POC Testing Across the COVID-19 Patient Pathway
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**Diagnosis**
- **COVID-19 infection?**
  - Molecular lab test

**Prognosis**
- **How severe is it?**
  - Immuno/chemistry lab tests
  - Hematology lab tests
  - Blood gas tests
  - CT
  - X-ray
  - Ultrasound

**Therapy**
- **How to treat?**
  - Immuno/chemistry lab tests
  - Hematology lab tests
  - Blood gas tests
  - CT
  - X-ray
  - Ultrasound

**Follow-up**
- **When recovered?**
  - Immuno/chemistry lab tests
  - Hematology lab tests
  - Molecular lab test
  - Serology lab test

This pathway is for illustration purposes only.
Persons with Chronic Conditions have an Increased Susceptibility to Contracting COVID-19\(^1,2,3\)

Growing statistics point to a strong correlation between people with chronic conditions and their increased susceptibility to COVID-19 along with a higher degree of complications.\(^1,2,3\)

Understanding patient risk and status of chronic conditions during the COVID-19 assessment phase, as well as monitoring function during and after recovery, could be beneficial.

For example, early studies show the importance of increased awareness of kidney impairment for COVID-19 admitted patients.\(^1\)

The Role of POC Testing in the COVID-19 Patient Pathway

Assessment Stage
People with chronic conditions are more susceptible to COVID-19 along with a higher degree of complications.4,5

Would immediate answers to these questions affect COVID-19 patient triage or care?

Siemens Healthineers point of care solutions (on the upcoming slides) can help answer these questions in just minutes.

Does the patient have diabetes?
Is the patient’s diabetes in control?
Is the patient at risk of kidney disease?
Is the patient pregnant?

The DCA Vantage® Analyzer is a point of care analyzer that offers a CLIA-waived fingerstick test with results in minutes for assessment of blood sugar control over the past three months.

- 1 uL whole blood finger stick
- Results in 6 minutes
CLINITEK Status® Family of Analyzers

Fast, CLIA-waived urine tests for monitoring kidney function, which is affected by COVID-19:

- CLINITEK® Microalbumin Reagent Strip for albumin-to-creatinine ratio
- Multistix PRO® Reagent Strip for protein-to-creatinine ratio

The analyzer can also provide a quick test to rule out pregnancy with the CLINITEST® hCG urine test.
Some of the major complications\(^6\) of COVID-19 are as follows:

- Early kidney damage,
- Acute kidney injury (AKI)
- Acute respiratory distress (ARDS)
- Sepsis/septic shock

Learn how the following simple, bedside solutions deliver immediate results without the wait.

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epoc® Blood Analysis System

A handheld, wireless analyzer for bedside blood gas and other important markers of sepsis and acute kidney damage.

- Single test card, room temperature storage
- Complete blood gas, basic metabolic panel with hematocrit and lactate
- Results in less than a minute
- 92 μL sample
- Arterial, venous, or capillary whole blood samples
- Barcoded with lot and expiration for error-free test panel recognition
- Simplified quality control and inventory management
DCA Vantage® Analyzer with DCA Microalbumin Creatinine Test

Analyzer provides fully quantitative albumin-to-creatinine ratio (ACR) test. Normalizes urine concentration to more accurately detect traces of albumin in urine, which can indicate potential kidney damage.

• Quantitative microalbumin/creatinine ratio (ACR) test results in minutes.
• Small sample volume—40 μL urine.
• Add sample to test cartridge, load, and walk away.
• No sample or reagent preparation required.
RAPIDPoint® 500e Blood Gas System

A proven end-to-end blood gas solution that reduces the daily burden of device management.

With an improved user experience, the analyzer transforms care delivery, setting an elevated standard in the following areas:

- **Heightened System and Data Security – Minimizing System Vulnerability**
  - Latest IT security defenses
  - WINDOWS 10 operating system with McAfee anti-malware
  - Two-step authentication process and encrypted password requirements

- **Integri-sense™ Technology – Redefining System and Sample Integrity**

- **Simplicity - Allowing More Time for Patients**

# Prognostic and Therapeutic Stage

<table>
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<th>Major Complications</th>
<th>DCA Vantage Analyzer</th>
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<tr>
<td>Early kidney damage</td>
<td>ACR</td>
<td>Serum Creatinine</td>
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<tr>
<td>Acute kidney injury</td>
<td></td>
<td>BUN Serum Creatinine</td>
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<tr>
<td>Acute Respiratory Distress (ARDS), Acute Respiratory Failure</td>
<td>Arterial blood gases: • pH (acidity and alkalinity) • Oxygen levels (pO2) • Carbon dioxide levels (pCO2) • Aid in ventilator setting changes</td>
<td>ARDS - Arterial blood gases: - Ph - Oxygen levels (pO2) - Carbon dioxide levels (pCO2) - Aid in ventilator setting changes</td>
<td></td>
</tr>
<tr>
<td>Sepsis/Septic Shock</td>
<td></td>
<td>Lactate</td>
<td>Lactate</td>
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Early studies indicate that coronaviruses (SARS, MERS, CoV-2) replicate in kidney tissues, causing damage and triggering renal failure.  

Acute Kidney Injury Statistics in patients with COVID-19\textsuperscript{11}

- Urinalysis is the most important noninvasive test in the initial workup of acute kidney injury.
- Findings of urinalysis guide the differential diagnosis and direct further workup.\textsuperscript{12}

Delivering POC Solutions That Matter
Thank You for Your Enthusiasm!

Siemens Healthineers
40 Liberty Boulevard
Malvern, PA 19355
siemens-healthineers.com/en-us