

## Biopromin LTD

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Gender: female Age: 34 Weight: 86 Pulse: 68 Resp.rate: 18 Atm.pres: 766,52

LCA: 34,14 RCA: 33,75 LAC: 35,98 RAC: 35,83 ABD: 33,87 173,57 99999

| No.:   | Parameter: | Norm:                                    | Value:               |
|--|------------|--|----------------------|
| <b>Hemogram:</b>                             |            |  |                      |
| 1  | 1          | Hemoglobin HGB. g/l                      | 120 - 160 124,58     |
| 2  | 2          | Erythrocytes RBC. x10 <sup>12</sup> /l   | 3,4 - 5 4,14         |
| 3  | 4          | Leukocytes WBC. x10 <sup>9</sup> /l      | 3,2 - 10,2 6,18      |
| 4  | 120        | MCH. pg                                  | 26 - 32 30           |
| 5  | 121        | MCV. fl                                  | 81 - 94 89           |
| 6  | 122        | MCHC. g/l                                | 310 - 350 343        |
| 7  | 123        | CPB (Color index of blood).              | 0,85 - 1,15 0,90     |
| 8  | 3          | Lymphocytes.LYMPH %                      | 19 - 37 9,59         |
| 9  | 5          | Segmented neutrofiles.NEUT %             | 47 - 72 79,38        |
| 10   | 7          | Eosinophils. %                           | 0,5 - 5,8 0,91       |
| 11   | 8          | Monocytes.MONO %                         | 3 - 11 4,69          |
| 12   | 9          | Stab neutrofiles.NEUT %                  | 1 - 6 5,43           |
| 13   | 6          | Erythrocyte sedimentation rate ESR. mm/h | 2 - 20 9,37          |
| <b>Blood coagulation:</b>                    |            |  |                      |
| 14   | 10         | Beginning of coagulation. min            | 0,5 - 2 02`32``      |
| 15   | 11         | End of coagulation. min                  | 3 - 5 03`23``        |
| 16   | 12         | Thrombocytes. x10 <sup>9</sup> /l        | 180 - 320 318,47     |
| 17   | 86         | Fibrinogen. g/l                          | 2 - 4 3,14           |
| 18   | 87         | Prothrombin index. %                     | 75 - 104 72,24       |
| 19   | 88         | Hematocrit.HCT %                         | 35 - 49 36,35        |
| <b>Electrolyte metabolism:</b>               |            |  |                      |
| 20   | 13         | Calcium (Ca) in plasma. mmol/l           | 2,25 - 3 2,39        |
| 21   | 14         | Magnesium (Mg) in plasma. mmol/l         | 0,7 - 0,99 0,87      |
| 22   | 15         | Potassium (K) in plasma. mmol/l          | 3,48 - 5,3 3,85      |
| 23   | 16         | Sodium (Na) in plasma. mmol/l            | 130,5 - 156,6 137,10 |
| <b>Functional parameters of the stomach:</b> |            |  |                      |
| 24   | 17         | pH of gastric juice.                     | 1,2 - 1,7 1,41       |
| 25   | 19         | SH.                                      | 7,32 - 7,4 5,72      |
| 26   | 20         | Basal pressure sphincter of Oddi. mm Hg  | 39 - 41 41,49        |
| <b>Carbohydrate metabolism:</b>              |            |  |                      |
| 27   | 33         | Concentration of lactic acid. mmol/l     | 0,99 - 1,38 1,21     |
| 28   | 42         | Concentration of glucose. mmol/l         | 3,9 - 6,2 4,85       |
| 29   | 43         | Glycogen. mg%                            | 11,7 - 20,6 15,25    |
| <b>Liver function tests:</b>                 |            |  |                      |

|   |    |  |                 |               |
|---|----|--|-----------------|---------------|
| 30  | 22 | AST. mmol/l  | 0,1 - 0,45      | <b>0,74</b>   |
| 31  | 23 | ALT. mmol/l  | 0,1 - 0,68      | <b>0,85</b>   |
| 32  | 24 | AST. U/l   | 8 - 40          | 35,53         |
| 33  | 25 | ALT. U/l   | 5 - 30          | <b>49,93</b>  |
| 34  | 26 | AST/ALT.   | 0,8 - 1,2       | 0,87          |
| 35  | 27 | Total bilirubin. $\mu\text{mol/l}$                                     | 8,6 - 20,5      | <b>60,80</b>  |
| 36  | 28 | Conjugated bilirubin. $\mu\text{mol/l}$                                | 2,2 - 6,1       | <b>21,96</b>  |
| 37  | 29 | Unconjugated bilirubin. $\mu\text{mol/l}$                              | 1,7 - 10,2      | <b>38,84</b>  |
| <b>Protein metabolism:</b>                            |    |  |                 |               |
| 38  | 30 | Total protein. g/l   | 60 - 85         | 68,89         |
| 39  | 31 | Concentration of creatinine. $\mu\text{mol/l}$                         | 55 - 123        | 64,16         |
| 40  | 32 | Dopamine $\beta$ -hydroxylase. DBH nm/ml/min                           | 28 - 32,5       | 28,13         |
| 41  | 34 | Concentration of urea. mmol/l  | 2,1 - 8,2       | 3,89          |
| <b>Lipid metabolism:</b>                              |    |  |                 |               |
| 42  | 41 | Concentration of triglycerides (TG). mmol/l                            | 0,55 - 1,85     | 1,20          |
| 43  | 38 | Low-density lipoproteins. mmol/l                                       | 2,7 - 3,37      | 3,06          |
| 44  | 39 | Lowest-density lipoproteins. mmol/l                                    | 0,2 - 0,52      | 0,35          |
| 45  | 40 | High-density lipoproteins. mmol/l                                      | 0,85 - 2,28     | 1,22          |
| 46  | 35 | Cholesterol total. mmol/l  | 3,11 - 6,48     | 5,19          |
| 47  | 36 | $\beta$ - lipoprotein. mmol/l  | 17 - 55         | 39,62         |
| 48  | 37 | $\beta$ - lipoprotein. g/l   | 3 - 6           | 3,17          |
| <b>Water metabolism:</b>                              |    |  |                 |               |
| 49  | 45 | Cellular water. %  | 39 - 42         | 40,53         |
| 50  | 46 | Total water. %   | 50 - 70         | 60,88         |
| 51  | 44 | Extracellular water. %   | 21 - 23         | 22,35         |
| <b>Hormones:</b>                                      |    |  |                 |               |
| 52  | 47 | Testosterone. $\mu\text{mol}/24\text{hours}$                           | 2,77 - 10,4     | 7,62          |
| 53  | 48 | Total estrogen. nmol/24hours   | 78,98 - 376,95  | 134,36        |
| 54  | 49 | Thyroxine T4. nmol/l   | 71 - 142        | 77,3          |
| <b>Enzymes:</b>                                       |    |  |                 |               |
| 55  | 50 | Amylase (W.T.Caraway). g/l*h   | 12 - 32         | 15,87         |
| 56  | 51 | Acetylcholine. $\mu\text{g/ml}$  | 81,1 - 92,1     | 82,42         |
| 57  | 52 | Acetylcholinesterase of erythrocytes. $\mu\text{mol/l}$                | 220 - 278       | 260,61        |
| 58  | 53 | Glutamine acid. mmol/l   | 0,0045 - 0,0055 | 0,0047        |
| 59  | 54 | Tyrosine. mg*%[Zbarskiy B. I., 1972]                                   | 1,4 - 1,8       | <b>1,88</b>   |
| 60  | 55 | Creatine kinase of muscles CK-MM. $\mu\text{mol}/\text{min}/\text{kg}$ | 473 - 483       | 475,37        |
| 61  | 56 | Creatine kinase of cardiac CK-MB. $\mu\text{mol}/\text{min}/\text{kg}$ | 35,1 - 38,1     | <b>38,87</b>  |
| <b>Cell mitosis regulation:</b>                       |    |  |                 |               |
| 62  | 57 | Comprehensive cell mitosis regulation factor.                          | 3,7828 - 3,9372 | <b>4,3282</b> |
| <b>Internal blood flow, in % to total blood flow:</b> |    |  |                 |               |
| 63  | 64 | Myocardial blood flow. %   | 4,32 - 5,02     | 4,38          |
| 64  | 65 | Muscular blood flow. %   | 14,56 - 16,93   | <b>17,09</b>  |
| 65  | 66 | Cerebral blood flow. %   | 12,82 - 14,9    | 14,40         |
| 66  | 67 | Hepatic-portal blood flow. %   | 20,28 - 29,86   | 23,99         |

|  |     |  |                |                 |
|--|-----|--|----------------|-----------------|
| 67   | 68  | Nephritic blood flow. %  | 21,58 - 25,09  | 23,89           |
| 68   | 69  | Blood flow through skin. %                                       | 7,9 - 9,19     | <b>6,76</b>     |
| 69   | 70  | Blood flow through other organs. %                               | 5,76 - 6,7     | 6,36            |
| <b>Internal blood flow, in ml/min:</b>                     |     |  |                |                 |
| 70   | 71  | Myocardial blood flow. ml/min                                    | 250 - 290,5    | 253,66          |
| 71   | 72  | Muscular blood flow. ml/min                                      | 930 - 1081,4   | <b>1 091,32</b> |
| 72   | 73  | Cerebral blood flow. ml/min                                      | 750 - 871,68   | 842,69          |
| 73   | 74  | Hepatic-portal blood flow. ml/min                                | 1690 - 2488,33 | 1 999,04        |
| 74   | 75  | Nephritic blood flow. ml/min                                     | 1430 - 1662,6  | 1 582,87        |
| 75   | 76  | Blood flow through skin. ml/min                                  | 500 - 581,65   | <b>428,01</b>   |
| 76   | 77  | Blood flow through other organs. ml/min                          | 375 - 436,19   | 414,38          |
| <b>Cerebral hemodynamics:</b>                              |     |  |                |                 |
| 77   | 82  | Cerebral blood flow on 100g of tissue. ml/100g                   | 50 - 55        | 53,58           |
| 78   | 83  | Blood flow per 1gr of thyroid gland. ml/g                        | 3,7 - 4,3      | 4,07            |
| 79   | 84  | Blood flow per 1gr of cerebral tissue. ml/g                      | 2,9 - 3,2      | 3,13            |
| 80   | 85  | Pressure of spinal liquid. mm H <sub>2</sub> O                   | 90 - 145       | 132,82          |
| 81   | 116 | Width of the third ventricle of cerebrum. mm                     | 4 - 6          | <b>6,05</b>     |
| <b>Functional parameters of cardio-respiratory system:</b> |     |  |                |                 |
| 82   | 78  | Resistance of pulmonary circulation. din/cm*sec                  | 140 - 150      | 140,88          |
| 83   | 79  | Central venous pressure. mm H <sub>2</sub> O                     | 70 - 150       | <b>66,37</b>    |
| 84   | 80  | Time of pulmonary circulation. s                                 | 16 - 23        | 20,56           |
| 85   | 81  | Time of systemic circulation. s                                  | 4 - 5,5        | 4,83            |
| 86   | 21  | Energy used for life support. kkal/kg/min                        | 1,23 - 4,3     | <b>4,70</b>     |
| 87   | 61  | Rate of O <sub>2</sub> delivery to tissue. ml/min                | 260 - 280      | <b>229,71</b>   |
| 88   | 62  | Surface of gaseous exchange. m <sup>2</sup>                      | 3500 - 4300    | 3 678,22        |
| 89   | 63  | Deficit of circulatory blood. ml/kg                              | 0 - 250        | 50,43           |
| 90   | 89  | Vital capacity of lungs. cm <sup>3</sup> .                       | 3500 - 4300    | 3 923,73        |
| 91   | 90  | Pulmonary ventilation. l/min                                     | 4 - 12         | 10,11           |
| 92   | 91  | Functional residual capacity (FRC) cm <sup>3</sup>               | -----          | 1 995,88        |
| 93   | 92  | Speed of maximum expiratory. l/min                               | 74 - 116       | 86,96           |
| 94   | 93  | Test Tiffeneau. %  | 86 - 109       | 92,07           |
| 95   | 94  | Working rate of assimilated oxygen. %                            | 45 - 60        | <b>66,48</b>    |
| 96   | 95  | Time of single load. min   | 3 - 10         | 5,83            |
| 97   | 96  | Respiratory quotient.  | 0,8 - 1,2      | 0,88            |
| <b>Oxygen transport and consumption:</b>                   |     |  |                |                 |
| 98   | 18  | pH of blood.   | 7,36 - 7,45    | <b>7,29</b>     |
| 99   | 59  | Volume of circulatory blood. ml/kg                               | 65 - 69        | 67,19           |
| 100  | 60  | Minute volume of circulatory blood. l/min                        | 3,5 - 4,3      | <b>4,62</b>     |
| 101  | 97  | Transportation of oxygen(DO <sub>2</sub> ). ml/min               | 900 - 1200     | 1 122,60        |
| 102  | 98  | Quantity of assimilated oxygen on 100 gr. of cerebral tissue. ml | 2,8 - 3,4      | <b>2,68</b>     |
| 103  | 99  | Saturation of O <sub>2</sub> in arterial blood. %                | 95 - 98        | <b>93,70</b>    |
| 104  | 100 | Oxygen consumption per kg of body weight. ml/min/kg              | 4 - 6          | 4,77            |
| 105  | 101 | O <sub>2</sub> consumption. ml/min                               | 200 - 250      | 245,96          |

|   |     |   |               |               |
|---|-----|---|---------------|---------------|
| 106   | 102 | Quantity of myocardial oxygen consumption. ml/min                     | 7 - 10        | 9,13          |
| 107   | 103 | Index of extraction of tissue oxygen. ml                              | 0,26 - 0,34   | 0,291         |
| <b>Transport and elimination of CO<sub>2</sub>:</b>     |     |   |               |               |
| 108   | 104 | CO <sub>2</sub> elimination. ml/min                                   | 119 - 300     | <b>317,99</b> |
| 109   | 105 | Content of CO <sub>2</sub> gas in arterial blood. %                   | 32,5 - 46,6   | 43,44         |
| 110   | 106 | Content of CO <sub>2</sub> gas in venous blood. %                     | 51 - 53       | <b>62,66</b>  |
| 111   | 107 | Rate of CO <sub>2</sub> production. ml/min                            | 150 - 340     | 166,94        |
| <b>Functional parameters of cardio-vascular system:</b> |     |   |               |               |
| 112   | 108 | Vascular permeability index.  | 4,165 - 4,335 | <b>3,882</b>  |
| 113   | 109 | Cardiac ejection. ml  | 60 - 80       | 64,72         |
| 114   | 110 | Interval PQ. sec  | 0,125 - 0,165 | <b>0,111</b>  |
| 115   | 111 | Interval QT. sec  | 0,355 - 0,4   | <b>0,350</b>  |
| 116   | 112 | Interval QRS. sec   | 0,065 - 0,1   | <b>0,123</b>  |
| 117   | 113 | The myocardial contraction of the left heart ventricle. %             | 52 - 60       | 53,19         |
| 118   | 114 | Systolic arterial pressure. mm Hg                                     | -----         | 151,42        |
| 119   | 115 | Diastolic arterial pressure. mm Hg                                    | -----         | 70,64         |
| 120   | 58  | Plasma density. g/l   | 1048 - 1055   | 1 052,66      |
| 121   | 117 | Cardiac work. Joule   | 0,692 - 0,788 | <b>0,84</b>   |
| <b>Hepatic metabolism</b>                               |     |   |               |               |
| 122   | 118 | eGFR [MDRD]. ml/min/1.73m <sup>2</sup>                                | 75 - 115      | 97,8          |
| 123   | 119 | Estimated creatinine clearance rate(eCCr)[Cockroft and Gault]. ml/min | 75 - 115      | <b>148,4</b>  |
| 124   | 124 | CysC (Cystatin C). mg/l   | 0,6 - 0,96    | 0,82          |
| 125   | 125 | BUN. mg/dl  | 6 - 23        | 11            |
| 126   | 126 | Transferrin. mg/dl  | 204 - 380     | <b>194,37</b> |
| 127   | 127 | Urine specific gravity. g/cm <sup>3</sup>                             | 1005 - 1035   | 1 007         |
| 128   | 128 | Chloride. mmol/l  | 98 - 107      | 105,6         |
| 129   | 129 | Ceruloplasmin (CP). g/l   | 0,16 - 0,6    | 0,350         |
| 130   | 130 | Alkaline phosphatase (ALP). $\mu$ kat/L                               | 0,5 - 2,4     | 1,26          |
| 131   | 131 | Intracranial pressure (Test) (ICP). mmHg                              | 7 - 15        | 9,6           |

Preliminary computer conclusion about diagnosis:

Protein S100 should be monitored.

Hepatic encephalopathy is defined. Total bilirubin.=60,8

Increasing of enzymes activity (aspartate transaminase, alanine transaminase) is determined.

Width of the third ventricle of cerebrum.=6,05

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