

# Cytomegaly CMV

## General:

CMV, Cytomegalovirus (giant cell virus) belongs to the family of herpes viridae and is a DNA virus. The virus is present worldwide; approximately 90% of the population in Germany has had contact with CMV. In healthy persons, the infection proceeds after an incubation time of 20-30 days without clinical symptoms. Risk group: patients treated with immunosuppressives, AIDS, post-transplantation or patients suffering from cancer, hemodialysis patients; CMV can result in reactivation or complicated generalized infection with interstitial pneumonia, encephalitis, swelling of lymph nodes and fever with lethal outcome. The secretion of the virus is via nasopharyngeal tract or by urine

Cytomegaly in pregnancy: In transplacental transmission - which is possible during the whole period of pregnancy (primary infection is most frequent in the 1st-2nd trimester, in the 3rd trimester more rarely - 10% of the children show severe malformations). About 90% of pregnant women are seropositive (IgG increased); approx. 1% of children are intrauterinely infected. However 90% of the infected newborns are healthy at birth. Five % of the infected newborns have slight and disappearing symptoms, 5% develop severe permanent cerebral symptoms. In some infected newborns, which appear healthy at birth, late damages can occur (hearing deficiencies, developmental retardation and mental retardation).

The following tests are available:

- **CMV IgG antibodies**

Material: 1 ml serum

Stability: 4 weeks at 2 to 8°C

TAT: same day, FML

Method: ECL

Units: ratio

Ref.- range: negative: < 0.8 borderline: 0.8 – 1.1

- **CMV IgM antibodies**

Material: 1 ml serum

TAT: same day, FML

Stability: 4 weeks at 2 to 8°C

Method: ECL

Units: ratio

Ref.- range: negative: < 0.8 borderline: 0.8 – 1.1

- **CMV IgG abs. avidity**

Material: 1 ml serum

TAT: 7-10 days\*

Method: LIA

Units: index

Ref.- range: see report

- **CMV IgG abs. avidity, Blot**

Material: 1 ml serum

TAT: 7-10 days\*

Method: Blot

Ref.- range: see report

- **CMV DNA (qualitative)**

Indication: fresh or reactivated infection

Material: blood: EDTA-monovette

throat smear: dry swab (let it dry for 2 hours, do not use medium containing swabs) send to the laboratory in a sterile container

urine: approx. 20 ml of midstream urine, sterile urine vials without additives

amniotic fluid: sterile container (such as Falcon tube)

chorionic villi: sterile container

TAT: 7-10 days\*

Method: PCR

Units: qualitative

Ref.- range: negative

- **CMV DNA (quantitative)**

Material: EDTA Blood, 10 ml urine

TAT: 7-10 days\*

Method: PCR

Units: geq/ml

Ref.- range: <400

- **CMV specific IgG antibodies, serum/CSF-index**

Material: 1 ml each serum + CSF

TAT: 7-10 days\*

Method: EIA

Units: see report

Ref.- range: see report

- **CMV DNA in amniotic fluid**

Material: 1 ml amniotic fluid

TAT: 7-10 days\*

Method: PCR

Ref.- range: see report

- **CMV DNA in CSF**

Material: 1 ml CSF

TAT: 7-10 days\*

Method: PCR

Ref.- range: see report

- **CMV IgG Avidity**

Material: 1 ml serum

TAT: 7-10 days\*

Method: LIA

Units: Index

Ref.- range: >0.3

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit

<http://www.fml-dubai.com/parameter-listings/>