

D-Dimer

viewed through the prism of COVID epidemic

NAISSA - Enzyme immunoassay for quantitative detection of D-Dimer on Naissa monotest immunoanalyzer.

General information

D-dimer is a fibrin degradation product that reflects ongoing activation of the coagulation cascade, and is often used to measure and assess clot formation.

Amid the COVID-19 pandemic, **elevated D-dimer levels have been associated with disease severity and mortality** trends (1). More than one-quarter of patients with COVID-19 had elevated D-dimer levels up to 4 months after diagnosis, according to study results published in Journal of Thrombosis and Haemostasis.

D-dimer value on admission is an **accurate biomarker for predicting mortality** in patients with COVID-19 and several studies demonstrated its prognostic potential and optimal cutoff value (4–6). On average, 1.5 $\mu\text{g/ml}$ is the optimal cutoff value of admission D-dimer for predicting mortality in COVID-19 patients (2).

NeoMedica's D-Dimer assay for NAISSA immunochemistry analyzer is intended for quantitative determination of D-Dimer concentration in human serum and plasma. Test has a high precision with sensitivity of 4.76 ng/ml. No cross-reaction between the evaluated substances used was detected.

When and who should be tested?

- Suspected thrombotic disorders
- Ability to exclude pulmonary embolism
- **COVID-19**
 - On diagnosis
 - Up to 4 months after recovery
 - After vaccination
 - At admission to the hospital
 - During the course of hospital treatment
 - To distinguish patients with moderate from severe disease - oxygen consumption and length of hospital treatment

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Patients should be tested for other respiratory pathogens using routine laboratory procedures, as recommended in local management guidelines for community-acquired pneumonia. Additional testing should not delay testing for COVID-19. As co-infections can occur, all patients that meet the suspected case definition should be tested for COVID-19 virus regardless of whether another respiratory pathogen is found. (source:WHO)

A special interest is focused on the possible role of vitamin D and its deficiency in the risk for COVID-19 and its severe course. Vitamin D has pluripotent modulatory activities on both innate and specific immunity. Its deficiency is a risk factor for exaggerated and persistent inflammation (Grant et al., 2020).

REFERENCES

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Other COVID-connected parameters on NAISSA

Vitamin D

Ferritin

Other respiratory pathogens

| Product | Order No. | Kit |
|---|--------------|----------|
| D-Dimer | N2901M24DDI | 24 tests |
| Ferritin | N1704M24FER | 24 tests |
| hs CRP | N1605M24HCRP | 24 tests |
| 25-OH Vitamin D | N803M24VID | 24 tests |
| NAISSA SARS-COV-2 IGA | N142D24IGA | 24 tests |
| NAISSA SARS-COV-2 IGM | N143D24IGM | 24 tests |
| NAISSA SARS-COV-2 IGG | N144D24IGG | 24 tests |
| NAISSA SARS-COV-2 S1/S2/RBD Neutralizing antibodies | N155D24SNA | 24 tests |

NAISSA monotest immunoanalyzer - BENEFITS

- ✓ One Cartridge - one test
- ✓ Simplify operation - just add sample and click RUN
- ✓ Save your time - ready to use reagents
- ✓ Factory precalibrated
- ✓ QC material included
- ✓ No crossover - Cartridge laminated with three layers plastic foil, provide completely safety and stability
- ✓ Quantitative evaluation of results
- ✓ High diagnostics specificity and sensitivity
- ✓ High reproducibility
- ✓ Total automatisation
- ✓ Small package size (24 tests, calibrators and control)

