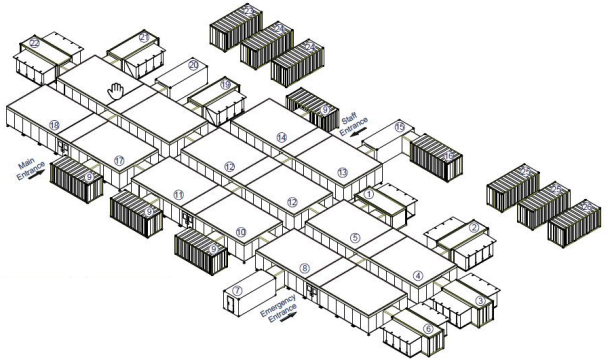
As the COVID-19 pandemic continues to spread, healthcare providers are searching for ways to treat more patients without increasing the risks of contagion. Non-COVID-related medical treatment for non-infected and high risk must continue, but this must be done in a way that protects them from infection – ideally in a separate and hygienically sealed area.

Reducing contagion probability for non-infected and high-risk patients

We offer an emergency hospital solution together with qualified partners: A complete package including the design and planning of a temporary, pop-up hospital or clinic – for example in tents or modular construction. These pop-up hospitals can be designed to integrate our product portfolio as needed (e.g. laboratory testing technology, X-ray systems, CT scanners, etc.) as well as deployment services, and can provide a quick, efficient and affordable way to increase bed capacity for patients in need of normal care as well as intensive care.[1]

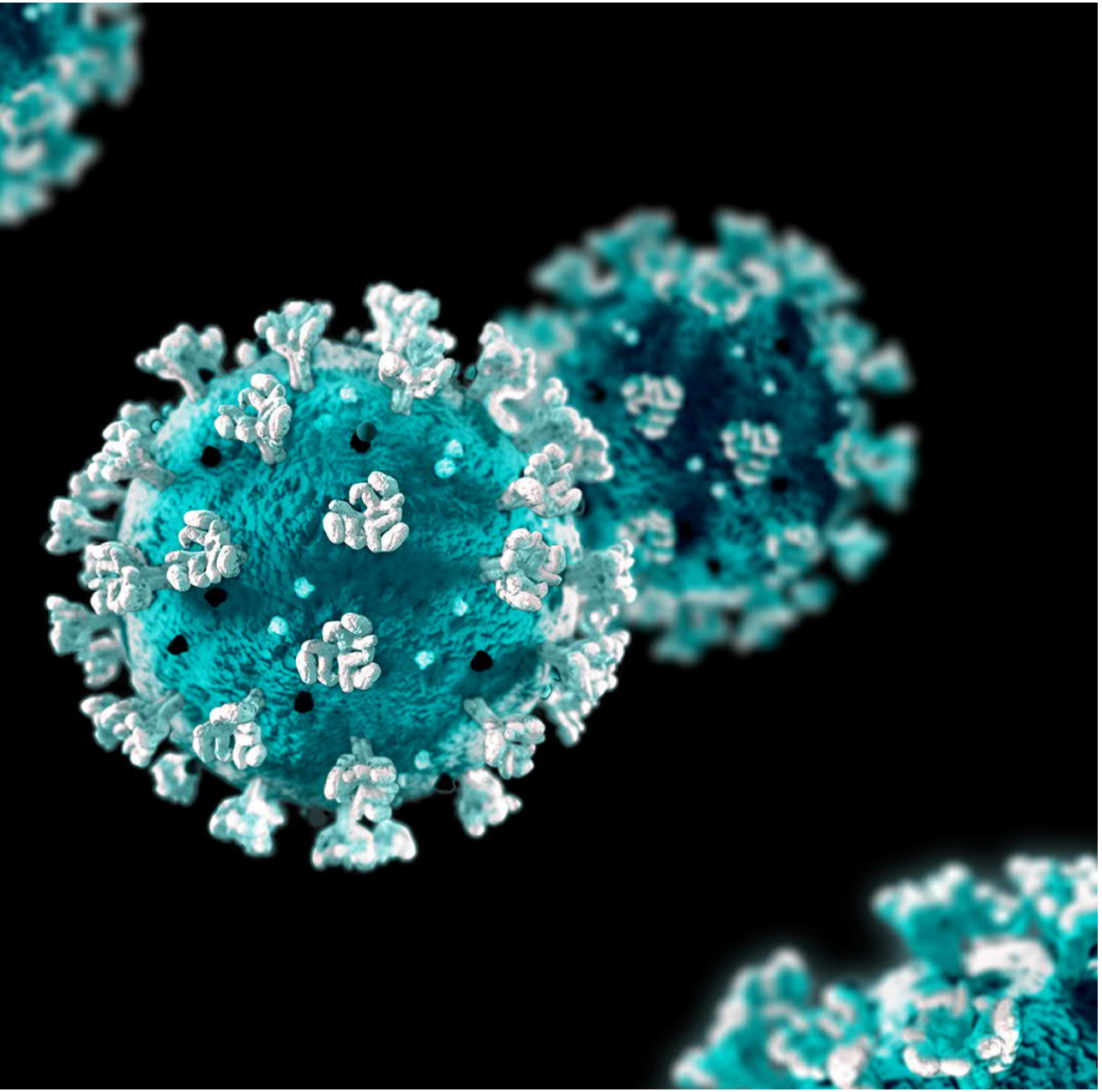


Example of tent construction



Example of modular construction

1) We also support the conversion of existing buildings and facilities (e.g. gyms, exhibition halls, etc.) into self-sufficient hospital units for COVID-19 patient care. Project requests will be checked against availability of key solution components on the global market.



Additional Resources

ECG Management Consultants continuously publishes articles covering the COVID-19 pandemic from different points of view

SIEMENS Healthineers

Knowledge is power – also in fighting a pandemic

As the COVID-19 pandemic is spreading, healthcare providers around the world face similar challenges but also individual needs. Collecting and sharing experiences, best practices and strategies can help mitigate the effects of this crisis and support with daily decision making.

Experts' perspectives on current topics

ECG Management Consultants, a Siemens Healthineers Company, focuses on providing accurate and actionable insights on how healthcare providers can respond to the COVID-19 pandemic. A team of experts in healthcare strategy, finance, operations, and technology is publishing new blog posts almost every day.

For more information please visit www.ecgmc.com.

April 6, 2020

ASCs Can Provide Hospital Services Under the Emergency COVID-19 Blanket Waivers

April 6, 2020

5 Tactics to Drive Cash Flow in Response to COVID-19

March 31, 2020

Combating COVID-19 with Data Sharing: Do "Temporary" Rules Signal Changes for the Future?

March 31, 2020

Connection During a Crisis: Handling Increased Communication at the Health System's Front Door

Additional COVID-19 resources: Recommendations – Preventing contamination of medical devices

How should devices or parts of devices that may have come in contact with patients be handled?

Recommendations

- To date, the recommendations of the WHO risk assessment apply.[1] Generally used disinfectants must be effective against the SARS-CoV-2 virus. Check the list of disinfectants that meet the EPA's criteria for use against SARS-CoV-2 and their labels for specific instructions for inactivation and follow the label instructions for product use. (For countries that do not follow the EPA recommendations, the recommendations of local environmental protection agencies apply.)
- All parts of objects that could potentially come in contact with patients or users must be disinfected.
- All local hygiene instructions (hospital) must be followed. These should meet at least recommendations of Siemens Healthineers.
- Please follow the cleaning instructions provided in the operator's manual.

Caution

Please note that some cleaning agents can cause damage to system components and accessories. A specific list of recommendations for different modalities can be found in the Instruction for Use of the medical device.
Do not pour cleaning fluid onto surfaces and do not spray fluids – always use a damp cloth for cleaning.

Please find regularly updated information on https://www.corporate.siemens-healthineers.com/covid-19 and contact your local Siemens Healthineers organization for further details.

1) See Q&A on coronaviruses (COVID-19), https://www.who.int/news-room/q-a-detail/q-a-coronaviruses, March, 26th 2020

Contatto

Siemens Healthineers
SHS EMEA SEU ITA SS
Siemens Healthcare S.r.l., dARE, Mailand, ITA
Via Vipiteno 4
20128 Milano MI,
siemens-healthineers.com

Patrizia Palazzi
Phone: +39 3351279827
patrizia.palazzi@siemens-healthineers.com