

**Theme No. J 12: Clinical virology I (hepatitis, HIV)**

To study: Repeat your notes from J10 and J11

**To all tasks**

Read always results of examination, do not forget to read controls, try to make a conclusion, if possible.

In ELISA tests, refer about patients in form „C2, D4, E5“ etc.

**Task No. 1: Diagnostics of hepatitis A virus (HAV)**

<b>a) assessment of IgM:</b> Cut off = $(C1 + D1) / 2$ . Cut off = (       +       )/2 = _____		<b>b) assessment of total antibodies:</b> Cut off = $(C1 + D1) / 2$ Cut off = (       +       )/2 = _____	
90 % cut off	110 % cut off	90 % cut off	110 % cut off
Positive patients:		<b>Negative(!)</b> patients:	
Borderline patients:		Borderline patients:	
Final conclusion (synthesis of both parts):			

**Task No. 2: Diagnostics of hepatitis B virus (HBV)**

**a) assessment of HBsAg**

<b>a) assessment of HBsAg:</b> Cut off = $(C1 + D1) / 2$ . Cut off = (       +       )/2 = _____ Controls <input type="checkbox"/> OK <input type="checkbox"/> not OK		<b>b) assessment of HBeAg:</b> Cut off = $(C1 + D1) / 2$ Cut off = (       +       )/2 = _____ Controls <input type="checkbox"/> OK <input type="checkbox"/> not OK	
90 % cut off	110 % cut off	90 % cut off	110 % cut off
Positive patients:		Positive patients:	
Borderline patients:		Borderline patients:	

**c) assessment of anti-HBs:**

<b>c) assessment of anti-HBs:</b> Cut off = $(C1 + D1) / 2$ . Cut off = (       +       )/2 = _____ Controls <input type="checkbox"/> OK <input type="checkbox"/> not OK		<b>d) assessment of anti-HBe:</b> Cut off = $(C1 + D1) / 2$ Cut off = (       +       )/2 = _____ Controls <input type="checkbox"/> OK <input type="checkbox"/> not OK	
90 % cut off	110 % cut off	90 % cut off	110 % cut off
Positive patients:		Positive patients:	
Borderline patients:		Borderline patients:	

Notes to individual hepatitis B markers:

**Task No. 3 Diagnostics of hepatitis C virus (HCV)**

**a) Polymerase Chain Reaction in HCV diagnostics**

Evaluate the picture of PCR result (gel electroforesis), draw it and evaluate the results.

Picture:	1 = positive control <input type="checkbox"/> OK (positive) <input type="checkbox"/> not OK (negative or inhibition)
	2 = patient A result:
	3 = patient B result:
	4 = patient C result:
	5 = negative control <input type="checkbox"/> OK (negative) <input type="checkbox"/> not OK (positive or inhibition)

**b) anti-HCV detection using ELISA reaction**

Cut off = $(B1 + C1 + D1)/3 + 0.050$		Conclusion:
Cut off = (        +        +        )/3 + 0.050 = _____		
Controls <input type="checkbox"/> OK <input type="checkbox"/> not OK		
90 % cut off	110 % cut off	
Positive patients:		
Borderline patients:		

**Task No. 4 Diagnostics of human immunodeficiency virus (HIV)**

Sera borderline or positive should be confirmed (= sent to reference laboratory in Prague for ensuring)

Cut off = $(C1 + D1) / 2$		Cut off = (        +        )/2 = _____	
Controls <input type="checkbox"/> OK <input type="checkbox"/> not OK			
90 % cut off		110 % cut off	
Patients that should be confirmation (positive, borderline):			
In the Czech Republic, we register _____ HIV-positive patients (to date of __. __. 200__, including foreigners).			

**Check-up questions:**

1. What is an importance of total antibodies to HAV? When could we consider hepatitis A?
2. What does the expression “confirmation” mean in serology? Which infections must be confirmed and why?
3. Explain importance of HBeAg diagnostics.
4. What group of people is extremely exposed to HCV?
5. After how long period after a risky situation (e.g. a contact with blood or a sexual intercourse without a condom etc.) is it reasonable to assess antibodies against HIV?