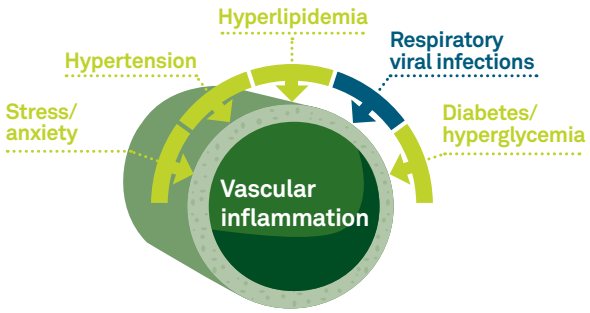
Biomarker testing provides critical insight into the **elevated cardiovascular risks** associated with COVID-19

Cardiovascular risk associated with severe upper respiratory infections like COVID-19 is well documented, and shows that patients with underlying conditions like obesity, hypertension, chronic lung disease, diabetes, and history of cardiovascular disease are especially affected by complications from COVID-19.[1]

Viral infections lead to an increase in risk for heart attacks

In a recent study, researchers demonstrated that **patients are far more likely to have a myocardial infarction (MI) within 7 days of a viral infection** than prior to the infection (≤65yo - 2.4x increased risk, >65yo - 7.3x increased risk).[2]

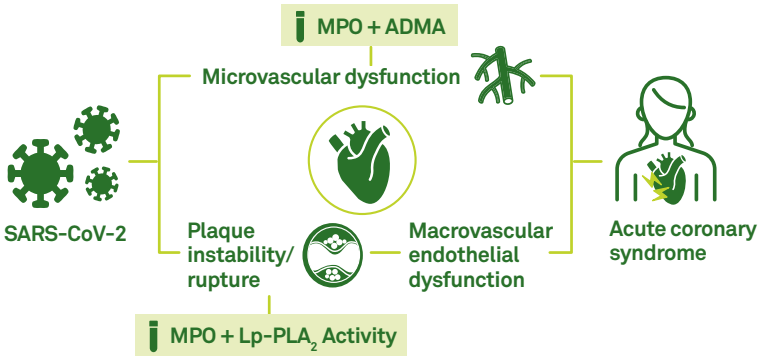
The increase in MI rate is thought to be driven by the **increase in vascular inflammation and risk of plaque rupture** due to respiratory viral infection.



Understanding a patient's prior cardiovascular risk profile will help you identify those patients in need of more aggressive management in order to optimize their outcome should they become exposed to COVID-19.

Biomarker testing provides critical insight

A biomarker assessment of specific vascular inflammation markers associated with risk can help you identify patients who have vulnerable plaque and who may benefit from preventative care and risk factor mitigation.



Helping you identify those most at risk

Quest Diagnostics biomarker testing provides critical insight into elevated cardiovascular risk.

1

Test patients with SARS-CoV-2 (COVID-19) antibody tests

How to test:

1. Order via Quanum® Lab Services Manager or your EHR system
2. Blood draw in the office or at a Patient Service Center (PSC)
3. Review results

SARS-CoV-2 Serology (COVID-19) Antibody (IgG), Immunoassay
Test code: 39504
CPT code*: 86769
Specimen: Serum
Volume: 0.5mL
Container: Gel-barrier tube (SST)

2

If patients test negative for antibodies with one or more underlying cardiovascular risk factors, **consider evaluating for vascular inflammation through biomarker assessment.**

Underlying risk factors and conditions include:

- Age 65 or older
- History of elevated HbA1c (>6.5%)
- Diagnosed cardiovascular disease
- Diagnosed hypertension
- Obesity (BMI ≥30)
- History of elevated myeloperoxidase (≥ 540 pmol/L within past 2 yrs)

How to test:

1. Order via Quanum® Lab Services Manager or your EHR system
2. Blood draw in the office or at a Patient Service Center (PSC)
3. Review results

Cardio IQ® Myeloperoxidase (MPO)
Test code: 92814
CPT code*: 83876
Specimen: EDTA Plasma
Volume: 0.5mL
Container: EDTA (Lavender Top)

ADMA/SDMA
Test code: 94153
CPT code*: 82542
Specimen: Serum
Volume: 0.5mL
Container: SST, Tiger Top

Cardio IQ® Lp-PLA2 Activity
Test code: 94218
CPT code*: 83698
Specimen: Serum
Volume: 0.5mL
Container: SST, Tiger Top

3

For those patients found to have an elevation in one or more inflammation markers, consider **reassessing cardiovascular risk factors** and providing preventative care when applicable.

* CPT codes are based on American Medical Association guidelines and are for informational purposes only. CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed.

Meeting your testing needs

The Quest Diagnostics network of 2,250 Patient Service Centers (PSCs) have kept the doors open for essential testing services. Our Peace of Mind program has enhanced safety features consistent throughout the day for all patients.

Quest Diagnostics PSCs also offer SARS-CoV-2 (COVID-19) antibody testing. Staff and patients with a physician's order can make appointments for SARS-CoV-2 (COVID-19) antibody testing at **Appointment.QuestDiagnostics.com**. They can also visit **QuestDirect™** and order a test directly.

Delivering Peace of Mind at our PSCs

- Social distancing
- All patients are required to wear a mask or face covering
- More frequent cleaning
- Safeguarding patient health with employee masks and PPE
- Wait by Text program

Count on us

Quest has the COVID-19 and biomarker testing to help you and your patients get the care they need. Talk to your Quest sales representative or call **1.866.MYQUEST (1.866.697.8378)**

The antibody tests (sometimes known as the serology tests or IgG tests) are intended for use as an aid in identifying individuals with an adaptive immune response to SARS-CoV-2, indicating recent or prior infection. Results are for the detection of SARS-CoV-2 antibodies. IgG antibodies to SARS-CoV-2 are generally detectable in blood several days after initial infection, although the duration of time antibodies are present post-infection is not well characterized. At this time, it is unknown for how long antibodies persist following infection and if the presence of antibodies confers protective immunity. Individuals may have detectable virus present for several weeks following seroconversion. Negative results do not preclude acute SARS-CoV-2 infection. If acute infection is suspected, molecular testing for SARS-CoV-2 is necessary. The antibody test should not be used to diagnose acute SARS-CoV-2 infection. False positive results for the antibody test may occur due to cross-reactivity from pre-existing antibodies or other possible causes.

- The antibody tests and the molecular tests (together "All tests") have not been FDA cleared or approved;
- All tests have been authorized by FDA under EUAs for use by authorized laboratories;
- The antibody tests have been authorized only for the detection of IgG antibodies against SARS-CoV-2, not for any other viruses or pathogens;
- The molecular tests have been authorized only for the detection of nucleic acid from SARS-CoV-2, not for any other viruses or pathogens; and,
- All tests are 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.

References
1. Garg S, Kim L, Whitaker M, et al. Hospitalization rates and characteristics of patients hospitalized with laboratory-confirmed coronavirus disease 2019 - COVID-NET, 14 states, March 1-30, 2020. *MMWR*. 2020;69(15):458-464. doi: 10.15585/mmwr.mm6915e3
2. Kwong JC, Schwartz KL, Campitelli MA, et al. Acute myocardial infarction after laboratory-confirmed influenza infection. *N Engl J Med*. 2018;378(4):345-353. doi: 10.1056/NEJMoa1702090

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