VALUE AND SCENARIOS OF DIFFERENT TEST

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TEST FOR DIRECT DIAGNOSIS

TYPE OF TEST	What does this test measure?	Sample origin	Testing timing	Meaning if positive	Meaning if negative	Sensitivity	False negative	Timing of test positivity* (approx.)	Timing of test negativity* (approx.)	Clinical significance
Test for Direct Diagnosis										
PCR	***Viral RNA***	*Swab from nasopharynx*	*Symptom onset and screening of asymptomatic*	*Patient is infected*	*Not infected* *or* *False –* *or* *Disease is finished and no possibility to infect* *or* *infected but in a very early stage*	*High*	*Low (very dependent on correct sampling)*	*Before symptom onset*	*8 days after symptoms onset*	*If +, the patient is contagious*
		Sputum	*Symptom onset*			*High*	*Low*	*After symptom onset*	*From day 7 to day 22 after symptom onset*	*If +, the patient is contagious (less likely than in above scenario)*
		Stool *(not a commonly used diagnostic test)*	*Symptom onset*			*High*	*Low*	*After symptom onset*	*From day 7 to day 22 after symptom onset*	*If +, the patient is contagious, although doubts (although it is not known very well but while it is demonstrated, it is necessary to be very cautious)*
Antigen**	***Viral antigens***	*Swab from nasopharynx*	*Not recommended due to low sensitivity*	*Patient is infected*	*Same as PCR*	*Low*	*High*	*Same as PCR*	*Same as PCR*	*Not yet recommended for COVID 19 acute phase*
		Sputum	*Not recommended*	*Patient is infected*		*-*	*-*			

* Subject to individual variations

** Fast tests

TEST FOR INDIRECT DIAGNOSIS OR SEROLOGY

TYPE OF TEST	What does this test measure?	Sample origin	Testing timming	Meaning if positive	Meaning if negative	Sensitivity	False negative	Timing of test positivity* (approx.)	Timing of test negativity* (approx.)	Clinical significance
Test Indirect diagnosis or Serology										
IgM**	**IgM antibody**	*Blood/Serum/Plasma*	*Any time*	*Active infection, being the first antibodies produced during the immune response*	*Not infected but does not exclude active infection*	*High (highest 10 days after onset of infection)*	*Moderate*	*5-7 days from infection (best results 8-14 days)*	*30 days from infection*	*If positive without possibility of a test for PCR: Active infection and patient should be isolate and treat* *If positive after PCR becoming negative: assess individually* *They are important if symptomatic and PCR -*
IgG**	**IgG antibody**	*Blood/Serum/*	*Any time*	*Antibodies produced in a late stage (past infection)*	*Early infection* *or* *Not infected*	*High (high after 10 days after infection)* *60% ate day 7 and 100% at day 14*	*Low*	*15-21 days from infection*	*Unknown*	*If positive: Past infection (even in asymptomatic patients)* *but* *Small % of patients could have PCR + and possibility of infect contacts*

* Subject to individual variations

** Fast tests

TEST INTERPRETATION

PCR*	IgM	IgG	Fig 1	Stage of infection	Interpretation pitfalls*/**	Risk of infecting contacts
-	-	-	1	Negative (not infected)	Risk of false negative in early stage of infection. (Watch out if contact with infected patient or symptomatic!!)	Low chance of infecting contacts. Infective, if PCR is false negative
+	-	-	2	Window stage or Initial stage of the disease	-	High chance of infecting contacts
+	+	-	3	Early stage of the disease	Warning: When performing only IgM testing: If only serological tests are performed, one can mistakenly assume past infection, and still be contagious	High chance of infecting contacts
+	+	+	4	Active stage of the disease	Warming: When performing only IgM: If only serological tests are performed, one can mistakenly assume past infection, and still be contagious	High chance of infecting contacts
+	-	+	5	Final stage of the disease	Warning: If only serological tests are performed, one can mistakenly assume past infection, and still be contagious	High chance of infecting contacts
-	+	-	6	Initial stage of the disease with PCR false negative or last phase of the initial stage with low viral load	Warning: Patient can be contagious if PCR is a False negative. False positive of IgM	High chance of infecting contacts if PCR is false negative Moderate chance if true negative
-	-	+	7	Past Infection	Warning: Patient can be contagious if PCR is a false negative.	Low chance of infecting contacts
-	+	+	8	Disease is evolving	Warning: Patient can be contagious if PCR is a false negative.	Low chance of infecting contacts

*Results from the test for antigens would be considered as the PCR, but only if the results of the test for antigen is positive since sensibility of this test is low

**The risk of interpretation is also based on the correct sampling for PCR

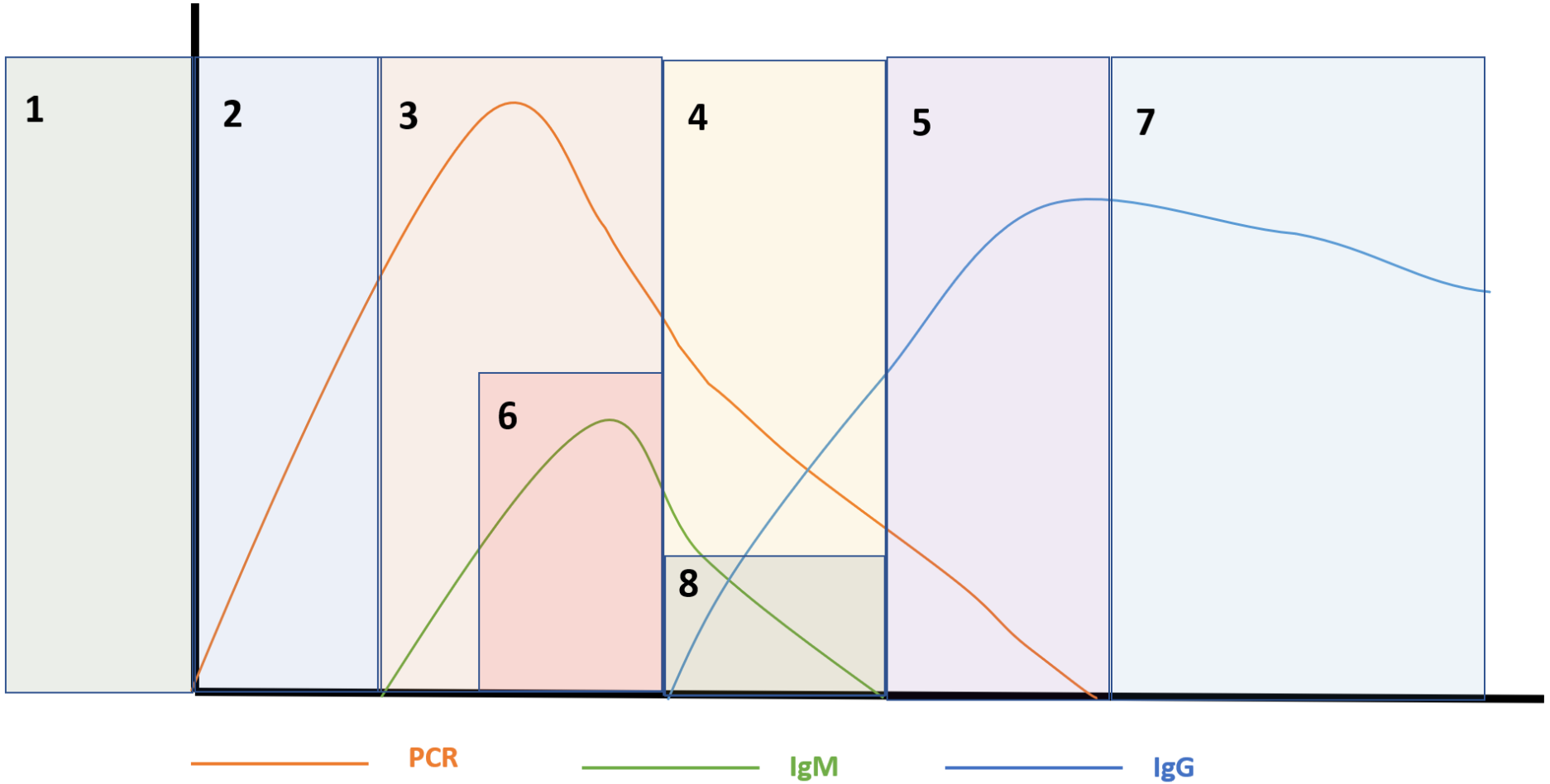

Figure 1.- Different combinations of the results of the test

(1)(2)(3)(4)(5)(6)(7)

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